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Grass Creek/Cody Wilderness Suitability EIS

OWL CREEK SUPPLEMENT

Draft

U. S. Department of the Interior

Bureau of Land Management

Worland District, Wyoming

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**DRAFT
WILDERNESS SUITABILITY
ENVIRONMENTAL IMPACT STATEMENT:
GRASS CREEK AND CODY RESOURCE AREAS

THE OWL CREEK SUPPLEMENT**

Prepared by:

**U. S. Department of the Interior
Bureau of Land Management
Worland District
May 1986**

This document supplements the Draft Grass Creek/Cody Wilderness Environmental Impact Statement and documents the effects as a result of wilderness designation or nondesignation of the 710 acres of public lands constituting the Owl Creek Wilderness Study Area. The Wilderness Study Area (WSA) is located on the western edge of the Big Horn Basin of north-central Wyoming. The proposed action for this WSA is the All Wilderness Alternative.

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Please submit comments to the above address by: **July 31, 1986.**

Hillary C. Deaton 4-15-86
Wyoming State Director Date

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SUMMARY

This document supplements the Draft Grass Creek/Cody Wilderness Environmental Impact Statement (EIS) and documents the effects expected as a result of wilderness designation or nondesignation of the 710 acres of public lands constituting the Owl Creek Wilderness Study Area (WSA) (WY-010-104). The WSA is located on the western edge of the Big Horn Basin of north-central Wyoming. This Supplemental EIS is in response to Section 603 of the Federal Land Policy and Management Act (FLPMA) of 1976 which directs the Bureau of Land Management (the Bureau) to inventory, study, and report to the Congress, through the Secretary of the Interior and the President, those public lands suitable for preservation in the National Wilderness Preservation System. Following public review and comment a final wilderness EIS will be prepared incorporating all the WSAs in the Grass Creek/Cody area.

The following summarizes the alternatives, including the proposed action:

ALL WILDERNESS ALTERNATIVE (PROPOSED ACTION)

All of the WSA's 710 acres would be recommended for inclusion in the National Wilderness Preservation System. Management would be the same as the management prescribed for the adjacent Washakie Wilderness; protection of natural values including wildlife, fishery, and scenic values, and provisions for recreation use in a primitive manner characterized by low visitor use. Leasing, exploring, and production of leasable minerals would not occur. Options exist for managing the area by either the Bureau or by the Forest Service as part of the Washakie Wilderness.

NO WILDERNESS ALTERNATIVE (NO ACTION)

None of the WSA's 710 acres would be recommended for inclusion in the National Wilderness Preservation System. Leasing, exploring, and production of leasable minerals could occur subject to no surface occupancy. Wildlife and fishery habitat would be managed to meet Wyoming Game and Fish strategic plan goals. Recreation would be managed for semi-primitive opportunities with no facilities or improvements. Livestock grazing would be managed to improve the area's grazing resources.

CHAPTER I

PURPOSE AND NEED

As a result of the Federal Land Policy and Management Act (FLPMA) of 1976 (Public Law 94-579) the Bureau of Land Management (the Bureau) was directed to inventory the public lands and identify those lands that have wilderness character. Lands with wilderness character must then be studied to determine their suitability for wilderness; based on an evaluation of all the resource values and uses. These suitability determinations (the Bureau's proposed action) are submitted to the Secretary of the Interior who must report his recommendations to the President no later than October 21, 1991. The President must then report his recommendations to Congress. Congress will then decide whether the Wilderness Study Area (WSA) will be designated as wilderness or not.

WILDERNESS REVIEW PROCESS

To accomplish the mandate of section 603 of FLPMA, the Bureau has developed a framework for the wilderness review process which has three phases:

1. Inventory - The inventory phase involves reviewing the public lands to identify areas containing wilderness characteristics that meet the criteria established by Congress in the Wilderness Act of 1964 (see Appendix A). Such areas are identified as WSAs.
2. Study - The study phase involves the process of determining which WSA will be recommended as suitable for wilderness designation and which will be recommended as unsuitable. This determination, made through the Bureau's land use planning system, considers all values, resources, and uses of the public lands (see Appendix B). Preparation of this supplemental EIS is part of the study phase.
3. Reporting - The reporting phase consists of forwarding the Bureau's recommendations through the Secretary of the Interior and the President to Congress. Mineral surveys, environmental impact statements, and other supporting data are submitted with these recommendations.

The inventory phase of the process was completed for the Grass Creek Resource Area in November 1980. The inventory results, published in the November 14, 1980 issue of the *Federal Register*, identified Owl Creek as a WSA.

The study phase for the Owl Creek WSA commenced with an amendment to the Management Framework Plan (MFP) for the Grass Creek Resource Area. This amendment was completed in July of 1983. The planning effort utilized the planning criteria and quality standards specified by the Bureau's wilderness study guidance (see Appendix B) to develop alternatives and select a proposed action.

Publication of this draft Supplemental EIS (DEIS) will be followed by a public comment period including a formal public hearing. Comments will be used to revise this draft and prepare a final legislative EIS which will include a proposal for recommending designation or nondesignation of the WSA. All planning documents and maps referenced but not included in this DEIS are available at the Worland District office.

SCOPING

The wilderness review inventory phase and the planning step of the study phase for Owl Creek involved many people. In addition, public comment, open houses, public meetings, and mail solicitations provided information about the wilderness views and concerns of the public. Information and comments were obtained from state and local government and from other federal agencies. A list of the organizations, agencies, and individuals consulted during this process is provided in Chapter V. Within the Bureau, a wide variety of staff and management specialists were involved. The participation of these groups resulted in certain issues being identified as central to an understanding of the environmental effects of wilderness designation or nondesignation of this WSA; however, there was no clear consensus by the public as to designate or not designate the area as wilderness. These issues are:

PURPOSE AND NEED

1. Surface disturbing activities would have an adverse impact on big game migratory routes, calving areas and crucial winter spring habitat.
2. Adverse impacts to big game habitat and migratory routes would affect the prey base for the Northern Rocky Mountain wolf and grizzly bear.
3. Surface disturbing activities would have an adverse impact on water quality which would directly affect fisheries along Rock Creek.
4. Surface disturbing activities would have an adverse impact on naturalness, solitude and primitive and unconfined recreation.
5. Wilderness designation would have an adverse impact on exploration and production of oil and gas resources.
6. Wilderness designation would have an adverse impact on livestock production and management.
7. Wilderness designation could have an adverse impact on motorized recreation because of vehicle route closure along the South Fork of Owl Creek.

ISSUES CONSIDERED BUT ELIMINATED

This section provides a brief discussion on several issues which were originally considered but were eliminated from analysis. These issues include:

1. Timber production was considered due to the existence of 209 acres of commercial forestland, but was dropped from further analysis because of lack of reliable access and overriding conflicts with wildlife, fisheries, watershed, scenic, and soil resources.
2. Locatable and salable mineral exploration and development was considered but dropped from analysis in the absence of current mining claims and low occurrence and development potential for these resources in the area.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

During the scoping process a partial wilderness alternative was considered but eliminated from detailed analysis because no realistic physical boundary could be identified and realignment of the boundary to include a smaller area would not insure adequate protection of wilderness values.

MANAGEABILITY

The Owl Creek WSA would be manageable as an addition to the contiguous 703,981 acre Washakie Wilderness. The Bureau would be capable of maintaining wilderness values over the long-term.

Map I-1
Owl Creek WSA
General Location Map

CHAPTER II

ALTERNATIVES INCLUDING THE PROPOSED ACTION

This EIS examines the Owl Creek Wilderness Study Area and analyzes two alternatives. These alternatives are:

ALL WILDERNESS ALTERNATIVE (Proposed Action)

The intent of this alternative is to provide protection to the area's wilderness values and to assure preservation of the wilderness character, over the long-term, for future generations.

All of the WSA's 710 acres would be recommended for inclusion in the National Wilderness Preservation System. Management would be the same as the management prescribed for the adjacent Washakie Wilderness: protection of natural values including wildlife; fishery; and scenic values; and provisions for recreation use in a primitive manner characterized by low visitor use. Leasing, exploring, and production of leasable minerals would not occur. Options exist for managing the area by either the Bureau or by the Forest Service as part of the Washakie Wilderness.

Minerals Management. Leasable and locatable minerals would not be available for lease, claim, exploration or production under this alternative. Existing post-FLPMA leases located on 420 acres could be explored and produced; however, this is not anticipated because oil and gas exploration and production potential is low, despite high oil and gas occurrence potential. In addition, the Bureau's wilderness protection stipulation (see Appendix C) would impose limitations that would exclude exploration and production activities that impair wilderness values.

Recreation Management. Recreation resources would be managed to provide nonmotorized, primitive recreation opportunities in a natural setting. Visitor use would remain low; probably not exceeding an increase of 10 percent per year for the first five years and would then level off to a rate of 5 percent per year increase thereafter. No visitor use facilities would be provided in the WSA; except wilderness boundary signs, trail registers, and some form of vehicle barrier at routes leading into the South Fork of Owl Creek and Rock Creek.

Wildlife Habitat Management. Wildlife habitat would be managed to protect crucial migratory, calving, and winter/spring ranges for big game species and to protect the prey base for the Northern Rocky Mountain wolf and grizzly bear. Population goals for big game would remain at the numbers established by the Wyoming Game and Fish Strategic Plan (see Chapter III - Wildlife Resources). By maintaining the elk, deer and bighorn sheep herds at the Strategic Plan goals the prey base for the Northern Rocky Mountain wolf and grizzly bear would be maintained. Big game enhancement projects within the WSA would include maintaining existing fences along 1.2 miles of the South Fork of Owl Creek and .75 miles of Rock Creek to exclude livestock use from riparian areas, fencing four springs in the South Fork of Owl Creek unit to exclude livestock, and coordinating with the Wyoming Game and Fish Department to transplant bighorn sheep to the area to supplement the existing herd.

Fisheries Habitat Management. Enhancement projects described under Wildlife Habitat Management for enhancing riparian areas and stream associated habitats would result in a gradual improvement of this resource, allowing trout populations to increase three-fold over the current population level, over the long-term (30-50 years).

Livestock Grazing Management. Livestock grazing would continue to be managed the way it now is with the exception of motorized use.

No adjustments in animal unit months (AUMs), from the existing 21, are planned in the WSA. Nonutilization of acreage in the Rock Creek unit would continue for the purpose of protecting riparian areas. Forage would continue to not be allocated on acreage above 10,000 feet for the purpose of protecting fragile high alpine vegetation. Motorized access would not be allowed on 1.2 miles of vehicle route along the South Fork of Owl Creek; except for emergency purposes. As mentioned in the wildlife and fishery sections, existing fences would be maintained for the purpose of excluding livestock use in riparian areas. An Allotment Management Plan (AMP) would be prepared for the purpose of improving the allotments grazing resources; however, it is not anticipated that this AMP would result in either AUM adjustments or in changes to planned projects in the WSA.

Map II-1
Owl Creek WY-010-104
Land Status

ALTERNATIVES INCLUDING THE PROPOSED ACTION

NO WILDERNESS ALTERNATIVE (NO ACTION)

The intent of this alternative is to provide resource use and development while protecting unique surface resource values of the area. Long-term protection would not be assured due to the discretion inherent in Bureau policy to reassess management objectives that may result in waiving lease stipulations regarding the use of public lands. A waiver of lease stipulations or reassessment of management intent could only be accomplished by appropriate environmental documentation.

None of the WSA's 710 acres would be recommended for inclusion in the National Wilderness Preservation System. Leasing, exploring, and production of leasable minerals could occur subject to no surface occupancy. Wildlife and fishery habitat would be managed to meet Wyoming Game and Fish strategic plan goals. Recreation would be managed for semi-primitive opportunities with no facilities or improvements. Livestock grazing would be managed to improve the area's grazing resources.

Minerals Management. Although the potential for occurrence of oil and gas in the WSA is considered high (see Affected Environment - Geology and Mineral Values) the potential for exploration and production of these resources is considered low because the entire WSA has topographic and environmental characteristics that exceed occupancy limitations imposed by the oil and gas lease stipulations (see Appendix D).

Post-FLPMA oil and gas leases have been issued on 280 acres in the Central unit and on 140 acres in the Rock Creek unit. The remaining 290 acres in the South Fork of Owl Creek are not leased but would be available for leasing subject to no surface occupancy for the purposes of protecting wildlife, fishery, scenic, and recreation values. Upon expiration of the leases in the Rock Creek and Central units, in 1991, leasing would be available subject to no surface occupancy. In the interim, it is not anticipated that oil and gas exploration and production would occur in the WSA.

It is not anticipated that locatable minerals would be claimed, explored, or produced, in the WSA, because of an absence of claims and low occurrence potential.

ALTERNATIVES INCLUDING THE PROPOSED ACTION

Recreation Management. Recreation resources would be managed to provide dispersed motorized, opportunities in a semiprimitive setting. No visitor use facilities would be developed. Vehicle access would be available on designated routes in the bench areas along the South Fork of Owl Creek and Rock Creek. Based on professional estimate it is anticipated that visitor use would stay about the same (less than 100 visits per year); however, should the Forest Service pursue and gain access to the Washakie Wilderness via the South Fork of Owl Creek and Rock Creek, it is estimated that visitation would increase approximately 10 percent per year. Recreation opportunities would remain the same.

Resource uses and activities would be restricted or the effects mitigated to protect scenic quality such as the views of the Washakie Needles, the creeks, and riparian areas.

Wildlife Habitat Management. Wildlife habitat would be managed for the same goals and population numbers set forth by the proposed action. The prime difference between the alternatives is the type of equipment utilized for habitat improvement. Thinning of aspen groves for big game would be implemented by prescribing fire and utilizing chainsaws.

Fisheries Habitat Management. Fisheries habitat would be managed for the same habitat goals set forth in the proposed action. Fences along riparian areas would continue to be maintained. However, under this alternative, 1.2 miles of channel on the South Fork of Rock Creek and .25 miles on Rock Creek would be restructured with heavy equipment to form pools and spawning areas designed to enhance trout fishery habitat. The expected result is a rapid increase in trout populations to a level three times the current population within the short-term (10-15 years).

Livestock Grazing Management. Livestock grazing would be managed the same as under the proposed action; except that motorized vehicles would be allowed on designated routes.

ALTERNATIVES INCLUDING THE PROPOSED ACTION

ANALYSIS OF IMPACTS

Table II-1
COMPARATIVE SUMMARY OF IMPACTS BY ALTERNATIVE

Program	All Wilderness (Proposed Action)	No Wilderness (No Action Alternative)
Wilderness Values	Wilderness values would be assured protection and preservation on 710 acres for the long-term.	No impacts are anticipated. However, wilderness wilderness values would not be assured long-term protection.
Mineral Resources	Mineral leasing, exploring and production would not be available on 710 acres.	Mineral leasing, exploring, and production would be moderately affected by management restrictions imposed to protect surface resources. These restrictions would cause mineral exploring and producing to occur on surface outside the WSA.
Recreation Opportunities	It is anticipated that a 10 percent increase per year in recreation use would occur due to designation. Motorized vehicle recreation would be foregone on 1.2 miles of vehicle route; however, this is not considered significant due to current low use.	No impacts are anticipated.
Wildlife Habitat & Populations	No negative impacts are anticipated to occur to wildlife habitat or populations from designation of the WSA.	No impacts are anticipated. However, wildlife habitat and population would not be assured long-term protection.
Fisheries	No negative impacts are anticipated to occur to fisheries as a result of designation. Trout populations would increase threefold in the long-term (30-50 years) from natural improvement of fishery habitat.	No negative impacts are anticipated. Trout populations would be expected to increase threefold in the short-term (10-15 years) from man-made and natural improvement of fishery habitat.
Livestock Management & Production	No impacts are anticipated.	No impacts are anticipated.

CHAPTER III

AFFECTED ENVIRONMENT

This chapter describes the environment of the Owl Creek WSA that would be affected by the alternatives considered in the EIS.

REGIONAL SETTING

The Owl Creek WSA is located along the southeastern portion of the Absaroka Range in Hot Springs County approximately 60 miles west of Thermopolis, Wyoming. The area is situated on the western border of the Big Horn Basin and to the east of the Yellowstone Plateau.

The area is characterized by high, steep ridges that contain dense stands of conifers, isolated pockets of aspen and sagebrush, and windswept, alpine tundra. Precipitation is moderate, averaging 15 to 19 inches of rain and snow per year. The South Fork of Owl Creek and Rock Creek are the major drainages. Both of these creeks feed into the Bighorn River; approximately 55 miles to the east.

The surrounding land pattern is a mixture of public, private, state, Forest Service, and Indian Reservation lands. The only legal public access is from the north and west by foot or horseback from the Washakie Wilderness Area. There are no existing rights-of-way or surface encumbrances in the WSA.

The WSA consists of three small units (total acreage, 710 acres) located in the southeastern portion of the Absaroka Mountains near the Washakie Needles. The three units border the Shoshone National Forest, Washakie Wilderness Area.

UNAFFECTED ASPECTS OF THE ENVIRONMENT

The following elements were analyzed to determine whether the alternatives addressed by this EIS would have an impact on them.

- Areas of Critical Environmental Concern
- Air Quality
- Climate
- Wild Horses

- Designated or potential Wild and Scenic Rivers
- Floodplains and Prime or Unique Farmlands
- Prime or Sole Source Drinking Water
- Socioeconomic

Because the elements listed above are either not present or would not be significantly affected, they will not be further discussed or analyzed.

AREA DESCRIPTION OF THE ENVIRONMENT

NATURALNESS

All three units are located on the major ridge line that divides the main drainages of Rock Creek and the South Fork of Owl Creek. The easternmost unit is positioned on the steep northeast facing flank of the ridge dropping down to the Rock Creek drainage. This slope has a dense stand of conifers with some barren patches at higher elevations. The western unit is on the southwest flank of the ridge in the drainage of the South Fork of Owl Creek. On this slope, conifers mingle with isolated pockets of aspen and areas of sagebrush vegetation. The central unit lies above timberline astride the ridge crest. Severe weathering here has exposed extensive area of rock outcrop and steep rock slopes largely barren of vegetation.

Elevations in the WSA range from 9,000 feet along the South Fork of Owl Creek to 10,900 feet along the ridge crest.

Imprints of humans are virtually nonexistent in the WSA. The only significant intrusion in any of the units is a jeep trail along the South Fork of the Owl Creek drainage. The impact of this trail is minimal, and its close proximity to the boundary makes it an insignificant intrusion on the natural character of the unit. In addition, fences have been installed along both Rock Creek and the South Fork of Owl Creek to prevent livestock grazing in riparian areas. The fences do not negatively impact the WSA.

The recommendation of this area for WSA status was based on its position adjacent to the Washakie Wilderness Area. These adjacent wilderness lands display unimpaired wilderness character. Visitor

AFFECTED ENVIRONMENT

use of this portion of the wilderness is very limited, and the only known development is a primitive trail in the Rock Creek unit. This trail is not part of the official trail system. The Wind River Indian Reservation lies to the southwest of the WSA, while privately owned lands form most of the southern boundary. All these lands retain their essential natural character with developments limited to a few vehicle trails and small stock management facilities.

SOLITUDE

The WSA contains 710 acres and is broken up into three units, the largest of which is 290 acres. An area this small and scattered obviously cannot, in and of itself, provide an outstanding opportunity for solitude. The rugged terrain broken by steep draws, and the excellent vegetative cover on two of the three units certainly provide a degree of solitude, but the critical factor that allows for an "outstanding" opportunity for solitude is that the WSA is adjacent to the 703,981 acre Washakie Wilderness.

PRIMITIVE AND UNCONFINED RECREATION

A wide variety of primitive recreation opportunities are available in the area. The perennial streamflows of Rock Creek and the South Fork of Owl Creek provide good trout fishing. Deer and elk hunting is excellent on the irregularly timbered slopes and broad drainage bottoms. Backpacking, hiking, and rock climbing experiences are enhanced by the scenic quality of the area. The wide variety of vegetation and the associated diversity of wildlife provide excellent nature study and photography opportunities.

All of these activities are available within the WSA, but the opportunity to experience them is by no means outstanding strictly within the WSA. The size of the units completely precludes the potential for primitive and unconfined recreation opportunities, and the pursuit of those opportunities would be severely hampered if confined solely within the boundaries of the WSA. The opportunity for a primitive recreation experience

AFFECTED ENVIRONMENT

cannot be considered outstanding unless it is considered with opportunities available in the adjacent wilderness area.

The limited visitor use data available (mostly USFS) indicates that recreation use of this area and the adjacent Washakie Wilderness lands is very limited (less than 100 visits per year). One reason for this low visitor use is the lack of legal and reliable access. Primitive routes or "jeep trails" are located along Rock Creek and the South Fork of Owl Creek but the route to these crosses private lands where there are no public access easements. During some parts of the year, particularly during hunting season, gates on these private lands are locked. The fact that the route up the South Fork of Owl Creek traverses Indian reservation lands also constrains access. This situation could change if the Forest Service pursues obtaining access along the South Fork of Owl Creek and Rock Creek enroute to the Washakie Wilderness.

SPECIAL VALUES

The study area contains critical habitat for deer, elk, bighorn sheep, and moose. There have been unconfirmed observations of Northern Rocky Mountain wolf and observations of grizzly bear around the WSA. The area's geology offers excellent opportunities for study of tertiary volcanics. There are two culturally significant sites which are believed to be eligible for the National Register of Historic Places. These sites are important for study of high altitude aboriginal occupation.

GEOLOGY AND MINERAL VALUES

The Big Horn Basin is a highly petroliferous basin with eight giant oil fields (each has a total reserves of over 100 million barrels) and produces approximately 30 million barrels of oil per year. Approximately 95 percent of this production is from Paleozoic rocks. In the Owl Creek area volcaniclastic rocks are exposed at the surface and unconformably overlie Paleozoic and Mesozoic rocks. Thin veneers of Quaternary alluvial rocks are present locally. Recent geologic mapping, in the near vicinity, has identified possible large anticlinal structures and stratigraphic traps which are potentially hydrocarbon bearing.

In addition, Petroleum Information (PI) scout cards and Hotline Energy Reports information indicate recently drilled wells 3 miles east (NE/

NE, Section 4, T. 43 N., R. 102 W.) and 3 miles southeast (NW/NE, Section 16, T. 43 N., R. 102 W.) encountered the Phosphoria and Tensleep formations beneath Tertiary volcaniclastic rocks. Based on reports from these wells, reservoir rocks are potentially present in the WSA.

The probable presence of reservoir quality rocks, potential large anticlinal traps and the proximity of oil shows in potential reservoir rocks indicate the potential for occurrence of oil in the Owl Creek WSA is high.

In addition, approximately 10 miles southwest of the WSA a well was drilled in 1956 by Shell. This well was drilled through 7,400 feet of granite and schist and then drilled through 1,278 feet of overturned Paleozoic through Cretaceous rocks. At a depth of 8,678 feet a normal section of Cretaceous through Jurassic rocks was encountered. The well reached a total depth of 10,689 feet in the Jurassic Sundance formation. A drill stem test in the overturned Phosphoria and Tensleep section recovered 69 barrels of gas cut muddy water. The well was later plugged and abandoned. The subthrust sedimentary section penetrated by this well may extend some distance northeast toward the study area.

The central and Rock Creek units of the WSA are leased (see Map III-1). A summary of the lease activity is shown on Table III-1 - Summary of Lease Activity.

RECREATION OPPORTUNITIES

Opportunities for recreation are available in a semiprimitive environment with opportunities for motorized vehicle uses. The adjacent Washakie Wilderness area affects recreation opportunities at Owl Creek. Specific opportunities include hunting, fishing, hiking, rock and mountain climbing, camping horseback riding, photography, sightseeing, and nature study. Recreation use is dispersed and visitation is low (less than 100 visits per year based on USFS information and professional knowledge). Remoteness, lack of access, and lack of public knowledge are factors which deflate use.

Fishing and hunting are the primary opportunities in the area. Approximately 60 percent of all visits can be attributed to big game hunting, 30 percent to trout fishing, and 10 percent to use associated with backpacking in the Washakie Wilderness. The South Fork of Owl Creek and Rock Creek are rated as Class II fisheries (trout fisheries of statewide importance) by the Wyoming

TABLE III-I
SUMMARY OF LEASE ACTIVITY

WSA Section	Lease Number	Lease Acreage	Acreage in WSA	Lease Expiration	Lease Stipulations Pertaining to Study Area Lands (See Appendices C & D)
Central	W-73257	2,120	280	03-31-91	No Surface Occupancy & Wilderness Protection
Rock Creek	W-71940	2,600	140	02-28-91	Oil & Gas Stipulations & Wilderness Protection

Game and Fish Department. These creeks currently provide opportunities for approximately one fisherman per mile.

The Bureau has not initiated on-site visitor management restrictions or visitor-related facilities. Motorized vehicle use is restricted to designated routes along the lower benches near the South Fork of Owl Creek and Rock Creek.

The study area is a part of the Absaroka Range which is characterized by Tertiary volcanics. The nearby Washakie Needles (12,518 feet) dominates the landscape and provides one of the most unique and dramatic scenic settings along the entire Absaroka Range east flank. Portions of the study area above 10,000 feet are characterized by alpine tundra and windswept ridges with rock outcrops which take on a badland type character. Below 10,000 feet and in side drainages are forested slopes which contain pine, spruce, fir, and aspen. Riparian vegetation extends like fingers along the South Fork of Owl Creek and Rock Creek. This array of vegetation and topography provides a visual contrast that is appealing to the visitor.

WILDLIFE

Owl Creek and adjacent lands provide significant habitat for a variety of wildlife species. Species vary from sedentary species with small home ranges to highly mobile species occupying widely separated seasonal habitats.

Big Game. Elk and mule deer are the primary big game species. Both utilize the area for seasonal and migratory habitat. The South Fork of Owl Creek and adjacent lands within a 3 mile radius provide crucial winter habitat for 50 to 350 elk; depending on the climatic conditions of any year. Approximately 300 elk utilize the area as a spring/

fall migratory route to summer ranges on the East Fork of the Wind River and South and Middle Forks of the Wood River. In addition, the area is utilized for elk calving. See Map III-2, Elk Distribution Patterns.

Owl Creek and its surrounding area support mule deer habitat in the spring/summer/fall. Up to 40 to 50 deer utilize the area in the summer and fall while less than 20 individuals utilize the area in the winter. Approximately 115 mule deer migrate through the area in the spring and fall.

Other species that utilize the area include bighorn sheep, moose, and antelope. The bighorn sheep population is estimated at 20 individuals on the adjacent Wind River Indian Reservation. This population base is considered to be in decline due to competition with cattle for forage on winter ranges and from illegal poaching. The area is important for, and has been seriously discussed for, potential bighorn sheep transplants to supplement this declining herd. See Map III-3, Bighorn Sheep Distribution Patterns.

The riparian and aspen and conifer areas of both the South Fork of Owl Creek and Rock Creek are utilized by approximately 10 moose. Use of these areas by moose is expected to increase as the study area's riparian zones improve.

All big game population numbers are goals set by the Wyoming Game and Fish Strategic Plan.

Trophy Big Game and Predators. The area is known habitat for black bear, mountain lion, bobcat, and coyote. The population status of these species is unknown. The presence of these species is dependent on prey species abundance and the availability of riparian areas.

Threatened and Endangered Species. Thirty-two unconfirmed Northern Rocky Mountain wolf observations have been documented in the

Map III-2
Owl Creek WY-010-104
Elk Distribution Patterns

*Distribution patterns are not available for land managed by the Forest Service

AFFECTED ENVIRONMENT

general Owl Creek Area since 1978. In addition, several unsubstantiated observations have been reported on the adjacent Wind River Indian Reservation. The Draft Wolf Recovery Plan recognized the area as wolf habitat.

Grizzly bears have been observed twice over the past seven years in the area. The Grizzly Bear Recovery Plan does not recognize the area as occupied habitat; however, Owl Creek is within 14 miles of occupied habitat and it is expected that infrequent transient use does occur.

No evidence exists to suspect that black-footed ferret, peregrine falcon, or bald eagle utilize the area.

Informal consultation with the U. S. Fish and Wildlife Service concerning threatened and endangered species that pertain to the WSA is currently in progress.

FISHERIES

The South Fork of Owl Creek and Rock Creek are important sport trout fisheries for rainbow, brook, and Yellowstone cutthroat trout. Both of these creeks have been identified as Class II trout fisheries (trout fisheries of statewide importance) by the Wyoming Game and Fish Department. Fish populations for the South Fork of Owl Creek are estimated at 124 cutthroat per mile and 13 rainbow per mile. Estimates for Rock Creek are 156 cutthroat per mile and 26 rainbow per mile.

The South Fork of Owl Creek is identified as the highest priority stream, in the Grass Creek Resource Area, for fishery habitat enhancement and improved public fishing opportunities. Water quality is excellent in the South Fork of Owl Creek.

LIVESTOCK GRAZING

The study area is located in an area that receives an average of 15"-19" of annual precipitation. Soils are loamy and shallow loamy. Spruce-fir timber stands on greater than 40 percent slopes dominate over half of the study area. Slightly over 280 acres is steep windblown terrain over 10,000 feet elevation and has little to no forage available to livestock. A few open, generally flat areas are predominately sagebrush and Idaho fescue.

The WSA is in portions of three grazing allotments which are summarized in Table III-2 - Summary of Livestock Grazing Management.

All three allotments are "I" category; meaning that they are considered for intensive management and for improving resource conditions. Access into the study area for livestock includes a four-wheel drive route up Rock Creek and up the South Fork of Owl Creek. There is no legal access or easements. For the purpose of protecting high alpine vegetation, forage is not allocated above elevations of 10,000 feet. To date, there have been no range improvement projects in the WSA; however, a wildlife habitat improvement fence has been installed along Rock Creek and the South Fork of Owl Creek to exclude cattle from riparian areas.

Allotment management plans will be prepared during the next three to five years for the allotments affecting the WSA. The AMPs would be prepared with the goal of improving the grazing resources, however, it is not anticipated that these AMPs would affect AUM adjustments or implement new projects that would affect the WSA.

CULTURAL RESOURCES

Evidence of cultural use in the Owl Creek area dates back approximately 8,000 years. Prehistorically, late Paleo-Indians used the southern Absaroka Range for hunting and gathering. Elk, bighorn sheep and bison were the primary animals hunted. Little is known historically about the area; however, it is assumed that Shoshone people utilized the area for hunting and gathering.

Euroamericans probably entered the area in the mid 18th to 19th century for trapping purposes. Sheep and cattle grazing operations have historically utilized the area.

Two sites, or approximately 5 percent of the WSA, are culturally significant. The first site is a prehistoric lithic scatter containing evidence of late Paleo-Indian occupation. This site is significant because it is the only known site of its kind located at this elevation in the southern Absaroka Range. In addition, its condition and future research potential enhance the site's significance. The second site is a rock shelter with indications of prehistoric occupation. The site is significant due to its high potential for further research and information of high altitude aboriginal occupation. Both sites are believed to be eligible for the National Register of Historical Places; however, eligibility work has not been pursued at this time.

Approximately 50 percent of the WSA is culturally important from a general environmental standpoint and for potential for additional cultural information. The remainder of the WSA has unknown cultural potential.

SOILS

The soils in the study are predominately shallow, well drained, loamy mountain soils with high contents of gravels and stones. Slopes range from 20 to 100 percent throughout most of the area and 1 to 20 percent in the canyon bottoms. There are numerous rock outcrops. The soils developed from igneous and sedimentary rock parent materials. Nearly half of the area has soils with rooting depths of 20 to 40 inches that support woodland vegetation. The remainder of the study area has soils with 4 to 20 inch rooting depths that support grasses and shrubs. The grassland areas commonly have fragile, sod covered topsoil over relatively infertile substratum. Runoff rates are moderate to high. The susceptibility of these soils to erosion are low; less than 1 ton per acre per year. Present soil loss rates are 0.5 to 1.0 tons per acres per year on the nonforested areas and less than 0.5 tons on the forested areas.

AFFECTED ENVIRONMENT

TABLE III-2
SUMMARY OF LIVESTOCK GRAZING MANAGEMENT

Allotment	Season of Use	Class of Livestock	Total Acres Allotment	Federal Acres	State Acres	Private Acres	WSA Acres In Allotment	AUMs on Federal	AUMs In WSA
Black Draw #0525 #0525	Summer	Cattle	4,440	1,600	640	2,220	140	240	0
MacKensie-Vass #0609	Summer	Cattle	4,605	2,125	0	2,480	570	77	21
Falls Creek #0542	Summer	Cattle	3,280	1,960	0	1,320	20	215	0

See Map 11-4, Owl Creek Grazing Allotments.

CHAPTER IV

ENVIRONMENTAL CONSEQUENCES

This chapter analyzes the expected impacts and consequences of wilderness designation or nondesignation on the affected environment described in Chapter III. Both alternatives identified were analyzed in terms of the resource elements discussed in Chapter III.

The following assumptions were used to provide a standard framework for impact analysis and comparison:

1. Management actions on designated wilderness would be in accordance with the Wilderness Management Policy (September 1981) and the Wilderness Act of 1964.
2. Management actions on areas not designated as wilderness would be based on existing management plans and applicable laws, regulations, and policies.
3. Until a congressional decision is reached on wilderness designation or nondesignation,

the area will continue to be managed to protect its wilderness character as required by the FLPMA and the BLM Interim Management Policy and Guidelines for Lands Under Wilderness Review.

4. BLM will have sufficient funding and work force to implement the management options selected.

The analysis of environmental consequences documented in this chapter considered for each alternative beneficial and adverse environmental consequences which could not be avoided, the relationship between short-term uses and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources. Measures which could potentially mitigate the adverse environmental impacts of an alternative were also evaluated. These points are discussed in the following narrative when appropriate.

ENVIRONMENTAL CONSEQUENCES

ALL WILDERNESS ALTERNATIVE (PROPOSED ACTION)

This alternative would assure that the area's wilderness and other unique surface resource values would be protected for future generations.

Effects on Wilderness Values. Designation of Owl Creek would assure long-term benefits of wilderness values on 710 acres. In addition, opportunities for solitude and primitive and unconfined recreation would be expanded in a designated Owl Creek/Washakie Wilderness Area encompassing 704,691 acres.

Effects on Mineral Exploration and Production. Wilderness designation would prohibit mineral leasing, exploring and producing on 710 acres in the WSA. Foregoing this development would be insignificant because the entire WSA contains topographic and environmental characteristics that exceed limitations imposed by Wyoming's oil and gas lease stipulations and because the acreage is so small that oil and gas could be developed from offsite by directional drilling.

Effects on Recreation Opportunities. Wilderness designation would have an effect on recreation opportunities in the WSA. Closure of 710 acres to motorized uses would cause some hunter and angler displacement to areas outside the WSA. This is considered insignificant considering the low motorized use occurring. Designation would cause an increase in visitor use of 10 percent per year for the first five years and would then level off to an increase of 5 percent per year thereafter; for these visitors seeking primitive recreation opportunities. This increase would be attributed to an increased awareness of the area's hunting, fishing and hiking opportunities.

Effects on Wildlife Habitat and Populations. Wilderness designation would assure long-term protection of big game habitat from surface-disturbing activities. Consequently, big game populations would continue to be managed at the populations stated in Chapter III-Wildlife. Maintenance of these big game populations assures that the prey base for Northern Rocky Mountain wolf and grizzly bear would be maintained. Long-term protection of habitat would result in no significant affect to wildlife.

Effects on Fisheries. Wilderness designation would assure long-term protection of riparian and stream related habitats on 1.2 miles of the South Fork of Owl Creek and .75 miles of Rock Creek from surface disturbing activities. This long-term assurance coupled with maintenance of existing fence to exclude cattle from the South Fork of Owl Creek and Rock Creek would improve the riparian and stream related habitats, thus increasing trout populations three-fold over the long-term (30-50 years).

Effects on Livestock Grazing. Wilderness designation would not cause changes in existing livestock grazing management; except 1.2 miles of vehicle trail on the South Fork of Owl Creek would be closed to vehicle use for other than emergency purposes. This would cause no significant impacts to livestock grazing management because no new actions are proposed and because the closure of 1.2 miles of vehicle trail affects only a small portion of the allotment that has only 21 AUMs.

NO WILDERNESS ALTERNATIVE (NO ACTION)

This alternative would provide for resource use and development while providing protection of the unique surface resources found in the WSA. However, the management intent discussed in Chapter II could be subject to reassessment and waiver of lease stipulations for the use of public lands in the area. Consequently, long-term protection of surface resources could not be assured. The environmental consequences of any reassessment of management intent or waiver of lease stipulations could only be done through the preparation of appropriate environmental documentation. The following discussion assumes that all protective actions proposed (no surface occupancy) would be applied.

Effects on Wilderness Values. It is not anticipated that this alternative would affect the area's naturalness, size, and opportunities for primitive and unconfined recreation. However, because the area would not be designated as wilderness, protection of the area's wilderness values would not be assured for future generations.

Effects on Mineral Resources. This alternative would impose management restrictions (no surface occupancy) designed to protect surface resources; resulting in potential mineral exploration and production to occur outside the WSA. This would cause inconvenience and increase cost, subjecting the operator to develop oil and gas resources offsite by directional drilling.

Effects on Recreation Opportunities. This alternative would propose no actions that would affect recreation opportunities.

Effects on Wildlife Habitat and Populations. This alternative would be similar to the Proposed Action except that there would be no long-term assurance of habitat protection from surface disturbing activities; therefore, no significant affects are anticipated to occur to wildlife habitat or the Northern Rocky Mountain wolf or grizzly bear.

Effects on Fisheries. This alternative would have similar impacts as the proposed action except that riparian and stream related enhancement projects would be implemented faster; resulting in positive impacts to trout fisheries. These positive impacts would cause a three-fold increase in trout populations over the short-term (10-15 years).

Effects on Livestock Production and Management. This alternative would not impact livestock production and management because there would be no change in management intent from the current situation.

CHAPTER V

CONSULTATION AND COORDINATION

DEVELOPMENT OF THE PROPOSALS

Consultation and coordination in the development of the proposed action and alternatives addressed in this EIS has been an ongoing process throughout the inventory and planning phases of the wilderness review.

The inventory phase provided two official public comment periods during which the public was asked to provide information on the suitability of areas for identification as wilderness study areas. The first of these comment periods, during the spring of 1979, dealt with proposed initial inventory decisions and was widely publicized in state and local news media. In the Worland District briefings were given for the planning commissions and county commissioners of the four counties in the district, open houses were held in Worland, Greybull, and Cody, and a formal public meeting was held in Worland. District staff also made presentations to a number of local civic organizations. In April of 1980, proposed intensive inventory decisions were published and a second comment period was initiated. Again there were open houses, public meetings, briefings for local government commissions, presentations to interested groups, and extensive news media coverage. Comments were accepted through August 19, 1980, and were used in making final WSA determinations.

The planning phase of the wilderness review was handled in the Grass Creek Resource Area as part of a management framework plan revision. This planning effort included the full range of public involvement opportunities that are required under the Bureau planning system. These standard procedures were supplemented for wilderness issues by letters requesting comments mailed to local and state government, other federal agencies, mineral interests, livestock operators, regional and national conservation organizations, and other individuals or groups interested in wilderness in the Worland District. The responses received were utilized in developing the EIS alternatives for the study areas in the Grass Creek Resource Area.

PUBLIC SCOPING

The wilderness review inventory phase and the planning step of the study phase for the Owl Creek involved many people. Public comment periods, open houses, public meetings, and mail solicitations gathered information about the wilderness views and concerns of the public. Information and comment were obtained from state and local government and from other federal agencies. (A list of the organizations, agencies, and individuals consulted during this process is provided in Chapter V.) Within BLM, a wide variety of staff and management specialists were involved. The participation of these groups resulted in certain issues being identified as central to an understanding of the effects of wilderness designation or nondesignation of the WSA. These issues are:

- Mineral exploration and development...oil and gas.
- Livestock management and production.
- Wilderness and other special values...naturalness, solitude, primitive and unconfined recreation, and proximity to the Washakie Wilderness.
- Wildlife...elk, bighorn sheep, and deer habitat.
- Threatened and endangered species...prey base for Northern Rocky Mountain wolf and grizzly bear.
- Fisheries...water quality and Wyoming Class II trout Fishery.

In addition, the following issues were eliminated from analysis because they did not provide an understanding of the effects of wilderness designation or nondesignation of the WSA:

- Timber Production...utilization of the WSA's forestry resources in the foreseeable future.
- Locatable and Salable Minerals...exploration and production.

CONSULTATION AND COORDINATION

CONSISTENCY

FLPMA requires that Bureau plans be as consistent as possible with the plans of other agencies. In addition to consistency, the Bureau must also ensure that federal laws, policies, and regulations are considered. This document considered the plans of cities, counties, the state, and other federal agencies. No inconsistencies have been found.

AGENCIES AND ORGANIZATIONS CONSULTED

The following agencies, organizations, and individuals have been consulted in the development of the supplemental EIS.

PUBLIC INPUT RECEIVED

Federal Agencies

Bureau of Reclamation
Fish and Wildlife Service
Forest Service
Geological Survey
National Park Service

State Agencies

Wyoming Agricultural Department
Wyoming Conservation Commission
Wyoming Department of Environmental Quality
Wyoming Game and Fish Department
Wyoming Geological Survey
Wyoming Oil and Gas Commission
Wyoming Recreation Commission
Wyoming Water Development Commission

Local Government

Big Horn County
Hot Springs County
Park County
Washakie County

Business and Industry

ANR Production Company
Amoco Production Company
Atlantic Richfield Company
American Natural Gas Production
American Quasar Petroleum Company
Arkla Exploration Company
Bear Oil Company

Burk, Bakwin, and Henery
Chevron USA, Inc.
Champlin Petroleum Company
Cody Gas Company
Exxon Company
Far West Exploration
Gulf Oil Exploration and Production Company
Husky Oil Company
L. U. Sheep Company
Michigan Wisconsin Pipeline Company
Minerals Exploration Coalition
Petroleum Association of Wyoming
Petroleum Information Corporation
Phelps Dodge Corporation
Sabine Production
Sage Creek Cattle Association
Santa Fe Industries, Inc.
Tenneco Oil Exploration and Production Company
True Oil Company
Tetra Tech., Inc.
Texas Gas and Exploration Corporation
Union Oil and Gas

Organizations

American Wilderness Alliance
Bowhunters of Wyoming
Delta Four Wheelers
Friends of the Earth, Inc.
Park County 4-H Council
Powder River Basin Resource Council
Shoshone Rock Club
Sierra Club
South Bighorn Conservation District
Wilderness Society
Willwood Irrigation District
Wyoming Farm Bureau
Wyoming Gem and Mineral Society
Wyoming Heritage Society
Wyoming Historical Society
Wyoming Stock Growers Association
Wyoming Wilderness Association
Wyoming Wildlife Federation
Wyoming Wood Growers Association

REVIEW OF THE EIS

The Worland District maintains a mailing list made up of individuals, groups, and organizations that have expressed an interest in district wilderness issues. The following businesses, agencies, organizations, and individuals have been requested to comment on this supplemental draft EIS:

Federal Government

Department of Agriculture
Forest Service
Soil Conservation Service
Department of Defense
Army Corp of Engineers

CONSULTATION AND COORDINATION

Department of Energy
Western Area Power Administration
Department of the Interior
Bureau of Indian Affairs
Bureau of Mines
Bureau of Reclamation
National Park Service
Fish and Wildlife Service
Geological Survey
Environmental Protection Agency
Nuclear Regulatory Commission
Wind River Indian Reservation

State of Wyoming

Office of the Governor
Wyoming Department of Agricultural Quality
Wyoming Department of Agriculture
Wyoming Department of Environmental Quality
Wyoming Department of Public Lands and Farm Loans
Wyoming Game and Fish Department
Wyoming Geological Survey
Wyoming Highway Department
Wyoming Land Office
Wyoming Oil and Gas Conservation Commission
Wyoming Recreation Commission
Wyoming State Clearing House
Wyoming State Engineer
Wyoming Water Development Commission

Congressional Offices

The Honorable Richard Cheney
The Honorable Alan K. Simpson
The Honorable Malcolm Wallop

State Legislators

Office of Representative, Big Horn County
Office of Representative, Hot Springs County
Office of Representative, Park County
Office of Representative, Washakie County
Office of Senator, Big Horn County
Office of Senator, Hot Springs County
Office of Senator, Park County
Office of Senator, Washakie County

County Government

Bighorn County Commissioners
Hot Springs County Commissioners
Park County Commissioners
Washakie County Commissioners

Businesses

5-Y Lumber Company
Amerada Hess
Amoco Production Company
AninOil, Inc.
Anschutz Corp.
Apache Corporation
Archeological Consultants, Inc.
Arco Exploration Company

Atlantic Richfield Company
Beard Oil Company
Big Horn REA
Blackburn Drilling
Boydston and Franzen Well Service
Brasher, Inc.
Bronco Oil and Gas Company
Buckhorn Petroleum Company
Champlin Petroleum Company
Chevron USA, Inc.
Coastal Oil and Gas Corp.
Cody Lumber Company
Conoco Oil Company
Coronado Oil Company
Cottonwood Acres Joint Ventures
Dale Weaver, Inc.
Dresser Industries-Minerals Division
Environmental Management Services Company
Equity Oil Company
Exxon Company USA
Freeport Exploration Company
George J. Schreibies Trust
Goton Outfitters
Grosch Construction Company
Homestake Mining Company
Husky Oil Company
John W. Donnell Assoc., Inc.
Kaycee Bentonite Corp.
Marathon Oil Company
May Petroleum, Inc.
Meridian Land and Mineral Company
Mobil Oil Company
Montana-Dakota Utilities, Inc.
Mountain Geophysical
Norpac Exploration Services, Inc.
Northwestern Resources
Pacific Power and Light Company
Phillips Oil Company
Prairie Winds Consulting Service
Sohio Petroleum Company
Snyder Oil Company
Superior Oil Company
Tenneco Oil Exploration & Prod. Company
Texaco, Inc.
Texas Gas Exploration Corp.
Tri-County Telephone Assn., Inc.
Union Oil Company of California
Union Texas Petroleum
Wyo-Ben, Inc.

Ranching/Grazing Interests

91 Ranch
Anderson Ranch Company
Baird & Sons, Inc.
Baird Cattle Company
Bear Creek Ranch
Brewster Ranch
C. A. Renner Ranch
Charles W. Duncan Jr.
Franklin Floyd
H. D. Ranch
HSB, Inc.
Hayes Bros. Land & Livestock
High Island Ranch
Hillberry Cattle Company
Irma Hotel dba YH Ranch
Jarrard & Kathleen Reed
Kis Land & Cattle Company

CONSULTATION AND COORDINATION

LU Sheep Company
Mackenzie & Vass
Paintrock Hereford Ranch
Pitchfork Ranch Company
Shell Valley Ranch
Switchback Ranches
TV Land & Cattle Company, Inc.
The Four Eulers
Triangle X Ranch
Triple S Ranch
Winninger Ranch
Wyoming Wool Growers Assoc.

Friend of Wild Wyoming Deserts
Minerals Exploration Coalition
Native Conservancy
Natural Resource Defense Council
Park County Resource Council
Public Land Council
Sierra Club
Thermopolis Pick and Trowel Club
Wilderness Society
Willwood Irrigation District
Wyoming Heritage Society
Wyoming Wildlife Federation

Organizations

American Wilderness Alliance
Audubon Society-High Plains Chapter
Earth First!

In addition to the above list, the supplemental draft EIS will be sent to other businesses, organizations, and individuals.

TABLE V-1
LIST OF PREPARERS

Name	EIS Assignment	Education	Years of Experience
Tim Smith	Team Leader/ Wilderness Resources	BS - Outdoor Recreation Management & Administration	7
Marty Sharp	Recreation/ Forestry Resources	BS - Outdoor Recreation, MS - Outdoor Recreation	1
Ken Stinson	Livestock Grazing	BS & MS - Range Management	17
Jeff Denton	Wildlife Resources	BS & MS - Wildlife Management	14
Fred Crockett	Mineral Resources	BS & MS - Geology	11
William Wilson	Hydrology	BS - Watershed Management	5
Paul Meyer	Soils	BS - Biology, MS - Botany	7
Dave Baker	Recreation	BS - Outdoor Recreation	1
M. Lee Douthit	Archeology/ Cultural Resources	PhD - Anthropology	4½
Leonard Larsen	Lands/Realty	BS - Range Management	18
Diane Losey	Word Processing	Work Experience	8
Margy Tidemann	Word Processing	Work Experience	25
Becky Brown	Word Processing	Business College	9
Cindy Schelin	Support Services	Business College	18

Document Review:

Edward Fisk, Associate District Manager
Arnie Dougan, Chief, Branch of Planning & Environmental Assistance
George Hollis, Assistant District Manager, Lands & Renewable Resources
Phyllis Roseberry, Grass Creek Area Manager

APPENDIX A

DEFINITION OF WILDERNESS CHARACTERISTICS

Section 603(a) of the Federal Land Policy and Management Act directs the BLM to use the criteria given by the Wilderness Act of 1964, in identifying areas having wilderness values. Section 2(c) of the Wilderness Act states the relevant criteria as follows:

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and

managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value."

These characteristics are explained in detail in the "Wilderness Inventory Handbook — Policy, Direction, and Procedures and Guidance for Conducting Wilderness Inventory on the Public Lands; September 1978."

APPENDIX B

WILDERNESS STUDY CRITERIA AND STANDARDS

The BLM Wilderness Study Policy specifies factors that are to be considered in developing suitability recommendations in the study phase of the wilderness review process. This guidance is summarized below:

The primary goal of the BLM wilderness study process is to determine an area's suitability or unsuitability for preservation as wilderness. The BLM will recommend for wilderness designation only those areas for which it has been determined, through the Bureau's multiple resource planning process and public involvement, that wilderness is the most appropriate use of the land and its resources. In addition, areas recommended as suitable for wilderness designation should possess wilderness values and multiple resource benefits capable of balancing the benefits of other resource values and uses which would be foregone due to wilderness designation.

In order to systematically evaluate these broad questions all BLM wilderness recommendations, both suitable and unsuitable for preservation as wilderness, will be justified on the basis of the two planning criteria and six quality standards listed below.

Criterion Number 1, Evaluation of Wilderness Values

Consider the extent to which each of the following contributes to the overall value of an area for wilderness purposes.

1. Mandatory wilderness characteristics: size, naturalness and outstanding opportunities for solitude or primitive, unconfined recreation.
2. Special features: the presence or absence and quality of ecological or other features of scientific, educational, scenic, or historical value.
3. Multiple-resource benefits: the benefits to other multiple-resource values and uses that only wilderness designation of the area could ensure.
4. The extent to which wilderness designation of the area under study would contribute to expanding the diversity of the NWPS from the standpoint of the factors listed below:

- a. Expanding the diversity of natural systems and features as represented by ecosystems and landforms.
- b. Assessing the opportunities for solitude or primitive recreation within a day's driving time of major population centers.
- c. Balancing the geographic distribution of wilderness areas.

Criterion Number 2, Manageability

The area must be capable of being effectively managed to preserve its wilderness character.

Standard Number 1, Energy and Mineral Resource Values

Recommendations as to an area's suitability or unsuitability for wilderness designation will reflect a thorough consideration of any identified or potential energy and mineral resource values.

Standard Number 2, Impacts on Other Resources

Consider the extent to which other resource values or uses of the area would be foregone or adversely affected as a result of wilderness designation.

Standard Number 3, Impact of Nondesignation of Wilderness Values

Consider the alternative use of land under study if the area is not designated as wilderness, and the extent to which the wilderness values of the area would be foregone or adversely affected as a result of this use.

Standard Number 4, Public Comment

In determining whether an area is suitable or unsuitable for wilderness designation, the BLM wilderness study process will consider comments received from interested and affected public groups at all levels—local, state, regional, and national. Wilderness recommendations will not be based exclusively on a vote-counting majority rule system. BLM will develop its recommendations by considering public comment in conjunction with its analysis of a wilderness study area's multiple resource and social and economic values and uses.

APPENDIX B

Standard Number 5, Local Social and Economic Effects

In determining whether an area is suitable or unsuitable for wilderness designation, BLM will give special attention to adverse or favorable social and economic effects, as identified through the wilderness study process, that wilderness designation will have on local areas.

Standard Number 6, Consistency With Other Plans

In determining whether an area is suitable or unsuitable for wilderness designation, BLM will consider the extent to which the recommendation is consistent with officially approved and adopted resource-related plans of other federal agencies, state and local governments, and Indian tribes (and the policies and programs contained in such plans), as required by FLPMA and BLM Planning regulations.

APPENDIX C

WILDERNESS PROTECTION STIPULATION

By accepting this lease, the lessee acknowledges that the lands contained in this lease are being inventoried or evaluated for their wilderness potential by the Bureau of Land Management (BLM) under section 603 of the Federal Land Policy and Management Act of 1976, 90 Stat. 2743 (43 USC Sec. 1782), and that exploration or production activities which are not in conformity with section 603 may never be permitted. Expenditures in leases on which exploration drilling or production are not allowed will create no additional rights in the lease, and such leases will expire in accordance with law. Activities will be permitted under the lease so long as BLM determines they will not impair wilderness suitability. This will be the case either until the BLM wilderness inventory process has resulted in a final wilderness inventory decision that an area lacks wilderness characteristics, or in the case of a wilderness study area until Congress has decided not to designate the lands included with this lease as wilderness. Activities will be considered nonimpairing if the BLM determine that they meet each of the following three criteria:

It is temporary. This means that the use or activity may continue until the time when it must be terminated in order to meet the reclamation requirement of paragraphs (b) and (c) below. A temporary use that creates no new surface disturbance may continue unless Congress designates the area as wilderness, so long as it can easily and immediately be terminated at that time, if necessary to management of the area as wilderness.

It is reclaimable. Any temporary impacts caused by the activity must, at a minimum, be capable of being reclaimed to a condition of being substantially unnoticeable in the wilderness study area (or inventory unit) as a whole by the time the Secretary of the Interior is scheduled to send his recommendations on that area to the President, and the operator will be required to reclaim the impacts to that standard by that date. If the wilderness study is postponed, the reclamation deadline will be extended accordingly. If the wilderness study is accelerated, the reclamation deadline will not be changed. A full schedule of wilderness studies will be developed by the Department upon completion of the intensive wilderness inventory. In the meantime, in areas not yet scheduled for wilderness study, the reclamation will be scheduled for completion

within 4 years after approval of the activity. (Obviously, if and when the Interim Management Policy ceases to apply to an inventory unit dropped from wilderness review following a final wilderness inventory decision of the BLM State Director, the reclamation deadline previously specified will cease to apply.) The Secretary's schedule for transmitting his recommendations to the President will not be changed as a result of any unexpected inability to complete the reclamation by the specified date and such inability will not constrain the Secretary's recommendation with respect to the area's suitability or unsuitability for preservation as wilderness.

The reclamation will, to the extent practicable, be done while the activity is in progress. Reclamation will include the complete recontouring of all cuts and fills to blend with the natural topography, the replacement of topsoil, and the restoration of plant cover at least to the point where natural succession is occurring. Plant cover will be restored by means of reseeding or replanting, using species previously occurring in the area. If necessary, irrigation will be required. The reclamation schedule will be based on conservative assumptions with regard to growing conditions, so as to ensure that the reclamation will be complete, and the impacts will be substantially unnoticeable in the area as a whole, by the time the Secretary is scheduled to send his recommendations to the President. ("Substantially unnoticeable" is defined in Appendix F of the Interim Management Policy and Guidelines for Lands under Wilderness Review.)

It is terminated. When the activity is terminated, and after any needed reclamation is complete, the area's wilderness values must not have been degraded so far, compared with the area's values for other purposes, as to significantly constrain the Secretary's recommendation with respect to the area's suitability or unsuitability for preservation as wilderness. The wilderness values to be considered are those mentioned in section 2(c) of the Wilderness Act, including naturalness, outstanding opportunities for solitude or for primitive and unconfined recreation, and ecological, geological or other features of scientific, educational, scenic or historical value. If all or any part of the area included within the leasehold estate is formally designated by Congress as wilderness, exploration and development

APPENDIX C

operations taking place or to take place on that part of the lease will remain subject to the requirements of this stipulations, except as modified by the Act of Congress designating the land as wilderness. If Congress does not specify in such act how existing leases like this one will be managed, then the provisions of the Wilderness Act of 1964 will apply, as implemented by rules and regulations promulgated by the Department of the Interior.

APPENDIX D

CURRENT OIL AND GAS LEASE STIPULATIONS PERTAINING TO OWL CREEK WSA

- No occupancy or other surface disturbance will be allowed within 500 feet of Rock Creek, small live water, or intermittent streams. This distance may be modified when specifically approved in writing by the authorized officer.
 - No occupancy or other surface disturbance will be allowed on slope's in excess of 25 percent without written permission from the authorized officer.
 - In order to protect important seasonal wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from May 1 to November 1. This limitation does not apply to maintenance and operation of producing wells.
- Exceptions to this limitation in any year may be specifically authorized in writing by the authorized officer.
- In order to minimize watershed damage, the authorized officer may prohibit exploration, drilling or other development during muddy and/or wet periods. This limitation does not apply to maintenance and operation of producing wells.
 - To maintain esthetic values, all semi-permanent and permanent facilities may require painting or camouflage to blend with the natural surroundings. The paint selection or method of camouflage will be subject to approval by the authorized officer.

GLOSSARY

ALLOCATION (LIVESTOCK GRAZING). The total number of animal unit months of livestock grazing on public lands apportioned and attached to base property owned or controlled by a permittee or lessee.

ALLOTMENT MANAGEMENT PLAN (AMP) A written program of livestock grazing management designed to attain specific management goals in a grazing allotment.

ANIMAL UNIT MONTH (AUM). The forage needed to support one cow, one horse, or five sheep for a month.

CRETACEOUS. One of the major periods in geologic time dating from 130 million years ago and ended 65 million years ago.

CULTURAL RESOURCES. Evidence of historic or prehistoric human occupation or activity reflected in sites, structures, artifacts, ruins, tools, art objects, etc.

ECOSYSTEM. A system formed by the interaction of a community of organisms with their environment.

ENDANGERED SPECIES. Any species which is in danger of extinction throughout all or a significant portion of its ranges.

ENVIRONMENTAL IMPACT STATEMENT (EIS). A written analysis of the impacts on the environment of a proposed project or action.

FEDERAL LAND POLICY AND MANAGEMENT ACT (FLPMA). Public Law 94-579, October 21, 1976, A Law which provides most of BLM's legislated authority, direction, policy and basic guidance.

HABITAT. A specific set of physical conditions that surround a species, group of species or a large community. In wildlife management, the major constituents of habitat are considered to be food, water, cover and living space.

HERD MANAGEMENT PLAN. An activity plan which addresses the management of wild horses or burros and their habitat on a herd management area.

INTERIM MANAGEMENT (WILDERNESS). Bureau policy mandated by FLPMA providing protection of wilderness character on lands being studied for possible wilderness designation.

INTRUSION. A feature which is out of context with the characteristic landscape.

JURASSIC. One of the major periods in geologic time dating from 192 million years ago to 135 million years ago.

MANAGEMENT FRAMEWORK PLAN (MFP). Land use plan for public lands which provides a set of goals, objectives, and constraints for a specific planning area to guide the development of detailed plans for the management of each resource. It is the BLM's land use plan.

MESOZOIC. One of the major eras of geologic time. Began about 225 million years ago and ended about 65 million years ago.

MINERAL POTENTIAL.

LOW: Evidence indicates one or more of the following probably are not present: hydrocarbon source rock, reservoir quality rock, or trapping mechanism. Hydrocarbon occurrences are not present near or in the WSA.

MODERATE: Evidence indicates of the following may be present: hydrocarbon source rock, reservoir quality rock, and trapping mechanism. Hydrocarbon occurrences in potential reservoir rock are not present near or in the WSA.

HIGH: Evidence indicates all of the following are present: hydrocarbon source rock, reservoir quality rock, and trapping mechanism. Hydrocarbon occurrences in potential reservoir rock are present near or within the WSA.

UNKNOWN: Sufficient data are not available to make a reasonable estimate of oil and gas potential.

NATURAL CHARACTER. Refers to an area which generally appears to have been affected primarily by the forces of nature with the imprint of man's work substantially unnoticeable.

PALEOCENE. Subdivision of the Tertiary period. Began about 65 million years ago and ended about 53.5 million years ago.

PALEOZOIC. One of the major eras of geologic time. Began about 570 million years ago and ended about 225 million years ago.

PERMITTED USE (GRAZING). An authorization that permits the grazing of a specified number of livestock on a designated area of BLM lands for a period of time.

PLEISTOCENE. One of the two subdivision of the Quaternary period. Began about 2 to 3 million years ago and ended about 10,000 years ago.

POST-FLPMA LEASE. Mineral lease issued after passage of the Federal Land Policy and Management Act on October 21, 1976. These leases contain a wilderness protection stipulation that prohibits any activity on the lease that would impair wilderness suitability.

PRIMITIVE AND UNCONFINED RECREATION. Non-motorized an undeveloped types of outdoor recreational activities.

PUBLIC LANDS. Any land and interest in land (outside of Alaska) owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management.

QUATERNARY. One of the major eras in geologic time dating from 1.6 million years ago to present.

REALTY. Public land, property or real estate administered by the Bureau of Land Management.

RIPARIAN. Situated on or pertaining to the bank of a river, stream or other body of water.

SEDIMENT. Mineral or organic matter that settles to the bottom of or is deposited by water.

TERTIARY. The earlier of the two geologic periods comprising the Cenozoic Era. Began about 65 million years ago and ended about 2 to 3 million years ago.

THREATENED SPECIES. Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

VOLCANICLASTIC. Pertaining to a clastic rock containing volcanic material in whatever proportion, and without regard to its origin or environment.

WILDERNESS AREA. An area formally designated by Congress as part of the National Wilderness Preservation System.

WILDERNESS STUDY AREA (WSA). An area determined to have wilderness characteristics. Study areas are subject to interdisciplinary analysis and public comment to determine wilderness suitability. Suitability areas are recommended to the President and Congress for wilderness designation.

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