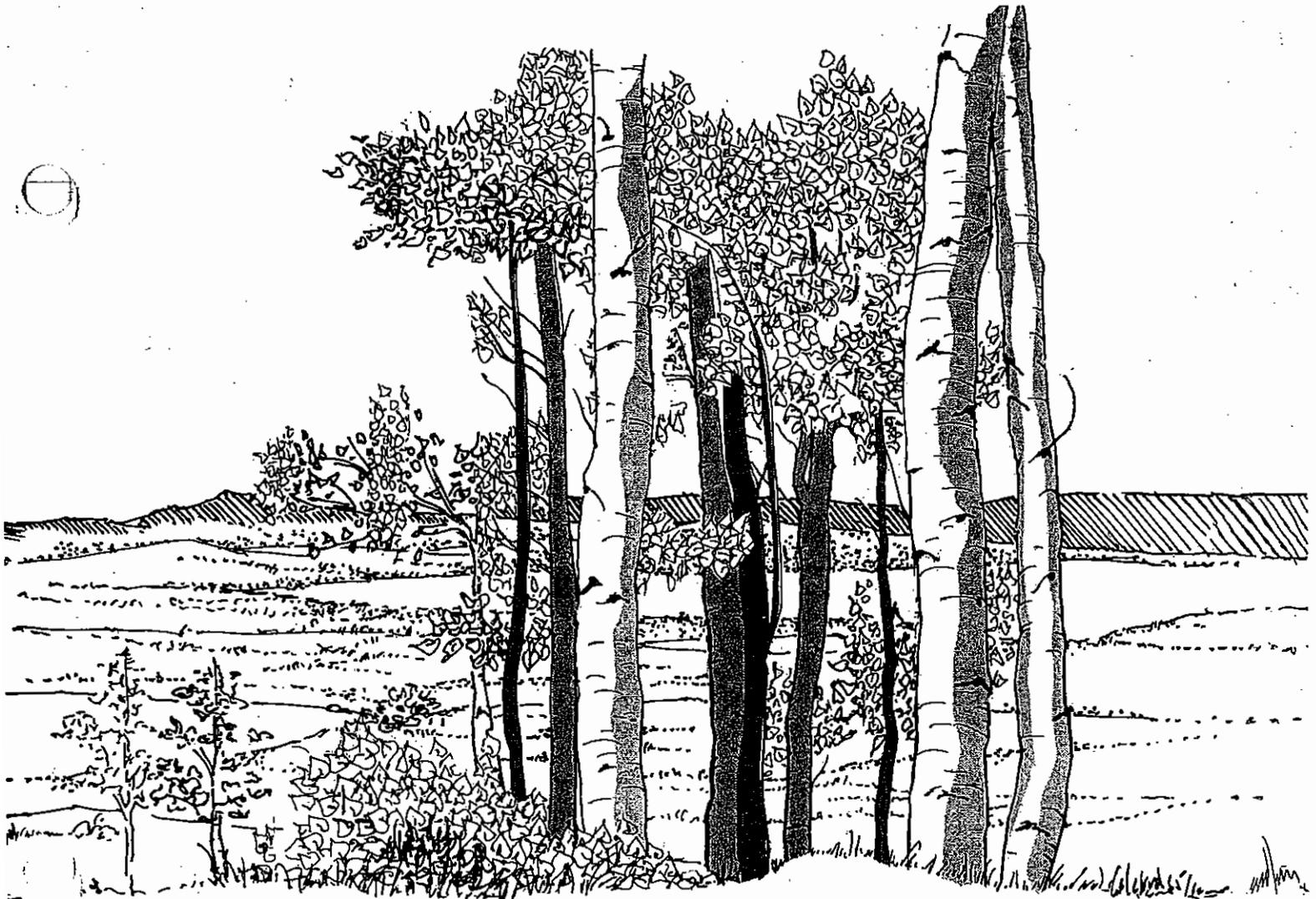


ELKO

FINAL WILDERNESS

ENVIRONMENTAL IMPACT STATEMENT

1987



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELKO DISTRICT ELKO, NEVADA



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

NEVADA STATE OFFICE

—650 Harvard Way
P.O. Box 12000
Reno, Nevada 89520

IN REPLY REFER TO:

8500 (NV-010)
(NV-932.6)

OCT 5 1987

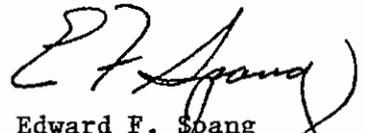
Dear Reader:

Enclosed for your review is the Elko Resource Area Final Wilderness Environmental Impact Statement (EIS). The final EIS analyzes the Elko District's proposal to recommend one entire wilderness study area (WSA) and a portion of one WSA as suitable for inclusion in the National Wilderness Preservation System and release from further consideration two entire WSAs and a portion of one WSA.

The final EIS has been completed in accordance with the National Environmental Policy Act. These recommendations may be subject to change through administrative review after receipt of the minerals reports from the Bureau of Mines and the U.S. Geological Survey. If significant information contained in the minerals reports indicates a need for change in the proposals analyzed in this EIS, a supplemental EIS would be issued and distributed for public review.

We appreciate your interest and involvement in the study process for these wilderness study areas in the Elko District.

Sincerely yours,


Edward F. Spang
State Director, Nevada

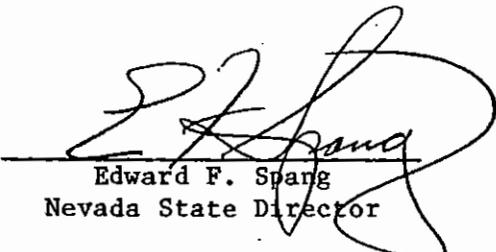
1 Enclosure

1. Elko Final Wilderness EIS (184 pp)

FINAL WILDERNESS
ENVIRONMENTAL IMPACT STATEMENT
for the
ELKO RESOURCE AREA
NEVADA

Prepared by
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELKO DISTRICT OFFICE


Rodney Harris
Elko District Manager


Edward F. Spang
Nevada State Director

The purpose of the Proposed Action is to manage and preserve the wilderness characteristics of 36,460 acres, which includes all 6,685 acres of the Rough Hills Wilderness Study Area (WSA) and a 29,775 acre portion of the Little Humboldt River WSA, and continue to manage the remaining 30,294 acres, which includes a 12,438 acre portion of the Little Humboldt River WSA and all the acreage of both the Cedar Ridge and Red Springs WSAs, for uses other than wilderness. This EIS assesses the environmental consequences of managing these areas as wilderness or nonwilderness.

The Federal Land Policy and Management Act of 1976 (FLPMA) mandates BLM to manage the public lands and their resources under the principles of multiple use and sustained yield. Wilderness values are identified as part of the spectrum of multiple land use values to be considered in BLM inventory, planning, and management. Section 603 of FLPMA requires a wilderness review of BLM roadless areas of 5,000 or more acres and roadless islands. The BLM inventory process identified wilderness study areas which have the mandatory wilderness characteristics (size; naturalness; solitude and/or primitive recreation opportunities). Suitable or unsuitable wilderness recommendations for each WSA will be presented to the President by the Secretary of the Interior. The President will then make recommendations to Congress. Areas can be designated wilderness only by an act of Congress.

For further information please contact: Rodney Harris, District Manager, Bureau of Land Management, P.O. Box 831, 3900 E. Idaho St., Elko, Nevada 89801 or call (702) 738-4071.

Date when the Final Environmental Impact Statement with the wilderness recommendations was made available to the public: OCT 9 1987

SUMMARY

SUMMARY

The purpose of the Proposed Action is to manage and preserve the wilderness characteristics of 36,460 acres, which includes all 6,685 acres of the Rough Hills Wilderness Study Area (WSA) and a 29,775 acre portion of the Little Humboldt River WSA, and continue to manage the remaining 30,294 acres, which includes a 12,438 acre portion of the Little Humboldt River WSA and all the acreage of both the Cedar Ridge and Red Springs WSAs, for uses other than wilderness.

The Federal Land Policy and Management Act of 1976 (FLPMA) mandates BLM to manage the public lands and their resources under the principles of multiple use and sustained yield. Wilderness values are identified as part of the spectrum of multiple land use values to be considered in BLM inventory, planning, and management. Section 603 of FLPMA requires a wilderness review of BLM roadless areas of 5,000 or more acres and roadless islands. The BLM inventory process identified wilderness study areas which have the mandatory wilderness characteristics (size; naturalness; solitude and/or primitive recreation opportunities). Suitable or unsuitable wilderness recommendations for each WSA will be presented to the President by the Secretary of the Interior. The President will then make recommendations to the Congress of the United States. Areas can be designated wilderness only by an act of the Congress. If designated as wilderness, an area would be managed in accordance with the Wilderness Act of 1964 and the BLM Wilderness Management Policy (1981).

The four WSAs being studied are covered by the Elko Area Resource Management Plan (RMP). The study areas are listed in Table S-1 which follows.

TABLE S-1

LIST OF WILDERNESS STUDY AREAS

WSA Name	Number	Acreage	County
Cedar Ridge	NV-010-088	10,009	Elko
Red Spring	NV-010-091	7,847	Elko
Little Humboldt River	NV-010-132	42,213	Elko
Rough Hills	NV-010-151	6,685	Elko

Issues

The scoping process for the Elko Area Resource Management Plan encompassed issues identified by the BLM staff, by the public during formal scoping comment periods on issue identification (November 9 to December 22, 1983), review of draft issues and planning criteria (April 26 to May 20, 1984), review of draft alternatives (November 1, 1984 to January 30, 1985), and from

comments on the Draft Elko Area RMP (August 14 to November 15, 1985) by the public and by Federal, State and local agencies. The environmental issues below were identified for analysis in this EIS and relate to all WSAs except where noted.

1. Impacts on Wilderness Values. The wilderness values of naturalness, opportunities for solitude, opportunities for primitive recreation, and various special features of the WSA would benefit from wilderness designation. The same values may be adversely affected by uses and actions that would occur should the WSAs not be designated wilderness. These impacts are an issue for analysis in the EIS.
2. Impacts on Recreational Off Road-Vehicle Use. Wilderness designation would eliminate the use of recreational off-road vehicles (ORVs) in the WSAs. Eliminating this use would affect the availability of opportunities for ORV recreation and shift ORV uses currently occurring in the WSAs to adjacent lands. The impact of wilderness designation on recreational ORV use in the vicinity of the WSAs is an issue for analysis in the EIS.
3. Impacts on Mineral Resources Actions. Wilderness designation could affect the of potential and development of known mineral resources by withdrawing designated lands from mineral entry. Development of existing mineral resources within designated wilderness areas could be affected by wilderness management restrictions. The impact of wilderness designation on the exploration of potential and development of known mineral resources is an issue for analysis in the EIS.
4. Impacts on Grazing Facility Maintenance and Construction. Wilderness designation could affect livestock operations by precluding some planned range development projects necessary for utilization of forage at planned levels. The impact of wilderness designation on the maintenance and construction of grazing and range management projects in the WSAs is an issue for analysis in the EIS.
5. Impacts on Woodland Product Harvest. Wilderness designation would continue the policy of not allowing commercial or public harvest of firewood or fence posts in the Cedar Ridge and Red Spring WSAs. The impact of forgoing the harvest of this resource is an issue for analysis in the EIS.
6. Impacts on Private Inholdings. The impact of foregone uses and access by wilderness designation or nondesignation on private land inholdings in WSAs was identified as an issue during the scoping process. Future uses of these lands and/or access to them could be inhibited with wilderness designation of the Little Humboldt River and Rough Hills WSAs. This impact is an issue for analysis in this EIS.
7. Impacts on Lahontan Cutthroat Trout (LCT) Habitat. The impact of wilderness designation or nondesignation on LCT, a Threatened Species under the Endangered Species Act, was identified as an issue in the Little Humboldt River WSA during the scoping process. Mineral exploration and rangeland development

activities could contribute increased stream siltation. However, these increased sediment levels would not adversely affect Lahontan cutthroat trout numbers.

The following issues were identified in scoping but were not selected for detailed analysis in this EIS because they were determined after careful analysis to be less than major or were irrelevant to the decision involved. The reasons for setting each of the issues aside are discussed below.

1. Impacts on Wildlife and Wildlife Habitat. Many comments during scoping and on the Draft RMP expressed a general concern for wildlife without identifying specific issues associated with wildlife. An issue dealing with wildlife in general was considered but not included in this EIS because current activities and uses which constrain wildlife populations and habitat management would continue even with wilderness designation. Therefore, the issue is not relevant to the proposed action. Additionally, based on the projections of development in the four WSAs, little or no change in wildlife populations or habitat is anticipated with wilderness designation or nondesignation.
2. Impact on Reintroduction of Bighorn Sheep. The Nevada Department of Wildlife has reintroduced bighorn sheep in the Little Humboldt River WSA. The reintroduction and management of more bighorn sheep will continue to be independent of the designation of the WSA as wilderness. Since the Bureau's Wilderness Management Policy provides guidelines for reintroduction of native wildlife species, this issue was not selected for analysis in the EIS.
3. Impact on Visitor Safety. Wilderness designation could encourage recreationists to use areas they otherwise wouldn't use because the areas are labeled wilderness. This could result in inexperienced recreationists being exposed to hazards they are not experienced in handling. This issue was not analyzed because hazards associated with recreation use on the WSAs would not be affected by wilderness designation. The hazards would be the same regardless of the area's status.
4. Economic Impact on Livestock Operations. Concerns were raised that livestock operators could be required to modify their operations within designated wilderness areas in a manner that would have significant adverse economic impacts on their business. This issue was considered but dropped from detailed analysis because the BLM's Wilderness Management Policy provides for the continued use of wilderness areas for livestock operations at historic levels.

Although the management practices of livestock operators in the four WSAs would be more regulated, they would continue as they did prior to wilderness designation subject to reasonable controls. The impact of wilderness designation on livestock operations as a result of curtailment of planned range developments is considered in issue 4 above.

5. Impact on Air Quality Classification. Concerns were raised regarding the interaction between wilderness designation and air quality classification. The Wilderness Management Policy states that BLM will manage all wilderness areas to comply with the existing air quality classification for that specific area, so wilderness designation or nondesignation would not cause the air quality classification to change. Therefore, this issue was dropped from further analysis in the EIS.
6. Impact on Cultural Resources. No cultural sites that would be eligible for nomination for listing on the National Register of Historic Places are known to exist within any of the WSAs. Since highly significant cultural sites are not known to exist within the WSAs, the issue of impact to cultural resources was dropped from further analysis.
7. Impact on Diversity within the National Wilderness Preservation System. The issue of how wilderness designation would impact ecologic diversity within the NWPS was not analyzed as an issue. Since all potential natural vegetation types within the WSAs are currently represented in the NWPS, designation of these WSAs as wilderness would not expand ecologic diversity of the system.
8. Impact on Wild Horses. Concerns were raised about wild horses and wilderness. This issue was considered as wild horses occur within the Little Humboldt River WSA, but as no management actions or necessary range developments could be determined which would be inconsistent with designation or nondesignation of the area, this issue was not selected for further analysis.
9. Riparian Habitat. The degraded condition of riparian habitat was a concern to many individual commentors. The primary causes of degradation of riparian habitat are uses which will continue with or without wilderness designation just as corrective actions would occur with wilderness designation or nondesignation.

The following issue is not an environmental issue, but is a program concern that was frequently identified as an issue during scoping.

The WSAs being studied are not what Congress intended to be included in the National Wilderness Preservation System. Some or all of the areas being studied for wilderness designation may not be the kind of area Congress intended to have considered for wilderness. This issue was dropped since it was determined in the inventory stage of the BLM's wilderness review process that all the WSAs being studied meet the minimum standards for wilderness identified by Congress in the Wilderness Act of 1964 and FLPMA of 1976.

Alternatives and Conclusions

The alternatives assessed in this EIS include: (1) a No Wilderness Alternative for each WSA; (2) an All Wilderness Alternative for each WSA and; (3) a Partial Wilderness Alternative for the Little Humboldt River WSA.

CEDAR RIDGE WSA (NV-010-088)

Proposed Action (No Wilderness Alternative). All 10,009 acres of public land in the Cedar Ridge WSA would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the harvest of woodland products and exploration of mineral resources and the resulting impacts on wilderness values in the long term.

Conclusions. The Cedar Ridge WSA's wilderness values of size, naturalness, and outstanding opportunities for solitude would be lost. Woodcutting access routes would most likely protrude into the WSA from the western and eastern boundaries. Sights and sounds from traffic and construction related to mineral exploration, ten miles of access roads, 3 oil well drill pads, and 50 miles of seismic line, would cause the WSA to appear unnatural to the average visitor and lower the quality of solitude in the WSA.

Although the area would be more accessible, recreational ORV use would remain below 200 visitor days annually. There would be no significant impact on recreational ORV use.

Potential mineral resources would be available for exploration. This includes high favorability for oil and gas and moderate favorability for precious metals, barite and uranium, although discovery leading to development is not anticipated because of unsuccessful past exploratory drilling nearby. This would be a favorable impact for mineral exploration.

No mineral development is anticipated so there is no impact on mineral development. Environmental impacts would be derived only from exploration activities.

There would be no impact on grazing facility maintenance and construction of a pipeline in the Cedar Ridge WSA would take place.

Woodland products would be available for harvest. This includes 4940 acres of pinyon pine and Utah juniper which could supply 250 cords of firewood and 500 fence posts per year, or 18 percent of the local demand. Canopy cover on approximately 40 acres per year would be thinned by about 60 percent in wood harvest activities.

All Wilderness Alternative. All 10,009 acres of public land in the Cedar Ridge WSA would be recommended as suitable for wilderness designation.

The primary impacts under this alternative relate to the elimination of woodland product harvest, mineral withdrawal, and ORV closure in the designated wilderness and the resulting effects on woodland product and mineral development, recreational ORV use, and the protection of wilderness values.

Conclusions. Wilderness values would be slightly enhanced on all 10,009 acres of the Cedar Ridge WSA.

Recreation ORV use of 70 visitor days annually would be forgone. The impacts of shifting this use to other public lands would be negligible.

Exploration activities would be foregone. Three exploratory oil and gas wells with their associated 10 miles of road, drill pads, and 50 miles of seismic line would be precluded. Impacts would be negligible since discovery leading to development is not anticipated.

There would be no impact on grazing facility maintenance but construction of a pipeline would not take place.

The harvest of woodland products would be forgone. Over the long-term 3 miles of access road would not be constructed. The 250 cords of firewood and 500 fence posts per year that could be cut from 40 acres per year within the WSA would be gathered elsewhere in the Elko Resource Area at considerable additional expense and inconvenience to the public.

RED SPRING WSA (NV-010-091)

Proposed Action (No Wilderness Alternative). All 7,847 acres of public land in the Red Spring WSA would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the harvest of woodland products and exploration activities for mineral resources on wilderness values.

Conclusions. The Red Spring WSA's wilderness values of size, naturalness, and outstanding opportunities for solitude would be lost. Woodcutting access routes would most likely protrude into the WSA. Sights and sounds from traffic and construction related to mineral exploration would cause the WSA to appear unnatural to the average visitor and lower the quality of solitude in the WSA.

Although the area would be more accessible, recreational ORV use would remain below 350 visitor days annually. There would be no significant impact on recreational ORV use.

Potential mineral resources would be available for exploration which is predicted to result in 3 wildcat wells, 50 miles of seismic line, and 10 miles of road. This includes high favorability for oil and gas and moderate favorability for uranium and barite, although no discovery leading to development is anticipated because of unsuccessful past exploratory drilling nearby.

There would be no impact on grazing facility maintenance or construction in the Red Spring WSA.

Woodland products would be available for harvest. This includes 3200 acres of pinyon pine and Utah juniper which could supply 150 cords of firewood and 320 fence posts per year, or 12 percent of the local demand. About 40 acres per year would be thinned. Over the long-term 2 miles of access road would be constructed.

All Wilderness Alternative. All 7,847 acres of public land in the Red Spring WSA would be recommended as suitable for wilderness designation.

The primary impacts under this alternative relate to the elimination of woodland product harvest, mineral withdrawal, and ORV closure in the designated wilderness and the resulting effects on woodland product harvest and mineral exploration, recreational ORV use, and the protection of wilderness values.

Conclusions. All wilderness values would receive long-term Congressional protection. Wilderness values of solitude would be slightly enhanced on all 7,847 acres of the Red Spring WSA.

Recreational ORV use of 125 visitor days annually would be forgone. The impacts of shifting this use to other public lands would be negligible.

Exploration of high potential oil and gas resources would be foregone. Exploration activities including 50 miles of seismic line, 10 miles of access roads and 3 wildcat oil wells would be precluded. Impact would be negligible since discovery leading to development is not anticipated.

There would be no impact on grazing facility maintenance or construction.

The harvest of woodland products would be forgone. The 150 cords of firewood and 320 fence posts per year that could be cut from 40 acres of the WSA would be gathered elsewhere in the Elko Resource Area at considerable additional expense and inconvenience to the public.

LITTLE HUMBOLDT RIVER WSA (NV-010-132)

Proposed Action (Partial Wilderness Alternative). A portion of the Little Humboldt River WSA, 29,775 acres, would be recommended as suitable for wilderness designation. The remaining 12,438 acres would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation and the resulting increases in naturalness and opportunities for solitude and primitive and unconfined recreation and the withdrawal of mineral resources.

Conclusions. The 29,775 acres designated as wilderness would receive long-term Congressional protection. On the 29,775 acres designated wilderness, all wilderness values would be maintained. The area's naturalness and opportunities for primitive and unconfined recreation and solitude would improve slightly because of the elimination of less than

100 visitor days of recreational ORV use in support of camping, hunting, fishing, hiking, and horseback riding. The area's most spectacular scenery, naturalness, and opportunities for primitive recreation and solitude would be retained. On the 12,438 acres not designated wilderness, there would be a reduction of naturalness and opportunities for solitude because of mineral exploration and construction of range improvements.

Recreational ORV use would be foregone on the 29,775 acres designated wilderness. About 130 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. On the 12,438 acres of the WSA not designated wilderness, recreational ORV use would continue to increase, but would not exceed 100 visitor days annually for the foreseeable future.

Exploration for potential mineral resources would be forgone on 29,775 acres. This includes 1,389 acres where construction of one mile of access road and 100 feet of trench would be foregone in exploration of this area with moderate favorability for gold and silver and about 7,500 acres with low favorability for tin, zinc, and barium. The entire 29,775 acres have low favorability for oil and gas potential, however, 50 miles of predicted seismic line would be foregone. Potential mineral resources on 12,438 acres would be available for mineral exploration activities which are predicted to result in construction of 19 miles of access road and 1,200 feet of bulldozer trench. No economical discoveries of mineral resources are anticipated and therefore no development of mineral resources would be predicted to be foregone.

Development of grazing facilities would be foregone on the 29,775 acres designated wilderness. About 13.3 miles of fence would not be constructed and about 9,240 acres of vegetative treatment would not take place. Construction of 7.3 miles of fence and vegetative treatment of 2,780 acres would occur on the 12,438 acres not designated wilderness.

Two private inholdings would be located within the 29,775 acre wilderness area. One would be accessible via a cherry-stemmed road while the other would have no vehicular access. Both are currently used for livestock management purposes and since that use is not expected to change, no impact is expected from designation. No impacts would occur to the three private parcels located within the 12,438 acre nonsuitable area.

Commodity Production Alternative (Partial Wilderness Alternative). A portion of the Little Humboldt River WSA, 28,386 acres, would be recommended as suitable for wilderness designation. The remaining 13,827 acres would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation and the resulting retention of naturalness and increased opportunities for solitude and primitive and unconfined recreation and the withdrawal of mineral resources.

Conclusions. The 28,386 acres designated as wilderness would receive long-term Congressional protection. On the 28,386 acres, wilderness values of solitude and naturalness would be maintained. The area's naturalness and opportunities for primitive and unconfined recreation and solitude would improve slightly because of the elimination of less than 100 visitor days of recreational ORV use in support of camping, hunting, fishing, hiking, and horseback riding. The area's most spectacular scenery, naturalness, and opportunities for primitive recreation and solitude would be retained. On the 13,827 acres not designated wilderness, there would be a reduction of naturalness and opportunities for solitude because of mineral development and construction of grazing facilities.

Recreational ORV use would be foregone on the 28,386 acres designated wilderness. About 120 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. On the 13,827 acres of the WSA not designated wilderness, recreational ORV use would continue to increase, but would not exceed 100 visitor days annually for the foreseeable future.

Exploration for potential mineral resources would be forgone on 28,386 acres. This includes about 7,500 acres with low favorability for tin, zinc, and barium. The entire 28,386 acres have low favorability for oil and gas potential. Potential mineral resources, including 7,300 acres with moderate favorability for gold and silver, would be available for mineral exploration on the nonsuitable 13,827 acres. Exploration activities are predicted to result in 20 miles of access road and 1,300 feet of bulldozed trench. Impacts would be negligible as no development is expected to result from exploration.

Development of grazing facilities would be forgone on the 28,386 acres designated wilderness. About 13.2 miles of fence would not be constructed and about 8,630 acres of vegetative treatment would not take place. Construction of 7.4 miles of fence and vegetative treatment of 3,390 acres would occur on the 13,827 acres not designated wilderness.

Two private inholdings would be located within the 28,386 acre wilderness area. One would be accessible via a cherry-stemmed road while the other would have no vehicular access. Both are currently used for livestock grazing purposes and since that use is not expected to change, no impact is expected from designation. No impacts would occur to the three private parcels located within the 13,827 acre nonsuitable area.

All Wilderness Alternative. All 42,213 acres of public land in the Little Humboldt River WSA would be recommended as suitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation and the resulting retention of naturalness and increased opportunities for solitude and primitive and unconfined recreation and the withdrawal of mineral resources.

Conclusions. All wilderness values would receive long-term Congressional protection. Naturalness would be maintained while there would be a slight improvement of the areas opportunities for primitive and unconfined recreation and solitude because of the elimination of less than 140 visitor days per year of recreational ORV use in support of camping, hunting, fishing, hiking, and horseback riding.

Recreational ORV use would be forgone on the 42,213 acres designated wilderness and about 140 visitor days per year would be forgone. Fourteen miles of vehicle ways would be closed. The impacts of shifting this use to other public lands would be negligible.

Exploration activities consisting of 20 miles of access road and 1300 feet of trench for potential mineral resources would be forgone, however, no anticipated location and development of mineral resources would be foregone. This includes 7300 acres with moderate favorability for gold and silver. The entire 42,213 acres have low favorability for oil and gas, however, 50 miles of seismic line are predicted to be foregone.

No mineral development is anticipated so there is no impact on mineral development. Environmental impacts would be derived only from exploration activities.

Development of grazing facilities would be forgone on the 42,213 acres designated wilderness. About 20.6 miles of fence would not be constructed and 12,020 acres of vegetative treatment would not take place.

Five private inholdings would be located within the 42,213 acre wilderness area. Two would be accessible via a cherrystem road while the other three would have no vehicular access. All of these are currently used for livestock grazing purposes and since that use is not expected to change, no impact is expected from designation.

No Wilderness Alternative. All 42,213 acres of public land in the Little Humboldt River WSA would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to ORV use, rangeland developments, and exploration for mineral resources and the resulting reduction in naturalness and opportunities for solitude and primitive and unconfined recreation.

Conclusions. On the 42,213 acres of the WSA there would be a reduction of the area's naturalness and opportunities for solitude because of mineral exploration surface disturbances, rangeland treatment, and increased recreational ORV use in the area.

There would be no impact on recreational vehicle ORV use.

Potential mineral resources would be available for exploration and location. This includes 7,300 acres with moderate favorability for gold and silver. Activities are predicted to include 20 miles of road and 1,300 feet of trench. There are 7,500 acres with low favorability for oil and gas and a predicted 50 miles of seismic line.

There would be no grazing facility development forgone. About 20.6 miles of fence would be constructed and 12,020 acres of vegetative treatment would take place.

No impacts on private property would occur.

ROUGH HILLS WSA (NV-010-151)

Proposed Action (All Wilderness Alternative). All 6,685 acres of public land in the Rough Hills WSA would be recommended as suitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation, the resulting effects on naturalness and opportunities for solitude and primitive and unconfined recreation and the withdrawal of mineral resources.

Conclusions. All wilderness values would receive long-term Congressional protection. Wilderness values of the area's naturalness and opportunities for solitude and primitive and unconfined recreation including hunting, fishing, and hiking, would be maintained on all 6,685 acres of the Rough Hills WSA.

Recreational ORV use of 50 visitor days would be foregone on the 6,685 acres designated wilderness. Impacts resulting from this use shifting to other public lands would be negligible. One vehicle way of less than one mile would be closed.

Exploration for potential mineral resources would be forgone. The entire WSA has moderate favorability for metallic minerals. Since the WSA is covered by 1,000 to 2,000 feet of barren volcanic rock, the recovery of mineral resources is considered uneconomical, however, a two mile access road for core drilling would be foregone.

There would be no impact on grazing facility maintenance. Construction of a 3 mile allotment boundary fence would be forgone.

Two private inholdings would be located within the 6,785 acre wilderness area. Access to these parcels is generally limited to foot and horseback. Both are currently used for livestock and hunting purposes. Since these uses are not expected to change, no impact is expected from designation.

No Wilderness Alternative. All 6,685 acres of public land in the Rough Hills WSA would be recommended as nonsuitable for wilderness designation.

The primary impacts under this alternative relate to mineral exploration surface disturbances and the resulting reduction in naturalness and opportunities for solitude and primitive and unconfined recreation.

Conclusions. On the 6,685 acres of the WSA there would be a moderate reduction of naturalness and opportunities for solitude and primitive and unconfined recreation because of mineral exploration.

There would be no significant impact on recreational ORV use.

Potential mineral resources would be available for exploration. This includes the entire 6,685 acre WSA which has moderate favorability for metallic minerals. A two mile access road for core drilling is anticipated.

There would be no impact on grazing facility maintenance. Construction of a three mile allotment boundary fence would occur.

There would be no impact to the two private parcels within the WSA.

TABLE OF CONTENTS

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION AND PLANNING PROCESS

	<u>PAGE</u>
Purpose and Need of the Proposed Action.	1
Location	2
Environmental Issue Identification/Scoping	2
The Planning Process, Selection of the Proposed Action, and Development of Alternatives	8
The Planning Process and Selection of the Proposed Action	8
Alternatives to the Proposed Action Selected for Analysis	8
Alternatives Considered but Dropped from Further Analysis	8

CHAPTER 2
PROPOSED ACTION AND ALTERNATIVES

Cedar Ridge WSA (NV-010-088)

Proposed Action (No Wilderness Alternative).	10
Livestock Grazing and Range Management Actions.	10
Recreational Off-Road Vehicle Use	10
Other Recreation.	10
Mineral Resource Actions.	11
Woodland Product Actions.	11
All Wilderness Alternative	11
Livestock Grazing and Range Management Actions.	11
Recreational Off-Road Vehicle Use	13
Other Recreation.	13
Mineral Resource Actions.	13
Woodland Product Actions.	13

Summary of Impacts.	13
-----------------------------	----

Red Spring WSA (NVB-010-091)

Proposed Action (No Wilderness Alternative).	15
Livestock Grazing and Range Management Actions.	15
Recreational Off-Road Vehicle Use	15
Other Recreation.	15
Mineral Resource Actions.	15
Woodland Product Actions.	17
All Wilderness Alternative	17
Livestock Grazing and Range Management Actions.	17
Recreational Off-Road Vehicle Use	17
Other Recreation.	17
Mineral Resource Actions.	17
Woodland Product Actions.	18

Summary of Impacts.	18
-----------------------------	----

CHAPTER 2 (Cont.)
 PROPOSED ACTION AND ALTERNATIVES

PAGE

Little Humboldt River WSA (NV-010-132)

Proposed Action (Partial Wilderness Alternative)	20
Livestock Grazing and Range Management Actions.	20
Recreational Off-Road Vehicle Use	20
Other Recreation.	20
Mineral Resource Actions.	20
Management Actions to Exchange for Private Land	22
Management Actions to Enhance Lahontan Cutthroat Trout Habitat	22
Commodity Production (Partial Wilderness Alternative)	22
Livestock Grazing and Range Management Actions.	22
Recreational Off-Road Vehicle Use	22
Other Recreation.	24
Mineral Resource Actions.	24
Management Actions to Exchange for Private Land	24
Management Actions to Enhance Lahontan Cutthroat Trout Habitat	24
All Wilderness Alternative	24
Livestock Grazing and Range Management Actions.	25
Recreational Off-Road Vehicle Use	25
Other Recreation.	25
Mineral Resource Actions.	25
Management Actions to Exchange for Private Land	25
Management Actions to Enhance Lahontan Cutthroat Trout Habitat	25
No Wilderness Alternative.	26
Livestock Grazing and Range Management Actions.	26
Recreational Off-Road Vehicle Use	26
Other Recreation.	26
Mineral Resource Actions.	26

Summary of Impacts. 26

Rough Hills WSA (NV-010-151)

Proposed Action (All Wilderness Alternative)	30
Livestock Grazing and Range Management Actions.	30
Recreational Off-Road Vehicle Use	30
Other Recreation.	30
Mineral Resource Actions.	30
Management Actions to Exchange for Private Land	30
No Wilderness Alternative.	32
Livestock Grazing and Range Management Actions.	32
Recreational Off-Road Vehicle Use	32
Other Recreation.	32
Mineral Resource Actions.	32

Summary of Impacts. 32

CHAPTER 3
AFFECTED ENVIRONMENT

	<u>PAGE</u>
Cedar Ridge WSA (NV-010-088)	
General Characteristics	34
Land Status	34
Wilderness Values	34
Naturalness	34
Solitude	34
Primitive and Unconfined Recreation	34
Special Features	36
Recreational Off-Road Vehicle Use	36
Mineral Resources	36
Livestock Grazing	39
Woodland Products	39
Red Spring WSA (NV-010-091)	
General Characteristics	40
Land Status	40
Wilderness Values	40
Naturalness	40
Solitude	40
Primitive and Unconfined Recreation	40
Special Features	43
Recreational Off-Road Vehicle Use	43
Mineral Resources	43
Livestock Grazing	46
Woodland Products	46
Little Humboldt River WSA (NV-010-132)	
General Characteristics	48
Land Status	48
Wilderness Values	48
Naturalness	48
Solitude	48
Primitive and Unconfined Recreation	50
Special Features	50
Recreational Off-Road Vehicle Use	51
Mineral Resources	51
Livestock Grazing	54
Lahontan Cutthroat Trout Habitat	54
Rough Hills (NV-010-151)	
General Characteristics	56
Land Status	56
Wilderness Values	56
Naturalness	56
Solitude	56
Primitive and Unconfined Recreation	56

CHAPTER 3 (Cont.)
AFFECTED ENVIRONMENT

	<u>PAGE</u>
Rough Hills (NV-010-151) (Continued)	
Special Features	58
Recreational Off-Road Vehicle Use.	58
Mineral Resources.	58
Livestock Grazing.	61

CHAPTER 4
ENVIRONMENTAL CONSEQUENCES

Cedar Ridge WSA (NV-010-088)

Proposed Action (No Wilderness Alternative).	62
Impacts on Wilderness Values.	62
Impacts on Recreational Off-Road Vehicle Use.	63
Impacts on Mineral Resource Actions	63
Impacts on Grazing Facility Maintenance and New Construction.	63
Impacts on Woodland Product Harvest	64
Irreversible and Irretrievable Commitments of Resources & Adverse Impacts which Cannot be Avoided	64
Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity	64
All Wilderness Alternative	64
Impacts on Wilderness Values.	64
Impacts on Recreational Off-Road Vehicle Use.	65
Impacts on Mineral Resource Actions	65
Impacts on Grazing Facility Maintenance and New Construction.	66
Impacts on Woodland Product Harvest	66

Red Spring WSA (NV-010-091)

Proposed Action (No Wilderness Alternative).	67
Impacts on Wilderness Values.	67
Impacts on Recreational Off-Road Vehicle Use.	68
Impacts on Mineral Resource Actions	68
Impacts on Grazing Facility Maintenance and New Construction.	68
Impacts on Woodland Product Harvest	68
Irreversible and Irretrievable Commitments of Resources & Adverse Impacts which Cannot be Avoided	69
Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity	69

CHAPTER 4 (Cont.)
ENVIRONMENTAL CONSEQUENCES

	<u>PAGE</u>
Red Spring WSA (NV-010-091) (Continued)	
All Wilderness Alternative	69
Impacts on Wilderness Values.	69
Impacts on Recreational Off-Road Vehicle Use.	70
Impacts on Mineral Resource Actions	70
Impacts on Grazing Facility Maintenance and New Construction.	70
Impacts on Woodland Product Harvest	70
 Little Humboldt River WSA (NV-010-132)	
Proposed Action (Partial Wilderness Alternative)	71
Impacts on Wilderness Values.	71
Impacts on Recreational Off-Road Vehicle Use.	72
Impacts on Mineral Resource Actions	72
Impacts on Grazing Facility Maintenance and New Construction.	73
Impacts on Private Inholdings	73
Impacts on Lahontan Cutthroat Trout Habitat.	73
Irreversible and Irretrievable Commitments of Resources & Adverse Impacts which Cannot be Avoided	74
Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity	74
Commodity Production (Partial Wilderness Alternative).	74
Impacts on Wilderness Values.	74
Impacts on Recreational Off-Road Vehicle Use.	74
Impacts on Mineral Resource Actions	75
Impacts on Grazing Facility Maintenance and New Construction.	76
Impacts on Private Inholdings	76
Impacts on Lahontan Cutthroat Trout Habitat.	77
All Wilderness Alternative	77
Impacts on Wilderness Values.	77
Impacts on Recreational Off-Road Vehicle Use.	78
Impacts on Mineral Resource Actions	78
Impacts on Grazing Facility Maintenance and New Construction.	78
Impacts on Private Inholdings	79
Impacts on Lahontan Cutthroat Trout Habitat.	79
No Wilderness Alternative.	79
Impacts on Wilderness Values.	79
Impacts on Recreational Off-Road Vehicle Use.	80
Impacts on Mineral Resource Actions	80
Impacts on Grazing Facility Maintenance and New Construction.	80
Impacts on Private Inholdings	80
Impacts on Lahontan Cutthroat Trout Habitat.	81

CHAPTER 4 (Cont.)
ENVIRONMENTAL CONSEQUENCES

	<u>PAGE</u>
Rough Hills WSA (NV-010-151)	
Proposed Action (All Wilderness Alternative)	82
Impacts on Wilderness Values.	82
Impacts on Recreational Off-Road Vehicle Use.	82
Impacts on Mineral Resource Actions	83
Impacts on Grazing Facility Maintenance and New Construction.	83
Impacts on Private Inholdings	83
Irreversible and Irretrievable Commitments of Resources & Adverse Impacts which Cannot be Avoided	83
Relationship Between Local Short-term Uses of Man's Environment and the Maintenance and Enhancement of Long-term Productivity	83
No Wilderness Alternative.	84
Impacts on Wilderness Values.	84
Impacts on Recreational Off-Road Vehicle Use.	84
Impacts on Mineral Resource Actions	84
Impacts on Grazing Facility Maintenance and New Construction.	85
Impacts on Private Inholdings	85

CHAPTER 5
CONSULTATION, COORDINATION, AND PUBLIC PARTICIPATION

Preparation of the Proposed Action.	86
Consultation and Coordination and Reviewing the EIS	90
List of Preparers	90
Comment Response Procedures	91
Index of Letters.	92
Comments and Responses.	93
APPENDIX 1.	140
APPENDIX 2.	141
GLOSSARY.	143
REFERENCES.	149

LIST OF TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
S-1	List of Wilderness Study Areas.	i
1-1	List of Wilderness Study Areas.	1
2-1	Summary of Impacts, Cedar Ridge WSA	14
2-2	Summary of Impacts, Red Spring WSA.	19
2-3	Summary of Impacts, Little Humboldt River WSA	27
2-4	Summary of Impacts, Rough Hills WSA	33
3-1	Mineral Favorability, Cedar Ridge WSA	37
3-2	Mineral Favorability, Red Spring WSA.	45
3-3	Mineral Favorability, Little Humboldt River WSA	51
3-4	Mineral Favorability, Rough Hills WSA	59

LIST OF MAPS

<u>Number</u>	<u>Map Name</u>	<u>Page</u>
1-1	Elko Resource Management Plan (RMP) Area.	3
1-2	Wilderness Study Areas, Location Map.	4
2-1	Proposed Action, Cedar Ridge WSA.	12
2-2	Proposed Action, Red Spring WSA	16
2-3	Proposed Action, Little Humboldt River WSA.	21
2-4	Commodity Production Alternative, Little Humboldt River WSA	23
2-5	Proposed Action, Rough Hills WSA.	31
3-1	Existing Situation, Cedar Ridge WSA	35
3-2	Mineral Favorability, Cedar Ridge WSA	38
3-3	Woodland, Cedar Ridge WSA	41
3-4	Existing Situation, Red Spring WSA.	42
3-5	Mineral Favorability, Red Spring WSA.	44
3-6	Woodland, Red Spring WSA.	47
3-7	Existing Situation, Little Humboldt River WSA	49
3-8	Mineral Favorability, Little Humboldt River WSA	52
3-9	Lahontan Cutthroat Trout Habitat, Little Humboldt River WSA	55
3-10	Existing Situation, Rough Hills WSA	57

CHAPTER ONE

Introduction and Planning Process

100

CHAPTER 1

INTRODUCTION AND PLANNING PROCESS

PURPOSE

The purpose of the Proposed Action in one wilderness study area (WSA) and a portion of another WSA as examined in this EIS, as the Wilderness Act states, "Is to secure for the American people of present and future generations the benefits of an enduring resource of wilderness." In two of the WSAs and the remaining portion of another WSA, the purpose is to continue with management of the land for multiple resource values. This document analyzes the potential impacts of designating or not designating as wilderness all or portions of four WSAs in the Elko Resource Area. The Proposed Action represents the BLM's wilderness recommendations as they developed through the Bureau planning system for the four WSAs.

NEED

The Federal Land Policy and Management Act of 1976 (FLPMA) directs the Bureau of Land Management (BLM) to manage the public lands and their resources under the principles of multiple use and sustained yield. Section 603 of FLPMA requires a wilderness review of BLM roadless areas containing 5,000 or more acres and roadless islands. The BLM inventory process identified WSAs which have the mandatory wilderness characteristics of size, naturalness, and opportunities for solitude and/or primitive recreation. Suitable or unsuitable wilderness recommendations for each WSA will be presented to the President by the Secretary of the Interior. The President will then make recommendations to the Congress. Areas can be designated wilderness only by an act of Congress. If designated as wilderness, an area would be managed in accordance with the Wilderness Act of 1964 and the Bureau's Wilderness Management Policy dated September 1981.

The four WSAs being studied are covered by the Elko Area Resource Management Plan and are listed in Table 1-1 below.

TABLE 1-1

LIST OF WILDERNESS STUDY AREAS

WSA Name	Number	Acreage	County
Cedar Ridge	NV-010-088	10,009	Elko
Red Spring	NV-010-091	7,847	Elko
Little Humboldt River	NV-010-132	42,213	Elko
Rough Hills	NV-010-151	6,685	Elko

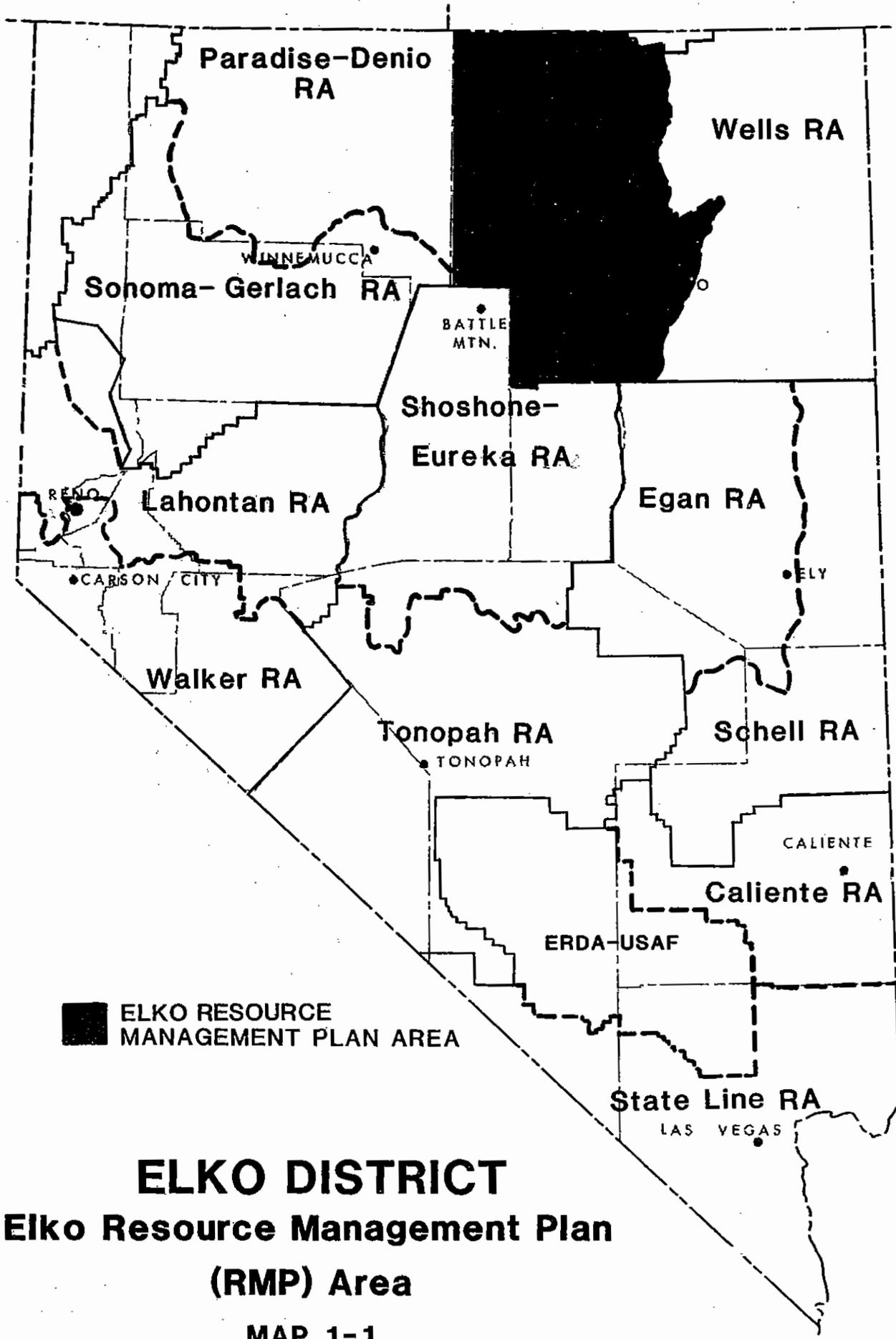
LOCATION

WSAs are located in northeastern Nevada in the BLM's Elko Resource Area of the Elko District. Map 1-1 shows the relative location of the Elko Resource Area within the State of Nevada. Map 1-2 displays the location of the four WSAs within the resource area.

ENVIRONMENTAL ISSUE IDENTIFICATION/SCOPING

The scoping process for the Elko Area Resource Management Plan/EIS encompassed issues identified by the BLM staff, by the public during formal scoping comment periods (November 9 to December 22, 1983, April 26 to May 20, 1984, and November 1, 1984 to January 30, 1985); at two public hearings in Elko and Reno, Nevada (October 2 and 3, 1985); and from written comments on the draft RMP/EIS by the public and by Federal, State, and local agencies. During the scoping period the United States Fish and Wildlife Service was consulted concerning the potential effects of wilderness designation on threatened or endangered species. The environmental issues identified for analysis in this EIS follow.

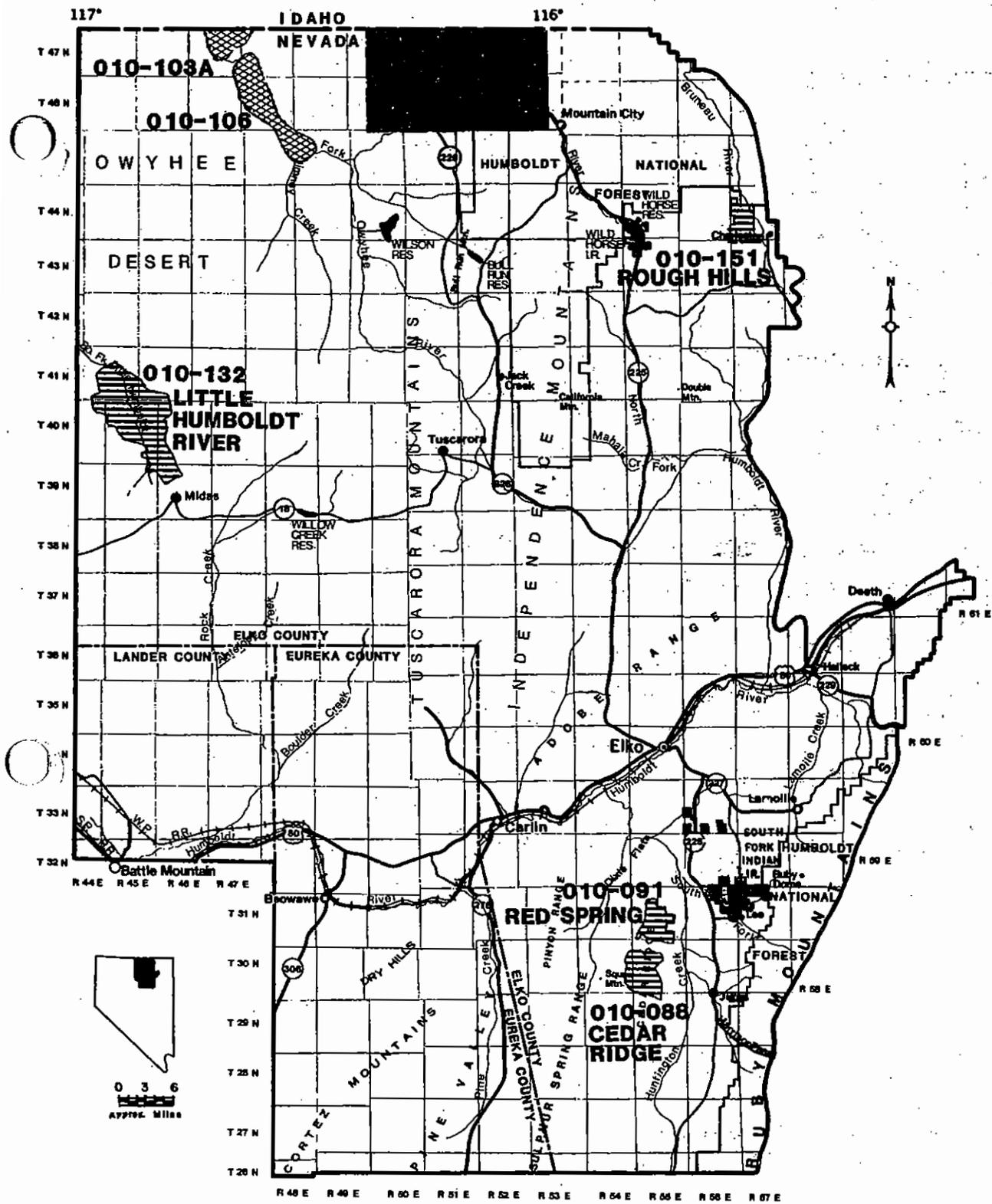
1. Impacts on Wilderness Values. The wilderness values of naturalness, opportunities for solitude, opportunities for primitive recreation, and various special features of the WSA would benefit from wilderness designation. The same values may be adversely affected by uses and actions that would occur should the WSAs not be designated wilderness. These impacts are an issue for analysis in the EIS.
2. Impacts on Recreational Off-Road Vehicle Use. Wilderness designation would eliminate the use of recreational off-road vehicles (ORVs) in the WSAs. Eliminating this use could affect the availability of opportunities for ORV recreation and shift ORV uses currently occurring in the WSAs to adjacent lands. The impact of wilderness designation on recreational ORV use in the vicinity of the WSAs is an issue for analysis in the EIS.
3. Impacts on Development of Mineral Resources. Wilderness designation could affect the development of potential and known mineral resources by withdrawing designated lands from mineral entry. The impact of wilderness designation on the exploration of potential and development of known mineral resources is an issue for analysis in the EIS.
4. Impacts on Grazing Facility Maintenance and Construction. Wilderness designation could affect livestock operations by precluding some planned range development projects necessary for utilization of forage at planned levels. The impact of wilderness designation on the maintenance and construction of grazing and range management projects in the WSAs is an issue for analysis in the EIS.



ELKO RESOURCE MANAGEMENT PLAN AREA

ELKO DISTRICT
Elko Resource Management Plan
(RMP) Area

MAP 1-1



LEGEND

-  Wilderness Study Area analyzed in the Elko Wilderness Environmental Impact Statement
-  Wilderness Study Area within the Elko Planning Area analyzed in the Owyhee Canyonlands Wilderness EIS

UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 ELKO RESOURCE AREA WILDERNESS
 ENVIRONMENTAL IMPACT STATEMENT
 WILDERNESS STUDY AREAS
 LOCATION MAP

MAP 1-2

5. Impacts on Woodland Product Harvest. Wilderness designation would continue the policy of not allowing commercial or public harvest of firewood or fence posts in the Cedar Ridge and Red Spring WSAs. The impact of forgoing the harvest of this resource is an issue for analysis in the EIS.
6. Impacts on Private Inholdings. The impact of foregone uses and access by wilderness designation or nondesignation on private land inholdings in WSAs was identified as an issue during the scoping process. Future uses of these lands and/or access to them could be inhibited with wilderness designation of the Little Humboldt River and Rough Hills WSAs. This impact is an issue for analysis in this EIS.
7. Impacts on Lahontan Cutthroat Trout. The impact of wilderness designation or nondesignation on LCT, a Threatened Species under the Endangered Species Act, was identified as an issue in the Little Humboldt River WSA during the scoping process. Mineral exploration and rangeland development activities could contribute to increased stream siltation. However, these increased sediment levels would not adversely affect Lahontan cutthroat trout numbers.

The following issues were identified in scoping but were not selected for detailed analysis in this EIS because they were determined after careful analysis to be less than major or even irrelevant to the decision involved. The reasons for setting each of the issues aside are discussed below.

1. Impacts on Wildlife and Wildlife Habitat. Many comments during scoping and on the Draft RMP expressed a general concern for wildlife without identifying specific issues associated with wildlife (other than those identified above in 7). An issue dealing with wildlife in general was considered but not included in this EIS because current activities and uses which constrain wildlife populations and habitat management would continue even with wilderness designation and were therefore not relevant to the proposed action. Additionally, based on the projections of development in the four WSAs, little or no change in wildlife populations or their habitat is anticipated with wilderness designation or nondesignation.
2. Impact on Reintroduction of Bighorn Sheep. The Nevada Department of Wildlife has reintroduced bighorn sheep in the Little Humboldt River WSA. The reintroduction and management of more bighorn sheep will continue to be independent of the designation of the WSA as wilderness. Since the Bureau's Wilderness Management Policy provides guidelines for reintroduction of native wildlife species, this issue was not selected for analysis in the EIS.
3. Impact on Visitor Safety. Wilderness designation could encourage recreationists to use areas they otherwise wouldn't use because the areas are labeled wilderness. This could result in inexperienced recreationists being exposed to hazards they are not experienced in handling. This issue was not analyzed because hazards associated with recreation use on the WSAs would not be affected by wilderness designation. The hazards would be the same regardless of the area's status.

4. Economic Impact on Livestock Operations. Concerns were raised that livestock operators could be required to modify their operations within designated wilderness areas in a manner that would have significant adverse economic impacts on their business. This issue was considered but dropped from detailed analysis because the BLM's Wilderness Management Policy provides for the continued use of wilderness areas for livestock operations at historic levels.

Although the management practices of livestock operators in the four WSAs would be more regulated, they would continue as they did prior to wilderness designation subject to reasonable controls. The impact of wilderness designation on livestock operations as a result of curtailment of planned range developments is considered in issue 4 above.

5. Impact on Air Quality Classification. Concerns were raised regarding the interaction between wilderness designation and air quality classification. The Wilderness Management Policy states that BLM will manage all wilderness areas to comply with the existing air quality classification for that specific area, so wilderness designation or nondesignation would not cause the air quality classification to change. Therefore, this issue was dropped from further analysis in the EIS.
6. Impact on Cultural Resources. No cultural sites that would be eligible for nomination for listing on the National Register of Historic Places are known to exist within any of the WSAs. The cultural sites that do exist would be protected with or without wilderness designation. Since highly significant cultural sites are not known to exist within the WSAs, the issue of impact to cultural resources was dropped from further analysis.
7. Impact on Diversity within the National Wilderness Preservation System. The issue of how wilderness designation would impact ecologic diversity within the NWPS was not analyzed as an issue. Since all potential natural vegetation types within the WSAs are currently represented in the NWPS, designation of these WSAs as wilderness would not expand ecologic diversity of the system.
8. Impact on Wild Horses. Concerns were raised about wild horses and wilderness. This issue was considered as wild horses occur within the Little Humboldt River WSA, but as no management actions or necessary range developments could be determined which would be inconsistent with designation or nondesignation of the area, this issue was not selected for further analysis.
9. Riparian Habitat. The degraded condition of riparian habitat was a concern to many individual commentators. The primary causes of degradation of riparian habitat are uses which will continue with or without wilderness designation just as corrective actions will occur with wilderness designation or nondesignation.

The following issue is not an environmental issue, but is a program concern that was frequently identified as an issue during scoping.

The WSAs being studied are not what Congress intended to be included in the National Wilderness Preservation System. Some or all of the areas being studied for wilderness designation may not be the kind of area Congress intended to have considered for wilderness. This issue was dropped since it was determined in the inventory stage of the BLM's wilderness review process that all the WSAs being studied meet the minimum standards for wilderness identified by the Congress in the Wilderness Act of 1964 and FLPMA of 1976.

THE PLANNING PROCESS, SELECTION OF THE PROPOSED ACTION,
AND DEVELOPMENT OF ALTERNATIVES

The Planning Process and Selection of the Proposed Action

Development of the Proposed Action is guided by requirements of the Bureau's Planning Regulations, 43 Code of Federal Regulations (CFR), part 1600. The BLM's Wilderness Study Policy (published February 3, 1982, in the Federal Register) supplements the planning regulations by providing the specific factors to be considered in developing suitability recommendations during the planning sequence.

The Proposed Action recommends as suitable for wilderness designation those WSAs, or portions of WSAs, with high quality wilderness values. Under the Proposed Action, 36,460 acres would be recommended suitable for wilderness designation including the entire Rough Hills WSA and a 29,775 acre portion of the Little Humboldt River WSA. The Cedar Ridge and Red Spring WSAs along with a 12,438 acre portion of the Little Humboldt River WSA would be recommended nonsuitable for wilderness designation.

Alternatives to the Proposed Action Selected for Analysis

The BLM Wilderness Study Policy calls for the formulation and evaluation of alternatives ranging from resource protection to resource production. The alternatives assessed in this EIS include: (1) a No Wilderness Alternative for each WSA; (2) an All Wilderness Alternative for each WSA and; (3) a Partial Wilderness Alternative for the Little Humboldt River WSA.

In this document, the No Action Alternative, as required by the National Environmental Protection Act, and the No Wilderness Alternative are equivalent. Both advocate continuation of management as outlined in the existing RMP and recommend the WSAs as nonsuitable for wilderness.

The All Wilderness Alternative represents the maximum possible acreage that could be recommended as suitable for wilderness designation.

Partial wilderness alternatives can make suitable or nonsuitable recommendations ranging between the All Wilderness and No Action Alternatives. A partial wilderness alternative can recommend as suitable for wilderness designation something less than the entire acreage of one WSA.

Alternatives Considered But Dropped From Further Analysis

Under the Wilderness Study Policy of 1982, there are two general cases when it is appropriate to consider recommending less than entire WSAs for wilderness: (1) resolution of conflicts and (2) manageability of wilderness.

A Partial Wilderness Alternative was considered but dropped from further analysis for each of the WSAs, with the exception of two Partial Wilderness Alternatives considered for the Little Humboldt River WSA. One Partial Wilderness Alternative for the Little Humboldt River WSA is carried forward. The reasons for setting aside these other Partial Wilderness Alternatives which are not analyzed further are discussed below.

Cedar Ridge (NV-010-088) and Red Spring (NV-010-091) WSAs

A Partial Wilderness Alternative that would recommend as suitable something less than the entire acreage of these WSAs was considered as a means to remove those public lands with potential for woodland product harvest. No reasonable boundary adjustments were identified that would accomplish this goal and leave essential wilderness values intact. Therefore, this alternative was dropped from further consideration.

Rough Hills WSA (NV-010-151)

A Partial Wilderness Alternative that would recommend as suitable something less than the entire acreage of this WSA was considered as a means to remove the two private inholdings from the portion recommended suitable. No reasonable boundary adjustments were identified that would accomplish this goal and leave essential wilderness values intact. Therefore, this alternative was dropped from further consideration.

Little Humboldt River WSA (NV-010-132)

A modified rim-to-rim Partial Wilderness Alternative of about 15,000 acres was considered. This excluded considerable acreage with wilderness characteristics and diversity. These areas were manageable as wilderness and contained low potential conflicts. Therefore, this alternative was dropped from further consideration.

O

O

O

CHAPTER TWO

Proposed Action And Alternatives

CHAPTER 2

PROPOSED ACTION AND ALTERNATIVES

Since the pattern of future actions within the WSAs cannot be predicted with certainty, assumptions were made to allow the analysis of impacts under the Proposed Action and alternatives. These assumptions are the basis of the impacts identified in this EIS. They are not management plans or proposals, but represent feasible patterns of activities which could occur under the alternatives analyzed.

CEDAR RIDGE WSA (NV-010-088)

Proposed Action (No Wilderness Alternative)

All 10,009 acres of public land in the Cedar Ridge WSA would be recommended as nonsuitable for wilderness designation (Map 2-1).

Livestock Grazing and Range Management Actions

The entire Cedar Ridge WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 385 animal unit months (AUMs) for cattle for the foreseeable future. Six and one half miles of fence and two pit reservoirs exist within the WSA (Map 2-1). These would continue to be maintained for livestock management purposes. A livestock water pipeline 4 miles long and storage tank would be constructed in the WSA.

Recreational Off-Road Vehicle Use

The lands within the WSA would remain open to recreational ORV use. Approximately 70 visitor days of ORV use is currently occurring in the WSA, projections indicate that recreational ORV use would increase slightly, but would remain at levels below 200 visitor days annually for the foreseeable future.

Three vehicle ways totalling five miles exist within the WSA (Map 2-1). Thirteen miles of road associated with woodland product harvest and oil and gas exploration would be constructed into the center of the WSA at some time in the future. No other development of ways or roads is anticipated because of the low use the area receives.

Other Recreation

The Cedar Ridge WSA would be open for other recreation activities in addition to recreational ORV use. These activities would include hunting, camping, photography, and sightseeing. Recreational use for these activities would remain below 200 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned,

however, the thirteen miles of road constructed in association with woodland product harvest and oil and gas exploration would be used by hunters to gain access to the central portion of the WSA. Development of recreational facilities is not anticipated because of the low use the area receives.

Mineral Resource Actions

No development of the six existing mining claims located along the southwest boundary of the WSA is anticipated due to the absence of a known discovery (Map 3-2). Low impact collection of mineral samples for evaluation and annual assessment work is expected to continue. However, because the entire WSA is highly favorable for oil and gas, it is assumed that there would be three exploratory oil wells drilled in the WSA. Based on similar exploration near Jiggs, Nevada and in Pine Valley, Nevada, ten miles of road and three drill pads would be constructed in the WSA for oil and gas exploration. Surface disturbance from earth moving equipment would be about 40 acres. Another 60 acres would be disturbed by seismic line exploration. No oil discoveries are predicted and no pipeline would be needed.

Although the potential for occurrence of precious metals, barite, and uranium within the WSA is moderate, no exploration disturbances or development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit.

Woodland Product Actions

The Cedar Ridge WSA would be designated a firewood cutting area for public use. The area would be managed under sustained yield management practices, which involves harvesting wood products at the same 200 year reestablishment rate at which it grows. Selective thinning of stands would involve harvesting about 40 acres per year of all trees larger than a six inch diameter. This selective thinning under sustained yield management on approximately 40 acres per year will result in a reduction of tree canopy overstory by about 60 percent and an increase in growth rate on the remaining trees of less than 6 inch diameter with an increase in understory vegetation from the reduced competition.

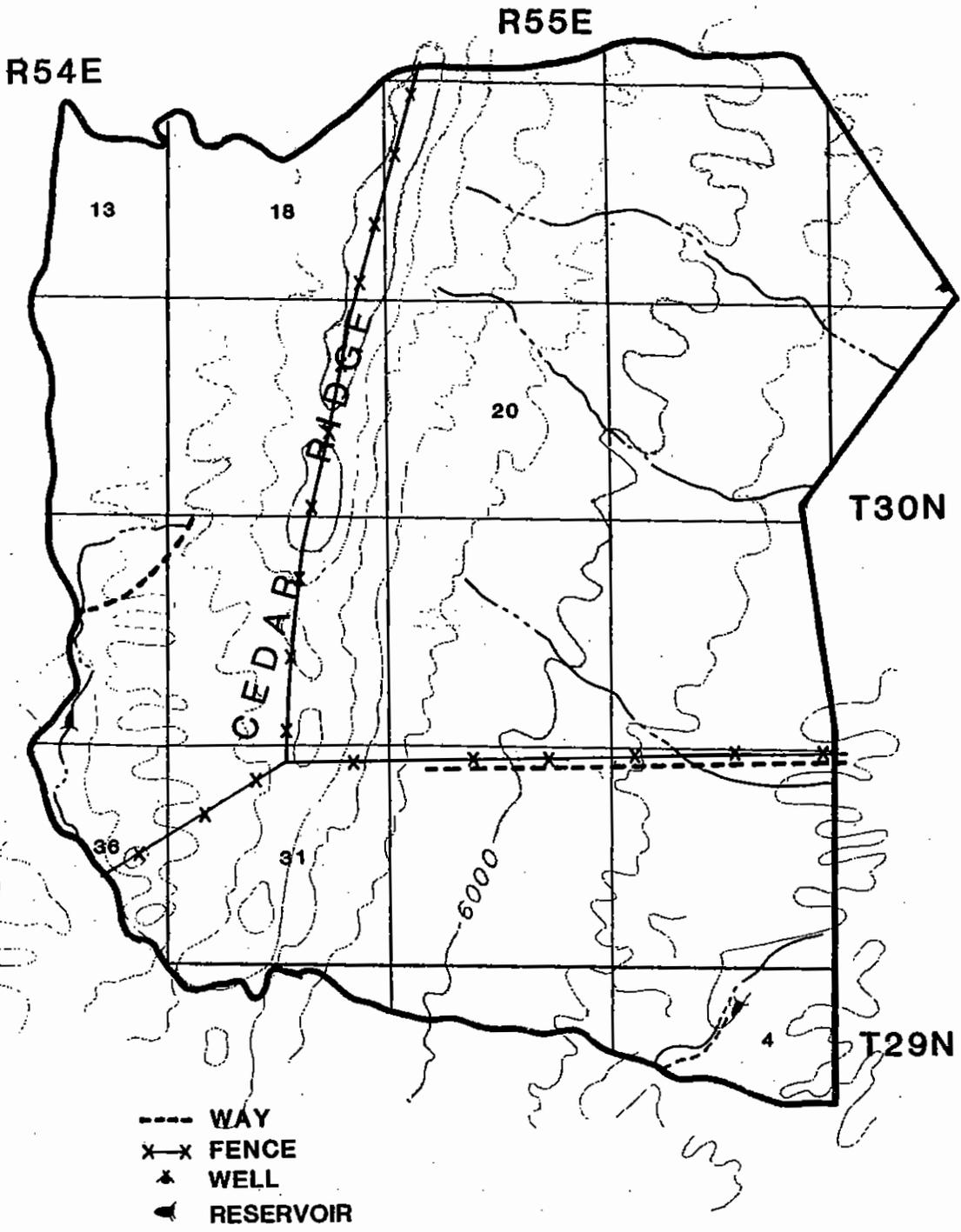
Three miles of road would be constructed specifically for this purpose and access routes also would be created by the passage of vehicles over time. Harvest activities would be intense on mild topography and along roads and ways. Activity would be much less intense on steeper terrain.

All Wilderness Alternative

All 10,009 acres of public land in the Cedar Ridge WSA would be recommended as suitable for wilderness designation (Map 2-1).

Livestock Grazing and Range Management Actions

The entire Cedar Ridge WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 385 AUMs for cattle for the foreseeable future. Six and one



PROPOSED ACTION-NO WILDERNESS

WILDERNESS STUDY AREA
CEDAR RIDGE NV-010-088
MAP 2-1

half miles of fence and two pit reservoirs in the WSA would continue to be maintained for livestock management purposes. A proposed four mile pipeline storage tank would not be constructed in the WSA.

Recreational Off-Road Vehicle Use

The Cedar Ridge WSA would be closed to recreational ORV use. This action would eliminate approximately 70 visitor days of ORV use that are estimated to occur annually.

Other Recreation

The Cedar Ridge WSA would be open for non-motorized recreation activities including hunting, camping, photography, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 200 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned. Development of those primitive recreation facilities which would be compatible with wilderness management are not anticipated because of the low use the area receives.

Mineral Resource Actions

Subject to valid existing rights, the Cedar Ridge WSA would be withdrawn from all forms of appropriation under the mining and mineral leasing laws. If a plan of operations is submitted a validity examination would be conducted on the six mining claims that are presently located within the WSA and any other mineral claims that exist at the time of designation. The expected exploratory drilling of three oil and gas wells in the WSA would be forgone. No mineral development or exploratory activities for the precious metals, barite, or uranium in the WSA is expected to occur. No oil or gas discoveries are predicted, based on historic success ratios in Nevada.

Woodland Product Actions

The Cedar Ridge WSA would not be designated a firewood cutting area for public use. No cords of pinyon pine and/or Utah juniper firewood or fence posts would be taken from the WSA. No roads would be constructed nor would access routes be created by the passage of vehicles used to gather woodland products over time. About 40 acres per year of wood harvest and thinning would not occur.

Summary of Impacts

Table 2-1 summarizes the impacts of the All Wilderness and No Wilderness Alternatives in the Cedar Ridge WSA.

TABLE 2-1

SUMMARY OF IMPACTS
CEDAR RIDGE WSA

Environmental Issues	Proposed Action	
	No Wilderness Alternative	All Wilderness Alternative
Impact on Wilderness Values	The area's wilderness values of naturalness and solitude would be lost.	Wilderness values of size and naturalness would be maintained. Solitude would be slightly enhanced on all 10,009 acres of the Cedar Ridge WSA.
Impact on Recreational ORV Use	Although the area would be more accessible, recreational ORV use would remain below 200 visitor days annually. There would be no significant impact on recreational ORV use.	Recreational ORV use of 70 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. Five miles of vehicle ways would be closed.
Impact on Mineral Resource Actions	Exploratory activities for oil and gas would continue. These include 50 miles of seismic line, 10 miles of road construction and drilling of 3 wildcat wells. No economical discoveries are predicted to result in development.	Exploratory drilling of 3 wildcat oil wells and 50 miles of seismic line, and construction of 10 miles of access road would be foregone. As no economical discoveries are predicted, there would be no impact to mineral development.
Impact on Grazing Facility Maintenance and Construction	There would be no impact on grazing facility maintenance. New construction of 4 miles of pipeline and a storage tank would take place.	There would be no impact on grazing facility maintenance. New construction of 4 miles of pipeline would be forgone.
Impact on Woodland Product Harvest	An annual harvest of 250 cords of firewood and 500 fence posts would occur on a sustained yield 200 year reestablishment basis. Approximately 40 acres per year would be thinned about 60 percent. Over the long-term 3 miles of access road would be built.	Harvest of woodland products would be forgone.

Proposed Action (No Wilderness Alternative)

All 7,847 acres of public land in the Red Spring WSA would be recommended as unsuitable for wilderness designation (Map 2-2).

Livestock Grazing and Range Management Actions

The entire Red Spring WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 482 AUMs for cattle for the foreseeable future. One developed spring, Red Spring, exists within the WSA (Map 2-2) and it would continue to be maintained for livestock management purposes. No new additional range developments would be constructed in the WSA and maintenance activities would not change.

Recreational Off-Road Vehicle Use

The lands within the WSA would remain open to recreational ORV use. Approximately 125 visitor days of ORV use are currently occurring in the WSA. Projections indicate that recreational ORV use would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future.

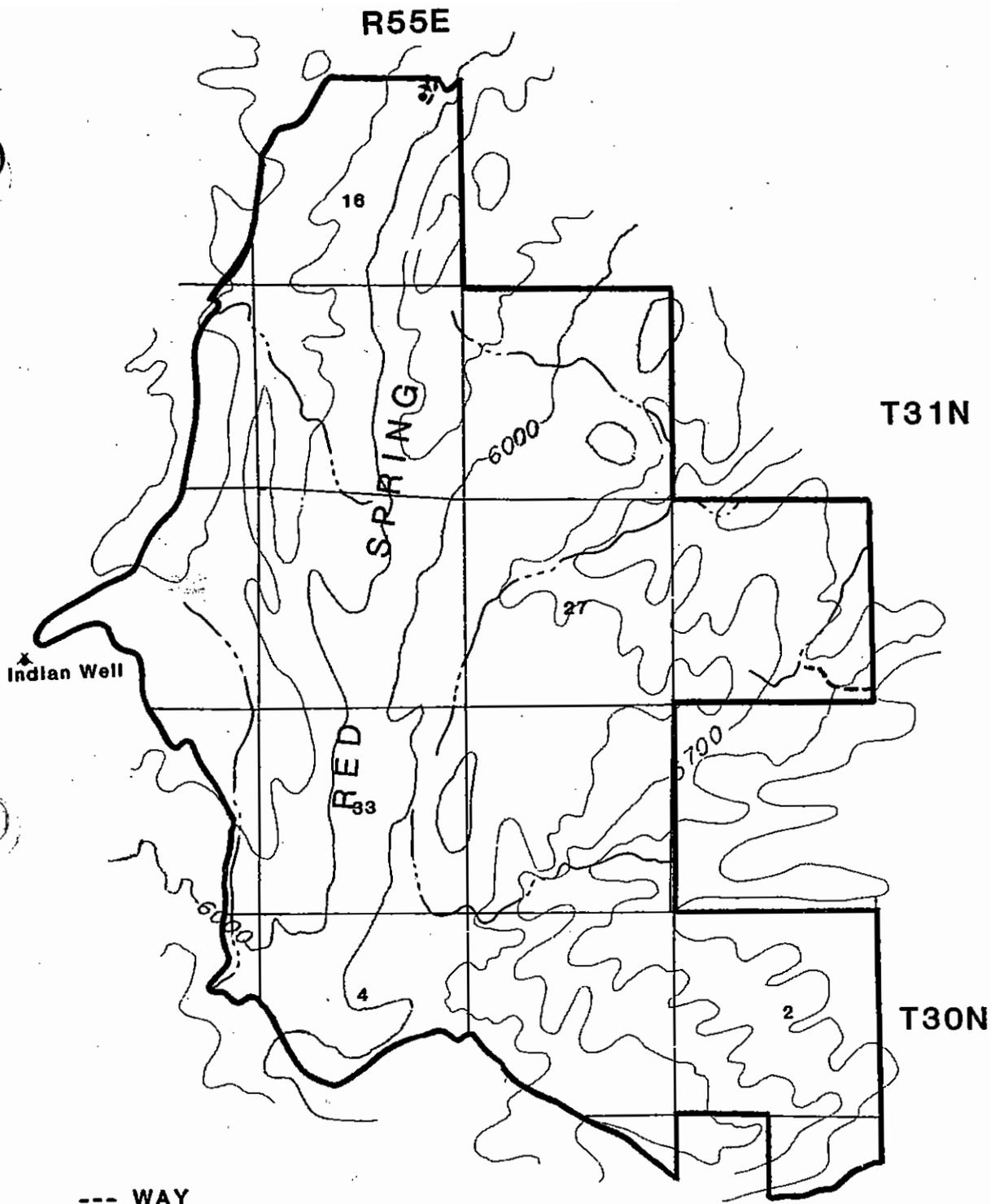
Two vehicle ways totalling one half mile exist within the WSA (Map 2-2). Twelve miles of road associated with woodland product harvest and oil and gas exploration would be constructed into the center of the WSA at some time in the future. No other development of ways or roads is anticipated because of the low use the area receives.

Other Recreation

The Red Spring WSA would be open for other recreation activities in addition to recreational ORV use. These activities would include hunting, camping, photography, and sightseeing. Recreational use for these activities would remain below 350 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives, however, the twelve miles of road constructed in association with woodland product harvest and oil and gas exploration would be used by hunters to gain access to the central portion of the WSA.

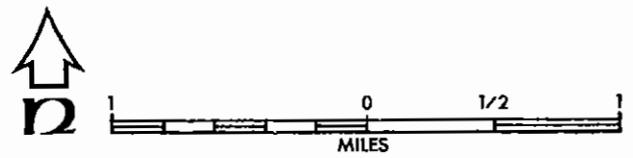
Mineral Resource Actions

No mining claims exist in the WSA. However, because the entire WSA is highly favorable for oil and gas, it is assumed that there would be exploration of three oil wells in the WSA. Based on similar exploration near Jiggs, Nevada and in Pine Valley, Nevada, ten miles of road and three drill pads would be constructed in the WSA for oil and gas exploration. Surface disturbance from earth moving equipment would be about 40 acres. Another 60 acres would be disturbed by seismic line exploration. No oil discoveries are predicted based on historic success ratios in Nevada.



Indian Well

- WAY
- ⊕ DEVELOPED SPRING
- ✕ WELL



PROPOSED ACTION- NO WILDERNESS

**WILDERNESS STUDY AREA
 RED SPRING NV-010-091
 MAP 2-2**

Although the potential for occurrence of barite and uranium within the WSA is moderate, no development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit.

Woodland Product Actions

The Red Spring WSA would be designated a firewood cutting area for public use. Permits to cut up to a total of 150 cords of pinyon pine and Utah juniper, and 320 fence posts per year would be sold to the general public. Two miles of road would be constructed specifically for this purpose and access routes also would be created by the passage of vehicles over time on forty acres per year, trees larger than six inches diameter at the base would be harvested, resulting in a 60 percent reduction of tree canopy density.

All Wilderness Alternatives

All 7,847 acres of public land in the Red Spring WSA would be recommended as suitable for wilderness designation (Map 2-2).

Livestock Grazing and Range Management Actions

The entire Red Spring WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 482 AUMs for cattle for the foreseeable future. Red Spring would continue to be maintained for livestock management purposes. No additional range developments would be constructed in the WSA and maintenance activities would not change.

Recreational Off-Road Vehicle Use

The Red Spring WSA would be closed to recreational ORV use. This action would eliminate approximately 125 visitor days of ORV use that are estimated to occur annually. Approximately one-half mile of vehicle way would be closed.

Other Recreation

The Red Spring WSA would be open for non-motorized recreation activities including hunting, camping, photography, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

Subject to valid existing rights, the Red Spring WSA would be withdrawn from all forms of appropriation under the mining and mineral leasing laws. If any future claims were located prior to withdrawal and a plan of operations were submitted, a validity examination would be conducted on the mineral claims. The expected exploratory drilling of three oil wells, 10 miles of access road,

and 50 miles of seismic line in the WSA would be forgone. No oil production would be foregone as no discoveries are predicted based on historic Nevada discovery ratios. No mineral development or exploratory activities for barite or uranium is expected to occur.

Woodland Product Actions

The Red Spring WSA would not be designated a firewood cutting area for public use. No cords of pinyon pine and/or Utah juniper firewood or fence posts would be taken from the WSA. No roads would be constructed nor would access routes be created by the passage of vehicles used to gather woodland products over time.

Summary of Impacts

Table 2-2 summarizes the impacts of the All Wilderness and No Wilderness Alternatives in the Red Spring WSA.

TABLE 2-2

SUMMARY OF IMPACTS
RED SPRING WSA

Environmental Issues	Proposed Action	
	No Wilderness Alternative	All Wilderness Alternative
Impact on Wilderness Values	The area's wilderness values of naturalness and solitude would be lost.	All wilderness values of size, naturalness, would be maintained. Solitude would be slightly enhanced on all 7,847 acres of the Red Spring WSA.
Impact on Recreational ORV Use	Although the area would be more accessible, recreational ORV use would remain below 350 visitor days annually. There would be no significant impact on recreational ORV use.	Recreational ORV use of 125 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. Approximately ½ mile of vehicle way would be closed.
Impact on Mineral Resource Options	Exploratory activities for oil and gas would continue. These include 50 miles of seismic line, 10 miles of access road, and drilling 3 wildcat wells. No mineral development is anticipated so there is no impact on mineral development. Environmental impacts would be derived only from exploration activities.	Exploratory drilling of 3 wildcat oil wells, 50 miles seismic line, and construction of 10 miles of access road would be foregone. No mineral development is anticipated so there is no impact on mineral development. Environmental impacts would be derived only from exploration activities.
Impact on Grazing Facility Maintenance and New Construction	There would be no impact on grazing facility maintenance or new construction.	There would be no impact on grazing facility maintenance or new construction.
Impact on Woodland Product Harvest	An annual harvest of 150 cords of firewood and 320 fence posts would occur. Approximately 40 acres per year would be thinned by about 60 percent. Over the long-term 2 miles of access road would be constructed.	Harvest of woodland products would be forgone. This would result in considerable additional expense and inconvenience to the public.

LITTLE HUMBOLDT RIVER WSA (NV-010-132)

Proposed Action (Partial Wilderness Alternative)

A portion of the Little Humboldt River WSA, 29,775 acres, would be recommended as suitable for wilderness designation. The remaining 12,438 acres would be recommended as nonsuitable for wilderness designation (Map 2-3).

Livestock Grazing and Range Management Actions

The entire Little Humboldt River WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 3,779 AUMs for cattle for the foreseeable future. Thirteen miles of barbed wire fence would be maintained in the portion recommended suitable for wilderness designation. Construction of 13.3 miles of fence and vegetative treatment of 9,240 acres in the suitable portion would be forgone. Construction of 7.3 miles of fence and vegetative treatment of 2780 acres would occur on the nonsuitable area

Recreational Off-Road Vehicle Use

The 29,775 acre parcel recommended as suitable for wilderness designation, including 10.5 miles of vehicle ways, would be closed to recreational ORV use. This would eliminate approximately 130 visitor days of ORV use that is estimated to occur annually in the area.

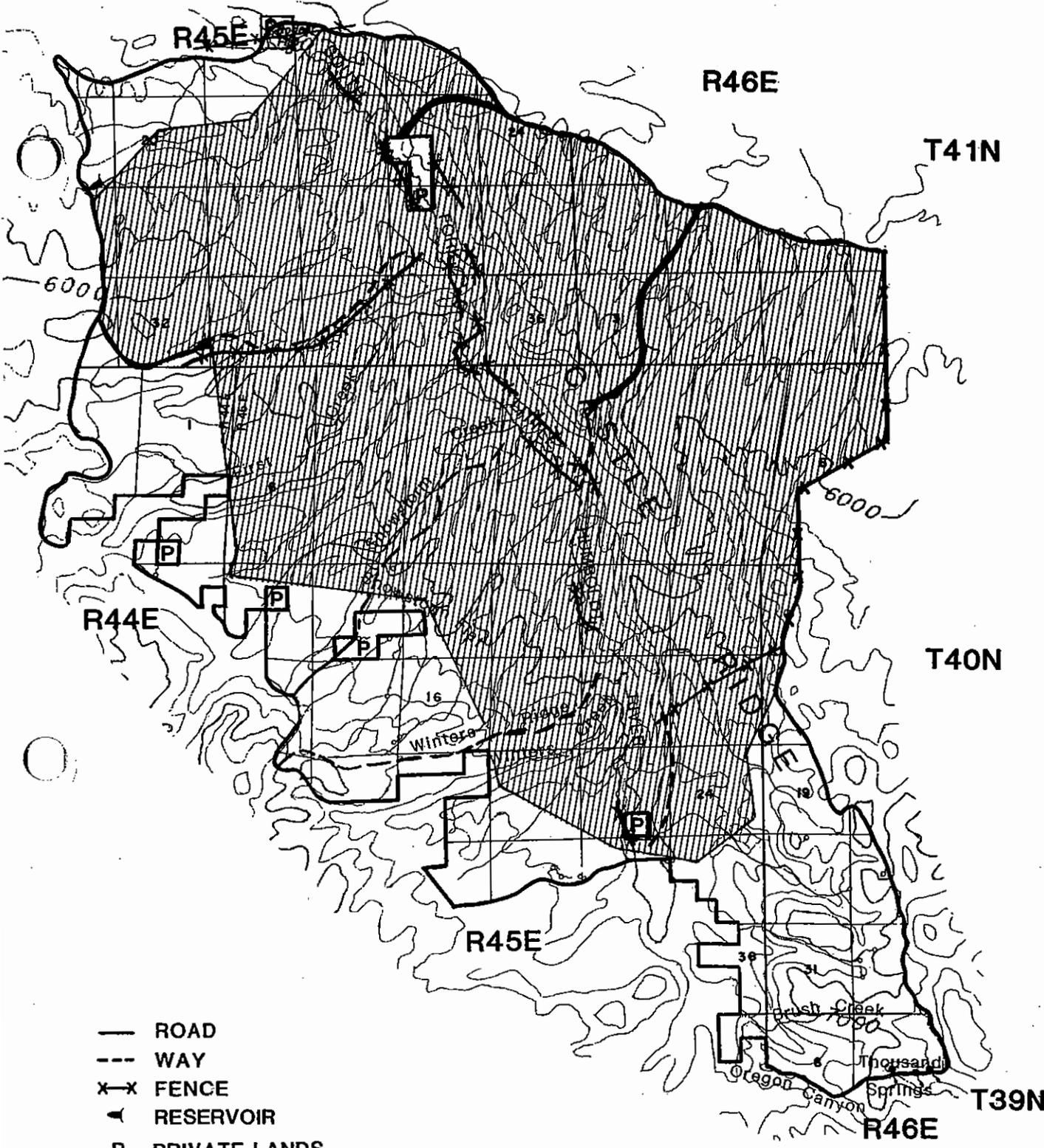
The 12,438 acre parcel recommended nonsuitable would remain open to recreational ORV use. A way 3.5 miles long would be open for vehicle use. Projections indicate that recreational ORV use would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future.

Other Recreation

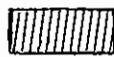
The Little Humboldt River WSA would be open for non-motorized recreation activities. These include hunting, fishing, horseback riding, camping, photography, nature study, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. The quality of the recreation experience of those hunting with a commercial guide in the WSA would also be expected to improve. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

Subject to valid existing rights, the 29,775 acres of the Little Humboldt River WSA recommended suitable would be withdrawn from all forms of appropriation under the mining and mineral leasing laws. Although no mining claims currently exist in the suitable area, validity examinations would be conducted on any mineral claims that might exist at the time of designation, for which a plan of operations is submitted.



PROPOSED ACTION - PARTIAL WILDERNESS

 Suitable

**WILDERNESS STUDY AREA
LITTLE HUMBOLDT RIVER NV-010-132**

About 19.0 miles of road would be built in the 12,438 acre nonsuitable portion of the WSA (southeastern and southwestern areas) to explore for gold and silver. In conjunction with this exploration, about 1,200 feet of trenches are anticipated to be dozed. Surface disturbance from earth moving equipment would be about 50 acres.

Although the potential for occurrence of gold and silver within the WSA is moderate, no development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit.

Management Actions to Exchange for Private Land

BLM would initiate action to acquire two parcels of private land totalling 200 acres through voluntary exchange.

Management Actions To Enhance Lahontan Cutthroat Trout (LCT) Habitat

Actions to maintain the existing 9 miles of riparian gap fences within the suitable portion of the WSA and mineral withdrawal on 29,775 acres would enhance LCT habitat.

Commodity Production (Partial Wilderness Alternative)

A portion of the Little Humboldt River WSA, 28,386 acres, would be recommended as suitable for wilderness designation. The remaining 13,827 acres would be recommended as nonsuitable for wilderness designation (Map 2-4).

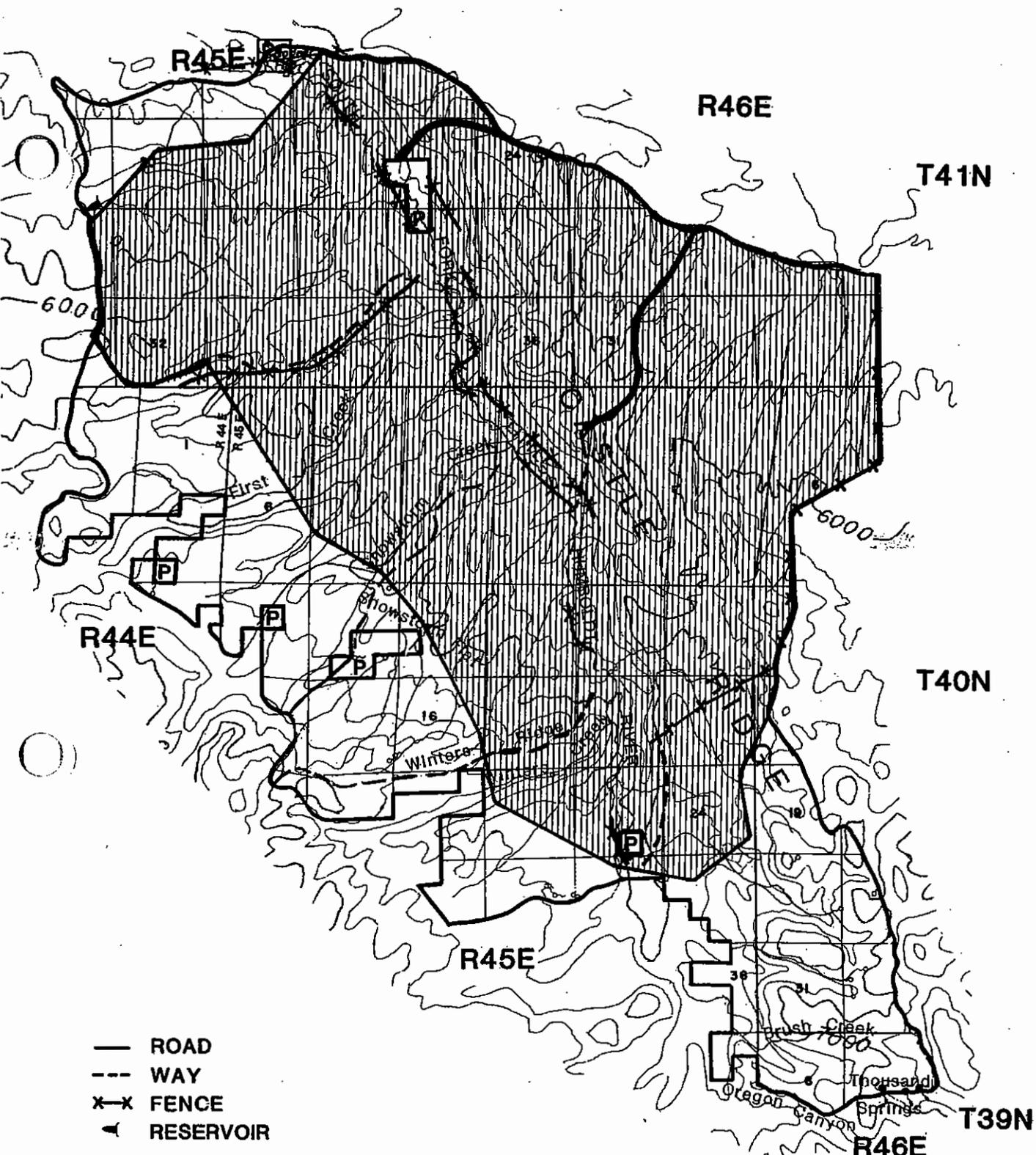
Livestock Grazing and Range Management Actions

The entire Little Humboldt River WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 3,779 AUMs for cattle for the foreseeable future. Thirteen miles of barbed wire fence would be maintained in the portion recommended suitable for wilderness designation. New construction of 13.2 miles of fence and vegetative treatment of 8,640 acres in the suitable portion would be forgone. New construction of 7.4 miles of fence and vegetative treatment of 3,380 acres would occur on the nonsuitable area.

Recreational Off-Road Vehicle Use

The 28,386 acre parcel recommended as suitable for wilderness designation, including 10.0 miles of vehicle ways, would be closed to recreational ORV use. This would eliminate approximately 120 visitor days of ORV use that is estimated to occur annually in the area.

The 13,827 acre parcel recommended nonsuitable would remain open to ORV use. Two ways totalling 4.0 miles would be open for vehicle use. Projections



- ROAD
- - - WAY
- x-x FENCE
- ▲ RESERVOIR
- P PRIVATE LANDS
- NATURAL SPRINGS



Note: The scale on this map is different than other WSAS.

MILES

COMMODITY PRODUCTION-PARTIAL WILDERNESS

Suitable

**WILDERNESS STUDY AREA
LITTLE HUMBOLDT RIVER NV-010-132**

indicate that recreational ORV use would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future.

Other Recreation

The Little Humboldt River WSA would be open for non-motorized recreation activities. These include hunting, fishing, horseback riding, camping, photography, nature study, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

Subject to valid existing rights, the 28,386 acres of the Little Humboldt River WSA recommended suitable would be withdrawn from all forms of appropriation under the mining and mineral leasing laws. Although no mining claims currently exist in the suitable area, validity examinations would be conducted on any mineral claims that exist at the time of designation for which a plan of operations is submitted.

About 20.0 miles of road would be built in the 13,827 acre nonsuitable portion of the WSA (southeastern and southwestern areas) to explore for gold and silver. In conjunction with this exploration, about 1,300 feet of trenches are anticipated to be dozed. Surface disturbance from earth moving equipment would be about 60 acres.

Although the potential for occurrence of gold and silver within the WSA is moderate, no development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit.

Management Actions to Exchange for Private Land

BLM would initiate action to acquire two parcels of private land totalling 200 acres through voluntary exchange.

Management Actions To Enhance Lahontan Cutthroat Trout Habitat

The primary impact upon LCT habitat is increased sediment loads from livestock grazing and/or mineral exploration and development activities. Therefore, the two most important actions to enhance LCT habitat would be to maintain the existing 9.0 miles of riparian gap fences within the suitable portion of the WSA and the mineral withdrawal of the 28,386 acres.

All Wilderness Alternatives

All 42,213 acres of public land in the Little Humboldt River WSA would be recommended as suitable for wilderness designation (Map 2-3).

Livestock Grazing and Range Management Actions

The entire Little Humboldt River WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 3,779 AUMs for cattle for the foreseeable future. Thirteen and one half miles of barbed wire fence could be maintained in the WSA. Construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would be forgone.

Recreational Off-Road Vehicle Use

The entire 42,213 acre WSA, including the 14.0 miles of vehicle ways, would be closed to recreational ORV use. This action would eliminate approximately 140 visitor days of ORV use that are estimated to occur annually.

Other Recreation

The Little Humboldt River WSA would be open for non-motorized recreation activities. These include hunting, fishing, horseback riding, camping, photography, nature study, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

Subject to valid existing rights, the entire Little Humboldt River WSA would be withdrawn from all forms of appropriation under the mining and mineral leasing laws.

Approximately 112 acres of the Little Humboldt River WSA are covered by 9 post-FLPMA mining claims for precious metals. These claims would be examined to determine validity if a plan of operations were submitted.

Although the potential for occurrence of gold and silver within the WSA is moderate, no development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit.

Management Actions to Exchange for Private Land

BLM would initiate action to acquire five parcels of private land totalling 480 acres through voluntary exchange.

Management Actions To Enhance Lahontan Cutthroat Trout (LCT) Habitat

Actions to maintain the existing 9 miles of riparian gap fences within the WSA and mineral withdrawal on 42,213 acres would enhance LCT habitat.

No Wilderness Alternative

The 42,213 acres of public land in the Little Humboldt River WSA would be recommended as nonsuitable for wilderness designation (Map 2-3).

Livestock Grazing and Range Management Actions

The entire Little Humboldt River WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 3,779 AUMs for cattle for the foreseeable future. Thirteen and one-half miles of barbed wire fence would be maintained in the WSA. Construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would occur.

Recreational Off-Road Vehicle Use

The entire WSA would remain open to recreational ORV use. It is reasonable to expect that recreational ORV use would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. Vehicle ways totalling 14.0 miles would be available for recreational and other vehicular use. Further development of ways or roads is not anticipated because of the low use the area receives.

Other Recreation

The Little Humboldt River WSA would be open for recreation activities in addition to recreational ORV use including hunting, fishing, horseback riding, camping, photography, nature study, and sightseeing. Projections indicate that recreational use for these activities would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. The quality of the recreation experience of those hunting with a commercial guide in the WSA would not change. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

Approximately 112 acres of the Little Humboldt River WSA are covered by 9 post-FLPMA mining claims for precious metals. Plans of operations for these claims would be processed in accordance with existing regulations.

About 20.0 miles of road would be built in the WSA (southeastern and southwestern areas) to explore for gold and silver. In conjunction with this exploration, about 1,300 feet of trenches are anticipated to be dozed. Surface disturbance from earth moving equipment would be about 70 acres. In addition, about 50.0 miles of seismic lines to explore for oil and/or gas are expected to occur in the northeastern portion of the WSA.

Although the potential for occurrence of gold and silver within the WSA is moderate, no development of these minerals is anticipated because of the lack of geologic features which would indicate an economic deposit. No oil or gas discoveries are predicted based on historic success ratios in Nevada.

Management Actions to Protect Lahontan Cutthroat Trout (LCT) Habitat

Maintenance of 9 miles of riparian gap fencing and reclamation measures to limit sediment yields from mining operations would preclude impacts on LCT habitat.

Summary of Impacts

Table 2-3 summarizes the impacts of the Proposed Action, Partial Wilderness, All Wilderness and No Wilderness Alternatives in the Little Humboldt River WSA.

TABLE 2-3

SUMMARY OF IMPACTS
LITTLE HUMBOLDT RIVER WSA

Environmental Issue	Proposed Action Partial Wilderness Alternative	Commodity Production Partial Wilderness Alternative	All Wilderness Alternative	No Wilderness Alternative
Impact on Wilderness Values	<p>The 29,775 acres designated as wilderness would receive long term Congressional protection. All wilderness values in this area would be maintained. The area's naturalness and opportunities for primitive and unconfined recreation and solitude would be retained. On the 12,438 acres not designated as wilderness, there would be a reduction of naturalness and opportunities for solitude.</p>	<p>The 28,386 acres designated as wilderness would receive long term Congressional protection. All wilderness values in this area would be maintained. The area's naturalness and opportunities for primitive recreation and solitude would be retained. On the 13,827 acres not designated as wilderness, there would be a reduction of naturalness and opportunities for solitude.</p>	<p>All wilderness values would receive long term Congressional protection. There would be a slight improvement in naturalness and opportunities for primitive and unconfined recreation and solitude on 42,213 acres.</p>	<p>There would be a reduction in naturalness and opportunities for solitude on 42,213 acres because of continued ORV use, new mineral exploration activities, and rangeland development projects.</p>
Impact on Recreational ORV Use	<p>Recreational ORV use of 130 visitor days would be forgone on 29,775 acres annually. Impacts of shifting this use to other public lands would be negligible. On the 12,438 acres of the WSA not designated as wilderness, recreational ORV use would continue to increase, but would not exceed 350 visitor days annually. About 10.5 miles of vehicle ways would be closed.</p>	<p>Recreational ORV use of 120 visitor days would be forgone on 28,386 acres annually. Impacts of shifting this use to other public lands would be negligible. On the 13,827 acres of the WSA not designated as wilderness, recreational ORV use would continue to increase, but would not exceed 350 visitor days annually. About 10 miles of vehicle ways would be closed.</p>	<p>Recreational ORV use of 140 visitor days would be forgone on 42,213 acres annually. Impacts of shifting this use to other public lands would be negligible. About 14 miles of vehicle ways would be closed.</p>	<p>There would be no impact on recreational ORV use.</p>

TABLE 2-3 (continued)

SUMMARY OF IMPACTS
LITTLE HUMBOLDT RIVER WSA

Environmental Issue	Proposed Action	Partial Wilderness Alternative	Commodity Production Partial Wilderness Alternative	All Wilderness Alternative	No Wilderness Alternative
Impact on Mineral Resource Actions	<p>The 29,775 acres of wilderness would be withdrawn from mineral entry and leasing. Approximately 50 miles of seismic exploration line on a 7,500 acre northern portion of the area would be foregone. Construction of 1 mile of access road and 100 feet of bulldozed exploration trench would be foregone on an area of 1,389 acres of moderate potential for gold and silver on the southwest portion of the suitable area.</p> <p>On the 12,438 acre nonsuitable area, exploration activities consisting of 19 miles of access road and 1,200 feet of bulldozed trench would occur on a 5,911 acre area of moderate potential for gold and silver in the southwest and southeast portions of the area.</p>	<p>The 28,386 acres of wilderness would be withdrawn from mineral entry and leasing. Approximately 50 miles of seismic exploration line on a 7,500 acre northern portion of the area would be foregone.</p> <p>On the 13,827 acre nonsuitable area, exploration activities consisting of 20 miles of access road and 1,300 feet of bulldozed trench would occur on a 7,300 acre area of moderate potential for gold and silver in the southwest and southeast portions of the area.</p>	<p>The 28,386 acres of wilderness would be withdrawn from mineral entry and leasing. Approximately 50 miles of seismic exploration line on a 7,500 acre northern portion of the area would be foregone.</p> <p>On the 13,827 acre nonsuitable area, exploration activities consisting of 20 miles of access road and 1,300 feet of bulldozed trench would occur on a 7,300 acre area of moderate potential for gold and silver in the southwest and southeast portions of the area.</p>	<p>The entire 42,213 acres would be withdrawn from mineral entry and leasing.</p> <p>Exploration activities consisting of 20 miles of access road and 1,300 feet of bulldozed trench on the southwest and southeast portions of the area, 7,300 acres of moderate potential for gold and silver, would be foregone. Exploration activities consisting of 50 miles of seismic lines on a 7,500 acre northern portion of the area would also be foregone.</p>	<p>The entire 42,213 acres would be open for mineral entry and leasing. Approximately 20 miles of access road and 1,300 feet of bulldozed trench would be constructed as a result of exploration on 7,300 acres of moderate potential for gold and silver on the southwest and southeast portions of the WSA. Approximately 50 miles of seismic line would occur on a 7,500 acre northern portion of the WSA.</p>
Impact on Grazing Facility Maintenance and Construction	<p>There would be no impact on grazing facility maintenance. Construction of 13.3 miles of fence and vegetative treatment of 9,240 acres would be foregone.</p>	<p>There would be no impact on grazing facility maintenance. Construction of 13.2 miles of fence and vegetative treatment of 8,640 acres would be foregone.</p>	<p>There would be no impact on grazing facility maintenance. Construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would be foregone.</p>	<p>There would be no impact on grazing facility maintenance. Construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would occur.</p>	

TABLE 2-3 (continued)

SUMMARY OF IMPACTS
LITTLE HUMBOLDT RIVER WSA

Environmental Issue	Proposed Action	Partial Wilderness Alternative	Commodity Production	Partial Wilderness Alternative	All Wilderness Alternative	No Wilderness Alternative
(continued)	On the 12,438 acre nonsuitable area, construction of 7.3 miles of fence and vegetative treatment of 2,780 acres would occur.	On the 13,827 acre nonsuitable area, construction of 7.4 miles of fence and vegetative treatment of 3,380 acres would occur.				
Impact on Private Inholdings	There would be no impact to two private inholdings, 200 acres, within the suitable portion.	There would be no impact to two private inholdings, 200 acres, within the suitable portion.			There would be no impact to five private inholdings, 480 acres, within the suitable portion.	There would be no impact to five private parcels, 480 acres.
Impact on Lahontan Cutthroat Trout Habitat	Designated wilderness areas would preclude mineral exploration and range development activities which might affect LCT habitat through siltation. Negligible increases in siltation of LCT habitat would occur on non-designated areas as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.	Designated wilderness areas would preclude mineral exploration and range development activities which might affect LCT habitat through siltation. Negligible increases in siltation of LCT habitat would occur on non-designated areas as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.		Designated wilderness areas would preclude mineral exploration and range development activities which might affect LCT habitat through siltation. Negligible increases in siltation of LCT habitat would occur on non-designated areas as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.	The LCT habitat would be maintained and the LCT population would be unaffected.	Small increases in siltation of LCT habitat would occur as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.

ROUGH HILLS WSA (NV-010-151)

Proposed Action (All Wilderness Alternatives)

All 6,685 acres of public land in the Rough Hills WSA would be recommended as suitable for wilderness designation (Map 2-5).

Livestock Grazing and Range Management Actions

The entire Rough Hills WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 1,024 AUMs for sheep, cattle, and horses for the foreseeable future. The only range improvement facility within the WSA is a developed spring near the southern boundary. It would continue to be maintained for livestock management purposes. No additional range developments would be constructed in the WSA and maintenance activities would not change.

Recreational Off-Road Vehicle Use

The entire WSA would be closed to recreational ORV use, including the 0.8 mile way leading through Inez Gulch in the southwestern corner of the WSA. This action would eliminate fewer than 50 visitor days of recreational ORV use that are estimated to occur annually.

Other Recreation

The Rough Hills WSA would be open for non-motorized recreation activities. These include hunting, hunting related horseback riding, camping, photography, nature study, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 100 visitor days annually for the foreseeable future. The quality of the recreation experience of those hunting with a commercial guide in the WSA would also be expected to improve. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

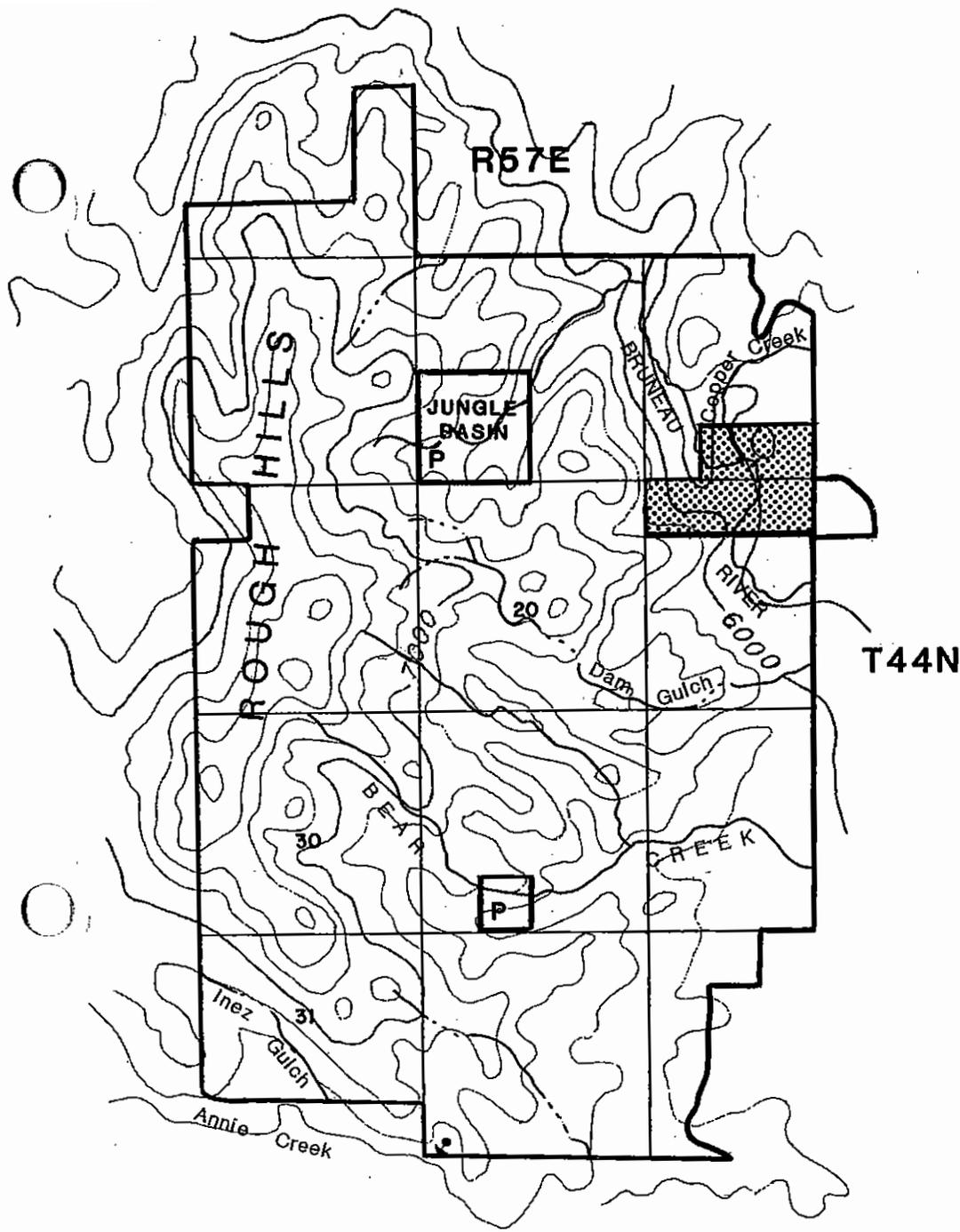
Mineral Resource Actions

Subject to valid existing rights, the Rough Hills WSA would be withdrawn from all forms of appropriation under the mining and mineral leasing laws. Although no mining claims currently exist in the WSA, validity examinations would be conducted on any mineral claims that exist at the time of designation.

Although the potential for occurrence of metallic minerals within the WSA is moderate, no development of these minerals is anticipated because of the presence of volcanic cap rock 1,000 to 2,000 feet thick.

Management Actions to Exchange for Private Land

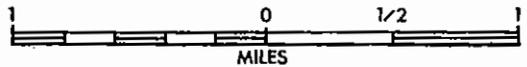
BLM would initiate action to acquire two parcels of private land totalling 200 acres through voluntary exchange.



 PUBLIC WATER RESERVE

 DEVELOPED SPRING

P PRIVATE LANDS



PROPOSED ACTION-ALL WILDERNESS

**WILDERNESS STUDY AREA
ROUGH HILLS NV-010-151
MAP 2-5**

No Wilderness Alternative

All 6,685 acres of public land in the Rough Hills WSA would be recommended as nonsuitable for wilderness designation (Map 2-5).

Livestock Grazing and Range Management Actions

The entire Rough Hills WSA would continue to be allotted for livestock grazing. Projections indicate that livestock use would be maintained at the existing level of 1,024 AUMs for sheep, cattle, and horses for the foreseeable future. The only range improvement facility within the WSA is a developed spring near the southern boundary. It would continue to be maintained for livestock management purposes. An allotment boundary fence about 3 miles long would be built across the WSA to better manage livestock.

Recreational Off-Road Vehicle Use

The entire WSA would remain open to recreational ORV use, including the 0.8 mile way leading through Inez Gulch in the southwestern corner of the WSA. Recreational ORV use would increase slightly, but would remain at levels below 100 visitor days annually for the foreseeable future. Further development of ways or roads is not anticipated because of the low use the area receives.

Other Recreation

The Rough Hills WSA would be open for non-motorized recreation activities in addition to recreational ORV use. These include hunting, fishing, hunting-related horseback riding, camping, photography, nature study, and sightseeing. Recreational use for these activities would increase slightly, but would remain at levels below 100 visitor days annually for the foreseeable future. The quality of the recreation experience of those hunting with a commercial guide in the WSA would not significantly change even with mining and range fence construction activities. No recreation facilities or trails exist in the WSA and none are planned because of the low use the area receives.

Mineral Resource Actions

No mining claims exist in the WSA. However, because the entire WSA is moderately favorable for metallic minerals, it is assumed that there would be exploration for, but no development of, minerals in the WSA. Two miles of road leading to the interior of the WSA would be built to perform exploratory drilling. Surface disturbance from earth moving equipment would be about 10 acres.

Summary of Impacts

Table 2-4 summarizes the impacts of the All Wilderness and No Wilderness Alternatives in the Rough Hills WSA.

TABLE 2-4

SUMMARY OF IMPACTS
ROUGH HILLS WSA

Environmental Issues	Proposed Action All Wilderness Alternative	No Wilderness Alternative
Impact on Wilderness Values	All wilderness values would receive long term Congressional protection. All wilderness values would be maintained. The area's naturalness and opportunities for solitude and primitive and unconfined recreation would improve.	There would be a reduction of the area's naturalness and opportunities for solitude and primitive and unconfined recreation.
Impact on Recreational ORV Use	Recreational ORV use of 50 visitor days would be forgone annually. The impacts resulting from this use shifting to other public lands would be negligible. One vehicle way 0.8 miles long would be closed.	There would be no impact on recreational ORV use.
Impact on Mineral Resource Activities	The 6,685 acres would be withdrawn from mineral entry and mineral leasing. Construction of 2 miles of access road for exploratory core drilling would be foregone.	The entire 6,685 acres would be available for mineral entry and mineral leasing. Construction of 2 miles of access road and exploratory core drilling for moderate potential of gold and silver deposits is predicted to occur.
Impact on Grazing Facility Maintenance and Construction	There would be no impact on grazing facility maintenance. Construction of a 3 mile long allotment boundary fence across the WSA would be foregone.	There would be no impact on grazing facility maintenance. Construction of a 3 mile long allotment boundary fence across the WSA would occur.
Impact on Private Inholdings	There would be no impact to two private inholdings, 200 acres, within the WSA.	There would be no impact to two private parcels, 200 acres.

CHAPTER THREE

Affected Environment

CHAPTER 3

AFFECTED ENVIRONMENT

CEDAR RIDGE WSA (NV-010-088)

General Characteristics

The Cedar Ridge WSA lies approximately 23 air miles south of Elko, Nevada. The dominant topographic feature of the unit is the single north-south ridge-line. The west side of the ridge has a short uptilted remnant bench, which is deeply dissected. The east side of the ridge is severely eroded and gullied. The highest point within the unit is Hilton Peak near the northern boundary at 7,151 feet. The lowest elevation is 5,600 feet on the flats along the eastern boundary.

Numerous wildlife species, including deer, sage grouse, Swainson and Ferruginous hawks, golden eagles and other raptors are found within the WSA.

Land Status

The Cedar Ridge WSA contains 10,009 acres of public land. There are no private or state lands within the WSA.

Wilderness Values

Naturalness

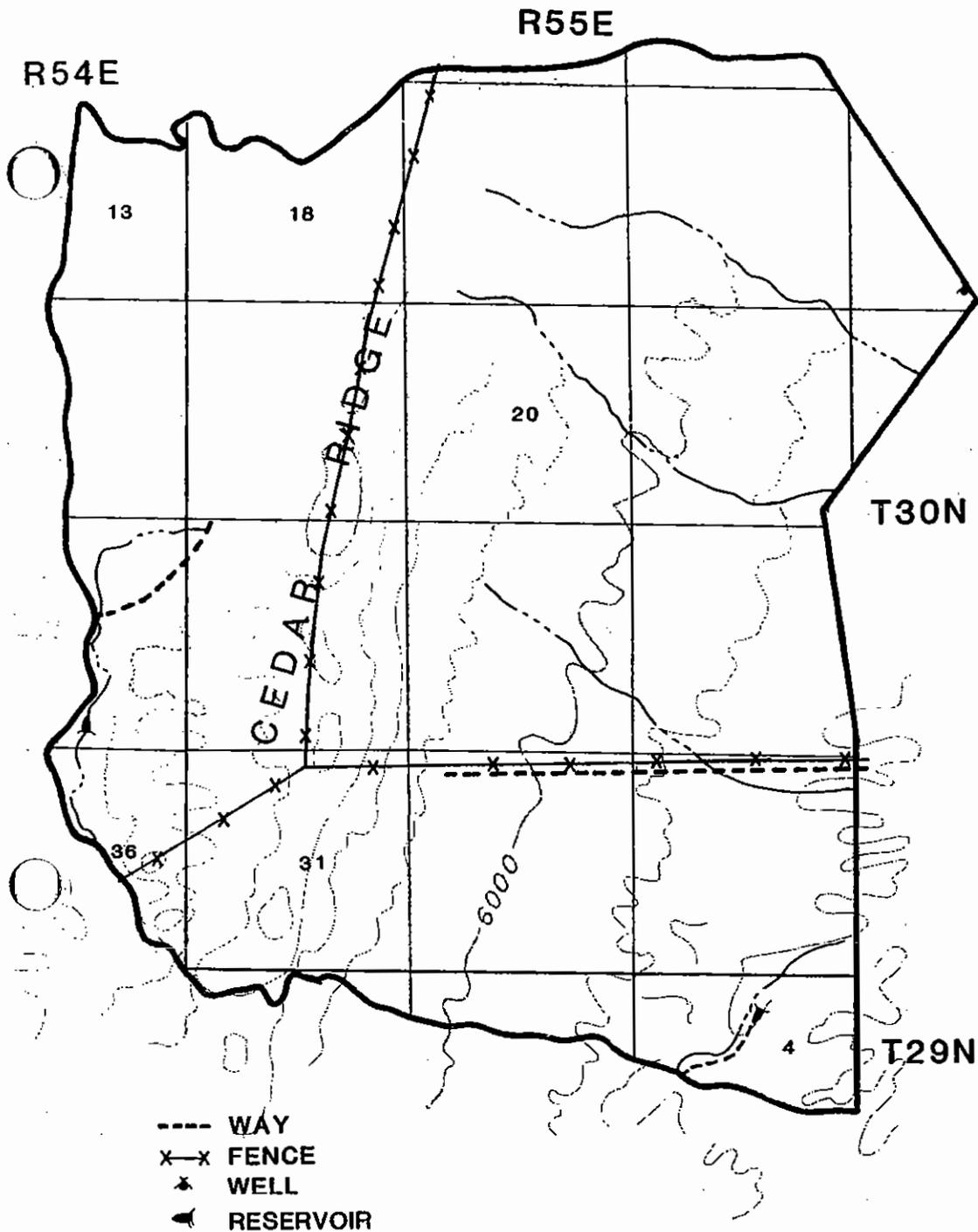
The WSA generally appears natural. Although man-made facilities exist they are subtle and possible to escape in much of the WSA. Two ways totalling five miles extend into the unit. Also evident are three allotment boundary barbed wire fences totalling 6½ miles (Map 3-1). The northern three-mile section is not bladed. The other two segments are bladed and their path through the juniper trees is easily noticeable. The northeastern portion of the WSA contains an old burn, remnant fire breaks and Hansel Well, with its associated water trough and corrals. Two pit reservoirs also exist near the western and southeastern boundaries of the WSA.

Solitude

The WSA provides the best opportunities for solitude in the west side bench and deeply dissected draws due to topographic screening and vegetative screening provided by dense Utah juniper. The juniper stands on the east side offer good solitude with dense vegetative screening but lack any topographic relief. The single narrow configuration of the ridge provides limited solitude with little opportunities to avoid others.

Primitive and Unconfined Recreation

Primitive recreational activities available include hiking, backpacking, camping, hunting, horseback riding, and wildlife observation. The lack of water and lack of diversity of recreational areas limit the attractiveness and potential for outstanding recreational opportunities within the WSA.



- WAY
- x-x FENCE
- * WELL
- ▲ RESERVOIR



EXISTING SITUATION
CEDAR RIDGE NV-010-088
MAP 3-1

The WSA lacks any challenging hiking terrain. It could be explored by the average hiker in a day's time. To fully explore the WSA might require two days, although the inclination to do so would be low.

Special Features

The unit has good quality vistas, small populations of deer and predators, and some picturesque twisted, burned juniper trees and stumps. The WSA is an example of an isolated Great Basin juniper woodland. These features contribute to the WSA but fail to enhance its suitability as wilderness.

Recreational Off-Road Vehicle Use

The WSA has little recreational ORV use, about 70 annual recreation visitor days. Most off-road vehicle use occurs in association with illegal wood harvesting activities. Terrain and vegetation limit ORV access and use occurs in approximately 50 percent of the WSA.

Mineral Resources

Map 3-2 depicts areas of mineral favorability within the Cedar Ridge WSA as reported in the Geology, Energy, and Minerals (GEM) Report. The mineral favorability classification system is explained and favorability for GEM Resources shown in Table 3-1 below.

The dominant physiographic feature is a north-trending ridge of Paleozoic limestone. The limestone forms an anticline, the limbs of which dip moderately to the east and west. The WSA is within the block-faulted basin and range province, however, no major faults are indicated on geologic maps of the area by Smith and Ketner (1975).

As of December 1985 there were portions of six post-FLPMA mining claims in the southwest corner of the WSA (Map 3-2). They were located by Cominco American in September 1983, apparently for precious metals. No activities requiring a 43 CFR 3802 plan-of-operation have occurred on the claims to date.

Stream sediment concentrate samples (Quade and Tingley, 1984) show geochemically anomalous concentrations of barium and occasionally silver in areas draining from Paleozoic limestone terrains within the WSA. Whole rock samples from areas of Paleozoic limestone, although rather few, show anomalous concentrations of arsenic, antimony, and mercury which are good indicators of potential precious metal mineralization. The WSA is also along the most significant gold trend (in terms of production) in the U.S. Area M1-3C (Map 3-2) is classified as moderately favorable for precious metals mineralization and barite.

Area U1-3B (Map 3-2) is underlain by rock similar to the host rock containing uranium mineralization. However, increased distance from mineralized areas along with dissimilar ages of host rock and veneers of quaternary gravels reduce the level of this confidence rating.

TABLE 3-1

Mineral Favorability of the
Cedar Ridge WSA

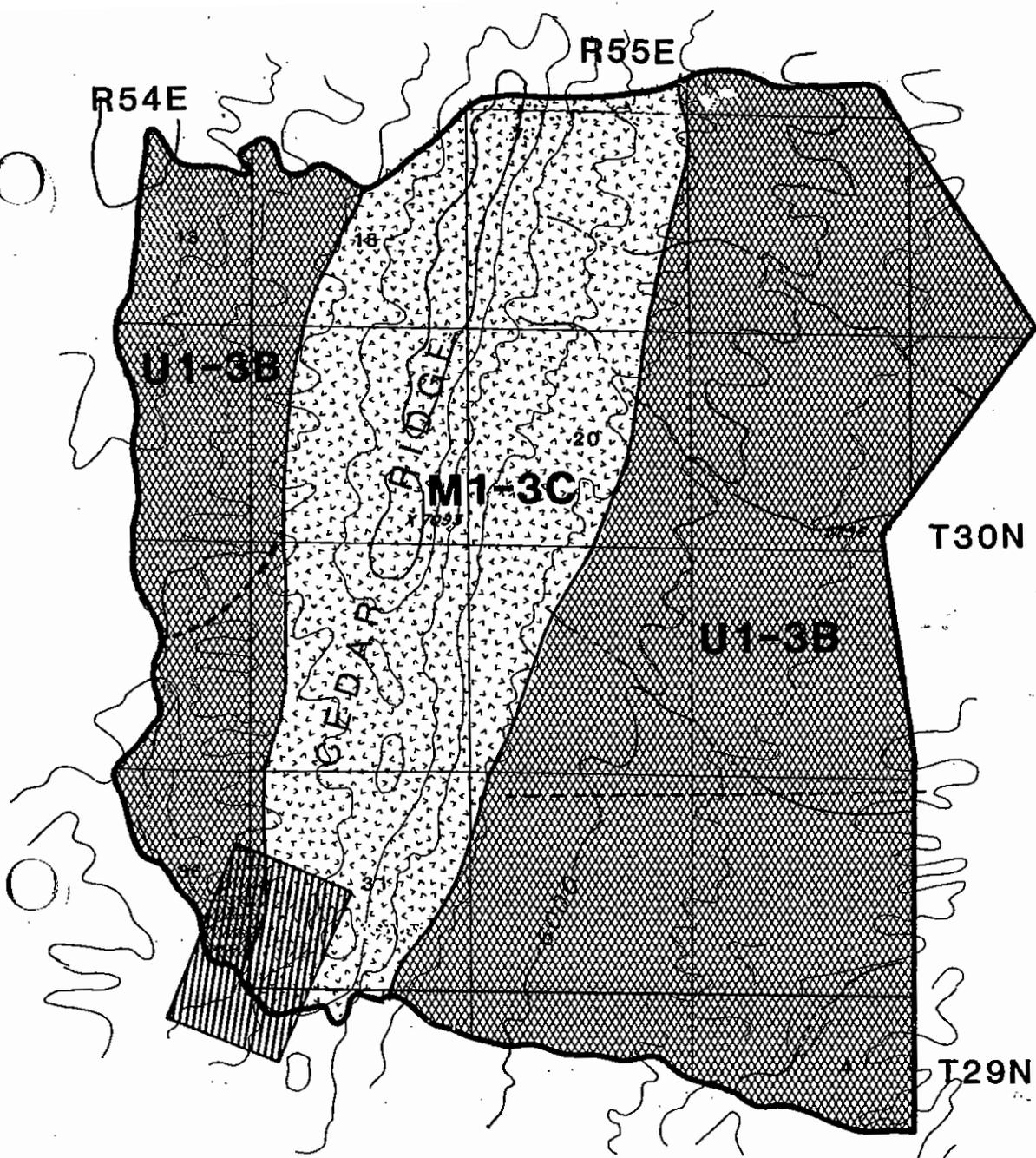
<u>COMMODITY</u>	<u>CLASSIFICATION</u>	<u>CONFIDENCE</u>	<u>REMARKS</u>
	<u>LEVEL</u>	<u>LEVEL</u>	
Metals/Non-Metals	3	C	Area M1-3C, Map 3-2
Metals/Non-Metals	2	C	Rest of WSA
Geothermal	1	D	
Uranium/Thorium	3	B	Area U1-3B, Map 3-2
	1	B	Rest of WSA
Coal	1	C	
Oil and Gas	4	C	
Tar Sands/Oil Shale	2	B	
Limestone	4	D	
Bentonite	2	C	
Diatomite	1	B	
Zeolites	2	C	
Barite	3	C	Area M1-3C, Map 3-2
	2	C	Rest of WSA
Turquoise	1	B	
Perlite	1	C	
Phosphate	1	C	
Paleontology	3	D	
Sand & Gravel	4	D	

LEGEND: Favorability of the Geologic Environment to Contain GEM Resources.

- Class 1 - Unfavorable
- Class 2 - Low Favorability
- Class 3 - Moderate Favorability
- Class 4 - High Favorability

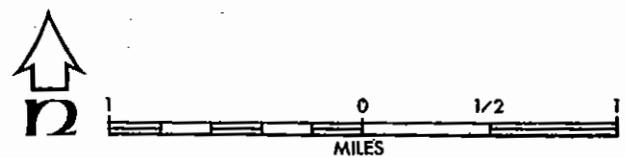
- Confidence Level A - Insufficient data or no direct evidence
- Confidence Level B - Indirect evidence available
- Confidence Level C - Direct evidence but quantitatively minimal
- Confidence Level D - Abundant direct and indirect evidence

The WSA is highly favorable for oil and gas. Noncommercial oil and gas discoveries have been reported in Tertiary strata near Jiggs, Nevada about six miles southwest of the WSA. A dry hole was drilled by Texaco in 1981 about ten miles north of the WSA. This wildcat did not test the Paleozoic section which is producing in Pine Valley, 25 miles southwest of the WSA. In 1984 ARCO submitted an Application for Permit to Drill (APD) an exploration well through both the Tertiary and Paleozoic strata three miles northwest of the WSA. Seismic oil and gas exploration was very active near the WSA during 1983 and 1984. The entire WSA was leased for oil and gas in 1983. Subsequently some of the leases have terminated. Due to high industry interest in the area it is highly probable that the entire WSA would be leased if available for leasing.



LOCATABLE MINERAL POTENTIAL

-  MODERATE FAVORABILITY FOR URANIUM (U1-3B)
-  MODERATE FAVORABILITY FOR PRECIOUS METALS AND BARITE (M1-3C)
-  MINING CLAIMS POST-(FLPMA)



Based on favorable oil maturation levels, excellent source rocks, nearby oil production and shows, and a favorable structural setting, the U.S.G.S. (Sandberg, 1983) rated the WSA as a prime area for petroleum exploration with high potential. Potential source rocks include Paleozoic marine strata (Chainman Shale, Webb Formation, and Nevada Dolomite) and Eocene lacustrine oil shales of the Elko Formation.

The WSA contains no geothermal features or requisite geologic criteria in the area which would indicate favorability for geothermal resources. Therefore, it is rated unfavorable for geothermal resources. All other leasable minerals are unlikely to occur in the WSA.

Upper Pennsylvania and Permian strata contain sparse, local, very fossiliferous beds having an invertebrate fauna consisting of brachiopods, bryozoans, crinoid columnals, foraminifera, and gastropods (Smith and Ketner, 1975). The Moleen Formation contains an abundant invertebrate fauna consisting of corals, echinoderms, bryozoans, brachiopods, foraminifera, and pelecypods. The WSA is rated moderately favorable for paleontological resources.

Livestock Grazing

The entire WSA is allotted for livestock grazing. It includes portions of three allotments: Hansel, Sleeman, and Dixie Creek. These three allotments are operated by two permittees and total 385 AUMs within the WSA.

About 48 percent of the WSA (northeastern portion) is within the Hansel Allotment. This allotment is operated under a rotational grazing system. Ecological status is rated as early to mid-seral stage. Most operations involving the 150 AUMs and maintenance of an existing fence within the WSA are primarily accomplished by horseback. About 29 percent of the WSA (western portion) is within the Sleeman Allotment. Within the WSA there are 85 AUMs. Cattle are grazed from May to August. Ecologic status is rated as early to mid-seral stage. Cattle are gathered by horseback within the WSA portion of the allotment. The allotment contains one pit reservoir just inside the western WSA boundary which might periodically require repair or maintenance by motorized equipment.

About 23 percent of the WSA (southern portion) is within the Dixie Creek Allotment. It is operated from May to July with 150 AUMs within the WSA. Ecological status is rated as mid-seral stage. The allotment contains two bladed fencelines. A pit reservoir is in the WSA's southeast corner. Fence maintenance has been accomplished by vehicle and horseback. The pit reservoir is connected to the south boundary road by a vehicle way and will periodically require heavy equipment for maintenance and repair. Cattle gathering and salting operations have been accomplished within the WSA by vehicles and horseback. Much of this allotment within the WSA is readily traversed by off-road cross country vehicles.

Woodland Products

The Cedar Ridge WSA contains 4,940 forested acres of pinyon pine and Utah juniper, a forested inventory of about 50,400 standing cords of wood, and a

projected inventory of 197,600 total harvestable posts (Map 3-3). Based on a reestablishment rotational basis of 200 years, Cedar Ridge WSA could support an annual harvest of about 250 cords of wood and about 500 fence posts. Because of the relatively mild terrain and close proximity to Elko, in relation to other forested areas, the WSA has a high potential for being a major supply source of woodland products to Elko residents. It could supply about 18 percent of the local demand for firewood, based on average annual permit sales in 1983 and 1984.

RED SPRING WSA (NV-010-091)

General Characteristics

The Red Spring WSA lies approximately 20 miles south of Elko, Nevada. The elevation varies between about 5,500 to 6,400 feet. The core of the WSA is an east titled block of limestone. The remaining area is comprised of soft Tertiary sedimentary rocks forming rounded weathered hills and eroded drainages. The area is a dense woodland of pinyon pine and Utah juniper.

Numerous wildlife species, including deer, sage grouse, golden eagles and other raptors are found within the WSA.

Land Status

The Red Spring WSA contains 7,847 acres of public land. There are no private or state lands within the WSA.

Wilderness Values

Naturalness

The WSA generally appears natural. Although man-made facilities exist they are subtle and possible to escape. Two ways totalling one half mile exist within the WSA (Map 3-4). The WSA also contains evidence of woodland product harvesting. Faint vehicle tracks thought to be associated with woodcutting, are often encountered in the relatively easily traversed terrain. Ax and saw cut stumps are evident in much of the WSA. Stumps estimated to be at least 80 years old are common.

Solitude

The heavily forested area offers outstanding solitude because of vegetative screening. The WSA in general provides ample opportunities to find seclusion although the two eastern most sections and several areas along the western boundary offer almost no opportunities for solitude due to their total lack of topographic and vegetative screening.

Primitive and Unconfined Recreation

Primitive recreational activities available include hiking, backpacking, photography, camping, hunting, horseback riding, and wildlife observation. The lack of water, diversity of recreational areas and vegetation, and geologic formations limit the attractiveness and potential for outstanding recreational opportunities within the WSA.

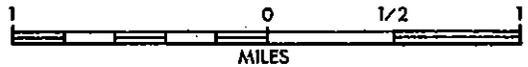
R54E

R55E

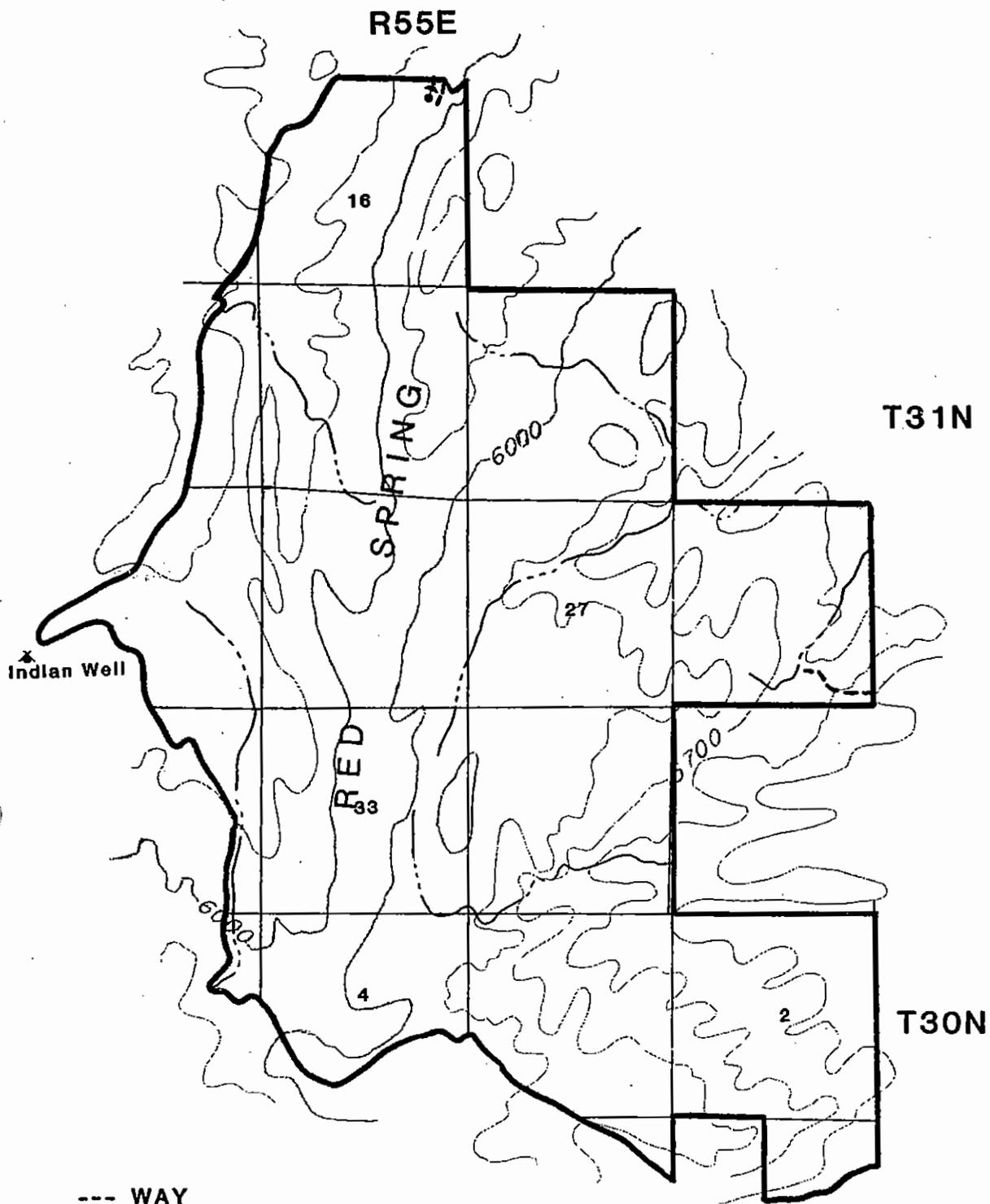
T30N

T29N

 FORESTED LAND



WOODLAND
CEDAR RIDGE NV-010-088
MAP 3-3



- WAY
- ⊕ DEVELOPED SPRING
- ✕ WELL



EXISTING SITUATION
RED SPRING NV-010-091
MAP 3-4

Special Features

The unit has a few good quality vistas, small populations of deer and predators, and some picturesque twisted burned juniper trees and stumps. This WSA is an example of an isolated Great Basin juniper woodland. These features contribute to the WSA but fail to enhance its suitability as wilderness.

Recreational Off-Road Vehicle Use

The WSA has little current recreational ORV use, probably about 125 annual recreation visitor days. Most off-road vehicle use occurs in association with wood harvesting activities.

Mineral Resources

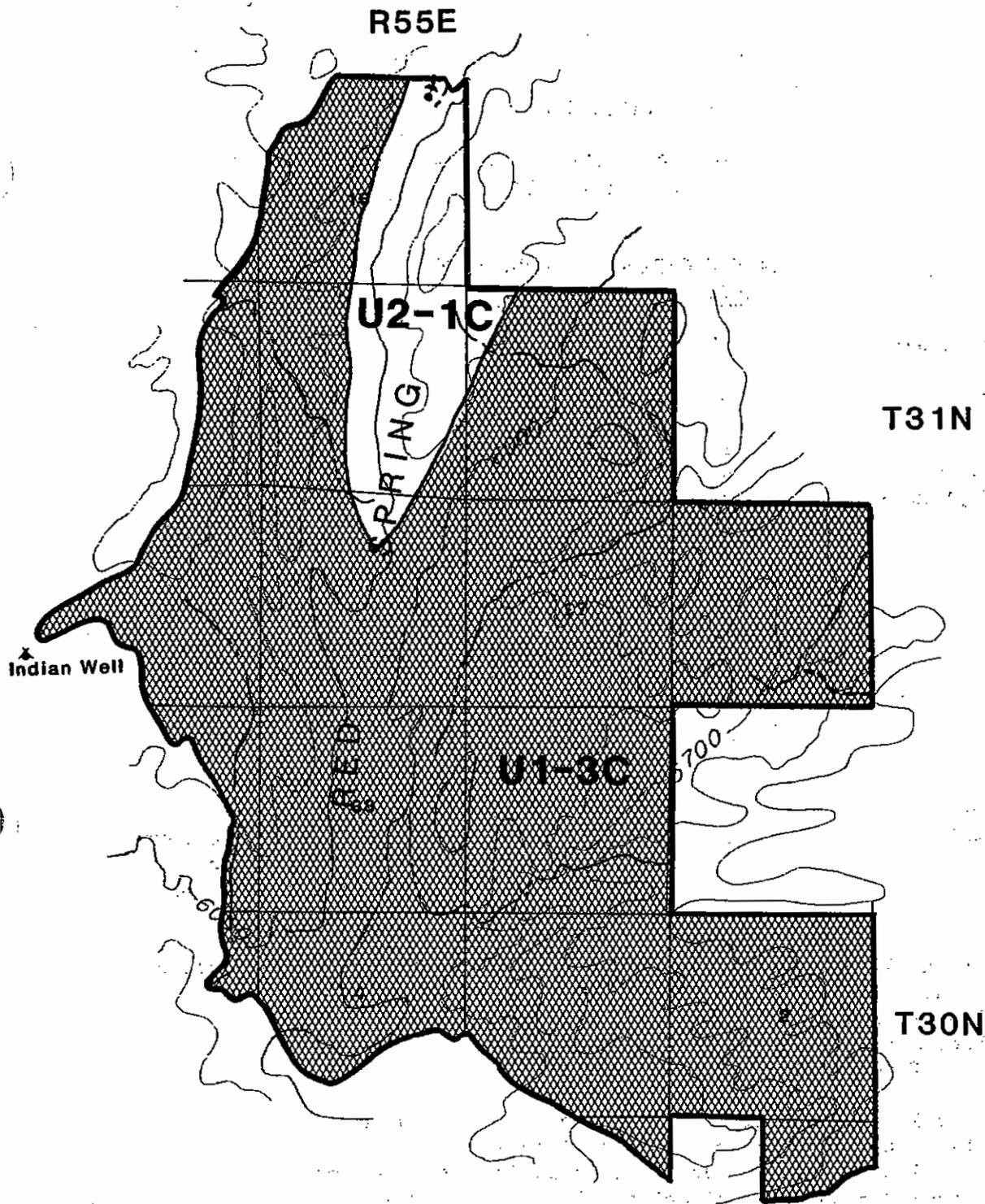
Map 3-5 depicts areas of mineral favorability within the Red Spring WSA as reported in the GEM Report. The mineral favorability classification system is explained and favorability for GEM resources is shown in Table 3-2 below.

The dominant physiographic feature is a north-trending low rounded ridge of Miocene Humboldt Formation sedimentary strata and Permian limestone. The strata generally dip moderately to the east. The major structural feature is a high angle normal fault trending north-south in the north central portion of the WSA.

As of December 1985 there were no mining claims or any evidence of mineral development in the WSA. A uranium anomaly occurs about one mile northeast of the WSA where workings consist of several dozer cuts. The best uranium mineralization seems to be along the silicified margin of a limestone/sandstone contact, where samples containing 240 to 440 ppm U_3O_8 were reported by Percival and Bright (1982). Another uranium occurrence was reported by Percival and Bright (1982) in tuffs about six miles north of the WSA. Although the source of uranium and mode of deposition are not well understood, it is evident that the Humboldt Formation and possibly most of the Tertiary section comprising most of the WSA is a favorable host for uranium mineralization. On the basis of this data, Area U1-3C is rated moderately favorable for uranium (Map 3-5). The remainder of the WSA is unfavorable for uranium (Area U2-1C, Map 3-5).

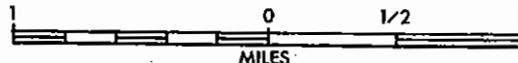
Quade and Tingley (1984) report high barium values in stream sediment samples from many of the channels draining the WSA. No source for the barium was found. The WSA is rated moderately favorable for barite. The WSA has low favorability or is unfavorable for other locatable minerals.

The WSA is highly favorable for oil and gas. Noncommercial oil and gas discoveries have been reported in tertiary strata near Jiggs, Nevada about six miles southwest of the WSA. A dry hole was drilled by Texaco in 1981 about five miles north of the WSA. This wildcat did not test the Paleozoic section which is productive in Pine Valley 25 miles southwest of the WSA. In 1984 ARCO drilled through both the Tertiary and Paleozoic strata three miles west of the WSA. Seismic oil and gas exploration has continued at a high level near the WSA from 1983 to 1986. The entire WSA was leased for oil and gas in 1983. Subsequently some of the leases have terminated. Due to high industry interest in the area it is highly probable that the entire WSA would be leased if available for leasing.



LOCATABLE MINERAL POTENTIAL URANIUM

-  MODERATE FAVORABILITY (U1-3C)
-  UNFAVORABLE (U2-1C)



MINERAL FAVORABILITY

RED SPRING NV-010-091

MAP 3-5

TABLE 3-2

Mineral Favorability of the
Red Spring WSA

<u>COMMODITY</u>	<u>CLASSIFICATION LEVEL</u>	<u>CONFIDENCE LEVEL</u>	<u>REMARKS</u>
Metals/Non-Metals	2	C	
Geothermal	1	D	
Uranium/Thorium	3	C	Area U1-3C
	1	B	Rest of WSA
Coal	1	C	
Oil and Gas	4	C	
Tar Sands/Oil Shale	2	B	
Limestone	4	C	Economic factors would reduce classification considerably.
Bentonite	2	C	
Diatomite	1	B	
Zeolites	2	C	
Barite	3	C	
Turquoise	1	B	
Perlite	1	C	
Phosphate	1	C	
Paleontology	3	C	
Sand & Gravel	4	C	Economic factors would reduce classification considerably.

LEGEND: Favorability of the Geologic Environment to Contain GEM Resources.

Class 1 - Unfavorable

Class 2 - Low Favorability

Class 3 - Moderate Favorability

Class 4 - High Favorability

Confidence Level A - Insufficient data or no direct evidence

Confidence Level B - Indirect evidence available

Confidence Level C - Direct evidence but quantitatively minimal

Confidence Level D - Abundant direct and indirect evidence

Based on favorable oil maturation levels, excellent source rocks, nearby oil production and shows, and a favorable structural setting, the U.S.G.S. (Sandberg, 1983) rated the WSA as a prime area for petroleum exploration with high potential. Potential source rock includes Paleozoic marine strata (Chainman Shale, Webb Formation, and Nevada Dolomite) and Eocene lacustrine oil shales of the Elko Formation.

The WSA contains no geothermal features or requisite geologic criteria in the area which would indicate favorability for geothermal resources. The WSA is rated unfavorable for geothermal resources. All other leasable minerals are unlikely to occur in the WSA.

Livestock Grazing

The entire WSA is allotted for livestock grazing, including portions of the Crane Springs and Hansel Allotments. These allotments are operated by two permittees and total 482 AUMs within the WSA.

About 99 percent of the WSA is within the Crane Springs Allotment. It is operated under a season long grazing system and has 456 AUMs within the WSA. About one percent of the WSA is within the Hansel Allotment. It is voluntarily operated under a rotation grazing system. The ecologic status of both allotments is early to mid-seral stage. No range improvement projects have been proposed which would involve the WSA.

Woodland Products

The Red Spring WSA contains approximately 3,200 forested acres of pinyon pine and Utah juniper (Map 3-6). The WSA has a forested inventory of 32,700 standing cords of wood and a projected inventory of 128,200 posts. Basing reestablishment on a 200-year rotation, the WSA could support an annual harvest of about 150 cords of firewood and about 320 fence posts. The Red Spring WSA has a high potential for being a major firewood source for Elko, 20 miles to the north, and is capable of supplying about 12 percent of the local woodland product demand based on the annual average wood permit sales for 1983 and 1984.

R55E

T31N

T30N

Indian Well

RED
SPRING

RED
SPRING

700

4

2



FORESTED LAND



WOODLAND
RED SPRING NV-010-091
MAP 3-6

LITTLE HUMBOLDT RIVER WSA (NV-010-132)

General Characteristics

The Little Humboldt River WSA lies about 65 miles northwest of Elko, Nevada, and about three miles north of Midas, Nevada. The study area is primarily the upper drainage basin of the South Fork Little Humboldt River, situated between the middle slopes of the Snowstorm Mountains on the west, Castle Ridge on the East, and Owyhee Bluffs on the south. The 12 miles of the Little Humboldt River; Winters and Castle Ridge; Snowstorm Flat; Bush, Winters, Snowstorm, and First Creeks and Oregon Canyon constitute the main features of the area.

Numerous wildlife species including deer, antelope, sage grouse, chukar, quail, golden eagles, prairie falcons, American kestrels, and other raptors occur in the WSA. In December 1985, California Bighorn Sheep, a state listed sensitive species, were reintroduced to the area by the Nevada Department of Wildlife. In December 1986, an additional release of California Bighorn Sheep occurred. Lahontan cutthroat trout, a threatened species, also exist within the WSA.

Land Status

The Little Humboldt River WSA contains 42,213 acres of public land. In addition there are five private parcels totalling 480 acres within the WSA boundary (Map 3-7).

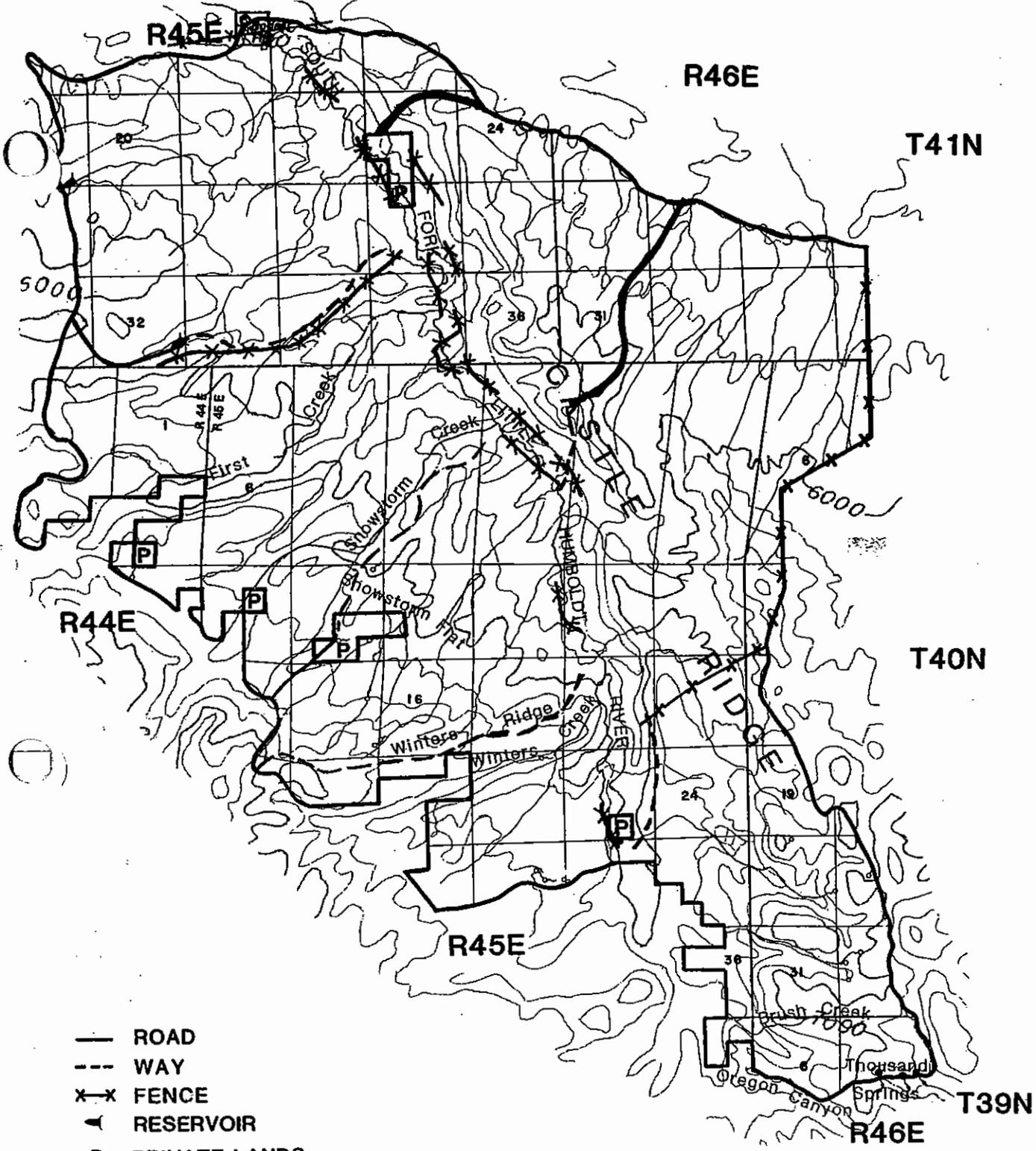
Wilderness Values

Naturalness

The WSA generally appears natural. Although man-made facilities exist they are possible to escape in much of the WSA. Four ways totalling 14.0 miles extend into the WSA. Thirteen and one half miles of barbed wire fence is found throughout the WSA. Approximately half of this fencing was constructed in 1984 for enhancement of riparian vegetation along the South Fork Humboldt River. Much of this fencing consists of short segments constructed across draws and canyons to control impacts on the WSA from wild horses and livestock and is not noticeable. The remaining fences were constructed in 1985 as pasture fences and extend westward from near the confluence of First Creek and the Little Humboldt River. These fences are temporary and may not remain if wilderness designation occurs.

Solitude

The size of the 42,213 acre WSA, its configuration, and the presence of only six access routes aid in the opportunities for solitude. Vegetative screening is excellent only along the main stream and its side creeks. The wide flats to the west of the canyon area offer little topographic screening from other users. The rolling hills over much of the area offer moderate screening. Overall, within the WSA, there are numerous areas where outstanding opportunities for solitude exist.



- ROAD
- - - WAY
- x-x FENCE
- ▲ RESERVOIR
- P PRIVATE LANDS
- NATURAL SPRINGS



Note: The scale on this map is different than other WSAS.

0 1/2 1

MILES

EXISTING SITUATION

LITTLE HUMBOLDT RIVER NV-010-132

MAP 3-7

Primitive and Unconfined Recreation

The deeply dissected, narrow twisted volcanic canyons, and creek confluences, with their spire-like formations, offer outstanding opportunities for photography, rock climbing, hiking, fishing and exploring. The mouths of the creeks offer equal attractions away from the main canyon. A significant opportunity exists for viewing and photographing wild and free roaming horses. The entire WSA is used by wild horses and consists of nearly equal amounts of year-round and summer wild horse range. The lack of vegetative screening, wide flat mesas and rolling hills between the entrenched creeks are an enhancement for viewing wild horses. The numerous drainages and rock formations offer almost unlimited opportunities to sneak within close viewing distance of bands of wild horses in the open areas or for close encounters where they trail through narrow rocky gorges. The year round presence of the bands somewhere within the unit is unique.

Opportunities for hiking vary from fair in the flats to very difficult within the canyon area. Trips would average two to five days. Excellent camping exists among the aspens along the streams. Good camping opportunities occur within the canyon areas. Fair to poor camping opportunities are present within the northern third of the WSA as limited sheltered sites along the river and the lack of water away from the river limit this activity.

Due to the presence of horse trails, the area provides excellent horseback riding opportunities. It would easily take a three day trip to fully explore the WSA.

The river provides good fishing opportunities for Lahontan cutthroat trout. The population averages about 400 of these trout per mile of stream.

The rugged high rock formations combined with the good condition of the riparian areas support a high population of cliff-nesting raptors, providing outstanding opportunities for nature study. Prairie falcons and golden eagles nest within the WSA. Chukar and valley quail can also be observed along the drainages.

A licensed outfitter and guide from Midas, just south of the WSA, started operations in 1985. No use data is yet available, however, it is his intention to operate within the WSA and the adjacent Snowstorm Mountains during the deer season.

Special Features

The WSA provides a unique area for study of a transition zone containing portions of the southern Owyhee Cold Desert and the lower slopes of a Basin and Range aspen forest without the typical pinyon pine and juniper woodlands. Within the northern portion of the WSA, Artemesia packardiae, a rare sagebrush of concern to the Nevada Native Plant Society, is thought to occur.

An estimated 150 to 200 wild horses exist within the unit, with the peak in summer. With an average band size of six to eight horses, there are numerous bands spread throughout the WSA.

Recreational Off-Road Vehicle Use

The WSA has little recreational ORV use, probably about 140 annual recreation visitor days. Most off-road vehicle use occurs in association with deer hunting and upland bird hunting.

Mineral Resources

Map 3-8 depicts areas of mineral favorability within the Little Humboldt River WSA as reported in the GEM Report. The mineral favorability classification system is explained in Table 3-3 below.

TABLE 3-3

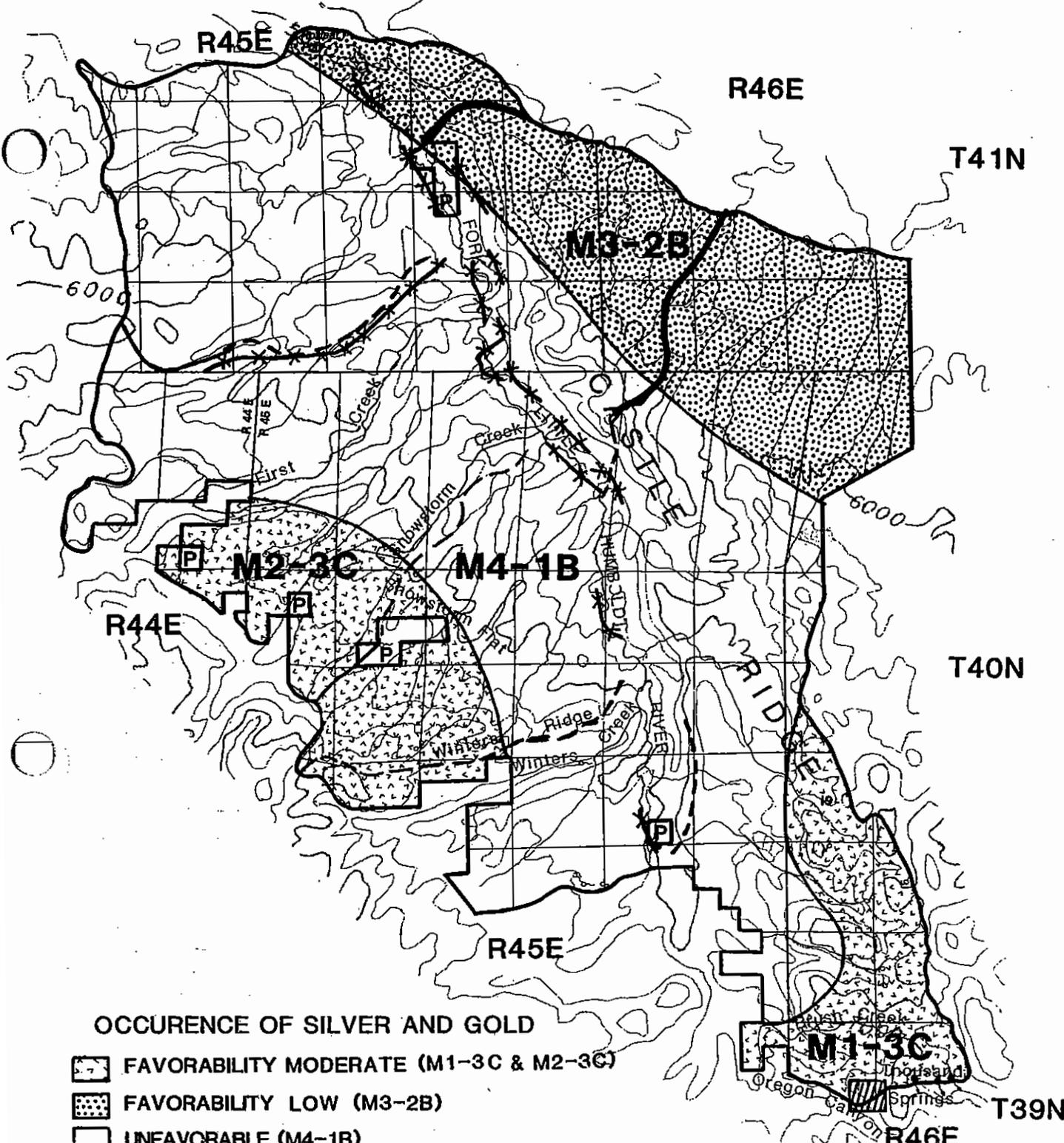
Mineral Favorability of the Little Humboldt River WSA

Metals	M1-3C	3	C	Au, Ag
	M1-2C	2	B	Au, Ag
	M4-1B	1	B	
Geothermal	Entire WSA	1	B	
Uranium/Thorium	Entire WSA	1	A	
Coal	Entire WSA	2	B	
Oil and Gas	Entire WSA	2	B	
Tar Sands/ Oil Shale	Entire WSA	1	C	
Limestone	Entire WSA	2	C	
Bentonite	Entire WSA	2	C	
Diatomite	Entire WSA	1	B	
Clinoptilolite	Entire WSA	1	A	
Barite	M1, M2, M3	2	B	
Turquoise	M4	1	B	
	Entire WSA	2	A	
Perlite	Entire WSA	1	B	
Phosphate	Entire WSA	2	A	
Palontology	Entire WSA	1	B	

LEGEND: Favorability of the Geologic Environment to Contain GEM Resources

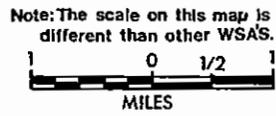
- Class 1 - Unfavorable
- Class 2 - Low Favorability
- Class 3 - Moderate Favorability
- Class 4 - High Favorability

- Confidence Level A - Insufficient data or no direct evidence.
- Confidence Level B - Indirect evidence available
- Confidence Level C - Direct evidence but quantitatively minimal.
- Confidence Level D - Abundant direct and indirect evidence.



OCCURENCE OF SILVER AND GOLD

-  FAVORABILITY MODERATE (M1-3C & M2-3C)
-  FAVORABILITY LOW (M3-2B)
-  UNFAVORABLE (M4-1B)
-  MINING CLAIMS (POST-FLPMA)



MINERAL FAVORABILITY
LITTLE HUMBOLDT RIVER NV-010-132
MAP 3-8

The WSA is entirely underlain by Tertiary volcanics. The geology and ore deposits of the Gold Circle Mining District (southern portion of the WSA) are well described by Rott, 1930, and many rock units underlying the WSA occur in the mining district.

Volcanic activity in Nevada is categorized by two periods of volcanism which occurred between 43 and 17 million years ago and again between 17 to 6 million years ago (Stewart, 1980). Mineralization in the vicinity of the WSA occurs in the older volcanics while the younger volcanics are barren.

Three rock types have been identified in the older volcanics. They are pre-andesite rhyolite, andesite and post-andesite rhyolite. All these rock types are altered, mineralized, faulted, and introduced by dikes (Rott, 1930).

The older volcanic group is unconformably overlain by unaltered and unmineralized rhyolite welded tuff (Cougar Point Tuff) dated 12.2 m.y. (Stewart, 1980). Also occurring in the WSA are younger volcanics chiefly consisting of rhyolite flows and domes with subordinate amounts of tuffaceous siltstone and sandstone, conglomerate, and limestone. Basalt crops out in the northeast portion of the WSA.

As of December 1985 portions of nine post-FLPMA lode claims (112 acres) are located on the southern and western boundaries of the WSA (Map 3-8). These claims are in an area of altered volcanics designated M1-3C. No development has occurred on these claims within the WSA, however, a few trenches have been dozed-in just outside the WSA. Rocks from Area M1-3C are in some places altered, brecciated, silicified, and iron stained. The most distinctive feature is the alteration which bleaches the rocks white. Eleven samples were taken in Area M1-3C and analyzed for gold and silver. Low but anomalous amounts of silver were detected in most samples (Brooks, 1983). No gold was detected. Based on alteration and known mineral occurrences, Area M1-3C is moderately favorable for gold and silver. The only evidence of mineral development in the WSA consists of a few prospect pits in Areas M1-3C and M2-3C.

Area M2-3C is moderately favorable for precious metals. Stream sediment samples by Tingley and Quade (1984) delineated a broad zone of correlative geochemical anomalies for barium, tin, copper, lead, zinc, and arsenic. Area M3-2B has low favorability based on low, but geochemical anomalous values for tin, zinc, and barium in stream sediment samples. The remainder of the WSA, Area M4-1B, is unfavorable for locatable minerals.

There are no oil and gas leases in the WSA. The WSA is estimated as having low favorability for oil and gas with a low level of confidence. Sandberg (1983) rates the WSA as having low oil and gas potential, however, little data specific to the WSA is presented. Exxon Company conducted widespread seismic, gravity, and magnetic surveys during 1984 on the Owyhee Desert to within a few miles northeast of the WSA. Exxon has rated the area as having low favorability based on rather sketchy data (personal communication, Blackgoat, 1983).

The WSA contains no geothermal features or requisite geologic criteria in the area which would indicate favorability for geothermal resources. The WSA is unfavorable for geothermal resources (Terradata, 1983).

The WSA is rated as having low favorability or is unfavorable for other GEM resources.

Livestock Grazing

The entire WSA is allotted for livestock grazing. It includes portions of the Bullhead and Little Humboldt Allotments. These two allotments are operated by two permittees and total 3,779 AUMs within the WSA.

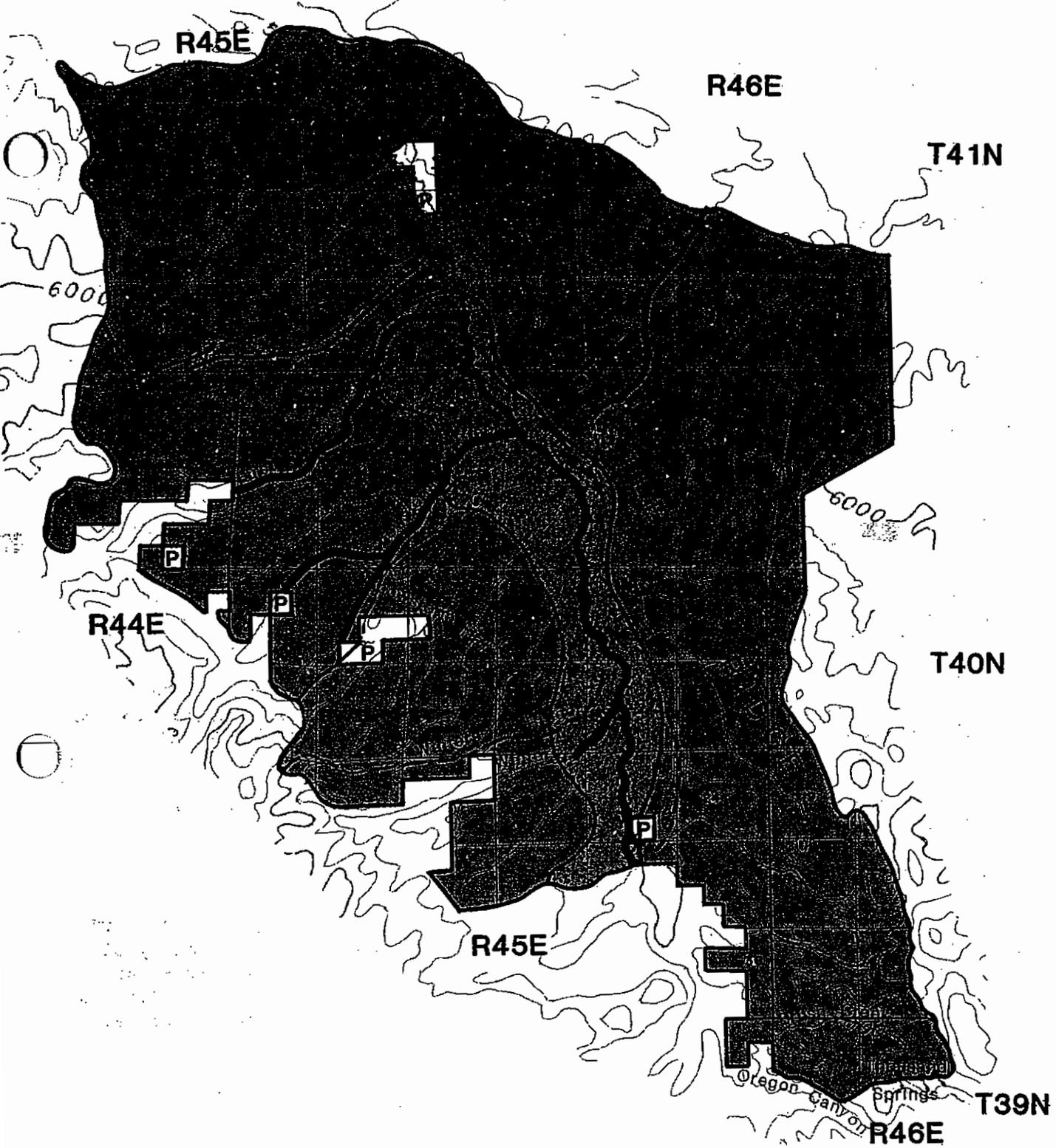
About 87 percent of the WSA is within the Bullhead Allotment. It is administered by the Winnemucca BLM District for grazing and wild horses by a cooperative agreement with the Elko BLM District. This allotment is under a Coordinated Resource Management Plan (CRMP) which was signed on April 9, 1982. A final Allotment Management Plan (AMP) was completed March 4, 1985. The AMP contains eleven pastures, of which all or portions of six are within the Little Humboldt River WSA. The AMP and CRMP is a combination of rest rotation and deferred use systems. Both the AMP and CRMP are post-FLPMA and subject to BLM's interim management policy. There are 3,013 AUMs for cattle within the WSA in the Bullhead Allotment.

The Little Humboldt Allotment is administered by the Elko District. The livestock permittee operates from April to October as licensed. There are 766 AUMs for cattle and domestic horses within the WSA in the Little Humboldt Allotment.

Both vehicles and horses are utilized for livestock operations in both allotments within the WSA.

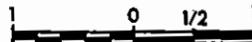
Lahontan Cutthroat Trout (LCT) Habitat

Approximately 20.0 miles of LCT habitat exists within the WSA (Map 3-9). LCT populations average about 400 per mile of stream. Conditions and quality of the habitat vary considerably in relation to accessibility by livestock, but is generally rated poor and declining. Reclamation potential for the river is very high. Recently completed riparian fencing should correct past overuse.



 LAHONTAN CUTTHROAT TROUT HABITAT



Note: The scale on this map is different than other WSAS.

 0 1/2
 MILES

**LAHONTAN CUTTHROAT
 TROUT HABITAT**
LITTLE HUMBOLDT RIVER NV-010-132
MAP 3-9

ROUGH HILLS WSA (NV-010-151)

General Characteristics

The Rough Hills WSA lies approximately 60 air miles north of Elko, Nevada. The topography of the WSA is extremely mountainous, includes eight drainages and over two miles of the Bruneau River Canyon. The highest peak is 7,923 feet, approximately 2,000 feet above the Bruneau River.

Numerous wildlife species exist within the WSA. The area is key summer range for mule deer. Chukar are common throughout the area with low to high densities. In addition, sage grouse, Sandhill cranes, Hungarian partridge, and valley quail are present. Migratory bald eagles have been observed along the Bruneau River, however no sightings have been recorded within the WSA. Furbearers such as river otter, muskrat, mink, raccoon, and beaver occur along Bruneau River and Copper Creek.

Land Status

The Rough Hills WSA contains 6,685 acres of public land. In addition, there are two private parcels totalling 200 acres within the WSA boundaries (Map 3-10).

Wilderness Values

Naturalness

The WSA is natural. There are no roads, man-made improvements, cherry-stems, or other intrusions except the 0.8 mile way in Inez Gulch within the southwest corner of the WSA. The private parcels are also natural in their present state.

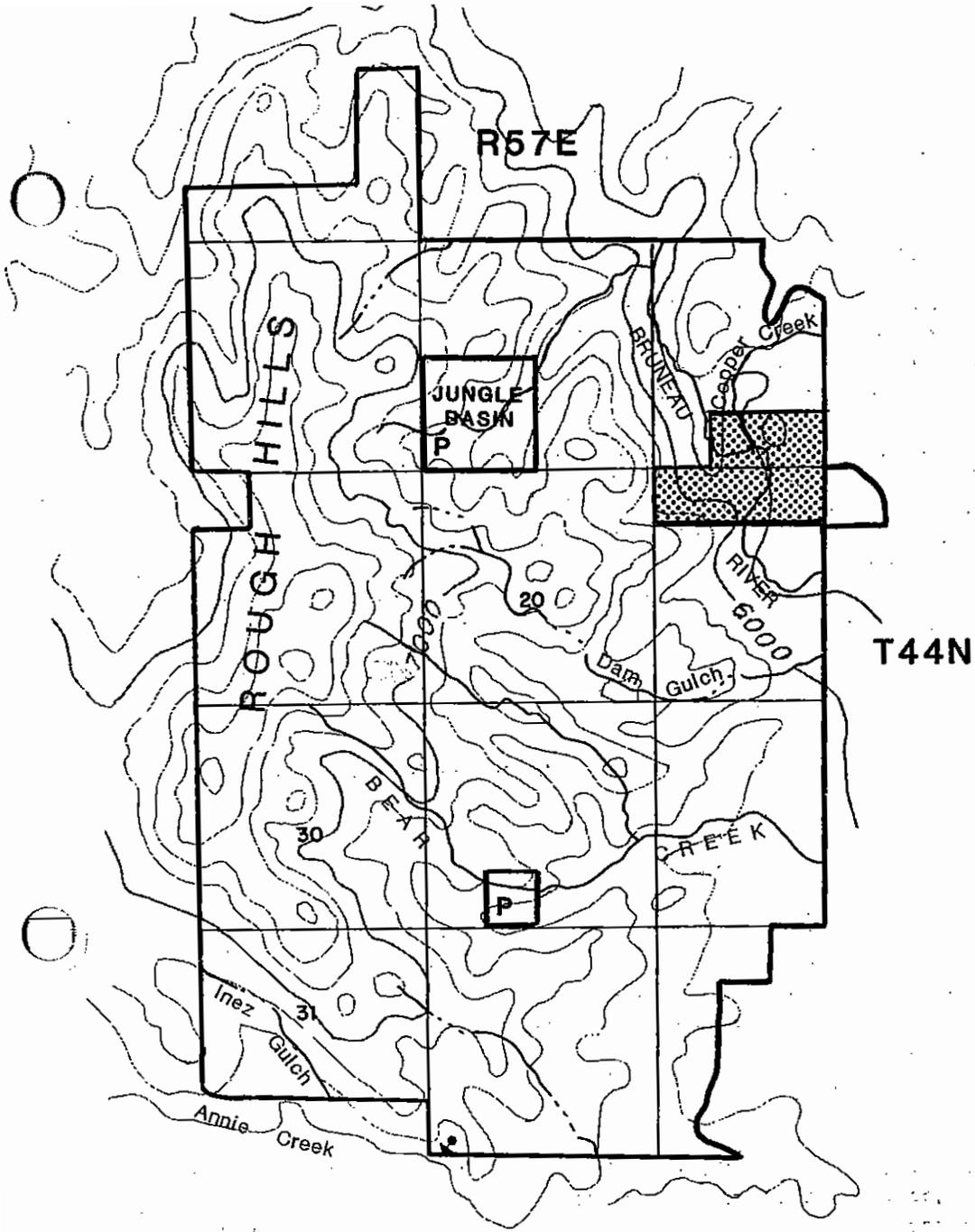
Solitude

The topographic screening in the WSA is outstanding overall. The meandering axis of the main ridge and the area to the west of the ridge offer screening from encounters by recreationists. The area east of the ridgeline offers excellent topographic screening with numerous winding drainages and the Bruneau River Canyon.

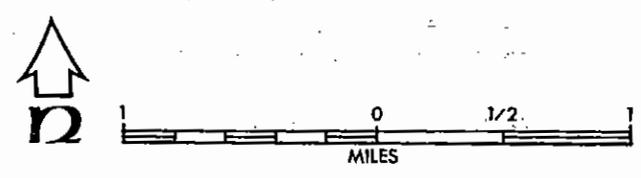
Vegetative screening is less than outstanding overall because of the large steep barren rock canyon faces. However, the tree and brush areas of the canyons offer numerous well distributed opportunities for experiencing isolated camping. Overall, there are numerous areas where outstanding opportunities for solitude exist.

Primitive and Unconfined Recreation

Recreation opportunities available in the WSA include backpacking, camping, hiking, horseback riding, hunting, fishing, wildlife observation, floating, sightseeing, photography, rock climbing, and gold panning. Deceiving for its compact size, the ruggedness and steepness of the WSA require two or three



-  PUBLIC WATER RESERVE
-  DEVELOPED SPRING
- P** PRIVATE LANDS



EXISTING SITUATION
ROUGH HILLS NV-010-151
MAP 3-10

days to cover while hiking or backpacking. Movement within the area is challenging and difficult as many routes require climbing on hands and knees.

Excellent day hikes are available along the lower drainages. Entering the WSA from the boundary road on the northeast corner of the unit, Bruneau River and Copper Creek offer excellent day hikes. The shallow river and associated riparian habitat areas are easily traversed and attractive.

Horseback riding and outfitting occur in the WSA in association with hunting and fishing trips. The lack of trails and their ruggedness hamper riding for pleasure and limit the area to expert riders.

Outstanding opportunities for primitive recreation exist in the WSA because of the diversity of activities available.

Special Features

The island-like effect of the Rough Hills WSA in relation to the mountain ranges around it results in outstanding scenic value. Vistas of up to twenty miles to the subalpine regions to the north, east, and west stand in contrast to the steppe basin and range areas to the south. Mahogany forests, aspen stands, and the river drainages generally appear in the middle to foreground areas and add contrast to the scenic views. Excellent scenic values also exist along Bruneau River and Copper Creek. The picturesque contrasts of rugged rock formations, riparian meadows and vegetation, and the water body offer scenic values far from common in Nevada.

The contorted and eroded geologic features of the area are also unique as well as picturesque. Canyon walls appear convoluted into grotesque formations which invite exploration.

Recreational Off-Road Vehicle Use

The WSA has little recreational ORV use, probably about 50 annual recreation visitor days. Most off-road vehicle use occurs in association with hunting activities.

Mineral Resources

The mineral favorability for GEM resources in the Rough Hills WSA are shown in Table 3-4.

TABLE 3-4

Mineral Favorability of the
Rough Hills WSA

<u>COMMODITY</u>	<u>AREA</u>	<u>CLASSIFICATION LEVEL</u>	<u>CONFIDENCE LEVEL</u>
Metals	Entire WSA	3	C
Geothermal	Entire WSA	1	C
Uranium/Thorium	Entire WSA	1	A
Coal	Entire WSA	1	C
Oil and Gas	Entire WSA	2	B
Tar Sands/Oil Shale	Entire WSA	1	C
Limestone	Entire WSA	2	C
Bentonite	Entire WSA	2	A
Diatomite	Entire WSA	1	B
Clinoptilolite	Entire WSA	1	B
Barite	Entire WSA	3	A
Silica	Entire WSA	3	C
Phosphate	Entire WSA	2	C
Palentology	Entire WSA	2	A

LEGEND: Favorability of the Geologic Environment to Contain GEM Resources

- Class 1 - Least Favorable
- Class 2 - Low Favorability
- Class 3 - Moderate Favorability
- Class 4 - High Favorability

- Confidence Level A - Insufficient data or no direct evidence.
- Confidence Level B - Indirect evidence available
- Confidence Level C - Direct evidence but quantitatively minimal.
- Confidence Level D - Abundant direct and indirect evidence.

The Rough Hills WSA is a rugged mountainous area of mid-Tertiary rhyolite flows, domes, plugs, and tuffs that have been incised by eastward-flowing tributaries of the Bruneau River. Older Tertiary volcanics crop out along the southeastern portion of the Rough Hills while Triassic siltstones extend along the southwest boundary. Paleozoic limestones and quartzites of the Sun Flower Formation following the westward margin of the WSA and older tertiary volcanics, along with paleozoic and Cambrian quartzites, occur to the north and east of the study area (Coash, 1967).

Headward erosion along Cornwall Creek has captured the stream flow into Cornwall Basin diverting it into the Bruneau River. Currently the stream is down-cutting the older volcanics that form the floor of Cornwall Basin exposing white rhyolite tuffs. The WSA is underlain at an unknown, but estimated depth of 1,000 to 2,000 feet by Paleozoic sedimentary rocks.

The WSA is within the block-faulted basin and range province. One of the major structures in the vicinity is a northwest striking normal fault which follows the western edge of the Copper Mountains one to two miles east of the WSA. The fault down-drops Tertiary volcanic rocks against Cambrian and Upper Paleozoic sediments which host mineralization in the area.

As of December 1985 there were no recorded mining claims in the WSA, although old claim posts and a small placer gold prospect pit were noted at the confluence of Copper Creek and the Bruneau River. Except for this prospect pit there is no evidence of mineral development in the WSA. A few holes were drilled in Paleozoic siltstone for precious metals one mile west of the southwest boundary of the WSA in 1984. Results from these drillings are not known (Elko District case files).

The Island Mountain mining district is adjacent to the western boundary of the WSA and derives its name from a prominent hill about five miles west of the WSA where gold was discovered in placer gravels near the Junction of Gold and Martin Creeks in 1873 (Coash, 1967).

The first ore deposits in the Island Mountain Mining district were discovered at the headwaters of Rosebud Creek several miles northwest of the WSA. The veins were characterized by high silver-lead content with minor gold, and in some places copper-iron sulfides. Similar mineralization was found in the same rocks and structures on Pine Mountain several miles North of the WSA. The gold bearing placers of Gold, Martin, and Rosebud Creeks all originate on the sides of Rosebud Mountain and flow to the west (Bushnell, 1967). A fourth stream (Cornwall Creek) flows southeast between Rosebud and Pine Mountains, into Cornwall Basin, eastward along the northern margin of the WSA, and into the Bruneau River. A concentrate sample from this stream, taken just north of the Colvin Ranch, ran 70 parts per million (ppm) silver, 100 ppm gold, 3,000 ppm lead, and 700 ppm Tungsten. There is no evidence that this stream has ever been worked for placers (Quade and Tingley, 1984)

About three quarters of a mile to the west of Cornwall Basin on the eastside of Cornwall Mountain is the site of the St. Elmo Mine. This mine was opened in 1940 and closed in 1950 during which time extensive tunnels and workings explored gold and silver bearing quartz veins, but there is no record of production.

The Charleston Mining District extends along the entire eastern boundary of the WSA and includes the Bruneau River drainage from Dry Creek south of Charleston to Coon Creek 11 miles north of Charleston. The history of the district has been well documented by Schrader (1923) and Vanderburg (1936). Briefly, the earliest discoveries were gold placers at Seventy-Six Creek in about 1876 with later placer discoveries at Badger, Pennsylvania, Union, and Dry Creeks, all tributaries of the Bruneau River.

Lode mining of gold, silver, copper, antimony and barite from the Prunty, Graham, Rescue, Slattery and Seventy-Six Mines began in 1905, continuing intermittently until the present. The host rocks are cherts, limestones, quartzites, sandstone and claystones of probably Ordovician age.

Samples within the WSA (Quade and Tingley, 1984) are generally indicative of an unmineralized volcanic terrain, except for two panned concentrate samples. One sample, from a drainage flowing from the southeast side of the WSA collected near the contact between older and younger volcanics, contained 150 ppm silver and 200 ppm lead. The other sample from rhyolite on the northeastern side of the WSA, contained 20 ppm silver.

The entire WSA is classified as moderately favorable for metallic minerals. The confidence level is based on the presence of known minerals and mines on all sides of the WSA.

Clearly, ranking the metallic mineral potential of the WSA is something of a dilemma. The youthful volcanic pile that makes up the Rough Hills WSA does not appear to be highly mineralized but the rocks surrounding and underlying the volcanics may contain metallic mineralization. Although the metallic mineral potential is moderate, it may never be economically feasible to discover and develop (Quade and Tingley, 1984).

As of March 1985 there were no oil and gas leases in the WSA. The WSA is classified as having low favorability for oil and gas. Paleozoic sediments are presumed to be over mature for oil generation in the vicinity of the WSA (Sandberg, 1983) due to heating by volcanic intrusive rock. Lower Tertiary sediments may have been heated to optimum maturity for oil generation, however, these sediments are very sparse in the vicinity of the WSA. Hence, the low favorability for oil and gas. The high structural position (uplifted mountainous terrain) of the WSA is also a limiting factor for oil and gas accumulations.

The WSA is rated unfavorable for geothermal resources as there is no evidence of geothermal activity, no very young volcanics, and no major faults in the WSA (Mathews and Blackburn, 1983).

Livestock Grazing

The entire WSA is allotted for livestock grazing. It includes portions of two allotments; Rough Hills and Annie Creek. These two allotments are operated by two permittees and total 1,024 AUMs within the WSA.

About 76 percent of the WSA and 887 AUMs are within the Rough Hills Allotment while the remaining 24 percent of the WSA and 137 AUMs are in the Annie Creek Allotment. Both allotments are run in common (not separated by a fence) and graze cattle, sheep, and horses. The present ecological status of the rangeland resource of both allotments within the WSA is good and is categorized in the late seral stage. Past and current grazing management within the WSA portion of the allotments has occurred without motorized vehicles.

CHAPTER FOUR
Environmental Consequences

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

CEDAR RIDGE WSA (NV-010-088)

Proposed Action (No Wilderness Alternative)

Under the proposed action, the entire 10,009 acres of the Cedar Ridge WSA would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the harvest of woodland products and mineral resource actions, and the resulting impacts on wilderness values in the long term.

Impacts on Wilderness Values

The entire WSA would be recommended nonsuitable for wilderness designation and none of the wilderness values on 10,009 acres would receive the special legislative protection provided by wilderness designation.

No development of the six existing post-FLPMA mining claims in the WSA is anticipated due to the absence of a known discovery. However, because the WSA is highly favorable for oil and gas, it is assumed for this analysis that exploration of three oil wells would take place within the WSA. The exploration would include construction of ten miles of road and three drill pads. The roads and pads would cause 40 acres of disturbance. Another 60 acres would be disturbed by seismic line exploration.

The 10 miles of exploration access roads would most likely protrude into the WSA from the southern and western boundaries and would be obvious along the WSA's ridgeline. This is the portion of the WSA that is most likely to be used by the public. Therefore, the WSA would no longer appear natural to the average visitor.

Mineral exploration activities would adversely impact the wilderness value of solitude. Sights and sounds from traffic and construction related to mineral exploration would lower the quality of solitude in the WSA. Outstanding opportunities for solitude would be lost.

Sights and sounds from the collection of 250 cords of firewood and 500 fence posts per year would have an adverse impact on solitude and naturalness. Canopy cover on approximately 40 acres per year would be thinned by about 60 percent as a result of wood harvest activities during the 200 year rotation cycle. The sound of chainsaws would interrupt the feeling of solitude within the WSA. Stumps and slash would also be evident in the WSA, adversely affecting naturalness.

Sights and sounds from recreational off-road vehicle use would have an adverse impact on solitude. However, this impact is expected to be slight since ORV use is estimated to be about 70 visitor days annually and is expected to remain below 200 visitor days annually for the foreseeable future.

Other recreation uses would increase slightly, but would remain at levels below 200 visitor days annually for the foreseeable future. This increase would not significantly impact opportunities for solitude.

A livestock water pipeline would be constructed in the WSA, however, maintenance activities would not change. Livestock use would be maintained at the existing level of 385 AUMs for the foreseeable future. Therefore, grazing facility maintenance and construction actions would not affect wilderness values in the WSA.

Conclusion. The Cedar Ridge WSA's wilderness values of naturalness, and outstanding opportunities for solitude would be lost.

Impacts on Recreational Off-Road Vehicle Use

The WSA would be open to ORV use. Over the long term ten miles of oil and gas exploration road would be constructed within the WSA making the central portion of the WSA more accessible to ORV use. Recreational ORV use would remain below 200 visitor days annually for the foreseeable future.

Conclusion. Although the area would be more accessible, recreational ORV use would remain below 200 visitor days annually. There would be no significant impact on recreational ORV use.

Impacts on Mineral Resource Actions

All lands within the WSA would remain open for mineral entry. Areas (Map 3-2) of moderate potential for precious metals, barite, and uranium would be available for exploration and development. Due to the absence of a known economic discovery it is unlikely that exploration activities or development would occur.

All lands within the WSA would remain open for mineral leasing. The high favorability for the occurrence of oil and gas with equal favorability under the entire WSA would likely result in fifty miles of seismic exploration lines which would disturb sixty acres. Exploration would likely result in three wildcat wells being drilled. This would result in ten acres of disturbance for construction of drill pads and two miles of constructed access roads which would impact an additional thirty acres. No oil and gas discoveries are predicted based on historic success ratios in Nevada.

Conclusion. There would be no impact on mineral resources in the Cedar Ridge WSA.

Impacts on Grazing Facility Maintenance and New Construction

Maintenance of the existing fences and pit reservoirs would not change. A livestock water pipeline would be built within the WSA. Therefore, there would be no impact on grazing facility maintenance or new construction.

Conclusion. There would be no impact on grazing facility maintenance or new construction in the Cedar Ridge WSA.

Impacts on Woodland Product Harvest

The Cedar Ridge WSA would be designated a firewood cutting area for public use. The area would be managed under sustained yield management practices, which involves harvesting wood products at the same 200 year reestablishment rate at which it grows. Selective thinning of stands would involve harvesting about 40 acres per year of all trees larger than a six inch diameter. This selective thinning under sustained yield management on approximately 40 acres per year will result in a reduction of tree canopy overstory by about 60 percent and an increase in growth rate on the remaining trees of less than 6 inch diameter and an increase in understory vegetation from the reduced competition.

Three miles of road would be constructed specifically for this purpose and access routes also would be created by the passage of vehicles over time. Harvest activities would be intense on mild topography and along roads and ways. Activity would be much less intense on steeper terrain.

Conclusion. There would be no impact on woodland product harvest in the Cedar Ridge WSA.

Irreversible and Irretrievable Commitments of Resources and Adverse Impacts Which Cannot Be Avoided

Nondesignation of the area as wilderness will result in loss of solitude and naturalness. Slight increases in motorized activities from ORV use and woodcutting along oil well roads would result in minor adverse impacts.

Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance Enhancement of Long-Term Productivity

All present short-term uses would continue and preclude enhancement of long-term productivity. The most significant change over the long-term would result from wood harvest activities under sustained yield management. The pinyon-juniper ecosystem over the long-term would result in an even-aged juvenile stand of trees. The density of the grassland ecosystem would increase as a result of thinning of the pinyon-juniper overstory.

All Wilderness Alternative

Under the All Wilderness Alternative, all 10,009 acres of public land in the Cedar Ridge WSA would be recommended suitable for wilderness designation.

The primary impacts under this alternative relate to the elimination of woodland product harvest, mineral withdrawal, and ORV closure in the designated wilderness and the resulting effects on woodland product harvest and mineral exploration, recreational ORV use, and the protection of wilderness values.

Impacts on Wilderness Values

Under the All Wilderness Alternative all 10,009 acres of the Cedar Ridge WSA would be recommended suitable for wilderness designation and all wilderness values would be protected over the long-term by legislative mandate.

Wilderness values of size, naturalness, opportunities for solitude, and the supplemental features of diversity of wildlife, and vistas would be retained in the WSA. Wilderness designation would withdraw the WSA from mineral entry and exploration of three oil and gas wells and seismic lines would not occur.

Wilderness designation would close the entire 10,009 acres of the Cedar Ridge WSA to all forms of woodland product harvest and recreational ORV use. Although encounters between ORV users and others are infrequent at current use levels, the elimination of wood cutting and ORV use would enhance opportunities for solitude. The improvement in the area's naturalness as a result of ORV closure would be marginal since the existing level of use is only 70 visitor days per year.

Livestock grazing and range management actions would not affect wilderness values in the WSA because no new range developments would occur in the WSA and maintenance activities would not change.

Conclusion. Wilderness values would be slightly enhanced on all 10,009 acres of the Cedar Ridge WSA.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close the entire 10,009 acre Cedar Ridge WSA to all forms of recreational ORV use. Recreational ORV use of approximately 70 visitor days would be eliminated annually from the WSA. Public land that offers similar or superior opportunities for recreational ORV use is located throughout the region. Therefore, recreational ORV use forgone in the WSA would be absorbed on surrounding public lands.

Conclusion. Recreational ORV use of 70 visitor days would be foregone annually. The impacts of shifting this use to other public lands would be negligible.

Impacts on Mineral Resource Actions

All lands within the Cedar Ridge WSA would be withdrawn from mineral entry. Exploration would be precluded from areas of moderate potential for precious metals, barite, and uranium. Due to the absence of a known economic discovery, it is not predicted that any development of these minerals would be foregone.

All lands within the WSA would be withdrawn from mineral leasing. Exploration for the highly favorable occurrence of oil and gas resources would be precluded. Fifty miles of seismic line and three wildcat wells with forty acres of drill pad and road construction disturbance would be precluded. Based on historic Nevada success ratios, no oil or gas discoveries are predicted to be foregone.

Conclusion. There would be adverse impacts to oil and gas exploration activities in the Cedar Ridge WSA. As no economic discoveries are predicted, there would be no impacts to mineral development.

Impacts on Grazing Facility Maintenance and New Construction

Maintenance of the existing fences would not change and no new range developments would occur within the WSA. Therefore, there would be no impacts on grazing facility maintenance but construction of a livestock water pipeline would be forgone.

Conclusion. There would be no impact on grazing facility maintenance. Construction of a new livestock water pipeline would be forgone in the Cedar Ridge WSA.

Impacts on Woodland Product Harvest

The WSA would not be designated a public firewood cutting area. The harvest of up to 250 cords of wood and 500 fence posts per year would be forgone.

Conclusion. The harvest of woodland products would be forgone. This would require users to expend up to 1½ hours more time traveling to other areas capable of supplying this resource commodity.

Proposed Action (No Wilderness Alternative)

Under the proposed action, the entire 7,847 acres of the Red Spring WSA would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the harvest of woodland products and exploration for mineral resources and the resulting impacts on wilderness values in the long term.

Impacts on Wilderness Values

The entire WSA would be recommended nonsuitable for wilderness designation and none of the wilderness values on 7,847 acres would receive the special legislative protection provided by wilderness designation.

Since there are no existing mining claims within the WSA, no mineral exploration is anticipated. However, because the WSA is highly favorable for oil and gas, it is assumed for this analysis that exploration of three wildcat wells would take place within the WSA. The exploration would include construction of ten miles of road and three drill pads. The roads and pads would cause 40 acres of disturbance. Another 60 acres would be disturbed by seismic line exploration.

The ten miles of exploration access roads would most likely protrude into the WSA from the west and would be obvious along the WSA's ridgeline. This is the portion of the WSA that is most likely to be used by the public. Therefore, the WSA would no longer appear natural to the average visitor.

Mineral exploration activities would adversely impact the wilderness value of solitude. Sights and sounds from traffic and construction related to mineral exploration would lower the quality of solitude in the WSA. Outstanding opportunities for solitude would be lost.

Sights and sounds from the collection of 150 cords of firewood and 320 fence posts per year would have an adverse impact on solitude and naturalness. The sound of chainsaws would interrupt the feeling of solitude within the WSA and stumps and dying slash would also be evident in the WSA on about 40 acres per year of disturbance during the 200 year rotation cycle. Approximately two miles of access road would be constructed over the long-term.

Sights and sounds from recreational off-road vehicle use would have an adverse impact on solitude. However, this impact is expected to be slight since ORV use is estimated to be 125 visitor days annually and is expected to remain below 350 visitor days annually for the foreseeable future.

Other recreation use would increase slightly, but would remain at levels below 350 visitor days annually for the foreseeable future. This increase would not significantly impact opportunities for solitude.

Activities to maintain range developments would not change. Livestock use would be maintained at the existing level of 482 AUMs for the foreseeable future. Therefore, grazing facility maintenance and construction actions would not affect wilderness values in the WSA.

Conclusion. The Red Spring WSA's wilderness values of naturalness, and outstanding opportunities for solitude would be lost.

Impacts on Recreational Off-Road Vehicle Use

The WSA would be open to ORV use. Over the long term ten miles of road for oil and gas exploration would be constructed within the WSA making the central portion of the WSA more accessible to ORV use. Recreational ORV use would remain below 350 visitor days annually for the foreseeable future.

Conclusion. Although the area would be more accessible, recreational ORV use would remain below 350 visitor days annually. There would be no significant impact on recreational ORV use.

Impacts on Mineral Resource Actions

All lands within the Red Spring WSA would remain open for mineral entry. Areas of moderate potential for barite and uranium would be available for exploration and development. Due to the absence of a known economic discovery it is unlikely that exploration activities or development would occur.

All lands within the WSA would remain open for mineral leasing. The high favorability for the occurrence of oil and gas resources with equal favorability under the entire WSA would likely result in fifty miles of seismic exploration lines which would disturb sixty acres. Exploration would likely result in the drilling of three wildcat wells. This would result in ten acres of disturbance for the construction of drill pads and two miles of constructed access roads which would impact an additional thirty acres. No oil or gas discoveries are predicted based on historic success ratios in Nevada.

Conclusion. There would be no impacts on mineral resources in the Red Spring WSA.

Impacts on Grazing Facility Maintenance and New Construction

Maintenance of the existing Red Spring would not change and no new range developments are planned within the WSA. Therefore, there would be no impact on grazing facility maintenance or construction.

Conclusion. There would be no impact on grazing facility maintenance or construction in the Red Spring WSA.

Impacts on Woodland Product Harvest

The WSA would be designated a public firewood cutting area and up to 150 cords of wood and 320 fence posts per year would be harvested. Approximately 40 acres per year would be available for a sixty percent thinning to supply wood products. The area would be managed under sustained yield management practices, which involves harvesting wood products at the same 200 year

reestablishment rate at which it grows. About 2 miles of access road would be constructed over the long-term. Approximately 12 percent of the local demand for firewood and posts could be supplied by this area.

Conclusion. There would be no impact on woodland product harvest in the Red Spring WSA.

Irreversible and Irretrievable Commitments of Resources and Adverse Impacts Which Cannot Be Avoided

Nondesignation of the area as wilderness will result in loss of solitude and naturalness. Slight increases in motorized activities from ORV use and woodcutting along oil well roads would result in minor adverse impacts.

Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance Enhancement of Long-Term Productivity

All present short-term uses would continue and preclude enhancement of long-term productivity. The most significant change over the long-term would result from wood harvest activities under sustained yield management. The pinyon-juniper ecosystem over the long-term would result in an even-aged juvenile stand of trees. The density of the grassland ecosystem would increase as a result of the thinning of the pinyon-juniper overstory.

All Wilderness Alternative

Under the All Wilderness Alternative, all 7,847 acres of public land in the Red Spring WSA would be recommended suitable for wilderness designation.

The primary impacts under this alternative relate to the elimination of woodland product harvest, mineral withdrawal, and ORV closure in the designated wilderness and the resulting effects on woodland product harvest and mineral exploration, recreational ORV use, and the protection of wilderness values.

Impacts on Wilderness Values

Under the All Wilderness Alternative all 7,847 acres of the Red Spring WSA would be recommended suitable for wilderness designation and all wilderness values would be protected over the long-term by legislative mandate. Wilderness values of size, naturalness, opportunities for solitude, and the supplemental features of diversity of wildlife, and vistas would be retained in the WSA. Wilderness designation would withdraw the WSA from mineral entry and exploration of three oil and gas wells and seismic lines would not occur.

Wilderness designation would close the entire 7,847 acres of the Red Spring WSA to all forms of woodland product harvest and recreational ORV use. Although encounters between ORV users and others are infrequent at current use levels, the elimination of wood cutting and ORV use would enhance opportunities for solitude. The improvement in the area's naturalness as a result of ORV closure would be marginal since the existing level of use is about 125 visitor days per year. Preclusion of 40 acres of wood harvest per year would preserve existing naturalness but not enhance it.

Livestock grazing and range management actions would not affect wilderness values in the WSA because no new range developments would occur in the WSA and maintenance activities would not change.

Conclusion. Wilderness values of solitude and opportunities for primitive recreation would be slightly enhanced on all 7,847 acres of the Red Spring WSA. Naturalness would be preserved.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close the entire 7,847 acre Red Spring WSA to all forms of recreational ORV use. Recreational ORV use of approximately 125 visitor days annually would be eliminated from the WSA. Public land that offers similar or superior opportunities for recreational ORV use is located throughout the region. Therefore, recreational ORV use forgone in the WSA would be absorbed on surrounding public lands.

Conclusion. Recreational ORV use of 125 visitor days annually would be foregone. The impacts of shifting this use to other public lands would be negligible.

Impacts on Mineral Resource Actions

All lands within the Red Spring WSA would be withdrawn from mineral entry. Areas of moderate potential for barite and uranium would be precluded from exploration. Due to the absence of a known economic discovery, it is not predicted that any development of these minerals would be foregone.

All lands within the WSA would be withdrawn from mineral leasing. Exploration for the highly favorable occurrence of oil and gas resources would be precluded. Fifty miles of seismic line with 60 acres of disturbance and three wildcat wells with forty acres of drill pad and road construction disturbance would be precluded. Based on historic Nevada success ratios, no oil or gas discoveries are predicted to be foregone.

Conclusion. Oil and gas resource exploration activities would be foregone in the Red Spring WSA.

Impacts on Grazing Facility Maintenance and Construction

Maintenance of the existing Red Spring Allotment would not change and no new range developments would occur within the WSA. Therefore, there would be no impacts on grazing facility maintenance or construction.

Conclusion. There would be no impact on grazing facility maintenance or construction.

Impacts on Woodland Product Harvest

The WSA would not be designated a public firewood cutting area. The harvest of up to 150 cords of wood and 320 fence posts per year, 12 percent of the local demand, would be precluded from this area. Other nearby areas would be incapable of absorbing this demand.

Conclusion. The harvest of woodland products would be forgone. Users would expend up to 1½ additional hours traveling to other suitable areas.

LITTLE HUMBOLDT RIVER WSA (NV-010-132)

Proposed Action (Partial Wilderness Designation)

Under the Proposed Action, 29,775 acres of the Little Humboldt River WSA would be recommended suitable for wilderness designation and 12,438 acres would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the development of mineral resources and the resulting impacts on wilderness values in the long term.

Impacts on Wilderness Values

In this alternative 29,775 acres of the Little Humboldt River WSA would be recommended suitable for wilderness designation and 12,438 acres would be recommended nonsuitable for wilderness designation. Naturalness and solitude of the 29,775 acres recommended suitable for wilderness designation would receive the special long-term legislative protection provided by wilderness designation. The areas of the most spectacular scenery and outstanding opportunities for primitive recreation and naturalness would be retained.

Three cherrystem roads and the northern and western boundary roads would be used by the public to access the wilderness area and by livestock operators to maintain 13 miles of fence and their livestock within the area. This vehicle use and maintenance would have negligible effect on the wilderness values of naturalness and solitude in the 29,775 acres designated wilderness since the amount of vehicle use would be low and the facilities already exist.

The 29,775 acre area, including 10.5 miles of vehicle ways, would be closed to recreational ORV use. This action would eliminate approximately 130 visitor days of recreational ORV use that is estimated to occur in the area at present. This would maintain the area's naturalness and improve opportunities for solitude and primitive and unconfined recreation slightly because of the near elimination of surface disturbance and because visitors would not encounter or hear ORV users in the area.

Exploration for mineral resources would not affect wilderness values in the suitable area since it would be withdrawn and no mineral exploration would occur.

Acquisition of the two parcels of private land totalling 200 acres within the WSA would enhance the wilderness values of naturalness and solitude as the BLM would then have control over future uses of these lands.

The 12,438 acres not designated wilderness, including a 3.5 mile vehicle way, would remain open for recreational ORV use. Recreational ORV use on this parcel would remain below 200 visitor days annually for the foreseeable future. About 19 miles of road would be built in this area to explore for gold and silver. Also, about 1,200 feet of trenches would be dug. Surface disturbance from earth moving equipment would be about 50 acres. Construction of 7.3 miles of fence and vegetative treatment of 2,870 acres would also occur. These actions would reduce the naturalness and opportunities for solitude on the 12,438 acres.

Conclusion. The 29,775 acres designated as wilderness would maintain long-term naturalness, solitude and opportunities for primitive unconfined forms of recreation. In the immediate areas of the closed ORV ways and the two acquired inholdings, naturalness and solitude would be enhanced.

On the 12,438 acres managed for other multiple uses, naturalness and opportunities for solitude would be foregone because of continued recreational ORV use, mineral exploration activities, and construction of future range improvement projects and vegetation manipulation.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close 29,775 acres and 10.5 miles of vehicle ways to recreational ORV use. Recreational vehicle use of approximately 130 visitor days would be eliminated annually from the WSA. Public land that offers similar opportunities for recreational ORV use is located throughout the region. Therefore, recreational use forgone would be absorbed on surrounding public lands.

The 12,438 acres not designated wilderness would remain open to ORV use. Recreational ORV use levels would increase but remain under 200 visitor days annually for the foreseeable future.

Conclusion. Recreational ORV use would be eliminated on the 29,775 acres designated wilderness and 130 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. On the 12,438 acres not designated wilderness, recreational ORV use would continue to increase but would not exceed 200 visitor days annually for the foreseeable future.

Impacts on Mineral Resource Actions

The 29,775 acres recommended as suitable for wilderness designation would be withdrawn from all forms of mineral entry and mineral leasing. Mineral exploration of one mile of access road and about 100 feet of open trench would be foregone on 1,389 acres of moderate potential for gold and silver. No discovery or development of these minerals is predicted to be foregone. Fifty miles, 600 acres of disturbance, of seismic exploration lines in the northeastern portion of the suitable area would be foregone even though it is not predicted there would be any foregone discoveries.

The 12,438 acres recommended as nonsuitable for wilderness designation would remain open for mineral entry and mineral leasing. The 5,911 acres of moderate potential for gold and silver, which includes the nine post-FLPMA mining claims, are anticipated to receive 19 miles of exploration roads and 1,200 feet of exploratory trenches. These are not predicted to result in an economic discovery leading to development.

Conclusions. Exploration for mineral resources would be precluded on the 29,775 acres recommended for wilderness designation. This includes one mile of exploratory access road and 100 feet of open trench predicted in the 1,389 acres of moderate potential for gold and silver. Additionally, 7,500 acres in the northeast portion of the area would also forego 50 miles of seismic exploration lines.

The 12,438 acres recommended as nonsuitable for wilderness designation include 5,911 acres of moderate potential for gold and silver which are predicted to receive 19 miles of exploratory access road and construction of 1,200 feet of open trench.

Impacts on Grazing Facility Maintenance and Construction

All grazing facilities would be maintained as they are now. However, construction of 13.3 miles of new fence and vegetative treatment of 9,240 acres would be forgone. Construction of 7.3 miles of fence and vegetative treatment of 2,780 acres would occur on lands not designated.

Conclusion. There would be no impact to grazing facility maintenance. Construction of 13.3 miles of fence and vegetative treatment of 9,240 acres would be forgone.

Impacts on Private Inholdings

Under this alternative two private inholdings totalling 200 acres would be included in the 29,775 acre wilderness area. One would be accessible via an existing cherrystem road while the other would have no vehicular access. Both are currently used for livestock management purposes. Since that use is not expected to change, no impacts to these parcels is expected from designation. No impacts would occur to the three private parcels within the 12,438 acre nonsuitable area.

Conclusion. There would be no impact to the two private inholdings within the wilderness area nor to three private parcels within the nonsuitable area.

Impacts on Lahontan Cutthroat Trout (LCT) Habitat

Wide fluctuations in LCT populations in Gance Creek, a Humboldt River drainage located approximately 50 miles east of the WSA, were documented by Platts and Nelson in 1983. They found that populations varied from 207 fish per mile in 1978 to 1,135 in 1980 and decreased to 518 in 1982. These population levels reflected variable habitat conditions which can be favorable, marginal or poor at any given time. Platts and Nelson suggest LCT found in the upper Humboldt have evolved adaptatively to naturally unstable conditions and have the ability to rebound quickly from depressed population levels.

Consequently, proposed range developments and mineral exploration activities which would occur on the 12,438 acres not designated as wilderness could contribute negligible amounts of siltation which would not affect LCT habitat. Section 7 consultation with the U.S. Fish and Wildlife Service would occur in accordance with the Endangered Species Act and stipulations would be attached to these projects to reduce siltation to acceptable levels to perpetuate the LCT. Any negligible increase in siltation would not result in a significant impact. The 29,775 acres designated as wilderness would preclude new range developments and mineral exploration projects in near proximity to nineteen miles of LCT habitat and adjacent watershed. As there would be no increase in siltation of LCT habitat, there would be no affect on the LCT.

Conclusion. Designated wilderness areas would preclude mineral exploration and range development activities which might affect LCT habitat with siltation. Negligible increases in siltation of LCT habitat

would occur on nondesignated areas as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.

Irreversible and Irretrievable Commitments of Resources and Adverse Impacts Which Cannot Be Avoided

Nondesignation of 12,438 acres of the area as wilderness will result in loss of naturalness and solitude. Effective upon designation as wilderness, 1,389 acres of moderate potential for precious metals would be withdrawn from appropriation under the mining laws. With wilderness designation there would be a loss of 130 annual motorized recreation user days resulting from the closure of 10.5 miles of vehicle ways. Construction of 13.3 miles of livestock fence and 9,240 acres of vegetative treatment for grazing would be foregone.

Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity.

Present short-term uses involving motorized vehicles and mineral exploration activities would be precluded on the suitable 29,775 acre portion. Over the long-term the sagebrush grassland ecosystem would be protected and realize some slight enhancement. The riparian ecosystems would be enhanced over the long-term with the preclusion of these short-term uses. All other present short-term uses would continue.

The 12,438 acres not designated as wilderness would expect to experience substantial degradation of natural ecosystems as a result of commodity development short-term uses.

Commodity Production (Partial Wilderness Alternative)

Under this alternative, 28,386 acres of the Little Humboldt River WSA would be recommended suitable for wilderness designation and 13,827 acres would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation and the resulting increases in naturalness and opportunities for solitude and primitive and unconfined recreation and the withdrawal of mineral resources.

Impacts on Wilderness Values

In this alternative 28,386 acres of the Little Humboldt River WSA would be recommended suitable for wilderness designation and 13,827 acres would be recommended nonsuitable for wilderness designation. All wilderness values on the 28,386 acres recommended suitable for wilderness designation would receive the special legislative protection provided by wilderness designation. The areas of the most spectacular scenery and outstanding opportunities for primitive recreation and naturalness would be retained.

Three cherrystem roads and the northern and western boundary roads would be used by the public to access the wilderness area and by livestock operators to maintain 13 miles of fence and their livestock within the area. This vehicle use and maintenance would have negligible effect on the wilderness values of naturalness and solitude in the 28,386 acres designated wilderness since the amount of vehicle use would be low and the facilities already exist.

The 28,386 acre area, including 10 miles of vehicle ways, would be closed to recreational ORV use. This action would eliminate approximately 120 visitor days of recreational ORV use that are estimated to occur in the area at present. This would improve the area's naturalness and opportunities for solitude and primitive and unconfined recreation slightly because of the near-elimination of surface disturbance and because visitors would not encounter or hear ORV users in the area.

Exploration for mineral resources would not affect wilderness values in the suitable area since it would be withdrawn and no mineral exploration would occur.

Acquisition of the two parcels of private land totalling 200 acres within the WSA would enhance the wilderness values of naturalness and solitude as the BLM would then have control over future uses of these lands.

The 13,827 acres not designated wilderness, including a 4 mile vehicle way, would remain open for recreational ORV use. Recreational ORV use on this parcel would remain below 200 visitor days annually for the foreseeable future. About 20 miles of road would be built in this area to explore for gold and silver. Also, about 1,300 feet of trenches would be dug. Surface disturbance from earth moving equipment would be about 60 acres. Construction of 7.4 miles of fence and vegetative treatment of 3,380 acres would also occur. These actions would reduce the naturalness and opportunities for solitude on the 13,827 acres.

Conclusion. The 28,386 acres designated as wilderness would maintain long-term naturalness, solitude and opportunities for primitive unconfined forms of recreation. In the immediate areas of the closed ORV ways and the two acquired inholdings, naturalness and solitude would be enhanced.

On the 13,827 acres managed for other than wilderness, naturalness and opportunities for solitude would be foregone because of continued ORV use, mineral exploration activities, and construction of future range improvement projects and vegetation manipulation.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close 28,386 acres and 10 miles of vehicle ways to recreational ORV use. Recreational vehicle use of approximately 120 visitor days would be eliminated annually from the WSA. Public land that offers similar opportunities for recreational ORV use is located throughout the region. Therefore, recreational use forgone would be absorbed on surrounding public lands.

The 13,827 acres not designated wilderness would remain open to ORV use. Recreational ORV use levels would increase but remain under 200 visitor days annually for the foreseeable future.

Conclusion. Recreational ORV use would be eliminated on the 28,386 acres designated wilderness and 120 visitor days would be forgone annually. The impacts of shifting this use to other public lands would be negligible. On the 13,827 acres not designated wilderness, recreational ORV use would continue to increase but would not exceed 200 visitor days annually for the foreseeable future.

Impacts on Mineral Resource Actions

The 28,386 acres recommended as suitable for wilderness designation would be withdrawn from all forms of mineral entry and mineral leasing. Fifty miles, 600 acres of disturbance, of seismic exploration lines in the northeastern portion of the suitable area would be foregone even though it is not predicted there would be any foregone discoveries.

The 13,827 acres recommended as nonsuitable for wilderness designation would remain open for mineral entry and mineral leasing. The 7,300 acres of moderate potential for gold and silver, which includes the nine post-FLPMA mining claims, are predicted to receive 20 miles of exploration roads and 1,300 feet of exploratory trenches. These are not predicted to result in an economic discovery leading to development.

Conclusion. Exploration for mineral resources would be precluded on the 28,386 acres recommended for wilderness designation. This includes 7,500 acres in the northeast portion of the area which would forego 50 miles of seismic exploration lines. Impacts would be negligible since discovery leading to development is not anticipated.

The 13,827 acres recommended as nonsuitable for wilderness designation includes 7,300 acres of moderate potential for gold and silver which are predicted to receive 20 miles of exploratory access road and construction of 1,300 feet of open trench. Benefits are insignificant since exploration leading to development are not anticipated.

Impacts on Grazing Facility Maintenance and Construction

All grazing facilities would be maintained as they are now. However, new construction of 13.2 miles of fence and vegetative treatment of 8,640 acres would be forgone. Construction of 7.4 miles of fence and vegetative treatment of 3,380 acres would occur.

Conclusion. There would be no impact to grazing facility maintenance. New construction of 13.2 miles of fence and vegetative treatment of 8,640 acres would be forgone on the designated area. The nonsuitable area would receive vegetative treatment on 3,380 acres and 7.4 miles of new fence construction.

Impacts on Private Inholdings

Under this alternative two private inholdings totalling 200 acres would be included in the 28,386 acre wilderness area. One would be accessible via a cherrystem road while the other would have no vehicular access. Both are currently used for livestock management purposes. Since that use is not expected to change, no impacts to these parcels is expected from designation. No impacts would occur to the three private parcels within the 13,827 acre nonsuitable area.

Conclusion. There would be no impact to the two private inholdings within the wilderness area nor to three private parcels within the nonsuitable area.

Impacts on Lahontan Cutthroat Trout (LCT) Habitat

As noted in the Proposed Actions research by Platts and Nelson has shown that populations of Humboldt drainage Lahontans fluctuate dramatically in response to current environmental conditions and that populations can rebound quickly from depressed levels.

Consequently, proposed range developments and mineral exploration activities which would occur on the 13,827 acres not designated as wilderness could contribute negligible amounts of siltation which would not affect LCT habitat. Section 7 consultation with the U.S. Fish and Wildlife Service would occur in accordance with the Endangered Species Act and stipulations would be attached to these projects to reduce siltation to acceptable levels to perpetuate the LCT. The negligible increase in siltation would not result in a significant impact. The 28,386 acres designated as wilderness would preclude new range developments and mineral exploration projects in near proximity to nineteen miles of LCT habitat and adjacent watershed. As there would be no increase in siltation of LCT habitat, there would be no affect on the LCT.

Conclusion. Designated wilderness areas would preclude mineral exploration and range development activities which might affect LCT habitat with siltation. Negligible increases in siltation of LCT habitat would occur on nondesignated areas as a result of stipulations and mitigations imposed on mineral exploration and range development activities. The LCT population would not be affected.

All Wilderness Alternative

Under the All Wilderness Alternative, all 42,213 acres of public land in the Little Humboldt River WSA would be recommended suitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation, the resulting increases in naturalness and opportunities for solitude and primitive and unconfined recreation, and the withdrawal from mineral resources exploration and development.

Impacts on Wilderness Values

Under the All Wilderness Alternative all 42,213 acres of the Little Humboldt River WSA would be recommended suitable for wilderness designation and wilderness values would be protected over the long-term by legislative mandate.

Three cherrystem roads and the northern and western boundary roads would be used by the public to access the wilderness area and by livestock operators to maintain 13.5 miles of fence and their livestock within the area. This vehicle use and maintenance would have a negligible effect on the wilderness values of naturalness and solitude in the 42,213 acres designated wilderness since the amount of vehicle use would be low and the facilities already exist.

The 42,213 acre area, including 14 miles of vehicle ways, would be closed to recreational ORV use. This action would eliminate approximately 140 visitor days of recreational ORV use that are estimated to occur in the area at present. This would improve the area's naturalness and opportunities for

solitude and primitive and unconfined recreation slightly because of the near elimination of surface disturbance and because visitors would not encounter or hear ORV users in the area.

Development of mineral resources would not affect wilderness values in the suitable area since it would be withdrawn and no mineral development would occur.

Acquisition of the five parcels of private land totalling 480 acres within the WSA would affect the wilderness values of naturalness and solitude as the BLM would then have control over future uses of these lands.

Livestock grazing and range management actions would not affect wilderness values in the WSA because no new range developments would occur in the WSA and maintenance activities would not change.

Conclusion. The 42,213 acres designated as wilderness would maintain long-term naturalness, solitude, and opportunities for primitive unconfined forms of recreation. In the immediate areas of closed ORV ways and with the acquisition of the five inholdings, naturalness and solitude would be enhanced.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close the 42,213 acre Little Humboldt River WSA to recreational ORV use. Recreational ORV use of approximately 140 visitor days would be forgone from the WSA. Public land that offers similar opportunities for recreational ORV use is located throughout the region. Therefore, recreational ORV use forgone in the WSA would be absorbed on surrounding public lands.

Conclusion. Recreational ORV use would be eliminated on the 42,213 acres designated wilderness and 140 visitor days would be foregone annually. The impacts of shifting this use to other public lands would be negligible.

Impacts on Mineral Resource Actions

The Little Humboldt River WSA would be withdrawn from all forms of mineral entry and mineral leasing. Exploration activities involving 20 miles of access road and 1,300 feet of open trench would be precluded on 7,300 acres with moderate potential for gold and silver. Fifty miles of seismic exploration lines on the northern portion of the area would not occur. No economical discoveries of mineral resources are predicted to be foregone.

Conclusion. Exploration activities of 20 miles of road, 1,300 feet of trench, and 50 miles of seismic line would be foregone.

Impacts on Grazing Facility Maintenance and Construction

All grazing facilities would be maintained as they are now. However, construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would be forgone.

Conclusion. There would be no impact to grazing facility maintenance. Construction of 20.6 miles of fence and vegetative treatment of 12,020 acres would be forgone.

Impacts on Private Inholdings

Under this alternative five private inholdings totalling 480 acres would be included in the 42,213 acre wilderness area. Two would be accessible via cherrystem roads while the other three would have no vehicular access. All are currently used for livestock management purposes. Since that use is not expected to change, no impacts to these parcels is expected from designation.

Conclusion. There would be no impact to the five private inholdings within the wilderness area.

Impacts on Lahontan Cutthroat Trout (LCT) Habitat

Wilderness designation would preclude range development and mineral exploration surface disturbances. Increased siltation would not result. LCT habitat would be maintained. There would be no affect on LCT populations.

Conclusion. LCT habitat would be maintained and LCT population would be unaffected.

No Wilderness Alternative

Under the No Wilderness Alternative, the 42,213 acres of the Little Humboldt River WSA would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to ORV use, range developments, and development of mineral resources and the resulting reduction in naturalness and opportunities for solitude and primitive and unconfined recreation.

Impacts on Wilderness Values

This alternative would recommend the entire 42,213 acre WSA nonsuitable for wilderness designation and solitude and naturalness would not receive special legislative protection.

Three cherrystem roads, the northern and western boundary roads, and 14 miles of vehicle ways would be used by the public to access the area and by livestock operators to maintain 13.5 miles of fence and trend their livestock within the area. This vehicle use and maintenance would have a negligible effect on the wilderness values of naturalness and solitude in the WSA since the amount of vehicle use would be low and the facilities already exist.

The entire WSA would be open to recreational ORV use. Off-road vehicle use is expected to increase slightly, but would remain at levels below 200 visitor days annually for the foreseeable future. This use would slightly reduce the area's naturalness and opportunities for solitude.

About 20 miles of road would be built in the WSA to explore for gold and silver. In conjunction with this exploration, about 1,300 feet of trenches are anticipated to be dozed. In addition, about 50 miles of seismic lines

to explore for oil and/or gas are expected to occur in the northeastern portion of the WSA.

Proposed range management projects include construction of 20.6 miles of new fence. Vegetative manipulation would include 12,020 acres of disturbance.

Conclusion. On the 42,213 acre WSA there would be a reduction of the area's naturalness and opportunities for solitude because of the continued recreational ORV use, and additional mineral exploration activities, and future range improvement projects.

Impacts on Recreational Off-Road Vehicle Use

The entire WSA would be open to recreational ORV use. Recreational ORV use levels would increase but remain under 200 visitor days annually for the foreseeable future. There would be no impact on recreational ORV use.

Conclusion. There would be no impact on recreational ORV use.

Impacts on Mineral Resource Actions

The Little Humboldt River WSA would remain open for mineral entry and mineral leasing. Exploration activities consisting of construction of 20 miles of access road and 1,300 feet of bulldozer trench are predicted to occur on 7,300 acres with moderate potential for gold and silver. Fifty miles of seismic exploration line for oil and gas are predicted to occur on the northern 7,500 acres of the area. No economic discoveries are predicted.

Conclusion. The 42,213 acres would remain open for mineral entry and mineral leasing. Exploration activities involving construction of 20 miles of access road and 1,300 feet of bulldozed trench are predicted. In addition, fifty miles of seismic exploration lines are predicted to occur on 7,500 acres in the northern portion of the WSA. No impacts on mineral development are expected since no valid discovery is anticipated.

Impacts on Grazing Facility Maintenance and Construction

Maintenance of the existing grazing developments would not change. Planned range developments would be constructed. These include 20.6 miles of fence and vegetative treatment of 12,020 acres. There would be no impact on grazing facility maintenance or construction.

Conclusion. There would be no impact on grazing facility maintenance or construction.

Impacts on Private Inholdings

Under this alternative, none of the five private inholdings totalling 480 acres would be within a wilderness area. There would be no impact to the private parcels.

Conclusion. There would be no impact to the five private parcels.

Impacts on Lahontan Cutthroat Trout (LCT) Habitat

As noted in the Proposed Action, Platts and Nelson found that Lahontan Cutthroat trout populations fluctuate dramatically in response to environmental conditions. On another Humboldt drainage located in the Elko Resource Area they found population levels varied from 207 fish per mile in 1978 to 1,135 in 1980 to 518 in 1982. They concluded that LCT have evolved to accommodate naturally unstable conditions and have developed the ability to rebound quickly from low population levels caused by normal environmental constraints.

Proposed mineral exploration and range development activities may contribute small amounts of siltation which would not affect LCT habitat. Section 7 consultation with the U.S. Fish and Wildlife Service would occur in accordance with the Endangered Species Act and stipulations would be attached to the projects to reduce siltation to acceptable levels to perpetuate the LCT. Any negligible increase in siltation would not result in a significant impact.

Conclusion. Negligible increases in siltation of LCT habitat would occur as a result of stipulations and mitigations imposed on mineral exploration and range development activities. LCT populations would not be affected.

Proposed Action (All Wilderness Alternative)

Under the Proposed Action, all 6,685 acres of public land in the Rough Hills WSA would be recommended suitable for wilderness designation.

The primary impacts under this alternative relate to the protection of wilderness values through wilderness designation, the resulting increases in naturalness and opportunities for solitude and primitive and unconfined recreation, and the withdrawal of mineral resources.

Impacts on Wilderness Values

All 6,685 acres of the Rough Hills WSA would be recommended suitable for wilderness designation and all wilderness values would receive the special legislative protection provided by wilderness designation. Wilderness values of naturalness, solitude, primitive recreation, and supplemental features of diversity, topography and scenery would be retained in the WSA.

The entire WSA, including the 0.8 mile vehicle way through Inez Gulch, would be closed to recreational ORV use. This action would eliminate 50 visitor days of recreational ORV use annually. This would improve the WSA's naturalness and opportunities for solitude and primitive and unconfined recreation by eliminating surface disturbance and encounters between ORV users and non-motorized recreationists.

Development of mineral resources would not affect wilderness values since no mineral development is expected.

Acquisition of the two parcels of private land totalling 200 acres in the WSA would affect the wilderness values of naturalness and solitude as the BLM would then have control over future uses of these lands.

Conclusion. Wilderness values would receive long-term Congressional protection. Wilderness values would be maintained on all 6,685 acres of the Rough Hills WSA. The area's naturalness and opportunities for solitude and primitive and unconfined recreation would improve because of the elimination of ORV use and the acquisition of the private land within the WSA.

Impacts on Recreational Off-Road Vehicle Use

Wilderness designation would close the entire 6,685 acre Rough Hills WSA to all forms of recreational ORV use. Recreational ORV use of 50 visitor days would be eliminated annually from the WSA. Public land that offers similar or superior opportunities for recreational ORV use is located throughout the region. Therefore, recreational ORV use forgone in the WSA would be absorbed on surrounding public lands.

Conclusion. Recreational ORV use of 50 visitor days would be foregone annually. The impacts of displacing this use to other public lands would be negligible.

Impacts on Mineral Resource Actions

The Rough Hills WSA would be withdrawn from all forms of mineral entry and mineral leasing. Predicted exploration activities for moderate potential metallic minerals include construction of 2 miles of access road into the interior for mineral core drilling which would be precluded with wilderness designation. However, the 1,000 to 2,000 foot cap of volcanic rock is predicted to preclude any economical development.

Conclusion. Construction of 2 miles of access road and exploratory core drilling would be foregone.

Impacts on Grazing Facility Maintenance and Construction

The developed spring in the southern portion of the WSA would continue to be maintained. Construction of an allotment boundary fence would be forgone.

Conclusion. There would be no impact on grazing facility maintenance. Construction of a three mile allotment boundary fence would be forgone.

Impacts on Private Inholdings

Under this alternative two private inholdings totalling 200 acres would be included in the wilderness area. Neither would have vehicular access. Both are currently used for livestock management purposes. Since that use is not expected to change, no impacts to these parcels is expected from designation.

Conclusion. There would be no impact to the two private inholdings within the wilderness area.

Irreversible and Irrecoverable Commitments of Resources and Adverse Impacts Which Cannot Be Avoided

Wilderness designation would mandate that existing wilderness values on 6,685 acres would be preserved. No irretrievable loss of resources would occur. Negligible adverse impacts would occur as a result of withdrawal of the area from all forms of appropriation under the mining laws and the closure of one vehicle way.

Relationship Between Local Short-Term Uses of the Environment and the Maintenance of Long-Term Productivity

Designation of the Rough Hills as wilderness would ensure the long-term productivity of ecosystems and would maintain the present wilderness values within the boundaries of this 6,685 acre area.

Livestock utilization would continue without any change to existing ecosystems or natural ecological succession. Prohibition of recreational vehicle use and mineral extraction will allow preservation of natural ecosystems and wilderness values over the long-term.

No Wilderness Alternative

Under the No Wilderness Alternative, the entire 6,685 acres of public land within the Rough Hills WSA would be recommended nonsuitable for wilderness designation.

The primary impacts under this alternative relate to mineral development and the resulting reduction in naturalness and opportunities for solitude and primitive and unconfined recreation.

Impacts on Wilderness Values

The entire WSA would be recommended nonsuitable for wilderness designation and none of the wilderness values on 6,685 acres would receive special legislative protection.

The entire WSA, including the 0.8 mile vehicle way through Inez Gulch, would be open to recreational ORV use. Recreational ORV use would increase slightly, but would remain below 100 visitor days of recreational ORV use annually for the foreseeable future.

Because the WSA is covered by 1000 to 2000 feet of volcanic rock, exploration for, but no development of, mineral resources is expected to occur. Two miles of road leading to the interior of the WSA would be built to perform exploratory drilling. Surface disturbance from earth moving equipment would be about 10 acres

An allotment boundary fence would be built across approximately 3 miles of the WSA to manage livestock.

Conclusion. On the 6,685 acres of the WSA there would be a reduction of naturalness and opportunities for solitude and primitive and unconfined recreation because of continued recreational ORV use, and predicted future mineral exploration activity and construction of a 3 mile allotment boundary fence.

Impacts on Recreational Off-Road Vehicle Use

The WSA would remain open to ORVs. Recreational ORV use levels would increase but would not exceed 100 visitor days annually.

Conclusion. There would be no impact on recreational ORV use.

Impacts on Mineral Resource Actions

The Rough Hills WSA would remain open for mineral entry and leasing. All potential mineral resources would be available for exploration. This includes construction of 2 miles of access road for core drilling.

Conclusion. Two miles of access road and exploratory core drilling are predicted to occur.

Impacts on Grazing Facility Maintenance and Construction

The developed spring in the southern portion of the WSA would continue to be maintained. Construction of an allotment boundary fence would occur.

Conclusion. There would be no impact on grazing facility maintenance and construction. A 3 mile long allotment boundary fence would be constructed.

Impacts on Private Inholdings

Under this alternative neither of the two private inholdings totalling 200 acres would be within a wilderness area. There would be no impact to the two private parcels.

Conclusion. There would be no impact to the two private parcels.

9

CHAPTER FIVE

Consultation and Coordination

587

10

CHAPTER 5

CONSULTATION, COORDINATION, AND PUBLIC PARTICIPATION

In Preparation of the Proposed Action

Development of the recommendations for the Elko Resource Area Final Wilderness Environmental Impact Statement has included an on-going coordination and public participation effort. Federal Register notices and news releases have announced all steps of the process to date, including the study schedule, notices of intent for preparation of the EIS, notice of availability of the draft Elko Area RMP/EIS, notice of public hearings, and public comment periods.

Throughout the study, consultation and coordination has occurred with other Federal agencies, State, county, and local governments, and the public. At this time, recommendations as to suitability or unsuitability of WSAs for wilderness designation are consistent with officially approved and adopted resource-related plans of these agencies and governments.

Inventories determined that no cultural sites that would be eligible for nomination for listing on the National Register of Historic Places are known to exist within the WSAs.

The U.S. Geological Survey and Bureau of Mines are inventorying each proposed WSA suitable for wilderness designation to determine its leasable, locatable, and saleable mineral potential. The BLM has supplied both agencies with maps and information of each WSA. The reports of the agency's findings should be available after September 1987.

Comments were requested from the following agencies, tribes, interest groups, and from business with permits, leases, and or easements which might be affected.

GOVERNMENTAL AGENCIES AND INDIVIDUALS

Federal Agencies

Advisory Council on

Historic Preservation

Department of Agriculture

Forest Service

Soil Conservation Service

Department of Defense

Army Corps of Engineers

Bolling Air Force Base

Hill Air Force Base

Department of Energy

Bonneville Power

Administration

Office of Environmental

Compliance

Department of the Interior

Bureau of Indian Affairs

Bureau of Mines

Bureau of Reclamation

Environmental Protection
Agency

Fish & Wildlife Service

Geological Survey

National Park Service

Office of Environmental
Project Review

Offshore Environmental
Assessment Division

Congressional Delegation

Senator Chic Hecht, Nevada
Senator Paul Laxalt, Nevada
Representative Harry Reid,
Nevada
Representative Barbara
Vucanovich, Nevada

Indian Tribes

Intertribal Council of Nevada
Shoshone-Paiute Tribe
Te-Moak Western Shoshone
Duckwater Council
Shoshone-Paiute Tribe
South Fork Band

State of Nevada

Governor Richard Bryan
State Assemblyman Byron
Bilveu
State Assemblyman John Marvel
State Senator Dean Rhodes

Department of Minerals
Division of Agriculture
Division of Historical
Preservation & Archaeology
Division of State Parks
Division of Water Resources
Division of Wildlife
Land Use Planning Advisory
Council
Multiple Use Advisory Board
Office of Community Services
State Communications Board

Local Government

Carlin City Mayor
Carlin City Planning Board
Elko City Manager
Elko City Mayor
Elko City Planning Board
Elko County Manager
Elko County Commissioners
Eureka County Commissioners
Lander County Commissioners
Lander County Planning
Commission
Jackpot Advisory Council

Others

Northeast Elko Conservation District
Elko Chamber of Commerce
Elko County Farm Bureau
Elko County Association of
Conservation Districts
Elko County CRMP
Elko County Game Board
Clover Conservation District
Duck Valley Conservation District
Eureka Conservation District
Jiggs Conservation District
Lamoille Conservation District
Lander County Conservation District
Owyhee Conservation District
Paradise Valley Conservation District
Starr Valley Conservation District
White Pine Conservation District
Lander County Planning Commission
Jackpot Advisory Council
Saval Research Project
College of Agriculture UNR
Mackay School of Mines
Forest Institute
Intermountain Forest Range
Experiment Station
Advisory Council on
Historic Preservation
Nevada Archaeological Association
Nevada Historical Society
Nevada Council of Professional
Archaeologists
National Wildlife Federation
Wildlife Society Nevada Chapter
Friends of Nevada Wildlife
Nevada Organization for Wildlife
Nevada Wildlife Federation
American Fisheries Society
Missouri Conservation Comm. AFS
Wildlife Management Institute
Izaak Walton League
National Audubon Society
Desert Fishes Council
Nevada Chukars Unlimited
Bighorn Unlimited
American Horse Protection Assoc.
The Center for Wild Horse
& Burro Research
Int'l Society for Protection
of Mustangs & Burros
WHOA! Inc.
National Mustang Assoc.
Nevada Humane Society

Other (continued)

Humane Society of Southern Nevada
Sierra Club
The Wilderness Society
American Wilderness Alliance
Earth First
Friends of the Earth
Friends of Plumas Wilderness
Federal Land Bank
Nevada State Grazing Board
Nevada Cattlemen's Association
Nevada Woolgrower's Assoc.
Pacific Legal Foundation
American Mining Congress
Amoco Productions Co.
Anaconda Company
ASARCO Inc.
Atlantic Richfield Co.
N.L. Baroid
Bullion Monarch Mining Co.
Carlin Gold Mining Co.
Chromalloy Mining & Milling Co.
Citizens for Mining
Cominco American Inc.
Cordex Exploration Co.
Duval Corp
Cortez Gold
Dee Gold
Exxon Co.
Freeport Gold
Getty Mining Co.
Gold Standard of Nevada, Inc.
Homestake Mining Co.
Independent Petroleum Assoc.
Kirkwood Oil and Gas
Dressor Industries, Inc.
Meridian Land & Minerals Co.
Minerals Exploration Coalition
Newmont Exploration Limited
Noranda Exploration Inc.
Queenstake Resources (USA), Inc.
NICOR Mineral Ventures
Rocky Mountain Oil and Gas, Assoc.
SOHIO Petroleum Co.
Sun Exploration & Production Co.
Western States Mineral Corp.
Texas Gulf Minerals & Metals, Inc.
Nevada Mining Assoc.
Northeastern Nevada Miners & Prospectors
Natural Resource Defense Council Inc.
Public Lands Council
Sage ASSociation, Inc.
Nevada Open Land Organized Council

Other (Continued)

National Outdoor Coalition
Elko County Resource Action Council
Four Wheel Drive World, Inc.
Silver State Four Wheelers, Inc.
Sierra Pacific Power Company
Lands of Sierra
California Pacific Utilities
Wells Rural Electric Co.
Idaho Power Company
Southern Pacific Transportation Co.
Southern Pacific Land Co.
Union Pacific Systems
Power Engineers
Southwest Gas Corporation
Nevada Mobile Telephone Co.
Bo-K Explorations
Dale R. Andrus Associates
Silver State Resource Consultants
Adobe Hills Ranches
Barnes Ranches, Inc.
C&C Cattle Co.
Damele Ranches, Inc.
Wildhorse Ranch
Corta Livestock Company
Happy Daze Ranch
Dahl, Inc.
Sheep Creek Ranch
Dewey Dann Estate
Elko Land and Livestock Co.
Elko Nevada Stake Welfare Ranch
Ellison Ranching Co.
Glaser Land and Livestock Co.
Gund Ranches
Hammond Ranches, Inc.
Holland Ranch
Howard Ranches, Inc.
CKO Land Company
Lee Livestock Company
Maggie Creek Ranch, Inc.
71 Ranch
Merklev Ranches, Inc.
101 Ranch
Nevada-Garvey
Nevis Industries, Inc.
Northfork Cattle Company
Northern California Financial Service Corp.
Palisade Ranch, Inc.
Paris Livestock Company
Petan Company of Nevada, Inc.
Joe Pieretti Ranch
Rancho Grande, Inc.
Roaring Springs Associates

Rother Farms, Inc.
Salicchi Ranches, Inc.
Heguy Brothers
Saval Ranching Company
Slagowski Ranches, Inc.
Sundown Land and Cattle Co.
Te-Moak Livestock Association
Stone House Ranch

Julian Tomera Ranches, Inc.
Twenty-Five Corporation, Inc.
Van Norman Ranches, Inc.
Lee Wilson and Co.
James J. Wright Ranch, Inc.
Zaga Ranches
Zeda, Inc.
Zunino Ranches

In addition, copies of the document were distributed to many interested individuals whose names are maintained on the Elko District's mailing list. Informational copies have been supplied to the following media organizations and libraries:

Nevada State Journal-Reno Evening Gazette
Elko Daily Free Press
Elko Independent
Ely Daily Times
Battle Mountain Bugle
The Nevada Rancher
The Idaho Statesman
Times News
KELK/KLKO Radio Station
KRJC 95 FM

U.S. Department of the Interior
Natural Resources Library
BLM Library - Denver Service Center
James Dickinson Library, UNLV
Getchell Library, UNR
Nevada State Library
Elko County Library
Elko County Bookmobile
Eureka County Library
Lander County Library
White Pine County Library

The Draft Wilderness Environmental Impact Statement was supplied to the following BLM Offices:

Director, USDI, Bureau of Land Management
Nevada State Office
Idaho State Office
New Mexico State Office
Battle Mountain District Office
Carson City District Office
Ely District Office
Las Vegas District Office
Winnemucca District Office
Butte District Office
Idaho Falls District Office
Salt Lake District Office
Boise District Office
Burley District Office
Craig District Office

CONSULTATION AND COORDINATION IN DEVELOPING AND REVIEWING THE ENVIRONMENTAL IMPACT STATEMENT

In early August 1985, approximately 580 copies of the draft Elko Area RMP/EIS were sent to the agencies, organizations, and individuals. The draft was officially filed with the Environmental Protection Agency on August 7, 1985. A new release was issued announcing the draft's availability. The public review period extended to November 15, 1985. Public hearings were held on October 3 and October 4, 1985 in Elko and Reno, Nevada respectively.

Comments and related responses are printed at the end of this chapter.

LIST OF PREPARERS

Name	Responsibility	Education	Experience
Steve Ashworth	Team Leader/Writer	BS Natural Resources	BLM 6 years Outdoor Recreation Planner, Recreation Technician
Kurtis Ballantyne	Wildlife	BS Wildlife Management	BLM 11 years Wildlife Biologist, Recreation Technician, Watershed Technician
Burton Bresch	Social Conditions	BA Sociology, MS Counseling	BLM 7 years Sociologist
Dave Curtis	Livestock Grazing	BS Wildlife Management	BLM 6 years Range Conservationist
Jeffrey Gardetto	Wildlife	BS Wildlife Management, BS Range Management	BLM 9 years Wildlife Biologist, Range Conservationist
Midge Gillette	Wilderness	BS Natural Resources	BLM 1 year Wilderness Technician, USFS 3 years Wilderness Technician
Roy Masinton	Fisheries	BS Fisheries Biology	BLM 7 years Fisheries Biologist
Paul Meyers	Economics	BS Economics	BLM 6 years Economist. Various Federal Agencies, 12 years Economist
Nancy Phelps	Planning	BS Range Management MS Forestry & Range Ecology	BLM 8 years Planning Coordinator, Range Conservationist
Bruce Portwood	Wild Horses	BS Range Management	BLM 24 years Wild Horse Specialist, Range Conservationist
Hank Riek	Range	BS Natural Resources	BLM 6 years Range Conservationist
Skip Ritter	Woodland Products	BS Forestry	BLM 6 years Forester, Range Conservationist

LIST OF PREPARERS (Continued)

Name	Responsibility	Education	Experience
Gene Drais	Recreation, Wilderness	BS Zoology	BLM 8 years Outdoor Recreation Planner/Wilderness Coordinator. HCRS 4 years Outdoor Recreation Planner
Stanley Jaynes	Cultural Resources	BA & MA Anthropology	BLM 6 years Archaeologist
Nick Rieger	Soils	BS & MS Range Management	BLM 6 years Surface Protection Specialist
Tim Hartzell	Manager	BS Geography, MS Natural Resource Management	BLM 14 years Elko Area Manager, 8 years Planning & Environmental Specialist, 3 years Surface Protection Specialist
Caroline Norris	Maps	BA Fine Arts	BLM 6 years Visual Information Specialist, Cartographic Technician
Annie Martiartu	Typing	High School	BLM 4 years Word Processor Operator

COMMENTS AND RESPONSES

A total of 29 letters were received and oral testimony given by two individuals concerning the draft RMP/EIS. The following index illustrates the 21 comment letters which are reprinted at the end of this chapter, those which mention the wilderness issue, and those which were determined to require a printed response.

The identifying number in the upper left-hand corner of each letter corresponds to the index of letters. The comments for which responses have been printed are identified by a RESPONSE LETTER and corresponding number to the original letter which is also in the upper left hand corner. These response letters are depicted to the right of the original letter or following this letter. Comments in the letters for which responses have been printed are identified by dark vertical lines and are numbered in the left margins of the letters. The corresponding responses are numbered to match the comments.

INDEX OF COMMENT LETTERS

Letter Number	Commentor	Letter Printed	Mentions Wilderness	Response to Letter
1	USDI, Bureau of Mines	Yes	No	No
2	Reed Secord	Yes	Yes	No
3	Sierra Pacific Power Company.	Yes	Yes	No
4	National Park Service	Yes	Yes	No
5	Bruce Mitchell.	No	No	No
6	Grant T. Kien	Yes	Yes	No
7	Pete Tomera	No	No	No
8	Alan R. Wasner.	Yes	Yes	No
9	Kenneth Nelson.	Yes	Yes	No
10	Roy G. Jones.	Yes	Yes	No
11	Lance McCold.	No	No	No
12	The Wilderness Society.	Yes	Yes	Yes
13	Nevada Grazing Board No. 1.	Yes	Yes	No
14	Dean Rhodes	No	No	No
15	USDI, Geological Survey	Yes	No	No
16	Wells Rural Electric Company.	No	No	No
17	Jiggs Conservation District	No	No	No
18	John Swanson.	Yes	Yes	Yes
19	Elko County Conservation Association.	Yes	Yes	No
20	NV State Office of Community Services	Yes	Yes	Yes
21	Elko County Recreation Board.	No	No	No
22	Sierra Club	Yes	Yes	Yes
23	Minerals Exploration Coalition.	Yes	Yes	Yes
24	Wildlife Management Institute	Yes	Yes	No
25	Amoco Productions Company	No	No	No
26	Environmental Protection Agency	Yes	Yes	Yes
27	Exxon Company, USA.	Yes	Yes	No
28	USDI, Fish and Wildlife Service	Yes	No	No
29	USDI, Bureau of Indian Affairs.	Yes	Yes	No

Hearing Testimony

1-2	Nevada Grazing Board No. 1.	No	No	No
1-2	Freeport McMoran Company.	No	No	No



United States Department of the Interior

BUREAU OF MINES

WESTERN FIELD OPERATIONS CENTER
EAST 900 MAD AVENUE
SPOKANE, WASHINGTON 99202

August 21, 1985

Memorandum

To: District Manager, Elko District Office, Bureau of Land Management,
Elko, Nevada

From: Supervisor, Minerals Involvement Section, Branch of Engineering
Studies

Subject: Draft Elko Resource Management Plan and Environmental Impact
Statement

The report adequately and clearly assesses the mineral issues in the district except for one question. Will there be special access restrictions or special stipulations and requirements for mine operating permits in areas where other resources receive priority consideration, although mining claims can legally be staked? Experience has shown that management practice affecting access or requiring special stipulations in the mine permits tends to inhibit minerals activities. Sometimes these restrictions become so burdensome as to tend to preclude mine development.

An example of this question might be applied under Alternative A to the areas within one-half mile of the high water line around Wilson, Zuni/Diggs, and Wildhorse Reservoirs and the rim-to-rim portion of the South Fork of the Owyhee River area. Will there be access restrictions for mineral exploration or development on locatable minerals? Will there be special stipulations on mine development attached to mine permits in these areas, or will there be only standard stipulations as elsewhere in the district?

These questions could be addressed and clarified in Chapter 4 under the consequences of each alternative. As the draft now appears, the reader must assume no access restrictions on exploration or mining and no special requirements will be incorporated in mine operating permits if the area is legally available to claim staking. Clarification is needed.

You might be interested in how the Forest Service has addressed these questions in their land plans. They have divided their land into four categories, depending on degree of restriction. An example copy from the Beaverhead National Forest of their four categories is enclosed.

D. G. J. E. Banister
D'Arcy J. Banister

Enclosure

Comment Letter 2

2921 NE 57th Street
Lighthouse Point, Florida 33064
August 27, 1985

Bureau Of Land Management
Elko District Office
Attn: Mr. Tom Lander
P.O. Box 891
Elko, Nevada 89801

Dear District Managers

Regarding the Elko Wilderness Technical Report, I support the establishment of four wilderness areas: (Rough Hills, Little Humbolt River, Cedar Ridge, and Red Spring). The entire wilderness study areas should be designated wilderness. The areas are important for benchhill cranes, bald and golden eagles, mule deer, and various subspecies.

It is important that these areas be preserved as wilderness for their primitive, scenic, recreational, and wildlife values. Thank you for this opportunity to comment.

Sincerely,
Ard. Seard
Lead Secord

Comment Letter 1

Category A

- Withdrawn or proposed for withdrawal from mineral entry.
- Wilderness areas.
- Wild and scenic rivers
- Sites for facilities
- Historic and cultural sites
- Developed recreation sites.

Category B

- Statutes or executive orders require specific protection or mitigation measures.
- Proposed wilderness areas.
- Congressionally mandated wilderness study areas.
- NACM or further planning areas.
- RLE Species.
- Roadless (Type 1) dispersed recreation areas.
- Culturally significant areas.

Category C

- Special conditions exist on lands which require special lease stipulations or plan of operation conditions.
- Big game winter range.
- Eik calving area.
- Riparian area.

Category D

- Standard lease stipulations and plan of operation conditions apply.
- Timber production areas.
- Existing mineral processing areas.

Sierra Pacific Power Company

JACK L. BYRON, P.E.
Vice President-Engineering
September 4, 1985

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Rodney Harris
District Manager
Bureau of Land Management
P. O. Box 831
Elko, Nevada 89801

Dear Mr. Harris:

We have received and reviewed the Draft Elko Resource Area Resource Management Plan (RMP) and Environmental Impact Statement. Our review was keyed on utility corridor designation and wilderness recommendations, as well as other plan contents with potential to impact energy development and transmission. We realize that formulation of sound land management plans becomes more complicated as the range of issues and numbers of interest groups increase. Sierra Pacific makes every effort to maintain an objective and reasonable stance on land use issues.

From the standpoint of overall equity in resource allocation, Sierra Pacific concurs with Alternative D, the preferred alternative of the RMP. The ten major issues identified and evaluated, including land tenure, corridors, and wilderness, are handled logically and consistently. Sierra Pacific is particularly pleased with the excellent treatment given the utility corridor issue, and we consider the Elko RMP a model document in this regard. I hope you, the planning team leader, and all of the participating staff will accept our congratulations for a job well done.

Please let us know whenever we may be of assistance.

Sincerely,
Jack L. Byron
Jack L. Byron

JLB/JL/ro

cc: BLM State Director
Southern California Edison Co.

P.O. BOX 181090 RENO, NEVADA 89518 TELEPHONE 702/780-4222



United States Department of the Interior

NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 16060
SAN FRANCISCO, CALIFORNIA 94116

IN REPLY REFER TO:
17619 (WR-RPE)

October 10, 1985

Memorandum

To: District Manager, Bureau of Land Management, Elko, Nevada
Attention: RMP Team Leader

From: Regional Director, Western Region

Subject: Draft Elko Resource Management Plan and Environmental Impact Statement
(08-85/37)

In accordance with your State Director's Memorandum of August 7, 1985, we have the following comments relating to the treatment of cultural resources in the subject Plan and DEIS.

1. The Draft Management Plan and DEIS do not adequately address cultural resources in that:

- (a) The initial chapter to the document, "Summary of Management Actions" (Pages 5-1 through 5-9), fails to include cultural resources as a management activity.
- (b) Cultural resources were not cited in the Reference section of the volume. At a minimum, the Nevada State Plan for cultural resources should be referenced.
- (c) The appendices include tabular and other data on recreation, livestock/grazing/range issues, ecological/biological concerns, and minerals, etc.; however, nothing is included on cultural resources.
- (d) The Management Plan and DEIS evaluate the consequences and make recommendations for all five (5) proposed alternatives under consideration. Cultural Resources are not discussed in any of the alternatives.

2. While Page 2-36 addresses compliance procedures and notes that a 1980 Programmatic Memorandum of Understanding exists between the Bureau of Land Management and the Advisory Council for Historic Preservation, the Overview of cultural resources presented on Page 3-27 is superficial when compared to other significant natural resources and concerns the Bureau must consider. As examples:

Comment Letter 4

- 2
- (a) The Overview should include a summary of the prehistoric and historic sites including inventories conducted to date; a breakdown of the number and types of sites already identified in previous surveys; the number and types of sites already determined eligible or potentially eligible for nomination to the National Register of Historic Places; and potential impacts to National Register or eligible properties.
 - (b) Management options, benefits and potentially adverse impacts to cultural resources should be discussed for each alternative presented.
 - (c) The cultural resources portion of the Management Plan should provide a series of projected (5-year) management directive/objectives/alternatives with a discussion of how each directive will be implemented. These directives should be evaluated on an annual basis and revised as needed. The directives and objectives should be articulated with the overall Nevada State Historic Preservation Plan.

3. The Plan and DEIS do not address Native American issues, concerns, or any coordination with such groups.

We appreciate the opportunity to review and comment upon this draft Resource Management Plan and DEIS.

Harold H. Chapman

cc: National Register Programs - IAS
WASO (762)

Comment Letter 6

1

332 Spring Creek Pkwy
Eiko, Nevada 89801
Oct. 28, 1985

Dear EIKO DISTRICT (BLM):

Please consider the following as my personal comments on your Draft RMP & EIS for the EIKO Resource Area. My main personal concern is all BLM land use plans in far wildlife wilderness.

First I support Alternative "D" with regards to wilderness. Both Rough Hills & Little Humboldt WSA's are superb candidates for inclusion in wilderness System.

I am against all of your Alternatives on ORV use. I do not feel you should give carte blanche permission to drive "anywhere" 97-98% on BLM lands. While we do not have a ORV problem yet like in southwest BLM lands, eventually off-road races & drive buggy use may come to Eiko. While enforcement to drive on existing roads is difficult, I think "within reason" this should be supported by BLM before a somewhat wildlife area (e.g. Sage grouse nesting ground) is destroyed before it is brought to your attention!

Comment Letter 6

2

I support Alternative "C" regarding wildlife habitat particularly with its proposal to manage 191 miles of riparian habitat. Wetland riparian management is a priority & the livestock industry is fully complying with preservation riparian easements. I feel no increase in livestock numbers or AUM's should be considered. For much too long we called "multiple use" of BLM lands has been in reality single use. I.e. Livestock. I feel the whole character of the BLM has to change in this respect.

- 1) Set grazing fees at fair market value
- 2) Abolish grazing boards (decisions should be made by BLM staff scientifically not politically by livestock operators)
- 3) BAN grazing in damaged riparian areas until wildlife staff at BLM feels re-introduction of livestock is possible
- 4) All land use decisions within staff of BLM should be consensus of wildlife & "range cons"

Comment Letter 8

Dear Folks:

I am writing in response to the Draft Elko Resource Area Management Plan.

I very much support Alternative C.

I would really like to see the Little Humboldt River WBA become a Wilderness Area. This is a unique area where I once spent most of a summer.

Also, I would really like to see the Kough Hills WSA become a Wilderness Area. This area at the headwaters of the Bruneau River is one of my favorite places in Elko County. I'd really like to see it set aside.

Both these areas are, in my opinion, good "museum pieces" of a landscape that we should set aside in its natural state. We have plenty of roads in Elko County, and it would be a good idea to protect AT LEAST these two areas from further development. I would like to see all 66,754 acres become wilderness.

I would also like to see as part of the final plan more protected watershed areas, i.e. fenced springs and riparian habitats not only with a mind to wildlife but also to people who need potable water. I would like to see set quantities and acreage goals for this as opposed to vague statements such as, "improve riparian area quality by 30%".

I did not see much mention of watershed management in this document. In the draft state in the nation I would think that watershed management would be much more of an issue, and I do not understand why it was not addressed more fully.

Sincerely,
 Alan R. Wagner
 798 5th St.
 Elko, NV 89801
 11-7-85

Comment Letter 9

October 23, 1955

Kenneth Nelson
Hagerman, Idaho
436 SE Kellerwood
Bend, Oregon

Dear Mr. Phelps,

I have reviewed the draft RMP/FIS for the Elko Resource Area and offer the following comments

Land and Realty

Recommend Alternative D (with suggested modifications)

There should be more flexibility in the amount of acreage identified as suitable for transfer, especially within the checkerboard land pattern. The major lands issue facing the Elko Resource Area, particularly in the

Comment Letter 9

long term, is the proper management of this area. The problems inherent in this task are common knowledge and need not be dwelled upon. Efficient management by the private landowner and Federal land manager requires the blocking of public and private lands into contiguous units. As passage of Federal legislation allowing large adjustments of acreage seems unlikely and probably undesirable from a management standpoint, the only tool remaining to accomplish this is the land exchange process.

The lands identified in Alternative D provide a good basis for this opportunity but could be expanded, for example, to include lands north and east of the Alele Range, lands within the Spring Creek area (T. 55N, R. 56E, S. 7E) lands east of SH 278 and west of the Union Range, and lands west and south west of the proposed Sixth Fork Humboldt River SRMA.

It should be remembered that by merely identifying the lands as

Comment Letter 9

CF
suitable for exchange does not mean a proposal will be started to completion. As stated on pages 2-26 in the narrative, "land tenure adjustment would be subject to a detailed analysis with this in mind it is reasonable to assume that the environmental assessment process, coupled with the critical factor of whether or not the exchange is in the public interest, would allow only those actions which meet the above criteria to be processed. It is no secret that a land exchange is a long and arduous task. However, until something better comes along it remains the only means available to accomplish blocking of lands. To summate interest, in desirable lands must be made available, otherwise the checkerboard land pattern will remain difficult and costly to manage for all parties concerned.

2. Large blocks of private land are included within the areas identified as suitable for transfer, particularly

Comment Letter 9

CF
in Boulder Valley and the area located roughly east of Spring Creek and south of Deeth. It is unrealistic to assume that adjustments would occur within these areas and only consider the reader as it gives the impression that more land is available for transfer than actually exists. Isolated public lands within these areas could be identified for sale if disposal is indicated.

3. The "sales" label and "transfer primarily by exchange" label contained in the map for Alternative D are ambiguous. The reader can assume that something other than exchanges would be acceptable in that category. The document should clearly point out what, as to what disposal actions would be acceptable in that category and what criteria would be used to make such a determination. I would suggest combining the two categories and assigning a label that indicates all forms of disposal would be considered. For example, "Land Tenure Adjustment Area."

Comment Letter 9

4. The map illustrating Alternative A was included in the draft. It is difficult for the reader to make comparisons between the various alternatives without having some idea of the situation as it presently exists. The lack of a map also implies that no planning criteria was available when making dispersal-related decisions.

5. Lands identified for sale in T. 33 N., R. 53 E., should be retained in public ownership. The lands in Cowlin Canyon are in proximity to unique geologic features and possess riparian and recreational values. An opportunity exists here for development of an interpretive and recreational site in cooperation with the State of Nevada. The remaining lands are located in a crucial deer winter habitat area and may possess scenic values to travelers on I-50.

Conclusions

Recommend Alternative D

Comment Letter 9

This alternative appears to accommodate industry's future needs. However, at some point in the future it may be desirable to have a corridor (3 miles wide) to channel major rights-of-way to the southern portion of the reserve area (land system).

Legal Access

Recommend Alternative D

In order to allow public utilization of the public lands legal access must be obtained where deemed necessary.

Recreation

Recommend Alternative C.

Assuming adequate funding, the public lands surrounding Wildhorse Reservoir should be retained in public ownership and managed for recreational use. Any development to this end should be coordinated with the State and Wildhorse Indian Reservation.

Wilderness

Recommend Alternative D

Cedar Ridge and Red Spring Wilderness Study Areas are not suitable for wilderness and should be released from that designation. The areas should then be intensively managed for woodland products and wildlife. Anticipated oil & gas exploration should be monitored carefully to prevent unnecessary surface disturbance.

Livestock Grazing

Recommend Alternative D

Approximately 66% of the grazing allotments mentioned are in a 'downward' or 'not apparent' (stable) trend. This indicates that range condition in general is not improving to a substantial degree. Any increase in preference must be justified by careful monitoring.

6/4/1983, Table 1

Wildlife Habitat

Recommend Alternative D

1. Wildlife and its habitat should always take precedence when considering grazing systems and treatments, range improvements, and other vegetative manipulations. I strongly support the reintroduction of big horn sheep into the reserve area.
2. A poor rating of 66% for those streams mentioned is also an indicator of the generally poor range condition throughout the reserve area. Riparian habitat must be provided to provide the substantial amounts of typical best annually through erosion, as well as to reestablish fisheries and associated aquatic habitat.

Wild Horses

Recommend Alternative D

In view of the present range condition,

Comment Letter 9

populations should not be allowed to increase above the current levels.

Woodland Products

Recommend Alternative D

The increasing demand for woodland products (especially firewood) necessitates an intensive management program based on sustained yield methods. Also, special attention must be given to the management of aspen stands if this species is to remain viable throughout the resource area.

Minerals

Recommended Alternative D

The release of Cedar Ridge and Lead Spring U.S.A.'s from wilderness designation and the opening to oil and gas exploration should offset any adverse impact arising from the inclusion of the Little Humboldt River and Rough Hills U.S.A.'s into

Comment Letter 9

The National Wilderness Preservation System.

Thank you for the opportunity to comment on these issues. As the BLM will direct the Fike Resource Area's management efforts for the next 20 years, I hope that my comments will provide some guidance towards an effective and efficient accomplishment of that task.

Sincerely,

Kenneth Huber

11/11/85

Dear Mr. Davis,

I have recently had the opportunity to review the Elko Resource Management Plan and Environmental Impact Statement and wish to submit my comments concerning it. I feel the alternative finally adopted should continue to be managed in such a manner to allow multiple use yet provide for some wilderness designation and eliminate overgrazing, if present.

In my mind the most important issue (and goal) should be the restoration of riparian habitat. If deemed possible I have no objection to increased grazing in those areas able to support it but hope the BLM will take the

2

action necessary to protect (and restore) critical riparian habitat.

Alternative A because it provides for no wilderness and Alternative E because it eliminates grazing are, of course, unacceptable. (I'm puzzled why the BLM even proposed these obviously unacceptable alternatives as they have no chance at reason to be adopted?) I am opposed to alt. B. as it contains too little wilderness, inappropriately increases livestock AUM's and most importantly manages only 52 miles of riparian habitat. To me alt. C is acceptable except that too much wilderness is designated and calls for an increase in the herds by 100%!

Comment Letter 10

3

To see brief I support all D
with following changes:

Wilderness -	Rough Hills	6,685 Ac
	Li He Humboldt	<u>42,213 Ac</u>
		48,898

livestock I support continued lease
at present level (305,247 ANRAs)
I would also support a
30% increase if monitoring
supports. Monitoring should
be close and if the monitoring
indicates overgrazing then
a decrease should occur.

Wildlife - Manage 191 miles of
riparian/stream habitat
as in alt C.

Thank you. *Ray Green*
 ROY G. JONES M.D.
 2053 Ruby View Drive
 Elko, Nevada 89601



THE WILDERNESS SOCIETY

CALIFORNIA-NEVADA REGION

7 November, 1985

Mr. Rodney Harris
District Manager
Elko District Office
Bureau of Land Management
P.O. Box 831
Elko, NV 89801

Dear Mr. Harris:

The Wilderness Society appreciates the opportunity to comment on the Draft Resource Management Plan (RMP) and Draft Environmental Impact Statement (DEIS) for the lands encompassing the Elko Planning Area.

The Wilderness Society is a major national conservation organization devoting resources to the preservation and wise management of our nation's public lands. Our current national membership of 145,000 individuals includes 500 members who call Nevada their home state.

We strongly object to the selection of Alternative D as the Preferred Alternative. In its current form, the Preferred Alternative would designate only 1 percent of the entire planning area as wilderness, open 98 percent of the planning area to Off Road Vehicle (ORV) use, and 82 percent to unrestricted minerals development. Furthermore, management direction proposed in the RMP for wildlife and riparian habitat is skewed in favor of increased grazing and mineral exploration/development.

Following is a section by section discussion of our criticisms of the selection of Alternative D as the Preferred Alternative.

12-1

1791-A PINE STREET, SAN FRANCISCO, CALIFORNIA 94109
(415) 771-2020

Inadequate Wilderness Recommendations

Rough Hills

The BLM is to be complimented for the recommendation to designate the entire Rough Hill WSA as wilderness. The area offers outstanding opportunity for solitude or primitive and unconfined recreation. The area is key mule deer (*Odocoileus hemionus*) summer range, and is populated by a variety of upland game birds; blue grouse (*Dendrospagus*), ruffed grouse (*Bonasa*), chukar (*Alectoris*), and sage grouse (*Centrocercus*). Riparian habitats along the Brunau River and Copper Creek sustain furbearers such as marten (*Martes*), beaver (*Castor*), river otter (*Lutra*), and muskrat (*Onychia*). These and many other wildland dependent resources in the area would be protected through wilderness designation. We support the BLM's recommendation for Rough Hills.

On the other hand, The Wilderness Society disagrees with the BLM's wilderness recommendations for the other study areas addressed in the Draft RMP. It appears that the BLM has decided against proposing an area for wilderness when any possibility for resource conflict exists.

12-2

Little Humboldt River

Of 42,213 acres studied, the BLM is recommending 29,775 acres for wilderness and 12,438 acres for non-wilderness. Acreage in the north and northwest should be included in the proposed wilderness to protect additional year round deer range. This acreage is unfavorable for minerals, and should be included to provide a more natural boundary for the area.

12-3

12-4

Cedar Ridge and Red Spring

Both the 10,009 acre Cedar Ridge WSA and the 7,847 acre Red Spring WSA are well timbered, provide valuable year round deer range, offer important winter cover for sage grouse, and are important to migrating raptors including the bald eagle (*Huoccephalus*). No wilderness is recommended in either area, rather, both of the entire areas will be opened to intensive commodity development. ORV use, fuelwood cutting, minerals development, and oil and gas leasing are projected to seriously degrade the current condition of both areas.

In summary, the BLM is proposing wilderness designation for 36,450 acres, only 1 percent of the entire planning area. Conversely, 99 percent of the planning area would be open to developmental activities during all or part of the year.

The Wilderness Society disagrees with this management proposal, and requests further wilderness recommendations be considered.

12-5

RESOURCE MANAGEMENT DIRECTION

The Wilderness Society has several very serious concerns regarding management directions proposed in the Preferred Alternative. Our greatest concern involves the effects of resource management activities on the diversity and status of wildlife populations.

12-6

Riparian/Aquatic Habitats

Our initial concern involves the Objectives for specific management issues arrayed in the "Alternatives" section. On page 2-18 in the Preferred Alternative, the Objective for Issue #7: Wildlife Habitat reads "Conserve and enhance terrestrial and aquatic wildlife habitat". Riparian habitats are glaringly absent from the objective. Alternative's A, C and E all include riparian habitats for protective management, yet the Preferred Alternative does not.

Approximately 22,000 acres of riparian habitat occur within the Elko Resource Area (ERA). About 6,000 of these acres are presently in poor or fair condition. Of 73 inventoried streams (585 miles) 66 percent are in poor condition and 27 percent are in fair condition, and only 7 percent are in good condition. More than 300 wildlife species are known to occur within the Resource Area, approximately 240 of which are directly dependent on riparian habitat or use it more than any other habitat (Draft RMP 3-9). The discussion on the value of riparian habitats goes on to state that the single most destructive force to riparian habitats is trampling by livestock. Additional supporting language for this can be found in the Draft RMP on page 3-11. "...in most cases, livestock grazing was primarily responsible for producing and maintaining deteriorated aquatic/riparian habitat conditions". Despite this, the Preferred Alternative proposes to increase grazing opportunities by 10 percent, limit livestock fencing, and exclude mitigation language for road construction.

Clearly the effects of these practices would be to further degrade the already fair to poor conditions of riparian habitats and severely impact wildlife. The Wilderness Society urges the assurance of protection for riparian habitats in the final recommendation.

Mineral Restrictions

The Draft RMP does propose seasonal restrictions on mineral-leasing activities to protect wildlife species during sensitive times of the year. The Preferred Alternative proposes seasonal restrictions to protect sage grouse brood rearing grounds, and pronghorn (Antilocapra) year round range. However limits restrictions on mule deer range to winter range.

12-1 The areas under analysis in this document were selected following evaluation of the wilderness inventory. Percentages were not a criteria for selecting lands for further wilderness study.

12-2 BLM recommendations as to which lands are suitable for wilderness designation by Congress result from evaluation of many factors under the Wilderness Study Policy. The four areas analyzed in this document all contain resource conflicts to varying degrees.

12-3 Recommendations result from analysis of which areas are suitable for wilderness classification. While wildlife values can enhance a wilderness, the presence or absence of wildlife values is not an essential criteria in determining which areas have outstanding naturalness, solitude, and primitive values; wilderness.

12-4 Boundaries on the north and northwest were selected as a result of evaluation of boundaries which would be manageable over the long-term, not as a result of mineral conflicts or naturalness.

12-5 See response 12-1.

12-6 We recognize wildlife resources and their value, however, this is not one of the wilderness characteristics in determining which areas to recommend as suitable, or unsuitable for wilderness to the Congress. See Chapter 1, alternatives considered but dropped from further analysis.

12-7 See responses 12-3 and 12-6 for discussion on wildlife values. This document does analyze recreation impacts.

We must admit to some confusion regarding the potential impacts of No Surface Occupancy (NSO) requirements on mineral exploration. On page 4-33, in the Preferred Alternative, the RMP states that NSO requirements are the same as in Alternative C, the "all wilderness" alternative. In the Preferred Alternative the impacts associated with these NSO requirements and seasonal restrictions are predicted to be "adverse, but not significant", yet on page 4-26 the RMP states that NSO requirements in Alternative C (identical to those in Alternative D) would have an "adverse" impact.

QUESTIONS/SUGGESTIONS

In conclusion, The Wilderness Society has the following questions and suggestions to be considered in the development of a Final Resource Management Plan.

- 12-7
- 1.) Expand wilderness recommendations to include lands valuable to wildlife and recreation in Little Humboldt River, Cedar Ridge, and Red Spring.
 - 2.) Include riparian habitat protection in management issue objectives for wildlife habitat.
 - 3.) Improve NSO language by including firm language regarding the requirement of NSO stipulations. example: replace "may require" with "will require"
 - 4.) Are there differences between the NSO requirements of Alternative C and D?
 - 5.) Clarify the contradiction in projected impacts of NSO and seasonal requirements on minerals development as discussed above.

Thank you for the opportunity to comment on the Draft Elko Resource Area Resource Management Plan and Environmental Impact Statement.

Sincerely,

Patricia L. Hedge
Patricia L. Hedge
Regional Director: California-Nevada

Q

Q

2027

Q

Comment Letter 13

Nevada Grazing Board of District #1
Post Office Box 52
Elko, Nevada 89801
(702) 738-5716

November 11, 1985

Mr. Rodney Harris, District Manager
Bureau of Land Management
Elko District
P.O. Box 831
Elko, Nevada 89801

Dear Mr. Harris:

Enclosed are our comments on the draft Elko Resource Area
Resource Management Plan and Environmental Impact Statement.

Please consider these comments thoroughly when you are preparing
the final alternative.

Sincerely,

Ray Young, Chairman

R/Y:sa
Enclosure

Comment Letter 13

MEMORANDUM FOR THE BOARD OF DISTRICT #1-
COMMENTS ON WELLS RESOURCE AREA RAMPY RESOURCE MANAGEMENT PLAN
AND ENVIRONMENTAL IMPACT STATEMENT
by Lester A. McManis

GENERAL COMMENT

This plan appears to be vastly improved, when compared to the
document BLM prepared for their Wells Resource Area.

The preparers of this document did use some questionable
procedures to develop and analyze the basic data used in the
formulation of the various alternatives. The publication of this
data is misleading and should be modified or a statement
describing it's inaccuracies should be prominently displayed in
the final report.

No unwarranted adverse effect on permittees should occur if BLM
continues to follow the policy requiring livestock use
adjustments to be based upon information developed through a
realistic and effective monitoring program.

Page 4-1. Introduction (Environmental Consequences)
1st sentence- This section presents the scientific and analytic
basis for comparison of the alternatives and selection of the
resource management plan.

Page 4-2. Assumptions for Analysis
Assumption 3- Baseline data for vegetation condition and trend
and other parameters is the best available

The data on condition and trend may be the 'best available' but
it is NOT adequate for comparing alternatives on a 'scientific
and analytic' basis as stated on page 4-1. The discussion in the
next three sections of this report are intended to support this
statement.

CONDITION AND TREND SURVEY AND ANALYSIS

The greatest problem with the approach used to obtain range
condition and trend data used in this RMP/EIS was that the team
conducting the survey could not possibly evaluate all of the
allotments in the Resource Area with the manpower and time
available. To meet the deadlines, compromises were made on two
very important points:

- (1) Only the 'I' category allotments were examined in the field.

Comment Letter 13

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS. Page 2

Condition and trend on 'H' and 'C' allotments were estimated in the office and

(2) field work on the 'I' allotments was limited to occasional write-ups of vegetative condition and trend on the major sites included in the mapping unit descriptions for the area being surveyed. The resulting estimates were then extrapolated to a much larger area, usually including all of the particular mapping unit delineation in which the write-up was made, sometimes including the same range site found in another mapping unit or delineation, and sometimes to an area many miles from the original write-up. Apparently no attempt was made to delineate varying ecologic status within the boundaries of a range site or mapping unit, even though significant differences do occur within relatively short distances from some of the write-up locations.

The result of these compromises is a very unreliable set of data for those allotments where the survey was conducted and potentially worse than unreliable where condition and trend were estimated.

On the 'I' allotments, apparent trend was determined more or less in accordance with the guidelines contained in the Nevada Rangeland Monitoring Handbook. In the 'C' and 'H' allotments, apparent trend was estimated in the office by the same falls who estimated the ecologic status.

The determination of apparent trend requires several subjective judgments to be made. Most of the people assigned to range survey parties do not have the experience necessary to allow them to make these judgments. Apparent trend is a one-point-in-time observation. The accuracy of which depends on weather conditions, current year's use or non-use by livestock and/or wildlife, insect infestations, personal bias, and other factors. Even when highly experienced people make the determination in the field, the information provided is unreliable and is nearly useless. The decision making process or in an analysis of alternatives. The trend estimates on 'H' and 'C' category allotments are further flawed by being made in the office.

The next step in the analysis of the range survey data was the prediction of the acreages at various serial stages that would eventually result from the application of each of the five alternatives on each allotment. This was another guessing game because there is absolutely NO documentation available to show what changes in ecological condition can be expected on the range

Comment Letter 13

N-1 GRAZING BOARD Comments on draft Eiko R.M. RMP/EIS Page 2

sites in Eiko County, Nevada as a result of applying alternatives 'B', 'C', 'D' or 'E' as described in this document. If realistic, measured trend data had been available, reasonable projections might have been made for alternative 'A', but even this is doubtful because of the artificial constraints applied in the plan.

The next step was the conversion of the range condition information to carrying capacities so the units available under each alternative could be predicted. SCS ecological site guides contain estimates of the total potential annual air-dry production of each range site for favorable and unfavorable years. On sites where production is primarily made up of palatable species, a reasonable estimate of AUMs/acre can be made using these guidelines. The numbers get really wild when a high percentage of the vegetation is species with a low palatability, because of the adjustments applied in an effort to account for differences in palatability and useability.

The combination of unreliable data, analyzed by outdated procedures, using arbitrarily selected factors and ignoring some obvious considerations is bound to result in questionable answers.

An example, using data from this document: The map reference number 4 is a 'C' category allotment. The estimators said 3,423 acres of the BLM land are in 'late seral' ecological status and 1,501 acres are miscellaneous. The estimators also said the trend is downward.

When the predictors got done running this through the various formulas and applying factors for alternative 'D', they predicted that monitoring will show the need for an 80% cut in AUMs. They also predicted that without any treatment, other than the reduction in use, the long-term result will be to improve 150 acres to the potential native vegetation ecologic status.

A look at the allotments map in the plan shows the 4,924 acres of BLM land to be about 5% of the total area within the boundaries of this allotment. A look at the alternative 'D' land tenure adjustment map shows the BLM land within this allotment would be designated for disposal, indicating that no special values have been identified for these lands.

Several questions need answering here:
(1) How on earth did they find the 4,923 acres of BLM land in this large field so they could determine the ecological condition

Comment Letter 13

N-1 GRAZING BOARD Comments on draft Eiko R.M. RMP/EIS Page 4

so precisely? Remember, this was done in the office.

(2) What evidence indicates a downward trend of such a magnitude as to require an 80% cut, when this area has been used in the present manner for many years and still has the kinds of plants required to place it in late seral ecological status?

(3) How could the proposed cut be applied on an allotment where such a preponderance of land is privately owned?

I could cite other examples of questionable answers obtained by this procedure, but will refrain from doing so in the interest of your time and mine.

WILDLIFE HABITAT CONDITION

All wildlife habitat condition surveys (whether they are conducted on big game upland habitats, riparian habitats connected with streams, non-aquatic riparian habitats, or fish habitats) rate conditions found on the ground using a numerical score which relates to an optimum or ideal habitat for a species or group of species. No thought or consideration is given to the ability of the area being studied to provide the desired kind and amount of cover or the desired kind and amount of food or the desired ratio of pools to riffles or any of the other desired habitat components. All the survey data is assigned a numeric value for the component, which is added to the values for the other components involved to arrive at a total score which says the condition is good, fair or poor. This method probably does a good job of rating man's concept of how good a particular habitat is for use by wild animals or fish. It DOES NOT provide the information needed to establish realistic goals or objectives for a Resource Management Plan or for a Habitat Management Plan.

--Page 3-6, Wildlife Habitat

The second paragraph, 2nd sentence, quotes Mike Nickersham of the Eiko NRDMA Office as stating that the 20 year trend for habitat and population of both deer and antelope was downward.

Bob McQuinn, Habitat Section Chief in the NRDMA State Office, told me that he believed the reason the habitat trend was downward was because better range management practices are changing the vegetation on deer habitats back to areas dominated plant communities from shrub dominated plant communities which

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS page 5

were created by destructive grazing around the turn of the century.

An article by b.c. Steats, published in the October 4, 1985 Elko Independent, quotes Wickersham as reporting a considerable number of deer still being available. The article goes on to quote George Tsukamoto, NODM's chief of game, as stating the statewide deer population has experienced a 20% increase this year.

These quotations lead me to believe that no one is exactly sure what the trend in deer numbers and habitat conditions is, and that any trend may not be primarily due to excessive livestock grazing, as various passages in this document would lead us to believe.

--Page 3-11. Aquatic Habitat

The 3rd par., 1st sentence lists the factors believed to be responsible for existing aquatic habitat conditions. Geologic events, other acts of God, and wildlife should be considered among the causes of 'deteriorated' conditions. The examples given us by the destructive runoff on the Ruby Mountains a few years ago seem to have been forgotten already as have the riparian areas and other wildlife habitats that were utterly destroyed by the extensive virus of 1964. Some of these events may have so altered the sites as to preclude any improvement, regardless of what management changes are made.

3rd par., 2nd sentence- It was somehow determined that livestock grazing was primarily responsible for productive deteriorated conditions. If the third sentence in this paragraph is supposed to be support for this theory, there must be an assumption that all 73 streams are identical to Gance Creek and the streams studied by Bill Platts. I think Platts will agree that no two streams are exactly alike and that, while livestock grazing may contribute to the condition of the habitat on a particular stream, you cannot make a flat statement that livestock grazing is always primarily responsible for deteriorated conditions. Grazing can in no way be blamed for two of the five 'priority A' limiting factors discussed in the 4th paragraph on page 3-10.

3rd par., 6th sentence- Most flooding in this area results from rapid snow melt on frozen or saturated ground, from rainfall and/or unseasonably warm weather with a heavy wet snowpack, or from convection storms. Soil compaction on riparian areas has a very insignificant effect on flood flows primarily because of the

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS Page 6

small portion of the watershed they encompass.

3rd par., 10th sentence- Gullying, and the resultant lowering of the water table can be caused by such things as fire, geologic activity, beaver dams failing, severe convection storms etc.

--Page 4-31. Wildlife Habitat

2nd par., 1st sentence- What is the basis for projecting a blanket one condition class improvement? Is there scientific information available to show that all wildlife habitat in the area (which is shown on page 3-8 to be 90% of the area) is capable of supporting the attributes of one class better condition?

WILDLIFE NUMBERS

Estimated existing and so-called 'reasonable' numbers for deer, antelope and big-horn sheep were provided by the Nevada Department of Wildlife in a publication titled 'Input into Land Management Agencies Planning Systems-Elko Resource Area'. The NODM document projects 'reasonable' numbers approximately double the existing numbers of deer and antelope and proposes to introduce 142 head of big-horn sheep into the resource area. According to BLM's Elko district wildlife biologist, Mr. Spring has signed an agreement with NODM, promising to provide sufficient habitat to support the estimated 'reasonable' numbers of big-horns.

Table 1 of appendix 4 of the RMP/EIS shows the wildlife NUMs assigned by BLM to each allotment. The footnote on page 4-4 states 'reasonable and existing numbers by allotment are mathematical calculations based on the percent of big game use areas occurrence within each allotment. The resource area wildlife conservationist told me the numbers in the table have been adjusted to account for the acreage of privately owned land in the allotments.

Comparing the numbers NODM provided for deer habitat areas with the numbers contained in the table, I am unable to reconcile the mathematics used by BLM to assign NUMs to allotments:

Map reference number 1, shows 17% of habitat area (use area) to be in the Umber allotment and that 1,277 NUMs are needed to meet the 'reasonable' number demand. NODM's numbers for habitat area D1-2 are 1,748 NUMs during the period from 3/16 to 1/15 and

2,267 AUMs during the period from 11/16 to 3/15. This is a total of 4,007 AUMs estimated as needed for NDOM's 'reasonable' number of deer in habitat area DY-2. My TI-35 calculator tells me that 13% of 4,007 is 521, not 1,277.

The TI-35 also tells me that the 7% of DY-2 shown for the YP allotment should be 280, not 645.

The total of all the 'reasonable' number AUMs shown in table 1 for area DY-2 is 6,149 instead of 4,007 as listed in the NDOM document. A similar check of the DY-1 area, contained within the allotments in NDOM management area 6, shows a total of 5,728 AUMs allocated to deer by BLM as compared to a need for 2,104 AUMs shown by the NDOM document. There are an additional 5,185 AUMs allocated on the allotments containing DY-1 in NDOM management area 7. The NDOM document does not show a habitat area DY-1 in management area 7, but it is on the map and Duane Erickson told me that a supplement does list 1,200 AUMs for this habitat area.

Map reference number 4, the Indian Creek FFR allotment, is shown as having 3% of DY-2 and an allocation of 285 AUMs for deer was made. Again, the TI-35 shows a total of 120 AUMs would be a more appropriate allocation. However, the area shown on the map as being included in this allotment is approximately 95% privately owned and contains a large acreage of fenced irrigated land. With the exception of some small corners along the west side of the allotment, it appears that the BLM administered land is all within area DY-2, rather than DY-1. An adjustment in allocation to account for private ownership would eliminate any allocation of AUMs for deer in the habitat area DY-2 portion of this allotment.

NDOM reports a total of 3,000 AUMs needed for the 'reasonable' number of deer in habitat area DY-2 of management area 6. BLM estimates the Indian Creek allotment to contain 3% of this area and allocates 225 AUMs for deer. My arithmetic says the allocation should be 90 AUMs, reduced by the 90%. See exhibit #1 for an in depth look at the allocation on the first ten allotments on table 1.

If forage is to be allocated to 'reasonable' numbers of wildlife, it is important that the computations made to determine the forage needs of wildlife be as accurate as possible. The method used to make this determination in this RMP/EIS has four serious faults: (1) it assumes that wildlife and livestock have identical dietary requirements; (2) it assumes that wildlife utilize

habitat areas uniformly, regardless of habitat quality; (3) it does not adequately recognize deer use on privately owned lands; and (4) Even if the other three points were not arbitrary, the mathematics are erroneous.

LIVESTOCK NUMBERS

--Page 5-5, Summary Table 11
 --Page 2-1B, Grazing Action #5
 --Page 4-30, Livestock Grazing, 1st par.
 BLM needs to more strongly emphasize that the 3 to 5 year average is for EIS purposes only, and that livestock may use up to the active preference AUMs on all allotments until monitoring indicates a need (or opportunity) for the adjustment of numbers or period of use.

USES AND DATA BY LAND OWNERSHIP

--Page 1-3, Table 1-1
 The 52% private lands, the 9% USFS lands and the 4% other lands are added to the 32% BLM lands to make the 100% of land in the planning area. It therefore appears that statements made about the resources in the planning area or RMP area apply to all lands, not just BLM, unless otherwise specified.

--Page 3-3, Recreation, 6th par.
 The first through fourth sentences state that 20% of the state's deer reside in the RMP area but that it is difficult to estimate the hunting use that occurs on BLM or USFS lands because of the mixed ownership between BLM and USFS. This would lead one to believe that all of the deer in this area live on publicly owned lands and that all hunting occurs there. This is NOT the case and it should be clarified that a substantial amount of deer habitat is found on private property and that a significant proportion of the hunting occurs on these lands.

The last sentence in this paragraph discusses access problems resulting from privately owned lands. The statement 'and recreationalists often unintentionally or intentionally trespass on private property' should be added.

--Page 3-15, Minerals
 It is unclear whether the statistics on production, disturbed lands etc. relate to just BLM land.

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS Page 9

Page 3-17. Riparian Vegetation
1st par. The 3rd sentence does not make it clear whether all 22,000 acres of riparian vegetation inventoried are on BLM land.

--Page 3-21. Mining Industry
Lists personal income, tax revenues, and employment resulting from mining, and from geothermal and oil/gas leasing. It is unclear whether these numbers relate strictly to BLM lands or whether they include private and perhaps Forest lands?

--Page 3-23. Recreation/Wilderness
1st par. 2nd sentence--Over 15 percent of the state's total for fishing, and about 25 percent of backpacking occurs within the RMP area. It is unclear whether these recreational activities all occur on BLM lands, or whether the numbers include N.F. and private lands also.

--Page 4-2, Appendix I, Table 1
I seriously doubt whether 33,500 person days of recreational horseback riding is done on BLM lands every year. This is an average of 92 people every day of the year or 186 people every day for a six month's period. The numbers in this table, if they reflect all ownerships, are highly misleading. If they are intended to reflect just BLM, they should be checked because the numbers for many activities are unrealistic.

--Page 3-27. Cultural Resources
1st sentence-- It is unclear whether all 1,600 known cultural sites are on BLM land. How was the 50,000 estimate obtained?

PLANNING

Since this is a broad plan, why not say 121,000 acres of land treatment rather than 120,778? 260 miles of fence rather than 258? 41,000 AUMs rather than 40,782 etc. ? The exact numbers used indicate a degree of precision that does not exist in this document.

--Page 2-18. Grazing Action #4
--Page 4-30. Grazing, 2nd par., 1st sentence
The six category 'M' allotments needing AHPs should be placed in

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS Page 10

category 'I' along with the category 'H' and 'C' allotments needing range improvement work.

--Page 2-24. Management Guidance
The 2nd sentence of the last paragraph on this page states that 'detailed, site specific management actions' are outlined in AHPs, MMP, WHMPs, Wilderness plans etc.

The only draft HMP I have had the opportunity to review did not go into much detail and was not site-specific other than to suggest an unusual grazing system and a change in season of use for a portion of one allotment. Other actions were mentioned, but the wildlife conservationist said the HMP area was so large and had so many needed projects that he just didn't have time to get down to specifics.

Several draft AHPs contain the statement that wildlife enhancement practices will be done in accordance with the HMP discussed above. The draft HMP does not mention some of these practices and discusses others in a very general way, certainly not in enough detail to be used as a reference for location and specifications in an AHP.

Planning would be much more meaningful if plans for an allotment were developed within the framework of the HMP and included plans for livestock grazing, wildlife habitat management, feral horse management and other uses as appropriate all in the same package. Under the present procedure, I'm concerned about which comes first--the chicken or the egg--Obviously all the different kinds of plans will not be developed simultaneously, yet each should be and is supposed to be coordinated with the other. How can an AHP be coordinated with a HMP or a WHMP that won't be developed until 3 years later?

--Page 2-29. Allotment Management Plans

The statement in the first paragraph is excellent. It brings out that AHPs need not be mini-EISs. It gives hope that there might be some give and take between HMPs, WHMPs and AHPs, rather than having to make the AHP fit the other kinds of plans as seems to be the present rule of the game.

GRAZING AND WILDLIFE IMPROVEMENTS

--Page 2-18. Grazing Action #3. Wildlife Action #2
Water developments for livestock would benefit wildlife too. Will the wildlife water developments be designed for multiple use or strictly for wildlife?

Comment Letter 13

N-1 Grazing Board Comments on draft Elko 6.A. RMP/EIS Page 11

The 18+ miles of wildlife fence appears to be in addition to the 23 miles of fence proposed under grazing. Poor antelope. Could these fences be coordinated to make them serve more than one purpose and thus reduce the total needed?

--Page 5-5, Summary Table 1

--Page 2-19, Wildlife Action #6

The plan does not specify how the riparian/stream habitats would be managed to bring about a 50% improvement in all of the selected 110 miles within a 5 year period. What techniques are planned and is this objective really reasonable for ALL 110 miles?

--Page 2-20, Range Improvements

Far. c) states that sagebrush alterations will be IN ACCORDANCE WITH PROCEDURES SPECIFIED in the Western States Sage Grouse Guidelines. The response from Washington to the N-1 Grazing Board's protest to the Well's RMP/EIS stated that these guidelines would be USED AS GUIDELINES, not as specifications.

MONITORING

--Page 5-5, Summary Table #1

Page 2-19, Grazing Action #5.

How much change must occur and for how long a period before it is considered to be an upward or downward trend that warrants a change in preference?

Will monitoring continue after adjustments are made, to assure the adjustment was effective in meeting the objectives?

--Page 2-19, Wildlife Action #3

This action should be rewritten to state that season-of-use adjustments or other management changes would be considered if monitoring indicates the need.

--Page 2-19, Horse Action #2

How will utilization and effects on vegetation due to horses be differentiated from grazing by livestock and wildlife?

Comment Letter 13

N-1 Grazing Board Comments on draft Elko R.A. RMP/EIS Page 12

--Page 2-31, Monitoring Program
The 3rd sentence of the 3rd paragraph should refer to the 1984 edition of the Nevada Rangeland Monitoring Handbook.

--Page 2-32, Use Mapping

The 1st paragraph partially explains the importance of use mapping but does not go far enough. Use pattern mapping is the most effective tool available for range managers to use in planning, locating monitoring sites, and determining whether or not the plan is working. Use pattern mapping must not be done just because someone says to map use patterns. It must be done because the range manager wants and will use the information it provides. To obtain maximum benefit for all parties, the permittee should actively participate in use mapping.

OTHER ALTERNATIVES

--Page 2-23, Long-term Horse Actions #1 and #2

It appears unnecessary to gather horses and restrict horse numbers under the no-grazing alternative. It would be more useful to analyze the effect of uncontrolled horse populations than it was to analyze the effect of no livestock grazing.

--Page 4-2, Assumptions for Analysis

Assumption no. 4- Monitoring or vegetative use is a requirement of BLM policy and therefore is NOT a variable that can be omitted from all alternatives except the preferred alternative. Omission of this important management activity biases the analysis in favor of the alternative that was obviously selected even before the analysis began.

--Page 4-8, Livestock Grazing (Alternative A)

Second sentence: However, particular allotments may experience gains or losses as a result of changes in forage condition and trend over time. If monitoring is not a part of alternative A, how would changes and trends be detected?

MISCELLANEOUS

--Page 2-27, Legal Access

The 3rd sentence reads: Easements required to provide access to public lands will be acquired Does this language indicate

N-1 GRAZING BOARD Comments on draft Elko R.A. RMP/EIS Page 14

do not truly reflect or even acknowledge the wildlife use on private lands. The recreational uses, forage production, wildlife habitat and other values of the intermingled private lands are substantial and are inseparable from those on BLM administered lands. The existence of these values should be acknowledged in the plan because they do have a effect on how the adjacent federal land is managed.

Respectfully submitted,

Lester A. McKenzie
Lester A. McKenzie
Certified Range Management Consultant

Exhibit #1

CALCULATION OF DEER AUMs FOR TEN ALLOTMENTS
NDOW Wildlife Habitat Areas DY-2 and DM-2

Map No. (RMP)	Deer Area (1)	Acres of Use Area in Allot (1)	% of Use Area in Allot (2)	Est. AUMs (3)	AUMs on BLM (4)	AUMs on Private Land (5)	Total AUMs (6)
1	DY-2	177,280	14.3	573	98	562	1,277
2	DY-2	97,280	7.8	315	98	306	645
3	DY-2	12,800	1.0	40	80	32	90
4	DY-2	32,640	2.6	104	5	5	285
5	DM-2	72,960	41.6	1,248	5	62	235
6	DY-2	14,080	1.1	44	28	17	47
7	DM-2	1,920	1.1	33	38	13	11
8	DY-2	10,880	0.9	36	68	25	89
9	DY-2	15,360	1.2	48	77	37	70
10	DM-2	5,120	2.9	87	77	67	39
11	DY-2	2,560	0.2	8	89	7	88
12	DM-2	16,640	9.5	285	89	234	18
13	DM-2	4,480	2.6	78	53	41	75
14	DM-2	4,480	2.6	78	49	38	38

(1) All acres estimated from BLM 50 minute maps with allotment and deer use area boundaries plotted as closely as possible.

(2) Percent of use area estimated by dividing acres of use area on allotment by total acres of use area.

(3) Use area AUMs estimated by multiplying NDOW reasonable AUM total for each use area by the percent of the use area estimated to be within the allotment.

(4) % BLM determined by dividing BLM acres (column 5, Table 1) by the total estimated area of the allotment.

(5) AUMs on BLM determined by multiplying the estimated AUMs for the use area in the allotment by the percent BLM land in the allotment.

Comment Letter 15



United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA. 22092

In Reply Refer To:
MGS-Mail Stop 423
DES 85-37

Memorandum

To: District Manager, ATTN: RPM Team Leader, Elko District, Nevada
From: Assistant Director for Engineering Geology
Subject: Review of resource management plan and draft environmental statement for Elko Resource Area, Nevada

We have reviewed the statement as requested in a memorandum of August 7 from the State Director, Bureau of Land Management.

Since ground water is used for irrigation, the statement should evaluate the scope of such use and assess its effects on ground-water resources under the proposed management plan. Periodic monitoring of the quality of drinking water supplied to the public and staff should be discussed.

James F. Devine

Copy to: District Chief, WRD, Carson City
(information only)

Comment Letter 18

PHIL S. FARRAR
Secretary, CA 1981

December 8, 1955.
The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.

11/24/55

Elko, Nevada, 11/24/55.

Subject: B.L.M. - Elko District

It has been suggested that the following be included in the Elko District Office Report on the Elko Resource Area, Nevada, which is being prepared for the Elko District Office. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.

The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.

- 1. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 2. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 3. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 4. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 5. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 6. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 7. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 8. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 9. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.
- 10. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.

The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office. The following is a copy of the letterhead memorandum dated 11/24/55, which was prepared by the Elko District Office.

18-1
18-2

18-1 This document analyses and proposes wilderness recommendations concerning the Rough Hills, Little Humboldt River, Cedar Ridge and Red Spring WSAs.

The Owyhee Canyon and South Fork Owyhee River WSAs are analyzed in the Owyhee Canyonland Wilderness EIS. Rock Creek was analyzed as part of the wilderness inventory of the Elko District and determined not to qualify for further wilderness study in November 1980. The East Little Owyhee River is not within the Elko ELM District.

18-2 The Elko Resource Area contains 3,134,019 acres administered by ELM. You fail to specify where the 636,000 acres you consider suitable for wilderness are located, however, the entire Elko Resource Area has been inventoried for lands suitable for wilderness. This document analyzes the environmental issues of the recommendations on those lands which were determined suitable for further study, except for the two units involved in the Owyhee Canyonlands Wilderness EIS.

Elko County Conservation Association
P. O. Box 2961
Elko, Nevada 89801
November 14, 1985

Mr. Rod Harris
District Manager
Bureau of Land Management
3900 East Idaho Street
P. O. Box 831
Elko, Nevada 89801

Dear Mr. Harris:

Recently a number of Elko County residents who are vitally interested in natural resource conservation assembled to form the Elko County Conservation Association. We wish to work closely with the land management agencies, conservation groups, and industry in conserving, protecting and enhancing Nevada's natural resources. With this in mind, please accept our comments on the Draft Elko Resource Area Management Plan.

Introduction

After reviewing the Draft Elko RMP, our impression is that the general condition of the lands within the Elko RA are in either fair or poor condition. This indicates to us that significant problems exist in the Elko RA, and we feel that it is urgent that problems identified in the Draft RMP be rectified. The generally poor condition of native plants and the deteriorated condition of riparian areas are a chief concern.

Riparian

I. Riparian habitat is the heart of the native ecosystem in Nevada and its condition is generally indicative of the quality of land management practices. It is disturbing that of the nearly 600 miles of riparian habitat within the Elko RA, 66% is rated in poor, 27% in fair, and only 7% in good condition. Each alternative of the RMP

Page 2
Riparian cont.

would result in a net decline of riparian habitat within the Elko RA, and each is unacceptable in that respect. We urge that the Elko ERM district adopt as its guideline the criteria outlined in the American Fisheries Report—The Best Management Practices for Management and Protection of Western Riparian Stream Ecosystems. Should the Bureau adopt any management plan that allows for a decline in or simple maintenance of current riparian habitat conditions, we would like a written explanation for the adoption of such a plan.

II Range Management

Livestock management practices should enhance overall range conditions for wildlife. That is, improvement of range conditions should be the goal of the Bureau for the mutual benefit of livestock and wildlife. However, no practice should be implemented that will have a detrimental effect on wildlife. We recommend that the Bureau adopt a vigorous program that would most enhance soil and water conservation within the Elko RA. Under such a program, livestock and wildlife will both benefit.

Specifically, the condition of all range land within the Elko RA should be stabilized and managed for improvement. Reseeding in burned areas should include the reintroduction of native species. Regular monitoring is a crucial part of the management program. We feel that such monitoring is necessary to an effective management plan.

III Wilderness

Both the Rough Hills and the Little Humboldt River WMA's should be given wilderness status. The Cedar Ridge and Red Springs WMA's should be dropped from wilderness consideration.

IV Land Exchanges

Land exchanges that will block up areas of wildlife habitat should be pursued. Public access corridors should be a part of any exchange.

Page 3

V Utility lines, pipe lines, etc. should closely follow existing corridors.

Questions and Concerns

Preferred Alternative D would result in deterioration of aspen stands (p. 3-37). How is this compatible with the Bureau's responsibility to protect and enhance wildlife habitat and with executive orders 11988 and 11990 to protect riparian habitat (pp. 1-6 and 1-7)?

The Alternative E (p. 4-37): The removal of livestock grazing will increase big game populations. Does this suggest that mule deer populations would benefit from a climax grass type? Don't studies indicate otherwise?

Shouldn't habitat improvements also consider the reintroduction of sharp-tailed grouse?

Wouldn't the abolishment of all livestock grazing (Alternative E) be detrimental to chuckar partridge habitat?

Grasshopper control has been an important and costly program. Grasshopper problems are largely a reflection of poor long-term management, yet this problem is not mentioned. Why?

Alternative E suggests that range fires would be a greater problem if cattle grazing were eliminated, but don't cheat grass ranges now pose the greatest fire danger?

Respectfully submitted,

Bob McDiary
Bob McDiary
Chairman

Elko County Conservation Association

Comment Letter 20

RICHARD H. BRYAN
Governor

STATE OF NEVADA



JEAN FOND
Director

STATE OFFICE OF COMMUNITY SERVICES

Capital Complex
Carson City, Nevada 89710
(702) 885-4420

November 14, 1985

Mr. Rodney Harris
District Manager
Elko District Office
Bureau of Land Management
P.O. Box 831
Elko, Nevada 89801

Re: SAI NV #86300014 Project: Elko RHP/EIS

Dear Mr. Harris:

Enclosed is the Governor's position on the wilderness recommendations as presented in the Elko Draft Resource Management Plan and Environmental Impact Statement. Also attached are individual State agency comments. Agency comments on wilderness are provided on an informational basis and may not directly correspond to the Governor's position.

We would also like to express our appreciation to you and your staff for the briefing held for State agencies in October; we will be looking forward to reviewing the Final EIS when published.

Sincerely,

John B. Walker
John B. Walker
Planning & Intergovernmental
Affairs, NOCS/SFPC

JBW/ll
Enclosures
cc: Edward Spang, BLM

Comment Letter 20

RICHARD H. BRYAN
Governor

STATE OF NEVADA



JEAN FOND
Director

STATE OFFICE OF COMMUNITY SERVICES

Capital Complex
Carson City, Nevada 89710
(702) 885-4420

November 14, 1985

Mr. Rodney Harris
District Manager
Elko District Office
Bureau of Land Management
P.O. Box 831
Elko, Nevada 89801

Re: Governor's Position on Wilderness, Elko RMP/EIS

Dear Mr. Harris:

The State of Nevada acknowledges receipt of the draft Resource Management Plan and Environmental Impact Statement for the Elko Resource Area. Several State agencies will be commenting directly on different aspects of the document. This letter constitutes the official State position on the wilderness recommendations developed in the plan.

1. Red Spring and Cedar Ridge Wilderness Study Areas: The State concurs that these two relatively small wilderness areas should not be given further consideration for wilderness designation. Located very close to each other, only twenty miles from Elko, these areas do possess a certain scenic beauty. However, they are not unique, and opportunities for solitude and primitive recreation are not outstanding. Both areas contain conflicts with wilderness designation (mineral and wood product potential as well as a considerable range fire hazard) that outweigh the limited wilderness values.

2. Rough Hills Wilderness Study Area: This is an isolated area of very rugged terrain. It has excellent opportunities for solitude and primitive recreation. Although it is a small area, it has many scenic rock formations and canyon areas. Access is presently difficult and the area is not frequently visited. The State does have some concerns about the two private inholdings

Comment Letter 20

Mr. Rodney Harris
November 14, 1985
Page 2

found in the area and also about the moderate mineral potential. We will be conducting additional research into these areas of concern. However, based on information available at the present time, the State concurs that the Rough Hills Wilderness Study Area appears suitable for wilderness designation.

3. The Little Humboldt River Wilderness Study Area: This area includes 42,000 acres of the canyon and drainage basin of the Little Humboldt River. The canyon itself is undeniably scenic and unique, and we concur that its high wilderness values outweigh other values. However, we have some concern about the inclusion in the wilderness area of so much of the rolling uplands above the canyon. We are concerned about the manageability of these uplands as wilderness. We also note the presence of private inholdings, several roads and ways, and some mineral potential, particularly for gold and barite. We would support a modified wilderness proposal in which the boundaries are drawn back closer to the canyon rim. We would be happy to work with you on specific boundary demarcations, but initially suggest that the top of Castle Ridge would be a preferable boundary on the northeast, and the boundary shown in Alternative B on the southwest.

The State appreciates the opportunity to comment on this document. We look forward to continuing to work with you in your wilderness reviews. Please do not hesitate to contact this office for any additional information you may need.

Sincerely,

Jan Ford
Jan Ford
Director

JF/11

Response Letter 20

20-1 See Chapter 1, alternatives considered but dropped for further analysis.



STATE OF NEVADA
DEPARTMENT OF WILDLIFE
1100 Valley Road
P.O. Box 10678
Reno, Nevada 89520-0022
(702) 789-0500

WILLIAM A. MOLINI
Director

November 5, 1985

Mr. John B. Walker, Coordinator
State Clearinghouse
Office of Community Services
1100 E. William, Suite 109
Carson City, NV 89710

RE: SAI NV #86300014

Dear John:

We appreciate the opportunity to review and comment on the Elko Resource Management Plan and Environmental Impact Statement and submit our comments and recommendations for your consideration in the final RMP/EIS.

In the Department's role to protect, maintain and enhance the state's wildlife resources, we must rely on the land management agency to provide the necessary quality and quantity of habitat to support that resource. Therefore, we see the present condition of that habitat and the proposed future conditions, as brought about by land management, to be key factors in our role of providing desirable populations of wildlife. It is often stated that good range management is good wildlife management and we certainly support that premise if the goal is applied to native range and the attainment of good or better ecological range condition. We believe that in many cases the RMP/EIS does document many resource conditions that are far from being optimal for wildlife and several other land users. The RMP/EIS states that of 22,000 acres of riparian habitat inventoried, 91 percent is in poor or fair condition. The resource area contains 212 miles of streams of which 66 percent are in poor condition. Trout populations are present in 37 of the 73 streams inventoried and historically trout were found in most, if not all, of those streams. Of the 2,511,893 acres of native range inventoried, 67 percent of the native vegetation is producing at or below half of the plant community potential. A total of 52 allotments was shown to have an apparent downward trend. We feel these allotments in the RMP/EIS certainly warrant some decisive and far-reaching management commitments to bring about improvement.

Mr. John B. Walker
November 5, 1985
Page 2

We feel that through the selective management process and the subsequent categorization of 27 1/2 allotments (approximately 70 percent of the resource area), that a positive commitment toward the first step in good range management has been made. We certainly commend the Bureau for such a positive approach to the categorization process. However, we feel the goals of improved management fall short of that needed to restore productivity to much of the wildlife habitat. For example, in the Environmental Consequences chapter, we see the following goals as being less than satisfactory to resolve some of the resource conditions previously stated:

1. Three percent of the native vegetation would move toward the potential native community and the remaining 97 percent would not change over the long term.
2. Fifteen percent of riparian vegetation would improve in habitat quality and 85 percent would remain unchanged or decline.
3. Habitat quality would improve on 106 acres of protected spring site riparian vegetation and 1,144 acres would decline or remain unchanged.
4. Aspen stands would remain unchanged or decline overall on approximately 18,000 acres.

In order to address and correct some of these conditions, and goals we strongly recommend that the Bureau select the wildlife objectives under Alternative C. If these goals are not selected, we would request an explanation why such a decision was not made. In recognition of the importance that riparian areas play in overall productivity of the resource area, we recommend that one more management guidance standard be adopted. This would be the acceptance of the American Fisheries Society paper entitled "The Best Management Practices for the Management and Protection of Western Riparian Stream Ecosystems" as the fundamental management standard for stream riparian areas in the Elko Resource Area.

Even though wildfire was not identified as an issue in the planning process, we feel that its effects in the resource area are significant enough to warrant some goals and objectives. For example, just this year alone approximately 153,800 acres were burned. Many of these areas were valuable wildlife habitat and in all probability a major percentage of it will never, at least in the foreseeable future, return to its former productivity. We request that the RMP/EIS address this concern and adopt some guidelines that will promote the restoration of native plant species where needed to maintain wildlife populations on critical and crucial habitats.

Comment Letter 20

Mr. John B. Walker
November 5, 1985
Page 3

The long-term proposal to increase livestock AUM's 30 percent above the current three to five-year average use does merit serious consideration to assure that impacts to wildlife habitat will be avoided. We support livestock increases if wildlife conflicts can be avoided, but we also advocate livestock reductions if wildlife conflicts are increased. The ultimate AUM goal is really irrelevant as long as a comprehensive and effective monitoring program is conducted to assure that range resources are not degraded. We totally support monitoring and feel that under the present range management system it is the best way decisions can be supported.

In our review of the RMP/EIS, we recommend that the following alternatives be selected for each issue category:

- Legal Access - Alternative D
- Lands and Realty - Alternative C
- Corridors - Alternative C
- Wilderness - Alternative D
- Livestock Grazing - No Recommendation
- Wildlife - Alternative C
- Horses - Alternative D
- Woodland - Alternative D
- Minerals - Alternative D

SPECIFIC COMMENTS

Page 1-5

The document states that the plan will be revised periodically (a minimum of five years) to determine the need for amendment. Can amendments or addendums to the RMP/EIS be submitted and activated at anytime or does the five-year minimum refer only to the review process?

Page 2-1

The public may have some comment on ACEC's if some candidate areas were proposed for review and comment.

What makes Alternative D a balanced approach?

Page 2-3

Why could not an alternative be developed that would continue the average level of use of 305,247 AUM's and still infringe the management actions of Alternative D?

Are there studies that show current management is providing only 20,338 AUM's of forage for existing numbers of mule deer?

Comment Letter 20

Mr. John B. Walker
November 5, 1985
Page 4

Page 2-5

Would land be sold just because it is difficult and uneconomic to manage or would other factors also be considered?

Page 2-8

In Alternative B, the objective to treat or seed 635,000 acres and spend \$14,000,000 on livestock range improvements seems inappropriate and unrealistic under current budget restraints. We question that this alternative is even necessary or feasible.

Page 2-13

In Alternative C it states that: (1) direction is to implement an RMP which would allow livestock grazing at use levels which would avoid significant conflicts with sensitive resources, and (2) grazing systems and range improvements would be implemented to enhance overall rangeland vegetative condition. This would appear to imply that Alternatives A, B, and D would result in significant conflicts with sensitive resources and grazing systems and range improvements would not enhance overall rangeland vegetative condition. Is this the intent?

Page 2-15

In Alternative D, how many acres of the 243,200 acres identified for transfer are proposed for disposal under the DLE and Carey Land acts?

Page 2-16

What is a low visibility corridor? If this means a setback of a certain distance from the highway despite conflicts with wildlife, we certainly have some concerns. An example of our concern was exemplified by the Eiko Secondary Source powerline which was placed one-half to one mile away from the highway despite our recommendation to use an existing corridor adjacent to the highway.

We have no concerns and agree with the designated SRMA's. However, we do have a question concerning the South Fork of the Humboldt River SPMA. We thought the land ownership and management of the area was going to State Parks.

The Department supports acquiring legal access for the public and public land administration. Would any of the legal accesses (Table 2-4) be closed to the public?

Mr. John B. Walker
November 5, 1985
Page 5

Page 2-16, Wilderness

We do support the Wilderness proposal as presented in the preferred alternative.

Page 2-18

Does the treatment of 120,978 acres include retreatment of old seedings?

Will all treatments or seedings have to meet a positive B/C ratio and how long is the period of amortization? When the B/C ratio is developed, will documented adverse impacts to wildlife be added to the cost of the project?

In our departmental briefing session with the Bureau on the Elko RMP/EIS, it was our understanding that none of the 120,978 acres of treatments or seedings will be located on crucial or key wildlife ranges. Is this correct; and if correct, where in the RMP/EIS is reference made to this?

Page 2-25 through 2-36, Specific Resource or Program Guidance

The selective management section really did not discuss levels of monitoring. Will all "A" category allotments receive sufficient monitoring upon which to execute grazing decisions in three to five years after the Record of Decision is signed?

We request that the degree of allowable livestock use of browse species on delineated big game winter ranges be no more than 30 percent in any season, not the 60 percent shown in the table on page 2-32. Also some of the use seems rather high, particularly if associated with riparian areas.

We request that guidelines be included that do not allow the routine harvest of live mountain mahogany or standing deciduous trees, unless the harvest is to meet specific habitat management requirements.

Under the Wildlife and Threatened and Endangered Habitat Management Program, we highly recommend the riparian pasture as a very beneficial management concept which would accomplish several objectives.

We recommend that the Bureau encourage and authorize, to the extent feasible, the use of track-mounted drill rigs.

Mr. John B. Walker
November 5, 1985
Page 6

We recommend that the Bureau outline what bonding requirements will be needed for the reclamation of areas disturbed by mining and mine exploration. We also encourage guidelines that will keep new cut-fill roads, associated with mineral exploration, to a minimum, to avoid critical habitats such as riparian zones, aspen stands, etc., and be closed as soon as possible. Native plant species should be seeded at suitable sites.

Page 3-8, Big Game Population and Habitat Condition

The Bureau's big game studies to date report that crucial mule deer habitat to be in fair to good condition and crucial winter habitat to be in good to excellent condition. To someone unfamiliar with the area, this would give the impression that mule deer habitat and populations are good and that habitat is not a limiting factor in the Elko Resource Area. This certainly is not the case. We must point out that these studies represent only a small percentage of the habitat. In addition, mule deer populations are far below historical levels and literally thousands of acres of very valuable mule deer habitat have been lost or severely degraded due to wildfire, livestock (see page 3-11), and mining activities.

Page 3-9

The Terrestrial Riparian Habitat portion states that the primary habitat conflict is the trampling of water sources. We question whether this is true. Probably of greater concern is erosion channel cutting which results in lowering of the water table and subsequent loss of riparian habitat. Forage overutilization and roads are also sources of conflict.

Page 3-22

Were expenditures for trapping revenues included in the \$3,160,000 total for hunting and fishing? Were trapping revenues included in the total income figure?

In conclusion, we feel the Elko RMP/EIS does adequately recognize most of the concerns we identify with wildlife habitat. The degree to which those concerns will be resolved is still a question of considerable concern. In relation to other RMP's/EIS's which have been prepared by the Bureau in Nevada, the Elko RMP/EIS is better for wildlife than most. However, none of the RMP's have met our expectations in regards to commitments for the management of basic land resources (soil, water, vegetation), upon which wildlife are totally

Mr. John B. Walker
November 5, 1985
Page 7

dependent. We felt the RMP made some solid commitments to riparian concerns, but we still have a concern that much riparian habitat will decline over the long term. We applaud the goal of establishing 27 AHP's and the placing of nearly 70 percent of the resource area in the "1" category. This categorization when integrated with effective monitoring and environmentally sound objectives for the resource area will result in improving ecological conditions.

Sincerely,

William A. Moiri

William A. Moiri
Director

LB:pw

cc: Region II

RICHARD H. BRVAN
Governor

STATE OF NEVADA



ROLAND D. WESTERLUND
State Historic Preservation Officer

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF HISTORIC PRESERVATION AND ARCHEOLOGY

261 S. Fall Street
Capital Complex
Carson City, Nevada 89710
(702) 868-3138

November 5, 1985

MEMORANDUM

TO: John Walker, Office of Community Services

FROM: Alice M. Becker, Staff Archeologist *Alice M. Becker*

SUBJECT: DRAFT/ELKO RESOURCE AREA RMP & EIS, SAI NV #86300014.

The Division has reviewed the draft Elko Resource Area RMP and EIS. As described in the document, numerous historic and archeological properties eligible for inclusion in the National Register of Historic Places are located in the Elko Resource Area. We recognize that under specific resource program guidelines, the RMP will comply with the National Historic Preservation Act of 1966 (NHPA), as amended, and Executive Order 11593 prior to construction of wildlife and livestock improvements. However, we are concerned that management of land as recreation areas and the increase in public access roads may have indirect impacts to Register eligible properties not addressed by the RMP and EIS. During road planning and development of management plans for the recreation areas, the RMP must examine whether such actions will increase acts of illegal collection or vandalism. In the case of road building, the RMP should consider alternatives where the placement of a road may increase access to fragile archeological resources.

As part of the management of the Elko Resource Area, the RMP must also follow Section 101 and 110 of the NEPA regarding the establishment of a program to nominate properties to the National Register.

If the RMP has any questions regarding these comments, please have Elko staff call us.

AMB/da

Comment Letter 20

RICHARD H. BRYAN
Governor

STATE OF NEVADA



RICHARD L. REVELLIN
Director

DEPARTMENT OF MINERALS

400 W. King Street, Suite 106
Carson City, Nevada, 89710

(702) 685-5050

October 30, 1985

MR JOHN WALKER
Clearinghouse Coordinator
Office of Community Services
1100 East William Street - 117
Carson City, NV 89710

RE: SAI NV #86300014

Dear Mr. Walker,

The Nevada Department of Minerals appreciates the opportunity to comment on the Draft/EIko Resource Area RHP & EIS, SAI NV #86300014.

We appreciate the fact that mineral resource management was treated as an issue in the draft documentation. However, we have concerns regarding the designated mineral potential. We believe that an area's true mineral potential can never be fully known until actual exploration and mining occur. In many cases, major mineral deposits are overlooked or ignored until new technological breakthroughs or shifts in industrial needs suddenly transform an area which seems to have little or no mineral potential into a prime exploration target. From our viewpoint, wilderness areas should only be considered if an area has no mineral potential, that is, areas with sufficient geologic data to indicate the lack of favorable host rocks or mineral resources given today's mining technology and, of course, present and predicted economic conditions.

We support the BLM's preferred alternative for the Red Spring and Cedar Ridge HSA's, which recommends that these areas are not suitable for wilderness designation. Both the Red Spring and Cedar Ridge have high favorability for oil and gas, and moderate favorability for barite and other minerals.

We are opposed to wilderness designation for the Rough Hills HSA. There are several mines north of the HSA with new discoveries being made periodically. Production of gold, silver, copper and lead has occurred from the Black Warrior, Cleveland, McKnight's, Placer, Vanity Fair and Virginia mines located only 2-3 miles east of the HSA. According to the USGS open-file report 1976-56, Mineral Resources of Elko County, Nevada, the Virginia mine produced 450 tons of ore averaging 2.8 ounces gold per ton, 2.3 ounces of silver per ton along with 0.74 percent copper and 3.7 percent lead. Although there have been no mining claims located within the Rough Hills HSA, we feel there is a moderate mineral potential based on demonstrated surrounding mineralization.

120-2

Comment Letter 20

John Walker
October 30, 1985
Page 2

20-3

We are also opposed to wilderness designation for the Little Humboldt-River HSA. Our concern is the mineral potential in the northeastern portion. Two prominent roads also exist in that portion. We note that the mining claims and area of mineral potential in the southeastern portion of this HSA are not included in the preferred alternative. We feel that, at the very least, the preferred alternative's north-eastern boundary should be adjusted to exclude the area of mineral potential.

The Department does value preserving some public land for future generations and scientific study, as long as the mining industry, which is so essential to our national defense and this state's progressive economy, can remain healthy and be provided the opportunity to pursue new mineral resources.

Sincerely,

Doug Druesner

Doug Druesner
Resource Engineer

DD:wf

Response Letter 20

20-2 The Congress of the United States acknowledged the importance of mineral resources in the wording of the Wilderness Act (1964) and the Federal Land Policy and Management Act (1976). Extensive efforts are mandated therein for identification of mineral values in all areas recommended suitable for designation. In the Elko Resource Area Wilderness EIS, suitability recommendations have been affected by mineral potential even when there are no known deposits. Further adjustments could be made based on information provided by USGS/Bureau of Mines Mineral Surveys.

20-3 The area of low mineral potential in the northeastern portion of the WSA was considered in the final suitability recommendation. See Chapter 1, areas considered but dropped from further analysis. Two cherry-stem roads, outside the boundaries, exist in this area of the WSA. Their significance to the naturalness of the area overall was examined in the wilderness inventory.

Comment Letter 20



MEMO

TO John Walker
FROM Steve Heaver *John*
SUBJECT DRAFT ELKO RESOURCE AREA RMP
SAI# 86300014

DATE 10/17/85

DIVISION OF STATE PARKS

The Division of State Parks supports the draft Resource Management Plan for the BLM Elko Resource Area. However, we do wish to express our concerns about the proposed recreation sites at Wild Horse and South Fork Reservoirs.

Both of these areas need to be managed in conjunction with the corresponding state recreation area. Thus, close cooperation with the Nevada Division of State Parks will be desirable. However, unless BLM is willing and able to make the necessary financial and personnel commitments, the Division anticipates problems that will inevitably affect the adjacent state lands. If there is any possibility that the Division is going to eventually be saddled with the burden of managing these BLM areas, contingency plans should be considered now for a cooperative management agreement or outright transfer of the lands involved.

SM/vh
801.6b (5)

NEVADA STATE CLEARINGHOUSE

OFFICE OF COMMUNITY SERVICE,
1100 EAST WILLIAM, SUITE 103
CARSON CITY, NEVADA 89710
885-4420

- TO:
- Governor's Office
 - Attorney General
 - Administration
 - Agriculture
 - Commerce
 - Community Services
 - State Job Training Office
 - Economic Development
 - Education
 - Employment Security Department
 - Dept. of Minerals
 - Equal Rights Commission
 - Health Resources
 - Indian Commission
 - Labor Commission
 - Legislative Counsel Bureau
 - Library
 - Prisons
 - Public Service Commission
 - Taxation
 - Transportation
 - Div.-Bureau of Mines
 - Div.-Bureau of Range, Wildlife, and Forestry
 - Div.-Wildlife
 - Press Room-Capitol Building
 - Nuclear Waste Project Office
 - SOICC
 - State Communications Board
- Conservation and Natural Resources
- State Lands
 - Conservation Districts
 - Environmental Protection
 - Forestry
 - Hist. Preservation
 - Archeology
 - State Parks
 - Water Planning
 - Water Resources

FROM: John B. Milner, Coordinator

SAI NO 86300014 PROJECT Draft/Elko Resource Area
RMP & EIS

Attached for review and comment is a copy of the aforementioned project. Please evaluate it with respect for
1) the program's effect on your plans and programs;
2) the importance of its contribution to State and/or areawide goals and objectives;
3) its accord with any applicable law, order or regulation with which you are familiar and/or
4) additional considerations.

PLEASE SUBMIT YOUR COMMENTS NO LATER THAN [redacted] to this office. Type your comments if applicable, check the appropriate box below and return the form to this office. PLEASE DO SO EVEN IF YOU HAVE NO COMMENT on this particular project so that we may complete our processing. If you are unable to comment by the prescribed date, please notify this office. Reviewers may substitute this form with agency letterhead. If letterhead is used, please cite the SAI number listed above in your comment.

THIS SECTION TO BE COMPLETED BY REVIEWING AGENCIES

No comment on this project

Proposal supported as written

Additional information (see below)

Comments (use additional sheets if necessary)

Conference desired (see below)

Conditional support (outlined below)

Disapproval of funding (must specify reason below)

The Clearinghouse has tentatively set a briefing for October 4, 1985.

AIR-Dick Serdoz: No comment

WATER-Ralph Capurro: The water quality section of Div. of Environmental Protection (DEP) supports the BLM's attempt to improve the aquatic habitat conditions as outlined in Table 4-1 of the Draft Resources Management Plan for the Elko Resource Area. This table shows a decided

Notice sheet attached

Signature: [redacted] Title: Administrator
Phone: 885-4670 Date: 11/8/85

Page 2

Clearing House Comments

SAI NV #86300014 Draft/Elko Resource Area RMP & EIS

Water- Continued: improvement in the "good" and "excellent" conditions from 11 miles (for the existing condition) to 117 miles (for the preferred alternative) caused by the reduction of poor and fair conditions from 201 miles to 95 miles. This improvement should improve the water quality in various streams rivers in Nevada. The DEP would appreciate the opportunity to comment on the specific projects proposed to accomplish this aquatic habitat improvement.

WASTE-Verne Rosse: No comment.

tm

Comment Letter 22



SIERRA CLUB

Toiyabe Chapter - Nevada and Eastern California

PLEASE REPLY TO: GREAT BASIN GROUP
P.O. Box 8058
Nevada State Office
Reno, Nevada 89507

LAS VEGAS GROUP
P.O. Box 10772
Las Vegas, Nevada 89119

November 14, 1985

Nancy Phelps, RMP Team Leader
BLM/Elko District
PO Box 831
Elko, NV 89801

Dear Team Leader Phelps,

On behalf of the Toiyabe Chapter of the Sierra Club, I am submitting comments on the Elko Draft Resource Management Plan and Environmental Impact Statement. I am also submitting comments as a member of the Natural Resources Defense Council, Nevada Outdoor Recreation Association, Defenders of Wildlife, the National Wildlife Federation, and the Wilderness Society.

As a conservationist with specific interests in improving public rangeland conditions, wildlife habitat, and riparian area management, as well as in generally improving public land management, I am very disappointed in the Draft Elko RMP/EIS. As currently proposed, the draft plan emphasizes the development and aggrandizement of commodity uses of the public lands at the expense of and to the direct detriment of non-commodity public land uses, including soil & water conservation, range condition improvement, wilderness, wildlife habitat, and riparian/fisheries habitat. The draft EIS consistently overemphasizes the benefits of resource development, while underestimating the costs of that development, both financial costs and costs in terms of continuing resource damage. At the same time, the document underestimates the values of non-commodity resources, both economic and non-economic. My specific comments are as follows:

Elko Wilderness Technical Report: This document is an exception to the generally superficial and inadequate nature of the Elko planning documents. The wilderness report was obviously written by BLM employees who actually have been in the areas, and who can appreciate the wilderness qualities of the areas, as well as objectively judge and report on manageability and quality standards. The excellence of the report is only qualified by the "political" requirement they had to emphasize (and thus justify the Alternative D recommendations) the wilderness values in the Rough Hills and Little Humboldt River WSAs, while de-emphasizing similar values in the Cedar Ridge and Red Spring WSAs.

My only specific comments on the Report concern statements on P.7. Only potentially adverse impacts of wilderness designation are mentioned on range and cultural resources. Omitted are potential beneficial impacts of decreased vehicle-dependent

vandalism and rustling which would be limited by the motor vehicle restrictions.

Summary Table 1: Management Actions. This Table should include by alternative the expected improvements (or decreases) in ecological condition, so that the public can compare the changes in condition along with other impacts of the different alternatives. This Table should also include the costs of each alternative, so the public can compare the impacts in terms of the costs of each alternative. It is very difficult to keep turning from Table 2-2 on p. 2-9 to the summary table in the beginning of the document.

Chapter 1: We were glad to read on p. 1-4 that "Public land resources were inventoried to establish a data base upon which to develop a resource management plan and analyze the impacts expected from the various alternatives." It is not clear from the document how much specific inventory data was collected on each resource, nor exactly how the inventory data was used. In addition, I do not understand how inventory data can be adequate for planning, but not adequate on which to base management decisions, such as reducing livestock to the carrying capacity in each allotment. Please clarify.

Chapter 2: The entire alternative formation process is faulty. The range of alternatives is inadequate on livestock grazing. The management action for livestock numbers resulting from each alternative except for the no-grazing alternative is exactly the same for each alternative, that is, existing numbers! Alternative A proposes to continue existing numbers, until monitoring indicates upward or downward adjustments. Alternatives B and C propose to increase livestock numbers by 62% if monitoring supports an increase. Alternative C proposes to decrease numbers by 37% if monitoring supports a decrease. The only action the BLM plans to take is to continue licensing existing numbers until and unless monitoring indicates a change is justified (by BLM standards). Because there is really only one alternative, the public is effectively denied the opportunity to participate in the decision on how much livestock use is to be permitted on the public lands, and, consequently, how much wildlife and wild horse use should occur and what conditions public rangelands should be managed for.

We also object to the BLM rationale which dismisses most of the non-commodity resources as "not significant," therefore, relieving the agency of considering all public land resources in its comprehensive land use plan. Such a process can only result in emphasizing existing management programs which are slanted towards continuing the status quo.

Alternative A: We do not understand the objective for wilderness on p. 2-3 (or in other alternatives)- "Manage all lands currently under wilderness review as nonsuitable for wilderness designation." We believe the Interim Wilderness Management regulations apply to all MSAs, whether recommended suitable or

22-1

As mentioned on page 1-6 of the Draft Eiko NMP, the wilderness planning issue is to determine which MSAs, or portions thereof, should be recommended suitable and nonsuitable for wilderness designation. Therefore, the objectives are written in terms of being suitable or nonsuitable for wilderness.

Yes, as a matter of Bureau policy and as stated on page 1-6, the Bureau will manage lands under review in a manner that will not impair their suitability for wilderness designation.

Response Letter 22

22-2 Lands designated as wilderness by Congress are managed by the Bureau of Land Management in accordance with 43 CFR Part 8560 titled "Designated Wilderness Areas, Procedures for Management; Final Rulemaking."

Comment Letter 22

22-1 non-suitable by BLM, until Congress decides on wilderness designation. Please clarify.

Table 2-21 Why are there no "rangeland improvement projects" figures included for Alternative A in this table? Shouldn't the current BLM budget for planned range improvements projects be included in this table for Alternative A?

Alternative D: We were glad to finally find a range condition improvement goal in one of the alternatives. However, we do not understand what is meant by "improving rangeland, vegetative conditions." This term is not defined in the glossary. Does the statement refer to ecological status? to range forage conditions? to a scale of excellent-good-fair-poor? Issue 7 refers to livestock permits, vegetation manipulation projects, livestock range improvements, categorization, and monitoring, but sets no specific objective for how much improvement in range condition will be obtained from all these management actions.

We support BLM's commitment to improving riparian area conditions and management (Alternative C). However, we do not see how the estimated improvements can be achieved given the commitment to a 20% increase in the preferred alternative for livestock numbers. It is ludicrous for BLM to promise to increase livestock numbers when there is insufficient forage capacity to carry existing livestock numbers. This promise is also based on an optimistic assumption of a high level of funding for livestock range improvements when the agency budget is declining annually. We urge BLM to modify Alternative D to increase or decrease livestock numbers to the carrying capacity of the allotments, based on whatever existing data is available with further adjustments when monitoring data supports a change.

We support wild horse and wildlife objectives and actions in Alternative C. But we have the same questions about whether these commendable goals and objectives can be achieved without necessary livestock reductions.

We support wilderness recommendations in Alternative D and recreation recommendations in Alternative C. We support Alternative A for land disposals and utility corridors. No information in the draft justified the excessive proposals for land disposals or utility corridors, other than statements that "requests" had been made.

Management Resource or Program Guidance: This section is very weak. Applicable BLM handbooks and regulations are not cited for most resources. The wilderness section should be supplemented by reference to Report No. 96-617 "Designating Certain National Forest System Lands in the National Wilderness Preservation System, and For Other Purposes" which details management actions permitted in wilderness.

Selective Management Policy. The Sierra Club is on record as opposing this policy, because it rewards (with range improvement

funds) poor management in I allotments, but essentially ignores both good management in M allotments and abysmally poor management in C allotments. While we do not object to prioritizing management efforts, our conservation ethic prevents us from condoning agency attempts to write off any allotments in terms of monitoring and management, and our common sense prevents us from endorsing a system which builds in financial incentives for poor management.

Notwithstanding our policy on M/C categorization, we read with great interest Table 4 in Appendix C. While we support the large acreage put into the I category, we could find no rhyme or reason why some allotments were designated I and others with the same or greater I ratings in the 7 criteria were not designated. 14 allotments with I ratings in 6 or 7 criteria were finally designated as I allotments. 24 allotments with I ratings in 5 categories were designated I, but 2 were designated M and 1 was designated C. 8 allotments with I ratings in 4 categories were designated I with the others designated either M or C. 4 allotments with I ratings in 3 categories were designated I and amazingly enough, one allotment with I ratings in only 2 categories was designated I. The draft document does not disclose that BLM weighted some categories over others, a procedure which could explain these discrepancies. If weighting does occur, we would certainly support weighting the 7th category, existing ecological condition, over the other categories.

Key Forage Plant Utilization: Does the table on p. 2-32 include utilization by livestock only, or by all grazing animals? If the allowable use levels do not include all use, they are much too high.

Ecological Status: We do not understand the statement on p. 2-33 that "Ecological status is use-independent...." Please explain. Do the four seral stages correspond to the excellent, good, fair, and poor scale used in most other BLM land use plans?

Appendix 5: Table 2: If BLM can use existing data to derive current and projected seral stages down to one acre in every allotment, why can't BLM use existing data to determine livestock carrying capacity in each allotment?

Table 1: Appendix 3: What data are the "apparent trends" in this table based on?

Maps: The maps at the end of Chapter 2 are very misleading. They imply resource conditions and management actions over the entire area. Not until the next chapter is information presented to illustrate that BLM administers only a little over 58% of the area. Land status information should be included in every map.

Chapter Three: This entire chapter is superficial with only cursory information provided on most resources and resource conditions. What little information is provided documents the

adverse impacts of past land management activities, especially poor livestock management, on most of the other resource values. **Lands and Reality:** The explanation totally ignores the management requirements of the checkerboard land pattern. Does BLM manage the checkerboard lands like consolidated public lands?

Livestock Grazing: We were shocked to learn that 85% of the allotments are not intensively managed. Are these "wild cow" operations or is some kind of grazing system in use in these allotments?

Wildlife Habitat: Wildlife habitat (including riparian and aquatic habitat) is very poorly managed with poor conditions, downward trends, and depressed populations for almost every species. While we support the proposed actions to improve wildlife habitat, we don't feel that, even if fully implemented, they will be sufficient to reverse unsatisfactory wildlife habitat management, unless excess livestock numbers are reduced.

Please explain the statement "Major alteration in peregrine falcon habitat and current land status have eliminated the possibility for reintroductions within the planning area."

Chapter Four: This chapter is actually even more superficial and perfunctory than Chapter 3. Perhaps there are few significant differences in impacts among the alternatives because there are no significant differences in alternatives. Even the no grazing alternative shows little overall improvement in ecological condition. The impacts of livestock grazing on vegetation are separated out with livestock impacts being numbers of livestock and range improvements while changes in vegetation appear divorced from livestock use. The disastrously negative impacts of a 62% increase in livestock numbers and extensive monotypic range improvements proposed in Alternative B hardly inconvenience the already stressed wildlife at all.

The analysis of Alternative A does seem to support the fact that livestock numbers significantly exceed carrying capacity. The statement on p. 4-41 in the last paragraph is especially convincing. We were certainly glad to learn on p. 4-7 that "...49 allotments would show an improvement in ecological status due to continued stocking levels below forage capacity." Would you explain the basis for this statement? If BLM knows that 49 allotments are below the carrying capacity, then does BLM know how many allotments are over the carrying capacity?

Lands and Reality: The statement on p. 4-16, "...transferring 336,898 acres of scattered and difficult to manage parcels out of Federal administration through exchange, seems contradictory. If 336,898 acres are exchanged, presumably 336,898 acres of non-federal or federal land would be transferred to BLM, for a net effect of 0 acres transferred out of federal administration. Please clarify.

Comment Letter 22

Economic Conditions: The economic analyses are meaningless. For instance, impacts on the livestock industry assume that BLM actions occur in a vacuum - that BLM actions are the only factor influencing the livestock industry. The analyses totally miss the fact that the industry is in a slump due to lower beef demand with ranchers going out of business all the time. The economic analysis in Alternative B missed the impact of all that extra beef from a 6% increase in livestock numbers on beef prices and expected increased profits. The economic analyses omit the information that like most agricultural operations, most ranching operations are marginal at best, existing only on massive subsidies provided mainly by the federal government - below market value grazing fees, free livestock improvements, free predator control, etc.

All in all, the only way to significantly improve the draft RMP/EIS would be to rewrite it in its entirety. We do not feel that it is even minimally adequate as a comprehensive resource management plan which will guide resource management on over 3,888,888 acres of public land for the next 20 years.

Sincerely,

Rose Strickland

Rose Strickland, Chair
Public Lands Committee

Comment Letter 23



MINERALS EXPLORATION COALITION

Minerals Advocate
in Public Policy
12640 West Cedar Drive
P.O. Box 15638
Denver, Colorado 80215
303/995-5567

Reply to:
Denver, Colorado
□ L. C. Lee

Washington Representative
L. Courtland Lee
5814 West Street
Lansdowner, Maryland 20786
301/325-6738

November 13, 1985

BOARD OF DIRECTORS

- J.K. Jones
Chairman
- John D. Webb
President
- Sandra L. Blackstone
- John G. Hill
- David C. Johnson
- John R. King
- Robert B. Kistler
- Kelvin R. Knoblock
- Donna S. Mason
- Donald E. Platte
- Richard H. Rustaf
- Major W. Seely
- Eliseo Gonzalez-Urrea

Rodney Harris
Bureau of Land Management
Elko District Office
P.O. Box 831
Elko, NV 89801

Dear Mr. Harris:

The following comments constitute the response of the Minerals Exploration Coalition (MEC) to the Proposed Resource Management Plan and Draft Environmental Impact Statement (DEIS) for the Elko Resource Area. The MEC represents companies and individuals engaged in exploration for minerals on the federal lands.

The description of minerals on pages 3-15 to 3-16 and the maps showing leasable and locatable mineral potential give a good general overview of the known minerals and the mineral potential of the Elko Resource Area, but the description is lacking in certain respects.

Data should be presented for the Elko Resource Area to show the dollar value of past mineral production and known resources and an estimate of the value of future production from the areas of high and moderate potential for both locatable and leasable minerals. This would provide background data on the importance of minerals in the area.

Wilderness designation will prohibit exploration for, and production of, minerals, therefore, the value of mineral production that may be foregone is very important. Overlays on the maps of the wilderness study areas (WSA) showing the mineral potential should be prepared and the location of mining claims should be shown. An estimate of the dollar values of locatable and leasable minerals for each WSA should be prepared and included as part of the data used to compare the alternatives and determine the preferred alternative. Without this data, valid comparisons cannot be made between the various resources, and the decision process is thereby flawed.

23-1

23-2

Elko Resource Area
November 13, 1985
Page Two

23-3 How will the minerals data pertaining to each WSA, prepared by the U.S. Geological Survey and Bureau of Mines during their mineral surveys, be incorporated into this decision document?

MCC opposes the designation of areas with high and moderate mineral potential as wilderness areas. Furthermore, we believe that the Bureau of Land Management has the legal and regulatory tools to protect areas of environmental, wildlife or recreational concerns without withdrawing the areas from mineral activity.

Most of the Rough Hills WSA has moderate mineral potential; therefore, it should not be recommended as suitable for wilderness.

The southern part of the Little Humboldt River WSA has moderate mineral potential and should not be recommended for wilderness.

The Cedar Ridge WSA should not be recommended for wilderness designation because of the high oil and gas potential.

A major portion of the Red Spring WSA has moderate potential for oil and gas production; therefore, the WSA should not be recommended for wilderness designation.

Thank you for the opportunity to comment on this forest plan.

Sincerely,

John D. Wells

John D. Wells

JDM/dlm

23-1 See the Elko Wilderness Technical Report (May 1985)

23-2 Minerals data available is not sufficient to estimate value (if any) of locatable or leasable minerals in the WSAs with an acceptable level of accuracy. No economically minable mineral deposits are known to exist in any of the WSAs.

23-3 The Joint USGS/Bureau of Mines Mineral Survey Report was not completed at the time this EIS was prepared. Further adjustments in the recommendation could be made based on the report if it identifies additional significant mineral resources and if these mineral resources outweigh the wilderness values. Any adjustments based on the joint report would be issued through a supplemental EIS.



Wildlife Management Institute

Suite 725, 1101 14th Street, N.W., Washington, D.C. 20005 • 202/371-1808

DANIEL A. POOLE
President
L. R. JAHN
Secretary
L. L. WILLIAMSON
Secretary
WESLEY M. DIXON, Jr.
Board Chairman

November 14, 1985

Mr. Rodney Harris
District Manager
Bureau of Land Management
3900 East Idaho Street
P.O. Box 831
Elko, Nevada 89801

Dear Mr. Harris:

The Wildlife Management Institute is pleased to comment on DRAFT ELKO RESOURCE AREA MANAGEMENT PLAN and ENVIRONMENTAL IMPACT STATEMENT.

We prefer Alternative C, the High Amenity Alternative because it provides more wilderness, better diversity, more hunting and angling and more riparian improvement. These are attained largely by reduced livestock grazing. (Page 5-8).

No total of wildlife numbers is provided, only AMU. (Page A-39) The proposals would be easier understood if numbers of animals were used. Both Alternative C (Amenity) and D (Preferred) provide only enough habitat to reach "reasonable numbers" of big game. "Reasonably numbers", by agreed definition are the average numbers for the last 15-17 years. Although "reasonable numbers" are more than current population, there is no provision for increasing big game through improved habitat management. That is the flaw in the reasonable numbers concept, which incidentally is not applied to livestock numbers which are scheduled to increase 30 percent. The elk planning unit now contains 20 percent of Nevada's mule deer. Holding this better habitat to produce only a past average population is not acceptable, especially when no such restrictions will be applied to livestock. The heavy subsidy to the livestock permittees is proposed in the preferred alternative. For example

DEDICATED TO WILDLIFE SINCE 1971

Mr. Rodney Harris

-2-

November 14, 1985

(Page 3-7)	Number of Permits	99
(Page 5-7)	Average Use (AMU)	305,247
(Page 5-7)	Proposed Use (AMU)	396,989
(Page 3-21)	Capital Value of an AMU	\$50
(Page 2-9)	Cost of Proposed Range	\$4,704,105
	Improvements calculating:	
	New AMU Created	91,742
	Cost of a New AMU	\$51.28
	Capital Value of 91,742 new AMU	\$4,587,100
	Average Capital Gain of New AMU's for each permittee	\$46,334
	Direct Subsidy per permittee for Range Improvements	\$47,516
	Total Subsidy - per permittee	\$93,850

The grazing fee is now \$1.35 per AMU. Since a new AMU costs \$51.28 and 8 percent interest on that AMU is \$4.10 per year, the \$1.35 fee charged represents a continuing subsidy from the taxpayer to the livestock operator.

These subsidies are for a livestock industry that provides only 3.9 percent of the income and 7.3 percent of the jobs in the country. (Page 3-20).

The plan, as written, is unsatisfactory until equal treatment and expansion are provided for the habitat that produces one-fifth of Nevada's mule deer. Alternative C is the minimum acceptable for wildlife.

These remarks have been coordinated with William B. Morse, the Institute's Western Representative.

Sincerely,

David A. Poole

Daniel A. Poole
President

DAF:slh



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 WASHINGTON
 215 Fremont Street
 San Francisco, Ca. 94105

Edward F. Spang
 Nevada State Director
 Bureau of Land Management
 300 Booth Street
 P.O. Box 12000
 Reno, Nevada 89520

Dear Mr. Spang:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) titled ELKO RESOURCE AREA, RESOURCE MANAGEMENT PLAN, ELKO, LANDER AND EUREKA COUNTIES, NEVADA. We have the enclosed comments regarding this DEIS.

We have classified this DEIS as Category EC-2. Environmental Concerns - Insufficient information (see attached "Summary of Rating Definitions and Follow-up Action"). This DEIS is rated EC-2 because 1) EPA recommends reevaluation of proposed riparian habitat protection efforts, 2) water quality concerns need to be addressed, 3) air quality issues have not been addressed, 4) herbicide issues have not been addressed, and 5) resource management concerns need to be clarified. The classification and date of EPA's comments will be published in the Federal Register in accordance with our public disclosure responsibilities under Section 309 of the Clean Air Act.

We appreciate the opportunity to review this DEIS. Please send five copies of the Final Environmental Impact Statement (FEIS) to this office at the same time it is officially filed with our Washington, D.C. office. If you have any questions, please contact Patrick J. Cotter, Federal Activities Branch, at (415) 974-0948 or FTS 454-0948.

Sincerely yours,

Charles W. Murray, Jr.
 Assistant Regional Administrator
 for Policy and Management

Enclosure (4 pages)

Riparian Habitat Comments

"Aquatic areas and riparian vegetation types constitute less than one percent of the total land area administered within the BLM area, however, they are the most productive in terms of plant and wildlife diversity. They are also areas where competition exists among various resources, including wildlife, mining, and livestock" (p. 1-7).

1. The preferred alternative will only improve 15% of the riparian habitats while allowing 85% to remain unchanged or to decline (p. 4-33). EPA urges BLM to reevaluate this management objective so that more of this valuable resource can be protected. The FEIS should identify those riparian areas where management techniques proven to be effective in improving and protecting riparian habitat will be used (pp. 2-33, 2-34).

2. The FEIS indicates that "livestock grazing was primarily responsible for producing and maintaining deteriorated aquatic/riparian habitat conditions" (p. 3-11). These impacts are related to livestock overuse of streambanks which caused sloughing of the banks, stream turbidity, reduction of streambank vegetation, increases in stream temperature, and soil compaction.

a. Estimates of resource reduction should be considered very carefully when BLM plans mitigation procedures to protect the aquatic and riparian habitats within the resource area. The nature of these impacts should also be considered during the monitoring phase when BLM is evaluating whether or not the grazing allotments can be increased 30% beyond the present levels.

b. The FEIS should discuss, in greater detail, mitigation measures that will be implemented to restrict activities affecting riparian areas and erosive soils (p. 2-27) and those "management actions within floodplains and wetlands (that) will include measures to preserve, protect and if necessary restore their natural functions" (p. 2-15).

Water Quality Comments

1. The FEIS should discuss the potential impacts associated with mining, roads, water diversions and channelization (which) were important on some specific stream locations" (p. 3-11). The discussion should include an evaluation of possible mitigation measures that could be employed to prevent significant deterioration of instream values from mining activities on steep slopes, potential impacts from erodible soils, and water quality impacts from development of oil and gas leases.

Comment Letter 26

-2-

- a. The discussion of aquatic habitats (p. 3-10) should include a discussion of whether streams in the planning area meet Nevada water quality standards. If violations of water quality parameters occur, the FEIS should discuss probable causes and possible mitigation measures that could be employed for the segments that may be affected.
 - b. The FEIS should list the streams that occur in the resource area with information about compliance with water quality standards and abundance of aquatic life. This information would be similar to the data presented in Table J-2 (p. 3-12) and page 3-26, but the new table would be more site specific for each stream.
 - c. Possible measures should be discussed which would enable these streams to comply with Nevada water quality standards. EPA recommends that the RMP be modified to prohibit any further degradation of streams that do not meet Nevada water quality standards and, where possible, measures should be implemented to improve the streams.
2. The FEIS should include a map with the location of all water resources improvements (pp. 2-18, 2-30) and a baseline reference map of the existing water resources in the resource area.

Air Quality Comments

The FEIS should provide data and evaluate the air quality of the resource area in terms of the National Ambient Air Quality Standards as well as those standards of the State of Nevada (p. 2-15). The statement that "air quality is generally good" (p. 3-27) is not an adequate evaluation of the present air quality of the resource area. For those activities that may affect air quality, the FEIS should discuss the kinds of mitigation that would be used to prevent air quality impacts.

Herbicide Comments

The RMP is intended to outline management techniques within the resource area, therefore, the FEIS should contain a broad overview of the potential uses of herbicides (pp. 2-18, 2-29, 2-30). The discussion should include the type of herbicide to be used, target species, areas to be treated and potential impacts from the application of the herbicide.

Comment Letter 26

-3-

Resource Management Comments

The FEIS should:

- 26-1
1. Disclose criteria used to designate 17,438 acres of the Little Humboldt River WSA as unsuitable in the preferred alternative (pp. 5-5, 2-18). The criteria listed under the description for the area were unclear (p. 4-22).
 2. Discuss the impact of vegetation conversion from Pinyon Pine/Juniper areas to grasslands (p. 2-34). The discussion should include the criteria that will be evaluated to determine when an increase in the harvest of woodland products (to 80,000 acres) and an increase of Christmas tree cutting (to 23,000 acres) would be permitted (p. 2-19).
 3. Disclose what monitoring criteria will be used to allow an increase of 30% in the grazing area as discussed in the resource area described in the preferred alternative (pp. 5-5, 2-18).
 4. Include a brief discussion of mitigation success for mine site reclamation efforts (p. 3-15).

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION*

Environmental Impact of the Action

1C—Lack of Objectivity

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

1C—Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

1C—Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

1C—Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CDO.

Adequacy of the Impact Statement

Category 1—Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2—Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3—Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CDO.

*From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment

26-1

The criteria utilized to determine the suitability or nonsuitability of all or a portion of a USA for wilderness designation are set forth in the BLM Wilderness Study Policy dated February 3, 1982. They are also listed on page 1 of the Elko Wilderness Technical Report.

The 12,438 non-suitable acres are comprised of three separate areas within the USA. One portion was non-suitable because its moderate mineral potential outweighed the moderate wilderness values present. Private land boundaries of the suitable portion were also avoided to allow for future recreational access.

Another portion included moderate mineral potential and low quality wilderness values. The suitable boundary was also drawn to avoid adverse impacts to owners of private land and allow for future recreational access.

The third portion contains low quality wilderness values and includes terrain that is easily accessible by motorized vehicles. It was determined non-suitable to avoid future manageability problems.

Comment Letter 27

EXXON COMPANY, U.S.A.

POST OFFICE BOX 120 • DENVER, COLORADO 80201-0120

NATIONAL DEPARTMENT
WESTERN DIVISION

NEW HELL CREEK
MANAGER

Mr. Tim Hartzell
Bureau of Land Management
P.O. Box 831
Elko, Nevada 89801

Dear Mr. Hartzell:

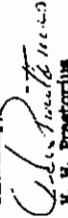
Exxon Company, U.S.A. is pleased to have this opportunity to comment on the Draft Resource Management Plan and Environmental Impact Statement for the Elko Resource Area. Exxon has a strong interest in the management direction of federal public lands because many of these areas have potential for hydrocarbon discoveries and production.

Exxon Company, U.S.A. has reviewed the Draft Plan for its range of alternatives and treatment of minerals, especially oil and gas. We found it encouraging that the Bureau recognizes the importance of the hardrock minerals industry to the economy of Nevada, but more significantly, it has provided for future exploration and development opportunities with leaseable minerals.

In another example of responsible decision-making, the Bureau has chosen not to recommend the Cedar Ridge and Red Spring Wilderness study areas as suitable for designation. We heartily concur with this action because the area has been acknowledged as having high oil and gas potential by the U.S. Geological Survey in Circular 902, entitled, "Petroleum Potential of Wilderness Lands in the Western United States."

Thank you for the opportunity to comment and your consideration of our views. Please feel free to contact Fernando Haddock at 303/789-7488 if we can be of further help.

Sincerely,



H. W. Proctorius

FB:mas

C - E. F. Spang, Nevada State Elk Director, Reno, Nevada

A DIVISION OF EXXON CORPORATION

December 27, 1985



United States Department of the Interior

FISH AND WILDLIFE SERVICE
GREAT BASIN COMPLEX
4600 Kietzke Lane, Bldg. C
Reno, Nevada 89502

FWS DEC -8 A 9 22

December 3, 1986

Memorandum

To: District Manager
Bureau of Land Management
Elko, Nevada

From: Complex Manager, Reno, Nevada

Subject: Draft Elko Resource Management Plan and Environmental
Impact Statement

We are sorry to let you know that because of other commitments, we cannot review and provide comments on the above subject document. We do, however, thank you for the opportunity to provide comments on this draft RMP and EIS, and look forward to providing input on future Bureau of Land Management planning documents.

Richard J. Lawrence

cc: Assistant Regional Director (APRE), Portland, Oregon
Dave Harmon, Bureau of Land Management, Reno, Nevada



UNITED STATES GOVERNMENT
memorandum

DATE: December 18, 1986
TO: DIRECTOR, BUREAU OF LAND MANAGEMENT
ATTENTION: DISTRICT MANAGER, EASTERN NEVADA AGENCY
ELKO DISTRICT OFFICE
FROM: DISTRICT MANAGER, ELKO DISTRICT OFFICE
SUBJECT: Draft Elko Resource Management Plan/EIS
Draft Elko Resource Management Plan/EIS, Bureau of Land Management
Elko District Office, Bureau of Land Management

ATTENTION: Dave Squires, Elko District Office

We have reviewed the environmental reports you supplied to our Nealy Office in request for comments. These reports are as follows:

1. Walls Record of Decision
2. Draft Walls Resource Management Plan/EIS
3. Elko Resource Management Plan/EIS
4. Elko Wilderness Technical Report
5. Draft Elko Resource Area Management Plan/EIS

Upon completion of our Agency review, we found the reports to be adequate but based on probable tribal concerns of spiritual values and culture impacts, our office offers a "No Comment."

If you have any questions or concerns, please feel free to contact James Vallie of our Nealy staff at telephone number (702) 718-5165.

James Vallie

APPENDICES

APPENDIX 1

LIVESTOCK GRAZING DATA BY ALLOTMENT

ALLOTMENT NAME	INVENTORIED PUBLIC LAND AC.	TOTAL PREFERENCE AUMS	EXISTING PERIODS OF USE	ACTIVE GRAZING PREFERENCE AUMS	AVERAGE LICENSED USE AUMS ^{1/}	APPARENT TREND ^{2/}
Little Humboldt	64,075	10,256	04/10-10/15	7,656	7,654	Downward
Rough Hills	4,902	887	05/01-09/30	887	669	Upward
Annie Creek	2,954	592	05/01-10/15	592	592	Downward
Grane Springs	22,304	2,120	05/01-09/30	1,281	768	Upward
Dixie Creek	44,796	6,526	06/01-11/17	4,105	5,145	Not apparent
Sleeman	5,433	1,392	05/01-09/20	1,392	1,014	Downward
Hansel	11,169	1,533	05/10-10/01	1,553	1,677	Not apparent
Bullhead ^{3/}	50,137	9,039		6,779	6,779	Downward

1/ Values were averaged for the period 1979 to 1983. Total includes only those allotments with Elko District Grazing Administration.

2/ Apparent trend analysis represents an overall allotment average and may not reflect certain localized situations.

3/ Allotments are within the boundaries of the Elko Planning Area, but grazing management is administered by other BLM Districts.

APPENDIX 2

STREAM INVENTORY DATA

Water Name	Location		Land Status of Miles Inventoried		Year Inventoried	Habitat Condition % of Optimum		Fish Species Present		Maximum Angler Day/Year ²
	Township	Range	Private	Public		Rating	Game ¹	Non-Game		
Little Humboldt River S.F.	40N	45E	6.5	0.5	77	52.4	Fair	LCT		ND
Annie Cr.	44N	56E	8.5		77	28.8	Poor			ND
Bruneau R. (Upper)	42N	57E	11.5	2.5	77	40.2	Poor		X	891

1 BF = Brook Trout

BRT = Brown Trout

LCT = Lahontan Cutthroat Trout

RT = Rainbow Trout

Red = Redband Trout

2 Angler Use is the maximum value recorded over the 10 years (1970-1980)

ND = Not determined

3 These values are averages, localized areas of better or worse condition than the average may be found on each stream.

Aquatic and riparian inventories were conducted by NDOW and BLM jointly during 1977 and 1980 on all streams known to support or having the potential to support fish populations. The inventory conformed to procedures in the Nevada State Office Supplement (Release NSO 6-38, dated 1/25/78) to BLM Manual 6671. Both public and private segments were inventoried to provide overall information about each stream and its watershed. This information provides for a complete understanding of the stream and the surrounding riparian community necessary for effective public land management. Owners of inventoried stream segments were contacted prior to evaluation and all individuals gave their consent.

The riparian habitat condition rating is derived from an average of ratings for streambank vegetation cover and streambank stability. This rating is expressed as a percentage of optimum. The resulting rating of excellent, good, fair, or poor corresponds to classes I, II, III and IV, respectively as shown in Appendix I of BLM Manual 6740.

NOTE: 70% - above = Excellent, 60% - 69% = Good, 50% - 59% = Fair, 49% - below = Poor.

GLOSSARY

0

0

0

GLOSSARY

ABBREVIATIONS

AMP	:	Allotment Management Plan
AUM	:	Animal Unit Month
BLM	:	Bureau of Land Management
CFR	:	Code of Federal Regulations
EIS	:	Environmental Impact Statement
FLPMA	:	Federal Land Policy and Management Act of 1976
GEM	:	Geology, Energy and Minerals Report
IMP	:	Interim Management Policy
LCT	:	Lahontan Cutthroat Trout
MOA	:	Military Operating Area
NAS	:	Naval Air Station
NWPS	:	National Wilderness Preservation System
ORV	:	Off-Road Vehicle
RA	:	Resource Area
RMP	:	Resource Management Plan
SCORP	:	State Comprehensive Outdoor Recreation Plan
SMSA	:	Standard Metropolitan Statistical Area
VRM	:	Visual Resource Management
WSA	:	Wilderness Study Area

TERMS

ALLOTMENT: An area designated for the use of a prescribed number and kind of livestock.

ALLOTMENT MANAGEMENT PLAN (AMP): A documented program which applies to livestock operations on the public lands is prepared in consultation with the permittee(s) or lessee(s) involved.

ANIMAL UNIT MONTH (AUM): The amount of forage necessary for the sustenance of one cow or its equivalent for one month.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): An area where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect life and safety from natural hazards.

CHERRYSTEM: A boundary configuration in which the boundary of a wilderness study area of proposed wilderness is drawn around a dead-end road or other near feature so as to exclude that road or feature from the wilderness study area or proposed wilderness.

CHERRYSTEM ROAD: A dead-end road excluded from wilderness study by means of a cherrystem.

CULTURAL RESOURCE INVENTORY CLASSES:

Class I - library, archival, and literature research with consultation to identify known cultural resources. Class II - a field inventory of an area, systematically designed to provide a predictive model of the nature and distribution of the cultural resources in the area. Class III - An intensive field search of surface-evident cultural resources for an entire area.

CULTURAL RESOURCES: Those fragile and non-renewable remains of human activity, occupation, or endeavor reflected in districts, sites, structures, buildings, objects, artifacts, ruins, works of art, architecture and natural features, that were of importance in human events. These resources consist of (1) physical remains; (2) areas where significant human events occurred - even though evidence of the event may no longer remain and; (3) the environment immediately surrounding the resource.

DISCOVERY: A term used in connection with mining claims. As stated in a legal ruling which has been upheld in many later decisions, it is "where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success, in developing a valuable mine..."

ECOLOGICAL STATUS: The present state of native vegetation of a ecological site in relation to the climax plant community for that site. It is an expression of the relative degree to which the kinds, proportions, and community resemble that of other native plant communities for that site. Four ecological status classes are used to express the degree to which the composition of the present plant community reflects that of the potential native: Potential Native (76-100%), Late (51-75%), Mid (26-50%), Early (0-25%).

ECOSYSTEM: A complex self-sustaining natural system which includes living and non-living components of the environment and the interactions that bind them together. Its functioning involves the circulation of matter and energy between organisms and their environment.

ENDANGERED SPECIES: Any species in danger of extinction throughout all or a significant portion of its range, as identified in accordance with the Endangered Species Act of 1973, as amended.

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

HABITAT: All elements of an organism's environment needed to complete its life cycle through reproduction including, but not limited to food, cover, water and living space in the amounts, qualities and locations which the organism requires to complete its life cycle.

HUNTER DAY: One hunter spending 12 hours hunting on BLM land, or 12 hunters spending 1 hour each, or any combination of these.

INHOLDING: State or privately owned property surrounded by the WSA.

LEASABLE MINERALS: Those minerals subject to lease by the Federal Government. Includes oil and gas, coal, geothermal, phosphate, sodium, potash and oil shale.

LITHIC SCATTERS: A surface distribution of stone flakes and tools, indicative of aboriginal stone knapping activities.

LOCATABLE MINERALS: Minerals subject to disposal and development through the Mining Law of 1872 (as amended). Generally includes metallic minerals such as gold and silver and other materials not subject to lease or sale.

LONG-TERM: Five years or more from the implementation of the Congressionally selected alternative.

MANAGEABLE WOODLAND: Any woodland area of 10% or greater crown cover located on a slope of 30% or less which has existing or potential feasible access.

MESOZOIC: An area of geologic time following the Paleozoic era and succeeded by the Cenozoic era.

MINERAL ENTRY: Claim location on Federal lands open to mining for the purpose of exploration or exploitation of minerals located there.

MINING DISTRICT: A section of country usually designated by name and described or understood as being confined within certain natural boundaries, in which gold or silver or other minerals may be found in paying quantities.

MINERAL POTENTIAL:

High Mineral Potential: The geologic environment, the inferred geologic processes, the reported mineral occurrences, and the known mines or deposits indicate high favorability for accumulation of mineral resources.

Moderate Mineral Potential: The geologic environment, the inferred geologic processes, and the reported mineral occurrences indicate moderate favorability for accumulation of mineral resources.

Low Mineral Potential: The geologic environment and the inferred geologic processes indicate low favorability for accumulation of mineral resources.

NATURALNESS: 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." (from Section 2(c), Wilderness Act).

OFF-ROAD VEHICLE (ORV): Any motorized vehicle capable of, or designed for travel on or immediately over land, water, or other natural terrain.

OUTSTANDING (Wilderness): 1. Standing out among others of its kind; conspicuous; prominent. 2. Superior to others of its kind; distinguished; excellent.

PATENTED MINING CLAIM: A claim in which title has passed from the Federal government to the mining claimant under the mining laws.

PERMITTEE: One who holds a permit to graze livestock on public land.

POST-FLPMA: The period of time after the enactment of the Federal Land Policy and Management Act (October 21, 1976).

PRELIMINARY WILDERNESS RECOMMENDATION: Refers to a wilderness recommendation at any stage prior to the time when the Secretary of the Interior reports his recommendation to the President. Until the Secretary acts, the recommendation is "preliminary" because it is subject to change during administrative review.

PRESCRIBED BURNING: Controlled application of fire to wildland fuels in either their natural or modified state, under such conditions of weather, fuel, moisture, etc., as to allow the fire to be confined to a predetermined area while producing the intensity of heat and rate of speed required to achieve certain planned objectives of silviculture, wildlife management, grazing, fire hazard reduction and insect and disease control.

PRIMITIVE AND UNCONFINED RECREATION: Nonmotorized and nondeveloped types of outdoor recreational activities.

RANGE IMPROVEMENT: Any activity on or relating to rangeland designed to improve production of forage, change vegetation composition, control pattern of use, provide water, stabilize soil and water conditions and enhance habitat for livestock, fish, wildlife and wild horses and burros.

RAPTOR: A bird of prey

RECREATION OPPORTUNITY SPECTRUM (ROS): A land classification system which identifies a particular area's capability to produce certain types of outdoor recreation opportunities based on a spectrum from primitive to urban.

RECREATION VISITOR DAY: Participation in a particular recreation activity by an individual for any portion of, or all of a 24-hour period.

RESOURCE MANAGEMENT PLAN (RMP): The basic decision document of BLM's resource management planning process, used to establish allocation and coordination among uses for the various resources with a Resource Area. An RMP is a "land-use plan" prescribed by Section 202 of the Federal Land Policy and Management Act. The RMP regulations appear at 43 CRR 1601.

RIGHT-OF-WAY: An easement license or permit; does not grant an estate of any kind, only the right of use. May also include a site.

RIPARIAN: Situated on or pertaining to the bank of a river, stream, or other body of water. Normally used to refer to plants of all types that grow along streams or around springs.

ROAD: A vehicle route which has been improved and maintained by mechanical means to ensure relatively regular and continuous use.

ROADLESS: For the purpose of the wilderness review program, this refers to the absence of roads which have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road.

SCOPING PROCESS: An early and open process for determining the significant issues related to a proposed action which are to be addressed in the environmental impact statement.

SHORT-TERM: The five-year period following the implementation of the Congressionally selected alternative.

SIGNIFICANT IMPACT: A meaningful standard to which an action may impact the environment. The impact may be beneficial, adverse, direct, or indirect.

SOLITUDE (Wilderness) 1. The state of being alone or remote from habitation; Isolation, 2. A lonely, unfrequented, or secluded place.

STANDARD METROPOLITAN STATISTICAL AREA (SMSA): A population center which has a population of 100,000 or greater. An SMSA is a county which contains at least one city of 50,000 inhabitants or more plus as many adjacent counties as are metropolitan in character and are socially integrated with that central city or cities.

SUITABLE FOR PRESERVATION AS WILDERNESS: Refers to a recommendation that certain Federal lands satisfy the definition of wilderness in the Wilderness Act and have been found appropriate for designation as wilderness on the basis of an analysis of the existing and potential uses of the land.

SUPPLEMENTAL VALUES: Values that may be present in an area under consideration for wilderness, such as ecological, geological, or other features of scientific, educational, scenic, or historical value. They are not required for wilderness designation, but their presence will enhance an area's wilderness quality.

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.

VALID EXISTING RIGHTS: Valid existing rights as of October 21, 1976 will be recognized. Examples of valid existing rights include: a valid mining claim, a mineral lease, or a right-of-way authorization. Valid existing rights are not absolute. The scope of a valid existing right depends upon any conditions, stipulations or limitations stated in the law or approval document that created the right.

VALID MINING CLAIM: A mining claim on which a discovery has been made (See "discovery".)

VEGETATION MANIPULATION: Alteration of vegetation by fire, mechanical, chemical, or biological means to meet management objective.

WAY: A vehicle route which has not been improved and maintained by mechanical means to ensure relatively regular and continuous use. A vehicle route established and maintained solely by the passage of motor vehicles.

WILD HORSE HERD AREA: The geographic area identified as having been used by a herd as its yearlong habitat in 1971.

WILD HORSE HERD USE AREA: The geographic area which a herd currently uses as its habitat.

WILDERNESS: An uncultivated, uninhabited, and usually roadless area set aside for preservation of natural conditions. According to Section 2(c) of the Wilderness Act of 1964.

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 or a primitive and unconfined type 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.

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

WILDERNESS CHARACTERISTICS: Key characteristics of a wilderness listed in Section 2(c) of the Wilderness Act of 1964 and used by BLM in its wilderness inventory. These characteristics include size, naturalness, outstanding opportunities for solitude, outstanding opportunities for primitive or unconfined recreation and supplemental values.

WILDERNESS MANAGEMENT POLICY: This policy document prescribes the general objectives, policies, and specific activity guidance applicable to all designated BLM wilderness areas. Specific management objectives, requirements, and decisions implementing administrative practices and visitor activities in individual wilderness areas are developed and described in the wilderness management plan for each unit.

WILDERNESS RECOMMENDATIONS: A recommendation by the Bureau of Land Management, the Secretary of the Interior, or the President, with respect to an area's suitability or nonsuitability for preservation as wilderness.

WILDERNESS STUDY AREA (WSA): A roadless area or island that has been inventoried and found to have wilderness characteristics as described in the Wilderness Act of 1964.

WILDERNESS STUDY CRITERIA: The criteria and quality standards developed in the Wilderness Study Policy to guide planning efforts in the wilderness EISs.

WILDERNESS VALUES: The wilderness characteristics and multiple resource benefits of an area.

WITHDRAWAL: Removal, or withholding, of public lands by statute, or Secretarial order, from operation of some or all of the public land laws ("surface" mining and/or mineral leasing laws).

WOODLAND: Land producing trees that are typically utilized for nonsaw timber products and sold in units other than board feet.

WOODLAND PRODUCTS: Any useful tree product produced from woodlands such as: fuelwood, posts, poles, nuts and Christmas trees.

O

The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

Furthermore, it highlights the role of internal controls in preventing fraud and ensuring the integrity of the financial statements. The document also mentions the importance of regular audits and reviews.

In addition, the document discusses the impact of external factors such as market conditions and regulatory changes on the organization's financial performance. It suggests strategies to mitigate these risks and maintain a competitive edge.

The document also touches upon the importance of effective communication and collaboration between different departments. It stresses the need for clear reporting lines and regular updates on the organization's financial health.

Overall, the document provides a comprehensive overview of the financial management process. It offers valuable insights and practical advice for organizations looking to improve their financial performance and ensure long-term sustainability.

The document concludes by reiterating the importance of a strong financial foundation for the organization's success. It encourages the management team to take proactive measures to address any potential issues and maintain a high level of financial discipline.

O

The second part of the document focuses on the operational aspects of the organization. It discusses the importance of efficient resource allocation and the implementation of effective project management practices.

It also addresses the challenges of managing a diverse workforce and the need for continuous training and development. The document suggests various strategies to enhance employee productivity and engagement.

Furthermore, it discusses the importance of maintaining a strong corporate culture and the role of leadership in setting the organizational vision. It emphasizes the need for clear communication and consistent values across all levels of the organization.

The document also touches upon the importance of risk management and the need for a robust risk assessment framework. It suggests various tools and techniques to identify, assess, and mitigate potential risks.

Overall, the document provides a comprehensive overview of the operational management process. It offers valuable insights and practical advice for organizations looking to improve their operational efficiency and ensure long-term success.

The document concludes by reiterating the importance of a strong operational foundation for the organization's success. It encourages the management team to take proactive measures to address any potential issues and maintain a high level of operational discipline.

REFERENCES

1007

0

1997

1997

0

1

REFERENCES

- Behnke, R.J., and M. Zarn. 1976. "Biology and Management of Threatened and Endangered Western Trout." USDA Forest Serv. GTR RM-28.
- Bentz, J.L. and Tingley, J.V. (1983) A mineral inventory of the Elko Resource Area, Elko District, Nevada: NBMG OF83-9.
- Bentz, J.L. and Tingley, J.V. (1983) Results of geochemical sampling within the Elko Resource Area, Elko, Eureka, and Lander counties, Nevada (portions of the Elko, McDermitt, Wells, and Winnemucca 2^o sheets): NBMG OF83-10.
- Brooks, S.J. (1983) BLM staff field investigation. WSA case files.
- Bureau of Business and Economic Research. 1982. "Nevada Review of Business and Economics". UNR, Reno, NV. 66 pp.
- Bureau of Business and Economic Research, John L. Dobra 1984 "Nevada Population Projections: 1983-2000". College of Business Administration, UNR, Reno, NV.
- Coash, J.R. (1967) Geology of the Mount Velma Quadrangle, Elko County, Nevada: NBMG Bull 68.
- Department of Agriculture, Soil Conservation Service (1976) National Range Handbook. Washington, D.C.
- Falk, Robert. 1980. Federal Land Bank, Personal Communication, Reno, NV.
- Fillo, Frank D.; Radtke, Hans D., and Lewis, E.P. 1978. "The Economy of Humboldt and Lander Counties: A Working Model For Evaluating Economic Change" Max C. Fleishman College of Agriculture, UNR Reno, NV. Unpublished.
- Geoscientific Systems and Consulting. 1980. "Nevada Air Quality and Climatological Atlas, Final Report." USDI, Bureau of Land Management, Reno, NV 417 pp.
- Hope, R.A. and Coats, R.R. (1976) Preliminary Geologic Map of Elko, Co., NV USGS open files map 76-779.
- Johnson, M.G. (1973) Placer Gold Deposits of Nevada: USGS Bull. 61 p. 43-56.
- Kesting, Joseph E. and Steven J. Susmilch. 1980. Sage Grouse Strutting Ground Inventory, Wells Resource Area, Elko District, Nevada. Bureau of Land Management, Elko, NV 28 pp.
- Matthews, G.W. and Blackburn, W.H. (1983) Geology, Energy and Minerals Assessment, Rough Hills WSA. Unpublished report by Terradata, Lakewood Co., unpagged.

Myer, Gordon L. and Hackett, Irving E. 1981. "Coats and Returns For Cow-Calf Enterprise in Elko county, Nevada." Max C. Fleishman College of Agriculture, UNR, Reno, NV E-29-81.

National Park Service. 1982. The Nationwide River Inventory, Nevada Component. Washington, D.C.

Nevada Bureau of Economic Research. 1985. "Preliminary Nevada Population Forecasts: 1980-2000.", UNR, Reno, NV.

Nevada Bureau of Mines and Geology. 1983. Mineral Inventory, Elko Resource Area, Elko County, Nevada. Bureau of Land Management, Elko, NV. unpagged.

Nevada Bureau of Mines and Geology. 1983. "The Mineral Industry - 1982." Special Publication MI-1982.

Nevada Dept. of Conservation and Natural Resources. 1982. Recreation in Nevada, Statewide Comprehensive Outdoor Recreation Plan, Div. of State Parks, Capitol Complex, Carson City, NV. 130 pp.

Nevada Department of Wildlife. 1982. Lahontan Cutthroat Trout Fishery Management Plan For The Humboldt River Drainage Basin. Elko District, Elko, NV. Federal Aid Project F-20-17. 33 pp.

Nevada Department of Wildlife. 1983. Wildlife Habitat Plans for the Future, In: Input Into Land Management Agencies Planning Systems - Elko Resource Area. Project FW-3-T Study I Job 2. Series Number HRM. 83-26.

Nevada Employment Security Department. 1985. Nevada Labor Force Summary Carson City, NV.

Nevada State Office of Community Services. 1982. Elko County Nevada, Profile. Carson City, NV.

Percival, T.J., and Bright, J.H. (1982) National uranium resource evaluation, Elko quadrangle, Nevada and Utah: United States Dept., of Energy, Open-File Report PGJ/F-046(82), 46p.

Platts, William S. and Nelson, Roger L. (1983), Population Fluctuations and Genetic Differentiation in the Humboldt Cutthroat Trout of Game Creek, Nevada. Cal-Neva Wildlife Transactions, p. 15-20.

Quade, J., and Tingley, J.V. (1984) Reconnaissance Geochemical Sampling of Minerals Resources in Red Spring Cedar Ridge GEM Resource Area, Elko Co. NV. unpublished, prepared by Nevada Bureau of Mines and Geology for the BLM.

Roberts, R.J., et al (1971), Gold Bearing Deposits of North-Central Nevada and Southwestern Idaho. Econ. Geo, v. 66, p. 14-33.

Rott, E.H. (1930) The Ore Deposits of Gold Circle District, Nevada. Unpublished masters thesis, Univ. of California, Berkeley.

- Sandberg, C.A. (1983) Petroleum Potential of Wilderness Lands in Nevada. U.S.G.S. Circular 902-H, 11 pages.
- Schrader, F.C. (1923) The Jarbidge Mining District, Nevada, (with a note on the Charleston District) U.S.G.S. Bull. 741.
- Smith, F.J., and Ketner, K.B. (1978) Geologic Map of the Carlin Pinon Range area, Elko and Eureka Counties, Nevada: U.S.G.S., Map I-1028.
- Smith, J.F., and Howard, L.A. (1977) Geologic Map of the Lee 15' Quadrangle. Elko County, Nevada: U.S. Geol. Survey, Map GQ-1393.
- Smith, F.S. and Ketner, K.B. (1975) Stratigraphy of Paleozoic rocks in the Carlin-Pinyon Range Area, Nevada. U.S. Geol. Survey Professional Paper 867-A, 87p.
- Smith, R.M. (1976) Mineral Resources of Elko County, Nevada: U.S.G.S., Open-File Report 76-56.
- Stewart, J.H. (1980) Geology of Nevada. Nevada Bureau of Mines and Geology Special Publication No. 4, 136 p.
- U.S. Dept. of Commerce, Bureau of Economic Analysis. 1977. "Industry Specific Gross Output Multipliers For BEA Economic Areas." U.S. Government Printing Office, Washington, D.C.
- U.S. Dept. of Commerce, Bureau of Economic Analysis. 1983. Regional Economic Information System: Personal Income by Major Source. Washington, D.C.
- U.S. Dept. of Commerce, Bureau of Economic Analysis. 1983. Regional Economic Information System: Employment By Type and Broad Industrial Sources. Washington, D.C.
- USDI, Bureau of Land Management. 1979. Interim Management Policy and Guidelines For Lands Under Wilderness Review. U.S. Government Printing Office, Washington, D.C. 32 pp.
- USDI, Bureau of Land Management. 1978. Wilderness Inventory Handbook. U.S. Government Printing Office, Washington D.C. 30 pp.
- USDI, Bureau of Land Management (Nevada). 1980. Wilderness Study Area Decisions: Nevada BLM Intensive Wilderness Inventory. Reno, NV pp. 30-148.
- USDI, Bureau of Land Management. 1980. Wilderness Inventory Files. Elko District, Elko, NV. Unpaged.
- USDI, Bureau of Land Management. 1981. Wilderness Management Policy. U.S. Government Printing Office, Washington, D.C. 36 pp.

USDI, Bureau of Land Management. 1982. Wilderness Study Policy: Policies, Criteria, and Guidelines For Conducting Wilderness Studies On The Public Lands. U.S. Government Printing Office. Washington, D.C. 97 pp.

DI, Bureau of Land Management. 1983. Woodland Inventory, Elko District.. Elko, NV.

USDI, Bureau of Land Management. 1984. Nevada Progress Report, 1983. Nevada State Office, Reno, NV.

USDI, Fish and Wildlife Service "1980 National Survey of Fishing, Hunting, and Wildlife Associated Recreation - Nevada." Washington, D.C.

Vanderberg, W.O. (1936) Placer Mining in Nevada: NBMG Bull. 27.

BLM EK PT 87 23 8500