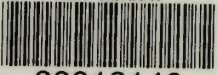


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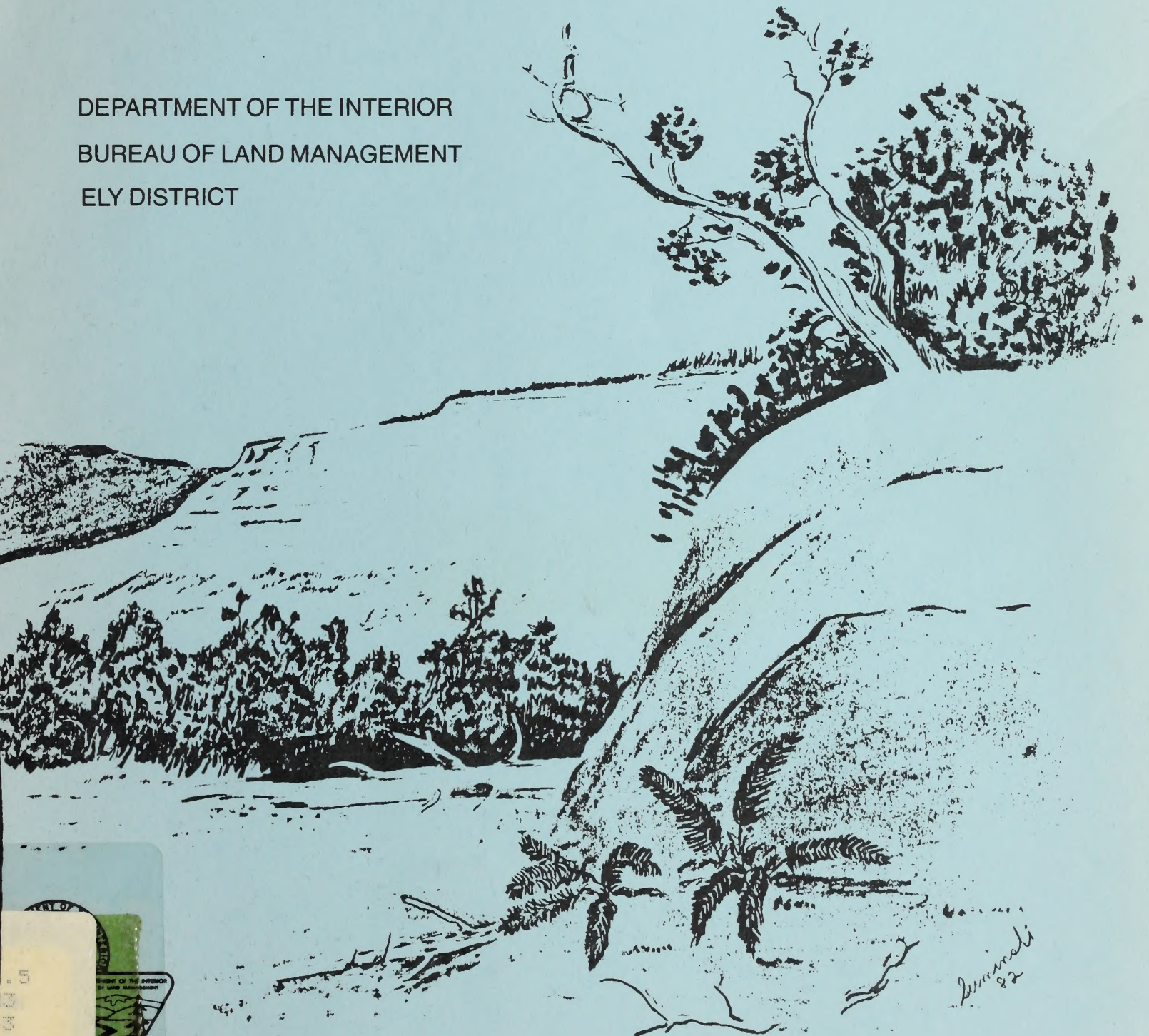
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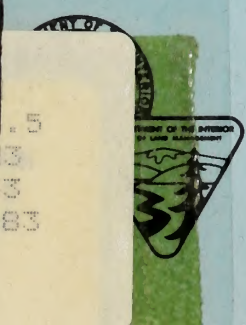
DRAFT

WILDERNESS ENVIRONMENTAL IMPACT STATEMENT

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELY DISTRICT



*Suminski
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ERRATA SHEET

The suitable and unsuitable acre figures for the Far South Eigans MSA (NV-040-172) were incorrectly shown for the Preferred Alternative. The suitable portion should be 42,316 acres and the unsuitable portion 10,908 acres. The error affects the total acreage for the entire Preferred Alternative. The total suitable acreage should be 190,408 and the total unsuitable acreage is 234,175.

Corrections should be made on the following pages:

Page 1 Table S-1: Preferred Alternative acreage should be 190,408.

Page 11 Far South Eigans: Acreage should read 42,316.

Page 12 Map 2-3: The boundaries for the Far South Eigans unit (2) should be the same as the Wilderness Emphasis Alternative map on page 10.

Page 13 Table 2-4: The Far South Eigans acreage should read; 42,316 suitable and 10,908 unsuitable. The totals should read; 190,408 suitable and 234,175 unsuitable.

ADDITIONAL INFORMATION

The Schell Resource Area Technical Report is available upon request from the Ely BLM District Office.

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DRAFT
WILDERNESS
ENVIRONMENTAL IMPACT STATEMENT

Dear Reader:

The Schell Resource Area Wilderness Suitability Study/Environmental Impact Statement is presented for your review and comment. This document considers the suitability of eight wilderness study areas for inclusion into the National Wilderness Preservation System. The study areas, containing 424,583 acres of public land, are administered by the Bureau of Land Management in the Ely District. The preferred alternative is discussed in Chapter 2. The environmental impacts of each alternative are considered in Chapter 4.

Written comments will be accepted through **JUL 8 1983** 1983. Comments should be sent to Merrill DeSpain, District Manager, Bureau of Land Management, Star Route 5, Box 1, Ely, Nevada 89301.

After comments are received and reviewed, a Preliminary Final Environmental Impact Statement will be prepared.

Formal hearings for public comments have been scheduled as follows:

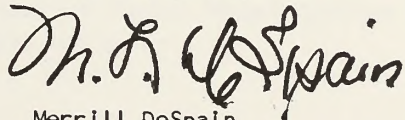
May 16 Reno 7:00 p.m. Pioneer Hotel 221 So. Virginia - Conference Room

May 17 Ely 7:00 p.m. Bristlecone Convention Center

May 18 Pioche 7:00 p.m. Lincoln County Courthouse

Testimony received will be considered and responses will be prepared as part of the Final Environmental Impact Statement. The final statement will consist of comments, responses to comments, and updated or corrected information from the draft for review when the final is released. Recommendations on suitability will then be forwarded to the Secretary of Interior and President for their review and recommendations. Congress will make the final decisions on whether these areas will be designated as wilderness.

Sincerely yours,



Merrill DeSpain
District Manager, Ely

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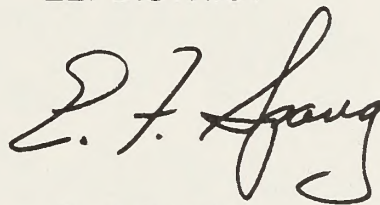
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DRAFT
WILDERNESS
ENVIRONMENTAL IMPACT STATEMENT
SHELL RESOURCE AREA

Prepared by

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ELY DISTRICT

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P. O. Box 25047
Denver, CO 80225-0047



State Director

Nevada State Office

This Wilderness Environmental Impact Statement considers the suitability of eight wilderness study areas in the Schell Resource Area totaling 424,583 acres for inclusion in the National Wilderness Preservation System.

The Preferred Alternative recommends wilderness designation for White Rock Range and portions of Parsnip Peak, Far South Egans, Worthington Mountains and Weepah Spring. These areas total 188,707 acres. The Preferred Alternative further recommends no wilderness designation for Table Mountain, Fortification Range, Mount Grafton and portions of the above listed areas. These areas total 235,876 acres.

For further information please contact:

Wayne Howle - Team Leader
Bureau of Land Management
Star Route 5, Box 1
Ely, Nevada 89301

(702) 289-4865

Please submit comments to Merrill DeSpain at the above address by:

JUL 8 1983

TABLE OF CONTENTS

Page No.

SUMMARY	1
CHAPTER 1: INTRODUCTION	
PURPOSE AND NEED	5
PLANNING PROCESS	5
CHAPTER 2: ALTERNATIVES	
DEVELOPMENT OF THE ALTERNATIVES	7
All Wilderness Alternative	7
No Wilderness Alternative	7
Wilderness Emphasis Alternative	7
Preferred Alternative	11
Limited Wilderness Alternative	13
CHAPTER 3: THE AFFECTED ENVIRONMENT	
INTRODUCTION	25
THE GENERAL ENVIRONMENT	25
Regional Setting	25
Wilderness	25
Minerals and Energy	27
Range	30
Vegetation	30
Soils	30
Water Resources	30
Fisheries	32
Wildlife	33
Forestry	35
Lands	35
Recreation	36
Visual Resources	36
Cultural Resources	36
Paleontology	37
Wild Horses	37
Economic Conditions	37
Social Values	39
THE WILDERNESS STUDY AREAS	42
Mount Grafton	42
Far South Egans	45
Fortification Range	47
Table Mountain	48
White Rock Range	51
Parsnip Peak	53
Worthington Mountains	56
Weepah Spring	59
CHAPTER 4: ENVIRONMENTAL CONSEQUENCES	
IMPACT ANALYSIS	77
ASSUMPTIONS	77
STANDARD OPERATING PROCEDURES	77
DETERMINATION OF SIGNIFICANT IMPACT	78
GENERAL IMPACTS	78
Wilderness	78
Energy and Minerals	79
Range	79
Wildlife	79
Recreation	79
Visual Resources	79
Lands	80
Cultural Resources	80
Wild Horses	80
Soil, Water and Air	80
IMPACTS BY ALTERNATIVE	
All Wilderness	
Mount Grafton	81
Far South Egans	82
Fortification Range	83

Table Mountain	83
White Rock Range	84
Parsnip Peak	85
Worthington Mountains	86
Weepah Spring	86
ECONOMIC IMPACTS	87
SOCIAL IMPACTS	88
CONCLUSIONS	88
Wilderness Emphasis Alternative	
Mount Grafton	91
Far South Egans	91
Fortification Range	92
Table Mountain	92
White Rock Range	93
Parsnip Peak	93
Worthington Mountains	94
Weepah Spring	94
ECONOMIC IMPACTS	95
SOCIAL IMPACTS	95
CONCLUSIONS	95
Preferred Alternative	
Mount Grafton	97
Far South Egans	97
Fortification Range	97
Table Mountain	98
White Rock Range	98
Parsnip Peak	98
Worthington Mountains	99
Weepah Spring	99
ECONOMIC IMPACTS	99
SOCIAL IMPACTS	100
CONCLUSIONS	100
Limited Wilderness Alternative	
Mount Grafton	102
Far South Egans	102
Fortification Range	102
Table Mountain	102
White Rock Range	102
Parsnip Peak	103
Worthington Mountains	103
Weepah Spring	104
ECONOMIC IMPACTS	104
SOCIAL IMPACTS	104
CONCLUSIONS	105
No Wilderness Alternative	
Mount Grafton	106
Far South Egans	106
Fortification Range	106
Table Mountain	107
White Rock Range	107
Parsnip Peak	107
Worthington Mountains	107
Weepah Spring	108
ECONOMIC IMPACTS	108
SOCIAL IMPACTS	108
CONCLUSIONS	108

CHAPTER 5: CONSULTATION AND COORDINATION

LIST OF AGENCIES, ORGANIZATIONS AND PERSONS CONSULTED/COMMENTS REQUESTED	111
CONSISTENCY WITH OTHER PLANS	112
LIST OF PREPARERS	113
REFERENCES	115
GLOSSARY	117
APPENDICES	
Appendix A Unavailable or incomplete information	122
Appendix B Vegetative Types in Schell RA	123
Appendix C Map of Deer Herd Management Area #23	124
INDEX	125

LIST OF TABLES

Page No.

S-1	Areas and Acres Recommended Suitable for Designation, by Alternative	1
S-2	Summary of Impacts	2
1-1	Summary of Study Policy Criteria and Quality Standards	5
2-1	All Wilderness Alternative	7
2-2	No Wilderness Alternative	7
2-3	Wilderness Emphasis Alternative	11
2-4	Preferred Alternative	13
2-5	Limited Wilderness Alternative	15
3-1	Wilderness Areas and Areas Under Review Having the Same Ecosystems as Those Found in the Schell RA	28
3-2	Wilderness Areas and Areas Under Review Within a Five Hour Drive of the Las Vegas SMSA	28
3-3	Grazing Allotments in Wilderness Study Areas	31
3-4	Employment and Personal Income by Major Source White Pine County	38
3-5	Employment and Personal Income by Major Source Lincoln County	38
3-6	Employment and Personal Income by Major Source Nye County	38
4-1	Percent of Energy and Mineral Potential Removed from Leasing and Mineral Entry, by Alternative ...	90

LIST OF MAPS

1-1	EIS Area Location Map	6
2-1	All Wilderness Alternative Map	8
2-2	Wilderness Emphasis Alternative Map	10
2-3	Preferred Alternative Map	12
2-4	Limited Wilderness Map	14
2-5	Alternatives - Mt. Grafton	16
2-6	Alternatives - Far South Egans	17
2-7	Alternatives - Fortification Range	18
2-8	Alternatives - Table Mountain	19
2-9	Alternatives - White Rock Range	20
2-10	Alternatives - Parsnip Peak	21
2-11	Alternatives - Worthington Mountains	22
2-12	Alternatives - Weepah Spring	23
3-1	Geographic Distribution of Wilderness	26
3-2	Resource Conflicts - Mt. Grafton	43
3-3	Resource Conflicts - Far South Egans	46
3-4	Resource Conflicts - Fortification Range	48
3-5	Resource Conflicts - Table Mountain	50
3-6	Resource Conflicts - White Rock Range	52
3-7	Resource Conflicts - Parsnip Peak	54
3-8	Resource Conflicts - Worthington Mountains	57
3-9	Resource Conflicts - Weepah Spring	60
3-10	Claims and Leases - Mt. Grafton	62
3-11	Claims and Leases - Far South Egans	63
3-12	Claims and Leases - Fortification Range	64
3-13	Claims and Leases - Table Mountain	65
3-14	Claims and Leases - White Rock Range	66
3-15	Claims and Leases - Parsnip Peak	67
3-16	Claims and Leases - Worthington Mountains	68
3-17	Claims and Leases - Weepah Spring	69
3-18	Wildlife Habitat - Mt. Grafton	70
3-19	Wildlife Habitat - Far South Egans	71
3-20	Wildlife Habitat - Fortification Range	72
3-21	Wildlife Habitat - Table Mountain	73
3-22	Wildlife Habitat - White Rock Range	74
3-23	Wildlife Habitat - Parsnip Peak	75

SUMMARY

PURPOSE

Federal law requires the Bureau of Land Management to study all areas of public land with wilderness characteristics to determine the suitability of each for designation as wilderness. In the Schell Resource Area, eight areas with wilderness characteristics (totaling 424,583 acres) have been identified. This Wilderness Environmental Impact Statement examines the suitability of each of these wilderness study areas (WSAs), and studies the impacts to the environment of designating five different combinations of areas as wilderness. This study will be used by the decision-makers in making wilderness recommendations and decisions.

ISSUE

Each WSA possesses wilderness values, but each also contains other resource values, the development or extraction of which would be detrimental to wilderness values. A determination must be made as to which resource an area would be better used for, the wilderness resource or the competing resource(s). This is the main issue to be resolved.

If it is determined that the "highest and best use" of an area is as wilderness, then the area will be recommended as suitable for wilderness designation. If it is determined that a use which is incompatible with the wilderness resource is the highest and best use, then the area will be recommended unsuitable for wilderness designation.

ALTERNATIVES

The five different combinations of areas that are studied range from a No Wilderness Alternative to an All Wilderness Alternative (see Table S-1). Implementation of the No Wilderness Alternative will result in no wilderness designations, and the All Wilderness Alternative will result in designation of all eight WSAs as wilderness. A Limited Wilderness Alternative recommends for wilderness only the areas with the highest wilderness values, lowest conflicts

with other resources, and most manageable boundaries. A Wilderness Emphasis Alternative recommends for wilderness designation all areas with wilderness values, excluding only the areas with the greatest manageability problems and the highest conflicts with other resources.

The Preferred Alternative is an alternative that eliminates most conflicts while recommending for designation most manageable areas with good wilderness values. It recommends as suitable portions of the Far South Egans, Parsnip Peak, Worthington Mountains, and Weepah Spring WSAs, and the entire White Rock Range WSA. It recommends as unsuitable the Mount Grafton, Fortification Range, and Table Mountain WSAs.

TABLE S-1

AREAS AND ACRES RECOMMENDED
SUITABLE FOR DESIGNATION, BY
ALTERNATIVE

	WSAs RECOMMENDED SUITABLE	ACRES RECOMMENDED SUITABLE
ALL WILDERNESS	8 (ENTIRE)	424,583
WILDERNESS EMPHASIS	6 (PARTIAL) 1 (ENTIRE)	288,446
PREFERRED ALTERNATIVE	4 (PARTIAL) 1 (ENTIRE)	188,707
LIMITED WILDERNESS	4 (PARTIAL)	114,023
NO WILDERNESS	0	0

SCOPING

A public scoping period was held from July 23 to September 10, 1982 during which time all interested persons were invited to comment on the alternatives developed for the EIS. As a result of comments received,

TABLE S-2: IMPACTS SUMMARY

	Minerals/Energy	Wilderness	Range	Wildlife	Recreation/ Visual Resources	Forestry	Lands	Cultural Resources	Soil/ Water	Wild Horses	Social Attitudes	Economic Impacts	
ALL WILDERNESS	Mineral potential removed: 27.3% high, 6.8% medium, 5.6 speculative. O/G potential removed: 1.3% high, 3% medium, 9.4% speculative Geothermal potential removed: 12.8% SAI	6 WSAs protected 2 WSAs unaffected SBI	6 proposed range improvements disallowed Future projects may be disallowed Costs may increase NSI	Habitat preserved Restrictions on habitat conversion for Herd #23 NSI	Beneficial impact to primitive and semi primitive recreation NSI Protection of visual resources SBI	22% of manageable woodland in Schell RA removed Some protection of special resources SAI	Communication sites disallowed in 4 WSAs with potential Conflicts with proposed rail corridor in Grafton NSI	Beneficial and adverse general impacts. Specific beneficial impacts in Worthingtons. NSI	Beneficial impacts by limiting disturbance NSI	Slight beneficial impact-preserves habitat and free roaming nature NSI	Strong local opposition-strong conservation support NSI	Minor beneficial impacts to trades and services Minor adverse impacts to livestock, mining and state revenues NSI	ALL WILDERNESS
WILDERNESS EMPHASIS	Mineral potential removed: 9% high, 1.5% medium, 5.2% speculative O/G potential removed: .1% high, 1.4% medium, .8% speculative Geothermal potential removed: 6.7% SAI	6 WSAs protected 2 WSAs unaffected SBI	Same as All Wilderness except future projects impacted less NSI	Habitat preserved Restrictions on habitat conversion for Herd #23 NSI	Same as All Wilderness SBI	10% of manageable woodland in Schell RA removed Some protection of special resources NSI	Same as All Wilderness NSI	Same as All Wilderness NSI	Beneficial impacts by limiting disturbance in suitable areas, adverse in unsuitable NSI	Same as All Wilderness NSI	Local opposition-strong conservation support NSI	Same as All Wilderness NSI	WILDERNESS EMPHASIS
PREFERRED	Mineral potential removed: 5.3% high, .7% medium, 3.4% speculative O/G potential removed: 0% high, .8% medium, .8% speculative Geothermal potential removed: 1% SAI	4 WSA's protected 2 WSAs unaffected 2 WSAs lose protection SAI and SBI	Same as All Wilderness except future projects impacted less NSI	Some habitat preserved, some lost Some habitat preserved, some lost Same Restrictions on habitat conversion for Herd #23 NSI	Beneficial impacts to primitive and semi primitive recreation in suitable areas, adverse in unsuitable areas NSI Protection of visual resources SBI	7% of manageable woodland in Schell RA removed Some protection of special resources NSI	Communication sites disallowed in 2 WSAs with potential NSI	Same as All Wilderness NSI	Same as Wilderness Emphasis-fewer beneficial impacts NSI	Same as All Wilderness to lesser extent NSI	Mixed support NSI	Minor beneficial impacts to trades and services Very minor adverse impact to livestock, mining and state revenues NSI	PREFERRED
LIMITED WILDERNESS	Mineral potential removed: 3.5% high, 0% medium, 2% speculative O/G potential removed: 0% high, .8% medium, 0% speculative Geothermal potential removed: .4% NSI	2 WSAs protected 2 WSAs unaffected 3 WSAs lose protection 1 WSA Impaired even though suitable SAI and SBI	3 proposed range improvements disallowed Future projects may be disallowed Costs may increase NSI	Most habitat lost, some preserved Few restrictions on habitat conversion for Herd #23 NSI	Adverse impacts to primitive and semi primitive recreation in unsuitable areas, beneficial impacts in suitable areas NSI Some protection of visual resources SBI	5% of manageable woodland in Schell RA removed Some protection of special resources NSI	Communication sites disallowed in 1 WSA with potential NSI	Beneficial and adverse general impacts. Specific adverse impacts in Worthingtons. NSI	Same as Wilderness Emphasis-fewer beneficial impacts NSI	Few beneficial impacts NSI	Mixed local support-conservation opposition NSI	Same as Preferred NSI	LIMITED WILDERNESS
NO WILDERNESS	No Impacts	6 WSAs lose protection 2 WSAs unaffected SAI	No Impacts	Habitat protection lost No restrictions on habitat conversion NSI	Adverse impacts to primitive and semi primitive recreation. Adverse impacts to visual resources NSI	No Impacts	No Impacts	Same as Limited Wilderness NSI	Minor adverse impacts from increased disturbance NSI	No Impacts	Mixed local support-strong conservation opposition NSI	No Impacts	NO WILDERNESS

NSI = No Significant Impacts
SAI = Significant Adverse Impacts
SBI = Significant Beneficial Impacts

the Wilderness Emphasis Alternative was formulated and included for study.

MAJOR CONCLUSIONS

This study concludes that there will be no significant impacts to range, recreation, cultural resources, wildlife, wild horses, soil, water, air, or lands in any alternative. Additionally, there will be no significant economic or social impacts. Significant impacts will occur to forestry, energy and minerals, wilderness and visual resources in the different alternatives as described in Table S-2.



CHAPTER 1

INTRODUCTION

PURPOSE AND NEED

This Environmental Impact Statement (EIS) analyzes the potential impacts of designating or not designating all or portions of eight wilderness study areas (WSAs) as wilderness. The Preferred Alternative represents the BLM's preliminary wilderness recommendations. These recommendations are subject to change during the public comment period and administrative review.

The Schell Resource Area (RA) Wilderness EIS is in response to Section 603 of the Federal Land Policy and Management Act (FLPMA) of October 21, 1976. This law directs the BLM to inventory, study and then report to Congress through the Secretary of the Interior and the President, the public lands suitable for inclusion in the National Wilderness Preservation System.

FLPMA requires the Secretary to report his recommendations to the President by October 21, 1991. The President has until October 21, 1993 to send the recommendations to Congress. Only Congress can designate any of the study areas as wilderness. The purpose of wilderness designation, 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."

PLANNING PROCESS

The BLM requires public lands to be covered by a multiple land use plan. The Schell Resource Area's land use plan is called a Management Framework Plan (MFP). It was started during a transition period between the BLM's old and new planning systems. All land use plans started after October 1980 were required to use the new planning process and formulate a Resource Management Plan. (See 43 CFR 1601). The Schell Resource Area Plan, however, was started before that date and is still using the old planning process. The plan is therefore

called a transition MFP and this Wilderness EIS is called a Wilderness Transition MFP EIS.

Each WSA is studied through the BLM's planning process regardless of which type of plan is used. The Management Framework Plan was begun before the wilderness input could be included. By July, 1982 the Area Manager had completed his preliminary wilderness recommendations, based on the Wilderness Study Policy, and they were included in the MFP. This recommendation later became the Preferred Alternative.

The Wilderness Study Policy, a national policy that guides the wilderness studies, was issued by the BLM in February, 1982 after public review. It mandates two criteria and six quality standards that must be addressed during the wilderness studies. Table 1-1 summarizes these criteria and quality standards. For more detailed information refer to the actual Wilderness Study Policy, available from any BLM office.

Table 1-1: Summary of Study Policy Criteria and Quality Standards

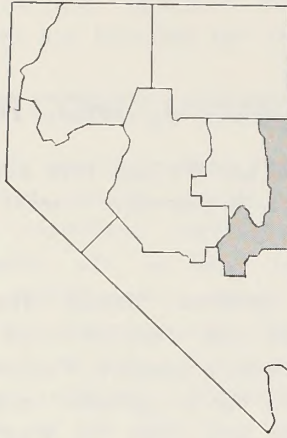
Criterion 1 Evaluation of Wilderness Values

- a) Mandatory wilderness characteristics
- b) Special features
- c) Multiple resource benefits
- d) Diversity in the National Wilderness Preservation System

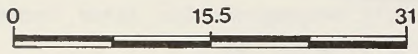
Criterion 2 Manageability

- Quality Standards
- 1) Energy and mineral resource values
 - 2) Impact on other resources
 - 3) Impact of nondesignation on wilderness values
 - 4) Public comment
 - 5) Local social and economic effects
 - 6) Consistency with other plans

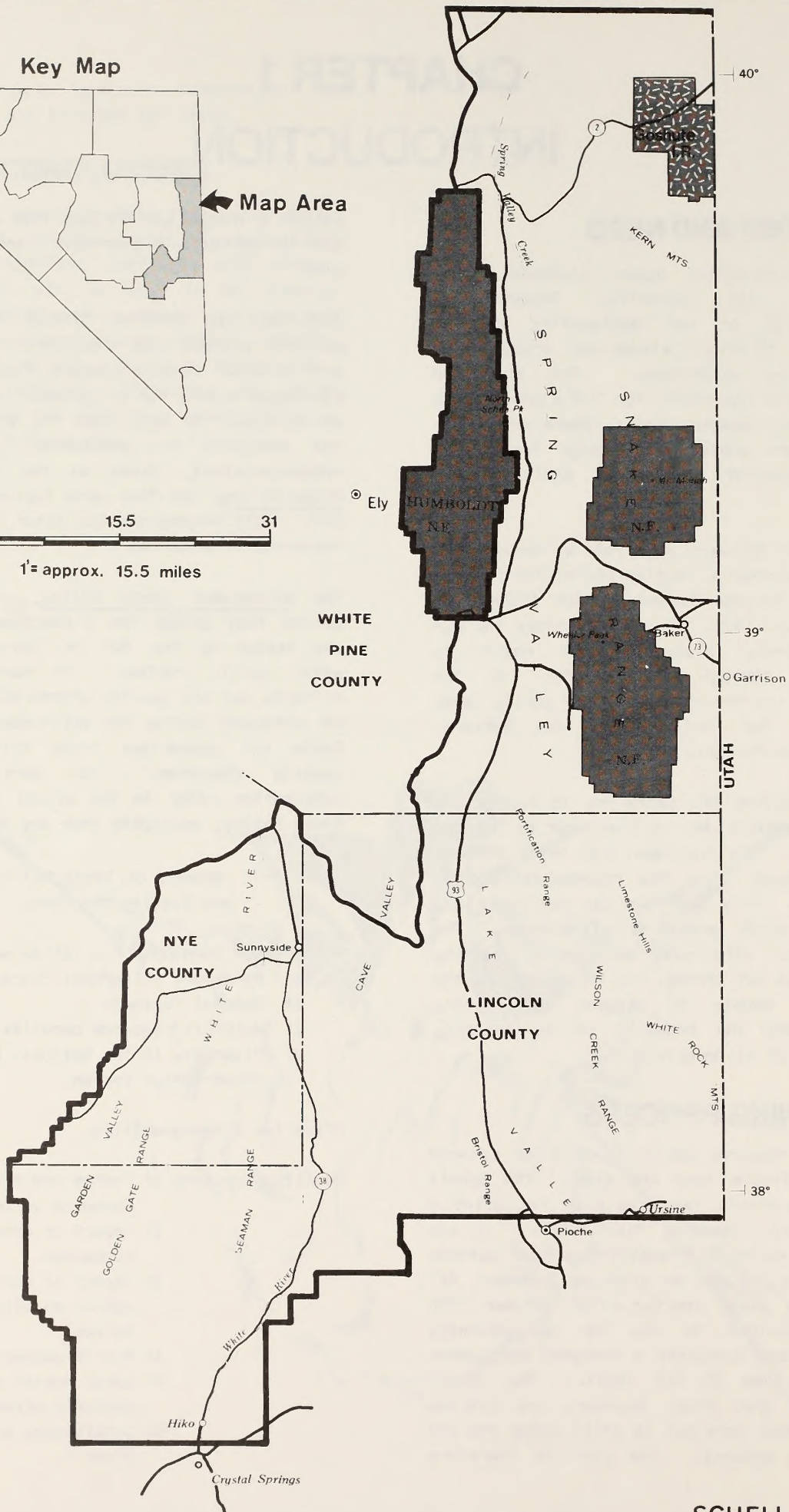
Key Map



Map Area



1" = approx. 15.5 miles



CHAPTER 2

ALTERNATIVES

The five alternatives analyzed in this document include the required All Wilderness and No Wilderness Alternatives and three partial wilderness alternatives.

DEVELOPMENT OF THE ALTERNATIVES

Two alternatives, the All and No Wilderness Alternatives, must be considered to comply with the Council of Environmental Quality's (CEQ) regulation 1502.14 and requirements of the BLM's Wilderness Study Policy. The All Wilderness Alternative recommends the eight WSAs in their entirety as suitable for wilderness designation. (See Map 2-1.) Under this alternative, all eight WSAs would be managed as wilderness, according to the BLM's Wilderness Management Policy.

Table 2-1 is a summary of the All Wilderness Alternative.

TABLE 2-1: ALL WILDERNESS ALTERNATIVE

WSA NAME	SUITABLE ACREAGE	UNSUITABLE ACREAGE
Mount Grafton	73,216	0
Far South Egans	53,224	0
Fortification Range	41,615	0
Table Mountain	35,958	0
White Rock Range	23,625	0
Parsnip Peak	88,175	0
Worthington Mtns.	47,633	0
Weepah Spring	61,137	0
TOTALS	424,583	0

The No Wilderness Alternative recommends the eight WSAs in their entirety as unsuitable for wilderness designation. Under this alternative all eight WSAs would be returned to regular multiple use management, and would be managed consistent with the Schell Management Framework Plan.

The No Wilderness and the No Action Alternatives are the same in this EIS. Impacts will be nearly the same in both alternatives since the major impacts of nondesignation (e.g. energy and mineral

development) are not planned by the BLM and so are unaffected by the Bureau Planning System. In addition, many impacts that are discussed will occur in the long term (such as communication site location and forest product removal) and are not covered by the life of the plan (10 years). Lastly, range development as considered in the proposed action in the Schell Grazing EIS will not, by itself, significantly impact the wilderness resource.

Hereafter the No Wilderness and the No Action Alternatives will be referred to as the No Action Alternative.

Table 2-2 is a summary of the No Wilderness Alternative.

TABLE 2-2: NO WILDERNESS ALTERNATIVE

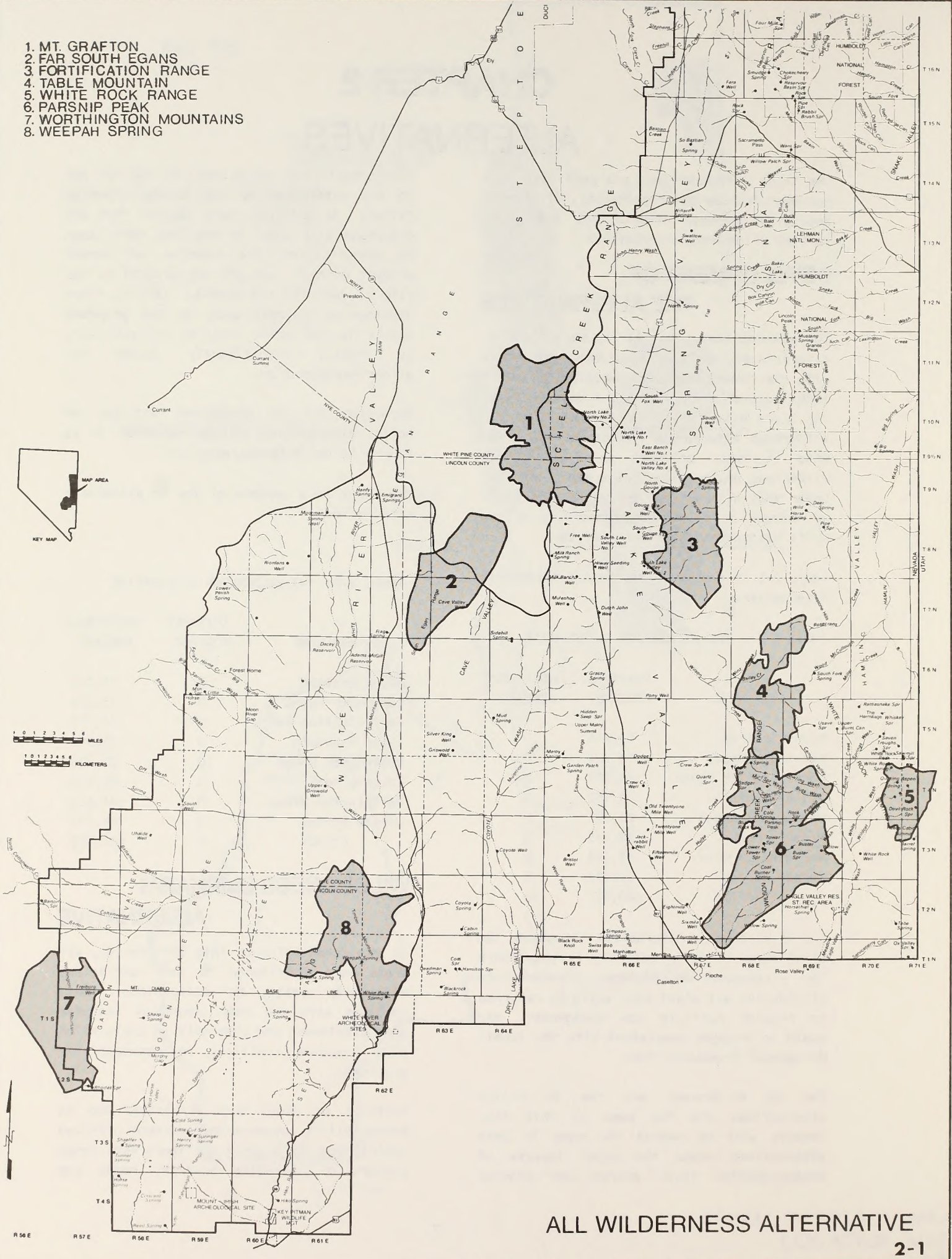
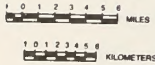
WSA NAME	SUITABLE ACREAGE	UNSUITABLE ACREAGE
Mount Grafton	0	73,216
Far South Egans	0	53,224
Fortification Range	0	41,615
Table Mountain	0	35,958
White Rock Range	0	23,625
Parsnip Peak	0	88,175
Worthington Mtns.	0	47,633
Weepah Spring	0	61,137
TOTALS	0	424,583

WILDERNESS EMPHASIS ALTERNATIVE

In the formulation of this alternative, all areas were considered to have sufficient wilderness quality for designation. Only portions with the most unnatural features were eliminated and then only in conjunction with resource conflicts or manageability problems.

Portions of areas were eliminated due to manageability concerns when current off-road vehicle use was present and there were large numbers of intruding boundary roads and

1. MT. GRAFTON
2. FAR SOUTH EGANS
3. FORTIFICATION RANGE
4. TABLE MOUNTAIN
5. WHITE ROCK RANGE
6. PARSNIP PEAK
7. WORTHINGTON MOUNTAINS
8. WEEPAH SPRING



ALL WILDERNESS ALTERNATIVE

ways. Boundaries were also adjusted when there were numerous private parcels with no current access, and when the exercise of valid existing rights seemed imminent.

Resource conflicts were excluded only when they were significant.

Public comment was instrumental in helping to develop this alternative. Many comments received during the scoping process indicated a need for a partial wilderness alternative that recommends more than 50 percent of the WSA acreage suitable for designation and that includes major portions of the Mount Grafton and Fortification Range WSAs as suitable. This alternative was formulated in response to these comments.

The remaining quality standards were evaluated but presented no opportunity for alternative variation.

This alternative is displayed on Map 2-2.

MOUNT GRAFTON: A portion (43,649 acres) of this unit is recommended suitable. Wilderness values are high. Manageability concerns presented by private inholdings, cherrystemmed routes, and mining, and conflicts with energy and minerals have been lessened by adjusting the boundaries. (See Map 2-5 and 3-2.)

FAR SOUTH EGANS: A large portion (42,316 acres) of the unit is recommended suitable. Wilderness values are high and conflicts are minimal throughout most of the unit. Boundaries were adjusted on the east and west sides to exclude energy and mineral conflicts and manageability problems caused by cherrystemmed routes (see Map 2-6 and 3-3).

FORTIFICATION RANGE: A portion (31,946 acres) of this unit is recommended suitable. Although wilderness values are not high, the area is very scenic. There are few conflicts in the area. The western boundary was adjusted to provide a more identifiable boundary and to eliminate an area with oil and gas potential. (See Map 2-7 and 3-4.)

TABLE MOUNTAIN: This entire unit is recommended unsuitable. Wilderness values are not high. The mineral and timber conflicts in the north and manageability problems throughout the unit (private inholdings and mineral potential) make the area unsuitable for designation (see Map 2-8 and 3-5).

WHITE ROCK RANGE: This entire unit is recommended suitable. Although wilderness values are not high, conflicts and manageability problems are not significant. (See Map 2-9 and 3-6.)

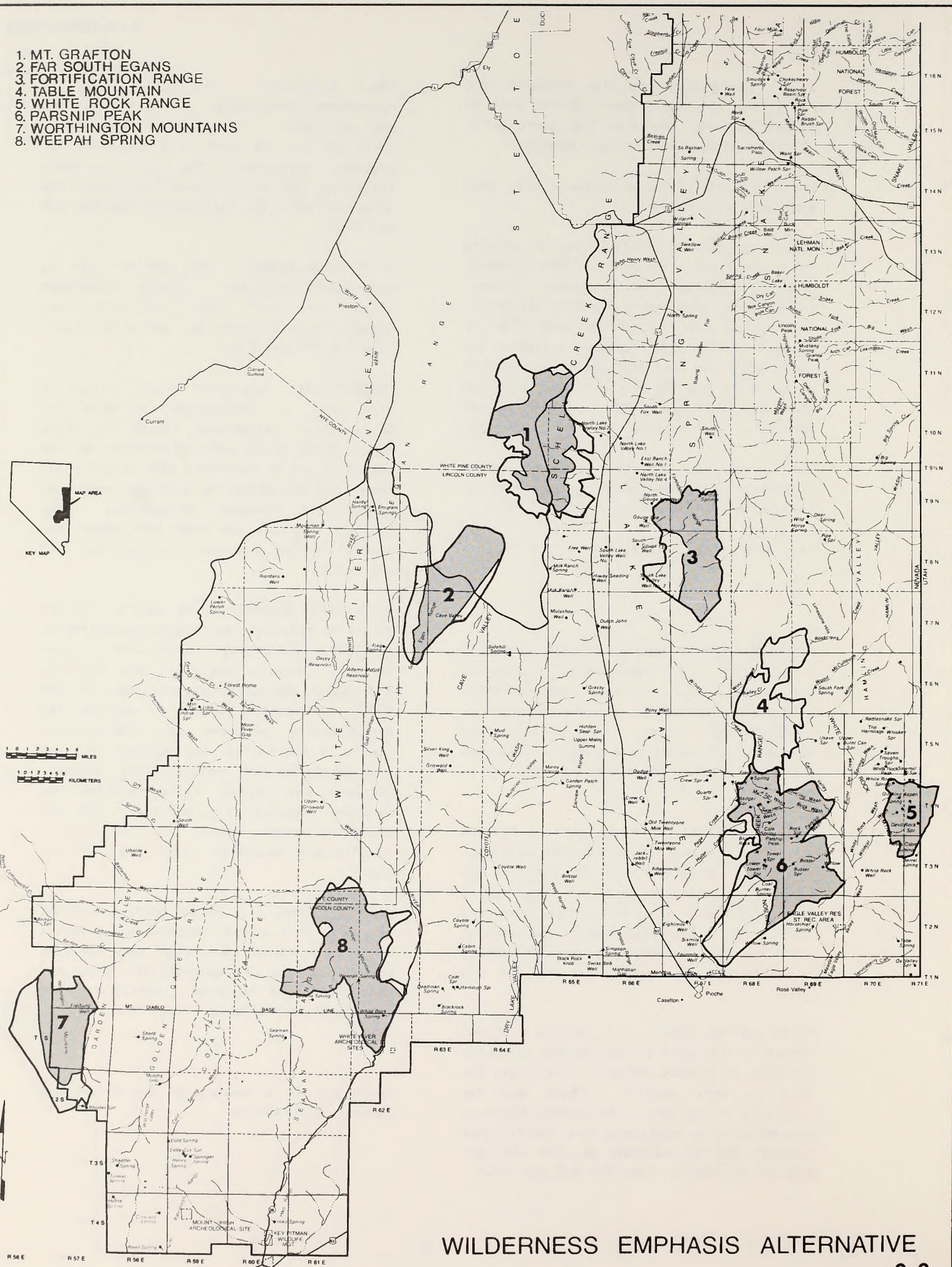
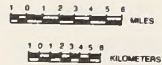
PARSNIP PEAK: A portion (61,661 acres) of this unit is recommended suitable for designation. Wilderness values are high. About 4,000 acres were eliminated on the west side due to conflicts with minerals and range and manageability problems caused by mining and ambiguous boundaries. The southern boundary was drawn back along jeep trails for the same reasons. (See Map 2-10 and 3-7.)

WORTHINGTON MOUNTAINS: A portion (26,587 acres) of this unit is recommended suitable. Although wilderness opportunities are limited, resource conflicts are minimal. The western boundary was drawn back to the 5,800 foot contour level to exclude the manageability problems of cherrystemmed routes in the valley. The southern tip was also excluded for manageability reasons. Although the eastern valley portion has marginal manageability problems, the WSA boundary road serves as an easily identifiable boundary. (See Map 2-11 and 3-8.)

WEEPAH SPRING: A large portion (58,662 acres) of this unit is recommended suitable. Wilderness values are high and outweigh other resource or manageability problems. Boundaries were adjusted slightly to make them more identifiable. (See Map 2-12 and 3-9.)

Table 2-3 is a summary of the Wilderness Emphasis Alternative.

1. MT. GRAFTON
2. FAR SOUTH EGANS
3. FORTIFICATION RANGE
4. TABLE MOUNTAIN
5. WHITE ROCK RANGE
6. PARSNIP PEAK
7. WORTHINGTON MOUNTAINS
8. WEEPAH SPRING



WILDERNESS EMPHASIS ALTERNATIVE

Table 2-3: WILDERNESS EMPHASIS ALTERNATIVE

WSA NAME	SUITABLE ACREAGE	UNSUITABLE ACREAGE
Mount Grafton	43,649	29,567
Far South Egans	42,316	10,908
Fortification Range	31,946	9,669
Table Mountain	0	35,958
White Rock Range	23,625	0
Parsnip Peak	61,661	26,514
Worthington Mtns.	26,587	21,046
Weepah Spring	58,662	2,475
TOTALS	288,446	136,137

PREFERRED ALTERNATIVE

In the formulation of this alternative, those areas with the lowest wilderness quality were dropped. Portions of units were dropped where cherrystemmed roads and ways exist and their existence was considered evidence of probable future manageability problems. Where several private parcels exist with no current access, management was considered a problem and boundaries were adjusted to exclude them. Where valid existing rights seemed likely to be exercised, boundaries were adjusted.

The potentials for other resource values was considered. Significant conflicts were excluded but minor conflicts were excluded only in conjunction with additional conflicts, manageability problems, or apparent unnaturalness of an area.

Public comments received during wilderness inventory and MFP-2 comment periods were instrumental in helping to develop this alternative. The alternative seeks a balance between the pro-wilderness and anti-wilderness comments by eliminating most major conflicts while seeking to preserve good quality wilderness values.

The remaining quality standards were evaluated but presented no opportunity for alternative variation.

This alternative is displayed on Map 2-3.

MOUNT GRAFTON: This entire unit is recommended unsuitable. Although wilderness values are high, they are outweighed by resource conflicts (minerals and energy) and manageability problems created by private inholdings, mineral activity and cherry-stemmed routes and range developments (see Map 3-2).

FAR SOUTH EGANS: This unit is partially (40,615 acres) recommended as wilderness. Wilderness values are high, conflicts are low throughout most of the area and it can be easily managed. Boundaries were adjusted to exclude those areas with oil, gas and mineral potential and manageability problems caused by cherrystemmed routes on the benchlands. (See Maps 2-6 and 3-3.)

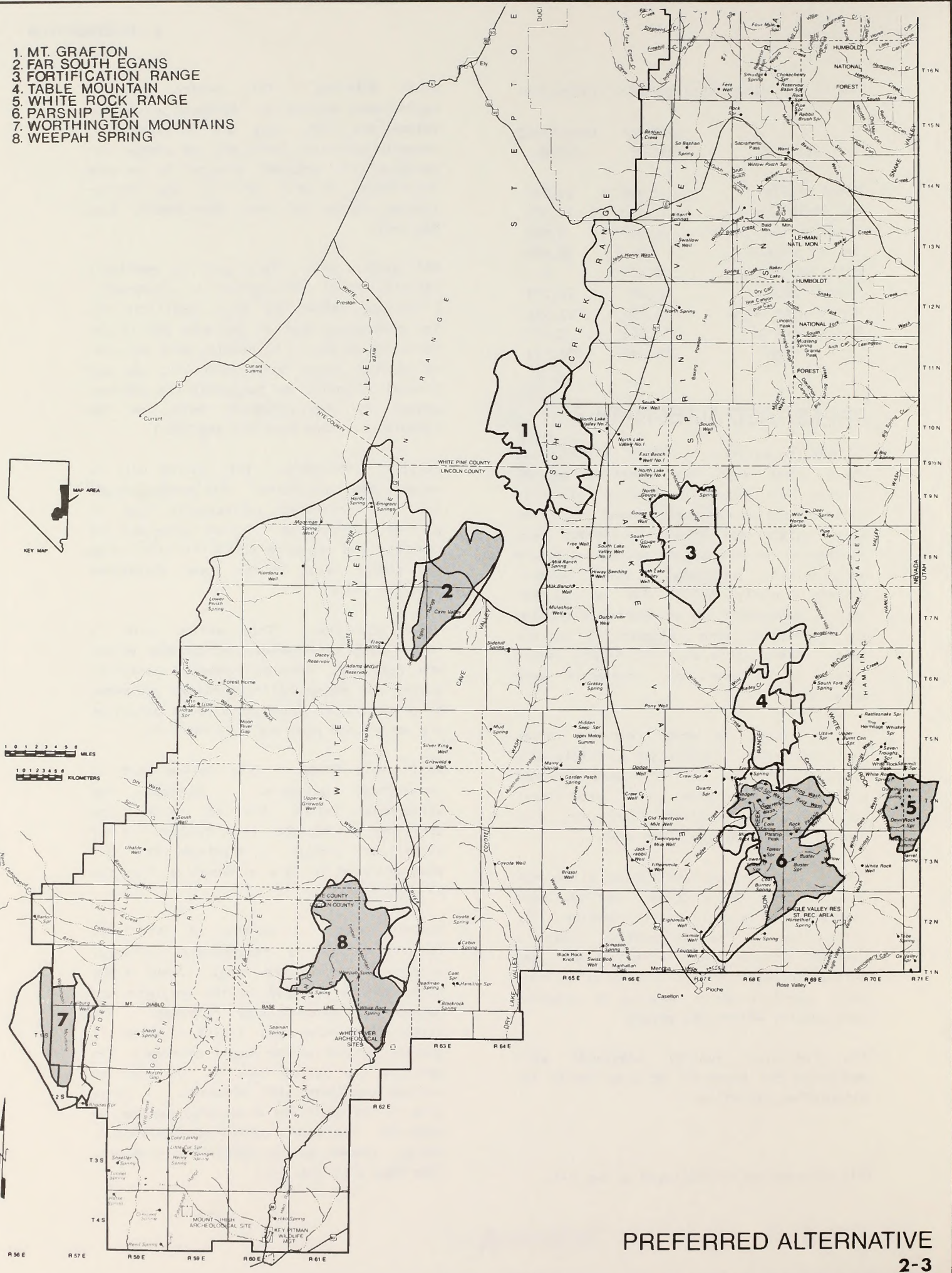
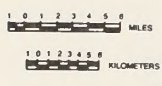
FORTIFICATION RANGE: This entire unit is recommended unsuitable. Wilderness values are not considered sufficiently high to warrant designation. A few manageability concerns and resource conflicts with range and energy exist in the lower elevations (see Map 3-4).

TABLE MOUNTAIN: This entire unit is recommended unsuitable. Wilderness values are not high, several resource conflicts exist, and manageability problems presented by private inholdings and mineral potential are severe and numerous (see Map 3-5).

WHITE ROCK RANGE: This entire unit is recommended suitable. Although the wilderness values are not high, the conflicts and manageability problems are not significant enough to eliminate the unit when analyzed in this alternative (see Map 2-9 and 3-6).

PARSNIP PEAK: A portion of this unit (53,650 acres) is recommended suitable. Wilderness values are high. About 4,500 acres were eliminated in the northern end because of manageability problems. The Wilson Burn area was included since it appears natural to the casual observer. The boundary was pulled back on the west to exclude conflicts with minerals. A large area in the south was eliminated because of numerous resource conflicts (minerals, energy, range) and manageability problems. (See Maps 2-10 and 3-7.)

1. MT. GRAFTON
2. FAR SOUTH EGANS
3. FORTIFICATION RANGE
4. TABLE MOUNTAIN
5. WHITE ROCK RANGE
6. PARSNIP PEAK
7. WORTHINGTON MOUNTAINS
8. WEEPAH SPRING



WORTHINGTON MOUNTAINS: A portion of this unit (17,500 acres) is recommended suitable. Boundaries were drawn along the 5,800 and 6,400 foot contour lines on the west and east side respectively, to eliminate manageability problems caused by the openness of these areas. The northern end stretches to the WSA boundary. The mineral conflict was not considered significant enough to exclude the north end. (See Map 2-11 and 3-8.)

WEEPAH SPRING: A large portion (53,317 acres) of this unit is recommended suitable. Wilderness values are quite high. Adjustments were made to make the boundaries more identifiable and to exclude most of the manageability concerns caused by cherry-stemmed routes in open areas (see Maps 2-12 and 3-9).

Table 2-4 is a summary of the Preferred Alternative.

TABLE 2-4: PREFERRED ALTERNATIVE

WSA NAME	SUITABLE ACREAGE	UNSUITABLE ACREAGE
Mount Grafton	0	73,216
Far South Egans	40,615	12,609
Fortification Range	0	41,615
Table Mountain	0	35,958
White Rock Range	23,625	0
Parsnip Peak	53,650	34,525
Worthington Mtns.	17,500	30,133
Weepah Spring	53,317	7,820
TOTALS	188,707	235,876

LIMITED WILDERNESS ALTERNATIVE

In the formulation of this alternative, only the areas with highest wilderness values were included as suitable for designation. The portions of WSAs with potential for off-road vehicle (ORV) use, valid existing right problems, and unpermitted woodcutting were eliminated. (Unpermitted woodcutting is seen as evidence of problems in managing the area as wilderness, and as demand for a conflicting resource use.) All private inholdings were removed with boundary adjustments. All but the most minor resource conflicts were eliminated from the units.

Public comments received during the wilderness inventory and MFP-2 comment periods were instrumental in helping to develop this alternative. The alternative seeks to address the comments of those most concerned with resource conflicts.

The remaining quality standards were evaluated but presented no opportunity for alternative variation.

This alternative is displayed on Map 2-4.

MOUNT GRAFTON: This entire unit is recommended unsuitable. Although wilderness values are high they are outweighed by conflicts with minerals, and manageability problems caused by cherry-stemmed routes and mineral activity likely to occur even with designation.

FAR SOUTH EGANS: This unit is partially (40,615 acres) recommended as wilderness. Wilderness values are high, conflicts are minimal throughout most of the area and it can easily be managed. Boundaries were adjusted to exclude those areas with oil, gas and mineral potential and manageability problems on the benchlands caused by cherry-stemmed routes. (See Map 2-6 and 3-3.)

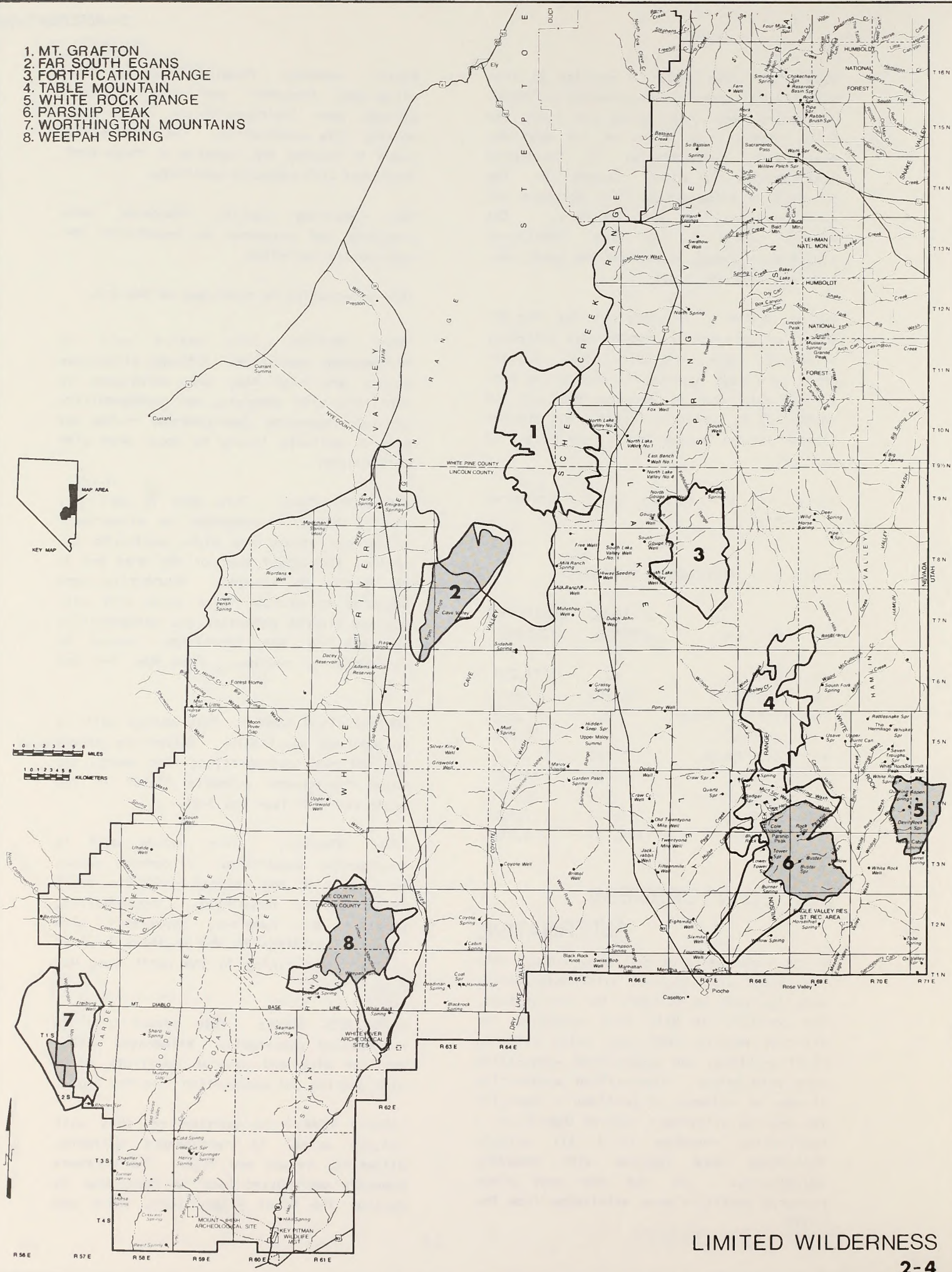
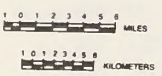
FORTIFICATION RANGE: This entire unit is recommended unsuitable. Wilderness values are not high and conflicts with energy and range development potential exist in the south and west (see Map 3-4).

TABLE MOUNTAIN: This entire unit is recommended unsuitable. Wilderness values are not high and several conflicts exist (minerals and forestry). Manageability problems are numerous, especially with private inholdings in the southern half of the unit and mining in the north (see Map 3-5).

WHITE ROCK RANGE: This entire unit is recommended unsuitable. Wilderness values are not high and several conflicts exist with grazing and woodcutting (see Map 3-6).

PARSNIP PEAK: A portion of this unit (34,310 acres) is recommended suitable. Wilderness values are high. The northern boundary was pulled back to Buck Wash to exclude the Mount Wilson burn, which was

1. MT. GRAFTON
2. FAR SOUTH EGANS
3. FORTIFICATION RANGE
4. TABLE MOUNTAIN
5. WHITE ROCK RANGE
6. PARSNIP PEAK
7. WORTHINGTON MOUNTAINS
8. WEEPAH SPRING



LIMITED WILDERNESS

fenced and seeded with nonnative species. Also excluded are areas with manageability problems caused by woodcutting and ORV use along cherrystemmed routes. The unit's southwestern third was excluded for numerous resource conflicts (minerals, energy, and grazing) and low wilderness values. (See Maps 2-10 and 3-7.)

WORTHINGTON MOUNTAINS: A portion of the unit (5,225 acres) is recommended suitable. Wilderness opportunities are limited. The northern half was eliminated due to mineral conflicts and the east and west boundaries were drawn back along the 6,400 and 5,800 foot contour lines to exclude manageability problems posed by openness of the land and lack of identifiable boundaries. The southern tip was also excluded for manageability conflicts. (See Map 2-11 and 3-8.)

WEÉPAH SPRING: A portion of the unit (33,873 acres) is recommended suitable. Wilderness values are very high. About 15,000 acres in the southern half were excluded so as to create a more manageable unit. Portions of the benchlands were removed because of oil and gas and mineral conflicts, unnaturalness and manageability concerns arising from presence of cherry-stemmed routes and poor configuration. (See Maps 2-12 and 3-9.)

Table 2-5 is a summary of the Limited Wilderness Alternative.

TABLE 2-5: LIMITED WILDERNESS ALTERNATIVE

WSA NAME	SUITABLE ACREAGE	UNSUITABLE ACREAGE
Mount Grafton	0	73,216
Far South Egans	40,615	12,609
Fortification Range	0	41,615
Table Mountain	0	35,958
White Rock Range	0	23,625
Parsnip Peak	34,310	53,865
Worthington Mtns.	5,225	42,408
Weepah Spring	33,873	27,264
TOTALS	114,023	310,560

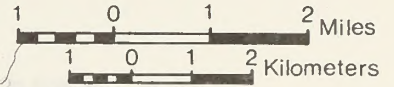
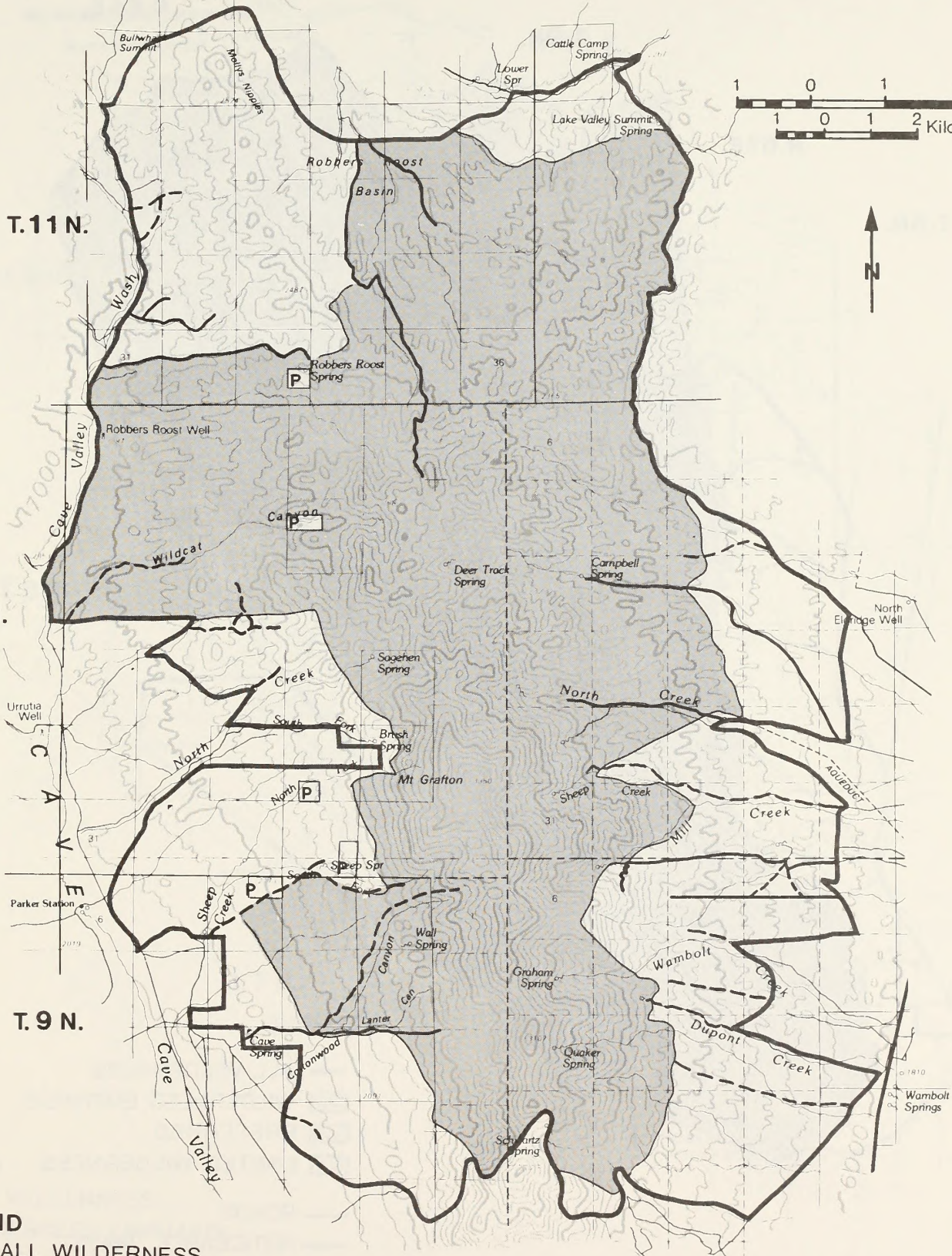
R.64 E.

R.65 E.

T.11 N.

T.10 N.

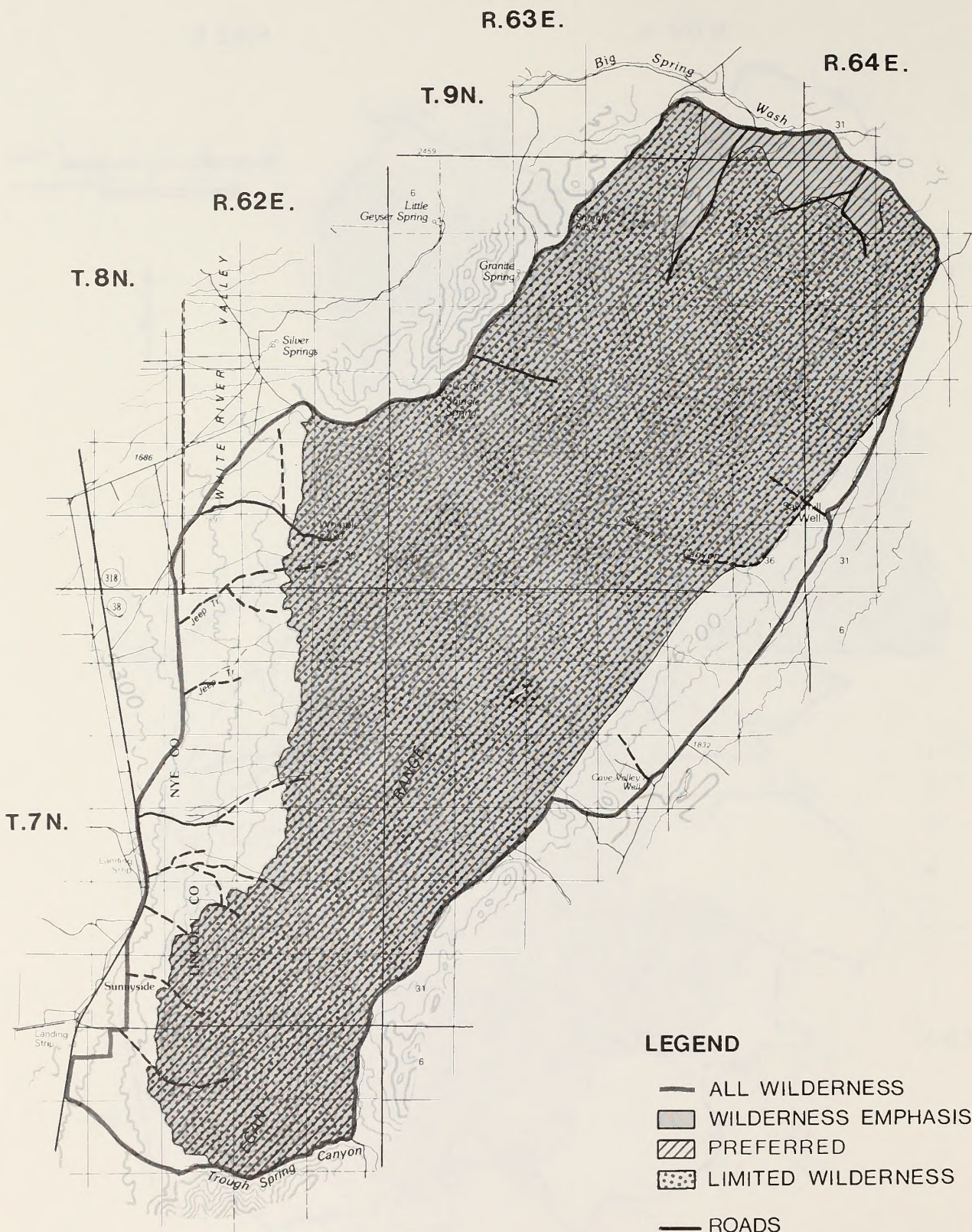
T.9 N.









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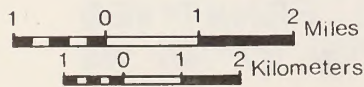
- ALL WILDERNESS
- WILDERNESS EMPHASIS
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND

ALTERNATIVES
MT. GRAFTON NV-040-169

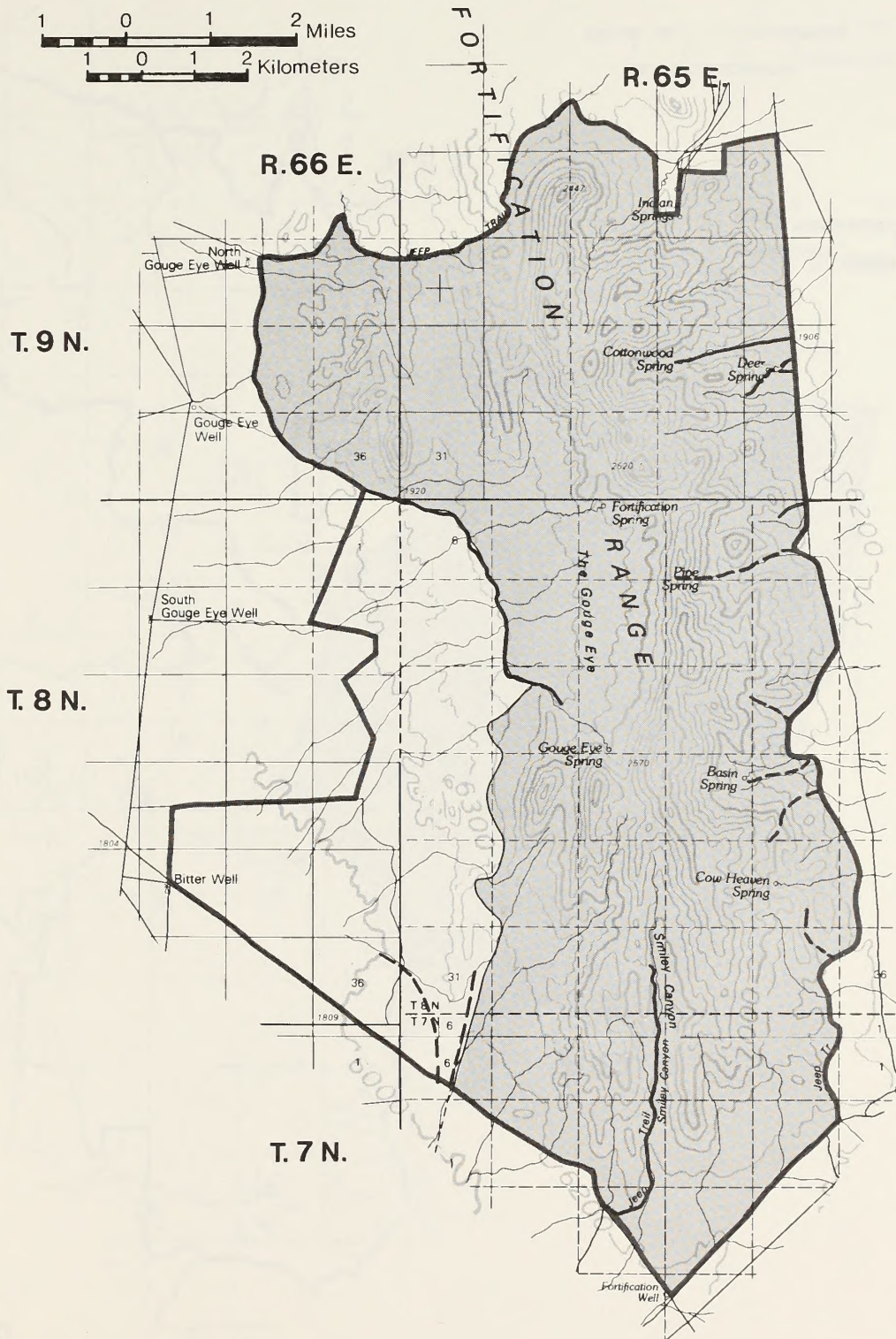
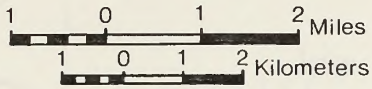


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
-  ALL WILDERNESS
-  WILDERNESS EMPHASIS
-  PREFERRED
-  LIMITED WILDERNESS
-  ROADS
-  NOTICEABLE WAYS



ALTERNATIVES
FAR SOUTH EGANS NV-040-172
2-6

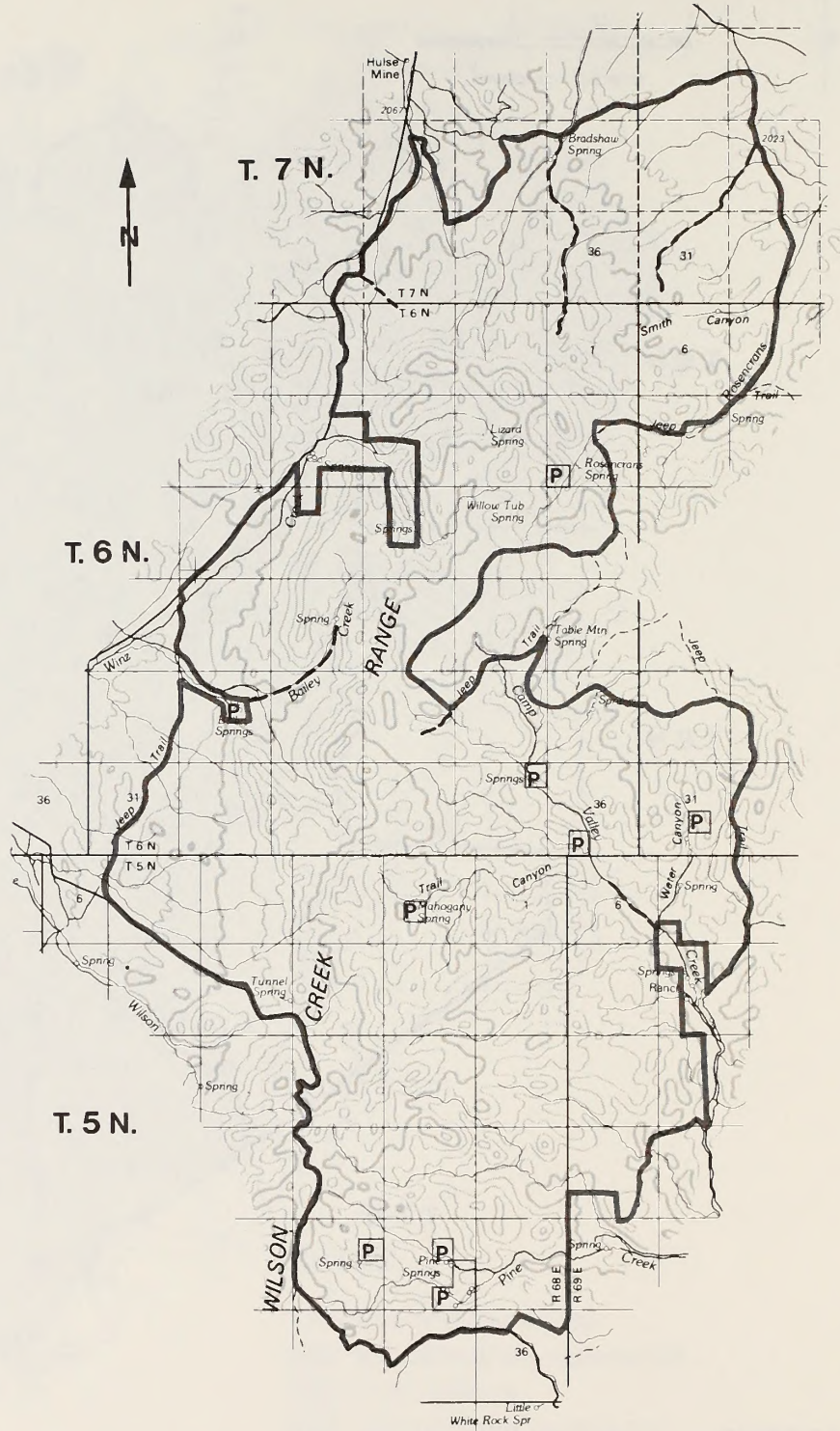


LEGEND

-  ALL WILDERNESS
-  WILDERNESS EMPHASIS
-  ROADS
-  NOTICEABLE WAYS

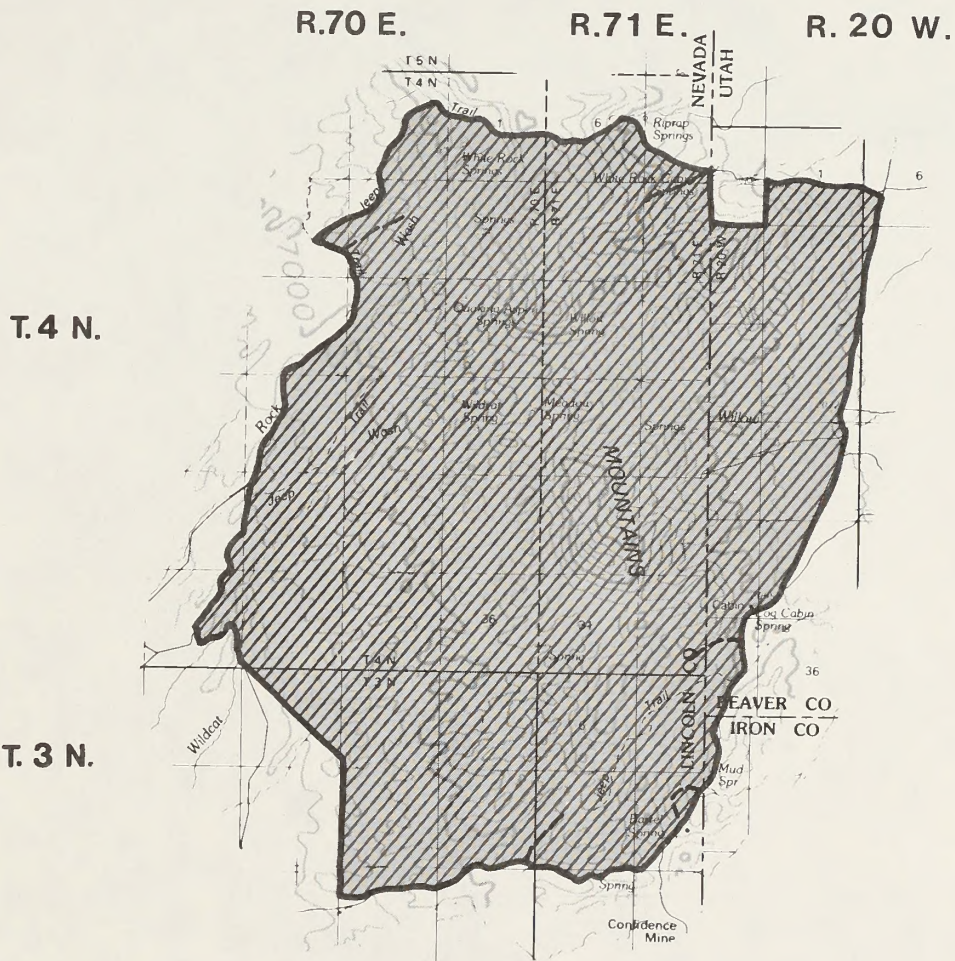
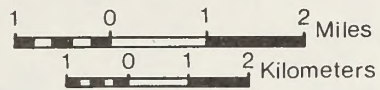
R.68 E.

R.69 E.



LEGEND

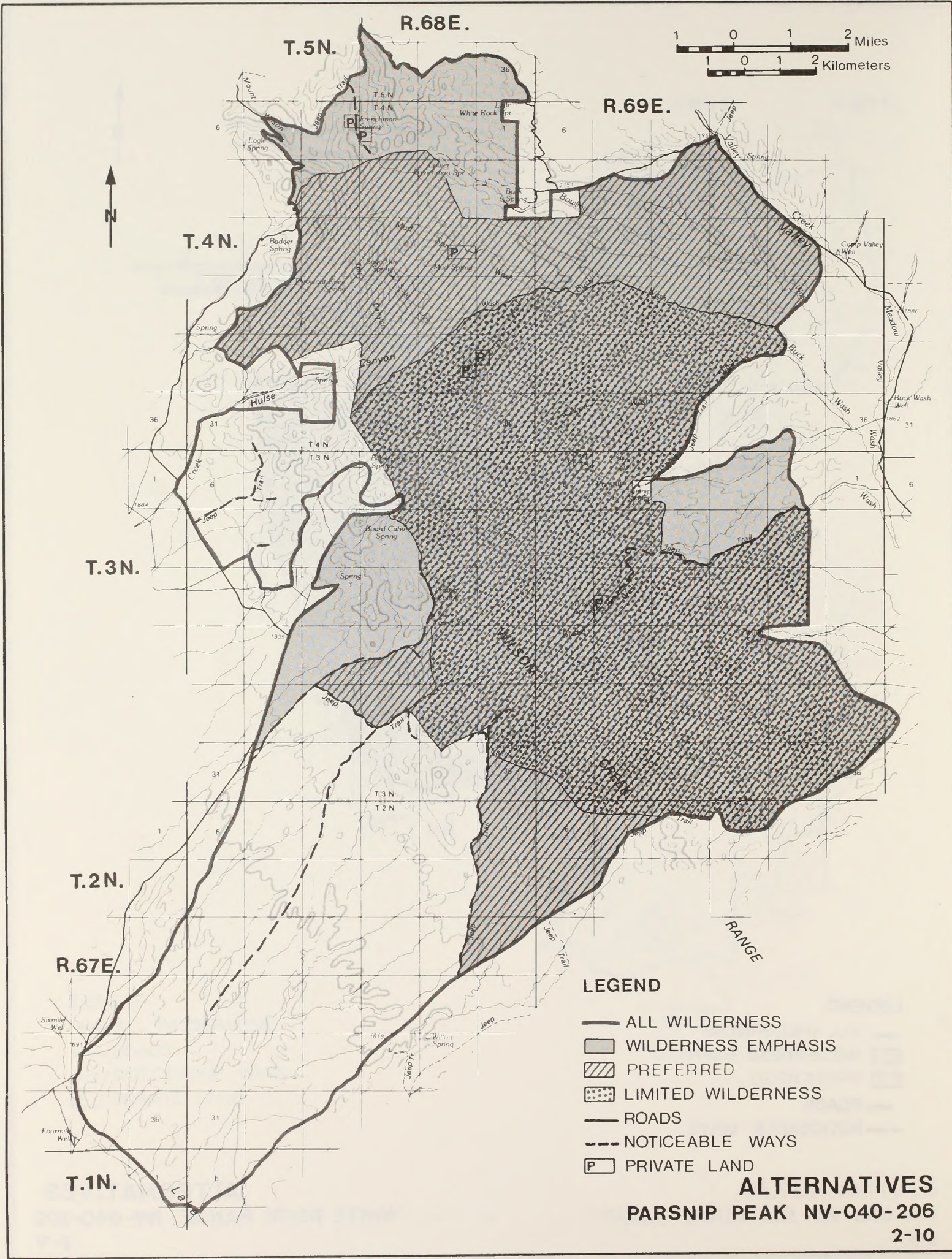
- ALL WILDERNESS
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND



LEGEND

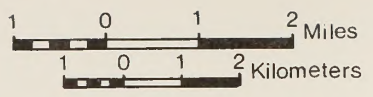
- ALL WILDERNESS
- ▭ WILDERNESS EMPHASIS
- ▨ PREFERRED
- ROADS
- - - NOTICEABLE WAYS

ALTERNATIVES
WHITE ROCK RANGE NV-040-202



R.68E.

T.5N.



R.69E.

T.4N.

T.3N.

T.2N.

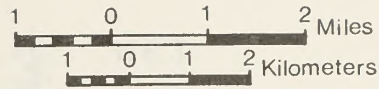
R.67E.

T.1N.

LEGEND

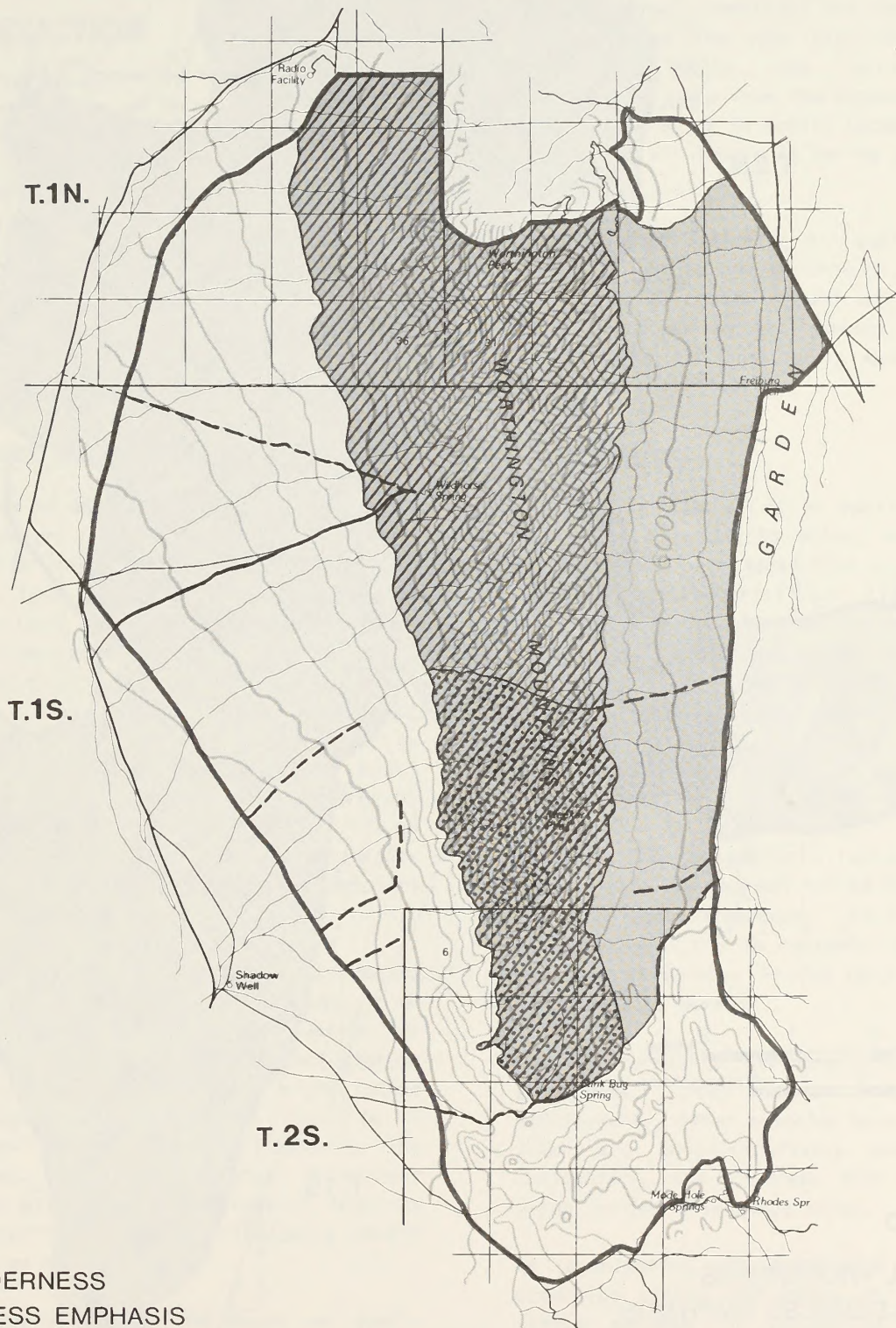
- ALL WILDERNESS
- WILDERNESS EMPHASIS
- ▨ PREFERRED
- ▤ LIMITED WILDERNESS
- ROADS
- - - NOTICEABLE WAYS
- Ⓟ PRIVATE LAND

ALTERNATIVES
PARSNIP PEAK NV-040-206



R.56E.

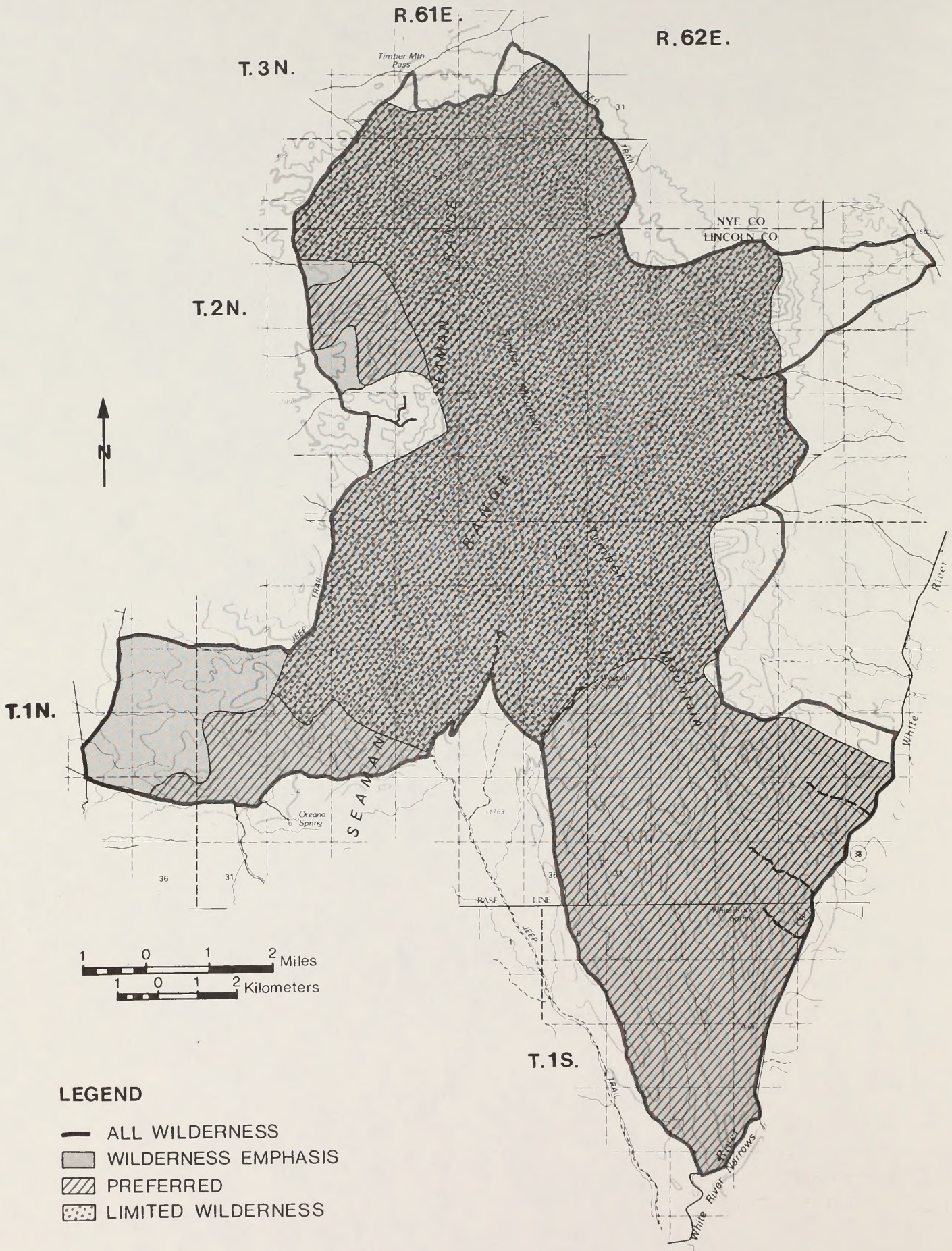
R.57E.







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

- ALL WILDERNESS
- WILDERNESS EMPHASIS
- ▨ PREFERRED
- ▤ LIMITED WILDERNESS

- ROADS
- - - NOTICEABLE WAYS



LEGEND

-  ALL WILDERNESS
-  WILDERNESS EMPHASIS
-  PREFERRED
-  LIMITED WILDERNESS

-  ROADS
-  NOTICEABLE WAYS

ALTERNATIVES
WEEPAH SPRING NV-040-246
 2-12

CHAPTER 3

THE AFFECTED ENVIRONMENT

INTRODUCTION

The information presented in this chapter is divided into two parts. The first part briefly describes in a general manner that part of the existing environment of the Schell RA that would be affected by the alternatives. The second part more specifically describes the affected environmental features of the individual wilderness study areas.

THE GENERAL ENVIRONMENT

REGIONAL SETTING

The Schell RA encompasses four million acres in mideastern Nevada on the Utah border within the Basin and Range Physiographic Province (see map 1-1). The topography is characterized by a series of north-south oriented mountain ranges that border high, broad, flat valleys. Extensive normal block faulting that created these landforms continues to the present day as evidenced by active fault scarps and frequent minor earthquakes. Elevations range from just under 4,000 feet near Hiko to 13,063 ft. on Mount Wheeler. Alluvial fans and benchlands line the extremely rocky mountains and form gentle slopes and washes.

The region has a semiarid continental climate characterized by a small amount of precipitation and a high percentage of sunshine. The average annual precipitation in the valley floors is about eight inches and generally increases with the rise in elevation to 16 inches or more in the mountains. Clear days average 79 percent per year with temperatures ranging from -28 F. to 102 F. There are typically 90-120 frost-free days per year.

Prevailing winds from the south and southwest in the summer act in conjunction with the moderate temperature to produce an annual free water evaporation rate of approximately 47 inches.

Air temperature inversions are common during all months of the year with the greatest occurrence during the cold months. Occasionally smoke from the Kennecott Copper smelting operation in McGill becomes trapped by inverted air layers in Spring and Steptoe Valleys.

Another factor affecting air quality within the Schell RA is the occurrence of blowing dust which is common around dry lake beds during late spring and summer. Usually, however, the air quality is excellent and visibility unlimited.

WILDERNESS

Of the 4,240,000 acres of public lands in the Schell RA, 424,583 acres, or about 10 percent, have been identified as possessing wilderness characteristics. Eight wilderness study areas, all situated primarily in the mountains with some contiguous bench and valley area, have retained their natural character because of their inaccessibility. Further, they all offer outstanding opportunities for solitude or for primitive recreation or for both (see Map 2-1).

There is no designated wilderness in the Schell RA. The nearest wilderness area is the Jarbidge Wilderness, about 270 road miles north of Ely in northern Nevada. The Jarbidge Wilderness is the only designated wilderness in Nevada.

The BLM currently has about 90 designated wilderness study areas in Nevada. Additionally, other agencies have nine areas which are administratively endorsed for designation, and 13 areas that are undergoing further wilderness study.

An examination of designated wilderness occurring within 250 miles of Ely serves little purpose in attempting to assess diversity based on geographic distribution. However, an extension of the zone of consideration shows that within a 300 mile radius of Ely, by far the greatest



GEOGRAPHIC DISTRIBUTION OF WILDERNESS WITHIN 300 MILE RADIUS OF ELY

- △ Designated Wilderness
- ◇ Administratively Endorsed Wilderness Proposal

concentration of wilderness areas is in southern California (see Map 3-1).

According to the Bailey-Kuchler land classification system and the Schell MFP, the Schell Wilderness Study Areas are composed of three basic ecosystem types: Great Basin Sagebrush, Juniper-Pinyon Woodland, and Mixed Conifer Forest. There is also a scattering of Western Ponderosa Forest in a few of the areas. These four types are underrepresented in the National Wilderness Preservation System. (See Table 3-1).

All of the study areas are within five hours driving time of only one Standard Metropolitan Statistical Area, Las Vegas. Also within five hours driving time of Las Vegas are four designated wilderness areas and about 200 other wilderness study areas (see Table 3-2).

MINERALS AND ENERGY

The Schell Resource Area is entirely within the Basin and Range physiographic province. Most of the mountain ranges trend north-south and are relatively narrow compared to the basins. The mountain ranges of the area are mainly folded and faulted blocks of sedimentary, metamorphic, and igneous rocks. The present topographic relief is largely the result of movement along many north-trending faults. Most of the water within the Schell Resource Area drains into local interior basins, many of which contain playas or dry lakes. The area contains only two integrated permanent outside drainage systems, Meadow Valley Wash and White River (Schell URA-3).

Locatable Minerals

The easily discoverable high grade ore deposits have already been extracted or are now being mined. The industry has now resorted to the mining of increasingly lower average grade ore deposits. The discovery and definition of new deposits and new mining districts is a future possibility. These two factors and their eventual mineral yields will depend upon 1) the evolution of technology, 2) the socio-economic demand for these minerals, and 3) the availability of lands open to prospecting and mining.

Basic geologic features and occurrence of known major mineral resources divide Nevada into a Western and an Eastern Metallogenic Province. The boundary is not sharp, and the two provinces have many mineral commodities in common including gold, silver, and copper. The Western Province is characterized by nearly all the iron, mercury, and antimony, while the Eastern (including the Schell Resource Area) is the lead-zinc province.

Although the present-day alignment of mountain ranges and valleys is strongly north-south in this Basin-Range Province which encompasses the entire State of Nevada, there can be recognized six or seven mineralized belts which trend in a northwesterly direction across the State, (Shawe and Stewart, 1976). These mineral belts are not sharply defined and continuous, but they are important because they contain about 95% of the copper, lead, zinc, gold, and silver in Nevada.

In the Schell RA, the Ely mineral belt extends southeastward from Ely across White Pine County and into Lincoln County. There are two mineral belts which are exceptions to the northwesterly trend: The east-west Cherry Creek belt which cuts across the northern portion of the Schell RA and the east-west Pioche belt on the southern border of the Schell RA.

The Ely mineral belt includes the Osceola Mining District which has a valued production over \$3 million. The Pioche mineral belt includes the Bristol/Jackrabbit Mining District which has produced over \$16 million.

The origin of these mineralized belts is a subject of controversy in geologic theory. The belts are broad swathes extending across mountain ranges in the Schell RA. Thus, the valleys may offer buried targets for valuable mineral resources. Across the valleys, geophysical and geochemical methods of prospecting offer opportunities for long-range discoveries and development. These belts, of course, represent older geologic formations and structures, probably from Precambrian to Late Paleozoic and Mesozoic Ages, which contain most of the locatable, metallic mineral resources.

TABLE 3-1 WILDERNESS AREAS AND AREAS UNDER REVIEW HAVING THE SAME ECOSYSTEMS AS THOSE FOUND IN THE SCHELL RA (INCLUDES THE SCHELL RA WSAs)

ECOSYSTEM	STATUTORY WILDERNESS			ENDORSED BY THE PRESIDENT			WILDERNESS STUDY AREAS			
	BLM STATE NO.	OTHER AGENCY STATE NO.	ACREAGE	BLM STATE NO.	OTHER AGENCY STATE NO.	ACREAGE	BLM STATE NO.	ACREAGE	OTHER AGENCY STATE NO.	ACREAGE
JUNIPER PINYON WOODLAND	NONE	CA 3	43,168	NONE	CA 4	52,640	CA 19	326,464	CA 11	433,384
					NV 3	478,800	NV 43	1,584,607	NV 7	105,828
GREAT BASIN SAGEBRUSH	NONE	CA 2	7,028	NONE	UT 1	17,530	UT 12	239,226		
					CA 4	6,830	CA 32	252,132	CA 12	140,430
MIXED CONIFER FOREST	NONE	CA 12	573,424	NONE	NV 2	811,180	NV 29	884,363	NV 2	7,409
					CA 18	520,366	UT 2	30,524		
WESTERN PONDEROSA FOREST	NONE	NV 1	58,347	NONE			CA 2	3,890		
		OR 2	27,709		NV 4	372,345	OR 1	5,640		
					OR 3	16,414	NV 9	138,182		
					WA 1	2,143	CA 69	693,143		

TABLE 3-2 WILDERNESS AREAS AND AREAS UNDER REVIEW WITHIN A FIVE HOUR DRIVE OF THE LAS VEGAS SMSA

BLM STATE NO.	OTHER AGENCY STATE NO.	ACREAGE	ENDORSED BY THE PRESIDENT			WILDERNESS STUDY AREAS			
			BLM STATE NO.	OTHER AGENCY STATE NO.	ACREAGE	BLM STATE NO.	ACREAGE	OTHER AGENCY STATE NO.	ACREAGE
NONE	AZ 1	47,762	NONE	AZ 47	1,074,392	CA 3	223,900		
CA 3	CA 3	79,921		CA 108	4,907,144	NV 14	252,585		
	NV 7	1,878,445		NV 30	2,012,110				
	UT 6	241,696		UT 11	136,417				

A second geologic fact concerning the occurrence of the metallic mineral deposits which is important to their distribution is that about 90% of the locatable mineral deposits are in contact metamorphic zones, or within or in proximity to granitic intrusive rocks, such as Late Mesozoic and Early Tertiary Granodiorite and Quartz Monzonite. Such rocks also contain the porphyry copper deposits, and other essential minerals.

Maps showing mining claims within the WSAs are located towards the end of this chapter (see Maps 3-10 through 3-16).

Oil and Gas

The geologic environment of the Schell RA is very complex and little information on oil and gas traps has been revealed. Due to the extensive faulting in the area, the possibility of structural traps is immense. Based upon other geomorphic occurrences of producing oil fields in Nevada, the consensus of opinion is that the valleys are probably the most likely targets for oil and gas reservoirs. Geophysical exploratory operations and oil and gas leasing supports this opinion.

Oil and gas are known to occur in commercial quantities adjacent to the Schell RA in the graben and downfolded area of Railroad Valley, particularly in the Eagle Springs and Trap Spring oil fields. These two fields are located within seven miles of each other and about 53 miles southwest of Ely, outside the Schell RA. Reservoir rocks in these fields are fractured oligocene tuff and Paleocene carbonate rocks of the Sheep Pass Formation. Chinaman Shale is considered to be the main source rock. Latest studies show that the lake beds of the Paleocene Sheep Pass Formation are also important source rocks which contain hydrocarbons.

Confirmation of both Chinaman Shale and Sheep Pass Formations as probable petroleum source rocks greatly increases the range of geological environments which can be considered favorable for oil occurrence in the Schell RA. There are no known occurrences of carbonaceous shales of the Elko Formation type.

Maps showing oil and gas leases in the WSAs are located towards the end of this chapter (see Maps 3-10 through 3-16).

Exploration

In the search for energy many miles of seismic line are run across open country. From 1 July 1981 to 1 July 1982, 24 oil and gas projects and 21 other projects ran 1,640 miles of seismic line. Additional physical impacts resulted from blading of drill pads and access roads. Most of the impacts occur in valleys and bench areas, and consist primarily of vegetative disturbances which can last for from less than 10 years to more than 100 years, depending upon a number of factors.

Mineral exploration is concentrated in the bench and mountain areas. Impacts from road building, core drilling, and other earth disturbances result from the more intensive exploration efforts. These impacts vary in duration, but are generally more long-lasting than those of oil and gas exploration and development.

RANGE

There are presently 58 livestock permittees in the Schell RA. Of these, 38 run cattle only, 4 run sheep only, 9 run both cattle and sheep, and 7 have run neither in the last 3 years.

Livestock movements generally correspond to changing seasons, climatic conditions, and current management practices. Livestock are restricted to the lowlands during the winter months. Grazing in the summer extends into the high country as well. Most allotments are grazed during the critical growth period for forage plants.

Portions of 16 allotments fall within the boundaries of the eight WSAs. (See Table 3-3.)

There are 14 individuals or companies with grazing privileges for allotments in the WSAs.

VEGETATION

The Schell RA is diverse in its topography, soils, precipitation, and elevation. It has 14 broad vegetation types based on the dominant species (Appendix B). The sagebrush and pinyon-juniper types are the most common, each covering about one-third of the Schell RA. Other common vegetation types are saltbrush, desert shrub, and greasewood.

Vegetation is generally affected by the severe temperatures and low precipitation of the area. Growth is very slow, and revegetation of disturbed or cleared areas may take several decades.

Zones of riparian vegetation, although small in area, are highly productive and important in the Schell RA because of the forage and cover they provide for wildlife, livestock, and wild horses. There are approximately 90 miles of stream riparian habitat and many hundreds of acres of non-stream riparian habitat. Many streams no longer flow in their natural channels but have been diverted into ditches and pipelines to supply water to irrigated fields and to stock tanks. Riparian vegetation is therefore no longer as common as it once was in the Schell RA.

Threatened and Endangered Plants

Harrison (1980) conducted a field survey of the Schell RA and found no officially listed threatened or endangered plant species.

SOILS

Soils within the Schell RA vary considerably in texture and type. The area is generally dominated by loamy soils, with salinity increasing from the alluvial areas to the valley floors. The only information available on erosion susceptibility in the Schell RA is that listed in the Schell RA for the Schell RA Grazing EIS. Erosion condition classes were identified by their respective Soil Surface Factors which are statistical ratings of ground cover and evidence of erosion. About 97 percent of the Schell RA has moderate erosion or less and over half has slight erosion or less. Nearly all erosion results from natural rather than manmade causes.

WATER RESOURCES

Surface Water

Due to its geologic location and topographic character, the Schell RA has little available surface water, although ground water reserves are thought to be substantial in certain areas. Most valleys are closed basins with no external surface drainage. Surface water from the higher elevations is lost due to infiltration and evapotranspiration on the valley slopes; smaller portions are evaporated on the valley floors. The majority of the streams are intermittent, flowing only during spring snowmelt and occasional summer rainstorms.

Major drainage systems of the Schell RA were formed during the Pleistocene era, when considerably more surface water was available. Drainage systems such as the White River were formed at that time, but today only flow for short distances below spring sources.

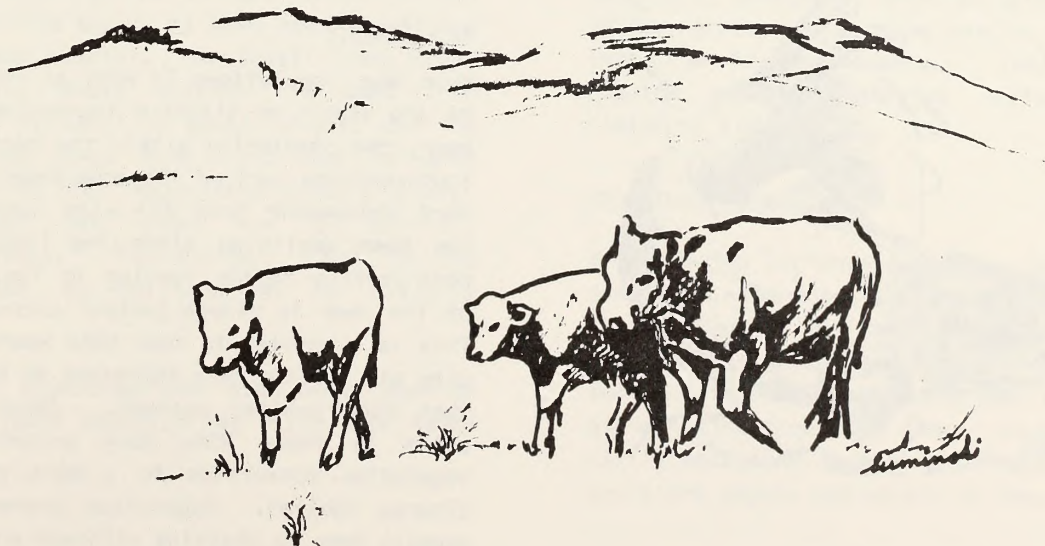
Water Quantity

Since most of the streams of the area flow only intermittently, flow gauging is rare and discharge is not well known. Runoff from the area is estimated at approximately 200,000 acre feet annually, concentrated in

TABLE 3-3

GRAZING ALLOTMENTS IN WILDERNESS STUDY AREAS

WSA	Allotments	No. of Permittes	Animal	Season of Use
Mount Grafton	Cattle Camp/Cave Valley	3	Cattle	05/18-11-1
	Cave Valley Ranch	1	Cattle	03/15-11/14
	Geyser	1	Cattle	Yearlong
Far South Egans	Shingle Pass	1	Cattle	05/16-10/15
	Sunnyside	1	Cattle	Yearlong
Fortification Range	Geyser	1	Cattle	Yearlong
	South Spring Valley	1	Cattle & Sheep	04/01-09/30
	Cottonwood	1	Cattle	11/01-09/30
	Wilson Creek	1	Cattle & Sheep	Yearlong
Table Mountain	Wilson Creek	6	Cattle	Yearlong
White Rock Range	Wilson Creek	4	Cattle	Yearlong
Parsnip Peak	Wilson Creek	6	Cattle	Yearlong
Worthington Mountains	Worthington Mountain	1	Cattle & Sheep	12/01-05/31
	McCutchen	1	Cattle	Yearlong
	Sand Spring	1	Cattle	Yearlong
Weepah Spring	Needles	1	Sheep	12/01-04/15
	Timber Mountain	1	Sheep & Cattle	03/01-04/15
	Wilson Creek	1	Cattle & Sheep	Yearlong
	North Hiko Six Mile	3	Cattle	12/01-02/28
	Oreana Spring	3	Cattle & Sheep	09/01-05/31
	West Timber Mountain	1	Sheep	12/06-01/25



the months of March through June. Most of the surface water, both streams and springs, occurs in or very near mountainous areas. Groundwater recharge is estimated at over 219,000 acre feet annually, while estimated groundwater storage is considered to approximate 14,000,000 acre feet (USDI, BLM, Schell URA 1980), most of which has not been developed.

Water Quality

A water quality sampling program was conducted in the Schell RA by the BLM in 1979. A total of 67 stations were sampled three times. In addition a limited amount of water quality data is available for some streams from a 1981 stream habitat inventory conducted by BLM. Water quality data collected from springs showed levels of total dissolved solids in excess of 500 mg/l (suggested maximum for human consumption and irrigation) in 94 percent of the springs sampled. These high levels can be attributed primarily to the movement of water through mineral rich alluvial slopes.

Fecal coliform bacteria exceeded Nevada water quality regulations in only four percent of the surface waters sampled. However, water quality is often dependent on the season, i.e. on the presence or absence of grazing livestock.



FISHERIES

Thirty-four streams in the Schell RA have a trout fishery. Fourteen more creeks are slated by the Nevada Department of Wildlife for future Utah Cutthroat Trout introductions. Only two existing fisheries and none of the slated introductions occur in WSAs (see "Mount Grafton," below).

WILDLIFE

The Schell RA provides habitat for 385 species of animals (see Schell Unit Resource analysis). In 1979, the Ely District completed wildlife inventories of the entire resource area under the guidelines of BLM Manual 6602, Integrated Habitat Inventory and Classification System. Seventy-four species of mammals, 247 species of birds, 11 species of amphibians, 28 species of reptiles, and 25 species of fish were recorded during the survey. The report is available at the Ely District Office of the BLM.

Big Game and Trophy Game

Mule deer, pronghorn antelope, elk, and bighorn sheep are the primary big game species occupying the Resource Area. Of the four species, mule deer are the most abundant and widespread, followed by pronghorn antelope. Only small populations of elk and bighorn sheep use public lands and then only during certain seasons of the year. It is the desire of BLM and the Nevada Department of Wildlife (NDOW) to increase populations of these game animals.

MULE DEER

Mule deer populations in most of the Schell RA are static or slightly increasing. However, the population within the central and south-eastern part of the area known as Deer Herd Management Area #23 (See Appendix D) has been declining since the 1960s. One contributing factor leading to the decline of the deer is pinyon-juniper encroachment. This is a problem in four WSAs where pinyon pine and juniper have increased to the point that deer habitat suffers. About 93,000 acres in these WSAs have potential for vegetation conversion to a more open and diverse habitat. Vegetation conversion is usually done by chaining although prescribed

burns could be used in some cases. The winter range areas are presently in poor condition due to encroachment.

The summer range areas (over 7,000 foot elevation) have poor plant species diversity. This creates special problems for deer during fawning season as well as the general deer population by depriving them of the nutrition required to get through the winter. Again, conversion would help remedy this problem.

The proposed solution to the problem, of herd decline is an increase of up to 80 percent in desired forage in the Herd Management Area. It is felt that only the maximum increase of 80 percent could guarantee herd reestablishment.

The 1980 estimate of deer numbers in the Schell RA is 4,535. Reasonable numbers, the average population in the area based on existing years survey information, is estimated at 10,521 animals.

Deer summer range is utilized from May through November. About 99,000 acres in the Schell RA have been identified as key summer range. Winter range is utilized from December through April. About 34,000 acres were identified as key winter range in the Schell RA.

ELK

Elk occupy public land in the Schell RA primarily during the winter. About 25,200 acres in the Schell RA have been identified as key elk habitat. The Schell Creek Range (including Mount Grafton) is used from December to April by about 10 elk, and the South Egan Range from mid-October to March by about 20 elk. Reasonable numbers of elk in these two areas are 28 and 25, respectively. The current trend in the population is believed to be slightly upward.

Isolated sightings have also been reported in the Table Mountain and White Rock Range area.

BIGHORN

The Nevada Department of Wildlife is planning to reestablish bighorn sheep in most of its former range. Both desert and Rocky Mountain subspecies of bighorn sheep occupy the Schell RA. Bighorn were never numerous in Nevada, but historic populations were higher than at present (McQuilvey 1978). Bighorns were infrequently observed in the Snake Range in the mid-1960s but disappeared until 1975 when they were reintroduced on Mt. Moriah. Another population was reestablished on Wheeler Peak in 1979. The Mt. Moriah population uses about 9,400 acres of public land as winter range. Sightings have been made recently on the North Schell Creek Range. The existing number of bighorn using the Mt. Moriah area is presently about 40 but reasonable numbers are estimated at 75 and the current population trend is up. A primary limiting factor for bighorn sheep is disease transmitted to them by domestic sheep where they occupy the same range.

PRONGHORN ANTELOPE

Pronghorn antelope numbers within Spring, Antelope, and Snake Valleys are thought to be at their highest level in 10 years. The populations in Lake Valley, Hamblin Valley, and near Mt. Wilson show an upward trend (Tsukamoto 1980).

Pronghorn use these areas yearlong. A few winter and spring concentration areas occur in the northern part of the Schell RA (Antelope Valley).

Generally, pronghorn antelope stay in the valley areas, only occasionally wandering into the higher country. They do not require cover, preferring instead clear fields of view.

MOUNTAIN LIONS

An estimated 106 mountain lions inhabit the Schell RA. (Nevada Department of Wildlife). This is close to their maximum density. Their range closely corresponds with mule deer habitat. Lions stay primarily in the higher elevations to take advantage of cliffs and trees to spot their prey, and to avoid the sights and sounds of man.

Upland Game

SAGE GROUSE

There are approximately 763,000 acres of sage grouse habitat within the Schell RA, all of which is considered yearlong.

The major sage grouse habitat occurs in Spring, Antelope, Snake, and Hamblin Valleys. Strutting grounds have been identified in Spring and Antelope Valleys. Other important populations occur in Meadow Valley Wash and White Rock Peak, with verified reports of strutting grounds. Smaller isolated populations occur on Parsnip Peak, Mt. Wilson, Table Mountain, Mt. Grafton, Grassy Mountain, and south Egan Range.

Strutting grounds, suitable habitat within a two-mile radius, and meadow riparian areas are considered crucial. Most strutting activity in northeastern Nevada occurs from about March 15 to April 25 (Schell URA-3, Wildlife).

The 1980 NDOW summer production surveys statewide for sage grouse showed a downward trend compared with 1978 and 1979. It is suspected that unseasonably cold, wet weather during late May and early June of 1980 was a major contributing factor (Molini et al. 1980). There are indications from hunter success that sage grouse populations in Lincoln County are extremely low in numbers.

BLUE GROUSE

There are limited populations of blue grouse inhabiting public lands within the Schell RA. On a statewide basis, blue grouse populations have increased in recent years. Populations within the area appear to be increasing, although data are insufficient to substantiate this trend (Molini et al. 1980).

There are approximately 133,000 acres of blue grouse yearlong range occurring on public lands in the Schell RA. The major portion is located on the Schell Creek and Snake Ranges. Other smaller areas of habitat occur on the Antelope Range, Kern Mountains, Mt. Grafton, Grassy Mountain, Table Mountain, Mt. Wilson, and White Rock

Mountain. The general habitat use pattern is canyon bottom-riparian vegetation in summer and mountain slope-fir/mahogany stands in winter.

Crucial areas include all hooting territories, nest sites, riparian zones, and winter habitat (white fir/mahogany patches). None of these areas have been specifically identified within the Schell RA.

Other Game Species

Bobcats are numerous in the Schell RA, although their population number is unknown. Their habitat is diverse, ranging from valley bottoms to high mountains. They are most numerous where old volcanic material cliffs are adjacent to streams. Bobcats occur throughout the Schell RA, but are most common in the mountains.

Nationally, there is concern that bobcat populations are low. In the Schell RA, populations are stable.

Kit fox populations are low in east-central Nevada. Some animals are accidentally killed when M-44 is used in animal damage control programs. The Nevada Department of Wildlife is currently watching kit fox populations closely. The kit fox inhabits valley bottoms and areas with loose, sandy soils.

Other fur bearers have attained stable populations.

Birds of Prey

Birds of prey are fairly common in the Schell RA. Habitat varies by species. For instance, golden eagles nest from 4,500 to 8,900 feet in the Ely District, and in all vegetation types where cliffs are available.

Goshawks nest in tall trees (over 25 feet) in riparian zones, and between 6,500 and 8,000 feet elevation and need running water. Cooper's hawks nest in most stream and spring riparian habitat. Ferruginous Hawks nest in isolated juniper trees along the alluvial fans of broad, open valleys.

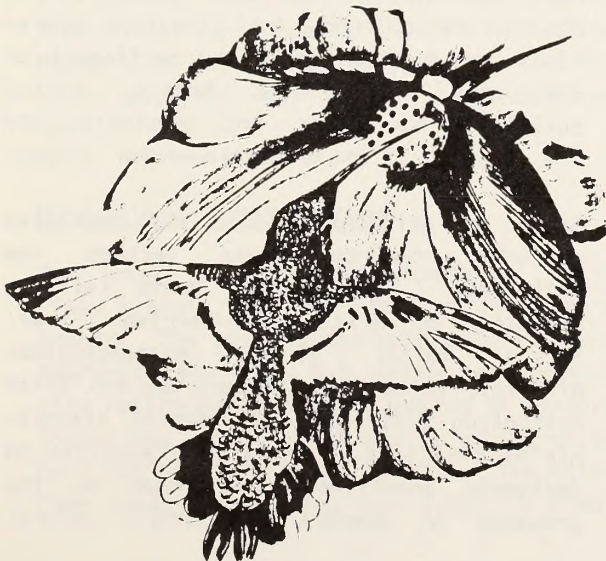
Other species include the marsh hawk, prairie falcon, American kestrel, red-tailed hawk, and sharp-shinned hawk.

The raptors have varying tolerances for human disturbance. Highly sensitive species are the goshawks, the ferruginous hawk, and the golden eagle.

Other Wildlife

Nongame birds and mammals occur in every vegetation type within the Schell RA. Within these vegetation types, many animals depend upon unusual habitat features such as springs, aspen groves, rock outcrops, riparian vegetation, wet and upland meadows, or other features which increase the habitat diversity within the normal monotypic shrub communities.

Common wildlife found within the lower elevation shrub and grassland communities (sagebrush, rabbitbrush, wheatgrass) include desert cottontail, blacktailed jackrabbit, least chipmunk, deer mouse, coyote, badger, mourning dove, horned lark, sage sparrow, and Brewer's sparrow. Typical species of the mountain shrub communities (bitterbrush and mountain mahogany) include Nuttall's cottontail, least chipmunk, deer mouse, coyote, common flicker, bush tit, Townsend's solitaire, green-tailed towhee, and chipping sparrow. Species of the pinyon-juniper type include Nuttall's cottontail, cliff chipmunk, Great Basin pocket mouse, bushy-tailed woodrat, coyote, hairy woodpecker, Say's phoebe, pinyon jay, mountain bluebird, and rufous-sided towhee. Species which may be found in quaking aspen and Douglas fir include Uinta chipmunk, deer mouse, willow flycatcher, Clark's nutcracker, mountain chickadee, western tanager, and gray-headed junco.



Threatened and Endangered Animals

Bald eagles occur during the winter in several areas in the Schell RA. Peregrin falcons were historically found throughout the resource area. Recently, however, the only sightings have been around the Seaman Range (Weepah Spring WSA). This area has some of the best peregrine falcon habitat in the Ely BLM District.

FORESTRY

The forest resource of the Schell RA consists of 1.3 million acres of pinyon/juniper woodland and about 80,000 acres of mixed conifer stands at higher elevations. The common species are single leaf pinyon, Utah juniper, Rocky Mountain juniper, white fir, limber pine, bristlecone pine and quaking aspen. There are scattered occurrences of Douglas fir, spruce, cottonwood and ponderosa pine. The mixed conifer stands are small and scattered in mostly inaccessible areas and are considered non-commercial. Approximately one third of the woodland acres can be considered manageable. This amounts to about 428,000 acres.

The major products removed from these areas are fuelwood, Christmas trees, pine nuts and fence posts.

LANDS

Most of the private lands held in the Schell RA are located in urban areas or form base properties for ranching operations. In addition, scattered parcels of land are scattered through the mountains and bench areas. The purpose of these is most often to assure control of a spring source.

A corridor study conducted by the Western Utility Group (May 1960) has identified several corridors which will likely be required in the near future. These pass through the valleys and occasionally through mountain passes, but avoid the rough terrain of the mountains.

Very few communication networks in the Schell RA run north and south. Such networks require repeaters or reflectors on mountain tops and are often required for

power transmission corridors, military projects and telephone communications. The need for these sites may increase in the future.

RECREATION

Recreation on public land in the Schell RA is dispersed and primarily occurs in the backcountry. The BLM does not provide any developed recreation sites. Major activities include hunting, fishing and sightseeing; other important, but less utilized recreation includes winter sports, predator calling, trapping, hiking/backpacking, horseback riding, off-road vehicle (ORV) use, spelunking, rockhounding, camping and picnicking. Many areas are without yearlong surface water and this affects recreational activities. The Schell RA can be characterized as having a vast supply of backcountry recreation opportunities and values with only limited demand for their use. Specific use figures for public land in the Schell RA can only be derived indirectly. Recreation use is estimated to be about 40,000 visits per year, not counting the many thousands of sightseers who are simply passing through.

The Forest Service, Nevada State Parks, Nevada Department of Wildlife and National Park Service all provide developed recreation areas and facilities within the region. The major site specific recreation areas within the region are Lehman Caves National Monument, Wayne Kirch Wildlife Management Area, Cave Lake and Eagle Valley State Parks and the Duck Creek Basin complex of Forest Service Campgrounds.

ORV use occurs throughout the Resource Area. However, at least 90% of this use is on existing trails. Little actual "off-road" use occurs. When it does occur, additional trails can be easily defined through use. No significant resource damage is known to be occurring from ORV use. Competitive ORV or recreation events happen infrequently in the Schell RA, one or two per year.

According to the 1982 Nevada Statewide Comprehensive Outdoor Recreation Plan, the region which includes the Schell RA serves as a "playground" for people from the Las Vegas area.

VISUAL RESOURCES

The visual resource of the Schell RA is characterized by its openness and naturalness. Vistas of many miles are available from the valleys and the mountains. Imprints of man, while visible in most areas, are very subservient on the landscape. Scenic quality is lower in the valleys, higher in the mountains where the diversity of features creates some instances of outstanding scenery.

CULTURAL RESOURCES

A total of 1,028 cultural resource sites have been identified within the Schell RA. Covering a timespan of over 12,000 years, these prehistoric and historic sites represent sporadic but continuous use of the resource area, and include isolated finds of the Paleo-Indian tradition, the earliest prehistoric peoples known in North America. More abundant, however, are sites related to the hunter-gatherers of the Desert Archaic tradition and the more recent Shoshone and Southern Paiute groups in the Protohistoric period. Sites associated with the horticulturally-based Fremont culture, who preceded the Shoshone, also occur in portions of the resource area. The various remains of these aboriginal cultures are classified into a variety of site types: open campsites, rock art, artifact scatters, quarries, rockshelters, isolated finds, and structural sites.

Historical use of the Schell RA began with early exploration efforts during the first half of the nineteenth century. Later, the establishment of overland mail routes, mining, agriculture, and livestock operations led to the growth and settlement of the area. Historic trails, mining buildings, homesteads, and cemeteries are the remnants of these developmental stages.

Based on existing site data, sensitive cultural resource areas include the following: Pony Express Route (with a one-mile buffer); Baker-Garrison area; Spring Valley Slough Archaeological District; White River Narrows and Mt. Irish Petroglyph Districts; and several historic mining districts. It is also possible to designate sensitive areas based on the presence or absence of certain natural

features; for example, pinyon-juniper vegetation, springs, former lake shores and terraces, and sand dune zones are more likely to have associated cultural resources.

PALEONTOLOGY

Published and unpublished data on the paleontology of the Schell RA shows that important vertebrate and invertebrate fossils are widespread (records of fossil plants thus far are sparse) (Miller 1981). Fossil invertebrates abound in the Schell RA, mostly in Paleozoic rocks of the mountain ranges. The known fossil vertebrates of the area generally occur along the exposed margins of the valleys and bases of the ranges. Fossils collected, but as yet unstudied, include horse, camel (at least two types), mastodont, antilocaprid, oreodont, carnivore, protoceratid, and others (Miller 1981). Considerably more field investigation is needed to fully evaluate the paleontological resources of the Schell RA.

Caves are numerous in the resource area; some have produced Pleistocene fossils and others potentially could. A number of extinct as well as extant vertebrates have been recovered from them.

WILD HORSES

There are four main horse herds totalling about 650 horses in the Schell RA. About 20 horses in the Seaman Herd use the Weepah Spring WSA. The Wilson Creek Herd, about 130 horses, uses the Parsnip Peak, White Rock Range, Table Mountain and Fortification Range WSAs. Horses may occasionally use the other WSAs but they are not in established herds.

ECONOMIC CONDITIONS

The Schell RA encompasses parts of White Pine, Lincoln, and Nye counties in eastern Nevada. The area is sparsely populated and averages less than 0.5 person per square mile (estimated). The population of Lincoln County was 3,732 in 1980 and is projected to be 5,790 by 1990, 7,049 by 2000. The White Pine County population was 8,167 in 1980,

and is projected to be 12,845 in 1990 and 10,235 in 2000 (Males and Rosen). Within the Schell RA there are no incorporated towns, although there are 3 small hamlets (Baker, Hiko, Ursine) and one industrial settlement (Atlanta Mine in Lincoln County) (BLM, Schell PAA 1981). However, several larger settlements are in close proximity to the resource area, including Ely, McGill, and Ruth in White Pine County, and Pioche, Alamo, and Caliente in Lincoln County. Ely is the trade center for the area. Agriculture, basically livestock-oriented, and mining are the major basic industries, and most of the commodities are either imported or exported, so that the economic structure is relatively simple, with even wholesale and retail trade composed of more than 50 percent importation (outside purchase).

The composition of the regional economy is depicted on tables 3-4, 3-5, and 3-6.

Mining

The mining industry contributes significantly to the regional economy. Its significance varies from county to county, and is most important in Lincoln County. (See Table 3-5). Income and employment are derived both from exploration activity and from actual extraction and processing operations.

The heavy reliance of the local economy on the mining industry means that the economy is subject to "boom and bust" cycles associated with fluctuations in the metals market.

Most mining operations are small scale, some are one-person operations. The only large mine in the Schell RA is the Atlanta Mine, an open pit gold and silver mine, which produces 150,000 tons of ore per year. The Osceola District is the location of a concentration of many small operations which, combined, represent a significant area of mining.

Claimants often have significant funds and time invested in their claims prior to actual extraction of ores. This exploration phase is a necessary part of mineral development.

TABLE 3-4		TABLE 3-5		TABLE 3-6		
Employment and Personal Income by Major Sources		Employment and Personal Income by Major Sources		Employment and Personal Income by Major Sources		
White Pine County		Lincoln County		Nye County		
1/ Persons	Income* (1,000's)	1/ Persons	Income* (1,000's)	1/ Persons	Income* (1,000's)	
%	%	%	%	%	%	
800	10,969	360	4,596	3,810	96,735	
23.4	19.6	25.6	17.8	55.3	61.0	
680	6,534	310	7,546	1,050	25,012	
19.9	11.6	22.0	29.3	15.3	15.8	
540	5,907	240	6,068	610	10,340	
15.8	10.5	17.0	23.6	8.8	6.5	
340	**	240	2,101	400	3,992	
9.9	--	17.0	8.14	5.8	2.5	
340	7,860	90	1,423	370	10,016	
9.9	14	6.4	5.5	5.4	6.3	
250	5,689	80	1,575	Finance/Insur- ance & Real- Estate	270	3.9
7.3	10.1	5.7	6.1			
240	5,896	50	**	160	1,698	
7.0	10.5	3.5	--	2.3	1.0	
150	1,590	30	372	140	**	
4.4	2.8	2.1	1.4	2.0	--	
80	1,322	10	**	80	1,883	
2.4	2.3	.7	--	1.2	1.1	
3,420	56,062 ¹	1,410	25,764 ¹	6,890	158,557 ¹	
100	81.4	100	91.8	100	94.2	
Total:		Total:		Total:		

1/ NV Employment Security Dept., Area Labor Review-Nevada Balance of State, 1981.

** Data not available.

* Regional Economics Information System, Bureau of Economic Analysis, 1982.

¹ Total income is greater than sum of sector incomes due to unavailable sector data.

Agriculture

All cattle operations in the resource area are cow-calf operations, mostly characterized by extensive unfenced areas with heavy dependence on public lands. Dependence on public lands ranges from 3 to 72 percent for cattle operations with less than 800 animal units and from 51 to 94 percent for cattle operations with 800 or more animal units. All sheep operations are ewe-lamb operations with dependence on public lands ranging from 8 to 50 percent throughout.

Recreation

Outdoor recreation on BLM-administered lands represents a very small portion of the economy of Nye, Lincoln, and White Pine Counties. The income derived from outdoor recreation on BLM lands is estimated at .12 percent of the income of the three-county region. Hunting by itself accounts for .11 percent of the income.

When other agency and state lands are included, the contribution of outdoor recreation to the three-county economy is about .85 percent (Schell Planning Area Analysis, 1981.)

SOCIAL VALUES

Personal values, such as "rurality, independence and self-determination" are held strongly by many of the residents in the Schell Resource Area. Individuality and the freedom to do what one pleases, when and where one pleases, are highly prized. This view is tied to the feelings about excessive Government regulation, which is seen as limiting personal freedom. (Schell Planning Area Analysis, 1981.) These views are further substantiated in the "Governor's Commission on The Future of Nevada Survey Report of 1980," which indicated that (a) over ninety percent (90%) of White Pine County respondents do not want access reduced to the out-of-doors, and (b) 92 percent of the respondents indicated they would not accept increased Federal regulations that affect their lifestyle. The survey also indicated that out of a list of seventeen (17) possible problems, White Pine County residents ranked "Unemployment/

Economic Depression" first, "Federal Regulations" second, and "Economic Diversification/Lack of Industry" third.

Although ranchers in the area support the concept of multiple-use land management, they feel that grazing (the production of food and fiber) should be the first priority, and strongly oppose the assignment of grazing areas to wilderness preservation, wild horses or other uses that they believe preclude livestock grazing. (Schell Grazing EIS, 1982.)

Several of the ranchers interviewed felt that ultimate wilderness designation would directly conflict with the range program. Their rationale was that the constraints that accompany wilderness designation would preclude future range improvements. Any program that either prohibits or makes the future implementation of range improvements more difficult is seen as a threat to the western cattle industry. In the long term, these constraints are seen as imposing an unwarranted, potentially adverse economic impact on the cattle industry. The Nevada Cattlemen's Association has objected to every WSA in Nevada. One of their stated reasons for objecting to the wilderness program is the potential impact on the range improvement program.

The wilderness program is seen by many area residents as conflicting with some of these basic values and beliefs. Informal discussions during the fall of 1982 with a number of Schell RA residents, as well as with a number of residents of the adjacent Egan RA, indicate that they support the concept of multiple-use management, but many view wilderness as essentially a single-user oriented activity, i.e., recreation. These residents expressed concerns about the perceived impact of wilderness designation on grazing, mining, and some forms of recreation, i.e., off-the-road vehicle activity. They strongly value the relaxed rural social environment, the openness and unspoiled beauty of the natural environment, and consider this combination a favorable environment for raising families. While they see wilderness as preserving those values, they are also vitally concerned about the high rate of unemployment, feel some development is both desirable and necessary to improve the local economy, and

to some extent, are willing to accept a reduction in the quality of their environment in order to increase employment in their community. While recognizing that one impact of gradual growth will be a continual erosion of the close-knit primary group community that they value, they nonetheless feel that the community can accommodate gradual, controlled growth while preserving the rural atmosphere.

There is some support, usually silent, for wilderness. Certain individuals believe that wilderness designation will ensure that future generations will be able to see and enjoy how the land once was, unmarked by man.

Many of the persons contacted informally indicated that known or speculative minerals development potential exists in specific WSAs and, therefore, those areas should not be included in the wilderness program. The WSAs specifically mentioned by this group of respondents included Mt. Grafton, Far South Egans, Table Mountain, Parsnip Peak and Worthington Mountain. A lesser number of respondents saw no conflict with minerals or energy development, if any or all of the WSAs were ultimately designated as wilderness. These individuals point out that the Schell Resource Area includes approximately four million acres. In the opinion of this group of respondents, the remainder of the Schell RA provides numerous other prospecting, mining, or energy development opportunities of equal or better potential than do the WSAs. However, these perceptions appear to be speculative. There is no thorough minerals or energy resource inventory for the Resource Area that would tend to either prove or disprove those perceptions.

A number of respondents, including the majority of teenagers that were involved in informal discussions regarding wilderness at White Pine County High School in the spring of 1982, felt that the greatest conflict with the wilderness program is in the area of motorized recreational activity. However, because of the abundance of public lands in the Resource Area, many of these respondents indicated that similar types of recreational opportunities are readily available on adjacent public lands which are not a part of the wilderness study program.

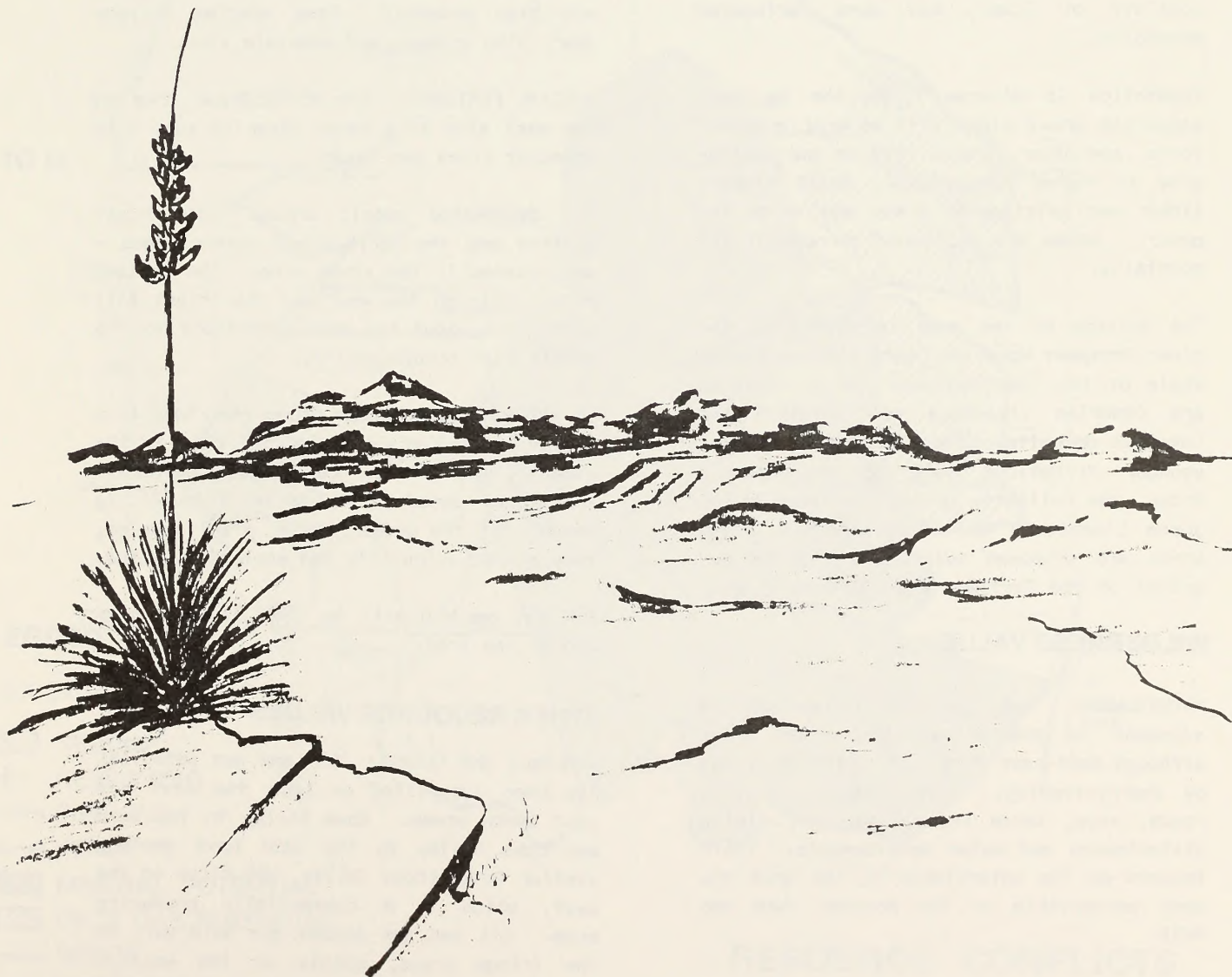
Some of the respondents indicated that designation of certain areas as wilderness publicly mark those specific areas as "something special." The implication of publicly marking these areas would, in the opinion of these respondents, be an increase in out-of-the-area visitors which this group felt was undesirable. Other respondents; however, felt that designation of wilderness areas would be desirable for the simple reason that visitors may be attracted to the area and this would perhaps expand job opportunities in the service sector. The point was made that with the closing of the mine at Ruth, additional job opportunities are desperately needed in the area and if the wilderness program would create additional job opportunities, the community would benefit.

A number of area residents indicated that only those areas whose natural topographic features renders them virtually inaccessible are truly wilderness. According to this group of respondents, these areas do not need wilderness designation for preservation. This group of residents also indicated that formal designation of any wilderness area is not only unnecessary but also counterproductive in the sense that formal designation may, in the long term, attract more visitors and, in that process, almost assure the destruction of the wilderness characteristics the program purports to preserve. Man's imprint on the area may not only become more noticeable, but also may become irreversible.

A very small number of area residents, according to several formal and informal community leaders, have reacted negatively to the wilderness program simply because it is another Federal program that intrudes into the private lives of area residents by placing additional constraints on both access to and use of specific public land areas. These residents view this as another case of a major decision about local public land resources being made by uninformed Federal bureaucrats at the national seat of Government. They object to these "absentee" decisions that affect the traditional and historic use of those lands by area residents.

Both those who support the wilderness program and those who oppose it expressed

cautious uncertainty about the program and its future. They feel that future political administrations or congressional mandates may alter initial wilderness management policies and supporting regulations. They cite other natural resource management policies and regulations, specifically range management, that have fluctuated from political administration to political administration to the detriment, in their view, of those user groups who depend on access to and use of public lands for their livelihood. This sense of uncertainty finds expression, to some extent, in opposition to the wilderness program.



WILDERNESS STUDY AREAS

The following narratives describe specific environmental features of each of the eight WSA's. Additional information is contained in the Schell Wilderness Technical Report, available upon request from the Ely District BLM Office.

Mount Grafton

The Mount Grafton wilderness study area is located about 50 miles south of Ely, in the Schell Creek Range. This WSA contains Mount Grafton (elevation 10,990 feet), which is the highest peak on BLM-administered land in Nevada. In the south half, the topography consists of a single north-south ridge line, but includes a large amount of benchland as well. In the north half, the topography consists of lower, but more variegated mountains.

Vegetation is diverse. On the benches, sagebrush grows along with several grasses, forbs, and other shrubs. Pinyon and juniper grow at higher elevations. Still higher, limber and bristlecone pines and white fir occur. Aspen are scattered throughout the mountains.

The geology of the area is mostly of the older Prospect Mountain Quartzite and Pioche Shale of the Cambrian Age. Also included are Cambrian limestone and dolomite and Laketown dolomite. The north end includes younger formations such as the Pogonip Group, the Guilmette Group, Chainman Shale, Joana Limestone, and Pilot Shale. Bench areas are composed mainly of alluvium and gravel of the Tertiary and Quaternary Ages.

WILDERNESS VALUES

NATURALNESS: Many manmade intrusions lie adjacent to and within the study area, although most have been technically excluded by cherrystemming. These features include roads, ways, fence lines, seedings, mining disturbances and water developments. Their impacts on the naturalness of the area are most perceptible on the benches (see map 3-2).

Outside sights and sounds include

occasional vehicular traffic along cherry-stemmed routes by ranchers, hunters and miners. Mining activities also cause sporadic disturbances because of heavy equipment use. Again, these disturbances are in almost every case restricted to the benches.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: The size of the area (73,216 acres), very good topographic and vegetative screening provide outstanding opportunities for solitude. Several side canyons serve additionally as "secluded spots."

An outstanding diversity of recreation opportunities exist in the study area. A large number of plant and animal species provide excellent opportunities for nature study. Good opportunities for hiking, backpacking, horseback riding, and hunting are also present. Game species include deer, blue grouse, and mountain lion.

SPECIAL FEATURES: The North Creek area on the east side is a large riparian zone with abundant flora and fauna.

Two designated scenic areas - the Mount Grafton and the North Creek scenic areas - are located in the study area. The exposed rock cliffs on the west and the bright fall color throughout the area contribute to the area's high scenic quality.

Bristlecone pines occur along the ridge line and in several draws. Several occur in the classic, gnarled configuration. The oldest individual dated is 1,748 years old. As members of the oldest living plant species, they are of scientific and ecological value.

Elk may periodically be seen in the north end of the area.

OTHER RESOURCE VALUES

MINERALS AND ENERGY: Oil and gas potential has been identified on both the east and west bench areas. Cave Valley to the west and Lake Valley to the east have geology similar to Railroad Valley, 100 miles to the west, which is a commercially producing area. Oil and gas leases are held only on the fringe areas, mainly on the western bench (see Map 3-10).

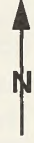
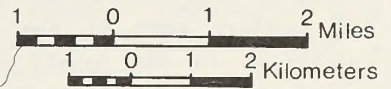
R.64 E.

R.65 E.

T.11 N.

T.10 N.

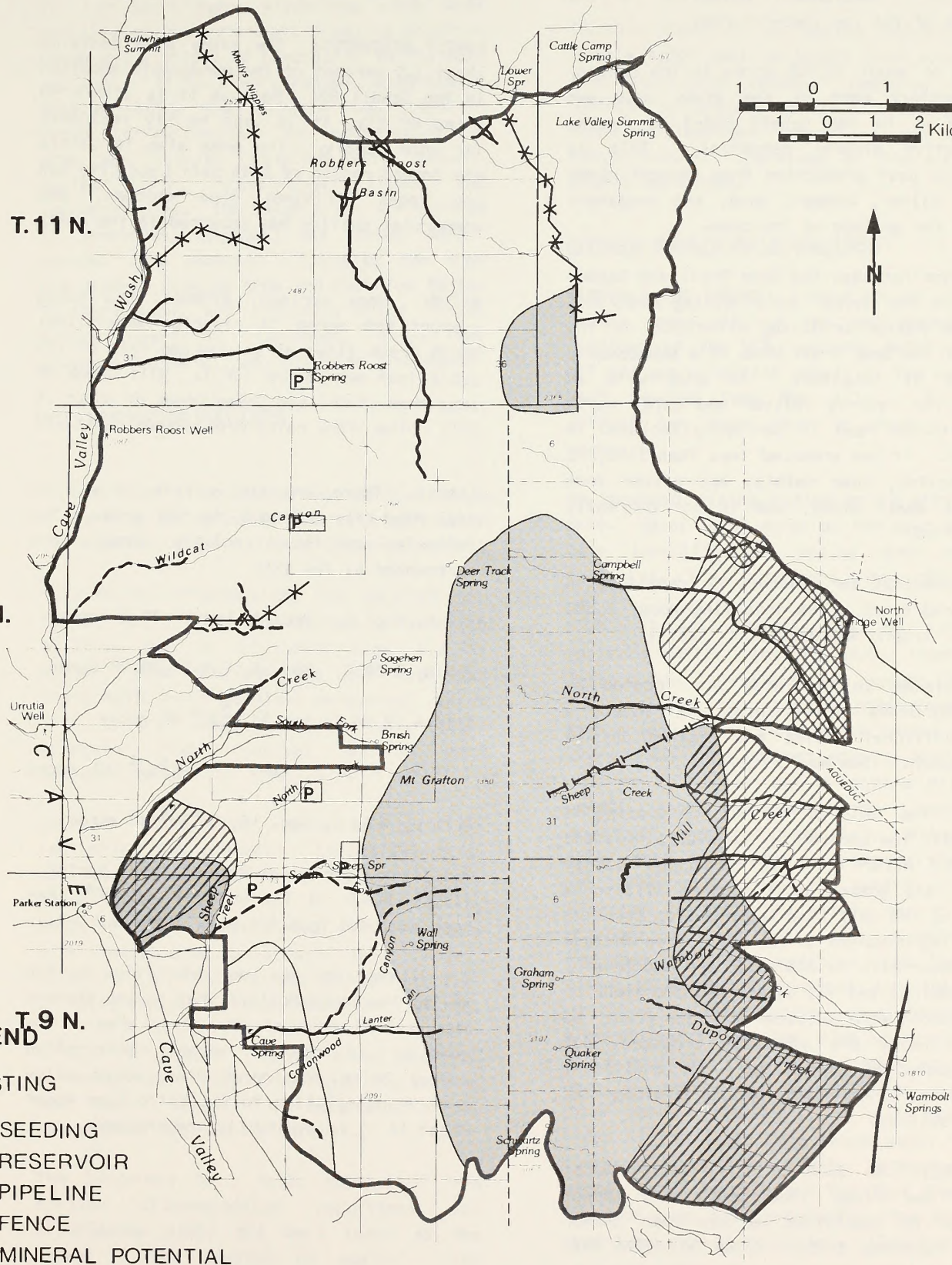
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LEGEND

EXISTING

- SEEDING
- RESERVOIR
- PIPELINE
- FENCE
- MINERAL POTENTIAL
- OIL & GAS POTENTIAL
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND



**RESOURCE CONFLICTS
MT. GRAFTON NV-040-169**

There are warm springs with temperatures of 65-70° F. located just outside the southeast boundary. Development potential is low because of the low temperatures.

A zone of about 18,000 acres in the central and southern part of the study area was identified in the Schell URA-3 as having speculative mineral potential. This is based on past production from several mines (gold, silver, copper, lead, and tungsten) and on the geology of the zone.

This zone includes the Deer Trail and Geyser mines in the Geyser Ranch Mining District, and the Patterson Mining District. In the area of the Deer Trail Mine is a subeconomic reserve of tungsten. An area with an identified reserve (silver and gold) north of Patterson Pass is partially included in the WSA. It has produced less than \$100,000 in tungsten, base metals, and silver from several small mines, and is not currently producing.

Some potential for minerals is identified in scattered bench areas totalling about 2,500 acres. (Fugro National, Inc. 1981.)

Most claims in the area are located on existing mines in the mining districts. A few additional claims are located on the west bench. (See Map 3-10).

RANGE: The value of the WSA for grazing is generally low because of the mountainous and forested nature of the landscape. Only cattle are grazed in the three allotments covering the unit (see Table 3-3). Existing range improvements in the study area include five reservoirs in disrepair and portions of two seedings and two aqueducts. Portions of four fences were excluded from the area. No new projects are currently proposed, but good potential exists for some additional vegetative conversions, spring developments, and pipelines.

WILDLIFE: An area of about 4,800 acres along the ridge line south from Mount Grafton is identified as key deer summer range (see Map 3-18). Other wildlife that range in the area include elk, mountain lions, raptors, songbirds, common small mammals and reptiles. North Creek has rainbow, brook, and a cutthroat hybrid trout

which were stocked many years ago. Geyser Creek has rainbow and brook trout which were also stocked many years ago.

FOREST RESOURCES: The study area contains about 3.5 percent of the manageable woodland in the Schell RA. Because it is within 50 miles of Ely, it is used by Ely residents for wood supply. The area also is within the demand region of both Salt Lake City and Las Vegas Christmas tree cutters, and commercial cutting has occurred in the past.

WATER: Many springs, streams, and seeps support 868 acres of riparian vegetation. North Creek flows at an average rate of .75 cubic feet per second (CFS). Mill Creek at less than .5 CFS and Sheep Creek at about .5 CFS. Other flow rates are unknown.

LANDS: There are six private parcels of land that lie adjacent to the area. The following additional private parcels are surrounded by the WSA:

T 9 N, R 65 E, Sec. 4, Lot 1 39.9 acres

T 9 N, R 64 E, Sec. 4, Lot 2 39.98 acres

T 10 N, R 64 E, Sec. 34, ²SE⁴ 80 acres

T 10 N, R 64 E, Sec. 27, SE⁴SW⁴ 40 acres

T 10 N, R 64 E, Sec. 10, SW⁴NW⁴ 40 acres

One private parcel at Robbers Roost Spring (T 11 N, R 64 E, Sec. 33, NE⁴SE⁴) has been excluded from the WSA. (See Map 3-2.)

A rail corridor has been identified by the White Pine Power Project that passes through the western edge of the study area. The corridor is one of several alternative routes being considered that would allow coal transportation to the White Pine Power Plant if it is eventually constructed.

Far South Egans

The Far South Egans wilderness study area consists of a north-south trending mountain range and a fringe of benchlands to the east and west. It is a very rugged, mountainous area extending from Shingle Pass south to Trough Spring Canyon. The mountains of the area are heavily forested with pinyon-juniper, fir, bristlecone, limber and ponderosa pine. The bench areas are covered by sagebrush, grasses, and common desert shrubs. The geologic origins of the area are diverse ranging from the Cambrian to the Tertiary Ages, and including Pilot Shale; Eureka Quartzite; Laketown, Sevy, and Simonson Dolomite; and Guilmette Limestone.

WILDERNESS VALUES

NATURALNESS: The mountainous portion is in a nearly pristine condition. The west bench is impacted by several cherrystemmed routes.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: This unit offers outstanding solitude due to its good size (53,224 acres), good configuration and excellent topographic and vegetative screening. Thick tree cover, broad mountains and large, irregular rock outcrops provide many secluded spots.

Several noteworthy opportunities for recreation are present. Extensive hiking can be done in this scenic area. Outstanding spelunking is provided by Whipple Cave, an extensive limestone cave with unusual cave formations. Deer hunting, nature study, rock climbing and technical climbing can all be undertaken in this unit.

SPECIAL FEATURES: A large, mixed stand of ponderosa and bristlecone pine is located near Sawmill Canyon. The occurrence of the two species together is unusual.

The ponderosa is a relic population from earlier climatological conditions and bristlecone pines are well known as the oldest living species on earth. The ponderosa pine occupy about 600 acres, the bristlecone pine are scattered over approximately half this acreage.

An historic logging site with remnants of a sawmill exists in Sawmill Canyon.

Whipple Cave is an active solution cave nearly 1,000 feet in length with scientific and educational values. Features of note include an unusual double-sink entrance, a massive flowstone formation, and a very large column. Portions of the cave are highly decorated.

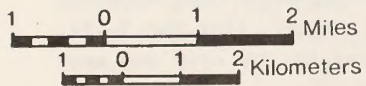
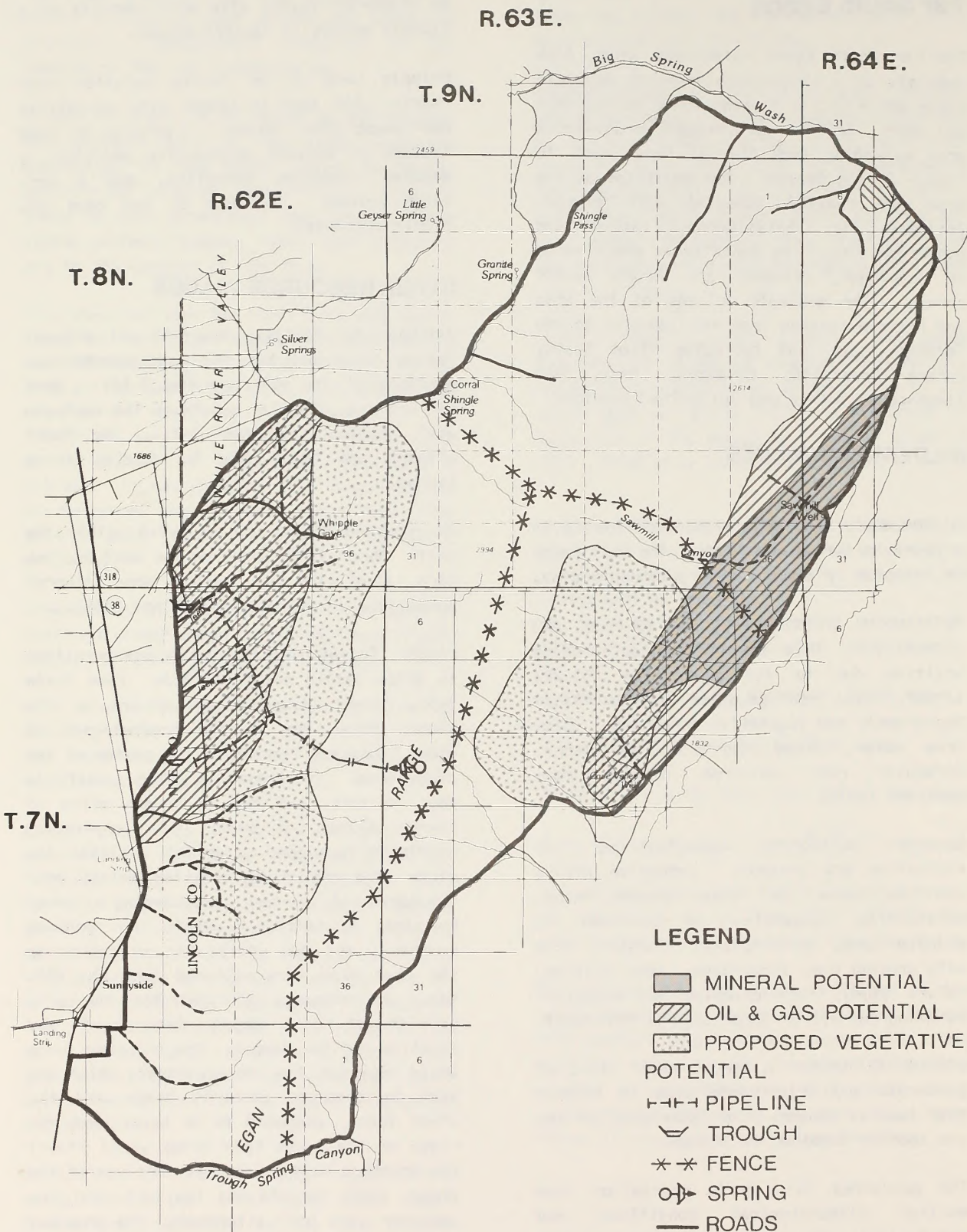
OTHER RESOURCE VALUES

MINERALS AND ENERGY: About 35 oil and gas leases cover all but the most mountainous portions of the WSA (see Map 3-11). Some oil and gas potential exists on the east and west benches (see Map 3-3). No known attempt has been made to develop these leases.

No recorded mining claims exist within the unit. About 3,500 acres on the east benches were identified as having some mineral potential. (Fugro National, Inc. 1981).

RANGE: Two allotments used by one permittee to graze cattle cover the WSA. (See Table 3-3). Most livestock use occurs on the lower slopes due to the predominance of steep, forested terrain in the center of the study area. The present grazing quality is poor to fair, but the 15 square miles of lower slopes proposed for vegetative treatment have good potential. Within the study area one short pipeline exists near the northwest boundary, one seeding of about 80 acres is partially within the northern boundary, and two wells with windmills on the east side were excluded from the WSA. Range improvements proposed for the area consist of one spring development and pipeline and two fences. One proposed fence would separate the two allotments which are each in separate resource areas and the other fence, proposed to be built down the ridge of the South Egan Range would bisect the southern most allotment. Because of the steep, rocky terrain and the fact that one operator uses both allotments, the proposed fences may not be necessary. (See Map 3-3).

WILDLIFE: This unit provides 44,200 acres of year-long elk range and 42,800 acres of mountain lion winter range. (See Map 3-19). The low forested areas on the east and west



LEGEND

- MINERAL POTENTIAL
- OIL & GAS POTENTIAL
- PROPOSED VEGETATIVE TREATMENT POTENTIAL
- PIPELINE
- TROUGH
- FENCE
- SPRING
- ROADS
- NOTICEABLE WAYS
- SEEDING

benches provide nesting habitat for ferruginous hawks and sage grouse strutting grounds.

FOREST RESOURCES: The study area possesses 1.9 percent of the manageable woodland in the Schell RA. The north end of the WSA has received unpermitted fuelwood cutting in the past.

LANDS: No private land exists adjacent to or within the WSA.

WATER: The only perennial surface water is at Shingle Spring located along the west boundary. Less than ten acres of riparian vegetation exist in the area.

Fortification Range

The Fortification Range consists of a rocky ridgeline bisected in the north and south by canyons, and associated bench and valley areas. The western third and southern quarter are valley bottom and rolling hills. The remainder of the WSA blends into more dissected, tree covered hills in the south to treeless ridges of eroded volcanic tuff in the north. These ridges are highly scenic with their varied and interesting rock formations.

The geology of the area is almost entirely undifferentiated volcanic rocks and tuffs and tuffaceous sediments, all of the Tertiary Age. Underlying this are older Scotty Wash Quartzite formations, along with Permian and Pennsylvanian limestone and sandstone.

WILDERNESS VALUES

NATURALNESS: The WSA is in a natural condition. The few roads and range improvements within it have been cherrystemmed out.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: This unit offers good opportunities for solitude due to its size, (41,615 acres), good configuration, relatively dense forest cover and mountainous terrain.

Several opportunities for recreation such as

hiking, camping, rock scrambling and nature study are present in this area. Technical climbing on the cliffs would be dangerous due to the crumbly nature of the rock. The presence of raptors, antelope, wild horses and mountain lions makes for good nature study opportunities. Camping and hiking are enhanced by the presence of scattered springs, but can be adversely affected along the ridgelines due to rugged terrain.

SPECIAL FEATURES: This area has some of the most scenic rock formations in the district.

There are populations of golden eagles and other raptors.

Small but regenerating stands of ponderosa pines provide a seed source and a source of genetic diversity.

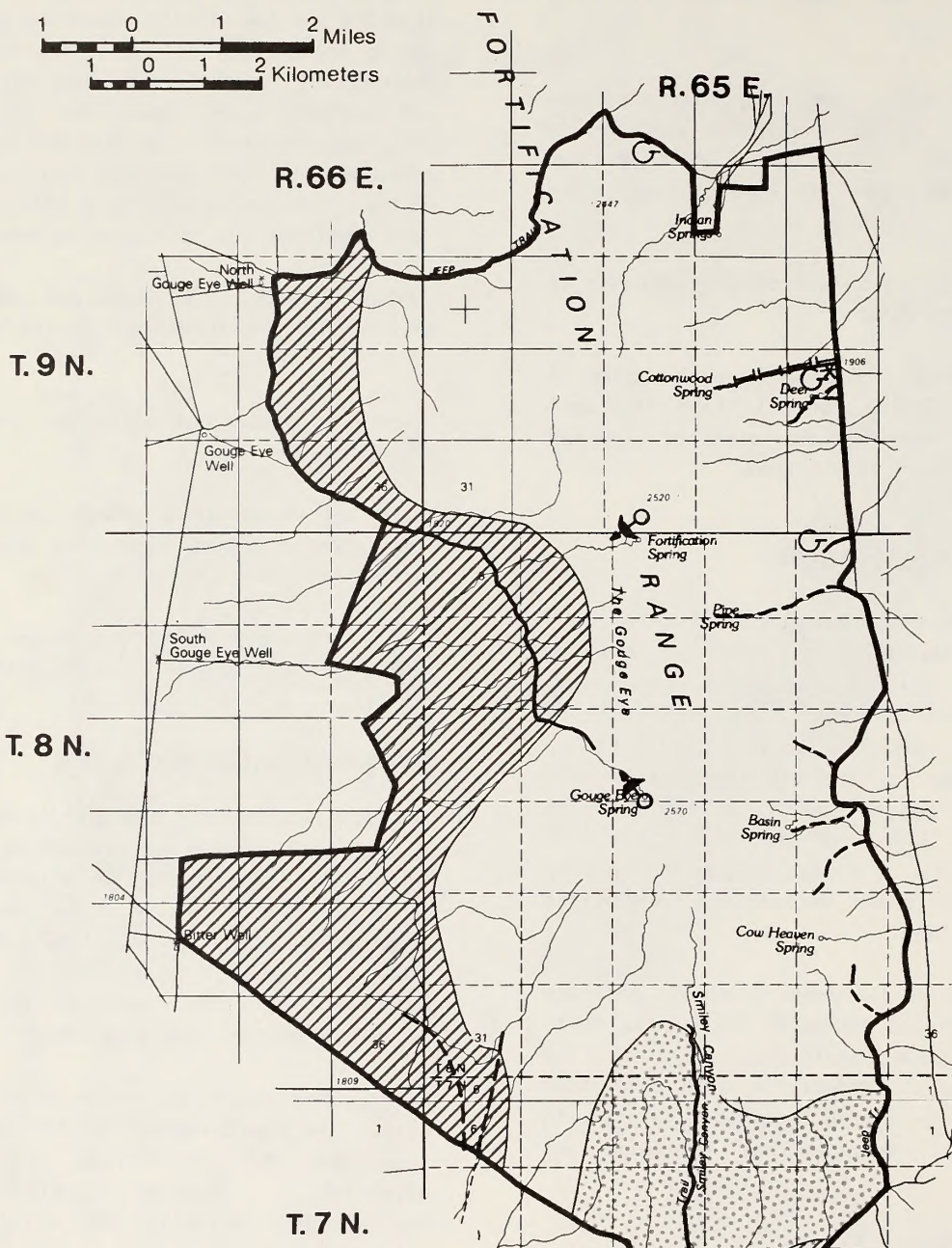
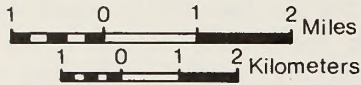
Wild horses range on both the east and west benches, and traverse the mountain range itself.

OTHER RESOURCE VALUES









MINERALS AND ENERGY: The unit is completely covered with 24 oil and gas leases (see Map 3-12). There has been some seismic testing on the western valley portions. No development work has occurred. The Fugro mineral inventory identified oil and gas potential in the western valley and benchland portion (see Map 3-4).

No recorded mining claims exist within the unit. The Fugro report and the Schell URA show the WSA as having low mineral potential. However, public comment indicates that potential does exist.

RANGE: Most of the WSA is covered by three allotments with a small portion covered by a fourth (see Table 3-3). Sheep and cattle are grazed in two allotments and cattle alone are grazed in the other two allotments. Much of the interior of the study area is too steep for use by livestock and most grazing use occurs in a few of the canyons and along the western edge. The present grazing quality is fair to poor. The southern tip of the unit has been included in a much larger area proposed for vegetative manipulation and the area known as the



LEGEND

-  OIL & GAS POTENTIAL
-  PROPOSED VEGETATIVE TREATMENT EXISTING
-  PIPELINE
-  FENCE
-  SPRING
-  CORRAL
-  ROADS
-  NOTICEABLE WAYS

**RESOURCE CONFLICTS
FORTIFICATION RANGE NV-040-177**

Gouge Eye has good potential for conversion of pinyon juniper to brush/grass rangeland. The few range improvements within the area (two fences, a pipeline, a few small corrals) have been excluded from the WSA by adjusting the boundary. Potential to develop springs within the study area is high. Water from these sources could be piped to areas outside the unit boundaries to help facilitate livestock distribution or provide water in areas of land treatment. The only structural range improvement proposed at this time is a well on the west side, in the Gouge Eye area, which the operator in that allotment wishes to have drilled. (See Map 3-4).

Two springs in the Gouge Eye have been recommended for development for wild horses.

WILDLIFE: This unit offers good nesting habitat for raptors. The deer herd using this area has declined 80% over the last ten years. Bighorn sheep may be reintroduced to the area although it is a low priority. Most of the area is good mountain lion winter range (see Map 3-20).

FOREST RESOURCE: The study area possesses 2.5 percent of the manageable woodland in Schell RA. Christmas tree cuts were made during the 1960s on the northeast edge of the unit. The east side is used by out-of-state commercial pine nut harvesters.

LANDS: No private land exists within the WSA. One private parcel at Indian Springs forms the northeast boundary.

WATER: About 17 springs are scattered throughout the WSA. The western side is the drier. A total of 131 riparian acres exist in the area.

Table Mountain

The Table Mountain area is rolling foothills with portions of a high plateau. The higher elevations typically have a good variety of open areas. Dense pinyon-juniper and mahogany cover the hilly southern portions.

Surface geology of the area is almost entirely undifferentiated volcanic rocks and

tuffaceous sediments of the Tertiary Age. This is almost entirely underlain by Paleozoic rocks. These show through in the northern tip, and include Laketown Dolomite, Eureka Quartzite, Ely Spring Dolomite, and rocks of the Pogonip Group.

WILDERNESS VALUES

NATURALNESS: Generally all human imprints have been excluded from the area. Several features just outside of the WSA, however, affect the perceived naturalness of the immediately adjacent area.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: Very dense vegetation and good topographic screening in the south half of the area provide outstanding opportunities for solitude, even though the configuration of the area detracts somewhat from these opportunities.

Several recreational activities are possible. Deer and upland game hunting are possible and are of fair quality. Hiking and camping opportunities are good in the table (central) area but are limited by the dense vegetation throughout the southern part of the unit. Nature study varies from good in the table area to fair elsewhere.

SPECIAL FEATURES: Bald eagles roost in the area during winter.

OTHER RESOURCE VALUES

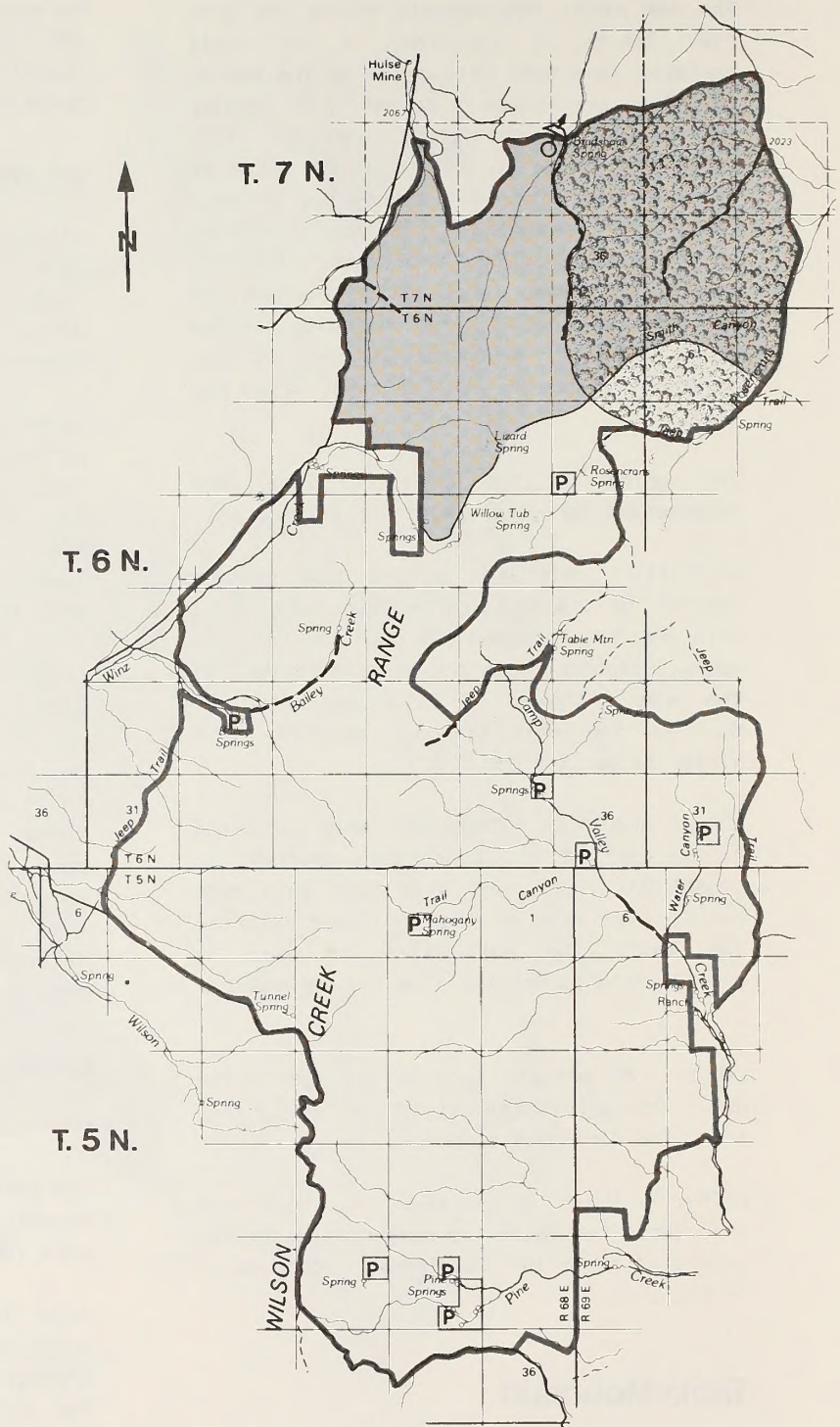
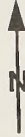
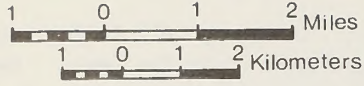
MINERALS AND ENERGY:

The entire WSA is covered by 14 oil and gas leases. No potential for oil and gas has been identified in the mineral inventories.








About 120 mining claims are located at the north end of the WSA (see Map 3-12). The producing Atlanta Mine lies just north of the WSA. The northern part of the unit is identified as having speculative mineral potential (gold, silver, and uranium primarily) based on close proximity of and geology similar to the Atlanta Mine. A substantial amount of industry interest is focused here as evidenced by comments received during the inventory and study phases. (See Map 3-5.)

R.68 E.

R.69 E.



LEGEND

-  MINERAL POTENTIAL
-  PROPOSED GREENWOOD AND CHRISTMAS TREE CUTTING AREAS
-  ROADS
-  NOTICEABLE WAYS
-  PRIVATE LAND
-  POTENTIAL
-  SPRING

RESOURCE CONFLICTS
TABLE MOUNTAIN NV-040-197

RANGE: The importance of grazing within this WSA is low due to hilly terrain and low value forage plants. The Wilson Creek Allotment covers this unit (see Table 3-3). No range improvements exist within the study area. Developed springs on the boundaries have been excluded.

Potential exists to develop a few springs within the study area. The development of Bradshaw Spring, just inside the WSA boundary, is proposed. A pipeline from this spring would extend outside of the WSA. No vegetative treatments are planned but parts of the study area to the west and north are suitable for conversion of pinyon-juniper. (See Map 3-5).

WILDLIFE: About 16,200 acres of this unit have been identified as crucial deer summer range (see Map 3-21). Pinyon-juniper encroachment is a problem for wildlife in this WSA. The deerherd in this area has declined 80% over the last ten years. A small chaining and seeding has been proposed in the Horsethief Habitat Management Plan as well as a meadow restoration. These are not high priority projects.

About 204 acres of riparian habitat exist throughout the unit.

FOREST RESOURCES: The study area possesses 4 percent of the manageable woodland in the Schell RA. Considerable Christmas tree harvesting occurred during the 1960s. An area in the northeast portion is recommended for greenwood and Christmas tree cutting (see Map 3-5).



LANDS: There are 11 parcels of private land along the WSA boundary. A number of scattered parcels totalling 480 acres are totally surrounded by the WSA:

T 6 N, R 68 E, sec. 12	
SW ⁴ SW ⁴	40 acres
sec. 29	
SW ⁴ NE ⁴	40 acres
sec. 36	
SE ⁴ SW ⁴	40 acres
T 6 N, R 69 E, sec. 31	
NW ⁴ SE ⁴	40 acres
T 5 N, R 68 E, sec. 2	
NE ⁴ SW ⁴	40 acres
sec. 27	
SE ⁴ NE ⁴	40 acres
sec. 26	
SW ⁴ NE ⁴	
E ² SE ⁴	
SW ⁴ SE ⁴ .	240 acres

WATER: This WSA has not undergone a stream inventory. However, there are several springs and streams with undetermined water quality in the area.

White Rock Range

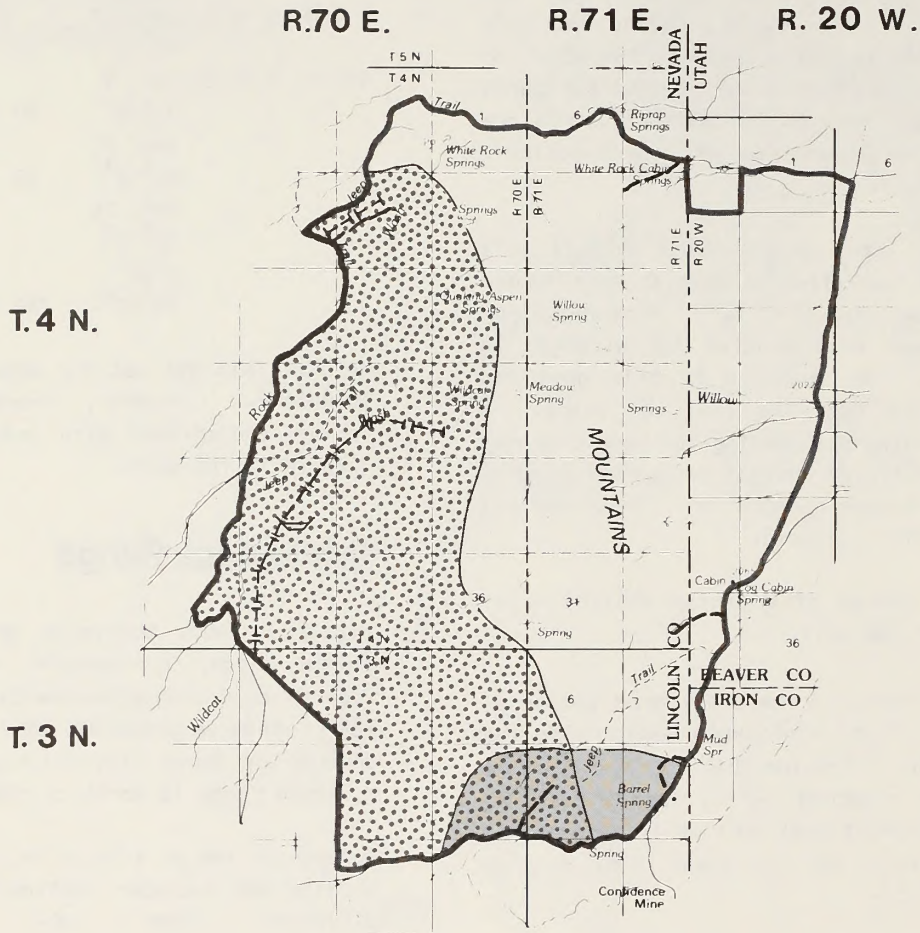
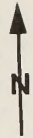
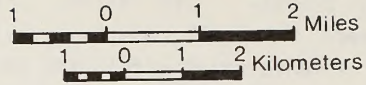
The White Rock Mountains are generally a single ridge, north-south trending range located on the Utah/Nevada State line. The WSA is made up primarily of lower mountains covered by dense pinyon-juniper. The main mountain range is north of the unit.







Geology of the area is of relatively younger origins and includes Tertiary or Quaternary alluvium, older lake beds, and undifferentiated volcanic rocks.

WILDERNESS VALUES

NATURALNESS: The area is in a highly natural condition. One developed spring and a few minor cherrystems are the only unnatural features.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: This unit offers outstanding solitude due to its rectangular configuration, size (23,625 acres), good topographic and excellent vegetative screening. Secluded spots are easy to find due to the dense vegetation and lack of specific points which attract users.



-  MINERAL POTENTIAL
-  PROPOSED VEGETATIVE TREATMENT POTENTIAL
-  PIPELINE
-  TROUGH
-  ROADS
-  NOTICEABLE WAYS

**RESOURCE CONFLICTS
WHITE ROCK RANGE NV-040-202**

Although hiking, camping, backpacking, hunting and nature study are possible, the continuous cover of pinyon-juniper limits these activities. The area has numerous springs throughout which contribute to these opportunities.

SPECIAL FEATURES: No special features were identified.

OTHER RESOURCE VALUES

MINERALS AND ENERGY: The Nevada portion of the unit is blanketed by about eight oil and gas leases. No leases exist on the Utah side (see Map 3-14.) No oil and gas potential was identified for this area and no attempt has been made to develop these leases.

Some potential may exist for geothermal resources, but there are no known warm springs and the area is quite remote. The USGS has withdrawn an earlier geothermal potential designation.

About 1,300 acres in the southern end were identified as having a speculative mineral resource (primarily gold and silver). (See Map 3-6.) One mining claim was staked in the WSA near Barrel Spring. The Inactive Confidence Mine lies within 1 1/2 miles of the southern boundary.

RANGE: The grazing quality for this area is low due to the steep rocky terrain and fair to poor forage value. Only cattle are grazed in this portion of the Wilson Creek allotment which covers the unit (see Table 3-3). Potential exists to develop springs in the area. Two projects are currently proposed, one is the development of Wildcat Spring and construction of a pipeline to run southwest for about four miles and the construction of a reservoir and pipeline in White Rock Springs Wash.

Pinyon-juniper encroachment is a problem in the study area, contributing to the general lack of forage. About two sections, or 1,300 acres, of pinyon-juniper on the western boundary have marginal potential for vegetative treatment (see Map 3-6).

WILDLIFE: Most of the WSA, about 18,200 acres was identified as crucial deer summer range (see Map 3-22). The deerherd in this

area has declined 80 percent over the last ten years. An occasional elk transits the area. Other species common to the region occur here. About 107 riparian acres occur in the area, concentrated mainly in the northern end.

The development of Wildcat Spring is also desired for wildlife habitat purposes.

FOREST RESOURCES: The study area possesses 1 percent of the manageable woodland in the Schell RA. Residents of Pioche, Ursine and Utah collect firewood here. Some Christmas tree sales occurred in the area during the early 1960s.

LANDS: No private land exists in the area or along the boundary. One section of state land in Utah touches the northeastern boundary.

WATER: Numerous springs are scattered throughout the WSA providing some surface water.

Parsnip Peak

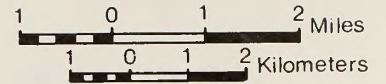
The Parsnip Peak wilderness study area includes in its northern two-thirds a broad, fairly gentle portion of the Wilson Creek Range (maximum elevation 8,916 feet). The southern third includes a portion of Patterson Wash. The ecosystem varies from mixed conifer forest and pinyon-juniper woodland in the mountains to sagebrush and saltbush-greasewood communities in the valley portions. The geological composition of the mountains is fairly simple, composed mainly of undifferentiated volcanic rocks and older alluvium, with some tuffs and tuffaceous sediments, all from the Tertiary Period. Underlying these is a more complicated geology of Paleozoic sediments. The valley portion includes a Pliocene lake bed.

WILDERNESS VALUES

NATURALNESS: The core of the study area is almost entirely free of any influence of man. Along the periphery, several manmade features are in evidence in varying degrees. On the north end, a large burn has been reseeded with non-native grass species, but because it was aerially reseeded, is not

R.68E.

T.5N.



R.69E.

T.4N.

MOUNT
WILSON

BURN

SEEDING

T.3N.

T.2N.

R.67E.









T.1N.

WILSON

CREEK

RANGE

LEGEND

-  MINERAL POTENTIAL
-  OIL & GAS POTENTIAL
-  PROPOSED VEGETATIVE TREATMENT
-  PROPOSED PINE NUT INTENSIVE MANAGEMENT AREA
-  EXISTING FENCE
-  ROADS
-  NOTICEABLE WAYS
-  PRIVATE LAND

RESOURCE CONFLICTS
PARSNIP PEAK NV-040-206

significantly noticeable as an imprint of man. A fence surrounds the burn, but it too detracts little from the apparent naturalness of the area.

On the west side of the area, a dormant, open pit perlite mine and associated impacts detract from the perceived naturalness of the immediately adjacent land.

There are several cherrystemmed routes in the area, most of which have very limited effect on the overall naturalness of the area. An exception is in the southern, valley portion where several substantial routes receive very little screening and so influence perceived naturalness. (See Map 3-7).

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND PRIMITIVE RECREATION: The opportunities for solitude in the study area are outstanding. Although the mountains are not exceptionally rugged, they are broad and diverse. Very dense vegetation in all but the northern mountains creates additional screening. Outside sights and sounds do not affect these opportunities except in the valley area and in the immediate vicinity of the impacts mentioned above. Because so little screening of any sort is available in the valley portion, solitude opportunities are of lower quality.

Many opportunities for recreation are present in the area. Backpacking and camping opportunities are abundant, and are enhanced by many campsites, plenty of fuelwood, and several springs (especially in the burn area), although water quality is unknown. The varied landscape and ecosystem make backpacking an enjoyable experience. Opportunities are somewhat limited by very thick vegetation which inhibits backpacking, especially on the east side.

The difficulty of access is the main reason that much of the area is in such a natural condition, and it is this characteristic that makes the area an excellent subject for nature study. Neither man nor livestock has impacted the high country around Parsnip Peak. Vegetation is in a nearly pristine condition and includes some unusual features, such as a ponderosa pine/gambel oak stand and a ponderosa pine/aspens stand.

Deer, raptors, bobcats, mountain lions, and an occasional antelope are among the animal species present.

Deer, sage grouse, blue grouse and mountain lion hunting opportunities exist. Good opportunities for rock climbing are present, and are appropriate for a wide range of skill levels.

SPECIAL FEATURES: The Parsnip Peak study area is rich in archaeological resources. The Mount Wilson Burn revealed a potential National Register District.

Most of the study area has very high scenic quality. Spectacular fall color provided by aspen and several large rock outcrops contribute to the high scenic rating.

The mixed ponderosa stands are valuable as a seed source and as a source of genetic diversity. The gambel oak stand is one of the westernmost occurrences known.

An Apache Tears rockhounding area is located on the southeast edge of the area.

OTHER RESOURCE VALUES

ENERGY AND MINERALS: Over 50 oil and gas leases cover all but about 6,500 acres of the study area. There has been no drilling in the area, but potential does exist. The valley and lower bench areas are the most likely locations for oil and gas traps (see Maps 3-7 and 3-15).

More than 50 mining claims are located in the study area. Most of these are in the vicinity of an old perlite mine in T 3 N, R 68 E, sec. 16. Large deposits (an estimated 9,000,000 tons) of perlite remain but are classified as submarginal reserves because of their great distance from markets, and because of much more suitably located and immense reserves in New Mexico and Arizona. Based on the presence of this resource, the BLM has identified an additional area of speculative and high potential that includes 22,475 acres in the study area.

Additional potential for locatable minerals exists in the Lake Valley portion of the area (see Map 3-7).

Potential has been indicated by the mining industry for silver, zeolite, borate, lithium and other salts.

RANGE: The entire study area falls within the Wilson Creek Allotment. This part of the allotment is grazed only by cattle (see Table 3-3). Although grazing quality varies from poor to very good, this study area has the highest value for grazing of all eight WSA's primarily because of the 1974 Mt. Wilson Burn on the north end. In addition, conversion of approximately 50 sections of high potential pinyon-juniper woodland and sagebrush benchland to more palatable forage species has been proposed.

Only the Wilson Seeding and the seeding fence occur within the study area boundary (see Map 3-1). Other range improvements consisting of two pipelines, one fence, and one spring development have been cherry-stemmed out of the area boundary. Potential for development of the 20 or more springs that exist within the WSA is high. The proposed structural range improvements include the construction of pasture fences within the burn and development and fencing of several springs.

WILDLIFE: The study area includes about 15,000 acres of key deer range, and about 62,000 acres of important mountain lion range (see Map 3-23). The deerherd in this area has declined 80% in the last ten years. The eastern third of the unit has the most potential for pinyon-juniper conversion (see Map 3-7). Other species include antelope, raptors, common songbirds, small mammals, and reptiles. About 764 riparian acres are located in this WSA.

Pinyon-juniper encroachment is viewed as a problem for wildlife in this area, and three projects (chain and seed) have been proposed as part of the Horsethief Habitat Management Plan.

FOREST RESOURCES: The Parsnip Peak study area contains 5.4 percent of the manageable woodland of the Schell RA. The unit is used by residents of Pioche and surrounding ranches for fuel wood and Christmas tree cutting. It is also within the demand range of commercial Christmas tree cutters in Las

Vegas. The Wilson Burn in the northern portion of the study area contains considerable standing timber that is easily accessible and harvestable, although its commercial value will be lost in about five years due to rot. Commercial pine nut collecting also occurs in the area.

LANDS: Five parcels of private land totalling 240 acres without road access occur in the study area:

T 4 N, R 68 E, Sec. 4	
SE ⁴ NE ⁴	40 acres
Sec. 3	
NW ⁴ SW ⁴	40 acres
Sec. 14	
N ² SE ⁴	80 acres
Sec. 26	
NE ⁴ SE ⁴	40 acres
Sec. 25	
SW ⁴ NW ⁴	40 acres

Two 40-acre parcels of private land with roaded access exist in the area, and five parcels of private land totalling 240 acres lie adjacent to the WSA.

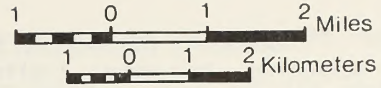
Worthington Mountains

This wilderness study area consists of a narrow north-south trending mountain range and its associated bench and valley areas to the east and west. The Worthington Mountains are an extremely rugged single ridge range made up of "every formation from the Ordovician Group to an unnamed Mississippian limestone unit, with the younger rocks occurring at the southern end." (Worthington Mountains G-E-M, p. 6). Several limestone formations and limestone caves make the area special.

WILDERNESS VALUES

NATURALNESS: Most manmade features have been excluded from the area.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND RECREATION: This area offers good opportunities for solitude. The size of the area is 47,633 acres. Topographic screening in the mountains is fair, but is limited by the narrow, single ridge character of the range. In the bench and valley portions, which



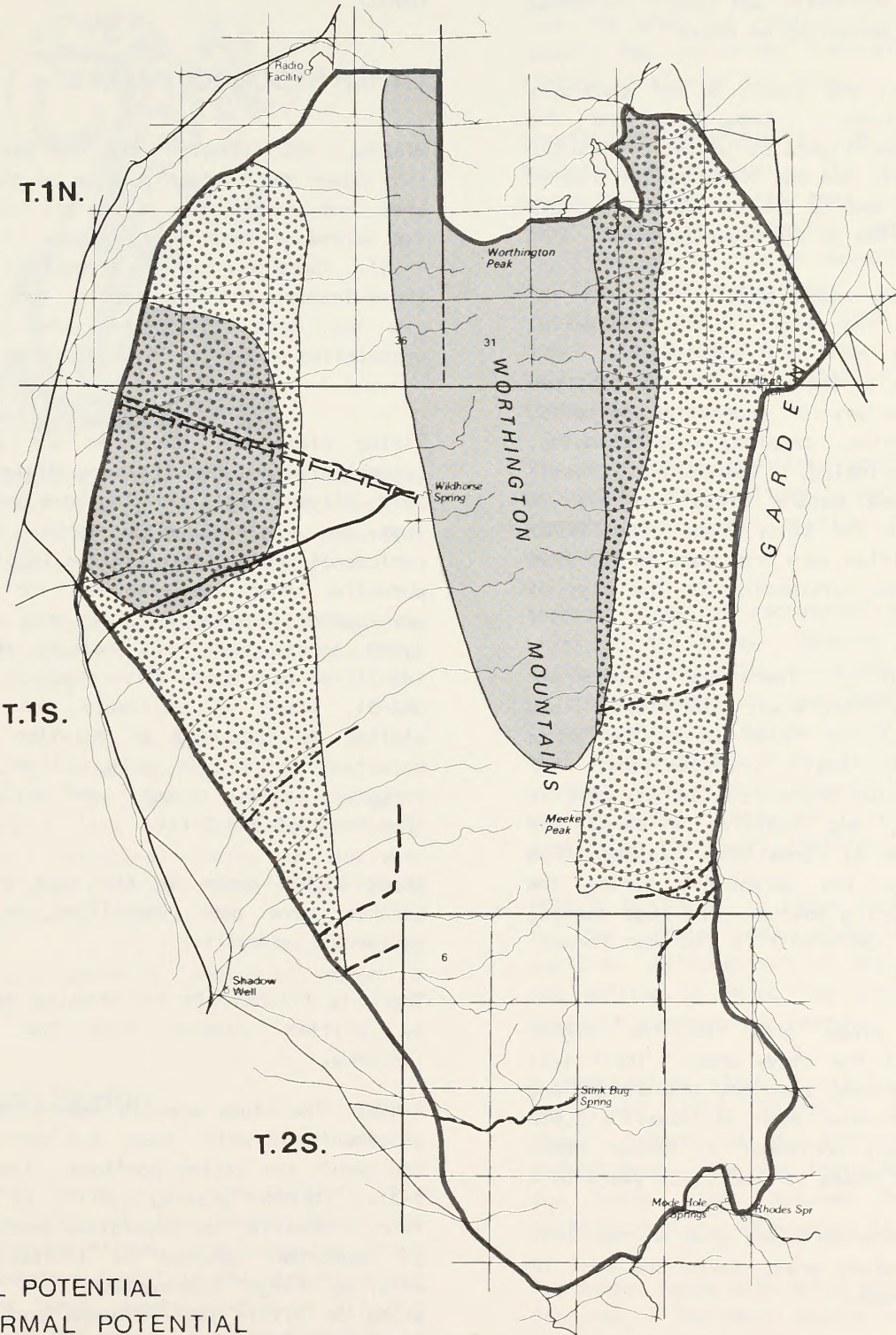
R.56E.

R.57E.



T.1N.

T.1S.


T.2S.




LEGEND


-  MINERAL POTENTIAL
-  GEOTHERMAL POTENTIAL


PROPOSED

 PIPELINE

EXISTING

 PIPELINE

 ROADS

 NOTICEABLE WAYS

**RESOURCE CONFLICTS
WORTHINGTON MOUNTAINS NV-040-242**

comprise over 50 percent of the area, topographic screening is very limited. Vegetative screening varies greatly, but is generally poor. The mountains generally support only sparse, scattered stands of piñon pine, juniper, and bristlecone pine. Only in the northeast can spotty instances of effective screening be found.

Outside sights and sounds do not generally affect solitude. Exceptions are the occasional overflights by United States Air Force aircraft, and the disturbances created in the north end by the on-again off-again mining operation at the Freiburg Mine.

Leviathan Cave holds special interest for visitors to the area. The spelunking opportunities here are outstanding. The cave receives an estimated 100 visitors per year. A variety of recreation pursuits, including hiking, camping, rock climbing, technical climbing, spelunking, fossil collecting and nature study can all be undertaken in the study area. Quality of the opportunities vary from poor in the case of camping to outstanding in the case of spelunking.

SPECIAL FEATURES: There are three known caves in the study area: Leviathan, Jinx, and Lavender. Of these three, Leviathan offers the best opportunities for recreation. One major room in the cave is very active, and contains a large and diverse number of formations. Another room contains huge ice formations during the winter and spring months. The huge opening of the cave (100'x180') is its most remarkable feature.

Bristlecone pines grow in the higher elevations of the study area. Their full extent is unknown, but they are widely and sparsely scattered over at least a 2,000 acre area just northwest of Meeker Peak. The oldest of these is over 2,122 years old.

Scattered ponderosa pines grow in the north end of the study area, south and east of Worthington Peak.

An Indian sandal, a metate, and a hunting blind have been found in the study area. Two wickiups were reported to exist inside Leviathan Cave in the 1960's, but were

apparently scavenged for firewood. Potential is good for other archaeological finds.

Fossil material occurs in abundance along the ridge. Only common specimens have been found.

OTHER RESOURCE VALUES

MINERALS AND ENERGY: Oil and gas leases (15) cover the western portion of the study area, and another nine leases are located in the northeast part of the area. (See Map 3-16). There has been no attempt to develop these leases, and no potential for oil and gas has been identified except for a speculative potential in Sand Spring Valley.

Mining claims in the area are strictly concentrated on the Freiburg Mining area. Gold, silver, lead, and zinc have been taken from the Freiburg area during sporadic periods of production since the 1870's. The potential which the area has for further development is uncertain. An area of about 7,600 acres south of Freiburg Mine is identified as a speculative resource (Schell URA-3), based on adjacency and geology similar to the area of existing mining. Potential exists for gold, silver, lead, tungsten, zinc, copper, and molybdenum. (See Maps 3-8 and 3-17).

About 13,800 acres on the east and west benches have been identified as having geothermal potential.

There is interest in the area as expressed by written comment from the mineral industry.

RANGE: The study area is covered by three allotments in which sheep and cattle graze the bench and valley portions (see Table 3-3). Current grazing quality is poor to fair. Potential for vegetation manipulation on sagebrush benches is limited. The existing range improvements are located along or within cherrystemmed portions of the unit. These consist of reservoirs, spring developments, one pipeline, and two fences. Potential for additional improvements is low.

WILDLIFE: Although there is no key wildlife range in the study area, deer, cougars, bighorn sheep in transit, and other common species are often seen here. Infrequently, antelope are seen.



FOREST RESOURCES: The study area possesses 0.2 percent of the manageable woodland in the Schell RA. The Worthington Mountains are not suited for woodland production.

LANDS: No private land exists within the WSA. Patented mining claims exist along the north boundary.

WATER: The only known perennial surface water is at Stink Bug Spring in the south end, which has been developed slightly (excavation) and is a private water property. Wildhorse Spring on the west bench is also a private water property and is piped down to the valley.

There are perennial pools of water in Leviathan Cave.

Weepah Spring

The Weepah Spring study area consists of a broad portion of the Seaman Range and associated benchlands. The ecosystem varies from ponderosa forest in the highest elevations to large, sagebrush-covered alluvial benches on the east. The mixed geology of the area includes limestone, dolomite, shale, volcanic rocks, gravels, and alluvium.

WILDERNESS VALUES

NATURALNESS: Most of the area is in a highly natural condition. An exception occurs on the west bench where old mining exploration activity has caused a visible impact. Most of this has been eliminated from the area but remains close enough to impair the perceived naturalness of a limited portion of the area.

OUTSTANDING OPPORTUNITIES FOR SOLITUDE AND PRIMITIVE RECREATION: The broad, rugged mountain range of the area combines with good vegetative screening and good size (61,137 acres) to provide exceptional opportunities for solitude. Occasional overflights by military jets in no way impair these opportunities. Innumerable secluded spots are afforded by the natural features.

The bench areas generally provide far less screening, and solitude opportunities are therefore of lower quality than in the mountains.

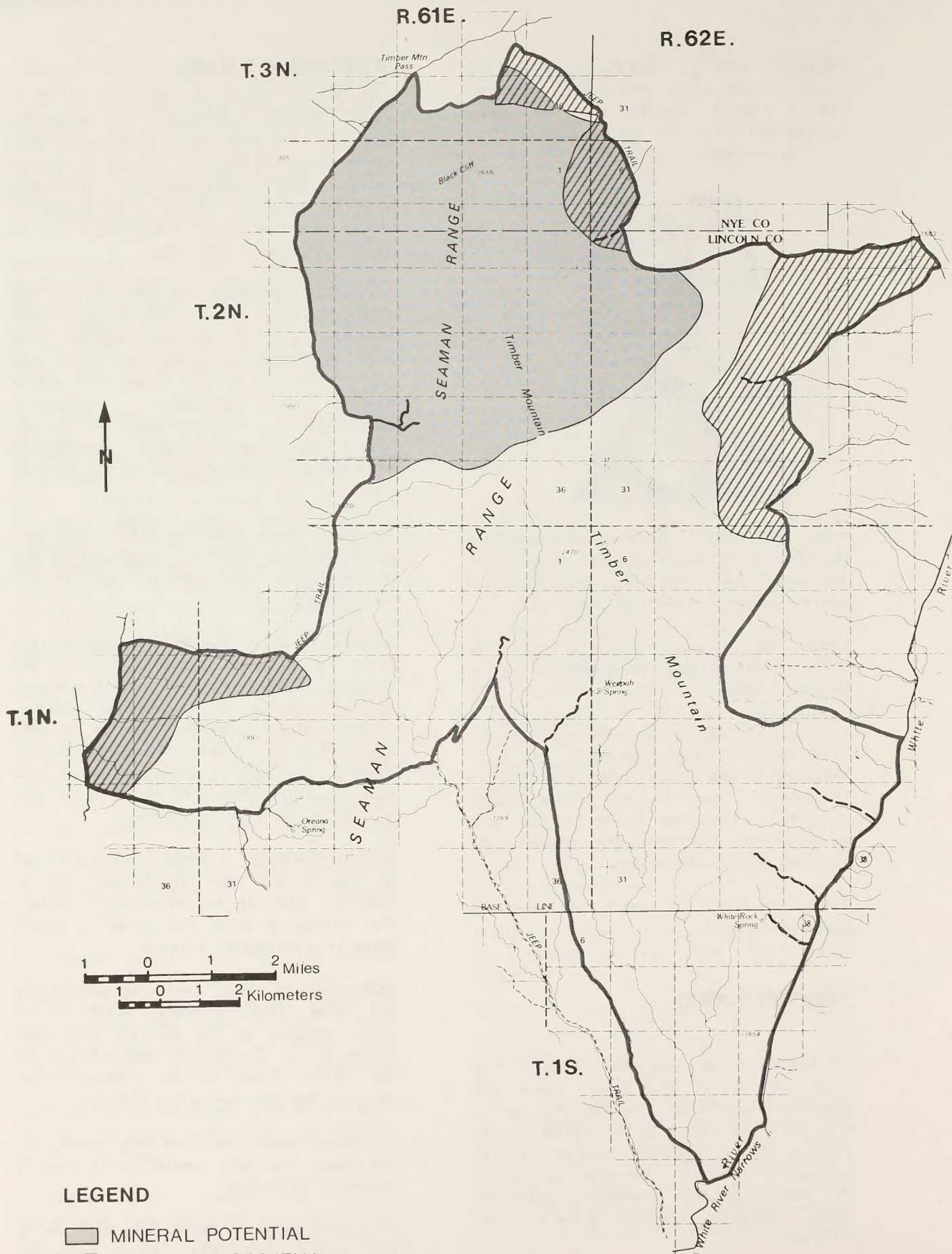
Several types of recreation opportunities exist in the area. Camping, hiking, and backpacking are among these and are enhanced by the presence of supplemental features (listed below). Nature study is of good quality due to the diversity of the natural system. Some hunting opportunities of fair quality exist. Horseback riding is of good quality in the lower elevations.

SPECIAL FEATURES: A large ponderosa forest is the area's most significant special feature. Although not an unusual species, the setting in which the ponderosa occurs makes it a noteworthy feature.

Archaeological sites, including petroglyphs and large lithic scatters, exist in the area. Several of the scatters have been picked over. The WSA includes portions of the White River Narrows Archaeological National Register Petroglyph District.

The Seaman Range wild horse herd ranges into the area. The herd population is roughly estimated at 20 head.

The scenic value of the area is high due to the varied topography, large ponderosa stand, and interesting geologic formations.



LEGEND

- MINERAL POTENTIAL
- OIL & GAS POTENTIAL
- ROADS
- NOTICEABLE WAYS

RESOURCE CONFLICTS
WEEPAH SPRING NV-040-246
3-9

OTHER RESOURCE VALUES

ENERGY AND MINERALS: The unit has ten oil and gas leases, all located along the boundaries in the lower bench areas (see Map 3-17). No drilling has occurred in the unit. Potential has been identified along the fringe of the area in portions of the north, east, and west. (See Map 3-22.)

About 400 mining claims are located in or near the northwest quadrant of the study area. The assessment work on about 50 percent of these is not current, according to BLM records. One historic mine is located on the edge of the area in T 2 N, R 62 E, sec. 6. No active mining is occurring in or near the unit.

A 17,000 acre portion in the north end of the study area has been designated as having speculative potential for minerals (uranium, gold, copper). A small zone of mineral potential was also identified on the western tip of the unit. (See Map 3-17).

The mining industry has indicated interest and potential in the area by comments submitted during the wilderness review process. Disseminated gold is the main mineral mentioned.

RANGE: Sheep and cattle are grazed in the five major allotments that cover the study area. (See Table 3-3.) The grazing quality for cattle is generally poor due to rugged terrain and low forage desirability. Forage desirability for sheep is fair, but grazing is still limited by terrain and absence of perennial water. Future grazing quality is likely to remain the same. One pipeline in disrepair is the only major range improvement in the area; however, it has been excluded by adjusting the WSA boundary. Potential for range improvements, including vegetation conversions, is very low. The only project under consideration is a short drift fence which would tie off to another fence outside of the area. The necessity of this fence has not yet been determined.

WILDLIFE: No key wildlife range has been identified in this study area. However it is important to wildlife. Peregrine falcons have been sighted here in the past. This WSA contains some of the best falcon habitat

in the Schell RA. Other species of wildlife include deer, raptors (including several golden eagles), small mammals, and song-birds.

Animal damage control is performed in this area. The main target species in these efforts is the coyote.

FOREST RESOURCES: The Weepah Spring study area contains 1.1 percent manageable woodland in the Schell RA.

The Ponderosa forest (1,300 acres) is a significant, noneconomic, botanical resource. It serves as a seed source, and as a reservoir of genetic diversity.

LANDS: No private land exists within or adjacent to the study area.

WATER: Intermittent springs and streams occur in the study area as a result of water runoff and snowmelt. No known perennial waters exist.

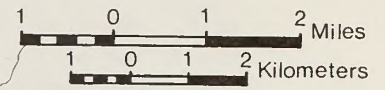
R.64 E.

R.65 E.

T.11 N.

T.10 N.

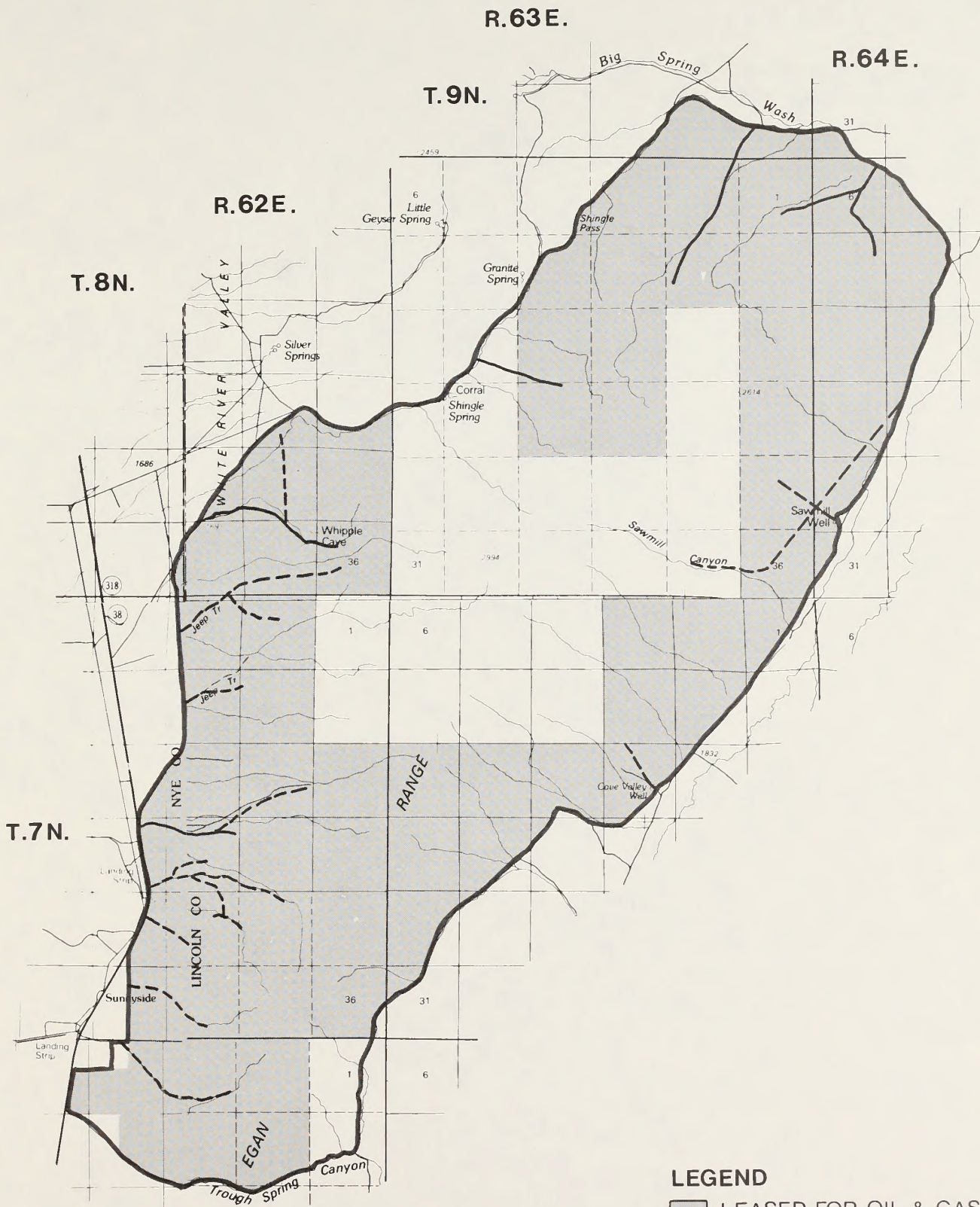
T.9 N.



LEGEND

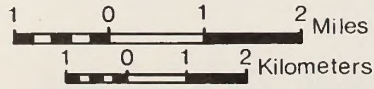
- LEASED FOR OIL & GAS
- POST-FLPMA CLAIMS
- PRE-FLPMA CLAIMS
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND

**MINING CLAIMS AND LEASES
MT. GRAFTON NV-040-169**

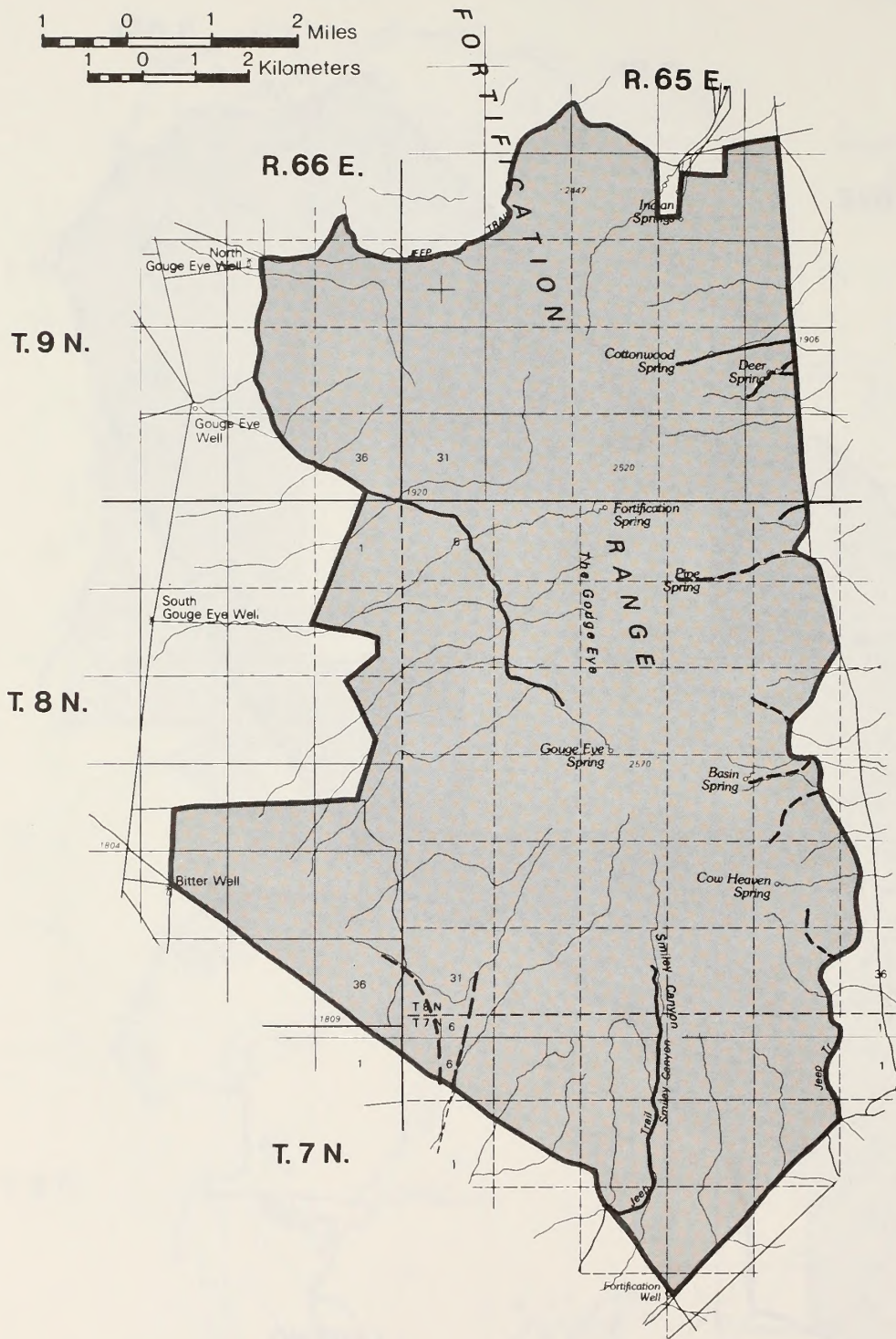
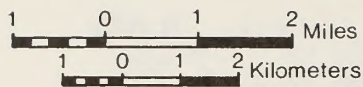


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


- LEASED FOR OIL & GAS
- ROADS
- NOTICEABLE WAYS



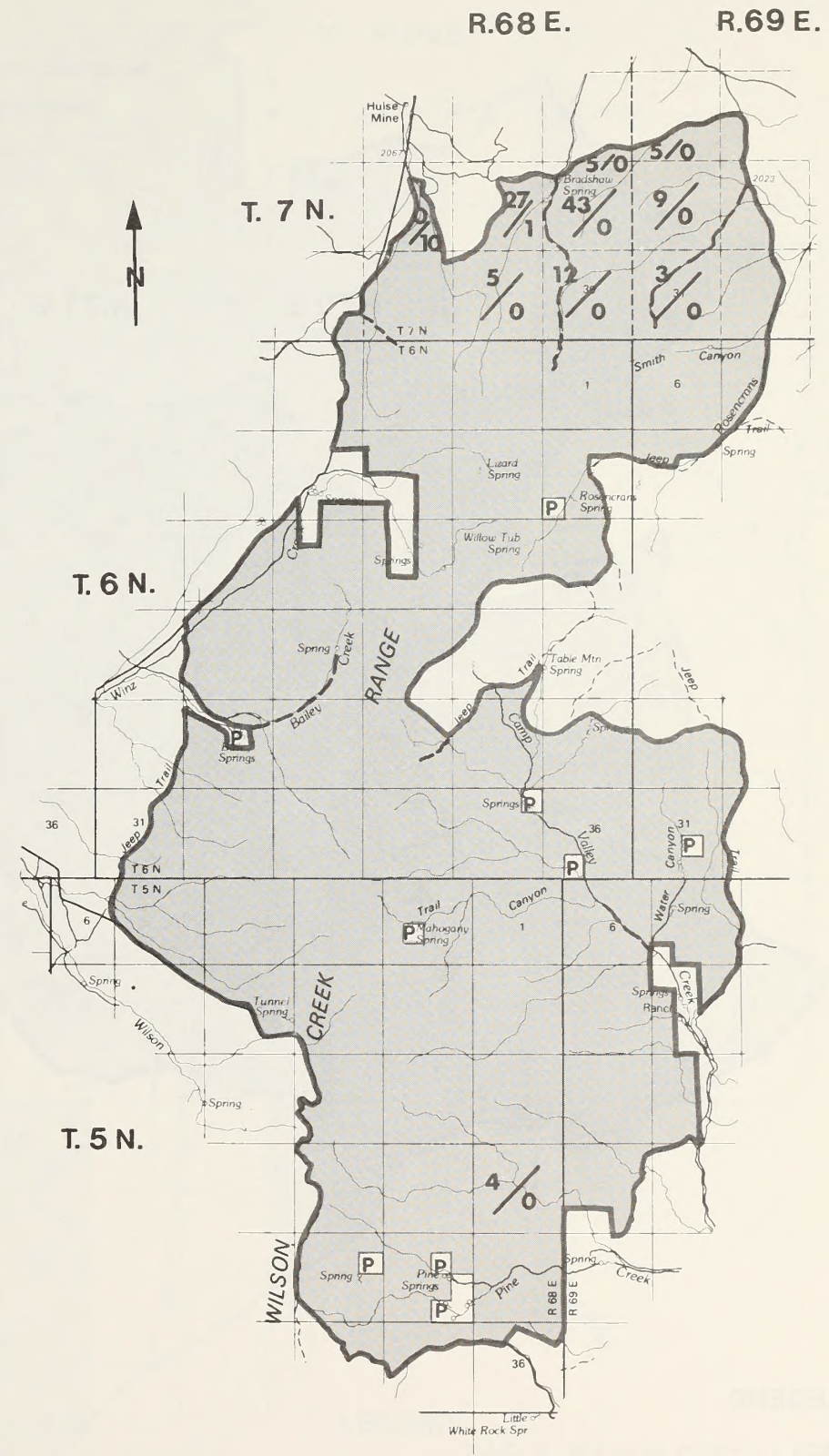
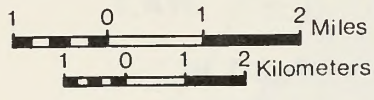
**MINING CLAIMS AND LEASES
FAR SOUTH EGANS NV-040-172**



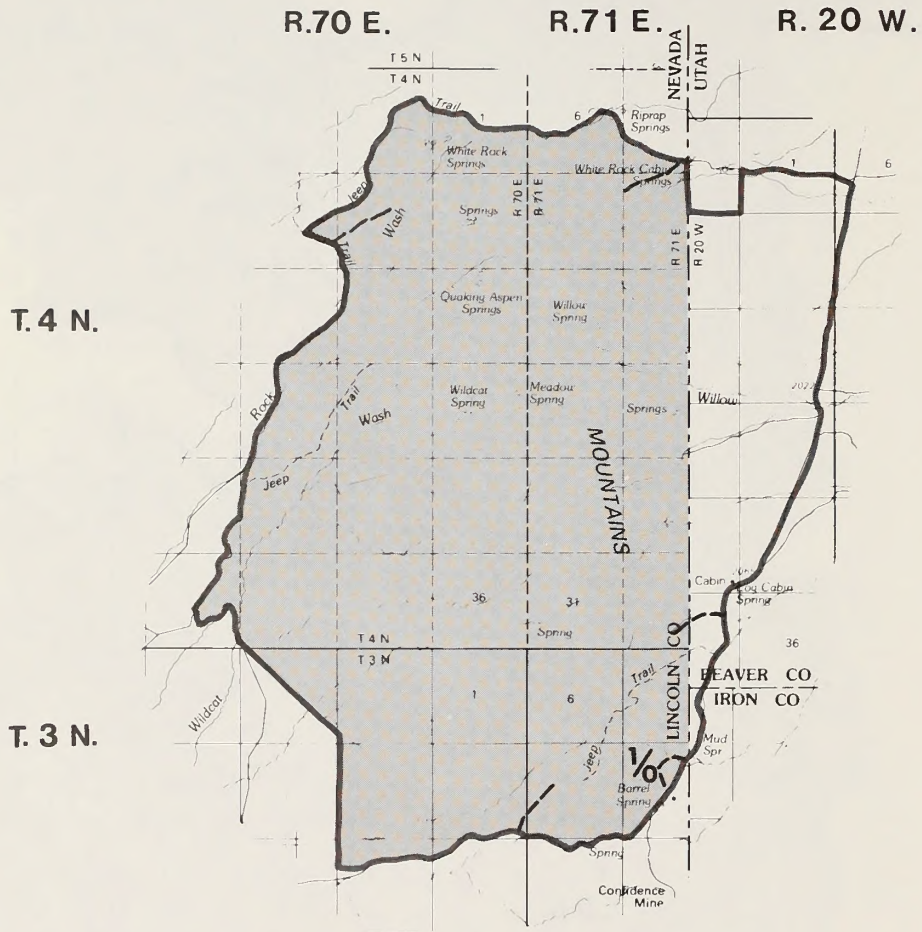
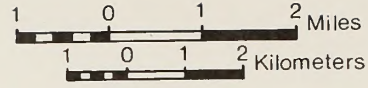
LEGEND

-  LEASED FOR OIL & GAS
-  ROADS
-  NOTICEABLE WAYS

**MINING CLAIMS AND LEASES
FORTIFICATION RANGE NV-040-177**



- LEGEND**
- LEASED FOR OIL & GAS
 - X / POST-FLPMA CLAIMS
 - / X PRE-FLPMA CLAIMS
 - ROADS
 - NOTICEABLE WAYS
 - P PRIVATE LAND



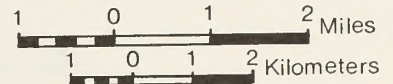
LEGEND

- LEASED FOR OIL & GAS
- X / POST-FLPMA CLAIMS
- X / PRE-FLPMA CLAIMS
- ROADS
- - - NOTICEABLE WAYS

**MINING CLAIMS AND LEASES
WHITE ROCK RANGE NV-040-202**

R.68E.

T.5N.



R.69E.

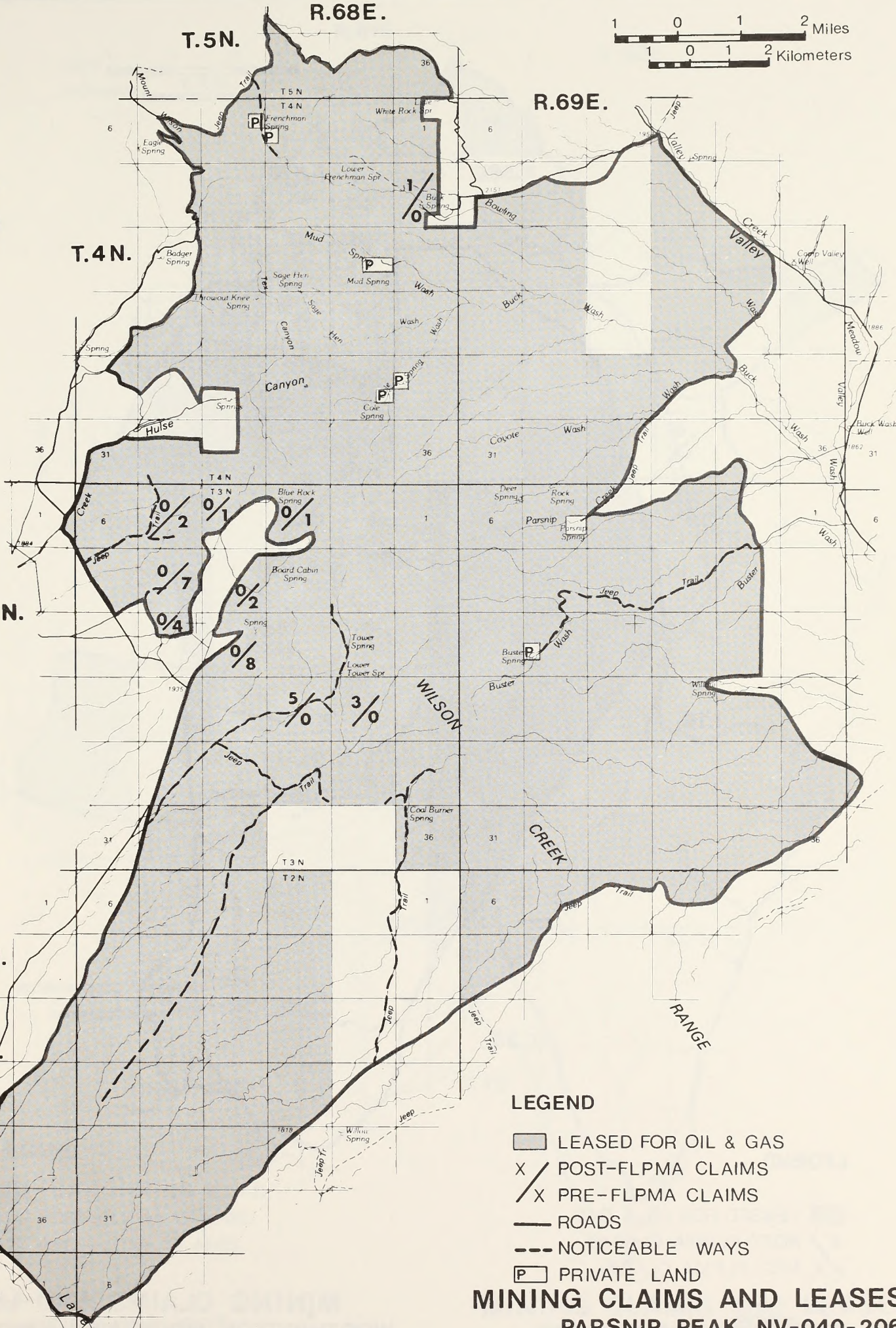
T.4N.

T.3N.

T.2N.

R.67E.

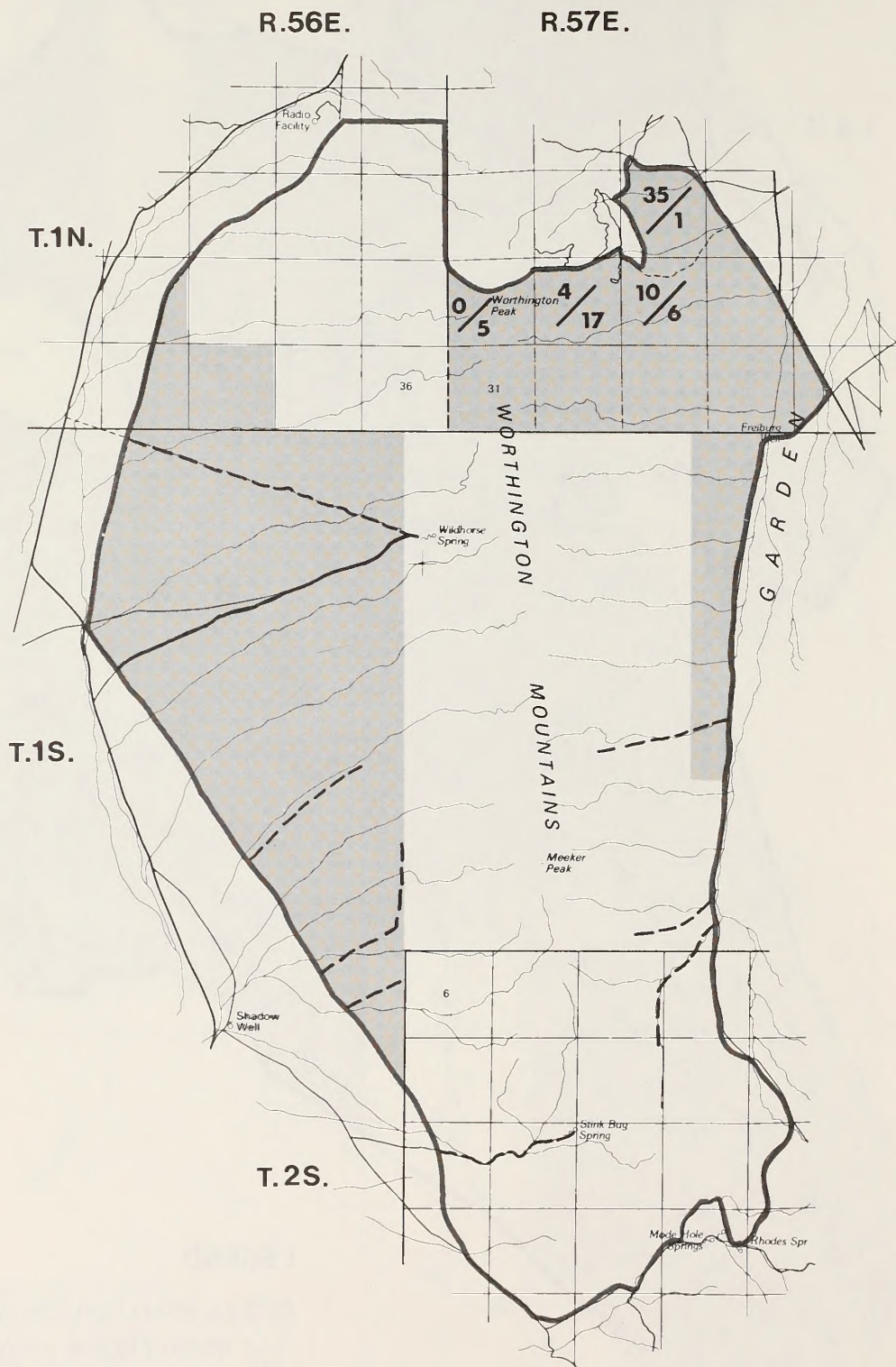
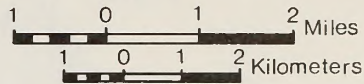
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LEGEND

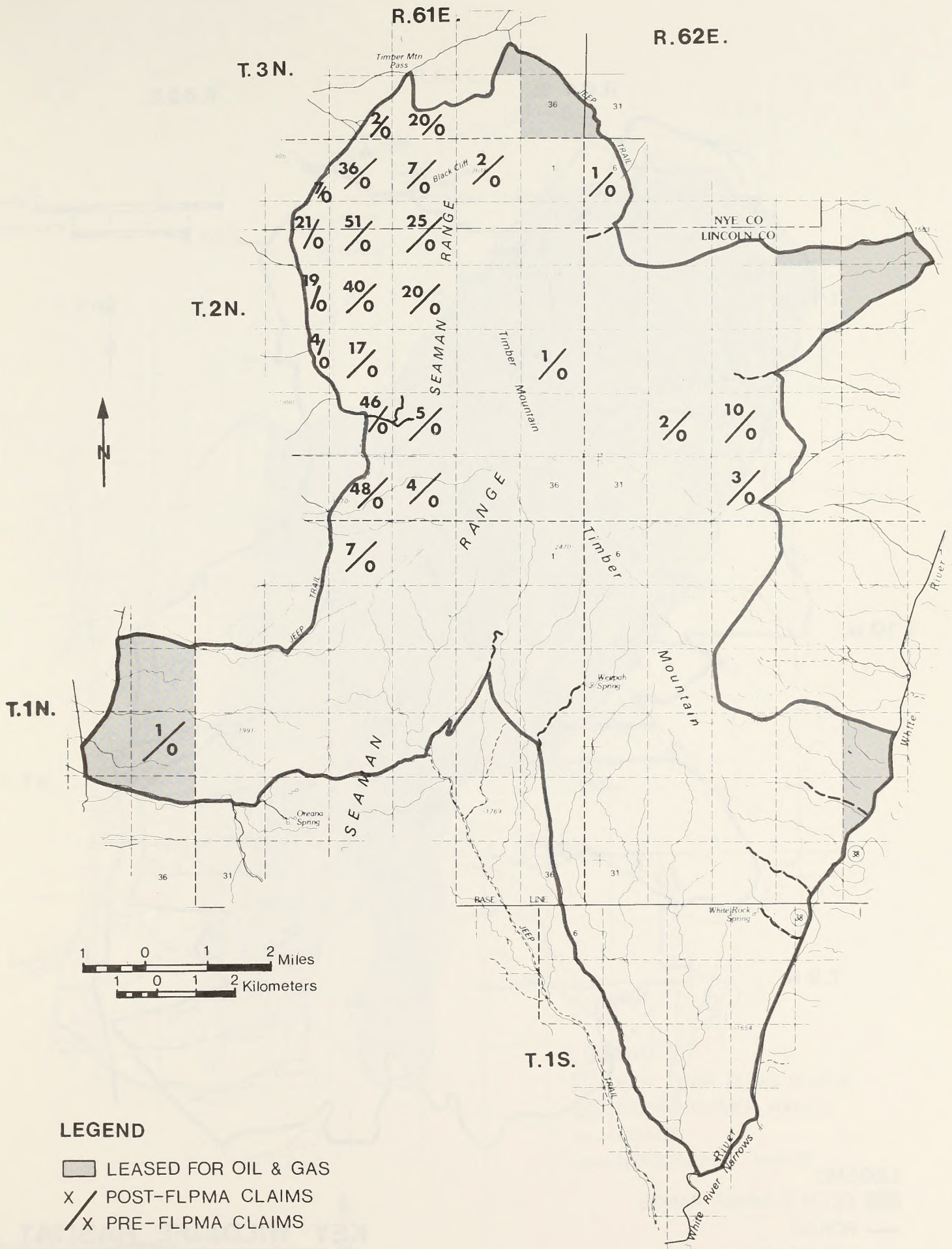
- LEASED FOR OIL & GAS
- POST-FLPMA CLAIMS
- PRE-FLPMA CLAIMS
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND

**MINING CLAIMS AND LEASES
PARNSHIP PEAK NV-040-206**



LEGEND

- LEASED FOR OIL & GAS
- X / POST-FLPMA CLAIMS
- / X PRE-FLPMA CLAIMS
- ROADS
- - - NOTICEABLE WAYS



LEGEND

- LEASED FOR OIL & GAS
- X / POST-FLPMA CLAIMS
- / X PRE-FLPMA CLAIMS
- ROADS
- - - NOTICEABLE WAYS

**MINING CLAIMS AND LEASES
WEEPAH SPRING NV-040-246**

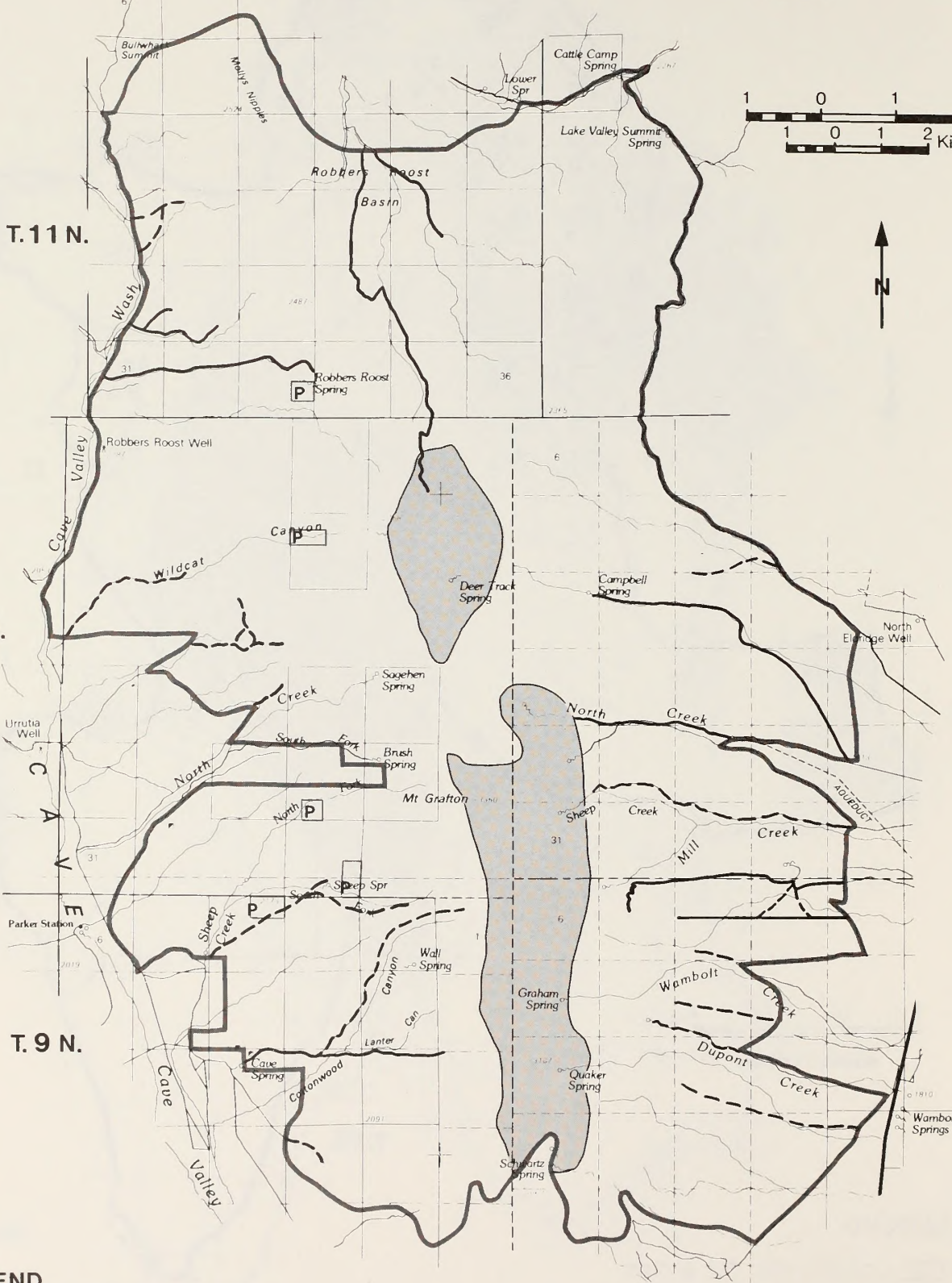
R.64 E.

R.65 E.

T.11 N.

T.10 N.

T.9 N.



LEGEND

- DEER SUMMER RANGE
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND

**KEY WILDLIFE HABITAT
MT. GRAFTON NV-040-169**

R.63E.

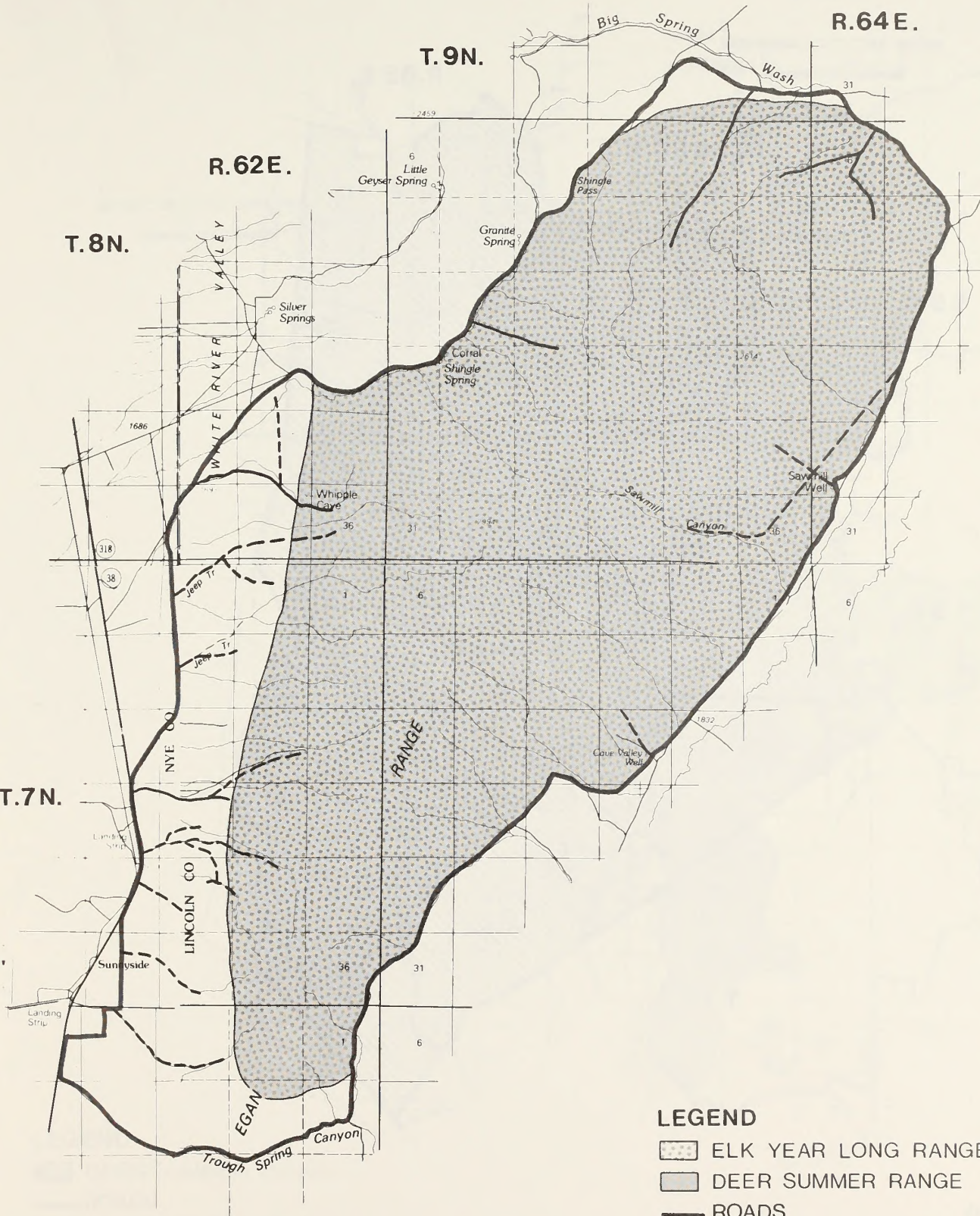
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T.9N.





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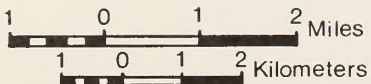
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T.7N.

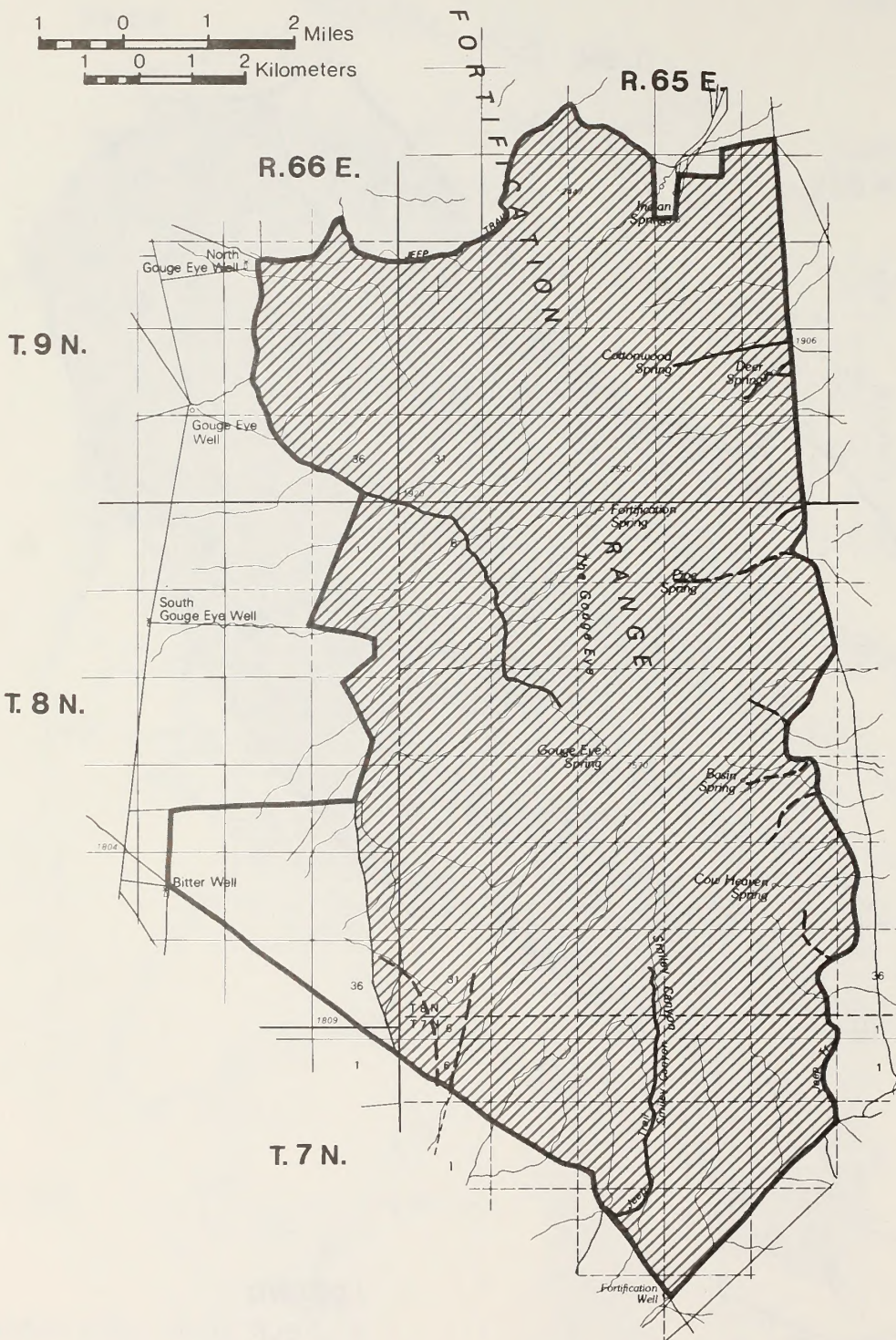
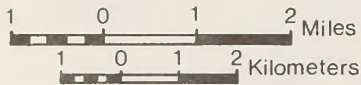


LEGEND




-  ELK YEAR LONG RANGE
-  DEER SUMMER RANGE
-  ROADS
-  NOTICEABLE WAYS



**KEY WILDLIFE HABITAT
FAR SOUTH EGANS NV-040-172**



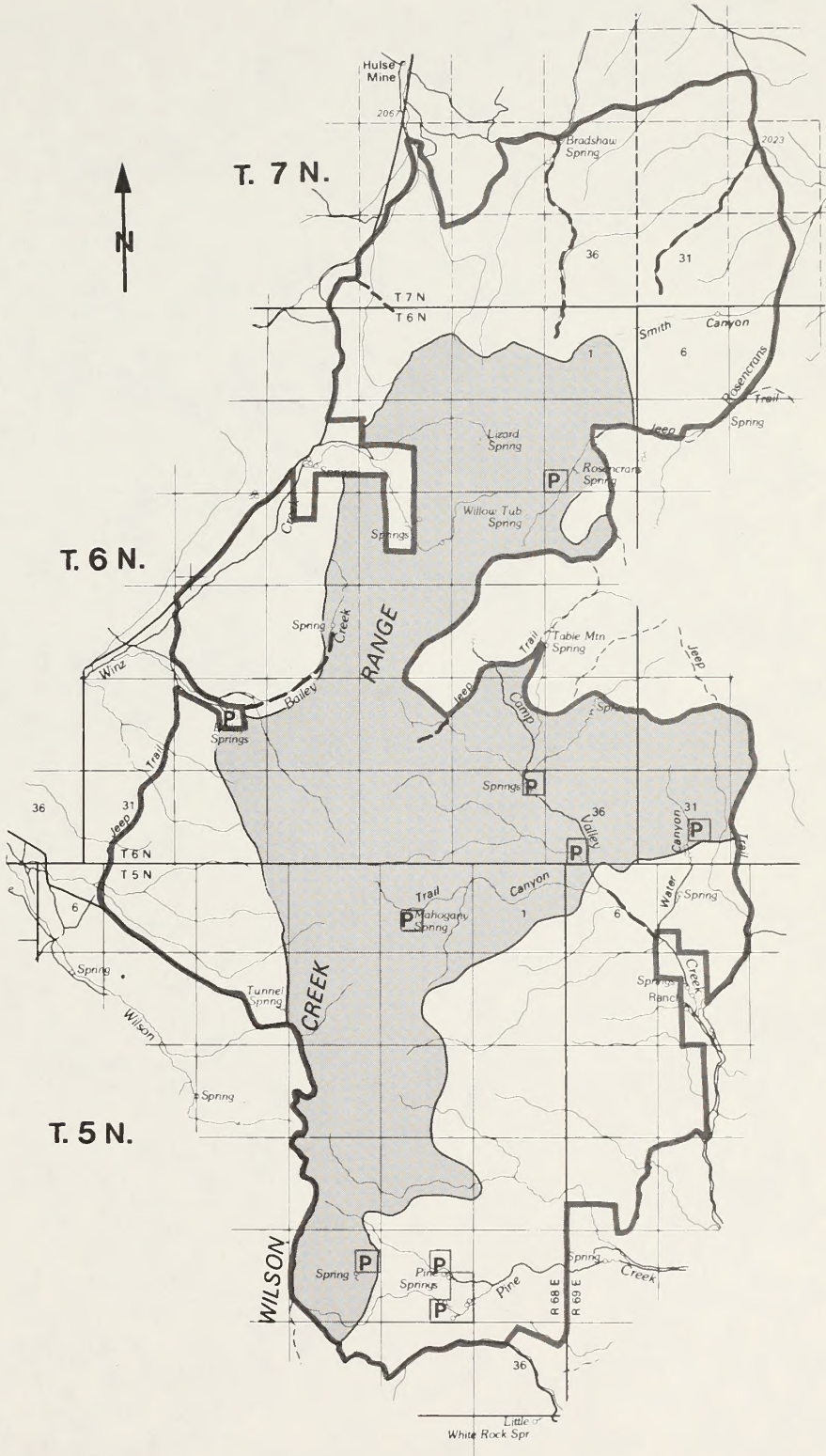
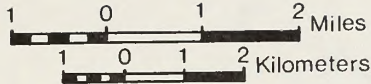
LEGEND

-  MOUNTAIN LION WINTER RANGE
-  ROADS
-  NOTICEABLE WAYS





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FORTIFICATION RANGE NV-040-177**

R.68 E.

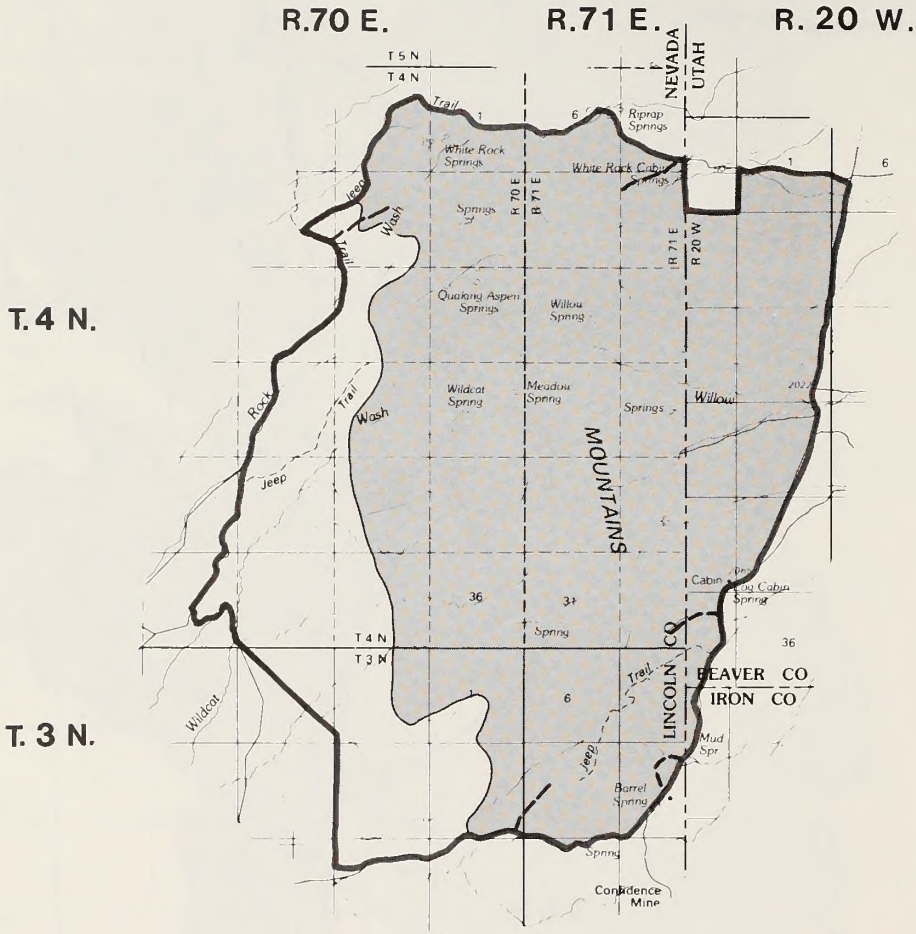
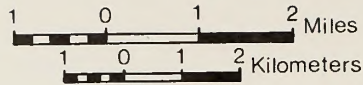
R.69 E.



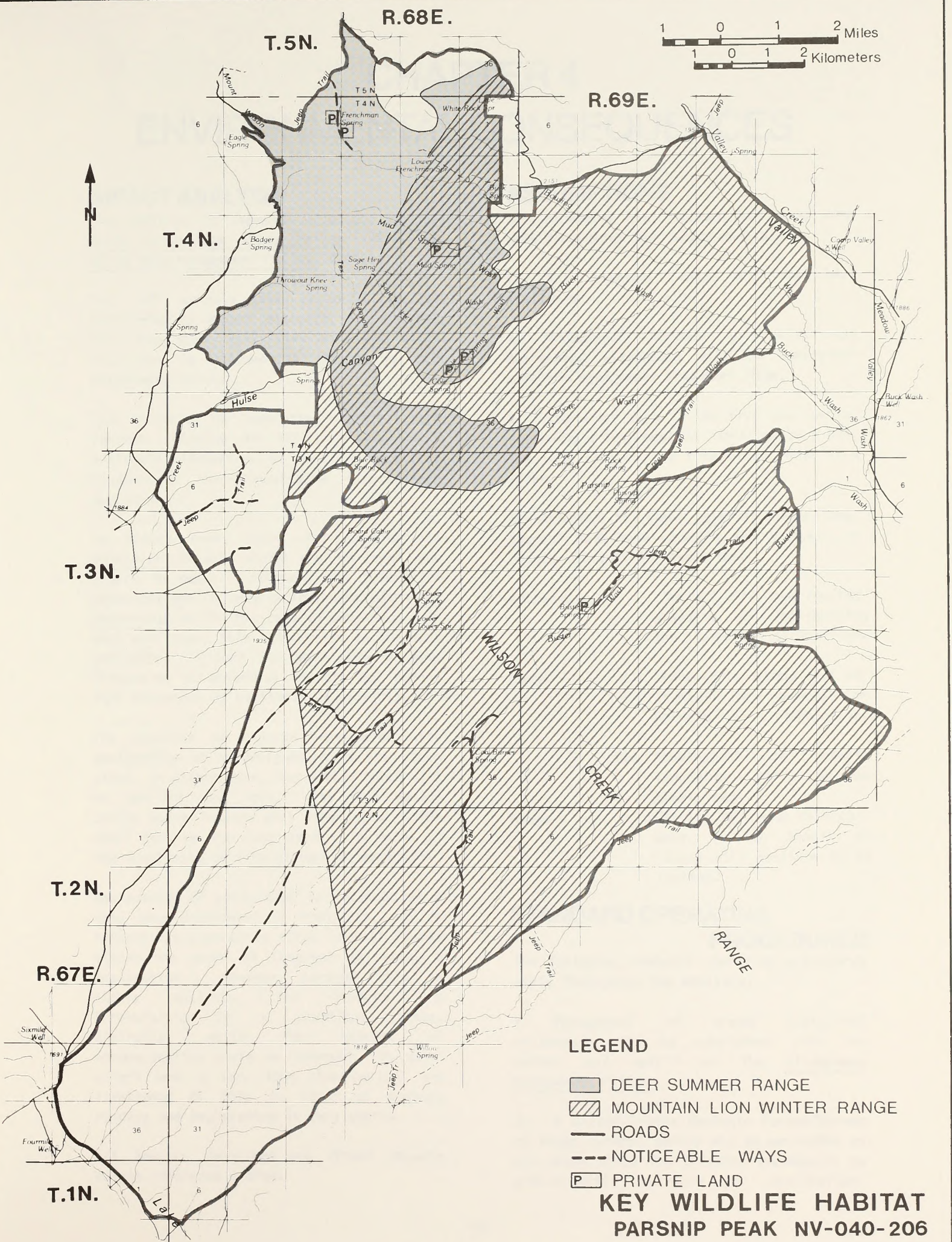
LEGEND

-  DEER SUMMER RANGE
-  ROADS
-  NOTICEABLE WAYS
-  PRIVATE LAND

**KEY WILDLIFE HABITAT
TABLE MOUNTAIN NV-040-197**



- LEGEND**
- DEER SUMMER RANGE
 - ROADS
 - NOTICEABLE WAYS



LEGEND

- DEER SUMMER RANGE
- MOUNTAIN LION WINTER RANGE
- ROADS
- NOTICEABLE WAYS
- PRIVATE LAND

**KEY WILDLIFE HABITAT
PARSNIP PEAK NV-040-206**

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

IMPACT ANALYSIS

The analysis of impacts is guided by the BLM's Wilderness Study Policy (WSP) and Wilderness Management Policy (WMP).

The WSP details the criteria to be considered in impact analysis, and the WMP describes which activities will and which will not be allowed in designated BLM wilderness areas.

The criteria for analyzing impacts were further tailored to fit with the best available information for each resource (see "Incomplete and Unavailable Information" Appendix A).

In nearly every case, the impacts are potential impacts which are believed are likely to occur. Further, the identified resources are in several instances potential resources, as in the case of minerals. In each such case, this information is the best available. Effort has been made to keep discussion of potential impacts and potential resources as realistic as possible.

The duration of impacts associated with designation or nondesignation is long term since, in either case, the action taken will be for the long term. The time period during which impacts will first occur - the short term or the long term - is noted in the conclusion section of each alternative.

Designation of wilderness is intended as a long term commitment of resources, but is technically reversible since it will remain within the power of Congress to revoke a designation. However, because this is highly unlikely, the impacts are irreversible in a practical sense. Similarly, while the impacts of nondesignation could be reversed with major effort over a very long time period, the likelihood of this in light of present funding and legislation is very small.

All impacts described are direct impacts unless otherwise stated.

ASSUMPTIONS

The following basic assumptions have been made throughout the impact analysis:

1. All baseline data are the best available.
2. Management actions on units not designated wilderness will be consistent with the Management Framework Plan.
3. The short term is the five year period following a Congressional decision on a WSA. The long term is the time after those five years.

In addition to these general assumptions, several have been made in the analysis of impacts to specific resources:

- | | |
|--------------|---|
| Wilderness - | The BLM will have funding adequate for implementing the selected alternative. |
| Lands - | (1) Reasonable access will be granted to owners of private inholdings.
(2) Development of private inholdings will not be prohibited. |
| Range - | Funding for range development in the Schell RA Island will continue to be limited. |

STANDARD OPERATING PROCEDURES

The following standard operating procedures apply throughout the analysis:

1. Management of areas designated wilderness will be consistent with the letter and spirit of the Wilderness Management Policy.
2. A United States Geologic Survey/Bureau of Mines mineral survey will be performed on all areas which the Director recommends as preliminarily suitable for designation.

This will insure the correction of any inaccuracies in impact assessment which resulted from the incomplete nature of current mineral knowledge.

3. Grazing will not be curtailed on account of wilderness designation.

4. A Class 3 Cultural Resource Inventory will be conducted on potential sites when degradation is expected to occur as a result of wilderness designation.

DETERMINATION OF SIGNIFICANT IMPACTS

To assist in determining if impacts are significant, thresholds are established for each resource. When an environmental impact exceeds a threshold, it is said to be significant. Thresholds are determined by the resource specialist, who uses professional judgement, and may also be influenced by law, regulation, and public opinion. In every case the existing condition is the baseline against which impacts are measured. The following thresholds have been developed for use in this EIS:

WILDERNESS - Designation of an area as wilderness is considered to be a significant beneficial impact if it would preserve mandatory wilderness characteristics (size, naturalness, opportunities for recreation or solitude) that would be lost without designation. A significant adverse impact occurs when an area will lose any one of these mandatory characteristics such that it would no longer qualify as a WSA.

ENERGY AND MINERALS - A significant impact occurs when a given percentage of the different identified potentials for minerals or energy is removed from leasing or mineral entry, as follows:

<u>Potential</u>	<u>Threshold*</u>
Mineral Potential	
High	5 percent
Medium	5 percent
Speculative	5 percent
Oil and Gas Potential	
High	1.5 percent
Medium	5 percent
Speculative	10 percent
Geothermal	10 percent

*Figures are percentages of potential identified in the Schell RA.

RANGE - The threshold of significance in livestock grazing is a ten percent or greater change over existing levels as listed in the Schell Grazing EIS.

FORESTRY - The threshold of significance for forestry is the point when 15 percent of the manageable woodland is removed from the supply for consumptive uses.

CULTURAL RESOURCES - The threshold would be destruction of scientifically or educationally valuable sites.

WILDLIFE - The threshold would be the destruction of ten percent of the wildlife habitat or a 20 percent change in wildlife populations.

VISUAL RESOURCES - A significant adverse impact occurs when cultural modifications have a net negative impact to visual resources within a WSA, according to Visual Resource Management scenic quality inventory and evaluation analysis.

RECREATION - A significant impact occurs with a ten percent or greater change in recreation visitor days in the Schell RA.

ECONOMICS - No objective measure(s) of what represents a significant impact is available. Therefore, the following analysis assumes thresholds of:

- a. A 5 percent change in income for any ranch size group.
- b. A 5 percent change in the employment or sales of any sector.

SOCIAL CONDITIONS - The threshold would be the immigration or out-migration of people greater than ten percent of the existing population in the area resulting from wilderness designation.

GENERAL IMPACTS

WILDERNESS: Any wilderness designation in the Schell RA will benefit the National Wilderness Preservation System by expanding its ecosystem diversity. In addition, any designation will expand the opportunities for primitive and unconfined recreation within a day's drive of the Las Vegas Standard Metropolitan Statistical Area.

ENERGY AND MINERALS: Mining claim location and mineral leasing will not be permitted in designated wilderness areas after midnight on December 31, 1983. Mining will be allowed on existing claims pending a validity exam to prove that a valid discovery exists. Operations will be subject to reasonable stipulations for the protection of wilderness values. Leasing operations on existing pre-FLPMA leases (leases taken before October 21, 1976) will be permitted under standard stipulations.

On post-FLPMA leases, operations will continue to be subject to the Wilderness Stipulation which requires that operations be nonimpairing.

RANGE: "There shall be no curtailment of grazing permits or privileges in an area simply because it is designated as wilderness" (Wilderness Management Policy). Increases or decreases in AUMs will be made as a result of normal grazing and land management planning and policy setting processes.

Maintenance of existing range facilities will be permitted in designated wilderness, and can include use of motorized equipment where practical alternatives do not exist.

New range developments will only be permitted when they will better protect the range or the wilderness resource. Costs of new developments will be higher in wilderness areas than outside because of the emphasis placed on use of least impairing construction methods and most environmentally compatible materials. Planning and lead-time will also be greater than in nonwilderness areas. Cost increases will be within reason.

The analysis of impacts is limited to consideration of only those projects which are proposed at this time. Wilderness designation will have similar effects on other potential developments, but in order to keep this document within a reasonable length, and since resource and economic considerations which bear on the feasibility of these projects have not been developed, they are not considered in this document. After designation of wilderness, potential developments will be considered on a case by case basis.

Because most range improvements can benefit wildlife and wild horses in addition to livestock, the discussion of impacts pertains to all range users to some degree.

WILDLIFE: Wilderness designation would have a beneficial impact to wildlife resources through the overall resource protection it provides. Limiting man's intrusions and developments would benefit wildlife in the long term.

Wilderness designation, though protection oriented, would preclude some wildlife habitat improvements. Management for big game would be complicated and costs associated with wildlife developments in wilderness would increase and could become cost prohibitive (see impacts to range developments, above).

Some increased disturbance will occur to wildlife as a result of increased recreation use in designated areas. This will be especially true in riparian zones, which are attractive to the recreationist and essential to wildlife. These impacts will be minimized by the Wilderness Management Plans for designated wilderness areas.

RECREATION: Designation of an area as wilderness will cause some increase in recreation use by calling attention to it. Increased use will cause degradation of opportunities for recreation in some very localized areas that serve as staging areas, travel routes, and destination points. Adverse impacts will also result from disallowance of off-road vehicles, but since most actual vehicular use occurs on roads and ways, this impact will not be great.

The existing recreation uses of the WSAs will benefit from wilderness designation by the preservation of current primitive and semi-primitive non-motorized characteristics. Designation would also provide legislative protection for special recreation sites such as caves.

VISUAL RESOURCES: Wilderness designation will provide a beneficial impact to visual resources by prohibiting certain visually impairing activities and developments, and by ensuring mitigation of those that are allowed.

LANDS: The increasing need for microwave communication sites is causing companies to look closely at many areas in the Schell RA for possible locations. In the short term, areas outside of the WSAs can meet this demand. In the long term, however, wilderness designation could adversely affect communications by precluding microwave site locations. Several WSAs are located in areas well suited for communication site development. When appropriate, these are discussed under the specific WSA sections.

There will be no significant adverse impact to the owners of private inholdings. Access to these inholdings is assured and no restrictions will be placed upon development of the private parcels. If the private landowner wishes, land exchanges for parcels outside of the wilderness area can occur.

Other impacts to the lands/realty program will be discussed under the specific WSA section affected. The lands program in the Table Mountain, White Rock Range, Parsnip Peak and Weepah Spring WSAs is not impacted.

CULTURAL RESOURCES: Impacts occurring to cultural resources as a result of wilderness designation will be both beneficial and potentially adverse, and will be offsetting. Adverse impacts will result from some increase in primitive recreational use and associated increase in vandalism and inadvertent damage to cultural resources. Adverse impacts will also occur due to much higher costs of intensive inventory and recordation in a wilderness area. Deterioration of sites will occur in most cases, since management will not normally include site stabilization.

Obedience of laws protecting cultural resources will be more certain in designated wilderness areas because there will be more monitoring of activities than in nonwilderness. Beneficial impacts will result from a greater knowledge of the resource provided by the greater number of visitors, and from inventories of areas where impacts of wilderness users are expected to be damaging. The prohibition of certain activities will mean that sites that would normally be inventoried and then destroyed or removed will be left intact and in context for future study with new techniques.

Nondesignation will cause both beneficial and adverse impacts, and these will be offsetting.

WILD HORSES: There will be no significant impact to wild horses. They will continue to be managed according to the Wild Horse and Burro Act. There will be some beneficial impacts from wilderness designation by limiting harassment, preserving their wild and free roaming nature and preserving their habitat. A possible indirect adverse impact would be placing restrictions on range developments which would benefit wild horses. Wild horse roundups with motorized equipment and aircraft will be permitted with State Director approval.

SOIL, WATER AND AIR: There will be no significant impact to the soil, water or air resources as a result of wilderness designation. All these resources would benefit slightly from designation by restricting mining operations and limiting vehicular traffic to existing roads and trails. Adverse impacts to soil, water and air would be the result of other resource actions permitted if the areas are not designated. Impacts resulting from such projects will be addressed at the time the project is proposed in an appropriate environmental analysis.

IMPACTS BY ALTERNATIVE

ALL WILDERNESS ALTERNATIVE

Mount Grafton

WILDERNESS: In this alternative the wilderness resource would receive maximum protection, and this would ensure the wilderness integrity of the area as a whole. It would not, however, prevent some adverse impacts that are expected to affect the wilderness resource even with designation.

In particular, mining activity is likely to occur on the east bench and in the Patterson Pass area with designation, but only where a valid discovery occurs on a claim located prior to designation. Known deposits of tungsten, silver, and gold deposits which are currently listed as subeconomic may become economic in the future with changes in market conditions. These are claimed, and mining can be expected in the future. Loss of opportunities for solitude could be a temporary, short term impact of mining, and some permanent loss of naturalness is inevitable, but the scale of operation would not likely be sufficient to permanently destroy the wilderness values of the entire area.

Access development to private land on the west bench may also occur after designation. Loss of naturalness and opportunities for solitude will result immediately adjacent to road access, but will not affect the area as a whole.

Some outside sights and sounds from vehicular use of cherrystemmed routes will result in very localized impacts to solitude and apparent naturalness, especially on the benches.

Inclusion of the entire WSA in a wilderness designation would entail very high surveillance costs to ensure compliance with the Wilderness Management Policy on the east and west benches. Off-road vehicle use especially will be difficult to control. The gains realized would not be commensurate with the efforts. The benches contribute very little to opportunities for solitude and recreation, and are in a much less natural condition than the remainder of the area.

Designation will serve to protect the wilderness values of the area from the impacts of additional mineral exploration and extraction, development of microwave communication sites, range development, woodland product harvest, and casual road building associated with recreation. These will be beneficial impacts occurring in both the long and short terms.

ENERGY AND MINERALS: Under the All Wilderness Alternative, a large amount of land containing mineral potential would be designated as wilderness in the Mount Grafton WSA. Approximately 30,000 acres of identified speculative potential and 3,400 acres of good potential would be withdrawn from mining claim location. A few hundred acres of high potential in three areas of mining (Patterson Pass, Mill Creek, and Sheep Creek) would be included in the wilderness area, and expansion of operations into these would be slowed and made more costly by the added management requirements of mining inside a wilderness. There is no current production from these locations.

The All Wilderness Alternative would include two areas of high oil and gas potential of 2,400 acres on the west bench and 10,000 acres of good potential on the east bench. (See Map 3-2.)

RANGE: Complete wilderness designation for the Mount Grafton WSA would create some minor impacts to the range resource. About 900 acres of a seeding on the east-central boundary will be included. Maintenance of this seeding will become somewhat more costly, mainly because of higher administrative costs imposed to insure compliance with the Wilderness Management Policy, but this will not be prohibitive.

WILDLIFE: Wilderness designation would protect habitat for elk, deer and potentially for bighorn sheep from mining intrusions, construction of microwave communication sites and increased noise and traffic from proposed rail corridor. This important wildlife habitat would be protected in the long term.

"Fisheries activities may be permitted as long as their purpose is to protect natural conditions, restore deteriorated habitat,

and maintain wilderness values." (Wilderness Management Policy, p 18). Impacts to the North Creek and Geyser Creek fisheries will therefore be minimal.

FORESTRY: Designating the entire Mount Grafton area as wilderness would remove 24,405 acres of manageable woodland from production. It would provide additional protection for the bristlecone pines by limiting authorized surface disturbance.

LANDS: Although microwave communication sites are not currently planned, Mount Grafton has good potential for being a north-south relay site. Wilderness designation would preclude development of this site. If Mount Grafton were designated wilderness, construction of the White Pine Power Project rail line would be prohibited in the wilderness area. The BLM has recommended that it be built on the other side of the boundary road. This would put it in the South Egan WSA which is being studied in the Egan EIS. Preliminary studies show that there would be fewer conflicts with the operation in the South Egan WSA than in the Grafton WSA, since wilderness values in the South Egan WSA would be minimally impacted by the rail project.

RECREATION: Some increased recreation use will occur over and above what could be expected without designation. This will result in some potential for concentration of use at certain locales, especially along North Creek on the east side of the WSA. This will largely be mitigated by the Wilderness Management Plan for the area.

Far South Egans

WILDERNESS: Virtually complete protection would be given to the wilderness values of the Far South Egans WSA under this alternative. Mineral or energy development is highly unlikely under the Wilderness Management Policy, and the area has no private inholdings, so manageability of the area is assured.

Certain portions included in the WSA will require very high management effort to ensure enforcement of the Wilderness Management Policy. This is especially true of the western bench area, and to a lesser degree, the east bench, where off-road

vehicle use and unpermitted woodcutting will occur unless intense patrol efforts are implemented. The value of these areas is mainly in the size and ecological diversity they contribute. They contain very few opportunities for solitude and recreation.

Protection for this area by wilderness designation is less necessary than in most other WSA's. See "No Wilderness Alternative". Beneficial impacts will be slight.

ENERGY AND MINERALS: About 10,500 acres of good oil and gas potential are included in the suitable portion of the Far South Egans WSA. This occurs along the periphery of the area (see map 3-3).

RANGE: In the All Wilderness Alternative for the Far South Egans WSA, about 4,600 acres on the west bench and about 4,900 acres on the east bench, a spring development and pipeline, and two fences are all proposed within the suitable portion. The proposed improvements would not better protect the wilderness or range resource, but would impair wilderness values and would not be allowed under wilderness management. Disallowance of these projects will not affect the continued grazing operation in the affected allotments.

WILDLIFE: Wilderness designation will protect nesting habitat for ferruginous hawks, sage grouse strutting grounds and potential habitat for bighorn sheep as well as preserving the existing elk habitat. Especially important is the protection given the ferruginous hawks on the east bench where impairment and disturbance of habitat will occur without designation.

FORESTRY: Designating the entire area as wilderness would remove 8,500 acres of manageable woodland from production. This includes some dense mature pinyon suited for fuelwood and pine nut harvest. It would provide protection for the ponderosa/bristlecone pine stands by reducing authorized surface disturbance.

LANDS: Although no microwave communication sites are currently planned, sites could be placed in this unit to provide north-south relay points. Wilderness designation would preclude development.

RECREATION: Some increased recreation use will occur over and above what is expected without designation. This will result in some potential for concentration of use at certain locales, especially at Whipple Cave. This will be largely mitigated by the Wilderness Management Plan for the area.

Fortification Range

WILDERNESS: With the entire WSA designated as wilderness, the wilderness values of the Fortification Range would be given virtually complete protection. There are no mining claims and no private inholdings located in the WSA, so that manageability of the area as wilderness will not be a major problem. Even though this study finds mineral potential to be low, several individuals have expressed interest in the area, and designation would protect wilderness values from mineral exploration likely to take place with nondesignation. Protection would also be given from development and use of other potentials in the area (springs, woodland products, some forms of recreation, communication sites) and roads associated with them.

ENERGY AND MINERALS: About 10,500 acres of the Fortification Range WSA are identified as having good potential for oil and gas, and all of this would become unavailable for exploration and development in this alternative (see Map 3-4).

RANGE: Complete designation of the Fortification Range WSA as wilderness would cause the site of the proposed well and the area of proposed vegetative conversion to be included within the boundaries. Neither of these projects would be permitted as they are not needed to better protect the range or wilderness resource. The area proposed for vegetative treatment is part of a larger proposal which is outside the WSA boundary and would still be developed. Two proposed spring developments (Fortification and Gouge Eye Springs) for wild horses would be permitted. (See Map 3-4.)

These are minor impacts that will not affect the success of any ranching operation.

WILDLIFE: Habitat management for big game on about 7,200 acres in the heavy pinyon-

juniper on the west bench will be complicated (see General Impacts, Wildlife). Vegetative manipulation would be beneficial to the declining deer herd although converting only the 7,200 acres in this unit is not likely to affect the deer herd. Potential habitat for bighorn sheep, and existing raptor nesting areas and mountain lion winter range will be protected from development.

FORESTRY: Designating the entire area as wilderness would remove 11,236 acres of manageable woodland from production. An important pine nut harvest area on the east bench would no longer be available to commercial harvesters. Some protection would be given the scattered ponderosa pines by reducing authorized surface disturbance.

LANDS: Although no microwave communication sites are currently planned, the Fortification Range has good potential for being a north-south relay site. Wilderness designation would preclude development of these sites.

WILD HORSES: Increased costs for construction and maintenance of spring developments at Fortification and Gouge Eye Springs will result, but will not be prohibitive.

Table Mountain

WILDERNESS: With designation of the entire Table Mountain WSA as wilderness, the wilderness values of the area - primarily its naturalness - in both the north and south would be given doubtful protection.

Mining claims in the north end will probably be developed even with designation as development outside the WSA extends southward following a logical pace and progression. Private inholdings in the south half will require roaded access and will be developed for water and recreation purposes, making management of this portion as wilderness problematic. Very high management costs and efforts would be required by these conditions and by inclusion of a large amount of easily accessible land in the north. Designation would be ineffective in protecting the wilderness values of the area. The beneficial impacts to wilderness values from designation would be very small.

ENERGY AND MINERALS: About 9,000 acres of speculative mineral potential associated with the producing Atlanta Mine would be withdrawn from mineral entry in the All Wilderness Alternative (see Map 3-5). While some mining will be permitted even with designation, this will be limited to valid discoveries on existing claims. New claims and exploration work on existing claims will be prohibited. Because of the high interest in the area, designation will have major impacts for the individuals and companies with interest in the area.

RANGE: If the entire Table Mountain WSA were designated wilderness, the one proposed spring development would be just within the edge of the suitable area (see Map 3-5). This improvement would be allowed because it would create more even livestock distribution and help alleviate overuse problems in Hamblin Valley thereby serving to better protect the range resource. Also, the pipeline from the spring would be outside the area and help draw use away from the spring. Special mitigating measures needed to protect wilderness values may cause an increase in the cost of developing this spring. This impact would be insignificant since it would not interfere with normal grazing management.

WILDLIFE: Wilderness designation would adversely affect big game management by delaying or reducing pinyon-juniper conversion on about 15,600 acres. This key deer summer range would benefit from conversion. Chaining the area would not be allowed but prescribed burns could be used. However, only portions of the acreage can be converted by burning, thus limiting the offsetting potential of this alternate form of treatment.

FORESTRY: Designating the entire area as wilderness will result in the removal of 17,260 acres of manageable woodland from production. A 5,000 acre proposed greenwood cutting area in the unit's northeast corner would be prohibited. Pioche residents would be affected by having their local firewood supply reduced. Some protection would be provided for the ponderosa pines by reducing authorized surface disturbance.

White Rock Range

WILDERNESS: With its entire acreage designated as wilderness, the White Rock Range would be given virtually complete protection. Wilderness values would be protected from developments (primarily spring developments and pipelines for range and wildlife) in the northwest, vegetative conversions on the west side to increase forage value for livestock, and intensified woodland product harvest wherever vehicular access is possible. There are no allowable nonconforming uses likely to occur after designation, so manageability of the area as wilderness is ensured. Designation will provide beneficial impacts in the long and short terms.

ENERGY AND MINERALS: Some speculative mineral potential (about 1,300 acres) would be removed from claim location in the All Wilderness Alternative for the White Rock Range. Impacts will be insignificant.

RANGE: If the entire White Rock Range were designated wilderness, the two springs proposed for development (Wildcat and White Rock Springs) would be within the suitable area (see Map 3-6). The development of Wildcat Spring is not needed for better protection of the range or wilderness resource and would not be allowed. White Rock Spring and pipeline proposed to incorporate Burnt Canyon Chaining into a rest-rotation grazing system would probably be allowed because this would help to better protect the range resource. Non-impairing methods would have to be used in construction and would cause a slight increase in the cost of the project. The added cost would not be prohibited.

WILDLIFE: Wilderness designation would adversely affect big game management by delaying or reducing pinyon-juniper conversion on the unit's entire 23,625 acres. About 18,200 acres of this is key deer summer range which would benefit from conversion. Chaining the area would not be allowed although prescribed burns could be used in some cases. Beneficial impacts are mentioned in the general wildlife impact section.

FORESTRY: Designating the entire area as wilderness would remove 4,252 acres of manageable woodland from production. Pioche residents would be affected by having their local firewood supply reduced. Preserving the area as wilderness would provide an opportunity to study an easily accessible area of mature pinyon-juniper stands in a climax stage.

Parsnip Peak

WILDERNESS: With its entire acreage designated as wilderness, the Parsnip Peak WSA would receive very high but not complete protection. Perlite mining could occur even with designation on existing claims in the area of the Hollinger Mine (see map 3-18), but will be confined to this portion of the WSA and will not affect the area as a whole. Access to and development of private inholdings could impair naturalness and opportunities for solitude (see map 3-17), but private inholdings are few enough, scattered enough, and located in non-central areas so that access, if provided to them, will not destroy the naturalness of the entire WSA.

Designation in this alternative will protect the wilderness values of the WSA from adverse impacts in the long term created by mineral and energy exploration in the central and southern portions, forest product removal in the accessible parts of the east and central portions, vegetative conversion in the southern third and eastern portions, structural range developments in the Wilson Burn, and casual road building associated with recreational pursuit throughout the area. Therefore, designation will result in a beneficial impact to the wilderness resource in the long term.

ENERGY AND MINERALS: A large amount of mineral potential (perlite) is included in the Parsnip Peak All Wilderness Alternative. A known reserve of perlite lies in land surrounding the Hollinger Mine, and this land is included. This will encumber the operators with additional costs should they seek to reopen and expand the mine. A perlite deposit is also located inside the area at Pierson Summit. It is presently unclaimed and will be withdrawn from claim

location with designation. About 18,000 acres of speculative oil and gas potential are located in the area.

The adverse impacts to energy and mineral development caused by designation will only affect the individual claim holders.

RANGE: In the All Wilderness Alternative for Parsnip Peak, the Wilson Burn and Seeding are largely included in the suitable area. Under wilderness management, maintenance of the seeding and fence would be slightly more difficult and expensive as would construction of new improvements that were allowed. The projects that would be allowed are the proposed deferred rotation division fence in the burn area and the development and fencing of several springs that are currently being trampled by grazing animals. These projects are considered necessary to protect the range resources. The added costs for project maintenance or development will not be prohibitive.

Some vegetative conversions within the proposed 32,000 acres would be permitted by prescribed burns when determined to enhance wilderness or wildlife values. However, the opportunity to increase livestock production by treating the entire proposed area will be forgone since burning alone cannot accomplish this.

WILDLIFE: Wilderness designation would adversely affect big game by delaying or reducing pinyon-juniper conversion. About 46,000 acres of the area is pinyon-juniper which is unacceptable for the declining deer herd. The problem is most severe in this WSA although it exists in the other WSAs within Deer Herd Management Area #23 (see Appendix D). Chaining the area would not be allowed although prescribed burns could be used. Prescribed burning can only partly offset this impact because only portions of the potentially treatable vegetation are susceptible to burning. Beneficial impacts are mentioned in the general wildlife impact section.

FORESTRY: Designating the entire area as wilderness would remove about 24,500 acres of manageable woodland from production. Much of this is easily accessible to Pioche residents and if designated would adversely

affect them by reducing their local wood-cutting supply. Firewood cutting in the Mount Wilson Burn would be prohibited although this would be a short term impact since the wood is rotting and will lose its value in about five years. Some protection will be afforded to the ponderosa pines and aspen groves by reducing authorized surface disturbance.

Worthington Mountains

WILDERNESS: With the entire Worthington Mountains WSA designated wilderness, the wilderness values of the area would be protected. Some impairment will occur even with designation on the north end as the Freiburg Mine expands on existing claims. This will only extend a maximum of one mile south and will not endanger Leviathan Cave. The integrity of the wilderness values of the area will not be significantly affected.

Some land is included as suitable that would require high costs and effort to manage as wilderness, and would contribute little to the area's wilderness values except to add diversity and size. The main portions where this is the case are the west bench, and to a lesser degree, the east bench areas. Because of their openness, these zones are susceptible to indiscriminate off-road vehicle use which is certain to increase with designation.

Designation will protect the Worthington Mountain from the impacts of mining and mineral exploration over and above what will occur on valid claims in a designated wilderness area. It will also protect from communication site location on the area's north end. This alternative will therefore provide beneficial impacts in the long term.

ENERGY AND MINERALS: Much of the Worthington Mountains WSA contains energy and mineral potential, and the All Wilderness designation would remove this potential from mineral entry. Mining would be allowed on existing claims pending a validity exam proving that a valid discovery exists. New claim location and assessment work would be prohibited so that development would be severely curtailed. Designation will therefore create adverse impacts in this alternative, especially to individuals and

companies with economic interest in the area.

RANGE: Since there are no proposed range developments in the Worthington Mountains WSA, impacts to this resource will be minimal.

WILDLIFE: Wilderness designation will protect bighorn sheep habitat from most of the degradation caused by mining expansions in the north and new developments, including construction of microwave communication sites, throughout the unit. The bighorn sheep currently using the area will remain without further disturbances. The habitat will also remain suitable for future bighorn sheep reintroductions.

Kit fox populations would be protected from Animal Damage Control activities. Raptor populations would remain stable or increase.

FORESTRY: Designating the entire area as wilderness would result in the removal of about 950 acres of manageable woodland from production. There will be no impact to woodland production, since the area is unsuitable for woodland production. Bristlecone and ponderosa pines will be protected from authorized surface disturbance.

LANDS: Although no microwave communication sites are currently planned, designation in this alternative would eliminate the potential for a site on Worthington Peak which would provide for a north-south relay point.

RECREATION: Some increased recreation use will occur over and above what is expected without designation. This will result in some potential for concentration of use at certain locales, especially at Leviathan Cave. This will be largely mitigated by the Wilderness Management Plan for the area.

Weepah Spring

WILDERNESS: With full wilderness designation, the wilderness values of the Weepah Spring WSA would receive nearly complete protection from degradation. The main existing threat to these values is mineral exploration on the northwest side,

and this threat is imminent. Without protection, the area will receive impacts from road blading and core drilling (see "No Wilderness Alternative"). Designation would prevent this impairment, and would therefore produce beneficial impacts in the short and long term.

There are no nonconforming uses likely to occur under wilderness management, so manageability of the area is assured. Portions of the area will require close monitoring to prevent unauthorized off-road vehicle use. The main such portion is a long, narrow arm of land on the northeast.

ENERGY AND MINERALS: A large area of 17,100 acres having speculative mineral potential is withdrawn from mineral entry in the Weepah Spring All Wilderness Alternative. While the conflict between the mineral and the wilderness resource is high because of the mineral industry's keen interest in the area, the adverse impacts of designation will only be to the individual claimants. The potential here is speculative, inferred by the geologic setting and the claims located in the area.

About 6,200 acres of oil and gas potential will be withdrawn from leasing.

RANGE: The Weepah Spring WSA contains no identified potential for vegetative treatment or structural range development. In the future, a short (less than one mile) drift fence may be necessary on the northwest side to better protect the range resource and this would be permitted with some minimal added costs to ensure proper blending with the environment. Impacts of designation in this alternative will therefore be very low.

WILDLIFE: Wilderness designation will protect raptor nesting habitat, especially potential sites for peregrine falcon, from most intrusions. Kit fox populations will be protected from Animal Damage Control activities. Habitat for bighorn sheep will be kept in present condition to allow for future reintroduction.

FORESTRY: Designating the entire area as wilderness would result in the removal of about 4,900 acres of manageable woodland

from production. There would be little if any impact to the woodland resource since the manageable acreage and volumes are so low. Protection of the vigorous stand of ponderosa (which is large for the Schell RA,) by restricting authorized surface disturbance would be beneficial.

ECONOMIC AND SOCIAL IMPACTS

ECONOMIC IMPACTS: Designation of all eight WSAs as wilderness will have only minor economic impacts. There will be no significant impact on the livestock industry since there will be no reduction of AUMs, and there will be very little increase in maintenance costs for existing developments. There is some uncertainty about the impacts of designation on the energy and mineral industry because of a lack of knowledge. No commercial grades of oil and gas or mineral ore have been located in the WSAs, and only the potentials for their existence have been identified. At this time, based on existing information, economic impacts to energy and minerals are judged to be insignificant. Recreation use is expected to increase slightly with designation, resulting in some increased sales in the retail trade and services industries, but these will not be sufficient to encourage the entry of new businesses.

Tax structures and revenues will be largely unaffected. Income and employment will remain within its present levels and trends in the livestock and wood harvest industries. Some potential for income and employment will be forgone in the mineral exploration industry. This will be offset by an enhancement of income and employment in the recreation-related trades and service sectors.

Currently, oil and gas leases in the WSAs provide approximately \$61,500 per year to the State of Nevada in revenues. This sum would be lost in the All Wilderness Alternative. The loss would occur over 10 years as the terms of the leases expire.

There will be no significant alteration of the local economy as a result of wilderness designation. There will be no significant impacts to any sector of the local economy.

SOCIAL IMPACTS: Designation of all eight WSAs as wilderness would not introduce new people into the area permanently in any significant numbers nor would designation cause residents to leave in any significant numbers. Designation would probably not provide significant employment opportunities to the underemployed or unemployed, nor would it create new jobs in different wage structures or create jobs for particular employee groups in any significant numbers. Although some jobs may develop in the service sector as a result of an increase in wilderness visitors, those jobs would be in the same sector and same occupations as existing jobs in the area.

Implementation of the All Wilderness Alternative would place additional regulatory constraints on the use of motorized equipment, as well as placing additional constraints on other activities within wilderness areas. This would be viewed negatively by many of the area residents. However, it is not expected that new community coalitions would evolve as a result of the implementation of this alternative. Community support for or opposition to this alternative would probably follow established patterns.

Although the economic impacts to the livestock sector are not considered significant, opposition to the implementation of this alternative could be expected from that sector. Opposition would probably center around the issue of the constraints on and increased costs of future range improvements. In the long term, this may be perceived by the 14 ranchers or companies holding grazing licenses in the eight wilderness study areas as a significant adverse impact on their ranching operations.

For those individuals who view the BLM negatively, the implementation of this alternative would reinforce that perception. They would view the implementation of this alternative as another case of a major decision about local public land resources being made by uninformed Federal bureaucrats at the national seat of government.

This alternative would withdraw eight Wilderness Study Areas from appropriation under the mining laws on the date of

designation as wilderness unless otherwise provided for in the enacting legislation. This could have a significant adverse impact on the availability of, the exploration for, and the development of any potential mineral deposits which had not yet been discovered. Any deposits which had already been discovered but not yet developed would also be negatively impacted due to the increased cost of meeting more restrictive and stringent regulations. In both cases, the opportunities forgone for the individuals, as well as for the community could be a significant adverse impact. This cannot be quantified since information on the location, size, and economic value of potential mineral and energy deposits within each wilderness study area does not exist.

CONCLUSIONS

The All Wilderness Alternative will provide significant beneficial impacts to the wilderness resource, although it will entail some major wilderness management problems. Manageability is impossible in the Table Mountain WSA, and spot occurrences of lesser problems exist in most of the other WSAs. Designation will prevent various activities which otherwise would cause a loss of wilderness values in all WSAs except Table Mountain and the Far South Egans. It will also enlarge the ecosystem representation of the National Wilderness Preservation System, and will enlarge the opportunities for primitive recreation for one Standard Metropolitan Statistical Area, Las Vegas.

Wildlife will benefit from the preservation of habitat, but wildlife management will be adversely affected by the impacts to habitat conversion caused by wilderness designation of all four WSAs in Deer Herd Management Area 23 (Fortification Range, Table Mountain, White Rock Range, and Parsnip Peak). Where possible, conversion would be done by prescribed burn, and the same will be true in designated wilderness. Where prescribed burning is not possible, chaining would normally be used. In these instances, wilderness designation would prevent habitat conversion. These impacts can be partially offset for winter range conversion by concentrating efforts outside of the WSAs. Summer range conversion can only be done in the WSAs. The restraints of the Wilderness Management Policy will prevent the necessary

80 percent increase in desired forage, and will therefore prevent successful reestablishment of the deer herd. These impacts are not significant however, since funds are not available for conversion on the scale contemplated.

Impacts to energy and minerals will be adverse and significant. Designation in this alternative will remove from mineral entry 27 percent of all identified high mineral potential acreage in the Schell RA; 7 percent of all acreage with good mineral potential; and 5.6 percent of all acreage with speculative mineral potential. It would also remove from leasing 9.4 percent of all acreage with speculative oil and gas potential, and 13 percent of all geothermal potential (see Table 4-1).

The removal of energy potential will barely affect the national effort to become self-sufficient because of the small areas and mostly speculative values involved. There will also be removal of potential for some strategic minerals, primarily silver. The National Defense Stockpile currently includes a large amount of silver (139,500,000 Troy ounces) and there is no goal for additional stockpiles (1980). Where potentials for other listed minerals occur, they are of secondary interest associated with gold and silver. The quality and quantity of known deposits of these other minerals is not high. The removal of potential for strategic minerals in this alternative is of little consequence to the national stockpile effort.

Implementation of this alternative will cause sustained yield production of cord wood to fall short of projected demand in 25.9 years instead of 27.7 years without any wilderness designation. About 22 percent of the manageable woodland in the Schell RA will be removed from availability in this alternative. This alternative will also remove a large portion of the available wood supply near Ploche. Impacts will be adverse and significant in the long term.

Some minor impacts will occur to livestock grazing. There will be some increased costs for, and some prohibitions of, new range improvements. Maintenance costs on some existing developments will be higher than

without wilderness designation. No reduction in AUMs or range condition will be caused by this alternative. Impacts to the range resource will not be significant.

The visual resources of the Schell RA will benefit from the prevention of certain visually impairing activities and the mitigation of others under wilderness management. These will be significant beneficial impacts occurring in the short and long terms.

There will be increases in recreation visitor days in the Schell RA above what would be expected without designation. These increases will not be more than 10 percent. Therefore impacts to recreation will be beneficial but insignificant.

Lands and realty will be adversely impacted by the removal of potential microwave communication sites in several WSAs. These impacts are not significant since other sites are available to fill the same needs, although at higher costs.

Cultural resources will receive offsetting beneficial and adverse impacts from the All Wilderness Alternative (see General Impacts, Cultural Resources). These impacts will be insignificant.

TABLE 4-1 Percent of Energy and Mineral Potential Removed from Leasing and Mineral Entry, By Alternative Potential in Schell RA = 100 percent.

	MINERAL POTENTIAL			OIL AND GAS POTENTIAL			GEOTHERMAL
	HIGH	GOOD	SPECULATIVE	HIGH	GOOD	SPECULATIVE	
ALL WILDERNESS	27.3	6.8	5.6	1.3	3.0	9.4	12.8
WILDERNESS EMPHASIS	9.0	1.1	5.2	0.1	1.4	0.8	6.7
PREFERRED ALTERNATIVE	5.3	0.7	3.4	0	0.8	0.8	1.0
LIMITED WILDERNESS	3.5	0	2.0	0	0.8	0	0.4
NO WILDERNESS	0	0	0	0	0	0	0

WILDERNESS EMPHASIS ALTERNATIVE

Mount Grafton

WILDERNESS: The integrity of the wilderness values of the Mount Grafton WSA would be insured in this alternative. Some minor adverse impacts will occur to the east and west benches in the long term because of their exclusion from the suitable area, but these will not be significant to the WSA as a whole. The main value of the bench areas is the size and diversity they add to the WSA. The opportunities for solitude and recreation that they hold are minimal, and the remainder of the area can easily stand as wilderness without them.

Mining may occur in the Deer Trail Mine area and in the Patterson Pass District as a nonconforming but allowable use in this alternative. Some short term and long term adverse impacts will result, but these will not be on a scale large enough to destroy the area's wilderness values.

Private inholdings and most areas where off-road vehicle use could be a problem are excluded from the suitable portion. Management of the area as wilderness will be fairly simple.

Wilderness designation in this alternative will protect the wilderness values of the Mount Grafton WSA from impacts caused by additional mineral exploration and extraction, development of microwave communication sites, potential range development, woodland product harvest, and casual road building associated with recreation. Long and short term beneficial impacts will result.

ENERGY AND MINERALS: In this alternative, the suitable portion of the Mount Grafton WSA is considerably reduced from the WSA boundaries. Most of the oil and gas potential is excluded and 15,000 acres of mineral potential remain. The land below the mine at Sheep Creek and much of the land around the Mill Creek (Geyser) Mine is excluded. Impacts of designation to these mines will be slight. The identified subeconomic reserve north of Patterson Pass

is partly included in the suitable portion, and development here would be encumbered by added administrative costs associated with designation.

RANGE: Few or no impacts will result to the range resource under this alternative. See General Impacts, Range.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Adjusting the wilderness boundary in this alternative results in the removal of 2,230 manageable woodland acres from production. It also provides additional protection for the bristlecone pines by limiting authorized surface disturbance.

LANDS: Same as for the All Wilderness Alternative.

RECREATION: Same as for the All Wilderness Alternative.

Far South Egans

WILDERNESS: Most of the WSA is recommended suitable in this alternative, and the integrity of the WSA's wilderness values are protected. Only the bench area on the west and a portion of the east bench are without protection. Impacts will occur to these over the long term from off-road vehicle use, energy exploration, range development, and forest product removal, but will be insignificant to the WSA as a whole. The value which these portions possess is mainly the added size and diversity they provide. Screening for solitude is minimal as are opportunities for recreation. Overall, very few impacts are expected if the area is not designated, so that only slight beneficial impacts will result.

ENERGY AND MINERALS: About 3,500 acres of good oil and gas potential are included. There will be no significant impacts with designation in this alternative.

RANGE: In this alternative, the boundary of the suitable portion is pulled off of the west bench to the cliff base, and is partially pulled off the east bench. This alleviates to a large degree the conflict

with the areas that have potential for vegetative conversion (still leaving 8,568 acres of potential on the east bench). A proposed spring development and pipeline remain in the suitable portion on the west side and would be disallowed if the area were designated as wilderness (see rationale in "All Wilderness Alternative").

WILDLIFE: Protection of nesting habitat for ferruginous hawks and sage grouse strutting grounds along the east and west benches would be lost. Adverse impacts to the hawks and grouse populations will occur with continued habitat destruction by unpermitted woodcutting, ORV use and oil and gas exploration. Potential bighorn sheep habitat will be protected.

FORESTRY: Adjusting the wilderness boundary in this alternative would result in the removal of 5,770 acres of manageable woodland from production. It would still allow protection for the ponderosa/bristlecone pine stands by reducing authorized surface disturbance.

LANDS: Same as for the All Wilderness Alternative.

RECREATION: Same impacts as in the All Wilderness Alternative.

Fortification Range

WILDERNESS: The impacts to the wilderness resource in the Fortification Range are similar in this alternative to those in the All Wilderness Alternative. (See All Wilderness.) A long term beneficial impact would result from prevention of development that otherwise would occur. A difference exists in that a large portion of the Gouge Eye area on the west side (see map 2-7) is not recommended suitable. In the long term, some adverse impacts from range development and forest product removal could be expected in this portion, but these would not be significant in the WSA as a whole. The Gouge Eye offers some good opportunities for solitude, but opportunities of better quality exist in the remainder of the WSA, as do outstanding opportunities for recreation, which are absent in the Gouge Eye.

ENERGY AND MINERALS: A major boundary adjustment on the west side of the Fortification Range WSA leaves 2,800 acres of good potential for oil and gas in the suitable portion.

RANGE: In this alternative, much of the Gouge Eye is removed from the suitable portion of the Fortification Range. The only remaining impact to the range resource is the inclusion of Gouge Eye Spring and Fortification Spring in the suitable portion and the increased costs of development and subsequent maintenance this would bring. This is a minor impact since it would not affect the success of any ranching operation.

WILDLIFE: Potential habitat for bighorn sheep will be protected. Raptor nesting areas and mountain lion winter range will also be protected from developments such as construction of microwave communication sites. Conflicts with big game management are largely eliminated.

FORESTRY: Adjusting the wilderness boundary in this alternative results in the removal of 6,406 acres of manageable woodland from production. The pine nut harvest area on the east bench would no longer be available to commercial harvesters. Some protection would be provided to the scattered ponderosa pines.

LANDS: Same as for the All Wilderness Alternative.

WILD HORSES: Increased costs of development and maintenance of fortification and Gouge Eye Springs will result, but will not be prohibitive.

Table Mountain

WILDERNESS: The entire Table Mountain WSA would be recommended as unsuitable in this alternative. Some adverse impacts will occur to the area's wilderness values. Spring developments and vegetative conversions will appear in the long term. Intensive forest product management in the northern one-third of the WSA will occur, possibly in the short term. However, since the wilderness values of the area - primarily its naturalness - are expected to

suffer significant adverse impacts even with designation (see "All Wilderness"), the loss of wilderness values cannot be attributed to nondesignation. The impacts from nondesignation would be insignificant.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Without wilderness designation pinyon-juniper conversion will be easier and less costly to accomplish. Deer numbers could increase significantly (37-58%) if forage problems caused by pinyon-juniper encroachment are solved. Sage grouse summer populations will be vulnerable to extirpation by likely expansion of the Atlanta mining activities.

FORESTRY: No woodland resource would be taken out of production in this alternative. The proposed greenwood cutting area would be allowed. Pioche residents would not lose this area for fuelwood cutting. The protection afforded the ponderosa pines by limiting surface disturbance would be lost.

White Rock Range

WILDERNESS: Same as for the All Wilderness Alternative. Long and short term beneficial impacts.

ENERGY AND MINERALS: Same as the All Wilderness Alternative.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

Parsnip Peak

WILDERNESS: In this alternative, a large portion on the south end and several small portions elsewhere along the periphery are not included in the suitable portion. (See map 2-10.) Impacts would occur to these in the long term, but would not be significant to the area as a whole. The value added by

the southern valley area is mainly the size and ecological diversity it contributes. Wilderness recreation use would be very light in this portion due to lack of opportunities for solitude and recreation. Exclusion of the other smaller parts will make management of the area easier and will not affect any outstanding opportunities for solitude or recreation.

Aside from the above differences, impacts to the Parsnip Peak WSA under the Wilderness Emphasis Alternative will be the same as for the All Wilderness Alternative. It will result in beneficial impacts in the long term.

ENERGY AND MINERALS: In this alternative, the suitable portion of the Parsnip Peak WSA contains 18,000 acres of land with speculative mineral potential (perlite) as well as about 1,500 acres with known reserves of perlite. Expansion of the Hollinger Mine to the east, if it reopens, will be encumbered by added costs.

About 800 acres with speculative oil and gas potential remain in the suitable portion.

Because the main perlite deposits can be developed even with designation, and because the oil and gas potential is merely speculative in a small area, impacts of designation will only affect the individual claimants and lessees.

RANGE: Impacts in the Wilson Burn will be about the same as in the All Wilderness Alternative.

Some increased costs for maintenance of existing developments and construction of new ones will occur. These will not affect the continued operation of any individual or company.

Exclusion of the Patterson Wash area in this alternative means that vegetative conversion will be allowed.

WILDLIFE: The impacts would be the same as for the All Wilderness Alternative except that 11,000 acres of pinyon-juniper suitable for conversion have been excluded from the suitable area.

FORESTRY: Adjusting the wilderness boundary in this alternative results in the removal of 18,600 acres of manageable woodland from production. The remainder of the impacts are the same as for the All Wilderness Alternative.

Worthington Mountains

WILDERNESS: The suitable portion of the Worthington Mountains in this alternative includes most of the mountain range, but excludes the west bench. This exclusion will result in lower efforts and costs required for successful management of the area, but very little loss of wilderness values. The values as identified during the inventory would receive protection from development except in the north end adjacent to Freiburg Mine where mining will occur on existing claims even with designation. Since this would extend south for only about one mile, adverse impacts would be insignificant.

Some mineral activity will occur in the suitable area after designation but designation will provide long term benefits by protecting wilderness values from more intensive mining and mineral exploration. Protection will also be given by preventing communication site location on the WSA's north end which will occur without designation.

ENERGY AND MINERALS: Under this alternative, all energy and mineral potential on the west bench is excluded. This still leaves the potential situated in the mountains south of Freiburg Mine and the geothermal potential on the east bench which will be withdrawn from mineral entry and leasing. Some mining will be allowed on existing claims pending a validity exam to prove that a valid discovery exists. Other mining and assessment work will be prohibited. Designation in the Wilderness Emphasis Alternative will have adverse impacts on the mineral resource (see "All Wilderness Alternative").

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

LANDS: Same as for the All Wilderness Alternative.

RECREATION: Same as for the All Wilderness Alternative.

Weepah Spring

WILDERNESS: Some minor deletions are made in this alternative for purposes of manageability. These involve small acreages with marginal wilderness quality, and the integrity of the WSA's wilderness values is in no way affected. Wilderness designation in this alternative would protect wilderness values from the immediate threat of impairment posed by mineral exploration in the northwest portion of the WSA (see "No Wilderness Alternative").

There is little likelihood of mining occurring in the area if it is designated as wilderness, and there are no private inholdings, so manageability of the area is assured. Some patrol of the area will be necessary to ensure enforcement of the Wilderness Management Policy, in particular in the lower elevations.

Designation of the suitable portion in this alternative would result in beneficial impacts to the wilderness resource in both the short and long term.

ENERGY AND MINERALS: Slightly less acreage with identified energy and mineral potential will be withdrawn in this alternative than in the All Wilderness Alternative. Adverse impacts will result to the energy and mineral resource as a result of wilderness designation.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

ECONOMIC AND SOCIAL IMPACTS

ECONOMIC IMPACTS: The economic impacts under this alternative will be the same as in the All Wilderness Alternative except that the adverse impacts will be slightly less in magnitude. Impacts are not significant.

Social Impacts: The impacts of this alternative are similar to but somewhat less than the All Wilderness Alternative.

CONCLUSIONS

The Wilderness Emphasis Alternative will provide protection for wilderness values that would otherwise be lost in all but the Table Mountain and the Far South Egans WSAs. (The values in the Table Mountain WSA would be lost even with designation, and the values in the Far South Egans WSA will be preserved even with nondesignation.) Manageability will be ensured in most instances, with minor exceptions in Mount Grafton and the Worthington Mountains, where mining will occur even with designation. Management of the areas as wilderness will not entail exorbitant costs or efforts.

This alternative will increase the ecosystem representation of the National Wilderness Preservation System, and will increase the opportunities for primitive recreation for one Standard Metropolitan Statistical Area, Las Vegas.

Impacts to the wilderness resource will be beneficial and significant.

The Wilderness Emphasis Alternative will remove substantial mineral potential from mineral entry. Of all acreage in the Schell RA with identified high potential for minerals, 9% will be removed, as will 1.1% of all good potential and 5.2 percent of all speculative potential. The level of removal of high and speculative potentials make the impacts significantly adverse. Impacts to energy resources are insignificant (see Table 4-1). Impacts to the national effort to become energy self-sufficient and to the national stockpile effort will be very small and adverse.

The Wilderness Emphasis Alternative will bring some adverse impacts to the range resource. Some new range developments will be prohibited, and others made more costly by the requirements of the Wilderness Management Policy. A very few existing facilities will become more difficult and costly to maintain. There will be no reductions in AUMs. Adverse impacts to range will be insignificant.

Wildlife under the Wilderness Emphasis Alternative will benefit from the preservation of habitats in those areas designated wilderness. Wildlife management will be more difficult especially in Deer Herd Management Area 23. Reestablishment of the deer herd by habitat manipulation will be made impossible by the requirements of the Wilderness Management Policy in the White Rock Range and Parsnip Peak WSAs, which contain 51,670 acres of treatable habitat. These impacts can be partially offset for winter range conversion by concentrating efforts outside of the WSAs. Some summer range can be converted in the Table Mountain WSA, which is unsuitable in this alternative, but this will not be adequate. However, impacts will not be significant because funds for conversion on the scale needed for herd reestablishment are not available.

Visual resources will experience long term significant benefits (see "General Impacts, Visual Resources").

Cultural resources will receive both beneficial and adverse impacts under this alternative. These will be insignificant (see "General Impacts, Cultural Resources").

Recreation will receive beneficial impacts that outweigh a few adverse impacts that can be expected (see "General Impacts, Recreation"). An increase in recreation visitor days will result, but will be less than 10 percent in the Schell RA, and so will be insignificant.

Impacts to forestry under the Wilderness Emphasis Alternative will be both adverse and beneficial. Adverse impacts will occur due to a reduction of 10% in the manageable woodland available for consumptive uses in the Schell RA, causing the point at which

sustained yield supply equals demand to come in 27 years instead of 27.7 years with no wilderness designation. Beneficial impacts will occur with protection given by wilderness management to special resource values such as bristlecone and ponderosa pine, although these are already protected by law or by policy. The designation of the White Rock WSA and especially the Parsnip Peak WSA will remove some of the most conveniently accessible wood supply from the Pioche area. All impacts to forestry are insignificant.

Designation of seven of the eight WSAs as wilderness will create beneficial impacts by preserving the quality of the soil, water, and air. Impacts will be insignificant.



PREFERRED ALTERNATIVE

Mount Grafton

WILDERNESS: Under this alternative, the Mount Grafton WSA is recommended unsuitable for designation in its entirety. Without designation, mineral exploration and extraction will occur in several portions of the area. Road development associated with increased harvest of woodland products, standard fire suppression methods, rangeland development, and recreation (in this case, casual road development) will create additional impacts. One or more communication sites will likely be emplaced on the ridge line. The accumulation of these impacts will result in a loss of most of the area's wilderness values in the long term, in particular its naturalness and opportunities for solitude.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Important habitat for elk, deer and potentially for bighorn sheep would be lost in the long term to mining intrusions, construction of microwave communication sites, and other impacts listed above.

FORESTRY: No manageable woodland will be taken out of production in this alternative. The bristlecone pines would not receive the added protection afforded by wilderness.

RECREATION: Some loss of primitive recreation opportunities due to increased disturbances.

NOTE: The BLM recognizes the high interest and values in the Mount Grafton WSA. To ensure that the natural values of the area are preserved, the BLM will consider recommending a portion of the area for withdrawal from mineral entry, mineral leasing, and disposal.

Far South Egans

WILDERNESS: The impacts to the wilderness resource in this alternative are the same as in the Wilderness Emphasis Alternative.

No nonconforming uses which would threaten wilderness values will occur with

designation. Some surveillance will be needed to prevent unauthorized woodcutting and off-road vehicle use in the north end and small portions of the benches on the east and west.

Again, designation will bring a slight beneficial impact to the wilderness resource in the long term.

ENERGY AND MINERALS: Same as for the Wilderness Emphasis Alternative.

RANGE: Same as for the Wilderness Emphasis Alternative.

WILDLIFE: Same as for the Wilderness Emphasis Alternative.

FORESTRY: Same as for the Wilderness Emphasis Alternative.

LANDS: Same as for the All Wilderness Alternative.

RECREATION: Same impacts as for the All Wilderness Alternative.

Fortification Range

WILDERNESS: In this alternative, the Fortification Range is recommended unsuitable for wilderness designation. Unprotected, the wilderness values of the area will experience very few impacts in the short term. In the long term, impacts from several resource uses will occur. Mineral exploration will create roads in the area. Roads and associated imprints will also appear with intensified woodland harvest on both benches and the south end; rangeland development in the Gouge Eye and western canyons; communication site location on the ridge; and conventional fire suppression and recreation wherever off-road access is possible. Naturalness and the quality of opportunities for primitive recreation will be adversely affected. Since these impacts would be prevented by designation, the impacts of nondesignation will be adverse in the long term.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: With no wilderness designation, pinyon-juniper conversion on 7,200 acres will be easier and less costly to accomplish. The protection of raptor nesting areas, potential bighorn habitat, mountain lion winter range, and habitat for other species from developments such as microwave communication sites will be lost.

FORESTRY: No woodland resource would be taken out of production in this alternative. The protection afforded the ponderosa pines would be lost.

WILD HORSES: Minor loss of protection for habitat will result in this alternative. Development of Fortification and Gouge Eye Springs will be unencumbered by the requirements of the Wilderness Management Policy.

Table Mountain

WILDERNESS: Same as for the Wilderness Emphasis Alternative. No significant impacts.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as for the Wilderness Emphasis Alternative.

FORESTRY: Same as for the Wilderness Emphasis Alternative.

White Rock Range

WILDERNESS: Same as for the All Wilderness Alternative. Long and short term beneficial impacts.

ENERGY AND MINERALS: Same as for the All Wilderness Alternative. Impacts will be insignificant.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

Parsnip Peak

WILDERNESS: In this alternative, sufficient acreage is included in the suitable area to preserve the wilderness values of the Parsnip Peak WSA. Some adjustments have been made in addition to those described in the Wilderness Emphasis Alternative, but the impacts will be nearly identical. A significant long term beneficial impact would result with designation. Exclusion of the land around the Hollinger Mine on the west, and exclusion of two private, 40-acre inholdings on the north end make the area more manageable as wilderness.

ENERGY AND MINERALS: The Preferred Alternative excludes the land around the Hollinger Mine. It includes about 15,000 acres of land containing speculative potential and about 2,000 acres of high potential (perlite) that will be withdrawn from mineral entry. It also includes about 800 acres of land with identified speculative oil and gas potential that will become unavailable for exploration and development. The impacts of designation to energy and mineral resources will only affect the individual claimants and lessees.

RANGE: Impacts to range in the Wilson Burn will be essentially the same as in the All Wilderness Alternative. Some increased costs for maintenance of existing developments and construction of new ones will occur. Exclusion of the Patterson Wash area in this alternative means that vegetative conversion will not be prevented by wilderness designation.

WILDLIFE: The impacts would be the same as for the All Wilderness Alternative except that 18,000 acres of pinyon-juniper have been excluded from the unit.

FORESTRY: This alternative results in the removal of 17,800 acres of manageable woodland from production. Pioche residents would be adversely affected by this reduction in their local wood supply. A portion of the Mount Wilson Burn will be excluded from this alternative allowing some timber salvage. The ponderosa pines and aspen groves would have some protection by reducing authorized disturbance.

Worthington Mountains

WILDERNESS: In this alternative, most of the Worthington Mountain Range is included in the suitable portion, and both the east and west bench are excluded. The outstanding opportunities for recreation which this area offers are held in the mountainous portion, so that the integrity of the area will be insured in this alternative.

Even with designation, some impairment may occur on the north end if the Freiburg Mine is expanded into the area. This should not be significant since the extension would likely be for only about a mile, and would not approach Leviathan Cave. Designation in this alternative will protect the wilderness values of the WSA from additional mining and mineral exploration and from communication site location on the WSA's north end. This will provide beneficial impacts in the long term.

Except for the possible expansion of mining on the north end, management of this area as wilderness will be very easy because of the topography of the area and the low probability of nonconforming but allowable uses occurring.

ENERGY AND MINERALS: This alternative excludes the energy and mineral potential on both east and west benches, but includes the potential in the mountains south of the Freiburg Mine. Some mining may occur on existing claims with proof of a valid discovery, but development will otherwise be prohibited. Adverse impacts will therefore result to the mineral and energy resource (see "All Wilderness Alternative").

RANGE: No impacts.

WILDLIFE: The impacts are the same as for the All Wilderness Alternative except that the kit fox populations would not be protected from Animal Damage Control activities.

FORESTRY: Same as for the All Wilderness Alternative.

LANDS: Same as for the All Wilderness Alternative.

RECREATION: Same as for the All Wilderness Alternative.

Weepah Spring

WILDERNESS: The wilderness values of the Weepah Spring WSA would receive almost complete protection in this alternative. Some deletions have been made from the All Wilderness and Wilderness Emphasis alternatives, but these are minor changes that in no way affect the quality or quantity of wilderness values in the suitable portion.

Management of the suitable portion as wilderness will be simple (see "Wilderness Emphasis").

The protection afforded by designation will prevent the impairment of wilderness values (naturalness and opportunities for solitude) by mineral exploration (see "No Wilderness Alternative"). Designation in this alternative will result in beneficial impacts in the short and long terms.

ENERGY AND MINERALS: Slightly less acreage with identified energy and mineral potential will be withdrawn in this alternative than in the Wilderness Emphasis Alternative. Adverse impacts will result to the energy and mineral resource as a result of wilderness designation.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Same as for the All Wilderness Alternative.

FORESTRY: Same as for the All Wilderness Alternative.

ECONOMIC AND SOCIAL IMPACTS

ECONOMIC IMPACTS: The economic impacts in this alternative will be about the same as in the All Wilderness Alternative. However, the adverse impacts will be of reduced magnitude because of the reduced suitable acreage. Impacts will not be significant.

SOCIAL IMPACTS: This alternative is a mid-range between the All Wilderness and No Wilderness Alternatives. The alternative proposes a balance of the major concerns of competing user groups, and by additional boundary adjustments, enhances the manageability of the five WSAs recommended as suitable.

Since this alternative attempts to achieve a balance between competing user groups while strengthening the manageability of the areas recommended as suitable by minimizing and/or eliminating resource conflicts, it will probably find a broader base of community support than would either the All Wilderness or Limited Wilderness Alternatives.

The implementation of this alternative would not significantly affect lifestyles in the area. However, for those area residents who view the Bureau of Land Management negatively, the implementation of this alternative would provide five areas that would stand as a constant reminder that the Federal bureaucracy prevailed in the selection and preservation of wilderness areas over the objections of some local residents.

CONCLUSIONS

CONCLUSION: The preferred alternative will protect the wilderness values and the integrity of four WSAs against impairing activities certain to occur without designation. It will also designate as wilderness a fifth WSA, the Far South Egans, whose wilderness values are not threatened except perhaps in the unforeseeable future. Management of the five suitable areas as wilderness can be successfully done with only some relatively minor costs for patrol and, in the case of Whipple and Leviathan Cave, special area management.

The exclusion of the Mount Grafton and the Fortification Range WSAs will result in a significant loss of their wilderness values in the long term. Significant adverse and beneficial impacts will therefore result to wilderness values under this alternative.

Of the acreage with identified high mineral potential in the Schell RA, five percent

would be withdrawn from mineral entry in this alternative, as would be less than one percent of the good mineral potential and a little more than three percent of the speculative mineral potential. Significant and adverse impacts would therefore result in regard to high and speculative potential. Impacts to energy will be insignificant (see Table 4-1).

Wildlife will benefit from the preservation of habitat in the suitable areas, and will be adversely impacted in the unsuitable areas by loss of habitat in the long term. Some adverse impacts will occur to wildlife management in Deer Herd Management Area #23, where habitat conversion needed for herd reestablishment will be more difficult, more costly, and in some cases impossible under wilderness management. This will not be significant since the funds needed for massive vegetative conversion necessary for herd reestablishment are not available. Generally, impacts will benefit wildlife in this alternative, but will be insignificant.

Some adverse impacts will occur to range under this alternative. Maintenance of a very few existing range facilities will become more costly, and a few potential facilities will be disallowed. These adverse impacts will not endanger the continued operation of any ranching operation, and will be insignificant in the Schell RA as a whole.

The forest resource will experience a loss of seven percent of the manageable woodland in the Schell RA in this alternative. This is an insignificant impact. Beneficial impacts will result from the added protection for special resources such as ponderosa and bristlecone pines, but these will be insignificant. Some adverse impacts will occur locally to Pioche residents, whose available supply of cordwood will be reduced.

The lands resource will be adversely affected in the long term by the inclusion in the suitable areas of several locations suited for communication site location. Since there are other sites that will serve the same purposes, these adverse impacts will be insignificant.

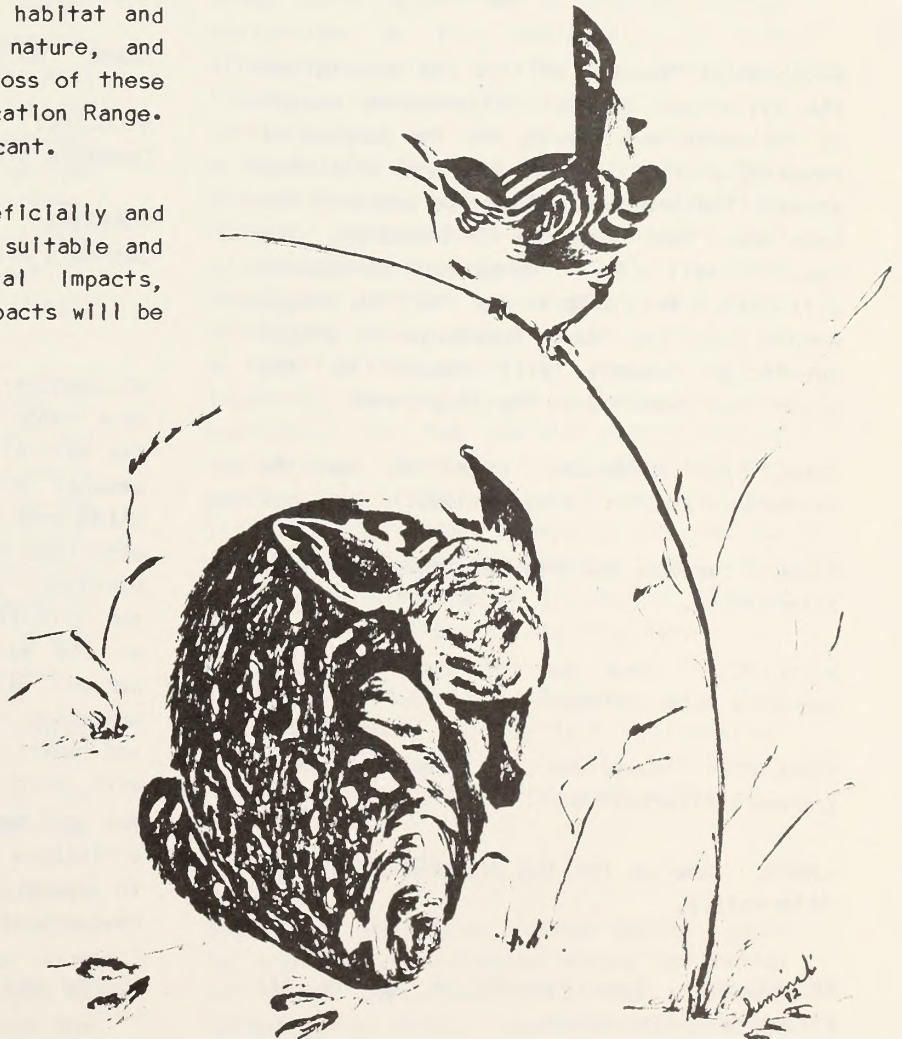
The recreation resource will experience some adverse impacts in the long term as primitive and semi-private recreation opportunities are lost in those areas unsuitable for designation. Beneficial impacts will result from the preservation of the same sorts of opportunities in the suitable areas. All impacts will be insignificant.

Visual resources will receive significant, long term beneficial impacts as a result of the protection afforded by wilderness designation.

Soil, water, and air will benefit from prevention of disturbing activities in the suitable areas, and will be adversely impacted by disturbing activities in the unsuitable areas. These impacts will be insignificant.

Wild horses will benefit in the suitable areas from protection of their habitat and their wild and free roaming nature, and will be adversely affected by loss of these characteristics in the Fortification Range. These impacts will be insignificant.

Cultural resources will be beneficially and adversely affected in both the suitable and unsuitable areas (see "General Impacts, Cultural Resources"). These impacts will be insignificant.



LIMITED WILDERNESS ALTERNATIVE

Mount Grafton

WILDERNESS: Same as for the Preferred Alternative.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Same as for the Preferred Alternative.

FORESTRY: Same as for the Preferred Alternative.

RECREATION: Same as for the Preferred Alternative.

Far South Egans

WILDERNESS: Impacts will be the same as for the Wilderness Emphasis Alternative except on the north end. Here, for the purpose of removing a slightly unnatural area with easy access, the proposed wilderness boundary has been drawn back from the WSA boundary. The result will be increased management difficulty and effort due to the vague nature of the new boundary. Slight beneficial impacts will result to the wilderness resource in the long term.

ENERGY AND MINERALS: Same as for the Wilderness Emphasis Alternative.

RANGE: Same as for the Wilderness Emphasis Alternative.

WILDLIFE: Same as for the Wilderness Emphasis Alternative.

FORESTRY: Same as for the Wilderness Emphasis Alternative.

LANDS: Same as for the Wilderness Emphasis Alternative.

RECREATION: Same impacts as in the All Wilderness Alternative.

Fortification Range

WILDERNESS: Same as for the Preferred Alternative. Long term adverse impacts.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Same as for the Preferred Alternative.

FORESTRY: Same as for the Preferred Alternative.

Table Mountain

WILDERNESS: Same as for the Wilderness Emphasis Alternative. No significant impacts.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Same as for the Wilderness Emphasis Alternative.

FORESTRY: Same as for the Wilderness Emphasis Alternative.

White Rock Range

WILDERNESS: In this alternative, the White Rock Range WSA is recommended unsuitable in its entirety. In the short and long terms, several activities will affect the area's wilderness values. Spring development and pipelines will impair the naturalness of the northwest portion. Vegetative conversion for wildlife and livestock will affect much of the western half of the area. Wood harvest will intensify and extend into now untouched areas, as will outdoor recreation; and roads associated with these activities will destroy naturalness and opportunities for solitude. The combined effect of these activities and of this alternative will be to create adverse impacts to the wilderness resource in the short and long terms.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Without wilderness designation pinyon-juniper conversion will be easier and less costly to accomplish. Deer numbers in the Deer Herd Management Area could increase significantly (37-58%) if forage problems caused by pinyon-juniper encroachment are solved.

FORESTRY: No woodland resource would be taken out of production in this alternative. The unique opportunity to study succession in this area would be lost.

Parsnip Peak

WILDERNESS: The acreage of the suitable portion of Parsnip Peak is reduced in this alternative from the Preferred Alternative. The wilderness values of the WSA are still insured. There will be some minor loss of value, primarily associated with the exclusion of the Wilson Burn area, which has high archaeological and some scenic value. Overall recreation and solitude opportunities will also be slightly lessened. Besides these differences, impacts to the WSA will be the same as in the Wilderness Emphasis Alternative. Management of the area as wilderness will entail very little effort and will be assured, with very little chance of nonconforming but allowed uses. A significant beneficial impact will result in the long term.

ENERGY AND MINERALS: About 11,000 acres of speculative mineral potential (perlite) and about 600 acres with a known perlite deposit are included in the suitable portion of the Parsnip Peak WSA. Because of the unlikelihood of the development of this resource (see All Wilderness Alternative), impacts to the energy and mineral resource will affect only the individual claimants and lessees.

RANGE: With exclusion of the Wilson Seeding and the Patterson Wash portion from the suitable part of Parsnip Peak, very few impacts will affect the range resource. Some small areas occur on the east bench that have marginal potential for vegetative conversion for livestock purposes. Conversion will be allowed in connection with wildlife habitat enhancement, but will be of less benefit and higher cost because of the special requirements of wilderness management.

WILDLIFE: Vegetative conversion will be complicated on the 15,500 acres of pinyon-juniper in this unit. Prescribed burning could be used for some pinyon-juniper conversion. There will be loss of protection from future developments for wildlife habitat overall.

FORESTRY: This alternative results in the removal of 11,200 acres of manageable woodland from production. Pioche residents would be slightly affected by the reduction of their local woodcutting supply. The entire Mount Wilson Burn is excluded from this alternative, allowing timber salvage. The ponderosa pines and aspen groves would have some protection by reducing authorized surface disturbance.

Worthington Mountains

WILDERNESS: This alternative eliminates all areas where impacts can be expected without designation so that designation in this alternative will provide no beneficial impacts. However, the exclusion of the northern half of the mountain range will allow impacts to occur that would have been prevented by wilderness designation. Mineral exploration in particular will affect the naturalness of the northern unsuitable portion. Even though the WSA's wilderness values would not be destroyed as a result, they would be compromised by lessening the quality of opportunities for recreation and the overall naturalness of the area. Management of the suitable portion as wilderness will require very little cost or effort excepting the need for special management of Leviathan Cave. This alternative will result in adverse impacts to wilderness values in the long term.

ENERGY AND MINERALS: Because of a much reduced suitable portion that excludes all identified mineral and energy potential, impacts in this alternative will be low.

RANGE: No impacts.

WILDLIFE: The bighorn sheep habitat would be degraded by increased mining activities and other developments such as microwave communication sites. Increased disturbances could result in the departure of bighorn sheep currently using the area and loss of

opportunities for future reintroductions. Kit fox populations would not be protected from Animal Damage Control activities. Raptor populations would decrease with increased disturbances.

FORESTRY: This alternative removes about 350 acres of manageable woodland. There will be no impact to woodland production since the area is unsuitable for this. Protection from authorized surface disturbance would be lost for the ponderosa pine and some bristlecone pine. The remaining bristlecone pine would be protected, although threatening activities are very few and speculative.

RECREATION: Some loss of primitive recreation opportunities due to increased disturbances in the north end.

Weepah Spring

WILDERNESS: In this alternative, the suitable area of the Weepah Spring WSA is reduced in size by the exclusion of the southern third of the WSA. This portion contributes to the size of the WSA and so to opportunities for solitude, especially since it has some very effective topographic screening. It has value for the ecological diversity it contributes (it consists of low mountains and high benchland with a desert shrub vegetative cover). It also contains important supplemental values including archaeological sites and wild horse habitat.

While the exclusion of the southern third of the area would remove some important wilderness values, it would not expose them to danger of impairment except in the long term when some ORV travel might impair the naturalness of the area. The main threat to wilderness values is in the northwest part of the WSA where mineral exploration will impair the naturalness and opportunities for solitude of the area if it is not designated as wilderness (see "No Wilderness Alternative"). Since designation in this alternative would protect the endangered area, it will result in beneficial impacts to the wilderness resource in the short and long term.

Management of the suitable portion as wilderness will be very simple since its

topography will virtually protect itself from all but the most major impairing activities.

ENERGY AND MINERALS: Slightly less acreage with identified mineral and energy potential will be withdrawn in this alternative than in the Preferred Alternative. Adverse impacts will result to the energy and mineral resource as a result of designation.

RANGE: Same as for the All Wilderness Alternative.

WILDLIFE: Some raptor nesting areas will be protected from increased mining activities. Many of them will not be protected, however. About 17,000 acres of potential bighorn sheep habitat will lose protection.

FORESTRY: This alternative results in the removal of about 4,000 acres of manageable woodland. The remaining impacts are the same as for the All Wilderness Alternative.

ECONOMIC AND SOCIAL IMPACTS

ECONOMIC IMPACTS: The economic impacts in the Limited Wilderness Alternative will be similar to the All Wilderness Alternative. The adverse impacts will be of much reduced magnitude because of the elimination of most other-resource conflicts in this alternative. Beneficial impacts will also be slightly reduced. Impacts are not significant.

SOCIAL IMPACTS: This alternative would reduce the number of acres recommended as suitable in the All Wilderness Alternative by 309,738 acres (73%) and would completely eliminate four of the eight wilderness study areas from further consideration in the Wilderness Study Program. This alternative would eliminate several of the conflicts evident in the All Wilderness Alternative and also respond to the multiple-use management concerns of many area residents.

For those ranchers licensed to graze in the four wilderness study areas that were dropped from further study, i.e., Mt. Grafton, Fortification Range, Table Mountain and White Rock Range, the implementation of this alternative would maintain the status

quo for that part of their ranching operation. Similarly, the implementation of this alternative would remove any lingering concerns about what direction the wilderness program would take in the future for those individuals and/or corporations who had prior existing rights or private inholdings in those areas dropped from further consideration.

It is likely that the implementation of this alternative would be favorably received by the minerals sector since the alternative eliminates major areas of minerals conflicts. It could also be expected that many if not a majority of area residents would support implementation since the alternative design evolved through the process of public input. However, those individuals and stakeholder groups with a conservation or environmental preservation orientation would probably object to its implementation.

CONCLUSIONS

CONCLUSION: Under the Limited Wilderness Alternative, the integrity of two WSAs (Parsnip Peak and Weepah Spring) will be protected against impacts that would occur with nondesignation. A third suitable area, the Far South Egans, needs no protection, and a fourth area, the Worthington Mountains, is so much reduced in size that its overall wilderness values will suffer significant impairment even though they will not be destroyed. Four unsuitable areas will suffer major loss of wilderness values in the long term, three of these because of nondesignation. Wilderness values will therefore receive both beneficial and adverse impacts of significance under this alternative.

Management of the suitable areas as wilderness will be very simple. Because of boundary adjustments, the topography of the areas will be virtually self-protecting. Only occasional patrols and special management for Leviathan and Whipple Caves will be necessary. There is very little chance for authorized mining activity in any of these areas once they are designated.

Of all the acreage with identified high mineral potential in the Schell RA, about 3.5 percent will be withdrawn from mineral

entry in this alternative, as will 2 percent of the speculative potential and none of the good potential. These are insignificant impacts, as are the impacts to oil and gas potential (see Table 4-1).

Wildlife under the Limited Wilderness Alternative will benefit from preservation of habitat in the suitable areas and will be adversely affected by loss of habitat in the unsuitable areas. Wildlife management in Deer Herd Management Area #23 will be encumbered by wilderness management requirements regarding habitat conversion for herd reestablishment. Designation in this alternative will eliminate the potential for herd reestablishment. However, since funds for vegetative conversion on the scale needed for successful reestablishment are not available, this impact is not significant. Generally, impacts to wildlife will be insignificant.

A very few adverse impacts will occur to range under this alternative, and they will be insignificant.

The forest resource will experience a loss of 5 percent of the manageable woodland in the Schell RA in this alternative. This is an insignificant impact, as are the benefits provided by protection for special values such as ponderosa and bristlecone pine in the suitable areas. Local impacts to Pioche will be slight.

The lands resource will be insignificantly impacted.

Recreation will experience some loss of primitive and semi-primitive recreation opportunities in the unsuitable areas, and will benefit from preservation of similar opportunities in the suitable areas. These will be insignificant.

Visual resources will benefit from the prevention of visually impairing activities in the suitable areas, and will be adversely impacted by impairing activities in the unsuitable areas. These will be significant impacts.

Soil, water, and air will benefit from prevention of disturbing activities in the suitable areas, and will be adversely

impacted by disturbing activities in the unsuitable areas. These impacts will be insignificant.

Wild horses will benefit in the Weepah Spring and Parsnip Peak WSAs from protection of their habitat and their wild and free roaming nature, and will be adversely affected by loss of these characteristics in the Fortification Range. These impacts will be insignificant.

Cultural resources will be beneficially and adversely affected in both the suitable and unsuitable areas (see "General Impacts, Cultural Resources"). These impacts will be insignificant.

NO WILDERNESS ALTERNATIVE

Mount Grafton

WILDERNESS: Same as for the Preferred Alternative.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Big game management (pinyon-juniper conversion) will be easier and less costly to accomplish with no wilderness designation, however, the potential loss of wildlife habitat due to future development will create an adverse impact to wildlife overall.

FORESTRY: Same as for the Preferred Alternative.

RECREATION: Same as for the Preferred Alternative.

Far South Egans

WILDERNESS: In this alternative, the wilderness resource would be given no special protection. The short term impact would be negligible, since little development activity is anticipated in the near future with nondesignation. In the long term the area is expected to suffer some adverse impacts, primarily as the result of

primitive road extension into the easily accessible portions of the area.

Vegetative conversion for range purposes will occur on the east and west benches, but wilderness values will suffer little as a result because of the minor contributions the benches make towards opportunities for recreation and solitude. Communication site emplacement may occur in the area, but this seems unlikely.

Adverse impacts from nondesignation will be small.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Protection of nesting habitat for ferruginous hawks, sage grouse strutting grounds and bighorn sheep habitat will be lost. There will be adverse impacts to the ferruginous hawks and sage grouse populations with loss of habitat due to woodcutting, ORV use and oil and gas exploration.

FORESTRY: No woodland resource would be taken out of production in this alternative. The protection for the ponderosa/bristlecone pine stands would be lost. However, without protection, very little damage is expected to occur to these stands.

RECREATION: No Impact.

Fortification Range

WILDERNESS: Same as for the Preferred Alternative. Long term adverse impacts.

ENERGY AND MINERALS: No Impacts.

RANGE: No Impacts.

WILDLIFE: Same as for the Preferred Alternative.

FORESTRY: Same as for the Preferred Alternative.

Table Mountain

WILDERNESS: Same as for the Wilderness Emphasis Alternative.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as for the Wilderness Emphasis Alternative.

FORESTRY: Same as for the Wilderness Emphasis Alternative.

White Rock Range

WILDERNESS: Same as the Limited Wilderness Alternative.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as for the Limited Wilderness Alternative.

FORESTRY: Same as for the Limited Wilderness Alternative.

Parsnip Peak

WILDERNESS: In this alternative, no part of the Parsnip Peak WSA will be designated wilderness. Short term impacts will be negligible. In the long term, many impacts to the wilderness resource will occur as a result of nondesignation. In the southern valley portion, disturbances will result from vegetative conversion, uncontrolled off-road vehicle use, and mineral exploration. Exploration will also impact the central portion of the WSA where mineral potential has been identified (see map 3-17), and could extend into the northern portion as well. The Wilson Burn area will experience intensive range management with fence and spring developments. The east side and south end will experience vegetative conversion for wildlife and livestock, and will receive intensified woodland product use wherever vehicle access is possible.

Some loss of values will occur even with designation, but this alone would not affect the integrity of the area (see "All Wilderness Alternative"). The additional impacts which designation could prevent, however, will impair the area's suitability, so that the No Wilderness Alternative will have an adverse impact on the area.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Without wilderness designation pinyon-juniper conversion will be easier and less costly to accomplish. Deer numbers could increase significantly (37-58%) if forage problems caused by pinyon-juniper encroachment are solved.

FORESTRY: No woodland resource would be taken out of production in this alternative. The protection afforded the ponderosa pines and aspen groves by reducing authorized surface disturbance would be lost.

Worthington Mountains

WILDERNESS: With nondesignation, there will be development in the Worthington Mountains WSA which will affect wilderness values. Mineral exploration will occur in a zone with speculative mineral potential that extends from the Freiburg Mine south for a distance of five miles. While this will not affect Leviathan Cave, it will lower the quality of opportunities for other forms of primitive recreation, and it will affect the naturalness of the area as a whole. Additional impacts will occur in the same area from communication site placement. Impacts under this alternative will be adverse in the long term.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Same as for the Limited Wilderness Alternative.

FORESTRY: No woodland resource would be taken out of production in this alternative. The protection afforded the bristlecone and ponderosa pines from authorized surface disturbance would be lost.

RECREATION: Some loss of primitive recreation opportunities due to increased disturbances in the north end.

Weepah Spring

WILDERNESS: With no wilderness protection, the Weepah Spring WSA will receive extensive impacts from mineral exploration. Road building will extend into the mountains of the northern (especially the northwestern) portion of the WSA, destroying naturalness and opportunities for solitude. The result will not be complete destruction of wilderness values in the area, but a major loss of naturalness and opportunities for solitude in the north half will impair the integrity of the area.

Other adverse impacts will result from nondesignation, especially casual road building associated with ranching and recreation, but these by themselves would be insignificant in the short and long term. Nondesignation will result in adverse impacts to the Weepah Spring WSA in both the short and long terms.

ENERGY AND MINERALS: No impacts.

RANGE: No impacts.

WILDLIFE: Habitat protection for nesting raptors, especially peregrine falcons, would be lost, as well as habitat for bighorn sheep from increased mining activity in the northwest portion of this unit. Kit fox populations would not receive protection from Animal Damage Control activities.

FORESTRY: No woodland resource would be taken out of production in this alternative. Protection of the large, vigorous stand of ponderosa pine by restricting authorized surface disturbance would be lost, although this loss is minor since there is no apparent threat to this resource.

ECONOMIC AND SOCIAL IMPACTS

ECONOMIC IMPACTS: No impacts.

SOCIAL IMPACTS: If this alternative were implemented, management of the public land resources would be guided by the current management framework plan decisions for the Resource Area which, in essence, continues the status quo. This would find a great deal of support among local residents--particularly those with an interest in or dependent on ranching, mining, and oil and gas exploration. Those individuals who hunt off road or enjoy pursuing other forms of motorized recreational activities in the WSAs would also support the implementation of this alternative. Current lifestyles in the area would not be affected by the implementation of this alternative.

It could be expected that those individuals and stakeholder groups who are environmentally oriented would, both at the local and national level, adamantly oppose the implementation of this alternative.

CONCLUSIONS

The No Wilderness Alternative will have no impact on minerals and energy, lands and realty, and range. It will have some adverse impact on wildlife because of the loss of habitat which will occur without designation. Wildlife management will benefit, however, from the absence of special regulations that wilderness designation would impose, especially in Deer Herd Management Area 23 where habitat conversion on a massive scale is needed for herd reestablishment. These impacts will not be significant.

Soil, water, and air will all be adversely impacted to a very minor degree by activities which would be prevented by wilderness designation.

The forest resource will suffer some adverse impacts under this alternative. Protection which would be given by wilderness designation to special resources such as ponderosa pine and bristlecone pine will be forgone. However, this alternative will leave all manageable woodland open to consumptive uses. Impacts to the woodland resource will be insignificant.

Wild horses will experience some loss of

protection for their natural and open habitat, and will be affected by manmade disturbances which would not occur with wilderness designation. These impacts will be insignificant.

The wilderness resource will be adversely impacted by the No Wilderness Alternative. All WSAs except the Far South Egans and Table Mountain will be significantly impacted by activities which, under wilderness management, would be prohibited. The No Wilderness Alternative will also forgo the inclusion of ecosystems in the National Wilderness Preservation System which would enlarge the system's representation, and it will forgo the enlargement of opportunities for primitive recreation for one standard Metropolitan Statistical Area, Las Vegas.

Scenic values in all WSAs will be affected by activities which would not be permitted in designated wilderness. Visual resources will be adversely and significantly impacted by the No Wilderness Alternative in the long term.

The recreation resource will be adversely affected by a loss of primitive backcountry recreation opportunities. This will be a qualitative and unquantifiable loss, and will be insignificant.

Cultural resources in the No Wilderness Alternative will be impacted both adversely and beneficially, and these impacts will be insignificant (see General Impacts, Cultural Resources).

CHAPTER 5

CONSULTATION AND COORDINATION

The Schell Wilderness Draft Environmental Impact Statement was prepared by specialists from the BLM's Ely District with assistance from the Nevada State Office and the Las Vegas District in Nevada and the Cedar City District in Utah. The writing of this EIS began in February 1982; research began in 1978 with the wilderness review required by FLPMA. The process included inventories of resources, public participation and coordination with other agencies, organizations and individuals. This EIS meets the requirements of Sections 101 and 102(1) in the National Environmental Policy Act.

An active public involvement process aided in developing the EIS. Public opinion was elicited through public meetings in Ely, Reno, Pioche and Baker; mailings to an extensive list of groups and individuals and Federal Register notices.

The BLM will request comments on the draft EIS from all affected grazing permittees, interested individuals, federal and state agencies, and interest groups. Due to the size of the mailing list (over 400), the following is only a partial list of those contacted.

Nevada State Agencies

Nevada Bureau of Mines And Geology
Nevada State Clearinghouse

Elected Representatives

Federal

Representative Barbara Vucanovich
Senator Chic Hecht
Senator Paul Laxalt

State

Assemblyman Getto
Senator Blakemore
Governor Richard Bryan

Indian Tribes and Councils

Duckwater Tribal Council
Ely Indian Colony
Intertribal Council
National American Indian Center

Local Agencies

Ely City Council
Ely District Advisory Council
Ely District Grazing Board
Lincoln County Commission
Nye County Commission
White Pine Chamber of Commerce
White Pine County Commission
White Pine County CRMP Committee
White Pine County Extension Service
White Pine County Library

Federal Agencies

Bureau of Indian Affairs
Bureau of Reclamation
Dept. of the Air Force
Environmental Protection Agency
Federal Highway Administration
Federal Energy Regulatory Commission
Forest Service
Minerals Management Service
National Park Service

Other Organizations

American Assoc. of Petroleum Geologists
American Wilderness Alliance
AMSELCO Exploration Inc.
Anaconda Minerals Co.
Animal Protection Institute
Atlantic Richfield Co.
Audubon Society
Bear Creek Mining Co.
Boundy & Foreman, Inc.
Chevron USA, Inc.
Conservation Districts
Ducks Unlimited
Environmental Forum
Exxon Minerals Co.
Freeport Exploration Co.
Freiburg Mines, Inc.
Gem and Mineral Societies
Grazing Permittees
High Desert Grotto
Homestake Mining Co.
Houston International Minerals Corp.
Independent Petroleum Assoc. of America
Inspiration Development Co.
Interested Individuals
Kennecott Copper Corp.
Kerr-McGee Corp.

LA Water and Power
 Laconda Mining Inc.
 National Resource Defense Council
 Nevada Cattlemen's Assoc.
 Nevada Miners & Prospectors Assoc.
 Nevada Mining Assoc.
 Nevada Outdoor Recreation Assoc.
 Nevada Prospectors Assoc.
 Nevada Wilderness Assoc.
 Nevada Woolgrowers Assoc.
 Noranda Exploration Inc.
 Occidental Minerals Corp.
 ORV Clubs
 Phillips Petroleum Co.
 Placid Oil Co.
 Placer-Amex
 Public Lands Institute
 Sierra Club
 So. California Edison Co.
 Superior Oil
 The Wilderness Society
 The Wildlife Society
 U.S. Borax
 Valdez Mine & Milling, Inc.
 White Pine Sportsmen's Club
 Wild Horse Organized Assist.
 Women In Mining

CONSISTENCY WITH OTHER PLANS

FEDERAL AGENCIES

The Department of the Air Force has expressed concern that wilderness designation will restrict available training space for the Tactical Air Command. In fact, according to the Wilderness Management Policy, designation by itself will not affect overflights by military aircraft. Limitation may occur only with the consent of the proper military authorities and the FAA.

STATE AGENCIES

The Nevada Department of Agriculture has vehemently opposed any wilderness designation but has not shown any specific conflict with any plan.

The Nevada Department of Wildlife (NDOW) has objected to wilderness designation for the Mount Grafton, Table Mountain, White Rock Range, and Parsnip Peak WSAs because of the

difficulty designation would create for big game management. Analysis in this EIS shows minimal conflict in the case of Mount Grafton and no difficulties imposed by road closures in the other three areas as anticipated by NDOW. However, this EIS also shows that management of the deer herd in the Mount Wilson area will be made more difficult by any wilderness designation, but that this conflict is tempered by the lack of funds for contemplated habitat conversion.

Wilderness designation for the Worthington Mountains is supported by NDOW, and they have reported an absence of conflicts in the Far South Egans, Fortification Range, and Weepah Spring WSAs.

The Nevada Division of State Parks has given support to the designation of all eight WSAs as wilderness. They point out that their support is in keeping with the Statewide Comprehensive Outdoor Recreation Plan, and they cite a 1981 survey of Nevadans conducted for Senator Howard Cannon which found "overall significant support (50 percent support to 41 percent nonsupport) for designating areas as wilderness".

COUNTY GOVERNMENTS

According to the Master Plan for Lincoln County (September 1975), designation of any of the eight WSAs as wilderness would not conflict with any planned urban development or agricultural uses. All WSA acreage is classified as "open land".

The most recently approved master plan for White Pine County (1970) lists no specific conflicts between wilderness designation for any area and planned urban development or agricultural use. The only WSA under consideration in White Pine County - Mount Grafton - is classified as "high mountain and forest lands" and "open range and grazing lands". Some conflict between wilderness and these classifications is inherent since the classifications call for mining and extractive industries in these areas.

The White Pine County Commission has resolved that no acreage in the county should be designated as wilderness, since

designation would remove land from multiple use management. The White Pine Chamber of Commerce has expressed similar sentiment.

The Nye County General Plan for 1970-1985 sets as a goal that "the county endeavor to protect its streams, rangelands, mountains, open views, and meadows from development that would reduce the county's desirability to the tourist and the local resident" (p. 99). The plan also recognizes the importance of mining in the county.

INDIAN TRIBES

Representatives of Indian tribes in Ely, Duckwater and Elko have been invited to comment and to attend public wilderness meetings throughout the review process. The Bureau knows of no conflicts between wilderness designation and tribal religious or customary use of the land or plans for the land.

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GLOSSARY

ABBREVIATIONS

AUM -	Animal Unit Month
BLM -	Bureau of Land Management
EIS -	Environmental Impact Statement
FLPMA -	Federal Land Policy and Management Act of 1976
MFP -	Management Framework Plan
O/G -	Oil and Gas
ORV -	Off Road Vehicle
RA -	Resource Area

TERMS

ACRE-FOOT: The volume (as of irrigation water) that would cover one acre to a depth of one foot. This equals 325,851 gallons or 43,560 cu. ft.

ALLOTMENT: An area allocated for the use of the livestock of one or more qualified grazing permittees including prescribed numbers and kinds of livestock under one plan of management.

ANIMAL UNIT MONTH (AUM): The amount of forage necessary for the sustenance of one cow or its equivalent for a period of one month.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN (ACEC): Areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage in 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.

BENCH: A series of confluent alluvial fans along the base of a mountain range.

CHAINING: A method of vegetation manipulation consisting of dragging an anchor chain through vegetation to break off or uproot shrubs or trees.

CHERRYSTEM: A boundary configuration in which the boundary of a wilderness study area or proposed wilderness is drawn around a dead-end road or other linear 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 nonrenewable 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..."

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.

EROSION: Detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

FLPMA: The Federal Land Policy and Management Act of 1976 (Public Law 94-579, 90 Stat. 2743, 43 USC 1701).

FORAGE: All browse and herbaceous foods that are available to grazing animals. It may be grazed or harvested for feeding.

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.

HABITAT MANAGEMENT PLAN: An officially approved plan for a specific geographic area which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

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.

KEY RANGE: Range on which a species depends for survival; there are no alternative ranges available.

LEASABLE MINERALS: Those minerals subject to lease by the Federal Government. Includes oil and gas, coal, geothermal, phosphate, sodium, potash and oil shale.

LITHIC: Pertaining to stone.

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.

MANAGEMENT FRAMEWORK PLAN (MFP): Land use plan for public lands that provides a set of goals, objectives and constraints for a specific planning unit to guide the development of detailed plans for the management of each resource. The planning process is divided into three steps. Specialists prepare management recommendations for their respective resources in step one. The manager, through a conflict resolution process, develops a proposed plan from the recommendations in step two. The final decision to adopt a plan is made in step three.

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.

METATE: A stone with a concave upper surface used as the nether millstone for grinding.

MINERAL ENTRY: Is claim location on Federal lands open to mining for the purpose of exploration or exploitation of minerals located there.

MINERAL POTENTIALS:

High Potential - High potential is assigned to areas that contain or are extensions of active or inactive properties which show evidence of ore, mineralization and favorable geologic characteristics. All producing properties fall within this category.

Good Potential - Good potential is assigned to areas with several geologic characteristics indicative of mineralization, relatively lower economic value of past production and similar environments out at greater distances from known ore and mineral occurrences. This category may include areas adjacent to known districts or in mineral belts.

Speculative Potential - Speculative potential is assigned to areas having some favorable geologic parameters and inferences based on geologic models and analogies to known favorable environments. Increasing depth of alluvial cover over areas of potential deposits is also a consideration in this category, except in the case of oil and gas potential.

Low Potential - Low potential is assigned to areas that are outside any construed favorable geologic and mineral trend projections or are buried by over 1,500 meters of alluvium (except oil and gas).

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.

MULTIPLE USE: Balanced management of the various surface and subsurface resources, without permanent

impairment of the productivity of the land that will best meet present and future needs.

NATIONAL REGISTER OF HISTORIC PLACES: The official list implemented by the Historic Preservation Act of 1966, of the Nation's cultural resources worthy of preservation.

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 designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other terrain.

OUTSTANDING: 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.

PINYON AND JUNIPER ENCROACHMENT: The invasion of pinyon pine and juniper trees into a dominant brushland area where pinyon pine and juniper have not previously occurred or in an area where the dominant brushland is essential to the sustenance of wildlife species.

POPULATION: All of the individuals belonging to a single species occupying a particular area or space.

POST-FLPMA: The period of time after the enactment of the Federal Land Policy and Management Act (October 21, 1976).

PRE-FLPMA: On or before 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 spread 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.

PUBLIC LANDS: Lands administered by the Secretary of the Interior through the Bureau of Land Management.

RANGE CONDITION: The present state of vegetation of a range 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

amounts of plants in the present plant community resemble that of the climax plant community for the site. Range condition is basically an ecological rating of the plant community. Four range condition classes are used to express the degree to which the composition of the present plant community reflects that of the climax: Excellent (76-100%), Good (51-75%), Fair (26-50%), Poor (0-25%).

RANGE IMPROVEMENT: Any activity on or relating to rangelands 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 VISITOR DAY: A 12-hour period spent in recreation activities by one or more individuals in a public land area. The time may be spent, for example, by one individual for 12 hours or 3 individuals for 4 hours each. This unit helps to calculate recreation use.

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.

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 within 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 CFR 1601. (Refer to definition of "Management Framework Plan").

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 SESSION: An early and open process for determining the significant issues related to a proposed action which are to be addressed in the environment 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.

SOIL SURFACE FACTOR (SSF): A numerical expression of surface erosion activity caused by wind and water. Values vary from 0 to 100 and these are grouped into 5 condition classes as follows; 0-20, stable; 21-40, slight erosion; 41-60, moderate erosion; 61-80, critical erosion; 81-100, severe erosion.

SOLITUDE: 1. The state of being alone or remote from habitations; 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 or 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.

UNIT RESOURCE ANALYSIS (URA): A BLM planning document which contains a comprehensive display of physical resource data and an analysis of the current use, production, condition, and trend of the resources and the potentials and opportunities within a planning unit, including a profile of ecological values.

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.

WATERSHED: A total area of land above a given point on a waterway that contributes runoff water to the flow at that point.

WAY: A vehicle route which has not been improved and maintained by mechanical means to ensure relatively regular and continuous use.

WICKIUP: An American Indian hut made of brushwood or covered with mats.

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: The management of lands which have been designated by Act of Congress as wilderness areas.

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. Refer to Table 1-1 for a list of the criteria.

WILDLIFE HABITAT IMPROVEMENT: Any procedure or activity designed to maintain or improve aquatic or terrestrial habitat, including, but not limited to seeding and other methods of vegetative management, water development, fence construction and/or modification and installation of in-stream structures.

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).

APPENDICES

APPENDIX A

APPENDIX B

APPENDIX C

APPENDIX D

APPENDIX E

APPENDIX F

APPENDIX G

APPENDIX H

APPENDIX I

APPENDIX J

APPENDIX K

APPENDIX L

APPENDIX M

APPENDIX N

APPENDIX A

INCOMPLETE AND UNAVAILABLE INFORMATION

MINERALS AND ENERGY

A Mineral Resource Inventory for the Resource Area was prepared under contract to the BLM by Terradata in 1979. Based upon this and other available information, estimates of potential were made in the Schell URA/MFP. These estimates were used in the preparation of this Wilderness EIS. Another report prepared in 1981 by Fugro National, Inc., for the Air Force's MX Missile project was also used. These sources of information on mineral and energy potential are the best and practically only ones available.

Following completion of the Schell Wilderness preliminary draft EIS, G-E-M reports prepared by the Great Basin GEM Joint Venture were presented to the BLM. Prepared specifically for the wilderness studies, these examine the mineral and energy potentials in each of the eight WSAs. Generally, they confirm the conclusions of the EIS, and in no instance do they directly contradict.

Most of this information is tentative, much of it based on inferences drawn from the geology of the areas. Provision is made in the law for redress of these deficiencies. All suitable areas must, before being designated as wilderness, undergo a USGS/Bureau of Mines mineral survey, and the findings of these may affect the suitability recommendations made to Congress.

CULTURAL RESOURCES

A Class I Inventory and literature overview has been completed for the Ely District (Gaudy 1979, James 1981), although only one percent of the resource area (46,329 acres) has been covered at the Class III level and only limited sample inventories (Class II) have been conducted within the Schell RA (Busby 1981).

THREATENED AND ENDANGERED PLANTS

A field review was conducted in the Schell RA for threatened and endangered (T&E) plants, and none were found. However, this was a very cursory review, concentrated in valley areas and along roads. Very little is known about the potential for T&E plants in the mountains of the Resource Area.

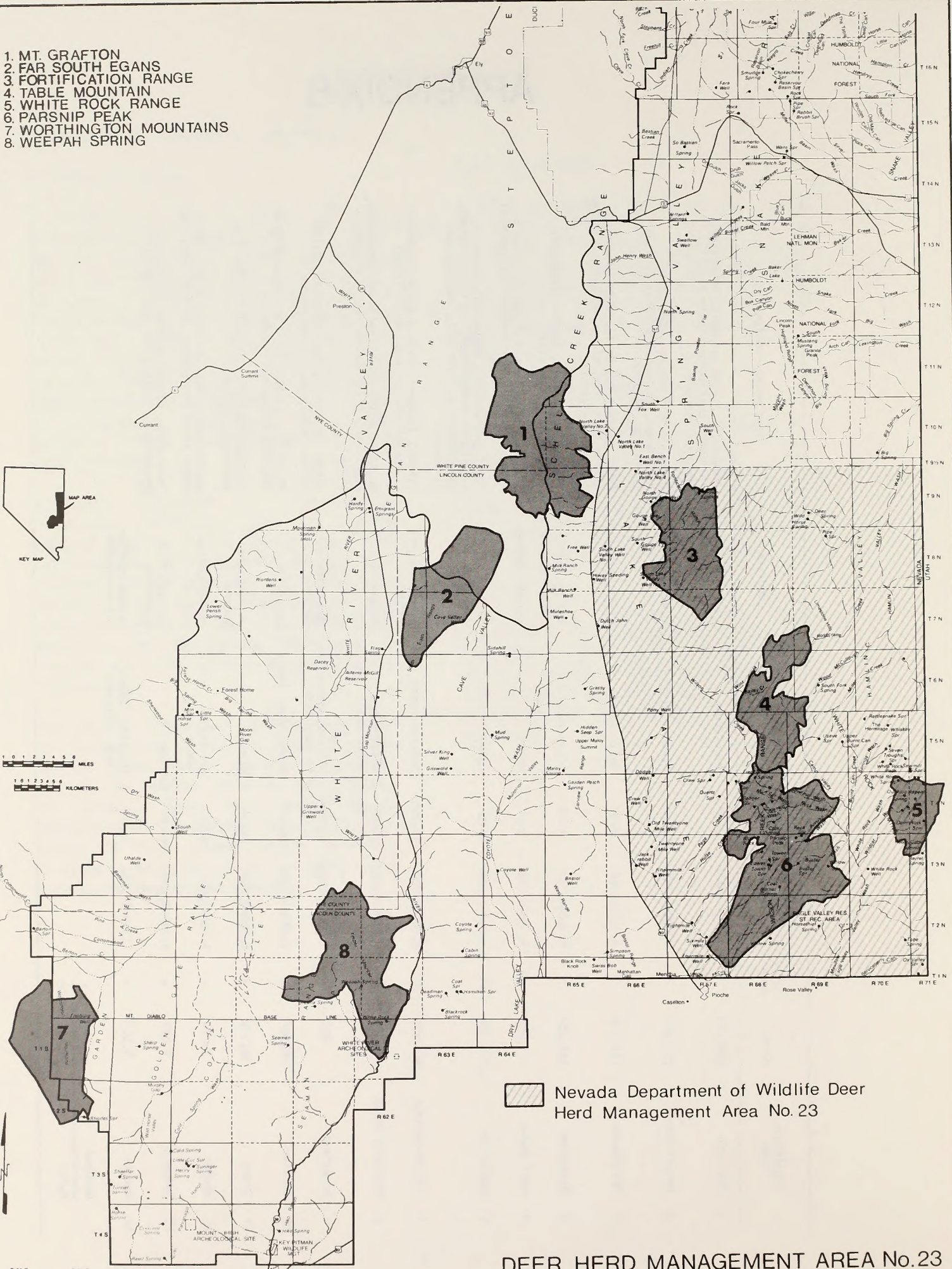
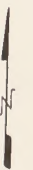
ECONOMIC IMPACTS

No reliable data are available concerning the monetary value of wilderness in the state of Nevada. Therefore no attempt is made in the EIS to make economic comparisons between impacts to wilderness and to other resources.

APPENDIX B

Vegetation Types	Acres	% Total Area	Elevation ft. above sea level	Average Precip. in Inches	Soil Characteristics	Landform	Associated Species ^a
1 Saltbush	268,022	6	4,300-6,000	5-8"	Alkaline	Valley bottoms	Shadscale, Nuttall saltbush, fourwing saltbush, bottlebrush squirreltail, Indian ricegrass
2 Desert Shrub	207,619	5	4,000-6,000	5-8"	Mixed	Lower benches	Blackbrush, spiny hopsage, spiny horsebrush, Indian ricegrass, bottlebrush squirreltail
3 Greasewood	174,836	4	4,300-6,000	5-8"	Saline-clay	Valley bottoms	Black greasewood, Bailey's greasewood, Inland saltgrass, alkali dropseed, bottlebrush squirreltail
4 Winterfat	134,409	3	4,300-6,000	5-8"	Silty loam	Valley bottoms, lower benches	Winterfat, budsage, Indian ricegrass, bottlebrush squirreltail
5 Half Shrub	5,852	-	4,300-6,000	5-8"	Mixed	Valley bottoms	Snakeweed, gray molly (Kochia), golden-weed, shadscale, bottlebrush squirreltail
6 Sagebrush	1,718,449	41	5,000-7,000	7-12"	Loamy	Valleys or mountains	Big sagebrush, low sagebrush, black sagebrush, rabbitbrush, Indian ricegrass, bottlebrush squirreltail, needlegrass, bluegrass
7 Pinyon-Juniper	1,547,938	37	6,000-8,000	10-20"	Shallow-rocky	Benches-upper ridges	Pinyon, juniper, big and black sagebrush, bluegrass, bottlebrush squirreltail
8 Mountain Shrub	77,059	2	7,500-10,000	16-20"	Granite and limestone	Mountains	Mountain mahogany, bitterbrush, snowberry, sagebrush, Idaho fescue, thurber needlegrass
9 Broadleaf	523	-	7,000-10,000	12-20"	Shallow, gravelly to deep loam	Mountains and canyons	Aspen, snowberry, big sagebrush, thick-spiked wheatgrass, common yarrow
10 Conifer	16,587	-	9,000-10,500	16-25"	Rocky, deep loam	Mountains	White fir, Douglas fir, bristlecone pine, mountain mahogany, snowberry
11 Grass	76,738	2	4,300-7,500	7-18"	Mixed	Valleys and benches	Crested wheatgrass, basin wildrye, big sagebrush, galleta
12 Meadow	2,600	-	5,000-7,000	5-12"	non-salty loamy	Valley bottom	Sedge, rush, basin wildrye, alkali dropseed, black greasewood, willow, wild rose
13 Annuals	2,897	-	4,300-8,000	6-16"	Mixed	Valleys to mountains	Cheatgrass, halogeton, Russian thistle, pepperweed, bottlebrush squirreltail
14 Barren	5,357	-	4,300-10,500	5-25"	Alkaline flats, rocky outcrops	Valley bottoms and mountains	
Untyped	466	-					
Total	4,239,352	100					

1. MT. GRAFTON
2. FAR SOUTH EGANS
3. FORTIFICATION RANGE
4. TABLE MOUNTAIN
5. WHITE ROCK RANGE
6. PARSNIP PEAK
7. WORTHINGTON MOUNTAINS
8. WEEPAH SPRING



Nevada Department of Wildlife Deer Herd Management Area No. 23

DEER HERD MANAGEMENT AREA No.23

INDEX

AIR QUALITY	25	SOILS	30
ALTERNATIVES, description of		STANDARD OPERATING PROCEDURES	77
All Wilderness	7	TABLE MOUNTAIN WSA	
Limited Wilderness	13	Wilderness values	49
No Wilderness	7	Other resource values	49
Preferred	11	Impacts of designation	83,
Wilderness Emphasis	7	92, 98, 102, 107	
ALTERNATIVES, cumulative Impacts of		THREATENED AND ENDANGERED	
All Wilderness	88	Animals	35
Limited Wilderness	105	Plants	30
No Wilderness	108	VEGETATION	30
Preferred	100	VISUAL RESOURCES	36
Wilderness Emphasis	95	WATER RESOURCES	30
ASSUMPTIONS	77	WEEPDAH SPRING WSA	
CULTURAL RESOURCES	36	Wilderness values	59
ECONOMIC CONDITIONS (general)	37	Other resource values	61
ECONOMIC IMPACTS (by alternatives)	87,	Impacts of designation	86
95, 99 104, 108		94, 99, 104, 108	
ENERGY	29	WHITE ROCK RANGE WSA	
FAR SOUTH EGANS WSA		Wilderness values	51
Wilderness values	45	Other resource values	53
Other resource values	45	Impacts of designation	84,
Impacts of designation	82,	93, 98, 102	
91 97 102, 106		WILDERNESS	25
FISHERIES	32	WILD HORSES	37
FORESTRY	35	WILDLIFE	32
FORTIFICATION RANGE WSA		WORTHINGTON MOUNTAINS WSA	
Wilderness values	47	Wilderness values	56
Other resource values	47	Other resource values	58
Impacts of designation	83,	Impacts of designation	86
92, 97, 102 106		94, 99, 103, 107	
IMPACTS (see specific WSAs)			
LANDS	35		
MINERALS	27		
MOUNT GRAFTON WSA			
Wilderness values	42		
Other resource values	42		
Impacts of designation	81,		
91 97, 102, 106			
PALEONTOLOGY	37		
PARSNIP PEAK WSA			
Wilderness values	53		
Other resource values	55		
Impacts of designation	85,		
93, 98, 103, 107			
PLANNING PROCESS	5		
PURPOSE AND NEED	5		
RANGE	30		
RECREATION	36		
SIGNIFICANCE, determination of	78		
SOCIAL IMPACTS (by alternatives)	88,		
95, 100 104, 108			
SOCIAL VALUES (general)	39		

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