

FINAL

DE-NA-ZIN WILDERNESS MANAGEMENT PLAN


August 1989

Prepared by:

U.S. Department of the Interior

Bureau of Land Management

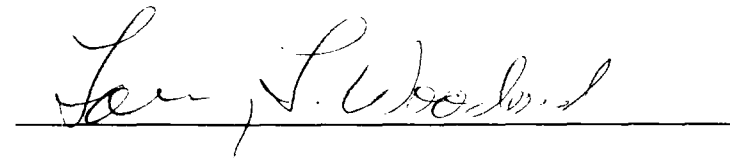
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DE-NA-ZIN
WILDERNESS
MANAGEMENT PLAN

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PART I

INTRODUCTION

Purpose of the Plan

This wilderness management plan serves a threefold purpose. First, it serves to fulfill the BLM Manual 8561 requirement that a management plan be prepared for all BLM administered wilderness areas. Second, it emphasizes the administration of the De-na-zin Wilderness by establishing specific written management objectives and policies that function to guide compatible management actions. And third, it identifies a sequence for implementing prescribed management actions in order to achieve goals and objectives and comply with the intentions of the governing legislation.

This wilderness management plan is area specific and directed toward the administration of resources and uses in the De-na-zin Wilderness. Resource programs actively operating in the wilderness must update their management efforts and adjust those portions of program implementation that are no longer applicable in order to comply with this plan.

The wilderness management emphasis provided in this document is the result of a two-year planning effort involving document preparation, review, and public input. This plan is designed to cover a 10-year management period. It will be evaluated and revised as necessary at least every five years or as dictated by significant changes in resource conditions or management direction.

Organization of the Plan

This plan has five parts. Wilderness management information is presented in a logical progression from the general to the specific. Part I introduces the reader to the De-na-zin Wilderness and the wilderness management plan. Basic management guidance is provided in Part II in the form of wilderness philosophy, broad national goals and specific management objectives. The objectives provide statements of the conditions desired within the wilderness concerning the various resources and uses of the area and for administration of the

wilderness. The wilderness management program is presented in Part III and includes descriptions of the objectives, current situation, program management assumptions, management policies and prescribed management actions for each of the major wilderness elements. The policy statements and management actions have been designed to help attain the conditions described in the objective. Part IV discusses the management strategy that focuses on a more specific level of wilderness management planning, namely the limits of acceptable (LAC) change process. The LAC evaluates the amount of human-caused change to biophysical or social components which are tolerable without the loss of wilderness character. Part V outlines the schedule for implementing this management plan. The appendices supplement portions of the plan and include an assessment of the environmental impacts of plan implementation and alternatives.

Wilderness Area Overview

Background

The Federal Land Policy and Management Act of 1976 (FLPMA) inventory, study, and report on all Bureau lands directed the BLM to review all public lands and identify those that met the definition of wilderness established by Congress in the Wilderness Act of 1964. During the inventory phase of the review process, a wilderness inventory unit was identified. A Draft Environmental Impact Statement prepared in 1982 proposed wilderness for the De-na-zin Wilderness Study Area, but Congress designated the area as wilderness prior to completion of the final EIS.

The De-na-zin WSA was formally designated wilderness as part of the San Juan Basin Wilderness Protection Act of 1984 (refer to Appendix A), signed into law on October 30, 1984 as PL 98-603. This Act has the distinction of being the first wilderness bill exclusively for BLM lands and the Bisti and De-na-zin Wilderness Areas are the first for BLM in New Mexico. The Act designated 23,872 acres as wilderness. A

cadastral survey has since been completed and the most accurate figure to date for the De-na-zin Wilderness is 22,454 acres excluding 1,683 acres of private inholdings.

Location

The De-na-zin Wilderness is located in northwestern New Mexico, San Juan County, in an area commonly referred to as the San Juan Basin (refer to Map A). The designated boundaries of the wilderness are completely within Townships 24 and 25 North, Range 11 and 12 West, New Mexico Principal Meridian. The city of Farmington, New Mexico, with a population of approximately 37,000 is the nearest major population center and lies about 26 air miles to the north-northwest.

Public Access

The De-na-zin Wilderness is accessible from Farmington, N.M., by traveling south on State Highway 371 for about 42 miles or from Crownpoint, N.M., traveling north on 371 for about 40 miles to the intersection of County Road 7500 (formally C15) and then traveling east for about eight miles. The wilderness can also be reached via State Highway 544 (formerly Highway 44) where County Road 7500 intersects 544 at the Huerfano Trading Post and then traveling west on 7500 for about seven miles (see Map C).

Size, Boundary and Ownership

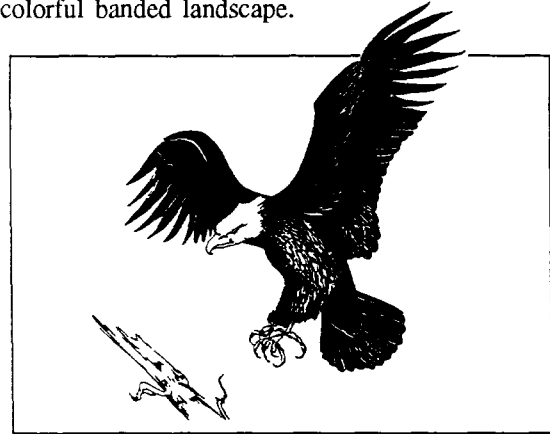
The De-na-zin Wilderness consists of 22,454 acres of Federally-owned public lands and 1,683 acres of Indian allotted lands. These allotted lands, if acquired, will be added to the wilderness acreage pursuant to PL 98-603. Eleven Indian allotments have been issued trust patents which vests title in the USDI Bureau of Indian Affairs as trustee for individual Indians. These allotments are considered private inholdings for planning purposes.

The exterior wilderness boundary primarily follows legal subdivisions that fall mostly on section lines. However, major portions of the eastern boundary run adjacent to County Road 7500 and a small portion of the southern boundary follows a graded road (See Map B). Refer to Appendix B for a complete description of the wilderness boundary.

Special Attributes

The wilderness contains a variety of resource values that are uncommon in the region. In particular the Log Jam Area of Critical Environmental Concern in the wilderness contains a concentrated site of massive petrified logs, most attaining the length of 75 feet and a diameter of six feet.

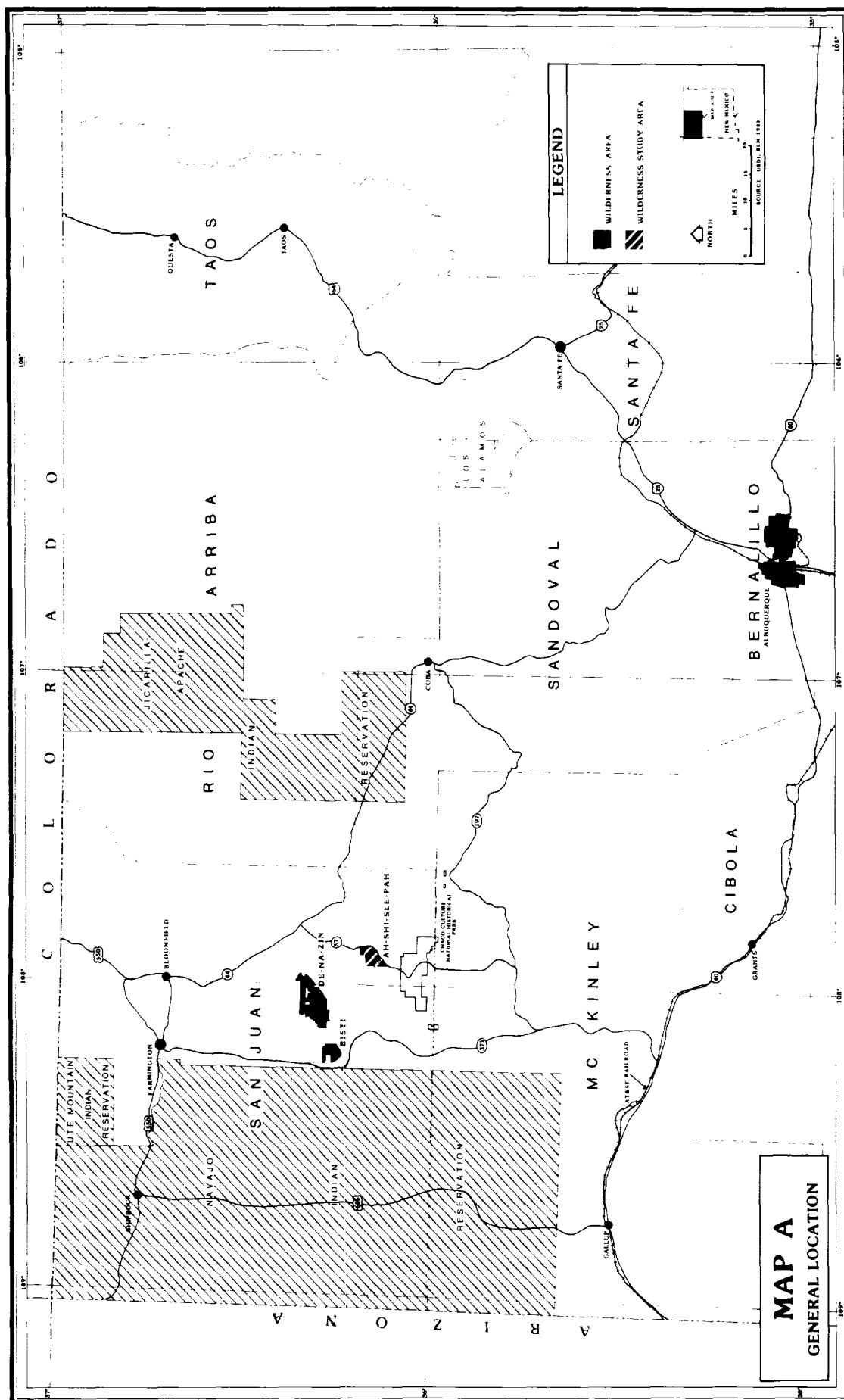
The badlands area of the wilderness contains high scenic values resulting from the weathering of layers of interbedded shale and sandstone forming a colorful banded landscape.



This semi-arid wilderness environment supports an unusually high diversity of plants and animals as compared to the lands to the north, east and south. This results from elevational changes and the presence of five specific habitat types from the sandy washes and badlands to gently rolling grasslands and sage flats rising to sandstone-capped mesas and upland areas of piñon pine and juniper trees. The Lost Pine Area of Critical Environmental Concern in the wilderness contains a remnant stand of Ponderosa Pine which supports nesting raptors.

General Management Situation

The De-na-zin Wilderness is managed by the USDI-BLM, Albuquerque District Office, Farmington Resource Area. The 1988 Farmington Resource Management Plan (RMP) identifies the general administrative emphasis for the wilderness and surrounding lands. It directs wilderness management according to the Wilderness Management Policy (1981), Bureau Manual 8560, and this management plan. The RMP decisions directly affecting the wilderness includes the



R11W
R12W

T25N
T24N

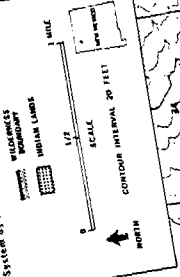
T24N
T23N

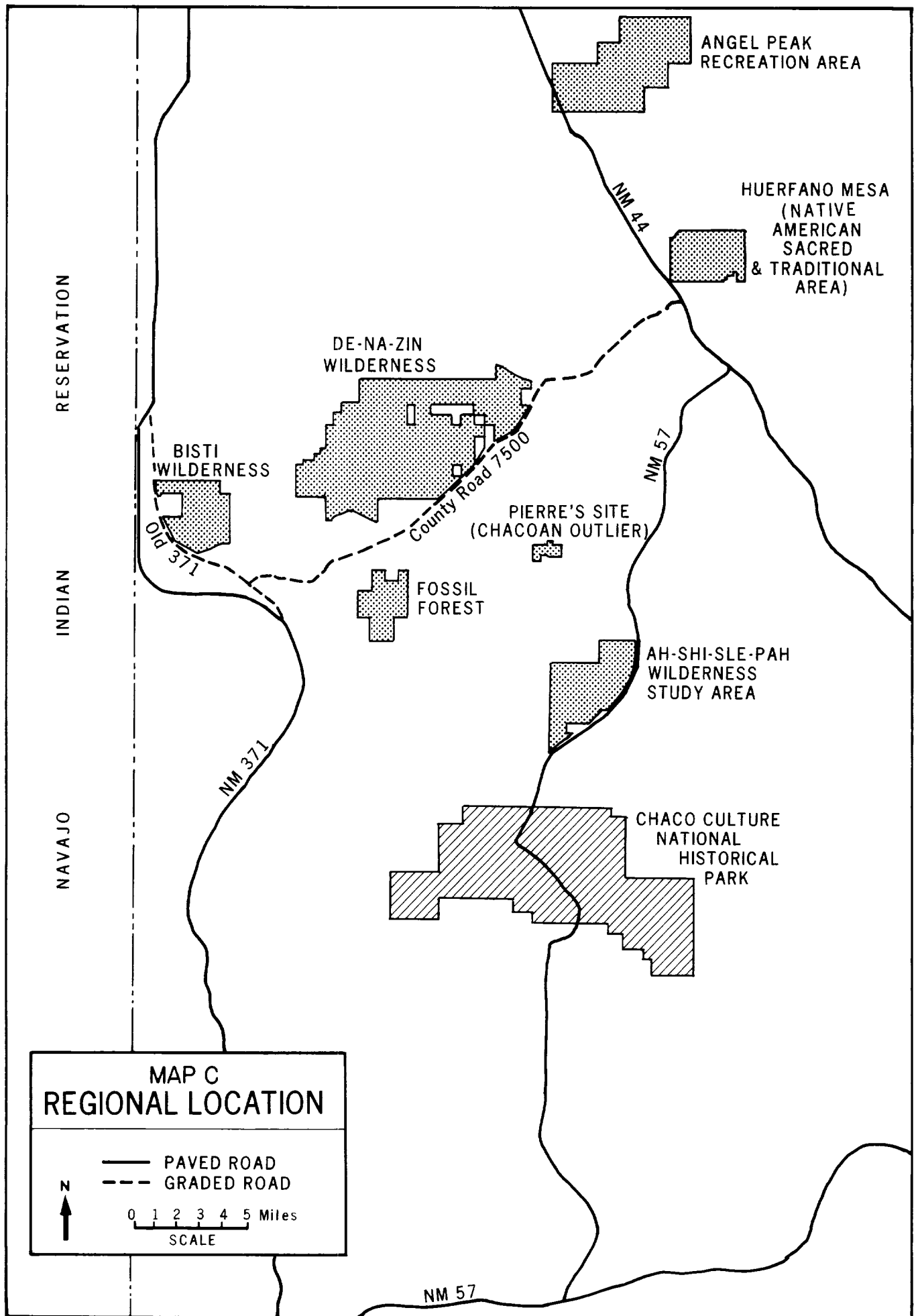
MAP B

DE NA ZIN WILDERNESS

US DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEW MEXICO
Farmington District Office
Albuquerque
1985

The exterior boundary of De Na Zin Wilderness as
shown on National Antiquities Act Proclamation
No. 5400, issued October 31, 1984,
is shown by P.L. 98-603, dated October 31, 1984.



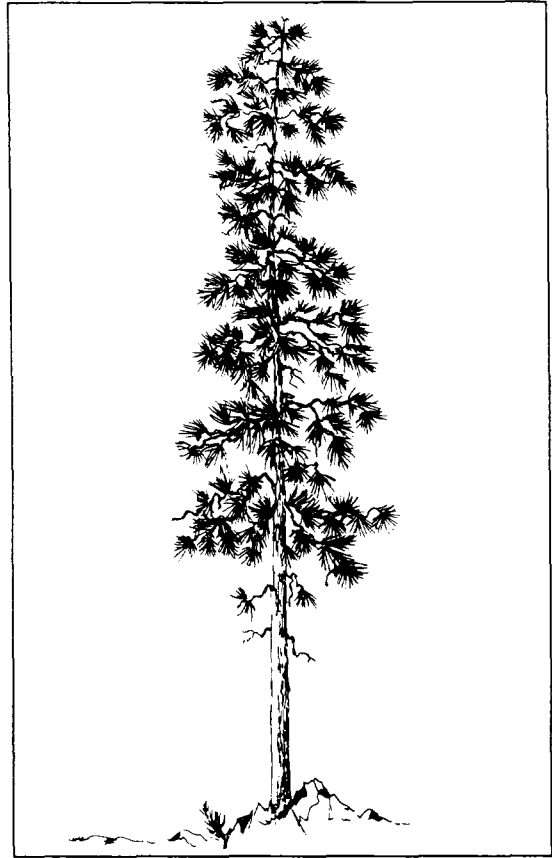


utilization of adjacent lands for administrative purposes and the acquisition zone that would consolidate a public corridor between the Bisti and De-na-zin Wildernesses should land acquisitions be completed. In addition, adjacent lands reserved from exchange until this management plan was complete are now released with the exception of the section of public land where the parking area and wilderness access is located. Easement acquisition to the northern boundary will continue to be pursued. Nearby areas under special management by the Federal government include the Bisti Wilderness (3 miles to the west), Fossil Forest Research Natural Area (3 miles to the south), Ah-shi-sle-pah Wilderness Study Area (8 miles to the southeast), Chaco Culture National Historical Park (14 miles to south-southeast), Pierre's Site Chacoan Outlier (4 miles to the east), Huerfano Mesa Native American Traditional Use and Sacred Area (8 miles to the northeast) and Angel Peak Recreation Area (12 miles to the north-northeast). Refer to Map C.

Immediately adjacent land ownership and uses consist of the following: to the north, a mixture of public, private and tribal trust lands support grazing and oil and gas operations; to the east, County Road 7500 provides vehicle transport while public lands beyond support grazing operations; to the south, state lands support grazing operations; and to the west Navajo Indian Irrigation Project lands hold the possibility of future agricultural crop production where presently badlands exist.

Current authorized uses in the wilderness include two oil and gas leases, access to inholdings which contain 11 Indian allotments, paleontological research, livestock operations and occasional recreation use in the form of dove hunting, day hikes, and sightseeing along County Road 7500. Portions of three Preference Right Lease Applications for coal resources exist. Authorized structures involve a water well and windmill, stock ponds, and fences associated with livestock operations. In the past, major unauthorized uses have included motor vehicle use, a 20 acre sagebrush chaining, road maintenance, and trash dumping. There is presently one unauthorized occupant residing within the wilderness.

Recent efforts to acquire one or more of the 11 Indian allotments which are considered private inholdings have not been successful. There appears to be no incentive for multiple heirs to



individual allotments to directly exchange interest in part of one allotment for another outside of the wilderness. Some interest was shown in respect to outright selling of an individual's interest in a particular allotment. This may dictate the need to seek a legislative amendment for purchase authority of private inholdings.

Issues

Issues associated with the De-na-zin Wilderness can be described in two categories. The first category of issues are those that have recently emerged and are currently being debated. These issues involve paleontological studies which are currently being debated in the literature. The second category of issues are those requiring resolution due to a conflict of land uses. These issues include acquisition of inholdings, access to private inholdings, unauthorized occupancy, vehicle intrusion, livestock grazing and restoration of intrusions. These current issues and other potential issues are further discussed under each wilderness element in Part II.

PART II

WILDERNESS MANAGEMENT DIRECTION

Management Philosophy

The De-na-zin Wilderness is designated primarily for permanent long-term protection and preservation of its natural character and, secondly, for public enjoyment of the area, as wilderness. It is the position of the BLM, consistent with legislation and national guidance, to establish an overall philosophy or mission for the administration of the wilderness in order to supplement national goals and policy.

The Bureau has made a commitment to effective wilderness management which follows the large investment the people of the United States has made in the National Wilderness Preservation System (NWPS) and the multiple benefits reaped by society.

The Wilderness Act of 1964 clearly recognizes that most lands in the U.S. have been affected, directly or indirectly, by human influences that have acted to modify natural conditions. It seeks to prevent further human disturbance from technology and development, and maintain wilderness characteristics that appear natural and preserve an atmosphere of harmony with nature.

Protection from unauthorized events such as sagebrush chaining or vehicle intrusion is not enough to prevent further unnatural change. Legislatively acceptable actions such as livestock grazing and mineral development where prior rights exist have a direct negative influence on naturalness and solitude but are legally allowed in wilderness. Also by-products of civilization like acid rain, air pollution and noise pollution that carry across wilderness boundaries are nearly impossible to control. It is unreasonable to close the wilderness to all human use and outside influences even if those uses impact naturalness and solitude.

Combining the scenario above and a semi-arid climate which makes near-term reclamation even more difficult, nature cannot be left alone to take its own course once disturbed. The cosmetic approach prevalent in many reclamation efforts is not a valid procedure in management of natural

system processes. Rehabilitation projects will not likely restore the natural conditions that prevailed before modification, but could restore the land as a place to be nurtured and maintained, as wilderness.

Therefore, it is the mission of the Bureau to prevent unnatural changes in wilderness character whenever possible. The management philosophy specific to the De-na-zin Wilderness is to recreate, reproduce and restore natural conditions which have been negatively affected by authorized, unauthorized, or undesirable events. This emphasis shall allow the natural systems in wilderness to operate freely with minimal human interference.

Wilderness Management Goals

Wilderness management goals have been established to obtain Bureau-wide consistency in the BLM wilderness management program. The following broadly stated goals apply to all BLM-administered wilderness areas (BLM Manual 8560):

To provide for the long-term protection and preservation of the area's wilderness character under a principle of non-degradation. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation, and any ecological, geological, or other features of scientific, educational, scenic, or historical value present will be managed so that they will remain unimpaired;

To manage the wilderness area for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and human use;

To manage the area using the minimum tools, equipment, or structures necessary to successfully, safely, and economically accomplish the objective. The chosen tool, equipment, or structure should be

the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible; and

To manage nonconforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's wilderness character. Nonconforming uses are the exception rather than the rule; therefore, emphasis is placed on maintaining wilderness character.

Management Objectives

Written objectives are presented here to clearly identify the desired conditions that the BLM is striving to achieve in the De-na-zin Wilderness. These objectives are arranged in this plan by various wilderness elements. The objectives comply with the goals stated in the previous section.

Managerial Elements

The ADMINISTRATION objective is to conduct the necessary administrative activities to the extent consistent with wilderness philosophy, goals, objectives and this management plan in order to preserve, protect and restore the integrity of the wilderness resource within the De-na-zin.

The INFORMATION AND EDUCATION objective is to provide visitors with an understanding and appreciation of wilderness values and the proper use and care of natural resources in a manner that will leave them unimpaired for future generations.

The INHOLDING AND ACCESS objectives are to acquire all private inholdings where landholders concur in order to consolidate Federal holdings for more effective wilderness management and to allow reasonable access to inholdings.

The SCIENTIFIC STUDY AND DATA COLLECTION objective is to allow research to occur when it is conducted in such a manner to protect/preserve wilderness character in its natural condition subject to natural ecological processes.

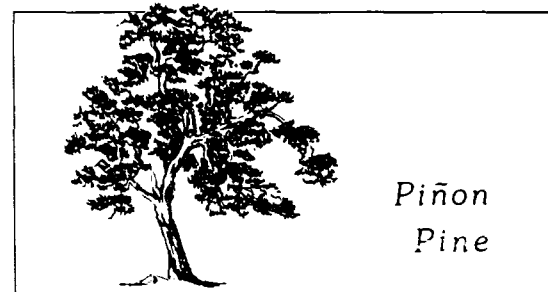
The SEARCH AND RESCUE objective is to allow visitors the opportunity to maximize risk, challenge, and isolation from the conveniences of

modern civilization and its assurances of well-being in order to fully realize a wilderness experience.

The WILDFIRE management objectives are to allow fire to return to its natural role and to exert its effects on wilderness resource without endangering public health, safety, or values; to use suppression techniques which result in the least possible evidence of human activity; and to develop a fire protection strategy that achieves wilderness management objectives at the least cost.

Environmental Elements

The CULTURAL RESOURCES objective is to protect and preserve cultural resources from human impacts in their natural condition and setting subject to natural ecological processes provided these processes do not adversely threaten significant resources that must be managed in compliance with applicable Federal and state laws and BLM policy.



The LIVESTOCK OPERATIONS objective is to allow existing grazing use to continue subject to wilderness regulations and to maintain or improve the existing vegetative condition and trend.

The MINERALS management objective is to prevent unnecessary and undue degradation of the area's wilderness character when mineral lessees exercise their valid existing rights and to allow no new mineral development after valid existing rights expire.

The NATURALNESS AND SCENIC QUALITY objective is to reclaim the effects of authorized and unauthorized uses that have occurred within the last 50 years, and maintain the area free from new structures and improvements (except for those necessary to protect the wilderness resource, public health and safety and recognize valid existing rights).

The OUTDOOR RECREATION objectives are to allow historical patterns of dispersed non-motorized recreation to continue in their traditional fashion unless they degrade the wilderness values; to provide for public recreation dependent upon a wilderness setting in a manner consistent with the preservation of an enduring resource of wilderness, characterized by naturalness, and outstanding opportunities for solitude and scenic enjoyment.

The PALEONTOLOGICAL RESOURCES objective is to protect and preserve paleontological resources from human impacts in their natural

condition and setting subject to natural ecological processes provided these processes do not adversely threaten significant resources which must be managed in compliance with applicable Federal and State laws and BLM policy.

The WILDLIFE management objectives are to preserve and protect habitats for wildlife (particularly nesting raptors) in their natural condition while providing minimal restriction to visitor use and access and to allow natural ecological succession of biological populations so long as they do not threaten resource and human values outside the wilderness.

PART III

WILDERNESS MANAGEMENT PROGRAM

The major wilderness elements identified in this part represent the significant uses, resources and management concerns of the De-na-zin Wilderness. Wilderness elements are the physical, biological, social and managerial factors which must be considered in developing a comprehensive management plan. The elements are arranged under managerial and environmental headings. Each element identifies the applicable management objective and describes the current situation, assumptions, management policies and prescribed actions. The current situation section describes the existing resource condition including problems, trends and uses. The assumption section explains expectations based on the current situation. Management policies seek to provide guidance and administrative direction for future actions and the prescribed management actions in this plan. The policies do not attempt to encompass or address all possible future management actions. If an unforeseen situation occurs, this management plan may need to be revised and the BLM Manual 8560 will guide the direction for the proposed management action. Revisions to the plan will be subject to public review and State Director approval. Wilderness Management Policy (1981) and regulations are not always restated here as specific policy, however, they still apply. For the most part, only new and redefined policies to fit a particular situation are addressed. The management actions prescribed are the action steps to be taken once the plan is approved. They are the implementation steps. Management actions can be tracked back through the process by looking back to the current situation which has called for some action.

Managerial Elements

ADMINISTRATION

⇒ Management Objectives

The ADMINISTRATION objective is to conduct the necessary administrative activities to the extent consistent with wilderness philosophy, goals, objectives and this management plan in order to preserve, protect and restore the integrity of the wilderness resource within the De-na-zin.

⇒ Current Situation

The De-na-zin Wilderness is directly administered by the BLM Farmington Resource Area under the responsibility of the Area Manager and the technical supervision of a wilderness specialist. To date, administrative funding has allowed the retention of a wilderness specialist and about 12 volunteers have been utilized to patrol and monitor wilderness activities.

Administrative activities have included scheduled volunteer patrols, tours, a cadastral survey and random field work by specialists. A cadastral team has surveyed and posted wilderness boundary signs on fence posts at most section corners, along rights-of-way and at access points where they intersect the wilderness boundary.

Vehicle radio communication from the wilderness boundary to the office is adequate. Radio shadows could make long-range hand-held radio communication from within the wilderness to the office a problem in the case of an emergency.

BLM and the Federal Aviation Administration have developed an Interagency Agreement (1985) regarding management/use of navigable airspace over designated wilderness. The agreement seeks compliance with a 2,000 feet above ground level clearance as minimum altitude for private and commercial aircraft flying in airspace over wilderness areas. An advisory was issued to pilots seeking compliance with the agreement. The agreement does not apply to military overflights over and adjacent to the wilderness.

Reported vehicle trespass violations and other unauthorized activities have been curbed in the recent past. Wilderness education efforts, volunteer patrols, visitor contacts, press releases and a ranger with citation authority providing law enforcement presence have contributed.

⇒ Assumptions

Wilderness boundary signs will need to be maintained in good condition. A continued program of law enforcement presence, volunteer patrols and

visitor contact may be the most effective means of preventing unauthorized activities and providing information to visitors.

⇒ Management Policies

Administrative use of motorized vehicles, mechanized equipment or facilities will not be permitted except upon justification for fire suppression and in emergencies that require protecting the wilderness resource.

Violations that impair the wilderness resource or do not comply with wilderness management policy and this management plan will be aggressively investigated. Appropriate actions, including reclamation, will be pursued.

Alternate sources of funding to implement this management plan will be pursued (e.g. gift catalog, donations, volunteer time and services.)

Patrol and surveillance operations for baseline monitoring will be continued to preserve and protect wilderness resources.

Administrative wilderness boundary signs will be monitored, maintained and replaced as necessary.

A permit must be carried by permittee while in the wilderness for uses requiring authorization.

Any management or proposed action will be addressed in an environmental assessment. In addition to National Environmental Policy Act requirements, each environmental assessment will analyze:

- compliance with laws, regulations, wilderness management policy, this plan and its objectives and the non-degradation standard and minimum tool concept.

- specific effects of the proposed action on natural ecological processes, naturalness, solitude and primitive recreation;

- the relationship of human influences and the wilderness resource;

- the spectrum of ways and means of each alternative, including those tools and equipment used before motor vehicles and modern technology were available;

- the cumulative impacts of all human influences occurring within and outside the wilderness on the wilderness characteristics of naturalness, solitude, primitive recreation and other special or supplemental values;

Standard operating procedures will include:

- a minimum 30-day public review period will be provided prior to approval of the activity and a field tour will be provided in most cases, if requested by interested citizens;

- non-disclosure of sensitive cultural and paleontological resource data to the general public;

- a reclamation plan to include the Visual Impact Evaluation System as the management tool to measure the effectiveness of rehabilitation;

- project clearances from cultural, paleontological, wildlife, wilderness and recreation specialists for compliance with laws and policies; and

- performance or surety bonds may be required to defray the costs of restoration and rehabilitation of lands affected by permitted use.

⇒ Management Actions

A patrol and monitoring record will be maintained by the wilderness specialist. This will include documentation of all authorized and unauthorized activities.

INFORMATION AND EDUCATION (I&E)

⇒ Management Objective

The INFORMATION AND EDUCATION objective is to provide visitors with an understanding and appreciation of wilderness values and the proper use and care of natural resources in a manner that will leave them unimpaired for future generations.

⇒ Current Situation

In a general sense, information about wilderness is provided to the public through means such as brochures, press releases, office posters, field contacts, and public meetings. Management efforts and publicity provided from other wilderness efforts help to inform the public about the proper

use and care for the De-na-zin Wilderness. A 1981 brochure entitled "De-na-zin" gave specific information on resources and visitation tailored to the immediate area. Other than this brochure, most attention has focused on the nearby Bisti Wilderness which has resulted in few requests for information on the De-na-zin.

Educational efforts thus far have focused on in-house training of employees and volunteers. Staff meeting and training courses have sought to increase awareness of the discipline and effectiveness of management.

⇒ Assumptions

Requests for information may increase in the future due to expanding public knowledge of the area which necessitates that materials be readily available.

On-site Bureau presence through volunteers, rangers, and other specialists will continue to be important for effective wilderness management.

Materials and techniques for I&E will be placed outside the De-na-zin Wilderness boundary except if they are needed within to protect the wilderness resource or provide for public safety.

Continued training and educational courses will enable specialists to keep current with management techniques as well as share the trials of their efforts.

⇒ Management Policies

The BLM will make general information available to the public without advertising or promoting the use of wilderness.

The BLM will divert use not dependent on wilderness to other areas through I&E efforts.

Voluntary visitor compliance with policy and this management plan will be sought through I&E as an initial and on-going process. A more direct method of regulating and restricting uses will be applied as required. Regulatory or administrative signing, if needed within the wilderness, will be the minimum necessary.

All BLM generated wilderness publications and media presentations will describe the inherent dangers of a wilderness away from the convenien-

ces of modern technology and any other known dangerous conditions. Visitor assumption of risk and no trace/minimum impact concept statements will also be incorporated.

I&E efforts (i.e. maps, brochures, displays) will be periodically updated to keep them current.

The BLM will inform the general public of specific resource needs that require special consideration due to fragile or endangered resources, seasonal, ecological, life cycle and environmental changes.

The BLM will initiate efforts to coordinate with organizations that provide information to the public about the wilderness to accomplish wilderness management goals and objectives.

⇒ Management Actions

The wilderness specialist, with cartographic and public relation support from the Albuquerque District Office, will update the 1981 De-na-zin map/brochure to reflect current information and conditions. Additional text and other media efforts will include summaries of wildlife - to divert users away from nesting areas, especially during the nesting season, without calling undue attention or pointing out exact nest locations; cultural resources - to outline prehistoric and historic use and statements of legislation protecting archaeological sites; paleontological resources - to identify the scientific value of fossils, and the laws and penalties to protect them and language to include no fossil collecting; geological features - to mention that features such as hoodoos, spires, toadstools, and other formations are fragile because of constant erosional forces, so climbing or otherwise disturbing them will destroy this special and irreplaceable resource; policy discouraging rockhounding; wilderness management regulations [as published in the Federal Register February 25, 1985, as amended]; and dangers of badlands - piping, quicksand, unstable soils and flash flooding; and wise use of general public lands and natural resources.

The wilderness specialist will conduct an all-employee orientation, and will prepare an orientation pamphlet for new employees, temporary employees and volunteers to familiarize them with wilderness philosophy, goals, objectives, policies, and this management plan.

The wilderness specialist will develop an I&E display to be located at entrance stations. Displays will include information to seek compliance with management objectives and policies of this Plan. Specific information will be provided on cultural, paleontological, geological, wildlife and wilderness resources.

An entrance sign will be placed near County Road 7500 in T. 24 N., R. 11 W., Section 16 to identify an access point to the wilderness boundary.

INHOLDINGS AND ACCESS

⇒ Management Objective

The INHOLDINGS AND ACCESS objectives are to acquire all private inholdings where landholders concur in order to consolidate Federal holdings for more effective wilderness management and to allow reasonable access to inholdings.

⇒ Current Situation

Since 2,600 acres of state-owned surface lands and 1,280 acres of subsurface state-owned minerals were exchanged to the Bureau, inholding acreage has been reduced substantially. Exchange of state minerals on 1,280 acres where the Bureau owns the surface (T. 24 N., R. 12 W., Sections 2 and 16) was completed in April 1989.

Eleven inholdings classified as Indian allotments are held in trust by the Bureau of Indian Affairs for the use of the Navajo Tribe. These lands and their owners or heirs are described and shown on Map D. The coal is Federally reserved on these same lands while all other subsurface minerals are privately owned by the allottee as administered by the Bureau of Indian Affairs.

There are five known homesites on the 11 inholdings and only two of the 299 heirs are known to be living at least part of the year there. One of the heirs in T. 24 N., R. 11 W., Section 8 with a homesite is also the unauthorized occupant who resides in the wilderness. The major use of these allotted lands is family grazing operations for sheep, goats and cattle.

In January of 1987 the Bureau mailed 299 letters to notify the heirs to the eleven Indian allotments within the De-na-zin Wilderness of the possibility of exchanging the allotments for public lands.

Most do not wish to exchange their allotments. A number of the allottees have indicated an interest in selling their portion of the allotment and a few have indicated an interest in exchanging their portion of the allotment.

According to the BIA, it will require 50% heir approval before they will approve an exchange. This means that the heirs will have to not only agree to exchange the allotment, but they will also have to agree on what public land to select. Five of the allotments involved have five or fewer heirs. On these allotments the BLM might eventually be able to work out an exchange. The other six allotments have between 15 and 84 heirs. It is highly unlikely that an exchange could ever be consummated on these six allotments. The ability to purchase the inholdings would not only increase the likelihood of acquiring the inholdings, but it would reduce the cost of the acquisition.

Three routes had been utilized in the past for access to inholdings.

In January 1987, the unauthorized occupant located in T. 24 N., R. 11 W., Sec. 7, NE/2 SE/2 applied for and received permission to haul wood and coal to a dwelling for domestic heating and cooking.

⇒ Assumptions

Legislative authority to purchase private inholdings will be needed to realistically consolidate Federal ownership.

Vehicle access routes to inholdings will need to be limited to those necessary for access in order to minimize impacts to wilderness character. The existing public roads outside the wilderness are adequate for public access to the wilderness.

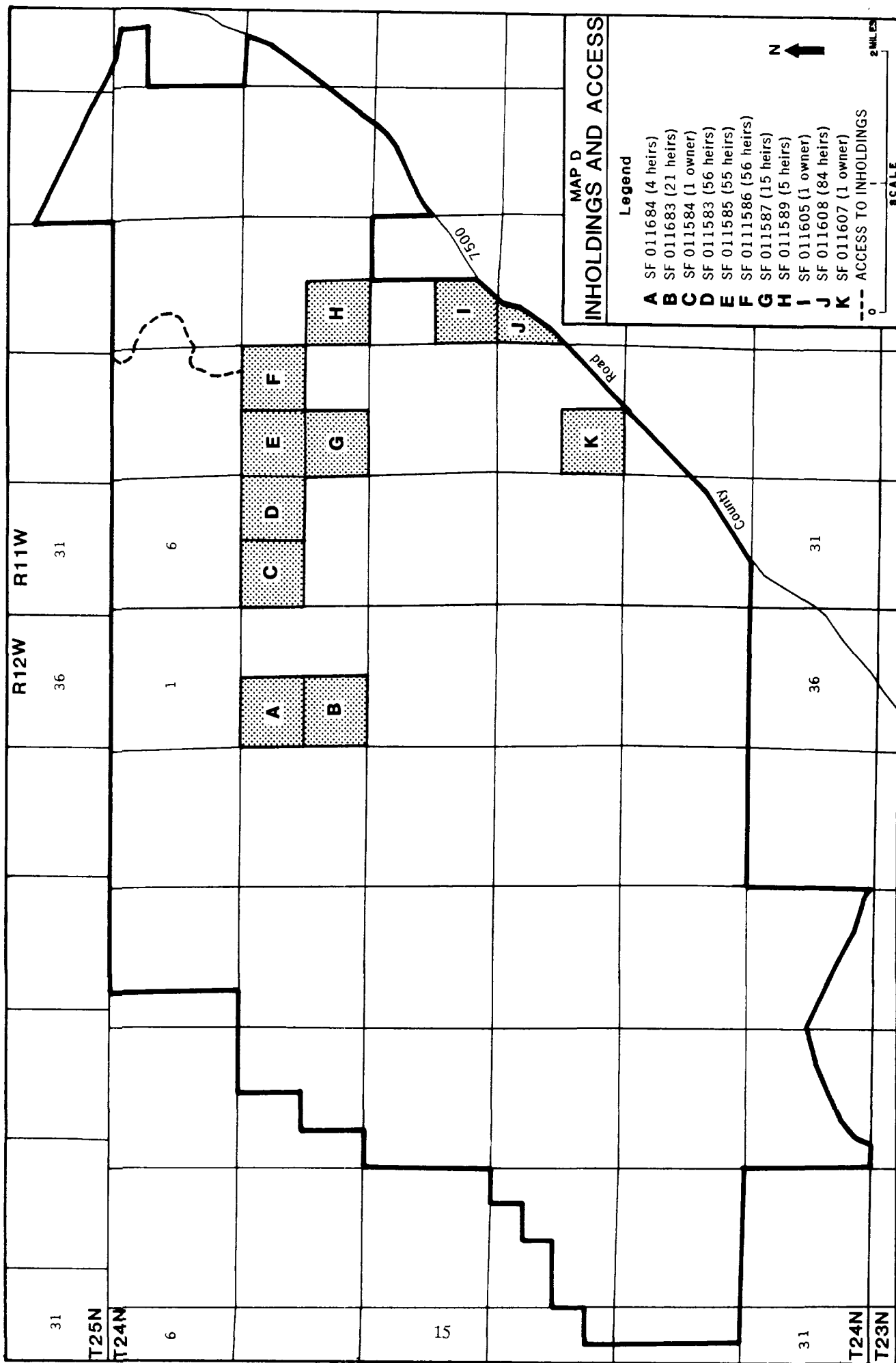
⇒ Management Policies

Private landowners within the wilderness will be provided with reasonable access for use and enjoyment of their land.

Efforts to acquire private surface interests will continue to be pursued.

Unauthorized uses will be abated.

Heirs not active in land use practices will not be allowed vehicle access to inholdings except with written permission by the Area Manager.



⇒ Management Actions

The route entering the wilderness in Section 4 of NW/4 of T. 25 N., R. 11 W. and travelling into Section 5 SE/4 has been designated to provide access to the inholdings. The entrance gate will be signed and locked and keys provided to the heirs actively utilizing the private allotments.

A legislative alternative will be sought for purchase authority of private inholdings within the wilderness.

A life-estate lease will be pursued to resolve the unauthorized occupancy and improvements and vehicle routes will be reclaimed.

SCIENTIFIC STUDY AND DATA COLLECTION

⇒ Management Objective

The SCIENTIFIC STUDY AND DATA COLLECTION objective is to allow research to occur as long as it is conducted in such a manner to protect and preserve the wilderness character in its natural condition subject to natural ecological processes.

⇒ Current Situation

The wilderness contains opportunities for scientific study and data gathering in an outdoor laboratory setting for those projects requiring a dynamic natural environment. There are a number of projects that are currently authorized within the wilderness. The Resource Area Wildlife Biologist collects data annually on raptors and their habitat. The "Limits of Acceptable Change" system for monitoring and evaluating visual impacts to the natural environment is on-going. Range conservationists are presently monitoring vegetative conditions. Paleontologists have collected plant and animal fossil material and are monitoring new occurrences caused by natural erosion.

⇒ Assumptions

Permit applications for scientific study, including paleontological investigations, in the wilderness may continue to be received.

The demand for basic research in the wilderness may increase due to the opportunities provided by a legislatively protected natural area which is otherwise limited in this region.

⇒ Management Policies

Scientific study involving extraction of materials or surface disturbing activities (e.g. excavation, surface collection, stabilization) will be analyzed on a case-by-case basis.

Scientific study involving non-consumptive/non-extractive data collection will be monitored closely to achieve conformance with the objective stated above.

All projects must be conducted without the use of motorized vehicles, mechanized equipment or facilities unless expressly authorized when no other reasonable alternative exists. If such use is approved, it must be the minimum necessary and must not degrade the wilderness resource.

All requests for scientific study and data collection will be analyzed in an environmental assessment. All proposals for scientific study will:

- provide information on specific location, maps, timeframes, detailed description of proposed action and a reclamation plan and locality information will be kept confidential when possible.

- provide for detailed recordation, reports, care of specimens, and availability of information to the public, specialists, scientists and institutions;

- address the relative availability of the information or material outside of the wilderness; and

- address similar information or material available for study in existing collections.

Analysis criteria will be:

- does the proposal further the management of wilderness and seek to explain the wilderness phenomena through studies of the natural environment, visitor use capacities, social assessments, user impacts, use patterns, use levels and user behavior;

- does the proposal limit the experience of the wilderness visitor;

— does the proposal conflict with wilderness philosophy, goals, objectives and this management plan; and

— what value will be gained from the proposal.

Authorized material collection of wilderness resources must be conducted in an inconspicuous manner and not be visually evident to the casual observer.

Permanent or temporary study plots or structures must be inconspicuous and not be visually evident to the casual observer.

Provide administrative aid (staff time and funding) when possible and process requests for projects within 120 days of receipt.

⇒ Management Action

All future proposals will be guided by the policies described above and the specifics of each proposal which are not anticipated above will be analyzed on a case-by-case basis for consistency with this plan.

SEARCH AND RESCUE

⇒ Management Objective

The SEARCH AND RESCUE objective is to allow visitors the opportunity to maximize risk, challenge and isolation from the conveniences of modern civilization and its assurances of well-being in order to more fully realize a wilderness experience, sense of challenge, risk and self-reliance.

⇒ Current Situation

The Bureau of Land Management in New Mexico is not directly responsible for search and rescue operations. However, the Bureau provides assistance when requested. A Memorandum of Understanding with the New Mexico State Police is in effect for incidents occurring on public lands. This allows trained professionals to carry out specialized duties associated with this discipline.

⇒ Assumption

Physical challenge, isolation, natural hazards, personal risk, an element of danger and the lack of modern conveniences and communication are integral parts of the wilderness experience and should not be eliminated or minimized.

⇒ Management Policies

The Bureau will not incur the expense for on-the-ground search and rescue operations involving wilderness visitors. Search and rescue may be performed by the State Police or other party in compliance with this management plan. The Bureau may assist, if requested, providing information and serving in a support role. The Area Manager will prescribe the use of emergency vehicles and equipment should the case arise.

⇒ Management Action

Should there be a need for search and rescue in the future, the policies above will guide the general operation. The Bureau's authorized officer will provide the specific guidance to carry out the operation once the specific details of the situation become known. Trying to anticipate the multitude of options for responding to an almost infinite number of possibilities for search and rescue would require a thesis. Thus, each occurrence will be handled on a case-by-case basis.

WILDFIRE

⇒ Management Objectives

The WILDFIRE management objectives are to allow fire to return to its natural role and to exert its effects on the wilderness resource without endangering public health, safety or values; to use suppression techniques which result in the least possible evidence of human activity; and to develop a fire protection strategy that achieves wilderness management objectives at the least cost.

⇒ Current Situation

One brushfire has been reported in the wilderness within the last ten years and no other fire history is available. The possibility of brushfire exists

due to the grassland, sage, and pinyon-juniper vegetative types that occur in the south central grasslands, north central mesa tops and the north-east and eastern upland flats.

⇒ Assumption

A coal bed fire or brushfire is possible but is expected to be of minimal occurrence in the future.

⇒ Management Policies

All wildfires or naturally ignited fires will be suppressed to prevent loss of human life or property within the wilderness boundary and to prevent the spread of fire to areas outside of the wilderness where life, resources, or property may be threatened or when the fire may be detrimental to wilderness resources, otherwise they will be allowed to run their course.

Human-caused fires will be prevented and/or controlled unless the fire is prescribed.



When suppression is needed, techniques will be used that result in the minimal use of motorized equipment necessary to control or suppress the fire.

⇒ Management Action

Should a fire needing suppression occur in the western half and southern quarter of the wilderness where motorized equipment and vehicles are deemed necessary by the authorized officer, the vehicles will enter the wilderness at the old Woods Ranch route in T. 24 N., R. 12 W., Section 36. Vehicles will take a direct line [taking into account the terrain, vehicle capabilities, and safety] to the fire or as called for by the authorized officer and suppress the fire with the means available. Should a fire needing suppression occur

in the northeastern quarter of the wilderness, backfires will be lit from county road 7500 when conditions are right. If conditions make backfiring impossible, helicopter slurry drops will be called for to suppress the fire before reaching private inholdings or lands east of the wilderness. Given the unpredictable nature of fire and the infinite number of possibilities that might occur depending on fuel build up, season of year, heat of fire and the fire fighting capabilities at the time of occurrence, the authorized officer will take actions necessary to suppress any fire that threatens public safety, private lands and resources. Any fire not needing suppression will be allowed to burn itself out.

Environmental Elements

CULTURAL RESOURCES

⇒ Management Objective

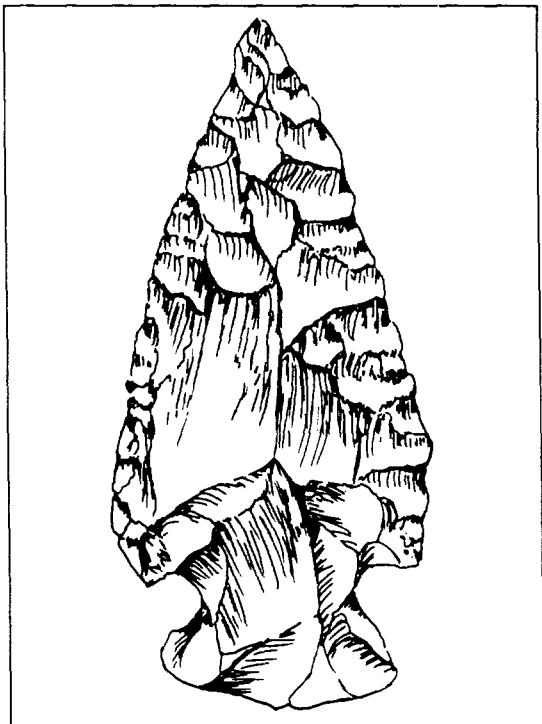
The CULTURAL RESOURCES objective is to protect and preserve cultural resources from human impacts in their natural condition and setting subject to natural ecological processes provided these processes do not adversely threaten significant resources that must be managed in compliance with applicable Federal and state laws and BLM policy.

⇒ Resource Situation

The De-na-zin area has been utilized and occupied since the Paleo Indian Period (10,000 B.C.) until modern times. This early occupation is evidenced by numerous lithic scatters found throughout the wilderness. Occupation continued through the Basketmaker, Pueblo I, and Pueblo II periods and terminated around A.D. 900. These later components of occupation are relatively scarce in comparison with the Archaic site density. The known site assemblage suggests the area was abandoned and/or ignored from the Pueblo III Period until the late A.D. 1700s when the Navajo moved into the area from the Dinétah region north and east of the De-na-zin.

Sites of religious significance to the Navajo include gravesites and other sacred sites such as gathering areas and offering points. Sacred sites may include various natural features such as rock formations, buttes, mesas, crevices and springs;

prehistoric structures; and other man-made features such as stone cists, cairns, ceremonial hunting and trapping pits, and sites (including sweatlodges and hogans) where curing and other religious ceremonies have been performed.



Identification of either sacred or burial sites are sensitive aspects of Navajo culture and informants are reluctant to discuss these issues. Possible burial sites and sacred areas have been identified in the vicinity and it is likely that similar sites do exist in the wilderness.

The resource does not appear to be threatened by any immediate destructive forces any more than other sites in the San Juan Basin. The sites in the wilderness are, in fact, more protected than the majority of sites in the basin because of restrictions to vehicle access and energy development.

⇒ Program Management

Cultural resource sites were identified and documented in the summer of 1977 as part of the Bisti-Star Lake Project (Huse et al 1978). About 3,527 acres or 15% of the De-na-zin Wilderness were inventoried. In addition, five small inventories have been conducted in association with proposed oil and gas projects. Fifty-three sites

containing 61 components have been recorded. Of these, 44 components have been determined eligible to the National Register of Historic Places. Seventeen components were determined ineligible.

⇒ Assumptions

If visitor use increases, this may lead to increased vandalism, surface artifact collection or even illegal excavations. The expected capacity of cultural properties to withstand impacts as a result of recreational use is moderate due to the fact that predicted site types have low visibility. Despite a general lack of features and structural remains, many of the cultural resource properties may still be vulnerable to natural impacts such as erosion.

⇒ Management Policies

Cultural resources in most instances shall be subject to the forces of nature and study or management will not normally include excavation, stabilization, or interpretive activities except on a case-by-case basis with prior written authorization in the form of a permit issued by the Bureau.

Inventory will be permitted as necessary to record and evaluate cultural properties.

Specific site locations will not be marked or identified for the public.

Graves will be managed and protected as cultural resource sites.

Gathering of renewable resources such as plants and fruits for Native American ceremonial and medicinal purposes will be allowed to continue. Vehicle access, however, will be prohibited. All information and education media will address the sensitivity of cultural resources.

⇒ Management Actions

Vandalism and other user impacts to prehistoric and historic sites will be discouraged by posting antiquities signs along boundaries and at popular entrance points.

Periodic patrol will be performed to inspect conditions of known sites and monitor for pot hunting and other illegal activities.

The Bureau will include interested individuals for a multi-discipline review of permit applications to provide input during the normal 30-day review period for proposed actions in wilderness. These individuals will define the greater public good served by preserving wilderness character or allowing extractive/consumptive scientific research. The State Director will review recommendations and make a final determination.

LIVESTOCK OPERATIONS

⇒ Management Objective

The LIVESTOCK OPERATIONS objective is to allow existing grazing use to continue subject to wilderness regulations and to maintain or improve the existing vegetative condition and trend.

⇒ Resource Situation

There are two grazing allotments that lie within the wilderness - Carson (#6004) and Otis (#6011). Small portions of each allotment extend into the wilderness from beyond wilderness boundaries where more intensive livestock operations occur. See Map E.

The 1984 Chaco Rangeland Inventory assessed range condition and trend on portions of the Otis and Carson Community allotments. The Otis Community allotment covers about 10% of the wilderness where vegetative conditions are poor to fair, trend is static. Nearly three-fourths of this area is badlands where grasses are scarce. The Carson Community allotment covers about 30% of the wilderness where vegetation is in fair condition and trend is static. Over one-half of this area is badlands where grasses are scarce.

⇒ Program Management

Grazing on approximately sixty percent of the wilderness, once part of the Black Lake Allotment, has been permanently retired. This allotment which extends beyond wilderness boundaries to the south has been in non-use status for many years. It is considered difficult to manage in an operational sense due to complicated land ownership patterns and constant unauthorized use and resulting litigation. There are five range improvements within the wilderness portion of the allotment consisting of three earthen retention dams and one

well and fenceline (approximately 10.5 miles). Refer to Map G for locations. A supplemental feeder once located in T. 24 N., R. 12 W., Section 26 was removed in 1985.

The Otis and Carson Community allotments extend beyond wilderness boundaries to the east and north, respectively. These community allotments are administered through a Cooperative Management Agreement between the BLM, Bureau of Indian Affairs (BIA) and the Navajo Tribe under Section 15 of the Taylor Grazing Act of 1934. Grazing privileges are leased by the Navajo Tribe and individuals are assigned specific use areas or range units by the BIA.

The Otis Community allotment contains three range units and seven operators within the wilderness. Range Unit #9 lies wholly within the wilderness. About 10% of Range Unit #14 and 25% of Range Unit #1 lie within the wilderness. There are no range improvements existing. There are 3,260 AUMs authorized on the entire allotment which allows grazing by sheep, goats and horses. The Carson Community Allotment (# 6004) contains eight range units and 19 operators within the wilderness. Range units #7, #16, #17 and #23 lie completely within the wilderness. About 30% of Unit #18, 50% of Unit #21, 30% of Unit #22, and 40% of Unit #24 lie partially within the wilderness. There are no existing authorized range improvements. There are 3,759 AUMs authorized on the entire allotment which allows grazing by sheep, goats and horses.

Grazing management under Section 15 of the Taylor Grazing Act is complicated by a number of interrelated events including range units that contain multiple allottees or heirs, range units lying partially within and outside of the wilderness where different administrative stipulations apply, requests for transporting supplemental feed for livestock into the wilderness, enforcing compliance with lease terms through second and third parties, unauthorized use which results in trespass and impoundment procedures. These problems have existed for many years.

⇒ Assumptions

In order to better assess vegetation conditions and trend, continued monitoring of some existing range sites and inventory of all range study sites will be needed.

Consolidation of administrative responsibility, fencing, and range unit boundary adjustments will be needed to effectively manage livestock and protect wilderness values.

⇒ Management Policies

Any adjustment to the current grazing levels will be examined through rangeland studies and environmental assessments. If grazing privileges are voluntarily relinquished, they would not be reallocated.

Any use of motorized vehicles or mechanized equipment for range improvements or maintenance will be guided by the direction stated in the Allotment Management Plan.

New range improvements will be constructed with natural materials when possible, not require motorized vehicle access, and must benefit wilderness values.

⇒ Management Actions

Rangeland limits of acceptable change will be established and then monitored annually. The baseline data will include vegetative condition, utilization and trend.

An Allotment Management Plan will be prepared for the two allotments. The plan will address grazing schedules, levels of acceptable forage utilization, vehicle access needs, maintenance schedules, range improvements, and animal damage control and other aspects of Range Improvement Plans addressed in IM-NM-88-201.

The Grazing Cooperative Agreement will be revised according to the Farmington Resource Area Management Plan and the direction will be to assume direct grazing administration in the wilderness and revise range unit boundaries.

Boundary fencing will be constructed around the wilderness perimeter to supplement topographic barriers and existing fenceline as outlined in the Allotment Management Plan.

MINERALS

⇒ Management Objectives

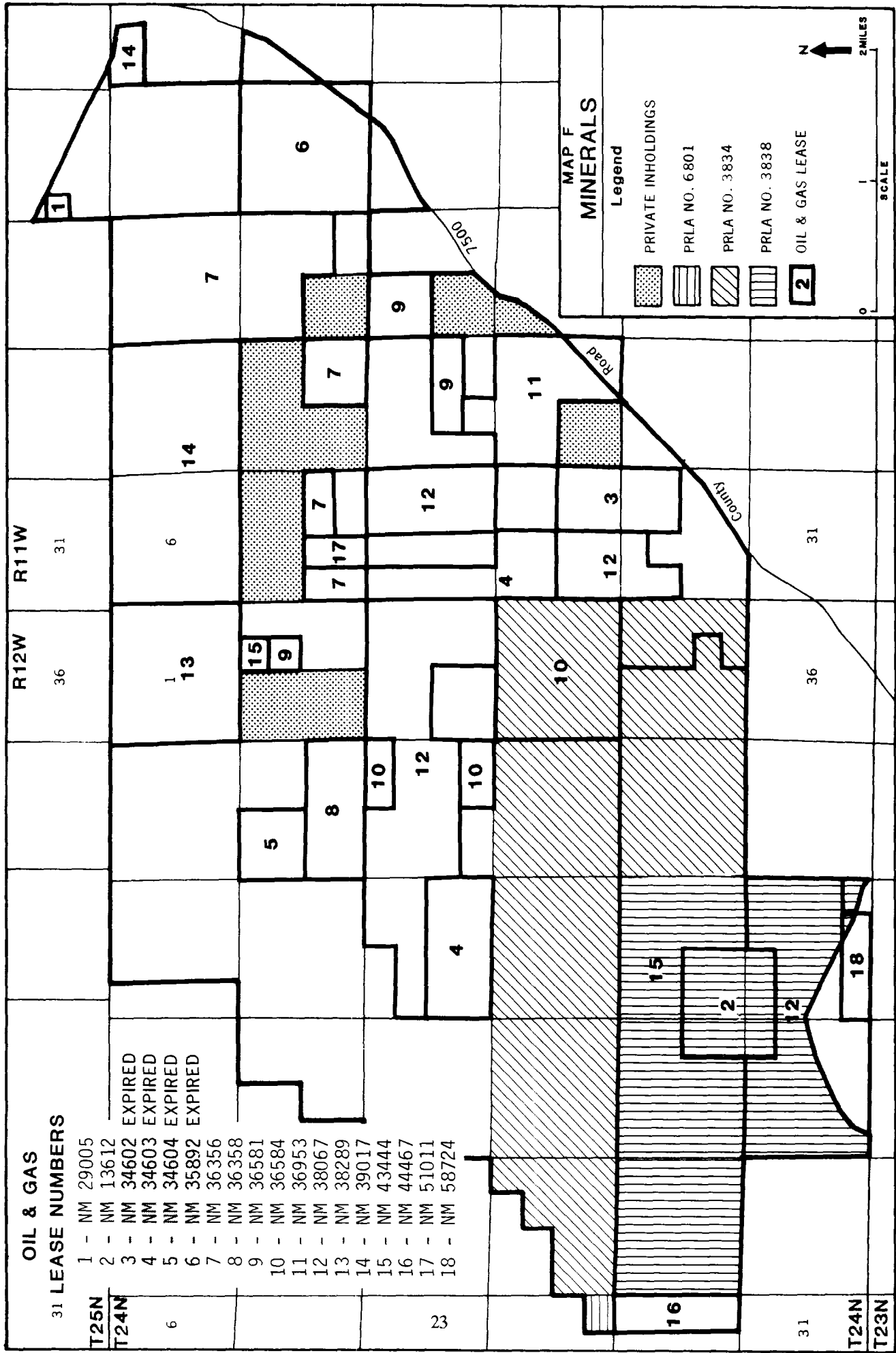
The MINERALS management objective is to prevent unnecessary and undue degradation of the area's wilderness character when mineral lessees exercise their valid existing rights and to allow no new mineral development after valid existing rights expire.

⇒ Resource Situation

There are no existing coal leases within the wilderness. Three applications for coal leasing (referred to as Preference Right Lease Applications or PRLAs) overlap wilderness boundaries. PRLA # NM 3834, # NM 6801 and # NM 3838 cover about 4,591 acres, 43 acres and 3,115 acres, respectively. Refer to Map F. Generally, the coal underneath the PRLAs in the wilderness is too deep for surface mining and would have to be mined by underground methods.

Oil and gas production has been minimal with 7 of the eight wells drilled over the last 31 years resulting in no commercial production. All 8 wells have since been plugged and abandoned. Refer to the table below.

<u>Well Name</u>	<u>Location</u>	<u>Abandoned</u>
#1 Fannin	T24N,R11W Sec 3	05/58
#3 Monument	T24N,R11W Sec 5	10/74
#1 Hazel Bolack	T24N,R11W Sec 5	11/60
#1 Continental	T24N,R12W Sec 13	10/60
#1 Vanderslice	T24N,R12W Sec 13	11/60
#1 Tanner Unit	T24N,R12W Sec 21	05/58
#1 Snuffle-upagus	T24N,R12W Sec 23	03/86
#2 Snuffle-upagus	T24N,R12W Sec 27	06/86



⇒ Management Program

Two oil and gas leases are being held by production, meaning that they will not expire within the 10 year primary lease term due to producing wells under the same lease outside of the wilderness.

Twelve oil and gas leases have been issued and will expire if not suspended or held by production. Refer to Map F and the following table for more information.

<u>Oil & Gas Lease</u>	<u>Issue Date</u>	<u>Expiration Date</u>
NM 13612	05/01/71	Held By Production
NM 29005	12/01/76	Held By Production
NM 36356	06/01/79	06/89
NM 36358	05/01/79	05/89
NM 36581	06/01/79	06/89
NM 36584	06/01/79	06/89
NM 36953	08/23/79	08/89
NM 38067	11/11/79	11/89
NM 38289	01/23/80	01/90
NM 39017	07/22/80	07/90
NM 43444	07/30/81	07/91
NM 44467	11/09/81	11/91
NM 51011	04/19/82	04/92
NM 58724	08/20/84	08/94

All appropriations for the last several years have prohibited the Bureau from using funds to process PRLAs in wilderness. Because of this restriction, the Bureau has not requested or received final showings on the three PRLAs which extend into the Wilderness. If, and when, Congress removes this prohibition, the Bureau will request final showings and will determine whether the applicants have shown that "commerical quantities" of coal exist. If they do not, the PRLA will be rejected. If they do, the most likely course of action will be to exchange the right to a lease for equivalent coal rights outside the wilderness. It is also possible that, if the prohibition remains, the applicants could relinquish those parts of the PRLAs which lie within the wilderness. This would allow the Bureau to process the remaining portions of the PRLAs which lie outside the wilderness.

Significant occurrences of other minerals are not known to exist. All mining claims have been abandoned and invalidated and the wilderness has been closed to claim location since October 30, 1984. There are no free use permits or sales of mineral materials existing in the wilderness. The Master Title Plats have been updated to reflect the mineral withdrawal.

⇒ Assumptions

Future Applications For Permit to Drill (APD) may be received on the existing leases; however, production of commercial quantities of oil and gas is currently speculative.

The PRLAs will eventually be adjudicated and processed according to regulations.

⇒ Management Policies

No new mineral leases will be issued. Lessees will operate under the terms and conditions of the lease. This includes the wilderness stipulation and the principle of non-degradation on all post-FLPMA leases. Mineral rights on leases will be acquired when possible.

The Bureau will not process the three PRLAs in the Wilderness until Congress authorizes it. If authorized, the Bureau will adjudicate the PRLAs, using the 43 CFR 3430 regulations. In the event that a right to lease coal is determined, we will pursue an exchange of the coal rights in the Wilderness for coal rights outside the Wilderness. Such an exchange may require specific legislation.

An environmental assessment will address each action and a 30-day notification period will apply in most cases. The following will be used as mitigating measures to be incorporated as stipulations in applications for a permit to drill:

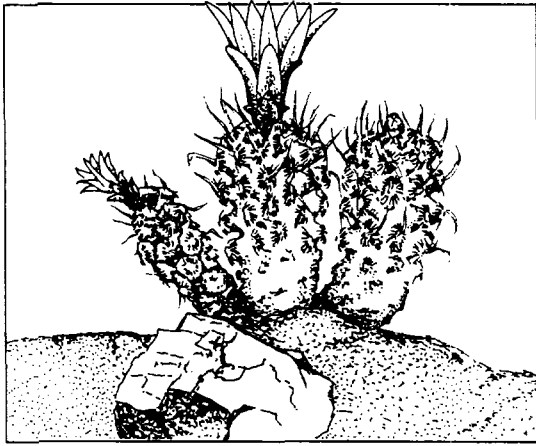
- vehicle use will receive prior written approval;
- any road will be the minimum necessary for ingress and egress;
- all structures will receive prior approval and be designed to have the least impact on visitor wilderness experience;

— tanks will be low-form and painted in colors that blend with the environment;

— slant drilling will be recommended where a bottom hole location is proposed within one-quarter mile of the wilderness boundary;

— automatic shut off controls will be installed on tanks and pipelines;

— in order to avoid rutting of the terrain, drilling operations will not take place during periods of high precipitation;



— trash and fluids produced during drilling and workover operations will be hauled out;

— all production pits will be lined and have a leak-detection system;

— fluids will be hauled out of the wilderness when pits are full;

— sites will be returned to as natural a contour as possible;

— topsoil will be retained, if present, and revegetation with native seeds will be accomplished;

— well sites will not cause accelerated erosion or hazards to visitors;

— no wells will be drilled in raptor nesting areas between February 1 and July 1;

The following will be used to guide operating procedures:

— the wilderness specialist will be contacted to attend the on-site pre-drill inspection;

— site-specific stipulations may be added at that time;

— slant drilling and no surface occupancy will be considered;

— monitoring will be performed by Bureau inspectors; and

— use of inspection and enforcement standards will apply, as will the approved lease and APD stipulations.

⇒ Management Action

Because no oil and gas activity is ongoing, no management action will be prescribed. If drilling were approved, the policies above will guide implementation of the proposed action.

NATURALNESS AND SCENIC QUALITY

⇒ Management Objective

The NATURALNESS AND SCENIC QUALITY objective is to reclaim the effects of authorized and unauthorized uses that have occurred within the last 50 years and maintain the area free from new structures and improvements (except for those necessary to protect the wilderness resource, public health and safety and to recognize valid existing rights).

⇒ Current Situation

There have been a number of events adversely affecting the natural and scenic qualities of the De-na-zin Wilderness. Refer to Map G.

Authorized uses involving valid existing or grandfathered rights have included drillholes, pipes and pads, two-track vehicle ways, earthen dams and fencelines. Permits have also been authorized for surface disturbance through collection and excavation of fossil resources. Unauthorized uses have included a sagebrush chaining, road improvements, littering and vehicle trespass. Structures have also been developed in association

with the occupant located in T24N R11W Section 7. These events are documented in case files at the Farmington Resource Area office.

⇒ Program Management

In 1986 a supplemental feeder that was no longer being used was removed from the wilderness. A reclamation project was also initiated on an illegally graded route. About two miles of the route was scarified with a horse-drawn harrow and drag and then reseeded with native grass using a cyclone seeder.

⇒ Assumptions

Future unauthorized uses will need to be prevented and existing unauthorized uses will be reclaimed to restore the area's primitive character.

Vehicular trespass will continue without sufficient barriers to restrict access to the interior of the wilderness.

⇒ Management Policies

All current and past unauthorized uses and their effects will be rehabilitated and restored to a natural condition. Preventative measures will be taken to prevent recurrence.

Fences or other barriers will be erected on existing vehicular ways to control vehicular intrusion into the Wilderness and in boundary locations that are easily accessible.

Denuded areas resulting from human activity which cannot rehabilitate naturally in a reasonable period of time will be reclaimed, recontoured to natural slope, and reseeded with native plant species to establish satisfactory ground cover as existed prior to disturbance.

Visual Resource Management Class I objectives, Federal Class II and state air quality standards will be maintained to establish the limits of acceptable change.

⇒ Management Actions

Air quality limits of acceptable change will be developed and monitored. The baseline data will include particulates and visibility information.

A washed out culvert in T24N R12W Section 28 and abandoned range improvements will be rehabilitated.

Fences at vehicular access points at the boundaries of the wilderness will be constructed. Vehicular routes will be reclaimed.

Annual monitoring the Woods Ranch Route rehabilitation project will continue. Initiate reclamation of two track routes.

Removal of scattered trash piles and litter pick-up projects will be initiated.

The drill pipes associated with abandoned wells will be removed.

OUTDOOR RECREATION

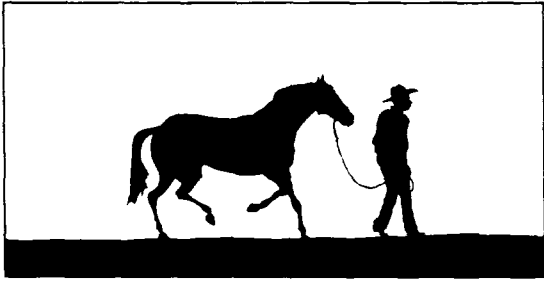
⇒ Management Objectives

The OUTDOOR RECREATION objectives are to allow historical patterns of dispersed nonmotorized recreation to continue in their traditional fashion unless they degrade wilderness values; to provide for public recreation dependent upon a wilderness setting in a manner consistent with the preservation of an enduring resource of wilderness, characterized by naturalness, and outstanding opportunities for solitude and scenic enjoyment.

⇒ Resource Situation

The number of visitors is normally low with virtually all use occurring in the months from May to October. Recreational use is limited by the lack of a reliable water source. Visitor use patterns consist of sightseeing from vehicles on County Road 7500 and short walks to the bluffs from the road. Some use occurs along the washes that transect the wilderness by day hikers and bird hunters. Photography and backpacking is also known to occur.

The primitive recreation potential is derived from the vast array of unusual topography and intriguing scenery occurring throughout the wilderness. Attractions include giant petrified logs, fossils, birds of prey, remnant ponderosa pine, archeological sites, and a colorfully sculpted badlands. One may gain a great sense of spaciousness from higher elevation vistas to a lonely feeling of seclusion in the lower elevation sandy washes.



⇒ Program Management

About 15,000 acres in the southern half and north-west quarter of the wilderness is being managed under the Recreation Opportunity Spectrum (ROS) (Refer to Glossary) primitive class objectives. Back country use and management of wilderness resources are dependent on maintaining natural order and freely functioning ecosystem, essentially free from the evidence of humans, administrative restrictions and on-site controls. There is an extremely high probability of experiencing isolation from the sights and sounds of others, independence, closeness to nature, self-reliance through the application of back country skills and an environment that offers a high degree of challenge and risk.

About 9,000 acres in the northeast portion of the wilderness surrounding the private inholdings and the extreme eastern border near County Road 7500 is being managed under the ROS semi-primitive non-motorized class objectives with the exception of vehicle access to inholdings. Use and management of wilderness resources are dependent on maintaining an environment comparable to a naturally occurring system. The area is largely free from the evidence of humans and technology, management restrictions and on-site controls. Off-site administration is encouraged. Project designs should stress protection of natural values and maintaining the integrity of a predominantly natural environment. There is a good probability of experiencing minimal contact with other people and occasional evidence of human sights and sounds associated with vehicles, homes, powerlines and fences.

⇒ Assumptions

The opportunity to experience solitude may be diminished near County Road 7500, adjacent to the inholdings and along access routes.

Visitor use is not expected to increase significantly over the present usage.

The visitor must assume the risks of entering the wilderness as a consequence of isolation from the conveniences of a technological world.

⇒ Management Policies

Developments for recreation and visitor use will be the minimum amount necessary for protection of the wilderness resource, public health and safety, and will be located outside the wilderness. There will be no restrooms, or developments for potable water.

Recreation developments must be analyzed through an environmental assessment and include stipulations that require facility construction and materials which harmonize with the natural surroundings. Site-specific plans will be prepared.

Recreational Opportunity Spectrum, semi-primitive non-motorized and primitive classes, will be the management objective for administering recreation opportunities.

Valid and reliable visitor use and impact data will be gathered to further the planning and management efforts including, but not limited to, resource impacts, use patterns, visitor behavior, expectations, perceptions, and personal data such as age, occupation and education. This information will be used to establish social indicators for measuring the limits of acceptable change.

Recreational or hobby gathering of fossils and non-fossil nonrenewable mineral specimens will be discouraged.

Information and education media will include the regulations in effect for the De-na-zin Wilderness.

⇒ Management Actions

A rustic parking facility will be developed as the wilderness access in T. 24 N., R. 11 W., Section 16 SE/4 off County Road 7500.

A self-issued registration system will be designed to collect visitor use information.

The social limits of acceptable change will be developed and evaluated annually. The baseline data will include crowding perception, group size and number of incident occurrences over time.

PALEONTOLOGICAL RESOURCES

⇒ Management Objective

The PALEONTOLOGICAL RESOURCES objective is to protect and preserve paleontological resources from human impacts in their natural condition and setting subject to natural ecological processes provided these processes do not adversely threaten significant resources which must be managed in compliance with applicable Federal and State laws and BLM policy.

⇒ Resource Situation

The wilderness contains the type locality for the Ojo Alamo sandstone.

The Kirtland Shale is most noted for dinosaur and reptilian fossils while the Nacimiento Formation is noted for mammal fossils. Petrified wood is most abundant in the Ojo Alamo Sandstone but is present throughout the majority of the wilderness.

⇒ Management Program

A regional inventory was conducted in 1977 and encompassed an area that is now the De-na-zin Wilderness. Two of the six proposed preserves addressed in the ensuing report include about 80 percent of the wilderness. The report emphasizes that fossils in this area are of such importance that land disturbing activities which might require mitigation should not be allowed.

Dinosaur bones were first discovered in the area in 1902. This stimulated interest by institutions which sent field parties to the area. In 1904, a skull and other material of a new genus and species, *Kritosaurus navajovius* were collected. *Kritosaurus* was a medium-sized dinosaur with hundreds of cheek teeth for grinding vegetation. *Alamosaurus sanjuanensis*, a new genus and species, was collected from this area in

1921. This was the first discovery of a Late Cretaceous sauropod, a huge plant-eating dinosaur that swallowed stones to grind up vegetation in its stomach. Research has been ongoing for many years with scientific papers published in various journals. Investigations prior to wilderness designation have included reconnaissance, surface collection, screen washing, excavation, and paleo magnetic studies. There are two current permits for collection in the wilderness.

The Log Jam Area of Critical Environmental Concern (ACEC) located on 350 acres within the Ojo Alamo Formation is not specifically located on a public map because of sensitive resource values. The ACEC contains an unusually high concentration of petrified logs that are remnant of an unknown disposition event at the Cretaceous-Tertiary boundary about 65 million years ago. Those logs attain a diameter up to five or six feet and lengths of 75 feet or more. Special management is required in this ACEC because the resource is sensitive to both natural and human disturbance. Natural forces act to weather the logs causing fragmentation and splitting, which is a natural process in wilderness and will be allowed to continue unimpeded by human intervention. However, human disturbance by climbing or collecting will accelerate natural weathering and can lead to an unacceptable change to this wilderness resource. If the ACEC location becomes well known heavy and/or concentrated use will be a major concern.

⇒ Assumptions

Collection or removal of paleontological resources from wilderness may not be compatible with the concept of wilderness preservation and therefore, any salvage, excavation, or collection of materials will require a case-by-case evaluation and special permit.

Removal of fossils, from the wilderness will negate these supplemental wilderness values for other uses in the wilderness.

Consumptive/extractive uses that require removing finite nonrenewable component parts of the wilderness or tinkering with the ecosystem might also negate or seriously hamper the opportunity for

non-consumptive natural systems research whose study demands an intact, unmanipulated, primarily undisturbed natural baseline which is a cornerstone of wilderness designation.



Without stabilization and/or collection, exposed paleontological materials will weather and erode.

Most scientific study of paleontological resources will require collection of fossils.

Amateurs will continue to indiscriminately remove fossil materials without adequate signing, enforcement and educational programs.

⇒ Management Policies

To the extent not inconsistent with the concept of wilderness preservation and the intent of the Wilderness Act, paleontological resources are available for recreational, scenic, scientific, educational, conservation, and historical uses.

Paleontological resources, in most instances, will be subject to the forces of nature in the same manner as other wilderness resources. Study or management will not normally include any excavation, stabilization, or interpretation activities.

Salvage of paleontological sites, excavation and collection of material may be permitted on a case-by-case basis where the project will not degrade overall wilderness character of the area and such activity is needed to preserve the particular resources.

Each permit application will be analyzed through an environmental assessment which will include a 30-day public notification period in most cases.

Information and education efforts will discuss the sensitivity issues of paleontological resources.

Unauthorized collection of paleontological resources will be discouraged through public education efforts, law enforcement and patrol and monitoring by BLM specialists and volunteers.

Recreational or hobby gathering of non-fossil non-renewable mineral specimens will be discouraged.

Management policies identified in the Scientific Study and Data Collection section in Part III of this document will be applied to scientific study of paleontological resources.

Inventory will be permitted as necessary to record, evaluate, and document site conditions.

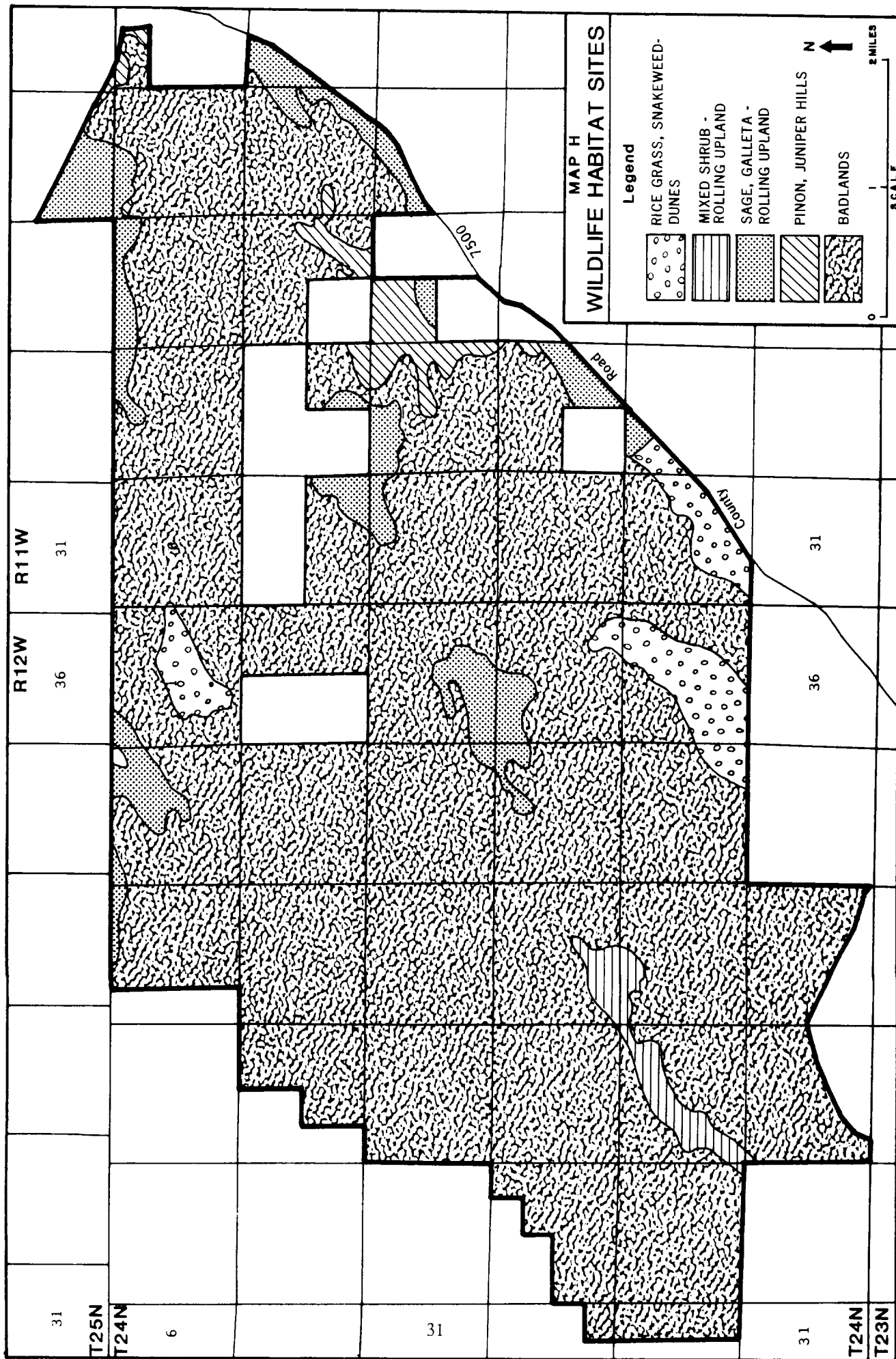
Permittees are required to submit their permit applications a minimum of 120 days prior to the proposed start of the project within the wilderness.

The Log Jam and Lost Pine ACEC prescriptions are to: close from all forms of paleontological permitting, intensify seasonal patrolling, establish photo-point monitoring and the limits of acceptable change, direct visitor use to avoid the ACECs and protect the petrified logs from unnatural disturbance.

⇒ Management Actions

A Federal Register Notice will be prepared to close the wilderness to collection of paleontological resources, including petrified wood, without a permit.

The Bureau will include interested individuals for a multi-discipline review of permit applications to provide input during the normal 30-day review period for all proposed actions in wilderness.



These individuals will define the greater public good served by preserving wilderness character or allowing extractive/consumptive scientific research. The State Director will review recommendations and make a final determination.

WILDLIFE

⇒ Management Objectives

The WILDLIFE management objectives are to preserve and protect habitats for wildlife (particularly nesting raptors) in their natural condition while providing minimal restriction to visitor use and access and to allow natural ecological succession of biological populations so long as they do not threaten resource and human values outside the wilderness.

⇒ Resource Situation

Wildlife is not abundant in the wilderness. Twenty-one species of mammals, seventy-four species of birds and nine species of reptiles may use the area. Five Standard Habitat Sites are represented and include: badlands (84%), sage-rolling uplands (8%), Ricegrass - Snakeweed dunes (4%), mixed shrub rolling uplands (2%), and Pinyon-Juniper Sage (2%). Refer to Map H for locations.

The most commonly viewed wildlife species found are the raptors: golden eagles, prairie falcons, ferruginous and red-tailed hawks, great-horned and burrowing owls and ravens. Within the wilderness, there are three ferruginous hawk nesting territories (active two of the last five years), one golden eagle nesting territory (active two of the last five years), and one prairie falcon nesting territory (active four of the last five years). Other species of bird include the horned lark, Say's phoebe, rock wren, sage sparrow, mourning dove, and scaled quail.

Resident mammals include coyotes, bobcats, red fox, badgers and porcupines. A remote possibility exists for an occasional mule deer or antelope sighting. Black-tailed jack rabbits, cottontail rabbits, pocket mice, deer mice, pocket gophers, kangaroo rats and antelope ground squirrels are other common mammals. Two black-tailed prairie dog towns have been identified in the southern portion of the wilderness, one of which was apparently decimated by plague, but appears to be rebounding.

Common species of reptile include the Colorado side-blotched lizard, yellow-headed collared lizard, bull snake and prairie rattlesnake.

⇒ Management Program

The Lost Pine ACEC located on 80 acres in the central portion of the wilderness is not specifically located on a public map because of sensitive resource values. The ACEC contains a dozen Ponderosa pines which represent a biogeographical anomaly in that the trees are remnants of a cooler climate that does not presently exist. The pines contain a single golden eagle nesting territory which consists of three nests within one quarter mile of each other. Some trees have been struck by lightning indicating a cultural significance to the Navajo. The special attention required in this ACEC reflects inherent conflicts among sensitive resources and human use. Golden eagles are intolerant of human disturbance during the March through July nesting season. Disturbance to nests, eggs, fledglings or adults can lead to nest abandonment which can result in death to the young or eggs. The matter is further complicated in that visitors are attracted to the ACEC by low soaring eagles and the visual contrast of the green ponderosa against the grayish badlands background. The pines offer virtually the only shade in the area.

Initial observation and monitoring of raptor nest sites has been conducted annually since 1981 and in years when young are produced monitoring of individual nests continues throughout the nesting season. Helicopter travel was utilized prior to wilderness designation. Current practice involves travel on foot to nesting territories to protect wilderness values.

No threatened or endangered plant or animal species have been documented in the wilderness. An inventory for *sclerocactus mesaeverdae* was conducted in the region in 1984 and 1985. No Mesa Verde cactus were found and the investigators felt that the area should no longer be considered potential habitat for the species (Ecosphere Environmental Services 1985). Additional inventories for *Atriplex pleiantha* (manco saltbush) by Bureau personnel have located no populations of this species. Clearances for T&E species are standard operating procedure when surface disturbing activities are proposed.

⇒ Assumptions

Nest abandonment may occur if humans approach or disturb raptors during the nesting season. The limits of acceptable change may be difficult to determine because nest abandonment factors are variable and monitoring is impossible on a day-to-day basis. Abandonment could also be caused by natural forces or human-induced environmental change. The only acceptable standard is no nest abandonment due to human disturbance.

⇒ Management Policies

Management will seek to maintain a natural distribution, number, and interaction of indigenous species of wildlife. Natural ecological processes will be allowed to occur in the wilderness as much as possible without human influences.

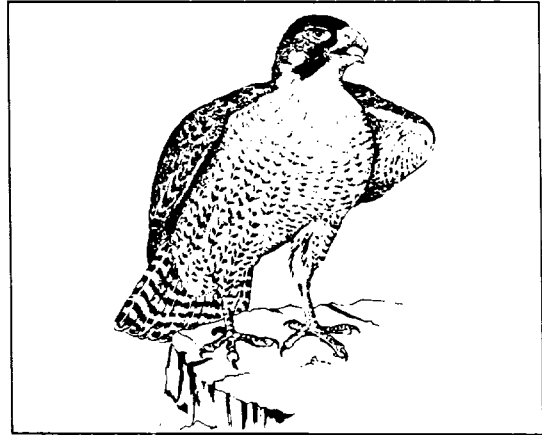
The preservation of sensitive, rare, threatened, and endangered species dependent on wilderness conditions will be favored.

Habitats of sensitive animals (including candidate species) will be managed and/or conserved to minimize the need for listing those animals by either Federal or State governments in the future (BLM Manual 6840).

All studying and monitoring of wildlife and their habitat will be accomplished by nonmotorized/non-mechanical means. Annual monitoring of raptor nesting territories will continue.

Data will be gathered annually by a wildlife biologist on the relationship of visitor use and nesting raptors, and limits of acceptable change indicators and standards will be established.

Public information and education efforts will be the first course of action before taking measures to restrict access to buffer zones around active nests. Efforts will include a concept similar to the Smokey Bear and Woodsy Owl campaigns where information is provided on how nest disturbance can affect raptors, which appeals to the sensitive side of visitors rather than restrictive language in the form of regulations that sometimes tend to provide a challenge or disregard for values.



If visitors are not voluntarily avoiding nesting raptors, the next step will be to restrict access to buffer zones around active nests.

All information and education media will address the sensitivity issues of nesting raptors. The Lost Pine ACEC prescriptions are to intensify seasonal monitoring of golden eagles, develop detailed LAC indicators and standards, direct visitor use and permitted uses to avoid the ACEC, protect the remnant ponderosa from unnatural disturbance, and monitor Navajo religious and ceremonial use of trees struck by lightning.

⇒ Management Actions

Monthly visits to observe raptor territories for the presence of adults will occur beginning March 1 each year. Care will be taken to ensure that nesting pairs are not disturbed. If territories are active, monitoring will be continued through July. Visitors will also be observed to determine if they are approaching active nests.

Wildlife indicators and limits of acceptable change standards will be established and annual monitoring will continue. The baseline data will include number of breeding pairs per season, nesting territories, and evidence of nest disturbance information.

PART IV

WILDERNESS MANAGEMENT STRATEGY

The Limits of Acceptable Change (LAC) System (Stankey, et al 1985) will be the strategic approach to wilderness management planning. A management planning strategy is incorporated into this document for two specific reasons. First, the BLM Manual 8560 states that the limits of acceptable change will be defined for each wilderness area. Second, the BLM Manual 8561 states that the evaluation of the limits of acceptable change will be required prior to establishing any wilderness use regulations or restrictions including quota or permit systems.

The Limits of Acceptable Change (LAC)

The LAC system is a nine-step process designed to alert managers to trends that could lead to unacceptable changes and possible degradation of the wilderness before it's too late to correct the situation, thus escaping the reactionary syndrome that seeks to direct management. A brief explanation of this nine-step process is outlined as follows:

- Step 1: Identify area concerns and issues.
- Step 2: Define and describe opportunity classes.
- Step 3: Select indicators of resource and social conditions.
- Step 4: Inventory resource and social conditions.
- Step 5: Specify standards for resource and social conditions.
- Step 6: Identify alternative opportunity class allocation.
- Step 7: Identify management actions for each alternative.
- Step 8: Evaluation and selection of an alternative.

- Step 9: Implement actions and monitor conditions.

The concept driving the LAC process centers on proactive management for desired quality conditions of the wilderness resource and experience. Recognizing that at least some impact occurs to natural ecological processes and environmental perceptions as a result of human influences, the question focuses on the type and amount of change that is acceptable. This level or limit of acceptable change signals below par quality conditions. The LAC process allows managers to predict unacceptable changes and apply corrective management actions to prevent degradation before the conditions deteriorate to unacceptable levels.

Application of the nine-step LAC process has been modified to the De-na-zin Wilderness management situation. Part III of this document, the Wilderness Management Program, has identified the need to identify limits of acceptable change for range conditions, raptor, air quality, and the social environment. Other physical, social and biological indicators may also be selected to further reflect the integrity of the wilderness resource. Methods are evolving and being refined in respect to developing LAC for the indicators mentioned above. The LAC also requires an appreciable management commitment to implement these systems which has not been developed as yet for the De-na-zin Wilderness. However, when developed and in place, these systems will define the quality of desired conditions in order to perpetuate the stability of the wilderness resource.

Wilderness demands the highest quality management attention. One basis of wilderness management decisions concentrates on ecological values, another is social values. Visitor perception of naturalness often ranks as high or higher in the decision-making process in wilderness due in part to its public involvement roots in the politically legislated compromise involving the passage of the Wilderness Act of 1964. Visual disturbance or impacts to scenic quality and social value of

naturalness in a wilderness setting most often results in visitor dissatisfaction in the way wilderness is managed. The situation may not meet their expectations of what wilderness conditions should be. In effect, most visitors are concerned with cosmetic visual management and when highlighted, manager's will react to in one form or another. Wilderness management can be a function of visitor perceptions as well as ecosystem management.

Visual impact is closely correlated with, and is a strong indicator of, unnatural disturbance to the physical, chemical, and biological properties of the ecosystem and degradation of the wilderness character of the area. As an initial step towards LAC system implementation, the Visual Impact Evaluation System (VIES) was developed to identify the Visual Limits of Acceptable Change.

To provide readers with an example of how the VIES is applied, the following hypothetical case is presented. The Manager is interested in measuring the "limits of acceptable change" (LAC) for the visual impact indicator - Vehicle Routes. The Wilderness Specialist selects a specific site where

vehicle access is possible due to the flat terrain and lack of barriers. The VIES worksheet is then completed.

The baseline inventory rating equals "2" which is compared to the indicator standard which equals "0". This standard exists because vehicles are prohibited in this area. Since the baseline rating exceeds the indicator standard, subpar wilderness conditions exist. In this case, the Manager prescribes immediate rehabilitation measures. The vehicle track is reclaimed by utilizing the minimum tool which is a horse drawn rake to fill in rills and loosen compacted soils. A fence is then constructed to prevent vehicle penetration and the affected area is left to the natural elements of wind and rain. Three months pass and the site is rated again. This time a rating of "1" is recorded, meaning that some evidence of the vehicle track remains. Even through the rating still exceeds the indicator standard it is determined that the improved conditions would continue, thus, no further management action is prescribed. Six months pass and the site is rated again. The rating now shows a "0" which complies with the established indicator standard, thus, preventing possible degradation of the wilderness. End of hypothetical case.

Visual Impact Indicator	Criteria			Baseline Rating	Indicator Standard
	0	1	2		
Vehicle Route	No evidence	Some evidence of two track travel	Mechanically improved route	2	0

PART V

PLAN IMPLEMENTATION SCHEDULE

<u>Implementation Target Date</u>	<u>Program Responsibility</u>	<u>Description of Management Action</u>	<u>Page Reference in Plan</u>
FY 89	Wilderness	Maintain patrol and monitoring record.	11
FY 90	Cultural Resources	Post antiquity signs.	18
FY 90	Lands	Initiate resolution of unauthorized occupancy.	15
FY 90	Wilderness	Design Map/Brochure.	12
FY 90	Wilderness	Conduct All-Employee Wilderness Orientation.	12
FY 90	Wilderness	Erect entrance sign.	13
FY 90	Wilderness	Designate access route to inholdings.	15
FY 90	Wilderness	Seek inholding purchase authority.	15
FY 90	Cultural Resources	Inspection patrols.	18
FY 90	Range	Revise Grazing MOU.	21
FY 90	Wilderness	Prepare Paleo Federal Register Notice.	30
FY 90	Wilderness	Target individuals for paleo and cultural review.	19, 30
FY 90	Wildlife	Raptor monitoring.	32
FY 90	Wilderness	Establish Air Quality LAC	27
FY 901	Range	Establish Range LAC.	21

PLAN IMPLEMENTATION SCHEDULE (Continued)

<u>Implementation Target Date</u>	<u>Program Responsibility</u>	<u>Description of Management Action</u>	<u>Page Reference in Plan</u>
FY 90	Recreation	Develop parking facility.	28
FY 90	Wilderness	Monitor Woods Ranch route rehabilitation.	27
FY 90	Wilderness	Trash pick up.	27
FY 90	Wilderness	Fencing projects.	27
FY 90	Wilderness	Rehabilitate abandoned culvert and range improvements.	27
FY 91	Wilderness	Develop I&E display.	13
FY 91	Range	Develop Allotment Management Plan.	21
FY 91	Recreation	Design registration system.	28
FY 91	Wildlife	Establish Wildlife LAC.	33
FY 92	Recreation	Establish Social LAC.	29
FY 92	Range	Construct perimeter fencing.	21
FY 92	Wilderness	Remove drill pipes.	27
FY 92	Wilderness	Reclaim two track routes.	27

APPENDIX A

EXCERPTS FROM THE SAN JUAN WILDERNESS PROTECTION ACT 1984

Title I - San Juan Basin

Sec. 101. This Act may be cited as the "San Juan Basin Wilderness Protection Act of 1984".

Sec. 102.(a) In furtherance of the purposes of the Wilderness Act (16 U.S.C. 1131-1136), the following lands are hereby designated as wilderness, and, therefore, as components of the National Wilderness Preservation System--

(1) certain lands in the Albuquerque District Bureau of Land Management, New Mexico, which comprise approximately three thousand nine hundred and sixty-eight acres, as generally depicted on a map entitled "Bisti Wilderness--Proposed", dated June 1983, and which shall be known as the Bisti Wilderness; and

(2) certain lands in the Albuquerque District of the Bureau of Land Management, New Mexico, which comprise approximately twenty-three thousand eight hundred and seventy-two acres, as generally depicted on a map entitled "De-na-zin Wilderness--Proposed", dated June 1983, and which shall be known as the De-na-zin Wilderness.

(b) Subject to valid existing rights each wilderness area designated by this Act shall be administered by the Secretary of the Interior in accordance with the provisions of the Wilderness Act, except that any reference in such provisions to the effective date of the Wilderness Act (or any similar reference) shall be deemed to be a reference to the effective date of this Act, and any reference to the Secretary of Agriculture shall be deemed to be a reference to the Secretary of the Interior.

(c) As soon as practicable after enactment of this Act, a map and a legal description of each wilderness area designated by this Act shall be filed by the Secretary of the Interior with the Committee on Energy and Natural Resources of the United States Senate and the Committee on Interior and Insular Affairs of the House of Representatives. Each such map and description shall have the same force and effect as if included in this Act, except that correction of clerical and typographical errors in each such legal description and map may be made by the Secretary subsequent to such filings. Each such map and legal description shall be on file and available for public inspection in the Office of the Director of the Bureau of Land Management, Department of the Interior.

(d) Within the wilderness areas designated by this Act, the grazing of livestock, where established prior to the date of enactment of this Act, shall be permitted to continue subject to such reasonable regulations, policies, and practices as the Secretary of the Interior deems necessary, as long as such regulations, policies, and practices fully conform with and implement the intent of Congress regarding grazing in such areas as such intent is expressed in the Wilderness Act and this Act.

Sec. 104.(a) The Secretary of the Interior shall exchange such public lands or interest in such lands, mineral or nonmineral, as are of approximately equal value and selected by the State of New Mexico, acting through its commissioner of public lands, for any State lands or interest therein, mineral or nonmineral, located within the boundaries of any of the tracts designated as wilderness under section 2. For the purpose of this section, the term public lands shall have the same meaning as defined in section 103(c) of the Federal Lands Policy and Management Act of 1976.

(b) Within one hundred and twenty days of enactment of this Act, the Secretary of the Interior shall give notice to the New Mexico Commissioner of Public Lands of the tracts to be designated as wilderness pursuant to section 102 of this Act and of the Secretary's duty to exchange public lands selected by the State for any State land contained within the boundaries of the designated wilderness area. Such notice shall

contain a listing of all public lands which are located within the boundaries of the State, which have not been withdrawn from entry and which the Secretary identifies as being available to the State in exchange for such State lands as may be within the designated wilderness areas.

(c) The value of the State and public lands to be exchanged under this section shall be determined as of the date of enactment of this Act.

(d) After the receipt of the list of available public lands, if the commissioner of public lands gives notice to the Secretary of the State's selection of lands, the Secretary shall notify the State in writing as to whether the Department of the Interior considers the State and Federal lands to be of approximately equal value. In case of disagreement between the Secretary and the commissioner as to relative value of the acquired and selected lands, the Secretary and the commissioner shall agree on the appointment of a disinterested independent appraiser who will review valuation data presented by both parties and determine the amount of selected land which best represents approximate equal value. Such determination will be binding on the Secretary and the commissioner. The transfer of title to lands or interests therein to the State of New Mexico shall be completed within two years of the date of enactment of this Act.

Sec. 105. (a) The Secretary of the Interior shall exchange any lands held in trust for an Indian whose lands are located within the boundary of the De-na-zin area referred to in section 102(a)(2) at the request of the Indian for whom such land is held in trust. Such lands shall be exchanged for lands approximately equal in value selected by the Indian allottee concerned and such lands so selected and exchanged shall thereafter be held in trust by the Secretary in the same manner as the lands for which they were exchanged.

(b) Except as provided herein, nothing in this Act shall affect the transfer to the Navajo Tribe of any lands selected by the Navajo Tribe pursuant to Public Law 93-531 and Public Law 96-305.

(c) Title to such in lieu selections shall be taken in the name of the United States in trust for the benefit of the Navajo Tribe as a part of the Navajo Reservation, and shall be subject only to valid existing rights as of December 1, 1983.

Sec. 106. Section 11 (a) of Public Law 93-531 (25 U.S.C. 640d-10) is amended--

(1) in paragraph (1) by striking out the last sentence, which begins "Such lands";

(2) by inserting after paragraph (2) the following. "Subject to the provisions of the following sentences of this subsection, all rights, title and interests of the United States in the lands described in paragraph (1), including such interests the United States as lessor has in such lands under the Mineral Leasing Act of 1920, as amended, will, subject to existing leasehold interests, be transferred without cost to the Navajo Tribe and title thereto shall be taken by the United States in trust for the benefit of the Navajo Tribe as a part of the Navajo Reservation. So long as selected lands coincide with pending noncompetitive coal lease applications under the Mineral Leasing Act of 1920, as amended, the Secretary may not transfer any United States interests in such lands until the noncompetitive coal lease applications have been fully adjudicated. If such adjudication results in issuance of Federal coal leases to the applicants, such transfer shall be subject to such leases. The leaseholders rights and interests in such coal leases will in no way be diminished by the transfer of the rights, title and interests of the United States in such lands to the Navajo Tribe. If any selected lands are subject to valid claims located under the Mining Law of 1872 the transfer of the selected lands may be made subject to those claims."; and

(3) by inserting the following new paragraph:

"(2) Those interests in lands acquired in the State of New Mexico by the Navajo Tribe pursuant to subsection 2 of this section shall be subject to the right of the State of New Mexico to receive the same value from any sales, bonuses, rentals, royalties and interest charges from the conveyance, sale, lease, development, and production of coal as would have been received had the subsurface interest in such lands

remained with the United States and been leased pursuant to the Mineral Lands Leasing Act of 1920, as amended, or any successor Act; or otherwise developed. The State's interest shall be accounted for in the same manner as it would have been if a lease had issued pursuant to the Mineral Lands Leasing Act of 1920, as amended."

APPENDIX B

BOUNDARY DESCRIPTION

Boundary Description of the De-na-zin Wilderness

Beginning at the corner of Sections 20, 21, 28 and 29, T. 24 N., R. 11 W., NMPM, NM.,

thence northerly between Sections 20 and 21 approximately 1/4 mile to the south 1/16 section corner of Sections 20 and 21,

thence easterly on the E-W centerline of the SW/4 of Section 21 approximately 1/4 mile to the SW/16 section corner of Section 21,

thence northerly on the N-S centerline of the SW/4 of Section 21 approximately 1/4 mile to the CW/16 section corner of Section 21,

thence easterly on the E-W centerline of Section 21 approximately 1/4 mile to the C/4 section corner of Section 21,

thence northerly on the N-S centerline of Section 21 approximately 1/2 mile to the 1/4 section corner of Sections 16 and 21,

thence northerly on the N-S centerline of Section 16 approximately one mile to the 1/4 section corner of Sections 9 and 16,

thence easterly between Sections 9 and 16 approximately 1/2 mile to the corner of Sections 9, 10, 15 and 16,

thence southerly between Sections 15 and 16 approximately 3/4 mile to the S/16 section corner of Section 15 and 16,

thence easterly on the E-W centerline of the SW/4 of Section 15 approximately 1/4 mile to the SW/16 section corner of Section 15,

thence northerly on the N-S centerline of the SW/4 of Section 15 approximately 1/4 mile to the CW/16 section corner of Section 15,

thence easterly on the E-W centerline of Section 15 approximately 1/2 mile to the CE/16 section corner of Section 15,

thence northerly on the N-S centerline of the NE/4 of Section 15 approximately 1/4 mile to the NE/16 section corner of Section 15,

thence easterly on the E-W centerline of the NE/4 of Section 15 approximately 1/4 mile to the N/16 section corner of Section 14 and 15,

thence northerly between Sections 14 and 15 approximately 1/4 mile to the corner of Sections 10, 11, 14 and 15,

thence northerly between Sections 10 and 11 approximately 1/4 mile to the S/16 section corner of Sections 10 and 11,

thence, easterly on the E-W centerline of the SW/4 of Section 11 approximately 1/4 mile to the SW/16 section corner of Section 11,

thence northerly on the N-S centerline of the SW/4 of Section 11 approximately 1/4 mile to the CW/16

section corner of Section 11,

thence easterly on the E-W centerline of Section 11 approximately 1/4 mile to the center 1/4 section corner of Section 11,

thence northerly on the N-S centerline of Section 11 approximately 1/2 mile to the 1/4 section corner of Sections 2 and 11,

thence westerly between Sections 2 and 11 approximately 1/2 mile to the corner of Sections 2, 3, 10 and 11,

thence northerly between Sections 2 and 3 approximately 3/4 mile to the N/16 section corner of Sections 2 and 3,

thence easterly on the E-W centerline of the NW/4 of Section 2 approximately 1/2 mile to the CN/16 section corner of Section 2,

thence northerly on the N-S centerline of Section 2 approximately 1/4 mile to the 1/4 section corner of Section 2, on the north boundary of T. 24 N., R. 11 W.,

thence westerly on the southern boundary of Section 35, T. 25 N., R. 11 W., approximately 1.75 chains to the standard 1/4 section corner of Section 35,

thence northerly on the N-S centerline of Section 35 approximately 1/4 mile to the CS/16 section corner of Section 35,

thence westerly on the E-W centerline of the SW/4 of Section 35 approximately 1/2 mile to the S/16 section corner of Sections 34 and 35,

thence northerly between Sections 34 and 35 approximately 1/4 mile to the 1/4 section corner of Sections 34 and 35,

thence westerly on the E-W centerline of Section 34 approximately 1/2 mile to the C/4 section corner of Section 34,

thence northerly on the N-S centerline of Section 34 approximately 1/4 mile to the CN/16 section corner of Section 34,

thence westerly on the E-W centerline of the NW/4 of Section 34 approximately 1/2 mile to the N/16 section corner of Section 33 and 34,

thence southerly between Sections 33 and 34 on the south boundary of the township,

thence on the south boundaries of Section 31, 32 and 33 approximately three miles to the corner of T. 25 N., R. 11 and 12 W.,

thence westerly on the southern boundary of Sections 34, 35 and 36, T. 25 N., R. 12 W. approximately 2.9 miles to the W/16 section corner of Section 3, T. 24 N., R. 12 W.,

thence southerly on the N-S centerlines of the NW/4 and SW/4 of Section 3, T. 24 N., R. 11 W., approximately one mile to the W/16 section corner of Sections 3 and 10,

thence westerly between Sections 3 and 10 approximately 1/4 mile to the corner of Sections 3, 4, 9 and 10,

thence westerly between Sections 4 and 9 approximately 1/2 mile to the 1/4 section corner of Sections 4 and 9,

thence southerly on the N-S centerline of Section 9 approximately 1/2 mile to the C/4 section corner of

Section 9,

thence westerly on the E-W centerline of Section 9 approximately 1/4 mile to the CW/16 section corner of Section 9,

thence southerly on the N-S centerline of the SW/4 of Section 9 approximately 1/2 mile to the W/16 section corner of Sections 9 and 16,

thence westerly between Sections 9 and 16 approximately 1/4 mile to the corner of Sections 8, 9, 16 and 17,

thence southerly between Sections 16 and 17 approximately one mile to the corner of Sections 16, 17, 20 and 21,

thence westerly between Sections 17 and 20 approximately 1/4 mile to the E/16 section corner of Sections 17 and 20,

thence southerly on the N-S centerline of the NE/4 of Section 20 approximately 1/4 mile to the NE/16 section corner of Section 20,

thence westerly on the E-W centerline of the NE/4 of Section 20 approximately 1/4 mile to the CN/16 section corner of Section 20,

thence southerly on the N-S centerline of Section 20 approximately 1/4 mile to the C/4 section corner of Section 20,

thence westerly on the E-W centerline of Section 20 approximately 1/2 mile to the 1/4 section corner of Sections 19 and 20,

thence southerly between Sections 19 and 20 approximately 1/4 mile to the S/16 section corner of Sections 19 and 20,

thence westerly on the E-W centerline of the SE/4 of Section 19 approximately 1/4 mile to the SE/16 section corner of Section 19,

thence southerly on the N-S centerline of the SE/4 of Section 19 approximately 1/4 mile to the E/16 section corner of Sections 19 and 30,

thence southerly on the N-S centerlines of the NE/4 and SE/4 of Section 30 approximately one mile to the E/16 section corner of Sections 30 and 31,

thence easterly between sections 30 and 31 approximately 1/4 mile to the corner of Sections 29, 30, 31 and 32,

thence easterly between sections 29 and 32 approximately one mile to the corner of Sections 28, 29, 32 and 33,

thence southerly between Sections 32 and 33 approximately one mile to the corner of Sections 4, 5, 32 and 33, on the south boundary of the township,

thence easterly on the south boundary of Section 33 approximately 1/2 mile to the 1/4 section corner of Sections 4 and 33,

thence northerly on the N-S centerline of Section 33 approximately 1/4 mile to the CS/16 section corner of Section 33,

thence easterly on the E-W centerline of the SE/4 of Section 33 approximately 1/2 mile to the S/16 section corner of Sections 33 and 34,

thence easterly on the E-W centerline of the SW/4 of Section 34 approximately 1/4 mile to the SW/16 section corner of Section 34,

thence southerly on the SW/4 of Section 34 approximately 1/4 mile to the W/16 section corner of Sections 3 and 34, on the south boundary of the township,

thence easterly on the south boundary of section 34 approximately 3/4 mile to the corner of Sections 2, 3, 34 and 35,

thence northerly between Sections 34 and 35 approximately one mile to the corner of Sections 26, 27, 34, and 35,

thence easterly between Sections 26 and 35 and Sections 25 and 36 approximately two miles to the corner of Sections 25, 30, 31 and 36, on the east boundary of the township,

thence easterly between Sections 30 and 31, T. 24 N., R. 11 W., approximately one mile to the corner of Sections 29, 30, 31 and 32,

thence northerly between Sections 29 and 30 approximately 1/4 mile to the S/16 section corner of Sections 29 and 30,

thence easterly on the E-W centerline of the SW/4 of Section 29 approximately 1/4 mile to the SW/16 section corner of Section 29,

thence northerly on the N-S centerline of the SW/4 of Section 29 approximately 1/4 mile to the CW/16 section corner of Section 29,

thence easterly approximately 1/4 mile to the center 1/4 section corner of Section 29,

thence northerly on the N-S centerline of Section 29 approximately 1/4 mile to the CN/16 section corner of Section 29,

thence easterly on the E-W centerline of the NE/4 of Section 29 approximately 1/4 mile to the NE/16 section corner of Section 29,

thence northerly on the N-S centerline of the NE/4 of Section 29 approximately 1/4 mile to the E/16 section corner of Sections 20 and 29,

thence easterly between Sections 20 and 29 approximately 1/4 mile to the corner of Sections 20, 21, 28 and 29 and the point of beginning.

The following tracts of land should be excluded from the previous description:

T. 24 N., R. 11 W.

Section 7: N/2

Section 8: N/2 and SW/4

Section 9: SW/4

Section 16: SW/4

Section 20: SW/4

Section 21: NW/4

T. 24 N., R. 12 W.,

Section 12: W/2

APPENDIX C

PUBLIC INVOLVEMENT PROCESS

This appendix summarizes the Bureau's efforts to obtain public input from other governmental agencies, private industry, special interest groups, and individuals during the development of the De-na-zin Wilderness Management Plan.

The management planning process began in 1985 when an effort was made to produce plans for the Bisti Wilderness and De-na-zin Wilderness concurrently. Volunteers were solicited to scope issues and assist in drafting various sections of the documents. However, due to the complexity of the effort and that these were the first plans to be produced in New Mexico it was decided to concentrate on the Bisti plan first. The Bisti Wilderness Management Plan was finalized in July 1986.

The De-na-zin planning process commenced during the summer of 1988 and incorporated the issues and objectives from the earlier effort. A Draft De-na-zin Management Plan was printed in October 1988 and released to over 300 individuals and organizations on the wilderness mailing list. This began a 60-day public comment period.

A public meeting was conducted in Farmington, New Mexico on November 4, 1988 where the proposed plan was presented. Nine individuals participated in discussion of issues and planned actions. In general, the group supported the objectives of the plan and said they might provide written comment at a later time. Most were interested in obtaining more information about the wilderness rather than specific comments on management. Discussion did generate questions on management of minerals, Indian inholdings, and administration of livestock.

A field trip to the wilderness was conducted on November 5, 1988 for the primary purpose of explaining the Limits of Acceptable Change System. Seven individuals participated in the day long trip and had the opportunity to implement a portion of the system at the proposed parking area site.

During the comment period newspaper articles and a television news program highlighted the paleontological issues of the management plan. This served to increase the number of letters received and questions as to why the issue commanded such attention. As a result the comment period was extended to December 23, 1988 to allow for additional input during the formal comment period. A total of 39 letters containing 192 comments on the Draft De-na-zin Wilderness Management Plan were received.

Consultation and Coordination

Three hundred copies of the Draft Plan were mailed to persons on the Farmington Wilderness Mailing List. Informal consultation with the public and special interest groups has taken place throughout the planning process via personal contacts, phone calls and letters. The following local organizations and their representatives received a copy of the draft plan.

U.S. Congress

The Honorable Pete Domenici
The Honorable Bill Richardson
The Honorable Jeff Bingaman

Local Governments

City of Farmington Mayor
Farmington Chamber of Commerce
Farmington Convention & Visitors Bureau
Navajo Nation

State of New Mexico

New Mexico Governor
Bureau of Mines & Mineral Resources
Department of Game and Fish
Energy, Minerals & Natural Resources
Environmental Improvement Division
Land Commission
Museum of Natural History
State Historic Preservation Officer

Organizations

American Museum of Natural History
NM Mountain Club
NM Recreation & Park Association
NM Wilderness Coalition
NM Wilderness Study Committee
The Paleontological Society
Sierra Club, Rio Grande Chapter
The Wilderness Society
Volunteers for the Outdoors

Business

Paragon Resources, Inc.
Public Service Company of New Mexico

Federal Agencies

Bureau of Indian Affairs
Bureau of Reclamation
Fish and Wildlife Service
Forest Service
Geological Survey
National Park Service
Soil Conservation Service

Educational Institutions

Auburn University
Brigham Young University
Eastern New Mexico University
Harvard University
New Mexico Highlands University
New Mexico State University
Princeton University
San Juan College
Southern Illinois University
University of Arizona
University of California, Berkely
University of California, Los Angeles
University of Idaho
University of New Mexico
University of Michigan
University of Wyoming

Comment Analysis

In addition to verbal comments received at public meetings, the BLM received 39 written letters. The number of letters received from various entities that required BLM response to substantive comments is as follows: Federal agencies (2), State government (5), tribal government (1), industry (1), special interest groups (13), educational institutions (5) and individuals (11). Changes made to the text did not revise the environmental consequences of implementing this Management Plan. Therefore, a second draft will not be necessary for public review.

Comment Response

This section addresses general responses to the 39 public letters received during the formal comment period. Most comments were limited to wilderness issues involving paleontology. These concerns are categorized below and a general response is provided.

A separate document has been prepared to respond to the 192 specific comments made in the 39 public comment letters received. Each letter is reprinted and responses to each substantive comment is provided. This document is entitled Public Involvement in the Draft De-na-zin Wilderness Management Plan and is available from the Farmington Resource Area office.

GENERAL RESPONSE #1

SPECIAL ATTRIBUTES. The Unique Attribute section and Resource Situation of the Paleontological section of the Draft attempted to accurately describe the significance of fossil resources in the De-na-zin Wilderness. The current debate among paleontologists on the issue of significance is split among those that feel the area is most important at a state, national, and even international level and those that feel the area is not as important as other areas even within the state that have the potential to yield more significant finds. It is not really the intent of a wilderness management plan to argue the areas significance which no doubt will continue to be addressed in scientific journals. The text has been revised to exclude all references of uniqueness or significance of paleontological resources.

GENERAL RESPONSE #2

PALEONTOLOGICAL RESOURCE OBJECTIVE. The specific wording of this management objective has apparently caused some confusion and misconceptions concerning the direction for management of fossil material. The objective was worded to this effect, ...paleontological resources will be protected and preserved in their natural condition subject to the forces of nature.... This misunderstanding has hopefully been clarified in the new wording of the objective. It was never the intent to lead anyone to believe that any wilderness resource would be protected from the natural forces of nature, in the general scheme of management. This no doubt is contrary to the very concept of establishing an area as wilderness. The clarification reads, paleontological resources will be preserved and protected from human impacts in their natural condition and setting subject to the forces of nature.... This objective has been evaluated and assessed as being consistent with the Wilderness Management Policy.

GENERAL RESPONSE #3

ASSUMPTION - COLLECTION OR REMOVAL OF PALEONTOLOGICAL RESOURCES FROM WILDERNESS IS INCOMPATIBLE WITH THE CONCEPT OF WILDERNESS PRESERVATION. This assumption has been revised to include language that further clarifies that this type of activity is incompatible on other than a case-by-case basis. The assumption stems from the point of view that removing any nonrenewable natural resource from wilderness including coal regardless of the purpose of removal will negatively affect the mission of preserving the wilderness character of the area. The amount of material removed and/or disturbed and its relationship to degrading wilderness character will continue to be debated. The point to be made is that the Bureau is charged with preserving for the long-term the wilderness character of the area. Not only does the impacts of each proposal need to be assessed but also the cumulative impacts of proposals over time. A good example of the point of this assumption is that involving the Petrified Forest National Park. A recent study identified a study plot to document the amount of petrified wood in the plot. Two weeks later the plot was evaluated and it was assessed that nearly 20% of the petrified wood was missing. This example precisely explains how the character of an area can be eroded. The primary issue is not the amount of wood that is disappearing, but the fact that the areas character is being changed unnaturally. The assumption makes the point that removing resources from the wilderness could adversely affect the character of the wilderness and needs to be monitored.

GENERAL RESPONSE #4

ASSUMPTION - REMOVAL OF FOSSILS, FROM THE WILDERNESS WILL NEGATE THESE SUPPLEMENTAL WILDERNESS VALUES FOR THEIR USE FOR OUTSTANDING OPPORTUNITIES FOR PRIMITIVE RECREATION AND OUTDOOR LABORATORY STUDY, TWO PRIMARY FACTORS IN NATURAL AREA DESIGNATIONS. This assumption is based on the obvious, if fossils are removed from the wilderness, those fossils will not be available for uses within the wilderness. The primary management of special features within a wilderness is to ensure their availability for wilderness uses, subject to exceptions. It can be argued that fossils will continue to erode out of the ground to provide an endless supply and therefore, the wilderness will not be depleted. It is also argued that most visitors will not likely identify fossils in the field due to untrained observational skills, but at the same time argue that

visitors might continue to collect fossils inhibiting the purposes of science. Arguments aside, the assumption makes the point that removing fossils from wilderness could adversely affect wilderness uses and needs to be monitored.

A wilderness by congressional definition mandates the agency to manage wilderness for the outstanding opportunity for primitive types of recreation. The special features of the De-na-zin include fossil resources which add significantly to the opportunity for fossil viewing and discovery, both ingredients of a primitive and unconfined type of recreation. In terms of outdoor education, the contention has been that few if any paleontologists utilize fossil resources in the field as a part of their scientific studies. This may be true and is not contested. However, the assumption refers to educators that utilize a field laboratory approach in their outdoor education curriculum. Entire field schools have been devoted to paleontology and many educators focus on fossils as a part of their curriculum in teaching other aspects of the environment.

GENERAL RESPONSE #5

ASSUMPTION - CONSUMPTIVE/EXTRACTIVE SCIENTIFIC STUDIES THAT REQUIRE REMOVING FINITE NONRENEWABLE COMPONENT PARTS OF THE WILDERNESS MIGHT ALSO NEGATE OR SERIOUSLY HAMPER THE OPPORTUNITY FOR NON-CONSUMPTIVE NATURAL SYSTEMS RESEARCH WHOSE STUDY DEMANDS AN INTACT, UNMANIPULATED, PRIMARILY UNDISTURBED NATURAL BASELINE WHICH IS A CORNERSTONE OF WILDERNESS DESIGNATION. This assumption is to provide further information and education on the issues involving paleontology. The types of scientific studies that might be encouraged are those that rely on observational research that does not consume, manipulate or experiment with natural resources and those studies that seek to further the management purposes of wilderness. In the case of paleontology, the purposes of study are primarily to add to the body of scientific knowledge and such studies involve surface disturbance and collection which can be described as a consumptive use in terms of wilderness. The wilderness and the restrictions to unnatural disturbance provides the environment for observational studies that often can not be completed outside of an area set aside for its naturalness. It has been argued that the amount of disturbance caused by most collections or excavations will not adversely affect studies of natural systems because they can be rehabilitated in such a manner so that no one could tell an excavation ever took place. On the other hand, how many small disturbances that are cosmetically reclaimed over the long-term can occur until most of the area has been disturbed at one time or another? What is the relationship to these cumulative effects and how it affects natural system studies or someone wanting to do research that requires an unmanipulated, intact natural system relative to those areas outside of wilderness? There may not be an easy answer to these questions. The point of the assumption is that research relying on a natural system is constrained to places like wilderness and such study can yield valuable information regarding natural processes which can in turn assist in management of such systems. Paleontological research is by nature and to present day technology a consumptive use and as other uses that are consumptive and proposed in the wilderness, must be analyzed for compatibility with wilderness preservation and its effects on wilderness character.

of restricting actions will occur in terms of funding and work efficiency and not effectiveness and therefore is not considered a significant impact.

— Social Environment

Visitors to the area will be without the modern conveniences of civilization and therefore, may be exposed to personal danger and risks. This impact is considered small due to the inherent dangers of wilderness and the information and education efforts warning of these dangers. There would be impacts to paleontologists and others due to the exclusion of motor vehicle use and prohibiting collection of fossils and other resources except on case-by-case basis with prior approval.

— Physical and Biological Environment

The proposed action is viewed as having positive impacts on wilderness values by reducing, reclaiming and preventing the effects of unauthorized uses. There would be natural impacts to resources through erosional forces which is considered to be acceptable in wilderness. Impacts to the Ferruginous Hawk (Federal Candidate species) is possible, but mitigating measures will facilitate compliance with the Endangered Species Act.

⇒ No Action Alternative (Amend the Existing Plan)

The environmental impacts would be very similar to the ones described in the preferred alternative. The impacts to the social and the physical and biological environments would be increased due to the current level of unauthorized uses and their effects on naturalness, solitude and primitive recreation. Without a plan of action to prevent and reclaim the effects of unauthorized uses such as the ones described in the preferred alternative, the impacts are considered to negatively impact the wilderness character of the area.

⇒ Human Use Enhancement Alternative

— Economic Environment

Commercial and business opportunities would be less restrictive. Due to the current lack of demand, this is not considered to be a significant impact.

— Managerial Environment

The opportunities to resume the type and level of management, monitoring and development would be less restrictive. Motorized vehicle use would be allowed for resource management within the framework permissible in applicable laws and regulations, as well as stabilization, improvements and interpretive activities. Impacts from these activities would degrade wilderness values below present levels, potentially to unacceptable levels.

— Social Environment

Increased developments and modern conveniences would most likely reduce personal danger and individual risk. These improvements may increase the number and types of users which may act to degrade wilderness values below the present levels. Crowding and increased regulations may degrade the outstanding opportunities for solitude and primitive recreation.

— Physical and Biological Environment

Increased levels and different types of human use may act to degrade the wilderness value of naturalness below the present level through the removal of fossils, artifacts, petrified wood and other natural resources, and the cumulative impacts of visitors on the fragile badlands environment along trails and at popular scenic areas.

⇒ Human Use Exclusion Alternative

The impacts under this alternative are considered positive in relation to the wilderness resource. By virtually eliminating human use of the area, natural ecological processes would function with as little human influence as possible. There could be impacts to the managerial environment because of the increased need for funding and personnel required to implement this alternative and effectively assure compliance with the plan. There would be impacts to those requesting motorized vehicle access within the wilderness.

V. CONSULTATION AND COORDINATION

The following organizations and their representatives have been sent a copy of this document which will also be made available to over 200 individuals on the wilderness mailing list.

U.S. Congress

The Honorable Pete Domenici
The Honorable Jeff Bingaman
The Honorable Bill Richardson

Business

Paragon Resources, Inc.
Public Service Company of New Mexico
Sunbelt Mining Company, Inc.

State of New Mexico

New Mexico, Governor
Bureau of Mines and Mineral Resources
Department of Game and Fish
Energy and Minerals Department
Environmental Improvement Division
Land Commission
Museum of Natural History
Natural Resource Department
State Historic Preservation Officer

Organizations

American Museum of Natural History
New Mexico Mountain Club
New Mexico Recreation & Park Association
New Mexico Wilderness Coalition
New Mexico Wilderness Study Committee
The Paleontological Society
Sierra Club, Rio Grande Chapter
The Wilderness Society
Volunteers for the Outdoors

Federal Agencies

Bureau of Indian Affairs
Bureau of Reclamation
Fish and Wildlife Service
Forest Service
Geological Survey
National Park Service
Soil Conservation Service

Educational Institutions

Auburn University
Brigham Young University
Eastern New Mexico University
Harvard University
New Mexico Highlands University
New Mexico State University
Princeton University
San Juan College
Southern Illinois University
University of Arizona
University of California, Berkely
University of California, Los Angeles
University of Idaho
University of New Mexico
University of Michigan
University of Wyoming
Western New Mexico University

Local Governments

City of Farmington, Mayor
Farmington Chamber of Commerce
Farmington Convention & Visitors Bureau
Navajo Nation

APPENDIX E

PLAN MONITORING AND REVISION PROCEDURES

Monitoring the Bisti Wilderness will include three procedures. First, general monitoring will be accomplished through patrols by BLM specialists, law enforcement personnel and volunteers. Second, resource-specific monitoring will be accomplished according to established guidelines of each program. Third, the limits of acceptable change system will monitor site-specific resource indicators throughout the area. Monitoring procedures will most likely indicate the need for plan revision.

Revision of this plan will be accomplished on two levels. This plan has been prepared for a ten year planning period with evaluations at five year intervals. The first level of revision will involve plan revision based on: a massive increase in visitation, a major environmental change in the wilderness resource, or a cumulative increase in user-caused resource impacts that call for more restrictive measures for resource protection. A second level of revisions include information updates or minor revisions which will be written into the working document, dated and initialed.

APPENDIX F
LIST OF PARTICIPANTS

Plan Preparation

<u>Name/Title</u>	<u>Primary Responsibility</u>	<u>Education</u>	<u>Related Experience</u>
Barbara am Ende Geologist	Paleontological Resources	BS Geology University of Iowa	4 yr Paleontologist
LouAnn J. Ball Archeologist	Cultural Resources	MA Anthropology University of NM	12 yr Archeologist
Danny S. Charlie Navajo Coordinator/ Range Con.	Livestock Ops	High School Diploma Ignacio, CO	23 yr Range Management
Myrna Finke Visual Info. Spec.	Printing Coord., Cartographics	Cert. - Graphic Arts University of NM	5 yr Visual Info Spec, 4 yr Cart Tech
Robert Moore Supv. Natural Resource Spec.	Inholding and Access	BS Range-Forest Mgmt. CO State University	4 yr Nat Res Spec, 7 yr Supv NRS, 4 yr Supv Realty
Kathy Ollom Resources Clerk	Data Entry	High School Diploma Clovis, NM	1 yr Resources Clerk, 6 yr Supv Cler Asst
F.M. O'Neill Supv. Natural Resource Spec.	Paleontological Resources	MA Bio. Anthropology University of NM	8 yr Paleontologist
William Overbaugh Outdoor Recreation Planner	Team Leader	MA Outdoor Recreation University of NM	6 yr Outdoor Recreation Planner
Jim Ramakka Wildlife Biologist	Wildlife	MS Wildlife Ecology University of ME	13 yr Wildlife Biologist
Marilu Waybourn Writer-Editor	Format Editing	AA Radio Communication Stephens College, MO	13 yr Newspaper Prod, 4 yr Pub. Rel.
Carl Yost Geologist	Minerals	MS Geology Eastern WA State	6 yr BLM, 1 yr MMS, 4 yr USGS, 3 yr Industry

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GLOSSARY

ALLOTMENT. An area of land designated and managed for grazing of livestock.

ALLOTMENT MANAGEMENT PLAN (AMP). A documented program which applies to rangeland operations on public land, which is prepared in consultation with the permittee(s) or lessee(s) involved, and which: (1) prescribes the manner in and extent to which livestock operations will be conducted in order to meet the multiple-use, sustained-yield, economic, and other needs and objectives as determined for public land through land use planning; (2) describes the type, location, ownership, and general specifications for the rangeland developments to be installed and maintained on public land to meet the livestock grazing and other objectives of land management; and (3) contained such other provisions relating to livestock grazing and other objectives as may be prescribed by the authorized officer consistent with applicable law.

ANIMAL UNIT MONTH (AUM). The amount of forage required to sustain the equivalent of one cow, one horse, two elk, three Barbary sheep, five domestic sheep, five goats, five deer, or ten antelope for one month.

CATEGORY 2 CANDIDATE SPECIES. A species which is being considered by the U.S. Fish and Wildlife Service for

listing as threatened or endangered but for which sufficient biological data for proposed listing is not yet available.

CUMULATIVE IMPACT. The aggregate impact of existing and proposed activities. Individual intrusions when considered by themselves may not impair the wilderness; however, when combined with other existing and proposed substantially unnoticeable impacts, the total effect may be sufficient to impair the wilderness.

IMPACT. The effect, influence, alternation, or imprint of a human activity.

IMPAIR. To diminish in value or excellence.

KNOWN GEOLOGIC STRUCTURE (KGS). A trap in which an accumulation of oil and gas has been discovered by drilling and which is determined to be productive. Its limits include all acreage that is presumptively productive [43 CFR 3100.0-5(a)]. Lands underlain by a KGS may be leased only through a competitive system.

LIMITS OF ACCEPTABLE CHANGE (LAC). The amount of human-caused change to biophysical or social components which are tolerable without the loss of wilderness character.

MANAGEMENT ACTION. An action carried out by BLM.

PREFERENCE RIGHT LEASE APPLICATION (PRLA). A formal request made to the BLM for a non-competitive coal lease. Holders of prospecting permits in the San Juan Basin filed PRLA's with the BLM New Mexico State Office between 1971 and 1973. These individuals or companies were required to demonstrate that, during the period of the permit, they had discovered commercial quantities of coal.

PRIMITIVE AND UNCONFINED RECREATION. Non-motorized and nondeveloped types of outdoor recreational activities.

RAPTORS. Any predatory bird such as a falcon, hawk, eagle, or owl that has feet with sharp talons or claws adapted for seizing prey and a hooked beak for tearing flesh.

RECREATION OPPORTUNITY SPECTRUM (ROS). A framework for stratifying and defining classes of outdoor recreation opportunity environments.

RIGHT-OF-WAY. An easement or permit which authorizes public land to be used for a specific purpose that generally requires a long narrow strip of land; examples are roads, powerlines, pipelines, etc.

SOLITUDE. Outstanding opportunities for solitude or primitive and unconfined recreation are wilderness characteristics examined in the intensive wilderness inventory. Factors contributing to opportunities for solitude are vegetative screening, topographic relief, vistas, and physiographic variety. 1. The state of being alone or remote from habitations; isolation. 2. A lonely, unfrequented, or secluded place.

UNNECESSARY OR UNDUE DEGRADATION. Impacts greater than those that would normally be expected from an activity being accomplished in compliance with current standards and regulations and based on sound practices, including use of the best reasonably available technology.

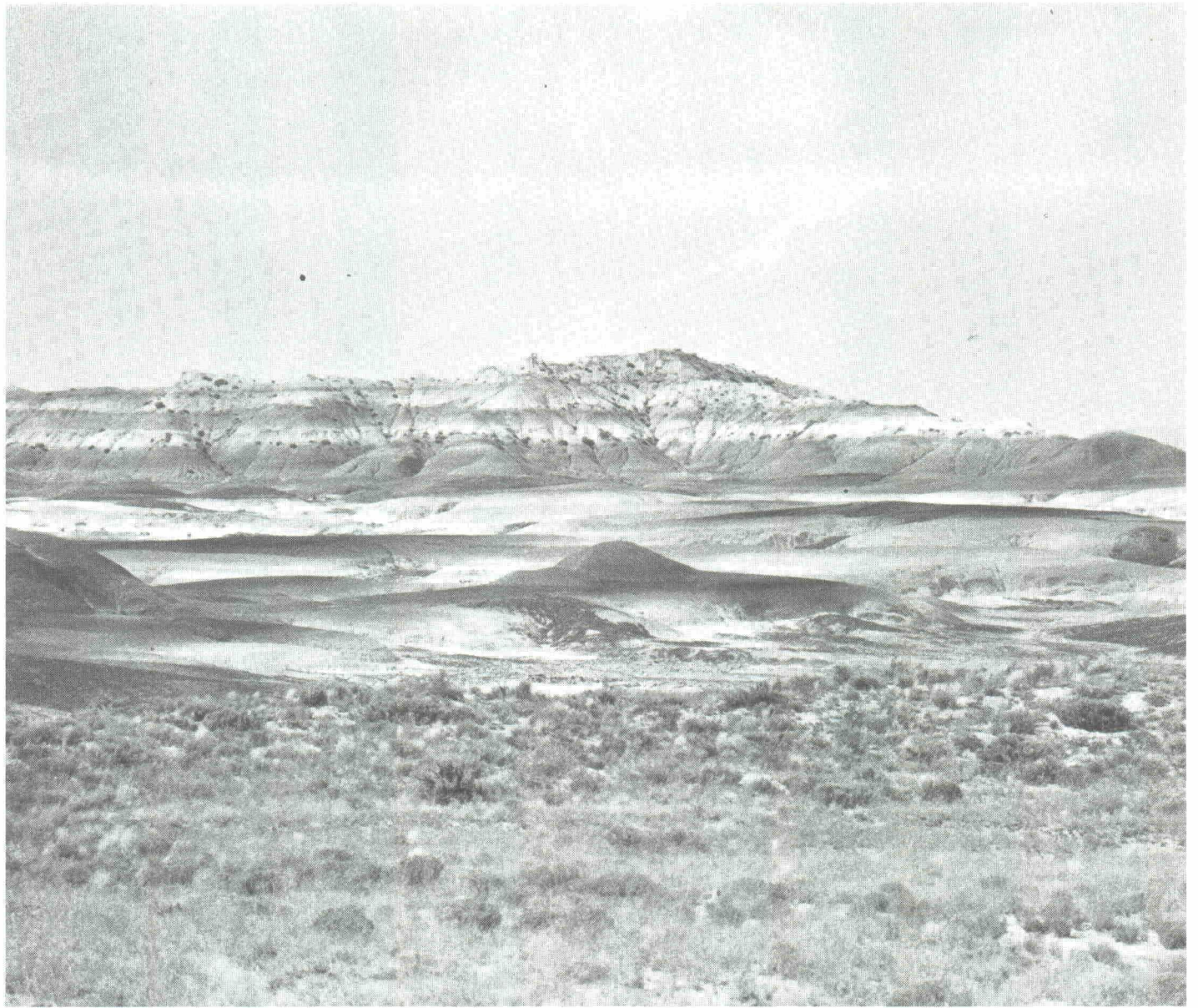
VISUAL IMPACT EVALUATION SYSTEM (VIES). The VIES is a management tool designed for the longitudinal collection of information concerned with monitoring and evaluating the visual "limit of acceptable change."

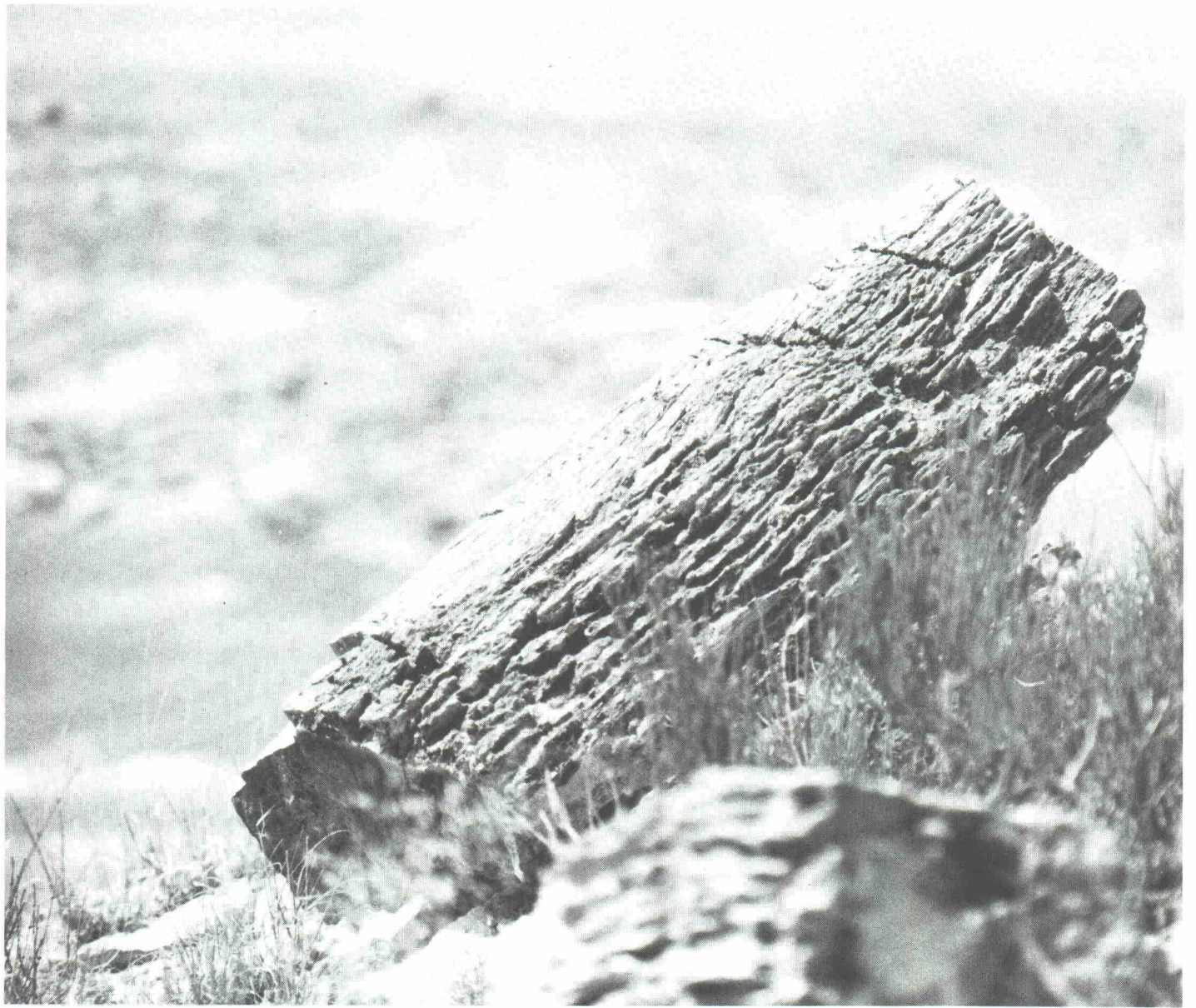
VISUAL RESOURCE MANAGEMENT (VRM) CLASS I. Natural ecological changes and very limited management activity are allowed. Any contrast created within the characteristic landscape must not attract attention.

WILDERNESS. The definition contained in section 2(c) of the Wilderness Act of 1964 (78 Stat. 891).

WILDERNESS STUDY AREA (WSA). A area formally designated by Congress as part of the National Wilderness Preservation System.

WILDERNESS CHARACTERISTICS. The definition contained in section 2(c) of the Wilderness Act of 1964 (78 Stat. 891).





APPENDIX D

U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

Albuquerque District Office
Farmington Resource Area

Farmington, New Mexico

Environmental Assessment and Finding of No Significant Impact for The Implementation of The De-na-zin Wilderness Management Plan

July 1988

ABSTRACT

In compliance with the National Environmental Policy Act (1969) and the BLM Manual 8561 — Wilderness Management Plans, an assessment has been made of the environmental consequences of implementing the De-na-zin Wilderness Management Plan. The result of this assessment was that the preferred alternative would not induce significant environmental impacts.

I. INTRODUCTION

This Environmental Assessment satisfies the Council on Environmental Quality regulations of implementing the National Environmental Policy Act (1969) requirements of identifying a preferred alternative in order to adequately consider and document the environmental consequences.

⇒ Background

The 1982 Draft Bisti, De-na-zin, Ah-shi-sle-pah Proposed Wilderness Areas Environmental Impact Statement (EIS) analyzed the environmental consequences of wilderness designation. This EIS demonstrated no or low levels of impact on various resources analyzed in the document finding of no significant impact for the designation of the

De-na-zin Wilderness Study Area as Wilderness.

This Environmental Assessment addresses the environmental consequences of implementing the preferred alternative of the De-na-zin Wilderness Management Plan.

⇒ Purpose for and Need of the Proposed Action

The purpose for the proposed action is to fulfill the BLM Manual 8561 requirement that a management plan be completed for BLM-administered wilderness areas. The need of the proposed action is to comply with the legislation and national policy and to adequately manage the area as wilderness.

⇒ Compatibility With Existing Land Use Plans

Due to the passage of the San Juan Basin Wilderness Protection Act (1984), there is no valid land use plan for the De-na-zin Wilderness Area. The 1981 Chaco Management Framework Plan provided administrative direction for the Wilderness Study Area before wilderness designation. The Farmington Resource Management Plan (July 1988) provides the general direction for management of the wilderness and adjacent lands while the management plan provides specific guidance.

II. ALTERNATIVES INCLUDING THE PREFERRED ALTERNATIVE

Four alternatives are analyzed in this environmental assessment. The preferred alternative represents the proposed action which is described below.

⇒ Preferred Alternative (Proposed Action)

Under this alternative, the management actions prescribed in the De-na-zin Wilderness Management Plan would be implemented. A detailed description of the proposed actions is located in Part III. Wilderness Management Program, Management Action section for each element. A descriptive summary of the management actions the BLM would implement include: fencing portions of the exterior boundaries; constructing a parking facility, reclaiming affects of unauthorized activities; collecting management data, and providing information and education materials.

⇒ No Action Alternative (Amend the Existing Plan)

Under this alternative, the De-na-zin Wilderness Management Plan would not be implemented and the area would continue to be managed under the policy guidance of the 1981 Wilderness Management Policy (BLM Manual 8560) and the Farmington Resource Management Plan.

⇒ Human Use Enhancement Alternative

Under this alternative, the BLM would allow human use and manipulation of the wilderness resource within the framework permissible in the Wilderness Act (1964) and the San Juan Basin Wilderness Protection Act (1984). A descriptive summary of the management actions the BLM would implement include: facilitate and encourage human use of the area through promotion and public relation efforts; provide vehicle access to several boundary locations; construct parking facilities with modern conveniences (i.e., restrooms, running water); construct trailheads and trails with displays and signing activities to aid in environmental interpretation; and allow motorized vehicle access with minimum restrictions to collection of fossils, artifacts and petrified wood.

⇒ Human Use Exclusion Alternative

Under this alternative, the BLM would seek to exclude human use and manipulation of the wilderness resource within the framework permissible in the Wilderness Act (1964) and the San Juan Basin Wilderness Protection Act (1984). A descriptive summary of the management actions the BLM would implement include: restrict and heavily stipulate all human uses of the area in order to allow natural ecological processes to function with minimum human influence; fence the entire boundary; allow no removal of fossils, artifacts, petrified wood or other natural materials; increase boundary and interior patrols; and implement a reservation system to control the amount of recreational use that will be allowed to occur.

III. AFFECTED ENVIRONMENT

The affected environment is described in detail in Part III. Wilderness Management Program in the Current Situation section of each wilderness element.

IV. ENVIRONMENTAL CONSEQUENCES

The preferred alternative (proposed action) would not have significant impacts on the wilderness resource. The proposed action complies exclusively with the finding of no significant impact as per the 1982 Environmental Impact Statement for the Bisti, De-na-zin, Ah-shi-sle-pah Proposed Wilderness Areas. There would be minor impacts to some of the environmental factors as described below:

⇒ Preferred Alternative (Proposed Action)

— Economic Environment

Some commercial or business opportunities such as recreational guiding or outfitting would be restricted. This impact is considered to be minute due to the lack of current demand.

— Managerial Environment

The opportunities to resume the type and level of management, monitoring and development would be restricted. This impact restricts administrative actions but does not prohibit them. The impacts



FINAL

De-Na-Zin Wilderness

MANAGEMENT PLAN

August 1989

Exhibit " 1 "

Application for Horizontal Directional Drilling Pilot Project
and a Non-Standard Oil Proration Unit

Case No. 10110 - October ~~4~~ 7, 1990

Debra Geiger Well No. 1

105' FSL, 125' FEL (Surface Location),

~~32~~ 7-T25N-R12W, N.M.P.M.

San Juan County, New Mexico

Giant Exploration & Production Company

Post Office Box 2810 ~ Farmington, New Mexico 87499-2810

505-326-3325

US Department of the Interior
Bureau of Land Management
Albuquerque District
Farmington Resource Area

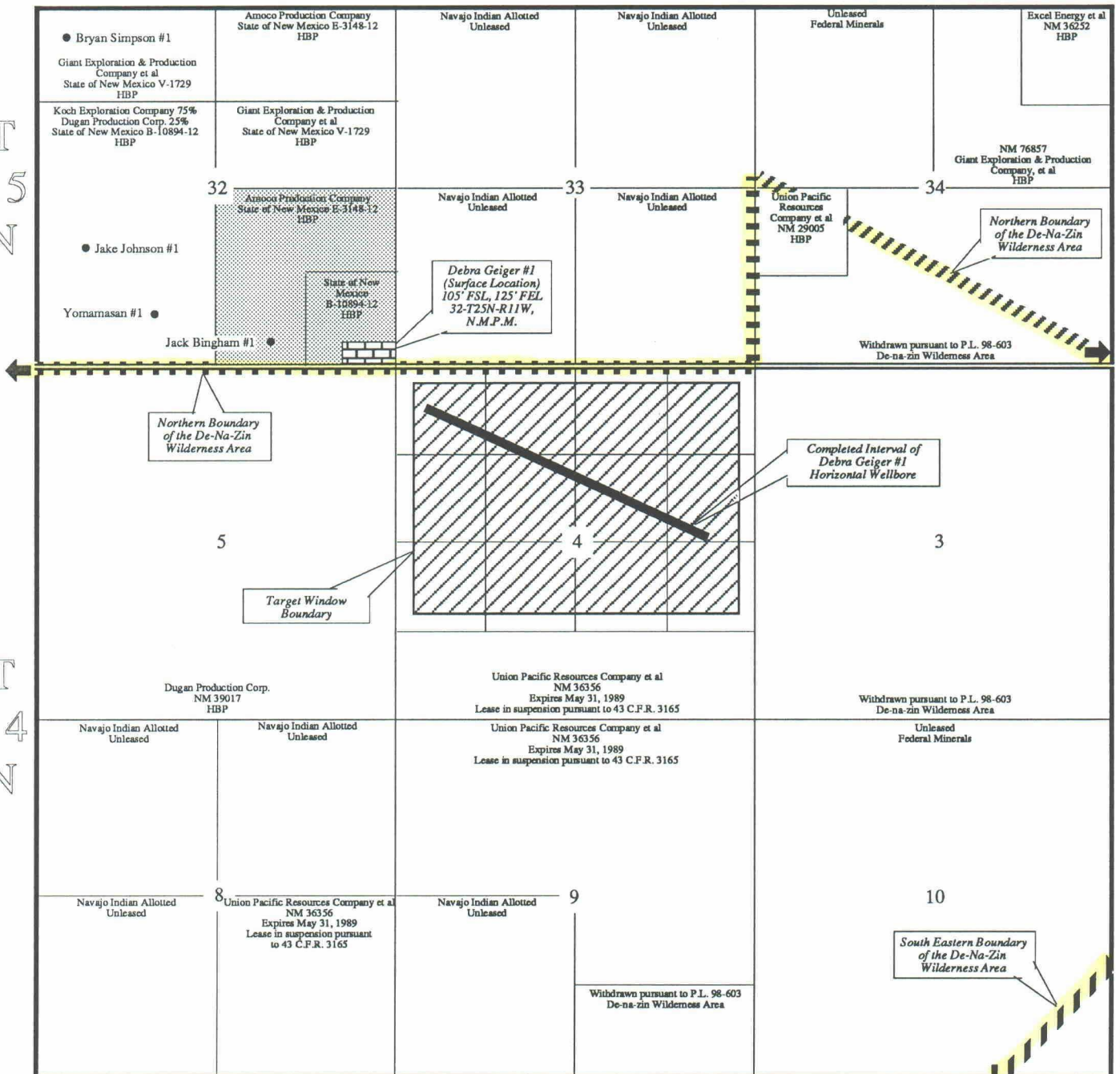
BLM-NM-PT-89-024-4332

Exhibits 1 through 7
Complete Set

R11W

T
25
N

T
24
N



(Plat Not Drawn To Scale)

Indicates Navajo Tribal Trust Surface

Indicates Oil Well Location ●

Land Plat
Debra Geiger Well No. 1
105' FSL, 125' FEL (Surface Location)
32-T25N-R11W, N.M.P.M.
San Juan County, New Mexico

GIANT
EXPLORATION & PRODUCTION COMPANY
Post Office Box 2810 Farmington, New Mexico ~ 87499-2810
505-326-3325

Exhibit " 2 "

Application for Horizontal Directional Drilling Pilot Project
and a Non-Standard Oil Proration Unit
Case No. 10110 - October 4, 1990
Debra Geiger Well No. 1
105' FSL, 125' FEL (Surface Location),
32-T25N-R11W, N.M.P.M.
San Juan County, New Mexico

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