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# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
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Ely, Nevada 89301-9408



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**MAY 28 1992**

*received June 2, 1992*

Commission for the Preservation of  
Wild Horses  
Stewart Facility  
Capitol Complex  
Carson City, NV 89710

Dear Participant:

We appreciate your interest in being involved in the allotment evaluation consultation process and enclosed for your information and review are the allotment monitoring evaluation(s), listed below. This is your opportunity again to provide allotment specific information and also provide comments to the evaluation which will be incorporated into Section VII, Management Action Selection Report. We would appreciate receiving your information and/or comments by June 19, 1992, to allow adequate time to review all input and to adhere to our deadlines. All of the information received will be evaluated and considered in the final portion of the evaluation which is the selection of a management action.

We appreciate your participation and solicit your continued involvement in the consultation process.

Sincerely,

Gene L. Drais, Manager  
Egan Resource Area

4 Enclosures

- 1. Badger Springs, JAKES WASH
- 2. Wells Station, WHITE RIVER HMA
- 3. North Steptoe, ANTELOPE, HMA
- 4. South Butte

## SOUTH BUTTE ALLOTMENT (0504) EVALUATION SUMMARY

### I. INTRODUCTION

The South Butte Allotment (0504) is comprised of 27,021 total acres (26,081 acres public and 940 acres private). The preference is 508 AUMs of cattle use with no AUMs in suspension. Season of use is yearlong but use has been made primarily between April 16 to November 30. The allotment is categorized as an "M" or maintain selective management category allotment. The current permittee is Warren Robison.

### II. INITIAL STOCKING LEVEL

#### a. Livestock Use

The preference for the allotment is 508 AUMs of cattle use with a season-of-use primarily from spring through early winter (4/16 to 11/30). The three year average use listed in the Egan Resource Management Plan (RMP) and Rangeland Program Summary (RPS) is 358 AUMs per year of cattle use (calculated for 1979-81).

#### b. WILD HORSE USE

The South Butte Allotment is located in the south end of the Butte Herd Management Area (HMA). Of the total wild horse use for the herd area, the RPS objective for this allotment is to provide yearlong forage for 4 horses or 43 AUMs. Existing wild horse use is estimated at 90 AUMs or 10 horses for nine months.

Wild horse use areas within the allotment are seasonally defined with fall, winter, and spring use occurring on the benchlands on the east and west sides of Butte Valley as well as on the winterfat flats in the northern part of the allotment. No summer use is made by wild horses on the allotment as they move to higher elevations in the Egan Range.

#### Determination of Wild Horse Actual Use

Wild horse census was flown in the Butte HMA on the following dates: June 1987, March 1989, March 1990, July 1991 and March 1992. Table I gives the actual number of wild horses counted in the South Butte Allotment during aerial census of the Butte HMA.

Table I. Aerial Census of Wild Horses in South Butte Allotment

<u>Dates</u>	6/87	3/89	3/90	7/91	3/92
<u>Census</u>	0	1	22	0	10

Since wild horses make no summer use of the allotment, the number of horses on the allotment at the time of census multiplied by 9 months/year equals the amount AUMs used per year. Table II gives the total AUM figures for each census and serves as the best information available to determine actual use.

Table II. Wild Horse AUMs In South Butte Allotment

<u>Dates</u>	6/87	3/89	3/90	7/91	3/92
<u>AUMs</u>	0	9	198	0	90

c. WILDLIFE USE

The RPS objective for this allotment is to provide forage and habitat for reasonable numbers of wildlife, i.e. 30 AUMs for deer and 20 AUMs for antelope. Existing wildlife use listed in the RPS is 20 AUMs for deer. South Butte Valley, in which the South Butte Allotment is located, was originally identified by the Nevada Department of Wildlife (NDOW) as a pronghorn antelope reintroduction area. However, since publication of the RPS, antelope have pioneered into Butte Valley making an antelope augmentation possible. In December 1991, 69 antelope were augmented in the southern end of Butte Valley. No antelope have been specifically sighted on the South Butte Allotment. Current actual wildlife numbers for the allotment were requested from NDOW in November 1991. NDOW was not able to provide numbers of animals by allotment. They did, however, provide numbers of animals by management area. This information was used by the Egan Resource Area Wildlife Biologist to make estimates of current wildlife numbers for the allotment. These estimates are: 80 mule deer from 5/1 to 10/31 and 160 mule deer from 11/1 to 4/30 (288 AUMs total).

There are four documented sage grouse leks on the allotment. Two leks are "satellite" leks to the Red Pepper Butte lek. In some years all leks will be occupied by strutting males while in other years only two leks are occupied.

There are two documented ferruginous hawk nest sites on the allotment. Neither nest site has been occupied in the recent past.

d. RIPARIAN

The 1982 Water Resource Inventory indicated that the South Butte Allotment had 5 water resource sites. These include 4 springs and 1 reservoir. In addition to these water sources, one additional spring has been located on the South Butte Allotment. Appendix I gives the legal locations of these riparian sites.

III. ALLOTMENT PROFILE

A. Description

The South Butte Allotment is located approximately 17 air miles northwest of Ely in the south end of Butte Valley. The allotment encompasses 27,021 acres of which 26,081 acres are public (BLM) and 940 acres are private. Elevation ranges from approximately 5800 feet in Butte Valley to over 8100 feet in the Egan Range. The allotment is bounded on the south, east and west by the Thirty Mile Spring Allotment (0503) and on the north by the Medicine Butte (0501) and Thirty Mile Spring Allotments. An allotment boundary fence is scheduled for construction in the summer of 1992 on the north and east sides of the allotment. Topographic barriers control livestock drift on the south and west sides. Bert Paris trails sheep through the South Butte Allotment in the spring and fall between the Jakes Unit Trail to the south and the Medicine Butte Allotment to the north. Gracian Uhalde also trails sheep across the allotment when making use in the Combs Creek area on the east side of Butte Valley. Two crested wheatgrass seedings lie within the South Butte Allotment. Both are fenced and are approximately 1000 acres each. The east seeding (Butte Seeding) is used by Gracian Uhalde while the west seeding (South Butte Seeding) is used by Warren Robison. Both are licensed as separate allotments and were evaluated in 1991.

B. Temperatures

Temperatures vary considerably in the area with extremes of 100 degrees in the summer to -30 degrees in the winter with wind chill making it even colder. Average temperatures in the summer are 68 degrees Fahrenheit and 24 degrees Fahrenheit in the winter. Temperatures may vary daily as much as 45 degrees.

C. Growing Season

The growing season is short with approximately 100 frost-free days annually. In the valley and on the adjacent benches, spring growth normally begins in mid-March and continues through late May/early June. In the mountains, at higher elevations, growth is on the average of 30-45 days later. Heavy snowfall may occur starting in October ending the grazing season until spring.

D. Allotment Specific Objectives

1. Land Use Plan Objectives

a. Rangeland Management- "All vegetation will be managed for those successional stages which would best meet the objective of this proposed plan." (Egan Resource Area Record of Decision (ROD), p.3).

b. Wild Horse and Burros- "Wild horses will be managed at a total of 60 animals in the Butte Herd Use Area." (Egan ROD, p.6). Actual wild horse numbers will be determined by this evaluation in conjunction with monitoring data to maintain a thriving natural ecological balance and prevent deterioration of the rangeland. (Note: The 60 animals identified above, as well as the 43 AUM's identified in the RPS is no longer a valid AML. The Interior Board of Land Appeals June 7, 1989 decision (IBLA 88-591, 88-638, 88-648, 88-679) ruled in part, "an AML established purely for administrative reasons because it was the level of wild horse use at a particular point in time cannot be justified under the statute" (Dahl vs. Clark, Supra at 595). The IBLA further ruled that the AML must be established through monitoring "in terms of the optimum number which results in a thriving natural ecological balance and avoids a deterioration of the range.")

c. Wildlife- "Habitat will be managed for "reasonable numbers" of wildlife species as determined by the Nevada Department of Wildlife." (Egan ROD, p.6).

- "Reintroductions of big game species will be accomplished in cooperation with the Nevada Department of Wildlife, where such reintroductions would not conflict with existing uses and if sufficient forage is available." (Egan ROD, p.6).

- "Forage will be provided for "reasonable numbers" of big game as determined by the Nevada Department of Wildlife." (Egan ROD, p. 8).

d. Riparian- "Where management objectives are not being obtained through application of management practices, fencing will be considered." (Egan ROD, p.13).

e. Watershed- "Establish utilization limits to maintain watershed cover, plant vigor and soil fertility in consideration of plant phenology, physiology, terrain, water availability, wildlife needs, grazing system and aesthetic values." (Egan ROD, p.44).

## 2. Rangeland Program Summary Objectives

### Range

a. "Provide forage for up to 358 AUMs of livestock use. Maintain or enhance native vegetation with utilization not to exceed Nevada Rangeland Monitoring Handbook levels on key species. Maintain or improve current ecological condition of native range." Maximum utilization on native key species is 50%.

### Wild Horses

b. "Initially manage rangeland habitat to support Appropriate Management Level (AML) of 4 horses in the South Butte Allotment as part of the Butte HMA. Provide forage for up to 43 AUMs of wild horse use." Actual wild horse numbers will be determined by this evaluation in conjunction with monitoring data to maintain a thriving natural ecological balance and prevent deterioration of the rangeland. (See note on previous page - III.D.1.b.)

### Wildlife/Riparian

c. "Manage rangeland habitat and forage condition to support reasonable numbers of wildlife as follows: mule deer 30 AUMs, antelope 20 AUMs." Utilization of key species will not exceed the levels listed in 2 a. above.

d. "Maintain or improve mule deer yearlong habitat in a good or better condition." This is also accomplished by limiting utilization to the levels listed in 2 a. above.

e. "Protect Ferruginous hawk nest sites." Utilization on white sage flats within two miles of ferruginous hawk nest sites will not exceed 55%."

f. "Protect sage grouse breeding complexes." This is accomplished by maintaining the big sagebrush sites within two miles of active strutting grounds in mid to late seral stage with a minimum of 30% shrub composition by weight.

## 3. Key Species Identification

The key forage species on the South Butte Allotment for cattle and wild horses are winterfat (Ceratoides lanata) and native perennial grasses. However, all users will utilize perennial grasses during spring greenup. Indian ricegrass (Oryzopsis hymenoides) and needle-and-thread grass (Stipa comata) are the most preferred with Sandberg bluegrass (Poa secunda) and bottlebrush squirreltail (Sitanion hystrix) as important secondary species.

Forbs are critical to the diet of wildlife and provide important late spring/early summer forage but no species is present in sufficient quantity to be considered key.

The primary key species for mule deer is bitterbrush (Purshia tridentata) with snowberry (Symphoricarpos spp.) and serviceberry (Amelanchier utahensis) being secondary. In areas where preferred species are limited, mule deer utilize mountain big sage (Artemisia tridentata vaseyana).

The hills are dominated by singleleaf pinyon pine (Pinus monophylla) and Utah juniper (Juniperus utahensis).

#### IV. MANAGEMENT EVALUATION

##### A. Purpose

The purpose of this evaluation is to assess whether current livestock management practices are meeting the multiple use objectives for the allotment and to determine the appropriate stocking level and management system for domestic livestock and appropriate management level for wild horses.

##### B. Summary of Studies Data

Monitoring studies were conducted on the allotment in 1990 and 1991. The following tables summarize precipitation data, use pattern mapping, actual use, estimated carrying capacity and recalculated livestock preference and wild horse AUMs.

##### 1. Precipitation

Data from the National Oceanic and Atmospheric Administration weather station located at Ely is being used for this evaluation due to its proximity to the South Butte Allotment. The normal crop year precipitation for Ely for the period 1951-1980 was 7.75". Crop yield is the effective precipitation for plant growth. It is the "crop year" precipitation that is measured to compute yield indices. The crop year precipitation is measured from September of the previous year through June of the growth year in the Intermountain Big Sagebrush Region (Sneva et. al. 1983). Table II illustrates the yield index for Ely in 1990 and 1991.

Table II. - Yield Index For Ely

Year	Crop Yield	Precipitation Index	Yield Index
1990	7.12	92%	90%
1991	7.75	100%	100%

Annual precipitation varies from 7-12 inches. The general precipitation pattern is one of limited moisture, yet moisture is normally available during the growing season. There is a slight increase in precipitation with a rise in elevation. Much of the total precipitation occurs during the winter months in the form of snow.

2. Use Pattern Mapping Summary - acres and percent of the allotment by use category.

<u>Year</u>	<u>Slight</u> (1-20%)	<u>Light</u> (21-40%)	<u>Moderate</u> (41-60%)	<u>Heavy</u> (61-80%)	<u>Severe</u> (81-100%)
1990	2792 (20%)	4517 (32%)	2359 (17%)	1629 (11%)	2884 (20%)
1991	2877 (20%)	3485 (25%)	6099 (43%)	1720 (12%)	0 ---

(Note: The low forage big sagebrush/greasewood areas located north of the seedings in the center of the allotment were excluded from the calculations above since little or no use is made in this area due to a lack of forage. This area comprises approximately 11,900 acres or 46% of the South Butte Allotment. It is recognized that on occasion a few cows may use this area for a short time.)

3. Estimated Actual Use Summary (AUMs)

<u>Year</u>	<u>Cattle</u>	<u>Wild Horses</u>	<u>Deer</u>
1990	572	198	288
1991	383	90	288



4. Livestock and Wild Horse Estimated Carrying Capacity

<u>Year</u>	<u>Actual* Use(AUMs)</u>	<u>Measured Util.(%)**</u>	<u>Yield Index</u>	<u>Adjusted Util.(%)</u>	<u>Desired Use(%)</u>	<u>Desired AUMs***</u>
1990	770	86%	.90	77%	50%	500
1991	473	80%	1.00	80%	50%	296

\*Actual use figures do not include deer since the key vegetative species used to measure utilization and calculate carrying capacity are not a major component of the dietary intake of deer.

\*\*The 86% and 80% measured utilization were the highest use recorded on a transect in a key area within the allotment using the Key Forage Plant Utilization Method for grazing years 1990 and 1991 respectively. Key species used to measure utilization were winterfat, indian ricegrass and needle-and-thread grass.

\*\*\*The "Desired AUMs" are calculated using the following formula:

$$\frac{\text{Actual Use (AUMs)}}{\text{Adjusted Util.(\%)}} = \frac{\text{Desired Use (AUMs)}}{\text{Desired Use (\%)}}$$

5. Recalculated Livestock Preference and Wild Horse AUMs

Supply: Desired Aums (2 Year Average).....398 Aums

Demand: Adjudicated Preference .....508 Aums  
 Wild Horses (last count: 3/92).....90 Aums  
 Total.....598 Aums

Deficit: .....200 Aums

Reduction: .....33%

New Livestock Preference: .....340 Aums

Wild Horse AML: .....60 Aums

C. Riparian Data Summary

1) Springs

- a) The following spring sources are non-existent at the legal location specified. (Also, legal locations outside of allotment boundary.)

T19N, R61E, S20 SESW  
 T19N, R61E, S30 SESE

- b) The following spring sites are in good or better condition with utilization levels not exceeding 55% on perennial grasses and grass-like species and 45% on shrubs along riparian areas and mesic meadows.

T19N, R61E, S36 NESE (Unnamed Spring)  
T19N, R62E, S31 NESE (Westside Spring)

- c) The following spring site is in fair condition with utilization levels exceeding 55% on perennial grasses and grass-like species and 45% on shrubs along riparian areas and mesic meadows.

T19N, R62E, S17 SENE (Willow Spring)

## V. CONCLUSIONS

### A. LAND USE PLAN OBJECTIVES

III.,D.,1.,(a) - Not Met

Rationale: Short term utilization is not within the allowable use levels on portions of the allotment, pointing towards a divergence from desirable ecological condition.

III.,D.,1.,(b) - Not Met

Rationale: Proper utilization levels on key species are being exceeded and the level of use is jeopardizing the thriving natural ecological balance of the vegetation and contributing to the deterioration of the range.

III.,D.,1.,(c) - Met

Rationale: Allowable use levels are not being exceeded in areas used by mule deer.

III.,D.,1.,(d) - Not Met

Rationale: Utilization levels are exceeding 55% on perennial grasses and grass-like species and 45% on shrubs along the Willow Spring riparian area.

III.,D.,1.,(e) - Not Met

Rationale: Allowable use levels on livestock and wild horse key species have been exceeded on portions of the allotment.

### B. RANGELAND PROGRAM SUMMARY OBJECTIVES

III.,D.,2.,(a) - Not Met

Rationale: Proper utilization levels on livestock and wild horse key species have been exceeded on portions of the allotment.

III.,D.,2.,(b) - Not Met

Rationale: Monitoring studies indicate that current wild horse numbers exceed the desired AML preventing the maintenance of a thriving natural ecological balance of the rangeland and contributing to further deterioration of the range resource.

III.,D.,2.,(c) - Met

Rationale: Deer and antelope habitat is in the appropriate condition and providing for at least "reasonable numbers" of deer and antelope.

III.,D.,2.,(d) - Met

Rationale: Allowable use levels are not being exceeded in areas used by mule deer and antelope.

III.,D.,2.,(e) - Not Met

Rationale: Utilization on winterfat within two miles of ferruginous hawk nest sites exceed proper use of 55%.

III.,D.,2.,(f) - Met

Rationale: Big sagebrush sites within two miles of active strutting grounds are in mid to late seral stage with a minimum of 30% shrub composition by weight.

## VI. Technical Recommendations

### A. Problem

The major resource problem on the South Butte Allotment is the over-utilization of winterfat, indian ricegrass and needle-and-thread grass by livestock and wild horses. The cause can be attributed to excessive numbers and poor distribution. This has led to a decrease in carrying capacity and a deterioration of the range resource.

### B. Solution

#### 1. Short Term

1) Reduce adjudicated preference for livestock from 508 AUMs to 340 AUMs as indicated by monitoring studies.

2) Establish wild horse AML at 60 AUMs as indicated by monitoring studies. (7 horses for 9 months).

3) Propose fencing Willow Spring riparian site and piping water to trough outside of fence.

4) Establish season of use from 4/15 to 2/28. The total

number of AUMs that can be licensed from 4/15 to 6/15 would be 10% of active preference to prevent overutilization of key forage species during the critical growth period.

Additional Monitoring Data Required

Continue to conduct key forage plant utilization on key areas every 2-3 years to ensure correct stocking rates and utilization by livestock, wildlife and wild horses.

Continue to monitor livestock, wildlife and wild horse actual use.

Map ecological status for the allotment based on the completed third order soil survey and range site information.

Establish frequency trend study(s) on the native range as funding and manpower allows.

Appendix I.-1982 Water Resource Inventory on South Butte

Site	Location			
UNNAMED SPRING	T19N	R61E	S20	SESW (outside allotment)
UNNAMED SPRING	T19N	R61E	S30	SESE (outside allotment)
UNNAMED SPRING	T19N	R61E	S36	NESE
WESTSIDE SPRING	T19N	R62E	S31	NESE
WILLOW SPRING	T19N	R62E	S17	SENE
UNNAMED RESERVOIR	T19N	R61E	S21	SENE

SPRING

R61E  
R62E

T.20 N.

04-01

Unit

Planning

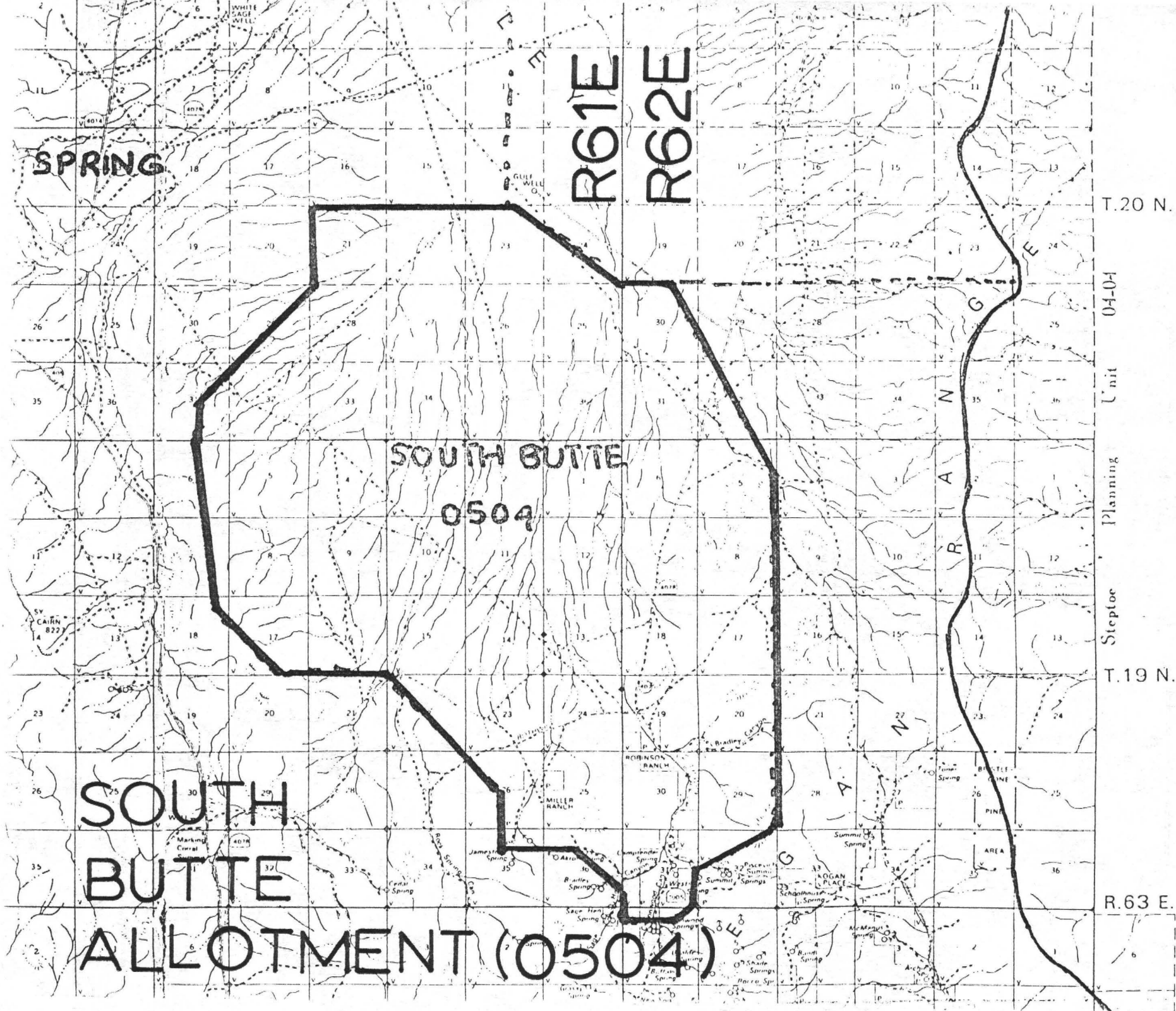
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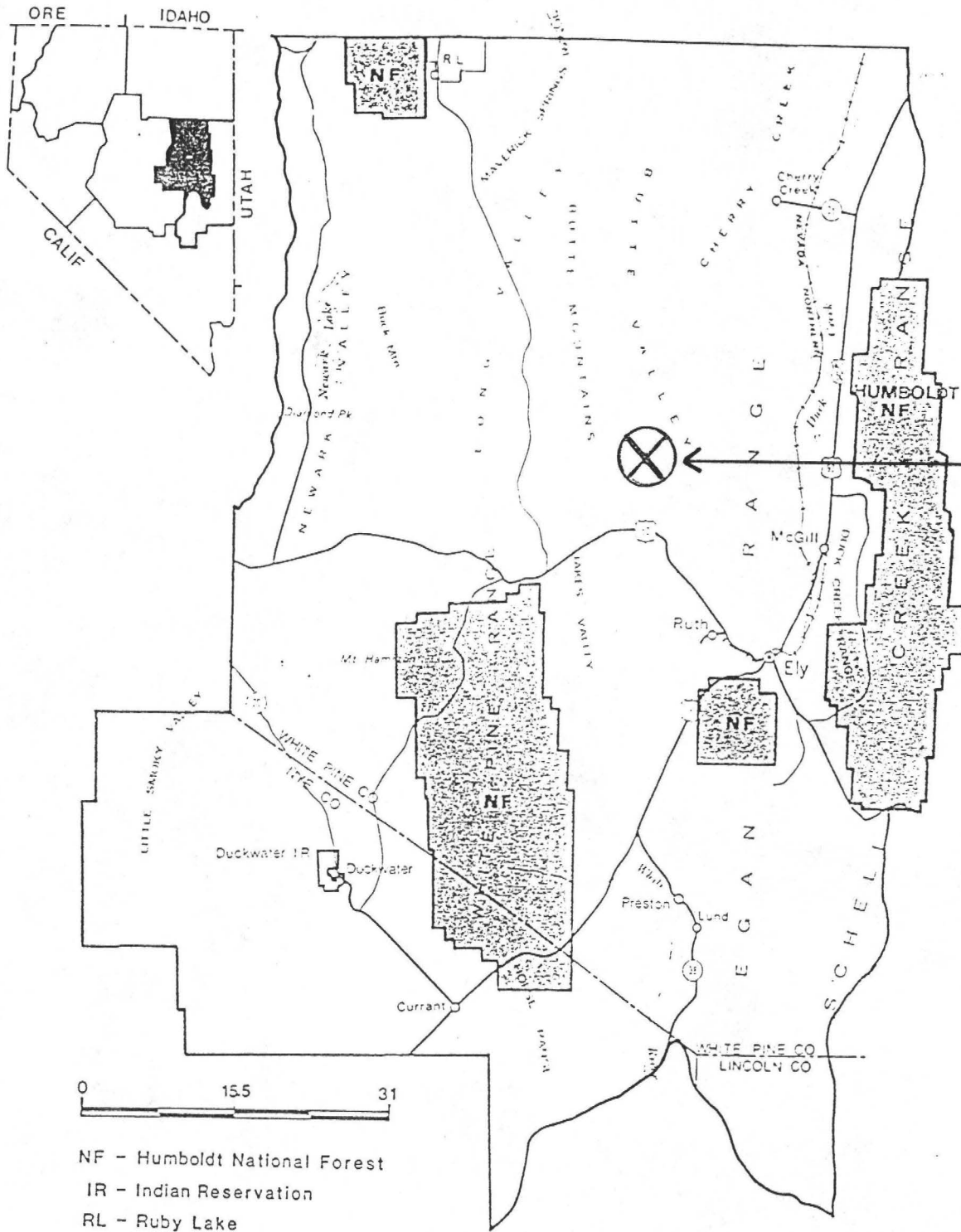
T.19 N.

SOUTH BUTTE  
0504

SOUTH  
BUTTE  
ALLOTMENT (0504)

R.63 E.





EGAN RESOURCE AREA  
 LOCATION MAP