ENVIRONMENTAL ASSESSMENT
BARSTOW-TO-LAS VEGAS MOTORCYCLE RACE
CA-060-EA0-01

I INTRODUCTION

Background

The San Gabriel Motorcycle Club began the Barstow-to-Vegas race on Thanksgiving weekend in 1967 with about 500 entrants. Over the next several years, the event became the largest, most prestigious off-highway motorcycle event in the world, culminating in the early 1970's with over 3,000 entrants. With so many entrants, along with support crews and up to 7,000 spectators, the race had grown to the point where no controls, no matter how effectively implemented, could keep environmental impacts within acceptable limits. The 1974 Environmental Impact Statement, which addressed cumulative impacts from previous races, and the subsequent 1975 Evaluation Report for the 1974 event clearly documented the negative impacts created by this race as it was then being conducted and led to a BLM decision to deny permits for races between 1975 and 1982.

On Thanksgiving weekends during that period, several hundred riders who disagreed with the BLM's decision conducted a protest or resistance ride along the race course. The resistance rides started in 1975 with a few hundred riders and grew to a high of 2,000 participants in 1980 and 1981. The American Motorcyclist Association's (AMA) District 37 attempted to provide other opportunities for a large-scale desert race with the Beatty-to-Vegas and Johnson Valley-to-Parker races, but the low number of participants in these events made it apparent that there was little popular support for anything but the return of the Barstow-to-Vegas.

In 1982, the BLM and AMA worked jointly to reconsider a permitted Barstow-to-Vegas race with sufficient controls and limitations to avoid the problems that had plagued the event in the past. This cooperative effort led to a 1982 California Desert Conservation Area (CDCA) Plan Amendment establishing a Barstow-to-Vegas race course and use guidelines. The number of entrants was limited to 1,200, pitting was strictly controlled, and spectators were allowed only at specific areas along the course.

The intent of the 1982 plan amendment was to designate a motorcycle course running from Alvord Road near Barstow to Stateline, Nevada with definite guidelines for its use. A course was developed that avoided as many environmentally sensitive areas as possible. Regarding future course changes, the amendment stated, "Any permitted race will be monitored for compliance with permit stipulations. Some course/pit changes may be recommended to reduce environmental impact, provide a safer course, reduce private land use, or reduce user conflict...." The 1982 plan amendment also specified that each future event would be evaluated in an environmental assessment (EA) and be based on the results of compliance and monitoring of the preceding years' events. Races following the guidelines established in the 1982 plan amendment and in subsequent EAs were held from 1983 through 1989. In summary, a total of 8 events were held prior to 1975 and 7 events since 1983.

Description of the Race

The Barstow-to-Vegas race was established as a long distance, point-to-point contest often referred to as a hare and hound race. Traditionally, the Barstow-to-Vegas race has used a "mass" start. Beginning in 1967, the Barstow-to-Vegas was one single start line. In the early 1970s, this changed to all Experts and Amateurs in one line, all Novices and 100cc bikes in the second line. The 1982 plan amendment specified that there be no more than 400 riders per line. On the average there were 200 Experts, 250 Intermediates, 500 Novices, 150 Beginners, and 100 Quadcycles. Participants lined up shoulder-to-shoulder and each line of riders aimed for the "bomb", a flashing strobe light, 2.5 miles away. By the time the racers reached the

bomb, the faster riders moved to the front and the wave narrowed to a nearly single file line of riders. In 1989, the start waves were limited to 250 riders. The first racer to reach the finish area near State Line, Nevada was declared the overall winner. Trophies have been awarded for the first rider in each class of ability, age, and displacement of motorcycle. No cash prizes or industry donated prizes have been awarded.

Since 1982, entry has been limited to 1,200 motorcycles/ATVs. The 1989 course was approximately 148 miles in length, of which 130 miles were in California and 18 miles were in Nevada. Three pitting areas provided services for the racers, with some designated as spectator viewing areas. The heaviest use has occurred at the starting area and the finishing area.

History of Course Routes

For each approved race, monitoring of the event (and its effects on the environment) has been followed by an overall race evaluation. Based on these evaluations, adjustments and stipulations were added to further mitigate impacts. Between 1984 and 1989, various course changes have beeen made to reduce impacts to sensitive resources.

California - Map A illustrates course routes in California which have been utilized in the past events in relation to the original route designated in the 1982 plan amendment. The 1983 event was the first permitted under the 1982 plan amendment. The following outlines the history of California routes:

1984 course. Changes in the 1984 course moved the race out of the Soda Mountains Wilderness Study Area (WSA) 242 and off private property. Though the 1983 event had not caused impacts to the WSA, it was determined to be a sensitive resource to be avoided. The private property problem came as a discovery of a 700 foot error in the Cave Mountain 15' Quad. The reroute was requested by the owner of the property.

1985/1986 course. The 1985 and 1986 events utilized the same course as 1984.

1987 course. The 1987 change came as a result of visual impacts that could be seen from I-15 at Rasor Road. Moreover, this change took this portion of the course from Class M (moderate use) into the Rasor OHV Open Area (intensive use). This reroute was at the request of District 37.

1988 course. The 1988 change removed the course (except a short segment near the Clark Mountains) out of the East Mojave National Scenic Area (EMNSA). There was considerable public pressure to remove this route from the EMNSA.

1989 course. The 1989 change was to relocate the first 25 miles of the course inside of the National Training Center at Fort Irwin. This was to reduce potential impacts on the then "emergency listed endangered" desert tortoise. This reroute was requested by U.S. Fish and Wildlife Service. There was also a section of road that was changed just after Pit 2. This road was very fast, fairly dangerous and was under constant use by a mining operation. The new portion was an existing road. This reroute was requested by District 37.

Nevada - The 1982 plan amendment indicated that the course in Nevada would vary from year to year. Nevada BLM at that time had been reviewing public lands for vehicle access designation. Any course changes were to conform with those designations. The following outlines the history of Nevada routes:

1984 course. The course was approximately 55 miles in length routed through the Jean/Roach Lake area and in the Goodsprings Valley. The course was entirely on existing motorcycle and buggy routes.

1985 course. The Hidden Valley portion of the course was relocated to the western edge of the valley to reduce impacts to grazing operations. The course was located on existing motorcycle and buggy routes and the finish was located at previous High Desert Racing Association start/finish areas.

1986 course. Approximately 47 miles were run on the previous Barstow-to-Vegas course and existing motorcycle courses. Several resource conflicts were identified including grazing and WSA concerns. BLM allowed this particular course for this year only; putting the promoter on notice to propose a different course in 1987. The finish was relocated to a state borrow pit near Sloan.

1987 course. The course was approved after relocation away from the Sheep Mountain Tortoise Habitat Area. The course was routed to avoid range improvements.

1988 course. The course was located on the west side of I-15 for approximately 20 miles then crossed under the highway and headed south to finish at Kactus Kates. In addition, the course was not allowed to cross under the Union Pacific railroad grade because of liability.

1989 course. The original proposal was the same as that proposed for 1988. However, due to the emergency listing of the desert tortoise and because the course (on the west side of I-15) was located in desert tortoise habitat, the course was reduced to a total of 13 miles and ended at Kactus Kates.

Purpose and Need

In December 1989, following the 1989 Barstow-to-Vegas race, the BLM announced its intention to deny future applications for a Barstow-to-Vegas race and to amend the CDCA Plan to remove the course from the land use plan. The Sports Committee for District 37 of the AMA subsequently applied for a special recreation use permit (SRUP) to conduct a hare and hound motorcycle/ATV race (1,200 participants) on November 24, 1990, the Saturday following Thanksgiving. On February 21, 1990, the BLM formally issued a document that reiterated the policy decision to deny all future applications and outlined the basis for its decision. In summary, the denial of the event was based on the following major points:

- The course had been changed several times over the past six years creating cumulative effects that exceeded acceptable levels as described in the CDCA Plan, Plan amendments, and subsequent environmental documents.

- The sponsor had not been able to adequately demonstrate that they could comply with the required event stipulations.

- Approximately 57 percent of the course lay within Category I, II, III tortoise habitat (see Appendix IV), which requires compliance with the Desert Tortoise Rangewide Plan and the restrictions associated with the emergency listing of the desert tortoise as an endangered species.

- There were no known reasonable alternatives outside designated off-highway vehicle open areas which would avoid sensitive resources and begin in Barstow and end in Las Vegas.

- BLM could not afford to commit scarce resources to an event which served a relatively small number of people over a very small period of time.

- The event had eroded public confidence in the BLM's ability to protect the desert.

The BLM denied District 37's request for a 1990 permit on March 6, 1990. District 37 filed a lawsuit on April 6, 1990, asking for a preliminary injunction against BLM's refusal to permit the race. On May 23, 1990, Judge J. Spencer Letts of the California Central District, U.S. Federal Court, granted District 37's motion for a preliminary injunction and ordered the BLM to "reconsider the Plaintiffs' application." The Judge further ordered that the reconsideration "proceed from the assumption that a permit can and will be issued subject to limitations which will preserve the basic balance of competing interests which is reflected by Plan Amendment No. 6." The Judge also stated that this order "not be deemed to limit or affect in any way the defendants' right to deny the permit in accordance with the law otherwise applicable, after such procedures have been followed."

A meeting involving the BLM and AMA representatives among others was held on June 1, 1990, in the Assistant U.S. Attorney's Office to discuss what had to be done to comply with the court order. At this meeting, District 37 submitted course revisions to their application for the proposed Barstow-to-Vegas race to be held during the Thanksgiving weekend of 1990. It was agreed that an EA had to be prepared in accordance with the 1982 Plan Amendment #6. The EIS for the 1982 CDCA Plan Amendment establishing the Barstow-to-Vegas race course fulfilled the NEPA requirements for the first (1983) event. The decision guidelines of that document stated "For each future event, an Environmental Assessment (EA) will be prepared. The EA will be based on the results of compliance and monitoring of proceeding events. The type of event will be described, the course mapped, and any modification to the course or guidelines in the EIS will be analyzed. Each EA and permit will include a complete list of stipulations....These stipulations may be altered or added to, based on data gathered from monitoring or from new information."

This EA for the proposed 1990 Barstow-to-Vegas was prepared in accordance with the requirements of the court and analyzes the proposed action of AMA's 1990 SRUP application. The EA includes an analysis of any modification to the course not previously evaluated in an environmental document, the results of compliance and monitoring reports prepared on past Barstow-to-Vegas events, and the potential impacts to the desert tortoise, which was federally listed as a threatened species on April 2, 1990 (55 Federal Register 12178-12191).

Relationship to Statutes, Regulations or Other Plans

A "may effect" determination regarding the desert tortoise requires formal consultation with the US Fish and Wildlife Service under Section 7 of the Endangered Species Act.

The race sponsor is required to obtain permits, file fees or provide notification as follows:

a. Letters of permission from private land owners in California and Nevada.

b. Encroachment permits from appropriate state/county agencies (as required) and approvals for crossing other Federal lands (i.e., small area in Ft. Irwin).

c. Letters of notification to all right-of-way holders, grazing permittees, and mining claimants, who are affected by the race.

Key Issues

Desert Tortoise - On April 2, 1990, the desert tortoise (Gopherus agassizi) was Federally listed as a threatened species. The listing of the tortoise, which resulted from documented dramatic declines in tortoise populations, has changed the basis of decisions and actions in the desert. All proposals must comply under a new set of criteria, specifically the Federal Endangered Species Act. A major issue to be considered in this EA is the potential impact of this race on the desert tortoise and its habitat.

Cumulative Impacts - The intent of establishing the Barstow-to-Vegas course in the 1982 plan amendment was to designate a motorcycle course running from Alvord Road near Barstow to Stateline, Nevada, with definite guidelines for its use. A course was developed that avoided as many environmentally sensitive areas as possible. Relocations have occurred almost annually as sensitive resources have been identified. Approximately 50 percent of the original route designated in 1982 remains a part of the 1990 proposed action. The past relocations of the race course have resulted in increasing amounts of land being affected by the event. With more restrictive requirements likely for all activities in desert tortoise habitat, additional course changes may be required for future events. The potential for cumulative impacts on the environment is a major issue addressed in this EA.

Social and Economic Considerations - Expenditures by participants and spectators involved with the Barstow-to-Vegas race have contributed to the local economies of several communities along the race course, including Barstow and Baker in California and Stateline in Nevada. Concerns have been expressed by members of these communities regarding the economic impacts of eliminating this event. Furthermore, this race has been a major fund raiser for the AMA's District 37 which uses most of the proceeds to fund umbrella insurance policies that allow small, affiliated clubs to run other races. The AMA considers this race to be important to the well being of its members and related organizations. There is national as well as international participation and interest in this race. The effect of this race on local economies and on the well being of the motorcycle community is a major issue addressed in this EA.

Manageability - The history of the Barstow-to-Vegas event has demonstrated an inability to comply with permit stipulations. Noncompliance with permit requirements has been documented in post-race monitoring reports. The majority of the problems have been associated with course straying and widening, incursions into WSAs, and illegal cross-country travel by spectators and support personnel. Due to the potential effect on a listed species, the desert tortoise, new stipulations were required in 1989 to protect the tortoise and its habitat. A substantial effort by District 37 and BLM was made to devise and design a 1989 Barstow-to-Vegas in view of the tenuous nature of the tortoise. There were, however, numerous problems associated with the new stipulations, i.e., unrealistic timeframes, effectiveness, and enforceability. Post event monitoring of the 1989 race indicated a significant amount of noncompliance relating to stipulations designed to protect tortoise including course width restrictions, spectator control, flagging of the course, and disqualification procedures. The ability of the proponent as well as the BLM to effectively manage this race is a major concern which is considered in this EA.

Wilderness Study Areas - In accordance with the Wilderness Interim Management Policy (IMP) all temporary impacts in a California WSA were to be reclaimed by June 30, 1989. This was the date that the Secretary of the Department of the Interior was scheduled to submit his recommendations on wilderness designation in California to the President. Between the time the Secretary's recommendations are transmitted to the President and Congress acts, only temporary uses that create no new surface disturbance can be authorized. There are exceptions for grandfathered rights, which apply to grazing and mining, or valid existing rights, however, these exceptions do not apply to discretionary permits such as the Barstow-to-Vegas SRUP. Though the proposed race course does not go through any WSA, it does utilize routes which form the boundary of several WSAs. Monitoring reports of past events have shown that impacts to WSAs occurred in the form of straying and course widening. The potential effects on WSAs, in the context of the expected effectiveness of stipulations formulated to prevent impacts, is a major issue addressed in this EA.

OHV Opportunities - Approximately 100 competitive OHV events are held each year in the CDCA involving approximately 25,000 participants. Except for the four competitive vehicle corridors established in the CDCA Plan (Barstow-to-Vegas, Parker 400, Johnson Valley to Parker, and Stoddard Valley-to-Johnson Valley), these events take place in the OHV Open Areas. The recreational value of the Barstow-to-Vegas is a major issue addressed in this EA.

II PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The proposed 1990 course is approximately 170 miles in length, of which approximately 130 miles occur in California and approximately 40 miles in Nevada. The entire course is displayed on Map D and on Maps 1 through 14 in Appendix III. The race course does not cross any WSAs, but several course segments make use of roads that border WSAs. One section of the race course enters the EMNSA in the northern Clark Mountain area--this section makes use of existing gravel roads (Map C).

The course proposed by District 37 for the 1990 event is almost identical to the 1988 course (as utilized in California). It differs from the 1989 event as follows:

> The start would be off Alvord Road, north of I-15 near Barstow, as has been used for previous events except 1989 when the start and first 25 miles of the course were located on Fort Irwin.
>
> An approximately 4 mile reroute near Solomons Knob onto a route last utilized in the 1974 race.
>
> For 3 miles the course would be routed onto the powerline road near Red Pass Lake which parallels the 1988/1989 course.
>
> The proposed route in Nevada is similar to the route used in Nevada in 1984. The Nevada portion of the 1989 course was 13 miles in length. The proposed 1990 course is approximately 40 miles in length.

District 37 also proposed a set of stipulations as part of the proposed action (see Appendix I). These stipulations are similar to the 1989 event stipulations with the following major exceptions:

> Start waves would be restricted to 25 riders or less as opposed to 250. The race would be a timed race rather than a mass start. The racer to cross the finish with the fastest time would be determined overall winner.
>
> A 60 foot race corridor would be established only where there is evidence of desert tortoise. Continuous ribboning would be utilized to delineate the 60 foot corridor boundary. Where there was no evidence of tortoises, there would be a 100 foot corridor and centerline flagging would be used to mark the route (i.e., no boundary markings). In 1989 a 25 foot corridor was stipulated through all tortoise habitat.
>
> A reduction in the number of pit vehicles is proposed in order to reduce impacts to the pit areas. Pitting crews would be consolidated with a maximum number of 250 pit vehicles allowed.

Monitoring of the event and its effects on the environment would continue and be followed by an overall race evaluation.

No Action Alternative

The no action alternative would deny issuance of a special recreation use permit for the 1990 Barstow-to-Vegas race. The environmental consequences of the no action alternative were analyzed in previous EAs including the 1982 Plan Amendment, and such analysis is incorporated by reference. Under this alternative, some Barstow-to-Vegas enthusiasts may attempt to utilize the course without a permit. The socio-economic impacts of the no action alternative as well as the impacts of likely unregulated or illegal protest races which may occur are addressed in this EA.

Alternatives Considered But Dropped From Further Analysis

The alternative of starting the race on Fort Irwin was considered. This starting point, though reasonable, was not proposed by District 37 for 1990. The analysis of this portion of the race was included in the November 3, 1989 EA. No further analysis of the Fort Irwin start alternative is presented in this document.

Since 1982, various routes have been proposed and/or utilized in the effort to avoid critical resources. Alternative routes previously considered have been determined to be unacceptable and, therefore, are not further analyzed in this EA.

III AFFECTED ENVIRONMENT

The affected environment along the Barstow-to-Vegas Competitive Event Corridor has been described in the 1974 and 1985 Environmental Impact Statements, the 1982 Plan Amendment, and most recently, in the Environmental Assessment for the 1989 event. The information contained in these documents is incorporated by reference and summarized below.

General Wildlife

Habitats crossed by the Barstow-to-Vegas course include creosote bush (Larrea tridentata) shrubland, blackbrush (Coleogyne ramosissima) shrubland, mixed desert shrubland, and desert wash. Wildlife species characteristic of these desert habitats include coyotes (Canis latrans), black-tailed jackrabbits (Lepus californicus), white-tailed antelope squirrels (Ammospermophilus leucurus), desert kit foxes (Vulpes macrotis arsipus), red-tailed hawks (Buteo jamaicensis), horned larks (Eremophila alpestris), zebra-tailed lizards (Callisaurius draconoides), and sidewinder rattlesnakes (Crotalus cerastes).

The course crosses approximately 7 miles of desert bighorn sheep (Ovis canadensis nelsoni) habitat in the Clark Mountain area. The desert bighorn sheep is a BLM sensitive species and is fully protected by the State of California. The Clark Mountain herd was estimated in 1988 to have 150 sheep. Bighorn regularly travel between different ranges, and some movement of bighorn sheep between the Clark Mountains, New York Mountains, and neighboring ranges in Nevada is likely.

In addition to the desert bighorn sheep, several wildlife species of special management concern are known to occur in this region. These species are the gilded northern flicker (Colaptes auratus chrysoides), Virginia's warbler (Vermivora virginiae), hepatic tanager (Piranga flava), gray vireo (Vireo vicinior), Bendire's thrasher (Toxostoma bendirei), California grey headed junco (Junco hyemalis caniceps), and the Kingston Mountain chipmunk (Tamias panamintinus acrus). The gilded northern flicker is listed by the State of California as endangered. It has been observed on top of Clark Mountain, several miles away from the course in different habitat, and should not be affected by Barstow-to-Vegas race activities. The Kingston Mountain chipmunk has a montane distribution and should be similarly unaffected by event activities. Remaining wildlife species listed above are more widely distributed in the eastern Mojave desert and do not have any legal status as sensitive species. No other wildlife species listed by the State or Federal government as threatened or endangered are known to occur in the area other than the desert tortoise which is discussed below.

The primary habitat type of the Nevada portion of the course is a creosote bush-white bursage assemblage similar to the California communities.

Desert Tortoise

The desert tortoise (Gopherus agassizi) was State listed as "threatened" in California on June 22, 1989 (California Code of Regulations, Section 670.5 (b) of Title 14), and Federally listed as "threatened" on April 2, 1990 (55 Federal Register 12178-12191).

Reasons for these listings include loss or deterioration of habitat, disease, predation, and collection as pets. Contributing factors include urbanization, vandalism and poaching, release of sick pet animals into wild populations, excessive predation on juvenile tortoises by ravens, motorized vehicle use, and route proliferation. The desert tortoise receives legal protection afforded under both the California Endangered Species Act and the Federal Endangered Species Act of 1973, as amended.

Prior to the desert tortoise being either State or Federally listed, the BLM had initiated efforts to protect the species. In November of 1988, the BLM Director issued a document titled "Desert Tortoise Habitat Management on the Public Lands: a Rangewide Plan". This Rangewide Plan directed BLM District Managers to assign tortoise habitat areas into three Habitat Categories. The goals and criteria for establishing those categories are identified in Appendix IV. On February 22, 1989, the California Desert District Manager assigned categories on an interim basis within the California Desert District.

Table 1 shows the number of miles of desert tortoise habitat, by Category, through which the course passes. See Appendix III, Map B, for location of tortoise habitat by categories.

Table 1 Estimated mileage of race course encompassing desert tortoise Category I, II, and III habitats.

	Tortoise Habitat Category			Non category	Total
	I	II	III		
# of miles	45	35	35	55	170

In 1988, the U.S. Fish and Wildlife Service (USFWS) conducted an inventory for the desert tortoise along much of the Barstow Resource Area portion of the Barstow-to-Vegas course. That report classified roughly 10 miles of the Barstow-to-Vegas course as having tortoise densities of 51 to 100, and an additional 15 miles as supporting 0 to 20 tortoises per square mile. As a result of this inventory, BLM has proposed the area in which tortoises were verified to be classified as Category 2 desert tortoise habitat.

The start area of the event was inventoried by USFWS at 0-20 tortoises per square mile. During a survey for the 1989 event, the Barstow Resource Area Wildlife Biologist found 10 tortoise burrows, one recent scat, and fresh tracks from one tortoise, all within 100 to 200 feet of the course in the NE 1/4 of section 10 (T.11N.,R.4E.). In sections 20 and 21 (T.12N.,R.5E.) within a wash portion of the course, the Wildlife Biologist found 7 active burrows either in or directly adjacent to the wash. The USFWS inventory placed tortoise densities in this segment at 51 to 100 per square mile.

A four mile segment of the race route runs through sections 4, 8, 9, 17, 19, and 20 of T.12N.,R.5E. The USFWS inventory documented densities in these sections as follows:

-- Sections 4 and 9 (1.5 miles): 0 to 20 tortoises per square mile.

-- Sections 17, 19, and 20 (2 miles): 51 to 100 tortoises per square mile.

-- Section 8 on Ft. Irwin: not inventoried.

In this four mile segment, the BLM Wildlife Biologist found 17 active tortoise burrows and 8 recently abandoned tortoise burrows.

In the eight mile portion of the course southwest of the Soda Mountains, the USFWS documented 0 to 20 tortoises per square mile.

In August 1989, portions of the course were inspected by a team of Needles Resource Area staff. Pit 2 lies within an area with estimated tortoise densities of 20 to 50 tortoises per square mile. The actual pit location is in an old borrow pit, and as such it provides poor habitat for tortoises. East of the pit, the tortoise densities are estimated at 0 to 20 tortoises per square mile.

The course winds through 10 miles of higher quality creosote-bursage habitat in Ivanpah Valley and eastern Shadow Valley. Tortoise densities there are estimated to be 20 to 50 per square mile (BLM, 1985c). Another four miles of the route run through even better habitat with densities of 50 to 100 per square mile.

Desert tortoise population densities have also been based on transect data obtained during the California Desert Plan Program, transects obtained for the BLM under contract in Nevada (Burge 1989), and by BLM staff in the Barstow and Needles Resource Areas in 1989.

In Nevada, approximately seven miles of the course is in Category 2 desert tortoise habitat, which has moderate to high densities of tortoise. Approximately 35 miles of the course is Category 3 desert tortoise habitat, which has either low or low to moderate densities of tortoise.

Vegetation

The Barstow-to-Vegas course crosses creosote bush (Larrea tridentata) shrubland, blackbrush (Coleogyne ramosissima) shrubland, mixed desert shrubland, and desert wash. No federal or state listed threatened or endangered plant species are known to occur along the routes.

Creosote bush communities vary considerably in composition and diversity. This plant community is found throughout the region at elevations of 1,000 to 3,000 feet. Creosote is the dominant species with generally burrobush (Ambrosia dumosa) or four-winged saltbush (Atriplex canescens). Other typical species are joint-fir (Ephedra sp.), little-leaved ratany (Krameria parvifolia), thornbushes (Lycium cooperi, L. andersoni), galleta grass (Hilaria rigida), Indian rice grass (Oryzopsis hymenoides), mallow (Sphaeralcea ambigua) and desert straw (Stephanomeria pauciflora).

The blackbrush community occurs on the slopes of Clark Mountain at elevations of 4,000 to 5,000 feet. Blackbrush is the most common species. Others are spiny mendora, California buckwheat, joint-fir and desert rue (Thamnosoma montana). Washes contain acacia, snakeweed, and spear-leaved Brickellia (Brickellia arguta).

Mixed desert shrubland and desert washes contain a variety of species such as rabbitbrush (Chrysothamnus paniculatus), paper bag bush (Salazaria mexicana), Joshua tree (Yucca brevifolia), Mojave yucca (Yucca schidigera), beavertail (Opuntia basilaris), and silver cholla (O. echinocarpa).

The vegetation along the 1990 proposed course has not fully recovered from previous years' events. Some shrubs have died and numerous plants show signs of damage. These plants exhibit broken branches, splits in the main stem/trunk, and overall reduction in the extent of aerial canopy. Due to the drought conditions being experienced in the desert region, plant vigor and regrowth potential is poor. Reduced growth rates, die-back, extended dormancy, and in some cases death of the plant are common signs currently being exhibited by plants in the desert. Regrowth along the race corridor has been poor.

The proposed route around Solomons Knob in the Needles Resource Area was last used in the 1974 race. A 1990 field inspection of that segment showed little regrowth of vegetation. After 16 years, plant cover was ocularly measured to be only 10 percent of that found adjacent to the race course. Much of that portion of the course has no plant cover, and effects of soil erosion are evident. Portions of the route utilizes an existing dry wash and sparse vegetation is normal.

One federal candidate species, Rusby's desert mallow (Sphaeralcea rusbyi spp. eremicola), occurs directly adjacent to the Barstow-to-Vegas course in the vicinity of the Clark Mountains. This low growing perennial herb exists along a 4-mile stretch adjacent to the powerline road north of the Clark Mountains.

There is a potential that bicolored penstemon (Penstemon bicolor spp. bicolor), a federal candidate and a Nevada watchlist species, occurs adjacent to the course in Nevada. The habitat for this species is similar to that found along the Barstow-to-Vegas course, and has been found within 5 miles of the course.

Cultural Resources

The Barstow-to-Vegas course passes through one recorded historic site situated on private property at the Silver Lake townsite (CA-Sbr-2922). However, there are no known cultural resources on the course. Three other recorded cultural resources are located on public lands adjacent to the course with other recorded sites located within one mile. In Nevada, cultural resource inventories have been conducted along the proposed course, which include surveys described in CR5-1198N, 184N, 1508N, 1509N, 247N, 268N, and 87N. No cultural resources were found during the course of these surveys. Based on data review in these survey documents, sufficient efforts have been taken to identify and evaluate significant cultural resources within the area of effect per 36 CFR Part 60 (Section 106 of the National Historic Preservation Act).

Wilderness

The Barstow-to-Vegas course has utilized roads along the boundaries of several WSAs. In 1983, the course used routes within the Soda Mountains WSA that were the subject of a court inspection and were approved by the court. The route of the proposed action does not enter any WSAs, but routes that form boundaries of WSAs are proposed for use. Map C displays the WSAs adjacent to or potentially affected by the race.

Recreation

Total membership in the AMA is around 180,000. Of that, 27,000 reside in California. District 37 of the AMA estimates that approximately 10,800 riders from California are trail/competition riders. Most of the 1,200 participants in the Barstow-to-Vegas race have come from District 37 which encompasses Ventura, Kern, Inyo, Los Angeles, San Bernardino, Orange and Riverside Counties. Although entrants have come from around the nation and from foreign countries, the primary out-of-District entries have been from San Diego/Imperial counties, northern California, and Nevada. These entries have accounted for about 150 riders each year. For the Barstow-to-Vegas race, there are generally between 3,000 and 5,000 race related individuals (family members/supporters/spectators) also attending the event.

In the region, the proposed action is one of four competitive vehicle corridors established in the CDCA Plan. These four particular events, the only OHV competitive events which take place outside OHV Open Areas, have involved approximately 1,300 participants on the average each year over the last ten years. The Stoddard Valley-to-Johnson Valley event was run only in 1980. The Johnson Valley-to-Parker was last run in 1986 with 173 participants and has only been run five times since 1980. The Barstow-to-Vegas has occurred under permit annually since 1983 with 1,200 participants. The Parker 400 has been permitted by the BLM annually since 1972 and involves a total of 425 participants, 300 of which race (except in 1989 when the California loop was not run) on the California side.

Approximately 100 permitted competitive OHV events are held each year in the CDCA involving approximately 25,000 participants. A majority of the events are held in the Barstow and Ridgecrest Resource Areas. Participants in the four competitive vehicle events occurring outside of open areas have made up approximately 5% of the total number of yearly participants in OHV competitive events.

In Nevada, there are no other OHV events authorized on the western portion of I-15. There are approximately 6-8 OHV events per year authorized in the Jean Dry Lake area. In addition, other special recreation permits are authorized in the Jean Dry Lake area including hot air ballooning, model rocket events, horse endurance events, dog trials, hang gliding, and land sailing. The east side of the highway is also used for a significant amount of OHV free play. There are no visitor use figures for the area; however, it is estimated that 50,000 visitors per year enjoy the Jean Dry Lake area.

Socio-Economic

Most of the economic spending associated with this event occurs in Barstow, Baker, State Line, and Las Vegas. Barstow is the largest city in close proximity to the race course (population 21,000) and is located approximately 30 miles west of the start area. The major source of income to the city is from the U.S. Army National Training Center at Fort Irwin and the U.S. Marine Corps Logistics Base in Daggett. Local businesses also rely upon recreation and tourism, and traffic going to and from Las Vegas and Los Angeles to supplement annual income. The Barstow Chamber of Commerce's 1989 annual income based on retail sales taxes was $278,231,000.

There are five casinos located within the general locale of the proposed event's finish. Several working mines are located in the general area and there is one cattle grazer located in the Jean Dry Lake area.

The Barstow-to-Vegas provides both economic and social benefits to the membership of District 37 of AMA as well as enthusiasts of the sport throughout the United States. This race has been a major fund raiser for the AMA's District 37 which uses most of the proceeds to fund umbrella insurance policies that allow small, affiliated clubs to run other races. The AMA considers this race to be important to the well being of its members and related organizations.

Soil, Air and Water

Soils along the course routes occupy two relatively distinct physiographic areas: (1) uplands consisting of old terraces, alluvial fans, and low desert foothills, and (2) mountains and lowlands consisting of alluvial flood plains, terraces, fans, and basin rims. These soil types are moderately to highly susceptible to erosion.

Current conditions along the race corridor are variable. Some areas in washes are mostly repaired through normal water flow patterns. Some roads used are in acceptable condition, due in part to repair by natural processes and road maintenance activities. However, the majority of the course route through non-roaded areas of the desert remains rutted, contains "whoop-de-doos" or is deeply "washboarded", and exhibits powder-like surface soils where desert pavement has been removed and soil consistency disturbed. Soil cover is reduced in many instances.

Air quality in the affected area is classified as "Attainment" (acceptable) under the National Ambient Air Quality Standards (NAAQS) designated by the Environmental Protection Agency. Under the Clean Air Act (as amended, 1977), BLM administered lands were given Class II air quality classification, which allows moderate deterioration associated with moderate, well controlled industrial and population growth.

The area has no permanent surface water. Surface flow occurs only after intense rainfall periods, and it soon infiltrates the dry desert soils or evaporates. Some water reaches the playas, which become inundated for short periods of time.

Other Critical Resources

The following critical items have been determined to be absent from the affected environment or would not impact or be impacted by the proposed action:

a. Prime and Unique Farmlands
b. Floodplains
c. Native American Religious Concerns
d. Solid and Hazardous Waste Concerns
e. Drinking and Ground Water Quality
f. Wetlands and Riparian Zones
g. Wild and Scenic Rivers

IV ENVIRONMENTAL CONSEQUENCES

The impact analysis is based on the best available information on the affected environment, the description of the proposed action, and the expected effectiveness of the stipulations. The impacts of the proposed action are analyzed within the context of the expected results of the application of the stipulations. The stated expected effectiveness of the stipulations is based on results of monitoring past events. The 1982 plan amendment stated that future events would be evaluated in an environmental assessment and be based on the results of compliance and monitoring of preceding years' events. A summary of the past monitoring reports is provided in Appendix II.

The 1989 Barstow-to-Vegas had special stipulations to protect the desert tortoise and its habitat due to the emergency listing of the species. Efforts were made by District 37 and BLM to apply and enforce these stipulations. The 1989 event was the most carefully planned in the history of the Barstow-to-Vegas. With the emergency listing of the tortoise, the success of the 1989 stipulations was viewed as critical to illustrate the ability and feasibility to control the event.

Overview of 1989 Monitoring Report

New stipulations were placed on the 1989 event to protect the desert tortoise and its habitat. These new requirements focused on course width restrictions, spectator controls, special flagging and disqualification procedures. Post race monitoring indicated a significant amount of non-compliance relating to these requirements.

The 1989 event had more disqualified riders (25) and more racers who did not finish the race (400) than any of the post-1983 events. Of the 97 special stipulations for the 1989 permit, 23 (25%) were violated. Several areas of the course were improperly flagged resulting in new surface disturbance. One area where this occurred was in the Hollow Hills WSA.

The transect data through tortoise habitat showed that straying extended out from the corridor boundaries an average of 30 feet. An analysis of the data (transect data, photographs, and BLM staff observations) indicated that the corridor flagging was not effective at minimizing the straying of vehicles. Topographical constraints of the course appeared to be a more effective controlling factor in minimizing straying than flagging.

Data collected in areas outside desert tortoise habitat where the permitted course width was 100 feet showed that straying and course widening occurred. The course width in the area to the west of Pit 1, for example, was measured at 260 feet and near Solomons Knob several transects noted race vehicle tracks over 90 feet outside the permitted course width (see Monitoring Report Summary, Appendix II).

In summary, course widths exceeding stipulated widths occurred throughout the length of the course. These types of impacts were significantly greater than anticipated and stipulated.

Intended Purpose of Stipulations and Anticipated Effectiveness

Efforts by District 37 and BLM to successfully apply the 1989 stipulations resulted in a less than satisfactory level of compliance and a substantial amount of noncompliance. The possible explanations for the noncompliance of the 1989 event include: last minute negotiations and changes in stipulations and the proposed action; inadequate flagging; improper flagging; wind, dust and soil conditions; the rugged terrain of the Fort Irwin portion of the race; and the highly competitive nature of this race event. Some factors appear to be resistant or beyond control, such as the weather and the individual racers' perspective including the many individual decisions made in the process of racing to the finish line.

The following stipulations for the proposed 1990 event are the major changes from the 1989 stipulations. They are proposed to attempt to resolve problems which occurred in the 1989 event. The stipulation is first described, then its intent and anticipated effectiveness is discussed. A complete list of stipulations is located in Appendix I.

Start waves would be restricted to 25 riders or less as opposed to 250 in 1989. Start waves are proposed to be one minute apart with a break of several minutes between the 5 divisions. The race would be a timed race rather than a mass start. The racer to cross the finish with the fastest time would be determined overall winner.

> The purpose of reducing start waves to 25 is to space riders out so as to limit the amount of passing. The effectiveness of this stipulation is uncertain. A break of one minute between waves may not be enough time to adequately space riders. Within 5 minutes, 125 riders would be on the course in passable range of each other. Within 30 minutes, 750 riders could be within 20 to 30 miles of each other. Within 1 to 1 1/2 hours, all riders would be on the course, assuming no extensive or unforeseeable delays. Start waves of 25 riders may increase spacing initially, but skill levels of the individual riders are likely to play a greater role in spacing riders, particularly further along in the course.

There would not be a start cone like past events. The start area would be 300 feet wide and narrow to 100 feet at 2.5 miles.

> Redesigning the start from a cone to a wedge 300 feet wide narrowing to 100 feet, 2.5 miles down the course, would reduce the amount of disturbance in the start area.

A 60-foot race corridor would be established only where there is evidence of desert tortoise. Where there is no evidence of tortoise, there would be a 100-foot wide corridor. In 1989 a 25-foot corridor was stipulated through all tortoise habitat.

> A 60-foot corridor, proposed only where there is evidence of desert tortoise, is more manageable than a 25-foot corridor but would result in a greater amount of desert tortoise habitat being affected.

The 60-foot corridor would be flagged with continuous ribboning along the boundary of the corridor.

> Using continuous flagging along the boundary of the 60-foot corridor would limit but not prevent straying. Continuous flagging was successful in the 1983 event in an area through a WSA where pennant flagging was used for a distance less than 1 mile in length.

A reduction in the number of pit vehicles is proposed. The maximum number of pitting vehicles would be 250.

Pit crews would be consolidated by District 37 to a maximum of 250 pit vehicles authorized. This reduction of pitting vehicles is intended to limit vehicle activity in the pits to reduce impacts. With 250 pit vehicles for 1,200 racers, each pit vehicle would have to service approximately 5 racers. The logistics of this stipulation may prove difficult to accomplish, particularly with 3 pitting areas, to carry enough fuel and supplies for 5 racers.

Additional flagging in areas of sensitive resources or where past straying had been a problem.

Additional flagging in areas of past straying problems, such as at sharp turns, would prevent some amount of straying. Given the length of the course and the amount of straying observed in past events, some straying off the course would be unpreventable.

Impacts of the Proposed Action

General Wildlife

Wildlife may be injured or killed by participant motorcycles or support vehicles during the race. Individual animals may be killed on roads leading to the start, finish, pits, and spectator areas by increased traffic associated with the event. Large species, such as coyotes and kit foxes, could be temporarily displaced during the event into adjacent areas. Less mobile species, such as rodents or species inactive at this time of the year (many reptiles), would be vulnerable to crushing or entombment due to burrow collapse. The effect of increased noise levels on smaller species has not been widely studied. There is controversy on the potential impacts of noise on wildlife.

Habitat degradation along off road portions of the course would reduce forage for herbivorous species, and could reduce populations of species with relatively small home ranges such as kangaroo rats (Dipodomys spp.).

Any food items and trash left along the course by spectators may also provide for temporary use of the area by opportunistic predators such as ravens and coyotes. Increased predation rates on wildlife prey populations may also result.

Desert Tortoise

Desert tortoises may be subject to both direct and indirect impacts associated with race activities. In the context of this analysis, a direct impact is defined as the killing, injuring or handling of tortoises and/or the disturbance or crushing of tortoise burrows by actions of participants in the event (racers, pit crews, spectators, etc.). Individual tortoises could be injured or killed by motorcycles during the race, or by support and spectator vehicles. Tortoises may also be crushed by collapse of burrows. Any tortoises coincidentally active at the time of the event could be subject to vandalism or collection. Potential for tortoise activity during this time of year is low, but could occur if temperatures are unseasonably warm or if rainfall occurs immediately prior to the race. Generally, the likelihood of direct kills or injuries to tortoises by being hit by a race vehicle or spectator vehicle is relatively low. Direct impacts on the tortoise from the crushing of burrows is more likely. Barricade flagging of identified tortoise burrows and continuous ribboning where there is evidence of tortoise presence is expected to be partially effective in reducing direct impacts to burrows. Such measures would not assure the prevention of direct impacts to burrows and possibly tortoises. In the 1989 race, 3 of the 12 flagged burrows in the Stateline Resource Area, Nevada, were impacted by racers. There is also concern that, despite careful pre-race inspections, all burrows which are potentially at risk would not be discovered and, therefore, flagged. Several unflagged burrows were discovered during the 1989 post-race monitoring.

the long run would adversely affect the desert tortoise. The relationship between habitat degradation and population decline is very complex and difficult to quantify. Race-related effects to tortoise habitats include habitat loss or degradation from crushing of vegetation, displacement of surface soils, and subsequent wind erosion. Herbaceous cover could be reduced by erosion. Reduction in ephemeral vegetation may reduce food availability for tortoises that utilize portions of the course for foraging. As a result of reduced ground cover, juvenile desert tortoises may become increasingly vulnerable to predation by common ravens (Corvus corax), which are a significant cause of juvenile mortality. Additionally, any trash and food items along the course or in spectator or pit areas, if not properly contained and removed, would attract ravens to the area. All of these factors may adversely affect the desert tortoise. The precise nature of and degree of long term adverse effects on the tortoise is uncertain; however, the potential risk involved in allowing continued degradation of the habitat is substantial.

The extent of habitat disturbance is a key consideration in assessing the indirect impacts of this race on the desert tortoise. The proposed action calls for a 100-foot wide race corridor except in areas where there is evidence of desert tortoise and on roads and through washes. A 60-foot corridor would be established in areas where there is evidence of tortoise. On roads, the course would be restricted to the road surface (berm to berm). In washes narrower than 100 feet, the course would be restricted to the width of the wash. In 1989, the stipulated course width through desert tortoise habitat was restricted to 25 feet. Course widths for the proposed 1990 event would increase the stipulated area of disturbance and overall area at risk to habitat degradation.

Table 2 shows the total acreage of the stipulated course through desert tortoise categories I, II, and III under two scenarios: 1) if there was a 100-foot corridor the entire length of the course, and 2) if there was a 60-foot corridor throughout all tortoise habitat with a 100 foot corridor outside tortoise habitat. Based on these scenarios, the acreage within the stipulated course includes between 837 and 1,393 acres of desert tortoise habitat. A survey of the course is required to determine where there is evidence of tortoise and a 60-foot corridor would be established.

Table 2 Estimated acreage of race course encompassing desert tortoise Category I, II, and III habitats.

	Tortoise Habitat Category			Total	Non category	Total course
	I	II	III			
100 foot corridor throughout course	545	424	424	1393	666	2059 acres
60 foot corridor through tortoise habitat	327	255	255	837	666	1503 acres

The actual acreage within the stipulated course would be less than shown in these scenarios, as portions of the course are routed on roads, where the course width is limited to berm to berm, or through washes. For purposes of this analysis, it is assumed that within desert tortoise habitat at least 20 miles of the course would require a 60-foot corridor with continuous ribboning, and approximately 40 miles would be on roads or within washes or other natural barriers which limit the stipulated width of the course to an average of 20 feet. Under these assumptions, the total acreage of the stipulated course within desert tortoise habitat would be 908 acres. [NOTE: An additional 37 miles of the course may be treated as "roads". If these 37 miles are determined to be "roads", and thus restricted in width, then the total acreage of the stipulated course would be 546 acres.] These estimates are based on calculations of 7.3 acres per mile for portions of the course with a 60-foot corridor, 2.4 acres per mile for areas where the course is on a road or within a wash, and 12.1 acres per mile for portions of the course with a 100-foot corridor.

The stipulated course through desert tortoise habitat in 1989 was only 25 feet. Monitoring of the 1989 race showed that the average width of the disturbed area in tortoise habitat was 55 feet - or 6.6 acres actually disturbed per mile. This footage was measured only at the point where the track(s) crossed the transect. To obtain an accurate value for actual on-the-ground disturbance, each track would have to be measured for width and total distance traveled. These measurements were not taken due to time and personnel constraints. Based on averages and the limited field data collected, it is estimated that the actual acreage of ground disturbed during the race lies somewhere between 5 and 8 acres per mile.

The proposed 1990 course does not require limitations on the course width through desert tortoise habitat except where there is evidence of tortoises. As previously indicated, this modification is expected to reduce direct impacts to tortoises, however, it would lead to a larger amount of acres disturbed and at risk than in 1989. Furthermore, based on the results of the 1989 race monitoring, straying beyond the established course boundaries is highly likely. In 1989, some of the most extreme examples of straying occurred in areas with a 100-foot course width. To determine the total area "at risk" of being disturbed under the proposed action, a reasonable and relatively conservative estimate of straying is projected. Straying off of the stipulated course where it falls on roads is estimated to average 7.5 feet outside of the course. Straying in areas where the stipulated course is 100 feet is estimated to average 30 feet. Straying where the stipulated course is 60 feet is estimated to average 5 feet. Thus, due to straying, it is reasonable to assume that an additional 246 acres of desert tortoise habitat are "at risk" of being disturbed under the assumption of only 20 miles of the course being established as a 60-foot corridor. The total area "at risk", including the stipulated course plus the estimate of acreage at risk due to straying, would be 1,154 acres (908 acres within the stipulated course plus 246 acres "at risk" due to projected straying).

It is proposed that a three-mile section of the 1989 course near Red Pass Lake and in desert tortoise habitat be moved onto the powerline road for the 1990 event. This road is approximately 15 feet wide. Speeds would increase as the race vehicles utilize this road. Straying off the road would occur if vehicles pass each other racing and search for the fastest line of travel. In other areas of the 1989 event which were routed on a road, some straying off the road occurred as well as the establishment of trails outside the road. This area is sandy and speeds off the road could be as high as on the road. Straying would be expected to occur in this area.

Based on the results of monitoring the effectiveness of past race stipulations to constrain riders within a corridor width, it is likely that adverse impacts to the desert tortoise and its habitat by straying and course widening would occur. The increased width would encourage future OHV use, which could result in the increased take of tortoises and additional loss of tortoise habitat. Additionally, the widening of the course may contribute to habitat fragmentation.

The proposed action calls for eliminating the start cone and initiating a timed start of 25 racers per start wave. This would reduce the amount of disturbance by approximately 355 acres in the start area. A start line 1/2 mile in width would equal 400 acres of disturbance. A start line of 300 feet would equal 45 acres of disturbance.

The success of timed start waves of 25 riders in reducing the amount of passing by racers is uncertain. There would probably be less crowding at the beginning of the race due to this modification and, therefore, reduce to some extent the tendency to stray for crowding or safety reasons. However, racer skill level also plays a prominent role in the spacing of riders, and passing may not be reduced from previous levels.

Vegetation

Anticipated impacts of the proposed action on vegetation were covered in the sections on wildlife and desert tortoise regarding effects on habitat. No impacts to state or federal listed threatened or endangered plant species are anticipated but could occur as a result of straying. The federal candidate species Rusby's desert mallow may be affected if straying off the course occurred in the vicinity of the species.

All impacts to the desert vegetation discussed in the previous section relate to non-tortoise habitat as well. It is expected that changes to species diversity and abundance would occur through seed/soil interactions. Seed is normally dispersed onto soils and blown, washed, or carried onto adjacent pieces of bare ground, where seed germination takes place. Seeds of various desert plants require different depths of soil coverage to germinate effectively. If buried too deep, the seedling dies before it can reach the surface. Not being buried deep enough can expose the seed to animals and insects, and cause the root tip to die before it can grow into the soil. Traffic over an area may disrupt the process of seedling growth by altering the depth at which various seeds are buried. This would have an unknown effect on plant reproduction, species diversity, and site revegetation. Soils subject to disturbance may show delay in reseeding due to soil compaction and an increase in occurrence of non-native species.

Impacts of dust accumulation on plants is another concern. Higher than normal levels of dust on leaf surfaces may reduce cooling efficiency of the plants and cause added stress. Levels of dust on leaf surfaces, growing points, and overall effects on plant production have not been studied.

Cultural Resources

No impacts to cultural sites/resources are expected given that cultural properties have been identified and mitigated within the area of potential effect. No further Section 106 consultation is required, nor are impacts anticipated.

Wilderness

Unanticipated impacts have affected WSAs during past Barstow-to-Vegas events. These impacts have been in the form of shortcutting and intrusion in areas where the course utilized roads along the boundaries of WSAs.

Shortcutting through the corner of the Soda Mountains WSA as the course approaches Pit 1 occurred in the 1988 and 1989 events. This shortcutting resulted in minor soil disturbance by individual vehicles. A stipulation for the proposed 1990 event calls for continuous flagging and construction fencing in this area to prevent shortcutting.

Silver Lake Road forms the boundary of the Soda Mountains WSA. In this area, during the 1989 event, race vehicles left the stipulated course and crossed the dry lake parallel to the road. The resulting course width utilized by the race vehicles measured an average of 146.2 feet where the stipulated course was the 30 foot wide road. These impacts were temporary in nature and have been substantially reclaimed by recent rainfalls. The 1990 event proposes to reduce the potential for these impacts by grading the Silver Lake Road before the race and utilizing adequate flagging to keep racers on the course.

The 1989 event was routed into the Hollow Hills WSA and the error was not detected by BLM. This route error resulted in approximately 2 miles of surface disturbance. This sort of problem can be avoided in the future by early flagging and checking of the course. Stipulations formulated for the proposed 1990 event call for initial flagging to be in place 1 month before the event to enable BLM to check the alignment and full flagging would be in place 1 week before the event. These measures are intended to eliminate the risk of impacts due to misflagging of the course.

Recreation

Under the proposed action, approximately 1,200 recreationists would have the opportunity to participate in the eighth race since the 1982 Plan Amendment. As many as 5,000 spectators would have the opportunity to watch the event.

The use of the BLM ranger staff for race monitoring and enforcement activities would reduce law enforcement and visitor services in other areas. Resource protection, law enforcement, and safety/rescue operations would be diminished throughout the desert area on one of the busiest camping weekends.

Casual and dispersed recreation uses in the vicinity are likely to be disrupted during the running of the race. Use of lands in and around the area of the race would suffer some access problems. Noise levels from the race would disturb the solitude in areas within a few miles of the course. Dust pollution may deter scenic values for the duration of the one day event, and camping may be more crowded in the vicinity of Clark Mountain and Valley Wells/Cima area.

Socio-Economic

Contacts with city governments and local businesses in the affected environment indicate few adverse impacts. The Barstow Chamber of Commerce had an annual income from retail sales taxes of $278,231,000 for 1989. They estimated that the Barstow-to-Vegas event brings approximately $300,000 to the city's economy. The Baker Chamber of Commerce and State Line Casinos estimate that levels of funds generated from this event ($10,000 for Baker and $50,000 for State Line) contribute only a minimal amount to their city's annual income. These small communities are situated along I-15 and derive their income from tourists and travelers stopping for gas, food, or rest. The rooms at the State Line casinos are usually booked for all holidays and weekends throughout the year.

District 37 estimates that each racer spends approximately $910 on this event, much but not all in adjacent communities. This includes expenditures on bike race preparation, entry fee, fuel, lodging, food and gambling. Pit crew members are estimated to spend about $600 each on food, fuel, lodging and gambling. About $102,000 is earned by the club from this race. This income is a major contribution to other competitive events held by District 37 in the Southern California area.

Soil, Air, and Water

Vehicles would cause surface compaction and displacement of surface soils along the course and at all pits. The 1989 Monitoring Report showed a significant amount of straying off course by race vehicles resulting in impacts to soils as well as vegetation. Soil impacts associated with past events were determined to be a reduction in desert pavement coverage and increased development of soft, powder-like soil in numerous areas. These soil materials are made up of very fine clay and/or silt particles. This powdery material is very susceptible to wind and water erosion. Most impacts are similar to those impacts associated with documented ORV traffic studied in depth in the work of Robert J. Tullock, "Study of Off Road Vehicle (ORV) Impacts Upon The Soils And Vegetation Of The California Desert Conservation Area (CDCA)", and others. In summary, the report documents changes similar in nature to those observed from previous years of monitoring the Barstow-to-Vegas course. The changes referenced above include, but are not limited to, reductions in soil cover values and increases in soil erosion under repeated ORV use.

Field investigations have determined that over the years this race has been run, approximately 2,000 acres of desert habitat have been disturbed annually. Some of this annual disturbance is to new areas (course changes), but the majority of impacts are to the existing course. Soil nutrient levels are expected to decrease over the long term due to the removal of the vegetative cover, from the churning of the soil surface by race traffic, and through the mixing of nutrient poor soils with the more fertile soils associated with "plant

islands." The reduced nutrient levels would inhibit plant establishment and regrowth potential for many years. These impacts would occur to soils along the course and in pit areas. Soil and dust particles generated from this event could have a detrimental impact to the vegetation along and adjacent to the race corridor.

Air quality standards would be temporarily exceeded based on measurement of total suspended particulates. This violation would be temporary and not an unusual event in the wind blown areas of the desert. Temporary increases in the amounts of oxidants and carbon monoxide on all portions of the course are expected. Although the air quality reduction is temporary, significant impacts from these particulates to spectators, participants, support personnel, and other recreational users in the race area are likely to occur. The atmosphere surrounding the event would be impacted by the generation of dust and temporary emissions resulting in a short-term (approximately 14 hours) reduction in air quality. Dust was found to be a major contributor to off-course straying due to impairment of rider visibility. Mitigation for the air quality change is not possible. Limiting the starting wave to 25 riders would help to keep dust levels down. The health and safety of those that suffer upper respiratory aliments is a concern when fugitive dust levels become severe. It can be assumed that all racers, support personnel, and spectators are voluntarily subjecting themselves to this temporary environment.

Water resources would be unaffected, with only minimal changes to water drainage patterns anticipated.

Summary of Impacts

In summary, birds, mammals, and reptiles are likely to be disturbed. Birds may leave the area of the race temporarily. The course route would be subject to extensive denudation except for larger shrubs. Grass and forb production would be likely to be greatly reduced on the course route. The potential for direct adverse impacts to desert tortoises is relatively low, however, indirect impacts could be substantial due to degradation of tortoise habitat. An estimated 1,154 acres of tortoise habitat are "at risk" of being adversely impacted. There would be potential for new surface disturbance in WSA's due to straying from the course. Air quality impacts of dust and wind erosion would continue until rain of a sufficient intensity helps to recreate the protective soil crust over the surface layer of the soils. Until then, soils are subject to wind and water erosion, and dust can be a problem under windy conditions.

Impacts of the No Action Alternative

Socio-Economic

There would be a measurable but minimal loss of income to the communities of Barstow and Baker, California, and Stateline, Nevada. It is estimated that Barstow would suffer a loss of $300,000 (or .011 percent of annual income) during that weekend.

District 37 would lose a major source of fund raising for their membership. The denial of the race would adversely affect the OHV segment of the recreation community. Racers would be deprived of a major opportunity to participate in an event which represents a pinnacle achievement in the motorcycle racing world. Spectators and enthusiasts would suffer the loss of an opportunity to view or follow this event.

Unregulated/Unlawful Use of Race Course

During the years between 1975 and 1982, when the BLM denied permits for the Barstow-to-Vegas race, several unauthorized rides occurred in resistance to the BLM decision. These unauthorized rides resulted in unregulated use and negative impacts to the environment. The event was reevaluated in the 1982 plan amendment cycle. This evaluation restructured the event as to route, number of entrants, and other controls to attempt to make it environmentally acceptable.

Under the no action alternative, unlawful use of the race corridors can be expected to occur from individuals who disagree with the BLM decision. Unregulated use would result in negative impacts to all resources including recreation. These impacts would be limited by stringent law enforcement, fines, and public education. This unlawful activity would be subject to law enforcement measures which could negatively impact the individuals involved and result in negative publicity for the sport in general. Unlawful use of the course would be expected to diminish as law enforcement and public education is applied.

V CUMULATIVE IMPACTS

Cumulative impacts are effects on the environment resulting from the incremental impact of an action when combined with the effects of past, present and reasonably foreseeable future actions. This section analyzes the cumulative impacts of the proposed action on the status of the desert tortoise including its habitat and on the desert environment.

On April 2, 1990, the desert tortoise was listed as a federally threatened species. The listing of the tortoise, which resulted from documented dramatic declines in tortoise populations, has changed the basis of decisions and actions in the desert. All proposals must comply with a new set of criteria, specifically the Federal Endangered Species Act and the BLM Desert Tortoise Rangewide Plan. Many activities from mining to grazing to OHV use have been affected by the listing. Future actions proposed in the desert will come under increased scrutiny due to the listing of the desert tortoise. To limit further reductions in desert tortoise habitat, land management must consider all current and projected uses of that land. The continued expansion of utility ROW's, exploration for minerals, mine development, grazing, land exchanges, and new disposal facilities have negatively impacted tortoise habitat. Many of these operations are allowed to occur due to existing laws and overall public benefit. Those consumptive uses that are more discretionary in nature must be reviewed to determine actual need in relation to the desert tortoise. OHV use, agriculture, land exchanges, and other discretionary actions are areas that need to be reviewed for direct impacts to or "take" of tortoise habitat.

In this context, the proposed action is related to many other individually insignificant actions and impacts occurring in the region and area of affected environment. Many factors have cumulatively contributed to the threatened status and the continued existence of the Mojave tortoise population. Cumulative impacts were a major factor stressed by the U.S. Fish and Wildlife Service in the listing of the species (55 Federal Register 12178-12191). It is reasonable to anticipate that the proposed action would contribute in an undetermined degree to the documented cumulatively significant impact on the tortoise and its habitat.

The intent of the 1982 plan amendment on race corridors was to confine events to a single route to minimize impacts. The course has been rerouted several times to avoid sensitive resources. The relocations have resulted in increasing amounts of land being affected by the event. Only about 50 percent of the originally designated course in the 1982 plan amendment remains a part of the 1990 proposed action. These route changes have also proven unsuccessful at limiting impacts to acceptable levels. With more restrictive requirements likely for all the activities in desert tortoise habitat, additional course changes are anticipated if future events were considered. This would add to the cumulative impacts. The inability of the racers to stay within the prescribed race corridors also adds to the cumulative impacts. Race corridor width increased an average of 30 feet in desert tortoise habitat in 1989. Therefore, the average width of the race corridor was 55 feet instead of the 25 foot limit. This impact would be reduced where riders are confined to roads or constrained by terrain. Straying an average of 15 to 30 feet would be expected to occur in the 1990 race as proposed.

Long term reduction in plant cover and species diversity is expected to occur within the race corridor. Due to the limited amount of annual moisture and high evapotranspiration rates, recovery of the race corridor to pre-disturbance condition could take 50 to 70 years. This would be under ideal circumstances and does not account for additional impacts from other OHV use, drought, and continued grazing pressure.

Many areas in the vicinity of the proposed action, such as Ivanpah and Shadow Valleys, are experiencing additional impacts to habitat as requests are filed for utility right-of-ways, mining and mining exploration projects, and private property development. These activities increase the fragmentation of habitat in the area of the course and contribute to a reduction in available plant forage. As forage available to the desert tortoise decreases from animal grazing, land development, and current drought conditions, negative impacts to the tortoise are expected. The Barstow-to-Vegas race is one more impact to the region that contributes to cumulative impacts, primarily through degradation of tortoise habitat.

VI CONSULTATION AND COORDINATION

Public Involvement

A Notice of Intent to prepare an Environmental Assessment on the 1990 Barstow-to-Vegas was published in the Federal Register on June 12, 1990. A total of 87 comment letters were received in response to this notice. The majority of letters received (76) expressed support for approval of the race.

EA Review Team

An EA Review Team was established at the request of District 37 of the AMA. The team was composed of two representatives from District 37 (Rick Hammel and Bill Howell), two representatives from the environmental community (George Barnes and Jim Dodson), one representative from the Desert Tortoise Council (Tom Dodson), and one representative from the California Desert District Advisory Council (Chuck Bell). The team met the weekend of July 7 and 8, 1990. BLM facilitated the meeting and recorded discussion. The team focused on defining the proposed action of the race, clarifying and ultimately modifying the proposed route and stipulations, and critiquing a preliminary draft of the EA.

Persons and Agencies Consulted

Mr. Rick Hammel, American Motorcyclist Association, District 37
Ms. Shirley Dougherty, President, Baker Chamber of Commerce
Comprehensive Planning Dept., Clark County, Nevada
Mr. Mike Villamor, Executive Office, Whiskey Pete's Casino
Mr. Dennis Dahlem, Economic Development Coordinator, Barstow, CA
BLM, Barstow Resource Area
BLM, Needles Resource Area
BLM, Stateline (NV) Resource Area
BLM, California Desert District
BLM, California State Office
Formal consultation has been initiated with the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act concerning effects on the desert tortoise.

List of Preparers

Molly Brady - California Desert District Office; Chief, Planning and Environmental Assistance; Team Leader
Sharon Paris - Barstow Resource Area; Environmental Coordinator
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Larry Foreman - California Desert District Office; Wildlife Biologist
Tim Smith - Stateline Resource Area; Outdoor Recreation Planner
Jim Carroll - California Desert District; Cartographic Technician

References

BLM, 1974 Draft and Final Environmental Impact Statement. Barstow to Las Vegas Motorcycle Race. Discussed the effects of the proposed event and the cumulative impacts from previous races.

BLM, 1975 1974 Barstow to Las Vegas Evaluation Report. Evaluated the 1974 event in relation to the anticipated impacts described in 1974 EIS, investigated compliance with stipulations. Led to a BLM decision to deny permits for races between 1975 and 1982.

BLM, 1977 Final Programmatic Environmental Record for the Jean Off-Road Vehicle Use Area. The majority of the Nevada portion of the course is located in the Jean ORV area. Analysis indicated the area's use by ORV's would have a number of adverse impacts on the environment (air pollution, loss of vegetation, soil and wildlife habitat). A series of mitigation measures were developed to lessen or eliminate adverse impacts.

BLM, 1982a. Draft Environmental Impact Statement (DEIS), Proposed 1982 Plan Amendment to the Californ Desert Conservation Area Plan. Primary reference document for the Barstow to Las Vegas race. Amendment 6 proposed the designation of the course, described use guidelines and limitations that would apply to the race, and analyzed impacts for the action.

BLM, 1982b. Final EIS (FEIS), Proposed 1982 Plan Amendment to the CDCA Plan. Contains corrections to the draft EIS, additional environmental data, and responses to public comments.

BLM, 1983. Record of Decision, Proposed 1982 Plan Amendment to the CDCA Plan. Describes the approved course, the use guidelines/limitations that in effect became the permit stipulations for the 1983 race.

BLM, 1984. 1984 Barstow to Las Vegas Motorcycle Race Environmental Assessment and Evaluation Report - 1983 Race. An addendum to the 1982 EIS that considered an alternative route around the Soda Mountains Wilderness Study Area, ATV entries in the race, and some mitigation measures to correct problems encountered in the 1983 race.

BLM, 1985a. Addendum to the Final Programmatic Environmental Analysis Record for the Jean Off-Road Vehicle Use Area. Updated the 1977 document, including reference to areas of Crucial Desert Tortoise Habitat in or near the Jean ORV use area, adjacent Wilderness Study Areas, and a lengthy series of public meetings addressing ORV use in Clark County, Nevada. This is a primary reference document for the Nevada portion of the race as proposed for 1985/1986.

BLM, 1985b. Data Recovery and Protection: The Archaeology of Five Dry Lakes Site on the race course, Mojave Desert, California. This report documents the steps taken to collect, study and curate cultural resource sites along the course that would not be mitigated by avoidance.

BLM, 1985c. 1985/1986 Barstow to Las Vegas Motorcycle Race Environmental Assessment and Environmental Report, Draft, Final and Decision Record. Discussed course segments for the 1985/1986 events. References to sensitive plant and animal species were revised to update listings, and the cultural resource information was rewritten to better describe the pre 1983 surveys.

BLM, 1988. 1988 Barstow to Las Vegas Environmental Assessment, Addendum to 1985c and Decision Record. Discussed course changes removing the course from the East Mojave National 7Scenic Area.

BLM, 1989. 1989 Barstow to Las Vegas Environmental Assessment, Addendum to 1985c and Decision Record. Due to the emergency listing of the desert tortoise, the race start area was located on Fort Irwin. The listing of the tortoise resulted in new stipulations on course width restrictions, spectator controls, special flagging, and disqualification procedures.

ENSR Consulting and Engineering 1989. Summary of desert tortoise information pertaining to the Luz SEGS VIII Harper to Kramer Transmission Line. Prepared for Luz Development and Finance Corp., Los Angeles, California.

WIRTH Environmental Services 1985. Mead/McCullough-Victorville/Adelanto Transmission Project, Clark Co., Nevada, and San Bernardino Co., California. Prepared for the BLM and Los Angeles Department of Water and Power.

U.S. Army Corps of Engineers 1989. Preliminary Draft Environmental Impact Statement for Proposed Expansion of the National Training Center for the U.S. Department of the Army, Fort Irwin, California, and Proposed Amendment to the CDCA Plan. Prepared in association with the BLM, Bureau of Mines, Department of the Army, and Department of the Air Force.

California State Lands Commission and FERC 1987. Mojave-Kern River-El Dorado Natural Gas Pipeline Project. Draft Environmental Impact Report/Statement.

Environmental Solutions, Inc. 1989. Castle Mountain Project, San Bernardino Co., California. Draft Environmental Impact Report/Statement. Prepared for BLM and San Bernardino Co.

U.S. Ecology, Inc. 1989. Proponents Environmental Assessment, California Low-level Radioactive Waste Disposal Site. Copy on file with BLM, California Desert District Office, Riverside, California.

Appendices

I Permit Stipulations
II Monitoring Report Summary
III Maps
- A History of Routes
- B Desert Tortoise Habitat
- C Special Areas
- D Course Overview
- 1-14 Detail Maps of Course

IV Desert Tortoise Habitat Categories

APPENDIX I

PROPOSED PERMIT STIPULATIONS

APPENDIX I

PROPOSED PERMIT STIPULATIONS

Part I. ISSUANCE OF THE PERMIT (All items in this section must be submitted to the California Desert District Office one month before the race, unless otherwise noted.)

1. A $5000 performance bond posted with BLM. Failure to do so will void the permit.

2. Letters of permission from private land owners in California and Nevada whose lands are used by the event.

3. Encroachment permits from appropriate State/County agencies (when required) in California and Nevada to cross over, under, or follow along the shoulder of county, state or federal highways.

4. Copies of letters of notification to all right-of-way holders, grazing permittees and mining claimants, who are affected by the race course (California only). BLM to provide names and addresses by 9/15 of current year.

5. Southern California Edison and Los Angeles Department of Water and Power will be notified of race plans at least 30 days prior to the event.

6. Notify the manager of Whiskey Pete's Casino to coordinate arrangements for access to Pit 3.

7. District 37 will prepare a summary of an activity report to delineate spectator, entrant, camping, and race control. This summary will state the number, location and responsibilities of each work team. This report will be due by 9/15 of the current year.

8. Supply BLM with a detailed logistics map by 9/15 of the current year. To include pits, checks helicopter landing points, medical, ambulance, volunteer security and patrol sectors.

9. BLM must be notified of any air-to-air radio working frequencies. Ambulance, medical and District 37 working frequencies will also be supplied. BLM will be supplied with District 37's call signs and working communication names. This information will be forwarded to BLM 2 weeks prior to event.

10. The sponsor will provide emergency medical services and radio communications for emergency response. In the event of a fatality or serious injury in connection with the event, the nearest law enforcement agent will be contacted and the BLM authorized officer notified immediately. The Post Use Report will include a copy of District 37's Risk Manager's Report.

Part II. COURSE STIPULATIONS

1. In areas without continuous corridor boundary ribboning, the centerline will be marked with flagging or flagged stakes as appropriate for the terrain. Green or blue ribbon shall not be used as course marking material.

2. Maximum allowable width for the course is 100 feet unless otherwise flagged narrower, with the following stipulations:

- On roads, the course will be restricted to the road surface (berm to berm).
- In washes narrower than 100 feet, the course will be restricted to the width of the wash
- In areas requiring boundary ribboning, the corridor will not exceed 60 feet in width.
- The start will be 300 feet wide and will narrow to 100 feet at 2.5 miles from the start.

3. Minimal course marking of the alignment of the course will be completed at least four weekends before the race to ensure adequate time for inspection by the BLM and any necessary corrections or additions. Full flagging and ribboning of the course will be completed at least one week before the event to allow BLM to conduct an inspection to determine adequacy or require additional flagging and ribboning.

4. Hazards will be clearly marked according to AMA regulations.

5. Sharp turns will be flagged with pennants or construction fencing as appropriate (determined by BLM or District 37), and signs will be placed before the turn instructing riders to slow down. Controls will be used to eliminate course straying on sharp turns.

6. Checkpoints will be established at areas other than pits to discourage course cutting or to protect environmentally sensitive areas as determined by the BLM authorized officer.

7. At county/state road crossings in California, all riders will be required to come to a full stop, then proceed when it is safe to do so. In Nevada, riders are required to walk their bikes across roads. Failure to do so will result in disqualification. AMA shall provide monitors during the race to verify compliance.

8. Painting of rocks to establish the permanent course markers or improvement will not be allowed.

9. By November 22 of current year, all temporary "Route Closed" signs will be posted by District 37 as directed by BLM at locations specified by the authorized officer.

10. No pre-running of the course will be allowed by racers.

11. Place ribboning (barrier tape) or pennants on the outside edges of the course to establish a corridor within which the racers ride when the course passes through or near sensitive resource areas as defined by surveys. This concept will be referred to as corridoring for future reference.

12. The maximum allowable width of the course is 60 feet or in the case of roads, from berm to berm, when the route proceeds through areas with evidence of tortoise.

13. At all 60 foot corridoring segments, form a funnel at a 45 degree angle by placing continuous ribbon 100 yards (or a length to be determined by the terrain) before the start of the corridor for the purpose of funneling riders into the corridor. At the first corridor segment, Ranger vehicles will be placed on each side of the mouth of the funnel to help channel riders into the corridor. Lights on these vehicles may be used to alert riders of the start of the funnel. Place continuous ribbon along the perimeter of the course within the corridor.

14. Through use of flagging, channel all participants off the Boulder Corridor Right-of-Way and into the wash and Road segment south of the corridor. Through the use of continuous ribboning or construction fencing, limit use to the active portion of the wash.

15. Pennant ribboning or barrier tape is to be used at the sharp turn in the course where entrants gain access to a gravel road about 1.5 miles due east of Yucca Mine. Such flagging will clearly identify the route to be taken.

16. Limit pit access to designated open vehicle routes.

17. Clearly mark the limits of Pit 1 and the race course with flagging, signs and temporary race fencing (see also #24 below).

18. Limit access to Pit 2 to designated routes. Clearly mark the limits of the pit and race course with flagging, signs, and temporary race fencing.

19. Pit 1 will be limited to 8 acres of impact (approximately 100 X 3,400 feet). Pits 2 and 3 will be limited to 10 acres of impact (approximately 150 X 2,900 feet). Each pit marshal shall lay out and clearly mark his pit area and take steps to keep pit crews and entrants within those bounds, beginning at 6:00 p.m. the day before the race.

20. Pit entrances and checkpoints will be signed "NO OHV RIDING PERMITTED WITHIN OR AROUND AREA. RACERS ARE RESPONSIBLE FOR THEIR CREWS". No vehicles will be allowed at checkpoints except for designated or safety and emergency vehicles.

21. Pit crews will be consolidated. A maximum of 250 pit vehicles will be allowed. Pit passes will be issued. Only pitting vehicles will be allowed in pits.

22. Play-riding will not be allowed in any pit areas.

23. The marshal will inspect fuel storage areas to ensure safe storage of containers away from fires. Pits will be inspected by BLM for any fuel spills requiring cleanup.

24. Place appropriate flagging to channel all participants around WSA 242 and into Pit 1. At Pit 1, place temporary race fencing along the south edge of the course to restrict access to the WSA.

25. The race marshal stationed at the southern end of Pit 2 shall be advised of the cultural sensitivity of the area near 4-SBR-2226 and will be instructed to direct spectators and pit crew members away from this area.

26. The access road to all pits shall be heavily posted to deter camping and off-road vehicle activity.

27. The sponsor will be responsible for closing gates after the race. The sponsor has the sole responsibility for coordinating how the gates are to be left with the BLM and the grazing lessees.

28. All gates specifically opened for the race will be closed upon completion of the event. It will be the responsibility of the AMA to ensure that this requirement is met.

29. All flagging will be left up through December 2, 1990, to provide sufficient time for monitoring activities. District 37 must remove flagging between December 3, 1990, and January 7, 1991.

30. On BLM lands, course marking will be removed between December 3, 1990, and January 7, 1991. If the race is canceled, any markings will be removed by the sponsor within 14 days after notification of the cancellation. Failure to do so will result in a minimum charge of $400.00 for contracted clean-up service.

31. Trash and food items shall be removed from all areas of the event within 48 hours.

32. Road surfaces shall be regraded and/or water diversion measures established as required by the BLM in conjunction with site inspections by all interested parties following the conclusion of the race. The final decision on requirements for road repairs shall be made by the BLM within one month following the event. BLM will provide District 37 written notice specifying those roads or roadways which AMA must grade and will establish a timetable for that grading. District 37 shall be required to provide all funds, equipment, personnel and other materials as required to comply with road grading and repair requirements.

33. Should the Bureau require portions of the course to be graded after the event, the grader shall be accompanied by a qualified tortoise biologist, approved by the BLM, when in tortoise habitat. The biologist shall direct the equipment operator so that tortoise burrows are not affected. The biologist shall be provided with a map and a description of all tortoise burrows located during the pre-race surveys.

34. The sponsor will restore to the satisfaction of the BLM's authorized officer any lands requiring soil, vegetative, or other environmental stabilization as a result of the event. District 37 will accompany BLM on this survey.

35. The permittee will be responsible for the repair and/or restoration of any improvements placed on public lands by the BLM or its authorized users that are damaged as a result of the event.

Part III RACE COURSE STIPULATIONS

1. The sponsor shall provide safety-related instructions to all participants. Items to be covered shall include: instructions on assistance to injured riders, including notification of paramedic crews; warnings about types of hazards along the course; precautions to be taken in regard to proper use of fuel containers.

2. In the event of inclement weather, the sponsor shall post a flood watch at all large washes to warn participants if flood hazards exist.

3. At the discretion of the authorized officer, the race may be postponed due to inclement weather conditions or if soil conditions or other factors warrant.

4. This permit is for a timed start, hare and hound motorcycle/(ATC) Quadcycle race. The race will start in waves of no more than 25 riders per wave. The waves will be at minimum one minute apart with a break of several minutes between the 5 divisions. Delays may occur due to accidents or other circumstances. A maximum entry of 1,200 will be allowed. Entrants must be encouraged to sign up by mail. If the maximum entry has not been reached before the scheduled race, entrants will be allowed to sign up at the start no later than midnight the day before the race.

5. A copy of handouts to be sent to all entrants and made available to spectators as they arrive. Handouts will include maps and rules of conduct clearly explaining what activities are or are not allowed and where.

6. It is the responsibility of the sponsor to ensure that all entrants meet existing State and Federal regulation and equipment requirements.

7. All residents of the State of California are required to be registered with the State of California as evidenced by the attachment of the "green sticker".

8. General spectator and competitor camping will be allowed only at designated areas within the Alvord Road Start Area (the "main camp"). Pits 1, 2, and 3 will provide camping for Pit and Support Crews only.

9. By November 21, the Camp Area will be clearly marked so as to leave no question about the boundaries within which the appropriate activities may occur.

10. The camp entrance area will be marked with signs stating "NO OHV RIDING PERMITTED WITHIN OR AROUND CAMP AREA OR START CONE. RACERS ARE RESPONSIBLE FOR THEIR CREWS." There will be no "bomb" practice or running motorcycles/quadcycles. Race machines may be ridden to designated test area only.

11. Play riding will not be allowed.

12. Through posting of appropriate BLM signs, the sponsor will discourage participants and spectators from congregating or camping within 1/2 mile of range improvements or springs.

13. Spectators will not be allowed along the course in Shadow Valley other than at Excelsior Mine Road.

14. Spectators will not be allowed along the course in Nevada other than at the finish area.

15. Spectators and spectator vehicles will not be allowed in pitting areas.

16. Spectators will be discouraged from lining up along the course. The course will be closed by the BLM to non-race related use to provide for public safety.

17. District 37 marshals shall be located at checkpoints/monitoring stations along the course. The marshals shall discourage campers, spectators or support crews from entering portions of the course unauthorized for such use. Detailed instructions shall be given to the marshals at a meeting to be held before the race.

18. The sponsors will appoint marshals for the main camp, start cone, pits, and finish areas. They will be responsible for enforcing all applicable permit stipulations in their areas until relieved of their duties by the District 37 sweep crew. Alternate marshals will be available at each pit to serve as backup. The marshals will be part of the Incident Command System.

19. Station race official at specific locations along the course through tortoise habitat to ensure racers remain within the race corridor.

20. An official symbol or letter of authorization should be carried on the person of any District 37 official prior to and during the event.

21. Station flagmen at the Excelsior Mine Road crossing and at the course intersection with Greens Well Road.

22. Start waves will be limited to a maximum of 25 riders.

23. To ensure that riders stay within the confines of the designated start area, the entire length of the start "funnel" shall be clearly marked, and the beginning and end of the start line signed one week before the event.

24. Any rider who strays from the designated course shall be disqualified. The designated course is defined as within the outer boundary flagging in areas where corridor flagging is used and from berm to berm (unless otherwise flagged) in roads, trails, and washes where this restriction applies. Passing shall occur only within the confines of the designated course. Should any support crew violate any stipulation aimed at the protection of the tortoise, the rider(s) associated with that crew shall be disqualified.

25. Develop a funnel using pennant flagging, or other suitable material, to direct riders into 60 foot corridor sections.

26. Use flagmen at the intersection of the course and Route 127 to control participant crossing highway.

27. Use of support vehicles is restricted to existing routes of travel.

28. AMA will provide personnel to follow behind the last starting line to locate all disabled vehicles or injured riders along the course. Names and race numbers of all riders shall be given to the marshal at the next pit or the finish area. All participants will be instructed to contact pit or finish area marshals about missing riders. Only after the course has been cleared between each pit will the duties of those marshals end.

29. On the morning of the race, the AMA will station volunteers near the crossing of the Boulder Corridor Road and State Highway 127 to inform the public that the route is closed. Volunteers should have maps to direct spectators to the start and the finish line.

Part IV ENVIRONMENTAL STIPULATIONS

1. Race Officials shall immediately bring to the attention of the BLM Incident Commander any archaeologist resources encountered during the event and maintain the integrity of such resources pending subsequent investigation.

2. Prior to the race, a BLM archaeologist will check culturally sensitive areas for proper flagging and monitoring.

3. The sponsor will send letters, at least 30 days prior to the race, to the grazing lessees notifying them of dates and the actual route of the race.

4. Areas within one mile of range water improvement will be identified in a way to alert riders of the potential hazard of cattle or burros on the course.

5. The Bureau shall assign, for the duration of the event, at least one ranger to each of the following areas: Pit 2, Pit 3, and the finish line at Cactus Kate's Casino. The intent of this condition is to restrict play riding and other activities which may be detrimental to tortoises and their habitat in the vicinity of these areas. Rangers and other BLM monitors will also be assigned other areas based on a law enforcement plan and monitoring requirements.

6. Race officials will immediately communicate to the BLM Incident Commander any discovery of sabotage or attempted sabotage of the sanctioned event. The officials will take appropriate steps to secure the scene of any such sabotage without disturbing physical evidence.

7. The race sponsor shall designate an individual as a contact representative who will be responsible for overseeing the participants' compliance with protective stipulations for the desert tortoise and coordination with the Bureau.

8. Participants shall be informed of the occurrence of the desert tortoise in the area and the status of this species. They shall be advised as to the potential impact to tortoises and the potential penalties (up to $50,000 in fines and one year in prison) for taking a threatened species. The sponsor shall provide to each participant a written statement indicating this information and explaining the stipulations regarding the tortoise. Riders shall sign and return these statements to the sponsor prior to the race's start. A copy of the written statements will be provided to the BLM by 9/15 of the current year for review and approval.

9. The Bureau shall conduct (by BLM personnel or contract) a pre-race tortoise sweep at first light the morning of the race.

10. Trash and food items shall be removed by the participants. The organizers of the event shall arrange to have a tail vehicle follow the participants and pick up any garbage that is inadvertently left behind. Should this vehicle encounter any tortoises which have been injured or killed during the race, the location of the take shall be prominently flagged and the sponsor's designated representative and the Bureau employee notified as soon as possible.

11. The route of the proposed course shall be clearly marked or flagged. Tortoise burrows along the course shall be clearly marked with hazard flagging and barrier tape to prevent crushing. BLM will delineate where marshals will be stationed. Checkpoints are those areas where riders must have their cards marked by a race official and are designed to eliminate short-cutting the course. All riders shall have their cards inspected at the conclusion of the race and anyone without all of the required checks shall be disqualified.

12. No later than two days after the event, Bureau personnel shall begin examining those portions of the course within desert tortoise habitat for tortoises which have been killed or injured as a result of the event. Their location shall be recorded and this information shall be provided to the Service's Laguna Niguel Field Office within one work week of the event. This report shall include, at a minimum: the location(s) of the take(s); the circumstances surrounding the incident(s), if known; and the names of the persons comprising the monitoring team, and the Bureau's and sponsor's designated representatives. Should any take of tortoises be noted, the Bureau shall reinitiate formal consultation with the Service at the earliest opportunity.

13. The Bureau and the sponsor shall conduct a joint post-race monitoring study to determine the actual impacts of the race on tortoises and tortoise habitat. Every burrow marked during pre-race surveys shall be located and its condition noted. The Service may participate in this effort. The details of the monitoring plan shall be finalized, in coordination with the Service, prior to the race and implementation of the plan shall begin within two days of the race's completion.

14. All race vehicles shall stay within the designated course limits. Should vehicles break down, they shall be moved to the side of the road, avoiding damage to vegetation as much as possible. Should participants stop to rest, they shall pull over onto side roads or other areas devoid of any perennial vegetation. Should riders retire from the race, they shall either wait along the course for the sweep truck or travel along the course to a pit area.

15. The sponsor will discourage participants from collecting or disturbing wildlife, livestock, cultural resources, and vegetation. There will be no collection of dead or down wood for campfires. The sponsor shall notify race participants of the presence of desert tortoises in the area, that the species is listed as threatened and protected by law, and that collection for pets is unlawful.

16. Place appropriate flagging and marshals to channel all participants into the wash on the north side of the road to prevent access into WSA 228.

17. Through course markers, assure no riding on Silver Dry Lake.

APPENDIX II

BARSTOW TO VEGAS RACE

MONITORING REPORT SUMMARY

APPENDIX II
SUMMARY MONITORING REPORT
BARSTOW-TO-VEGAS

I. Barstow-to-Vegas Events of 1983 through 1988

Each monitoring of the Barstow-to-Vegas event has been followed by an overall race evaluation. Based on these evaluations, adjustments and stipulations were added to further mitigate impacts and define the race corridor.

For the 1983 and 1984 events, 26 transects were set up to study changes in perennial plant cover values. The sites selected for monitoring were located in representative plant communities with high sensitivity and resource value (i.e., UPA's, prime desert tortoise habitat, etc.,). Base line data were collected prior to the race, and post race comparison data were collected the following spring. Some of the transects were photographed, mostly within WSA 242. Sites utilized for transect location were selected to document the greatest or "worst case" use.

Reports from the monitoring of the 1983 and 1984 races stated that impacts seemed to be short term in nature, were mostly unnoticeable from 50 feet away, and that damage levels were lower than or equal to the 1982 plan amendment projected levels. Monitoring efforts found one tortoise burrow damaged from a race vehicle. Four of the 26 transects showed a reduction in perennial plant cover values. Some of the other transects could not be found, were removed, or were washed away. Impacts to perennial vegetation resulting from soil shearing/compaction, plant stress or desiccation, and route damage were not measured. WSA impairment did not occur, however, recommendations were to limit any reroutes to roads and eliminate cross-country corridors. Pit areas needed better flagging and improved spectator control. A recommendation by BLM monitoring crews to limit post race vegetation/wildlife monitoring to every third year instead of after every race was introduced. The request was proposed in 1983 because it was thought that the yearly timeframes did not appear to be long enough to pick up appreciable changes in cover and species composition.

The recommendation for monitoring every third year was implemented following the 1984 race and no monitoring reports were done on the 1985 and 1986 events.

Methods utilized for the 1987 and 1988 events were visual observations by race monitors, usually BLM rangers or recreation staff members. No vegetative data from field studies were documented in the 1987/88 monitoring reports, because no post race evaluation of impacts to resources was conducted.

Results of monitoring reports indicate that dust was a problem, but that it dissipated rapidly, and no lasting effects on air quality were noticed. Spectator and vehicle control was again a major problem. Although no data was collected to support the views of the observers, the consensus for both the 1987 and 1988 race was that habitat damage on the race course was not severe.

Ecotage group(s) attempted to sabotage the 1987 and 1988 races. All attempts were discovered and failed to stop the race, but the acts indicated increased frustration with BLM and District 37 decisions to allow the race to continue.

In summary, other than the transect monitoring in the 1983 and 1984 events, the pre-1989 events based monitoring on the visual observations made by BLM staff.

II. Barstow-to-Vegas 1989 Event

Monitoring for the 1989 event was two fold. A tortoise monitoring program was developed to monitor the effects of stipulations designed to protect the tortoise. Additional monitoring was conducted throughout the course to monitor impacts and the effectiveness of race stipulations.

A. Desert Tortoise Habitat Monitoring

In 1989, new requirements were placed on the event to protect the emergency listed desert tortoise and its habitat. Measures were instituted to reduce potential adverse effects associated with the event to the tortoise. These measures included the relocation of the start and first 25 miles of the race onto the Fort Irwin military base, flagging the race corridor in addition to the center line, narrowing course width to 25 feet through tortoise habitat, prompt removal of trash items, and stationing race officials in tortoise habitat areas to ensure participants remained within the race corridor. An integral component of the measures to protect the tortoise was the development and implementation of a monitoring program for the desert tortoise. The focus of the monitoring effort was the determination of the effects of race activities on the tortoise, and the levels of compliance with protective stipulations for this species during the event.

The intent of the monitoring plan for the tortoise was to obtain information, based on comparisons between pre-race and post-race course condition, on the following:

- Effectiveness of corridor flagging at minimizing straying of vehicles.
- Effectiveness of flagging or course adjustments to protect desert tortoise burrows discovered during biological surveys of the course.
- Injury or mortality to any individual desert tortoises present in the area occurring as a result of the race.
- Effectiveness of event mitigation measures (e.g., use of marshals, flagging, etc.) for race course control and for spectator control.

1. Methodology

Before the race, line intercept transects were established along the race corridor through desert tortoise habitat at one mile intervals. Each transect was perpendicular to the race course. A short wooden stake was driven into the ground at the road berm or outside edge of the course. A 100-foot tape was stretched perpendicular to the course where another short wooden stake was placed. Transects were established on both sides of the course at each location. A total of 30 pairs of transects were established through tortoise habitat. Pre-race data collection included recording the vegetation and vehicle tracks intercepted by the transect line. Collection of post-race data in the same manner resulted in a quantification of change.

The sections of the course which passed through desert tortoise habitat were surveyed by biologists before the race for the presence of desert tortoises. The desert tortoise burrows found along the course were flagged with barrier ribbon and warning signs with the intent that the burrows would be avoided by the racers.

The course through tortoise habitat was inspected before the race for the presence of individual tortoises above ground and after the race for any direct instances of harm or mortality to desert tortoises.

Pits were monitored during the race and inspected after the race for compliance with permit stipulations.

2. Results

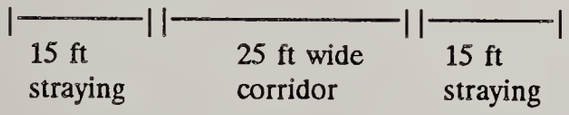
Desert tortoise burrows located and flagged during the pre-race survey in the Barstow and Needles Resource Areas were avoided by the racers and were not impacted. In the Stateline Resource Area, three tortoise burrows were disturbed and impacted by racing participant vehicles. Each impacted burrow area showed obvious disturbance from course widening caused by a lack of adequate flagging and warning signs.

The pre- and post-race sweep of the course through desert tortoise habitat detected no tortoises.

Pits were fairly well flagged and defined. Trash was controlled and removed properly. Flagging and signing at pits, as well as other sections of the course, were removed immediately following the race in violation of permit stipulations requiring flagging remain until after December 3, 1989.

A total of 30 pairs of tortoise corridor transects were established perpendicular to the course through tortoise habitat. The 8 transects in the Barstow Resource Area showed vehicles had strayed outside the race corridor an average of 27.6 feet. In the Needles Resource Area, 16 transects showed that race vehicles strayed outside the race corridor an average of 31.9 feet. Six transects in the Stateline Resource Area of the Nevada portion of the course showed that race vehicles strayed outside the race corridor an average of 32.8 feet. These transects indicated that overall, vehicles strayed an average of 30.7 feet outside the 25 foot race corridor through desert tortoise habitat.

The following profile illustrates the average amount of straying which occurred through desert tortoise habitat.



3. Discussion

The transect data through tortoise habitat shows that straying extended out from the corridor boundaries an average of 30 feet. An analysis of the data (transect data, photographs, and BLM staff observations) indicates that the corridor flagging was not effective at minimizing the straying of vehicles outside the flagged corridor. The type of terrain appeared to be a more effective controlling factor in minimizing straying than was flagging.

The data collected through the sandy soils of the first 3 miles of desert tortoise habitat in the Barstow Resource Area indicates a race corridor twice the stipulated width. The next 2 mile section showed that the majority of racers remained on the stipulated course defined as between the berms of the powerline road. In this section, a trail 13.2 feet wide was observed established outside the permitted course as well as at least 34 individual tracks. This straying off the permitted course extended out to approximately 70 feet on both sides of the course. The following 2 miles were through a very rocky section which discouraged straying. The majority of racers remained within the stipulated width. There were, though, at least 53 individual tracks observed extending approximately 25-35 feet outside both sides of the course.

In the Needles Resource Area, corridor flagging appeared to be spaced at distances too great to adequately delineate corridor boundaries. Despite some efforts made by the District 37 to confine racers within identified corridors, such measures were ineffective. Generally, where opportunities to shortcut the course or avoid washboard were available, racers took advantage of those opportunities, thereby widening the course beyond its stipulated width. Straying from the course was least frequent in those areas where terrain features restricted riding outside the course, or where the course itself presented the fastest line of travel.

The desert tortoise burrows located and flagged during the pre-race survey in the Barstow and Needles Resource Areas were avoided by the racers and were not impacted. The Needles staff also noted additional burrows near the course which were not flagged, suggesting that the pre-race survey conducted by a biologist contracted by District 37 was not thorough.

In the Stateline Resource Area, 12 tortoise burrows were flagged during the pre-race survey. The post-race survey by BLM staff detected that 3 of the 12 flagged burrows were impacted by numerous passes by motorcycles and ATVs. Each impacted area showed obvious disturbance from course widening caused by a lack of adequate flagging. The condition or presence of tortoises in the burrows impacted in the Stateline Resource Area is unknown.

The post-race sweep of the course through tortoise habitat was conducted by BLM staff immediately following the race. No tortoises were found.

Corridor flagging and the presence of District 37 officials, BLM staff, U.S. Fish and Wildlife Service staff, and Sierra Club representatives in the area of the desert tortoise habitat within the race corridor proved insufficient at controlling straying and the widening of the course. Several corners flagged in the Needles Resource Area were shortcutted by racers despite flagging and the presence of race marshals.

B. Additional Monitoring

In addition to the transects established through the desert tortoise habitat, post-race data was collected along the course through the Barstow Resource Area at 0.1-0.5 mile intervals. Data collected included 1) the width of the permitted or stipulated course, 2) the width of the actual course, 3) the number of tracks and number and width of trails formed outside of the stipulated course, and 4) the distance outside of the stipulated course which was utilized by the racers. If tracks showed signs of weathering or age they were not included in the data collection.

Through the Needles Resource Area, additional transects, identical to the tortoise transects, were established along the course in areas outside tortoise habitat.

1. Methodology

Through the Barstow Resource Area, at 0.1 to 0.5 mile intervals, depending upon the terrain and resource sensitivity, the width of the actual course utilized by the racers and the amount of straying outside the course was measured and noted.

Transects were established similar to those established in desert tortoise habitat in the Needles Resource Area. The width of the course in the transect areas was limited to berm to berm or as otherwise flagged such as through a wash.

2. Results

The course widths through the Barstow Resource Area were averaged for 6 sections of the course and are shown in Table 1.

Table 1 Average Course Widths

Area	Length (miles)	Average Course Width (feet)
Red Pass Lake - Tortoise Habitat	3	49.6
Road and rocky terrain	4	27.3
West of Pit 1	3	160.7
Road and approach to Pit 1	1	14.9
Silver Dry Lake	1.7	146.2
Washes and powerline road	11	27.5

In addition to course width, trails created outside the course were measured and individual tracks were counted. Trails outside the main course were between 1.7 and 30 feet in width. Trails outside the course occurred on the average of 1 per mile.

Table 2 Straying

Area	# of Tracks	Max. distance outside course (feet)
Red Pass Lake - Tortoise Habitat	135	L = 64 : R = 66
Road and rocky terrain	87	L = 75 : R = 69
West of Pit 1	280	L = 108 : R = 102
Road and approach to Pit 1	58	L = 115 : R = 165
Silver Dry Lake	44	L = 0 : R = 142
Washes and powerline road	163	L = 188 : R = 198

In the Needles Resource Area, 20 transects were established in addition to transects in tortoise habitat. These transects showed that race vehicles strayed outside the race corridor an average of 37 feet in areas outside tortoise habitat.

3. Discussion

The additional data collected in the Barstow and Needles Resource Areas provides an analysis of the overall level of compliance with permit stipulations, which were formulated to reduce the risk of adverse effects on the environment.

Check Point One was located where the course exited Fort Irwin and entered public land. A race marshal was stationed at this location. Post-race monitoring revealed numerous vehicle tracks (including 4x4s, quads and motorcycles) off established routes throughout the area. The course intersected the 1988 Barstow-to-Vegas course and crossed Red Pass following the secondary powerline road up the west-facing slope and continued down the steep east-facing slope.

The data collected through the Barstow Resource Area desert tortoise habitat indicated that corridor flagging was ineffective in restricting racers to within the stipulated corridor width. The resulting course was two to three times the stipulated width with additional trails and individual tracks established well outside the main trail.

Between the desert tortoise habitat and Pit 1, the course was routed between the transmission towers of the powerline corridor. There was much straying from the course by racers and a total of 280 individual tracks counted outside the course in addition to 9 trails averaging between 3 and 10 feet wide. The actual course utilized by the majority of racers averaged 160 feet wide. The minimum course width measured through this area was 108 feet and the maximum 260 feet.

At Pit 1, 25 motorcycle tracks were counted shortcutting through WSA 242 to the Pit. Overall, the majority of racers remained on the course, which was defined as berm to berm distance. An additional 58 tracks were counted outside the course.

At Silver Lake, the majority of racers left the course and drove across the dry lake parallel to the course, Silver Lake Road. The road width averaged 30 feet berm to berm and the course actually utilized by the racers averaged 146 feet. Straying extended out an additional 71 to 142 feet (average 114 ft.) from the actual course.

Between Highway 127 and WSA 228, the course followed a wash to the north of the boundary of WSA 228. The actual course averaged the same distance as the stipulated width of the wash. Some straying occurred outside the race corridor.

As the course approached the main powerline road at the north boundary of WSA 228, the course was routed into the WSA. An attempt to correct the course was made during the early part of the race but was unsuccessful in returning to the 1988 course for a distance of approximately 2 miles. Approximately 30 racers had passed before the correction was attempted.

From the WSA 228 area to the Needles Resource Area boundary, the course followed a secondary powerline road.

Entering the Needles Resource Area, the course continued in a northeasterly direction within the Boulder Corridor. Within one mile prior to turning south off the Boulder Corridor, the course proceeded on the powerline maintenance road. No deviations from the course in this section were noted.

Turning south from the Boulder Corridor, the course entered a sandy wash. Along the northern half of the wash, racers generally stayed within the allowable 100-foot corridor. The southern half of the wash, having been identified for corridor flagging (25-foot width) in the November 14, 1989, Biological Opinion by the U.S Fish and Wildlife Service, was flagged in such a manner so as to be ineffective in delineating the 25-foot wide corridor, i.e., flagging was sporadic. As a result, racers strayed outside the stipulated course boundaries in numerous locations as the race progressed.

The course then accessed a dirt road and continued to the west. With the exception of one area where numerous riders strayed outside the berms of the road and created a new trail, the race vehicles were kept on the course due, in part, to the constraints imposed by adjacent vegetation.

North-northeast of Turquoise Mountain, the course intersected and continued on a paved for about one mile, and then followed a series of dirt roads in a southwesterly direction for about five miles before turning east toward Pit 2, another five miles further along the course. Transects that were established along this portion of the course revealed that in several locations, vehicles strayed outside the race corridor, which in this area was restricted to the road surface between berms. At the sharp corner located in section 18, T.15N., R.10E., racers severely shortcut the corner despite the presence of a race marshall.

Within Bull Spring Wash, located just prior to Pit 2, two transects were established. The post-race survey revealed considerable straying from the course, with three distinct trails comprised of numerous vehicles tracks having been created at one of the transect locations. At this site 16.6 feet in width of new disturbance outside the race corridor was measured.

Pit 2 exhibited no excessive disturbance beyond what was allowed.

Leaving Pit 2 the course proceeded south along a rough road adjacent to a powerline. Transects along

this route revealed occasional straying from the course. However, at the sharp turn located in section 14, T.15N., R.10E., where the course leaves the powerline, severe overshooting of the corner created an array of tracks in a previously undisturbed area despite the presence of a race marshal.

From this corner, the course continued in a northeasterly direction and utilized portions of a wash and existing roads. Through this area, some deviation from the course occurred as evidenced by the results of the post-race transect survey. Northeast of Solomons Knob, the course entered a wash identified for corridor flagging and, therefore, restricted to 25 feet in width. General observation during the post-race survey revealed considerable straying from the delineated course throughout this wash. Corridor flagging, which included the placement of placards, appeared to be spaced at distances too great to adequately define the corridor boundaries. As such, these control measures were ineffective. Generally, where opportunities to shortcut the course or avoid washboard were available, numerous racers took advantage of these opportunities, thereby widening the course beyond its stipulated width. However, it was evident that despite the efforts made by the District 37 to confine racers to the identified corridor in certain location, racers failed to comply. Some went so far as to break through barrier tape and purposely ride to the outside of course control placards.

Between this unnamed wash and Kingston Wash, the course proceeded along a dirt road. Little straying outside the course boundaries were observed in this section. However, once the racers entered Kingston Wash, another portion of the course identified for corridor flagging, considerable straying occurred. As in the previous wash, course control markings were sporadic and ineffective. Numerous racers once again ignored the flagging and placards to choose the fastest route available.

Especially apparent in the Kingston Wash area was the considerable dust raised by the passage of motorcycles and ATVs and subsequent settling of the dust up to 150 yards from the course. In an area of desert pavement, this created a noticeable visual contrast between the dark pavement beyond the dusting effect and the affected areas closer to the course.

Exiting Kingston Wash, the course proceeded northeast on a dirt road, then northwest on Green Well Road to where it intersected the Boulder Corridor. It continued along the Corridor maintenance road for about five miles. Throughout this section, virtually no deviation from the course was noted.

About two miles east of Keany Pass, the course left the Boulder Corridor and entered a wash identified for corridor flagging. As in previous washes, flagging of the course was sporadic and deemed to be ineffective as evidenced by numerous vehicles tracks outside the course boundaries. The post-race survey of one transect in this location revealed the creation of three distinct trails comprised of numerous vehicle tracks. At this location site, 22.5 feet in width of new disturbance outside the race corridor was measured.

About four miles after entering this wash, the course accessed a dirt road and continued toward Pit 3, another four miles to the east. Throughout this last section of the course before Pit 3, very little straying from the course was observed.

As with Pit 2, Pit 3 exhibited no excessive disturbance beyond what was allowed.

It was noted during the post-race survey that flagging was removed prior to the post-race survey from Pit 1 to 0.5 miles east of Highway 127, and from three miles before leaving the Barstow Resource Area, through the Needles Resource Area to Pit 2. As stipulated, the flagging should have remained in place until December 3, 1989.

Data collection through the Stateline Resource Area was limited to the pre- and post-race transects through tortoise habitat. Observations made during the post-race survey indicated areas of course widening and straying outside the race corridor.

4. Conclusion

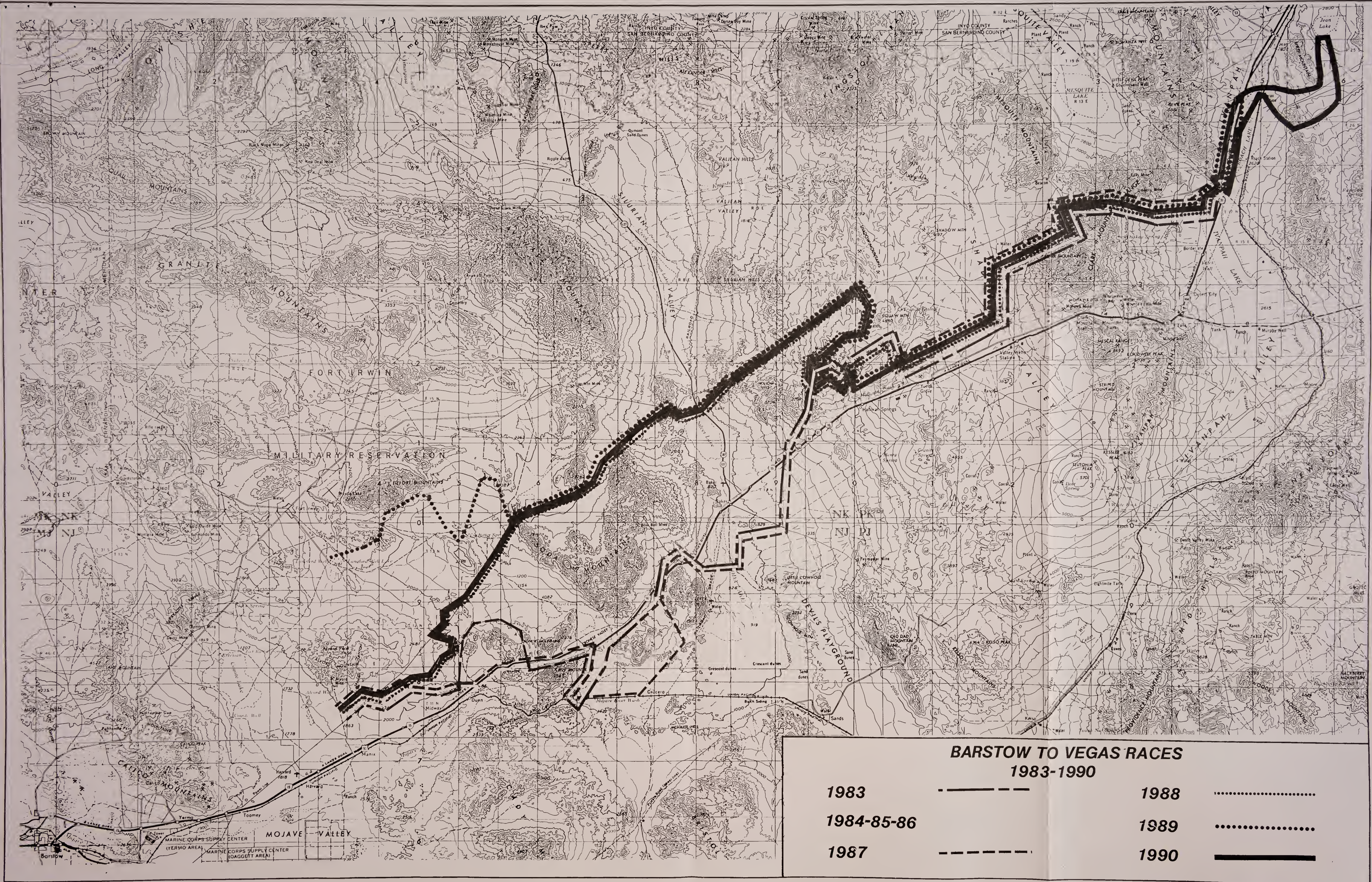
The data collected indicates that the actual course utilized by the racers was routinely wider than the stipulated width, particularly through desert tortoise habitat. Stipulations pertaining to the width of the course had a low level of compliance. Straying of many racers off the course resulted in additional trails and individuals tracks far outside the stipulated course.

Flagging was sporadic and spaced at distances too great to adequately delineate corridor boundaries. Most of the barrier ribbon placed along the race corridor appeared to be intentionally driven over. Many areas had trails 3 to 6 feet wide established immediately outside placards with arrows pointing inward.

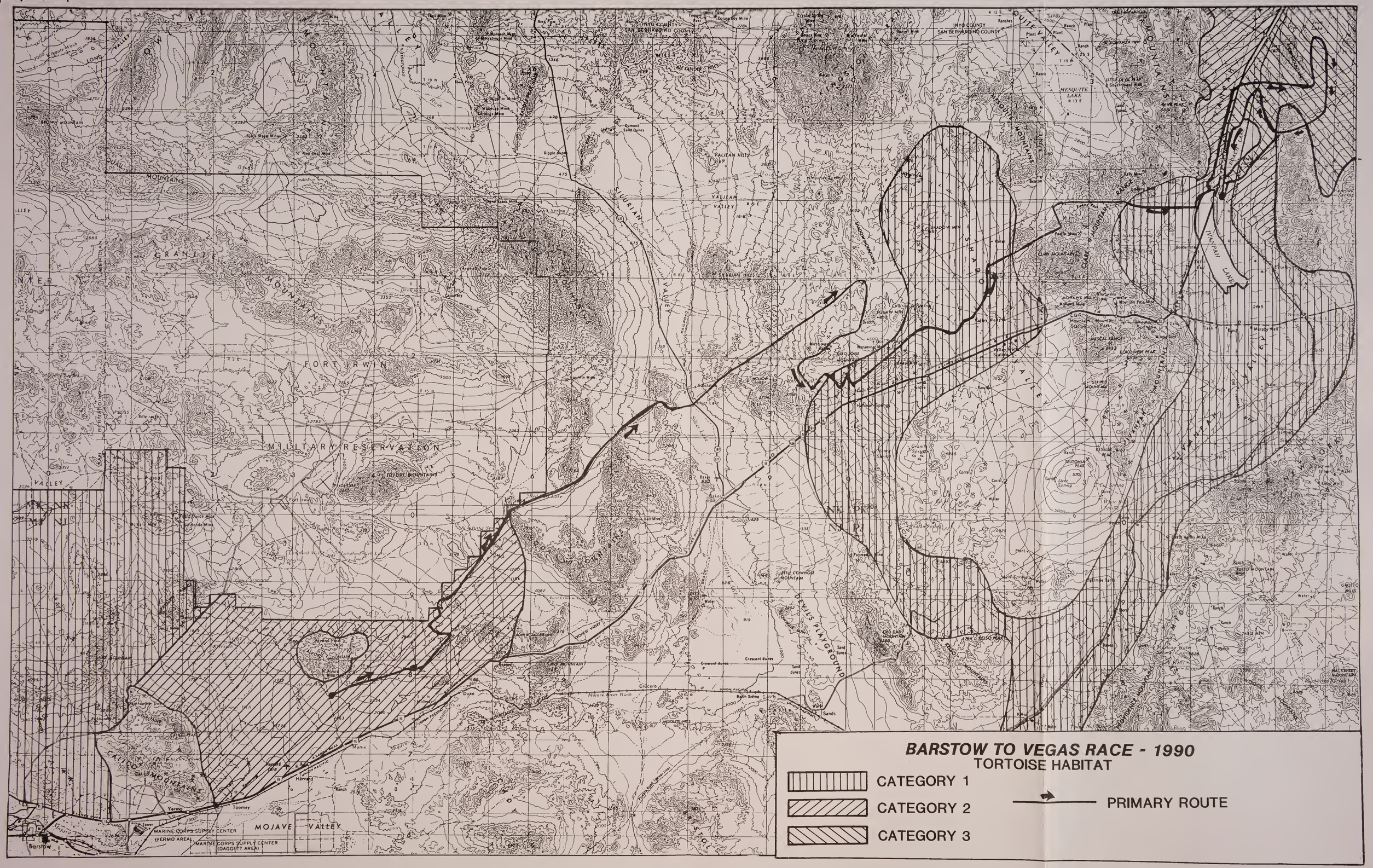
The presence and attempts of race marshals and BLM monitors to enforce the width of the race corridor proved to have little effect.

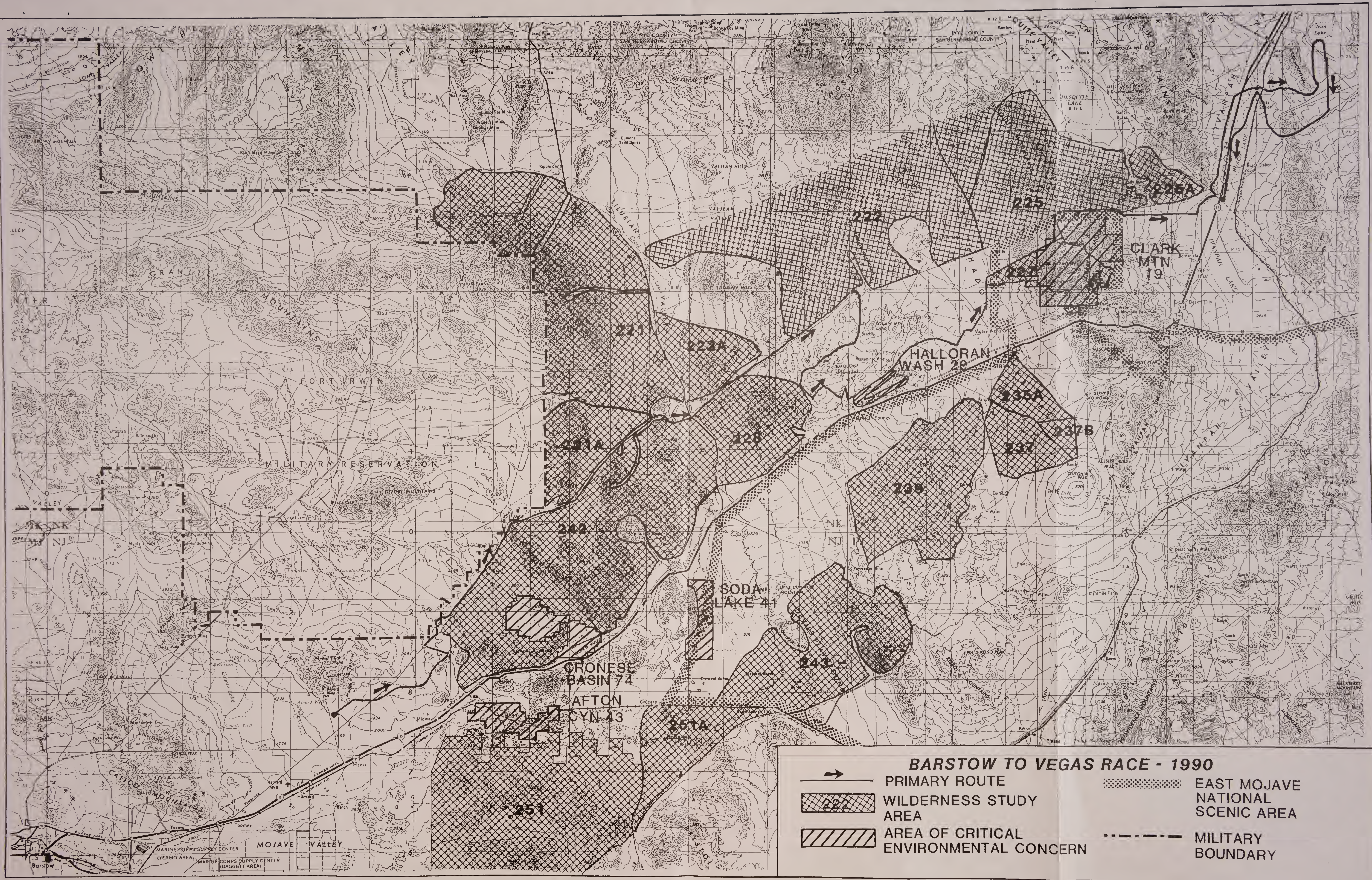
APPENDIX III

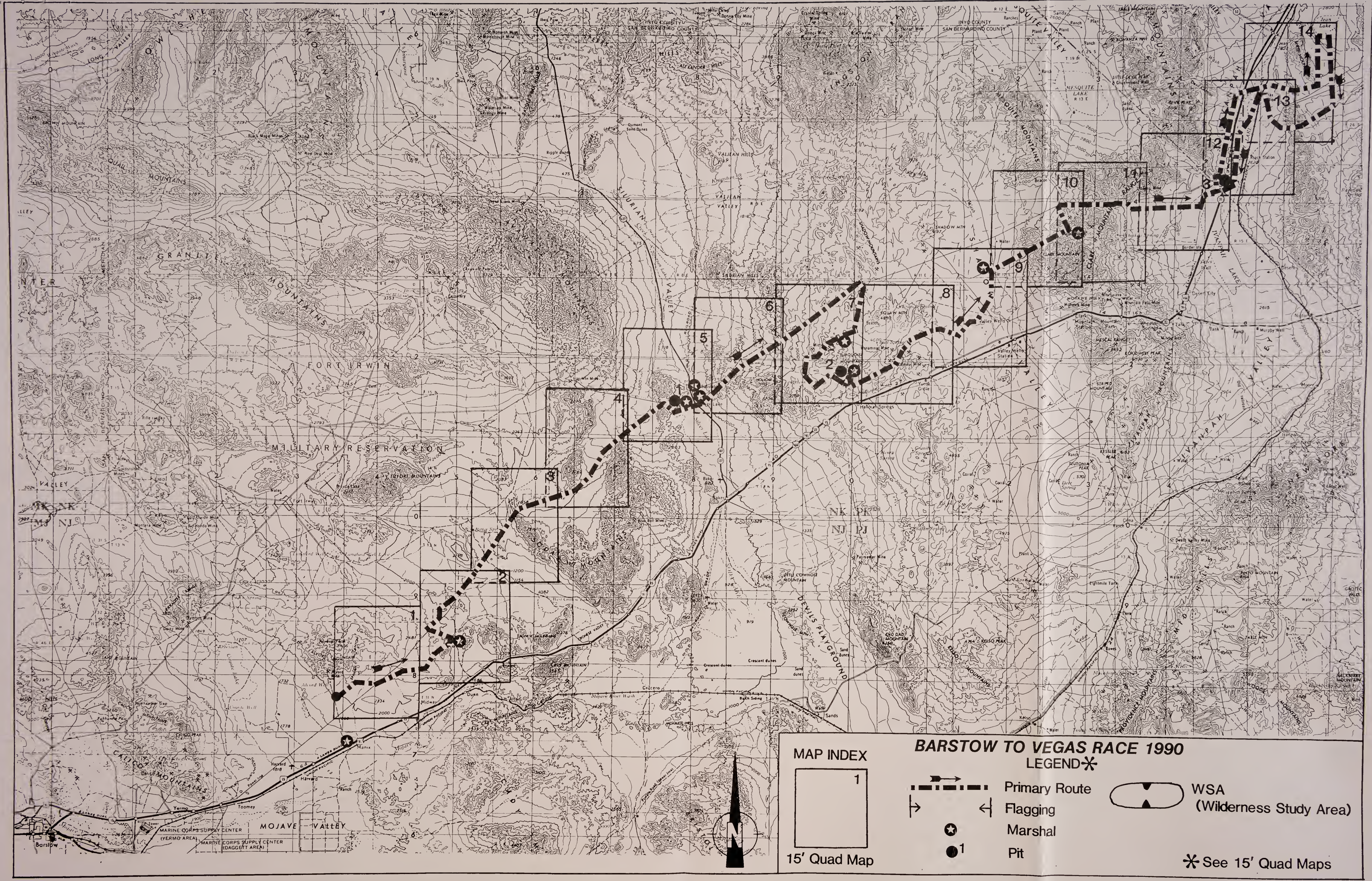
BARSTOW TO VEGAS MAPS



BARSTOW TO VEGAS RACES
1983-1990
1983
1984-85-86
1987
1988
1989
1990
FORT IRWIN
MILITARY RESERVATION
GRANITE MOUNTAINS
QUAIL MOUNTAINS
MOJAVE VALLEY
CALICO MOUNTAINS
Barstow
MARINE CORPS SUPPLY CENTER (YERMO AREA)
MARINE CORPS SUPPLY CENTER (DAGGETT AREA)
DEVILS PLAYGROUND
SILURIAN VALLEY
SILURIAN HILLS
VALJEAN VALLEY
VALJEAN HILLS
SHADOW MTN
MESQUITE MOUNTAINS
MESQUITE LAKE
CLARK MOUNTAIN
IVANPAH
KESSLER PEAK
CIMA DOME
KELSO PEAK
Crescent Dunes
INYO COUNTY
SAN BERNARDINO COUNTY
Valley Wells Station
Halloran Springs
LITTLE COWHOLE MOUNTAIN
OLD DAD MOUNTAIN
TEUTONIA PEAK
Yermo
Toomey
Harvard
Manix
Afton
Baker
Kelso
NK PK
NJ PJ

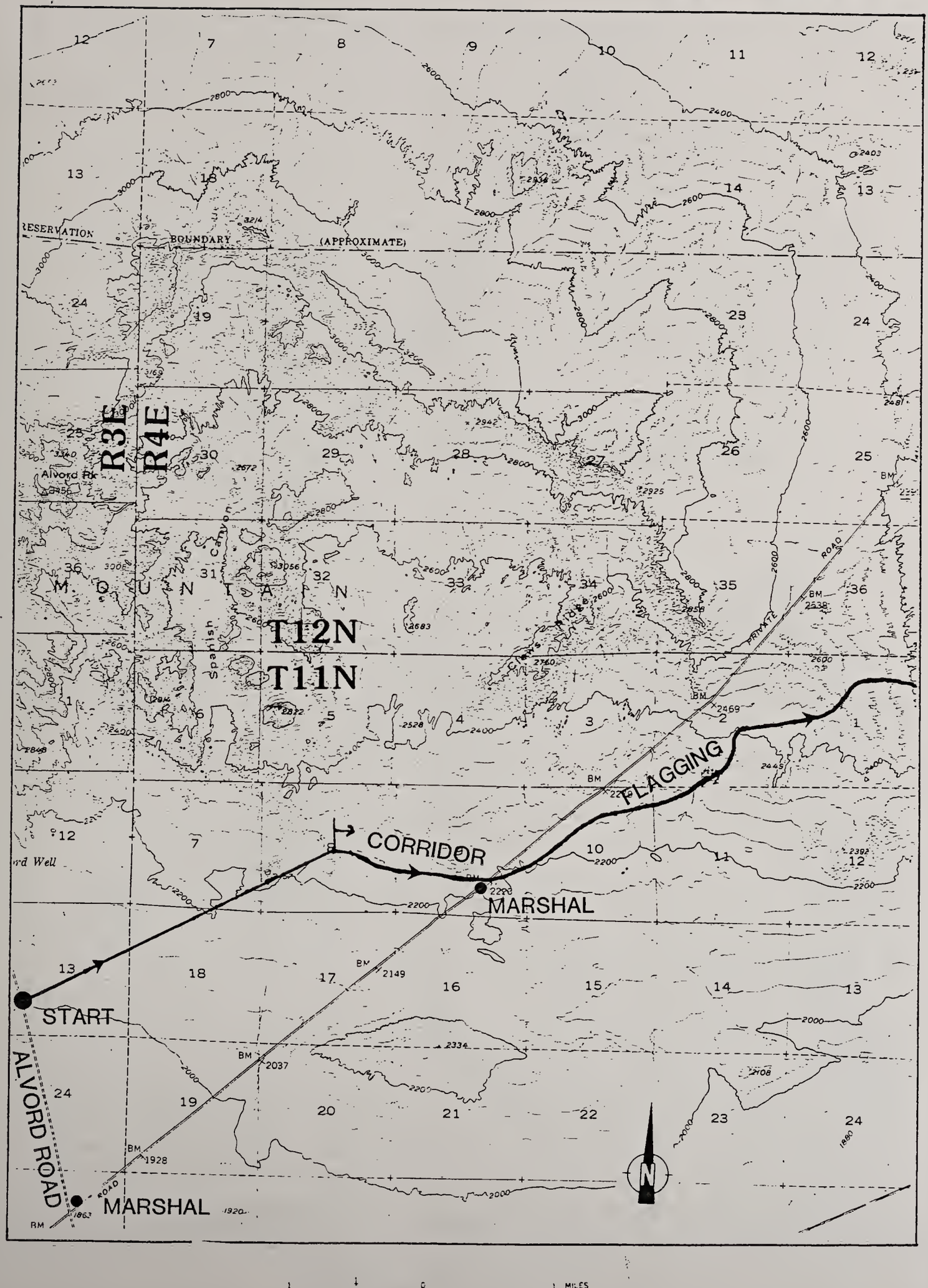

BARSTOW TO VEGAS RACE - 1990
TORTOISE HABITAT
CATEGORY 1
CATEGORY 2
CATEGORY 3
PRIMARY ROUTE
INYO COUNTY
SAN BERNARDINO COUNTY
MILITARY RESERVATION
FORT IRWIN
GRANITE MOUNTAINS
MOJAVE VALLEY
MARINE CORPS SUPPLY CENTER (YERMO AREA)
MARINE CORPS SUPPLY CENTER (DAGGETT AREA)
DEVILS PLAYGROUND
MESQUITE LAKE
IVANPAH LAKES
Barstow
Yermo
Toomey
Manix
Cinders
Crescent dunes
Sand Dunes
Sands


BARSTOW TO VEGAS RACE - 1990
PRIMARY ROUTE
WILDERNESS STUDY AREA
AREA OF CRITICAL ENVIRONMENTAL CONCERN
EAST MOJAVE NATIONAL SCENIC AREA
MILITARY BOUNDARY
222
225
225A
221
223A
221A
226
227
235A
237B
237
239
242
243
251A
251
CLARK MTN 19
HALLORAN WASH 26
SODA LAKE 41
CRONESE BASIN 74
AFTON CYN 43
FORT IRWIN
MILITARY RESERVATION
GRANITE
MOUNTAINS
CALICO MOUNTAINS
MOJAVE VALLEY
MARINE CORPS SUPPLY CENTER (YERMO AREA)
MARINE CORPS SUPPLY CENTER (DAGGETT AREA)
Barstow
Yermo

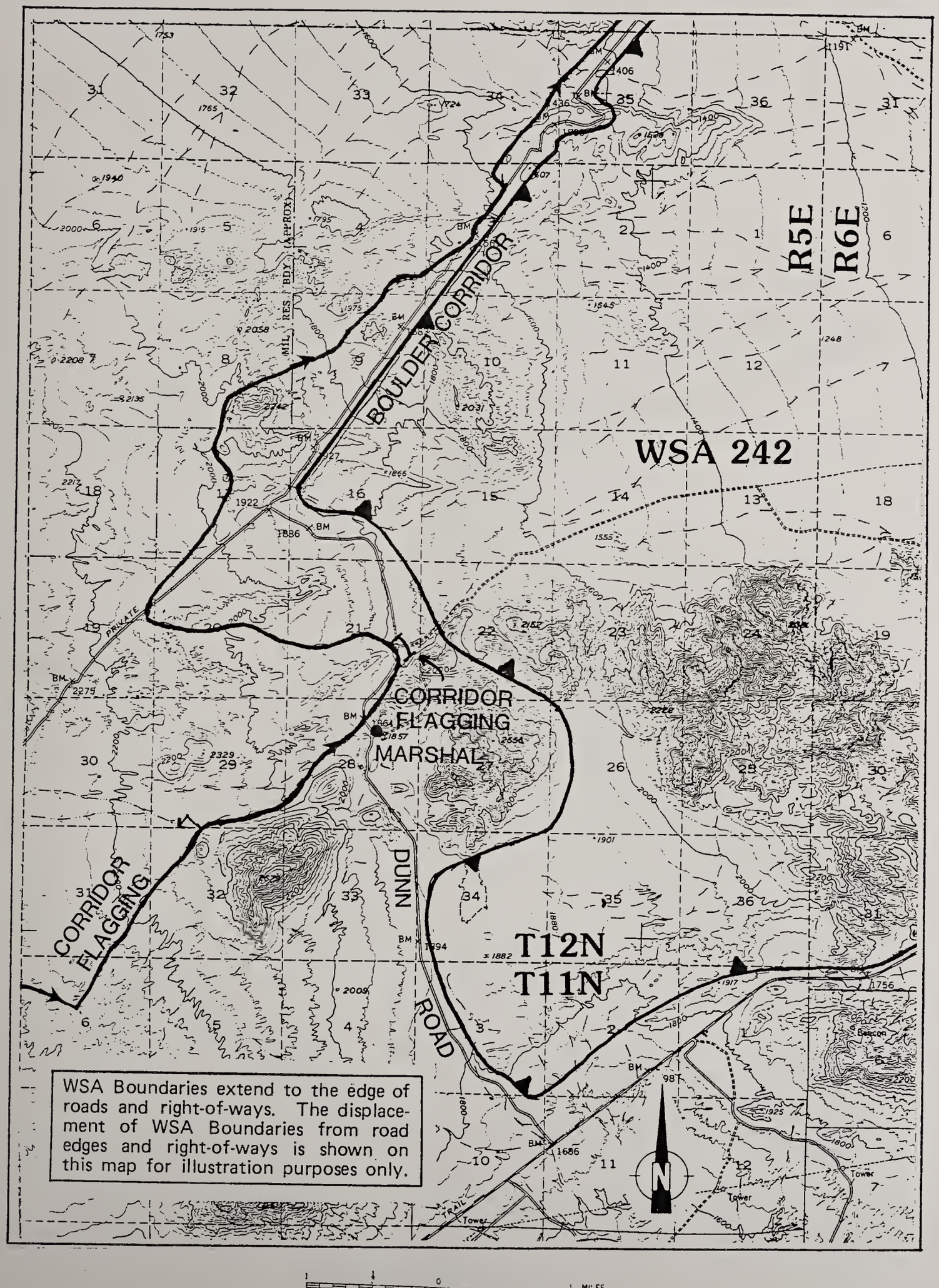


BARSTOW TO VEGAS RACE 1990
LEGEND
MAP INDEX
1
15' Quad Map
Primary Route
Flagging
Marshal
Pit
WSA
(Wilderness Study Area)
See 15' Quad Maps
FORT IRWIN
MILITARY RESERVATION
GRANITE MOUNTAINS
QUAIL MOUNTAINS
SILURIAN VALLEY
DEVILS PLAYGROUND
MOJAVE VALLEY
CALICO MOUNTAINS
MARINE CORPS SUPPLY CENTER
Barstow
Yermo
Hector
SODA MOUNTAIN
MESQUITE LAKE
1
2
3
4
5
6
7
8
9
10
11
12
13
14

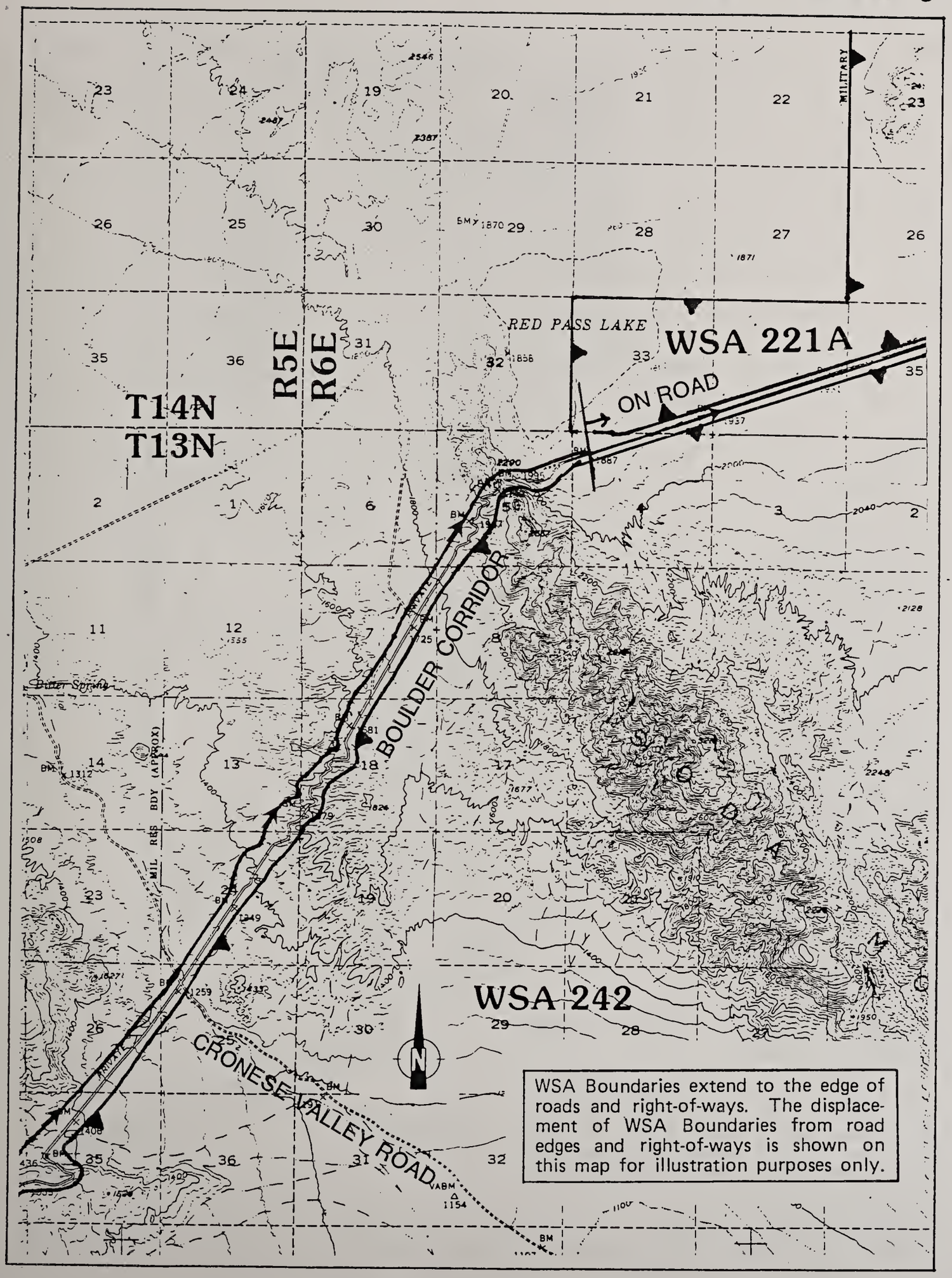
BV - MAP 1


R3E
R4E
T12N
T11N
RESERVATION BOUNDARY (APPROXIMATE)
Alvord Pk
Spanish Canyon
M O U N T A I N
CORRIDOR
FLAGGING
MARSHAL
START
ALVORD ROAD
MARSHAL
ROAD
PRIVATE
BM
N
MILES

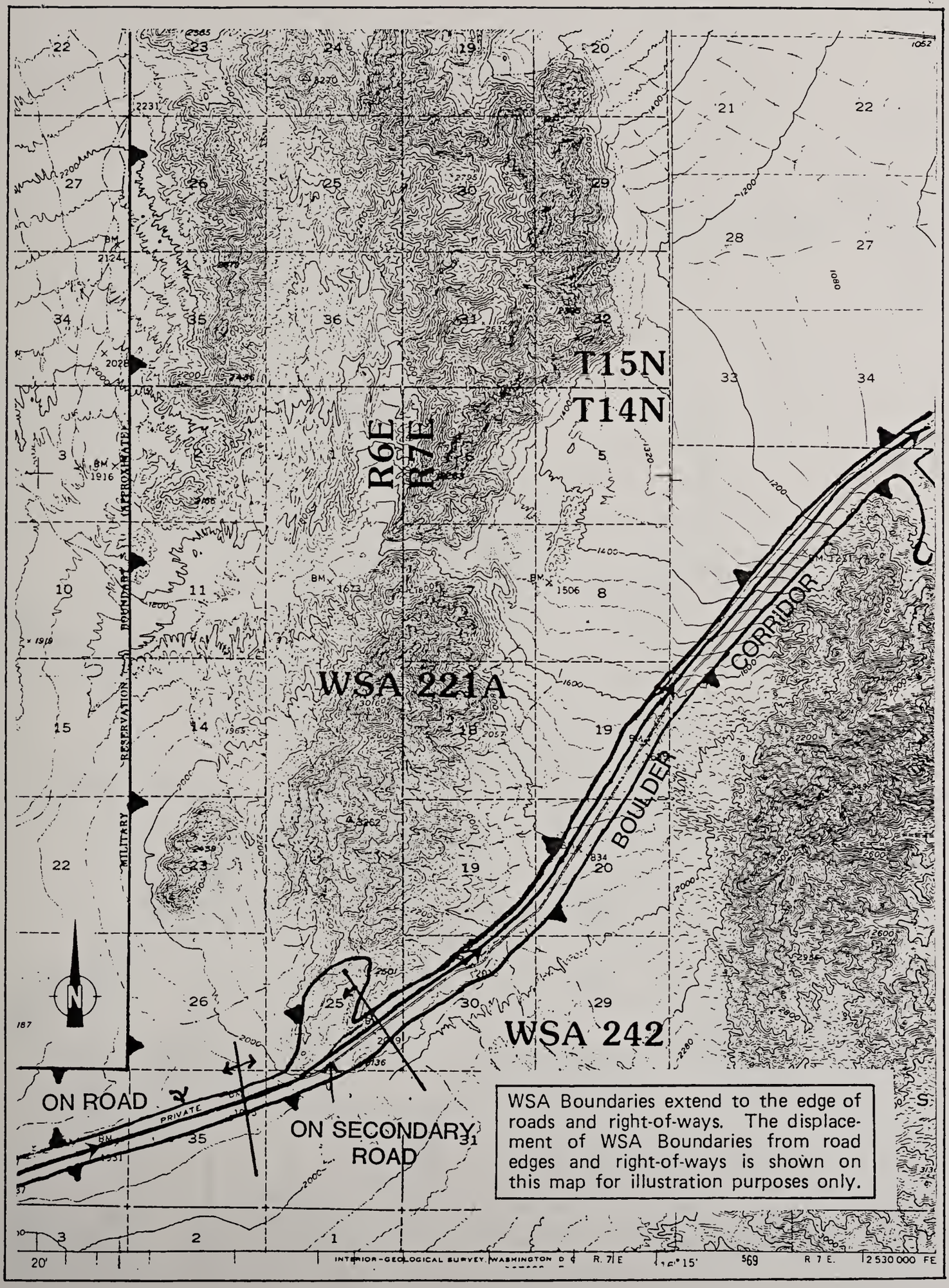
BV - MAP 2


BOULDER CORRIDOR
WSA 242
R5E
R6E
T12N
T11N
CORRIDOR FLAGGING
CORRIDOR FLAGGING
MARSHAL
DUNN ROAD
MIL RES BDY (APPROX)
PRIVATE
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
N
1 0 1 MILES

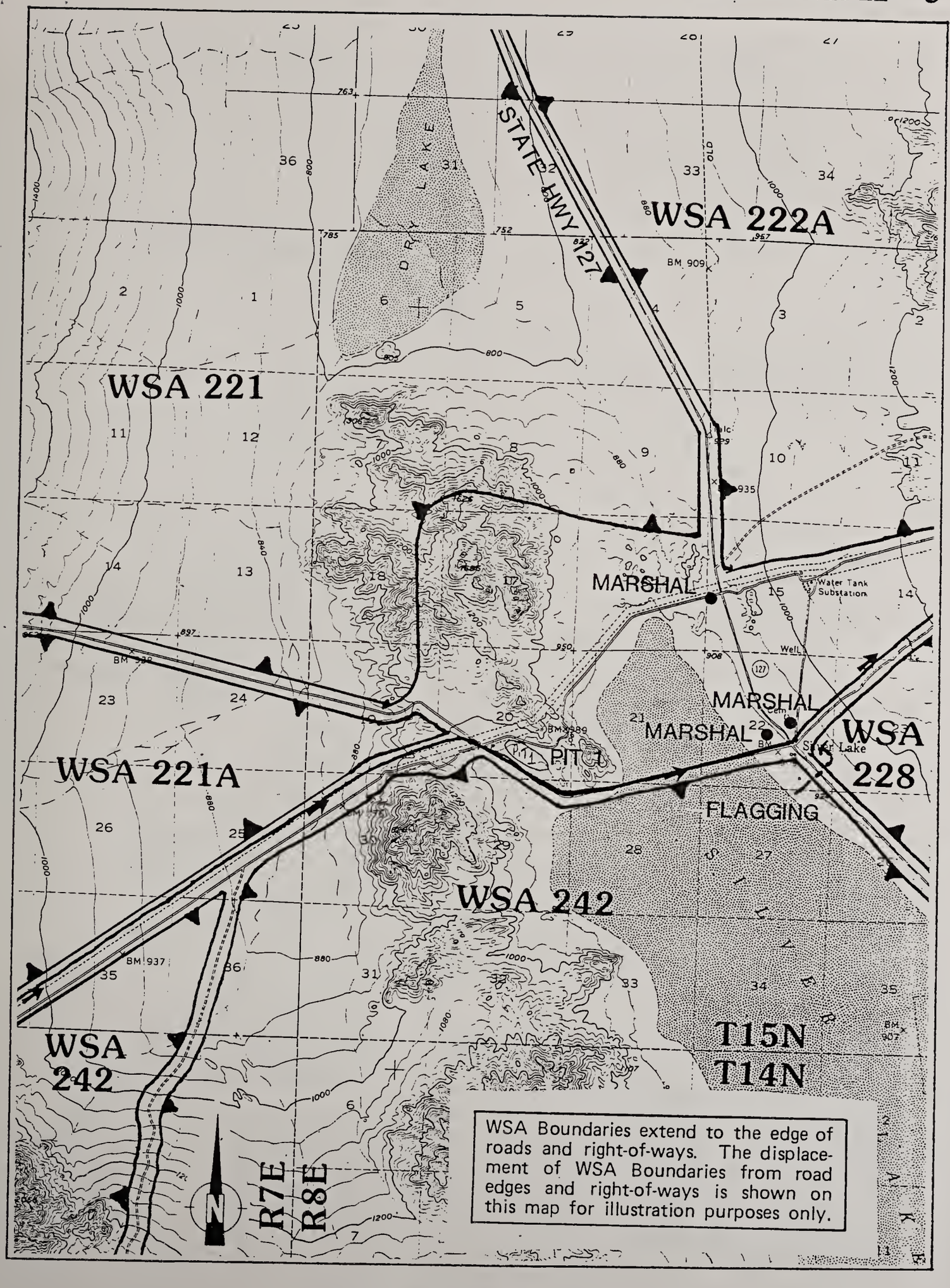
BV - MAP 3


WSA 221A
ON ROAD
RED PASS LAKE
T14N
T13N
R5E
R6E
BOULDER CORRIDOR
WSA 242
CRONESE VALLEY ROAD
MILITARY
Diller Spring
BDY (APPROX)
MIL R&S
N
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
MILES

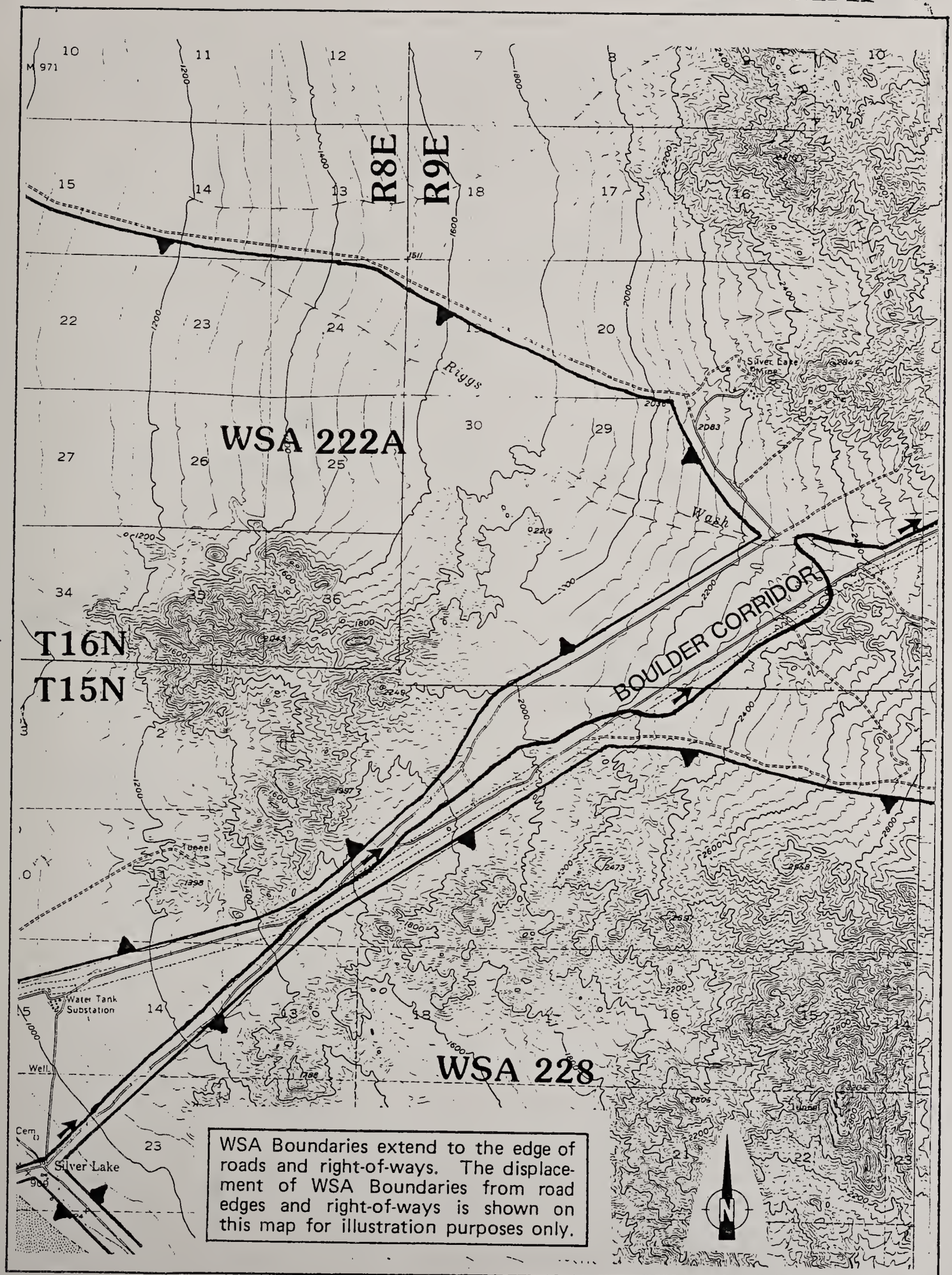
BV - MAP 4


T15N
T14N
R6E
R7E
WSA 221A
WSA 242
BOULDER CORRIDOR
MILITARY RESERVATION BOUNDARY (APPROXIMATE)
ON ROAD
ON SECONDARY ROAD
PRIVATE
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
INTERIOR-GEOLOGICAL SURVEY, WASHINGTON, D.C.
R. 7 E.
R 7 E.
MILES

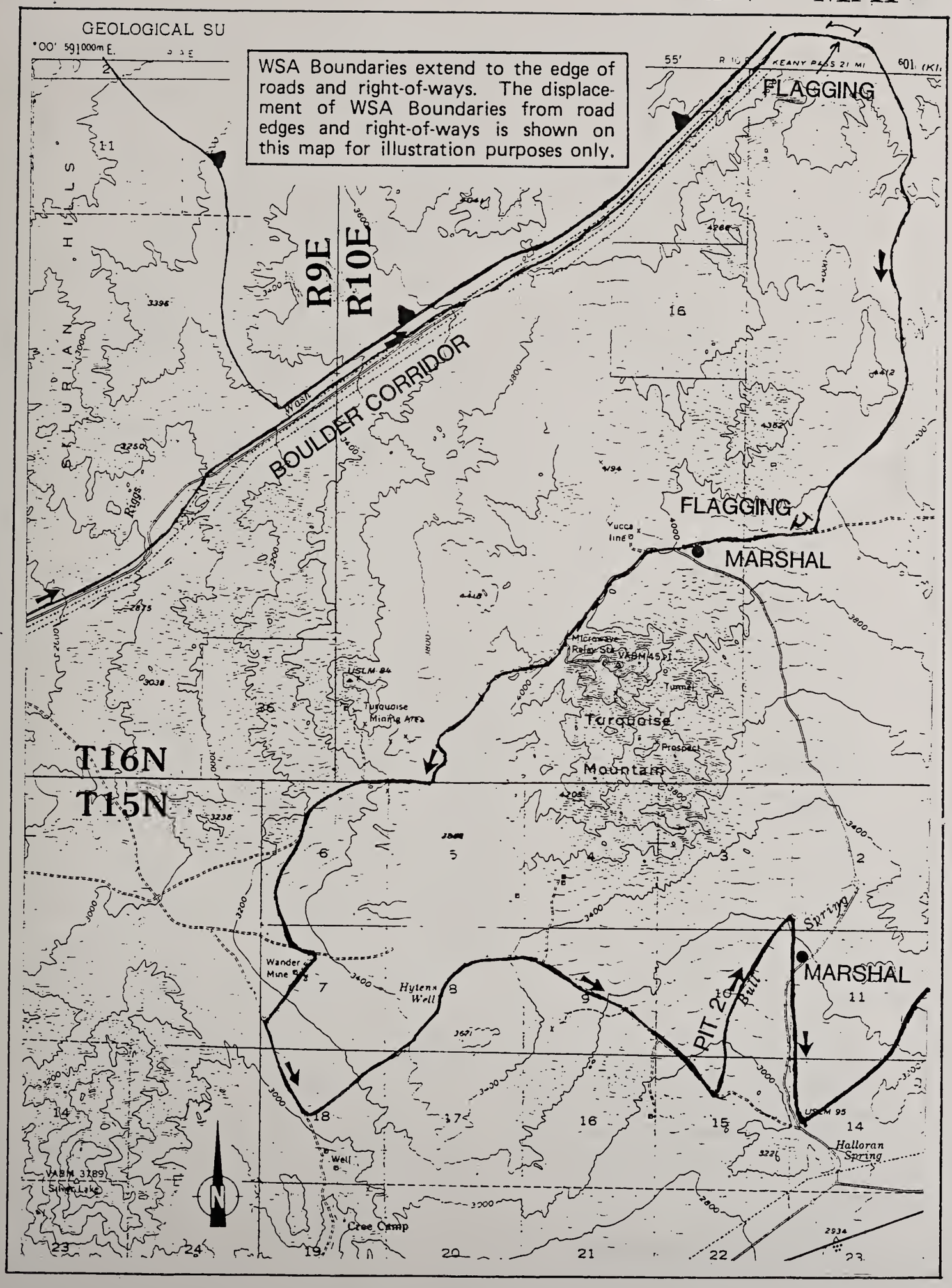
BV - MAP 5


WSA 222A
WSA 221
WSA 221A
WSA 242
WSA 242
WSA 228
STATE HWY 127
DRY LAKE
MARSHAL
MARSHAL
MARSHAL
PIT 1
FLAGGING
Water Tank
Substation
Well
Silver Lake
BM 909
BM 937
BM 907
T15N
T14N
R7E
R8E
N
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
MILES

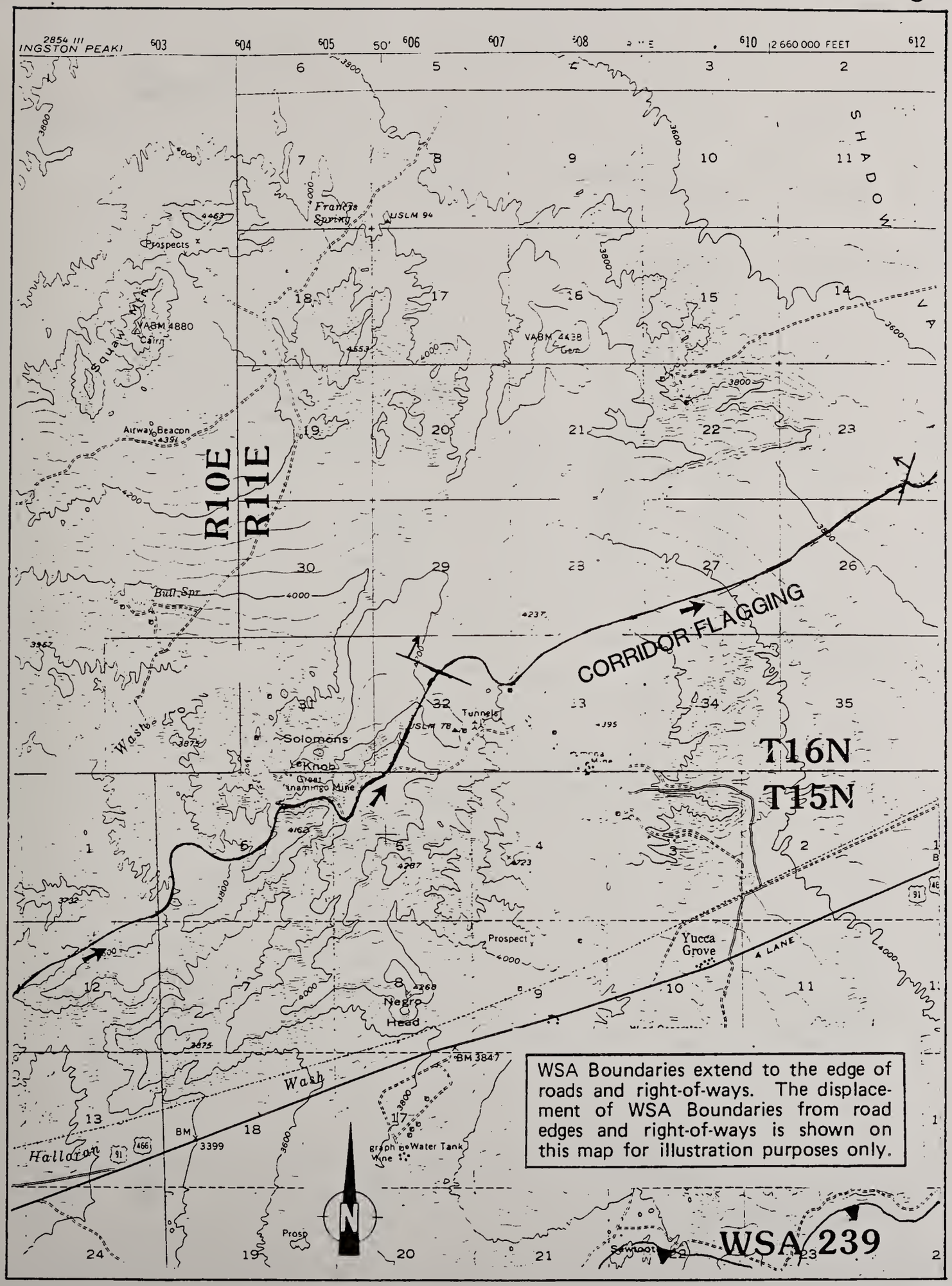
BV - MAP 6


R8E
R9E
T16N
T15N
WSA 222A
WSA 228
BOULDER CORRIDOR
Riggs
Wash
Silver Lake Mine
Water Tank Substation
Well
Cem
Silver Lake
Tunnel
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
N
MILES

BV - MAP 7

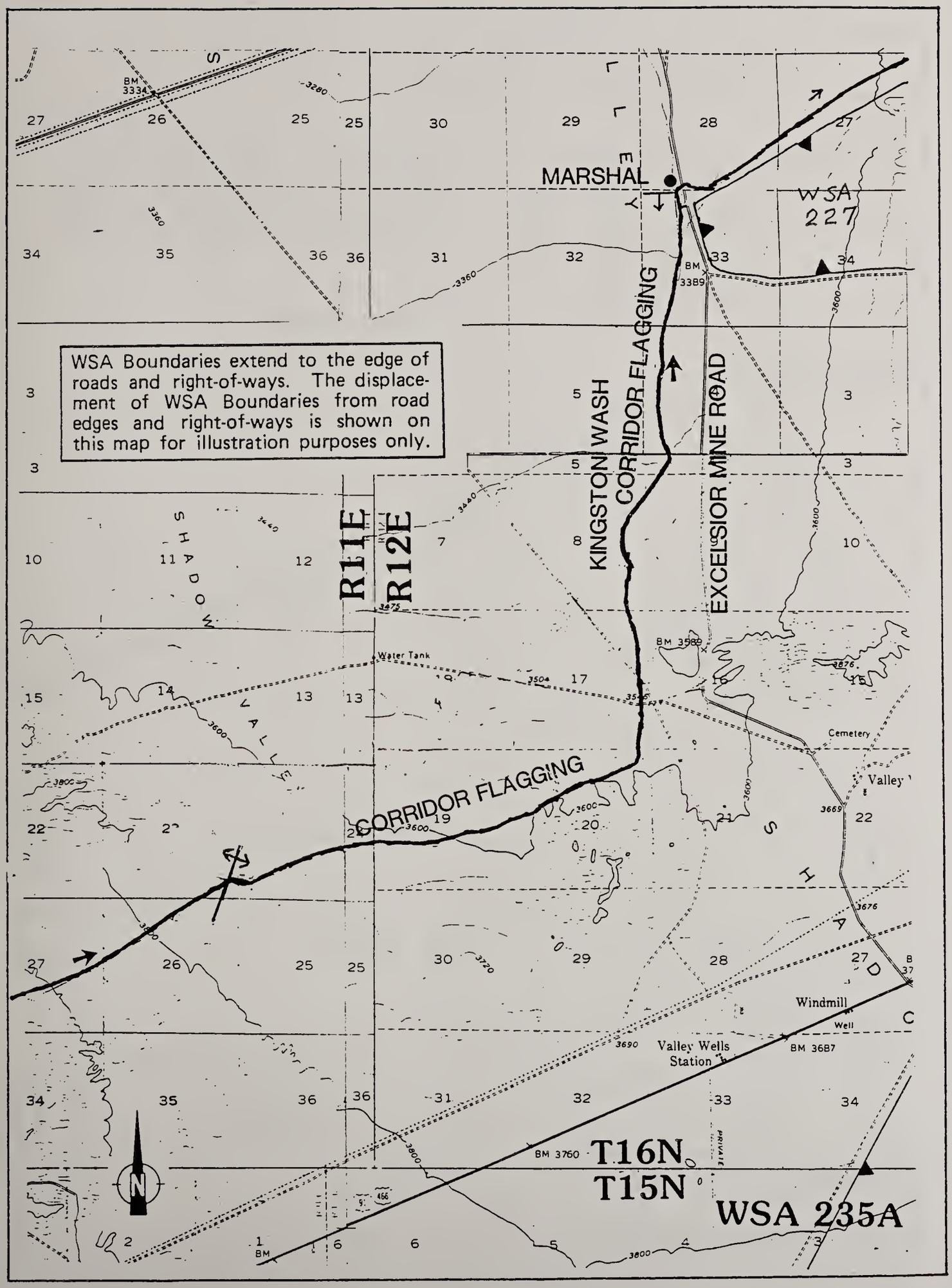

GEOLOGICAL SU
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
FLAGGING
R9E
R10E
BOULDER CORRIDOR
FLAGGING
MARSHAL
Turquoise Mountain
T16N
T15N
MARSHAL
PIT 2
Spring
Halloran Spring
Silver Lake
Cree Camp
Well
Hytens Well
Wander Mine
Turquoise Mining Area
Microwave Relay Sta
VABM 4591
USLM 84
USLM 95
VABM 3289
Yucca line
Tunnel
Prospect
Bull
N
MILES

BV - MAP 8

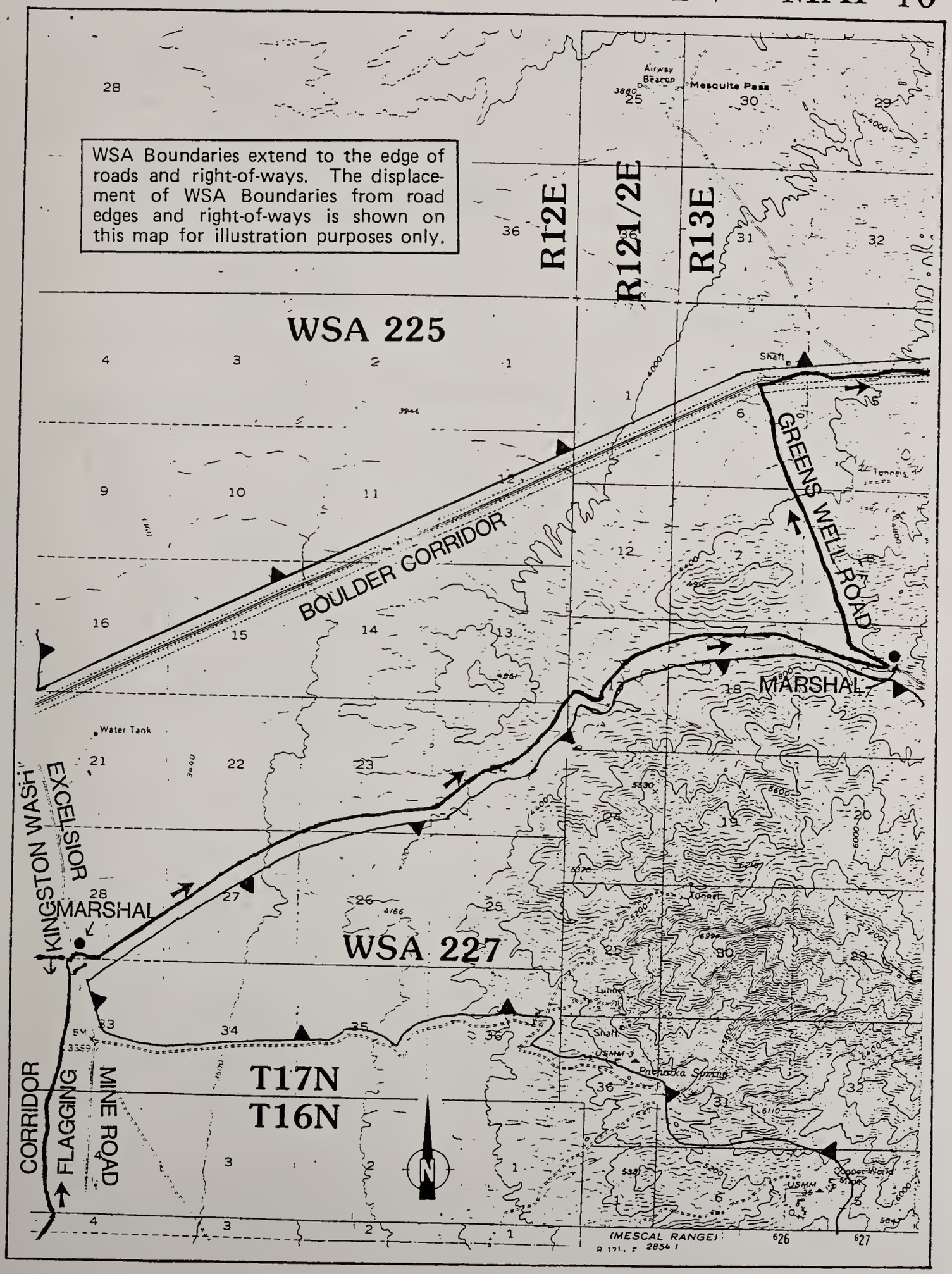


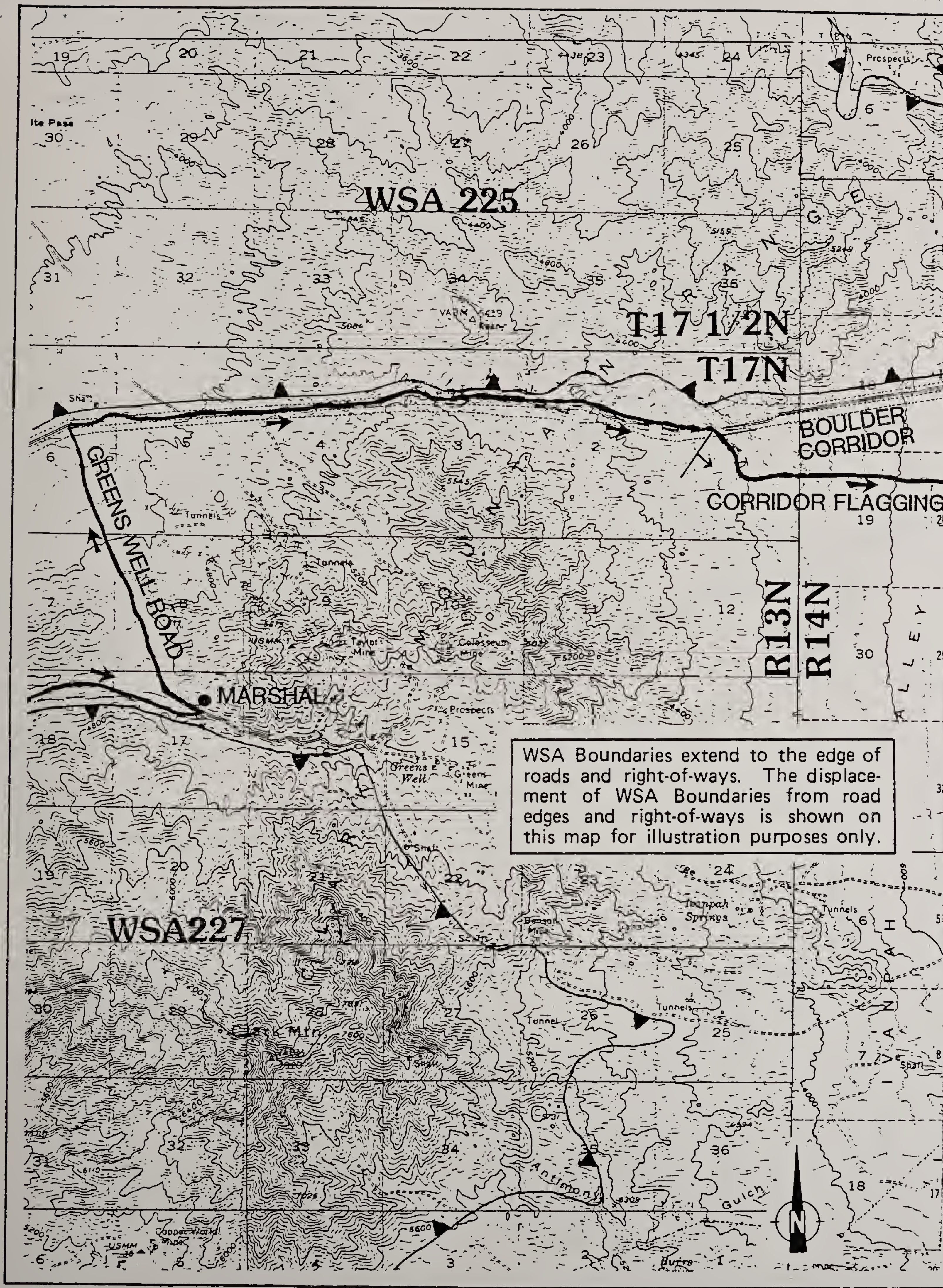
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.

BV - MAP 9

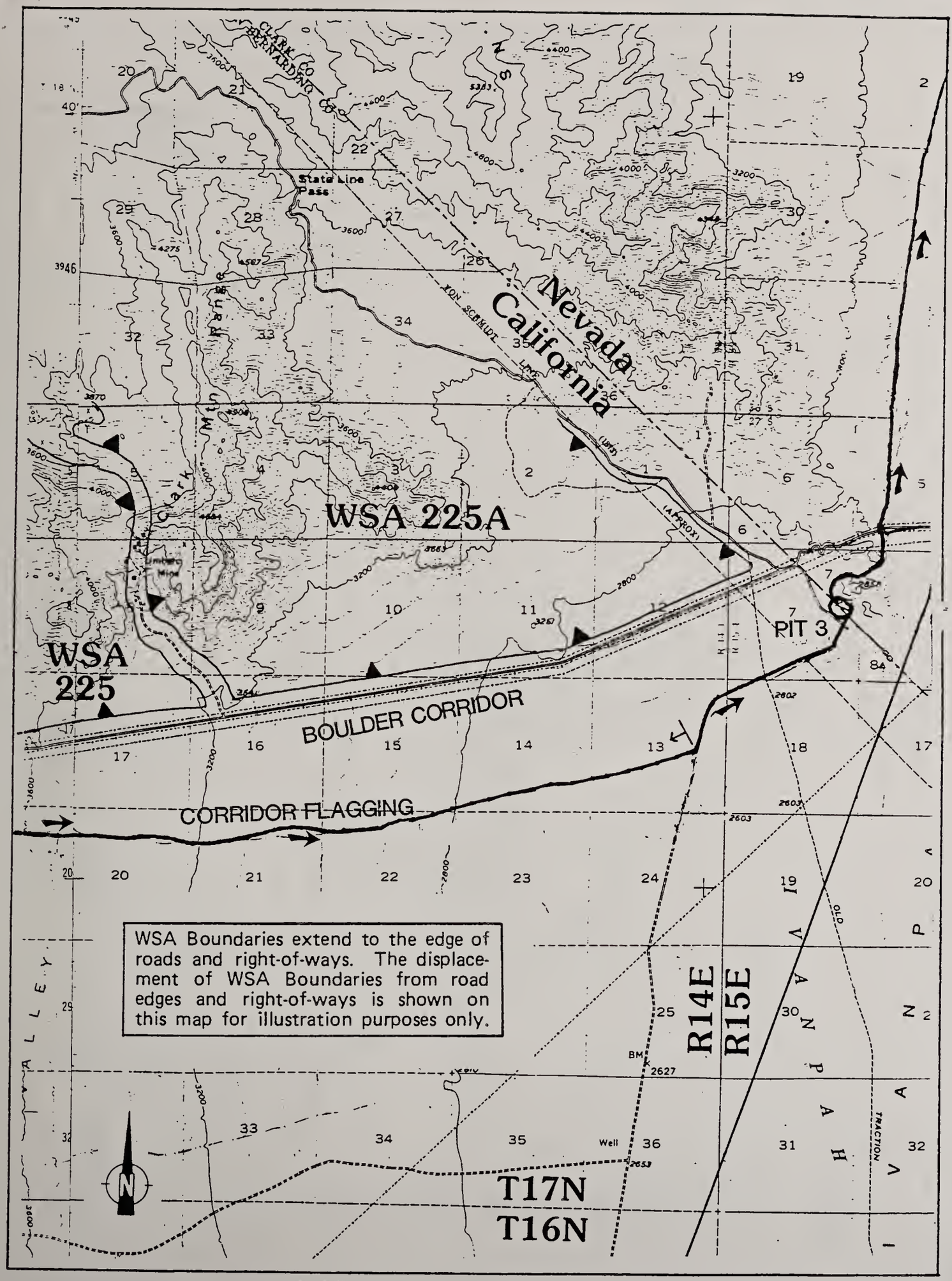

WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
MARSHAL
WSA 227
KINGSTON WASH CORRIDOR FLAGGING
EXCELSIOR MINE ROAD
CORRIDOR FLAGGING
R11E
R12E
SHADOW VALLEY
SHIVA
Water Tank
Cemetery
Valley
Windmill
Well
Valley Wells Station
BM 3389
BM 3588
BM 3687
BM 3760
T16N
T15N
WSA 235A
N
MILES

BV - MAP 10

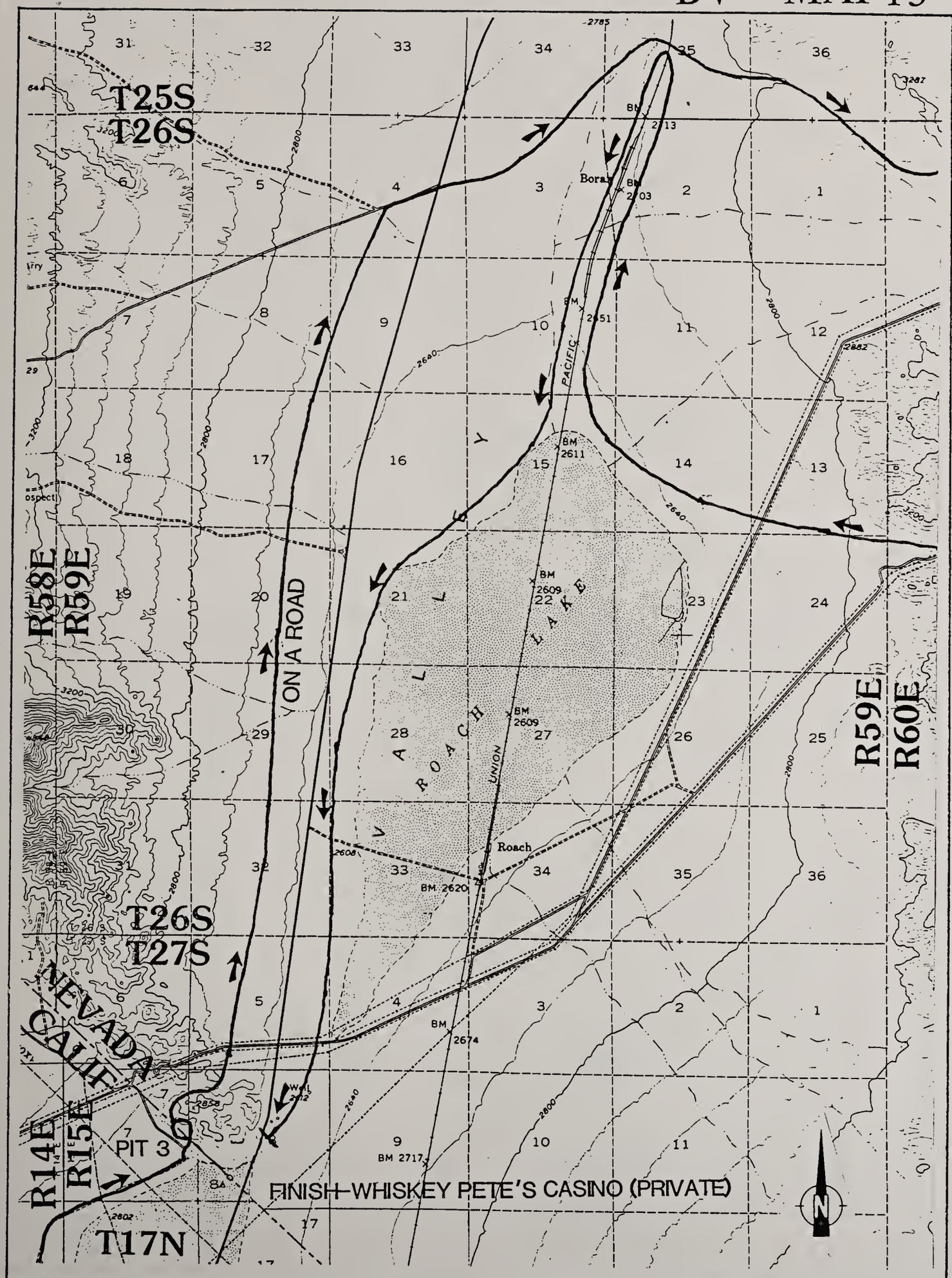

WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
R12E
R121/2E
R13E
WSA 225
WSA 227
BOULDER CORRIDOR
GREENS WELL ROAD
MARSHALL
MARSHAL
KINGSTON WASH
EXCELSIOR
CORRIDOR
FLAGGING
MINE ROAD
T17N
T16N
Airway Beacon
Mesquite Pass
Water Tank
Shaft
Tunnel
Tunnels
Patchatka Spring
USMM
(MESCAL RANGE)
N
1 0 1 MILES


WSA 225
T17 1/2N
T17N
BOULDER CORRIDOR
CORRIDOR FLAGGING
GREENS WELL ROAD
MARSHAL
R13N
R14N
WSA227
Clark Mtn
Antimony Gulch
Greens Well
Greens Mine
Taylor Mine
Colosseum Mine
Prospects
Tunnels
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
MILES

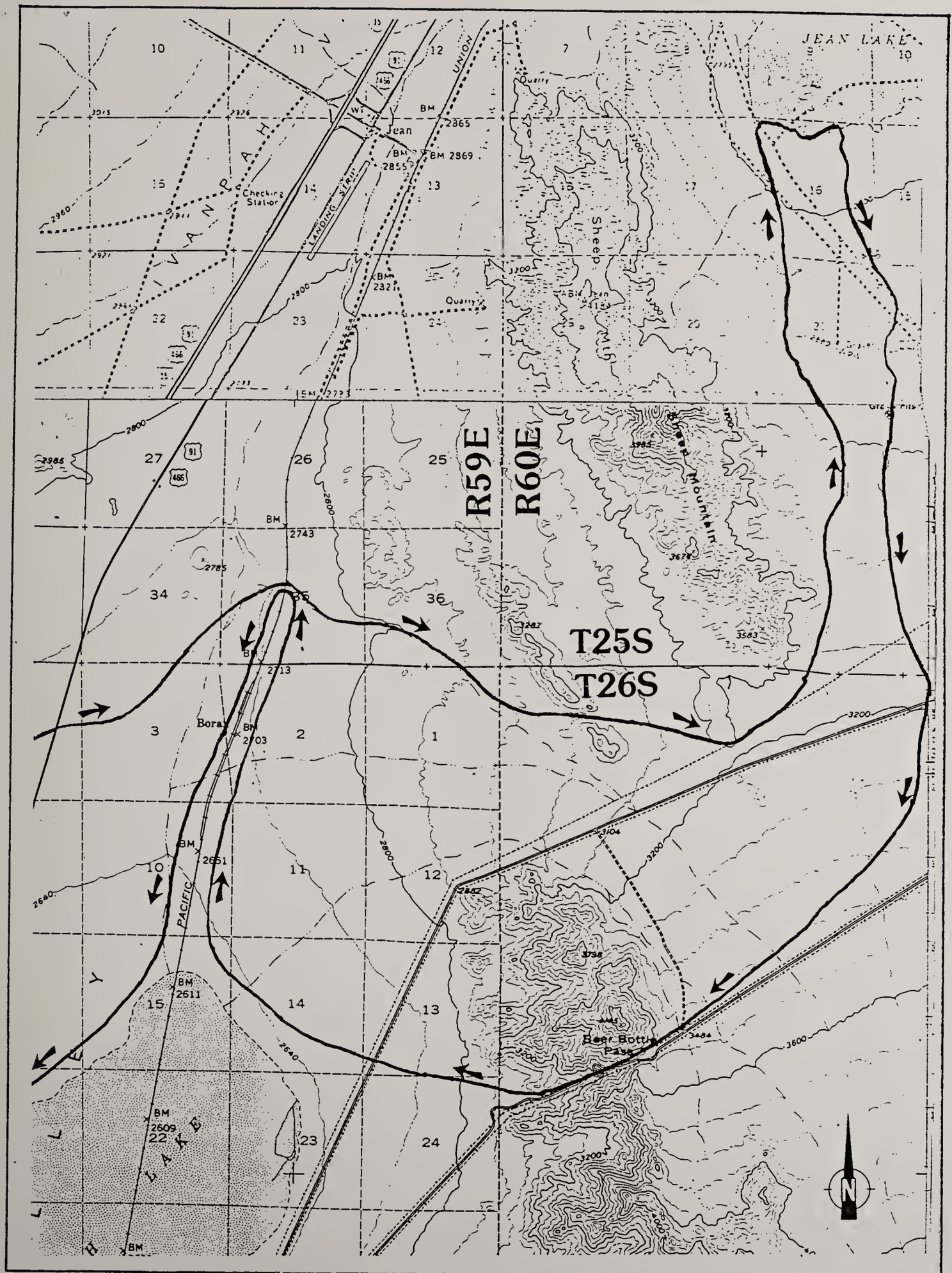
BV - MAP 12


Nevada
California
WSA 225A
WSA 225
BOULDER CORRIDOR
CORRIDOR FLAGGING
PIT 3
State Line Pass
Clark Mtns
CLARK CO
SAN BERNARDINO CO
KON SCHMIDT
Umberci Mine
WSA Boundaries extend to the edge of roads and right-of-ways. The displacement of WSA Boundaries from road edges and right-of-ways is shown on this map for illustration purposes only.
R14E
R15E
T17N
T16N
N
MILES

BV - MAP13


T25S
T26S
T27S
R58E
R59E
R60E
R14E
R15E
T17N
YON A ROAD
PACIFIC
UNION
VALLEY
ROACH
LAKE
Roach
Boral
BM 2620
BM 2674
BM 2717
PIT 3
FINISH—WHISKEY PETE'S CASINO (PRIVATE)
NEVADA
CALIF
N
MILES

BV - MAP14


JEAN LAKE
Jean
Checking Station
LANDING STRIP
UNION
Sheep Mtn.
Mountain
R59E
R60E
T25S
T26S
Bora
PACIFIC
Bear Bottle Pass
LAKE
BM 2865
BM 2869
BM 2855
BM 2321
BM 2743
BM 2713
BM 2703
BM 2651
BM 2611
BM 2609
Quarry
Gravel Pits
N
1 0 1 MILES

APPENDIX IV

CATEGORIZATION OF TORTOISE HABITAT AREAS

CATEGORIZATION OF TORTOISE HABITAT AREAS

Desert Tortoise Habitat Areas will be delineated by BLM District Managers (with appropriate public review) to meet the three Category Goals described in Table 1. Such categorization of habitats will assist the BLM in attaining the overall tortoise habitat management Goal established by the Director (see Introduction). That Goal is translated into more specific Goals for each of the three habitat Categories. These Category Goals will, in turn, be reached by implementing the Objectives and related Management Actions in the next section of this Rangewide Plan.

The purpose of the categorization of habitats is to provide for future protection and management of these areas and their associated desert tortoise populations. Differing levels of management, consistent with Category Goals, will be applied to Habitat Areas in each Category. The Bureau is committed to maintaining viable tortoise populations in Category I and II habitats through implementation of the Management Actions in the next section. The placing of an area of habitat in Category III means that these areas are of lower value in sustaining viable populations of tortoises on the public lands, and thus can be subjected to lower management intensity specifically for tortoises than habitats in the other Categories.

The criteria in Table 1 provide guidelines for categorization by decision makers. They are not intended to be used as a cookbook formula. For example, some modification of the conflict resolvability criterion may be required in checkerboard or braided land ownership patterns. All conflicts may not be resolvable, but the significance of the other three criteria may clearly place the Habitat Area into Category I.

The criteria used to categorize tortoise habitats include the following: (1) importance of the habitat to maintaining viable populations, (2) resolvability of conflicts, (3) tortoise density, and (4) population status (stable, increasing, decreasing). Information concerning all of these criteria may not be available or relevant for all categorizations.

Note that tortoise density and population trends will often be more useful in evaluating management progress within Categories than for actual categorization of Habitat Areas. Usually, the overriding criteria for categorization will be viable population considerations and conflict resolvability. The concept of resolvability includes mitigation; thus, conflicts will be judged resolvable whenever the actions required to resolve the conflicts are within the Bureau's discretion.

Where schedules permit, areas will be categorized through resource management planning. Where schedules do not permit, categorizations will be completed using existing data and will be reconsidered whenever a Resource Management Plan is prepared or revised. The results will be documented as a part of the approved plan.

Table 1. Goals and criteria for three Categories of desert tortoise Habitat Areas. The criteria are ranked by importance to the categorization process, with Criterion 1 being the most important.

Items	Category I Habitat Areas	Category II Habitat Areas	Category III Habitat Areas
Category Goals	Maintain stable, viable populations and protect existing tortoise habitat values; increase populations, where possible.	Maintain stable, viable populations and halt further declines in tortoise habitat values.	Limit tortoise habitat and population declines to the extent possible by mitigating impacts.
Criterion 1	Habitat Area essential to maintenance of large, viable populations.	Habitat Area may be essential to maintenance of viable populations.	Habitat Area not essential to maintenance of viable populations.
Criterion 2	Conflicts resolvable.	Most conflicts resolvable.	Most conflicts not resolvable.
Criterion 3	Medium to high density or low density contiguous with medium or high density.	Medium to high density or low density contiguous with medium or high density.	Low to medium density not contiguous with medium or high density.
Criterion 4	Increasing, stable, or decreasing population.	Stable or decreasing population.	Stable or decreasing population.