



## ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

# MINIMUM REQUIREMENTS DECISION GUIDE

*"... except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."*

– the Wilderness Act, 1964

### Step 1: Determine if any administrative action is necessary.

**Description: Install mine safety features at four sites within wilderness.**

Death Valley National Park contains thousands of abandoned mining features which present a great risk to human health and safety. These features are up to 140 years old and once abandoned, they were no longer maintained. If not closed according to public safety standards, these features will continue to deteriorate and present even greater risks to human health and safety and present a danger to wildlife. The threat of significant injury or death to the public and park staff is high from these unmonitored abandoned mine features. These features include deep open shafts with unstable edges; open adits with unmarked interior shafts, unstable and unreinforced ceilings, loose timbers, and toxic gases. Some features are open to groundwater and susceptible to contamination from a variety of sources including vandalism, and illegal dumping of hazardous waste. Once groundwater is contaminated, it has been compromised and can never be completely decontaminated. Such features are frequently forgotten; once out of mind, there is little chance of preventing them from deteriorating and developing into substantial physical safety hazards.

The majority of these mine features pre-date the establishment of the park and are scattered throughout the park as a legacy of the area's mining history.

Pursuant to the needs of public safety the National Park Service proposes to install safety closures on 238 mining features (shafts, declines, stopes, adits and trenches) 69 of which are within designated wilderness.

#### **A. Describe Options Outside of Wilderness: Is action necessary within wilderness?**

Yes: ☒ No: ☐ Not Applicable: ☐

**Explain:** Four widely separated sites with 69 mine features within designated wilderness are proposed for treatment in fiscal year 2011. These four sites include the Eureka Mine, Keane Wonder Mine, Greenwater, and Titus Canyon (Leadfield). They require action to eliminate significant safety hazards. The estimated cumulative work area is less than ten acres. The features are in wilderness and cannot be mitigated outside of wilderness. Safety closures are site specific in their design and installation (see attachment A, B1, B2, C, and D).



## B. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows consideration of the Section 4(c) prohibited uses? Cite law and section.

Yes: ☒ No: ☐ Not Applicable: ☐

**Explain:** All abandoned mine sites covered by this project pre-date the establishment of Death Valley National Park and the designation of wilderness.

As provided for in the Wilderness Act of 1964, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use (PL 88-577 § 4(b)). Public use of the Death Valley Wilderness is currently compromised by the dangers presented by abandoned mines in Death Valley National Park. Currently a portion of the designated wilderness in the vicinity of the Keane Wonder Mine is closed to public access due to these safety concerns. These hazards were created by human action, but may be mitigated by the installation of safety closures that still allow the public to access and enjoy these sites within wilderness.

## C. Describe Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Yes: ☒ No: ☐ Not Applicable: ☐

### Explain:

While recognizing that competing concerns often restrict the Service's ability to eliminate hazards, the Service will strive to protect human life and provide for an injury-free visit within the constraints of the 1916 Organic Act and available resources. The Act requires the National Park Service to provide for the public enjoyment of the parks while conserving the scenery and natural and historic objects and wildlife therein "in such manner and by such means as will leave them unimpaired for the enjoyment of future generations" (16 U.S.C. 1). Unimpaired in this case translates to stabilization of the historic structures. For the "enjoyment" of the public, the features need to be safe.

## D. Describe Other Guidance

Is action necessary to conform to direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state and local governments or other federal agencies?

Yes: ☒ No: ☐ Not Applicable: ☐

**Explain:** The Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior* (2008) and the National Park Service's Directive on Abandoned Mine Land Features (2008) gives Death Valley National Park and other units of the national park system a mandate to identify high-risk Abandoned Mine Land (AML) features and to mitigate or safeguard those features with quick response measures and longer-term solutions.

National Park Service, Management Policies Section 8.2.5.1 provides policies and principles to guide the National Park Service's public risk management program. According to those policies, the saving of human life takes precedence over all other management actions. Death Valley National Park's General Management Plan (GMP) states in its introduction that the plans' purpose, in part, is to preserve various historic resources, including those associated with mining endeavors. The extensive and well-preserved mining history is part of the park's significance, and the management objectives call for minimizing the adverse effects of mining while preserving and interpreting natural and cultural values; and ensuring the perpetuation of rare animals and native species. The California Desert Protection Act requires the plan to place emphasis on the protection and preservation of historical and cultural sites. Protection of bat habitat through the



Careful design and use of bat-compatible closures meets the GMP's goal to protect native wildlife and the wildlife surveys conducted in advance of the closures meet the GMP's goal to identify, inventory, and monitor sensitive species that are native to and present in the Park. A park-specific program goal for abandoned mine lands includes eliminating physical safety hazards and hazardous materials; mitigation of adverse environmental impacts to park resources, including restoration of landscapes, soils and vegetation; protection of important wildlife habitat such as bat habitat; and preservation of historic and cultural resources which may include stabilization of structures.

### E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: untrammeled, undeveloped, natural, outstanding opportunities for solitude or a primitive and unconfined type of recreation, or unique components that reflect the character of this wilderness area?

**Untrammeled:** Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** This action does not contribute to the untrammeled quality of wilderness character.

**Undeveloped:** Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** This action does not contribute to the undeveloped quality of wilderness character.

**Natural:** Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** This action will not contribute to the natural character of wilderness in Death Valley National Park.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation:**

Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** This action has the potential to improve access to primitive and unconfined types of recreation if areas currently closed to the public are reopened.

**Other unique components that reflect the character of this wilderness:**

Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** No other components have been identified.

### F. Describe Effects to the Public Purposes of Wilderness

Is action necessary to support one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

**Recreation:** Yes: ☒ No: ☐ Not Applicable: ☐

**Explain:** Improvements to human safety support recreational experiences. Action is necessary to secure dangerous mine features in a manner that prevents people from falling down deep, man-made holes or being caught in horizontal openings that may contain multiple hazards such as; bad or insufficient air, collapsing passages or falling rock, rotting wood elements, and unstable explosives. Unsecured hazards are potentially harmful or fatal as people enjoy exploring old mines. Recreational access is currently not allowed around the Keane Wonder Mine area due to safety concerns.

**Scenic:** Yes: ☐ No: ☒ Not Applicable: ☐

**Explain:** Safety installations will not reduce the visual intrusions presented by abandoned mine features; treatments may slightly increase the visibility of features but will make the features safer.

Scientific: Yes: ☐ No: ☒ Not Applicable: ☐

Explain: Action is not necessary to protect scientific values.

Education: Yes: ☐ No: ☒ Not Applicable: ☐

Explain: Educational uses will neither benefit nor be adversely impacted by safety installations.

Conservation: Yes: ☐ No: ☒ Not Applicable: ☐

Explain: Conservation of wilderness will neither benefit nor be adversely impacted by safety installations.

Historical use: Yes: ☐ No: ☒ Not Applicable: ☐

Explain: Improved public safety may or may not increase visitation to abandoned mine sites. Contributions to historical uses of these sites are inconclusive. Unsafe historical use, i.e. exploring of abandoned mines, will be eliminated at these features,

**Step 1 Decision:** Is any administrative action necessary in wilderness?

Yes: ☒ No: ☐ More information needed: ☐

Explain: Administrative action is necessary to comply with safety regulations and to protect the park visitor and natural and historic resources. Taking no action would ignore a significant safety threat which could possibly affect human life and regional resources such as bat populations and species distributions both inside and outside of wilderness.

In addition, the activities are limited to a very small area within wilderness.

If action is necessary, proceed to Step 2 to determine the minimum activity.

## Step 2: Determine the minimum activity.

Description of Alternatives: For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.



## Alternative # A

**Description:** This alternative proposes the use of helicopters, vehicles (including ATVs), and mechanized equipment to facilitate the closure of abandoned mine features.

Installing safety closures on deep and dangerous mine features will eliminate a substantial safety hazard. This project involves the movement and use of supplies, power tools, and mechanized equipment to various abandoned mine features that are in wilderness to place concrete footings and then install steel safety closures (see attachment A). Heavy equipment such as generators, compressor, exhaust fans, concrete mixers, welding and cutting equipment and power tools, and supplies such as steel beams and concrete needing to be transported to the work sites will be by vehicle or helicopter. Workers may need to be transported to remote work sites. One or more trailers may be needed to carry heavy steel beams, concrete for footings, wood forms, and power tools to work the steel, and mesh as well as tow-behind concrete mixers. Two to three vehicles may be needed; these vehicles could include all-terrain vehicles (ATV's). The generator will be kept on an absorbent pad to prevent soil contamination from any potential spills of petroleum products.

Issue authorization for vehicles (including ATV's and helicopters) and construction equipment to access and address dangerous open features at abandoned mine sites in wilderness. Helicopter use would allow for the transportation of heavy equipment and supplies to a work sites while limiting the need for transporting heavy loads by vehicles. The limiting of heavy loads helps to minimize road impacts, and also allows power equipment/tools such as generators, torches, concrete mixers, cutters, grinders, exhaust fans, etc. on site. ATV's will allow ground transport of materials while reducing the vehicle impact of a full-size vehicle.

### Effects:

#### Wilderness Character

**Untrammelled** – The installation of bat gates and mine closures would be a necessary administrative action considered a trammeling.

**Undeveloped** – No negative effects identified.

**Natural** – No negative effects identified.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – This action has the potential to improve access to primitive and unconfined types of recreation if areas currently closed to the public are reopened. There will be a temporary increase in noise from helicopter use and the use of a compressor, generators and power tools. There will also be a temporary negative effect from the visual impact of helicopter and vehicle use.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** – This alternative will not involve the use of primitive or traditional skills, non-motorized tools or non-mechanical travel methods.

**Special Provisions** - Motor vehicles and motorized equipment (helicopters, power tools and construction equipment) are allowed only if they are the minimum necessary for administration of the area as wilderness (The Wilderness Act Section 4(c)) and if they meet the test of *practical necessity and reasonableness*. Securing human safety at abandoned mine sites is an administrative action necessary for both park staff and visitors to Death Valley National Park.

**Safety of Visitors, Personnel, and Contractors** – The use of helicopters and construction equipment in rugged terrain has an inherent risk to the operators but is safer for other personnel involved by reducing risk of injury from heavy lifting and moving heavy equipment. Alternative A will have immediate and long-term benefits to the safety of visitors and park personnel alike.

Safety installations on abandoned mine features that are installed using powered tools are stronger and less able to be defeated, which contributes to the safety of the installation.

**Economic and Time Constraints** – The use of motor vehicles including helicopters, power tools, and construction equipment may be more efficient for operators. Their use increases workers safety over other means of supply transport or construction and significantly cuts the time that activity would occur. Several mines scheduled to be



treated host bats at times of the year when they are sensitive to disturbance (during hibernation in winter and when giving birth and rearing young in the spring and summer). The timeframe for installing safety features at these sites is limited. For hibernation sites, the closures must be completed by November 30, 2010. Alternative methods not utilizing motorized equipment would prolong the work over several seasons.

**Additional Wilderness-Specific Comparison Criteria** – None identified.

## Alternative # B

**Description:** Utilize pack animals, hand tools, and other manual means to complete the projects. For example, all drill holes would be made using hand drills and sledge hammers. Steel would be drilled with a brace and bit or be pre-drilled outside of wilderness. Supplies would be transported by people and pack animals. Each installation may require two trips of ten animals each to transport material into a site. Under this alternative, the time needed to complete safety installations will take many years. Risks to human safety would involve lifting of heavy steel beams and other components for safety installations. Hand tools likely would increase the risk of fatigue on the job site.

### Effects:

#### **Wilderness Character –**

**Untrammelled** – The installation of bat gates and mine closures would be a necessary administrative action considered a trammeling.

**Undeveloped** – No negative effects identified.

**Natural** – This alternative has the potential to increase the spread of exotic plants if the pack animals are not fed weed-free feed for a period of time prior to use and during use.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** Due to the extended timeframe for completion under this alternative, recreational opportunity will continue to be limited in areas closed to public access due to safety concerns.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** If safety installations can be accomplished by this alternative, then traditional skills will be maintained.

**Special Provisions** – none specified.

**Safety of Visitors, Personnel, and Contractors** – The use of pack animals and non-mechanized equipment in wilderness has an increased risk to workers. Workers would need to lift steel beams up to 10' long and 100 lbs onto and off of pack animals. The length of the beams may create unsafe conditions for the pack animals and workers.

The weight of the generator and compressor (several hundred pounds apiece) and the excessive length of the steel beams would be difficult if not impossible to transport with pack animals.

The treatments installed by hand method are not as strong or secure and are easier to vandalize. Treatments that can be more easily vandalized and defeated are less safe for visitors and staff.

**Economic and Time Constraints** – The use of pack animals or non-mechanized equipment will be less efficient, and would significantly contribute to an increase in contractor time on-site and cost to the National Park Service to facilitate this project. Safety hazards and resource protection issues remain unaddressed for a longer period of time.

**Additional Wilderness-specific Comparison Criteria** –The cumulative negative effects to soil and vegetation from multiple pack trips should be taken into consideration as well as the possibility of the spread of exotic plants due to pack animals not having been fed weed free feed as required.



## Alternative # C

**Description:** This alternative is similar to Alternative A except it allows the use of wheeled hand carts and limits the use of motorized vehicles such as ATV's and pick-ups. Workers will access each feature in wilderness by foot.

Allow the use of helicopters or vehicles such as ATV's or pick-ups--expected to be about three trips per feature-- to transport heavy equipment such as compressors, generators, concrete mixers, long, heavy steel beams and mechanized equipment such as power tools, and exhaust fans to complete safety installations. No helicopter landings are allowed or anticipated within wilderness.

Only allow the use of ATV's or pick-ups to transport supplies for short distances on abandoned roads, open washes or on terrain where their impacts are negligible or readily mitigated. All vehicle tracks will be raked out.

Allow the use of hand carts where the terrain permits to transport equipment and tools.

When wilderness features are close to existing roads the generator and compressor will remain on the road utilizing extension cords and long hoses to reach the feature. Other tools and supplies will be carried or carted in.

The generator will be kept on an absorbent pad to prevent soil contamination from any potential spills of petroleum products. Trash and installation debris will be collected and removed from all work sites.

### Effects:

#### Wilderness Character

**Untrammelled** – The installation of bat gates and mine closures would be a necessary administrative action considered a trammeling.

**Undeveloped** – No negative effects identified.

**Natural** – No negative effects identified.

**Outstanding opportunities for solitude or a primitive and unconfined type of recreation** – This action has the potential to improve access to primitive and unconfined types of recreation if areas currently closed to the public are reopened. The use of helicopters, mechanized equipment, and extremely limited vehicle use will have a short-term negative impact to the solitude and primitive character of wilderness during installation. Vehicle use will have a short term negative effect on vegetation.

**Heritage and Cultural Resources** – No negative effects identified. Historic resources will be stabilized.

**Maintaining Traditional Skills** – This alternative will not involve the use of primitive or traditional skills or non-motorized tools. However workers will walk into all sites.

**Special Provisions** – Motorized vehicles and mechanized equipment is allowed only if it is the minimum necessary for administration of the area as wilderness (The Wilderness Act Section 4(c)) and if they meet the test of *practical necessity and reasonableness*. Securing human safety at abandoned mine sites is an administrative action necessary for both park staff and visitors to Death Valley National Park. Use of motorized vehicles and mechanized tools is the most practical, reasonable, and cost-effective approach for installing safety features at abandoned mines.

**Safety of Visitors, Personnel, and Contractors** – The use of helicopters and construction equipment in rugged terrain has an inherent risk to the operators but is safer for other personnel involved by reducing risk of injury from heavy lifting and moving heavy equipment. Alternative C will have immediate and long-term benefits to the safety of visitors and park personnel alike.

**Economic and Time Constraints** – The use of helicopters, power tools, construction equipment, wheeled cart, and the limited use of motor vehicles may be more efficient for operators. Their use increases workers safety over other means of supply transport or construction and significantly cuts the time that activity would occur. Several mines scheduled to be treated host bats at times of the year when they are sensitive to disturbance (during hibernation in winter and when giving birth and rearing young in the spring and summer). The timeframe for installing safety features at these sites is limited. For hibernation sites, the closures must be completed by November 30, 2010. Alternative methods not utilizing motorized equipment would prolong the work over several seasons.

**Additional Wilderness-specific Comparison Criteria** – None identified.



## Alternative No Action

**Description:** *Do not install safety installations at abandoned mine sites and features in wilderness in Death Valley National Park.* Leave abandoned mine sites in their present condition, with mine openings unsecured and hazardous to human safety. Four sites identified for safety installations in 2010 and 2011 have 69 individual features that will continue to threaten human health and safety under the No Action alternative.

### Effects:

**Wilderness Character (untrammelled, undeveloped, natural) outstanding** – Wilderness character will remain unaffected by the No Action. Recreational opportunities continue to risk being compromised by the dangers to human safety presented by abandoned mine lands.

**Opportunities for solitude or a primitive and unconfined type of recreation** – The unsafe mine conditions and site closures will continue to restrict recreational access.

**Heritage and Cultural Resources** – Historic resources will not be stabilized as planned under Alternatives A, B, and C.

**Maintaining Traditional Skills** – not applicable. Under No Action, no safety installations will be carried out at abandoned mine sites in wilderness.

**Special Provisions** – none specified.

**Safety of Visitors, Personnel, and Contractors** – Open features at abandoned mine sites will continue to pose risks to human health and safety, as described in the Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior* (2008) and the National Park Service's Directive on Abandoned Mine Lands (2008).

**Economic and Time Constraints** – not applicable

**Additional Wilderness-specific Comparison Criteria** – None identified.

## Comparison of Alternatives

It may be useful to compare each alternative's positive and negative effects to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	Alternative A (helicopter, vehicles and mechanized equipment)	Alternative B (use pack animals and walk into sites)	Alternative C (helicopter, mech- anized equipment, wheeled cart, and limited vehicle use)	No Action
Untrammelled	-	-	-	n/a
Undeveloped	n/a	n/a	n/a	n/a
Natural	n/a	n/a	n/a	n/a
Solitude or Primitive Recreation	-	+	-	-
Unique components	n/a	n/a	n/a	n/a
<b>WILDERNESS CHARACTER</b>	-	+	-	-



	Alternative A (helicopter, vehicles and mechanized equipment)	Alternative B (use pack animals and walk into sites)	Alternative C (helicopter, mech- anized equipment , wheeled cart, and limited vehicle use)	No Action
Heritage & Cultural Resources	+	+	+	n/a
Maintaining Traditional Skills	-	+	-	n/a
Special Provisions	-	+	-	+
Safety of Visitors, Personnel and Contractors	+	-	+	-
Economics & Time	+	-	+	n/a
Additional Wilderness Criteria	n/a	n/a	n/a	n/a
<b>OTHER CRITERIA SUMMARY</b>	+	+	+	+/-

	Alternative A (helicopter, vehicles and mechanized equipment)	Alternative B (use pack animals and walk into sites)	Alternative C (helicopter, mech- anized equipment , wheeled cart, and limited vehicle use)	No Action
<b>SAFETY</b>	+	-	+	-

#### Safety Criterion:

If safety issues override impacts to wilderness character or other criteria, provide documentation that the use of motorized equipment or other prohibited uses is necessary because to do otherwise would cause increased risks to workers or visitors that cannot be satisfactorily mitigated through training, use of personal protective equipment (PPE), or other requirements to alleviate the safety risk. (This documentation can take the form of agency accident-rate data tracking occurrences and severity; a project-specific job hazard analysis; research literature; or other specific agency guidelines.)

#### Documentation:

Multiple sources of data are available that show the dangerous situations associated with mine openings at abandoned mine sites. The Department of Interior Office of Inspector General report entitled, *Audit Report: Abandoned Mine Lands in the Department of the Interior* (2008) describes safety hazards at abandoned mine sites on lands in California, Arizona, and Nevada. The dangers presented by AMLs are consistent across lands managed by the National Park Service, the Bureau of Land Management, or any other public agency. The report stated that the Inspector General "concluded that BLM and NPS are putting the public's health and safety at risk by not addressing hazards posed by abandoned mines on their lands."

"Many abandoned mine sites present an immediate danger of physical injury or death due to open vertical shafts and horizontal adits (entrances to a mine) and mill sites with deteriorating buildings and equipment. Dangers include deadly gases and asphyxiation, collapsing mine walls, explosive and toxic chemicals, and rotting structures... Some sites also present long-term dangers to people from exposure to piles of waste rock or mine tailings (mine waste) containing hazardous materials such as arsenic, lead, and mercury." (2008 Audit Report, p. 7)

#### Step 2 Decision: What is the Minimum Activity?

The Wilderness Act, Section 4c, allows for the administrative use of motorized equipment only "as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..." In this case, the use of motorized vehicles (trucks, ATV's and helicopters) and mechanical equipment (welders and power cutting tools,) is the minimum requirement since the project cannot be accomplished without the equipment.

Alternative C best meets the policy, objectives, and agency needs to administer safety installations at abandoned mine sites in wilderness in a timely manner while protecting wilderness character. Wilderness character will be disturbed by the work required to implement safety installations at AML features. The use of motorized and mechanized equipment will



allow this work to be done in a safe and expeditious manner, keeping impacts to solitude and primitive/unconfined recreational activities to the shortest time possible. It will allow for the installations to be completed in a timeframe that minimizes impacts to wildlife and secures human safety in a shorter period of time. Alternative B, if feasible, would require longer periods of time to complete the installations, leaving AML hazards open subjecting visitors and park staff to potential physical injury or death during these periods, while alternative A would have a greater negative impact on the wilderness character and a greater negative impact on the natural resources.

When wilderness features are close to existing roads the generator and compressor will remain on the road utilizing extension cords and long hoses to reach the feature. Other tools and supplies will be carried or carted in.

NPS staff will meet with contractors and construction manager prior to construction in wilderness. The purpose of these meetings will be to convey NPS and Death Valley procedures for working in and protecting wilderness character.

Helicopter Use: It is anticipated that a minimum of three trips will be necessary to each feature. Helicopters will not land within the wilderness except in an emergency. A Plan of Operations will be filed with the park and all standard safety procedures will be followed.

Hand Cart Use: All cart tracks will be raked out.



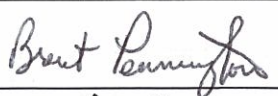
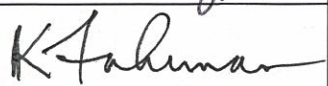
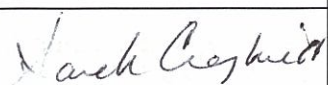
ATV or other vehicle use: Vehicle use will only be allowed for short distances over old roads, open washes or other open terrain where the impacts are either negligible or readily mitigated. The use of vehicles to access features within wilderness must be pre-approved by the Superintendent or her representative. All vehicle tracks will be raked out. Any closure signs or closure features such as rocks or vertical mulch which are removed to allow vehicle access will be replaced. Park staff will monitor to insure compliance.

**Check any Wilderness Act Section 4(c) uses approved in this alternative:**

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> mechanical transport | <input type="checkbox"/> landing of aircraft                  |
| <input checked="" type="checkbox"/> motorized equipment  | <input type="checkbox"/> temporary road                       |
| <input checked="" type="checkbox"/> motor vehicles       | <input checked="" type="checkbox"/> structure or installation |
| <input type="checkbox"/> motorboats                      |   |

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

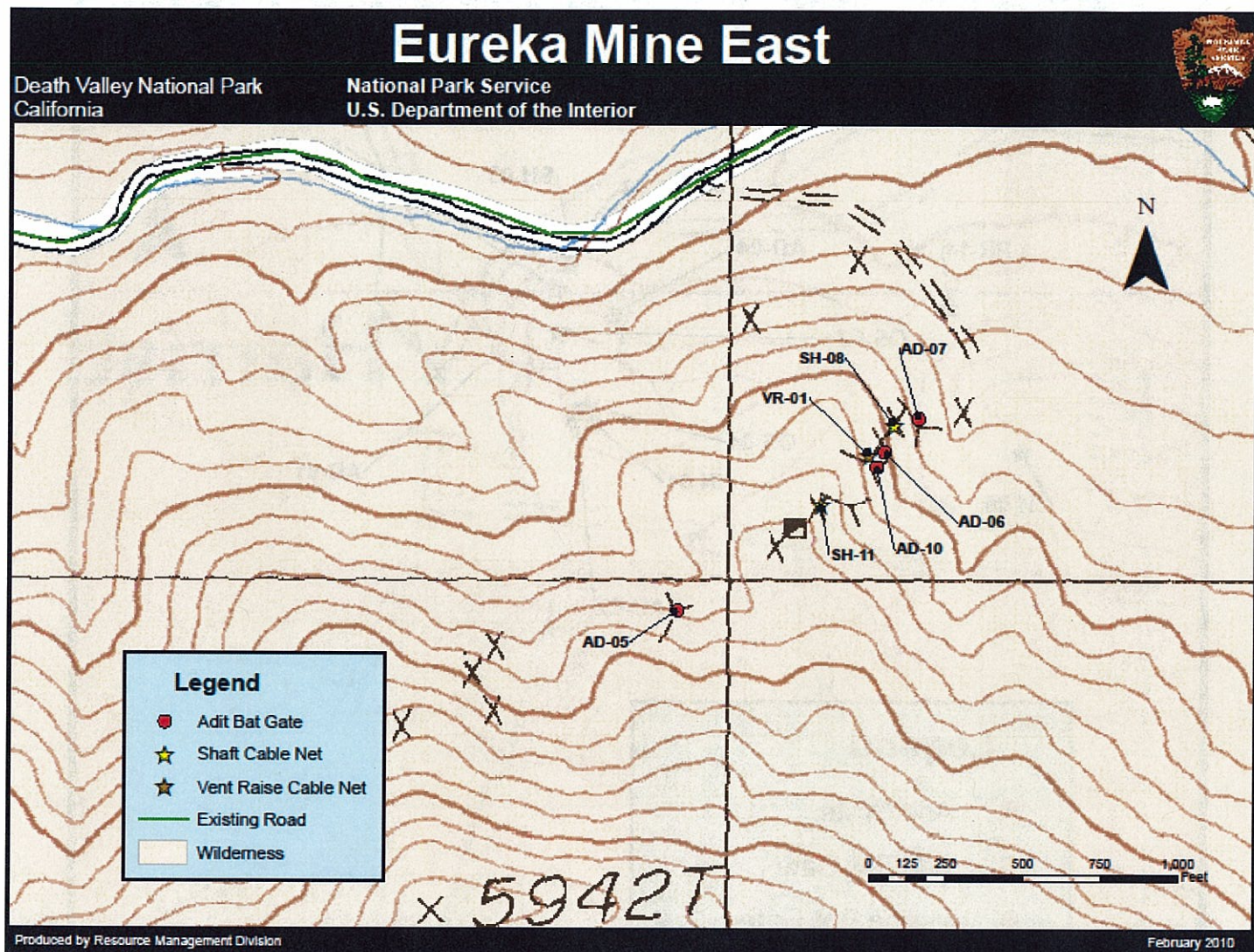
- NPS 2006 Management Policies, Chapter 6.4.9. Mineral Development
- NPS Reference Manual 12, Chapter 3-4, C(18)

Approvals	Signature	Name	Position	Date
Prepared by:		Linda Manning	Wildlife Biologist Interim AML Coordinator	10-26-10
Prepared by::		Charlie Callagan	Wilderness Coordinator	10-26-2010
Recommended:		Brent Pennington	Chief Ranger	10-26-2010
Recommended:		Kelly Fuhrmann	Chief of Resources	10/26/10
Approved:		Sarah Craighead	Superintendent	10/27/10

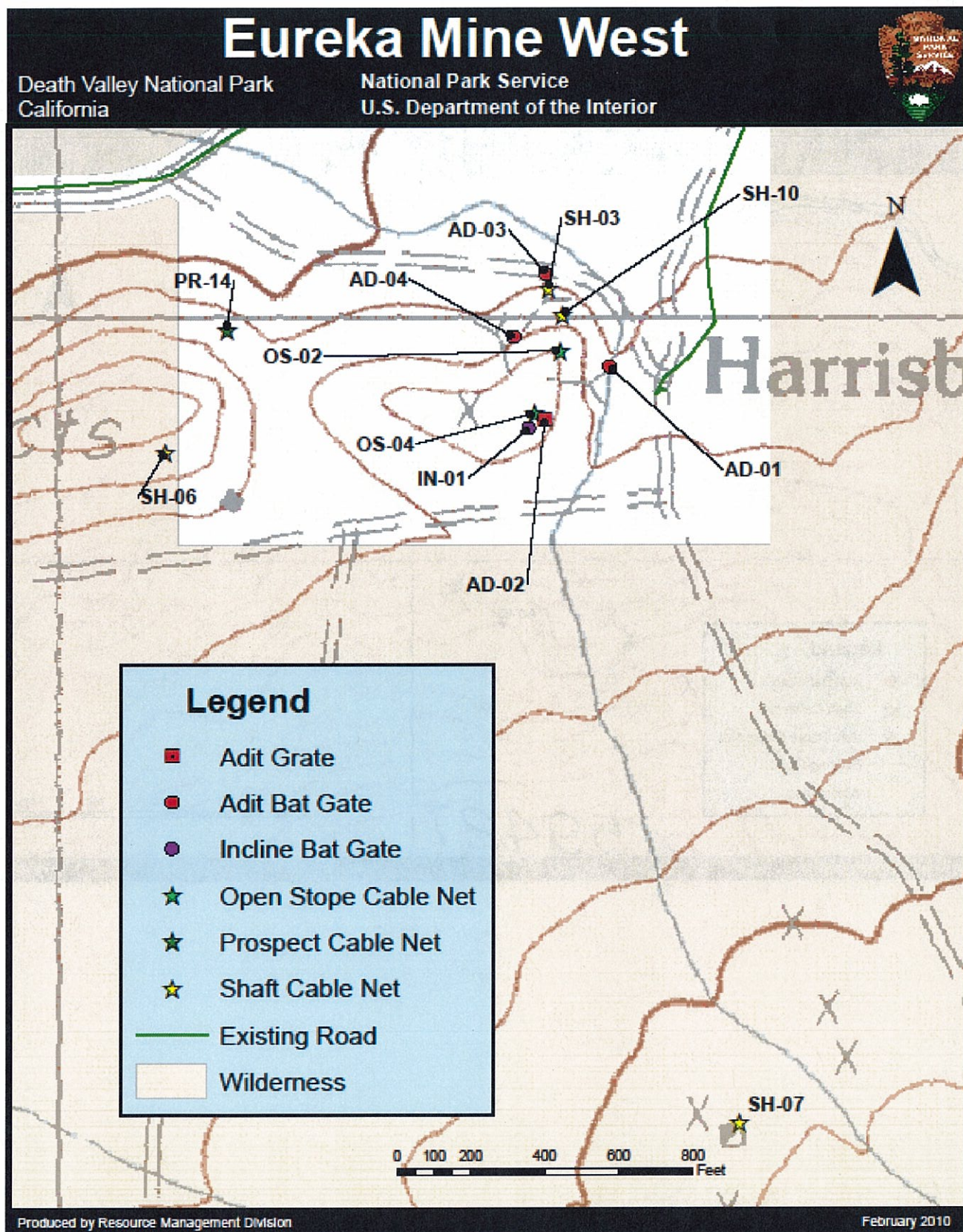


Attachments showing location of mines to be treated that are within wilderness.

Attachment A.1:  
Eureka Mine East

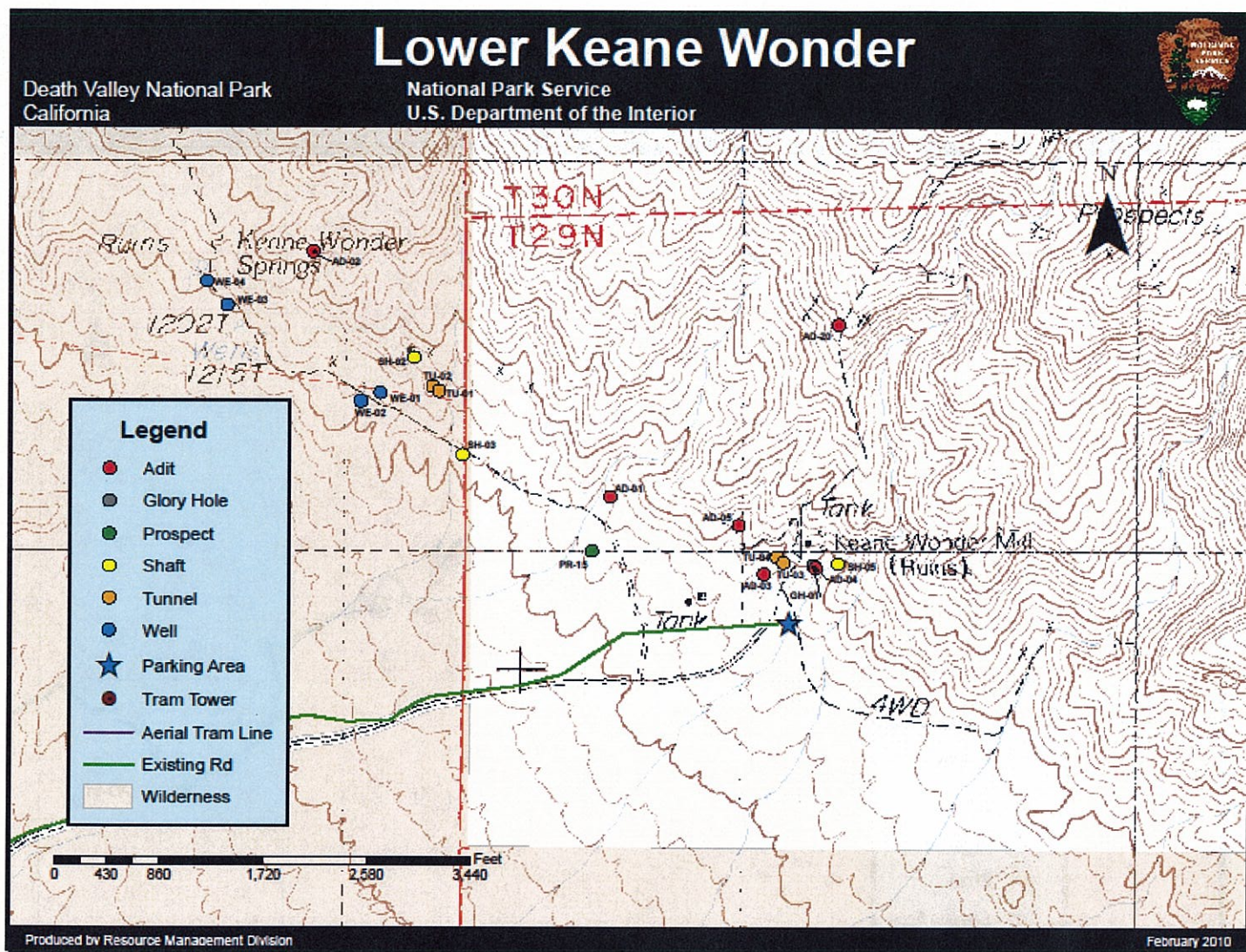






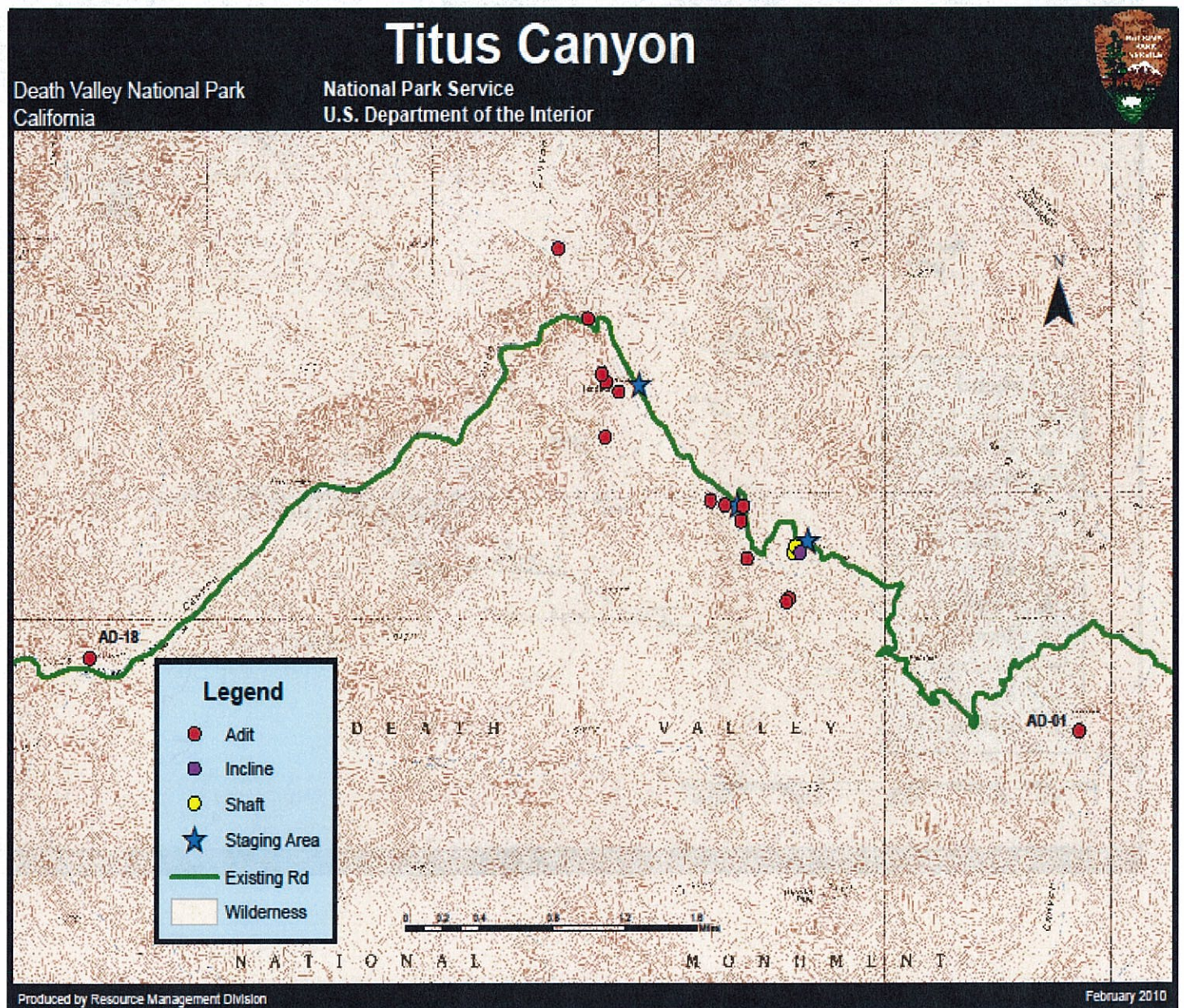


Attachment B  
Lower Keane Wonder  
Wilderness and non-wilderness



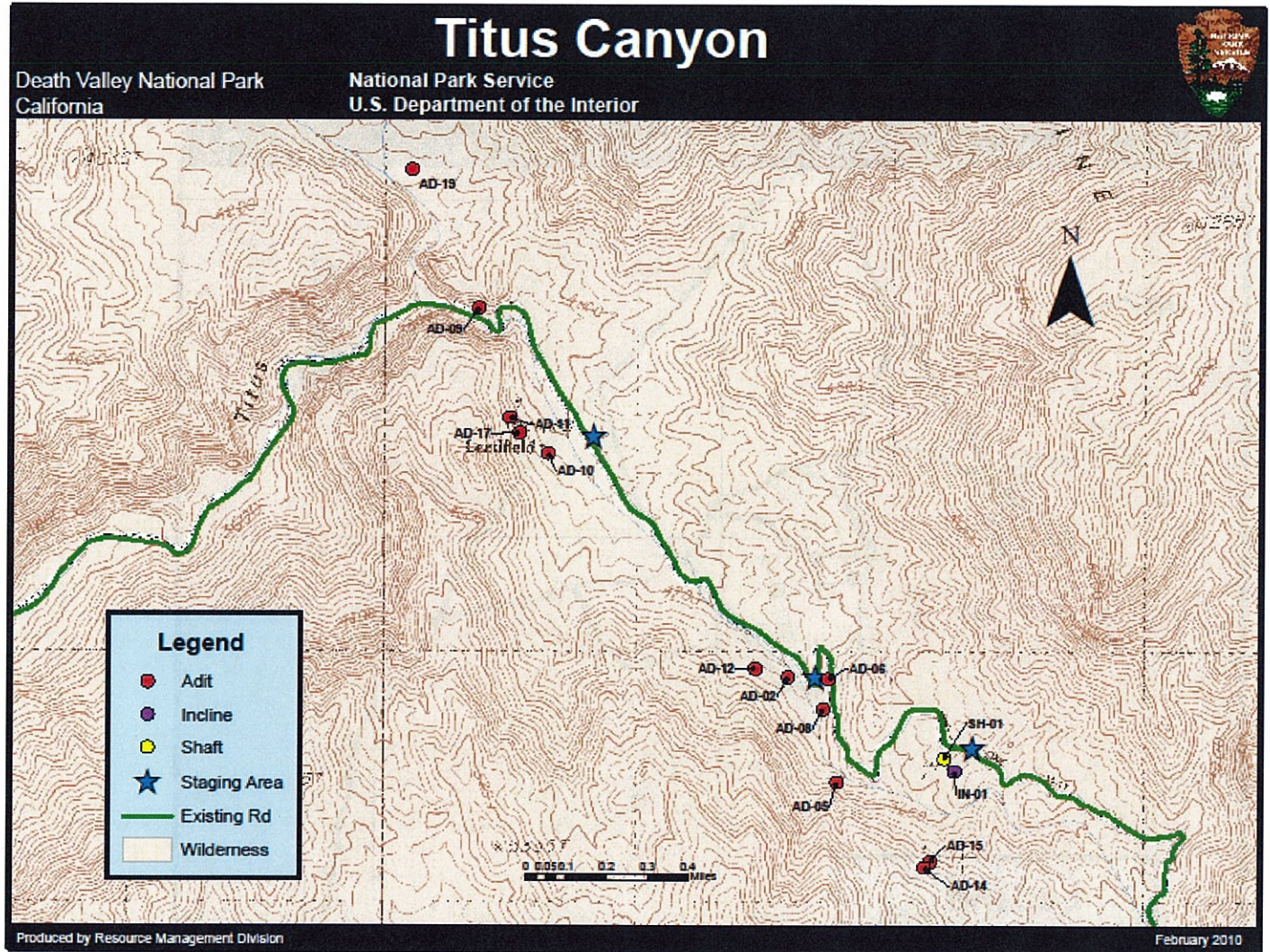


Attachment C 1:  
Titus Canyon (Leadfield)  
All Features including outlying features AD-01 and AD-18



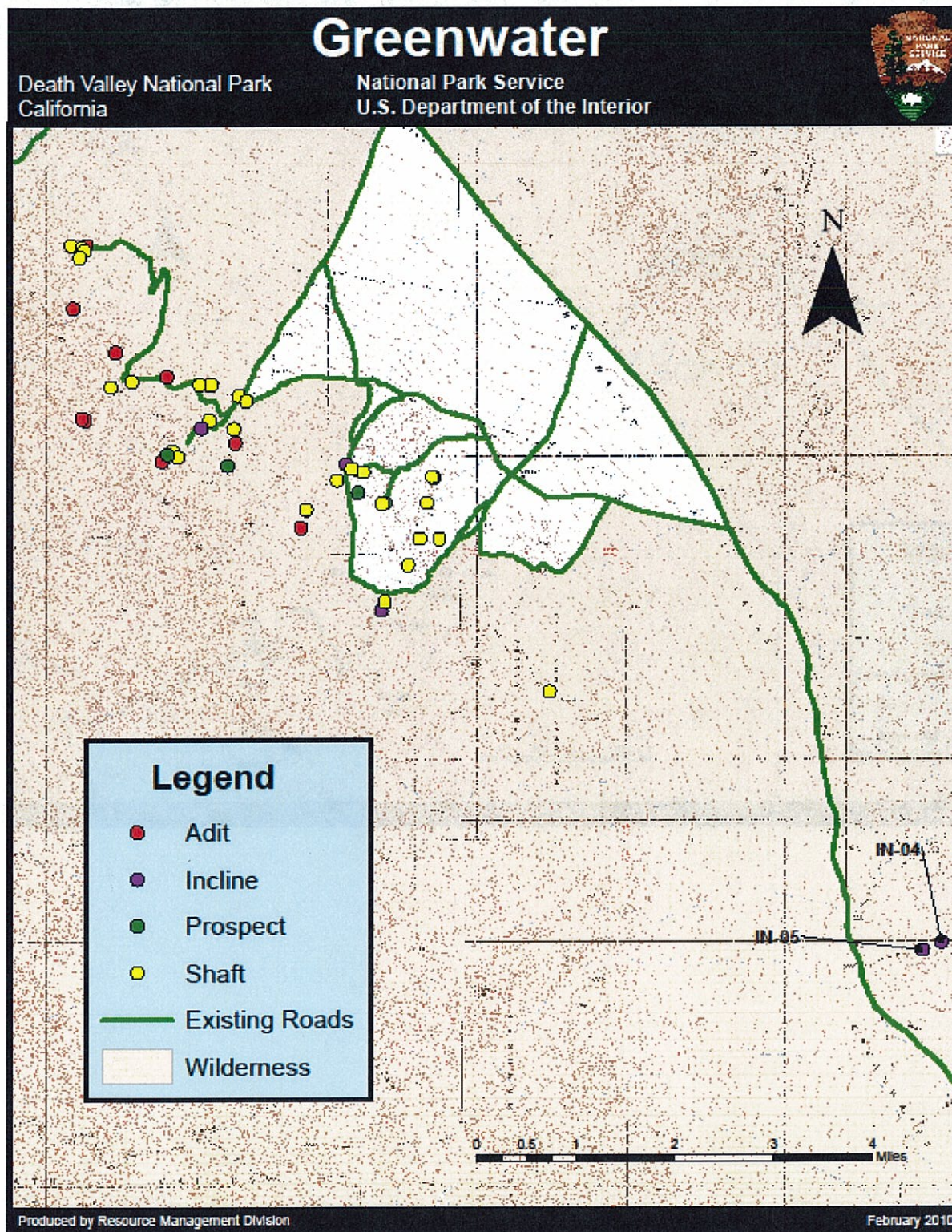


Attachment C 2:  
Titus Canyon (Leadfield)  
Features at Leadfield (includes all features except AD-01 and AD-18)





Attachment D.1:  
Greenwater Valley  
All Features including outlying features IN-04 and IN-05





Attachment D.2:  
Greenwater Valley  
All Features excluding outlying features IN-04 and IN-05

