WPF-0093

Cover Page Instructions

Fill in all blanks on the cover page. Devise a short descriptive title for the proposal. Your project may fall into more than one of the four primary project types. If so, select all categories that apply. For #12 below, **only list other grants that are secured at the time of application submittal.** For #13c below, you may list the total of both secured and unsecured money that is committed at the time of application submittal. The difference between #13c and #12 should represent the total of unsecured money needed to complete your proposal.

Cover Page: Application Information

1. Title of Project: Big Sandy River Riparian Project

2. Type of Project:
___Water Acquisition
_X_Capital Project or other
___Water Conservation
___Research

3. Stream type
___Perennial
___Intermittent
___Ephemeral

4. Date submitted___August 1, 1996

5. Date received by ADWR _August 1, 1996

6. Applicant Name_Kingman Resource Area

7. Applicant address (city, county, zip code)
Kingman Resource Area
2475 Beverly Ave
Kingman Az 86401

8. In an AMA
___ Phoenix
___ Tucson
___ Prescott
___ Pinal
___ Santa Cruz

Outside AMA_X_

9. Contact person/title and phone/fax number: Mike Blanton, Range Management Specialist, (520) 757-3161

10. Type of application:
New (x) Continuation ( )

11. Project start date:_10/01/96
End date:_12/01/1999

12. Other grants obtained and secured:

Grant type	Amount
Total	

13. Estimated funding:
a. AWPF___$92,000.00
b. Applicant_$57,500.00
c. Other_____
d. Total___$149,500.00

14. Tax ID number: PII[redacted]

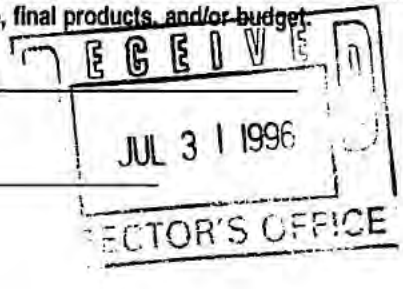
15. The undersigned hereby offers and agrees to perform in compliance with all terms, conditions, specifications and scope in the application. Signature certifies understanding and compliance with the attached application. Signature certifies that all information provided by the applicant within this application is true and accurate. The Arizona Water Protection Fund Commission may approve grant award agreements with modifications to scope items, methodology, schedule, final products, and/or budget.

Ken Drew
Typed Name of Authorized Representative

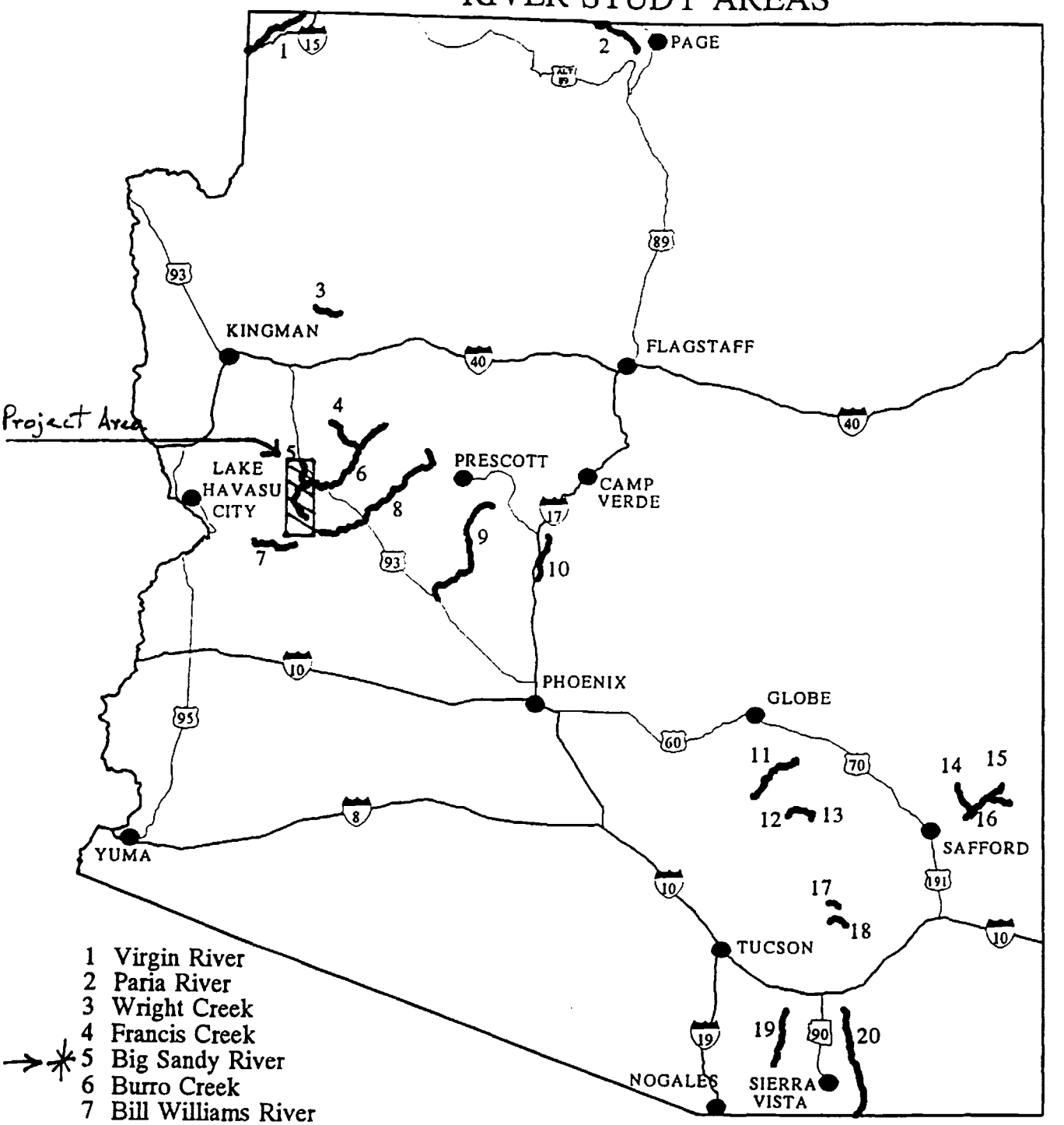
Ken Drew
Signature

Area Manager (520) 757-3161
Title and Telephone No.

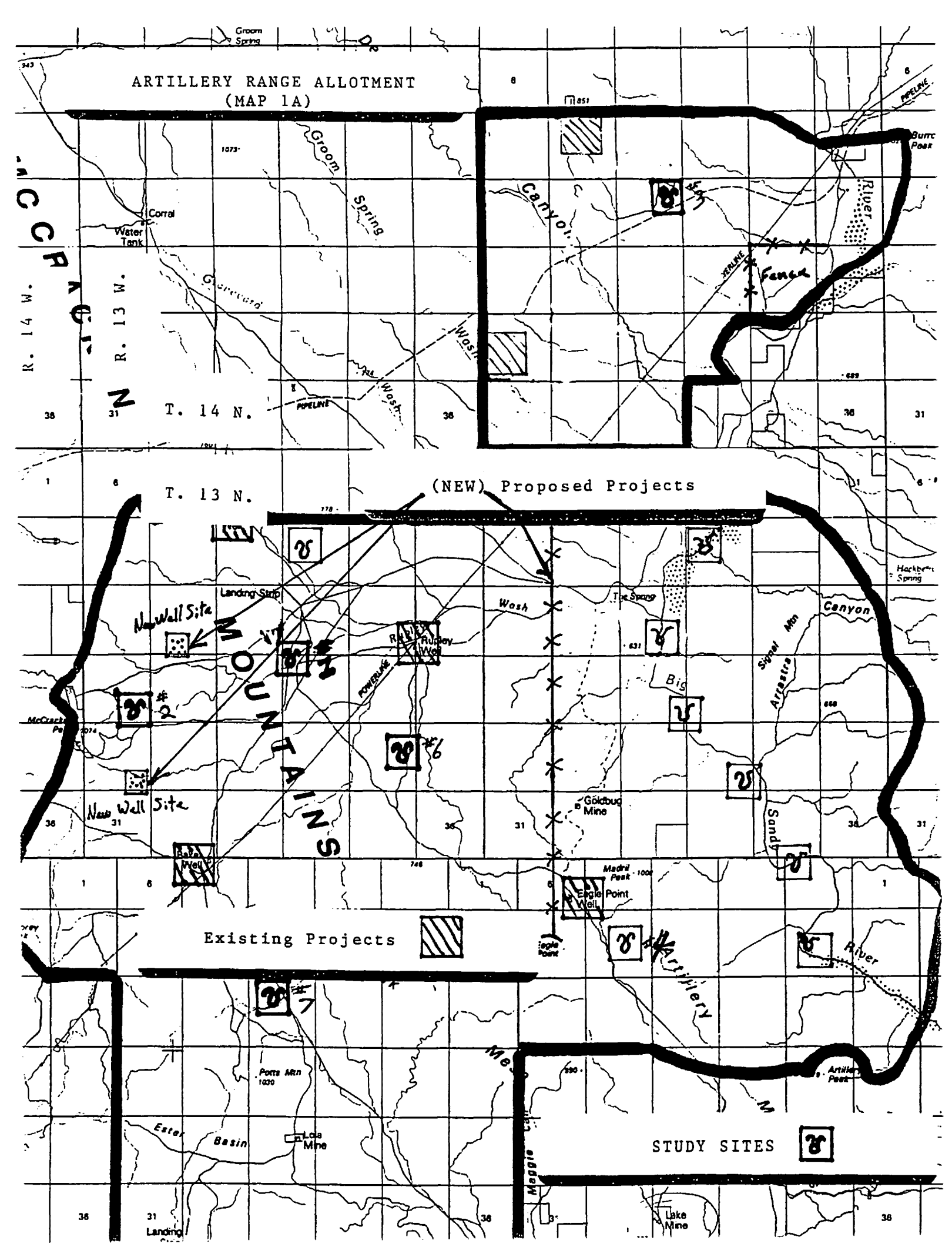
7-30-96
Date Signed



BUREAU OF LAND MANAGEMENT
RIVER STUDY AREAS



1 Virgin River
2 Paria River
3 Wright Creek
4 Francis Creek
→ ✳ 5 Big Sandy River
6 Burro Creek
7 Bill Williams River
8 Santa Maria River
9 Hassayampa River
10 Agua Fria River
11 Gila River (Middle segment)
12 Aravaipa Creek
13 Turkey Creek
14 Bonita Creek
15 Lower San Francisco River
16 Gila River (Gila Box)
17 Swamp Springs Canyon
18 Hot Springs Canyon
19 Cienega Creek
20 San Pedro River


ARTILLERY RANGE ALLOTMENT
(MAP 1A)
R. 14 W.
R. 13 W.
T. 14 N.
T. 13 N.
(NEW) Proposed Projects
Existing Projects
STUDY SITES
Groom Spring
Corral
Water Tank
Groom Spring
Wash
PIPELINE
Canyon
River
Fence
Landing Strip
New Well Site
New Well Site
Rudolph Well
Rudolph Well
POWERLINE
Wash
Tule Spring
Canyon
Signal Mtn
Artesia
Big
Sandy
#2
#6
#7
Goldbug Mine
Eagle Point Well
Eagle Point
Madrid Peak
Artillery
River
Potts Mtn
Ester Basin
Lee Mine
Maggie
Lake Mine
Artillery Peak
Landing
Hackberry Spring
McCracken Pass

Narrative Summary Page Instructions

Begin this summary with a **single sentence clearly stating the purpose** of the project. **List objectives, describe methods to be used, and indicate the significance of the proposed work** to the maintenance, enhancement or restoration of Arizona's rivers, streams and associated riparian or aquatic habitats. [*this is sent out to people requesting summary information about submitted projects*]

Summary:

The main focus of these projects is to restore and maintain riparian, aquatic and upland habitat on the Artillery Range allotment in the Kingman Resource Area. Approximenitly 8 miles of perennial stream would be enhance by constructing pasture fenceing and water facilities so that livestock grazing within these riparian sites could managed to reduce impacts. Currently no interior pasture fenceing exist to control livestock grazing within the riparian habitat on this allotment.

The Artillery Range allotment is located in the south half of the Kingman Resource Area near Alamo lake (see Map). This allotment is covered by the Hualapai-Aquarius Grazing Environmental Impact Statement (EIS) signed August 1981. The allotment is comprized of 76,171 acers of public land and 1,360 acers of private land. The Big Sandy River flows through the eastern edge of the allotment. The Big Sandy River is an oasis for animals in the allotment, providing a source of reliable water, food, cover and shade.Currently no interior pasture fenceing exist to control livestock grazing within the Big Sandy river on the allotment. Lack of adequate fence and watering facilities makes control of livestck grazing difficult. The projects main objective is to control livestock grazing during critical points during the year such as the the growing season. The development of a riparian pasture and additional watering facilities would allow the livestock operator to remove cattle from the Big Sandy river during the spring and summer months.

Objectives for Upland Vegetation

a. Limit the use of key forage species to 50% of the current years growth.

b. Maintain or increase the frequency of all key species within a stable range of statistical significance:

Objectives for Riparian Areas

The three most important aspects of "properly functioning riparian area" are:

a) The presence of a diverse age class structure of desirable woody species.

b) Maintain or increase cover of herbaceous vegetation consisting of sedges, rushes, and grasses along the stream banks and within the channel

c) Limit utilization of woody and herbaseous vegetation to 50 percent of the current years growth.

Expected benefits of this are:

a) To increase the amount and duration of flow of streams, springs, and seeps by increasing the water holding capacity of the stream banks.

b) Increase the quantity of riparian vegetation along and within the channel which will provide cover and forage for wildlife and cattle and protect the stream banks.

c) To reduce the frequency and severity of "blowouts", and to expedite the recovery of these areas when they do occur.

Methods

All range improvements will be constructed to BLM standardes with minimal impacts to vegetation, soils and wildlife resources.

Each of the stated vegetation management objectives recommended above will be monitored and evaluated to determain the progress of management actions toward meeting the objectives. An annual meeting will be held with all interisted parties to review the monitoring of the allotment and progress towards management objectives. A copy of monitoring data will be provided by the BLM to all interested parties.

For these analyses, frequency data on upland sites and all data on riparian sites will be collected. This data along with utilization data on upland

sites will be evaluated to guide management practices in meeting the resource objectives. Additional monitoring sites may be identified upon agreement between all interests parties as this plan progresses.

A. Upland Vegetation

There are 7 upland study sites located on the Artillery Range allotment. They were established in the allotment in 1983 and have been recorded each year since.

1. Utilization

Utilization data will be collected annualy on all key forage species within the study plots listed above using the Grazed-Class method (BLM Technical Reference 4400-3, pp. 23-6).

2. Trend

Frequency data will be collected every five years using the Pace Frequency method (BLM Technical Reference 4400-4, pp. 24-8).

3. Actual Use

The permittee will provide the BLM with an actual use report by March 15 of each year specifying numbers and dates of movement of livestock.

4. Weather

Weather data, from the National Oceanic and Atmospheric Administration (NOAA) stations located in Wikieup, Alamo Dam, and Yucca, was utilized to determine weather conditions in the area. Although no precipitation data was collected on the allotment, the three weather stations surround the allotment to the North, South and West. The precipitation data was graphed and analyzed to determine if general weather patterns between the stations were similar. The data indicates, high and low precipitation occurred during the same months at all three weather stations.

B. Riparian

The Big Sandy river within the Artillery range allotment has been divided into 6 segments for monitoring proposes. Each year 4 of these segements will be monitored using the following methods.

1. Utilization

Utilization data within riparian areas will be collected annually in each pasture using the Browse Utilization Classes in the Key Forage Plant Method (BLM TR 4400-3, pp. 11-13).

Key species: Cottonwood (Populus fremontii) and Willow (Salix Goodingii)

2. Age Class

Age class structure will be measured by walking through each riparian area and determining age class diversity. In addition a vegetation profile board will be used to document age class. Photos will be taken and used to get a general idea of the trend of age class diversity.

3. Cover

Vegetative cover will be measured using the Line Intercept Method (BLM TR 4400-3, pp. 42-45).

Location Information Instructions

This sheet is to be completed for capital, water acquisition, or research projects, which involve a specific stream reach or watershed area. If the exact extent of the project area is not completely defined at the time this sheet is completed, please make note of this on line #10 below, and complete the form with location information which is as accurate as possible.
Outline the study area on a 7.5 minute (15 minute if the project area is too large), U.S.G.S. topographic map. At least one original topographic map must be included with the five copies of the submitted proposal. For any projects that include a developmental component, the map (or additional maps) must include the locations of the developments which are discussed within the proposal, such as locations of checkdams, revegetation areas, fence lines, and water distribution systems. Please submit more than one map if necessary.

LOCATION INFORMATION SHEET/LAND OWNERSHIP FORM

1. County: Mohave 2. Section: several, see map Township: _____

4. Range: 13 W and 14 W 5. Stream Name: Big Sandy River

6. Landownership of project area: Private and Public land Managed by the BLM

7. Current land use of project area: Grazing and Recreation

8. Length of stream through project area: 8 Miles

9. Size of project area (in acres): 30,600

10. Is the project area fully defined at this time: Y/N? Yes

11. **Provide directions to the project site from the nearest town. List any special access requirements.**

Travel 7 miles southeast of Wekieup on Hwy 93 to the Signal road. Turn south on the Signal road and drive 5 miles to the ranch headquarters. From the ranch headquartes contenue south on the Signal road approximately 10 miles to project site.

12. **Describe the agreements which give you legal access to the project area throughout the project period. Include signed copies of any agreements already in effect.**

N/A These projects will be constructed on public land so access to project area is not an issue.

Narrative Introduction Instructions

List the problem or problems that you address in your proposal, **list the cause or causes of these problems**, and **list the remedies or solutions** that you will implement.

Statement of problem/s:

In 1988, Riparian Area Condition Evaluation or RACE inventories were conducted on all 13.8 miles of the Big Sandy River within the allotment. This inventory method used a rating system of unsatisfactory or satisfactory based on vegetation, hydrology and geology. Part of the rating system also includes other factors such as utilization rates on woody species and age class structure of the trees. The inventory rated 9.78 miles of the river in unsatisfactory condition and 4.02 miles in satisfactory condition. The inventory also recorded the utilization rate on all segments of the river range from heavy to severe use on both woody and herbaceous

The utilization data collected on the upland vegetation on this allotment since 1983 indicates that utilization patterns are not uniform. Livestock use in the northern and western portions of the allotment is very light due to a lack of water in these area.

Statement of cause/s of the problem/s:

The primary cause of this problem is the yearlong grazing by livestock along the stream banks of the Big Sandy river within the Artillery Range allotment. Utilization information recorded on both woody and herbaceous vegetation indicates that use levels range between heavy and severe. The percentage of the small trees topped is 100 percent over the majority of the riparian area. The over-utilization of riparian vegetation has caused other problems such as unstable stream banks, depleted wildlife habitat and poor age class structure for woody tree species. Riparian conditions in the Artillery Range allotment have also been classified as non-functioning. The latest monitoring data recorded in 1994 indicates the condition of the riparian habitat along the river is the same as reported in the 1988 inventory.

Statement of remedies or solutions:

In addition to the stocking rate reductions already in place, the solution to this problem is to remove livestock annually from the Big Sandy River during the growing season from 05/01 to 9/30. Deffering grazing during the growing season has worked to restore the health to riparian habitat on other grazing allotments in the Kingman Resource Area.

Livestock management on the uplands should be changed from year long grazing to a management system that will allow for rest to meet the physiological needs of the plants. Based on utilization patterns and range condition, different areas of the allotment will be rested each year to improve range condition throughout the allotment. This type of management could be accomplished using water developments such as water traps. Water traps will be set on waters in areas to be rested. If livestock drift into an area that is being rested they will be trapped and removed. If this is unsuccessful pasture fencing will be constructed to control livestock.

However, in order to be able to utilize the entire allotment and provide for proper distribution of livestock some additional range improvements will have to be developed.The new water developments will provide adequate water for cattle to be move from the river to the uplands. Additional fenceing will allow livestock grazing to be managed in the riparian habitat.

Narrative Introduction Instructions

Provide the necessary introductory information which supports your listing of the problem/s, cause/s, and solution/s on the previous page. If possible provide examples of similar successful projects and associated documentation. Describe the project area's relevant history if applicable. Justify whether your project will provide short-term, mid-term, or long-term benefit (short-term is less than 5 years; long-term is greater than 20 years). For on-going projects, the history and background of the project should be provided. Describe the site prior to project initiation, tasks that have been completed and any site changes that have occurred as a result of these activities.

Introductory Information:

Before 1936 the Artillery Range allotment was a common use allotment utilized by Bacon and Eston ranches. From 1936 to 1937 the allotment was vacant but in 1937 Alvin T. Bland acquired the grazing permit for the allotment. Mr. Bland had the permit until 1957 when he sold the ranch. During the 20 year period that Mr. Bland had the grazing permit for the allotment, the licensed livestock number ranged from 105 to 335 cattle year long (CYL) for an average of 215 CYL. In 1957 William Roer SR. acquired the grazing permit for the Artillery Range allotment. Bill Roer Sr. retired from the ranch several years ago and leases the ranch to his son Bill Roer Jr. who is the permittee of record today. The licensed livestock number has ranged for 85 to 530 CYL for an average of 182 CYL over the past 34 years. Based on monitoring data the stocking rate on the allotment was changed from 345 CYL to 140 CYL in 1995 through an agreement signed by the livestock permittee.

In addition to the stocking rate adjustments the evaluation pointed out other resource conflicts resulting from heavy yearlong livestock grazing such as excessive use of the riparian areas and use of these zones during the critical growing seasons of spring and summer. Livestock should be removed annually from the Big Sandy River during the growing season from 05/01 to 9/30.

However, in order to be able to utilize the entire allotment and provide for proper distribution of livestock some additional range improvements will have to be developed. These facilities will be developed on a cooperative basis between the BLM and the permittee. The livestock permittee would be asigned all maitenance of range improvement as part of his grazing permit and would remain intact and functional.

Scope of work: Objectives and Benefits

Objectives are specific, measurable outcomes of the project. **List these objectives in numbered order**, with number one being the most important outcome. After each objective, **list the benefits to the riparian or aquatic habitat** that accomplishing this objective will provide. **(An example scope of work with listed objectives and benefits is available as a separate document to be used in conjunction with this manual)**

Objective #1:

Construct additional fenceing to control livestock grazing within the Big Sandy River.

Benefits:

Keeping livestock off the riparian habitat during the growing season will help to restore riparian and aquatic habitat along the Big Sandy River.

Objective #2:

Develop additional watering facilities on the Upland .

Benefits:

Additional watering facilities will allow livestock removed from the river and place to graze during the spring and summer months. This will not only remove grazing pressure from the riparian areas but will also improve the distrobution of livestock on the upland range sites as well.

Objective #3:

Development of additional waters on the upland.

Benefits:

Additional watering facilities on the upland will help maitain the current grazing system on the allotment. Without additional watering facilities it would not be fesable to rest a site that has been over grazed in the past and therefor upland range condition would not improve

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Objective #4:

Benefits:

Scope of work: Task Descriptions

Tasks: **Describe in detail the tasks you will perform to accomplish your objectives and achieve your desired results.** If you have completed a **common task form** for a specific task, you may refer to the information in that form in your task description rather than repeating it in this section . These tasks must be exactly the same tasks as the tasks you will list later in your task-timetable. Please use the same task numbering on each form. Consider the acquisition of permits, monitoring, and data analysis to all be tasks within your overall project. After your task description, provide the AWPF task cost (this includes all costs associated with that task; e.g. administrative, materials, personnel, etc., that the AWPF will pay for), include a description of any deliverables the Commission will receive from that task, and the date those deliverables will be submitted to the Commission. A deliverable is a product produced from a task, which is submitted to the Commission and proves that the task was completed as described within the scope of service. Deliverables are often reports. They are sometimes photos, lists of data, invoices for materials, etc. **(An example scope of work with task descriptions is available as a separate document to be used in conjunction with this manual)**

Task #1 Description:

The following permits, authorizations and clearances will be required: Develop the Enviromental Assement or EA for the propose projects. Allow for a 45 day comment peroid before the Area Manager signs the EA. Issue range improvement permits and complete all project planning by Dec. 1996.

AWPF task cost: $ 0.0
Deliverable description: Signed copies of all necessary permits authorizations and clearances.
Deliverable due date: Feb. 15, 1997

Task #2 Description:

Complete contracting work for drilling wells and construction of fences. All range improvement will be constructed according to BLM guidlines Order needed materials for fencing and water facilities. Shortly after show me trip with contractors issue contracts Estimated date to begin drilling is mid-March 1997 (see allotment map 1A for locations).

AWPF task cost: $92,000.00
Deliverable description: (1) Copies of materal invoices; (2) Copies of Issued contracts; (3) Copies of project completion reports including photos; (4) Copy of the well drillers log

Deliverable due date: May 31, 1997

Task #3 Description:

Change grazing permit to reflict the new grazing system and show the riparian pasture rest period from May 1 to October 1.

AWPF task cost: $0.0
Deliverable description: Signed copy of the grazing permit

Deliverable due date: Sept. 1 1997

Task # Description:

Contenue to conduct monitor studies on the riparian habitat in the Big Sandy river as well as on the upland vegetation. After two years

AWPF task cost: $0.0
Deliverable description: Copy of the Evaluation

Deliverable due date: Dec. 1, 1999

Task-Timetable

Enter the starting and ending dates of the project, the duration of the project (in number of months), and the years of benefit your project will provide to the riparian or aquatic habitat. Indicate the timing of all tasks from the scope of work. If you perform a task periodically (e.g., taking water level measurements every 3 months), indicate it in this manner rather than as if it is performed every month. Provide the estimated cost to the AWPF for each task (which includes labor, materials, administration, etc.). The total cost for all tasks must add up to the exact amount you are requesting from the AWPF on the application cover page (line 13a), and must agree with the AWPF column total on the budget page. Forms for years 2 and 3 are included for multi-year projects.

Start Date: 03/01/1997 **Yrs of Benefit:** 20+
End Date: 12/01/1999 **Duration:** 36 Months

Project Name: Big Sandy Riparian Project

Project Categories and Tasks

Task No.	Task Cost	Task Description	Months Since Project Initiated (Year 1)											
			1	2	3	4	5	6	7	8	9	10	11	12
1	10,500	EA, Project Planning, Obtain Permits	x	x	x									
2	107,500	Construct Range Improvements												
		Order Materails and Contracts			x									
		Construct Fencing and Wells				x	x	x						
3	3,500	Change Grazing Permit							x					
4	7,000	Monitoring Studies										x		
		Evaluation of Monitoring Data (1999)												

Project Categories and Tasks			Project Name: Big Sandy Riparian Project											
			Months Since Project Initiated (Year 2)											
Task No.	Task Cost	Task Description	13	14	15	16	17	18	19	20	21	22	23	24
4	7,000	Monitoring Studies					x		x		x			
		Evaluation of Monitoring Data												

Project Categories and Tasks			Project Name: Big Sandy Riparian Project										
			Months Since Project Initiated (Year 3)										
Task No.	Task Cost	Task Description	25	26	27	28	29	30	31	32	33	34	35	36
4	7,000	Monitoring Studies				x		x		x				
	7,000	Evaluation of Monitoring Data									x	x		

Project Budget Sheets

On the project budget sheet, break down your budget into Administrative costs, Direct Labor costs, Other Direct costs, Outside Services costs, and Capital Outlay costs. **Administrative costs** are management and overhead costs, and by statute the total administrative costs charged to the AWPFC cannot exceed 5% of the total amount requested from the AWPF. **Direct Labor costs** include the labor costs directly involved with the project. Break down these costs by: Job classification (e.g., laborer, project scientist, hydrologist, etc.); average cost/hour for that job classification; number of hours for that job classification; and total cost (Total cost = (Job classification cost/hour) x (number of hours). **Other Direct costs** include supplies and materials, paper, pencils, computer time, per diem, printing, public relations, etc. **Capital Outlay costs** include any equipment costs greater than $1000.00. **[The costs on this budget sheet do not have to be broken down into the exact same task costs that you previously presented in the scope of work section and on the task-timetable.]**

PROJECT BUDGET

	FUNDING SOURCES			
	AWPF	**Other**	**Donated Mat./Serv.**	**TOTAL**
ADMINISTRATION COSTS (1)				
Project Management			**$3,500.00**	**$3,500.00**
DIRECT LABOR COSTS (2)				
Range Management Specialist			**$21,000.00**	**$21,000.00**
Water Facilities Construction Crew			**$3,500.00**	**$3,500.00**
Siting Cattleguard			**&1,500.00**	**$1,500.00**
Project Manager			**$21,000.00**	**$21,000.00**
OTHER DIRECT COSTS				
Fencing Materials	**$12,000.00**			**$12,000.00**
Water Facilities Materials	**$12,000.00**			**$12,000.00**
Cattleguard	**$3,000.00**			**$3,000.00**

	FUNDING SOURCES			
	AWPF	Other	Donated Mat./Serv.	TOTAL
OUTSIDE SERVICES				
Licensed Well Driller (contrat)	$30,000.00		$3,500.00	$33,500.00
Fence contract	$35,000.00		$3,500.00	$39,000.00
CAPITAL OUTLAY				
Tech/Industrial Equip. (3)				
Water (CAP/Effluent)				
Other (describe)				
TOTALS	$92,000.00		$57,500.00	$149,500.00

(1) Administration costs are limited to 5% of the total dollars requested for a project.
(2) Include wages, salaries, and fringe benefits.
(3) Attach list of capital equipment expenditures over $1,000.00

Budget Information

Your budget information (numeric) is presented on the project budget sheets preceding this page and within the task-timetable. These should be your best estimates of all costs. You will not be contractually bound to spend that exact amount for each task if your proposal is selected. However, the total cost requested from the AWPF will be part of the contract. If an explanation of any costs or expenditures is necessary, include it in this section. **Also provide written evidence of all secured funds (in-hand or committed in writing) that you are listing on the cover page.** For unsecured funds, list their amount and desribe their status. If you were to obtain them, list when would this occur. An explanation of any in-kind contributions listed in your application is recommended.

Budget Information:

The BLM will provide the services of a Range Management Specialist and Project Manager. Costs for their support will be as follows:

Range Management Specialist-$ 3,500.00/Month for 6 Months
Project Manager- $3,500.00/Month for 6 Months

Other Direct Costs:

Fencing material costs total $2,500.00/mile for a total cost of $15,000.00

Both well site will be equiped with solar pumps, thoughs, pipelines and 10,000gl storage tanks total cost for each facility is $6,000.00.

BLM will provide labor to equipe the well facility and sit cattleguard.

Existing Plans

Discuss any existing plans, reports or information that are relevant to the project and that the Commission should be aware of when evaluating your proposal. This might include other projects that are being performed or being planned in the area that may affect your project, or local planning/zoning changes that could impact the project area.

Existing Plans:

This allotment is covered by the Hualapai-Aquarius Grazing Environmental Impact Statement (EIS). Objectives from the EIS were carried foreword to the Kingman Resource Area Management Plan (RMP) signed in March 1995.

Community Support

Describe the community support for your project. Include signed copies of letters from community organizations or groups that support your project. If pertinent, describe your commitment to work jointly with affected cities, towns, counties, NRCDs, special districts, and/or Indian tribes. Please be aware that for public support to affect your proposal's criteria rating score, it must be included with your application. Indications of public support for your proposal that are received after your application is submitted will be summarized for the Commission and may affect their decisions on which proposals to fund, but will not affect the criteria rating score.

Community Support:

Range Staff, BLM-Kingman Resource Area

Wildlife Staff, BLM-Kingman Resource Area

Wildlife Staff, Arizona Game and Fish Dept.

US Fish and Wildlife Service, Phoenix AZ.

Recreation Specialist, BLM-Kingman Resource Area

Cultural Specialist, BLM-Kingman Resource Area

Roer Family, Artillery Range Allotment (Permittee)

Mohave County Public Lands Committee

Karen Sussman (ISPMB), Scottsdale AZ.

Personnel

Identify the key personnel associated with this project. Include brief biographical sketches that indicate relevant qualifications.

Personnel:

Mike Blanton - Range Management Specialist
B.S. New Mexico State University - Range Ecology
Range Management Specailist for the Bureau of Land Management for the 10 years. Mike has developed many allotment management plans mostly dealing with riparian management. Mike developed the cunnent Monitorin plan for the Kingman Resource Area. Based on this monitoring he has also published several papers on the livestock management in riparian areas. In 1993 Mike presented one of his papers intitled Integrated Resorce Management and Riparian Improvement on the Bagdad Grazing Allotment to the Symposium on Vegetation Management of Hot Desert Rangeland Ecosystems in Phoenix Arizona.

Duane Ferneau - Project Manager
Has worked for the Bureau of Land Management for 15 year as a Engineer. He has designed and developed almost every type of range improvement used by the BLM for livestock and wildlife management.

AWPF Task Form for Recharge Projects	
Additional information if required	

AWPF Task Form for common Monitoring Activities	
Item	**Applicant's response**
Groundwater monitoring (Y/N): If Y,	**No**
Depth to water (Y/N): if Y	
method?	
approx. # of sample pts.?	
sample frequency?	
start date & end date?	
GW quality (Y/N): if Y	
constituents?	
approx. # of sample pts.?	
sample frequency?	
start date & end date?	
Surface water monitoring (Y/N)	**Yes, USGS stations**
Discharge (Y/N): if Y	
method?	
approx. # of sample pts.?	
sample frequency?	
start date & end date?	
Stage (Y/N): if Y	
method?	
approx. # of sample pts.?	
sample frequency?	
start date & end date?	

AWPF Task Form for common Monitoring Activities	
SW quality (Y/N): if Y	
constituents?	
approx. # of sample pts.?	
sample frequency?	
start date & end date?	
Photo point monitoring (Y/N): If Y,	**Yes**
Approximate number of points, and photos per point?	**six**
How often will photos be taken?	**Twice a year**
Additional information if needed	
Wildlife monitoring (Y/N): If Y,	**Yes**
Aquatic (Y/N): If Y,	**Yes**
Which plant and/or animal categories?	**Plants**
Which parameters?	**Cover(woody & hebaceous), Age class (woody spp.), Utilization (woody and hebaceous)**
How often will monitoring be performed?	**Twice a year**
Start and end dates for monitoring?	**5/1 and 10/1 each year**
Terrestrial (Y/N): If Y,	**N/A**
Which plant and/or animal categories?	
Which parameters?	
How often will monitoring be performed?	
Start and end dates for monitoring?	
Additional information if needed	
Fisheries habitat (Y/N): If Y,	

List abiotic parameters	
List biotic parameters	
How often will monitoring be performed?	
Start and end dates for monitoring?	
Climatic data (Y/N): If Y,	**Yes**
List types of data?	**Precipitation, Air Temp., Soil Moisture, Soil Temp.**
How often will monitoring be performed?	**once a month**
Start and end dates of monitoring?	**Started in 1990 and is on-going**
Additional information if needed	**N/A**
Soil monitoring (Y/N): If Y,	**Yes**
Soil type (Y/N)	**N/A**
Soil moisture (Y/N): If Y,	**Yes, plant productivity**
How often will monitoring be performed?	**once a month**
Start and end dates for monitoring?	**Started 1990 and is no-going**
Additional information if needed	**N/A**
Channel morphology (Y/N): If Y,	**No**
List parameters measured?	
How often will monitoring be performed?	
Start and end dates for monitoring?	

Aerial imagery: photos/videography (Y/N): If Y,	**No**
List formats that will be used	
How often will imagery be taken?	
Start and end dates for imagery?	
Additional information if needed	
Will transects be used (Y/N) during any of the activities mentioned above: If Y,	**Yes**
List which activities involve the use of transects	**Plant Cover useing Line Intercept method**
Transect dimensions? (If more than one type/size, please indicate)	**200 ft tape**
Approximate number?	**3**
Location selection parameters?	**N/A**
Will quadrats be established along transects (Y/N): If Y,	**No**
Quadrat dimensions? (If more than one size/type please indicate)	
Approximate number?	
Location selection parameters?	
Additional information if needed	

State Historic Preservation Office Information (must be submitted)

SHPO Certification

This certification is required by regulations implementing the State Preservation Act (A.R.S. 41-861 through 41-864), effective July 24, 1982. It is understood that recipients of state funds are required to comply with this law throughout the project period. The State Historic Preservation Act mandates that all State agencies consider the potential of activities or projects to impact significant cultural resources. Each State agency is required to consult with the State Historic Preservation Officer with regard to those activities or projects that may impact cultural resources.

PROJECT TITLE: Big Sandy River Riparian Project

Please answer the following questions which provide information about the potential of the project to impact cultural resources:

Does the project have the potential to disturb the surface and/or subsurface of the ground?
YES: X **NO:** _____

Are there any buildings or structures (including mines, bridges, dams, canals, etc.) which are 50 years or older within the project area that have the potential to be disturbed by the proposed activity?
YES: _____ **NO:** X

Are there any known prehistoric and/or historic archaeological sites within the project area?
YES: _____ **NO:** X

Are you aware of any archeological investigations that have been performed within one (1) mile of the project area?
YES: _____ **NO:** X

If you have answered "**NO**" to all of the above questions, please sign on the line below certifying that the activity or project is in compliance (and will remain in compliance throughout the project period) with the State Historic Preservation Act. **YOU MUST SUBMIT THIS FORM WITH YOUR COMPLETED APPLICATION.**

Authorized Signature

7-30-96

Date

If you have answered "**YES**" to any of the questions above, please answer all applicable questions on the other side of this form.

If you answered yes to question #1, specifically identify any surface or subsurface impacts that are expected. Attach extra sheets if more space is needed.

During the developement of the Fence and watering facilities some surface soil will be impacted. Before any ground disturbing actions occur, a cultural resource inventory will be conducted in compliance with all the BLMs policies and regulations governing the protection of cultural resource values.

If you answered yes to question #1, describe the current ground surface condition within the entire project area boundary (i.e., is the ground in a natural undisturbed condition, or has it been bladed, paved, graded, used for agriculture, etc.). Attach extra sheets if more space is needed.

This entire project area has been grazed by livestock for the past 100 years impact include existing fenceing and Water developements.

If you answered yes to question #2, list the sites, their names, and provide a brief description of the site.

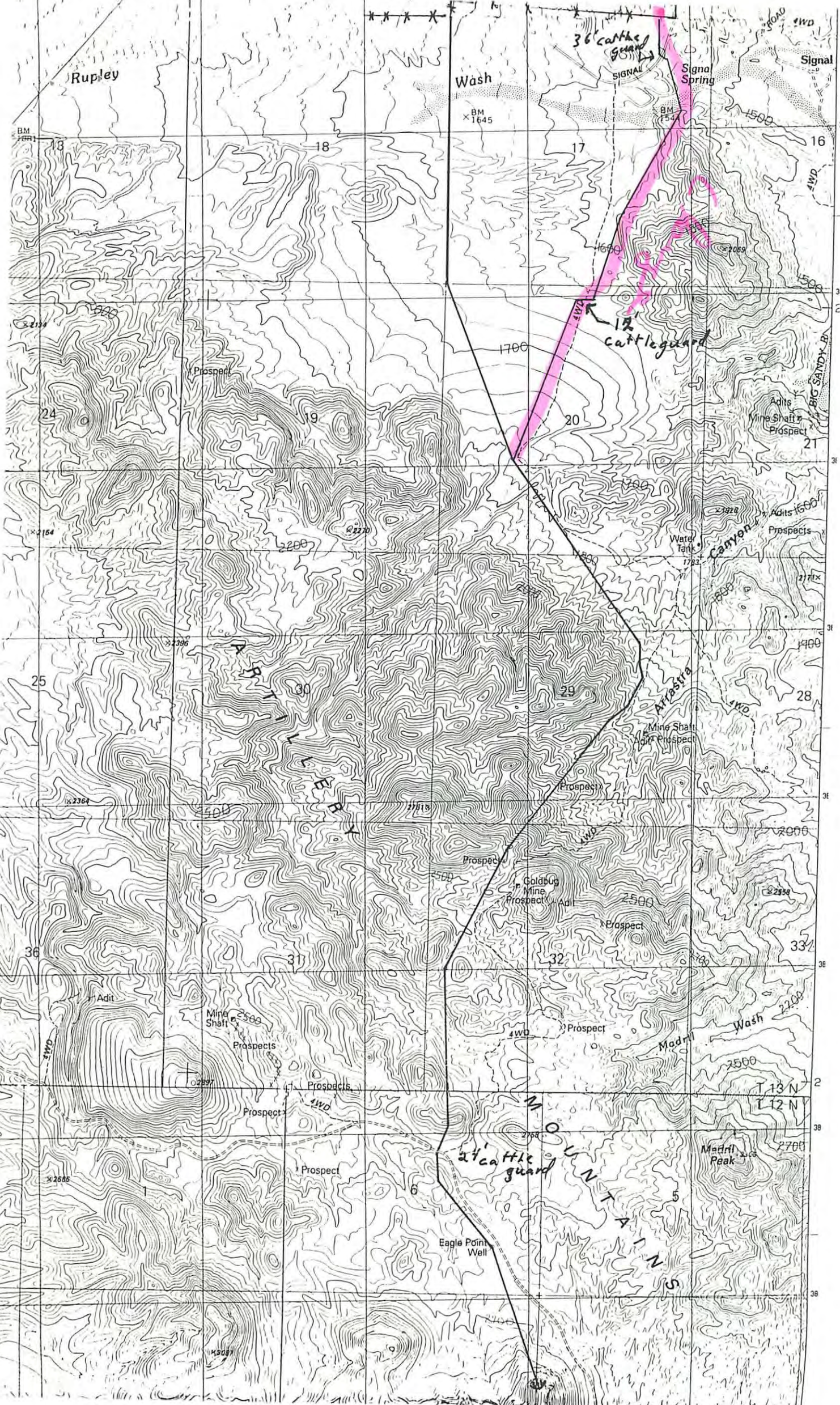
Has the project area been previously surveyed for cultural resources by a qualified Archaeologist?

YES:_____ **NO:**_____

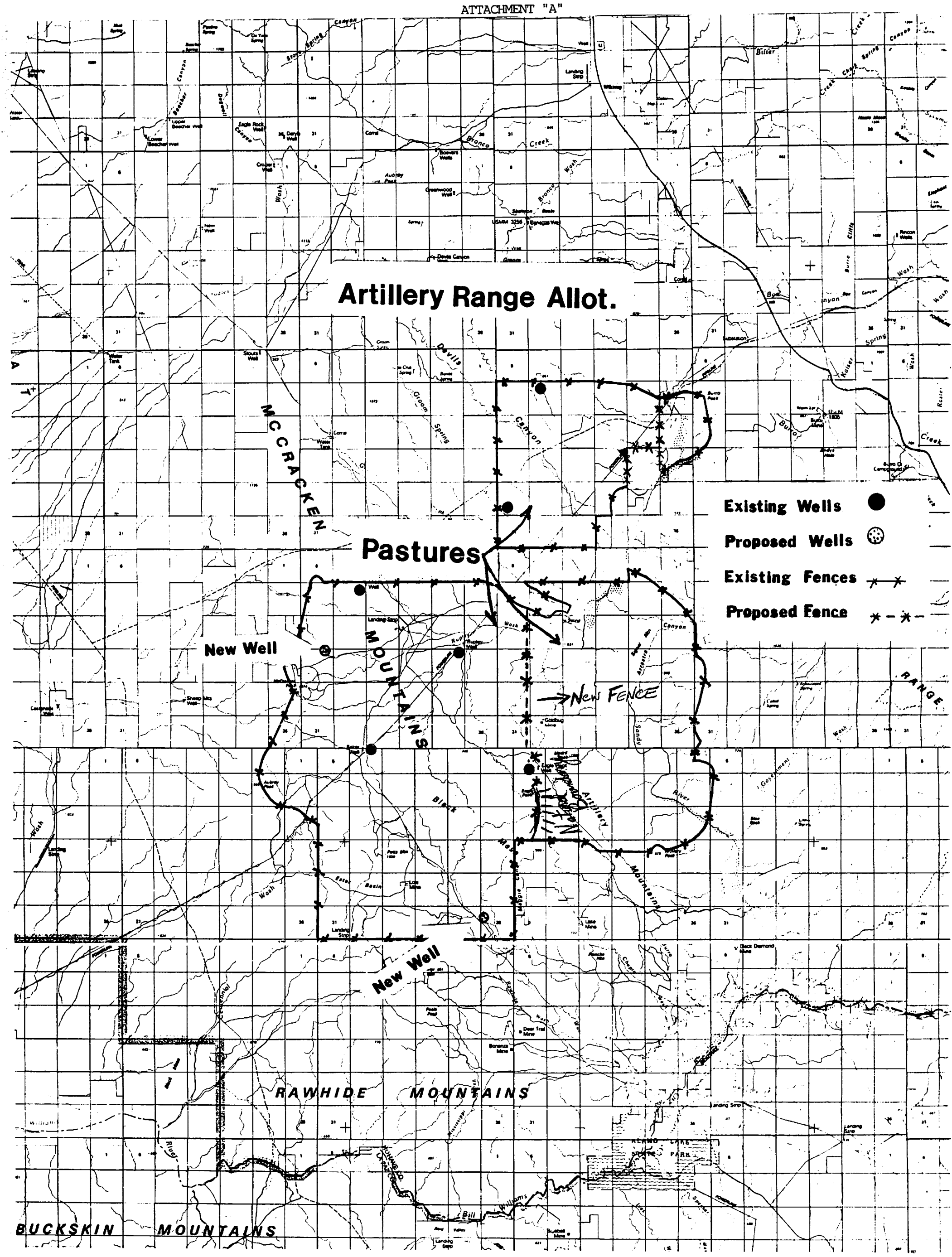
DON'T KNOW: X

If yes, submit a copy of the Archaeologist's report with your application.

YOU MUST SUBMIT THIS FORM WITH YOUR COMPLETED APPLICATION


Rupley
Wash
Signal
Signal Spring
36' cattle guard
12' cattleguard
24' cattle guard
Prospect
Adits
Mine Shaft
Prospect
Water Tank
Canyon
Adits
Prospects
Arizstra
Mine Shaft
Adit
Prospect
Goldbug Mine
Prospect
Adit
Prospect
Prospect
Adit
Mine Shaft
Prospects
Prospects
Prospect
Prospect
Prospect
Eagle Point Well
Madril
Wash
Madril Peak
MOUNTAINS
APTILLERY
BIG SANDY R
T 13 N
T 12 N
4WD
ROAD
BM 1645
BM 1541
BM 1681

ATTACHMENT "A"



Artillery Range Allot.

Riparian Studies

Upland Studies

New Fence

New Well

Cattle-Guard

#1 #2 #3 #4

Upper Beecher Well
Lower Beecher Well
Eagle Rock Well
Daryls Well
Crozier Well
Corral
Boevers Wells
Aubrey Peak
Greenwood Well
New Well
Roadside Tank
Devils Canyon Well
Crozier
Shannon Basin
USMM 3256
Banegas Well
Groom Peak
Spring
Hot Spring
Neale Mesa
Sycamore Wash
Gray Wash
Big Sandy
Cliffs
Burro Canyon
Box Canyon
Substation
Kaiser Spring
Burro Peak
Warm Spr
USLM 1805
Burro Mine
Andys Hole
Burro Cr Campground
Canyon
Sandy River
Powerline
Pipeline
Wash
Well
Landing Strip
Rupley Well
Rupley Wash
Signal Mtn
Arrastra Canyon
Goldbug Mine
Baker Well
Madrill Peak
Eagle Point Well
Eagle Point
Sheep Mts Well
McCracken Peak
Aubrey Peak
Potts Mtn
Ester Basin
Lola Mine
Maggie Can
Artillery Peak
Artillery Mountains
Government Wash
Blue Rock
Chino Spring
Greenwood Peak
Greenwood Spring
Big Sandy Spring
Alamo Spring
Hackberry Spring
Arrowweed Spring
Cattail Spring
Lake Mine
Plancha Mtn
Black Diamond Mine
Deer Trail Mine
Bonanza Mine
Miller Mtn
Rawhide Wash
Chapin Wash
Mississippi Wash
Black Mesa
Centennial
Bluebell Mine
Reid Valley
Wells
Jeep Trail
Lees Wash
Swansea (Site)
Alamo Lake State Park
Mohave Co.
La Paz Co.
Poachie Range
Sheep Mountains
Rawhide Mountains
Black Mesa Mountains