DATA SHEET 0H0290157

Form 10-306
(Oct. 1972)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY – NOMINATION FORM
FOR FEDERAL PROPERTIES
(Type all entries - complete applicable sections)

STATE: Arizona
COUNTY: Yuma
FOR NPS USE ONLY
ENTRY DATE: OCT 3 1975

SEE INSTRUCTIONS

1. NAME

COMMON: Harquahala Peak Observatory
AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER: T.5 N., R.10 W., Sec. 6: NE¼NW¼NW¼, G&SRM
CITY OR TOWN: ~~40 air miles SW of Wickenburg, Arizona~~ Wenden area
CONGRESSIONAL DISTRICT: 3
STATE: Arizona — CODE: 04
COUNTY: Yuma — CODE: 027

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☒ Building	☒ Public	Public Acquisition:	☐ Occupied	Yes:
☐ Site ☐ Structure	☐ Private	☐ In Process	☒ Unoccupied	☐ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☒ Unrestricted
				☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☒ Other (Specify) livestock grazing	
☐ Educational	☐ Military	☐ Religious	hunting	
☐ Entertainment	☐ Museum	☐ Scientific		

4. AGENCY

United States Department of the Interior
Bureau of Land Management
REGIONAL HEADQUARTERS: (If applicable) Phoenix District Office
STREET AND NUMBER: 2929 West Clarendon
CITY OR TOWN: Phoenix,
STATE: Arizona 85017 — CODE: 04

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: United States Department of the Interior, Bureau of Land Management
STREET AND NUMBER: 2929 West Clarendon
CITY OR TOWN: Phoenix
STATE: Arizona 85017 — CODE: 04

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY:
DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local
DEPOSITORY FOR SURVEY RECORDS:
STREET AND NUMBER:
CITY OR TOWN:
STATE: — CODE:

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NATIONAL REGISTER

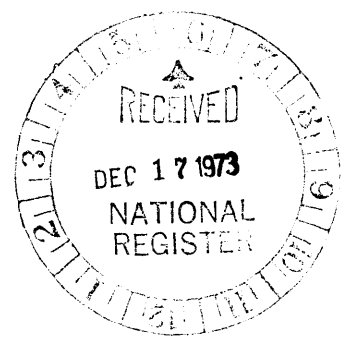
STATE: ARIZONA
COUNTY: Yuma
FOR NPS USE ONLY
ENTRY NUMBER: 4 OCT 3 1975
DATE

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☐ Altered	☒ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL *(if known)* PHYSICAL APPEARANCE

Site consists of two buildings, one of which is a two story double adobe building. The other building is a small storage shed. These buildings are partially deteriorated and slightly vandalized. Buildings are not being used at the present time.



SEE INSTRUCTIONS

Form 10-300a
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	
Arizona	
COUNTY	
Yuma	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE
	OCT 3 1975

(Number all entries)

7. Description

The large, two-story building at the Harquahala Peak Observatory is built on a rock and mortar foundation. Of double-walled, adobe construction, with pour cement elements, the structure has wooden supports and beams, and is sided and roofed with corrugated tin. Several lightning rods are still in place on the roof.

The basement, which comprises the first floor of the main building, has an entrance at the southern end. A metal barred door is still in place at that entrance. (see photos).

The two second floor entrances are on the eastern and western exposures of the building. Wooden porches, one of which is still intact on the western side of the building, led up to the second floor doors.

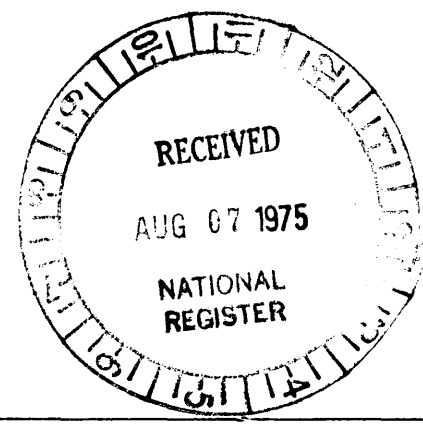
Along the northern end of the building is a cement water catchment device.

To the south of the larger building is a small, one room, storage shed, which is made of corrugated metal sheeting with a cement foundation.

The observatory buildings were built in 1920 by the Smithsonian Institution to house scientists and solar observing equipment.

Harquahala Peak Observatory, at an altitude of 5680', lies in the central portion of a desert mountain range, the Harquahala Mountains. Part of the basin and range province, the mountains are surrounded by a low (1500--2000') plain. Other isolated mountain ranges are found throughout the area.

Vegetation surrounding the observatory is low desert scrub, which consists of grasses, yuccas, mimosas, acacias, and bear-grass. Climate in the area is semi-arid. The area has a minimum of rainfall, most of which falls in July and August, summer temperatures in the 100's, and a mild winter climate.



GPO 921-724

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☒ 20th Century
☐ 15th Century	☐ 17th Century	☐ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)* 1920-1925

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☐ Engineering	☐ Religion/Philosophy	☐ Other *(Specify)*
☐ Historic	☐ Industry		_____
☐ Agriculture	☐ Invention	☒ Science	_____
☐ Architecture	☐ Landscape Architecture	☐ Sculpture	_____
☐ Art		☐ Social/Humanitarian	_____
☐ Commerce	☐ Literature		_____
☐ Communications	☐ Military	☐ Theater	_____
☐ Conservation	☐ Music	☐ Transportation	_____

STATEMENT OF SIGNIFICANCE

From 1920 to 1925 the Smithsonian Institute operated a "Solar Astrophysical Observatory" at this site. Scientific study of the sun was conducted for this five-year period. The site is unique in Arizona and one of three or four such sites in the entire United States.

Arizona, with its high frequency of clear and cloud-free days and nights, is increasingly referred to as the "world-wide capital" of astronomical research. The significance of astronomy in Arizona can be traced from historical sites, such as Harquahala Peak Observatory, to modern facilities such as Kitt Peak and Lowell Observatory.

SEE INSTRUCTIONS

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Bulletin - Worldwide Variations in Atmospheric Transmission:1 Baseline Results from Smithsonian Observations (Reprinted from Bulletin of the American Meteorological Society. Vol. 54, No. 4, April 1973).
Annals of the Astrophysical Observatory from Smithsonian Institution

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY				OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES	
CORNER	LATITUDE	LONGITUDE			LATITUDE	LONGITUDE
	Degrees Minutes Seconds	Degrees Minutes Seconds			Degrees Minutes Seconds	Degrees Minutes Seconds
NW	° ' "	° ' "			33 ° 48 ' 39 "	113 ° 20 ' 46 "
NE	° ' "	° ' "				
SE	° ' "	° ' "				
SW	° ' "	° ' "				

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 10

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE

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11. FORM PREPARED BY

NAME AND TITLE: Kenneth S. White, Outdoor Recreation Planner

DATE: August 10, 1973

BUSINESS ADDRESS: Bureau of Land Management

STREET AND NUMBER: 3022 Federal Building

PHONE: (602) 261-3141

CITY OR TOWN: Phoenix

STATE: Arizona 85025

CODE: 04

12. CERTIFICATION OF NOMINATION

State Liaison Officer recommendation:

☒ Yes
☐ No
☐ None

Dennis McCarthy
State Liaison Officer Signature

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Liaison Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The recommended level of significance is ☒ National ☐ State ☐ Local

Federal Representative Signature — *Date* 8-7-75

Deputy Assistant Secretary
Title

NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

Director, Office of Archeology and Historic Preservation

Date 10/3/75

ATTEST:

Keeper of The National Register

Date OCT 2 1975

SEE INSTRUCTIONS

GPO 938-449

Form 10-300a
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	
Arizona	
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(Number all entries)

8. Significance

Harquahala Peak Observatory, Arizona, was established in 1920 by the Smithsonian Astrophysical Observatory with funds donated by Mr. John A. Roebling, in conjunction with the construction of a similar observatory on Mt. Montezuma, Chile. Dr. C.G. Abbott of the Smithsonian was responsible for moving the solar observatory to Harquahala Peak from Mt. Wilson, California. The peak was picked because of its remoteness from pollution, and for the region's high percentage of cloudless days.

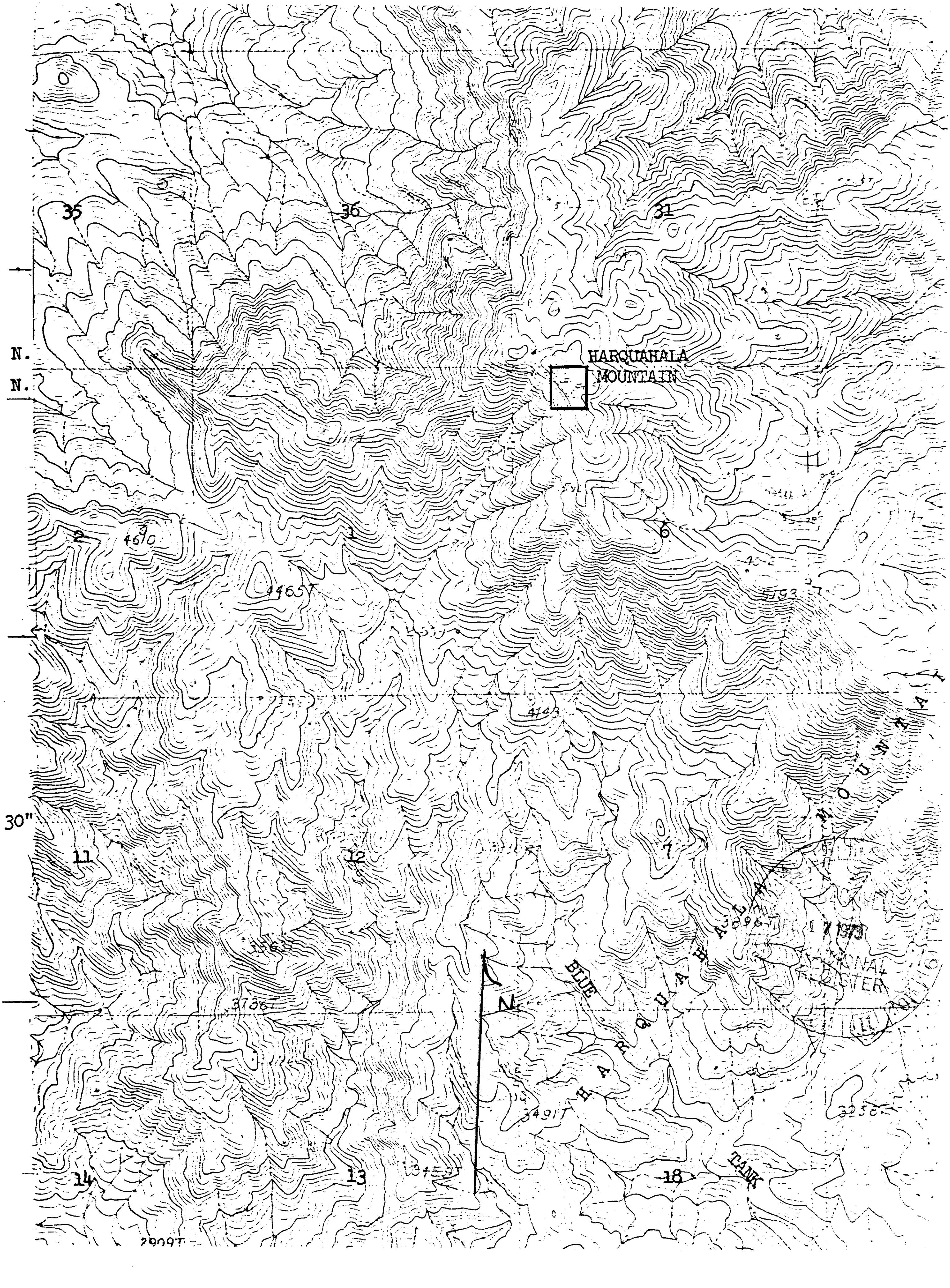
Solar observations began on October 3, 1920, and for five years, measurements of the solar constant were taken at the site. The equipment used was a pyroheliometer, an early device used to measure the sun's energy output in ergs per second per square centimeter. The solar constant measurement, which has since been abandoned as a method, was used to determine the effect of the sun's energy output on the earth's climate. Although results concerning weather forecasting were inconclusive, the five year study, using data from both Harquahala Peak and Mt. Montezuma, indicated that the amount of energy reaching the earth from the sun was constant over the earth's surface.

In order to gain easier access and better atmospheric conditions, the Harquahala Peak Observatory was moved in 1925 from Arizona to Table Mountain, California. While in operation, Harquahala Peak was the only observatory of its kind in the United States.

Harquahala Peak represented an expanding national interest in Arizona as an astronomical laboratory. Arizona is invaluable to the astronomical observer because of the state's high percentage of cloudless days, a minimum amount of rainfall, and until recently, its lack of air and light pollution. Two observatories had been built prior to the Harquahala Peak station. Both are still in operation; the Lowell Observatory in Flagstaff, established in 1894 by Percival Lowell, and the Steward Observatory, built in 1916 by the University of Arizona at Tucson. Since that time, several other observatories have been built and maintained in Arizona. Among these are; the Northern Arizona University and U.S. Naval Observatories in Flagstaff, the National Center for Optical Astronomy, established in 1957 at Kitt Peak, and, most recently, the Smithsonian Astrophysical Observatory on Mt. Hopkins, south of Tucson.

Part of a chain of Smithsonian funded solar observatories which include Mt. Montezuma, Chile, Table Mountain, and Mt. Wilson, California, as well as several other world-wide astrophysical observatories, the Harquahala Peak station illustrates an early phase in the development of American astrophysics.

Harquahala Peak Observatory is of national significance for its contribution to the developing science of astrophysics.



HARQUAHALA
MOUNTAIN
35
36
31
N.
N.
2
4610
1
6
4465T
4143
30"
11
12
7
HARQUAHALA MOUNTAINS
BLUE
3563
3736T
3491T
3238
14
13
18
TANK
N
NATIONAL REGISTER

Form No. 10-301
Rev. 7-72

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES

PROPERTY MAP FORM

(Type all entries - attach to or enclose with map)

STATE	
Arizona	
COUNTY	
Yuma	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE
	OCT 8 1975

SEE INSTRUCTIONS

1. NAME

COMMON: Harquahala Peak Observatory

AND/OR HISTORIC:

2. LOCATION

STREET AND NUMBER:

T. 5 N., R. 10 W., Sec. 6: NE¼NW¼NW¼, G &S.R.M.

CITY OR TOWN:

Sw of Wickenburg

STATE:	CODE	COUNTY:	CODE
Arizona	04	Yuma	027

3. MAP REFERENCE

SOURCE:

USGS Harquahala Mtns, SE

SCALE: 1:24,000

DATE: Advance sheet, unedited

4. REQUIREMENTS

TO BE INCLUDED ON ALL MAPS

1. Property broundaries where required.
2. North arrow.
3. Latitude and longitude reference.

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AUG 07 1975
NATIONAL REGISTER

☆ U.S. GOVERNMENT PRINTING OFFICE : 1973—729-148/1441 3-1

NPS Form 10-900-a
(3-82)

OMB No. 1024-0018
Exp. 10-31-84

United States Department of the Interior
National Park Service

National Register of Historic Places Inventory—Nomination Form

For NPS use only
received 8/15/86
date entered

Continuation sheet | Item number | Page

Name Harquahala Peak Observatory
State LaPaz County, AZ

Nomination/Type of Review	Date/Signature
County change from Yuma to LaPaz County - Approved	for Keeper Helen Bryan 8/15/86
	Attest
	Keeper
	Attest
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	Keeper
	Attest
	Keeper
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	Attest
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	Keeper
	Attest

NPS Form 10-900-a
(3-82)

OMB No. 1024-0018
Expires 10-31-87

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date entered

Continuation sheet | Item number | Page

Correction to Harquahala Peak Observatory, listed 10/3/75

Previously listed as being located within Yuma County, this property is now located in La Paz County. The La Paz County code is 012.

This change is the result of the creation of La Paz County, which became a separate entity from Yuma County on January 1, 1983.

Signed Donna J. Schober

Donna J. Schober
Arizona State Historic Preservation Officer