



WATER-RIGHT DOCKET

Big Bend National Park

Docket No: 5

PANTHER JUNCTION AREA

Preliminary Docket Information

00-00-0000: water docket summary

BIG BEND NATIONAL PARK

WATER RIGHT #5

PANTHER JUNCTION WELLS

Panther Junction is served by various water wells. The use of these wells has varied from year to year, according to this docket's water use reports.

The water law of Texas does not control or require reports on ground water taken from wells. Also, since the taking and use of the water is entirely within a federal land reservation, under the Supremacy Clause of the U.S. Constitution, state law could not mandatorily control this water usage.

Therefore, as indicated by correspondence in this docket, water records are being kept on a voluntary basis. Also, NPS policy favors keeping water records to establish federal rights in the event of a subsequent change in water control laws.

By Roger Smith

February 15, ¹⁹⁶⁷~~1966~~

Area: Big Bend National Park Docket #5
Title of Docket: Panther Junction Area

I. Land Status

1. Big Bend General Map -- NP-BB 17018A
2. Panther Junction - NP-BB 2108-H

II. Water Rights

1. Map showing location of wells, springs and test holes
in Panther Junction Area

III. Survey of Ground Water Pumpage in Texas during calender year:

1. 1959
2. 1960
3. 1961
4. 1962
5. 1963
6. 1964

IV. Water Quality Reports

1. U.S. Geological Survey Analytical Notes - undated
 - a. Well No. 1 - Rio Grande Village
2. Analytical Statement - June 14, 1964
 - a. Headquarters
3. Analytical Statement - June 15, 1964
 - a. K-Bar #2 - K-Bar Ranch West
 - b. K-Bar #5 - Smith Ranchhouse
 - c. Old K-Bar - Kay-Bar Ranchhouse
4. Analytical Statement - June 25, 1964
 - a. Dug-Out Wells
 - b. Nail Ranch
5. U.S. Geological Survey Analytical Notes - March 12, 1965
 - a. Well #2
 - b. Well #4
 - c. Well #5 - K-Bar Ranch
 - d. K-Bar
 - e. Dug-Out Wells - Spring
6. U.S. Geological Survey Analytical Notes - October 16, 1965
 - a. Test Well No. 1 - Panther Junction
 - b. Test Well No. 2 - Panther Junction Test No. 2
7. U.S. Geological Survey Analytical Notes - November 17, 1965
 - a. Well No. 2
 - b. Well No. 4
 - c. Well No. 5
 - d. Well No. K

8. Texas State Department of Health Laboratories' chemical analyses

- a. Analysis #196102
- b. Analysis #196103
- c. Analysis #196104
- d. Analysis #197453

V. Test Wells

- 1. K-Test Hole Water Well, Big Bend National Park #13
Brewster County, Texas
- 2. U. S. Geological Survey Well Logs for Test Well TH-13 and
Memo dated September 24, 1973 to Superintendent, BIBE from
Hydraulic Engineer, SWR.

TEXAS BOARD OF WATER ENGINEERS
P. O. BOX 2311 CAPITOL STATION
AUSTIN, TEXAS

REPORT OF WATER USE - 1960

NOTE: WATER USED UNDER EACH PERMIT, CERTIFIED FILING OR OTHER WATER RIGHT MUST BE REPORTED ON A SEPARATE REPORT OF WATER USE. The Statutes of Texas* require all users of public waters to keep records of and to file annual reports with the Board of Water Engineers showing such use. Please use the reverse hereof if necessary to complete answers to any questions.

Docket # 5
Panther Junction Water System

NATIONAL PARK SERVICE
SUPERINTENDENT
MEDIN SPRINGS
BIG BEND NATIONAL PARK TEXAS

Permit _____ Certified Filing _____

Riparian 36180
This report shall be used only for reporting water used under the above designation. Forms for reporting used under other than the above designation will be provided upon request.

Watershed: RIO GRANDE

Please indicate any change in ownership and address from that shown above.

Present Ownership Same

Present Address Same

1. Name of stream or canal from which water was diverted: None

If you have a reservoir please state:

- (a) Name of reservoir _____
(b) Present capacity of reservoir _____
(c) Condition of dam _____

2. The amount of water used was determined by: (a) Recording meter _____ (b) Wier _____
(c) Flume _____ (d) Pump rating multiplied by hours of operation X (e) Other method _____
of estimating quantity used (explain) _____

3. Detail of Amount of Water Used: (ALL USERS)

In the appropriate column or columns below, show by months the amounts of water used for each purpose covered by this report. If your record is by gallons, convert to acre-feet.
(325,851 gal. = 1 ac. ft.)

ALL USERS ARE REQUIRED BY LAW TO EXECUTE AFFIDAVIT AT END OF THIS REPORT

Quantity Used in Acre-Feet (450 gallons per minute = 2 acre-feet per 24 hour day; 450 GPM = 1 CFS)							
Mo.	Municipal & Domestic	Industrial Use	Irrigation Use	Mining Use	Hydro-electric Use	Recreation Use	Other Uses
Jan	0.556						
Feb	0.653						
Mar	1.092						
Apr	2.042						
May	1.828						
Jun	1.939						
Jul	1.927						
Aug	1.833						
Sep	1.290						
Oct	1.094						
Nov	0.890						
Dec	0.604						
TOTAL	15.748						

This water was pumped from wells

Total Acre-Feet Surface Water Used: _____

**Indicate gal. per minute or cubic feet per second.

*Articles 7611, 7612 and 7612a Revised Civil Statutes of Texas

4. If all of the water reported here was not obtained from your own facilities, please state name of supplier and approximate amount of water obtained.
Name _____ Amount _____ Acre-feet _____

5. If you supplied water to other users, give the names, ~~of persons supplied~~, quantities of water supplied, and purpose for which the water was used, ~~Not applicable~~

Name and Address	Purpose	No. of Ac. Ft.

6. Irrigators Only:

Please state the number of acres of land in your irrigation program: _____ acres.
Of this amount, please state the number of acres irrigated during 1960: _____ acres.
Of the acres irrigated during 1960, how many acres were irrigated to produce only one crop: _____ acres. How many acres were irrigated during 1960 to produce more than one crop: _____ acres. State the name of the survey or surveys in which the lands in your irrigation program are located: _____
Survey No. _____, Abstract No. _____, _____ County, Texas.

7. Municipal Users Only:

Indicate the amount of water returned to stream as sewage effluent: None _____ Ac. Ft.
Indicate the amount of sewage effluent used for irrigation, industrial, or other purposes: _____ Ac. Ft. What was the estimated population connected to your system at the end of 1959 _____; 1960 _____?

8. Industrial Users Only:

Type of industry: _____ None _____
Of the amount of surface water you have reported on this form as being used during 1960, estimate the quantity or percentage actually consumed: _____ Ac. Ft. or _____ %.

9. WELL WATER is not to be included in the figures reported under item number 3, however for planning purposes only the Board is interested in obtaining figures for the total quantity of well water used in 1960: 13,748 acre feet.

10. Other Comments:

This water was pumped from four wells in the Panther Junction Area.

AFFIDAVIT

I hereby certify that the above is true and correct to the best of my knowledge and belief.

Witness my hand at Big Bend National Park, Texas, this the 28 day of February, 19 61

Stanley C. Joseph
(Signature) Superintendent

Subscribed and sworn to before me, the undersigned authority, on this the 28 day of

February, 19 61.

Charley E. Shannon
Charley E. Shannon, ~~Notary Public in and for~~
U.S. Commissioner ~~Notary Public in and for~~
Big Bend National Park, Texas XXXXXXXXXXXX
County, Texas

(SEAL)

Docket #5

Panther Junction

REPORT OF WATER USED FOR THE YEAR ENDING DECEMBER 31, 1959

Article 7612, Vernon's Annotated Civil Statutes, Texas, provides for the filing of an annual report to the Board of Water Engineers by all appropriators of public waters. The report is intended to show the amount of water used and the distribution of use. Each Permit or Certified Filing must be reported separately.

Superintendent
Big Bend National Park
Texas

Change, if any, in ownership: _____

Change, if any, in address: _____

Check the appropriate square or squares to indicate the use or uses for which your Permit was granted:
Municipal ☐; Industrial ☐;
Irrigation ☐; Mining ☐;
Hydroelectric ☐; Recreation ☐.

Source of Water:

- (1) Reservoir ☐. Name of reservoir _____
(2) Stream ☐. Name of stream _____
(3) Well ☒. (While your Permit covers only the use of surface water, information concerning the use of ground water is of value to this Board in compiling data.)
Panther Junction Water System

Method of Determining Amount of Water Used:

- (1) Recording meter ☒; (2) Wier ☐; (3) Flume ☐; (4) Pump rating multiplied by hours of operation ☐; (5) Other method of estimating quantity used ☐. Explain other method.

Capacity of pump or pumps: 7

gal. per minute 7 gal. per minute 25 gal. per minute 4 gal. per minute
K-Bar Well #2 Well #4

Miscellaneous Information:

- (1) Was all of the water reported on this form obtained from your own facilities? yes If not, state here the name of your supplier and the approximate amount of water obtained.
Name of Supplier _____; no. of ac. ft. _____
Name of Supplier _____; no. of ac. ft. _____
(2) Did you supply water to other users? no. If so, give the names of persons supplied, quantities supplied, and purpose for which use was made:

Name	Purpose	No. of Ac. Ft.

- (3) Was your supply of water adequate in 1959? Yes. What plans, if any, do you have for increasing your supply? We plan to drill a new well for this area

Detail of Amount of Water Used: (ALL USERS)

In the appropriate column or columns below, show by months the amounts of water used for each purpose covered by this Permit or Certified Filing. While your Permit covers only the use of surface water (from reservoir or stream), information concerning the use of well water is also of value to this Board in compiling data. Please indicate such use by drawing a circle around the number of acre feet used from wells. If both sources were used during a given month (for example, 20 acre feet from a reservoir and 10 acre feet from a well), show the amount used in this manner: 20 (10). If your record is by gallons, convert to acre feet. (325,851 gal. = 1 ac. ft.)

Mo.	Quantity Used in Acre Feet (1 Acre Foot = 325,851 Gallons)						Maximum Diversion Rate	
	Municipal & Domestic Use	Industrial Use	Irrigation Use	Mining Use	Hydro-electric Use	Recreation Use	Gal. per Minute	Cu. Ft. per Second
Jan	1.014							
Feb	1.086							
Mar	0.827							
Apr	1.264							
May	1.396							
Jun	1.647							
Jul	1.268							
Aug	1.369							
Sep	1.560							
Oct	0.882							
Nov	0.652							
Dec	0.705							
TOTAL	13.650							

Total Acre Feet Surface Water Used: _____ Total Acre Feet Ground Water Used: 13.65

ALL USERS ARE REQUIRED BY LAW TO EXECUTE AFFIDAVIT AT END OF THIS REPORT

(See Other Side of This Sheet)

Detail of Amount of Water Used: (Irrigators Only)

In the spaces below, list by months the number of acres irrigated and the depth of irrigation in inches for each crop that received water during 1959. In case well water was used for any of these irrigations, draw a circle around the number of inches so irrigated.

CROP	JAN		FEB		MAR		APR		MAY		JUN	
	Acres	In.	Acres	In.	Acres	In.	Acres	In.	Acres	In.	Acres	In.
Cotton												
Grain Sorghum												
Field Corn												
Sweet Corn												
Wheat												
Oats or Barley												
Rice												
Forage Sorghum												
Pasture												
Alfalfa												
Peanuts												
Orchard												
Sweet Potatoes												
Irish Potatoes												
Vegetable Crop												
Other Crop or Use												
CROP	JUL		AUG		SEP		OCT		NOV		DEC	
	Acres	In.	Acres	In.	Acres	In.	Acres	In.	Acres	In.	Acres	In.
Cotton												
Grain Sorghum												
Field Corn												
Sweet Corn												
Wheat												
Oats or Barley												
Rice												
Forage Sorghum												
Pasture												
Alfalfa												
Peanuts												
Orchard												
Sweet Potatoes												
Irish Potatoes												
Vegetable Crop												
Other Crop or Use												

TOTAL ACRES _____ TOTAL INCHES _____ TOTAL ACRE FEET _____ *

* Multiply total acres by total inches and then divide by 12 to get total acre feet.

Irrigators Only:

Of the number of irrigated acres reported above, how many of these acres were used to produce more than one crop during 1959? _____. How many acres do you farm which are subject to irrigation but were not irrigated during 1959? _____. How many acres are contained in the property on which you irrigate? _____. Do you own this property? _____. If not, give the name of the owner: _____; address of owner: _____; State the name of the survey in which this property is located: _____; survey number: _____; abstract number: _____; name of county: _____.

Municipal Users Only:

Indicate the amount of water returned to stream as sewage effluent: None Ac. Ft.
Indicate the amount of sewage effluent used for irrigation, industrial, or other purposes: None Ac. Ft.
What was your estimated population at the end of 1958? Not Applicable; 1959? Not Applicable.

Industrial Users Only:

Type of industry: _____
Of the amount of surface water you have reported on this form as being used during 1959, estimate the quantity or percentage actually consumed: _____ Ac. Ft. or ____ %.

AFFIDAVIT

I hereby certify that the above is true and correct to the best of my knowledge and belief.
Witness my hand at Big Bend National Park, Texas, this 23rd day of March, 19 60.

Subscribed and sworn to before me, the undersigned authority, on this the 23rd day of March, 19 60.

(SEAL)

Charley E. Shamon Notary Public in and for the State of Texas
U. S. Commissioner _____ County, Texas
Big Bend National Park, Texas

Tract No. _____

Deed No. 2

Big Bend National Park

Name of Park or Area

Date - Nov. 4, 1927

Guest Ranch Area.

*Area based on survey of J. O. Medin

Section of Park or Area

Legal Description: Water Right Application 973, Permit 927, Cert.

Method of Acquisition: Appurtenant to land covered by Deed 1 Appropriation or Source of funds:

Cost (if purchased) or estimated value:

Acquired from: State of Texas

Accepted by Secretary () Opinion of Att'y. Gen.-title in U. S. () Date:

Physical Characteristics: A conditional right to divert 700 acre-feet of water per annum from the Rio Grande for irrigation purposes on what was formerly the J. O. Medin Ranch in Survey No. 5, Block C-19, CO & SP AR Co. Grant.

Improvements on Land at time of Acquisition:

Existing or outstanding special use permits, reservations, rights, or rights of way:

Report Based on: Records of Inter Rights Division

Prepared by: A. Van V. Balm, Hydraulic Engineer

date: July 5, 2011

Map References: Map in Good.

Remarks: This right is in danger of lapsing or loss of priority is not protected.
At: [unclear]

Number of water users on system: error State rates charged: --

If water was used for generating power, give the following information:

NO. DAYS PLANT OPERATED	CAPACITY OF PLANT (h.p.s.)	AMOUNT OF POWER GENERATED (k.w.h.)		
		PRIMARY	SECONDARY	STANDBY
<u>--</u>				

If water was diverted and used by what is commonly known as spreader dams, state number of such dams operated during year and number of times during year water was diverted, and approximate number of acres irrigated: --

If water was diverted from storage, give the following information: (Do not include settling or desilting basins)

Capacity of reservoir: -- acre-feet.

Number of times filled during year: --

Amount in storage on December 31, 1944: -- acre-feet.

Was water supply sufficient during entire year: Yes If not, give dates of insufficient supply:

ADDITIONAL INFORMATION

Mrs. Mary Coe Daniels, successor to J. O. Madin, deeded land and appurtenant water right to State Park Commission on July 16, 1942, but she retained possession and farmed the area until spring of 1944. She removed pump unit about February 1944. State Park Commission made no use of land but conveyed it to United States by deed accepted by Secretary of Interior on June 12, 1944. Pump unit was not conveyed with land. This report describes last year of irrigation under Permit No. 927 during period of transfer but does not indicate maximum past irrigation or proposed use by United States.

Witness my hand at Chicago Illinois
(my or our) Texas, this the 27th
day of February, 1945.
(month, day, year)

United States of America,
Department of the Interior,
National Park Service

By (Sgd) Hillory A. Tolson
Acting Director.

(SEAL) Subscribed and sworn to before me, the undersigned authority, on this the 27th
day of February, 1945.

(Sgd.) C. A. Sandberg

Notary Public

(Official Title)

OFFICE RECORD

Received in the office of the Board of Water Engineers at --- M. on the ---
day of ---, 19---

Secretary

Supporting Hydro Data

TEXAS WATER COMMISSION

P. O. BOX 12311, CAPITOL STATION
AUSTIN, TEXAS 78711

SURVEY OF GROUND WATER PUMPAGE IN TEXAS DURING CALENDAR YEAR 1964

DUPLICATE - RETAIN FOR YOUR FILES

United States Department of the Interior
National Park Service
Big Bend National Park, Texas 79834

1. County _____

2. Source of Water:

Water Wells _____

Surface Water _____

Other _____

TWC Code No. 72653. Number of water wells owned and operated by you 8 (K-Bar 3, Panther Junction 1, Lower Basin
CCC Wells 2, Castolon 2)

4. Number of water wells owned by others but supplying water to you _____

Names of well owners _____

5. If your records show the amount of ground water pumped by months in 1964 or if you can reasonably estimate the monthly pumpage, please fill in the following table by reporting pumpage in gallons:

Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons	Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons
Jan	499,275	16,643	July	1,088,777	36,293
Feb	331,664	11,055	Aug	1,033,705	34,457
Mar	596,057	19,869	Sept	1,029,412	34,313
Apr	638,086	21,270	Oct	429,102	14,304
May	724,112	24,544	Nov	416,983	13,900
June	1,059,113	35,300	Dec	767,506	25,583

Total pumpage for year 1964 8,625,922 Gallons

Note: If you have not been able to give the pumpage by months, please show the yearly pumpage for 1964 in the above space.

6. Please check one of the following to indicate how the figures you have provided in item 5 were obtained.

☐ A. Master Meter ☒ B. Well Meters ☒ C. Average Pumping Rates
☐ D. Power consumption ☐ E. Storage Facilities ☐ F. Other

(See reverse side)

7. a. Additional well water used by you that is obtained from other cities, industries, water districts, water companies, etc.

Supplier	Quantity in Gallons per Year
NONE	

Is this quantity also reported in item 5?

Yes _____ No _____

- b. Well water that you supply to other cities, industries, water districts, water companies, etc.

User	Quantity in Gallons per Year
NONE	

Is this quantity also reported in item 5?

Yes _____ No _____

8. Are water-level measurements made in your well(s) and recorded?

Yes _____ No ☒

Number of wells measured _____

Number of measurements per year _____

9. The following information is requested to supply data for study by research groups to obtain an index for projection of water-use figures.

- a. To be completed by Municipalities, Water Districts, School Districts, etc:

Population _____ No. of Services _____

- b. To be completed by Industries:

Type of Industry _____ No. of Employees _____

- c. To be completed by Commercial Establishments:

Type of Business _____

Principal Use of Water: Sanitary _____ Air Conditioning _____

Restaurant _____ Swimming Pool _____ Golf Course _____

Other _____

10. Estimated percentage of annual water represented in item 5 that is discharged as sewage or effluent: 65%. Name of stream or point of disposal: Septic tanks & Sewage Lagoons

11. To assure that future inquiries are addressed to the proper person, please complete the following:

By Perry E. Brown Superintendent
Name Title

TEXAS WATER COMMISSION

P. O. BOX 2311, CAPITOL STATION
AUSTIN 11, TEXAS

Sheet No. 5

SURVEY OF GROUND WATER PUMPAGE IN TEXAS DURING CALENDAR YEAR 1963

DUPLICATE - RETAIN FOR YOUR FILES
COPIES TO BE SUBMITTED TO THE COMMISSIONBIG BEND NATIONAL PARK
PARK ENGINEER
BIG BEND NATIONAL PARK, TEXAS1. County Brewster

2. Source of Water:

Water Wells X

Surface Water _____

Other _____

TWC Code No. 72653. Number of water wells owned and operated by you 9, K-Bar 3, Panther 1st 1, CCC 2, Castolon 1
Dugout 1, Sam Nail 14. Number of water wells owned by others but supplying water to you NONE

Names of well owners _____

5. If your records show the amount of ground water pumped by months in 1963 or if you can reasonably estimate the monthly pumpage, please fill in the following table by reporting pumpage in gallons.

Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons	Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons <u>X</u>
Jan	484,733	16,153	July	1,057,065	35,236
Feb	322,004	10,733	Aug	1,003,597	33,453
Mar	578,696	19,290	Sept	999,429	33,314
Apr	619,501	20,650	Oct	416,604	13,867
May	714,885	23,829	Nov	604,833	13,209
June	1,028,178	34,272	Dec	745,351	24,838

Total pumpage for year 1963 8,374,681 Gallons

Note: If you have not been able to give the pumpage by months, please show the yearly pumpage for 1963 in the above space.

6. Please check one of the following to indicate how the figures you have provided in item 5 were obtained.

 A. Master Meter X B. Well Meters X C. Average Pumping Rates
 D. Power consumption E. Storage Facilities X F. Other Estimates on windmill

(See reverse side)

7. a. Additional well water used by you that is obtained from other cities, industries, water districts, water companies, etc.

Supplier	Quantity in Gallons per Year
NONE	

Is this quantity also reported in item 5?

Yes

No

- b. Well water that you supply to other cities, industries, water districts, water companies, etc.

User	Quantity in Gallons per Year
NONE	

Is this quantity also reported in item 5?

Yes

No

8. Are water-level measurements made in your well(s) and recorded?

Yes

No

Number of wells measured

Number of measurements per year

9. The following information is requested to supply data for study by research groups to obtain an index for projection of water use figures.

- a. To be completed by Municipalities, Water Districts, School Districts, etc.

Population

No. of Services

- b. To be completed by Industries:

Type of Industry

No. of Employees

- c. To be completed by Commercial Establishments:

Type of Business

Principal Use of Water:

Sanitary

Air Conditioning

Restaurant

Swimming Pool

Golf Course

Other

10. Estimated percentage of annual water represented in item 5 that is discharged as sewage or effluent, 60 %.

Name of stream or point of disposal, Septic Tanks & Sewage Lagoons

11. To assure that future inquiries are addressed to the proper person, please complete the following:

By

Perry E. Brown

Name

Superintendent

Title

STATE WATER COMMISSION

Southwest Region
P. O. Box 728
Santa Fe, New Mexico 87501

L54

SEP 6 1973

171 9/10/73
L. HARRIS
2. BERTÉ

Dr. Ross A. Maxwell
9200 Cherry Lane
Austin, Texas 78703

Dear Dr. Maxwell:

We have recently received the drill-cutting analysis for Test Hole #13, Big Bend National Park, and have processed your invoice for payment.

At the present time we still have an additional purchase order (\$600.00) made out to you for field consultation services. We plan, upon availability of additional funds, to deepen the existing hole 1,000 feet to a depth of 4,570 feet. Hopefully, we would have penetrated 200-300 feet into the Georgetown Limestone and WATER. Your field consultation service will definitely be required during this drilling period.

Thanks for your patience, and I do hope we will get to meet each other this time.

Sincerely yours,

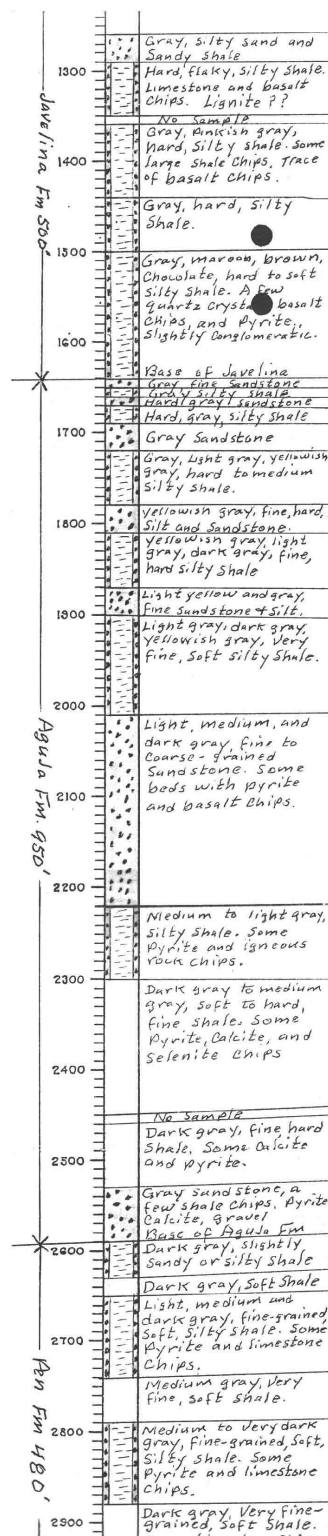
/s/ Garland Moore

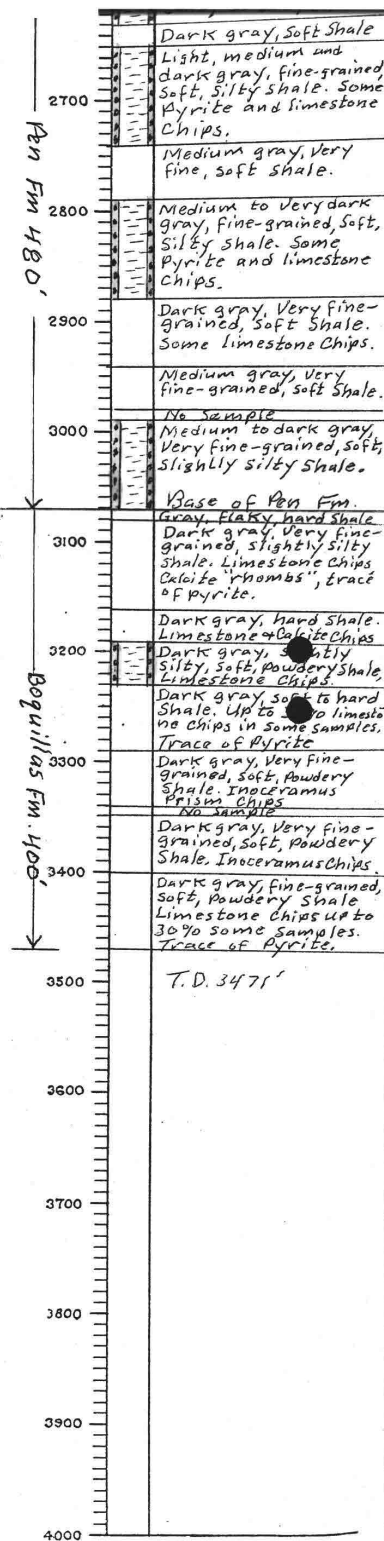
Garland Moore
Hydraulic Engineer

cc:
Supt., BIBE, w/c encl.
Chief Scientist, PSN-WASO, Attn: Vic Berte', w/c encl.
Chief Scientist, PSN-SWR
PSN-SWR

GMoore:ba 9/6/73

NOTE for BIBE and PSN-WASO: Please file enclosures in Water Right Docket #5.





K—Test Hole Water Well, Big Bend National Park, #13
Brewster County, Texas

Samples examined by Ross A. Maxwell beginning June 19, 1973, to
August 10, 1973.

Depth in feet	General color and description of sample
0-90	No sample, probably alluvium and gravel outwash
90-100	Light yellowish gray, mostly clay about 55%, rounded quartz grains, and some black mineral grains
100-110	Same color clay, 25% quartz grains
110-120	Light bluish gray clay, 5-10% sand grains, some calcite
120-130	Brownish gray clay, a little sand and a trace of chips that could be igneous rock
130-140	Light chocolate clay, didn't see any sand grains or igneous pebbles, but about 5% calcite mostly as cement
140-150	Light pinkish gray clay similar to above
150-160	Same color and similar clay, but about 20% calcite
160-170	Chocolate clay, a few sand grains, 20% calcite
170-180	Same
180-190	Same
190-200	Slightly darker chocolate clay, a few sand grains, 20% calcite
200-210	Sample labeled 200-220. Chocolate gray fine clay, calcite 5%, two or three flakes that look like glass shards
210-220	Dark gray fine clay, 5% calcite
220-230	Reddish chocolate fine clay, 10% calcite
230-240	Chocolate gray sandy clay, glass shards, pyrite, and dark mineral
240-250	Gray fine argillaceous sand, some pyrite, black minerals, and glass shards

-2-

250-260	Light bluish gray, fine sand, some clay, pyrite, rusty minerals that are probably altered pyrite, three chips that look like basalt, 10-15% calcite
260-270	Gray sandy clay, some pyrite and calcite
270-280	Gray, fine sand, some clay, trace of pyrite and calcite.
280-290	Gray fine sand, some clay, trace of pyrite
290-300	Gray fine sand, some clay, trace of pyrite and calcite
300-310	Light gray, 40% fine sand, rest soft clay, no pyrite or calcite
310-320	Gray mostly soft clay, 10-15% fine sand, a few pebbles that look like basalt, some water
320-330	Dark gray clay
330-340	Same
340-350	Dark gray clay, about 5% sand
350-360	Dark gray clay, 5 to 10% fine sand
360-370	Dark gray clay, a little more (15%) sand
370-380	Dark gray clay, 20% sand
380-390	70-80% gray sand, some clay
390-400	Dark gray 95% fine sand, remainder clay
400-410	Medium gray, fine angular sand
410-420	Light gray fine sand, pyrite and a dark mineral
420-430	Light gray fine sand, a few dark minerals and a trace of pyrite
430-440	Light gray fine sand, traces of pyrite and calcite
440-450	Light gray fine angular sand and a little clay
450-460	About 50-50% fine gray sand and clay. ~~Possible base of Cambrian~~ ~~Fossiliferous~~
460-470	Gray, dirty, trashy fine clay with a little fine sand, may be top of Javelina

-3-

470-480	Dark gray clay, a little fine sand, a lot of trash, show of pyrite
480-490	Medium gray about 50-50% trashy fine sand and clay
490-500	Dark gray clay, some pyrite calcite
500-510	Dark gray clay with trash that looks like plant stems
510-520	Dark gray fine sandy clay with plant remains
520-530	Dark maroon shale, very similar to above
530-540	Light to dark gray shale, swells in water, some fine sand. Looks like Javelina
540-550	Light to dark gray shale, swells and gets sticky when wet, Javelina
550-560	Same
560-570	Same
570-580	Same
580-590	Maroon shale, trace of sand
590-600	Maroon sandy with some shale
600-610	Gray and maroon sand with shale
610-620	Dark gray to maroon shale, trace of fine sand, a few chips that look like rhyolite
620-630	Dark maroon hard shale
630-640	Dark maroon fine powdery shale
640-650	Same
650-660	Dark maroon, fine hard shale, trace of sand
660-670	Same
670-680	Same
680-690	Same
690-700	Dark maroon, hard shale, trace of sand

700-710	Same
710-720	Dark maroon, hard lumpy shale with a few limestone chips
720-730	Light maroon hard lumpy shale with sand
730-740	Gray fine sand with some greenish igneous chips or little shale
740-750	Gray fine sand, basalt and limestone chips, some yellowish chips, probably altered basalt
750-760	Light gray, very fine sand, basalt chips
760-770	Same
770-780	Dark gray to maroon fine sand, some shale chips
780-790	Light gray silty sand, with small rounded limestone and basalt pebbles, show of pyrite and a yellowish brown altered mineral. ~~Base of section?~~
790-800	Dark maroon silty shale, some fine sand grains. ~~Top of section?~~
800-810	Same
810-820	Same
820-830	Same with trace of pyrite
830-840	Dark gray, hard shale, with basalt chips, slightly conglomerate
840-850	Gray, silty shale
850-860	Gray silty sand, a little shale
860-870	Dark gray silty sand and hard shale
870-880	Light gray soft silty sand, some shale
880-890	Salt and pepper silty sand with large chips of hard maroon shale, pyrite
890-900	Gray silty sand and dark maroon shale
900-910	Gray medium hard shale

910-920	Gray shale with limestone chips
920-930	Gray silty shale with pyrite
930-940	Same
940-950	Dark maroon silty shale, about 10% sand grains
950-960	Dark maroon, fine silty sand, some shale
960-970	Same
970-980	Dark maroon silty shale
980-990	Dark maroon hard silty shale
990-1,000	Reddish maroon silty sand with some clay
1,000-1,010	Dark maroon coarse sandstone, with light and dark grains, looks like a microconglomerate
1,010-1,020	Same
1,020-1,030	Dark gray hard flaky shale with a few sand grains
1,030-1,040	Dark gray fine silty sand with a lot of yellow to yellowish-brown altered chips, some chips look like broken limestone pebbles
1,040-1,050	Light gray fine silty sand
1,050-1,060	Same
1,060-1,070	Gray fine silty sand--well cased and cemented, 8-5/8 inch O.D. Casing set and cemented at 1,070 feet
1,070-1,080	Light maroon silty shale, with large chips of hard shale (black eye pea size)
1,080-1,090	Salt and pepper gray, 60% shale, 40% fine silty sand
1,090-1,100	Very fine, salt and pepper silty sand
1,100-1,110	Light gray very fine silty sand
1,110-1,120	Same

1, 120-1, 130	Same
1, 130-1, 140	Dark gray sand with finger nail size chips of hard flaky laminated shale. <i>Base of Canosa Formation</i>
1, 140-1, 150	Dark gray indurated sandy shale, chips size of kitchen match head, a few fine sand grains and some long black stem-like bodies
1, 150-1, 160	Maroon shale, a little fine silt or sand and a trace of possible lignite
1, 160-1, 170	Maroon, hard fine-grained shale
1, 170-1, 180	Same as above, but a few light colored chips that look like broken limestone
1, 180-1, 190	Same
1, 190-1, 200	Reddish maroon, had flaky shale chips, a few foreign chips that suggest conglomerate
1, 200-1, 210	Dark gray hard flaky shale
1, 210-1, 220	Light maroon hard flaky shale, some shale chips as large as a blackeye pea
1, 220-1, 230	Same
1, 230-1, 240	Very dark maroon shale, shale chips finger nail size
1, 240-1, 250	Same
1, 250-1, 260	Very dark maroon hard fine-grained flaky shale
1, 260-1, 270	Pinkish gray silty sand and silty shale
1, 270-1, 280	Pinkish gray sand and silty shale
1, 280-1, 290	Gray sandy silty hard shale and siltstone. ~~Base of Canosa Formation~~
1, 290-1, 300	Flaky hard shale, considerable trashy vegetation "stuff," may be old soil zone, or possibly lignite. ~~Base of Canosa Formation~~
1, 300-1, 310	Light gray silty sandy shale
1, 310-1, 320	Light maroon, hard flaky shale, a few sand grains

1,320-1,330	Light gray silty shale, a few limestone fragments, considerable vegetation, I think lignite
1,330-1,340	Pinkish gray hard silty shale
1,340-1,350	Pinkish gray hard silty shale, chips that look like limestone and basalt fragments, spongy black material that I am sure is <u>lignite</u>
1,350-1,360	No sample
1,360-1,370	Gray fine silty hard shale
1,370-1,380	Light maroon hard flaky shale, some fingernail size shale chips have dendrite markings, considerable fine sand grains (silt).
1,380-1,390	Light maroon hard silty shale, with large shale chips, some shale chips are spongy, a little pyrite
1,390-1,400	Dark maroon fine silty shale, with both light and dark colored chips, probably igneous
1,400-1,410	Pinkish gray fine silty shale with a trace of basalt flakes
1,410-1,420	Pinkish gray fine silty shale similar to above sample
1,420-1,430	Pinkish gray very fine silty shale
1,430-1,440	Medium gray very fine silty shale
1,440-1,450	Light yellowish gray fine silt or sand
1,450-1,460	Same
1,460-1,470	Light yellowish gray fine silty shale
1,470-1,480	Same
1,480-1,490	Dark gray fine silty shale
1,490-1,500	Same
1,500-1,510	Medium gray fine silty shale with flakes of limestone
1,510-1,520	Light gray soft silty clay
1,520-1,530	Light maroon clay, chips of fingernail size with bedding

1,530-1,540	Pinkish maroon hard silty shale, a few chips look like water had been added or were flakes from the drilling tools. Sample very likely mixed with something from above
1,540-1,550	Light brownish gray silty shale, more "drilling tool chips"
1,550-1,560	Dark gray, very hard silty clay chips
1,560-1,570	Same
1,570-1,580	Chocolate gray, medium hard silty shale
1,580-1,590	Dark chocolate gray, hard silty shale, more of those concave-convex drilling mud chips. I won't say that it is "drilling mud" but they sure look like mud chips that came off the "tools" when I "rough necked" on wells during the early 1920's.
1,590-1,600	Dark gray, hard flaky silty shale - a lot of "vegetation trash"
1,600-1,610	Light gray silty shale, some shale chips fingernail size and show bedding, one little purple chip that looks like azurite. I don't know what it is
1,610-1,620	Light gray hard silty shale, some shale chips fingernail size with bedding. Three more of those azurite colored chips--I wonder if they may be "hardened steel chip" of a freshly sharpened bit
1,620-1,630	Light gray, hard silty shale, two more of those azurite colored flakes, some fine quartz grains, trace of pyrite
1,630-1,640	Light gray, hard sandy shale, 35% sand, don't see any of the "azurite stuff" but plenty of pyrite. Trace of gravel, base of Javelina Fm.
1,640-1,650	Medium gray silty shale, top of Aguja Fm.
1,650-1,660	Light gray, very fine silty shale--more of the drilling tool mud flakes
1,660-1,670	Light gray, medium grained, hard sandstone, some pure quartz grains, some light colored igneous rock chips, a little basalt, fresh pyrite, and oxidized pyrite grains
1,670-1,680	Light gray to sandy shale, basalt flakes, oxidized yellowish mineral and more "drilling tool mud"

1,680-1,690	Pinkish gray, very fine silty shale
1,690-1,700	Gray fine to medium-grained sandstone
1,700-1,710	Light gray very fine silty sand
1,710-1,720	Same, with drilling tools mud scales
1,720-1,730	Yellowish gray fine silty shale
1,730-1,740	Same
1,740-1,750	Light gray very fine silty sand with drilling tool mud scales
1,750-1,760	Light yellowish gray silty shale
1,760-1,770	Same
1,770-1,780	Light gray very silty shale
1,780-1,790	Yellowish gray very fine silt
1,790-1,800	Same
1,800-1,810	Same
1,810-1,820	Light gray silty shale
1,820-1,830	Medium gray silty hard shale
1,830-1,840	Dark gray, hard silty shale
1,840-1,850	Same
1,850-1,860	Medium gray hard fine silty shale
1,860-1,870	Same
1,870-1,880	Light yellowish gray very fine sand
1,880-1,890	Same
1,890-1,900	Same
1,900-1,910	Dark gray very fine soft silty shale

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1,910-1,920	Light yellow very fine soft silty shale
1,920-1,930	Same
1,930-1,940	Light gray very fine soft silty shale
1,940-1,950	Same
1,950-1,960	Same
1,960-1,970	Same
1,970-1,980	Same
1,980-1,990	Same
1,990-2,000	Same
2,000-2,010	Medium gray, fine-grained silty sandstone, some pyrite and yellowish brown grains that are probably oxidized pyrite
2,010-2,020	Same
2,020-2,030	The same plus a few basalt chips
2,030-2,040	Light gray, very fine silty sandstone, some pyrite and chips of basalt
2,040-2,050	Same
2,050-2,060	Medium gray, quite coarse-grained silty sandstone with pyrite, yellow oxidized grains, and basalt chips
2,060-2,070	Light gray, very fine silty sandstone
2,070-2,080	Dark gray, medium-grained silty sandstone
2,080-2,090	Same
2,090-2,100	Medium gray, fine silty sandstone with 2% pyrite
2,100-2,110	Same, plus basalt chips
2,110-2,120	Dark gray, medium-grained sandstone with pyrite and 10% igneous rock chips mostly basalt

2,120-2,130	About the same but some igneous rock chips look rhyolitic
2,130-2,140	Dark gray, coarse-grained sandstone with a variety of igneous rock chips, some are light gray, a few are green or greenish gray, most are basalt
2,140-2,150	Dark gray, fine-grained silty sandstone with basalt chips
2,150-2,160	Same
2,160-2,170	Same with trace of pyrite
2,170-2,180	Dark gray, fine-grained silty sandstone with some clay
2,180-2,190	Light gray, fine-grained silty sandstone with light igneous rock chips and mud scale from drilling tools
2,190-2,200	Dark gray, very fine silty sandstone and shale with trace of pyrite
2,200-2,210	Medium gray, fine-grained silty sandstone with igneous rock chips and a little shale
2,210-2,220	Medium gray, fine-grained silty sandstone, with shale chips and trace of pyrite
2,220-2,230	Dark gray, silty shale
2,230-2,240	Medium gray, coarse-grained sandy shale with trace of pyrite
2,240-2,250	Dark gray, silty shale with trace of pyrite
2,250-2,260	Same with some light gray igneous rock chips
2,260-2,270	Dark gray silty shale
2,270-2,280	Dark gray shale
2,280-2,290	Same
2,290-2,300	Same
2,300-2,310	Dark gray fine soft shale
2,310-2,320	Same
2,320-2,330	Same

2,330-2,340	Same plus trace of sand grains
2,340-2,350	Very dark gray, fine hard shale with trace of calcite chips
2,350-2,360	Very dark gray, fine hard shale with a few gypsum (selenite) flakes
2,360-2,370	Dark gray, slightly silty, soft fine shale
2,370-2,380	Very dark gray, soft fine shale
2,380-2,390	Very dark gray, soft, fine shale with trace of calcite chips
2,390-2,400	Very dark gray, soft fine shale with trace of pyrite
2,400-2,410	Very dark gray, medium hard, fine shale
2,410-2,420	Very dark gray, medium hard fine shale
2,420-2,430	Same with traces of pyrite and calcite
2,430-2,440	Very dark gray, hard fine shale
2,440-2,450	Same
2,450-2,460	No sample
2,460-2,470	Very dark gray, fine hard shale with calcite chips
2,470-2,480	Same plus a trace of pyrite
2,480-2,490	Very dark gray, fine hard shale
2,490-2,500	Same
2,500-2,510	Same
2,510-2,520	Very dark gray, hard shale with a few chips of quartz? and pyrite
2,520-2,530	Very dark gray, hard shale with quartz? chips and trace of sand grains
2,530-2,540	Medium gray (salt and pepper) sandy shale

2,540-2,550	Light gray, fine-grained sandstone, some clear quartz grains, trace of clay chips and calcite
2,550-2,560	Light gray sandstone with 5% shale chips and trace of pyrite
2,560-2,570	Same
2,570-2,580	Medium gray, fine-grained silty sandstone with shale chips
2,580-2,590	Medium gray, fine-grained gravely sand. Base of Aguja
2,590-2,600	Dark gray slightly sandy shale. Top of Pen Formation
2,600-2,610	Very dark gray, almost black, soft slightly sandy shale
2,610-2,620	Dark gray, slightly sandy, soft fine shale
2,620-2,630	Same
2,630-2,640	Very dark gray, almost black, slightly soft fine shale
2,640-2,650	Same
2,650-2,660	Dark gray, fine, silty soft shale
2,660-2,670	Very dark gray, fine silty, soft shale
2,670-2,680	Same
2,680-2,690	Same
2,690-2,700	Same
2,700-2,710	Same with pyrite
2,710-2,720	Very dark gray, almost black, fine, soft, slightly silty shale
2,720-2,730	Same with a lot of pyrite
2,730-2,740	Same
2,740-2,750	Medium gray, very fine, soft shale
2,750-2,760	Medium gray, fine, soft shale with limestone chips
2,760-2,770	Same

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2,770-2,780	Same
2,780-2,790	Same with mud scale from drilling tools
2,790-2,800	Medium gray, fine, soft slightly silty shale
2,800-2,810	Medium gray, fine silty shale with a few limestone chips
2,810-2,820	Medium gray, fine, silty shale with mud scale off drilling tools, and a little pyrite
2,820-2,830	Same
2,830-2,840	Almost black, very fine silty shale
2,840-2,850	Dark gray, very fine silty, soft shale with a few limestone and calcite chips
2,850-2,860	Same
2,860-2,870	Same
2,870-2,880	Same
2,880-2,890	Almost black, very fine soft shale
2,890-2,900	Dark gray, very fine shale with limestone chips
2,900-2,910	Same
2,910-2,920	Same
2,920-2,930	Same
2,930-2,940	Same
2,940-2,950	Medium gray, very fine silty soft shale
2,950-2,960	Same
2,960-2,970	Same, with long rods of selenite
2,970-2,980	Same
2,980-2,990	No Sample

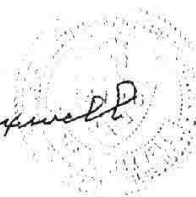
2,990-3,000	Medium gray, very fine silty soft shale
3,000-3,010	Dark gray, very fine silty soft shale
3,010-3,020	Same
3,020-3,030	Same
3,030-3,040	Same
3,040-3,050	Same
3,050-3,060	Same
3,060-3,070	Same, except shale a little harder. Base of Pen Formation
3,070-3,080	Medium gray, flaky, hard shale. Top of Boquillas Formation
3,080-3,090	Dark gray, very fine flaky, hard shale
3,090-3,100	Dark gray, very fine hard shale with limestone chips and trace of pyrite
3,110-3,120	Same
3,120-3,130	Same
3,130-3,140	Dark gray, very fine silty shale, increase in amount of limestone chips, calcite rhombs
3,140-3,150	Dark gray, very fine silty shale, only a few limestone chips
3,150-3,160	About the same
3,160-3,170	Dark gray, hard shale a few limestone chips
3,170-3,180	Dark gray, hard shale, limestone and calcite chips
3,180-3,190	Dark gray, fine shale with limestone and calcite chips
3,190-3,200	Dark gray, powdery, soft, slightly silty shale with limestone chips
3,200-3,210	Same
3,210-3,220	Same

3,220-3,230	Same
3,230-3,240	Dark gray, powdery, soft shale, with 25 to 30% limestone chips, trace of pyrite
3,240-3,250	Dark gray, fine powdery, soft shale, a few limestone chips, trace of pyrite
3,250-3,260	Dark gray, fine, medium hard shale, a few limestone chips, some pyrite
3,260-3,270	Same
3,270-3,280	Dark gray, fine, medium hard shale, a few limestone chips
3,280-3,290	Dark gray, fine, medium hard shale and 15% limestone chips
3,290-3,300	Dark gray, fine powdery soft shale
3,300-3,310	Same
3,310-3,320	Dark gray, fine powdery, very soft, slightly silty shale
3,320-3,330	Dark gray, very fine powdery, soft shale
3,330-3,340	Dark gray, very fine powdery, very soft shale
3,340-3,350	No Sample
3,350-3,360	Same as sample 3,330-3,340
3,360-3,370	Dark gray, very fine powdery, very soft shale
3,370-3,380	Same
3,380-3,390	Same
3,390-3,400	Same
3,400-3,410	Dark gray fine powdery, soft shale with about 5% limestone chips
3,410-3,420	Same with slight increase of limestone chips
3,420-3,430	Dark gray, very fine, very soft, powdery, slightly silty shale, with trace of limestone chips

- | | |
|-------------|---|
| 3,430-3,440 | Same with increase of limestone chips to about 10% |
| 3,440-3,450 | Dark gray, fine, soft, powdery shale with about 25-30% limestone chips |
| 3,450-3,460 | Dark gray, very fine, very soft, powdery silty shale with trace of pyrite |
| 3,460-3,470 | The same with a few limestone chips |

T.D. 3,471'

Ross A. Maxwell



Form 10-174
(June 1962)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FACE SHEET FOR COMPLETION REPORT

Park Big Bend	Region Southwest	Work Order No. B-7 BIRE
Location in Park Panther Junction	State(s) Texas	Fund Symbol 14X1035
	County or Counties Brewster	Year Programmed 1961
☒ Contract and/or ☒ Day Labor		PCP No. B-22-6, B-22-6 U-38-2, U-49
Work Order Title Administration - Orientation Building including exhibits, B-22-6 - Water System Extension, U-38-2 Sewer System Extension, U-49		Master Plan No. NP-88-2103-H
		Master Plan Corrected By
		As Built Drawings By WODC
		Date Started July, 1961
		Date Completed March, 1963
DESCRIPTION OF FIXED ASSETS (For completion by employee in charge of project)		TOTAL COSTS (For completion by FFO)
Contract:		
Administration - Orientation Building including water and sewer extension. Contract 14-10-0333-714		\$216,755.19
Day Labor:		
Planting		6,217.43
Irrigation System		1,279.57
Outdoor Lighting		1,069.03
Furnishings		12,354.07
TOTAL		\$ 237,675.29

DISTRIBUTION	THE FIXED ASSET DESCRIBED ABOVE HAS BEEN COMPLETED IN ACCORDANCE WITH APPROVED DRAWINGS, SPECIFICATIONS, AND AUTHORIZED CHANGES		
No. To	Submitted By	Title	Date
1 WASO	Frank A. Pimentel	Project Inspector, WODC	
1 WODC	McCune C. Ott	Maintenance Supervisor	5/10/63
2 SW Region	Stanley C. Joseph	Superintendent	5/10/63
1- Reg. Dir.			
1- FFO			
1 Big Bend	Henry Alford, Jr.	Regional Accountant	5/21/63

11360

Administration Building, Utilities and Roads
Contract No. 14-10-0333-714
J. D. Burk Construction Company

NARRATIVE STATEMENT

by
Frank Pimentel

This contract consists of an Administration Building, water extension system, access road and parking areas, and a sewage disposal system. The building has approximately 11,750 square feet of floor area, 2,200 square feet of covered porch and walkway, and 11,000 square feet of paved patio and sidewalks. Construction is re-enforced concrete foundation and floor slabs, integrally colored concrete block masonry walls and exposed aggregate precast concrete panels at front center section of the building. A total of fifty-one rooms include a dark room, post office, U. S. Commissioner's office, public telephone booth, first aid room and a kitchen equipt with stove and refrigerator adjoining the community hall. There are six comfort stations, two opening to the exterior and four accessible from the interior of the building. Heating and cooling is by seven G.E. Weathertron heat pump units with a total of 46 tons cooling and heating. They are zoned and controlled to operate independently of each other. Fluorescent lighting is used throughout all rooms excepting indoor equipment and janitor rooms; these are equipt with bare bulb and keyless porcelain socket. This structure has a low, pleasing appearance, blending well with the native materials and fitting snug to the building site. It will serve very well in its intended use. All electrical, mechanical and other facilities are good and will continue to perform as intended.

The water extension system of 6" C.I.M.J. pipe, 624 L.F. with three exterior type fire hydrants, four 6" gate valves and two 6"x2" tees for outside watering system connection is proper and a good installation.

The sewage system has 201 L.F. of 6" V.C.P. from the building to a 5,000 gallon septic tank complete with syphon as shown on the drawings, 387 L.F. of 4" V.C.P. including feeder lines from a ten line distribution box. The ten leach lines of 100 L.F. each are on 8 foot centers. These are made up of open joint 4" V.C.P. in 2 foot lengths. These are also well placed and should be trouble free.

The access road and parking areas prepared on a stable base with a double seal coat and chip surface. The roadway is 873 L.F. with a 20 foot wide surface. The parking areas, fully curbed, will accommodate fifty cars in the visitor parking and 26 cars in the employees parking area. Storm drainage is good throughout.

NARRATIVE STATEMENT

The day labor portion of this contract (\$20,919.82), which was accomplished by park forces, included landscape planting (\$6,217.43), an irrigation system (\$1,279.29), outdoor lighting (\$1,069.03), and office furniture and equipment (\$12,354.07). These prices included all supplies and materials. The J.D. Burk Construction Company was requested to submit a price for installing the irrigation system and the outdoor lighting. Since the prices quoted considerably exceeded the limit set on these items, and the park indicated that their forces could accomplish the work within these limitations, the irrigation system and outdoor lighting were included as part of the day labor, along with the landscape planting.

The irrigation system involved laying waterlines to water outlets in two planters and a sprinkler system for two lawn areas. Also included in this portion was the installation of two water meters not included in the contract with J.D. Burk Construction Company. The working drawing was NP-BB-3125-C, sheet P-1A.

The outside lighting portion included the installation of lighting fixtures and underground conduit as indicated on working drawing NP-BB-3125-C sheet P-1A. There are five walk lights, two patio lights, and a building sign floodlight. The control switch for the latter is located in the visitor orientation room, while the walk and patio lights are controlled by an exterior switch mounted on a walk light by the employees parking area.

The landscape planting was done mainly in the vicinity of the building to create a desirable relationship between the existing plant growth and the new structure. Obliteration of the old road and construction scars were part of this work.

The planting started upon completion of the building in mid-June. However, at that late time in the growing season, only the hardier desert plants could be moved. Therefore, some planting was deferred until the plants became dormant. When this period occurred in early January, planting was resumed. The landscape planting was completed by the first week in February.

TEXAS WATER COMMISSION
P. O. BOX 2311, CAPITOL STATION
AUSTIN 11, TEXAS

SURVEY OF GROUND WATER PUMPAGE IN TEXAS DURING CALENDAR YEAR 1962

DUPLICATE - RETAIN FOR YOUR FILES

1. County Brewster
2. Source of Water: (This Report)
- Water Wells X
- Surface Water _____
- Other _____

TWC Code No. _____

3. Number of water wells owned and operated by you 9
 (X-Bar 3, Panther Jet. 1; Basin 2; Castolon 1; Dugout 1; Sam Nail 1)
4. Number of water wells owned by others but supplying water to you _____
- Names of well owners _____

5. If your records show the amount of ground water pumped by months in 1962 or if you can reasonably estimate the monthly pumpage, please fill in the following table by reporting pumpage in gallons.

Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons	Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons
Jan	585,287	13,000	July	904,038	18,000
Feb	415,532	11,000	Aug	1,225,569	21,000
Mar	446,307	12,000	Sept	952,340	18,000
Apr	648,162	14,000	Oct	293,120	9,000
May	1054,688	20,000	Nov	480,333	11,000
June	730,232	16,000	Dec	262,725	9,000

Total pumpage for year 1962 7,998,333 Gallons

Note: If you have not been able to give the pumpage by months, please show the yearly pumpage for 1962 in the above space.

6. Please check one of the following to indicate how the figures you have provided in item 5 were obtained.
- Majority**
- A. Master Meter X B. Well Meters X C. Average Pumping Rates
- D. Power consumption E. Storage Facilities X F. Other (Estimates on small vol. wells)

(See reverse side)

7. a. Additional well water supply you that is obtained from other cities, industries, water districts, water companies, etc.

Supplier	Quantity in Gallons per Year

Is this quantity also reported in item 5?

Yes _____ No _____

- b. Well water that you supply to other cities, industries, water districts, water companies, etc.

User	Quantity in Gallons per Year

Is this quantity also reported in item 5?

Yes _____ No _____

8. Are water-level measurements made in your well(s) and recorded?

Yes _____ No ☒ X

Number of wells measured _____

Number of measurements per year _____

9. The following information is requested to supply data for study by research groups to obtain an index for projection of water-use figures.

- a. **To be completed by Municipalities, Water Districts, School Districts, etc:**

Population _____ No. of Services _____

- b. **To be completed by Industries:**

Type of Industry _____ No. of Employees _____

- c. **To be completed by Commercial Establishments:**

Type of Business _____

Principal Use of Water: Sanitary _____ Air Conditioning _____

Restaurant _____ Swimming Pool _____ Golf Course _____

Other _____

10. Estimated percentage of annual water represented in item 5 that is discharged as sewage or effluent 60 %. Name of stream or point of disposal Sentic Tanks

11. To assure that future inquiries are addressed to the proper person, please complete the following:

By _____ Name _____ Park Engineer Title _____

TEXAS BOARD OF WATER ENGINEERS

P. O. BOX 2311, CAPITOL STATION
AUSTIN, TEXAS

SURVEY OF GROUND WATER PUMPAGE IN TEXAS DURING CALENDAR YEAR 1961

COPY
~~ORIGINAL - RETURN TO BOARD~~Superintendent
National Park Service
Big Bend National Park, Texas

1. County Brewster
2. Source of Water: (This Report)
- Water Wells X
- Surface Water _____
- Other _____

BWE Code No. 7265

3. Number of water wells owned and operated by you 9
(K-Bar 3; Pan. Act. 1; CCC 2; Castolon 1; Dugout 1; Sam Nail 1)
4. Number of water wells owned by others but supplying water to you _____
- Names of well owners _____

5. If your records show the amount of ground water pumped by months in 1961 or if you can reasonably estimate the monthly pumpage, please fill in the following table by reporting pumpage in gallons.

Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons	Mo.	Total Pumpage for Month in Gallons	Maximum Daily Pumpage for Month in Gallons
Jan	267,832	9,500	July	589,737	20,100
Feb	298,671	10,100	Aug	523,604	18,200
Mar	411,838	16,000	Sept	618,310	21,000
Apr	389,209	15,000	Oct	515,650	18,100
May	475,533	17,600	Nov	223,970	7,800
June	414,154	15,800	Dec	248,509	9,000

Total pumpage for year 1961 4,977,017 Gallons

Note: If you have not been able to give the pumpage by months, please show the yearly pumpage for 1961 in the above space.

6. Please check one of the following to indicate how the figures you have provided in item 5 were obtained.

 A. Master Meter X B. Well Meters X C. Average Pumping Rates

 D. Power consumption E. Storage Facilities X F. Other (Estimate on small wells)

(See reverse side)

RECEIVED WITH MEMO OF 4/23/62

7. a. Additional well water use _____ you that is obtained from other cities, industries, water districts, water companies, etc.

Supplier	Quantity in Gallons per Year

Is this quantity also reported in item 5? Yes _____ No _____

- b. Well water that you supply to other cities, industries, water districts, water companies, etc.

User	Quantity in Gallons per Year

Is this quantity also reported in item 5? Yes _____ No _____

8. Are water-level measurements made in your well(s) and recorded? Yes _____ No ☒

Number of wells measured _____ Number of measurements per year _____

9. The following information is requested to supply data for study by research groups to obtain an index for projection of water-use figures.

- a. To be completed by Municipalities, Water Districts, School Districts, etc:

Population _____ No. of Services _____

- b. To be completed by Industries:

Type of Industry _____ No. of Employees _____

- c. To be completed by Commercial Establishments:

Type of Business _____

Principal Use of Waters: Sanitary _____ Air Conditioning _____

Restaurant _____ Swimming Pool _____ Golf Course _____

Other _____

10. Estimated percentage of annual water represented in item 5 that is discharged as sewage or effluent 60 %. Name of stream or point of disposal Septic tanks and sewage lagoons

11. To assure that future inquiries are addressed to the proper person, please complete the following:

By _____ Name _____ Title _____

Form 10-174
(Rev. 6-55)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
COMPLETION REPORT OF CONSTRUCTION PROJECT

1961 FY.

NAME Three	AREA Big Bend National Park	COUNTY Brewster	STATE TEXAS
PROJECT OR JOB TITLE Additional Water Supply, Panther Junction			PCP NO. U-51
LOCATION IN AREA K-Bar		MASTER PLAN NO. NP-BB 2106-C	BUILDING NO.
WORKING DRAWING NO. AND TITLE			
APPROPRIATION TITLE AND SYMBOL Construction and Acquisition of Land, NPS 14x1035			WORK ORDER NO. B-5, BIBE
CONTRACT NO. Day Labor		DATE WORK STARTED Feb. 1961	DATE WORK COMPLETED May 1961
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Drilling, Casing and Packing Well	109'		1,028.43
Pump in place			486.10
3" G.S.P. including fittings, etc. (see attached sheet for inventory of materials)	663'		1,138.27
This project changes Real Property Inventory as follows:			
Utilities, water system, Account 10-8, increased-----		\$2,652.80	
			2,652.80
			18.27%
			486.67
			3,137.47
			2,652.80
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			2,652.80

Inventory of Materials

Pump:

Name	Red Jacket
Mfr.	Red Jacket Mfr. Co., Davenport, Iowa
Type	Submersible
Size	1½ inch
No.	Model No. 9CA Serial No. Ktypl 74

Motor:

Mfr.	Same as pump
Size	1½ H.P.
Voltage	Single phase, 230 volts, 10.5 Amps.
No.	Model No. 15OK1 Serial No. Ktyml 74

Pipe, etc.:

- 1 - 3" check valve
- 1 - 3" nipple
- 1 - 45° L
- 1 - 3" x 1½" reducer
- 5 - 1½" close nipples
- 1 - 1½" union
- 1 - 1½ 45° L
- 1 - 1½" x 3/4" T
- 1 - 3/4" hose bib
- 1 - 1" valve
- 1 - 1" meter with unions
- 1 - 1" pipe 30 inches long.
- 3 - 3" close nipples
- 1 - 3" Y
- 1 - 3" check valve
- 2 - 3" unions
- 663 feet of 3" G.S.P.

Narrative Statement

All of the work accomplished under Account No. B-5, BIBE was by day labor and consisted of the following:

Drilling, casing and packing well; installation of pump and connecting the new well to the existing water system.

The new well, No. 5, is located approximately 650 feet south of the old K-Bar well. Well No. 5 was drilled with a diameter of 8 inches for a 109 feet and encountered the following materials: The first 40 feet was through a loose material that appeared to be a conglomerate, the next 65 feet was in a hard material that appeared to be lime stone and the last four feet was in granite.

Because of the loose material encountered for the first 40 feet, it was necessary to case that portion with an 8 inch casing during drilling operations. However when the entire well was drilled and cased with a 5 inch standard steel welded joint casing, the 40 feet of 8 inch casing was pulled.

Beginning four feet from the bottom of the well the casing was perforated for eighteen feet with $\frac{3}{8}$ inch holes and then $\frac{1}{2}$ inch clean gravel was packed around the casing within 10 feet of the surface. The 10 feet from the gravel to the surface was filled with concrete.

The first flow of water estimated at $\frac{1}{2}$ gal. per min. was encountered at 70 feet below the surface but the main source of the water supply is from 85 to 100 feet below the surface.

The well was pump tested at 29 GPM for 12 hours with only a 30 inch draw down for the first 20 min. and then the level remained constant.

This new well is an auxiliary water supply for the Panther Junction water system. The submersible pump is set 98 feet below the surface at an elevation of approximately 3,382 feet and pumps through a 3 inch pipe to the 25,000 gallon tank at K-Bar well No. 2. The elevation at the top of the 25,000 gallon tank is approximately 35115 feet.

Other Supporting Information

Southwest Region
Santa Fe, New Mexico

NOV 17 1964

*254
Ducker*

Memorandum

To: Director

From: Assistant Regional Director, Operations

Subject: Test Wells at Panther Junction and K-Bar, Big Bend

We are enclosing for your information a copy of a memorandum report from the Superintendent at Big Bend concerning the four test wells which were recently drilled in the subject area.

This report is very comprehensive and self-explanatory. We have filed it in our water rights file with the heading Test Wells, Panther Junction and K-Bar and by copies of this memorandum are requesting that Chief, WODC, and the Superintendent place it in their files.

(SIGNED)

George W. Miller

In duplicate

Enclosure

CC:

Chief, WODC (2)

w/enc.

Superintendent, Big Bend

w/enc.

W O D C	
NOV 23 1964	
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IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Big Bend National Park, Texas 79834

November 3, 1964

RECEIVED	
NPS SOUTHWEST REGIONAL OFFICE	
NOV 6 1964	
	Surname Date
Regional Director	
Operations	
Administration	
Coop. Activities	
Development	
Resource Studies	
Files	

Memorandum

To: Regional Director, Southwest Region

From: Superintendent, Big Bend

Subject: Test Wells

This project was initiated in an attempt to locate an additional water supply for Big Bend National Park to supplement our present inadequate supply.

The U.S.G.S. Office in Austin was requested to assist in locating well locations. Information available in the Park files was sent to them and on October 11 Mr. E. R. Leggat arrived from Austin to assist with the project.

While Mr. Leggat was making a preliminary investigation of the area, the Park contacted several well drillers for quotations on drilling test wells.

An equipment rental agreement was made with the H. V. Grantham Drilling Company of Kermit, Texas to drill 4 7/8" test wells at \$1.65 per foot, ream to 8 inch where necessary at \$2.00 per foot, set casing at \$12.50 per hour and air jet testing at \$17.50 per hour. Mr. Grantham's rig is a Mayhew 1,000 rotary exploration rig mounted on an R-190 International truck, and equipped to drill with air, water or mud as a circulation medium.

Mr. Leggat, Assistant Superintendent Newman and I selected three locations for exploratory drilling and the driller commenced work on October 15.

Test Well No. 1

Location: Approximately South 65 degrees East 7100 feet of K-Bar
Well No. 2

Log: 0 to 58 feet Alluvial gravel
58 to 240 feet multicolored clays

Conclusion: There was no indication of any water-bearing formations to this depth. On Mr. Leggat's recommendation this site was abandoned as a dry hole at this depth.

L 54 Bibe

Test Well No. 2

Location: Approximately North 42 degrees East 1650 feet of the Administration Building at Panther Junction.

Log: 0 to 110 feet Alluvial gravel
110 - 150 feet - Multicolored clay
150 - 155 feet - Yellowish sandstone
155 - 204 feet - Multicolored slaty shale
204 - 260 feet - Grey Igneous or metamorphic rock

Conclusion: No water-bearing strata were encountered; site abandoned as a dry hole at this depth.

Test Well No. 3

Location: West of Headquarters Junction along Route No. 3, 4,752 feet thence North 40 degrees East 2112 feet.

Log: 0 - 47 feet - Alluvial gravel
47 - 58 feet - Yellowish sand or soft sandstone
58 - 60 feet - Multicolored clay
60 - 80 feet - Yellowish tan sandstone
80 - 92 feet - Tan sandstone, very fine grained or silty.
92 - 260 feet - Blue-grey slaty shale with thin bands or streaks of sandstone or quartzite
260 - 300 feet - Hard grey shale

Water was first encountered at approximately 155 feet, several aquifers were transversed between 155 feet and 260 feet; it is the driller's opinion that the last water-bearing strata was encountered at 260 feet.

The surface alluvial layers were reamed to an eight inch hole and 45 feet of 5 inch casing were set to permit testing of the water flow.

On October 21 the well was flow tested by injecting air through the drill stem with the drill bit resting on the bottom of the hole. Approximately 6 to 7 gallons per minute were recovered by this method; the driller expressed the opinion that the well would produce 10 to 12 gallons per minute by pump.

Based on the air test results and the driller's opinion, it was decided to pump test the well using a standby pump owned by the Park. This pump is a 2 H.P., 220 volt, submersible pump rated at 18 G.P.M.

A 240 volt A.C. generator was rented in Alpine to operate the pump.

The pump was set in the well on October 23 using 232 feet of 2" galvanized pipe (this length of pipe was all that was available in the Park); a $\frac{1}{4}$ " galvanized pipe was set at the same level as the pump to measure the static level and pumping levels by air pressure. Pumping was begun on October 25, at 1:20 P.M. and continued until October 26 at 11:00 A.M., with the following results:

TEST WELL NO. 3

STATIC LEVEL 109.57

TIME	PUMPING LEVEL	G.P.M.
1:20 P.M.	109.57 ft.	19
1:30 "	111.88 "	19
1:40 "	114.19 "	19
1:50 "	116.50 "	19
2:00 "	118.81 "	19
2:10 "	121.12 "	19
2:20 "	123.43 "	19
2:30 "	123.43 "	19
3:00 "	123.43 "	19
3:30 "	125.74 "	19
4:00 "	125.74 "	19
4:30 "	123.43 "	19
5:00 "	125.74 "	19
6:00 "	123.43 "	19
7:00 "	125.74 "	19
8:00 "	125.74 "	19
9:00 "	128.05 "	19
10:00 "	141.91 "	19
11:00 "	137.29 "	19
12:00 Midnight	139.60 "	19
1:00 A.M.	139.60 "	19
2:00 "	134.98 "	19
3:00 "	125.74 "	19
4:00 "	125.74 "	19
5:00 "	125.74 "	19
6:00 "	125.74 "	19
7:00 "	125.74 "	19
8:00 "	125.74 "	19
9:00 "	123.43 "	19
10:00 "	125.74 "	19
11:00 "	123.43 "	19

Average pumping level - 125.89

Average drawdown - 16.32

Maximum G.P.M. of Pump - 19 G.P.M.

Recovery time to static level 5 minutes

Conclusions: This well has possibilities of being a good water supply.
Preliminary tests for specific conductance indicated potability comparable to the existing Park wells.

Test Well No. 4

Location: North 75 degrees West 1584 feet of Test Well No. 3

Log: 0 - 78 feet - Alluvial gravel
78 - 92 feet - Grey shale or clay
92 - 180 feet - Blue-grey slaty shale with thin sand streaks, several aquifers from 132 feet
180 - 200 feet - Reddish-grey slaty shale with thin sandstone or quartzite layers
200 - 210 feet - Blue-grey slaty shale with thin sandstone or quartzite layers
210 - 220 feet - Reddish-grey slaty shale with possibly thin layers of sand
220 - 240 feet - Reddish-grey slaty shale with a trace of sandy clay. Noted increase in water flow.
240 - 260 feet - Grey slaty shale with thin layers of sandstone or quartzite. Noted increase in water flow.

The mention of sandstone or quartzite layers may be erroneous, but is based on changes in drill bit behaviour and occasional recovery of cuttings that were apparently hard sandstone or quartzite. Each penetration of these hard layers produced a slight increase in water volume.

Drilling was stopped at 260 feet due to the limitation of funds for the project.

The flow of water upon reaching the 200 feet level was sufficient to cause cavitation and caving in the surface alluvial beds, necessitating reaming to 8 inches and setting casing for the first 80 feet. The aforesaid water flow was from drilling air pressure, not an artesian flow.

After setting the casing, the well was drilled to the 260 feet level and the hole cleaned out and surged with air pressure through the drill bit.

The same 2 H.P. submersible pump used at No. 3 well was again set at 232 feet, with 2 inch galvanized steel pipe and the 1/4" air pressure line set to pump level.

Due to the funds limitation the pump test at this well was of limited duration.

The static level of the well was 139.60 feet below the surface; after 15 minutes of pumping at 18 G.P.M., the pump was drawing air at the 232 feet level. The pump was shut down for 5 minutes and the well re-covered 11.55 feet. By throttling the pump down to 10 G.P.M. delivery, a pumping level of 178.85 feet was maintained for 1 1/2 hours. The pump was operated for 2 hours at full capacity with the pumping level

at 232 feet and the pump breaking suction frequently enough to reduce the flow to 14 G.P.M. This amount appears to be the maximum rate at the 232 foot level.

While cleaning and surging the well by air pressure through the drill bit, the measured flow of water was approximately 12 G.P.M.

In comparison to Well No. 3, which delivered only 6 to 8 G.P.M. by air pressure against 19 G.P.M. by pump, it appears there is a heavier flow of water below the 232 foot level.

If this well is developed for use we recommend deepening the well to a non-water bearing formation so as to transverse all of the available aquifers.

The cutting samples and water samples obtained from this well after Mr. Leggat's departure have been forwarded to the U.S.G.S. office in Austin.

Copies of Mr. Leggat's report and the well logs will be forwarded to your office upon completion.

Mr. Leggat also mentioned that after November 15, there will be a mobile electric log unit available from their office. If possible, arrangements should be made to log these wells when they are developed in order to obtain an accurate identification of the formations and the location and size of the various aquifers.

It will probably be cheaper to connect these two wells to the headquarters system at the service station in Panther Junction. If the proposed Job Corps Camp is established at K-Bar, the wells in that area can then be used to supply the camp.

It appears that an extensive investigation and exploration program for water sources should be initiated in preparation for future needs.

The expenditures on this exploration project are as follows:

Test Well No. 1	240 ft. @ \$1.65	\$ 396.00
Test Well No. 2	260 ft. @ \$1.65	429.00
Test Well No. 3	300 ft. @ \$1.65	495.00
" " " "	Ream 43 ft. @ \$2.00	86.00
" " " "	Set casing, 3 hours @ \$12.50	37.50
" " " "	Test Water flow, 1 hour @ \$17.50	17.50
" " " "	Set and pull pump, 2 hours @ \$12.50	25.00
Test Well No. 4	260 ft. @ \$1.65	429.00
" " " "	Ream 80 ft. @ \$2.00	160.00
" " " "	Set casing 1 hour, \$12.50	12.50
" " " "	Set pump, 1 hour @ \$12.50	12.50
Sub total covering equipment rental		\$2100.00

5" casing	126 lin. ft	234.24
Drilling mud, 8 bags		23.50
Generator Rental		70.00
Pump Cable	270 lin. ft.	75.60

Grand Total		\$2503.34
-------------	--	-----------

Salaries of Park Employees involved in the project have been charged to the normal operating accounts.

Perry E. Brown
Perry E. Brown

cc:
District Geologist
U. S. Geological Survey
Vaughn Building
807 Brazos Street
Austin 14, Texas 7801
Attention: Mr. E. R. Leggat

FEB 19 1960

	be	
	by:	
	signature	
✓	SEEDING AGENT	
✓	AGENCY	
	SUPPLY AGENT	
	CHEMICALS	
	AGENCY	
✓	AGENCY	
	AGENTS, SURV.	
	SAND, ARCH.	
	SUPPLY CLERK	
	SECRETARY	

Copy to: Director (2)
WADC (2)
Supt., Hq. Band ✓

February 10, 1960

154-081

Memorandum

To: Regional Director, Region Three
From: Chief, Water Resources Section
Subject: Water Use Reports, Big Bend

You have apparently received a copy of the letter of February 2 from Mr. H. A. Beckwith, Acting Chief Engineer, Texas Board of Water Engineers, together with the additional copies of forms for water use reports.

Mr. Beckwith refers to records of well or ground water use for municipal, industrial and irrigation purposes which are being assembled on a voluntary basis. It seems to me that Mr. Fields and the Park Engineer have enough to do without trying to meet any deadline for these records so late in the season, assuming such data would be desired by some date in March.

However, I believe that you should get copies of the forms and any explanatory literature for your office, the park, WOBC, and us. A report on the Panther Junction ground water use (all wells) might be to our ultimate advantage if not required immediately. We should complete the records for Docket 5, for which folders are herewith distributed. There should be a record of well or log and pump test record for each well, and the plan of the water system with descriptions of pumps from a table requested but apparently not yet submitted for Big Bend. There should also be an historical record of water use which might be modeled to fill the present State requirements.

We may have some of the records for the docket, but are too short of personnel to make copies at this time. The folders should be filed to receive the records as assembled.

SIGNED

A. van V. Dunn
Chief, Water Resources Section

Copy to: Superintendent, Big Bend- with docket folder
Chief, WOBC - with docket folder

L54-CBL

March 3, 1959

Memorandum

To: Regional Director, Region Three

From: Chief, Water Resources Section

Subject: Water Use Reports for 1958, Big Bend

WESTERN OFFICE	
DESIGN & CONSTRUCTION	
MAR 6 1959	
CHIEF	
ADMIN. ASST.	
PERSONNEL	
PLANS & PROJ.	
SAFETY	
ARCHITECT	
ENGINEER	
LAND ARCH.	

We are distributing copies of the four reports for 1958 with this memorandum, to be filed in Dockets 1, 2, 3 and 4. Also attached is a copy of the letter of February 9 from Mr. Booth, Examiner, of the State Board of Water Engineers.

The reports are copies, for the most part, from the drafts supplied with memorandum of February 27 from Mr. Miller. The drafts appear to have been based on fairly well kept records of the past year. However, it has been necessary to add rather approximate answers to one or two questions. There is a pond for scenic effects in the Rio Grande Area, for which water must be supplied to compensate for evaporation and seepage. The area irrigated with water from Spring B, which you now seem to have named Wedin Spring, should be defined as to acreage. We must also answer questions concerning municipal use at the Basin with more accuracy than I was able to supply. I have assumed that negligible use of the Basin Wells was made in 1958. That use should also be recorded this year.

In the event of another change in water laws, to cover groundwater, I suggest that records of water use be kept at Panther Junction. We can start a docket record for 1959 even if it is not also submitted to the State.

The compilation of data for 1959 should be started at once. Now that Mr. Fields has entered on duty, I propose to refer the forms to you for preparation, when they are received next January. You should thereafter arrange to have the forms sent directly to you.

SECRET

A. van V. Dunn
Chief, Water Resources Section

Attachments 5

Copy to: Superintendent, Big Bend, with 5 attachments
Chief, WODC, with 5 attachments

Taaffe - Int. 4482



DEPARTMENT OF THE INTERIOR
INFORMATION SERVICE

NATIONAL PARK SERVICE

For Release APRIL 9, 1957

NATIONAL PARK SERVICE SEEKS OFFERS FROM PRIVATE ENTERPRISE TO OPERATE
VISITOR FACILITIES AT BIG BEND NATIONAL PARK, TEXAS

The National Park Service is interested in obtaining informal offers from qualified and competent parties for the operation of existing and projected visitor facilities and services under contract at Big Bend National Park, Texas, the Department of the Interior announced today.

The park covers some 708,000 acres of spectacular mountain, canyon and desert country enclosed in the great band of the Rio Grande River. Open all year, it is reached by modernized and paved roads from both Alpine and Marathon, Texas. Fine progress has been made in park development and further plans are under way to accommodate increasing visitation. Visitor-use of the park has jumped from 850 in 1944 to 87,709 in 1956.

The accommodations and services to be operated by one or more successful applicants would include lodging, food service, stores, transportation, trailer courts, pack and saddle horses, and other operations.

National Park Service Director Conrad L. Wirth said that existing facilities presently providing services to the public in the park's Basin area include guest and employee cabins, a restaurant, central comfort station, one-room office building, service station, storage warehouse, and a building for guest registration, curio sales, post office, grocery store, and rest rooms.

In the Panther Junction area there are four house-trailer sites with utility connections and a gasoline station that may be enlarged to provide for the sale of refreshments.

Many of these facilities are owned by the present concessioner, National Park Concessions, Inc., and a successful applicant or applicants would be required to negotiate for the purchase of its interest in them. Such negotiations would be conducted with Mr. H. S. Sanborn, the corporation's president and general manager who may be contacted at Mammoth Cave, Kentucky. Certain Government-owned facilities at Basin and Panther would be consigned to a new concessioner to operate under certain contractual conditions.

D. G. Lee

Not in distributed folders.

[Handwritten signatures and initials]

Wirth said that applicants must be prepared, within the first few years of the contract, to finance construction of additional facilities needed to accommodate visitors at the Basin area and the new development planned for the Rio Grande area under the National Park Service's MISSION 66 program. Preliminary estimates place the cost by 1960 at about \$1,500,000--approximately \$850,000 for the Basin area and \$650,500 for Rio Grande. Commercial electric power is now available at the Basin, Panther Junction, and Rio Grande areas and commercial telephone service at Basin and Panther Junction. When required, telephone service will be extended to the Rio Grande area.

Applicants, according to Wirth, also should expect to finance other visitor-accommodations later on at the Santa Elena Canyon area since long-range MISSION 66 plans call for its development. MISSION 66 expects to reach its goal of adequate development and staffing in all parks by 1966, the 50th anniversary of the Service's establishment.

Qualified parties interested in submitting applications to operate at Big Bend National Park are urged to visit the park, inspect the facilities, and confer with the superintendent, George W. Miller. His address is Big Bend National Park, Texas. Copy of the prospectus and a form of concession contract illustrating the type of operating right to be granted can be secured from the Superintendent.

Provisions of the contract will be subject to negotiation, but the term will be limited to 20 years, the statutory limit. The long-standing policy of the Department of the Interior has been to grant concessioners, if they have rendered satisfactory service during the lifetime of their contracts, the preferential opportunity to negotiate a new contract upon expiration of that covering their operations.

Informal offers should be forwarded to the Director, National Park Service, Room 3211, Interior Building, Washington 25, D. C., prior to May 15, 1957. Evaluation of the offers will be made as promptly as possible thereafter. Offers received after the above date, but before the final award of the contract, will be given full consideration if they are determined to be in the public interest.

x x x

*File in WO
assembly of
Big Bend Docket 5*

<u>Organ</u>	<u>Date of Article</u>	<u>Begin Const.</u>	<u>Pertinent Data</u>
1. San Angelo Std-Times	3/9/57	4/1	Lawler Construction Company, Abilene, Texas, submitted low total bid of \$336,314.02 for residences and utilities at Panther Junction
" " " "	"		2,000-feet / of 6 inch main and distribution pipes and hydrants.
2. Fort Worth Star Telegram	3/6/57		Bill to strengthen control of underground waters in Texas
3. San Angelo Std-times	3/6/57		240 calendar days on the above items in No. 1
4. Alpine Avalanche	3/8/57		Repeated data in No. 1 and added Chisos Basin to be 100 unit campground.
5. Fort Worth Star Telegram	3/10/57		Objective of MISSION 66 is adequate accommodation in all the national parks for 80,000 visitors by 1966, the golden anniversary year of the National Park Service. Big Bend visitation in 1966 is estimated at 500,000.

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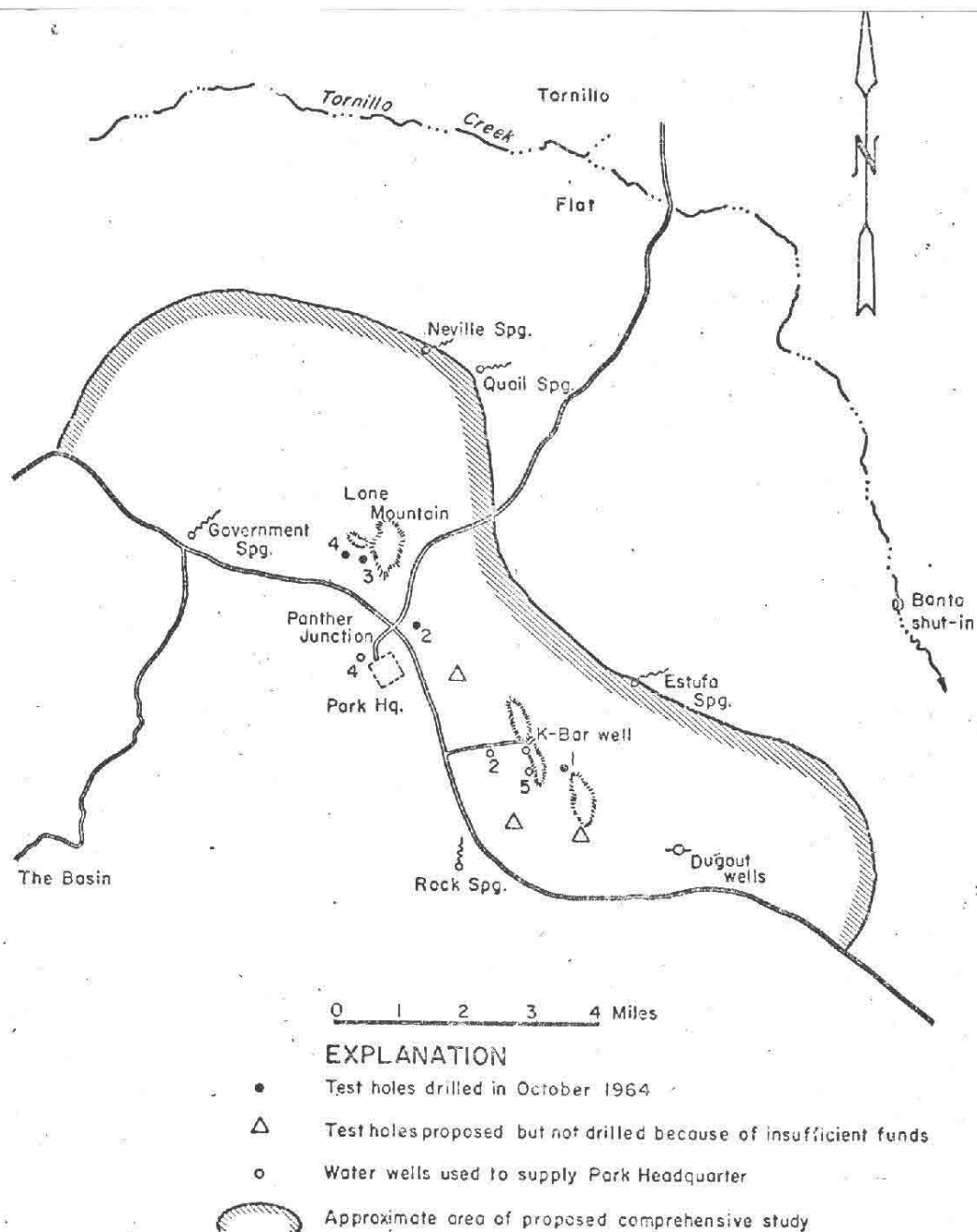
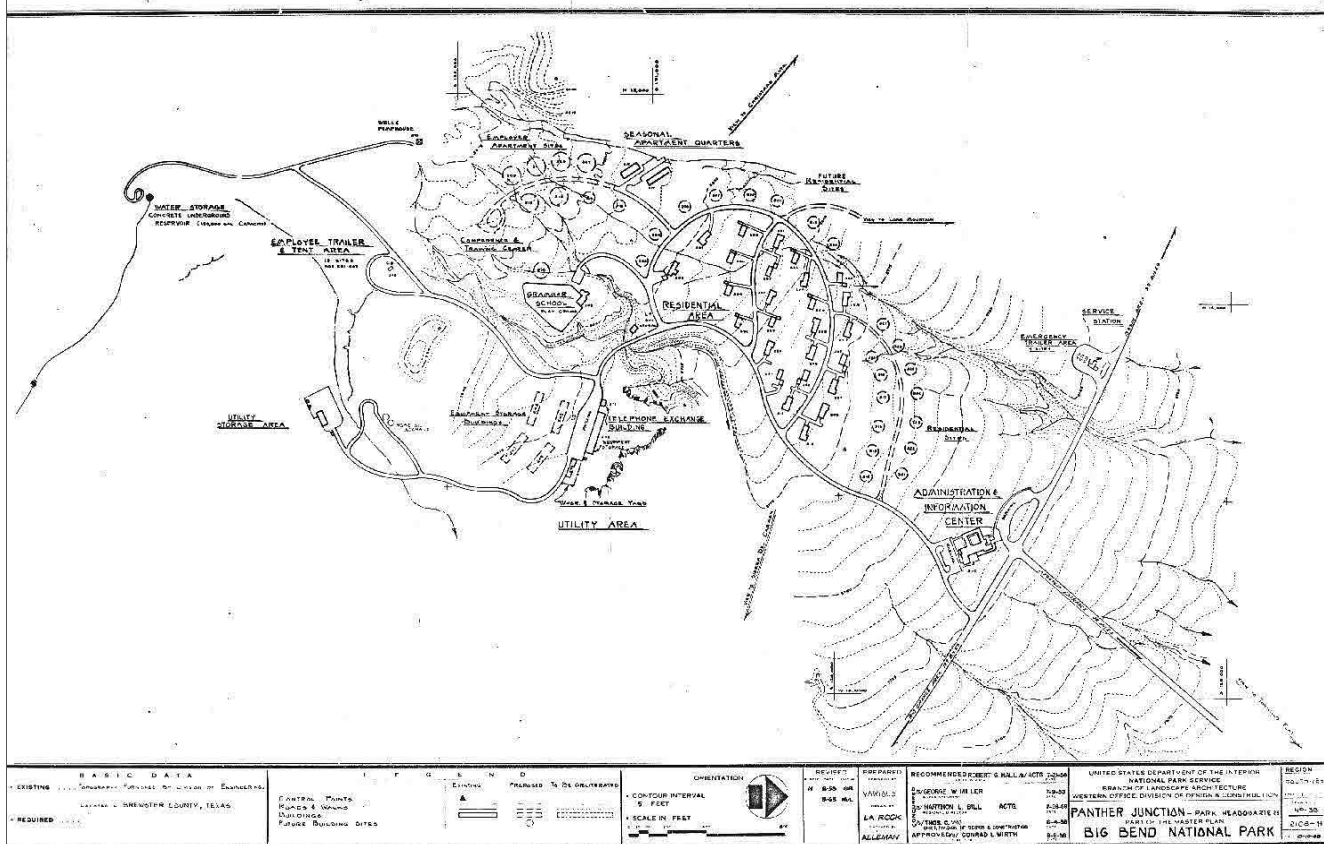
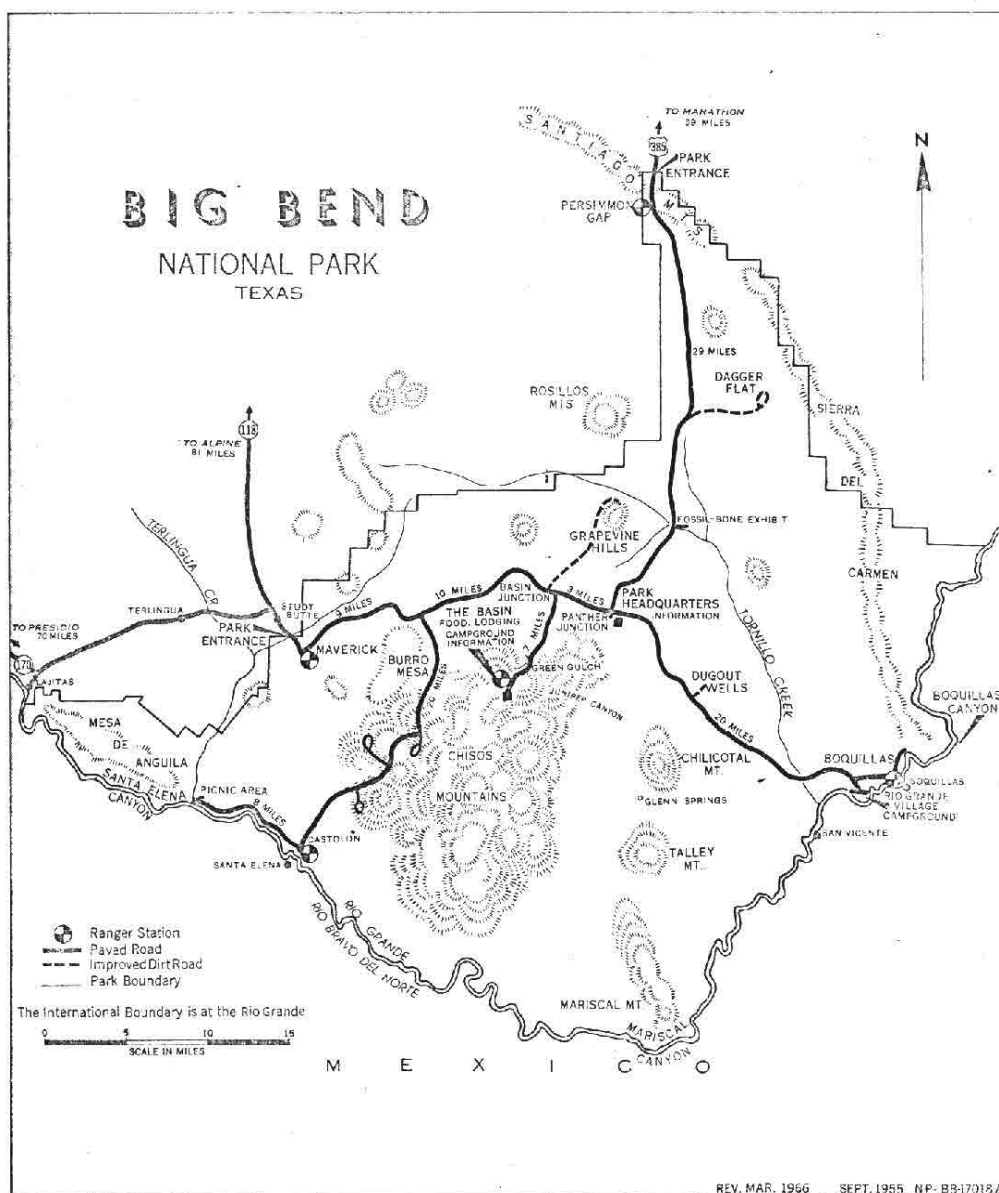


Figure 1.--Map showing locations of wells, springs, and test holes in Panther Junction area, Big Bend National Park, Texas





Docket Information

Number of Documents in Docket 61

Documents Dated from 11/4/1927 to 9/6/1973

Docket Compiled: 1/31/2011