



WATER-RIGHT DOCKET

Organ Pipe Cactus National Monument

Docket No: 10

WELL #5. HEADQUARTERS WATER SYSTEM.

Preliminary Docket Information

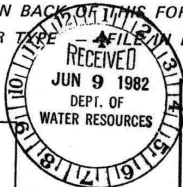
07-20-1979: water docket information

DOCKET (FILE) TITLE _____		DATE: <u>July 20, 1979</u>
REGION	<u>Western</u>	ANMA <u>Organ Pipe Cactus National Monument</u>
SITE	<u>Headquarters Water System - Well #5</u>	
STATE	<u>Arizona</u>	COUNTY <u>Pima</u> DOCKET NO. <u>WR #10</u>
LOCATION	<u>SW¼ NW¼ NE¼ Sec.17 T17S R5W</u>	
REGIONAL BASIN	_____	LOCAL BASIN: _____
ACQUIRED BY	<u>Reservation</u>	
APPROPRIATION	PERMIT _____	CERTIFICATE _____
ACTION DUE	PRIORITY _____	RESERVATION <u>April 3, 1937</u>
QUANTITY	<u>3000 gpd</u>	USE <u>Public Supply and Domestic</u>
STATUS	<u>Active</u>	SOURCE <u>Ground Water - Well</u>
REMARKS	<u>Hydrologic Unit #15080102</u>	
_____ _____ _____ <u>NARRATIVE:</u> In August of 1974 a well was drilled at the headquarters complex to supplant the water from the other wells there. The main producing well was lost when a swab was permanently lodged during a swabbing operation. This well then became the primary source for the area. This source supplies the headquarters, NPS residences and the campground. See also ORPI WR #5 & 10.		
Compiled by	<u>T. Kern</u>	
Approved by	_____	

DEPARTMENT OF WATER RESOURCES
99 EAST VIRGINIA AVENUE
PHOENIX, ARIZONA 85004

REGISTRATION OF EXISTING WELLS

READ INSTRUCTIONS ON BACK OF THIS FORM BEFORE COMPLETING
PRINT OR TYPE - **FILE IN DUPLICATE**



Declaration: The United States gives this
certification to the State in the interest
of equity, and does not concede that the
State has power to regulate the rights of
the United States to the use of water.

REGISTRATION FEE (CHECK ONE)
EXEMPT WELL (NO CHARGE) ☐
NON-EXEMPT WELL - \$10.00 ☒

FOR OFFICE USE ONLY
REGISTRATION NO. 55- 629090
FILE NO. C(17-5)17abc
FILED 6-9-82 AT 1:30
(DATE) (TIME)
INA _____
AMA _____

1. Name of Registrant:
National Park Service, Western Region, Division of Water Resources
450 Golden Gate Avenue, Box 36063, San Francisco, CA 94102
(Address) (City) (State) (Zip)
2. File and/or Control Number under previous groundwater law:
(File Number) _____ 35- _____
(Control Number)
3. a. The well is located within the SW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17,
of Township 17 S N/S, Range 5 W E/W, G & SRB & M, in the
County of Pima.
b. If in a subdivision: Name of subdivision _____
Lot No. _____, Address _____
4. The principal use(s) of water (Examples: irrigation - stockwater - domestic - municipal - industrial)
Domestic, public supply, fire protection _____
5. If for irrigation use, number of acres irrigated from well approximately 15
6. Owner of land on which well is located. If same as Item 1, check this box ☒

(Address) (City) (State) (Zip)
7. Well data (If data not available, write N/A)
a. Depth of Well 420 feet
b. Diameter of casing 12 inches
c. Depth of casing 420 feet
d. Type of casing steel, perforated from 350 - 420 feet below land surface datum
e. Maximum pump capacity 50 gallons per minute.
f. Depth to water 310 feet below land surface.
g. Date well completed August 6, 1974
(Month) (Day) (Year)
8. The place(s) of use of water. If same as Item 3, check this box ☐
X $\frac{1}{4}$ X $\frac{1}{4}$ South $\frac{1}{2}$ Section 8 Township 17 S Range 5 W
X $\frac{1}{4}$ X $\frac{1}{4}$ SW $\frac{1}{4}$, Section 17 Township 17 S Range 5 W
Organ Pipe Cactus -- Headquarters Well #5 **
Attach additional sheet if necessary.
9. DATE JUN 3 1982 SIGNATURE OF REGISTRANT (Sgd) Gerard S. Witucki

** This replaces Headquarters Well #1 _____
GERARD S. WITUCKI
CHIEF, DIVISION OF WATER RESOURCES

Supporting Hydro Data



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE

WESTERN REGION

450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

L54 (WR)PSW
ORPI/GEN

October 23, 1974

Memorandum

To: Chief, Division of Water Resources, Western Region

From: Hydrologist, Water Resources, Western Region

Subject: Report on new production well at Organ Pipe Cactus

Drilling of well (C-17-5) 17 abc 2 (NPS #5) commenced on June 11, 1974 by utilization of a percussion drill rig by Earl H. Williams Well Drilling Company, Tucson, Arizona. Mud was utilized in the drilling process for this 14-inch diameter hole. During drilling of volcanic materials the driller encountered hard drilling and reported high magnetite content in the samples. At a depth of 330 feet water was struck, water rose approximately 20 feet up the hole. "Easier" drilling was reported from 330 feet to 360 feet. At 390 feet softer material was again reported, drilling continued to a total depth of 420 feet in this material on July 16, 1974.

A 12-inch diameter steel casing was set with two 10 feet Johnson Well screen sections placed at the following intervals: 350 feet - 360 feet and 400 feet - 410 feet. The well was then gravel packed with 3/8-inch washed gravel.

Following completion of the well, a temporary submersible pump was installed and the well was pumped and surged until clear water was obtained. On August 6, 1974 (several days after being pumped) an aquifer test was conducted. Well # (C-17-5) acb (NPS #4) was utilized as an observation well. Lost tools in Well # (C-17-5) 17 abc 1 (NPS #1) prevented its use as an observation well. (A complete data packet, including well schedule and aquifer test data and drawdown curves, is included.) Well was pumped at the rate of 114 gpm for a period of 15-1/2 hours. Drawdown in the pumped well was 6.78 feet at the end of the test. This small amount of drawdown indicates that the well is capable of producing an even larger quantity of water.



Save Energy and You Serve America!

Drawdown in observation well was of extremely small magnitude and does not allow for mathematical computation of transmissivity. The specific conductance of the water was 700 micromhos @ 32.0°C.

Present park demands require that the new well produce at a rate of 40-50 gpm for a period of 4-5 hours per day, thus it appears that the well is more than adequate.



William L. Werrell

Enclosure
(packet a/s)

October 11, 1974

Analysis of Aquifer Test on Well (C-17-5) 17 abc 2

A mathematical treatment of data from the aquifer test (conducted on August 6, 1974) to determine transmissivity cannot be made. The pumping rate of 114 gpm was not sufficient to cause a drawdown in the observation well which was acceptable for mathematical analysis i.e., observation well drawdown was less than 0.20 feet. Drawdown of such a small magnitude fails to provide an acceptable analysis curve for the following reasons: (1) data collection errors (which are of a negligible percentage when drawdowns are several feet) may invalidate the data. Such errors may be: electric tape stretch; error in reading the water level; and (2) the effect of barometric efficiency of the aquifer. The latter is the major concern in regards to the data of this aquifer test. As noted in the data, a storm built up in the late afternoon and intensified after dark. No barometric pressure data are available for the test; however, it is reasonable to assume that this meteorological event was associated with a barometric "low". This would have caused a decrease in depth to water below land surface datum. Data for both observation and pumped wells shows a "break" in drawdown curves at about 600 minutes, an increase in slope occurs. This "break" is not understood as water levels increase in depth below land surface datum. At any rate, any change in water levels caused by barometric efficiency of the aquifer may be of greater magnitude than water level changes caused by the cone of depression from the pumped well - thus analysis of the aquifer by use of the observation well drawdown curve would not be considered valid.

Although the test does not allow formal mathematical analysis, the following conclusions may be made. In view of the extremely small drawdown in the observation well, it certainly appears safe to assume that no well interference will occur under normal park usage, present park utilization is for 4-5 hours per day.



William L. Werrell
Hydrologist

FORM 9-1642B
(DEC. 68)Well No. (C-17-5) 17 abc 2

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

W. WERRELL -

PRELIMINARY MAP

FIELD CHECKED
W. WERRELL
NAT'L PARK SERVICE
AUGUST 1974

Source of data NAT'L PARK SERVICE Date 8/74 Map NARIZ MT 2 NE 7.5'

Word by BELLINOFF

State ARIZONA County PIMA Sequential number 1

Latitude: 31 57 02 N Longitude: 111 24 80 W

Lat-long accuracy: 17 0 5 Sec 17 T. SW R. NE G & M

Local well number: C-17-05 Other number: NPS #5

Local use: WMD Owner or name: _____

Owner or name: _____ Address: _____

Ownership: County, Fed Gov't, City, Corp or Co, Private, State Agency, Water Dist F

Use of water: (A) Air cond, Bottling, Comm, Dewater, Power, Fire, Dom, Irr, Med, Ind, P S, Rec, (S) Stock, Instit, Unused, Repressure, Recharge, Desal-P S, Desal-other, Other H

Use of well: (A) Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed W

DATA AVAILABLE: Well data 70 Freq. W/L meas.: _____ Field aquifer char. 72

Hyd. lab. data: _____ 73

Qual. water data; type: SPEC. COND. 74

Freq. sampling: _____ Pumpage inventory: yes 76 no: period: _____

Aperture cards: _____ yes 77

Log data: _____ CUTTINGS 78 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 420 ft 420 Meas. 24 6

Depth cased: 350 ft 350 Casing type: STEEL Diam. 12 in 29 30

Finish: porous gravel w. gravel w. horiz. open perf., screen, sd. pt., shored, open concrete, (perf.), (screen), gallery, end, other 31

Method: (A) air bored, (B) cable, (C) dug, (D) hyd jetted, (E) air reverse trenching, (F) driven, (G) drive rot, (H) percussion, (I) rotary, other 32

Date Drilled: AUG. 6, 1974 Pump intake setting: _____ ft 36 38

Driller: EARL WILLIAMS DRUG CO. TUCSON address _____

Lift: (A) air, (B) bucket, (C) jet, (D) multiple, (E) multiple, (F) none, (G) piston, (H) submerg, (I) turb, other 39 Deep 40

Power: (type): diesel, elec, gas, gasoline, hand, gas, wind; H.P. _____ Trans. or meter no. _____

Descrip. MP TOP OF CASING 1.6 ft above LSD, Alt. MP _____

Alt. LSD: _____ Accuracy: (source) _____ 47

Water Level 311.13 ft below MP; Ft below LSD _____ Accuracy: _____ 53

Date 5-4-79 Yield: _____ gpm _____ Method determined _____ 61

Drawdown: _____ ft _____ Accuracy: _____ Pumping period _____ hrs _____ 64 68

QUALITY OF WATER DATA: Iron ppm _____ Sulfate ppm _____ Chloride ppm _____ Hard. ppm _____ 72

Sp. Conduct _____ K x 10⁵ _____ Temp. _____ °F _____ Date sampled _____ 73 74 75 76 77 78 79

Taste, color, etc. _____

NATIONAL G W FILE

Well No.

(C-17-5) abc 2

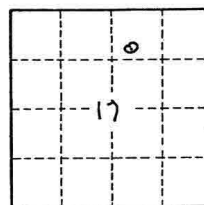
Well No. (c-17-5)17abc2Latitude-longitude 31.57.02 ^N 112.48.04 ^W

HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD ☐ Physiographic Province: BASIN & RANGE 22 Section: SONORAN
 DESERT B Drainage Basin: Subbasin:
 (D) (C) (E) (F) (H) (K) (L)
 Topo of depression, stream channel, dunes, flat, hilltop, sink, swamp,
 well site: (O) (P) (S) (T) (U) (V)
 offshore, pediment, hillside, terrace, undulating, valley flat
 MAJOR AQUIFER: system series aquifer, formation, group
 Lithology: Origin: Aquifer Thickness: ft
 Length of well open to: ft Depth to top of: ft
 MINOR AQUIFER: system series aquifer, formation, group
 Lithology: Origin: Aquifer Thickness: ft
 Length of well open to: ft Depth to top of: ft
 Intervals Screened: 350-360, 400-410, JOHNSON STAINLESS STEEL 100 SLOT
 Depth to consolidated rock: ft Source of data:
 Depth to basement: ft Source of data:
 Surficial material: Infiltration characteristics:
 Coefficient Trans: gpd/ft² Coefficient Storage:
 Coefficient Perm: gpd/ft²; Spec cap: gpm/ft; Number of geologic cards:

WELL IS 8.3 FT NORTH OF WELL #4.

21
 which is correct?

Well No. (c-17-5)17abc2

T.S. 4.21

Page 1 of 2 U.S. Geological Survey Water Resources Division Location (C-17-5) 17ABC2

Owner: N.P.S. WELL-CUTTINGS ANALYSIS FORM LAB No. 3605

Driller: WILLIAMS Depth: 420 Method drilled: CABLE

Depth	Pan	Sample Size*	Munsell color		% Fines <.0625 mm	% Sand >.0625 mm	% Gravel >2.0 mm	% Gravel >4.0 mm	% Mud- stone +	Acid **	Max. size mm	Remarks
			Dry	Wet								
10	1		10YR 7/1 L.GRAY	10YR 4/1 D.GRAY	4	17	20	59		W	28	Granitics 50% Interval 10 To 80
20	2					NO	SAMPLE					Schist
30	3		10YR 6/1 GRAY		2	31	18	49		W	17	Volcanics (65%)
40	4					NO	SAMPLE					Quartzite & Sandstone 30%
50	5											Limestone
60	6				3	16	15	66		W	17	Other
70	7				0	35	24	38		W	8	Regularity SUB-ANG TO SUB-ROUND
80	8				1	62	25	14		W	9	SAND COLOR: GRAY
90	9		10YR 7/2 L.GRAY	10YR 6/2 D.GRAY	19	32	15	33		W	19	
100	10									M	17	Interval 90 To 170
110	11				19	32	13	36		M	18	Granitics 50%
120	12				20	34	14	32		M	18	Gneiss
130	13				24	34	15	27		M	20	Schist
140	14				16	31	15	38		M	22	Volcanics 65%
150	15				32	85	18	29		M	21	Quartzite & Sandstone 30%
160	16				19	32	17	27		M	17	Limestone
170	17				25	46	16	19		M	15	Other
180	18				24	39	15	22		M	16	Regularity SUB-ANG TO SUB-ROUND
190	19				31	47	13	9		M	14	SAND COLOR: GRAY
200	20				28	49	15	8		M	20	Interval 180 To 290
210	21		10YR 6/2 L.B. GRAY		22	41	19	18		M	14	Granitics 10%
220	22				14	36	15	41		M	26	Gneiss
230	23				61	26	7	6		M	9	Schist
240	24				NO	SAMPLE						Volcanics 70%
250	25				7	56	15	22		M	20	Quartzite & Sandstone 20%
260	26				7	57	20	16		M	15	Limestone
					8	29	27	36		M	18	Other

ANAL. BY J. LUDOVICI DATE 3-13-73

* 200 grams - no entry
 100 grams - 1
 <100 grams - 0

‡ Silt and clay particles
 not broken down by
 washing

** Reaction to HCl
 S - strong
 M - moderate
 W - weak
 0 - none

1.D. 6.61

Page 2 of 2 U.S. Geological Survey Water Resources Division

WELL-CUTTINGS ANALYSIS FORM

Owner: _____ Location _____

Driller: _____ Depth: _____ LAB No. 3605

Method drilled: A

Depth	Pan	Sample Size*	Munsell color		% Fines <.0625 mm	% Sand >.0625 mm	% Gravel >2.0 mm	% Gravel >4.0 mm	% Mud- stone ‡	Acid **	Max. size mm	Remarks
			Dry	Wet								
270	27		10YR 8/1 GRAY	10YR 2/1 V.D. GRAY	1	94	3	2		W	5	
280	28		10YR 8/2 L.B. GRAY	"	5	60	21	14		W	15	
290	29		"	"	15	52	22	12		W	8	(300-320)
300	30		"	"	9	43	26	22		W	8	75% VOLCANICS
310	31		7.5YR 8/1 GRAY	"	2	55	18	19		W	9	SAND COLOR: GRAY
320	32		"	"	5	53	21	21		W	15	(320-360)
330	33		"	"	6	64	19	11		W	5	80% VOLCANICS
340	34					NO	SAMPLE					SAND COLOR: GRAY
350	35		"	"	7	66	13	14		W	7	
360	36	1			52	34	6	8		W	6	(370-400)
370	37		10YR 8/1 L.B. GRAY	2.5Y 5/2 S. BROWN	17	55	17	11		W	8	75% VOLCANICS
380	38					NO	SAMPLE					SAND COLOR: GRAY
390	39		"	"	21	66	11	02		W	5	
400	40		10YR 8/1 L.B. GRAY	10YR 2/1 BLACK	1	23	22	54		W	28	(410-420)
410	41		"	"	6	53	22	19	✓	W	14	75% VOLCANICS
420	42		"	"	7	50	18	25		W	9	SAND COLOR: GRAY

ANAL. BY _____ DATE _____

* 200 grams - no entry
 100 grams - 1
 <100 grams - 0

‡ Silt and clay particles
 not broken down by
 washing

** Reaction to HCl
 S - strong
 M - moderate
 W - weak
 0 - none

PERMANENT REFERENCE
Do Not Discard

NATIONAL PARK SERVICE

FORM 9-1642B
(DEC. 68)

Well No. (C-17-5)17 abc 2

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

Record by W. Werrell Source of data Field Date Aug 7, 74 Preliminary Map: Map Nariz Mt 2 NE, 7 1/2'

State Ariz County Pima Sequential number: 10

Latitude: 31 57 02 N Longitude: 111 24 80 W

Local well number: C-17-05-17 ABC 2 Other number: NPS #5

Local use: NATL PARK SER 5 Owner or name: National Park Service

Ownership: County, (C) (F) (M) (N) (P) (S) (W) F

Use of water: (A) (B) (C) (D) (E) (F) (H) (I) (M) (N) (P) (R) H

(S) (T) (U) (V) (W) (X) (Y) (Z) W

Use of well: (A) (D) (G) (H) (P) (R) (T) (U) (W) (X) (Z) W

Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed

DATA AVAILABLE: Well data 70 Freq. W/L meas.: 71 Field aquifer char. 72

Hyd. lab. data: 73

Qual. water data: type: Specific conductance 74

Freq. sampling: 75 Pumpage inventory: yes 76 no, period: 77

Aperture cards: 78

Log data: 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 420 ft Meas. 420 Driller 6

Depth cased: 350 ft Casing type: Steel Diam. 12 in

Finish: (C) (F) (G) (H) (P) (S) (T) (W) (X) (Z) 9

porous gravel w. concrete, (perfor.) (screen) horiz. open perf., screen, sd. pt., shored, open hole, other

Method: (A) (B) (C) (D) (H) (J) (P) (R) (T) (V) (W) (Z) C

Drilled: air bored, cable dug, hyd jetted, air reverse trenching, driven, drive wash, other

Date Drilled: Aug 6, 74 Pump intake setting: 874 ft

Driller: Earl Williams Drilling Co., Tucson, Ariz.

Lift: (A) (B) (C) (J) multiple, multiple, (N) (P) (R) (S) (T) (Z) Deep D

(type): air, bucket, cent, jet, (cent.) (turb.) none, piston, rot, submers, curb, other

Power: (type): diesel, elec, gas, gasoline, hand, gas, wind; H.P. 5 Trans. or meter no. 5

Descript. MP top of casing, 1.6 ft above LSD, Alt. MP 1660

Alt. LSD: 1660 Accuracy: USGS Topo - 20' Contours 3

Water Level: 310.71 ft above MP; Ft below LSD 311 Accuracy: Steel tape A

Date meas: Aug 6, 74 Yield: 874 gpm Method determined

Drawdown: 310.71 ft Accuracy: 311 Pumping period: hrs

QUALITY OF WATER DATA: Iron ppm Sulfate ppm Chloride ppm Hard. ppm

Sp. Conduct 700 K x 10³ Temp. 90 °F 90 Date sampled Aug 6, 74 874

Taste, color, etc.

Well No. (C-17-5) 17 abc 2

Well No. (C-17-5) 17 abc 2Latitude-longitude 31.57.02^N 112.48.04^W

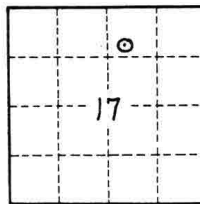
HYDROGEOLOGIC CARD

SAME AS ON MASTER CARD Province: Basin & Range Section: Sonoran
 Desert B Drainage Basin: 22 Subbasin: 34
 (D) (C) (E) (F) (H) (K) (L)
 Topo of depression, stream channel, dunes, flat, hilltop, sink, swamp,
 well site: (P) (S) (T) (U) (V) terrace undulating, valley flat T
 MAJOR
 AQUIFER: system series 28 29 aquifer, formation, group 30 31
 Lithology: 32 33 Origin: 34 Aquifer Thickness: 35 ft
 Length of well open to: 36 ft Depth to top of: 37 ft
 MINOR
 AQUIFER: system series 44 45 aquifer, formation, group 46 47
 Lithology: 48 49 Origin: 50 Aquifer Thickness: 51 ft
 Length of well open to: 52 ft Depth to top of: 53 ft
 Intervals Screened: 350' to 360' & 400' to 410'; Johnson Stainless Steel - 100 slot.
 Depth to consolidated rock: 54 ft Source of data: 55
 Depth to basement: 56 ft Source of data: 57
 Surficial material: 58 Infiltration characteristics: 59
 Coefficient Trans: 60 gpd/ft² Coefficient Storage: 61
 Perm: 62 gpd/ft²; Spec cap: 63 gpm/ft; Number of geologic cards: 64

Well is located 8.3 feet North of
 (C-17-5) 17 abc 1 [NPS # 1].
 Well was drilled 14 inches in
 diameter and gravel packed with
 3/8" washed gravel.

Driller reports that water was struck
 at 336 ft. depth, and that water
 rose about 20 ft. up the hole.

Aquifer test conducted on Aug 6, 1974, see
 enclosed data.

Well No. (C-17-5) 17 abc 2

PERMANENT REFERENCE
Do Not Discard

NATIONAL PARK SERVICE

Well No. (C-17-5) 17 abc 2

WELL SCHEDULE

U. S. DEPT. OF THE INTERIOR

GEOLOGICAL SURVEY

WATER RESOURCES DIVISION

MASTER CARD

Record by W. Werrell Source of data Field Date Preliminary Map:
Map Nariz Mt 2 NE 7 1/2
 State Ariz 04 County Pima 10
 Latitude: 31 57 02 N Longitude: 111 24 80 W Sequential 1
 Lat-long 17 05 0 17 SW NW NE GESR PM
 Local well number: C-17-05 17 ABC 2 NPS # 5
 Local use: NATL PARK SER 5 Owner National Park Service
 Ownership: County, (C) (F) (M) (N) (P) (S) (W) F
 Use of (A) (B) (C) (D) (E) (F) (H) (I) (M) (N) (P) (R)
 well: Air cond, Bottling, Comm, Devater, Power, Fire, Irr, Mad, Ind, P S, Rec,
 (S) (T) (U) (V) (W) (X) (Y) (Z)
 Stock, Instit, Unused, Repressure, Recharge, Desal-P S, Desal-other, Other H
 Use of (A) (D) (G) (H) (O) (P) (R) (T) (U) (W) (X) (Z)
 well: Anode, Drain, Seismic, Heat Res, Obs, Oil-gas, Recharge, Test, Unused, Withdraw, Waste, Destroyed W
 DATA AVAILABLE: Well data 70 Freq. W/L meas.: 71 Field aquifer char. 72
 Hyd. lab. data: 73
 Qual. water data: Specific conductance 74
 Freq. sampling: 75 Pumpage inventory: yes 76 no 77
 Aperture cards: 78 Log data: 79

WELL-DESCRIPTION CARD

SAME AS ON MASTER CARD Depth well: 420 ft 420 Meas. Driller 6
 Depth cased: 350 ft 350 Casing type: Steel Diam. 12 in 12
 Finish: porous gravel w. (C) (F) (G) (H) (O) (P) (S) (T) (W) (X) (Z)
 concrete, (perf.) (screen) horiz. open perf., screen, sd. pt., shored, open
 Method (A) (B) (C) (D) (E) (J) (P) (R) (T) (V) (W) (Z)
 Drilled: air bored, cable dug, hvd jetted, air reverse trenching, driven, drive
 rot, rot., percussion, rotary, wash, other C
 Date Drilled: Aug 6, 74 874 Pump intake setting: 34 ft 34
 Driller: Earl Williams Drilling Co., Tucson, Ariz.
 Lift (A) (B) (C) (J) multiple, multiple, (N) (P) (R) (S) (T) (Z) Deep D
 (type): air, bucket, cent, jet, (cent.) (turb.) none, piston, rot, submers, turbo, other S Shallow 40
 Power (type): diesel, elec, gas, gasoline, hand, gas, wind, H.P. 5 Trans. or meter no. 41
 Descrip. MP top of casing, 1.6 ft above LSD, Alt. MP 42
 Alt. LSD: 1660 1660 Accuracy: USGS Topo - 20' Contours 3
 Water Level 310.71 ft above MP; Ft 311 LSD 311 Accuracy: Steel tape A
 Date Aug 6, 74 874 Yield: 31 gpm 31 Pumping period: 31 hrs 31
 Drawdown: 31 ft 31 Accuracy: 31 Pumping period: 31 hrs 31
 QUALITY OF WATER DATA: Iron 31 Sulfate 31 Chloride 31 Hard. 31
 Sp. Conduct 700 K x 10 4 Temp. 90 °F 90 Date sampled Aug 6, 74 874
 Taste, color, etc.

Well No. (C-17-5) 17 abc 2

Well No. (C-17-5) 17 abc 2Latitude 31 57 02 Longitude 112 48 04

HYDROGEOLOGIC DATA

Basin & Range 212 Section: Sanoran
Desert 3

Topo of depression, stream channel, dunes, flat, hilltop, sink, swamp,
 well site: (D) (C) (E) (F) (H) (K) (L)
 (G) (P) (S) (T) (U) (V)
 offshore, pediment, hillside, terrace undulating, valley flat T

MAJOR
 Aquifer: system series aquifer, formation, group

Lithology: Length of well open to: ft Depth to top of: ft

MINOR
 Aquifer: system series aquifer, formation, group

Lithology: Length of well open to: ft Depth to top of: ft

Intervals
 Screened: 350' to 360' & 400' to 410'; Johnson Stainless Steel - 100 slot

Consolidated: ft Source of data:

Depth to basement: ft Source of data:

Surficial material: Characteristic: Coefficient Storage:

Permeability: gpd/ft²; Spec. cap: gpm/ft; Number of geologic units:

Well is located 8.3 feet North of

(C-17-5)17 abc 1 [NPS # 1].

Well was drilled 14 inches in

diameter and gravel packed with

3/8" washed gravel.

Driller reports that water was struck

at 336 ft. depth, and that water

rose about 20 ft. up the hole.

Aquifer test conducted on Aug 6, 1974, see

enclosed data.

Well No. (C-17-5) 17 abc 2

**EARL H. WILLIAMS
WELL DRILLING**

701 W. RIVER ROAD
TUCSON, ARIZONA 85704
888-3250

August 27, 1974

RECEIVED	
SOUTHWEST ARIZONA GROUP	
AUG 29 1974	
GEN SUPT	
ADM OFF	
PLANNING	
FISCAL	
PERSONNEL	
PARK OP S/LC	
ARCHAEOLOGIST	
INF SPEC	
LAND ACQ	
ARCHITECT	
ENG TECH	
TRAINING	
FILE	

NATIONAL PARK SERVICE
Southern Arizona Group
1115 N. 1st Street
Phoenix, Arizona 85004

Ref: I.F.B. 8600-4

Gentlemen:

Following is a daily progress report for the recently completed well at Organ Pipe National Monument.

6/11/74 Move Rig to location
6/12/74 Set up rig and string up tools
6/13/74 Build up bit and drill 20 ft.
6/14/74 Drilled 20-65 ft.

6/17/74 Drilled 65-100 ft.
6/18/74 Drilled 100-140 ft.
6/19/74 Drilled 140-180 ft.
6/20/74 Drilled 180-200 ft.

6/24/74 Drilled 200-220 ft.
6/25/74 Drilled 220-240 ft.
6/26/74 Drilled 240-260 ft.
6/27/74 Drilled 260-280 ft.

7/1/74 Drilled 280-300 ft.
7/2/74 Drilled 300-330 ft.
7/3/74 Drilled 330-360 ft.

7/9/74 Drilled 360-390 ft.
7/10/74 Drilled 390-400 ft.

7/16/74 Drilled 400-420 ft.
7/17/74 Set screen and casing
7/18/74 Set casing
7/19/74 Set casing (drpped pipe)

7/22/74 Set Casing (fished pipe out)
7/23/74 Gravel pack well

Sincerely

Earl H. Williams
Earl H. Williams

**EARL H. WILLIAMS
WELL DRILLING**

701 W. RIVER ROAD
TUCSON, ARIZONA 85704
938-3250

August 15, 1974

RECEIVED	
SOUTHERN AZ GROUP	
AUG 19 1974	
GEN SUPT	☒
ADM OFF	☒
PROG. MGMT	☒
PLANNING	☒
DESIGN	☒
CONSTRUCTION	☒
ARCHIT.	☒
INT. C.	☒
INSPECTION	☒
TRAINING	☒
FILE	☒

NATIONAL PARK SERVICE
Southern Arizona Group
1115 N. 1st Street
Phoenix, Arizona 85004

Ref: I.F.B.8600-4-10

Gentlemen:

Following is the well log for the recently constructed well at Organ Pipe National Monument.

0 - 200 ft. Gravel and Clay
200-330 Hard Black Basalt (Cuttings very fine and heavy)
330-360 Less hard, cutting coarser water @ 330 ft.
360-400 Hard Black Basalt (Fine cuttings)
400-420 Red Scoria Lava (Softer, coarser cutting, and water)

The well is cased from the surface to 420 ft. with 12" well casing, with a 10 ft. section of screen from 400-410 and a 10 ft. section of screen from 350-360 ft.

The well was drilled open hole with a 14 inch bit, then cased and gravel packed with 3/8 washed gravel.

Static water level at the time of completion was 308 ft. and a pump test with a 20 HP. Submersible pump indicated that the well would produce 112 GPM with a 6 ft. draw down.

Sincerely

Earl H. Williams
Earl H. Williams
Contractor

Other Supporting Information

Mr. O'Neil

April 30, 1958

Chief, Water Resources Section

Increased Rate of Construction, Organ Pipe Cactus National Monument

You ask what I think of proposal to drill a 5th well at Headquarters Area, Organ Pipe Cactus, as covered by memorandum of April 5 to Regional Director from the Superintendent.

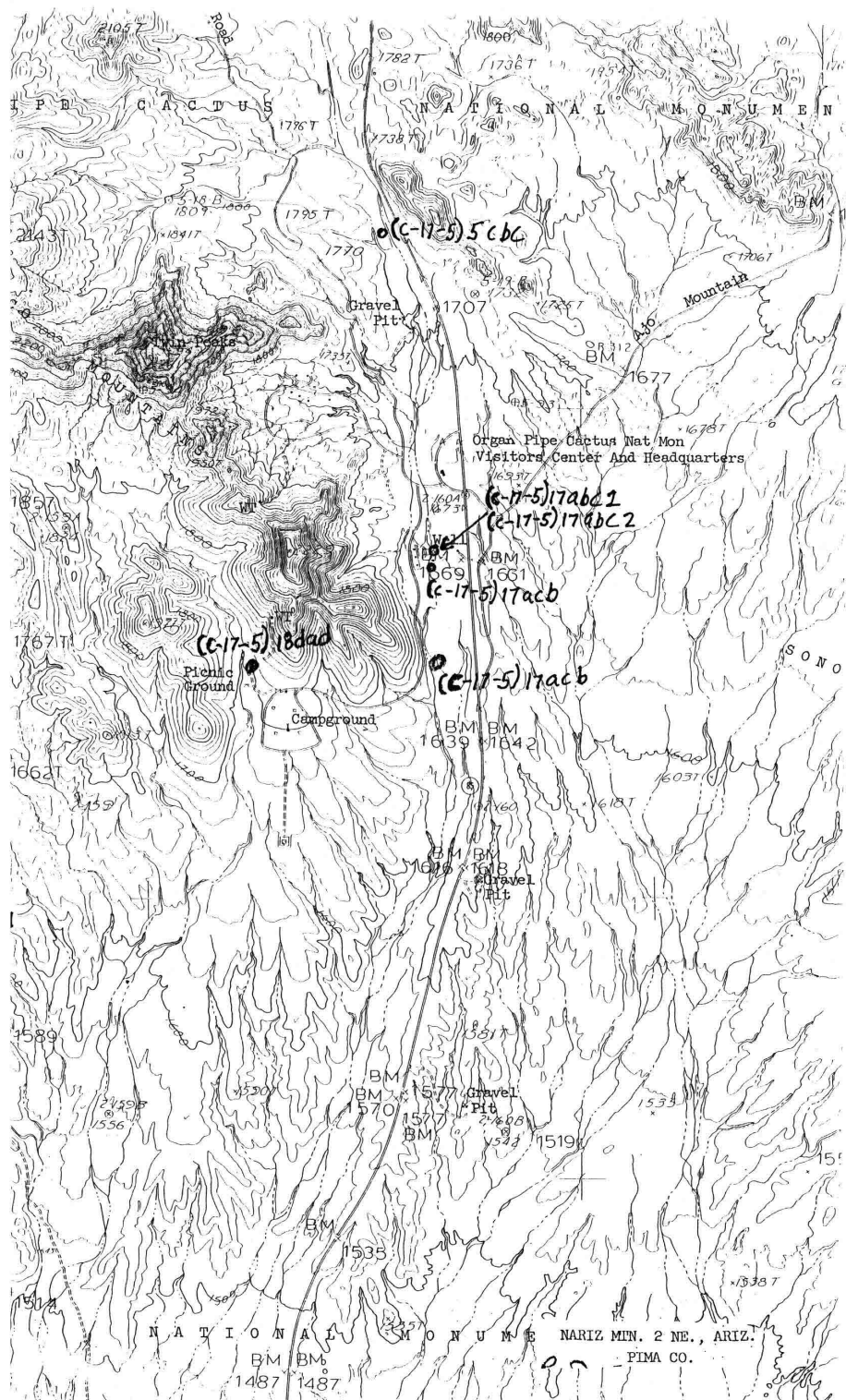
We are in process of trying to locate all existing wells and complete their records. Hence Mr. Eden's memo is of most value to me for the additional data it supplies.

I think Regional Three has scheduled a Geological Survey investigation in 1959 or 1960 budget, but do not have time to check before leaving for San Francisco at close of work April 30. In any case, my ideas are as follows:

1. Well No. 4, at between 43,000 and 72,000 gallons per day, if pumped all day, should be adequate until we get the whole picture.
2. I think a well 5 will be desirable, as standby, and may be essential for regular use if any appreciable irrigation is desired.
3. I think we want a geological investigation, which I think is scheduled, before any new well is drilled. The ground-water is apparently in rather narrow basin. In addition, the wells should be so spaced that they will not interfere if pumped simultaneously.

This is being left for typing after my departure. I will be back in last week of May, and suggest that you have field action deferred until we can check my investigation programs and budgets, and data.

A. van V. Dunn
Chief, Water Resources Section



Docket Information

Number of Documents in Docket 19

Documents Dated from 4/30/1958 to 6/3/1982

Docket Compiled: 6/3/2011