



WATER-RIGHT DOCKET

Fort Frederica National Monument

Docket No: 1

WELL. MAIN PARK WATER SUPPLY

Land History

05-20-1946: letter to secretary of the interior from office of the attorney general regarding transcript of record in relation to the con

sl



Office of the Attorney General
Washington, D.C.

Chief Clerk

MAY 31 1946

Deed 2.

**RECEIVED
MAY 21 1946
OFFICE OF
THE SECRETARY**

**INTERIOR DEPT.
SECRETARY
MAIL CENTER
MAY 22 1946
TO SOLICITOR**

**INTERIOR DEPT.
MAY 22 1946**

**INTERIOR DEPT.
SECRETARY
MAIL CENTER
MAY 23 1946
TO NATIONAL
PARK SERVICE**

Honorable Julius A. Krug
Secretary of the Interior
Washington, D. C.

My dear Mr. Secretary:

I have examined the transcript of record in relation to the condemnation proceeding entitled United States v. One Acre of Land in Glynn County, Georgia; E. T. Stevens, et al., Civil No. 92 in the United States District Court for the Southern District of Georgia, Brunswick Division, pertaining to the acquisition of land for use in connection with the Fort Frederica National Monument Project.

Subsequent to the filing of the declaration of taking on November 1, 1945, a judgment was entered fixing the value of Parcel No. 1 in the sum of \$425.00, which is identical with the sum deposited as the estimated just compensation.

From my examination of the transcript of record I am of the opinion that the condemnation proceeding has been regularly conducted, that the judgment dated November 1, 1945 has been satisfied and that a valid fee simple title to Parcel No. 1 together with all and singular the water rights and other rights, tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining heretofore vested in the United States of America together with all right, title and interest in and to the easement described as Parcel No. 2, subject, however, to an agreement entered into with the Board of Road and Revenue Commissioners of Glynn County, relative to the present use of certain roadways across the area involved.

There is enclosed a certified copy of the judgment dated November 1, 1945.

Sincerely yours,

Tom C. Clark
Attorney General

IN THE DISTRICT COURT OF THE UNITED STATES
FOR THE SOUTHERN DISTRICT OF GEORGIA
BRUNSWICK DIVISION

UNITED STATES OF AMERICA

vs.

One acres of land, more or less,
in Glynn County, Georgia,
E. T. Stevens, et al.

CIVIL ACTION 92

FINAL DECREE

It appears to the court:

1. That on February 18, 1944 the United States of America filed in this court its petition for condemnation and declaration of taking of one (1) acre of land, more or less, in Glynn County, Georgia; and at the time of filing said declaration of taking deposited in the registry of the court the sum of \$425.00 as estimated fair compensation for the taking of said tract of land, together with all and singular the water rights and other rights, tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining.

2. That on September 27, 1944 said petition for condemnation was amended so as to include all of the existing easements for public roads of every class situate within the boundaries of the Fort Frederica National Monument; and on October 9, 1944 an amended declaration of taking was filed in said case, which described the lands and easements for public roads taken by this proceeding as follows:

Parcel 1

That certain tract of land situated on the Island of St. Simons, Glynn County, Georgia, and lying within the boundaries of Fort Frederica National Monument as shown on the map designating the lands necessary for the establishment of the said Fort Frederica National Monument pursuant to the Act of Congress approved May 26, 1936 (49 Stat. 1373), map number HM-FRE 7001, bearing the approval of Harold L. Ickes, Secretary of the Interior, under date of November 10, 1941, described as follows:

The tract of land marked on said map "E. T. Stevens 1.0 acre", which is bounded on the north by the south line of the Frederica Road; on the west by tract marked "St. Simons Island Development Co. (Franklin Horne) 4.33 acres"; and on the south by the Fort Frederica National Monument boundary line marked on the map "N. 72° 05' E., 374.18."

TOGETHER with all and singular the water rights and other rights, tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining.

50 11-317

-2-

Parcel 2

The existing easements for public roads of every class situate within the boundaries of the Fort Frederica National Monument as shown on the map thereof (No. NM-FRE 7001) approved by the Secretary of the Interior on November 10, 1941.

3. That by verdict of a jury rendered in this court on May 12, 1945 the fair market value of said tract of one (1) acre of land, together with all improvements situated thereon, including all claims and damages of whatever nature arising out of the taking of said land by the United States of America, was fixed at the sum of \$425.00.

4. That by agreement entered into between the United States of America and the Board of Road and Revenue Commissioners of Glynn County, Georgia the permissive use of the public roads located within the boundaries of Fort Frederica National Monument was stipulated as just compensation for the easements for all public roads taken by this proceeding.

NOW, THEREFORE, IT IS HEREBY ADJUDGED, ORDERED AND DECREED:

(a) The verdict of the jury rendered in this case with respect to said tract of one (1) acre of land is hereby made the judgment of the court; and said sum of \$425.00 is adjudged to be just and fair compensation for the taking of said tract of land, including all claims and damages of whatever nature arising out of the taking thereof.

(b) The agreement for future use of public roads located within the boundaries of Fort Frederica National Monument under agreement entered into between petitioner and the Board of Road and Revenue Commissioners of Glynn County, Georgia is adjudged fair and just compensation for all easements for public roads taken by this proceeding as Parcel 2.

(c) Said tract of one (1) acre of land, as hereinabove described as Parcel 1, and the easements for public roads, as hereinabove described as Parcel 2, have been taken and condemned for the use and benefit of the United States of America; and on February 15, 1944 the fee simple title to said tract of land vested in the United States of America, together with all and singular the water rights and other rights.

-3-

tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining; and on October 9, 1944 all right, title and interest of Glynn County and the state of Georgia in and to the easements for public roads located within the boundaries of Fort Frederica National Monument and designated as Parcel 2, vested in the United States of America, subject only to such use of said roads as may be permitted by the National Park Service of the United States Department of the Interior.

(d) All funds now on deposit in the registry of the court as compensation for the taking of said tract of land shall be disbursed under further order of the court.

(e) That a certified copy of this judgment be recorded in the deed records of Glynn County, Georgia and properly indexed in the name of E. F. Stevens, et al. as former owners thereof.

This the 1st day of November, 1945.

W. D. Hugh Davis
United States Judge

Presented by:

Henry H. Barrance
Henry H. Barrance
Assistant U. S. Attorney

J. Conner Trumbull
J. Conner Trumbull
Special Assistant to the
United States Attorney

U. S. DISTRICT COURT
Brunswick Division
Filed in Office
Nov. 1-1945
Margaret Clarke
Chief Deputy Clerk

I certify the foregoing is a true and correct copy of the original now remaining of file and of record in my office.
This 1st day of November, 1945

SCOTT A. EDWARDS, Clerk,
United States District Court,

By Margaret Clarke
Deputy Clerk.

Supporting Hydro Data

WATER SYSTEM DATA

DATE
AREA Fort Frederica NMon **COLLECTED** 17 April 1962 **COLLECTED BY** GEE

1. Name of System: *Visitor Center, Residence Service Area Water System
2. Location: State Georgia County Glynn General Area St. Simon Isl.
 Reference to permanent landmark _____
3. Source of Supply: Artesian Well** Capacity 6000
 (Well, Spring, Stream, Impoundment, etc.) gph
4. Type of System: Pumped
 (Pumped, Gravity, etc.) _____
5. Treatment: None
 (Filtration, Chlorination, Airation, etc.) _____
6. Distribution Mains: ***
 Size 2" Length 565 ; Size _____ Length _____
 Size 1½" Length 250 ; Size _____ Length _____
 Size 1" Length 200 ; Size _____ Length _____
7. Pump Unit: ****
 Make McDonald ; Type Hydro Jet Pump ; ~~Model~~ Fig. 2151
 Serial No. G56 ; Outlet 1½ in. ; Inlet 1½ in.
 (Size) (Size)
 8. Power Source: Electric Motor: Make Wagner ; HP 1½ ;
 (Elec., Gas, Generator)
 Capacitor
~~Serial~~ No. 10573 ; Voltage 14.6 ; Amps 2.30 ;
 RPM 3500 ; Type RK ; Phase Single ;
 Model
 Cycles 60 ; ~~Model~~ JY368K5039 ;
 9. Control: Automatic Pressure Tank ; Manual _____
 (Float, Electrobe, Pressure, Time)
 Other _____
 (Explain)

* See enclosure.

** Well - 670' - 4 inch Artesian Depth to water bed 570 ft.

Thickness of bed 100 ft.

Casing 4 inch 199 ft Flow 100 gpm Hard, Sulphur
 3 inch 315 ft

Shale Rock encountered 400 ft. Pressure at well head 10½ lbs.

***Distribution mains plastic pipe.

****Identical pump unit installed to supply heating and air-conditioning unit at
 Visitor Center.

** Initial storage is an underground tank² outside building and supplied by artesian head. From this point water is pumped to pressure tank, thence pressure distribution to facilities.

DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
REGIONAL OFFICE
Region III
Charlottesville, Virginia

PUBLIC HEALTH SERVICE

February 15, 1961

REGION ONE	
FEB 17 1961	
Reg. Dir.	
Asst. Reg. Dir.	
Ch. Operating	
Ch. Ranger Act.	
Ch. Interpretation	
Ch. Admin.	
Ch. Rec. Res. Pl.	

Mr. Elbert Cox, Regional Director
National Park Service, Region One
900 North Lombardy Street
Richmond 20, Virginia

Attention: Mr. Tyler Kiener

Dear Mr. Cox:

This is a report of the investigation of the water supply serving Saint Frederick National Monument, made at your request.

An addition is being planned for the East side of the Visitors Center that will cover the present well and steel storage tank. It is recommended that an identical well be drilled east of the new addition and the steel storage tank moved to this location.

The Superintendent of this area states that his staff encounters difficulty in maintaining the white plumbing fixtures free of rust-colored stains and that the water has a disagreeable odor. A desire has also been expressed for softening the water used in the two residences.

The principle chemical characteristics of this ground water as it issues from the artesian well are as follows:

pH - 6.7
Total Alkalinity - 136 ppm
Total Hardness - 218 ppm
Hydrogen Sulfide Taste and Odor

The alkalinity and low pH indicates a rather high concentration of carbon dioxide. The hydrogen sulfide plus the carbon dioxide makes this water very corrosive and readily aggressive toward metal surfaces and explains the deposition of red stains on the plumbing fixtures. Unless this water supply is stabilized, severe corrosion will continue throughout the water and plumbing system. Treatment by aeration and filtration will make this water noncorrosive and will remove the disagreeable odors.

-2-

Mr. Elbert Cox--2/15/61

It is recommended that a forced draft aerator be installed that will discharge into a gravity type neutralizing filter. The concrete filter box should be at least 3' X 5' in plan and approximately 8' deep. The bottom drain from the filter would connect to the 5000 gallon steel storage tank. The purchase price of the aerator with solenoid valve and control switch plus media for the filter bed is estimated at about \$2200.

Water with a total hardness of 208 ppm is normally considered a rather hard water for household use. It is common practice to consider softening of water for this use, when a total hardness exceeds 100 ppm. Because of the lay-out of the water system, any softening provided for the residences should be by installation of individual units at each of the two residences. The estimated purchase price of a small domestic water softener for one residence is about \$250.

I can furnish some details as to the design of the water treatment unit at your request.

Sincerely yours,



Paul C. Henderson
Sanitary Engineer Consultant to
National Parks Service



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Fort Frederica National Monument
Box 227
St. Johns Island, Georgia

IN REPLY REFER TO:

D5039

REGION ONE	
NOV 2 1956	
Re. Director	
Asst. Dir.	
Adm. Serv.	
Ext. Aff.	
Gen. Inv.	
Ident.	
Insp.	
Int. Sec.	
Lab.	
Legal Coun.	
Plan. & Insp.	
Rec. Mgmt.	
Tech. Serv.	
Training	
Wildlife	
Y.M.C.A.	

W. N. Glover
W. N. Glover

October 31, 1956

Memorandum

To: Regional Director, Region One
From: Superintendent, Fort Frederica NM
Subject: Water Well Contract

The four (4") inch artesian well dug by Curtis Stevens under unnumbered contract and Purchase Order #31-656 had been completed.

The following is furnished as a matter of record; 4" casing for 199', 3" casing for 315', Total depth cased 507' and seated into limereck.

The various layers encountered consist of sand, sandy mud and shell to 160'. Clay from 160' to 400' with a thin layer of rock and sand at the 350' level. Clay and sandstone from 400' to 440' which level would produce water if developed. Sand, shell and limereck from 440' to 480', 480 to 570' limereck, 570 to 670' water bearing strata of limereck. Total depth of well 670'.

Test for flow was 100 g.p.m. at four feet above ground level, pressure taken at 2" outlet was 10 1/2 lbs.

A solution of chlorine disinfect was pumped to bottom of well and allowed to stand for two hours, then released gradually.

Mr. Stevens has conducted a well organized project and in so far as we know the Contract has been satisfactorily completed.

W. N. Glover
W. N. Glover
Superintendent

cc: RDBC

Form 10-171
7-58UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

REPORT 7 SPL

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION One	AREA Fort Frederica NM	COUNTY Glynn	STATE Georgia
PROJECT OR JOB TITLE Water Well		PCP NO. U-1 Portion	
LOCATION IN AREA Visitor Center		BUILDING NO. ---	
WORKING DRAWING NO. AND TITLE -----			
APPROPRIATION TITLE AND SYMBOL 14X1035		ACCOUNT NO. 332.1	
CONTRACT NO. Unnumbered		DATE WORK COMPLETED 10/31/57	
NAME OF CONTRACTOR Curtis Stevens		DATE WORK STARTED 10/1/57	
ADDRESS St. Simons Island, Ga.			

COST ANALYSIS

CONSTRUCTION ITEMS	QTY.	UNIT COST IN PLACE	TOTAL COST IN PLACE
Contract Expense, Drilling Well			\$1293
Other Direct Expense			4.00
FAO clearance certified correct.			
(Sgd) JAMES P. ALLEN			
James M. Allen Regional Accountant			
TOTAL			\$1297

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	EQUIPMENT	MATERIALS AND SUPPLIES	
OTHER			
~~1293~~		\$1,297.00	
CHANGE ORDERS			
ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
1293	~~1293~~		
FINAL CONTRACT AMOUNT	FOURTH	FIFTH	SIXTH

THIS PROJECT OR JOB HAS BEEN COMPLETED IN ACCORDANCE WITH
APPROVED DRAWINGS, SPECIFICATIONS, AUTHORIZED CHANGES

SUBMITTED BY (Name and title) W. H. Glover Superintendent	DATE 2/27/58
APPROVED BY (Name and title) W. H. Glover, Superintendent	DATE 5-5-58

(ATTACH NARRATIVE STATEMENT, PHOTOGRAPHS, AND "AS BUILT" DRAWINGS TO THIS FORM)



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Fort Frederica National Monument
Box 337

St. George Island, Georgia

May 25, 1956

IN REPLY REFER TO:

D2215

95039

REGION ONE	
MAY 26 1956	
Mr. Tolson	
Mr. E.A. Tamm	
Mr. Clegg	
Mr. Glavin	
Mr. Ladd	
Mr. Nichols	
Mr. Rosen	
Mr. Tracy	
Mr. Harbo	
Mr. Mohr	
Mr. Winterrowd	
Tele. Room	
Mr. Holloman	
Miss Gandy	

Memorandum

To: Regional Director, Region One
From: Superintendent, Fort Frederica NM.
Subject: Wells at Frederica

The subject of a water supply was discussed here by Messrs Harrington, Saratton, Zimmer, and Cabot.

The following report was made 11/8/52. (There are three deep wells, Artesian, located within Fort Frederica NM. as follows;

	Name	Flow	Depth	Casing	Pressure	GPM.
No. 1	Dodge Home	2nd	450'	4"	8 Lbs.	75
No. 2	Douglas Taylor	3rd.	640'	3"	13 lb.	50
No. 3	Horne	3rd.	640'	3"	13 Lb	50

The above information was furnished by Mr. Curtis Stevens a local well driller who has knowledge of these wells.

All these well are more than 20 years old some much older and the casing of anyone is apt to spring a leak anytime. The Dodge Home Well was repaired within the last year. There was a leak about one foot below the surface, this was repaired with a lead sleeve.

It is recommended that a new well be dug and that it be located near the source of greater use. A new 3rd. Flow 4" Cased well approximately 700 feet deep would flow 75 Gallons per minute at 13 to 15 Lbs. and would cost approximately \$1,500

W.H. Glover
W.H. Glover
Superintendent

cc: BORO.

Other Supporting Information



IN REPLY REFER TO:

United States Department of the Interior

NATIONAL PARK SERVICE
EASTERN SERVICE CENTER
4228 Wisconsin Avenue NW.
Washington, D.C. 20242

L54 ESC-LW

June 14, 1971

397 6-24-71

Mavis 6/23
Reed 6/23
Beiter

MEMORANDUM

To: Chief, Division of Water Resources, WASO
From: Supervisory Hydraulic Engineer, ESC
Subject: Water Rights Docket No. 1 Ft. Frederica

During our recent analysis of the Fort Frederica water system, we find that Docket No. 1 contains portions of data from at least three different possible water supplies. Most of the detailed information concerns itself with the well drilled in October 1957. This was drilled at the time the Visitor's Center was constructed. It was located about 30 feet east of the structure. In 1964 the building was extended easterly over the well and a new well was drilled about 135 feet farther east. We have very little information on this new well. However, it is this new well that failed in 1968. The park at that time abandoned the new well and tied the system back onto the old well under the Visitor's Center.

The water level measurements are taken at a third well, as the observations date back to 1939. The data shows a constant decrease in static pressure from +36.0 to +8.0 in 1963. The present pressure as checked in April 1971 was 5.0 feet. This old production well now being used as an observation hole will be located and described when the docket is reissued.

Richard W. Ketcham

cc:
Director, Southeast Region
Superintendent, Fort Frederica
Chief, EP&D-ESC, Attn: Mr. John Longworth
ESC-OPM

June 4, 1971

L54-NW

Memorandum

To: Director, Eastern Service Center
Attention: Mr. Richard W. Ketcham

From: Chief, Division of Water Resources

Subject: Water Supply Problem, Fort Frederica

We are enclosing Superintendent Roush's May 27 memorandum on the above subject, which was mistakenly sent to this Office.

In reviewing our correspondence and docket files, we were unable to locate a well log for the 1964 replacement well or any information as to what kind of screen it has, if any. This information should be available someplace. An effort should be made to secure a copy of the Project Completion Report if one was issued. If not already done, we suggest that you contact the U.S. Geological Survey District Office in Georgia in hopes of recovering pertinent data relative to the construction of the 1964 well.

Please keep us advised on this matter, and any recovered data should be duplicated for distribution and inclusion in Water Right Docket No. 1.

(Signed)

Manuel Morris

Enclosure

cc:
Director, Southeast Region (2)
NW - Mr. Berte' - Rm. 708, 801 Bldg.
VABerte':sem 6-4-71

348 63-71



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

FORT FREDERICA NATIONAL MONUMENT
P. O. Box 816
St. Simons Island, Georgia 31522

Jan 1 9 40 AM '71

D5039

May 27, 1971

MW

Memorandum

To: Division of Water Resources, WASO
Attention: Mr. Ketchum

From: Superintendent, Fort Frederica

Subject: Information - Water System, Fort Frederica

The following is submitted in answer to your telephone requests of May 24.

In early 1964 a new water well and associated system was put into operation. The previous well had to be abandoned because of an addition to the visitor center being built over the site. After solving a few problems with filtration and purifying systems the new well gave satisfactory service until 1968. (See attached memoranda). Following failure of the new well, the old well was reactivated, and is still in operation.

I believe the present system has the following deficiencies.

- 1) In event of electric power failure or equipment malfunction, park has less than 50 gallons of water in pressure system.
- 2) Well and equipment is too near interpretive area and noise of operation is an intrusive factor.
- 3) For ease of maintenance, inspection and treatment, a new well and equipment would be better located near present maintenance area.

Encl: (4) *E*

Lawrence D. Roush
Lawrence D. Roush

cc:

SERO

Traector Operator James M. Riley, WG-6; and Maintenance Worker Ray Ramsey, WG-5.

The organizational structure works satisfactorily. The maintenance employees were all wearing the latest version of the uniform and all were pleased with the uniform availability, fit, and quality of the individual items of clothing.

Resource Maintenance

Maintenance of the park buildings was good. Restrooms were clean, with adequate supplies available. Floors were clean and there were no smudged wall areas in the visitor center. Quarters maintenance was satisfactory.

Superintendent Roush wants to enclose the equipment storage space of the maintenance building. Keeping things clean in the area is difficult because the wind blows leaves and dirt through the open space. Any work on equipment has to be done in this open area, and dirt blows in constantly. Funds for this work will be programmed in construction.

Each of the MISSION 66 houses has a large screened porch across the back. Laundry facilities are in one end of the porch. The porches are hot in summer, wet in winter, and small insects coming through the screens make the porches nearly useless during most of the year.

Superintendent Roush wants to build solid walls around the laundry area. The team sees no objection to making the alteration if funds are available and the approval of the Director, SER, is secured.

The water system consists of a deep well, small aeration and chlorination plant, a ground level storage tank, and a hydropneumatic unit that delivers water under pressure to the water lines. A new deep well was drilled at the time of the library construction. A cave-in, sometime in 1968, ruined this well and a temporary pump was installed to draw water out of the old deep well under the library floor. This pump installation, of necessity, has a buried suction line between the pump and the well, and this is a type of installation generally considered unsatisfactory by the Public Health Service. A new well, away from the buildings

is needed in order to stop the use of the old well. This would require a construction project.

Recommendation # 10

That a new deep well be drilled for the main park water supply, the cost to be programmed in the construction program. Responsibility: Superintendent

Approved:


Director, SER


Date

Superintendent Roush is strongly in favor of constructing an overhead water storage tank. This would supply water under a constant head of pressure for fire fighting, air conditioning, and general use. The team seriously questions the economics of an overhead tank. The benefits, compared to the costs, would not be very high.

Trash and garbage disposal are under control. Garbage from the quarters is hauled away and disposed of by the City. Park forces dispose of other trash in a local dump about one mile from the Monument.

Superintendent Roush is trying to negotiate with local firms for contracts to accomplish the inspection, repair, servicing, and maintenance of the heating, air conditioners, and water system controls. The Regional Office, Division of Park Support, has furnished the park with some sample agreements used in other areas. This is a fine way to accomplish maintenance for a firm, fixed expense. The major drawback is administration and supervision to make sure the NPS receives what it pays for.

In the historic town site, water stands in the foundation space of the Calwell house. Apparently, a high water table is above the bottom of the foundation pit. While the team was in the park, Earl Stadel and Marshall Gingery checked the possibility of draining the water toward the river. There is one foot of fall between the bottom of the pit and the high tide line in the river. This is adequate fall, since the Calwell house is only about 475' from a drainage point near the river.

Fort Frederica National Monument
Box 816
St. Simons Island, Georgia 31522

D5039

October 9, 1968

Memorandum

To: Regional Director, Southeast Regional Office
From: Superintendent, Fort Frederica
Subject: Water System (Well)

The relocation of the water system pump and installation of the chlorinator in a new pumphouse near the tank and well was completed on August 26. Recent water samples have been reported satisfactory.

Our Memorandum of September 5, reported trouble with the deep well and submersible pump, but for record purposes we will record the complete procedure.

The well started pumping mud and sand on August 14. On August 15, the pump quit. We purchased 200 feet of 2" plastic pipe, and connected to the well under the library, using a 3/4 hp electric pump to put water into the degassifier and storage tank. This system is now in operation.

On October 4th, a well rig moved in and pulled the deep well submersible pump. A two inch pump was put on the well with a capacity of 100 gpm. The water, at first, was clear, but after approximately ten minutes the water became muddy with sand, and several bushels of sand were pumped out. The heavy mud and sand cleared after about 30 minutes pumping. Samples of 3 to 5 gallons were caught in a bucket every few minutes, but though the water appeared to be clear, the samples showed about a teaspoonful of sand each time.

After two hours of pumping, the pump was shut off, and the well was allowed to settle. The pump was started, and again there was mud and sand in heavy quantities with the water clearing after pumping for a while. This procedure was followed for approximately six hours. On Monday morning, after the well had set for two days, we started the pump again with the very same results.

To this point, we have spent approximately \$500.00 in money, plus time by our regular crew. This, of course, includes the cost of putting the old well in operation.

Mr. Stevens, who is an old timer in artesian wells of this section, did most of the work, and he says there is no sure way to cure the trouble. In many cases he has lowered a 2 inch pipe inside the 3 inch casing to extend approximately 100 feet below the present casing. This, he says, in most cases, passes the cave-in which is causing the trouble. He then seals the 2 inch casing inside the 3 inch, and the water supply is normal. The approximate cost of this job is \$400.00 plus a new pump and installation which would be approximately \$300.00 additional. Although the above is a proposed solution, no one can guarantee success.

It is estimated that a new 1" x 3" deep well with pump and connections will now cost \$2,500.00.

W.H. Glover



UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

SOUTHEAST REGION, P. O. BOX 10008
FEDERAL BUILDING, RICHMOND, VA. 23240

IN REPLY REFER TO

D5039
SER (CW)

SEP 16 1968

Memorandum

To: Superintendent, Fort Frederica
From: Regional Chief, Division of Maintenance, Southeast Region
Subject: Water System (Well)

Your September 5, 1967 memorandum reviewed the rather sudden failure of the deep well and the breakdown of the submersible pump. The emergency action you have taken is satisfactory and provides you with water of about the same quality as the deep well.

The old well under the library is not in a very good location for servicing. We recommend that you proceed with plans to pull the old pump. It may be a problem to pump the deep well dry but it is certainly worth the effort if there is a chance the well can be salvaged. We believe the old pump should be pulled and if the well cannot be salvaged, then the hole should be plugged and sealed with concrete to prevent contamination of the artesian water. Please advise us by phone if the attempt to clear the well is not a success and we will then advise you whether to proceed with plugging the old hole.

The old submersible pump may be repairable but probably the cost will be high. Frequently a new pump and motor (less the controls) can be purchased for less money than it would cost to repair the old one. We suggest you have your pump man give you an estimate of the cost of repairs and the purchase price of a new pump for comparison purposes.

Please keep us advised of the results of your efforts to put this water supply back in use.


Donald S. Nutt

Fort Frederica National Monument
Box 816
St. Simons Island, Georgia 31522

D5039

September 5, 1968

Memorandum

To: Regional Director, Southeast Region
From: Superintendent, Fort Frederica
Subject: Water System (Well)

The deep well with the submersible pump which was supplying water for the whole park, suddenly started pumping sand and mud on August 14 and 15. The pump quit pumping, entirely, on the 15th. This created an emergency.

A two inch plastic line was laid from the well under the Library with a 3/4 HP electric jet pump supplying the water to the filter tank and the water system. The system is now in operation, and the water is being treated. Periodic tests are being made to assure purification. The cost to date, for this temporary hook-up is approximately \$350.00.

We have asked advice from several plumbers and well drillers as to what we might be able to do with the well failure. We got no firm answers, but many say to pull the pump, and pump the well dry to the bottom. This may reveal the trouble, and may cure it. The submersible pump will need repair. How much is hard to guess. Pulling the pump, and pumping the well dry will cost approximately \$175.00.

The temporary hook-up is working fine, and we have made no plan to pull the pump, or pump the well dry, but we feel that this should be done soon. We would appreciate any advice as to what the next step should be.

I will be away on Annual Leave until September 13, but plan to do something soon thereafter.

W. H. Glover



IN REPLY REFER TO:

D 5039

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Fort Frederica National Monument
St. Simons Island, Georgia 31522

August 14, 1963

Memorandum

To: Regional Director, Southeast Region

From: Superintendent, Fort Frederica NM

Subject: Water System

The new 4" artesian well is complete and flows approximately 80 to 100 GPM. Samples have been collected and sent to Georgia State Department of Health for a Bacteriological examination.

The 5000 gallon reservoir which is on top of the ground and near the new well has been cleaned and painted.

A Chemical test on the original well was made February 1961 by Paul C. Henderson and another test probably should be made on the new well. Should we contact Mr. Henderson or will your office take care of that detail?

The new well is located approximately 135 feet East of the original well and the ground elevation at the new area is about 18" lower than at the building site. To dig a hole for a 7' X 18' tank would require all the well points in Glynn County. So it is recommended that the 5000 gallon tank be placed approximately one-half above ground level. The location of the new well and tank is well into the wooded area and screening is already provided.

Plans and specifications for the Pump House, Pump, Filtration plant should be prepared immediately. There is attached an overlay plus extension, showing location of new well, Power pole, Walk, Visitor Center Addition etc.

Please advise if we should proceed with further water samples.

W.H. Glover
W.H. Glover
Superintendent

SOUTHEAST REGION	
AUG 16 '63	
Reg. Director	
Asst. Reg. Dir. (Adm.)	
Asst. Reg. Dir. (Tech.)	
Asst. to Reg. Dir.	
Boundary Studies	
Planning Service	
Proposed Areas	

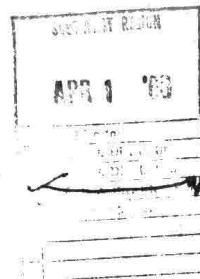
Several days after this was written, power sink in an area near by Georgia Health Dept. 3/2/64

this suggests logical

Not attached

251

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Rm. 348, Federal Bldg.
Brunswick, Ga.



March 22, 1963

C-O-P-Y
attention Tim - Vick

Mr. Hershel Glover, Superintendent
Fort Frederica National Monument
St. Simons Island, Georgia

☒	Boundary Studies
☒	Lands
☒	Planning Service
☒	Proposed Areas

Dear Mr. Glover:

In reference to the visit on March 18, 1963 of yourself and Mr. Al Vick to this office, I am sending a list of water-level measurements made on a well at Fort Frederica. The water-level measurements were started in 1939, and were made at quarterly and semi-annual intervals from that date to July 1959, at which time a ground-water investigation was started in Brunswick. After the office was established, measurements were made monthly.

An original and carbon copy are included so Mr. Vick can have a copy.

We will make water-level measurements on the present supply well, and also obtain a water sample for analysis of chloride and hardness. An annual summary of the measurements for the year can be sent to you.

If you drill a new well to replace the existing one we would like to obtain a set of drill cuttings and to make electric and gamma-ray logs of it. Copies will be furnished you of all logs. Bags for collection of the samples will be furnished by us.

Yours very truly,

(Signed)

Robert L. Wait
Geologist

Enclosure: water-level measurements

C-O-P-Y

Water-level measurements on well D-81, Glynn County

LOCATION: Fort Frederica National Monument
 DEPTH: 640 feet
 CASING DIAMETER: 4-inches
 DRILLED: December, 1937 by Mr. Perry for
 Mrs. George Stevens

Date	Depth to water above (+) or below (-) land surface	Date	Depth to water above (+) or below (-) land surface	Date	Depth to water above (+) or below (-) land surface
11 Jan 39	36.0	21 May 53	24.21	4 Apr 61	15.1
18 Jun 41	32.1	9 Dec 54	22.02	25 Apr 61	14.4
12 Aug 41	31.3	7 Jun 55	21.31	24 May 61	13.5
13 Oct 41	31.65	1 Dec 55	20.24	19 Jun 61	13.4
11 Mar 42	32.65	5 Jun 56	17.74	31 Jul 61	12.9
10 Jul 42	32.35	15 Nov 56	18.0	30 Aug 61	13.8
14 Oct 42	31.9	29 May 57	16.0	19 Sep 61	13.6
24 Feb 43	31.5	20 Jun 57	15.0	28 Oct 61	13.4
22 Apr 43	31.15	7 Nov 57	14.87	29 Nov 61	13.6
15 Jul 43	30.55	27 Jan 58	16.3	18 Dec 61	13.3
18 Dec 43	29.9	27 May 58	13.3	22 Jan 62	13.6
25 May 44	30.75	14 Oct 58	14.9	21 Feb 62	14.1
13 Sep 44	31.23	5 May 59	16.8	15 Mar 62	14.3
17 Jun 45	30.64	26 Aug 59	14.5	16 Apr 62	14.1
10 Dec 45	30.75	7 Oct 59	8.17(?)	21 May 62	13.9
12 Mar 46	31.33	27 Jan 60	16.4	28 Jun 62	12.5
13 Jul 46	30.24	24 Feb 60	16.5	17 Jul 62	11.4
14 Dec 46	30.79	24 Mar 60	16.1	17 Aug 62	11.5
7 Mar 47	30.1	21 Apr 60	15.8	18 Sep 62	11.9
26 Jun 47	30.09	18 May 60	16.6	24 Oct 62	11.6
7 Dec 47	31.10	22 Jun 60	14.4	19 Nov 62	11.8
1 Dec 48	30.02	18 Jul 60	15.7	17 Dec 62	10.3
12 Aug 49	28.79	22 Aug 60	15.2	21 Jan 63	8.6
11 Dec 49	29.44	14 Sep 60	15.5	21 Feb 63	8.0
14 Jul 50	26.84	21 Oct 60	15.97		
10 Dec 50	26.92	17 Nov 60	15.5		
18 Aug 51	24.74	20 Dec 60	15.5		
7 Dec 51	25.53	30 Jan 61	15.5		
17 Jul 52	24.76	21 Feb 61	15.3		
7 Dec 52	25.55	20 Mar 61	15.2		

Fort Frederica

*WRW
12/12
12/13*

December 7, 1962

L54-RL

Memorandum

To: Regional Director, Southeast Region
From: Chief, Branch of Water Resources
Subject: Flowing well, Fort Frederica

In our telephone discussion with Mr. Vick on December 3, we promised him we would check with the U. S. Geological Survey to see what reports were available on Glynn County, Georgia.

The latest published report, dated 1962, is by Robert L. Wait entitled "Interim report on test drilling and water sampling in the Brunswick Area, Glynn County, Georgia." It is Georgia Geological Survey Information Circular 23. A copy can probably be obtained by writing to Captain Garland Peyton, Director, Department of Mines, Mining, and Geology, Georgia State Division of Conservation, Atlanta, Georgia. An earlier report by J. W. Stewart entitled "Relation of salty ground water to fresh artesian water in the Brunswick Area, Glynn County, Georgia" and published as Information Circular 20 may also be of interest.

Mr. Wait's report postulates an increase in pumpage of 30 mgd and calculates the effect of such an increase on the water levels in the aquifer surrounding the center of pumpage. The report concludes that such an increase will lower the water levels below land surface within a radius of three to ten miles within a year.

Whether such an increase has occurred is not known here. We are not certain whether the superintendent based his report to Mr. Vick on the postulated case in Mr. Wait's report or on an actual increase in pumpage. Undoubtedly pumpage from the Brunswick Area will increase but unless there has been a drastic, immediate increase in pumpage during the first half of 1962 or earlier, it is doubtful that the well at Fort Frederica will cease to flow in the next few months or even next year.

Nevertheless, sometime within the next decade, the well at Fort Frederica will cease to flow and a pump will have to be installed. Common-law doctrine applies to ground water in Georgia so the possibility of legal action seems remote. It would be wise, however, to start a program of

✓

periodic measurements of artesian head and flow of the well, and because of the possibility of salt-water contamination, periodic sampling of the water for chloride determination should be started also. Mr. Vick can advise the superintendent of the details of a suitable program.

A docket for the Fort Frederica well should be set up as soon as convenient. We have no record of the well at all in our files here. State law requires the furnishing of well records and cutting to the Department of Mines, Mining, and Geology so if the records are not available in the files at Fort Frederica, they may be available from the State. The docket should include a map showing the location of the Fort Frederica well and the major industrial and public supply wells of the area. Wait's report includes a water-level map with the wells spotted on it but the map has been reduced to a point that the well numbers are obscured. Perhaps a larger print can be obtained from the U. S. Geological Survey office in Atlanta.

We would appreciate being kept informed of future developments at Fort Frederica.

A. van V. Dunn

cc:
Superintendent, Fort Frederica
Chief, EODC (2)
Mr. Dunn

EWReed:ljc



IN REPLY REFER TO:

104

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Southeast Region
Richmond 40, Virginia

DEC 13 1962

Handwritten notes and signatures:
F. C. [unclear]
D. E. [unclear]
[unclear]
12/17/62
12/17/62

Memorandum

To: Superintendent, Fort Frederica
From: Acting Assistant Regional Director, Resource Planning,
Southeast Region
Subject: Ground-water study in Glynn County by U. S. Geological
Survey, Fort Frederica

We would like you to contact Mr. Wait, U. S. Geological Survey and obtain a map of Glynn County which shows the location of the existing and proposed well sites of the pulp mill. It would also be most helpful to us if you could secure information on the quantity of water that will be pumped from each well per day.

Please forward to this office any other technical data available on this recently completed ground-water study which you think may be of interest.

Robert C. Squier

cc:
Director, w. inc.
Chief, RADC (2)

Handwritten: FOR



IN REPLY REFER TO

DS023

1 196

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Fort Frederica National Monument
Box 816
St. Simons Island, Georgia

November 26, 1962

11-26-62
[Handwritten notes and signatures in the top right corner, including "D. H. Wait" and "mickell"]

Memorandum

To: Regional Director, Southeast Region
From: Superintendent, Fort Frederica NM
Subject: Water Supply

The U. S. Geological Survey has just finished a test on water supply and future levels in Glynn County. This test was made to determine the effect of available underground water resulting in the expansion of a local Pulp Mill.

Mr. Wait of the Geological Survey says that the water supply will be ample but the level will be reduced - to 12 feet below ground level - Fort Frederica now operates from free flowing wells. This will end shortly after January 1, 1963, so we must plan for immediate pumping facilities. We can arrange locally for temporary pumping but this matter should be incorporated in the newly planned extension.

W. H. Glover
W. H. Glover
Superintendent

CC - EODC



UNITED STATES
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE
Fort Frederica National Monument
Box 367
St. Simon's Island, Ga

IN REPLY REFER TO:
D2621

June 26 1968 REGION ONE

JUN 30 1958

Memorandum

To: Regional Director, Region One

From: Superintendent, Fort Frederica National Monument

Subject: Attachments for Completion Report - Water Well 332

There are attached Form 9-255, Record of Well, photographs and narrative for artesian well at Fort Frederica NM.

In accordance with instructions contained in memorandum by Paul McG. Miller, Acting Chief of Design and Construction and H. Reese Smith, Regional Chief of Operations, dated May 15 and May 26, respectively, this information is forwarded as requested.

W. H. Glover
Superintendent

Attachments

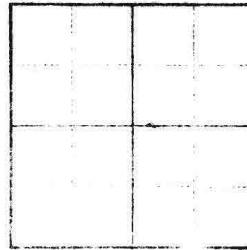
cc: EODC

U. S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION

RECORD OF WELL

RECORD OF WELL

1. Location: State **Georgia** County **Glynn**
 Nearest P.O. **St. Simons Island** Direction from P.O. **SW**
 Distance from P.O. **8** miles **0** sec. **0** min. **0** sec.
 If in city, give street and number **County**



Location within plat of section.

2. Owner: **National Park Service** Address: **Box 367, St. Simons Island, Ga.**
 Driller: **Curtis Stevens** Address: **St. Simons Island, Ga.**

3. Situation: Is well on upland, in valley, or on hillside? **Tidelands**

4. Elevation of top of well: **12** ft. **above** the level of **sea**

5. Type of well: **Drilled, Artesian** Kind of drilling rig used: **Solid Tool**

6. Depth of well: **670** ft.; year in which well was finished: **1956**
 Does well enter rock? **Yes** If so, at what depth? **400** ft.; kind of rock: **Shale**

7. Diameter: At top **3 4** inches; at bottom **3** inches.

8. Principal water bed: **Limerock**
 Depth to principal water bed: **570** ft. (If gravel, sand, clay, or rock, give kind) If rock, give kind: **100** ft.
 If other water supplies were found, give depth to each: **440**

9. Casings: Kind **CI** size **4** length **199** ft.; between depths of **0** and **199** ft.
 Kind **CI** size **3** length **315** ft.; between depths of **192** and **507** ft.
 Kind size length ft.; between depths of and ft.

Packers (if any): Depth at which packers were used: **none**; kind:

Screen or Strainer: Was well finished with screen? **no**; kind of screen:
 length of screen ft.; diameter inches; size of openings:

10. Head: Does well at present overflow without pumping? **Yes**; did it overflow when new? **Yes**;
 if flowing, give pressure **10 1/2** lb. per sq. inch; or height water will rise in a pipe ft. above surface;
 original pressure or head **10 1/2**; if not flowing, give water level in well ft. below surface.

11. Pump: Is the well pumped? **No**; kind of pump: **** Well flows into Reservoir and**
 size or capacity of pump: **Water is pumped from Tank.**; kind of power:

12. Yield: Natural flow at present (if any) **100** gallons per minute; original flow **100** gallons per minute;
 well has been pumped at **no** gallons per minute continuously for **no** hours;
 quantity of water ordinarily obtained from well: **3000** gallons per day.

13. Use: For what purpose is the water used? **Visitor Center, 2 Residences, shop, grounds**

14. Quality of the water: **Hard, Sulphur**; is there an analysis? **No**
 (Hard or soft, fresh or salty, etc.)

15. Cost of well, not including pump: **11277** Temperature of water **72** °F.

Name of person filling blank: **H. L. Glover**

Date: **June 27, 1958** Address: **Box 367, St. Simons Island, Ga.**

(On the back of this sheet give the record of the beds through which the well passes and any other facts not given above.)

6-5043



WELL (UNDER CONCRETE SLAB)

The four inch artesian well was dug by Mr. Curtis Stevens and he furnished the following information:

Four inch casing for 199 feet; three inch casing for 315 feet and seated into limerock.

The various layers encountered consisted of sand, sandy mud and shell to 160 feet. There is a layer of coarse sand from 80 to 100 feet which would probably produce water from a screened well.

Clay from 160 feet to 400 feet with a thin layer of rock and sand at 350 feet. Clay with layers of sandstone to 440 feet where sand was encountered and which would produce water if developed.

450 feet to 480 feet - layers of sand shell and limerock.

480 feet to 570 feet - limerock

570 feet to 670 feet - water bearing stratas of limerock.

Well completed at 670 feet. Flow of well 100 gallons per minute, four feet above casing, pressure approximately $10\frac{1}{2}$ pounds.

Fort Frederica National Monument
Box 367
St. Simons Island, Georgia

Docket Information