



WATER-RIGHT DOCKET

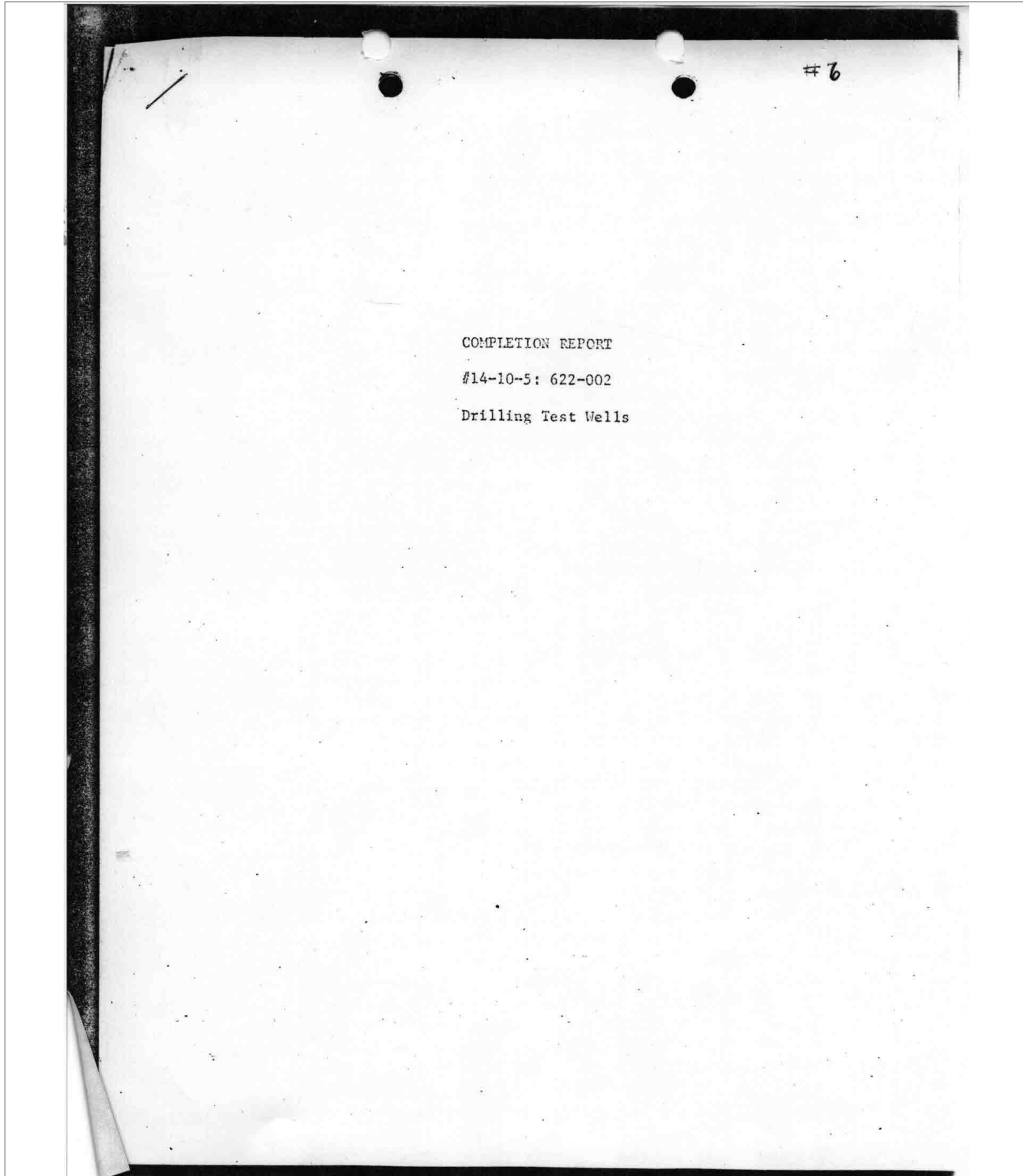
Assateague Island National Seashore

Docket No: 6

TOM'S COVE WELL #1.

Supporting Hydro Data

00-00-1967: completion report: #14-10-5:622-002; 1967



COMPLETION REPORT

Contract #14-10-5: 622-002

Drilling test water wells at AINS headquarters and Tom's Cove, Assateague
Island National Seashore.

Bid opened: 2/24/67 3:00 p.m.

Contract Awarded:

Contract Amount: \$12,132.00

Contract Winner: R. L. Magette Company
Smithfield, Virginia

Notice to Proceed: 3/17/67

Reconstruction Conference: 3/20/67 1:00 p.m.

Started work: 3/21/67

Finished work: 5/26/67

COMPLETION REPORT

Narrative

Test drilling was necessary to determine if a potable ground-water supply was available at park headquarters, AINS, Worcester Co., Md., and Tom's Cove, Accomac Co., Va., (see topographic maps, enclosed). In the event that a potable water supply was available, test wells should be completed to production wells in order to expedite development of the Seashore.

Previous reconnaissance reports published by State and Federal agencies indicated that water-bearing rocks were present, but the chloride concentration in the water might be too high for use in a public water supply.

Under Bid Schedule A, a test well was drilled and electrically logged to 314 feet at headquarters without complications. The log indicated at least five water sands containing suitable-quality water. In order to insure against vertical leakage of salt water from Sinepuxent Bay, the deepest sand was selected for screening the production well. A shutter-type screen, approved in preconstruction conference, was installed but failed to keep flowing sand out of the well. As remedial action, the shutter screen was removed, and a pre-cast-gravel-wall well screen selected by the contractor was installed in a new hole at no cost to the Park Service. This screen also failed and was removed. A continuous-slott, wire-wound screen with slott size designed to exclude the sand was then installed in the new hole (see diagram enclosed), and proved entirely satisfactory. The well was developed and then tested for 8 1/3 hours, continuously pumping 100 gallons per minute with 143 feet of drawdown for a specific capacity of 0.70 gallons per minute per foot of drawdown.

Many delays in executing the contract resulted from inappropriate screen design, waiting for equipment delivery, equipment repair, and travel time from contractor's offices to job site (see Contract Work Log, enclosed).

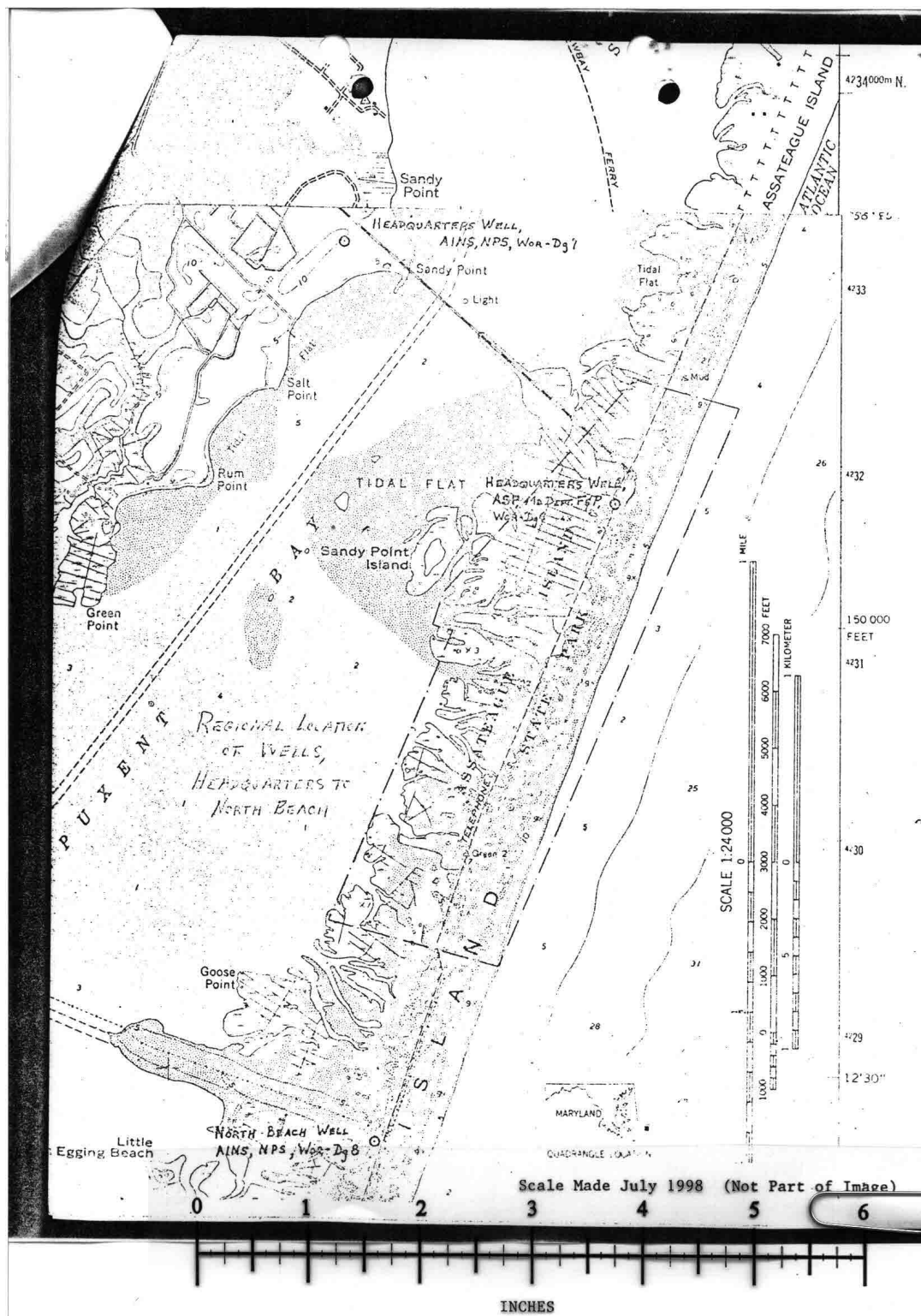
The completed production well, however, is of excellent construction and should give many years of trouble-free service.

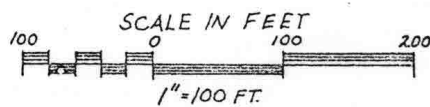
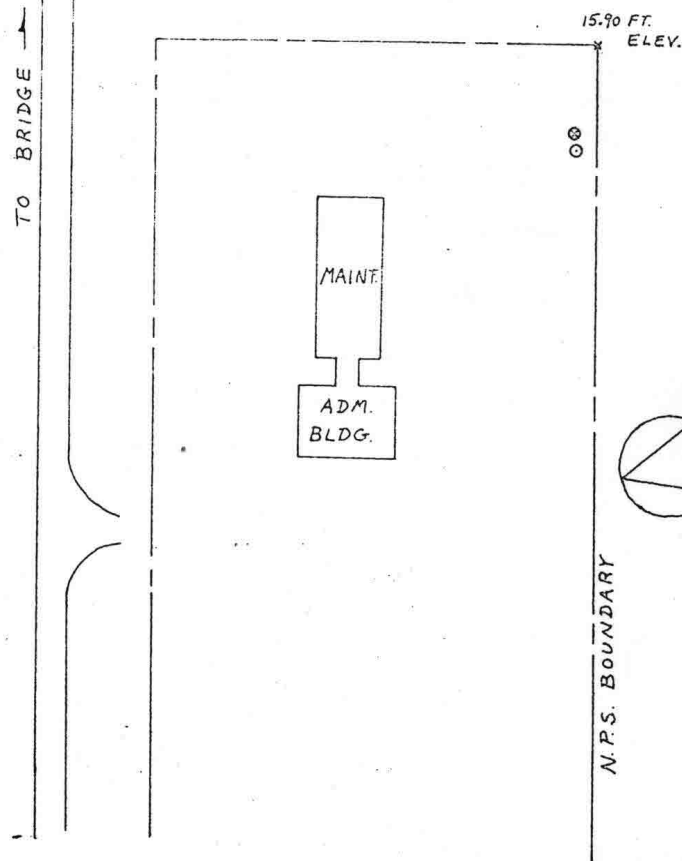
Under Bid Schedule B, a test well was drilled and electrically logged to 506 feet at Tom's Cove. The log indicated at least four water sands, all of questionable quality. Under change order, the test well was deepened from 506 feet to 800 feet and relogged. Two additional water sands were encountered, also of questionable quality. Water samples indicated that no sand was encountered with water containing less than 1,000 parts per million chloride.

(U. S. Public Health Service recommends 250 parts per million as a limit for drinking water). The test hole was grouted from 160 feet to land surface and abandoned.

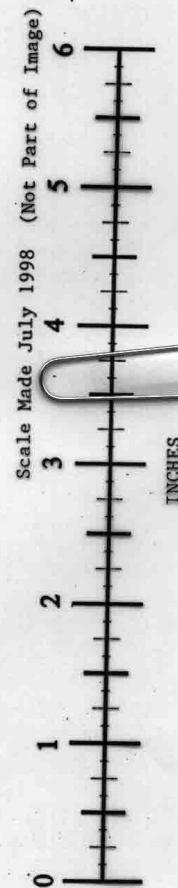
All work went smoothly under Bid Schedule B, and the Park Service obtained concrete evidence that a potable ground-water supply does not exist within 800 feet of the surface in the vicinity of the Round-Up Restaurant at Tom's Cove.

Este F. Hollyday
Este F. Hollyday
Geologist





⊗ TEST WELL
○ PRODUCTION WELL

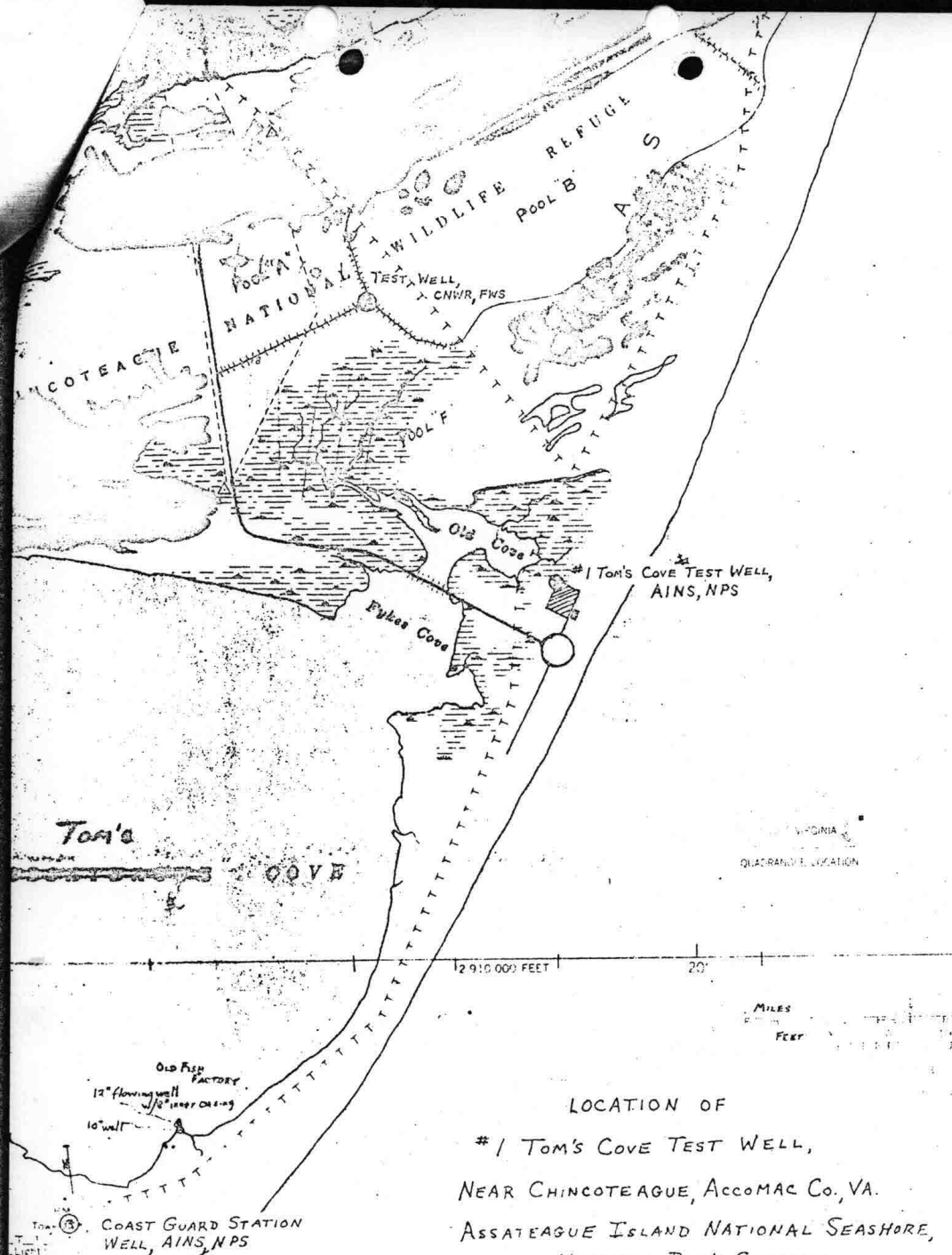


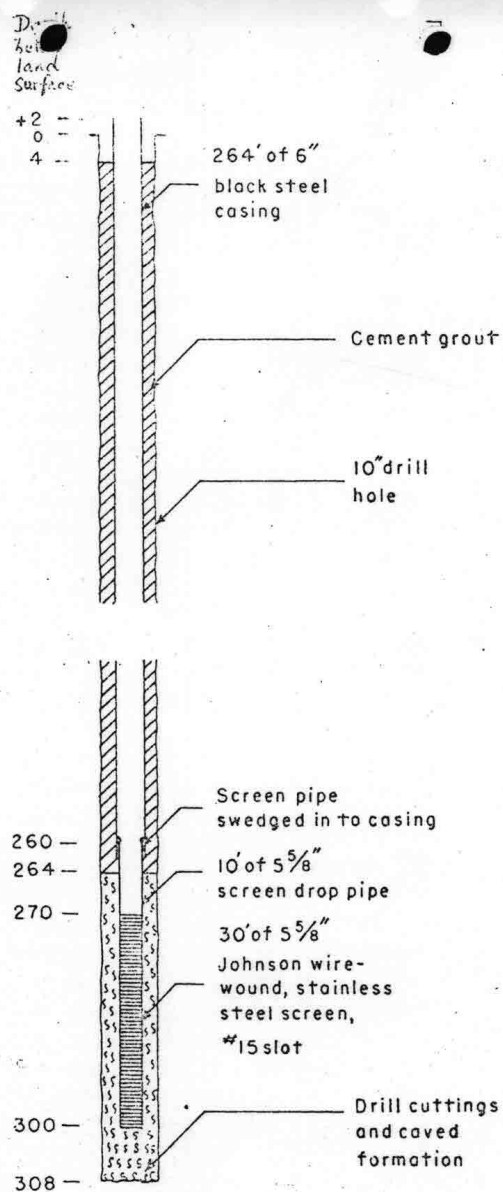
LOCATION OF WELLS

HEADQUARTERS, SANDY POINT BRIDGE

VISITORS' CENTER, ASSATEAQUE ISLAND NATIONAL SEASHORE

N.P.S.





Construction Diagram of Headquarters Well,
Assateague Island National Seashore, N.P.S.
Well Wor - Dg. 7

[illegible]

MONTH

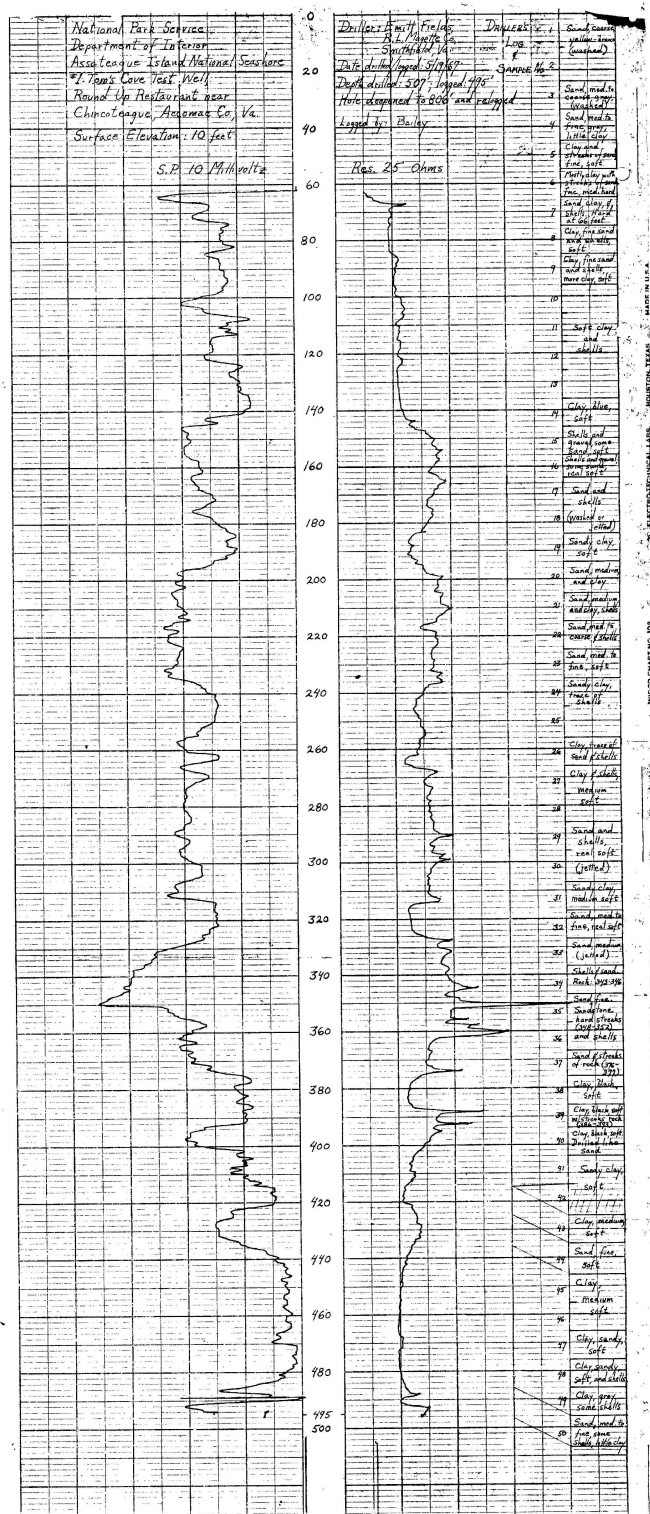
May

YEAR

1967

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 Drilling new well	2 Set new pre-cast gravel-wall well screen	3 Developing new well, putting water all around bottom. Gravel, no. 8 mesh, 1/2" deep. Stepped to bottom. Repaired, dug, and filled with 50' of gravel.	4 New well with new screen, putting sand all around bottom. Gravel, no. 8 mesh, 1/2" deep. Drilled 2 holes in gravel. Screen failed.	5 Screen was pulled and returned to Virginia. Screen had several holes in pre-cast gravel well.	6 No drilling activities
7 Drilling activities	8 Drilling crew absent	9 Drilling crew absent, awaiting delivery of new screen.	10 Drilling crew returned to job site in afternoon with new equipment. Well screen meeting specifications.	11 Set new screen by washing down; no gravel pack. Develop well for 7 hrs. in the afternoon. Full of water, then sand-free, strong screen.	12 Pumping test. 2 1/4 hrs. of drawdown, pumping continuously at 100 gpm. 1 hr. of recovery.	13 No drilling activities
14 No drilling activities	15 Drilling crew absent	16 Gravel from top of screen to land surface. Clean up job site and cap well.	17 Move equipment to new test site @ Tens Co. Va. Set up and dig mud pits; place water. Water silty @ 50'.	18 Spud-in and drilled to 300'.	19 Completed test hole to 500' depth. 2nd E-logged, sent to Va. Return to Va.	20 No drilling activities
21 No drilling activities	22 Drilling crew arrived in afternoon	23 MJS. decided to explore deeper, drilling from 506' to 800'.	24 Completed hole to 800', E-logged in early afternoon, preparing hole for water quality tests.	25 Gauging back-filling hole to 210' zone. Sample 210' zone w/ military well @ 5:30 pm - close. Construct military well in 165' zone.	26 Collect muddy sample from 165' zone in morning; disassemble gravel from 160' to surface with red wax, clean up.	

Contract Deadline: Monday, June 1967



392 6-18-7

WR Copy

WAB

L54 ESC-LN

June 15, 1971

Memorandum

To: Superintendent, Assateague Island National Seashore
From: Supervisory Hydraulic Engineer, Office of Land Acquisition
and Water Resources, ESC
Subject: Water Right Dockets #3 and #6

Enclosed are subject dockets for the wells at Pope Bay and Little Fox Levels. We are also enclosing guidelines regarding the information to be included in Water Right Dockets. We would appreciate it if you would review the contents of these dockets and if you have material to add, it should be prepared in triplicate and distributed to the following offices; Chief, Division of Water Resources, WABO; to this office; and retain a copy in your docket file. Your assistance in this matter is appreciated.

(Sgd.) Richard W. Ketcham

Richard W. Ketcham

Enclosures *Filed in Docket File*

cc:
Director, Northeast Region
WABO-NW w/c enc
ESC-EP&D Attn: Mr. Longworth



IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON PLANNING AND SERVICE CENTER
1730 NORTH LYNN STREET
ARLINGTON, VIRGINIA 22209

69-9-22-68
H.R. Coy.
9/17

L54 WSC-OLW

September 13, 1968

Memorandum

To: Chief, Branch of Water Resources, WASO
From: Chief, Office of Land and Water Rights, WSC
Subject: Estimated water use at Toms Cove, Assateague Island National Seashore (Present and Future)

As a followup to your verbal request for subject Hydraulic Engineer Moore of this office has been in telephone contact with the Superintendent's office at Berlin, Maryland.

The existing development at Toms Cove consists of the following:

1. Concessionaire operated restaurant.
2. Government bathhouse consisting of -
 - a. Total 6 cold shower heads.
 - b. Total 8 wash basins.
3. Visitor contact station.

The park estimates that approximately 50% of the total visitation to the area is concentrated in the Toms Cove area. As of August 1968, a total of 480,000 visitor-days have been reported. Projection to the end of this calendar year, the park estimates that 500,000 visitor-days would have been recorded.

The peak visitor day count is estimated at 5,000. The park estimates that 50% of all visitors use the shower facilities during the visitor season (110 days) at an estimated 10 gallons per person per shower.

Present water consumption is calculated as:

Total visitors (1968)	500,000 est.
Off season visitors (no showers)	60,000
Season visitors (summer)	440,000
50% use factor	220,000
Quantity of water @ 10 gal./visitor	2,200,000 gallons
Average season daily use (110 days)	20,000 gpd
Maximum season daily use (2,500 visitor)	25,000 gpd

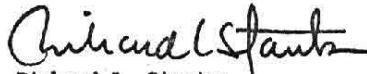
Projected water demand to 1974

The park personnel estimates that by 1974 the projected visitation at Toms Cove will approach 2,000,000. This figure, however, is contingent upon the timely construction of campground facilities, through roads, etc. If such is the case, the total water demand can be expected to increase from an average daily use of 20,000 g.p.d. with the maximum daily use increasing from 25,000 g.p.d. to 100,000 g.p.d.

It should be noted, however, that the present water demand is confined locally to the restaurant and bathhouse facilities. Ultimate development as envisioned by Resource Planners call for a distributed development complex designed to meet the needs of about 3.3 million annual visitors with a total water demand (domestic and utility) of 500,000 g.p.d.

Present utility system serving the Toms Cove area consists of an aerial electric line of 7.2 kv single phase. The Delmarva Power and Light Company of Virginia is increasing the voltage to 12.4 kv and presumably to three phase.

Should you have any additional questions on this matter, please do not hesitate to call on us.


Richard L. Stanton

cc:
Regional Director, Northeast
Superintendent, Assateague
Chief, Office of Resource Planning, WSC, Attention: Mr. Smith

R. L. MAGETTE WELL DRILLING COMPANY SMITHFIELD, VIRGINIA

LOG OF WELL For Assateague Island National SeashoreLocated at Tom's Cove in Accowmac County, State Maryland

Date Drilling Started _____, 19____ Date Started _____ 19____

Finished Drilling _____, 19____ Finished _____ 19____

Formation And Depth Of Well				Dimensions Of Casing And Screen							
Total Depth Of All Strata		Depth Of Each Stratum		Formation Found At Each Stratum	Total Length Of All Screens And Casings		Length Of Each Sec. Of Screen Or Casing		Specs. Screen Or Casing	Size Of Screen Or Casing	Other
Ft.	In.	Ft.	In.		Ft.	In.	Ft.	In.			
0	-	12		Brown coarse sand (washed)							
12	-	24		"							
24	-	34		Medium coarse grey sand							
34	-	45		Medium fine grey sand - some clay							
45	-	55		Clay & streaks of sand - fine							
55	-	65		" " " " - medium hard	clay						
65	-	75		Sandy clay & shell							
75	-	85		Fine sandy clay & shell							
85	-	96		" " " "							
96	-	106		Soft clay & shell							
106	-	116		" " " "							
116	-	126		" " " "							
126	-	136		" " " "							
136	-	146		Soft blue clay							
146	-	156		Shell, gravel & some soft sand							
156	-	164		" " " "							
164	-	174		Sand & shell							
174	-	184		" " " "							
184	-	194		Sand & soft clay							
194	-	205		Medium soft clay							
205	-	215		Medium soft clay & shell							
215	-	225		" " " " w/medium coarse sand							
225	-	235		Medium fine sand - soft							
235	-	245		Sandy clay							
245	-	256		" " " " w/traces of shell							
256	-	266		Clay w/traces of sand							
266	-	276		" " " "							
276	-	286		Medium soft clay & shell							
286	-	296		Soft sand & shell							
296	-	307		" " " "							
307	-	317		Medium soft sand clay							
317	-	327		Medium fine sand - soft							
327	-	337		Medium sand							
337	-	347		Shell & sand							
347	-	357		Hard streaks of shell - sandstone & sand							
357	-	367		" " " " " "							
367	-	376		Sand & streaks of rock							
376	-	386		Soft black clay							
386	-	394		" " " " & streaks of rock							
394	-	404		" " " " " "							
404	-	416		Soft sandy clay							
416	-	424		" " " "							
425	-	435		Medium soft clay							
435	-	446		Fine soft sand							
446	-	456		Medium soft clay							
456	-	466		" " " "							
466	-	475		Soft sandy clay							
475	-	486		" " " " & shell							
486	-	496		Grey clay w/shell							
496	-	507		Medium fine sand w/shell & clay							
507	-	516		" " " " w/clay							
516	-	526		" " " " w/shell							
526	-	536		Sandy clay							
536	-	546		" " " "							
546	-	556		Soft sandy clay w/traces of shell							
556	-	566		" " " " " "							
566	-	576		Soft sandy clay							
576	-	586		" " " "							
586	-	596		" " " "							

WELL DATA:

Preliminary Test

Date Tested _____ 19____ Status _____

Production _____ GPM Pump _____

Permanent Test

Date Tested _____ 19____ Status _____

Production _____ GPM Active _____

Draw Down _____ Pump _____

Remarks: _____

Shop No. _____ Type Lumber _____

Type Head _____ Size Suction _____

Depth Setting _____ (BP to MB) _____

Size Column _____ Length Section _____

Type Bowl _____ Length Air L. _____

No. Stages _____ Discharge _____

Casing and Head _____ Pressure _____

MOTOR DATA:

Horse Power _____ Voltage _____

RPM _____ Phase _____

Type _____ Cycles _____

Make _____ Frame No. _____

