



WATER-RIGHT DOCKET

Morristown National Historical Park

Docket No: 1
WICK HOUSE WELL
Supporting Hydro Data

02-26-1964: letter to assistant regional director, resource planning from geologist regarding data relative to the exploratory well at t

IN REPLY REFER TO:	
UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY Water Resources Division Ground Water Branch	
432 Federal Building P.O. Box 1238 Trenton, N.J. 08607	
February 26, 1964	
Mr. Allen T. Edmunds Assistant Regional Director, Resource Planning National Park Service 143 South Third St. Philadelphia, Pa. 19106	
Dear Sir:	
Transmitted herewith are the following data relative to the exploratory well at the Wick House developed area, Morristown National Historical Park:	
(1) Construction details (2) Lithologic log (3) Pumping-test record (4) Water analysis (5) Electric and gamma-ray logs	
This concludes our work as agreed upon in previous correspondence.	
Sincerely yours,	
For the District Geologist	
John Vecchioli John Vecchioli Geologist	
Enclosures	
NORTHEAST REGION FEB 27 1964	
Reg. Director	
Asst. to RD(PA)	
Program Coord.	
Asst. Reg. Dir. Adm.	
Finance & Prop.	
Personnel	
Safety	
Asst. Reg. Dir. Civ.	
History & Arch.	
Natural History	
Oper. & Maint.	
Ranger Services	
Asst. to RD(PA)	
N. P. S. & U. S. G. P. L.	
J. Vecchioli	
J. Vecchioli	

Lithologic log

Depth interval

Lithology

0 - 28 ft	Granite gneiss, highly weathered
28 - 35 ft	Granite gneiss, slightly weathered
35 - 70 ft	Granite gneiss, very slightly weathered to unweathered
70 - 150 ft	Granite gneiss, unweathered

Pumping-test record

Date of test : February 4, 1964

Duration of test : 8 hours

Type of pump : Piston pump, 80 ft of 2 1/4 in pump column

Static level : 41.3 ft below top of casing

Pumping level : 43.3 ft below top of casing after 8 hours continuous
pumping

Yield : 15 gpm

Drawdown : 2 ft

Specific capacity: 7.5 gpm/ft

Log of test :

<u>Time</u>	<u>Discharge</u> <u>(gpm)</u>	<u>Water level</u> <u>(ft below top of casing)</u>	<u>Remarks</u>
9:30	--	----	pump on
9:35	15	----	water cloudy
10:00	15	42.2	Do.
11:00	15	42.4	water clear
12:00	15	42.6	Do.
13:00	15	42.8	Do.
14:00	15	43.0	Do.
15:00	15	43.1	Do.
16:00	15	43.2	Do.
17:00	15	43.3	Do.
17:25	15	43.3	Do.
17.30	--	----	pump off

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Lab. No. 31899
Project NJGW-NPS (SPEC.)
Field No.

WATER ANALYSIS

Location MORRISTOWN, N. J. County MORRIS
Source DRILLED WELL
Point of coll. PUMP DISCHARGE - MORRISTOWN NATIONAL HISTORICAL PARK
Owner U.S. NATIONAL PARK SERVICE Treatment
Appear. w. c. CLEAR Use DOM. Temp. (°F) 51
Surface Water Information Ground Water Information
Gage height (ft) WBF PRE-CAMBRIAN - GRANITE GNEISS
Discharge (cfs) WL 40 bls Yield 15 gm
Depth (ft) 150 Diam. (in) 6
Cased to 38 Date drilled Feb, '64
Collected February 4, 1964 By John Vecchioli
Remarks Sample collected after 7 hrs. of pumping.

	ppm	epm		ppm	epm
Silica (SiO ₂)	21		Carbonate (CO ₃)	0	0.00
Aluminum (Al)			Bicarbonate (HCO ₃)	58	.95
Iron (Fe) IN SOLN. W.A.	.05	0.00			
Iron (Fe)	.27		Sulfate (SO ₄)	12	.25
Manganese (Mn) " "	.02	.00			
Manganese (Mn)	.03		Chloride (Cl)	3.5	.10
Calcium (Ca)	15	.75	Fluoride (F)	.3	.02
Magnesium (Mg)	4.1	.34			
Sodium (Na)	6.5	.28			
Potassium (K)	.5	.01	Nitrate (NO ₃)	4.7	.08
Total cations		1.38	Total anions		1.40

	ppm		
		Specific conductance (micromhos at 25°C)	136
Dissolved solids:			
Sum	96	pH	8.0
Residue on evaporation at 180°C	100		
		Color	3
Suspended solids			
Hardness as CaCO ₃ :			
Calcium, magnesium	53		
Noncarbonate	7		

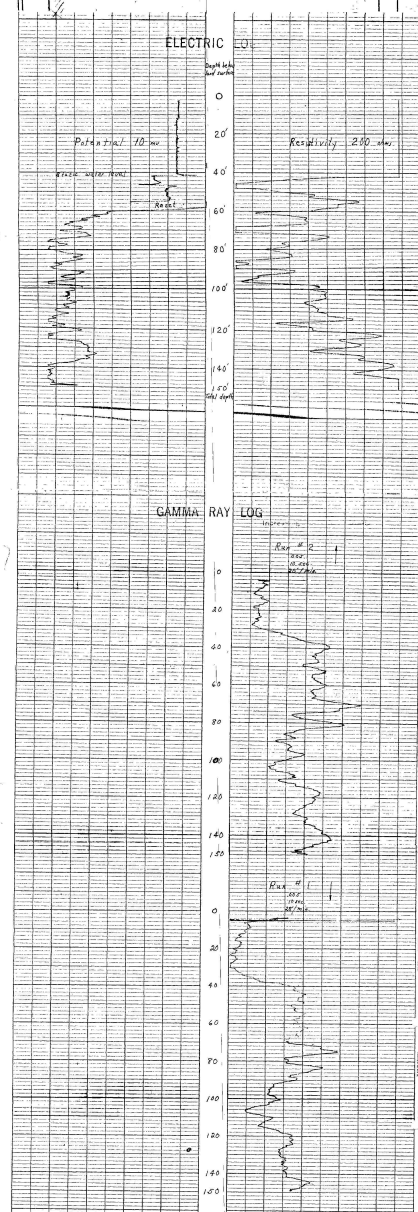
Construction details

Drilling method : cable tool

Total depth : 150 ft

Diameter of borehole: 10 in from 0 to 36 ft 8 in depth; 6 in from
36 ft 8 in to 150 ft

Casing installed : 38 ft 11 in of 6-in black steel pipe, annular
space between 6-in casing and 10-in borehole
cemented to land surface.



Number of Documents in Docket	6		
Documents Dated from	2/6/1964	to	2/26/1964
Docket Compiled:	5/27/2011		