



WATER-RIGHT DOCKET

Blue Ridge Parkway

Docket No: 29

MONTBELLO AREA.

Supporting Hydro Data

08-07-1967: test well sample description; august 07, 1967

TEST WELL SAMPLE DESCRIPTION

Well #1 - Whetstone Ridge (Montebello) - Blue Ridge Parkway, Virginia

Spud date - July 26, 1967

Casing record: 27' of 6½" ID galvanized
steel casing 3/16" thick

Completion date - July 27, 1967

Results - The test well will produce water in excess of 60 gpm.

Drill Sample Description

Depth

- 0' - 20' Overburden consisting of sand and boulders composed of quartz, badly weathered feldspar, epidote, and hornblende.
- 20' - 30' Hornblende granite, very coarse crystalline, badly weathered iron stained, composed of quartz, orthoclase, plagioclase, hornblende, and minor epidote.
- 30' - 50' Hornblende granite as above except less weathered and medium to very coarse crystalline. Water was encountered at from 31 feet to 35 feet at the approximate rate of 30 gpm. At 45 feet another water bearing zone was drilled bringing the total flow to about 40 gpm.
- 50' - 60' Hornblende granite, medium to very coarse crystalline, iron stained, composed of quartz, orthoclase, plagioclase, hornblende, minor epidote and pyrite. A water bearing zone was drilled at 52' bringing the total flow to about 50 gpm. The last water bearing zone was drilled at 59' bringing the total estimated flow to be in excess of 60 gpm.
- 60' - 80' Epidote-Hornblend-Granite, medium to very coarse crystalline, composed of quartz, orthoclase, plagioclase, epidote, and hornblende.
- Total depth - 80'

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U.S. GEOLOGICAL SURVEY

AUG 7 1967

WATER RESOURCES DIVISION
RICHMOND, VIRGINIA

Pumping Test Data on Blue Ridge Parkway Testwell
at Whetstone Ridge (Montebello), Virginia

Test began 1:58 p.m. July 28, 1967 Pump used: 5 HP UTM GOULDS
Data collected by D. L. Brown - U.S.C.S., Nashville, Tenn.

Time (p.m.)	Air line measurement (psi)	Pumping rate (gpm)	Comments
0	20	0	2.31 psi = 1 foot of water
1:58	20	25	5 gal. in 12 sec.
1:59	20	25	
2:00	20	25	
2:01	20	25	
2:02	20	25	water temperature = 54
2:03	20	25	
2:05	20	25	
2:07	20	25	
2:09	20	25	
2:11	20	25	
2:13	20	25	
2:18	20	25	
2:23	20	25	
2:28	20	25	
2:29	19	43	5 gal. in 7 sec.
2:30	19	43	
2:31	19	43	
2:32	19	43	
2:33	19	43	
2:35	19	43	
2:37	19	43	
2:39	19	43	
2:41	19	43	water temperature = 54
2:43	19	43	
2:45	19	43	
2:50	19	43	
2:55	19	43	
3:00	19	43	
3:01	19	60	5 gal. in 5 sec. Full capacity of pump.
3:02	19	60	
3:03	19	60	
3:04	19	60	
3:05	19	60	
3:10	19	60	
3:15	19	60	
3:20	19	60	
3:25	19	60	water temperature = 54
3:30	19	60	
3:35	19	60	
3:40	19	60	
3:50	19	60	
4:00	19	60	
4:10	19	60	5 gal. in 5 sec.

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water temperature = 54
AUG 7 1967

WATER RESOURCES DIVISION
BIRMINGHAM, ALA.

Pumping Test Data on Blue Ridge Parkway Testwell
at Whetstone Ridge (Montebello), Virginia

<u>Time</u> <u>(p.m.)</u>	<u>Air line measurement</u> <u>(psi)</u>	<u>Pumping rate</u> <u>(gpm)</u>	<u>Comments</u>
4:20	19	60	
4:30	19	60	
4:40	19	60	
4:50	19	60	
5:00	19	60	
5:10	19	60	
5:20	19	60	
5:30	19	60	
5:40	19	60	
6:00	19	60	
6:15	19	60	
6:30	19	60	5 gal. in 5 sec.
6:45	19	60	
7:00	19	60	
7:15	19	60	
7:28	19	60	Pump off - short circuit in control box
7:30	20	0	
7:32	20	0	
8:15	20	0	

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U. S. GEOLOGICAL SURVEY

AUG 7 1967

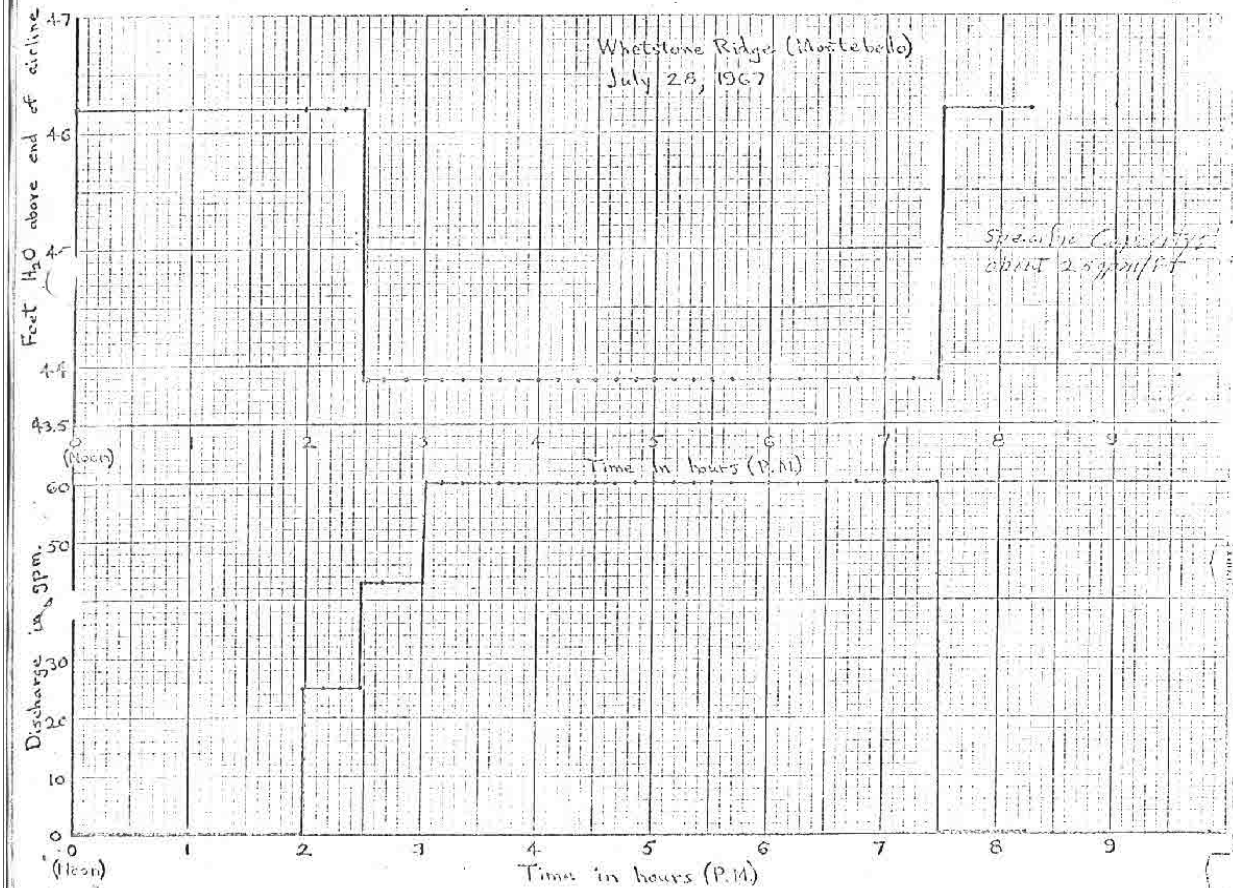
WATER RESOURCES DIVISION
RICHMOND, VIRGINIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
WATER ANALYSIS

W.R. Lab. No. NC 49100

Location <u>Montebello, Virginia</u> <u>Nelson County</u>			
Source <u>Drilled Well.</u>			
Depth <u>80 ft.</u> , diameter <u>6½ in.</u> Cased to <u>27 ft.</u> Drilled <u>7/26/67.</u> Pt. of Collection:			
Pump discharge. Owner: <u>National Park Service.</u>			
Date of collection <u>7/28/67</u>			
Cage height(ft.)		Discharge(sec.ft.)	Temp.(°F) <u>54</u>
(Parts per million)			
Silica (SiO ₂).....	<u>17</u>	Carbonate (CO ₃).....	
Aluminum (Al).....		Bicarbonate (HCO ₃).....	<u>41</u>
Iron (Fe).....	<u>.02</u>	Sulfate (SO ₄).....	<u>.8</u>
Manganese (Mn).....	<u>.02</u>	Chloride (Cl).....	<u>15</u>
Calcium (Ca).....	<u>8.3</u>	Fluoride (F).....	<u>.1</u>
Magnesium (Mg).....	<u>1.6</u>	Nitrate (NO ₃).....	<u>.9</u>
Sodium (Na).....	<u>13</u>	Phosphate (PO ₄).....	<u>.02</u>
Potassium (K).....	<u>.6</u>		
Lithium (Li).....			
(Parts per million)			
Dissolved solids:		ABS.....	
Sum.....	<u>77</u>	Color.....	<u>1</u>
Residue upon evapo- ration @ 180°C.....	<u>80</u>		
Hardness as CaCO ₃	<u>27</u>		
Noncarbonate.....	<u>0</u>		
pH.....	<u>6.7</u>	Specific conductance (micromhos at 25°C).....	<u>113</u>

Unpublished records subject to revision.



Other Supporting Information

BLUE RIDGE PARKWAY

WATER SYSTEM DATA

- AREA Blue Ridge Parkway DATE COLLECTED _____ COLLECTED BY _____)
1. Name of System: Whetstone Ridge
 2. Location: State Virginia County Rockbridge General Area M.P. 29.2
Reference to permanent landmark _____
 3. Source of Supply: Spring Capacity 12 gpm
(Well, spring, stream, impoundment, etc.)
 4. Type of System: Pumped to storage, gravity distribution
(Pumped, gravity, etc.)
 5. Treatment: None
(Filtration, Chlorination, Airation, etc.)
 6. Distribution Mains: Size 2½" Length 1588'; Size 1½" Length 342'
Size 6" Length 2211'; Size _____ Length _____
Size 4" Length 855'; Size _____ Length _____
 7. Pump Unit: Make Jacuzzi; Type _____; Model No. 1DR8
Serial No. _____; Outlet _____ in.; Inlet _____ in.
(Size) (Size)
 8. Power Source: Electric Motor: Make Jacuzzi; HP 1;
(Elec., gas, generator)
Serial No. _____; Voltage 230; Amps 5.85;
RPM ~~1725~~ 3450; Type _____; Phase _____;
Cycles 60; Others _____; Stages _____
 9. Control: Automatic Float; Manual _____;
(Float, Electrode, Pressure, Time)
Other _____
(Explain)

10. Pump Design: Capacity _____ (Actual) _____ gpm _____ (Design) _____ gpm
Head _____ (Actual) _____ ft. _____ (Design) _____ ft.

11. Pump Housing: Type Const. Block _____; Concrete _____; Size 8' x 9'
(Walls) _____ (Roof) _____

12. Storage: Underground _____; Type Const. Concrete _____
(Pneumatic, elevated, underground, etc.) (concrete, wood, steel)
Size _____; Capacity 10,000 gal; Inlet 3114.83 ft. 6 in.
(Elev.) (Size)
Outlet 3114.83 ft. 6 in.; Pressure Setting _____
(Elev.) (Size) (if pneumatic)

13. Distribution: Water Closets 11 _____; Lavatory 8 _____; Urinal 4 _____;
Drinking Fountain 1 _____; Hose Bibs 4 _____; Residences 2 _____;
Other 1 restaurant _____; 1 gas station _____

14. Metered or nonmetered: Metered _____; No. 4 _____; Size _____
No. _____; Size _____
No. _____; Size _____

15. Fire Protection: Fire Hydrants 2 _____; Yard Hydrants 2 _____

16. Water Analysis: _____

17. Condition of System: Due to increased visitation and expansion,
(Repairs needed itemize)
the present supply is barely sufficient. A successful test well has
been drilled here in 1967 yielding 60 gpm and will probably be put in
production in 2 or 3 years.

Form 10-174
(Rev. 8-56)UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

COMPLETION REPORT OF CONSTRUCTION PROJECT

D2621

REGION One	AREA Blue Ridge Parkway	COUNTY Rockbridge	STATE Virginia
PROJECT OR JOB TITLE Construction of Water System Extension			PCP NO. U-130-1
LOCATION IN AREA Whetstone Ridge		MASTER PLAN NO. PKY-BR-WR-2051A	BUILDING NO. ---
WORKING DRAWING NO. AND TITLE Water and Sewer System, Whetstone Ridge		PKY-BR-WR-2056A	
APPROPRIATION TITLE AND SYMBOL 14X1037 Construction (Liq. of Contract Auth.) NPS			WORK ORDER NO. 514.43
CONTRACT NO.		DATE WORK STARTED May 1958	DATE WORK COMPLETED October 1958
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST IN PLACE	TOTAL COST IN PLACE
Extend existing water system to provide a potable water supply to concessioner development and employee residences at Whetstone Ridge.	1	3,304.98	3,304.98 ✓
PL&S and Other Indirect Costs			421.05
			3,726.03
		TOTAL	~~3,304.98~~

SUMMARY OF EXPENDITURES

PERSONAL SERVICES 1,665.23	EQUIPMENT None	MATERIALS AND SUPPLIES 1,518.00
OTHER 121.75	Certified: <i>Henry Svec</i> Henry Svec, Supervisory Accountant	PS&S 421.05

CHANGE ORDERS

ORIGINAL CONTRACT AMOUNT	FIRST	SECOND	THIRD
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) <i>Earl W. Batten</i> Earl W. Batten	DATE October 20, 1959
APPROVED BY (Name and title) <i>Sam F. Weems</i> Sam F. Weems	DATE October 20, 1959

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

Narrative Report:

Installation of water system was started in May 1958 and was completed October 1958 by National Park Service day labor. Project includes installing 755 lin. ft. of 4" cast iron pipe and 332 lin. ft. of 1½" plastic pipe with necessary fittings and valves; also, includes installing two fire hydrants to provide fire protection for Government residences and concessioner buildings. This completed usable facility provides a potable water supply and fire protection for the developments in this area.

Maps and Miscellaneous Information

Number of Documents in Docket	11		
Documents Dated from	3/14/1958	to	8/7/1967
Docket Compiled:	2/1/2011		