



WATER-RIGHT DOCKET

Blue Ridge Parkway

Docket No: 5

PEAKS OF OTTER VISITOR CENTER

Supporting Hydro Data

10-25-1960: completion report for peaks of otter well; october 25, 1960

Parkway Engineer

October 25, 1960

Engineer Everhardt

Completion Report for Peaks of Otter Well

Well location 3500 feet north of Virginia Rt. 43 and Blue Ridge Parkway Intersection and 100 feet west of Parkway in the Peaks of Otter Recreation Area in Bedford County. Drilling was started September 26, 1960 and completed October 21, 1960 by Falwell Well Corporation of Lynchburg, Virginia. Well size is 8 inches and is 140 feet deep. Steel casing is grouted in to a depth of 32 feet.

An eight hour test was made of the well at 20, 30, 40, 45-50 gpm flow rate and the drawdown vs gpm data are attached. The drawdown vs gpm curve for 30 gpm was consistent with an ideal drawdown vs gpm curve. Would suggest 30 gpm as pumping rate due to the inconsistency at other testing rates.

Of particular importance is the behavior of curves during the 40, 45-50 gpm testing periods that indicate some good size storage wells at depths of 30-45 feet and 72-77 ft. During the testing period the water appeared muddy at these particular depths and then cleared.

Soil samples were taken at regular intervals and have been forwarded to the U. S. Geological Survey.

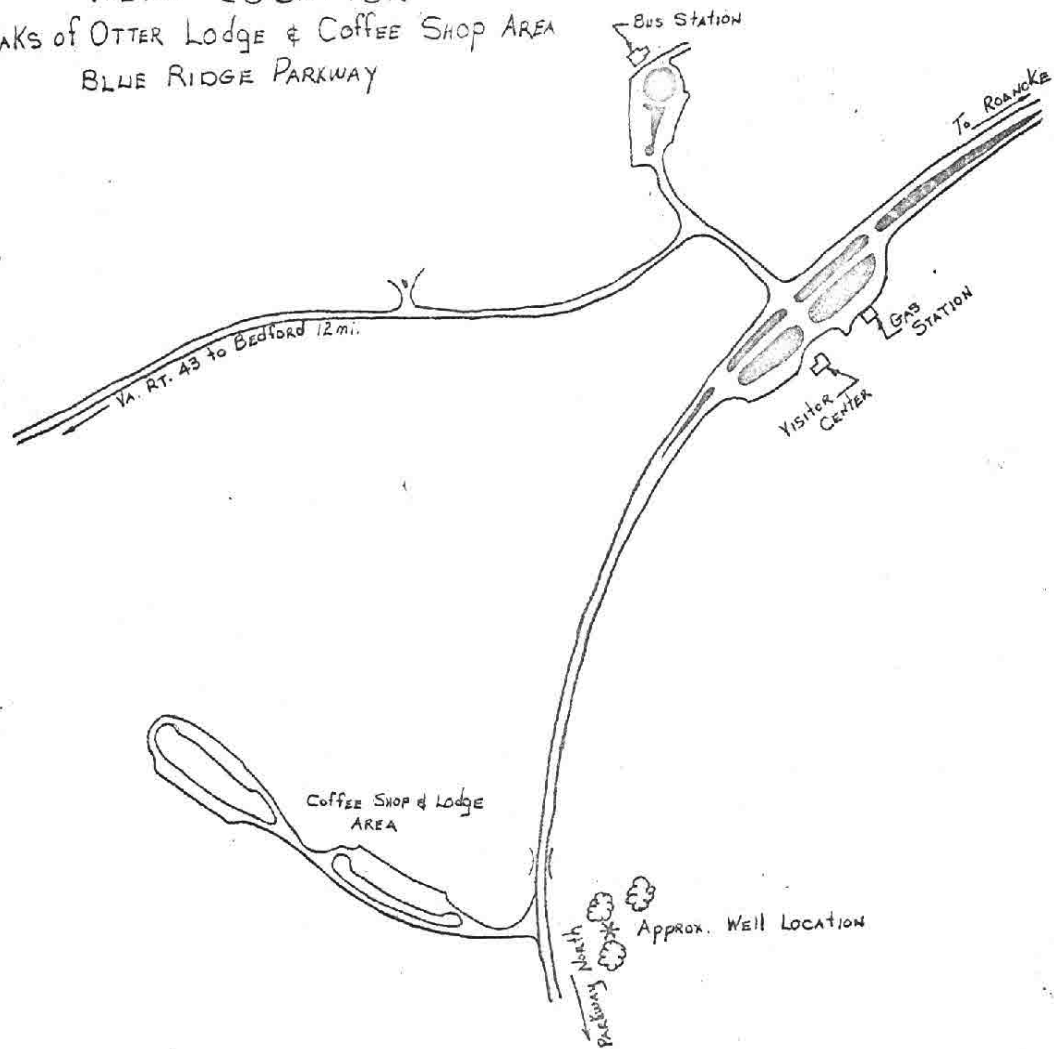
The log of samples and a determination as to identification are attached.

(Signed)

Gary E. Everhardt
Civil Engineer

Attachments

USDI - N P S
DIAGRAM SHOWING
WELL LOCATION
PEAKS of OTTER LODGE & COFFEE SHOP AREA
BLUE RIDGE PARKWAY



Length of Hose - 112 feet
 Depth of Well - 140 feet
 Static Head - 45#

Drawdown vs G.P.N. Data

Flow Rate	Time		Gauge Reading		Drawdown
	Starting	Ending	Pressure	Feet (2, 32)	
20 gpm	9:10	--	45#	104.5	Casing zero
	9:10	9:14	40.5#	94.0	-7.5 ft.
	9:14	9:20	40#	92.8	-18.0
	9:20	9:24	40#	92.8	-19.2
	9:24	9:28	40#	92.8	-19.2
	9:28	9:32	40#	92.8	-19.2
	9:32	9:36	40#	92.8	-19.2
	9:36	9:44	39#	90.5	-21.5
	9:44	9:50	38#	88.0	-24.0
	9:50	10:00	38#	88.0	-24.0
	10:00	10:06	38#	88.0	-24.0
	10:06	10:10	38#	88.0	-24.0
	10:10	10:20	38#	88.0	-24.0
	10:20	10:24	38#	88.0	-24.0
	10:24	10:28	38#	88.0	-24.0
	10:28	10:30	38#	88.0	-24.0
30 gpm	10:44	10:44	44#	102.0	-10.0
	10:44	10:46	40#	92.5	-19.5
	10:46	10:48	38#	88.0	-24.0
	10:48	10:50	37#	85.5	-26.5
	10:50	10:52	36#	83.5	-28.5
	10:52	11:04	36#	83.5	-28.5
	11:04	11:10	36#	83.5	-28.5
	11:10	11:18	36#	83.5	-28.5
	11:18	11:24	36#	83.5	-28.5
	11:24	11:30	36#	83.5	-28.5
	11:30	11:36	36#	83.5	-28.5
	11:36	11:40	36#	83.5	-28.5
40 gpm	12:04	12:04	44#	102.0	-10.0
	12:04	12:06	37#	85.8	-26.2
	12:06	12:08	35#	81.2	-30.8
	12:08	12:12	35#	81.2	-30.8
	12:12	12:18	35#	81.2	-30.8
	12:18	12:22	34#	78.8	-33.2
	12:22	12:26	34#	78.8	-33.2
	12:26	12:32	34#	78.8	-33.2
	12:32	12:36	34#	78.8	-33.2
	12:36	12:40	34#	78.8	-33.2
	12:40	12:44	34#	78.8	-33.2
	12:44	12:52	32#	74.3	-37.7
	12:52	12:58	32#	74.3	-37.7
	12:58	1:02	32#	74.3	-37.7
	1:02	1:06	32#	74.3	-37.7

Length of Hose - 112 ft
 Depth of Well - 140 feet
 Static Head - 45'

Drawdown vs G.P.M. Data

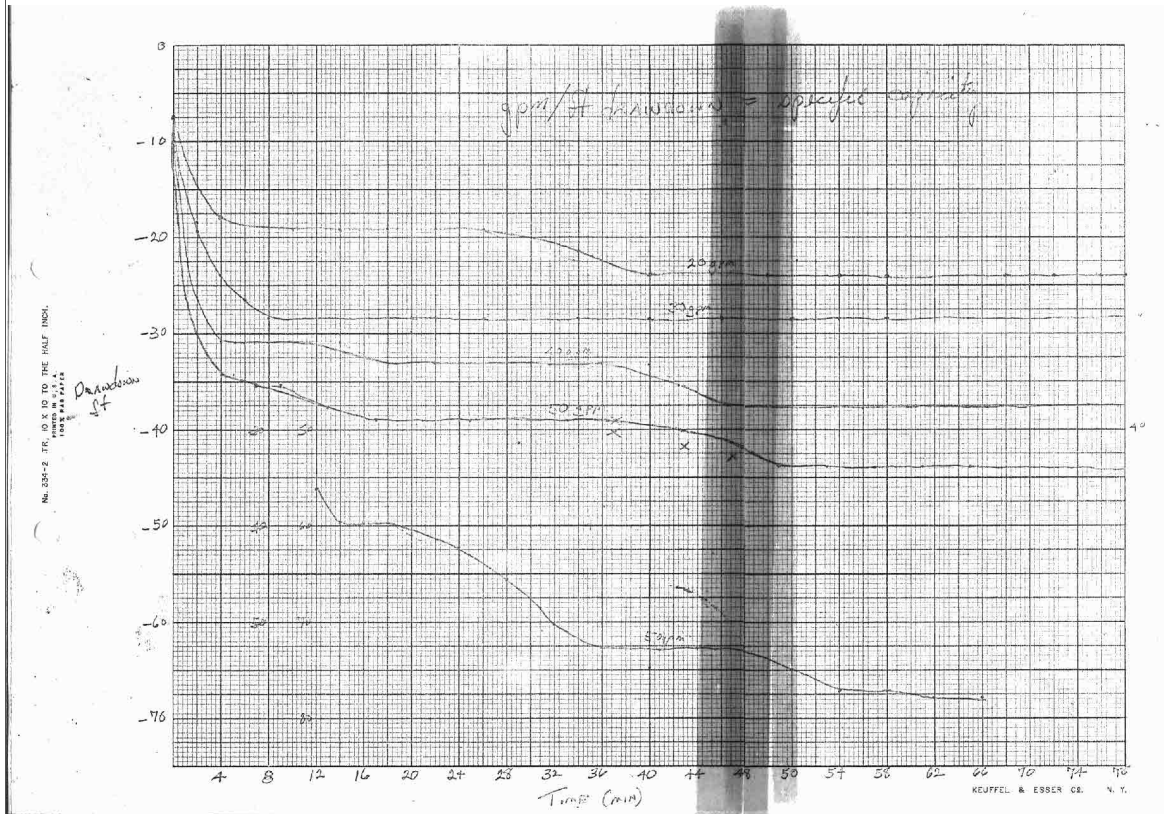
Flow Rate	Time		Gauge Reading		Drawdown
	Starting	Ending	Pressure	Feet (2.32)	
45-50 gpm	1:31		43.5#	101.0	-11.0 ft.
	1:31	1:35	39.5#	77.6	-34.4
	1:35	1:38	33.0#	76.5	-35.5
	1:38	1:40	33.0#	76.5	-35.5
	1:40	1:44	32.0#	74.3	-37.7
	1:44	1:48	31.5#	73.0	-39.0
	1:48	1:52	31.5#	73.0	-39.0
	1:52	1:56	31.5#	73.0	-39.0
	1:56	2:00	30.5#	70.7	-41.3
	2:00	2:08	31.5#	73.0	-39.0
	2:08	2:14	31.0#	71.9	-40.1
	2:14	2:18	30.5#	70.8	-41.2
	2:18	2:22	30.0#	69.6	-43.3
	2:22	2:26	30.0#	69.6	-43.8
	2:26	2:30	30.0#	69.6	-43.8
muddy appearance	2:30	2:34	30.0#	69.6	-43.8
	2:34	2:46	31.0#	71.9	-40.1
	2:46	2:50	31.0#	71.9	-40.1
	2:50	2:56	31.0#	71.9	-40.1
	2:56	3:00	29.5#	68.5	-43.5
	3:00	3:06	24.0#	55.8	-56.2
	3:06	3:08	22.5#	52.3	-59.7
	3:08	3:10	22.5#	52.3	-59.7
	3:10	3:12	22.5#	52.3	-59.7
	3:12	3:14	22.0#	51.0	-61.0
	3:14	3:18	21.5#	49.8	-62.2
	3:18	3:22	20.0#	46.4	-65.6
	3:22	3:26	18.0#	41.7	-70.3
	3:26	3:30	17.0#	39.4	-72.6
	3:30	3:34	16.0#	37.1	-74.9
clearing	3:34	3:38	17.0#	39.4	-72.6
	3:38	3:42	17.0#	39.4	-72.6
	3:42	3:46	16.0#	37.1	-74.9
	3:46	3:50	15.0#	34.8	-77.2
	3:50	3:54	15.0#	34.8	-77.2
	3:54	3:58	14.5#	33.6	-78.4
	3:58	4:00	14.5#	33.6	-78.4

RECOVERY DATA

<u>Time</u>	<u>Gauge Reading</u> <u>Pressure</u>	<u>Feet</u>	<u>Recovery (Ft.)</u>
Recovery after pumping 20 gpm			
10:30	38#	88	
10:32	41#	95	
10:35	43#	99.5	
10:38	44#	102.0	
Recovery after pumping 30 gpm			
11:44	36#	83.5	
11:46	40#	92.5	
11:48	42#	97.5	
12:00	44#	102.0	
Recovery after pumping 40 gpm			
1:06	32#	74.3	
1:10	38#	88.0	
1:12	40#	92.8	
1:18	43#	99.8	
1:21	43.5#	101.0	
1:30	43.5#	101.0	
Recovery after pumping 45-50 gpm			
4:00	14.5#	33.6	
4:02	17#	39.4	
4:03	19#	44.1	
4:06	32#	74.3	
4:07	34#	78.8	
4:09	36#	83.5	
4:12	40#	92.8	
4:16	42#	97.5	
4:20	43#	99.8	

Peaks of Otter Motel Group Well

<u>From (ft.)</u>	<u>To (ft.)</u>	<u>Type of Soil</u>	<u>Remarks</u>
0 ft.	10 ft.	Topsoil	Sample #1 taken @ 3 ft.
10 ft.	20 ft.	Sand and Clay	Sample #2 taken @ 15 ft.
20 ft.	30 ft.	Sand and Clay	Sample #3 taken @ 25 ft.
30 ft.	40 ft.	Gneiss	Sample #4 taken @ 35 ft.
40 ft.	50 ft.	Gneiss	Sample #5 taken @ 47 ft.
50 ft.	60 ft.	Gneiss	Sample #6 taken @ 55 ft.
60 ft.	70 ft.	Gneiss	Sample #7 taken @ 67 ft.
70 ft.	80 ft.	Gneiss	Sample #8 taken @ 74 ft.
80 ft.	90 ft.	Gneiss	Sample #9 taken @ 88 ft.
90 ft.	100 ft.	Gneiss	Sample #10 taken @ 95 ft.
100 ft.	110 ft.	Gneiss	Sample #11 taken @ 106 ft.
110 ft.	120 ft.	Gneiss	Sample #12 taken @ 120 ft.
120 ft.	130 ft.	Gneiss	Sample #13 taken @ 130 ft.
130 ft.	140 ft.	Gneiss	Sample #14 taken @ 140 ft.



Other Supporting Information

BLUE RIDGE PARKWAY

WATER SYSTEM DATA

- AREA Blue Ridge Parkway DATE COLLECTED _____ COLLECTED BY _____)
1. Name of System: Peaks of Otter
2. Location: State Virginia County Bedford General Area Peaks of Otter Rec. Area
M. F. 85.8
 Reference to permanent landmark _____
3. Source of Supply: Well and 5 springs Capacity 30 gpm for well
 (Well, spring, stream, impoundment, etc.) 21 gpm for springs
4. Type of System: Completely gravity except pumped from well to storage
 (Pumped, gravity, etc.)
5. Treatment: None
 (Filtration, Chlorination, Airation, etc.)
6. Distribution Mains: Size 8" Length 1118'; Size 2 1/2" Length 4433'
 Size 6" Length 342'; Size 2" Length 13,434'
 Size 4" Length 516'; Size 1 1/2" Length 641'
 Size 3" Length 2319'; Size 1 1/4" Length 5,336'
 Size 1" Length 2,323'
7. Pump Unit: Make Jacuzzi; Type Submersible; Model No. 384X12S
 Serial No. _____; Outlet 2 in.; Inlet 2 1/2 in.
 (Size) (Size)
8. Power Source: Electric Motor: Make Jacuzzi; HP 3;
 (Elec., gas, generator)
 Serial No. _____; Voltage 230; Amps 16.15;
 RPM 1725 3450; Type _____; Phase Single;
 Cycles 60; Others _____; Stages 12
9. Control: Automatic Float (all tanks); Manual _____;
 (Float, Electrode, Pressure, Time)
 Other _____
 (Explain)

10. Pump Design: Capacity _____ gpm _____ gpm
 (Actual) (Design)
 Head _____ 185 _____ ft. _____ ft.
 (Actual) (Design)
11. Pump Housing: Type Const. Block _____; Concrete _____; Size 6' x 6'
 (Walls) (Roof)
12. Storage: All are underground _____; Type Const. Concrete
 (Pneumatic, elevated, underground, etc.) (concrete, wood, steel)
 Size _____; Capacity 150,000 gal. 2635.0 2"
2,500 gal. 2649.5ft. 1 1/4" in.
 Inlet _____ (Elev.) (Size)
2625.0 8" 10,000 gal. 2518.0 1 1/2"
 Outlet 2645.0 ft. 2" in.; 75,000 gal. 2732.14 2"
 (Elev.) (Size) Pressure Setting _____
 (if pneumatic)
13. Distribution: Water Closets 3" 35 _____; Lavatory 35 _____; Urinal 16 _____;
2222.18 _____
 Drinking Fountain 21 _____; Hose Bibb 25 _____; Residences _____;
 Other 1 restaurant _____; 1 lodge _____; 1 visitor center _____
1 gas station; 1 maint. area; 1 campstore; 3 trailer quarters
14. Metered or nonmetered: Metered _____; No. 4 _____; Size _____
 No. _____; Size _____
 No. _____; Size _____
15. Fire Protection: Fire Hydrants 15 _____; Yard Hydrants _____
16. Water Analysis: _____

17. Condition of System: 185' deep test well yielding 20 gpm was drilled
(Repairs needed itemize)
here in 1967, and will probably be put into production in 1969 since
the present system barely meets the demand in dry spells.

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

D2621

COMPLETION REPORT OF CONSTRUCTION PROJECT

REGION One	AREA Blue Ridge Parkway	COUNTY Bedford	STATE Virginia
PROJECT OR JOB TITLE Water System (Addition) U-131		PCP NO. U-131	BUILDING NO. --
LOCATION IN AREA Peaks of Otter Recreational Area		MASTER PLAN NO. PKY-BR-PO-2080D	
WORKING DRAWING NO. AND TITLE PO-2152 Utilities - Camp and Trailer Area			
APPROPRIATION TITLE AND SYMBOL 14X1035 Construction C.A.		WORK ORDER NO. 314.24	
14X1037 Construction Liq. of C. A.		514.24	
CONTRACT NO.		DATE WORK STARTED December 1954	DATE WORK COMPLETED December 1955
NAME OF CONTRACTOR		ADDRESS	

COST ANALYSIS

CONSTRUCTION ITEMS	QTY	UNIT COST (IN PLACE)	TOTAL COST (IN PLACE)
Extension of water system to lower picnic area to supply 6 drinking fountains and Comfort Station No. 342. Also extended water system to camp area to supply 2 drinking fountains and Comfort Stations No. 183 and 184. This project included only a portion of the water system extension covered by PCP U-131.	1	4,655.34	4,655.34
TOTAL			4,655.34

SUMMARY OF EXPENDITURES

PERSONAL SERVICES	799.02 (35)	EQUIPMENT	Operation 54.47 (35)	MATERIALS AND SUPPLIES	330.99 (35)
OTHER	1,827.15 (37)	"	110.37 (37)		1,033.34 (37)

Certified: *Henry Svec* Supervisory Accountant

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, Assistant Parkway Engineer	DATE March 13, 1959
APPROVED BY (Name and title) <i>Sam P. Weems</i> Sam P. Weems, Superintendent	DATE March 13, 1959

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

GPO 914176

Narrative Report:

Work was started December, 1954 and completed December, 1955 on water extension to picnic and camp areas by National Park Service day labor forces. In the lower picnic area the following was completed: installed 790 ft. of 2½" galvanized pipe to Comfort Station #32, and 320 ft. of 1" distributed line to 6 drinking fountains.

The following was completed in the camp and trailer area: Water line was extended by installing 500 ft. of 3" galvanized line from existing line and 600 ft. of 2½" distribution line to supply two comfort stations and 3 drinking fountains. The extension of the Peaks of Otter water system provides usable facilities at both the lower picnic area and the camp and trailer area.

"As Built" Drawing No. PKY-MM-PO-2152A

Docket Information

Number of Documents in Docket 11

Documents Dated from 3/13/1959 to 10/25/1960

Docket Compiled: 2/1/2011