Table 4. Springs of the Cul-de-Sac Plain, Haiti

November 1948

Number	Name	Temp. (oC.)	Use 1/	Nature of Orifices 2/	Number of Orifices	Type of Spring 3/	Geologic Horizon	Lithologic Character of Aquifer	Known Range of Discharge (lts/sec.)	Approx. Average Discharge (lts/sec.)	Number of Measurements	Years of Measurement	Uniformity of Discharge 4/	Permanence of Discharge 5/	Remarks
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Sources Caseau	26	I,D,S	Filtration	5	Gravity depression	Quaternary Recent alluvium	Unconsolidated coarse sand and limestone and chert pebble gravel.	40- 60	49	8	1928-30	Subvariable	Perennial	Water rises from 5 spring heads and general seepage along a line 300 meters long and in ravine 1-3 meters below level of plain. Irrigates 12.8 hectares.
2	Sources Papeau	"	"	"	5	" "	" " "	Unconsolidated sand with some gravel.	50-120	85	9	1927-30	"	"	Water rises in 5 spring heads about 100 to 250 meters apart. Each head sustains a small spring run. Irrigates 110 hectares.
3	Source Lathan	"	"	"	Many	" "	" " "	Unconsolidated sand		50			"	"	Water rises as general seepage in an arcuate depression 25 meters long and 1-2 meters below level of plain. Irrigates 71 hectares.
4	Source Oranger	"	D,S	"	1	" "	" " "	" "		2			Variable	Intermittent	Water rises in small recess one meter below level of plain near bank of Rivière des Orangers.
5	Source Sonnette	"	D,S	"	1	" "	" " "	" "		2			"	"	" " " " " "
6	Source Balangnier	"	I,D,S	"	Many	" "	" " "	Unconsolidated sand with some gravel		50			"	Perennial	Water rises as general seepage in channel of Rivière des orangers about 1-2 m. below level of plain.
7	Source Puantes	33	U	Fracture	"	Artesian	Tertiary; Oligocene(?) limestone (?)	Crushed and brecciated limestone		30			Constant	"	Water rises along a fault line as general seepage in a marshy area 100 meters in diameter. Water contain dissolved H_2S gas and has a very salty taste.
8	Source Sans Nom	27	U	"	1	"	Tertiary; Oligocene limestone	Fractured crystalline grey limestone		0.1			"	"	Water rises in small seep along fault line at edge of alluvial plain. Salty taste and sulphurous odor.
9	Source Ca Secant	36	U	Tubular and fracture	2	"	" " "	" "		10			"	"	Water rises along fault line from 2 orifices about 100 meters apart. Water contains dissolved H_2S gas and has a very salty taste.
10	Sources Hatte Dumornay	28	I,D,S	"	2	Gravity contact	" " "	" "		20			Subvariable	"	Water rises from 2 spring heads about 300 meters apart. North head rises directly from Oligocene and South head from a thin alluvial cover overlying the Oligocene. Irrigates 103 hectares.
11	Source Diasreix	27	I,D,S	"	1	" "	" " "	" "		15			"	"	Water rises from one spring head in bottom of ravine Irrigates 55 hectares.
12	Source Trou Caiman	27	I,D,S	"	5 - 10	" "	" " "	" "	12-40	34	14	1923-30	"	"	Water rises from several openings in a line about 8 meters long.
13	Source Lagon	26	I,D,S	Filtration	Many	Gravity depression	Quaternary; Recent alluvium	Unconsolidated sand and gravel.	20-80	45	9	1925; 1927-30	Variable	"	Water rises as general seepage over an area of about 800 square meters. Irrigates 40 hectares.
14	Sources Duthil (Thomassen)	24	I,D,S	"	3	" "	" " "	" "	20-90	50	10	1922; 1927-30	"	"	Water rises as general seepage in 3 areas 100 to 200 meters apart. Irrigates 425 hectares.
15	Source D'allessand			"	1	" "	" " "	" "					"	Intermittent	In bottom of ravine
16	Sources Manneville	24	D,S	Tubular and fracture	4	Gravity contact	Tertiary; Oligocene limestone	Fracture and cavernous limestone	323-690	536	26	1922-30	Subvariable	Perennial	Water rises from solution passages and joints in 4 principal spring heads along a line about 50 meters long.
17	Source Clere	24	D,S	" " "	5 - 10	" "	" " "	" "	76-530	249	24	1922-30	Variable	"	Water rises from several openings on a bedding plane along a line about 30 meters long.
18	Source Madame Beaugé	27	I,D,S	Filtration	1	Gravity depression	Quaternary; Recent alluvium	Unconsolidated pea and pebble gravel with sand		10			"	"	Water rises (from) as seepage in a area of 5 square meters.
19	Source Palmiste Claire	24	I,D,S	"	3	" "	" " "	Unconsolidated pebble and cobble gravel with sand	1-500	104	4,800	1922-39	"	"	Water rises in 3 principal spring heads about 20 meters apart along a spring run and 2-4 meters below general surface. Irrigates about 535 hectares.
20	Source Zabette	24	I,D,S	"	5	" "	" " "	Unconsolidated gravel with sand		235			"	"	Water rises in 5 principal spring heads and general seepage along a spring run cut 2-4 meters below plain surface. Irrigates about 1,292 hectares.

See footnotes at end of table

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A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
21	Source Despuzeau	24	I,D,S	Filtration	7	Gravity depression	Quarternary;Recent alluvium	Unconsolidated coarse sand and fine gravel	50-2,700	707	5,500	1919-39	Variable	Intermittent and perennial	Water rises in 7 principal spring heads of which 4 are intermittent and 3 perennial. Irrigates 2,627 hectares.
22	Source Dumay			"	Many	" "	Quaternary;Pleistocene gravel	Semi-consolidated limestone gravel		0.5			"	Intermittent	Water rises from Pleistocene gravels in two small ravine heads.
23	Source Deschapet						Tertiary;Oligocene limestone		40- 100	66	8	1928-30	"	"	
24	Source Mapou						" "			0.5			"	"	
25	Source Cannaud	24	D,S	Tubular	1	Gravity contact	" "	Chalky white limestone		2			"	Perennial	Water emerges from a joint enlarged by solution at bottom of ravine.
26	Source	24	D,S	Fracture (?)	1	" "	" "	" " "		2			"	"	Water apparently emerges from crevice at head of small ravine.
27	Source Gros Jean	23	D,S,I	Filtration	Many	" "	" "	Fractured (?) white limestone		60			Subvariable	"	Water emerges from fractured rock overlying less permeable limestone in area about 30 meters across at head of ravine. Irrigates 97 hectares.
28	Source Bauduy	23	D,S,I	Fracture	2	" "	" "	Fractured white limestone		15			"	"	Water issues from fractured rock in 2 openings 30 meters apart. Irrigates 32 hectares.
29	Sources Frères	23	D,S,I	Tubular	1	" "	" "	" " "		60			"	"	Water emerges from a solution passage 1-1/2 meters in diameter near head of small ravine. Irrigates 83 hectares.
30	Source	23	D,S,I	Filtration	1	" "	Quaternary;Pleistocene gravel	Semi-consolidated limestone gravel		10			"	"	Water emerges from clean Pleistocene gravel in small alcove near stream channel.
31	Sources Greffin	26	D,S,I	"	Many	Gravity depression	Quaternary;Recent alluvium	Unconsolidated sand with gravel	30 - 90	56	9	1928-30; 1933	Variable	"	Water rises in 2 spring basins about 50 meters apart and each about 10 meters in diameter. Irrigates a considerable area of rice.
32	Source Digue	24	D,S	Fracture	1	Gravity contact	Tertiary;Oligocene limestone	Shattered limestone		1			"	"	Water rises from broken shattered rock in small ravine.
33	Source Dupont	23	D,S	"	1	" "	" "	Fractured gray limestone		0.5			"	"	Water rises from broken rock near head of small ravine.
34	Source Millet	19	D,S,P	"	1	" "	" "	Thin-bedded white limestone	15 - 81	41	5	1924-25	"	"	Water rises from bedding planes in hard rock at fault in bottom of deep ravine.
35	Source Puits Blanc	26	D,S	Filtration	1	" "	Quaternary;Pleistocene gravel	Semi-consolidated gravel					"	Intermittent	Water rises in a small ravine from Pleistocene gravels overlying impervious Miocene sandy siltstone. In dry seasons forms natural well 2 meters long. Overflows in rainy seasons.
36	Source Dame Marie					Gravity depression	Quaternary;Recent alluvium								
37	Source	22	D,S	Fracture	2	Gravity contact	Tertiary;Oligocene limestone	Fractured white limestone		1			Variable	Perennial	Water issues from 2 openings in fractured rock near head of ravine Motivier.
38	Source Motivier	22	D,S,I	"	1	" "	" "	" " "		30			Subvariable	"	Water issues from fractured rock in area 2 meters in diameter in bottom of ravine. Irrigates 180 hectares.

1/ D, domestic; I, irrigation; P, public supply; S, stock; U, unused

2/ Filtration; water percolates from numerous small openings in permeable material
Fracture; water percolates from joints, bedding planes, or other fractures
Tubular; water percolates from rounded channel or solution passages

3/ Gravity Depression; water flows to the surface from permeable material because surface extends down to water table.
Gravity Contact; water flows to the surface from permeable material overlying less permeable or impermeable material
Artesian; water rises to surface under artesian pressure through a fissure or opening in confining bed overlying the aquifer.

4/ Constant; variability not more than 25 per cent of average discharge.
Subvariable; variability more than 25 per cent, but less than 100 per cent of average discharge.
Variable; variability more than 100 per cent of average discharge

5/ Perennial; springs that discharge continuously.
Intermittent; springs that discharge during certain periods, but at other times are dry