

Surficial Geology of the Pompton Plains Quadrangle
Morris, Passaic, Essex, and Bergen Counties, New Jersey

New Jersey Geological Survey
Open-File Map 68
2007

pamphlet to accompany map

Table 1.--Selected well and boring records.

Well no.	Identifier ¹	Depth to bedrock or driller's log with depth and description ²	
1	26-4595	0-18	sandy (Qst)
		18-177	clay (Qpml)
		177-198	hardpan and stones (Qr)
		198-245	red shale
2	26-4490	0-3	fill
		3-21	sandy (Qst)
		21-167	clay (Qpml)
		167-173	hardpan and stones (Qr or Qpmf)
		173-178	sand and gravel (Qpmf)
		Cased to 178, yield 30 gpm	
3	26-11469	0-18	sandy (Qst)
		18-179	clay (Qpml)
		179-190	water-bearing silty sand and gravel (Qpmf)
		190-235	red shale
4	26-51898	0-20	fine sand (Qst)
		20-180	gray clay (Qpml)
		180-190	sand and gravel (Qpmf)
		Cased to 190, yield 15 gpm	
5	25-13645	0-5	yellow clayey sand (Qst)
		5-20	gray clayey silt (Qst)
		20-25	gray clayey sand (Qst)
		25-150	gray clay and silt, clay becoming very plastic (Qpml)
		150-160	gray clay, very fine sand and pebbles (Qr or Qpmf)
		160-173	red shale
6	26-1022	0-175	sand, clay (Qst over Qpml)
		175-214	red rock
7	26-3781	0-16	sandy (Qst)
		16-155	clay (Qpml)
		155-175	heaving water-bearing sand and gravel (Qpmf)
		Cased to 175, yield 15 gpm	
8	25-44425	0-70	sand (Qst over Qpml)
		70-122	silt (Qpml)
		122-201	red shale
		201-223	trap rock
9	26-4709	0-21	sandy (Qst)
		21-145	clay (Qpml)
		145-165	silty sand (Qpmf)
		165-171	hardpan and stones (Qr)
		171-210	red shale
10	DOT L-21	abbreviated	

		0-18	brown and gray sand and gravel (Qst)
		18-38	fine gray sand, trace silt (Qst)
		38-93	layers of clay and silt, trace fine sand (Qpml)
		93-97	fine-to-coarse gray sand, trace gravel (Qpmf)
		97-105	fine brown sand, trace silt (Qpmf)
11	26-4015	0-19	sandy (Qst)
		19-108	clay (Qpml)
		108-135	heaving sand (Qpmf)
		135-148	hardpan (Qr)
		148-155	water-bearing sand and gravel (Qsp)
		Cased to 155, yield 15 gpm	
12	26-2192	0-19	sand (Qst)
		19-93	clay (Qpml)
		93-109	silty water-bearing sand (Qpmf)
		109-140	hardpan and stones (Qr)
		140-207	red and gray shale
13	26-4582	0-17	sandy (Qst)
		17-108	clay (Qpml)
		108-119	hardpan and stones (Qr)
		119-125	water-bearing sand and gravel (Qsp)
		Cased to 125, yield 20 gpm	
14	26-4178	0-23	sand (Qst)
		23-98	clay (Qpml)
		98-136	hardpan and stones (Qr)
		136-148	silty sand and gravel (Qsp)
		148-153	gray shale
15	26-2110	0-21	sand (Qst)
		21-93	clay (Qpml)
		93-136	water-bearing silty sand (Qpmf)
		136-201	red and gray shale
16	25-31582	95	
17	26-4222	0-18	sand (Qst)
		18-84	clay (Qpml)
		84-96	water-bearing sand and gravel (Qpmf)
		Cased to 96, yield 25 gpm	
18	26-4202	0-18	sandy (Qst)
		18-97	clay (Qpml)
		97-109	silty water-bearing sand (Qpmf)
		109-119	hardpan and stones (Qr)
		119-165	red shale
19	26-2243	0-5	sand (Qst)
		5-75	clay (Qpml)
		75-85	sand (Qpmf)
		85-129	shale
20	26-2423	0-7	sand (Qst)
		7-77	clay
		77-87	sand (Qpmf)
		87-127	shale
21	26-2424	0-10	sand (Qst)
		10-80	clay (Qpml)
		80-95	sand (Qpmf)
		95-130	shale
22	26-2422	0-10	sand (Qst)
		10-85	clay (Qpml)
		85-95	sand (Qpmf)
		95-125	shale
23	26-2727	0-15	sand (Qst)

		15-90	clay (Qpml)
		90-108	sand (Qpmf)
		Cased to 108, yield 20 gpm	
24	26-2662	0-10	sand (Qst)
		10-80	clay (Qpml)
		80-115	sand (Qpmf)
		115-138	shale
25	26-4338	0-24	sandy (Qst)
		24-96	clay (Qpml)
		96-114	silty water-bearing sand and gravel (Qpmf)
		114-126	clay (Qpml)
		126-132	water-bearing sand and gravel (Qpmf)
		Cased to 132, yield 20 gpm	
26	26-2760	0-10	sand (Qst)
		10-60	clay (Qpml)
		60-90	sand (Qpmf)
		90-130	shale
27	26-2943	0-2	fill
		2-21	sandy (Qst)
		21-52	clay (Qpml)
		52-78	hardpan and stones (Qr)
		78-89	water-bearing silty sand and gravel (Qsp)
		89-92	red shale
28	26-4231	0-23	sandy (Qst)
		23-38	silt (Qpml)
		38-74	clay (Qpml)
		74-94	hardpan and stones (Qr)
		94-131	gray and red shale
29	26-4462	0-18	sandy (Qst)
		18-78	clay (Qpml)
		78-84	hardpan and stones (Qr)
		84-90	water-bearing sand and gravel (Qsp)
		Cased to 90, yield 30 gpm	
30	26-2342A	0-19	sandy (Qst)
		19-78	clay (Qpml)
		78-97	hardpan and stones (Qr)
		97-147	gray shale
		147-161	red shale
31	26-4216	0-21	sandy (Qst)
		21-97	clay (Qpml)
		97-108	water-bearing sand (Qpmf)
		108-136	red shale
32	26-4350	0-19	sandy (Qst)
		19-83	clay (Qpml)
		83-89	hardpan and stones (Qr)
		89-96	silty sand and gravel (Qsp)
		96-151	gray and red shale
33	26-4305	0-29	sandy (Qst)
		29-81	clay (Qpml)
		81-95	water-bearing sand and gravel (Qpmf)
		Cased to 95, yield 7 gpm	
34	26-2515	0-5	sand (Qst)
		5-90	clay (Qpml)
		90-102	sand (Qpmf)
		Cased to 102, yield 9 gpm	
35	26-2624	0-21	sandy (Qst)
		21-81	clay (Qpml)
		81-91	hardpan and stones (Qr)

		91-97	water-bearing sand and gravel (Qsp) Cased to 97, yield 15 gpm
36	26-2623	0-21 21-73 73-89 89-90	sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing sand and gravel (Qpmf) Cased to 90, yield 9 gpm
37	26-3082	0-21 21-39 39-56 56-67 67-72	sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing silty sand (Qsp) water-bearing sand and gravel (Qsp) Cased to 72, yield 20 gpm
38	26-2238	0-21 21-48 48-87 87-96	sand (Qst) clay (Qpml) hardpan (Qr) gray slate
39	26-2556	0-20 20-40 40-80 80-140	sand (Qst) clay (Qpml) hardpan (Qr) red sandstone
40	26-4040	0-12 12-22 22-41 41-63 63-66	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty heaving water-bearing sand (Qsp) choice water-bearing sand and gravel (Qsp) Cased to 66, yield 42 gpm
41	26-2987	0-16 16-29 29-37 37-58 58-66 66-85 At 85	sandy (Qst) clay (Qpml) hardpan with some large boulders (Qr) silty water-bearing sand (Qsp) clay (Qsp) water-bearing sand and gravel (Qsp) shale Cased to 85, yield 15 gpm
42	26-2788	0-11 11-58 58-88 88-95 95-138	sandy (Qst) clay (Qpml) silty water-bearing sand and gravel, some boulders at 82 (Qpmf) hardpan (Qr) red shale
43	26-4413	0-40 40-55 55-79 79-86	existing well water-bearing sand and gravel (Qpmf) hardpan (Qr) water-bearing sand and gravel (Qsp) Cased to 86, yield 15 gpm
44	26-4246	0-64 64-79 79-82	hardpan and stones (Qst over Qr) heaving sand (Qsp) choice water-bearing sand and gravel (Qpmf) Cased to 82, yield 10 gpm
45	26-4557	0-19 19-157 157-173 173-176	sandy (Qst) clay (Qpml) silty sand (Qpmf) water-bearing sand and gravel (Qpmf) Cased to 176, yield 30 gpm
46	26-4417	0-18 18-72 72-82	sandy (Qst) hardpan and stones (Qr) water-bearing sand and gravel (Qsp) Cased to 82, yield 20 gpm

47	26-13734	0-54 54-90 90-122	gravel, sand (Qpmf) red clay (Qpml and Qr) shale
48	26-2618	0-2 2-18 18-44 44-81 81-85 Cased to 85, yield 30 gpm	fill clay (Qpml) hardpan and stones (Qr) heaving sand and gravel (Qsp) water-bearing sand and gravel (Qsp)
49	26-2616	0-3 3-9 9-16 16-42 42-71 71-76 76-82 Cased to 82, yield 30 gpm	fill sandy (Qst) clay (Qpml) hardpan with some boulders (Qr) silty sand (Qsp) hardpan (Qsp or Qb) water-bearing sand and gravel (Qsp)
50	26-2453	0-14 14-19 19-41 41-61 61-69 69-85	sand (Qst) clay (Qpml) hardpan (Qr) water-bearing silty sand (Qsp) hardpan (Qb) red shale
51	26-1915	0-24 24-79 79-90 At 90 Cased to 90, yield 9 gpm	sand (Qst) clay (Qpml) water-bearing very silty sand (Qpmf) water-bearing sand and gravel
52	26-4373A	0-27 27-54 54-78 78-105 105-113 Cased to 113, yield 15 gpm	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty sand (Qsp) water-bearing sand and gravel (Qsp)
53	25-4518	0-110 110-250	sand, loam red shale
54	26-6146	0-24 24-63 63-79 79-87 87-150	silty fine sand and gravel with some clay (Qst) gray clay (Qpml) water-bearing very fine sand and gravel (Qpmf) hardpan and stones (Qr) red and gray shale
55	26-4950	0-13 13-33 33-71 71-81 81-107 107-181	brown sand (Qst) water-bearing gray sand (Qst) gray clay (Qpml) water-bearing silty fine sand with some gravel (Qpmf) water-bearing sand and gravel (Qpmf) brown, gray, red shale
56	26-4185	0-19 19-69 69-80 80-83 Cased to 83, yield 6.5 gpm	sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing sand and gravel (Qsp)
57	26-4497	0-21 21-74 74-96 96-155	sandy (Qst) clay (Qpml) hardpan (Qr) gray and red shale
58	26-2747	0-87 Cased to 87, yield 15 gpm	sand (Qst over Qpml over Qpmf)

59	26-4215	0-16 16-54 54-71 71-77 Cased to 77, yield 30 gpm	clay and sand (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing gravel (Qsp)
60	26-4280	0-3 3-16 16-86 86-92 Cased to 92, yield 10 gpm	fill sandy (Qst) clay (Qpml) water-bearing sand and gravel (Qpmf)
61	26-4121	0-18 18-70 70-76 76-81 81-84 84-200	sand (Qst) gray clay (Qpml) hardpan (Qr) red hardpan (Qr) red sand (Qsp) red and gray shale
62	26-4840	0-21 21-71 71-117 117-171	sand and gravel (Qst) hardpan with some large stones (Qr) water-bearing sand and gravel with lenses of very fine sand (Qsp) red and gray shale
63	26-2210	0-10 10-40 40-60 60-120	sand (Qst) clay (Qpml) sand (Qpmf) shale
64	26-2318	0-10 10-40 40-75 Cased to 75, yield 20 gpm	sand (Qst) clay (Qpml) sand (Qpmf)
65	26-2317	0-10 10-40 40-80 80-125	sand (Qst) clay (Qpml) sand (Qpmf) shale
66	26-2254	0-10 10-50 50-91 Cased to 91, yield 15 gpm	sand (Qst) clay (Qpml) sand and gravel (Qpmf)
67	26-2390	0-10 10-50 50-80 80-121	sand (Qst) clay (Qpml) sand (Qpmf) shale
68	26-4146	0-21 21-58 58-81 81-90 90-136	hardpan and stones (Qst) clay (Qpml) hardpan and stones (Qr) silty sand and gravel (Qsp) red shale
69	26-2257	0-10 10-40 40-70 70-122	sand (Qst) clay (Qpml) sand (Qpmf) shale
70	26-2255	0-10 10-40 40-80 80-118	sand (Qst) clay (Qpml) sand (Qpmf) shale
71	26-2272	0-10 10-40 40-80 80-125	sand (Qst) clay (Qpml) sand (Qpmf) shale

72	26-2282	0-10 10-50 50-70 70-121	sand (Qst) clay (Qpml) sand (Qpmf) shale
73	26-2157	0-10 10-40 40-70 70-125	sand (Qst) clay (Qpml) sand (Qpmf) shale
74	26-2103	0-30 30-70 70-115	clay (Qpml) sand (Qpmf) shale
75	26-2158	0-40 40-70 70-122	sand (Qst) clay (Qpml) shale
76	26-5869	0-31 31-44 44-54 54-71 71-80 Cased to 80, yield 6 gpm	existing well water-bearing sand and gravel (Qpmf) hardpan and stones (Qr) clay and some large boulders (Qr or Qsp) water-bearing sand and gravel (Qsp)
77	26-2875	0-15 15-41 41-48 48-57 57-62 Cased to 62, yield 15 gpm	dug well (Qe and Qst) hardpan with stones (Qr) clay (Qsp) hardpan and stones (Qsp or Qb) water-bearing sand and gravel (Qsp)
78	26-4165	0-16 16-47 47-69 69-86 86-136	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty sand and gravel (Qsp) red shale and sandstone
79	26-2763	0-21 21-49 49-67 67-84 84-126	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty sand and gravel (Qsp) red shale
80	26-2307	0-21 21-32 32-74 74-89 89-140	sand (Qst) clay (Qpml) hardpan and large stones (Qr) silty sand and gravel (Qsp) red and gray shale
81	26-2064	0-18 18-31 31-84 84-179	sand (Qst) clay (Qpml) hardpan and large stones (Qr) red and gray shale
82	26-2526	0-10 10-60 60-80 80-152	sand (Qst) clay and hardpan (Qpml over Qr) sand (Qsp) shale
83	26-2527	0-10 10-50 50-80 80-150	sand (Qst) clay (Qpml) sand (Qpmf) shale
84	26-4024	0-17 17-58 58-67 67-84 84-147	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty water-bearing sand (Qsp) gray and red shale

85	26-4435	0-4 4-17 17-36 36-63 63-78 Cased to 78, yield 30 gpm	fill sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing sand and gravel (Qsp)
86	25-17986	0-14 14-31 31-69 69-145	sandy (Qst) clay (Qpml) hardpan, stones, boulders (Qr) red shale
87	26-2968	0-18 18-50 50-85 85-235	sand (Qst) clay (Qpml) hardpan (Qr) red rock
88	26-24514	abbreviated 0-13 13-37 At 37	sand (Qst) gray clay (Qpml) basalt bedrock
89	26-820	0-80 80-185	clay, hardpan and boulders (Qpml over Qr) red rock
90	26-2940	0-35 35-49 49-66 66-279	yellow sand and clay over gray clay (Qst over Qpml) gravel with clay and sand mixed (Qpmf) yellow and red hardpan (Qr) red and gray shale
91	ACE FL-10	abbreviated 0-3 3-12 12-20	sand (Qst) silty sand (Qst) clay (Qpml)
92	26-5357	0-22 22-38 38-86 86-102 102-138	existing well sand and gravel with some large boulders (Qpmf) hardpan and stones (Qr) water-bearing heaving silty sand and gravel (Qsp) red shale
93	26-5444	0-28 28-34 34-57 57-63 63-68	existing well brown sand and gravel (Qpmf) brown hardpan, stones, some large boulders (Qr) gray clay (Qsp) water-bearing sand and gravel (Qsp)
94	26-1680	0-14 14-35 35-45 45-NR NR-150 Cased to 115, assumed depth to rock	sand (Qst) clay (Qpml) boulders (Qr) sand and gravel (Qsp) brownstone
95	26-2451	0-9 9-27 27-51 51-69 69-74 74-80	sand (Qst) clay (Qpml) hardpan (Qr) silty water-bearing sand (Qsp) hardpan (Qb?) red shale
96	26-2482	0-2 2-16 16-33 33-62 62-78 78-85	fill clayey sand (Qst) clay (Qpml) hardpan (Qr) water-bearing sand (Qsp) shale
97	26-2486	0-17	sandy (Qst)

		17-31	clay (Qpml)
		31-52	hardpan (Qr)
		52-58	silty water-bearing sand (Qsp)
		58-84	shale
98	26-2448	0-4	sand (Qst)
		4-34	clay (Qpml)
		34-58	hardpan and stones (Qr)
		58-67	silty sand (Qsp)
		67-75	shale
99	26-2432	0-11	sandy (Qst)
		11-19	clay (Qpml)
		19-54	silty sand, some stones (Qpmf or Qr)
		54-67	hardpan (Qr)
		67-81	shale
100	26-2452	0-51	hardpan and large boulders (Qr)
		51-77	water-bearing silty sand (Qsp)
		77-135	red shale
101	26-4138	abbreviated	
		0-60	hardpan and boulders (Qr)
		60-113	very fine-to-coarse sand (Qsp)
		116-225	red sandstone
102	26-2288	0-21	sand (Qst)
		21-31	clay (Qpml)
		31-52	hardpan and very large boulders (Qr)
		52-69	water-bearing silty sand and gravel (Qsp)
		69-75	red rock
103	26-2286	0-2	fill
		2-16	black muck
		16-19	sand (Qst)
		19-27	clay (Qpml)
		27-43	hardpan and boulders (Qr)
		43-50	water-bearing sand and gravel (Qsp)
		Cased to 50, yield 25 gpm	
104	26-2260	0-8	black muck
		8-18	sand (Qst)
		18-31	clay (Qpml)
		31-69	hardpan and stones (Qr)
		69-141	red shale
105	26-4229	0-18	sand (Qst)
		18-54	gray clay (Qpml)
		54-78	hardpan and very bad boulders (Qr)
		78-200	red sandstone
106	26-1937	0-21	sand (Qst)
		21-33	clay (Qpml)
		33-61	water-bearing silty sand and gravel (Qpmf)
		61-140	red rock
107	26-2955	0-8	sandy (Qst)
		8-31	clay (Qpml)
		31-49	hardpan and stones (Qr)
		49-58	silty water-bearing sand (Qsp)
		58-80	red shale
108	26-4200	0-5	fill and meadow mat
		5-20	sand (Qst)
		20-35	boulders and clay (Qr)
		35-65	dirty sand (Qsp)
		65-80	red hardpan (Qb)
		80-124	red sandstone

109	26-2764	0-25 25-40 40-74	sand (Qst) clay (Qpml) sand (Qpmf)
Cased to 74, yield 15 gpm			
110	26-2645	0-21 21-33 33-46 46-57 57-130	sandy (Qst) clay (Qpml) hardpan and stones (Qr) fine sand and gravel (Qsp) red shale
111	26-2930	0-15 15-60 60-90 90-140	sand (Qst) gray clay (Qpml) boulders and hardpan (Qr) red rock
112	26-4203	0-16 16-34 34-51 51-59 59-62	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty heaving sand and gravel (Qsp) water-bearing sand and gravel (Qsp)
Cased to 62, yield 18 gpm			
113	26-4928	0-19 19-37 37-60 60-74 74-80	sandy (Qst) gray clay (Qpml) hardpan and stones (Qr) water-bearing silty sand with some stones and gravel (Qsp) water-bearing sand and gravel
114	26-4221	0-18 18-33 33-58 58-109 109-172	sandy (Qst) clay (Qpml) hardpan, stones, and boulders (Qr) silty sand and gravel (Qsp) red shale
115	26-4306	0-4 4-19 19-64 64-94 94-135	fill sandy (Qst) clay (Qpml) hardpan and stones (Qr) red shale
116	26-2600	0-40 40-90 90-135	hardpan (Qr) sand (Qsp) shale
117	26-2632	0-20 20-50 50-114	sand (Qst) clay (Qpml) sand (Qpmf)
Cased to 114, yield 8 gpm			
118	26-2694	0-20 20-40 40-110 110-160	sand (Qst) clay (Qpml) sand (Qpmf) shale
119	26-2631	0-25 25-45 45-74	sand (Qst) clay (Qpml) sand (Qpmf)
Cased to 74, yield 15 gpm			
120	26-2740	0-21 21-51 51-88 88-94 94-110	sandy (Qst) clay (Qpml) hardpan and stones (Qr) silty water-bearing sand and gravel (Qsp) red shale
121	26-2004	0-24 24-31 31-57 57-74	sand (Qst) clay (Qpml) hardpan (Qr) water-bearing silty sand (Qsp)

74-76 water-bearing sand and gravel (Qsp)
 Cased to 76, yield 12 gpm

122	26-2741	0-21 21-54 54-99 99-145	sandy (Qst) clay ((Qpml) hardpan and stones (Qr) red shale
123	26-2739	0-21 21-54 54-84 84-91 91-98	sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing silty sand and gravel (Qsp) red shale
124	26-2738	0-21 21-56 56-99 99-172	sandy (Qst) clay (Qpml) hardpan with some large stones (Qr) red and gray shale
125	26-1973	0-26 26-34 34-46 46-92	sand (Qst) clay (Qpml) hardpan (Qr) red rock
126	26-1971	0-21 21-35 35-46 46-115	sand (Qst) clay (Qpml) hardpan (Qr) red rock
127	26-2003	0-19 19-34 34-58 58-110	sand (Qst) clay (Qpml) hardpan (Qr) red shale
128	26-2047	0-19 19-41 41-58 58-63	sand (Qst) clay (Qpml) hardpan (Qr) red shale
129	26-2107	0-27 27-43 43-51 51-61	sand (Qst) clay (Qpml) hardpan (Qr) red rock
130	26-2048	0-13 13-39 39-60 60-65	sand (Qst) clay (Qpml) hardpan (Qr) shale
131	26-2109	0-27 27-47 47-51 51-61	sand (Qst) clay (Qpml) hardpan (Qr) red rock
132	26-2108	0-27 27-46 46-53 53-62	sand (Qst) clay (Qpml) hardpan (Qr) red rock
133	26-2146	0-17 17-29 29-49 49-108	sand (Qst) clay (Qpml) hardpan and large stones (Qr) red shale
134	26-2147	0-3 3-11 11-18 18-37 37-100	fill sand (Qst) clay (Qpml) hardpan (Qr) red shale

135	26-2495	0-4 4-17 17-36 36-51 51-98	fill sandy (Qst) clay (Qpml) hardpan (Qr) red shale
136	26-2348	0-16 16-27 27-45 45-126	sand (Qst) clay (Qpml) hardpan and stones (Qr) red shale
137	26-2153	0-3 3-16 16-29 29-41 41-145	fill sand (Qst) clay (Qpml) hardpan (Qr) red shale
138	26-2151	0-3 3-14 14-26 26-39 39-103	fill sand (Qst) clay (Qpml) hardpan (Qr) red shale
139	26-2150	0-4 4-18 18-29 29-39 39-124	fill sand (Qst) clay (Qpml) hardpan and large stones (Qr) red shale
140	26-2105	0-21 21-33 33-53 53-67	sand (Qst) clay (Qpml) hardpan (Qr) red shale
141	DOT 33	abbreviated 0-19 19-55 55-57	medium-to-fine sand and silt (Qst) silt and clay (Qpml) compact sand and gravel (Qpmf or Qr)
142	26-4252	0-21 21-43 43-78 78-147	sandy (Qst) clay (Qpml) hardpan and stones (Qr) red shale
143	26-2561	0-2 2-16 16-89 89-96	fill sandy (Qst) clay (Qpml) water-bearing sand and gravel (Qpmf)
		Cased to 95, yield 15 gpm	
144	DOT 34	abbreviated 0-7 7-16 16-18 18-51 51-55	brown medium-to-fine sand, some fine gravel (Qst) gray sand and fine gravel (Qst) gray silt, some fine sand (Qst) gray clay, varved, silt seams (Qpml) fine sand and gravel (Qpmf)
145	26-2909	0-28 28-52 52-59 59-67	sandy (Qst) clay (Qpml) hardpan with some large stones (Qr) water-bearing sand and gravel (Qpmf)
		Cased to 67, yield 12 gpm	
146	26-4198	0-18 18-40 40-44 44-105 105-250	sand (Qst) gray clay (Qpml) sand and water (Qpmf) hardpan (Qr) red sandstone
147	26-4090	0-16	silty sand (Qst)

		16-48	clay (Qpml)
		48-56	hardpan and stones (Qr)
		56-66	water-bearing sand and gravel (Qsp)
148	DOT 35	abbreviated	
		0-13	gray silty sand and sand (Qst)
		13-30	gray-brown varved clay (Qpml)
		30-42	gray to brown clayey sand and gravel (Qpmf)
149	DOT 36	abbreviated	
		0-12	brown silty sand, some gravel (Qst)
		12-28	brown clay, sand layers, trap rock fragments below 25 (Qpml)
		28-28.3	refusal (bedrock)
150	25-10453	0-15	sand (Qst)
		15-35	clay (Qpml)
		35-55	sand (Qpmf)
		55-100	shale
151	26-2055	0-18	sand (Qst)
		18-38	clay (Qpml)
		38-41	hardpan (Qr)
		41-95	red shale
152	26-4503	0-17	sandy (Qst)
		17-31	clay (Qpml)
		31-58	hardpan with some large boulders (Qr)
		58-64	water-bearing sand and gravel (Qsp)
		64-70	red shale
153	25-10452	0-20	sand (Qst)
		20-40	clay (Qpml)
		40-80	sand (Qpmf)
		80-130	shale
154	26-2144	0-19	sand (Qst)
		19-33	clay (Qpml)
		33-59	hardpan and stones (Qr)
		59-186	red and gray shale
155	26-1917	0-18	sand (Qst)
		18-27	clay (Qpml)
		27-46	hardpan (Qr)
		46-69	boulders, gravel, silty sand (Qsp)
		69-90	red rock
156	26-1918	0-19	sand (Qst)
		19-29	clay (Qpml)
		29-67	large stones and hardpan (Qr)
		67-127	red shale
157	26-2394	0-2	fill
		2-19	sand (Qst)
		19-32	clay (Qpml)
		32-44	hardpan (Qr)
		44-117	red rock
158	26-1961	0-23	sand (Qst)
		23-32	clay (Qpml)
		32-43	hardpan (Qr)
		43-136	red shale
159	26-2347	0-4	fill
		4-19	sand (Qst)
		19-31	clay (Qpml)
		31-46	hardpan and stones (Qr)
		46-117	red shale
160	26-4450	0-5	fill
		5-58	clay (Qpml)

		58-230	red rock
161	26-1477	0-34 34-123	sand and clay (Qst over Qpml) shale
162	26-1478	0-36 36-125	sand and clay (Qst over Qpml) shale
163	26-1498	0-23 23-125	sand and clay (Qst over Qpml) red rock
164	26-1492	0-50 50-57 57-135	sand and clay (Qst over Qpml) boulders (Qr) shale
165	26-1542	0-30 30-75 75-145	clay (Qpml) bad boulders at 30 and then hardpan (Qr) red rock
166	DOT 37	abbreviated 0-9 9-24 24-28	gray, brown, red-brown fine-to-medium sand (Qst) gray clay (Qpml) gray-brown clay and large gravel, casing bent at 28 (Qr)
167	26-1955	0-19 19-28 28-58 58-87 87-95	sand (Qst) clay (Qpml) hardpan (Qr) silty sand and gravel (Qsp) red rock
168	26-4014	0-26 26-59 59-78 78-91 91-121	sandy (Qst) clay (Qpml) hardpan and stones (Qr) water-bearing silty sand and gravel (Qsp) red shale
169	26-4697	0-101 At 101 Cased to 101, yield 15 gpm	hardpan and boulders with lenses of sand and gravel (Qpmf and Qr) bedrock
170	26-4686	0-81 81-98 98-150	hardpan, some boulders, lenses of clay, sand and gravel (Qpmf and Qr) water-bearing silty sand and gravel (Qsp) red shale
171	26-3031	0-36 36-47 46-69 69-89 89-93 Cased to 93, yield 10 gpm	hardpan and large boulders (Qpmf) clay (Qpml) hardpan and stones (Qr) silty sand and gravel (Qsp) water-bearing sand and gravel (Qsp)
172	26-4441	0-55 55-74 74-82 82-140	hardpan, stones, boulders (Qpmf over Qr) heaving silty sand and gravel (Qsp) hardpan (Qb?) red shale
173	26-1433	0-85 85-175	sand and hardpan (Qst over Qpmf and Qr) red rock
174	26-4482	0-36 36-103 Cased to 93, yield 25 gpm	boulders (Qpmf and Qr) sand and gravel (Qsp)
175	26-4298	0-29 29-148	gray clay (Qal over Qpml) red shale
176	25-4753	0-18 18-31 31-45 45-120	sandy (Qal) clay (Qpml) hardpan and stones (Qr) shale

177	26-855	54	
178	26-971	51	
179	ACE GP-1	abbreviated	
		0-10	fill
		10-16	gray silt and fine sand (Qal)
		16-40	gray-brown to red-brown varved silty clay (Qpml)
		40-64	red-brown clayey sand, little gravel (Qr)
		64-67	red-brown sandstone
180	ACE GP-2	abbreviated	
		0-13	gray-brown silty sand (Qal)
		13-40	gray silty clay (Qpml)
		40-77	brown, red-brown sand, little silt, with gravel and boulders--glacial till (Qr)
		77-80	red-brown sandstone
181	26-4583	0-14	sandy (Qst)
		14-43	hardpan and stones (Qr)
		43-110	red shale
182	26-1255	37	
183	26-13515	29	
184	26-4459	0-3	fill
		3-14	clay (Qpmf)
		14-21	sandy (Qpmf)
		21-43	hardpan with stones and boulders (Qr)
		43-125	red shale
185	26-4365	0-58	hardpan, clay, stones, some boulders (Qpmf over Qr)
		58-122	red shale
186	DOT 38	abbreviated	
		0-31	brown clayey sand and gravel (Qpmf)
187	26-1866	0-15	sand (Qst)
		15-30	clay (Qpml)
		30-95	shale
188	26-4396	0-13	sandy (Qst)
		13-29	hardpan and boulders (Qr)
		29-41	red clay (Qsp)
		41-102	red shale
189	26-2823	0-10	sand (Qst)
		10-30	clay (Qpml)
		30-45	hardpan (Qr)
		45-54	shale
190	26-4818	0-47	hardpan with some large boulders (Qpmf over Qr)
		47-54	water-bearing silty sand and gravel (Qsp)
		54-90	red sandstone
191	26-4296	0-14	sandy (Qst)
		14-27	clay (Qpml)
		27-49	hardpan and stones (Qr)
		49-105	red shale
192	26-2509	0-10	sand (Qal)
		10-40	gray clay (Qpml)
		40-59	hardpan (Qr)
		59-90	red sandstone
193	26-4451	0-62	sand (Qal over Qpml)
		62-64	hardpan (Qr)
		64-200	red rock

194	26-4233	0-17 17-28 28-41 41-51 51-57	sandy (Qal) hardpan and stones (Qr) clay (Qsp) sand and gravel (Qsp) sandstone
195	26-4410	0-19 19-28 28-47 47-81	sandy (Qal) clay (Qpml) hardpan and boulders (Qr) red shale
196	DOT 39	abbreviated 0-10 10-20 20-22 22-25	brown fine gravel and sand (Qal) brown clay, trace gravel, trace sand (Qpml) boulder (Qr) trap rock
197	26-2976	0-18 18-54 54-70	dug well hardpan with large stones (Qr) red shale
198	26-5794	0-2 2-16 16-41 41-67 67-110	fill hardpan and lenses of clay (Qr) gray clay (Qsp) stones with some large boulders (Qsp or Qb) red shale
199	26-2198	0-5 5-18 18-45 45-72 72-200	fill sand (Qst) gray clay (Qpml) hardpan (Qr) red and gray sandstone
200	26-2921	60	
201	26-1705	0-54 54-128	clay and boulders (Qpml over Qr) red rock
202	26-2271	0-50 50-78 78-88	clay and sand over hardpan (Qst over Qpml over Qr) water and sand (Qsp) red hardpan (Qb)
203	26-2523	0-42 42-80 80-165	hardpan (Qr) sand (Qsp) shale
204	26-951	0-110 110-175	clay, sand, boulders, etc. (Qpmf over Qr) sandstone
205	26-3851	0-20 20-65 65-250	clay (Qpml) sand (Qpmf and Qr) trap rock
206	26-2758	0-50 50-80 80-90 90-163	hardpan and boulders (Qpmf and Qr) very fine sand (Qsp) red hardpan (Qb) red sandstone
207	26-2551	0-45 45-65 65-132	gray clay (Qpml) hardpan (Qr) red rock
208	26-2685	0-4 4-39 39-64 64-70 70-73 Screened to 73, yield 30 gpm	sandy (Qst) clay (Qpml) hardpan (Qr) silty sand (Qsp) water-bearing sand and gravel (Qsp)
209	26-338	0-28	gray clay (Qal over Qpml)

		28-50	gray clay, sand (Qpml)
		50-52	clay, gravel (Qr)
		52-85	trap
210	26-4567	0-21	sandy, then clay (Qst over Qpml)
		21-43	hardpan and stones (Qr)
		43-80	trap rock
211	26-4408	0-14	sandy (Qst)
		14-44	clay (Qpml)
		44-51	water-bearing silty sand and gravel (Qpmf)
		51-60	trap rock
212	26-4299	0-42	sand (Qpmf)
		42-65	trap rock
213	26-3007	0-6	sandy (Qpmf)
		6-14	clay (Qpml)
		14-43	hardpan and stones, water-bearing silty sand and gravel (Qpmf, Qr)
		43-49	trap rock
214	26-2773	0-23	sand and gravel (Qpmf)
		23-34	hardpan and stones (Qpmf, Qr)
		34-42	water-bearing sand and gravel (Qpmf or Qsp)
		42-52	trap rock
215	26-2244	0-58	sand over hardpan (Qst over Qr)
		58-113	trap rock
216	26-540	0-15	sand (Qst)
		15-30	blue clay (Qpml)
		30-50	hardpan (Qr)
		50-69	fine sand (Qsp)
		69-155	trap rock
217	26-1259	0-72	hardpan and boulders (Qr)
		72-172	trap rock
218	26-3927	0-2	fill
		2-17	sandy (Qst)
		17-39	clay (Qpml)
		39-46	hardpan and stones (Qr)
		46-53	water-bearing sand and gravel (Qsp)
		Cased to 53, yield 25 gpm	
219	26-2442	0-8	sandy (Qst)
		8-19	clay (Qpml)
		19-41	hardpan (Qr)
		41-50	water-bearing sand and gravel (Qsp)
		Cased to 50, yield 20 gpm	
220	26-4123	0-25	silty clay (Qst over Qpml)
		25-60	sand (Qpmf)
		60-76	gray hardpan (Qry)
		76-110	trap rock
221	26-36016	0-10	sand (Qst)
		10-22	clay (Qpml)
		22-63	till (Qry)
		63-195	rock
222	25-9373	>53	
		Cased to 53, yield 30 gpm	
223	26-1763	0-40	sandy soil (Qpmf)
		40-67	hardpan (Qry)
		67-150	hard gray rock
224	26-5445	0-13	abbreviated fill

		13-30	sand and gravel (Qpmf)
		30-35	heavy gravel, stones, large boulders (Qry or Qpmf)
		35-45	weathered trap rock
225	26-1986	0-25	sand and gravel (Qpmf)
		25-55	brown hardpan (Qry)
		55-139	trap rock
226	26-1001	0-57	hardpan (Qpmf over Qry)
		57-100	hard gray rock
227	26-624	0-74	clay, dead sand, hardpan, a few boulders (Qpmf over Qry)
		74-445	trap rock
		445-465	red rock
		465-475	trap rock
		475-497	slate
		496-510	trap rock
228	26-615	0-42	gravel and hardpan with boulders (Qpmf over Qry)
		42-153	hard gray rock
229	26-6183	abbreviated	
		0-29	sand and gravel (Qpmf)
		29-32	trap rock
230	26-2228	0-9	sand (Qst)
		9-21	clay (Qpml)
		21-28	hardpan (Qry)
		28-34	water-bearing sand and gravel (Qsp)
		34-85	trap rock
231	26-3067	0-11	sandy (Qst)
		11-17	clay (Qpml)
		17-34	hardpan and stones (Qry)
		34-38	water-bearing silty sand and gravel (Qsp)
		38-40	trap rock
232	26-4115	0-11	sandy (Qst)
		11-38	hardpan and stones (Qry)
		38-43	trap rock
233	26-4426	0-16	sandy (Qst)
		16-31	clay (Qpml)
		31-44	hardpan and stones (Qry)
		44-65	trap rock
234	26-2454	0-3	fill
		4-18	sand (Qst)
		18-46	clay (Qpml)
		46-53	water-bearing sand and gravel (Qpmf)
		Cased to 53, yield 20 gpm	
235	26-2213	0-19	sand (Qst)
		19-46	clay (Qpml)
		46-51	water-bearing silty sand (Qpmf)
		51-55	water-bearing sand and gravel (Qpmf)
		At 55	bedrock
		Cased to 55, yield 30 gpm	
236	26-2223	0-6	sand (Qst)
		6-15	clay (Qpml)
		15-38	hardpan and stones (Qry)
		38-45	water-bearing sand and gravel (Qsp)
		At 45	bedrock
		Cased to 45, yield 20 gpm	
237	26-3976	0-17	sandy (Qst)
		17-38	clay (Qpml)
		38-47	hardpan and stones (Qry)
		47-53	water-bearing sand and gravel (Qsp)

		53-81	trap rock
238	26-2220	0-2 2-16 16-36 36-38 At 38 Cased to 38, yield 15 gpm	fill clay (Qpml) hardpan and stones (Qry) water-bearing sand and gravel (Qsp) bedrock
239	26-3582	0-14 14-42 42-50 50-55 55-68	sandy (Qst) clay (Qpml) hardpan and stones (Qry) water-bearing silty sand and gravel (Qsp) trap rock
240	26-2219	0-2 2-9 9-39 39-48	fill clay (Qpml) hardpan and large stones (Qry) trap rock
241	26-4308	0-14 14-32 32-46 46-121	sandy (Qst) clay (Qpml) hardpan, stones, boulders (Qry) trap rock
242	26-2822	0-10 10-30 30-51 51-98	sand (Qst) clay (Qpml) sand (Qpmf or Qry) trap rock
243	26-721	0-39 At 39 Cased to 38, yield 6 gpm	dirt, hardpan, clay, sand (Qst over Qpml over Qry) blue stone
244	26-4897	0-16 16-21 21-29 29-60	hardpan and stones (Qst over Qry) sand and gravel (Qsp) gray clay (Qsp) trap rock
245	26-2970	0-17 17-75	sand (Qst) trap rock
246	26-4906	0-26 26-135	hardpan, stones, and clay with small layers of sand (Qst over Qry) trap rock
247	26-4179	0-15 15-28 28-36	dug well hardpan and stones (Qry) trap rock
248	26-2941	0-2 2-14 14-23 23-42	fill black muck large stones, gravel, and sand (Qry) trap rock
249	26-4297	0-8 8-27 27-34 34-45	clayey sand (Qst) clay (Qpml) hardpan and stones (Qry) trap rock
250	26-4608	0-21 21-44 44-48	silty sand (Qst) hardpan and clay (Qry) trap rock
251	26-4167	0-34 34-53	hardpan, stones, and clay (Qst over Qry) trap rock
252	26-4927	0-2 2-29 29-42	fill hardpan and clay with small lenses of sand and gravel (Qst over Qry) trap rock

253	26-4633	0-12 12-19 19-31 31-41	hardpan (Qry) sandy (Qsp) clay (Qsp) trap rock
254	26-1079	0-30 30-42 42-182	boulders (Qry) sand and silt (Qsp or weathered basalt) trap rock
255	26-12005	0-50 50-475	overburden with layers of hardpan (Qry) trap rock
256	26-4385	30	
257	DOT 40	abbreviated 0-10 10-20 20-22 22-25	brown fine gravel and sand (Qst) brown clay, trace gravel and sand (Qpml) boulder (Qr) trap rock
258	ACE DC-122	abbreviated 0-4 4-12 12-23 23-57 57-273	sandy clay with gravel (Qal) sand and fine gravel (Qal) gray to brown silty clay to sandy clay (Qpml) till (Qr) red sandstone
259	26-4501	0-10 10-20 20-38 38-50 50-60 60-65 65-73 73-83 At 83	fine yellow sand (Qst) brown fine sand, some gray clay (Qst) gray clay (Qpml) reddish-brown hardpan, streak of gravel, some small cobbles (Qr) red sandy hardpan, some small cobbles (Qr) red hardpan with very fine sand (Qr) red hardpan, quite hard (Qr) sand and gravel, fine-to-coarse, some water (Qsp) gray shale
260	ACE DC-121	abbreviated 0-15 15-32 32-71 71-273	silty sand, sand and gravel (Qst) gray-brown clay (Qpml) red-brown till (Qr) red sandstone and shale
261	26-4634	0-75 75-90 90-101	clay (Qal over Qpml) sand (Qpmf) trap rock
262	DOT 23-77	abbreviated 0-13 13-17 17-21 21-35	fine-to-medium brown sand (Qst) brown clay (Qpml) medium gray sand, medium gravel (Qpmf) fine-to-medium gray sand and boulders (Qpmf)
263	26-31968	0-14 14-38 38-350	gray silty fine sand (Qst) gray very hard clay (Qpml or Qry) rock
264	DOT 23-46	abbreviated 0-5 5-13 13-18 18-21 21-27 27-33 33-43	fill fine silty brown sand with pieces of rock (Qst) medium-to-coarse gravelly brown sand (Qst) gray and tan clay (Qpml) gray silt with pieces of rock (Qpml or Qry) white sandstone, traces of red clay (weathered basalt) trap rock
265	DOT 23-85	abbreviated 0-5 5-8 8-21	brown fine-to-medium sand, some gravel (Qst) brown clayey fine sand (Qst) brown medium-to-coarse sand (Qst)

		21-30	gray-brown varved silt with some clay (Qpml)
		30-40	dark gray wet sandy clay (Qpml)
		40-43	reddish brown fine-to-medium clayey sand (Qpml)
266	DOT 23-33	abbreviated	
		0-14	medium-to-coarse gray sand (Qst)
		14-20	fine-to-medium slightly silty brown sand (Qst)
		20-34	gray clay (Qpml)
		34-45	soft red sandstone
267	DOT 23-78	abbreviated	
		0-6	topsoil, roots, fibrous organic
		6-13	fine gray sand (Qst)
		13-27	gray silty clay (Qpml)
		27-32	sandy gray clay with pieces of rock (Qry)
		32-42	gray trap rock boulders and clay (Qry)
268	26-49551	0-5	brown coarse-to-fine sand, little silt (Qst)
		5-20	gray sand, silt, and clay (Qst over Qpml)
		20-50	gray silt and clay (Qpml)
		50-55	brown silt (Qpml)
		55-70	brown coarse-to-fine sand and gravel, trace clay and boulders (Qry)
269	DOT 23-98	abbreviated	
		0-10	brown fine clayey sand (Qal)
		10-20	gray fine-to-coarse sand (Qst)
		20-25	gray fine silty sand, trace of clay (Qst)
		25-31	reddish-gray silty clay (Qpml)
		31-41	gray silty clay with pieces of rock (Qpml)
		41-57	reddish-gray silty clay with layers of gray fine sand and pieces of rock (Qpml)
270	26-27392	140	
271	DOT 23-61	abbreviated	
		0-4	fine-to-medium light brown sand (Qst)
		4-8	brown clay, some fine sand (Qst)
		8-21	fine-to-medium gray sand (Qst)
		21-26	gray-brown clay (Qpml)
		26-53	silty brown clay (Qpml)
		53-60	medium clayey brown sand (Qpml or Qpmf)
272	26-2826	0-15	hardpan (Qst)
		15-58	sand (Qst over Qpmf)
		Cased to 58, yield 10 gpm	
273	26-3029	57	
274	26-1995	0-19	sand (Qal)
		19-27	clay (Qpml)
		27-51	hardpan (Qr)
		51-56	water-bearing sand and gravel (Qsp)
		Cased to 56, yield 30 gpm	
275	26-4750	0-12	sandy (Qal)
		12-16	black humus (Qal)
		16-27	clay (Qpml)
		27-63	hardpan, large stones and gravel with lenses of water-bearing sand and gravel towards bottom (Qr over Qsp)
		63-80	red shale
276	26-3930	0-20	sand (Qal)
		20-45	clay (Qpml)
		45-50	gravel (Qpmf)
		Cased to 50, yield 12 gpm	
277	26-2636	0-15	sandy (Qal)
		15-26	clay (Qpml)
		26-67	hardpan and stones (Qr)
		67-72	water-bearing sand and gravel (Qsp)

		72-76	red shale
278	26-4618	0-18 18-53 53-61 61-72 Cased to 72, yield 8 gpm	sandy (Qal) clay (Qpml) hardpan and stones (Qr) water-bearing sand and gravel (Qsp)
279	26-5025	0-40 40-105 105-320	sand, boulders (Qr) brown sand (Qsp) red shale
280	26-5187	abbreviated 0-45 45-77	brown sand, clay, boulders (Qr) brown sand and gravel (Qsp)
281	26-4281	0-50 50-68 68-98 98-423	hardpan and boulders (Qr) gravel (Qsp) hardpan and small boulders (Qb) gray and red shale
282	23-5245	92 Screened 82-92 in gravel (Qsp), yield 21 gpm	
283	26-949	0-85 85-160	glacial till, hardpan over gravel atop rock (Qr over Qsp) trap
284	26-2074	0-70 70-83 83-100 100-306	hardpan and boulders (Qr) fine sand (Qsp) trap rock red shale
285	26-31069	abbreviated 0-6 6-90 90-98 98-110	fill gray silty clay (Qpml) gray silt and fine sand, trace gravel (Qpml) red brown fine-to-medium sand, some gravel, trace silt and clay (Qr)
286	26-25794	118	
287	26-26166	abbreviated 0-28 28-48 48-50 50-65	silt and fine sand (Qal over Qst) gray clay and silt (Qpml) gray silt, trace fine sand (Qpml) red-brown coarse gravel (Qr or Qpmf)
288	ACE DC-102	abbreviated 0-3 3-12 12-52 52-87 At 87	clay with roots (Qal) sand (Qal over Qst) silty clay (Qpml) till (Qr) rock
289	26-2361	0-49 49-148 148-264	sand, large stones with some boulders (Qry) hardpan (Qry) red and gray shale
290	26-2306	0-151 151-251	hardpan and large stones (Qry) red and gray shale
291	26-2140	0-130 130-260	hardpan and large stones (Qst over Qry) red rock
292	26-2737	15	
293	26-2777	0-22 22-92 92-110 110-123 Cased to 123, yield 10 gpm	sand (Qst) clay (Qpml) clay and hardpan (Qpml over Qry or Qpmf) packed gravel (Qpmf)

294	26-3003	abbreviated 0-14 sand and gravel (Qst) 14-94 slimy gray clay (Qpml) 94-134 gray sand and gravel, heaves (Qpmf) 134-171 gray clayey fine-to-medium sand and gravel, stones (Qry or Qpmf) At 171 brown shale Screened 100-120, yield 300 gpm well flows to 4 feet above land surface at 5 gpm
295	26-308	184
296	26-2089	0-35 hardpan (Qst over Qpml) 35-93 clay (Qpml) 93-96 coarse gravel (Qpmf) Cased to 96, yield 10 gpm
297	26-48762	0-20 sand (Qal) 20-22 clay (Qal) 22-30 sand and gravel (Qst) 30-90 reddish clay (Qpml) 90-355 sandstone
298	26-51104	0-27 sand (Qal) 27-80 clay (Qpml) 80-302 sandstone
299	26-48765	0-17 sand (Qal) 17-70 clay (Qpml) 70-86 gravel and sandstone
300	23-6146	117 Cased to 113, yield 8 gpm from sand and gravel
301	26-4734	0-23 sandy (Qal over Qst) 23-64 clay (Qpml) 64-71 hardpan and stones (Qr or Qpmf) 71-76 water-bearing sand and gravel (Qpmf or Qsp) Cased to 76, yield 30 gpm
302	26-2965	0-5 fill 5-104 gray clay streaks of silt (Qpml) 104-110 gravel (Qpmf) 110-112 muddy sand (Qpmf) 112-118 sand, gravel, boulders (Qpmf) 118-120 clay, streaks of gravel (Qpmf) 120-130 gray muddy sand (Qpmf) Screened 107-127, yield 10 gpm, well flows to 2 inches above land surface
303	26-2911	0-25 sand (Qst) 25-85 clay (Qpml) 85-106 dirty sand (Qpmf or Qr) 106-200 red and gray shale
304	26-2428	0-20 sand (Qal) 20-100 clay (Qpml) 100-111 sand (Qpmf) Cased to 111, yield 30 gpm, well flows to 2 feet above land surface at 2 gpm
305	26-2904	0-21 sandy (Qal) 21-52 clay (Qpml) 52-76 hard formation like trap rock (Qr?) 76-89 sand and heavy gravel (Qsp) 89-100 red shale
306	26-2832	0-35 clay (Qst over Qpml) 35-45 boulders (Qr or Qpmf) 45-84 sand, gravel (Qsp or Qpmf) Screened 69-84, yield 50 gpm, well flows to 1 foot above land surface at 5 gpm

307	26-20680	0-50 50-128	sand, clay (Qst over Qpml) red rock
308	26-2646	0-16 16-24 24-28 28-43 43-61 61-76 76-78 78-85	swamp muck (Qal) gray clay (Qpml) brown clay, some gravel (Qr) gray hardpan and big rocks (Qr) brown hardpan (Qr) red-brown hardpan (Qr) gray coarse sand (Qsp) red shale
309	23-6506	abbreviated 0-51 51-149	sand and gravel (Qst over Qpp) black, gray, brown rock, weathered to clay in places
310	23-6853	40	
311	23-6181	0-25 25-75 75-130	sand (Qst over Qpp) clay (Qpml) red shale
312	26-2462	0-21 21-91 91-104 104-273	sand (Qal) clay (Qpml) hardpan (Qry) gray and red shale
313	26-3002	0-15 15-55 55-152	boulders (Qry) sand (Qsp) shale
314	23-5115	75	
315	26-4487	48	
316	26-1512	0-25 25-35 35-150	clay and some boulders (Qn and Qry) red hardpan (Qr) red sandstone
317	23-1187	72	
318	26-1592	0-50 50-150	hardpan and boulders (Qn) red shale
319	26-2507	82	
320	26-2565	0-19 19-70 70-78 78-81	sand and gravel (Qst) gray clay (Qpml) sand, gravel, clay mixed (Qn) rock
321	26-4148	0-15 15-25 25-75 75-81 81-257	fill and top soil sand (Qst) sticky clay (Qpml) hardpan (Qry) red sandstone
322	26-2973	0-17 17-81 81-103 103-180	sand and gravel (Qal) clay (Qpml) hardpan (Qry) red shale
323	26-19184	abbreviated 0-23 23-35	brown sand, gravel, boulders, little to some silt, trace clay (Qn) rock
324	26-30328	0-43 43-150	sand, gravel, cobbles (Qn) red slate
325	23-8358	0-46	sand, clay, gravel overburden (Qpp over Qpml over Qpmf)

		46-75	red slate
326	26-26447	32	
327	26-3048	0-76 76-84	clay (Qpml) sand and gravel (Qpmf) Cased to 84, yield 40 gpm, well flows to 1 foot above land surface at 11 gpm
328	26-26448	101	
329	26-698	0-12 12-140 At 140	fine sand (Qpp) gray clay (Qpml) gravel well flows to 1 foot above land surface at 10 gpm
330	26-898	0-10 10-25 25-90 90-114 at 114	soft clay (Qpp) fine silty sand (Qpp) gray clay (Qpml) fine red sand coarse sand Well flows
331	26-733	0-90 90-132	fine sand over blue clay (Qst over Qpml) red sandstone
332	26-4465	0-21 21-126 126-160	sandy (Qst) clay (Qpml) red shale
333	26-3990	0-10 10-70 70-90 90-122	sand (Qal) clay (Qpml) sand (Qpmf) shale
334	26-2520	0-15 15-45 45-51 51-140	earth (Qst) clay (Qpml) hardpan (Qry) trap rock
335	26-2869	0-15 15-55 55-143	sand (Qst) clay (Qpml) trap rock
336	26-804	0-8 8-36 36-38 38-78	sand (Qal) clay (Qpml) sand (Qry or Qpmf) trap
337	26-805	0-48 48-108	dirt, clay, sand (Qal over Qpml over Qpmf) trap rock
338	26-2500	0-20 20-103 103-140	sand (Qal) soft gray clay (Qpml) trap rock
339	26-10119	0-3 3-105 105-108 108-230	fill gray clay (Qal over Qpml) sand and gravel (Qpmf) trap rock
340	26-4110	0-15 15-90 90-100 100-114 114-219	sandy soil (Qal) clay (Qpml) sand (Qpmf) silty hardpan (Qry) trap rock
341	26-2936	0-20 20-83 83-96 96-268	sand (Qal) clay (Qpml) hardpan (Qry) trap rock

342	26-1559	65	
343	26-3640	0-22 22-35 35-42 42-130	yellow hardpan (Qal) sand (Qst) clay (Qpml) trap rock
344	26-2205	0-48 48-114	silty sand then clay (Qal over Qpml) trap rock
345	26-1861	0-82 At 82	sandy clay then gray clay (Qal over Qpml) trap rock well flows to 2 feet above land surface at 10 gpm
346	26-4810	0-17 17-79 79-86 86-91 Cased to 91, yield 15 gpm	sandy (Qal) gray clay (Qpml) hardpan and stones (Qry or Qpmf) water-bearing sand and gravel (Qpmf)
347	26-4754	0-16 16-88 88-100 Cased to 100, yield 12 gpm	sandy (Qal) gray clay (Qpml) water-bearing sand and gravel (Qpmf)
348	26-509	6	
349	22-27475	5	
350	26-29664	5	
351	26-29185	5	
352	22-4016	0-20 20-88 Cased to 88, yield 4 gpm	hardpan and boulders (Qn) gravel (Qsp)
353	22-27388	90	
354	22-24051	21	
355	22-21971	49	
356	23-4496	22	
357	22-7757	0-25 25-30 30-121	sand, gravel, boulders (Qmld) clay, fine sand, boulders (Qmld) granite
358	22-4921	25	
359	22-4494	9	
360	22-7913	abbreviated 0-76 76-125	sand, boulders, gravel, brown clay from 28-42 (Qbu1) granite
361	22-5812	0-103 103-116	boulder, gravel, sand, hardpan (Qbu1) sandstone (gneiss)
362	22-4523	37	
363	22-9805	3	
364	22-20152	0-18 18-248	overburden with boulders (Qbu2) granite
365	22-5350	0-80 80-113	boulders, sand, gravel, hardpan (Qbu1) granite

366	22-5621	0-61 61-78	hardpan, boulders, sand and gravel (Qbu1 over Qn) gray granite
367	22-27528	0-60 60-150	sand and gravel (Qn) granite
368	22-7028	0-65 65-93 93-145	sand, gravel, boulders (Qn) sandstone, soft, with mica (weathered gneiss) granite
369	22-8476	0-88 88-174	sand, gravel, boulders (Qn) granite
370	22-20122	7	
371	22-25699	0-30 30-400	sand and gravel (Qn) granite
372	22-26316	0-21 21-375	gravel, sand (Qbu1) granite
373	22-15302	0-5 5-40 40-55	overburden with boulders (Qbu1) sand, gravel, clay (Qbu1) granite
374	22-23346	15	
375	23-1481	7	
376	22-2956	0-23 23-142	earth and boulders (Qbu1) granite
377	22-20187	0-60 60-97 97-107 107-198	sand, boulders (Qbu1) boulders, gravel, etc. (Qbu1) boulder (Qbu1) granite
378	22-19972	0-20 20-30 30-50 50-60 60-66 66-145 145-200	overburden with boulders (Qbu1) fine sand (Qbu1) sand, gravel (Qbu1) clay, sand (Qbu1) rotten granite soft granite granite
379	22-20636	0-16 16-59 59-87 87-265	sand (Qbu1) all sand (Qbu1) fine brown sand (Qbu1) granite
380	22-24112	50	
381	22-27632	22	
382	22-20043	0-30 30-123	overburden with boulders (Qn) granite
383	22-21866	15	
384	22-24112	50	
385	22-14900	0-35 35-130	overburden-clay, gravel, boulders (Qn) granite
386	22-21937	27	
387	22-8206	0-84 84-88 88-120	sand, gravel, some clay (Qn) soft brown granite granite

388	22-17425	35	
389	22-14513	0-20 20-25 25-40 40-65 65-69 69-90 90-95	fine sand, clay, boulders (Qfy) sand and gravel (Qfy) very fine silt and sand (Qfy) coarse sand and gravel (Qfy) gravel, clay mix (Qfy) very fine water-bearing sand granite
390	22-3608	0-20 20-50 50-57 Screened 35-50, yield 435 gpm	swamp dirt and fill sand and gravel (Qfy) fine sand
391	22-6486	abbreviated 0-110 110-120 production well (22-7045) at same location screened 48-90, yield 271 gpm	fine-to-coarse sand granite
392	22-20875	3	
393	22-27148	23	
394	22-24701	17	
395	22-24699	17	
396	22-24700	0-18 18-575	sand gravel (Qfy) granite
397	22-23917	8	
398	22-14151	16	
399	22-26581	37	
400	25-29856	10	
401	25-11065	0-20 20-305	hardpan, boulders (Qn) granite
402	22-21774	0-12 12-175	sandy overburden (Qn) granite
403	22-27387	13	
404	22-14807	13	
405	23-3038	0-30 30-85 85-131	dirt and boulders (Qbu2) sand (Qbu2) granite
406	23-3119	0-20 20-80 80-163	dirt and boulders (Qbu2) sand (Qbu2) granite
407	233-3039	0-30 30-85 85-140	dirt and boulders (Qbu2) sand (Qbu2) granite
408	23-6787	0-20 20-67 67-74 74-300	sand (Qbu2) sand and gravel (Qbu2) rotten granite granite
409	23-2699	25	

410	23-2656	4	
411	23-2683	0-28 28-104	dir, sand (Qbu2) granite
412	23-6807	2	
413	23-2611	3	
414	23-1627	8	
415	23-5752	3	
416	23-6393	20	
417	23-2700	5	
418	23-2586	5	
419	23-3963	0-20 20-43 43-43.5 Screened 32-42, yield 60 gpm	hardpan (Qpp, topset beds) sand (Qpp, foreset beds) granite
420	23-133	0-9 9-73 73-78 78-552	big gravel (Qpp, topset beds) fine yellow sand (Qpp, foreset beds) coarse gravel (Qpp, lacustrine-fan gravel) trap rock, blue rock
421	23-5664	45	
422	23-2497	abbreviated 0-29 29-87 87-94 94-106 106-184	sand and gravel (Qal over Qst) fine gray sand and clay (Qpp over Qppl) silty gray clay (Qppl) fine gray sand and grit (Qpmf) conglomerate
423	23-7059	abbreviated 0-25 25-104 104-109 109-111	sand, gravel, small cobbles (Qal over Qst) silt, sand, some clay (Qpp over Qppl) very dense wet gray coarse-to-fine sand and coarse-to-fine gravel, trace silt (Qpmf) gneiss
424	23-3858	0-108 Screened 98-108, yield 204 gpm	clay, sand, gravel (Qppl over Qpmf)
425	23-7055	0-116 116-347	sand and gravel red rock
426	23-6958	0-176 176-605	sand and gravel overburden red slate
427	23-6651	0-5 5-10 10-28 28-30 30-111 111-500	gravel (Qst) sand (Qst) gravel (Qpp) boulder (Qpp) gray sand and silt (Qppl) granite
428	23-7338	0-30 30-103 103-120 Cased to 120, yield 30 gpm	gravel and sand (Qst over Qpp) gray silt (Qppl) gravel and water (Qpmf)
429	23-7271	0-12 12-30 30-116	gravel (Qst) fine brown sand (Qpp) gray silt (Qppl)

		116-127	silt and gravel (Qpmf) Cased to 127, yield 20 gpm
430	23-6228	0-20 20-85 85-86	brown sand and gravel (Qst) gray silt (Qppl) gravel and water (Qpmf) Cased to 86, yield 10 gpm
431	23-6534	0-17 17-49 49-81 81-109 109-115	sand and gravel with some large boulders (Qst) very fine silty sand (Qpp or Qppl) gray clay (Qppl) heaving water-bearing silty sand with some gravel (Qpmf) water-bearing sand and gravel Cased to 115, yield 15 gpm
432	23-6563	0-18 18-49 49-82 82-116 116-118	sand and gravel with some large boulders (Qst) very fine silty sand (Qpp or Qppl) gray clay (Qppl) heaving water-bearing silty sand and gravel (Qpmf) water-bearing sand and gravel (Qpmf) Cased to 118, yield 15 gpm
433	23-7641	0-121	sand and gravel Cased to 121, yield 20 gpm
434	23-6564	8	
435	23-1520	0-124 124-170	sand, gravel (Qpp over Qpmf) red rock
436	23-11599	0-176 176-673	sand (Qpp over Qpmf) shale
437	23-6366	0-20 20-90 90-111	sand (Qal) clay (Qppl) sand (Qpmf) Cased to 111, yield 10 gpm
438	23-11257	abbreviated 0-160 160-205	abbreviated sand and gravel, trace silt and clay (Qpg over Qpmf) fine-to-medium sand (Qpmf)
439	23-12000	0-201 201-203	gray fine-to-coarse sand and gravel, little clay (Qpmf) granite production well (23-12902) at same location screened 155-175, yield 700 gpm
440	23-7516	0-20 20-40 40-48 48-55 55-57	coarse sand (Qpmf) coarse sand, some gravel (Qpmf) coarse sand and large gravel (Qpmf) fine gray sand (Qpmf) rock
441	23-5405	abbreviated 0-113 113-169 169-216 216-226 226-236 236-238	abbreviated sand and gravel (Qpmf) clay and gravel (Qpmf) sand and gravel (Qpmf) clay and gravel (Qpmf) gravel and boulders (Qn or Qpmf) rock Screened 180-200, yield 409 gpm production well (23-5451) at same location screened 171-196, yield 704 gpm
442	23-6956	abbreviated 0-138 138-160 160-189	abbreviated stones, sand, gravel, trace clay (Qpmf) very fine sand and gray clay (Qpmf) stones, boulders, gravel (Qpmf)
443	23-6955	abbreviated 0-82 82-101	abbreviated sand, gravel, boulders (Qpmf) clay (Qpmf)

		101-204 At 204	sand, gravel, boulders, a little clay (Qpmf) rock
444	23-4924	abbreviated 0-113 113-166 Screened 136-156, yield 352 gpm production well (23-5033) at same location screened 120-150, yield 800 gpm	sand, gravel, boulders (Qpmf) fine-to-coarse sand, a little gravel (Qpmf)
445	23-5819	0-73 73-83 Cased to 80, yield >20 gpm	sand (Qpp over Qpmf) sand and gravel (Qpmf)
446	23-13108	0-87 87-502	sand, gravel (Qpmf) granite
447	23-10981	0-100 100-500	sand, clay, gravel overburden (Qpmf) granite
448	23-4041	0-65 65-400	sand and gravel (Qpmf) granite
449	23-6518	0-22 22-101	hardpan with some large boulders and lenses of clay, gravel, and sand (Qpmf over Qn) granite
450	23-10603	abbreviated 0-30 30-90 90-147 147-154 154-400	gravelly sandy silt (Qst) gray silt and very fine sand (Qpml) gray silt (Qpml) sand and gravel (Qpmf or weathered rock) red shale and conglomerate
451	23-15156	0-205 205-550 550-1000	sand (Qpp over Qpmf) red shale granite
452	23-3496	0-4 4-12 12-55 55-65 65-69 69-105 105-120 120-140 140-147 147-148	sand fill (Qal) gravel (Qal) very fine sand (Qm1, deltaic bottomset beds) clay, some sand (Qppl) brown clay (Qppl) gray clay (Qppl) clay, fine (Qppl) brown, gray clay (Qppl) hardpan (Qry) gray shale
453	23-5440	10	
454	23-1538	0-35 35-125	sand and gravel (Qm1) red and gray shale
455	23-9698	15	
456	23-5776	0-12 12-400	sand, gravel (Qm1) sandstone and granite (conglomerate)
457	23-2280	31	
458	23-5078	0-10 10-105	hardpan (Qry) red and gray shale
459	23-8098	0-117 117-300	sand gray rock
460	23-6944	100	
461	23-6946	>128 Cased to 118, yield 50 gpm from gravel (Qpmf)	

462	23-5454	0-10 10-40 40-95 95-140 140-153 Screened 133-153, yield 855 gpm	black muddy sand (Qal) fine sand and clay, some small gravel at 30 (Qal over Qpp) gray clay (Qpml) fine sand and gravel (Qpmf) sand and gravel (Qpmf)
463	23-5455	0-18 18-34 34-50 50-80 80-90 90-140 140-160 160-170 170-185 185-190 190-210 210-221 Screened 196-215, yield 1000 gpm	overburden (Qal) sandy clay, full of pea gravel (Qpp) gray sandy clay (Qpml) gray sticky clay (Qpml) very soft mucky clay (Qpml) sand and gravel (Qpmf) hard sticky clay (Qpml) fine silty sand (Qpmf) soft slimy clay (Qpml) sand (Qpmf) water-bearing sand and gravel (Qpmf) very coarse gravel with more clay (Qpmf or Qry)
464	23-6983	0-10 10-20 20-30 30-35 35-50 50-54 54-58	medium-to-coarse yellow sand (Qal) brown sand and gray clay (Qal over Qm1) gray clay (Qpml) gravel, sand, gray clay (Qpml over Qpmf) medium-to-coarse gray gravel (Qpmf) gravel with pieces of red shale (Qpmf) red shale
465	23-6984	0-5 5-30 30-45 45-110 110-129 129-144 Cased to 144, yield 56 gpm	brown sand (Qal) brown sand and gravel (Qal over Qm1) fine sand and gray clay (Qm1 over Qpml) gray clay (Qpml) gray sand and gravel (Qpmf) hard gray sand, boulders, and rock
466	23-6997	0-72 72-100	sand and gravel (Qm1) trap rock
467	23-11358	90	
468	23-7549	0-10 10-365	clay (Qry) trap rock
469	23-3107	0-35 35-55 55-120 120-200	hardpan, boulders (Qn) clay (Qn or Qsp) sand, boulders (Qn or Qsp) sandstone
470	23-5222	0-80 80-120 120-140 Cased to 140, yield 30 gpm, well flows to 3 feet above land surface at 2 gpm	sand (Qal over Qpp) clay (Qpml) sand (Qpmf)
471	23-5626	0-23 23-159 159-191 191-272 272-280 Cased to 280, yield 20 gpm	sand and gravel (Qst over Qpp) clay (Qpml) silty sand and gravel (Qpmf) clay (Qpml) water-bearing sand and gravel (Qpmf)
472	23-1729	0-298 Cased to 298, yield 100 gpm	sand, quick sand, clay, finally gravel with water (Qpp over Qpml over Qpmf)
473	23-6632	0-279 279-384	sand red rock and trap rock
474	23-844	0-50	sand and gravel (Qpp)

Cased to 50, yield 10 gpm

475	ACE PW-2	0-4	dark brown sandy silt (Qal)
		4-12	brown, gray gravelly sand to sandy gravel (Qst)
		12-34	brown very fine silty sand (Qpp, deltaic bottomset beds)
		34-74	brown, gray silt, some clay, trace sand (Qpml)
		74-130	dark gray silty clay (Qpml)
		130-132	dark gray sand with some silt (Qpmf)
476	ACE PTI-1	0-10	fill
		10-15	medium-to-coarse sand and gravel (Qal)
		15-23	medium-to-coarse sand, some silt (Qpp)
		23-44	fine sand and silt, trace clay (Qpp, deltaic bottomset beds)
		44-82	gray clay (Qpml)
		82-89	red-brown till (Qr)
		At 89	rock
477	ACE DU-114A	0-11	fill
		11-18	sand and gravel (Qal)
		18-48	clay (Qpml)
		48-49	rock
478	ACE DC-114	0-16	fill
		16-21	silty sand (Qal)
		21-46	gray clay (Qpml)
		46-51	coarse gray-black gravel and cobbles-till (Qry)
		At 51	rock
479	23-5858	0-18	yellow to brown sand (Qst)
		18-43	gray clay (Qpml)
		43-53	hard-packed sand (Qry)
		53-65	red shale
480	23-5052	0-30	clay and boulders (Qry)
		30-133	trap
		133-348	red rock
481	23-4988	15	
482	23-5187	14	
483	23-5186	10	
484	23-5204	20	
485	23-9158	0-10	sand, gravel (Qst)
		10-30	sand (Qst over Qpp)
		30-198	clay (Qpml)
		198-206	sand, gravel (Qpmf)
		206-275	red rock
486	23-4321	21	
487	23-4575	6	
488	23-4213	0-56	hardpan and sand overburden (Qry)
		56-165	red shale
489	23-4233	0-63	hardpan with boulders (Qry)
		63-123	red sandstone
490	23-115	0-64	hardpan (Qry)
		64-150	red shale
491	23-3152	4	
492	23-6867	0-48	clay, gravel, sand, etc. (Qry)
		48-190	red shale
		190-260	trap rock

493	23-633	0-30 30-47 47-135	boulders (Qry) gravel (Qry or Qsp) red rock
494	23-1094	26	
495	23-4244	15	
496	23-4327	23	
497	23-4217	30	
498	23-4243	27	
499	23-7197	0-20 20-498	clay and overburden (Qry) red and gray shale
500	23-4769	54	
501	23-4787	0-29 29-160	hardpan (Qry) red sandstone
502	23-5915	0-30 30-60 60-140 140-148 148-248	sand, gravel (Qst) sand (Qpp) clay (Qpml) fine sand, gravel, and clay (Qry) gray and red shale
503	23-6565	0-139 139-348	sand and clay shale
504	23-5029	0-18 18-54 54-88 88-237	sandy (Qst) clay (Qpml) silty sand and stones (Qpmf or Qry) shale and sandstone
505	22-6216	0-55 55-85 85-120	sand, clay (Qal over Qpml) hardpan, boulders (Qry) red rock
506	23-4939	0-10 10-25 25-100 100-115 115-153	sandy hardpan (af or Qst) sand and gravel (Qst) clay (Qpml) dirty sand and gravel (Qry or Qpmf) red and gray shale
507	23-3826	0-25 25-60 60-85	sand (Qal over Qst) clay (Qpml) rock
508	23-8151	0-87 87-175	gravel and clay (Qry) red rock
509	23-4304	0-40 40-154	sand and gravel (Qry) red shale
510	26-3358	0-30 30-197	red clay and boulders (Qry) red rock
511	23-4594	0-55 55-57 57-141	hardpan and boulders (Qry) sand (Qsp or weathered rock) shale
512	23-6859	30	
513	23-4045	0-30 30-107	hardpan (Qry) red shale
514	23-4134	7	

515	23-3247	7	
516	23-4357	0-12 12-230 230-240	rocky hardpan (Qry) red and gray shale trap rock
517	23-4097	0-19 19-110	hardpan (Qry) red and gray shale
518	23-4309	0-38 38-172	sand and clay (Qry) red rock
519	23-41-41 obs. well 6	abbreviated 0-14 14-48 48-52	sand and gravel (Qn) large stones, boulders, medium-to-coarse sand (weathered conglomerate) red shale
520	23-41-41 test well 7	abbreviated 0-14 14-48 48-52	sand and gravel (Qn) large stones, boulders, medium-to-coarse sand (weathered conglomerate) red shale
521	23-41-41 obs. well 2	abbreviated 0-6 6-48 48-58	brown clay (Qn) sand, clayish (Qpml) gravel, stones, rocks (weathered conglomerate)
522	23-41-41 obs. well 5	abbreviated 0-38 38-51	fine-to-medium sand (Qpmf) sand, stones, boulders, rock (weathered conglomerate)
523	23-41-41 obs. well 4	abbreviated 0-22 22-26 26-30 30-38	sand and stones (Qpmf) clay and sand (Qpmf) stones and sand (Qpmf) clay, sand, gravel, stones (weathered conglomerate)
524	23-41-41 obs. well 1	abbreviated 0-66 66-70 70-71	very fine sand, streaks of clay (Qpml) very hard dry sand (Qn) reddish shale
525	23-1091	0-36 36-42 Cased to 42, yield 17.5 gpm	dead sand (Qpml) good sand and gravel (Qpmf)
526	23-7922	0-40 40-350	sand, gravel, loam, etc. (Qn over weathered conglomerate) granite (conglomerate)
527	23-6637	15	
528	23-4308	0-14 14-300	clay and sand (Qn) sandstone
529	23-4303	0-9 9-245	sand, clay, gravel (Qn) red sandstone
530	25-18221	0-3 3-36 36-130	boulders (Qn) hardpan, sand, gravel, clay (Qn) shale and sandstone
531	23-6424	0-23 23-62 62-155	sandy (Qst) clay (Qpml) red shale and sandstone
532	23-7723	0-8 8-17 17-86 86-200	black humus (Qal) water-bearing sand with some gravel (Qst) gray clay (Qpml) red shale and sandstone

533	22-7691	30	
534	23-7250	0-5 5-11 11-24 24-150	gray clay with some black humus gray clay (Qpml) hardpan and stones with small layers of silty sand (Qn) conglomerate and shale
535	23-6415	0-4 4-23 23-86 86-92 92-155	humus and fill sandy (Qst) clay (Qpml) water-bearing sand (Qpmf or Qn) gray and red shale
536	23-5387	0-17 17-112 112-118 118-155	peat and sand (Qal) clay (Qpml) hardpan (Qn) red shale and sandstone
537	23-6547	0-3 3-17 17-98 98-104 104-250	black humus silty sand (Qst) gray clay (Qpml) water-bearing silty sand and gravel (Qpmf or Qn) red and gray shale and sandstone
538	22-4236	0-15 15-50 50-108 108-195	sand (Qst) gray clay (Qpml) dead sand (Qpml) red and gray rock
539	23-2569	0-30 30-72 72-90 90-150	sand (Qst) clay (Qpml) pink granite (conglomerate) red rock
540	23-148	12	
541	23-929	0-22 22-180	hardpan (Qn) gray and red shale
542	23-4538	0-125	clay, no water (Qpml)
543	23-6070	0-21 21-286 286-430	sandy (Qpp) clay and hardpan (Qpml over Qn) red and black shale
544	23-11803	0-220 220-700	sand, gravel, cobbles overburden red slate
545	23-7003	0-25 25-229 229-598	sand and silt (Qpp) gray silt (Qpml) gray and red shale
546	well LP02 of Hoffman and others (in review)	0-221 221-400	sand, clay, some stones (Qpp over Qpml) red shale
547	26-2295	0-10 10-90 90-245	sand (Qal) clay (Qpml) red and gray shale
548	22-9529	0-25 25-40 40-143 143-155 155-325	sand (Qpp) sand and clay (Qpp over Qpml) gray clay (Qpml) red gravel with clay (Qr) red and blue shale
549	26-2845	0-18 18-150 150-156	sand (Qst) clay (Qpml) hardpan 9Qry)

		156-439 439-468	gray and red shale trap rock
550	26-2564	0-90 90-105	sand and silt over gray clay (Qst over Qpml) red shale
551	26-1809	0-14 14-132 132-134 134-448 448-453	NR (Qpp) clay (Qpml) fine sand (Qry) trap rock red shale
552	26-2762	0-25 25-164 164-169 Cased to 169, yield 12 gpm	sand (Qst over Qpp) clay (Qpml) sand and gravel (Qpmf)
553	22-17205	9	
554	22-17896	0-14 14-273	hardpan and stones (Qn) granite
555	25-18707	2	
556	22-15901	24	
557	22-15731	0-22 22-150	hardpan, boulders, and gravel (Qn) granite
558	22-18043	0-12 12-200	hardpan and stones (Qn) granite
559	22-19158	0-29 29-160	hardpan, clay, some very large boulders with lenses of sand and gravel (Qn) limestone (gneiss)
560	25-13807	0-31 31-78	hardpan, boulders, clay (Qn) rock
561	25-15802	18	
562	22-21312	0-37 37-65	hardpan with some large boulders and small lenses of sand and gravel (Qn) conglomerated rock (gneiss)
563	22-13470	0-22 22-111	hardpan, clay, some large boulders (Qn) limestone (gneiss)
564	22-13968	0-16 16-103	hardpan, boulders and gravel (Qn) granite
565	22-19513	0-18 18-101	hardpan and stones (Qn) granite
566	25-44295	20	
567	22-17505	18	
568	25-7398	0-NR NR-115 Cased to 42, assumed depth to rock	hardpan, boulders (Qn) soft granite
569	22-7129	12	
570	25-12564	0-8 8-30 30-36 36-322	hardpan (Qpmf) dirty sand and gravel (Qpmf) hardpan (Qn) granite
571	25-12157	0-69 69-150	sand and gravel (Qpmd) conglomerate

572	25-11450	0-28 28-49 49-90	heavy gravel and sand (Qpmd topset beds) finer sand and gravel (Qpmd foreset beds) conglomerate
573	25-11955	0-85 Cased to 85, yield 10 gpm	boulders and hardpan (Qpmd)
574	25-10451	0-59 59-225	sand and gravel (Qpmd) granite
575	25-10885	0-NR NR-219 Cased to 104, assumed depth to rock	sand (Qpmd) mountain rock (gneiss)
576	25-9524	0-30 30-80 80-180	gravel, bank run (Qpmd topset beds) sand (Qpmd foreset beds) rotten granite
577	25-16555	0-22 22-85	hardpan and stones (Qn) limestone (gneiss?)
578	25-16306	0-20 20-95	hardpan and stones (Qn) limestone (gneiss?)
579	25-23066	0-64 64-270	sand and gravel with layers of fine sand (Qpmd) conglomerate
580	25-23065	0-58 58-330	sand and gravel with lenses of fine sand and some large boulders (Qpmd) conglomerate
581	22-21887	0-29 29-125	gravel and water (Qpmd) trap rock
582	23-14845	0-144 144-600	sand, clay, gravel (Qpmd) granite
583	23-14844	0-136 136-600	sand, clay, gravel (Qpmd) granite
584	23-6832	0-18 18-223	overburden with boulders and sand (Qn) granite
585	22-11279	0-136 136-167 167-200	sand and gravel (Qpmd) conglomerate granite
586	22-11889	0-151 151-300	sand and gravel (Qpmd) limestone
587	23-14817	0-108 108-500	sand, gravel, cobbles (Qpmd) granite
588	23-6677	0-105 Cased to 100, yield 15 gpm	sand, gravel (Qpmd)
589	22-17015	0-12 12-38 38-62 Cased to 50, yield >10 gpm	overburden sand (Qpmd) gravel (Qpmd)
590	23-8818	0-17 17-185	sand, gravel (Qpmd) red rock
591	25-22322	0-13 13-80 80-210 210-240	rotten conglomerate sandstone trap rock granite
592	23-8061	15	

593	22-1395	12	
594	22-20444	0-80	sand and gravel with layers of very fine sand and small lenses of gray clay (Qpmd)
		80-99	water-bearing sand and gravel (Qpmf)
		99-102	conglomerate
595	22-21998	0-71	fine sand with small lenses of coarse sand and gravel (Qpmd)
		71-180	granite
596	22-22990	0-64	fine sand with lense of coarse sand and gravel (Qpmd)
		64-68	hardpan and stones (Qpmf or Qn)
		68-160	granite
597	22-20546	0-54	fine sand and gravel with some layers of coarse sand and gravel (Qpmd)
		54-73	conglomerate
		73-155	granite
598	22-19384	0-22	sand and gravel (Qpmd)
		22-43	coarse sand and gravel (Qpmd)
		43-79	fine sand (Qpmd, lower foreset beds)
		79-98	silty water-bearing sand and gravel (Qpmf)
		98-162	conglomerate
599	22-18779	0-12	fine sand (Qpmd)
		12-21	large stones, gravel, and sand (Qpmd)
		21-42	sand with a little gravel (Qpmd foreset beds)
		42-49	water-bearing silty sand and gravel (Qpmf)
		49-150	conglomerate
600	22-18999	0-41	fine sand with lenses of gravel (Qpmd)
		41-150	conglomerate
601	22-24429	0-118	sand (Qpmd over Qpmf)
		118-450	trap rock
602	22-17682	0-59	very fine sand with few stones (Qpmf)
		59-65	gravel (Qpmf)
		65-94	silty sand and gravel (Qpmf)
		94-105	water-bearing sand and gravel (Qpmf)
			Cased to 105, yield 10 gpm
603	22-17729	0-88	sand and gravel with lenses of fine sand (Qpmf)
		88-107	water-bearing silty sand (Qpmf)
		107-125	conglomerate
604	25-16408	0-94	sand and gravel (Qpmf)
		94-150	conglomerate
605	25-12015	0-51	sand and gravel (Qpmf)
		51-110	conglomerate
606	25-18062	0-34	sand, gravel, large boulders (Qpmf)
		34-150	conglomerate
607	22-14902	0-55	sand and gravel with lenses of clay (Qpmf)
		55-170	conglomerate
608	22-16317	0-21	sand and gravel with lenses of hardpan (Qpmf)
		21-200	conglomerate
609	22-11229	0-81	sand and gravel (Qpmf)
		81-135	conglomerate
610	22-5302	0-29	sand and gravel (Qpmf)
		29-56	clay (Qpmf)
		56-108	water-bearing silty heaving sand (Qpmf)
		108-115	sand and gravel (Qpmf)
			Cased to 115, yield 10 gpm

611	22-11596	0-26 26-205	sand and gravel (Qpmf) conglomerate
612	25-11686	0-47 47-76 76-80 Cased to 80, yield 12 gpm	fine sand and gravel (Qpmf) water-bearing silty sand (Qpmf) water-bearing sand and gravel (Qpmf)
613	22-6912	0-17 17-21 21-162	sand and gravel becoming clayey (Qpmf) soft rock conglomerate
614	22-10939	0-61 61-72 72-105	sand and gravel (Qpmf) clay (Qpmf) conglomerate
615	22-7140	0-56 56-59 59-93	sand and gravel (Qpmf) clay (Qpmf) conglomerate
616	22-22528	0-21 21-26 26-65	hardpan, some large stones, lenses of sand and gravel (Qpmd over Qn) hardpan and stones (Qn) conglomerate
617	22-2700	0-60 60-65 65-200	blue clay (Qpml) fine sand (Qpmf) pink granite (conglomerate)
618	22-6912	0-17 17-21 21-162	sand and gravel becoming clayey (Qpmf) soft rock conglomerate
619	22-6911	0-21 21-168	boulders, sand and gravel (Qpmf) conglomerate
620	22-7159	0-24 24-147	sand, gravel, some large boulders (Qpmf) conglomerate
621	22-7158	0-9 9-90	sand and gravel (Qpmf) conglomerate
622	25-11509	17	
623	25-11040	13	
624	22-121204	0-9 9-175	hardpan and stones (Qn) limestone (conglomerate)
625	22-6761	0-13 13-177	hardpan (Qn) pink granite (conglomerate)
626	22-13580	0-5 5-350	clay (Qn) shale
627	22-15348	0-12 12-350	hardpan and stones (Qn) conglomerate
628	22-14529	0-16 16-351	hardpan and clay (Qn) conglomerate
629	25-17325	0-5 5-300	clay (Qn) red shale
630	25-13511	0-68 68-109 109-133 133-140 Cased to 140, yield 20 gpm	water-bearing heaving sand (Qpml) hardpan (Qpml?) silty sand (Qpmf) water-bearing sand and gravel
631	25-15059	0-3	fill

		3-89	hardpan and clay (Qpml)
		89-142	heaving silty sand (Qpml)
		142-147	water-bearing sand (Qpmf)
		Cased to 147, yield 15 gpm	
632	22-21605	abbreviated	
		0-208	water-bearing sand and gravel, a little clay from 76-98 (Qst over Qpmf)
		208-210	conglomerate
		Screened 180-210, yield 300 gpm	
633	22-22499	abbreviated	
		0-7	fill
		7-9	humus
		9-50	sand and small gravel (Qst)
		50-78	fine sand (Qpml)
		78-145	sandy clay, clayey fine sand, some gravel (Qpml over Qpmf)
		145-200	sand and gravel (Qpmf)
		200-208	sandy hardpan (Qn)
		208-216	conglomerate
		Screened 175-200, yield 2000 gpm	
634	22-21883	abbreviated	
		0-11	silty sand with some gravel (Qst)
		11-29	fine sand (Qst)
		29-51	silty fine sand (Qpml)
		51-90	sand and gravel (Qpmf)
		90-92	gray conglomerate (anomalous depth to rock, not contoured)
635	25-52907	abbreviated	
		0-21	brown silty clay (Qal over Qpml)
		21-30	gray silty clay (Qpml)
		30-35	silty fine gray sand (Qpml)
		35-90	silty brown-gray clay (Qpml)
		90-97	gray clay with sand streaks (Qpml)
		97-118	clay and gravel (Qry)
		118-130	gray rock
636	25-10660	0-100	clay (Qpml)
		100-114	sand and gravel (Qpmf)
		Cased to 114, yield 50 gpm	
637	22-13497	>242	
		Screened 209-242 in sand and gravel (Qpmf), yield 1200 gpm well flows to 1.5 feet above land surface	
638	22-12140	abbreviated	
		0-26	clay and hardpan (Qst over Qpml)
		26-50	very fine silty sand (Qpml)
		50-100	fine sand (Qpml)
		100-248	water-bearing sand and gravel (Qpmf)
		248-252	conglomerate
		Screened 248-252 well flows to 13 inches above land surface at 5 gpm	
639	22-13923	abbreviated	
		0-10	yellow sandy clay (Qst)
		10-15	gray clay, some fine sand (Qpml)
		15-35	fine sand, some gray clay (Qpml)
		35-50	fine gray sand (Qpml)
		50-100	fine silty sand (Qpml)
		100-243	water-bearing sand and gravel (Qpmf)
		Screened 210-243, yield 771 gpm	
640	25-18882	0-41	hardpan, gravel, and stones (Qpmf)
		41-148	water-bearing silty sand with lenses of clay (Qpml and Qpmf)
		148-170	conglomerate
641	25-52908	abbreviated	
		0-10	medium-to-coarse sand (Qst)

		10-30	silty fine sand (Qst)
		30-55	fine-to-medium sand (Qst)
		55-75	very fine sand (Qpml)
		75-100	silt with very fine sand (Qpml)
		100-115	silt and clay (Qpml)
		115-125	silt (Qpml)
		125-160	silt, fine sand, gravel (Qpmf)
		160-164	conglomerate
		Screened 133-153, yield 300 gpm	
642	22-45-499 well 4	abbreviated	
		0-31	brown sand and gravel (Qst)
		31-139	gray very fine silty sand with lenses of clay (Qpml)
		139-185	sticky gray clay (Qpml)
		185-195	gray clay with gravel (Qn)
		195-200	conglomerate
643	22-45-499 well 3	abbreviated	
		0-113	coarse brown silty sand (Qst over Qpml)
		113-129	clean fine sand (Qpml)
		129-146	very fine sand with lenses of clay (Qpml)
		146-161	gray clay (Qpml)
		161-234	water-bearing sand and gravel (Qpmf)
		234-235	trap rock
644	25-32755	abbreviated	
		0-15	sandy silt (Qst)
		15-25	dark gray clay, silt, and fine sand (Qpml)
		25-33	gray clay with angular pebbles (Qpml)
645	25-15948	0-21	sandy (Qst)
		21-52	clay (Qpml)
		52-92	water-bearing sand and gravel
		Cased to 92, yield 30 gpm	
646	25-16372	0-30	silty sand mixed with clay (Qst)
		30-54	water-bearing silty sand (Qpml and Qpmf)
		54-85	heaving sand (Qpmf)
		85-92	sand and gravel (Qpmf)
		Cased to 92, yield 35 gpm	
647	25-17139	0-90	silty sand with lenses of clay (Qpmf and Qpml)
		90-120	water-bearing heaving silty sand (Qpmf)
		120-141	water-bearing heaving coarse sand with some gravel (Qpmf)
		Screened 141-145, yield 60 gpm	
648	25-21515	0-18	dug well
		18-31	sand (Qst)
		31-58	silty fine sand with lenses of gray clay (Qpml)
		58-125	trap rock
649	26-1912	0-50	dirt, sand, clay (Qst over Qpml)
		50-144	trap rock
650	25-31053	40	
651	25-17326	0-50	bank run, sand (Qpmd, Qpmf)
		50-170	trap rock
652	25-17327	0-25	dirt (Qal over Qpml)
		25-52	sand (Qpmf)
		52-150	trap rock
653	25-29984	0-78	silt, sand, clay and rocks
		78-178	red rock
654	25-20236	0-4	dark soil and clay (Qpml)
		4-31	sand and gravel with some small boulders (Qpmd)
		31-152	conglomerate

655	25-20287	0-25 25-152	sand and gravel (Qpmd) conglomerate
656	25-20288	0-19 19-151	sandy gravel (Qpmd) conglomerate
657	25-20364	0-21 21-152	sand and gravel (Qpmd) conglomerate
658	25-20366	0-7 7-152	sand and gravel (Qpmd) conglomerate
659	25-20365	0-14 14-152	sand and gravel (Qpmd) conglomerate
660	25-20368	0-5 5-152	sand and gravel (Qpmd) conglomerate
661	25-20367	0-4 4-127	sand and gravel (Qry) conglomerate
662	25-38875	4	
663	25-39769	3	
664	25-18041	4	
665	25-20655	0	
666	25-22844	0-8 8-77 77-172	hardpan and stones with small lenses of fine sand (Qpmd) conglomerate trap rock
667	25-20485	0-10 10-108 108-127	sand and gravel (Qpmd) conglomerate and sandstone trap rock
668	25-25401	0-8 8-100	sand and gravel with small lenses of clay (Qpmd) trap rock
669	25-16251	6	
670	25-17729	0-19 19-27 27-105	sand and gravel (Qst over Qpmd) conglomerate trap rock
671	25-20662	0-10 10-20 20-36 36-40 40-46 46-51	hardpan, gravel, stones (Qst) silty fine sand (Qpml) silty coarse sand (Qpmd) water-bearing silty sand and gravel (Qpmd) water-bearing coarse sand (Qpmd) water-bearing sand and gravel (Qpmd)
		Cased to 51, yield 20 gpm	
672	25-47402	0-85 85-95	gray clay (Qst over Qpml) granite (conglomerate)
673	25-42652	abbreviated 0-9 9-39	silt and fine sand (Qal) silt, fine sandy silt, varved (Qpml)
674	25-23222	0-23 23-54 54-70	hardpan with clay and small lenses of sand (Qst) very fine silty sand (Qpml) water-bearing sand and gravel (Qpmd)
		Cased to 70, yield 12 gpm	
675	25-12532	0-15 15-25 25-92	dirt (Qpmd) clay (Qpmd) sand (Qpmd)

Cased to 92, yield 20 gpm

676	25-17159	0-68 68-77 77-120	silty sand streaked with coarse sand (Qpml) water-bearing heaving sand (Qpmf) trap rock
677	25-17140	0-63 63-75 75-91 Cased to 91, yield 20 gpm	fine silty sand (Qpml) heaving sand with some gravel(Qpmf) water-bearing sand and gravel (Qpmf)
678	25-19714	0-18 18-37 37-51 Cased to 51, yield 15 gpm	hardpan, sand, gravel (Qpmf) clay (Qpml) water-bearing sand and gravel (Qpmf)
679	25-22768	0-18 18-44 44-64 64-70 Cased to 70, yield 18 gpm	dark brown hardpan and clay (Qpml) brownish-gray very fine silty sand with small lenses of clay (Qpml) light brown coarse water-bearing silty sand with some gravel (Qpmf) water-bearing sand and gravel (Qpmf)
680	25-20212	0-18 18-52 52-85 Cased to 85, yield 15 gpm	sandy (Qpmf) silty fine sand with lenses of clay (Qpml) water-bearing sand and gravel (Qpmf)
681	25-34688	0-55 55-205	fine sand and water (Qpml) trap rock
682	25-20896	0-31 31-47 47-71 71-80 Cased to 80, yield 15 gpm	coarse sand and gravel (Qpmf) very fine sand (Qpml) coarse silty sand and gravel (Qpmf) water-bearing sand and gravel (Qpmf)
683	25-21674	0-27 27-48 48-62 62-65 65-72	sand and gravel (Qpmf) silty fine sand with layers of clay (Qpml) water-bearing silty sand and gravel (Qpmf) hardpan and stones (Qpmf) water-bearing sand and gravel (Qpmf)
684	25-40320	29	
685	25-18880	0-29 29-34 34-47 47-55 Cased to 55, yield 15 gpm	sand and gravel (Qpmf) clay (Qpml) hardpan and stones (Qpmf) water-bearing sand and gravel (Qpmf)
686	25-38423	0-30 30-350	sand, gravel, cobbles (Qpmf over Qry) granite (basalt)
687	25-38360	0-34 34-195	sand, clay, gravel (Qpml over Qry) slate
688	25-38424	0-29 29-200	sand, clay, gravel, cobbles (Qpml over Qpmf) granite (basalt)
689	25-16993	0-19 19-24 24-55 55-109	sand and gravel (Qpmf) clay (Qpml) water-bearing sand (Qpmf) trap rock
690	25-16994	0-21 21-26 26-57 57-107	sandy (Qpml) clay (Qpml) water-bearing silty sand (Qpmf) trap rock
691	25-16321	0-18	sand and gravel (Qpmf)

		18-59	silty sand (Qpml)
		59-63	water-bearing sand and gravel (Qpmf)
		63-75	trap rock
692	25-21473	0-12	hardpan with small lenses of sand and gravel (Qal)
		12-55	gray clay with small layers of silty sand (Qpml)
		55-175	trap rock
693	25-18091	0-46	fine sand with lenses of clay (Qpml)
		46-150	trap rock
694	25-14542	0-125	sand and gravel (Qpmd)
		125-274	pink granite (conglomerate)
695	25-49189	115	
696	25-13962	0-8	hardpan (Qry)
		8-191	pink granite (conglomerate)
697	25-25845	9	
698	25-7000	0	
699	25-30103	abbreviated	
		0-35	brown-gray sand, stones, gravel, trace clay (Qry)
700	25-37982	abbreviated	
		0-27	brown fine sand and fine-to-medium gravel (Qpmf)
		27-40	basalt
701	25-17372	0-86	sand, gravel, large stones with small lenses of clay (Qpmf)
		86-91	water-bearing sand and gravel
			Cased to 91, yield 10 gpm
702	25-22669	0-58	brown sand, gravel, trace to some silt (Qpmf)
		58-60	refusal
703	25-22670	0-8	fill
		8-17	brown medium-to-fine sand (Qpmf)
		17-28	brown silty fine sand (Qpmf)
		28-64	brown silt, sand, gravel (Qpmf)
		64-102	gravel, sand, silt, some cobbles and boulders-till (Qpmf, Qry)
704	25-22616	abbreviated	
		0-60	brown sand and gravel (Qpmf)
		60-62	brown large stones with very little sand (Qry)
		62-63	gray trap rock
705	25-22674	0-44	brown fine sand with layers of silt (Qpmf)
		44-49	brown medium-to-fine sand and gravel, trace cobbles, trace silt (Qpmf)
		49-69	brown medium-to-fine sand, trace silt (Qpmf)
		69-75	rock?
706	25-22667	0-47	brown medium sand, trace gravel, trace silt (Qpmf)
		47-54	brown medium-to-coarse sand and gravel
		54-60	brown silt with fine sand layers (Qpmf)
		60-95	brown medium-to-fine sand, some gravel, some silt, trace cobbles (Qpmf)
707	25-22672	0-58	brown fine-to-medium sand with layers of gravel, some layers of silt (Qpmf)
		58-112	brown fine-to-medium sand and gravel with some cobbles and some silt (Qpmf)
		112-115	rock?
708	25-6609	0-60	real fine sand (Qpmf)
		60-80	coarse gravel and sand (Qpmf)
			Cased to 80, yield 10 gpm
709	25-16532	0-62	sand and gravel, water-bearing below 47 (Qpmf)
			Cased to 62, yield 30 gpm

710	25-7727	0-30 30-50 50-92	sand (Qpmf) clay (Qpml) sand (Qpmf)
Cased to 92, yield 15 gpm			
711	25-8207	0-73	fine sand, coarse sand (Qst over Qpmf)
Cased to 73, yield 6 gpm			
712	25-22845	0-8 8-17 17-52 52-72 72-73	brown sand and gravel with some large stones (Qst) water-bearing brown silty sand with some gravel (Qst over Qpml) very fine water-bearing gray brown silty sand with small lenses of clay (Qpml) water-bearing brown sand and gravel (Qpmf) conglomerate
713	25-18147	0-38 38-81	clay (Qpml) sand and gravel (Qpmf)
Cased to 81, yield 15 gpm			
714	25-30227	0-45 45-51 51-148	silt, gray clay, sand, water (Qstl over Qpml) gray clay and gravel (Qry) gray trap rock
715	25-21033	0-38 38-44 44-140	coarse sand and gravel, small lenses of clay (Qpmf) fine silty sand and gravel (Qpmf) conglomerate
716	25-22468	0-71 71-160	sand and gravel with layers of very fine sand and clay (Qpmf) conglomerate
717	25-23288	0-13 13-32 32-38 38-41 41-110	sand and gravel with small layers of clay (Qpmf) clean sand and gravel (Qpmf) fine sand (Qpmf) hardpan and stones (Qpmf) conglomerate
718	25-21031	0-24 24-45	very fine silty sand with lenses of gray clay (Qstl over Qpml) trap rock
719	25-15904	4	
720	25-15909	2	
721	25-7327	5	
722	25-7468	3	
723	25-10309	2	
724	25-40810	15	
725	25-18552	4	
726	25-23173	3	
727	25-38568	10	
728	25-20235	3	
729	22-10009	3	
730	25-11146	0-75	hardpan, clay, gravel (Qstl over Qpml over Qpmf)
Cased to 75, yield 50 gpm			
731	25-10668	0-6 6-54 54-87 87-205	gravel (Qstl) clay (Qpml) hardpan with some large boulders (Qpmf or Qry) red shale and conglomerate
732	25-15430	0-8	sandy (Qstu)

		8-61 61-121	clay (Qpml) trap rock
733	25-16549	0-15 15-52 52-150	sand (Qstu) clay (Qpml) trap rock
734	25-16649	0-10 10-40 40-48 48-125	sand (Qstu) clay (Qpml) sand (Qpmf or Qry) trap rock
735	25-21677	0-13 13-21 21-44 44-54 54-61 61-70 70-81 81-200	sand and gravel with large boulders (Qstl) hardpan with layers of clay (Qpml) gray clay (Qpml) hardpan and stones (Qpmf or Qry) water-bearing sand and gravel with some large boulders (Qpmf or Qry) silty water-bearing fine sand with some stones (Qpmf or Qry) hardpan and stones (Qpmf or Qry) red and gray shale
736	25-10190	0-65 Cased to 65, yield 50 gpm	clay, hardpan, and gravel(Qpml over Qpmf or Qry)
737	25-15803	4	
738	25-33293	20	
739	25-6958	4	
740	25-31362	6	
741	25-12810	0-18 18-59 59-62 62-108	sand and gravel (Qstu) clay (Qpml) hardpan (Qry) trap rock
742	25-9909	0-70 Cased to 70, yield 10 gpm	clay, hardpan, boulders (Qpml over Qpmf or Qry)
743	25-8205	0-40 40-85 85-130	clay (Qpml) sand (Qpml or Qpmf) shale
744	25-7881	0-82 82-140	clay and sand (Qstu over Qpml) shale
745	25-43884	0-5 5-9 9-15 15-20	yellow-brown sand (Qstu) yellow-brown medium sand to coarse sand, some small gravel (Qstu) gray clay, some silt (Qpml) gray silty clay with medium sand (Qpml)
746	25-8086	0-20 20-80 80-133	sand (Qstu) clay (Qpml) shale
747	25-28735	0-5 5-8 8-13 13-29 29-35 35-39 39-64 64-65 At 65	coarse brown sand, graded (Qst) fine and medium gray sand (Qst) brown stiff sandy clay (Qpml) gray stiff sandy clay (Qpml) gray soft sandy clay (Qpml) fine gray silty sand (Qpml) silty soft clay (Qpml) till (Qr) refusal
748	ACE B4	0-5 5-10 10-32	sand (Qal) silty sand (Qr) silt (Qr)

749	ACE B9	0-5 5-10 10-14 14-32	silty sand (Qal) sand (Qal) silty sand (Qal) silt (Qpml)
750	25-9230	0-10 10-38 38-65 65-78 78-325	stony fill coarse gravel and sand (Qal) red clay (Qpml over Qr) stony red hardpan (Qr) red shale
751	25-11258	0-NR NR-150 Cased to 75, assumed depth to rock	clay (Qpml) red shale
752	25-9913	0-NR NR-85 Cased to 42, assumed depth to rock	sand, clay (Qst over Qpml) shale
753	25-17624	0-16 16-38 38-44 44-110	sandy (Qpmf) clay (Qpml) hardpan and stones (Qry) trap rock
754	25-20539	0-41 41-89 89-99 99-202	sand and gravel (Qpmf) gray clay (Qpml) hardpan and stones (Qry) trap rock
755	25-19300	20	
756	25-12450	4	
757	22-20560	5	
758	25-12493	0-10 10-12 12-50	sand (Qry) clay (Qry) trap rock
759	25-20110	0-4 4-152	clay and hardpan (Qry) trap rock
760	26-1472	1	
761	26-16312	3	
762	25-28068	0-32 32-302	sand, gravel (Qry) granite (basalt)
763	26-4428	10	
764	26-1697	0-8 8-96	sand (Qpp) trap rock
765	25-19178	9	
766	26-3982	6	
767	25-9054	25	
768	25-13618	2	
769	25-39070	14	
770	26-793	0	
771	25-1038	48	
772	25-522	3	

773	25-20234	0-4 4-10 10-127	sandy clay loam (Qry) silty red sand (Qry) trap rock
774	25-3237	1	
775	25-15658	5	
776	25-2583	8	
777	25-43319	5	
778	25-30764	10	
779	25-15902	0-15 15-180	clay (Qry) trap rock
780	25-3165A	0-18 18-93	clay (Qry) trap rock
781	25-10139	4	
782	25-20577	5	
783	25-16158	3	
784	25-20112	0-5 5-122 122-253	clay and hardpan (Qry) trap rock red shale and sandstone
785	25-38246	15	
786	25-22334	4	
787	26-4247	0-18 18-31 31-42 42-45 45-48	dug well clay (Qry) hardpan (Qry) water-bearing silty sand and gravel (Qry or Qsp) sandstone
788	26-4893	0-31 31-85	hardpan, clay, small layers of sand and stones (Qry) red and gray shale and sandstone
789	26-4324	0-12 12-18 18-96 96-142	clay (Qpml) sand (Qpml) hardpan and stones (Qry) red shale and sandstone
790	26-4302	2	
791	26-365	6	
792	25-12217	3	
793	25-24177	5	
794	25-24211	2	
795	25-24176	4	
796	25-20296	0-8 8-84 84-240	hardpan and stones (Qry) trap rock red and gray shale and sandstone
797	25-24499	0-3 3-69 69-261	hardpan (Qry) trap rock red and gray shale and sandstone

798	25-23174	2	
799	25-17652	0-8 8-140	hardpan and stones (Qry) red and gray shale and sandstone
800	25-20263	0-4 4-125 125-302	dead sand and clay (Qry) trap rock red shale and sandstone
801	25-18959	0	
802	25-17788	3	
803	25-20488	0-8 8-130	hardpan and stones (Qr) red sandstone
804	25-16007	0-16 16-166	hardpan and stones (Qr) red and gray shale and sandstone
805	25-17714	2	
806	25-20492	0-8 8-211	hardpan, large stones, and small lenses of gravel (Qry) red and gray shale
807	25-15729	0-11 11-166	hardpan, stones, and some boulders (Qry) red and gray shale
808	25-18224	0-3 3-180	hardpan (Qry) red and gray shale
809	25-14300	7	
810	25-17932	5	
811	25-20262	2.5	
812	25-15761	0-8 8-290	clay (Qry) red shale
813	25-10055	8	
814	25-13356	0-13 13-305	hardpan, stones, boulders (Qry) red and gray shale
815	25-20591	2.5	
816	25-17558	3	
817	25-12688	2	
818	25-9879	0-9 9-122	hardpan (Qr) red and gray shale
819	25-19901	0-6 6-166	hardpan and stones (Qr) red and gray shale
820	25-17702	0-8 8-240	hardpan and stones (Qr) red and gray shale
821	25-10510	9	
822	25-10669	11	
823	25-10509	8	
824	25-10671	10	
825	25-10958	11	
826	25-11386	7	

827	25-10670	10	
828	25-10024	9	
829	25-10255	11	
830	25-10075	12	
831	25-10206	7	
832	25-11387	11	
833	25-10253	9	
834	25-10618	7	
835	25-9921	5	
836	25-9922	4	
837	25-10619	7	
838	25-20399	0-11 11-160	hardpan with some large stones (Qr) red and gray shale
839	25-23864	0-9 9-160	hardpan with small lenses of sand and gravel (Qr) shale and sandstone
840	25-13016	0-17 17-100	hardpan, clay and boulders (Qr) red shale
841	22-25260	8	
842	25-19439	0-4 4-18 18-100	fill hardpan and clay (Qr) red and gray shale
843	25-21619	0-7 7-145	hardpan with some large stones (Qry) shale and sandstone
844	25-11768	0-21 21-55	clay and hardpan (Qry) red shale
845	25-19850	0-30 30-75	hardpan, boulders, and lenses of sand and gravel (Qry) red and gray shale
846	25-21726	0-41 41-80	hardpan and stones with small lenses of sand and gravel and some large boulders (Qr) red and gray shale
847	25-11180	0-48 48-59 59-93	clay (Qpml or Qr) hardpan and stones (Qr) red shale
848	25-13529	0-54 54-69 69-73 Cased to 73, yield 25 gpm	hardpan and stones (Qry) water-bearing silty sand and gravel (Qsp) water-bearing sand and gravel (Qsp)
849	25-12807	0-16 16-58	hardpan, clay, and some large stones (Qry) gray and red shale
850	26-7681	0-38 38-53 53-58 58-130	hardpan, lenses of sand and gravel with some very large stones (Qry) water-bearing very silty sand and gravel (Qsp) hardpan and stones (Qb?) red and gray shale
851	25-25548	0-34	hardpan with some very large stones and small lenses of sand and gravel (Qry)

		34-47	water-bearing silty sand and gravel (Qsp)
		47-51	clay (Qsp)
		51-67	heaving water-bearing sand and gravel (Qsp)
		67-73	hardpan and stones (Qb?)
		73-125	black and red shale
852	25-15440	0-33	hardpan, stones, and some large boulders (Qry)
		33-59	clay (Qsp)
		59-96	silty water-bearing sand and gravel (Qsp)
		96-105	sandstone
853	26-11061	0-8	sandy hardpan (Qry)
		8-248	trap rock
854	25-24406	0-7	sand and gravel (Qpmf)
		7-13	conglomerate
		13-100	trap rock
855	ACE FL-11	0-2	fill
		2-16	silty sand (Qst)
		16-22	clay (Qpml)
856	26-2693	0-20	sand (Qst)
		20-40	clay (Qpml)
		40-71	sand (Qpmf)
		Cased to 71, yield 15 gpm	
857	26-29699	41	
858	26-1474	0-70	clay and stones (Qst over Qr)
		70-94	gray sand and gravel (Qsp)
		At 94	red shale
		Screened 67-92, yield 360 gpm	
859	26-1461	0-40	clay and boulders (Qr)
		40-45	coarse gravel (Qsp)
		45-70	sandy clay with little gravel (Qsp)
		70-84	coarse gravel and sand (Qsp)
		84-91	red shale
		Screened 70-84, yield 50 gpm	
860	26-1496	0-30	clay and stones (Qpmf over Qr)
		30-82	sand and coarse gravel (Qsp)
		At 82	red shale
		Screened 58-78, yield 554 gpm	
861	N23-41-585	0-7	silty fine sand (Qst)
		7-24	silty sand and gravel (Qst)
		24-55	silt and clay (Qpml)
862	N23-41-528	0-160	clay (Qpml)
		160-350	gray and red shale
863	26-3627	0-8	sand (Qst)
		8-19	clay (Qpml)
		19-50	sand and gravel (Qr)
		50-60	hardpan (Qr)
		60-77	fine sand (Qsp)
		77-143	black and red shale
864	26-5392	0-7	brown sand (Qst)
		7-29	gray clay (Qpml)
		29-38	hardpan and stone with some boulders (Qry)
		38-48	trap rock
865	26-2876	0-15	sand (Qst)
		15-50	clay (Qpml)
		50-107	sand (Qpmf)
		Cased to 107, yield 10 gpm	

866	26-4243	0-21	sandy (Qst)
		21-89	clay (Qpml)
		89-106	water-bearing sand and gravel (Qpmf)
			Cased to 106, yield 15 gpm

¹Identifiers of the form 26-xxxx, 25-xxxx, 22-xxxx, and 23-xxxx are well permit numbers issued by the N. J. Department of Environmental Protection, Bureau of Water Allocation. Identifiers of the form xx-xx-xxx are N. J. Atlas Sheet grid coordinates of well records in the Bureau of Water Allocation files that do not have permit numbers. Identifiers of the form Nxx-xx-xxx are N. J. Atlas Sheet grid coordinates of entries in the N. J. Geological Survey permanent note collection. Identifiers preceded by “ACE” are U. S. Army Corps of Engineers borings on file at the N. J. Geological Survey. Identifiers preceded by “DOT” are N. J. Department of Transportation borings on file at the N. J. Geological Survey.

²A number without a log is the depth, in feet below land surface, to bedrock reported for wells where the surficial material is either not identified or identified only as “overburden” or other non-informative terminology. For wells and borings with logs of the surficial materials of sufficient detail, the depth (in feet below land surface) and driller’s or logger’s description is provided. Inferred map units and comments by author are in parentheses. Some inferred map units may not exactly match the map and sections due to scaling and lack of detail in drillers’ descriptions. All descriptions are reproduced as they appear in the original source, except for minor format, punctuation, and spelling changes. Logs identified as “abbreviated” have been condensed for brevity. Many bedrock descriptions have been condensed; these are not identified as abbreviated. The notation “NR” indicates “not reported”. For wells completed in surficial materials, the screened interval (in feet below land surface), or depth below land surface (in feet) to which the well is cased, and yield (in gallons per minute, gpm) are reported beneath the log. Map units are inferred from the known extent of materials at the surface and from known depositional settings, in addition to the drillers’ descriptions.

Table 2.--Composition of pebbles in surficial deposits

Site	Unit	Number of pebbles	Percentages of pebbles					
			gneiss ¹	gray mudstone ²	red sandstone, mudstone, conglomerate ³	purple quartzite ⁴	basalt ⁵	chert ⁶
1	Qbr	151	66	22		12		
2	Qbu2	82	57	40		3		
3	Qbu 1	100	89	3		8		
4	Qbu2	114	63	33		4		
5	Qbu2	146	69	27		4		
6	Qbu 1	118	27	70		3		
7	Qfy	82	85	9		6		
8	Qn	155	55	37		8		
9	Qpmd	134	75	20		5		
10	Qpmf	159	63	32		5		
11	Qpmf	115	65	31		4		
12	Qpmf	146	68	29		3		
13	Qpmd	164	61	30		9		
14	Qpmf	148	68	27		5		
15	Qpp	129	68	27		5		
16	Qpp	133	67	29		4		
17	Qml	98	61	34		5		
18	Qry	118	36	34	5	6	19	
19	Qml	107	63	34		3		
20	Qst	91	66	31		3		
21	Qst	121	62	35		3		
22	Qry	81	56	17		2	24	1
23	Qn	132	76	12		2	10	1
24	Qry	169	59	19		1	20	1
25	Qst	120	64	25	4	3	4	
26	Qpmd	107	56	41		3		
27	Qpmf	166	54	43		3		
28	Qpmf	150	33	53	14			
29	Qpmd	161	27	24	49			
30	Qpmd	133	30	18	52			

31	Qpmf	157	34	18	48			
32	Qpmf	106	27	39	30	4		
33	Qpmf	48	27	23	40	10		
34	Qpmf	147	34	21	44	1		
35	Qn	144	59	31	6		4	
36	Qstu	110	50	35	6	9		
37	Qbu3	128	78	14		8		
38	Qpmf	136	22	21	57			
39	Qpmf	153	65	31		4		

¹Proterozoic gneiss from the Highlands.

²Paleozoic sedimentary rocks from the Wallkill Valley and Green Pond mountain belt.

³Sedimentary rocks from the Newark Basin.

⁴Quartzite-conglomerate from the Green Pond and Skunnekunk formations in the Green Pond mountain belt.

⁵Basalt from the Watchung and Hook Mountain basalt flows of the Newark Basin.

⁶Chert from Paleozoic carbonate rocks in the Wallkill Valley.