Well 14/4W-19C1

Type of record: Driller's log. Altitude: About 745 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	14	14	
Pan	40	54	
Drift	4	58	
Pan	10	68	
Mississippian System:			
Meramec Series:			
Shale, limy	3	71	
Limestone	1	72	W. B.

Well 14/4W-21A1

Type of record: Driller's log. Altitude: About 865 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	45	45	
Mississippian System:			
Meramec Series:			
Limestone	130	175	W. B.
Osage Series:			
Bluestone	25	200	
Limestone	2	202	
Bluestone	198	400	

Well 14/4W-21R1

Type of record: Driller's log. Altitude: About 840 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	32	32	
Mississippian System:			
Meramec Series:			
Limestone	60	92	
Shale, limy, gray	2	94	
Limestone	16	110	
Shale, limy, gray	10	120	
Limestone	12	132	
Shale, limy, gray	8	140	
Limestone	120	260	
Osage? Series:			
Shale, sandy, gray	3	263	
Sandstone, gray	6	269	
Shale, sandy, gray	621	890	T. D. 1,128 ft

Well 14/4W-24H1

Type of record: Driller's log. Altitude: About 810 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Surface	3	3	
Hardpan	68	71	
Clay, gummy, yellowish-red	5	76	
Mississippian System:			
Meramec Series:			
Bluestone, sandy, soft	8	84	
Limestone, blue-gray	42	126	W. B.

Well 14/4W-25Q2

Type of record: Driller's log. Altitude: About 780 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Dirt	20	20	
Sand	20	40	
Sand and gravel	25	65	
Clay, red	7	72	
Mississippian System:			
Osage? Series:			
Bluestone	26	98	W. B.

Well 14/4W-27L1

Type of record: Driller's log. Altitude: About 830 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, gray	22	40	
Mississippian System:			
Meramec Series:			
Limestone, gray	24	64	W. B.

Well 14/4W-27P1

Type of record: Driller's log. Altitude: About 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, red	8	8	
Hardpan, gray	12	20	
Mississippian System:			
Meramec Series:			
Limestone, soft, gray	20	40	W. B. at 32 ft

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 14/4W-30R1

Type of record: Driller's log. Altitude: About 735 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	32	32	
Mississippian System:			
Meramec Series:			
Limestone, gray, with cracks and crevices, with a trace of clay	18	50	W. B.

Well 14/4W-34B1

Type of record: Driller's log. Altitude: About 790 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	78	78	
Mississippian System:			
Meramec Series:			
Limestone	72	150	W. B.
Osage Series:			
Sandstone and limestone	25	175	W. B.

Well 14/4W-34R2

Type of record: Driller's log. Altitude: About 775 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Dirt	20	20	
Mud, blue	15	35	
Gravel	7	42	
Mississippian System:			
Meramec Series:			
Limestone	14	56	W. B.

Well 14/5W-12B1

Type of record: Driller's log. Altitude: About 800 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Dirt	20	20	
Mud, blue	30	50	
Mississippian System:			
Meramec Series:			
Limestone	12	62	W. B.

Well 14/5W-20E1

Type of record: Driller's log. Altitude: About 790 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	22	22	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	24	46	
Bluestone	17	63	W. B.

Well 14/5W-31B1

Type of record: Driller's log. Altitude: About 800 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, brown	12	32	
Sandstone, white	20	52	
Sandstone, coral	12	64	
Sandstone, brown	12	76	
Sandstone, dark-brown	8	84	
Shale	28	112	
Shale, black	8	120	

Well 14/5W-31G1

Type of record: Driller's log. Altitude: About 770 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	7	7	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	9	16	
Shale, sandy	6	22	
Shale, dark-gray	42	64	
Sandstone	1.5	65.5	
Shale, sandy, light-gray	20.5	86	
Mississippian System:			
Meramec Series:			
Limestone	1	87	

Well 14/5W-31H2

Type of record: Driller's log. Altitude: About 770 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	4	4	

Well 14/5W-31H2--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone	4	8	
Shale, sandy, gray	77	85	
Mississippian System:			
Meramec Series:			
Limestone	2	87	
Shale, gray	3	90	
Limestone	43	133	W. B.

Well 14/5W-34M1

Type of record: Driller's log. Altitude: About 690 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Surface	32	32	
Pennsylvanian System:			
Lower? Series:			
Sandstone	28	60	
Mississippian System:			
Meramec Series:			
Limestone	74	134	W. B.

Well 14/5W-34M2

Type of record: Driller's log. Altitude: About 705 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	12	12	
Sand, yellow	1	13	
Clay, gray, and hardpan	33	46	
Mississippian System:			
Meramec Series:			
Limestone, gray	5	51	
Mud seam	11	62	
Shale, soft, muddy, blue	12	74	
Limestone, gray	51	125	W. B.

Well 14/5W-35R1

Type of record: Driller's log. Altitude: About 720 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift	24	24	
Mississippian System:			
Meramec Series:			
Limestone ledges and mud seams	26	50	
Limestone, solid	174	224	W. B.

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 15/3W-2P1

Type of record: Driller's log. Altitude: About 875 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Clay, yellow	8	11	
Hardpan	111	122	
Sand	26	148	W. B.
Mississippian System:			
Osage Series:			
Bluestone	22	170	W. B. at 160 ft

Well 15/3W-9M1

Type of record: Driller's log. Altitude: About 840 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	23	23	
Clay, gray, and hardpan	107	130	
Mud, sandy, gray	20	150	
Clay, sandy, gray	20	170	
Sand, muddy	8	178	
Mississippian System:			
Osage Series:			
Bluestone	17	195	W. B.

Well 15/3W-22B1

Type of record: Driller's log. Altitude: About 855 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	18	18	
Clay, gray	19	37	
Mississippian System:			
Osage Series:			
Bluestone	28	65	W. B.

Well 15/3W-29M1

Type of record: Driller's log. Altitude: About 730 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	8	8	
Gravel, yellow, mixed with clay	10	18	
Hardpan, gray	3	21	
Sand and gravel, gray	1	22	W. B.

Well 15/3W-31J1

Type of record: Driller's log. Altitude: About 760 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	23	23	
Clay, gray	24	47	
Limestone, gray	3	50	Boulder?
Clay, sandy, yellow	10	60	
Clay, gray, and hardpan	52	112	
Sand, fine, dirty, gray	1	113	
Mississippian System:			
Osage Series:			
Bluestone	37	150	W. B.

Well 15/3W-33P2

Type of record: Driller's log. Altitude: About 910 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	8	8	
Mississippian System:			
Osage Series:			
Limestone, gray	19	27	
Limestone, gray, with bluestone	48	75	
Sandstone, yellow, with bluestone	5	80	W. B. at 80 ft
Limestone, gray and blue	12	92	
Shale, blue	12	104	
Bluestone	86	190	
Bluestone, hard, dark	15	205	W. B.
Bluestone	185	390	
Bluestone, hard, dark, with a trace of shale	25	415	

Well 15/4W-2J1

Type of record: Driller's log. Altitude: About 950 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, gray	47	62	
Mississippian System:			
Osage Series:			
Limestone with bluestone	12	74	
Limestone, gray	11	85	W. B.

Well 15/4W-10N1

Type of record: Driller's log. Altitude: About 950 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	25	25	
Mississippian System:			
Osage Series:			
Limestone, hard	15	40	
Sandstone, honey-combed	20	60	W. B.
Bluestone	--	60	

Well 15/4W-11A2

Type of record: Driller's log. Altitude: About 910 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift	97	97	
Mississippian System:			
Osage Series:			
Limestone	1	98	
Bluestone	88	186	W. B.

Well 15/4W-11A4

Type of record: Driller's log. Altitude: About 930 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	10	10	
Clay, gray	13	23	
Muck, sandy, gray	25	48	
Hardpan, mixed streaks of yellow and gray	11	59	
Record missing	25	84	
Mississippian System:			
Osage Series:			
Limestone, gray	14	98	
Sandstone, yellow	3	101	W. B.
Limestone	11	112	
Bluestone	18	130	
Shale, blue	2	132	
Limestone, speckled blue and white	3	135	
Bluestone	37	172	
Sandstone, hard, blue	4	176	
Bluestone	24	200	

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 15/4W-11H1

Type of record: Driller's log. Altitude: About 920 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Subsoil	10	10	
Hardpan	26	36	
Sand	7	43	
Hardpan	36	79	
Sand	1	80	
Mississippian System:			
Osage Series:			
Limestone	30	110	W. B.
Sandstone, blue	35.5	145.5	W. B.

Well 15/4W-12A1

Type of record: Driller's log. Altitude: About 900 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	15	15	
Clay, gray	45	60	
Hardpan, gray	20	80	
Sand, gray, and gravel	2	82	W. B.

Well 15/4W-12C1

Type of record: Driller's log. Altitude: About 905 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	7	7	
Clay, gray	25	32	
Mississippian System:			
Osage? Series:			
Limestone, gray	10	42	W. B.

Well 15/4W-17H1

Type of record: Driller's log. Altitude: About 910 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift	45	45	
Mississippian System:			
Meramec Series:			
Limestone ledges and mud	67	112	
Osage Series:			
Sandstone, shaly, blue	18	130	W. B.

Well 15/4W-20J1

Type of record: Driller's log. Altitude: About 870 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	20	20	
Clay, gray	19	39	
Sand	1	40	W. B.
Clay, gray	50	90	
Mississippian System:			
Meramec Series:			
Limestone	3	93	
Clay	2	95	
Limestone	15	110	W. B.

Well 15/4W-26J1

Type of record: Driller's log. Altitude: About 810 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	17	17	
Clay, gray	63	80	
Sand and gravel, dirty	2	82	
Gravel, clean	2	84	W. B.

Well 15/5W-19H1

Type of record: Driller's log. Altitude: About 815 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel and sand	32	32	
Grit, gray	20	52	Gravelly clay?
Mud	6	58	
Pennsylvanian System:			
Lower Pennsylvanian Series:			
Sandstone, hard, bright-red	31	89	
Rock and shale	11	100	
Black borings (coal or black shale)	3	103	
Shale	1	104	

Well 15/5W-34K1

Type of record: Driller's log. Altitude: About 735 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	25	25	
Clay, gray	25	50	
Hardpan	8	58	

Well 15/5W-34K1--Continued

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Limestone, shelly, mixed with hardpan and sand	4	62	W. B., limestone boulders?
Mississippian System:			
Meramec Series:			
Limestone	98	160	Dry

Well 16/3W-10Q1

Type of record: Driller's log. Altitude: About 905 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Hardpan, gray	87	90	
Sand	18	108	
Mississippian System:			
Osage Series:			
Sandstone, blue	44	152	W. B.

Well 16/3W-13N1

Type of record: Driller's log. Altitude: About 920 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, gray	120	120	
Sand, trace	---	120	
Clay, gray	40	160	
Mississippian System:			
Osage Series:			
Sandstone, brown	14	174	
Sandstone, blue	44	218	W. B.

Well 16/3W-14A2

Type of record: Driller's log. Altitude: About 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, moist, compact, brown	8	8	
Sand, fine, moist, with brown moist clay	7	15	
Sand, moist, with brown wet clay	5	20	
Sand, moist, with gray wet clay	20	40	

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 16/3W-15B1

Type of record: Driller's log. Altitude: About 905 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Hardpan, gray	50	53	
Mississippian System:			
Osage Series:			
Sandstone, blue	92	145	W. B.

Well 16/3W-16M1

Type of record: Driller's log. Altitude: About 885 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, yellow and gray	128	130	
Sand and clay streaks	11	141	W. B.

Well 16/3W-20F1

Type of record: Driller's log. Altitude: About 880 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	3	3	
Clay, yellow	7	10	
Hardpan, gray	31	41	
Sand, dirty	15	56	Dry
Sand	6	62	W. B.
Mississippian System:			
Osage Series:			
Bluestone, soft, with streaks of gray sandstone	78	140	W. B. at 100 ft

Well 16/3W-34B1

Type of record: Driller's log. Altitude: About 925 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil	2	2	
Clay, yellow	6	8	
Hardpan	16	24	
Mississippian System:			
Osage Series:			
Bluestone with streaks of sandstone	33	57	W. B. at 42 ft

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 16/4W-1P2

Type of record: Driller's log. Altitude: About 840 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Soil and clay	16	16	
Gravel, fine	2	18	
Clay	18	36	
Mississippian System:			
Osage Series:			
Shale	8	44	
Limestone	3	47	
Shale, sandy	116	163	W. B.

Well 16/4W-33G1

Type of record: Driller's log. Altitude: About 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, very-sandy, yellow	8	8	
Muck, gray	5	13	
Mississippian System:			
Osage Series:			
Bluestone	2	15	
Muck, gray	5	20	
Bluestone	15	35	W. B.

Well 16/4W-33H1

Type of record: Driller's log from memory. Altitude: About 845 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Hardpan	60	60	
Mississippian System:			
Osage Series:			
Limestone	5	65	W. B.
Sandstone	15	80	W. B.

Well 16/4W-34J1

Type of record: Driller's log. Altitude: About 890 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Drift	49	49	
Limestone	3	52	Boulder?
Dirt, mucky	103	155	
Mississippian System:			
Osage Series:			
Bluestone	86	241	W. B.

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 16/4W-34N1

Type of record: Driller's log. Altitude: About 840 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Drift----------	117	117	
Mississippian System:			
Osage Series:			
Limestone----------	3	120	
Bluestone----------	93	213	W. B.

Well 16/5W-2H1

Type of record: Driller's log. Altitude: About 820 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil----------	6	6	
Clay, yellow----------	8	14	
Hardpan, sandy----------	16	30	
Sand and gravel----------	8	38	Dry
Hardpan, sandy----------	82	120	
Gravel, gray----------	2	122	W. B.

Well 16/5W-5Q1

Type of record: Driller's log. Altitude: About 835 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay----------	65	65	
Mississippian System:			
Meramec? Series:			
Limestone----------	50	115	
Osage Series:			
Shale----------	35	150	

Well 16/5W-5R1

Quaternary System:			
Recent and Pleistocene Series:			
Drift----------	58	58	
Mississippian System:			
Meramec Series:			
Limestone, hard----------	60	118	
Osage? Series:			
Limestone, soft----------	17	135	W. B.

Table 4.--Selected well logs, Putnam County, Indiana--Continued

Well 16/5W-7F1

Type of record: Driller's log. Altitude: About 790 feet.

Material	Thickness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow	16	16	
Clay, gray, hardpan and sand	8	24	
Sand	1	25	
Clay, gray, and hardpan	15	40	
Hardpan, sandy, yellow	3	43	
Hardpan, sandy, gray	7	50	
Mud and sand	10	60	
Hardpan, sandy, gray	39	99	
Gravel	1	100	W. B.

Table 5.--Field chemical analyses of water from wells, Putnam County, Indiana

(Results in parts per million)

Well number: See text for description of well-numbering system.
Geologic age: Pl, Pleistocene; P, Pennsylvanian; M, Mississippian.
Material: G, Gravel; Ls, limestone; S, sand; Sh, shale; Sh-ss, shaly sandstone; Sls, siltstone; Ss, sandstone.

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
12/3W- 3D1	G	Pl	1-11-60	56	1.2	381	10	14	228	
3N1	Ls	M	2-21-61	52	4.0	512	19	10	384	
4N1	Ls	M	1-11-60	56	1.5	439	12	12	316	
5A1	Ls	M	1-11-60	54	3.0	444	11	10	312	
5J1	Ls	M	1-11-60	54	.5	508	13	18	388	
6P1	Ls	M	2-21-61	--	.1	346	55	62	376	
10R1	S,G	Pl	2-21-61	--	.5	376	18	8	296	
13A1	Ls	M	1-11-60	54	.2	342	31	22	312	
14R1	G	Pl	1-14-60	54	.1	405	22	12	364	
12/4W- 5M1	Ls	M	2-21-61	--	.1	283	150	12	356	
10A1	Ls	M	1-11-60	55	1.3	342	10	4	220	
10A2	G	Pl	1-11-60	56	1.5	351	6	6	212	
10N1	Ls	M	2-21-61	--	.5	488	38	16	424	
12M1	Ls	M	1-11-60	54	.5	356	110	46	420	
16A1	Ls	M	1-11-60	54	1.0	454	46	14	368	
12/5W- 3A1	Ls	M	5-28-58	--	.2	346	---	2	256	
3G1	Ls	M	3-28-60	52	1.0	429	15	14	308	
7R1	S,G	Pl	2-21-61	52	3.0	327	12	8	236	
13P1	Ls	M	11-16-60	56	1.0	327	34	10	292	
15M1	Ss,Sh	M	3-28-60	55	1.5	78	55	206	184	
13/2W- 7J1	Ls	M	1-12-60	54	4.0	488	12	18	292	
13/3W- 2D1	Ls,Sls	M	2-22-61	--	3.0	517	17	12	424	
2H1	Ls	M	1-12-60	53	4.0	512	13	20	396	
8H1	Ls?	M	4-20-61	57	5.0	395	10	8	292	
9F1	Ls	M	2-22-61	56	5.0	495	13	4	344	

Table 5.--Field chemical analyses of water from wells, Putnam County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
13/3W-10M1	Ls	M	1-12-60	55	5.0	468	9	6	312	
11G1	Ls	M	2-22-61	--	3.0	468	13	4	332	
12M1	Sls	M	1-13-60	56	.3	517	20	8	392	
12N1	G	Pl	2-22-61	54	>7.5	512	12	8	384	
12Q1	Ls,Sls	M	2-22-61	--	.5	351	20	8	296	
13D1	Ss	M	1- -60	--	5.0	434	45	14	336	
13D2	Sls	M	1-14-60	55	2.0	473	7	6	252	
18Q1	Ls	M	1-13-60	52	---	395	36	12	352	Silty
19A1	Ls	M	3- 8-61	54	.1	454	11	12	364	
21M1	Ls	M	4-20-61	54	.1	420	18	10	352	
22P1	G	Pl	1-14-60	58	5.0	439	8	4	320	
24E1	Sls	M	6- 3-58	54	2.5	527	--	4	336	
24L1	Sls	M	2-22-61	--	.5	468	9	10	304	
25K1	Ss	M	1-13-60	54	.8	459	22	6	348	
25P1	Ls	M	1-14-60	55	1.5	473	17	8	364	
26B1	Ls	M	1-12-60	54	2.0	434	27	8	344	
27H1	Ls	M	3-22-61	--	.1	342	16	18	328	
28N1	Ls	M	1-12-60	56	1.5	444	11	10	336	
31L2	Ls	M	3-22-61	--	.1	371	14	28	300	Gas trace of oil
31P1	Ls	M	1-12-60	54	.3	283	8	4	216	
31P2	Ls	M	2-22-61	--	.1	332	13	10	252	
32C1	S	Pl	1-12-60	54	3.0	429	12	4	324	
33L1	Ls	M	2-22-61	58	5.0	376	13	12	272	
34D1	G	Pl	1-13-60	54	4.0	425	12	4	308	
34P1	G	Pl	2-22-61	57	4.0	493	15	6	352	
35M1	G	Pl	2-22-61	--	1.0	454	15	10	340	
13/4W- 1Q1	Ls	M	4-20-61	--	.2	332	20	16	280	
2E1	Ls	M	3- 8-61	56	.1	429	15	14	360	

13/4W- 7R1	Ls	M-	3- 8-61	54	0.1	381	27	42	232	
9M1	Ls	M	1-15-60	55	2.5	410	38	8	320	
9N1	Sls	M	3- 8-61	59	.1	547	11	1,080	216	
9N2	Ls	M	1-15-60	53	.3	410	83	20	380	
10M1	Ls	M	1-14-60	55	2.5	371	25	42	296	
10M2	Ls	M	1-15-60	55	.3	400	18	352	176	
11B1	Ls,Sls	M	2-22-61	--	.1	712	12	416	144	
11E1	Ls	M	3- 8-61	56	.3	259	13	14	224	
12D1	Ls	M	3- 8-61	55	.2	410	24	12	336	
14H1	Ls	M	1-15-60	56	.3	459	64	14	420	
14J1	Ls	M	2-22-61	56	.1	303	15	14	268	
24D1	Ls	M	2-22-61	--	1.0	420	13	32	264	H_2S odor
34J1	Ls	M	1-14-60	55	1.5	327	48	34	268	
34R1	Ls	M	1-14-60	55	2.0	410	89	6	356	
36H1	Ls	M	1-14-60	58	.3	449	51	22	400	
36J1	Sls,Ls	M	1-14-60	52	2.5	376	39	10	320	
36J6	Ls	M	3-22-61	--	.5	293	12	14	228	Silty
13/5W- 1F1	Ls	M	3- 9-61	--	.1	415	30	40	456	
2C1	Ls	M	2-17-60	50	5.0	381	26	14	288	
20J1	Ls	M	2-11-60	50	7.5	351	37	12	280	
21B1	Ls	M	2-11-60	50	.5	142	145	38	248	
21J1	Sh,Ss	M?	2-11-60	60	1.0	312	21	6	228	
23B1	G	P1	2-11-60	58	1.0	312	23	10	248	
23P1	S,G	P1	2-11-60	58	.3	264	13	6	200	
24C1	Ls	M	2-11-60	54	2.0	346	83	18	304	
24D1	Ls	M	2-11-60	54	.5	337	125	28	380	
24E1	Ls	M	2-11-60	50	.1	464	16	140	152	
24M1	S,G	P1	4-19-61	54	.1	386	53	80	356	
25P1	G	P1	2-11-60	54	4.0	439	7	190	248	Contaminated?
31K1	-----	M	3-22-61	--	.5	434	23	10	16	
14/3W- 2R1	Sls	M	3-10-61	--	3.0	508	10	8	344	
4P1	Sls	M	2-10-60	56	2.0	483	8	6	352	
4P2	Sls	M	2-10-60	58	2.0	464	21	6	348	
9B1	Ls,Sls	M	5-28-58	56	3.0	503	----	3	326	

Table 5.--Field chemical analyses of water from wells, Putnam County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
14/3W- 9B3	Sls	M	2-10-60	52	1.0	449	12	8	316	
9E1	Ls	M	2-10-60	55	3.0	425	8	6	280	
9F1	Ls	M	3-10-61	--	1.0	459	11	8	316	
9K1	Sls	M	2-10-60	54	1.0	434	11	4	216	
9K2	G	Pl	3-10-61	57	.5	503	10	14	376	
10A1	Sls	M	2- 1-60	55	1.0	425	58	12	364	
16C1	Sls	M	2- 1-60	56	1.0	478	10	6	296	
16P2	Ls	M	3-10-61	--	.3	429	37	10	368	
17K1	Sls	M	3-10-61	56	5.0	512	11	8	384	Gas
20L1	Ls	M	2- 1-60	--	2.0	459	13	32	380	
24R1	Sls	M	2- 1-60	54	3.0	478	9	22	356	
25C1	Sls	M	2- 1-60	58	1.5	449	90	58	456	
31J1	Ss	M	3-10-61	57	7.5	439	17	8	356	
33D1	Ls	M	3-10-61	--	.5	390	40	14	368	Gas
33Q1	Ls	M	1-15-60	56	5.0	420	10	4	312	
34G1	Ls	M	3-10-61	--	1.5	434	10	8	256	Gas
34H1	Ls	M	3-10-61	--	.3	332	12	6	192	Gas
35P2	Ss	M	3-10-61	56	1.5	547	15	10	428	
35R1	Ls	M	3-10-61	55	.1	405	26	10	348	Silty
36N1	Ls	M	3-10-61	56	.3	478	38	16	372	
14/4W- 3M1	G	Pl	3- 9-61	--	2.0	493	23	28	348	
5H2	Ls	M	3- 9-61	--	.1	468	16	16	396	
7Q1	Ls	M	2-18-60	52	.5	400	120	8	412	
11P1	Ls	M	3-24-61	--	.1	444	15	8	364	
12B1	Ls	M	2-10-60	54	1.5	517	9	6	384	
12F1	Ls	M	2-10-60	56	.5	429	27	6	340	
12P1	Ls	M	2-10-60	52	5.0	449	17	6	348	
14J1	Ls	M	3- 9-61	57	.1	322	25	14	264	Gas

14/4W-15E1	G	P1	2-10-60	52	0.5	278	100	10	296
19C1	Ls	M	3- 9-61	--	1.5	488	8	6	356
21C1	Ls	M	2-18-60	58	.3	351	135	74	372
22A1	Ls	M	2- 5-60	54	.5	361	95	16	368
24H1	Ls	M	2-10-60	52	1.0	464	14	4	336
27E1	Ls	M	1-15-60	58	.3	488	20	6	376
27P1	Ls	M	4-20-61	57	.1	273	42	20	300
29P1	Ls	M	2-17-60	54	2.0	342	90	28	320
31K1	Ls	M	3- 9-61	56	1.0	410	10	10	164
34J1	Ls	M	1-15-60	58	.3	400	81	14	212
35G1	Ls	M	3- 9-61	--	.3	371	16	10	316
35M1	Ls	M	2-18-60	58	1.0	488	38	14	392
14/5W- 2K1	Ls	M	2-16-60	50	2.5	459	32	6	352
4M1	Sh,Ss	P	2-16-60	50	5.0	361	11	6	268
6J1	Sh,Ss	P	2-17-60	54	.3	361	15	12	272
7P1	G	P1	2-16-60	50	6.0	425	12	6	316
9R1	Ss	P	3- 9-61	--	.5	88	11	8	28
10B1	Ss	P	2-16-60	50	.5	303	12	6	224
10J1	Ls	M	2-18-60	58	1.0	439	8	6	312
12H1	Sh	M	2- 4-60	54	.8	449	30	8	300
20H1	Ss	P	3- 9-61	57	7.5	322	13	8	240
25P1	Ls	M	2-19-60	54	2.0	307	55	14	264
31B1	------	P	3- 9-61	--	.3	376	19	16	288
33A1	Sls	P?	2-17-60	52	4.0	425	12	6	288
34M1	Ls	M	2-17-60	58	.5	332	12	30	212
35R1	Ls	M	2-17-60	52	2.0	234	9	6	152
36A1	Ls	M	2-17-60	54	.3	293	22	36	300
15/3W- 2A1	Ss	M	2- 1-60	54	10.0	425	10	4	300
2L1	Sls	M	2- 1-60	54	3.0	473	19	14	320
2P1	Sls	M	4-20-61	56	1.0	390	11	8	272
10N1	Ss	M	3-17-61	54	.5	391	16	8	304
10Q1	G	P1	3-17-61	54	.5	215	35	28	208
15B1	Ss	M	3-17-61	--	.1	361	80	52	476
15Q1	Sls	M	2- 1-60	53	7.5	508	13	6	376
16P1	Sls	M	2- 1-60	54	5.0	415	31	6	328

Table 5.--Field chemical analyses of water from wells, Putnam County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
15/3W-22B1	Sls	M	3-17-61	--	5.0	498	15	6	376	Water turbid
28H1	Sls	M	2- 1-60	58	4.0	551	11	180	272	
29M1	S,G	Pl	3-16-61	53	1.5	332	34	10	304	
33P1	Sls	M	2- 1-60	54	1.0	454	110	16	484	
33P2	Ss,Sls	M	3-11-61	--	.1	151	75	20	324	
33Q1	Ls	M	2- 1-60	54	.4	415	80	20	436	
15/4W- 2J1	Ls	M	3-21-61	--	.1	371	80	26	376	
2Q1	Ss	M	3-21-61	--	2.0	488	14	8	340	
8B1	Ss	M	2- 4-60	54	.5	322	12	6	220	
10K1	Ls	M	3-21-61	53	2.0	522	11	8	404	
10N1	Ss	M	2- 1-60	54	.6	283	98	42	372	
12A1	S,G	Pl	3-21-60	--	3.0	459	12	6	332	
12C1	Ls	M	3-21-60	--	2.0	405	10	20	288	
17H1	Sh-ss	M	2- 2-60	56	1.0	434	26	10	324	
20J1	Ls	M	3-24-61	--	3.0	425	11	6	312	
21H1	Ls	M	12- 2-60	50	2.0	468	13	6	308	
22R1	Ls	M	2- 2-60	54	1.0	439	46	14	368	
24M1	Sh	M	3-21-61	--	.1	390	24	18	380	
26J1	G	Pl	3-24-61	--	7.5	537	12	6	368	
32H1	Ls	M	2- 2-60	54	2.5	464	10	6	336	
34G1	Ls	M	2- 2-60	54	1.0	512	19	6	380	
15/5W-11D1	Ls	M	3-21-61	56	1.5	459	15	14	368	
11D2	Ls	M	3-21-61	--	.1	449	23	14	380	
15J1	G	Pl	3-21-61	52	3.0	439	10	8	332	
17C1	Ss	P	2-16-60	50	.5	376	63	18	324	
18P1	Sh	P	3-21-61	--	.1	371	120	44	416	
24B1	Ls	M	2- 4-60	54	.8	415	90	6	400	
26L1	Ls	M	2- 4-60	53	2.5	454	16	6	336	

15/5W-27G1	Ls	M	2- 4-60	54	0.5	312	33	6	248	
35R1	Ls	M	2-16-60	52	.5	478	15	20	384	
16/3W- 1H1	G	P1	1- -60	47	3.0	337	15	4	164	
2P1	S1s	M	1- -60	54	.1	307	12	4	148	
5C1	G	P1	2- 5-60	58	10.0	639	14	4	348	Gas
9R1	S1s?	M	1- -60	48	1.5	439	11	6	284	
10K1	Ss	M	3-20-61	--	.3	434	12	6	320	
10Q1	Ss	M	3-20-61	--	1.5	425	11	6	300	
13N1	Ss	M	3-17-61	--	.1	498	10	8	300	
15B1	Ss	M	1- -60	58	1.5	322	26	38	288	
16M1	S	P1	3-20-61	--	.1	351	34	12	264	
20F1	S1s,Ss	M	4-20-61	54	.3	351	11	8	268	
20G1	S1s	M	1- -60	54	5.0	322	14	6	228	
20N1	S1s	M	1- -60	55	5.0	415	14	4	208	
23K1	S1s	M	1- -60	47	2.5	356	8	6	232	
27R1	S1s	M	2-16-60	50	5.0	493	9	10	352	
28F1	S1s	M	1- -60	54	4.0	322	12	6	224	
16/4W- 4G1	S1s	M	1- -60	50	2.5	210	12	138	308	
5N1	Ss	M	2-19-60	52	2.0	498	11	24	336	
11C1	Ss	M	3-20-61	--	5.0	556	9	6	400	
14A1	Sh	M	1- -60	60	4.0	376	18	6	184	
14M1	G	P1	1- -60	58	3.0	322	14	10	240	
16K1	G	P1	3-21-61	--	.5	493	8	6	356	
16R1	G	P1	1- -60	54	5.0	298	10	6	192	
18B1	S1s	M	2-19-60	52	4.0	415	11	4	292	
19A1	G	P1	2-19-60	56	4.0	512	12	8	388	
19Q1	G	P1	2-19-60	50	1.5	547	8	6	380	
24C1	S1s	M	1- -60	48	4.0	390	9	8	228	
26P1	S1s	M	1- -60	48	4.0	229	9	100	284	
33H1	Ls,Ss	M	3-21-61	56	.1	600	27	10	516	Silty
34N1	S1s	M	1- -60	47	1.5	439	12	28	152	
35G1	S1s	M	1- -60	48	4.0	346	13	16	256	
16/5W- 1G1	G	P1	3-20-61	--	1.0	468	12	32	368	
1H1	Ss	M	3-20-61	55	.1	405	14	12	328	

Table 5.--Field chemical analyses of water from wells, Putnam County, Indiana--Continued

Well	Material	Geologic age	Date of collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (Calcium, magnesium)	Remarks
16/5W- 2H1	G	P1	3-20-61	--	0.8	483	11	8	352	
5G1	Ls	M	1- -60	54	2.5	283	34	12	220	
5R1	Ls	M	1- -60	55	.5	327	17	8	228	
7F1	G	P1	3-21-61	56	.5	444	10	10	308	
11N1	S,G	P1	3-21-61	56	1.0	498	14	6	380	
13N1	S,G	P1	3-28-60	50	3.0	415	135	16	424	
22E1	Sh	M	1- -60	54	5.0	288	11	24	156	

Table 6.--Records of springs, Putnam County, Indiana

Spring number: See text for well-numbering system.
Altitude: Altitude of land-surface datum from topographic map.
Water-bearing material: Ls, limestone; Ss, sandstone; T, till.
Geologic age: M, Mississippian; Pl, Pleistocene.
Flow: e, estimated; m, measured.
Use: D, domestic; N, not used.
Field chemical analyses: In parts per million; water samples collected on date of measurement.

Spring	Owner	Altitude (feet)	Water-bearing material	Geologic age	Flow (gpm)	Date of measurement	Use	Temperature (F°)	Field chemical analyses					Remarks
									Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (calcium, magnesium)	
13/5W-22L1	F. Aker	640	Ss	M?	5e	4-11-61	N	48	0.1	132	24	10	108	Spring from fracture zone
14/3W-15R1	A. G. Bryan	865	T	Pl	15e	4-26-61	N	50	<.1	210	18	10	200	
14/4W- 2G1	M. Reeves	710	Ls	M	15e	4-26-61	N	51	<.1	317	21	8	280	Spring from solution opening
17P1	C. L. Smith	710	Ls	M	15e	4-14-61	D	50	.1	337	75	42	364	Do
17Q1	E. Hamilton	720	Ls	M	5e	4-14-61	D	--	---	---	--	--	---	Do
27M1	C. E. Stevens	830	Ls	M	15e	4-28-61	D	50	<.1	298	40	12	304	Do
15/3W-30K1	L. F. Alter	730	T	Pl	.2e	4-26-61	N	50	<.1	410	53	12	382	
16/4W-33H2	F. Tate	830	Ls	M	5e	5-15-61	N	56	.1	337	28	0	300	Spring from solution opening
16/5W-10H1	F. Dahlgren	790	Ls	M	40m	4-27-61	N	49	<.1	288	23	12	280	Do

Table 7.--Field chemical analyses of water from streams, Putnam County, Indiana

(Results in parts per million)

Name	Location	Date of Collection	Temperature (°F)	Iron (Fe)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Hardness as $CaCO_3$ (calcium, magnesium)	Remarks
			T. 12 N., R. 3 W.						
Mill Creek	NW¼SE¼ sec. 2	10-3-60	58	0.2	307	25	12	284	Sample taken at bridge on county road
			T. 12 N., R. 5 W.						
Deer Creek	SE¼SE¼ sec. 2	10-3-60	60	.2	215	17	16	208	Do
Mill Creek	SE¼NE¼ sec. 10	10-3-60	61	.2	220	16	10	200	Do
Croys Creek	NW¼NW¼ sec. 17	10-3-60	57	.2	239	46	10	224	Do
			T. 13 N., R. 3 W.						
Vermillion Branch	SE¼SE¼ sec. 35	10-3-60	58	.3	312	17	14	284	Do
			T. 13 N., R. 4 W.						
Deer Creek	SW¼NW¼ sec. 10	10-5-60	59	.1	307	55	14	264	Do
			T. 13 N., R. 5 W.						
Deweese Creek	SE¼NE¼ sec. 23	10-5-60	57	.2	259	21	12	232	Sample taken at bridge on federal highway
Big Walnut Creek	NE¼SE¼ sec. 29	10-3-60	61	.2	176	30	22	232	Sample taken at bridge on county road
			T. 14 N., R. 3 W.						
Deer Creek	SW¼SW¼ sec. 16	10-5-60	58	.1	356	24	8	324	Do
			T. 14 N., R. 4 W.						
Big Walnut Creek	NW¼SW¼ sec. 1	10-5-60	59	.2	327	31	12	308	Do

			T. 14 N., R. 5 W.						
Jones Creek	SE¼SE¼ sec. 2	10-4-60	68	0.1	278	26	8	252	Do
Long Branch	NE¼NE¼ sec. 21	10-4-60	61	.1	273	14	8	228	Do
Little Walnut Creek	NE¼NW¼ sec. 23	10-4-60	62	.1	288	18	10	280	Do
Big Walnut Creek	SW¼NW¼ sec. 25	10-4-60	62	.2	337	34	30	328	Do
			T. 15 N., R. 3 W.						
Do	NE¼NE¼ sec. 6	10-5-60	57	.2	312	35	12	304	Do
Plum Creek	SW¼SE¼ sec. 17	10-5-60	60	.1	327	30	12	308	Do
Clear Creek	SE¼SE¼ sec. 28	10-5-60	59	.1	361	34	10	352	Do
Miller Creek	SE¼NE¼ sec. 34	10-5-60	59	.2	332	44	16	340	Do
			T. 15 N., R. 5 W.						
Owl Creek	SE¼NW¼ sec. 27	10-4-60	65	.1	312	21	10	280	Do
			T. 16 N., R. 3 W.						
Big Walnut Creek	NW¼NW¼ sec. 13	10-5-60	57	.2	327	43	14	320	Do
			T. 16 N., R. 4 W.						
Lick Creek	NW¼NE¼ sec. 1	10-5-60	57	.2	327	36	26	336	Do
Raccoon Creek	SE¼SW¼ sec. 6	10-5-60	55	.2	342	26	12	320	Sample taken at bridge on federal highway
			T. 16 N., R. 5 W.						
Ramp Creek	NE¼NW¼ sec. 25	10-5-60	55	.1	351	32	14	336	Sample taken at bridge on county road
Raccoon Creek	NE¼NE¼ sec. 33	10-5-60	57	.2	351	24	12	324	Do

Table 8.--Water levels in observation wells in Putnam County, Indiana
(In feet below land-surface datum. Water level:
e, estimated; h, tape measurement)

Putnam 1. (14/5W-14Q1). Paul McMahan. Greencastle. SW¼SE¼, sec. 14, T. 14 N., R. 5 W. Dug artesian well in sand and gravel, diameter 36 inches, depth 18.6 feet. Land-surface datum is about 665 feet above msl. Highest water level is 1.48 below lsd, June 17, 1945; lowest 7.43 below lsd, Sept. 19, 1945. Records available: 1945-46.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1945		Aug. 6	5.02	Jan. 28	2.70	May 6	2.78
		13	5.08	Feb. 4	2.65	14	1.75
June 14	2.28	22	5.34	11	2.20	22	4.69
17	1.48	27	5.59	18	1.77	July 29	5.03
25	2.48	Sept. 12	6.73	26	1.98	Aug. 19	4.50
July 2	2.85	19	7.43	Mar. 11	2.55	27	5.22
9	3.60	Oct. 29	5.04	Apr. 15	3.24	Sept. 8	5.88
16	4.16			22	3.86		
23	4.58	1946		28	4.17		
30	4.63	Jan. 21	2.15				

Putnam 2. (12/4W-9M2). W. W. Coffman. Cloverdale. NW¼SW¼ sec. 9, T. 12 N., R. 4 W. Drilled unused well in limestone, diameter 6 inches, depth 202 feet. Land-surface datum is above 850 feet above msl. Highest water level is 20.83 below lsd, April 19, 1952; lowest 132.21 below lsd, Nov. 30, 1952. Records available: 1949-53.

1949		Sept. 4	124.43	Jan. 16	63.62	May 7	108.69
		11	127.78	18	69.53	14	110.55
Apr. 1	129.89	18	126.35	20	70.63	21	111.10
10	127.60	25	125.55	23	79.30	28	110.55
21	118.22	Oct. 3	128.47	24	69.09	June 4	109.57
22	118.25	9	127.78	26	64.00	11	109.54
30	119.60	16	119.64	28	69.59	17	106.53
May 8	125.21	23	116.50	30	70.90	25	101.91
15	127.23	30	118.45	Feb. 2	70.53	July 2	106.78
22	124.00	Nov. 6	121.22	4	77.80	9	107.40
29	124.61	13	124.04	5	79.40	15	109.75
June 5	127.24	20	127.30	12	70.25	23	110.15
12	127.60	27	128.62	19	72.02	30	110.83
19	127.21	Dec. 4	129.70	26	72.14	Aug. 6	114.79
26	127.31	11	118.90	Mar. 5	81.00	13	116.24
July 3	125.17	18	117.80	12	81.74	20	115.68
10	124.50	25	116.70	19	88.12	27	117.41
17	127.87			26	78.26	Sept. 3	113.43
24	129.55	1950		Apr. 2	86.95	10	115.28
31	129.47			9	85.74	16	117.65
Aug. 7	128.71	Jan. 1	98.38	16	90.82	24	115.13
14	128.61	8	91.09	23	103.53	Oct. 1	117.54
21	125.28	11	71.70	30	104.22	8	111.08
28	124.80	13	66.70				

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 2--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1950		June 10	115.00	Mar. 1	79.59	1953	
		17	109.15	8	81.99		
Oct. 15	113.46	24	109.80	15	73.65	Jan. 10	128.85
22	113.08	July 1	109.90	22	66.74	24	122.05
29	118.03	8	110.16	29	67.59	Feb. 1	117.84
Nov. 5	119.09	15	111.43	Apr. 4	35.93	8	129.75
12	123.65	25	110.94	19	20.83	15	112.81
19	110.99	29	110.52	27	39.98	22	125.83
26	111.65	Aug. 5	111.06	May 4	61.87	Mar. 8	115.83
Dec. 3	104.66	12	114.77	11	86.54	15	107.84
10	106.44	19	116.82	19	59.84	22	99.85
17	106.53	27	117.99	24	63.57	29	92.84
24	109.75	Sept. 2	118.54	June 1	103.81	Apr. 5	97.79
31	110.03	23	124.91	7	75.21	13	97.43
		30	126.09	14	107.00	19	106.84
1951		Oct. 14	124.10	21	102.71	26	92.72
		20	126.87	28	102.93	May 3	111.09
Jan. 7	112.72	27	117.93	July 6	111.38	10	104.75
14	113.86	Nov. 4	120.22	12	114.68	17	111.72
20	62.00	11	112.36	19	109.69	24	110.75
29	85.22	17	113.69	26	113.88	31	91.84
Feb. 4	96.63	25	106.77	Aug. 4	126.37	June 14	101.66
11	95.53	Dec. 1	104.36	10	122.64	21	116.84
18	85.65	9	71.66	Sept. 18	124.77	30	111.64
25	84.48	15	101.90	27	126.57	July 8	116.72
Mar. 4	94.06	22	82.76	Oct. 5	97.07	14	116.72
11	95.48	29	71.23	11	131.80	19	110.78
18	44.74			20	114.76	26	119.15
25	60.75	1952		26	129.00	Aug. 3	117.81
Apr. 4	61.43			Nov. 9	131.05	9	114.79
8	58.36	Jan. 6	49.27	15	132.07	16	121.72
16	62.43	12	53.87	22	131.73	23	118.82
22	57.49	19	98.81	30	132.21	30	124.65
29	71.10	26	108.00	Dec. 7	127.46	Sept. 6	121.81
May 8	86.60	Feb. 2	95.54	13	131.63	13	120.75
14	89.58	9	30.69	21	119.87	20	120.89
26	108.05	16	44.09	28	127.24		
		24	58.30				
		27	68.40				

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 3. (12/4W-17J1). Fredric A. Danforth. Cloverdale. NE¼SE¼ sec. 17, T. 12 N., R. 4 W. Drilled unused well in rock, diameter 6 inches, depth 157 feet. Land-surface datum is about 810 feet above msl. Highest water level is 93.68 below lsd, April 12, 1952; lowest 134.85 below lsd, Oct. 26, 1952. Records available: 1946-53.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1946		July 9	131.36	Aug. 24	132.01	Oct. 23	130.96
		15	131.34	31	132.02	30	131.10
Sept. 10	131.82	27	131.34	Sept. 6	131.98	Nov. 6	131.20
17	131.45	29	131.30	Oct. 2	131.74	13	131.10
24	131.32	Aug. 5	131.45	12	130.98	20	130.98
Oct. 1	131.41	13	131.45	27	130.97	27	131.19
8	131.26	20	131.35	Nov. 27	130.72	Dec. 4	130.90
15	131.30	Sept. 9	131.41	Dec. 11	130.90	11	131.22
22	131.42	19	131.50	14	130.90	18	131.10
29	132.21	23	131.50	30	131.43	25	131.36
Nov. 5	131.44	Oct. 2	131.68				
12	131.41	14	131.55	1949		1950	
19	131.48	22	131.45				
26	131.37	30	131.00	Feb. 21	130.98	Jan. 1	131.36
Dec. 3	131.51	Nov. 3	131.27	Mar. 2	130.97	11	124.66
12	131.34	25	131.35	15	131.03	13	127.00
17	131.41	Dec. 16	131.40	27	130.97	16	127.80
24	131.72	23	131.40	Apr. 3	130.97	18	129.70
31	131.52			30	131.04	20	126.86
		1948		May 8	131.14	23	129.10
1947				15	130.50	24	124.49
		Feb. 17	125.24	22	131.10	28	126.49
Jan. 7	131.51	24	125.01	29	131.15	30	126.89
14	131.44	Mar. 2	124.33	June 5	131.28	Feb. 2	129.52
21	131.38	9	124.29	12	131.24	4	130.43
28	131.36	30	131.37	19	131.21	5	129.52
Feb. 4	131.42	Apr. 7	132.10	26	131.29	12	129.31
10	131.47	20	131.66	July 3	131.20	19	129.41
18	131.48	30	131.40	10	130.60	26	129.68
25	131.43	May 7	131.20	17	131.30	Mar. 5	129.76
Mar. 4	131.40	11	131.20	24	131.37	12	130.84
25	131.40	18	130.90	31	131.40	19	129.80
Apr. 7	131.43	25	131.20	Aug. 7	131.50	26	129.95
29	131.45	June 1	130.96	14	131.49	Apr. 2	129.75
May 9	131.35	21	131.39	21	131.40	9	129.83
13	131.34	25	131.41	28	130.70	16	129.83
20	131.21	29	131.31	Sept. 4	131.65	23	129.85
27	130.38	July 6	131.52	11	130.64	30	129.81
June 3	131.25	14	131.37	18	124.90	May 7	129.89
10	131.19	26	131.37	25	130.85	14	129.90
20	131.09	Aug. 3	131.41	Oct. 3	130.97	21	129.97
24	131.15	10	131.41	9	130.98	28	130.03
July 1	131.19	17	131.93	16	130.98	June 4	130.00

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 3--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1950		Feb. 4	129.82	Dec. 1	130.00	Aug. 10	128.41
		11	129.65	9	129.56	17	129.99
June 11	130.07	18	131.06	15	130.14	24	129.49
17	130.06	25	130.19	22	130.19	Sept. 11	115.81
25	130.03	Mar. 4	130.17	29	130.19	18	130.03
July 2	129.58	11	130.22			27	125.03
9	130.19	18	130.43	1952		Oct. 5	121.99
15	130.85	25	130.29			11	116.70
23	130.36	Apr. 4	130.10	Jan. 6	123.06	20	115.88
30	130.40	8	130.10	12	117.15	26	134.85
Aug. 6	130.40	16	130.04	19	117.14	Nov. 9	118.03
13	130.48	22	129.94	26	114.13	15	127.77
20	130.24	29	130.08	Feb. 2	118.86	22	120.00
27	130.25	May 8	130.13	9	130.64	30	120.60
Sept. 3	129.93	14	130.10	16	133.96	Dec. 7	114.71
10	130.22	26	130.10	27	134.30	13	115.98
16	130.24	June 10	130.10	Mar. 1	133.93	21	107.87
24	130.26	17	129.95	8	129.63	28	114.30
Oct. 1	129.93	24	130.02	15	121.69		
8	129.73	July 1	130.17	22	117.11	1953	
15	130.31	8	130.12	29	114.93		
22	130.21	15	129.47	Apr. 4	102.99	Jan. 10	115.04
29	130.38	25	130.69	12	93.68	24	121.68
Nov. 5	130.61	29	129.73	19	102.14	Feb. 1	99.03
12	130.36	Aug. 5	130.24	27	131.74	8	111.96
19	130.30	12	130.25	May 4	121.93	15	108.61
26	129.74	19	130.36	11	129.66	22	112.69
Dec. 3	130.96	27	130.48	19	113.21	July 8	130.87
10	132.06	Sept. 2	130.31	24	124.32	14	129.72
17	132.12	9	130.35	27	130.55	19	131.65
24	130.87	16	130.31	June 1	121.76	26	128.74
31	130.92	23	130.30	7	104.47	Aug. 3	131.81
		30	130.32	14	107.86	9	128.89
1951		Oct. 14	130.36	21	130.34	16	130.93
		20	130.43	28	106.32	23	130.93
Jan. 7	131.20	27	130.17	July 6	105.27	30	131.75
14	131.32	Nov. 4	130.38	12	110.40	Sept. 6	126.73
20	130.17	11	130.48	19	110.66	13	130.36
29	130.03	17	130.03	26	116.87	20	132.85
		25	130.32	Aug. 4	122.31	Nov. 3	131.32

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 4. (13/5W-20Q1). Brazil Water Works. Reelsville. SW¼SE¼ sec. 20, T. 13 N., R. 5 W. Drilled unused water table well in sand and gravel, diameter 10 inches, depth 60 feet. Land-surface datum is 611.7 feet above msl. Recording gage installed July 8, 1957. Highest water level is 1.65 below lsd, June 24, 1960; lowest 17.30 below lsd, Aug. 24, 25, 1959. Records available: 1957-60. Affected by nearby pumping and Big Walnut Creek.

(Daily highest water level from recorder graph, 1957)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1957		Aug. 21	14.95	Oct. 20	15.50	Dec. 5	14.65
		22	15.05	21	15.55	6	14.45
July 9	12.22	23	15.20	23	14.25	7	12.70
10	12.22	24	15.25	24	13.90	8	12.60
11	12.80	25	15.25	25	13.85	24	h11.07
12	13.15	26	15.20	29	15.05		
13	e11.84	28	14.65	30	15.20		
17	13.07	29	14.55	31	15.30		
18	13.23	30	14.65				
19	13.60			Nov. 1	15.35		
20	13.85	Sept. 3	15.15	2	15.40		
		4	15.20	3	15.40		
21	13.95	5	15.25	5	15.25		
22	14.10	6	15.30	6	15.30		
23	14.20	7	15.30	7	14.35		
24	14.20	10	15.40	8	14.20		
25	14.25	11	15.45	9	14.15		
26	14.30	12	15.45				
27	14.45	13	15.45	12	14.75		
28	14.55	16	15.35	13	14.65		
30	14.70			14	9.75		
31	14.80	Oct. 1	15.60	15	11.25		
		2	15.65	16	11.85		
Aug. 1	14.90	3	15.65	19	11.15		
2	14.75	4	15.70	20	11.70		
3	14.85	5	15.70				
4	14.25	6	15.70	21	12.65		
5	14.60	7	e15.75	22	13.05		
6	14.75	8	15.70	23	13.30		
7	14.90	9	15.70	24	13.50		
8	14.95	10	15.70	25	13.75		
9	15.00			26	13.90		
10	15.10	11	15.70	27	14.05		
		12	15.70	28	14.10		
13	14.45	13	15.70	29	14.20		
14	14.75	14	15.70	30	14.35		
16	13.55	15	15.75				
17	13.55	16	15.75	Dec. 1	14.45		
18	14.30	17	15.55	2	14.50		
19	14.60	18	15.45	3	14.55		
20	14.80	19	15.45	4	14.60		

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 4--Continued

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-----	14.30	14.95	14.70	14.85	15.05	14.55	4.85	-----	15.85	16.15	14.75
2	-----	14.35	14.95	14.75	15.00	14.95	14.65	8.25	-----	15.95	16.10	14.95
3	-----	14.50	15.00	14.85	14.65	15.00	14.75	10.85	-----	16.00	16.10	15.05
4	-----	14.60	15.10	14.90	13.30	15.15	14.90	11.40	-----	15.95	16.15	14.95
5	-----	14.60	15.15	14.90	12.60	15.30	14.95	12.25	-----	15.95	16.20	14.80
6	-----	14.60	15.25	14.70	12.45	15.45	14.50	-----	-----	15.95	16.20	14.80
7	-----	14.60	15.25	14.65	12.50	15.50	14.50	-----	-----	16.05	16.20	14.90
8	-----	14.65	15.20	14.60	13.00	15.50	14.75	-----	-----	16.10	16.25	15.00
9	-----	14.65	15.15	14.70	13.35	14.75	14.95	-----	-----	15.90	16.20	15.10
10	-----	14.70	15.15	14.75	13.60	12.25	14.75	-----	-----	15.45	16.15	15.05
11	-----	14.75	15.20	14.85	13.85	4.70	14.05	14.40	15.60	15.45	16.20	15.00
12	-----	14.95	15.25	14.90	14.00	-----	13.70	14.20	15.70	15.45	16.20	15.05
13	-----	15.10	15.25	14.90	14.25	8.95	13.60	14.10	15.75	15.50	16.25	15.10
14	-----	15.30	15.30	14.95	14.40	8.95	13.70	14.25	15.75	15.65	16.30	15.05
15	-----	15.30	15.30	15.00	14.55	9.85	14.15	13.40	15.75	15.75	16.10	15.05
16	-----	15.25	15.30	15.05	14.45	10.80	14.30	13.20	14.55	15.75	15.75	15.20
17	-----	15.30	15.25	15.10	15.25	11.90	14.60	13.40	14.85	15.80	14.65	15.15
18	-----	15.65	15.30	15.15	14.25	12.60	14.80	13.70	14.85	15.85	14.40	15.35
19	-----	15.40	15.35	15.15	14.35	12.45	14.95	14.10	15.00	15.85	14.40	15.35
20	-----	15.35	15.40	15.20	14.35	-----	14.00	14.45	16.20	15.80	14.55	15.40
21	-----	15.30	15.45	14.95	14.50	12.45	13.65	14.60	15.25	15.90	14.80	15.40
22	-----	15.15	15.45	14.95	14.65	12.73	13.65	14.65	15.40	15.95	15.05	15.40
23	13.65	15.05	15.40	14.95	14.45	13.15	13.95	14.75	15.55	15.95	15.25	15.50
24	13.60	-----	14.95	14.95	14.35	13.45	14.25	14.80	15.60	16.00	15.35	15.50
25	14.10	-----	14.30	15.00	14.40	13.70	14.50	14.90	15.75	16.05	15.10	15.55
26	14.00	15.20	14.20	15.05	14.60	13.65	14.75	15.00	15.75	16.05	14.15	15.55
27	13.95	15.20	14.25	14.95	14.80	13.85	14.90	15.25	15.80	16.05	14.05	15.50
28	14.00	15.05	14.35	14.85	14.90	14.10	14.55	15.30	15.75	16.10	14.20	15.70
29	14.10	-----	14.45	14.80	15.00	14.25	14.45	-----	15.80	16.10	14.50	15.70
30	14.20	-----	14.50	14.80	15.10	14.35	14.65	-----	15.90	16.15	14.70	15.80
31	14.25	-----	14.60	-----	15.15	-----	5.50	-----	-----	16.15	-----	15.80

(Daily highest water level from recorder graph, 1959)

1	15.65	-----	13.35	13.40	13.65	-----	16.30	16.30	16.75	-----	16.55	16.40
2	15.55	-----	13.25	12.55	13.95	-----	16.06	16.35	16.70	17.00	16.50	16.45
3	15.60	-----	13.50	12.55	14.15	-----	16.15	16.40	16.75	17.00	16.60	16.45
4	15.70	-----	14.00	12.70	14.30	-----	-----	15.25	16.80	16.95	16.45	16.45
5	15.70	-----	14.25	13.05	14.50	-----	-----	15.15	16.85	16.90	16.30	16.50
6	15.55	-----	13.90	13.40	14.70	-----	16.40	15.45	16.85	16.95	16.25	16.40
7	15.55	-----	13.80	13.45	14.75	-----	15.90	15.70	16.85	16.95	16.25	16.35
8	15.55	-----	13.90	13.85	14.85	-----	15.90	15.90	16.85	16.95	16.25	16.40
9	15.65	-----	13.70	13.75	14.95	15.80	15.95	16.00	16.90	17.00	16.25	16.45
10	15.90	-----	13.60	13.75	14.75	15.80	16.05	16.10	16.95	16.95	16.35	16.50

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 4--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	15.95	-----	13.65	13.85	14.65	14.90	16.20	16.15	16.90	16.10	16.35	16.40
12	16.00	-----	13.65	13.95	14.50	14.80	16.25	16.25	16.95	16.05	16.35	15.30
13	16.05	-----	13.35	14.05	14.45	14.80	16.25	16.30	16.90	16.20	16.40	14.80
14	16.20	-----	12.80	14.20	14.45	14.95	16.35	16.45	16.85	16.35	15.90	14.75
15	15.90	-----	11.85	14.30	14.55	15.15	16.45	16.50	16.90	16.45	15.65	14.95
16	15.90	-----	11.95	14.45	14.70	15.40	16.45	16.45	16.95	16.55	15.65	15.10
17	15.75	11.80	12.75	14.55	14.80	15.50	16.50	16.05	16.95	16.60	15.70	15.20
18	14.55	12.05	13.25	14.60	14.85	15.60	16.55	15.95	17.00	16.95	16.00	15.35
19	14.50	12.35	13.60	14.35	14.95	15.70	16.45	16.05	16.95	16.55	16.00	15.45
20	14.15	12.80	13.60	14.15	14.95	15.80	16.45	16.25	16.95	16.65	16.15	15.50
21	6.95	13.15	13.85	14.10	14.95	15.85	16.60	16.30	16.90	16.65	16.10	15.50
22	6.45	13.30	14.10	14.25	14.00	15.85	16.60	16.40	17.00	16.70	16.15	15.55
23	9.40	13.15	14.25	14.40	13.85	15.95	16.60	16.40	17.00	16.75	16.10	-----
24	11.55	13.00	14.50	14.50	14.00	16.05	16.50	16.45	17.00	16.55	16.20	15.80
25	12.05	13.05	14.70	14.65	14.30	16.10	16.15	16.15	17.05	16.45	16.25	15.75
26	12.25	13.25	14.70	14.70	14.60	16.15	16.05	16.65	17.00	16.35	16.25	15.75
27	13.00	13.35	14.60	13.70	14.75	16.05	16.10	16.65	16.85	16.40	16.30	15.70
28	13.65	13.45	14.45	13.05	14.75	16.15	16.00	16.65	16.80	16.45	16.30	15.50
29	14.10	-----	14.50	13.05	14.90	16.15	16.00	16.70	-----	16.50	16.35	15.25
30	-----	-----	14.85	13.35	15.05	16.25	16.05	16.70	-----	16.55	16.35	15.15
31	-----	-----	14.90	-----	-----	-----	16.05	16.65	-----	16.60	-----	15.15

(Daily highest water level from recorder graph, 1960)

1	15.25	14.45	-----	12.95	14.85e	13.50e	13.45	15.80	16.50	16.75	16.65	16.65
2	15.25	14.55	-----	13.35	14.85	14.15e	13.75	16.00	16.50	16.70	16.70	16.70
3	15.05	14.70	-----	13.65	15.00	14.50	13.95	16.05	16.55	16.70	16.75	16.65
4	15.00	14.80	-----	13.85	15.15	14.70	14.10	15.90	16.55	16.70	16.70	16.60
5	15.05	13.25	-----	14.05	15.25	14.90e	14.35	15.95	16.50	16.75	16.70	16.55
6	15.20	11.10	-----	14.25	15.35	15.05e	14.50	15.95	16.55	16.75	16.70	16.60
7	15.25	11.15	-----	14.40	15.10	15.25e	14.60	16.00	16.60	16.75	16.65	16.45
8	15.35	11 95	-----	14.55	15.05	15.35e	14.75	16.05	16.65	16.80	16.70	16.45
9	15.45	12.10	-----	14.70	15.10	15.50	14.80	16.15	16.65	16.75	16.70	16.40
10	15.45	8.65	-----	14.80	15.15	15.60	14.85	16.20	16.60	16.75	16.75	16.45
11	15.45	8.95	-----	14.85	15.10	15.65	14.90	16.25	16.60	16.80	16.75	16.45
12	15.40	10.75	-----	14.95	15.20	15.65	-----	16.25	16.60	16.80	16.75	16.40
13	14.50	11.85	-----	15.00	15.25	15.60	-----	16.30	16.65	16.80	16.75	16.45
14	14.25	12.45	-----	15.10	15.30	-----	14.45	16.30	16.65	16.80	16.65	16.35
15	13.50	12.90	-----	15.10	15.35	-----	14.35	16.30	16.65	16.80	16.65	16.50
16	13.45	13.30	15.35	15.10	15.40	15.75	14.50	16.35	16.65	16.80	16.55	16.45
17	13.65	13.45	15.25	15.15	15.35	15.75	14.75	16.35	16.70	16.80	16.50	16.40
18	13.90	13.65	15.20	15.15	15.40	15.80	14.85	16.40	16.65	16.85	16.45	16.40
19	14.05	13.80	15.20	15.20	15.45	15.85	15.10	16.40	16.55	16.85	16.50	16.55
20	14.30	14.00	15.05	15.25	15.50	15.90	15.20	16.15	16.50	16.85	16.50	16.65

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 4--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	14.50	-----	15.00	15.30	15.45	15.75	15.35	16.15	16.50	16.80	16.50	16.60
22	14.70	-----	14.90	15.35	15.15	15.70	15.45	16.20	16.50	16.80	16.60	16.55
23	14.70	-----	14.85	15.40	15.10	1.85	15.55	16.35	16.55	16.75	16.60	16.50
24	14.65	-----	14.85	15.45	15.20	1.65	15.60	16.35	-----	16.75	16.65	16.55
25	14.65	-----	14.95	15.45	15.30	8.00	15.65	16.40	-----	16.80	16.65	-----
26	14.75	-----	14.95	15.50	15.15	10.50	15.75	16.45	-----	16.80	16.70	-----
27	14.35	-----	14.25	15.45	15.10	11.55	15.70	16.45	-----	16.65	16.70	-----
28	14.20	-----	12.95	15.45	15.15	11.95	15.75	16.50	-----	16.70	16.65	16.45
29	14.20	-----	12.70	15.55	15.30	12.55	15.80	16.50	16.70	16.70	16.65	16.45
30	14.30	-----	12.80	15.00	12.60	13.10	15.85	16.50	16.70	16.65	16.60	16.45
31	14.40	-----	12.70	-----	12.70	-----	15.90	16.45	-----	16.60	-----	16.50

Putnam 5. (12/4W-1A1). Town of Cloverdale. Cloverdale. NE¼NE¼ sec. 1, T. 12 N., R. 4 W. Drilled unused artesian well in shale and siltstone, diameter 8 inches, depth 410 feet. Land-surface datum is 763.1 feet above msl. Recording gage installed Aug. 19, 1957. Highest water level is 12.18 below lsd, Mar. 15, 1959; lowest 15.52 below lsd, July 30, 1959. Records available: 1957-60. Affected by fluctuations in barometric pressure.

(Daily highest water level from recorder graph, 1957)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1957		Sept. 8	14.89	Oct. 14	h15.09	Nov. 19	e13.27
		10	14.92	19	15.08	20	13.27
Aug. 20	14.32	11	14.93	20	15.07	21	13.25
21	14.38	12	14.92	21	15.00	22	13.31
22	14.47	13	14.96	22	14.92	23	13.14
23	14.41	14	15.04	23	14.51	24	13.14
24	14.38	15	14.90	24	14.51	25	13.23
25	14.40	16	14.94	25	14.56	26	13.28
26	14.54	24	14.98	26	14.54	27	13.26
27	14.62	25	14.96	27	e14.50	28	13.25
28	14.61	26	14.96	28	14.43	29	13.30
29	14.61	27	15.08	29	14.24	30	13.31
30	14.66	28	15.05	30	14.22		
31	14.69			31	14.27	Dec. 1	13.39
		Oct. 2	15.02			2	13.44
Sept. 1	14.68	3	15.04	Nov. 1	14.35	16	13.24
2	14.64	4	15.07	2	14.34	24	12.88
3	14.64	7	15.12	3	14.35	25	12.56
4	14.70	8	15.16	5	14.42	26	12.56
5	14.67	9	15.21	6	14.44	27	12.53
6	14.85	10	15.26	7	14.16	28	e12.52
7	14.85	11	15.29	13	13.77	31	12.78

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 5--Continued

(Daily highest water level from recorder graph, 1958)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.80	13.34	-----	-----	-----	14.32	13.38	13.63	-----	-----	13.99	-----
2	12.90	13.42	-----	14.00	-----	14.39	13.42	13.61	-----	-----	13.99	-----
3	12.98	13.44	14.62	13.97	-----	14.49	13.49	-----	14.18	-----	14.07	-----
4	13.10	13.38	14.70	13.98	-----	14.55	13.56	13.46	14.19	-----	14.01	12.97
5	13.00	13.42	-----	13.81e	13.53	14.55	13.63	13.47	14.16	-----	14.00	13.03
6	12.88	13.51	-----	13.81	-----	14.62	-----	13.47	14.15	-----	14.13	13.15
7	-----e	13.64	-----	13.89	-----	14.57	-----	-----	14.15	-----	14.14	13.18
8	-----	13.73	-----	13.96	-----	14.57	-----	-----	14.19	-----	14.00	13.05
9	-----	-----	-----	13.85	-----	14.58	13.98	-----	14.21	-----	13.97	13.16
10	-----	13.71	-----	13.75	-----	14.47	13.93	-----	14.21	-----	14.16	13.29
11	-----	13.73	14.78	13.77	-----	-----	13.73	13.39	14.36	-----	14.23	13.18
12	-----	13.80	14.68	13.87	-----	-----	13.70	13.41	14.37	-----	14.24	13.19
13	13.37	13.85	14.59	13.92	13.70	-----	13.68	13.50	14.38	-----	14.18	13.33
14	13.37	13.85	14.67	13.88	13.74	-----	13.68	13.58	14.40	-----	14.15	13.49
15	13.51	13.86	14.68	13.87	13.75	-----	13.67	13.51	14.40	13.79	14.04	13.50
16	13.59	-----	14.66	13.94	13.78	13.73	13.70	13.41	-----	13.79	14.06	13.49
17	13.61	-----	14.70	13.99	13.80	13.70	13.71	13.42	-----	13.79	-----	13.49
18	13.67	-----	14.72	13.97	13.82	13.70	13.70	-----	-----	13.81	-----	13.59
19	-----	-----	14.71	13.98	13.95	13.69	13.71	13.50	-----	13.79	-----	13.56
20	-----	-----	14.68	-----	14.01	13.60	13.73	13.52	-----	13.79	-----	13.78
21	-----	-----	-----	-----	14.03	13.56	13.72	13.52	-----	13.83	-----	13.92
22	13.38	-----	-----	13.97	13.99	-----	13.73	13.57	-----	13.83	-----	13.85
23	13.42	-----	-----	13.86	14.09h	13.52	13.74	13.62	-----	13.84	-----	13.82
24	13.55	13.50	-----	13.86	14.10	-----	13.74	-----	14.00	13.86	-----	13.93
25	-----	-----	14.44	14.16	14.10	-----	13.74	13.74	14.01	13.91	-----	14.09
26	-----	-----	14.29	14.04	14.19	-----	13.81	13.76	14.03	13.94	-----	14.04
27	13.33	-----	14.23	13.93	14.20	-----	13.89	13.80	14.01	13.96	-----	14.03
28	13.28	-----	14.21	13.93	14.22	-----	13.92	13.82	-----	14.00	-----	14.04
29	13.65	-----	-----	13.79	14.36	-----	13.88	13.87	-----	14.03	-----	14.10
30	13.17	-----	-----	13.77	14.35	13.38	13.88	13.88	-----	14.09	-----	14.22
31	13.22	-----	-----	-----	14.32	-----	13.84	-----	-----	14.99	-----	14.00

(Daily highest water level from recorder graph, 1959)

1	13.92	13.66	-----	12.73	13.43	13.89	14.58	15.39	14.90	-----	13.90	13.28
2	13.97	-----	-----	12.50	13.47	13.97	14.70	15.42	14.96	14.79	13.76	13.30
3	13.99	-----	-----	12.50	13.48	14.06	14.80	15.36	14.93	14.79	13.76	13.30
4	14.04	-----	-----	12.72	13.50	14.11	14.74	15.20	14.88	14.84	13.79	13.26
5	14.28	-----	-----	12.72	13.52	14.11	14.74	15.08	14.87	14.79	13.84	13.28
6	14.08	-----	-----	12.88	13.58	14.18	14.80	15.00	14.89	14.75	13.78	13.26
7	14.06	-----	-----	12.84	13.70	-----	14.94	14.96	14.92	14.72	13.69	13.27
8	14.10	-----	-----	12.90	13.82	-----	14.93	14.95	14.87	14.65	13.57	13.28
9	14.25	-----	-----	12.94	13.71	14.38	14.95	14.95	14.86	14.73	13.57	13.42
10	14.27	-----	-----	13.05	13.71	14.37	14.99	14.95	14.78	14.65	13.63	13.38

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 5--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	14.27	-----	12.59	13.07	13.75	-----	14.99	14.97	14.71	14.63	13.43	13.15
12	14.25	-----	12.56	13.09	13.71	-----	15.02	15.01	14.63	14.51	13.42	13.05
13	14.25	-----	12.40	13.09	13.62	-----	15.12	14.92	14.55	-----	13.30	13.12
14	14.02	-----	12.22	13.10	13.63	-----	15.17	14.85	14.53	-----	13.20	13.09
15	14.01	-----	12.18	13.18	13.63	-----	15.17	-----	14.57	-----	13.20	13.02
16	14.00	-----	12.52	13.19	13.63	-----	15.17	-----	14.72	-----	13.13	12.99
17	14.01	12.77	12.52	13.24	13.61	-----	15.15	-----	14.75	-----	13.12	12.99
18	13.89	12.77	12.72	13.27	13.58	-----	15.13	-----	14.73	-----	13.07	12.99
19	13.88	12.91	12.65	13.28	13.59	-----	15.14	-----	14.70	-----	13.05	13.01
20	13.75	12.98	12.66	13.29	13.67	-----	15.21	-----	14.69	-----	13.06	13.00
21	13.55	13.02	12.67	13.42	13.67	-----	15.26	-----	14.70	-----	13.05	13.00
22	13.81	-----	12.82	13.42	13.68	-----	15.28	-----	14.75	-----	12.93	13.03
23	13.73	-----	12.81	13.42	13.70	14.22	15.23	-----	14.80	-----	12.96	13.00
24	13.56	-----	12.82	13.42	13.75	14.24	15.24	-----	14.78	-----	13.15	13.01
25	13.55	-----	12.85	13.42	13.72	14.28	15.28	-----	14.69	-----	-----	13.02
26	13.55	-----	12.77	13.47	13.73	14.33	15.33	-----	14.70	-----	-----	12.99
27	13.55	-----	12.78	13.35	13.82	14.40	15.31	14.91	14.78	-----	13.24	12.85
28	13.54	-----	12.98	13.30	13.81	14.44	15.31	14.89	-----	14.11	13.29	12.85
29	13.47	-----	12.96	13.38	13.82	14.52	15.32	14.91	-----	13.98	13.31	12.85
30	13.50	-----	12.87	13.38	13.85	14.56	15.35	14.94	-----	13.92	13.29	12.92
31	13.65	-----	12.88	-----	13.84	-----	15.37	14.90	-----	13.92	-----	12.98

(Daily highest water level from recorder graph, 1960)

1	12.92	12.99	-----	-----	13.41	12.56	12.62	-----	14.06	14.39	14.47	14.31
2	12.89	12.99	-----	-----	13.35	12.56	12.56	-----	14.06	14.37	14.52	14.27
3	12.89	12.99	-----	-----	13.32	12.61	12.56	14.06	14.03	14.48	14.69	14.22
4	12.91	12.95	-----	-----	13.30	12.69	12.66	14.06	13.99	14.47	14.67	14.21
5	12.89	-----	-----	-----	13.17	12.78	12.73	14.08	13.99	14.40	14.65	14.20
6	12.89	-----	-----	-----	13.14	12.97	12.85	14.04	14.02	14.41	14.55	14.20
7	12.89	-----	-----	-----	13.18	12.99	12.90	13.98	14.06	14.50	14.69	14.01
8	12.92	-----	-----	-----	13.19	13.07	12.95	13.98	14.09	14.46	14.64	14.01
9	12.98	-----	-----	-----	13.15	13.16	12.99	13.99	14.12	14.46	14.60	13.87
10	12.98	-----	-----	-----	13.18	13.22	13.01	14.01	14.12	14.56	14.69	13.79
11	12.99	-----	-----	-----	13.21	13.26	13.02	14.07	14.09	14.55	14.61	13.62
12	12.94	-----	-----	-----	13.26	13.28	13.10	14.08	14.08	14.56	14.58	13.70
13	12.96	-----	-----	13.16	13.32	-----	13.12	14.09	14.13	14.57	14.58	13.62
14	12.80	-----	-----	13.18	13.32	-----	13.22	14.12	14.21	14.57	14.56	13.47
15	12.80	-----	-----	13.18	13.39	-----	13.31	14.22	14.23	14.61	14.38	13.44
16	12.87	-----	-----	13.18	13.33	13.16	13.33	14.26	14.31	14.67	14.38	13.52
17	12.83	-----	-----	13.17	13.33	13.20	13.33	14.27	14.31	14.62	-----	13.52
18	12.83	-----	-----	13.42	13.31	13.41	13.35	14.24	14.28	14.66	-----	13.58
19	12.89	-----	-----	13.44	13.26	13.44	13.41	14.21	14.25	14.61	-----	13.61
20	12.84	-----	-----	13.36	13.16	13.44	13.53	14.18	14.30	14.69	-----	13.48

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 5--Continued

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	12.86	-----	-----	13.36	13.11	13.45	13.65	14.15	14.28	14.67	-----	13.50
22	12.88	-----	-----	13.48	13.05	13.38	13.68	14.14	14.26	14.53	-----	13.58
23	12.93	-----	-----	13.53	12.96	13.07	13.70	14.15	14.26	14.53	-----	13.60
24	12.93	-----	-----	13.51	12.90	13.07	-----	14.19	14.25	14.60	14.10	13.60
25	12.91	-----	-----	13.51	12.87	13.00	-----	14.18	14.32	14.64	14.10	13.60
26	12.99	-----	-----	13.55	12.80	12.94	-----	14.21	14.34	14.56	14.09	-----
27	12.98	-----	-----	e13.60	12.74	12.84	-----	14.22	14.32	14.61	14.09	13.83
28	13.01	-----	-----	13.53	12.74	12.66	-----	14.23	14.29	14.64	14.01	13.67
29	13.02	-----	-----	13.45	12.69	12.66	-----	14.27	14.29	14.62	14.09	-----
30	13.00	-----	-----	13.36	12.69	12.64	-----	14.20	14.31	14.49	14.19	-----
31	12.99	-----	-----	-----	12.65	-----	-----	14.09	-----	14.42	-----	-----

Putnam 6. (16/4W-8Q1). Ohio Oil Co. Roachdale. SW¼SE¼ sec. 8, T. 16 N., R. 4 W. Drilled unused artesian well in sand and gravel, diameter 6 inches, reported depth 172 feet. Land-surface datum is about 800 feet above msl. Recording gage installed June 26, 1958. Highest water level is 18.65 below lsd, Mar. 15, 1959; lowest 25.08 below lsd, Dec. 1, 2, 1960. Records available: 1958-60. Affected by fluctuations in barometric pressure.

(Daily highest water level from recorder graph, 1958)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
1958		July 27	20.94	Aug. 19	19.63	Oct. 27	21.55
		28	20.77	20	19.76	28	21.60
June 27	20.58	29	e20.55	21	19.81	29	21.66
28	20.64	30	20.45	22	19.81	30	21.70
29	20.72	31	e20.15	23	19.91	31	21.72
30	20.73	Aug. 1	19.85	24	20.00	Nov. 1	21.68
July 1	20.78	2	19.73	Sept. 10	h20.67	2	21.64
2	20.82	3	19.65	Oct. 7	21.15	3	21.64
3	20.86	4	19.65	13	21.43	4	21.67
4	20.87	5	19.65	14	21.43	5	21.61
5	20.87	6	19.68	15	21.38	6	21.68
6	20.96	7	19.68	16	21.33		
7	21.00	8	19.68	17	21.33	7	21.77
8	21.05	9	19.72	18	21.43	8	21.70
9	21.15	10	19.74	19	21.44	9	21.66
10	21.15			20	21.43	10	21.72
		11	19.77			11	21.86
11	21.03	12	19.85	21	21.45	12	21.97
22	20.86	13	19.86	22	21.45	13	21.94
23	20.86	14	19.90	23	21.48	14	21.90
24	20.89	15	19.33	24	21.48	15	21.87
25	20.92	17	19.54	25	21.49	16	21.84
26	20.92	18	19.63	26	21.53	17	21.62

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 6--Continued

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 18	21.60	Nov. 20	21.40	Dec. 4	20.19	Dec. 19	20.57
19	21.48	Dec. 3	20.25	18	20.54	20	20.55

(Daily highest water level from recorder graph, 1959)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-----	21.33	19.58	19.06	19.05	20.21	-----	22.43	22.93	24.01	23.88	23.05
2	-----	21.34	19.50	18.83	19.12	20.25	-----	22.45	22.94	24.05	23.88	23.07
3	-----	21.08	19.47	18.81	19.15	20.32	-----	22.48	23.04	24.05	23.88	23.08
4	-----	21.01	19.53	18.82	19.26	20.40	-----	22.13	23.18	24.06	23.73	23.03
5	-----	21.04	19.31	18.80	19.30	20.45	-----	22.39	23.22	24.10	23.66	23.03
6	-----	21.22	19.29	18.84	19.36	20.47	-----	22.44	23.23	24.10	23.69	22.99
7	-----	21.32	19.35	18.89	19.43	-----	21.48	22.42	23.25	24.10	23.74	22.99
8	-----	21.21	19.33	18.90	19.57	-----	21.54	22.42	23.33	24.10	23.73	23.00
9	-----	-----	19.26	18.91	19.62	20.68	21.57	22.43	23.38	24.10	23.64	23.11
10	-----	-----	19.26	18.99	19.50	20.61	21.62	22.50	23.36	24.08	23.57	23.13
11	-----	-----	19.21	18.99	19.51	20.55	21.64	22.56	23.44	24.08	23.53	22.95
12	-----	-----	19.19	19.00	19.60	20.48	21.64	22.61	23.55	24.13	23.53	22.79
13	-----	-----	19.06	19.01	19.62	20.48	21.75	22.74	23.59	24.05	23.40	22.74
14	21.30	-----	18.77	19.01	19.62	20.48	21.81	22.78	23.57	24.03	23.35	22.62
15	21.23	-----	18.65	19.06	19.64	20.52	21.84	22.79	23.53	24.03	23.26	22.50
16	21.23	20.20	18.68	19.08	19.69	20.52	21.89	22.59	23.58	23.99	23.15	22.42
17	21.23	20.02	18.75	19.14	19.72	20.52	21.90	22.66	23.65	23.99	23.17	22.34
18	21.26	19.93	18.80	19.21	19.69	20.55	21.85	22.66	23.72	24.00	23.15	22.33
19	21.26	20.04	18.79	19.18	19.69	20.65	21.85	22.67	23.78	24.00	23.12	22.35
20	21.15	20.06	18.79	19.18	19.77	20.65	21.90	22.67	23.83	24.00	23.04	22.32
21	21.01	20.09	18.80	19.22	19.80	20.65	22.00	22.68	23.80	24.00	22.98	22.30
22	-----	19.97	18.86	19.24	19.84	20.67	22.09	22.68	23.80	24.03	22.94	22.30
23	-----	19.87	18.94	19.25	19.86	20.71	22.13	22.69	23.81	23.84	22.83	-----
24	-----	19.91	18.95	19.25	19.95	20.79	22.13	22.79	23.86	23.75	22.79	-----
25	-----	19.88	19.00	19.27	19.99	20.83	22.17	22.81	23.90	23.73	22.80	-----
26	21.15	19.79	19.00	19.29	20.02	20.85	22.28	22.81	23.79	23.76	22.87	-----
27	21.18	19.74	19.00	19.20	20.04	20.89	22.17	22.83	23.79	23.77	22.95	-----
28	21.20	19.69	19.16	19.08	20.10	20.97	22.25	22.86	23.84	23.92	23.02	-----
29	21.08	-----	19.25	19.06	20.13	21.00	22.30	22.89	-----	23.99	23.06	-----
30	21.15	-----	19.21	19.05	20.15	-----	22.34	22.93	24.01	23.99	23.07	-----
31	21.26	-----	19.21	-----	20.19	-----	22.40	22.93	-----	23.94	-----	-----

Table 8.--Water levels in observation wells in Putnam County--Continued

Putnam 6--Continued

(Daily highest water level from recorder graph, 1960)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-----	20.61	19.60	19.76	20.66	20.72	19.99	21.09	22.61	23.67	24.27	25.00
2	-----	20.61	19.58	19.73	20.80	20.64	20.02	21.14	22.62	23.69	24.35	25.05
3	-----	20.58	19.56	19.66	20.80	20.63	20.02	21.16	22.71	23.71	24.47	25.02
4	-----	20.50	19.60	19.62	20.80	20.63	20.07	21.16	22.76	23.79	24.59	24.97
5	-----	19.79	19.71	19.61	20.76	20.63	20.15	21.17	22.84	23.77	24.63	24.92
6	-----	19.79	19.83	19.55	20.65	20.66	20.24	21.22	22.84	23.77	24.61	24.87
7	-----	19.92	19.89	19.56	20.65	20.72	20.35	21.28	22.90	23.85	24.68	24.89
8	-----	19.60	19.95	19.62	20.67	20.83	20.39	21.32	22.93	23.88	24.72	24.89
9	-----	-----	19.88	19.68	20.67	20.85	20.46	21.40	22.97	23.88	24.72	24.86
10	-----	-----	19.89	19.83	20.65	20.88	20.41	21.41	23.05	23.92	24.73	24.79
11	-----	-----	19.97	19.87	20.68	20.88	20.42	21.48	23.05	23.95	24.83	24.66
12	-----	-----	20.03	19.90	20.78	20.83	20.46	21.57	23.04	23.97	24.81	24.67
13	-----	-----	20.15	19.05	20.80	-----	20.50	21.59	23.07	24.01	24.81	24.77
14	-----	-----	20.20	19.99	20.81	-----	20.47	21.60	23.13	24.02	24.83	24.65
15	-----	-----	20.13	20.04	20.83	-----	20.44	21.66	23.17	24.04	24.66	24.60
16	-----	18.66	20.04	20.02	20.83	-----	20.42	21.78	23.30	24.13	24.66	24.63
17	-----	18.66	20.04	20.00	20.83	20.91	20.39	21.84	23.34	24.15	24.73	24.68
18	-----	18.70	20.08	20.14	20.86	21.05	20.35	21.90	23.36	24.15	24.81	24.76
19	-----	18.76	20.11	20.30	20.95	21.13	20.35	21.88	23.30	24.18	24.86	24.80
20	20.67	18.95	20.18	20.30	20.96	21.18	20.38	21.88	23.30	24.20	24.87	24.73
21	20.67	18.96	20.27	20.27	20.93	21.14	20.51	21.90	23.36	24.25	24.91	24.73
22	20.67	18.96	20.25	20.31	20.93	21.02	20.56	22.02	23.38	24.25	24.87	24.76
23	20.70	19.08	20.32	20.40	20.97	19.99	20.59	22.08	23.38	24.20	24.87	24.81
24	20.72	19.20	20.30	20.47	21.00	20.28	20.65	22.15	23.41	24.22	24.93	-----
25	20.67	19.05	20.34	20.48	21.01	20.22	20.68	22.24	23.45	24.35	24.93	-----
26	20.69	19.09	20.13	20.48	21.04	20.15	20.68	22.30	23.50	24.27	24.93	-----
27	20.58	19.28	19.94	20.58	21.00	20.04	20.70	22.39	23.51	24.27	24.93	-----
28	20.65	19.39	19.92	20.67	21.00	19.99	20.83	22.45	23.55	24.34	24.84	24.87
29	20.65	19.45	-----	20.67	21.00	19.99	20.88	22.46	23.55	24.35	24.86	24.80
30	20.65	-----	-----	20.61	21.00	19.99	20.89	22.49	23.55	24.33	24.93	24.80
31	20.61	-----	-----	-----	20.83	-----	20.96	22.58	-----	24.27	-----	24.69

PUBLICATIONS OF COOPERATIVE GROUND-WATER PROGRAM

Report

Ground-water resources of the Indianapolis area, Marion County, Indiana. C. L. McGuinness. Indiana Department of Conservation, Division of Geology. 1943.

Bulletins

No. 1 Memorandum concerning a pumping test at Gas City, Indiana. J. G. Ferris, Indiana Department of Conservation, Division of Water Resources. 1945.

2 A preliminary report of the ground-water levels of the State based on records of twenty-six observation wells for which long time records are available. Indiana Department of Conservation, Division of Water Resources. 1946 (Out of print).

3 Ground-water resources of St. Joseph County, Indiana. Part 1, South Bend area. F. H. Klaer, Jr., and R. W. Stallman. Indiana Department of Conservation, Division of Water Resources. 1948.

4 Ground-water resources of Boone County, Indiana. E. A. Brown. Indiana Department of Conservation, Division of Water Resources. 1949.

5 Ground-water resources of Noble County, Indiana. R. W. Stallman and F. H. Klaer, Jr. Indiana Department of Conservation, Division of Water Resources. 1950.

7 Water-level records of Indiana. Indiana Department of Conservation, Division of Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Indiana. Appendix, Basic Data. J. S. Rosenshein and O. J. Cosner. Indiana Department of Conservation, Division of Water Resources. 1956.

8 Ground-water resources of Tippecanoe County, Indiana. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1958 (1959).

9 Ground-water resources of Adams County, Indiana. F. A. Watkins, Jr., and P. E. Ward. Indiana Department of Conservation, Division of Water Resources. 1962.

10 Ground-water resources of northwestern Indiana. Preliminary Report: Lake County. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1961.

11 Ground-water resources of west-central Indiana. Preliminary Report: Greene County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1961.

Bulletins--Continued

12 Ground-water resources of northwestern Indiana. Preliminary Report: Porter County. J. S. Rosenshein. Indiana Department of Conservation, Division of Water Resources. 1962.

13 Ground-water resources of northwestern Indiana. Preliminary Report: La Porte County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.

14 Ground-water resources of west-central Indiana. Preliminary Report: Sullivan County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.

15 Ground-water resources of northwestern Indiana. Preliminary Report: St. Joseph County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1962.

16 Ground-water resources of west-central Indiana. Preliminary Report: Clay County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1962.

17 Ground-water resources of west-central Indiana. Preliminary Report: Vigo County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.

18 Ground-water resources of west-central Indiana. Preliminary Report: Owen County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1963.

19 Ground-water resources of northwestern Indiana. Preliminary Report: Marshall County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.

20 Ground-water resources of northwestern Indiana. Preliminary Report: Fulton County. J. S. Rosenshein and J. D. Hunn. Indiana Department of Conservation, Division of Water Resources. 1964.

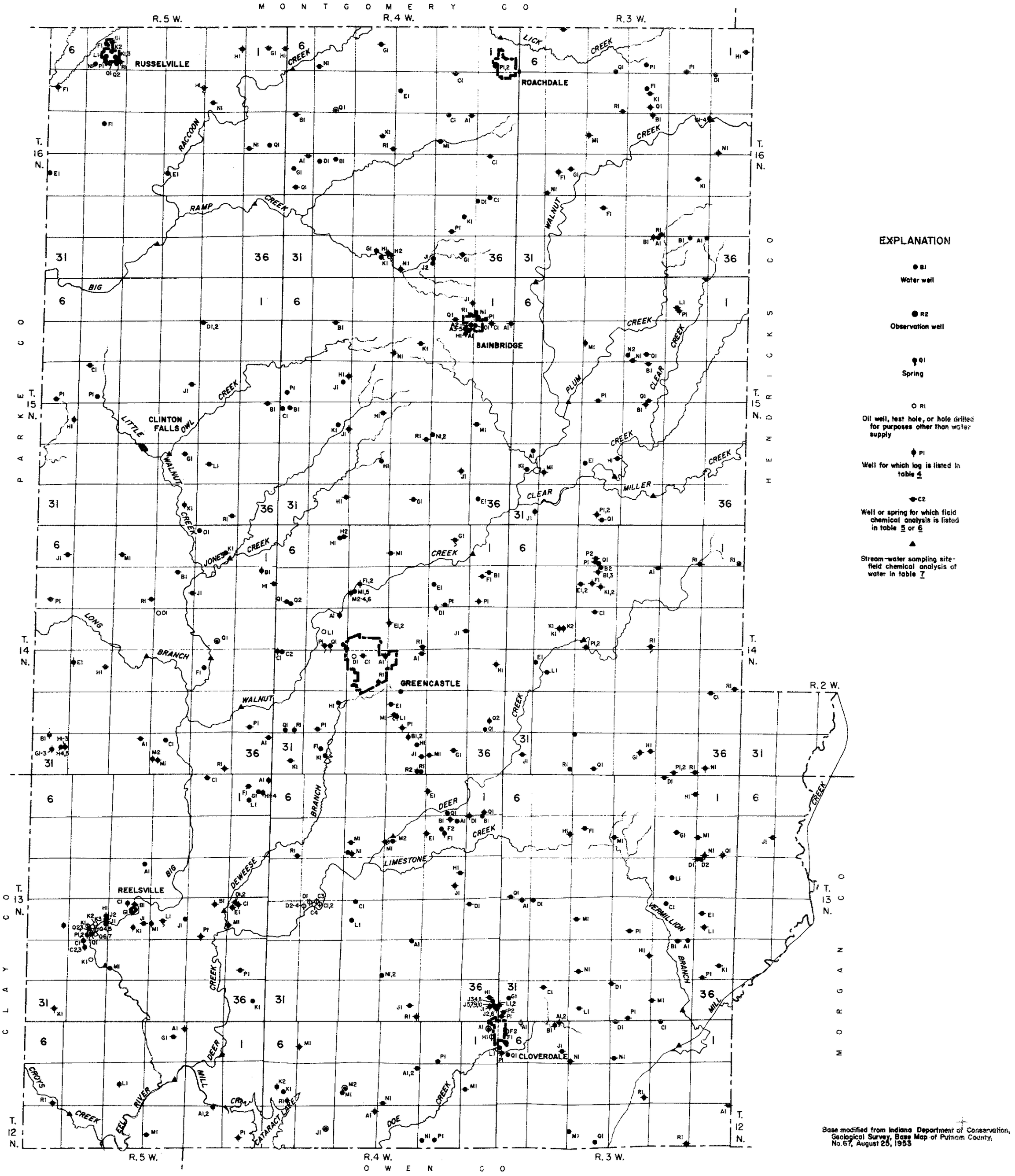
21 Ground-water resources of west-central Indiana. Preliminary Report: Putnam County. F. A. Watkins, Jr., and D. G. Jordan. Indiana Department of Conservation, Division of Water Resources. 1964.

INDEX

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 21 PLATE 1



EXPLANATION

- ● BI — Water well
- ● R2 — Observation well
- ● QI — Spring
- ○ RI — Oil well, test hole, or hole drilled for purposes other than water supply
- ♦ PI — Well for which log is listed in table 4
- ●-C2 — Well or spring for which field chemical analysis is listed in table 5 or 6
- ▲ — Stream-water sampling site-field chemical analysis of water in table 7

Base modified from Indiana Department of Conservation, Geological Survey, Base Map of Putnam County, No. 67, August 25, 1953

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

MAP OF PUTNAM COUNTY, INDIANA SHOWING LOCATION OF WELLS AND SPRINGS

0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 FEET

BY F.A. WATKINS, JR. AND D.G. JORDAN
1961

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

SECTION LETTER SYMBOLS IN WELL-NUMBERING SYSTEM

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

PREPARED BY THE
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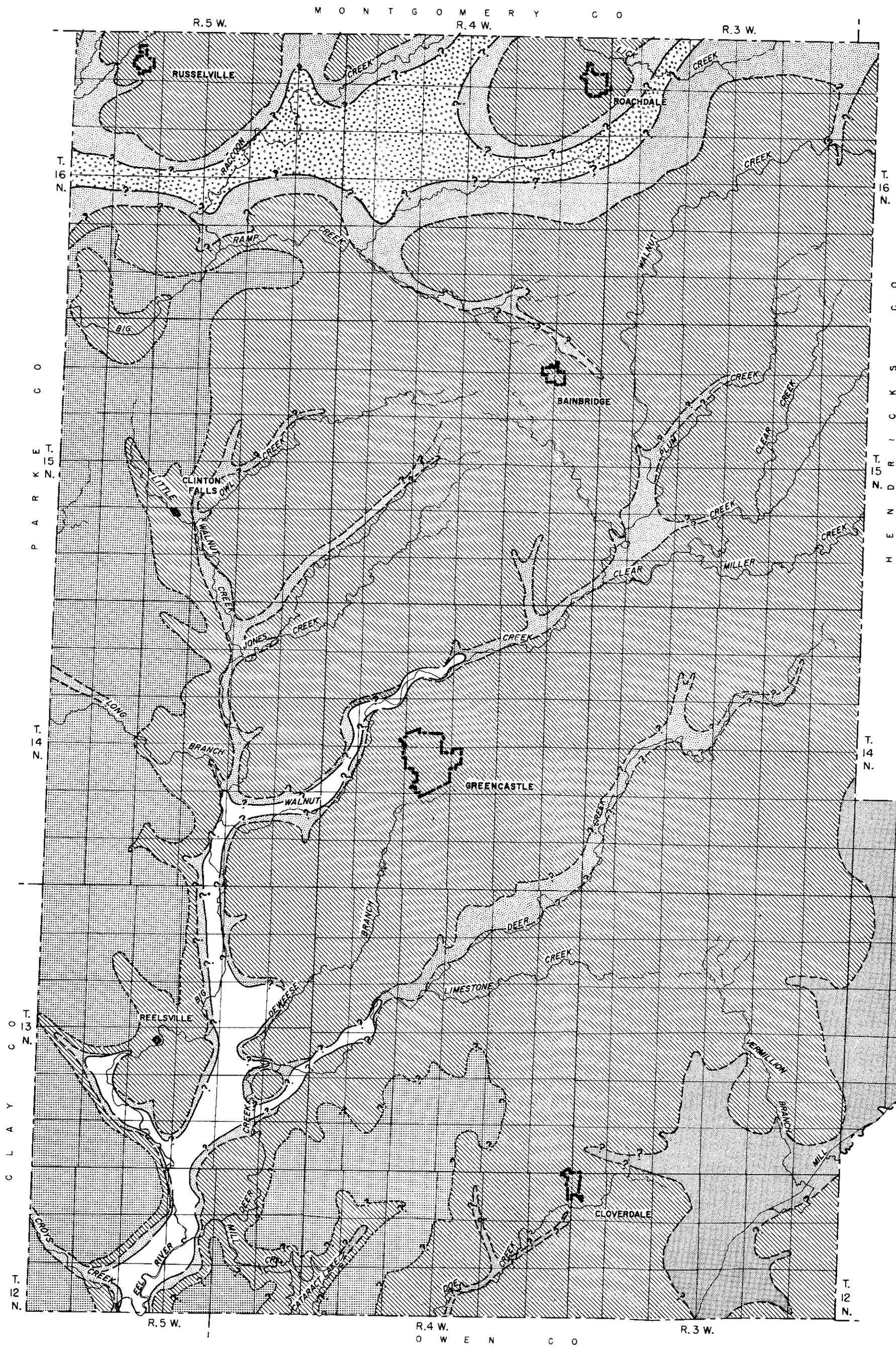
GEOLOGICAL SURVEY

BULLETIN 21 PLATE 2



EXPLANATION

Production from sand and gravel

Water from sand and gravel of Pleistocene age overlain by Recent alluvium. Well depths range from 30 to 70 feet. Yields more than adequate for domestic and stock use. Area of municipal pumpage and relatively large yields.

Water from sand and gravel of Pleistocene age overlain by till. Well depths range from 90 to 170 feet. Yields more than adequate for domestic and stock use. Area in which large yields may be possible.

Water from sand and gravel lenses and stringers interbedded with till or overlain by recent alluvium. Well depths range from 20 to 130 feet. Yields more than adequate for domestic and stock use. Some wells cased through the sand and gravel and tap the underlying bedrock.

Water from sand and gravel lenses and stringers interbedded with lake sediments. Well depths range from 50 to 120 feet. Yields adequate for domestic and stock use. Area in which large yields may be possible from sand and gravel underlying lake sediments.

Production from bedrock

Water predominately from sandstone of Pennsylvanian age. Well depths range from 40 to 120 feet. Yields generally adequate for domestic and stock use.

Water from limestone, sandstone, and siltstone of Mississippian age. Well depths range from 25 to 500 feet. Yields erratic, range from inadequate for domestic and stock use to adequate for industrial and municipal use.

Boundary approximate

Boundary uncertain

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

MAP OF PUTNAM COUNTY, INDIANA SHOWING AVAILABILITY OF GROUND WATER

0 1 2 3 4 5 6 MILES
0 5000 10000 15000 20000 FEET

BY F.A. WATKINS, JR. AND D.G. JORDAN
1961

Base modified from Indiana Department of Conservation, Geological Survey, Base Map of Putnam County, No.67 August 25, 1953

STATE OF INDIANA
INDIANA DEPARTMENT OF CONSERVATION
DIVISION OF WATER RESOURCES

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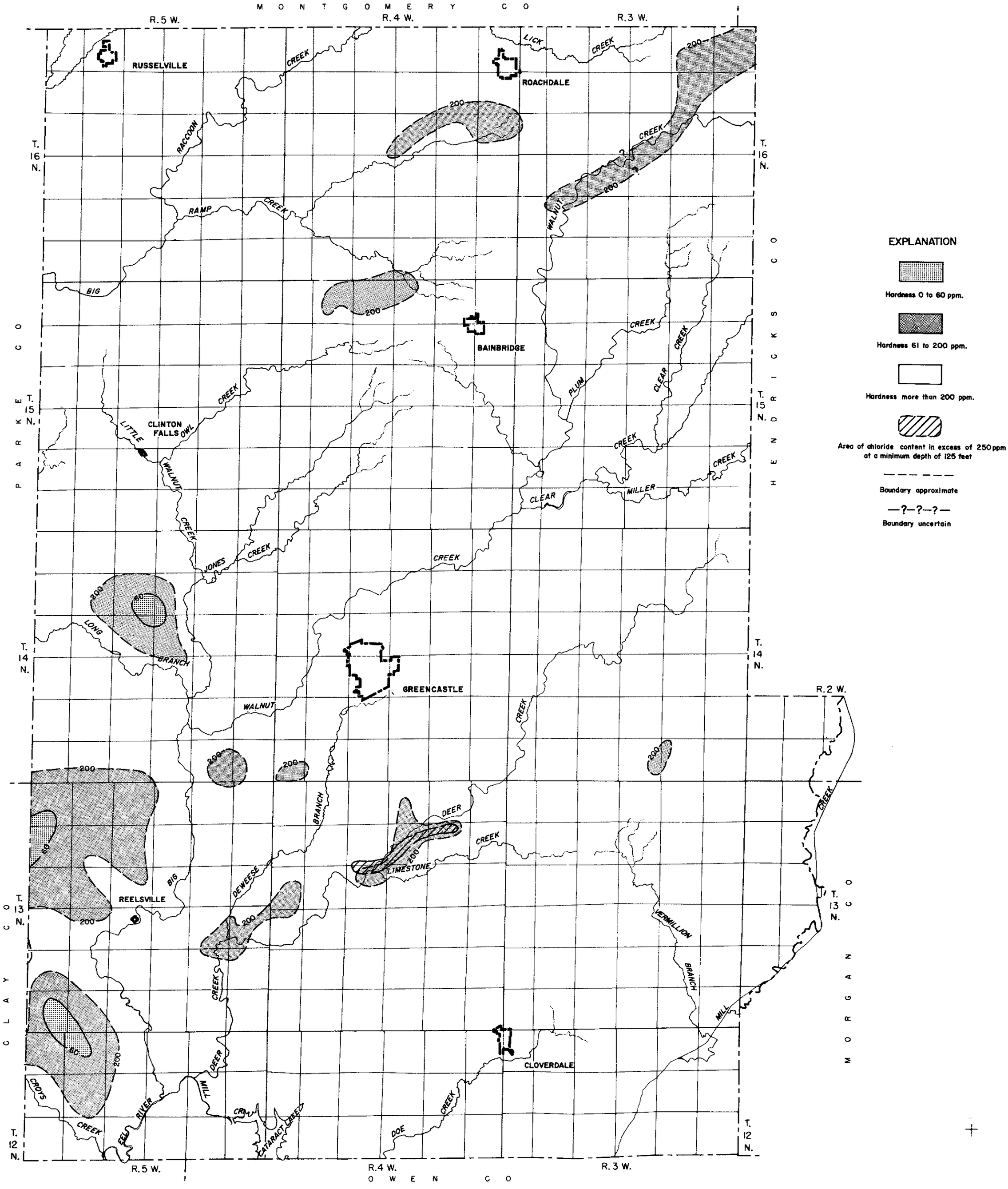
BULLETIN 21 PLATE 3



EXPLANATION

Hardness 0 to 60 ppm.

Hardness 61 to 200 ppm.

Hardness more than 200 ppm.

Area of chloride content in excess of 250 ppm at a minimum depth of 125 feet

Boundary approximate

Boundary uncertain

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

DIAGRAM OF TOWNSHIP

MAP OF PUTNAM COUNTY, INDIANA SHOWING HARDNESS OF GROUND WATER

0 1 2 3 4 5 6 MILES

0 5000 10000 15000 20000 FEET

BY F.A. WATKINS, JR. AND D.G. JORDAN

1961

Base modified from Indiana Department of Conservation, Geological Survey, Base Map of Putnam County, No. 67 August 25, 1953