

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 32/3-22D2

Type of record: Driller's log.

Altitude: 792 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	54	54	
Sand and gravel; with some clay--	3	57	
Clay, soft, blue-----	40	97	
Sand, medium-----	4	101	

Well 32/3-23L1

Type of record: Driller's log.

Altitude: 810 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, with streak of sand and gravel-----	21	21	
Sand and gravel-----	21	42	
Clay, blue-----	42	84	
Clay, blue, with streaks of sand and gravel-----	81	165	
Sand, fine-----	10	175	
Sand, fine to coarse-----	9	184	
Sand, muddy-----	4	188	
Gravel, rice-sized, mixed with clay-----	4	192	
Clay, brown, with sand-----	33	225	

Well 32/3-23L2

Type of record: Driller's log.

Altitude: 810 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, with streaks of gravel-----	21	21	
Gravel-----	24	45	
Clay, blue, with gravel-----	73	118	
Sand, very fine-----	3	121	
Clay, blue-----	2	123	
Gravel, "BB"-sized to pea-sized--	8	131	

Well 32/3-24K1

Type of record: Driller's log.

Altitude: 775 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	8	8	
Clay-----	4	12	
Sand and gravel-----	43	55	
Clay and sand-----	1	56	
Sand and gravel-----	32	88	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 32/3-24K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel and sand-----	7	95	
Sand and gravel-----	7	102	
Clay, sandy-----	4	106	

Well 32/3-31R1

Type of record: Driller's log.		Altitude: 852 feet.	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	16	16	
Sand, fine-----	3	19	
Clay and sand; mixed-----	101	120	
Gravel, medium-----	6	126	

Well 32/3-34N1

Type of record: Driller's log.		Altitude: 793 feet.	
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	25	25	
Clay, blue-----	8	33	
Sand and gravel; with streaks of clay-----	21	54	
Sand, fine, clean-----	26	80	
Sand and gravel-----	8	88	

Well 32/3-34Q1

Type of record: Driller's log.		Altitude: 790 feet.	
Quaternary System:			
Recent and Pleistocene Series:			
Muck and marl-----	35	35	
Clay, blue, and gravel; very hard	33	68	
Sand and gravel-----	7	75	

Well 32/3-35E1

Type of record: Driller's log.		Altitude: 817 feet.	
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	35	35	
Sand-----	4	39	
Clay, blue, with some gravel-----	46	85	
Sand, gravel, and clay; hard-----	10	95	
Gravel-----	10	105	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 32/3-36H1

Type of record: Driller's log. Altitude: 777 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	15	15	
Clay, blue-----	25	40	
Sand-----	7	47	
Gravel-----	5	52	

Well 32/4-711

Type of record: Driller's log. Altitude: 797 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	20	20	
Clay, blue-----	16	36	
Sand, muddy, gray-----	6	42	
Sand becoming cleaner and coarser with depth-----	13	55	
Sand and gravel-----	8	63	

Well 32/4-19K1

Type of record: Driller's log. Altitude: 782 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	21	21	
Clay, blue-----	14	35	
Sand, fine, gray-----	4	39	
Gravel becoming coarser with depth-----	3	42	

Well 32/4-19M1

Type of record: Driller's log. Altitude: 778 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel and fine sand-----	18	18	
Sand, fine-----	4	22	
Clay, blue-----	7	29	
Gravel and sand; gray-----	4	33	

Well 32/4-21L1

Type of record: Driller's log. Altitude: 787 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, yellow-----	8	8	
Clay, yellow-----	4	12	
Sand and gravel-----	3	15	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 32/4-21L1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue, with some gravel-----	17	32	
Sand, gray-----	22	54	
Sand and gravel-----	6	60	

Well 32/4-29J1

Type of record: Driller's log. Altitude: 795 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	16	16	
Gravel-----	8	24	
Clay, blue-----	14	38	
Sand, coarse-----	3	41	

Well 32/4-29R1

Type of record: Driller's log. Altitude: 797 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Clay, hard, brown-----	2	3	
Gravel, brown-----	12	15	
Clay, blue-----	10	25	
Clay and gravel; blue-----	6	31	
Gravel, medium, blue-----	4	35	

Well 33/1- 2N2

Type of record: Driller's log. Altitude: 818 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel and clay-----	35	35	
Sand-----	6	41	
Gravel, coarse-----	4	45	

Well 33/1- 3D1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	18	18	
Sand and gravel-----	3	21	
Clay, blue-----	6	27	
Gravel-----	18	45	
Sand with streaks of blue clay---	18	63	
Clay, yellow-----	7	70	
Sand, fine-----	39	109	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1- 3D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, coarse, with some pea- sized gravel-----	6	115	
Clay, blue-----	55	170	

Well 33/1- 6J1

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

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	12	12	
Clay-----	4	16	
Clay and sand-----	11	27	
Clay, blue and sand-----	5	32	
Clay, blue-----	16	48	
Sand, fine-----	6	54	
Sand, fine, dirty-----	4	58	
Sand and boulders-----	6	64	
Sand-----	5	69	
Clay, hard-----	19	88	
Gravel-----	2	90	
Clay, hard-----	6	96	

Well 33/1-10A1

Type of record: Driller's log. Altitude: 812 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Gravel-----	36	36	
Clay-----	10	46	
Sand and gravel-----	6	52	

Well 33/1-10B1

Type of record: Driller's log. Altitude: 787 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	25	25	
Clay-----	25	50	
Sand underlain by layer of clay--	30	80	
Sand, muddy-----	10	90	
Sand-----	10	100	
Sand, coarse, and gravel-----	8	108	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-10D1

Type of record: Driller's log.

Altitude: 785 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Dirt and clay-----	27	27	
Sand, fine-----	6	33	
Clay, blue-----	5	38	
Sand and gravel-----	5	43	

Well 33/1-10L1

Type of record: Driller's log.

Altitude: 784 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	25	25	
Clay, blue-----	10	35	
Gravel-----	5	40	
Clay, blue-----	15	55	
Gravel, coarse-----	11	66	

Well 33/1-10L2

Type of record: Driller's log.

Altitude: 790 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	20	20	
Clay, blue-----	4	24	
Sand and gravel; dirty, with blue clay-----	3	27	
Gravel, gray, and sand-----	4	31	

Well 33/1-11H1

Type of record: Driller's log.

Altitude: 811 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	60	60	
Sand, hard-----	24	84	
Sand, coarse, and gravel; gray---	6	90	

Well 33/1-11R1

Type of record: Driller's log.

Altitude: 812 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil and yellow clay-----	18	18	
Gravel-----	17	35	
Clay, blue, with sand and gravel-	27	62	
Sand and gravel; gray-----	6	68	

*green log
2-12-67*

*green log
2-12-67*

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-13Q1

Type of record: Driller's log. Altitude: 806 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand; yellow-----	25	25	
Clay, yellow, and stone-----	14	39	
Gravel, medium-----	6	45	

Well 33/1-14N1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Muck and marl-----	18	18	
Clay, blue-----	14	32	
Gravel-----	15	47	

Well 33/1-16R1

Type of record: Driller's log. Altitude: 812 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	18	18	
Gravel-----	7	25	
Clay, blue-----	11	36	
Sand, hard-----	12	48	
Clay, blue, with sand-----	12	60	
Gravel, gray, with sand-----	4	64	

Well 33/1-23H1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	20	20	
Sand, white-----	10	30	
Gravel-----	9	39	

Well 33/1-24E2

Type of record: Driller's log. Altitude: 797 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	12	12	
Gravel-----	18	30	
Sand and clay-----	14	44	
Gravel and sand; coarse-----	6	50	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-25PI

Type of record: Driller's log.

Altitude: 752 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, silty, brown, with few fine roots and silt-----	2	2	Organic odor; silt less than 15 percent.
Sand, fine to medium, silty, brown-----	2	4	
Sand, fine to coarse, brown-----	1	5	
Sand, fine to coarse, brown, with few fine gravel and trace of silt-----	2	7	
Sand, fine to coarse, slightly silty, brown, with fine gravel-	4	11	Gravel about 20 percent, up to 3/8 inch.
Sand, fine to coarse, slightly silty, gray-brown, with fine gravel-----	2	13	Organic odor; more gravel than above.
Do-----	2	15	More coarse sand than above.
Sand, fine to coarse, gray, with few fine gravel-----	3	18	
Sand, fine to coarse, gray, with some silt and trace of gravel--	3	21	
Sand, fine to coarse, gray, with some silt and few fine gravel--	3	24	
Sand, fine to coarse, gray, with few gravel-----	4	28	More gravel than above
Sand, fine to coarse, gray with fine gravel-----	2	30	Gravel 15 percent.

Well 33/1-26R1

Type of record: Driller's log.

Altitude: 750 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, fine, sandy, dark-gray, with roots-----	2	2	Organic odor.
Silt, clayey, dark-gray, with fine to coarse sand-----	1	3	Sand 35 percent.
Gravel, fine, gray, with silty, fine to coarse sand-----	1	4	Gravel up to 1/2 inch.
Sand, fine to coarse, gravelly, gray-----	17	21	Some decayed wood

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-26R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, clayey, with few fine gravel---	2	23	Sand mostly coarse. Silt less than 15 percent; sand mostly fine.
Sand, fine to coarse, silty-----	4	27	
Sand, fine to medium, silty, gray-----	3	30	

Well 33/1-29L1

Type of record: Driller's log.

Altitude: 737 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown-----	1	1	Organic odor; silt less than 15 percent.
Sand, fine to medium, brown, with few fine gravel and trace of silt-----	3	4	
Sand, fine to medium, brown, with fine gravel, and trace of silt-----	3	7	Sand mostly fine; gravel 10-15 per- cent.
Sand, fine to coarse, brown, with few fine gravel-----	3	10	Sand mostly medium. Sand mostly coarse.
Do-----	4	14	
Sand, fine to coarse, brown, with very few gravel-----	3	17	Gravel 5-10 per- cent.
Sand, fine to coarse, brown, with fine gravel-----	3	20	
Sand, fine to coarse, gray-brown, with fine gravel-----	4	24	
Do-----	3	27	Gravel 5-10 per- cent; sand mostly coarse.
Do-----	3	30	Gravel 5-10 percent.

Well 33/1-29N1

Type of record: Driller's log.

Altitude: 736 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, silty, clayey, dark-brown--	2	2	
Sand, fine to medium, silty, clayey, brown-----	2	4	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-29N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, gray-brown-----	1	5	
Sand, silty, gray-brown, with fine gravel-----	3	8	Gravel more than 20 percent.
Gravel, fine, with fine to medium sand and silt; dark- gray-----	2	10	Gravel 45 percent; up to 1/2 inch; sand 30 percent.
Sand, fine to coarse, silty, dark-gray, with fine gravel----	3	13	Coarse sand 50 per- cent; gravel 30 percent.
Sand, fine to coarse, gravelly, dark-gray, with silt-----	2	15	Sand 70 percent; silt 5-10 per- cent.
Sand, gravelly, with silt-----	3	18	Gravel 25 percent; up to 3/8 inch; silt 5 percent.
Do-----	3	21	More silt than above.
Do-----	5	26	Gravel up to 1 inch.
Do-----	4	30	Gravel 20 percent.

Well 33/1-29Q1

Type of record: Driller's log.

Altitude: 745 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown-----	2	2	Organic odor from 0-1 foot.
Sand, fine to medium, brown-----	7	9	
Sand, fine to medium, brown, with some fine to coarse gravel-----	2	11	Gravel up to 3/4 inch.
Sand, fine to coarse, slightly clayey, with very fine gravel--	4	15	
Sand, fine to coarse, slightly clayey-----	3	18	
Sand, fine to coarse, slightly clayey, with trace of fine gravel-----	2	20	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-29Q1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, slightly clayey, with fine gravel-----	4	24	Gravel up to 3/8 inch.
Do-----	2	26	More gravel than above.
Clay, gray, with few fine gravel and medium sand-----	4	30	

Well 33/1-30Q1

Type of record: Driller's log.

Altitude: 730 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, clayey, gray with roots-----	1	1	Organic odor.
Sand, fine, silty, clayey, gray-brown-----	1	2	
Clay, silty, brown, with fine sand-----	1	3	
Clay, silty, brown, with fine to coarse sand-----	1	4	
Sand, fine, silty, gray-brown, with trace of clay-----	3	7	
Sand, fine to coarse, silty, gray-brown, with trace of clay-	3	10	
Sand, fine to medium, silty, gray-brown, with trace of clay-	4	14	
Do-----	4	18	Silt less than 15 percent.
Sand, fine to medium, silty, gray-brown, with few fine gravel and trace of clay-----	4	22	
Sand, fine to medium, silty, gray-brown, with trace of clay-	3	25	

Well 33/1-30Q2

Type of record: Driller's log.

Altitude: 742 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, brown, with few fine roots-----	2	2	
Sand, fine to coarse, gravelly, brown-----	2	4	Gravel up to 3/4 inch.
Do-----	2	6	Gravel 40 percent, up to 1 inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-30Q2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, gravelly, brown, with trace of clay-----	5	11	Gravel 25 percent, up to 1/2 inch.
Sand, fine to coarse, silty, gravelly, brown, with trace of clay-----	4	15	
Sand, fine to medium, slightly clayey, brown-----	3	18	Gravel 30 percent, up to 3/4 inch.
Sand, fine to medium, slightly clayey, light-gray, with trace to silt-----	10	28	
Sand, fine to medium, silty, slightly clayey, light-gray----	2	30	

Well 33/1-30R1

Type of record: Driller's log.

Altitude: 733 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, fine, sandy, brown, with roots-----	2	2	Organic odor from 0-1 foot.
Clay, brown, with fine to medium sand and trace of silt--	1	3	
Clay, silty, gray-brown, with fine to medium sand-----	1	4	Silt 30 percent. Silt 15 percent.
Silt, dark-gray, with fine sand--	1	5	
Sand, fine, silty, dark-gray----	3	8	
Do-----	3	11	
Sand, fine to coarse, gravelly, slightly silty, gray-----	10	21	
Sand, medium to coarse, slightly silty, gray, with fine gravel--	9	30	Gravel up to 3/8 inch. Coarse sand increases with depth.

Well 33/1-31D1

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, dark-brown-----	1	1	Silt 30 percent.
Sand, fine, brown-----	1	2	
Sand, fine-----	1	3	
Sand, silty-----	2	5	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-31D1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sticky, drab-----	2	7	Looks like shale.
Clay, light-gray, with fine sand-	3	10	Sand 35 percent.
Sand, silty, light-gray-----	4	14	Coarse sand 20 percent.
Sand, silty, with rounded gravel-	2	16	Gravel 10 percent.
Sand, fine to coarse, with very little silt-----	6	22	
Sand, fine-----	3	25	

Well 33/1-31D2

Type of record: Driller's log.

Altitude: 732 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown-----	1	1	Silt 5-6 percent.
Sand, fine, brown-----	1	2	
Sand, silty, with fine gravel----	1	3	Silt 15 percent; fine sand 10 percent.
Silt, sandy-----	4	7	
Clay, sandy, gray-----	8	15	Sand 50 percent.
Clay, sandy, gray-----	7	22	
Sand, gravelly-----	3	25	

Well 33/1-32A1

Type of record: Driller's log.

Altitude: 742 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, gray-brown, with fine sand and roots-----	1	1	Organic odor.
Sand, fine to medium, brown, with trace of silt-----	1	2	
Sand, fine to medium, silty, gray-brown-----	1	3	
Sand, fine to coarse, silty, gray-brown-----	2	5	
Sand, fine to medium, silty, gray-brown, with few fine gravel-----	2	7	
Sand, fine to medium, silty, gravelly, gray-brown-----	4	11	Gravel 35 percent, up to 3/4 inch.
Gravel, sandy, gray-brown-----	2	13	Gravel 60 percent, up to 1/2 inch.
Do-----	4	17	Gravel 55 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-32A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, sandy, gray-brown-----	4	21	Gravel 75 percent, up to 3/4 inch.
Do-----	2	23	Gravel 60 percent, up to 1/2 inch
Clay, gray-----	7	30	

Well 33/1-33F1

Type of record: Driller's log.

Altitude: 742 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, dark-gray, with little clay-----	1	1	
Silt, clayey, dark-brown, with fine sand-----	1	2	
Sand, silty, dark-brown, with clay-----	1	3	Silt 40 percent.
Do-----	2	5	Silt 30 percent; clay 5 percent.
Silt, dark-gray, with fine to medium sand-----	2	7	Silt 80 percent or more.
Sand, fine to coarse, silty, dark-gray, with trace of gravel-----	3	10	Silt 15 percent; sand mostly coarse.
Do-----	6	16	Less silt than above.
Sand, fine to coarse, silty, gray-brown, with fine gravel---	5	21	
Gravel, sandy, gray-brown, with trace of silt and clay-----	3	24	Gravel up to 1 inch.
Do-----	4	28	Gravel up to 3/4 inch.
Clay, gray, with fine sand-----	2	30	Sand 15 percent.

Well 33/1-34A1

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, brown, with fine sand and roots-----	1	1	Slight organic odor.
Sand, fine, silty, brown-----	1	2	
Clay, brown, with fine sand-----	1	3	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-34A1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, slightly silty, light-brown-----	1	4	
Sand, fine to medium, silty, dark-brown-----	1	5	Silt less than 15 percent.
Sand, fine to medium, silty, gray-brown-----	2	7	Silt about 20 percent; sand mostly fine.
Sand, fine to coarse, silty, gray-brown-----	5	12	More silt than above.
Sand, fine to coarse, slightly silty, gray-brown-----	4	16	
Sand, fine to medium, gray, with trace of coarse sand-----	14	30	

Well 33/1-34G1

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, dark-brown, with roots-----	1	1	
Sand, fine, silty, lighter-brown-	1	2	
Sand, fine to medium, slightly silty, brown-----	2	4	Sand mostly fine.
Sand, fine to medium, silty, brown-----	1	5	Sand about 80 percent.
Sand, fine to coarse, gravelly, brown-----	3	8	Sand mostly fine; gravel up to 3/8 inch.
Gravel, fine, brown, with fine to coarse sand-----	2	10	Gravel up to 1-1/2 inch.
Sand, fine to coarse, gravelly, brown-----	3	13	Sand 60 percent; gravel up to 1/2 inch.
Do-----	2	15	Gravel up to 1 inch.
Do-----	6	21	Sand 60 percent; gravel up to 1/2 inch.
Do-----	7	28	Gravel 20 percent, up to 3/8 inch.
Clay, gray, with fine to medium sand-----	2	30	Sand more than 20 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-35A1

Type of record: Driller's log.

Altitude: 752 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt, clayey, dark-brown, with fine sand and roots-----	1	1	Slight organic odor.
Silt, clayey, brown, with fine to medium sand-----	2	3	
Clay, sandy, silty, brown-----	1	4	Sand 25 percent.
Sand, fine to medium, silty, clayey, brown-----	1	5	
Sand, fine to medium, silty, slightly clayey, gray-----	5	10	
Do-----	6	16	
Sand, fine to coarse, silty, slightly clayey, gray-----	3	19	Sand 80 percent.
Sand, fine to coarse, silty, slightly clayey, gray, with trace of fine gravel-----	2	21	
Clay, light-gray, with fine to medium sand and few fine gravel-----	9	30	Sand 45 percent or more.

Well 33/1-35C1

Type of record: Driller's log.

Altitude: 757 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, dark-brown, with few fine roots-----	1	1	Sand 80 percent or more.
Sand, fine to coarse, light- brown, with few fine gravel----	3	4	Sand mostly fine; gravel up to 3/8 inch.
Sand, fine to coarse, gravelly, light-brown-----	3	7	Gravel 20 percent, up to 3/4 inch.
Do-----	4	11	Sand mostly coarse; gravel up to 3/8 inch.
Sand, fine to coarse, gravelly, silty, light-brown, with trace of clay-----	5	16	
Sand, fine to coarse, silty, light-brown, with trace of gravel-----	4	20	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-35C1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, gray, with fine sand and few fine gravel-----	5	25	Sand nearly 50 per cent.
Sand, silty-----	5	30	

Well 33/1-35D1

Type of record: Driller's log.

Altitude: 750 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown, with roots-----	1	1	Slight organic odor.
Sand, fine to medium, brown, with trace of fine gravel and silt-----	3	4	
Sand, fine to coarse, brown, with trace of fine gravel-----	9	13	Sand mostly fine.
Sand, fine to coarse, slightly silty, brown, with fine gravel-----	2	15	Gravel more than 20 percent, up to 3/8 inch.
Do-----	4	19	
Sand, fine to coarse, slightly silty, brown, with fine gravel and trace of clay-----	5	24	More gravel than above.
Sand, gray-----	3	27	
Clay, gray, with fine sand-----	3	30	Fine sand 20 percent. Sand 20 percent.

Well 33/1-35F1

Type of record: Driller's log.

Altitude: 748 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, silty, brown, with roots---	1	1	Slight organic odor; silt 40 percent.
Sand, fine to medium, silty, brown, with few fine roots----	1	2	
Sand, fine to medium, brown-----	1	3	Sand mostly fine.
Sand, fine to medium, silty, brown-----	2	5	
Sand, fine to medium, silty, brown with trace of coarse sand-----	2	7	Sand 80 percent or more.

Table 4.--Selected logs of wells and test holes in Marshall, County, Ind.--Cont.

Well 33/1-35F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, gray, with trace of coarse sand and fine gravel-----	1	8	
Do-----	2	10	Silt less than 20 percent.
Sand, fine to coarse, silty, gray, with few fine gravel-----	3	13	
Sand, fine to coarse, silty, gray, with fine gravel-----	3	16	More gravel than above.
Do-----	4	20	Gravel 20 percent.
Sand, fine to coarse, slightly silty, gray, with fine gravel--	4	24	Gravel 25 percent, up to 3/8 inch.
Sand, coarse, gravelly, gray- brown-----	3	27	More gravel than above.
Sand, coarse, gravelly, silty, gray-brown-----	3	30	

Well 33/1-36A1

Type of record: Driller's log.

Altitude: 757 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, dark-brown, with roots and few fine gravel-----	1	1	Organic odor.
Sand, fine to coarse, silty, gravelly, brown-----	2	3	Gravel up to 1/2 inch.
Gravel, silty, brown, with fine to coarse sand-----	3	6	Sand 12 percent; silt 5 percent.
Do-----	5	11	Less silt than above; gravel up to 1 inch.
Do-----	3	14	More sand than above; gravel up to 3/4 inch.
Do-----	3	17	Sand 40 percent; silt 5 percent; gravel up to 1 inch.
Clay, fine to coarse, sandy, yellow-brown, with some fine gravel-----	2	19	Gravel up to 3/8 inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-36A1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, fine to coarse, sandy, yellow-brown-----	3	22	
Sand, fine to medium, clayey-----	3	25	Clay 45 percent.
Sand, fine silty, clayey-----	3	28	Sand 80 percent.
Sand, fine to medium, silty, brown-----	2	30	Sand mostly fine.

Well 33/1-36C1

Type of record: Driller's log.

Altitude: 750 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, slightly sandy, dark-brown, with roots-----	1	1	Organic odor.
Silt, dark-brown, with fine sand-----	2	3	Sand more than 25 percent.
Sand, fine to medium, silty, dark-gray-----	4	7	
Sand, fine to coarse, gravelly, silty, dark-gray-----	3	10	Silt 10 percent; gravel up to 1 inch.
Do-----	3	13	Less sand and silt than above; gravel up to 3/4 inch.
Sand, fine to coarse, gravelly, slightly silty, dark-gray-----	7	20	Sand 25 percent, mostly coarse.
Do-----	4	24	Sand 15 percent.
Do-----	6	30	Sand 20 percent.

Well 33/1-36D1

Type of record: Driller's log.

Altitude: 757 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown, slightly organic, with roots----	1	1	
Sand, fine to coarse, brown, with trace of fine gravel and silt-----	2	3	Sand mostly fine.
Sand, fine to coarse, slightly silty, brown, with fine gravel and rock fragments-----	2	5	Sand mostly medium; rock fragments up to 3/4 inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/1-36D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, gravelly, brown-----	3	8	Silt less than 15 percent; gravel up to 3/4 inch.
Sand, fine to coarse, silty, gravelly, brown, with trace of clay-----	3	11	Gravel up to 1/2 inch.
Sand, fine to medium, clayey, slightly silty, brown-----	10	21	Clay about 20 per- cent.
Sand, fine to coarse, clayey, slightly silty, brown-----	6	27	Less clay than above.
Clay, fine to medium, sandy, gray-----	3	30	

Well 33/2- 2N1

Type of record: Driller's log.

Altitude: 837 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Clay, brown-----	4	5	
Clay, gravelly, brown-----	10	15	
Sand, medium, red, and gravel----	18	33	
Sand, fine, dirty, red-----	22	55	
Sand, medium, red-----	3	58	
Gravel, fine, and sand-----	2	60	
Sand, coarse, and fine gravel----	8	68	
Gravel, yellow, with rock fragment-----	3	71	
Gravel, medium, gray, with little sand-----	4	75	Gray, soft, gummy clay at 75 feet.

Well 33/2- 3D1

Type of record: Driller's log.

Altitude: 811 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	18.	18	
Clay, blue-----	22	40	
Sand and gravel with streaks of fine sand-----	13	53	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 4D2

Type of record: Driller's log.

Altitude: 782 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt, brown-gray, with fine to coarse sand, roots, and few gravel-----	1	1	Organic odor; sand nearly 50 percent.
Sand, fine to medium, silty, brown-----	1	2	
Sand, fine to medium, clean, brown-----	3	5	Sand mostly fine.
Sand, fine to coarse, silty, brown, with few gravel and trace of clay-----	2	7	Sand mostly fine.
Clay, silty, brown, with fine to medium sand and trace of gravel-----	1	8	Gravel up to 3/8 inch.
Do-----	3	11	Sand 40 percent.
Clay, silty, gray, with fine to medium sand-----	3	14	
Do-----	3	17	Sand nearly 30 percent.
Sand, fine to coarse, silty, light-gray, with very fine gravel-----	8	25	

Well 33/2- 4E4

Type of record: Driller's log.

Altitude: 776 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, dark-gray, with fine gravel and brick fragments-----	2	2	
Sand, fine to coarse, silty, dark-gray, with fine gravel----	1	3	Silt 15 percent or less.
Sand, fine to coarse, silty, gravelly, dark-gray, with brick fragments-----	2	5	Gravel and brick fragments more than 39 percent, up to 1 inch.
Sand, fine to coarse, silty, gravelly, dark-gray-----	2	7	Gravel 20 percent, up to 1/2 inch; more silt than above.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 4E4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, dark-gray-----	2	9	Silt 5-10 percent.
Sand, fine to medium, silty, brown-gray-----	2	11	Sand mostly fine.
Sand, fine to medium, silty, dark-gray-----	2	13	Sand mostly fine.
Do-----	3	16	Silt 30-40 per- cent.
Sand, fine to coarse, silty, dark-gray-----	4	20	Silt 20-30 per- cent.
Sand, fine to medium, silty, dark-gray, with trace of coarse sand and gravel-----	5	25	

Well 33/2- 4F1

Type of record: Driller's log.

Altitude: 782 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, gray, with gravel and fine roots-----	1	1	Organic odor; sand 50-60 per- cent; gravel up to 3/4 inch.
Sand, fine to medium, clayey, slightly silty, brown, with trace of gravel-----	2	3	Sand 70 percent.
Sand, silty, clayey, brown, with some fine gravel-----	2	5	
Sand, silty, clayey, brown, with trace of gravel-----	3	8	
Sand, fine to coarse, silty, clayey, brown, with trace of gravel-----	2	10	
Sand, fine to coarse, gravelly, slightly silty, brown-----	3	13	Gravel up to 1/2 inch.
Clay, gray, with fine to coarse sand and few fine gravel-----	8	21	Sand more than 40 percent.
Sand, fine, silty, gray-----	4	25	Sand more than 75 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-4Q1

Type of record: Driller's log.

Altitude: 796 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	10	10	
Sand, dirty-----	15	25	
Clay, tough, blue-----	20	45	
Sand, fine, clean-----	5	50	
Sand, dirty-----	10	60	
Sand, fine, clean-----	23	83	
Sand, fine, dirty-----	7	90	
Sand, medium, dirty-----	3	93	
Sand, medium, clean-----	3	96	
Sand, medium, dirty-----	24	120	
Sand, fine, clean-----	7	127	
Sand, medium, clean-----	21	148	
Sand, medium, clean, with some gravel-----	4	152	
Sand, fine, dirty-----	20	172	
Sand, coarse, clean, with some gravel-----	18	190	

Well 33/2-4Q2

Type of record: Driller's log.

Altitude: 798 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	2	2	
Sand, dirty, with some gravel----	23	25	
Clay, sandy-----	20	45	
Sand, fine, dirty, with some gravel-----	15	60	
Sand, fine, dirty, with some clay-----	10	70	
Sand, fine, dirty, with clay-----	15	85	Clay 50 percent.
Sand, fine, dirty, with some clay-----	10	95	
Clay with fine sand and some gravel-----	34	129	
Sand and gravel-----	21	150	
Sand and coarse gravel-----	7	157	
Clay, sandy, with some gravel----	16	173	
Sand-----	5	178	
Clay, yellow, and gravel-----	12	190	
Gravel-----	3	193	
Shale, black-----	5	198	Gravel?
Gravel, fine, with some sand----	1	199	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series; undifferentiated:			
Shale, black-----	2	201	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind--Cont.

Well 33/2-4Q3

Type of record: Driller's log.

Altitude: 796 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	5	5	
Sand, dirty-----	20	25	
Gravel, sandy-----	15	40	
Sand, muddy, becoming cleaner with depth-----	100	140	
Gravel, sandy, little dirty-----	10	150	
Gravel, muddy-----	15	165	
Gravel, clean-----	5	170	
Sand, clean-----	10	180	
Sand, muddy-----	10	190	
Gravel, sandy, with some boulders	27	217	

Well 33/2-4Q4

Type of record: Driller's log.

Altitude: 796 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	4	4	
Sand and gravel-----	12	16	
Clay-----	29	45	
Sand-----	17	62	
Clay with some boulders-----	53	115	
Sand-----	10	125	
Sand and gravel-----	42	167	
Clay-----	10	177	
Gravel and sand; with boulders---	15	192	

Well 33/2-4R1

Type of record: Driller's log.

Altitude: 801 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil-----	1	1	
Sand-----	3	4	
Clay, sandy, with gravel-----	3	7	
Clay, sandy, gray-----	8	15	
Gravel-----	3	18	
Clay-----	6	24	
Sand and gravel-----	5	29	
Clay, sandy, with gravel-----	13	42	
Clay-----	10	52	
Sand and gravel-----	13	65	
Clay, sandy, with gravel-----	12	77	
Sand and gravel-----	4	81	
Clay, sandy, with gravel-----	47	128	
Sand and gravel-----	38	166	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-4R1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, gravelly-----	3	169	
Gravel, sandy-----	20	189	
Boulders with trace of clay-----	3	192	
Clay, gravelly, with boulders----	4	196	
Mississippian and Devonian Systems:			
Lower Mississippian and Upper Devonian Series; undifferentiated:			
Shale, brown-----	4	200	

Well 33/2-5G1

Type of record: Driller's log.

Altitude: 798 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	16	16	
Gravel-----	2	18	
Clay, blue, with streaks of gravel-----	16	34	
Gravel, clean, and sand-----	6	40	

Well 33/2-5G1

Type of record: Driller's log.

Altitude: 790 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, red-----	4	4	
Sand and clay; with boulders----	26	30	
Sand, coarse, and gravel-----	14	44	
Sand, fine to medium, and fine gravel-----	5	49	
Clay, sandy-----	7	56	
Sand, fine to medium-----	27	83	
Sand medium to coarse-----	10	93	
Gravel, fine to medium, and coarse sand-----	21	114	
Sand, coarse-----	7	121	
Clay, hard, brown-----	2	123	

Well 33/2-5H2

Type of record: Driller's log.

Altitude: 796 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, brown-----	3	3	
Clay, sandy, brown-----	9	12	
Clay, sandy, gray, with gravel---	20	32	
Sand, fine, muddy-----	8	40	
Sand and gravel; muddy-----	13	53	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 5H2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, brown-----	7	60	
Sand, fine, muddy-----	10	70	
Sand, fine, with some gravel-----	24	94	
Sand, clean, and gravel-----	21	115	

Well 33/2- 5H3

Type of record: Driller's log.

Altitude: 796 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Fill-----	10	10	
Clay, sandy, and gravel-----	14	24	
Clay, sandy, gray, and gravel----	12	36	
Sand and gravel-----	19	55	
Sand and gravel with chunks of clay-----	9	64	
Sand, fine-----	16	80	
Sand, clean, brown, with some gravel-----	15	95	
Sand and gravel with chunks of clay-----	2	92	
Gravel, clean, and sand-----	15	112	

Well 33/2- 5J1

Type of record: Driller's log.

Altitude: 775 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, gray, with fine gravel, brick fragments, and roots-----	2	2	Organic odor.
Sand, fine to coarse, silty, gravelly, gray with cinders----	2	4	More gravel, less silt and sand than above.
Sand, fine to coarse, gravelly, slightly silty, brown-----	4	8	Sand mostly fine; gravel up to 3/4 inch.
Sand, fine to coarse, gravelly, silty, brown-----	3	11	More coarse sand than above; gravel about 30 percent, up to 1/2 inch.
Sand, fine to coarse, gravelly, slightly silty, brown, with trace of clay-----	4	15	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 5J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, gravelly, silty, gray-brown, with trace of clay-----	3	18	Gravel 20 percent.
Sand, fine to coarse, silty, brown, with trace of clay-----	4	22	
Sand, fine to coarse, silty, brown, with trace of clay-----	3	25	Sand mostly fine.

Well 33/2- 5P1

Type of record: Driller's log. Altitude: 772 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, brown, with few roots and trace of cinders-----	1	1	Gravel and rock fragments 5 per- cent.
Sand, fine to medium, silty, slightly clayey, brown-----	2	3	
Sand, fine to coarse, silty, dark-gray, with fine gravel and rock fragments-----	1	6	
Gravel, silty, brown, with fine to coarse sand-----	8	14	Sand about 40 per- cent.
Sand, fine to coarse, silty, slightly clayey, gray, with trace of fine gravel-----	16	30	

Well 33/2- 5Q1

Type of record: Driller's log. Altitude: 774 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Fill; cinders, glass, and gravel with some fine to coarse sand-----	5	5	Sand about 40 percent.
Sand, fine to medium, red-brown--	2	7	
Gravel, fine, brown with fine to coarse sand-----	3	10	
Sand, fine to coarse, silty, slightly clayey, gray-----	3	13	Less coarse sand than above.
Do-----	3	16	
Silt, gray, with fine to medium sand-----	14	30	Sand about 30 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 5R1

Type of record: Driller's log.

Altitude: 773 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Silt, sandy, dark-brown, with roots and few fine gravel-----	1	1	Organic odor.
Sand, fine to medium, silty, slightly organic, brown, with trace of gravel-----	1	2	Sand about 80 percent.
Sand, fine to medium, silty, brown-----	2	4	Sand about 95 percent.
Sand, fine to medium, slightly silty, light-brown, with trace of clay-----	1	5	
Sand, fine to medium, silty, light-brown, with trace of clay-----	5	10	More silt than above.
Sand, fine to coarse, silty, gray, with bits of wood and trace of gravel-----	3	13	Sand more than 80 percent.
Sand, fine to coarse, silty, gray, with few fine gravel-----	6	19	
Sand, fine to coarse, silty, gray, with gravel-----	3	22	More gravel than above.
Clay, slightly sandy, light-gray, with few fine gravel-----	3	25	

Well 33/2- 6H1

Type of record: Driller's log.

Altitude: 802 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and some sand-----	89	89	
Sand, fine-----	7	96	
Clay and stone-----	14	110	
Sand, medium-----	13	123	

Well 33/2- 7A1

Type of record: Driller's log.

Altitude: 770 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, clayey, black-----	1	1	
Clay, silty, black-----	2	3	
Sand, fine to medium, silty, gray	2	5	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 7A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, brown, with some silt-----	8	13	
Sand, fine to coarse, brown, with some silt-----	14	27	
Sand, fine to coarse, brownish- gray, with fine gravel-----	3	30	

Well 33/2- 7J1

Type of record: Driller's log.

Altitude: 770 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Silt, clayey, brown, with some fine sand-----	2	2	Clay 20 percent.
Sand, fine, silty, brown, with clay lumps-----	2	4	Silt 15 percent.
Sand, fine to medium, silty, brownish-gray-----	2	6	Silt 30 percent.
Sand, gravelly, brown, with some silt-----	2	8	Gravel 20-30 per- cent.
Sand, fine to coarse, brown, with some silt-----	9	17	
Sand, fine to coarse, and gravel; brown, with some silt-----	4	21	
Gravel, sandy, brown, with some silt-----	3	24	Gravel 30-40 per- cent.
Sand, fine to coarse, brown, with fine gravel-----	6	30	

Well 33/2- 7R1

Type of record: Driller's log.

Altitude: 768 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown-----	2	2	Silt 10-15 per- cent.
Sand, fine to medium, silty, brown, with clay lumps-----	1	3	
Clay, sandy, brown-----	2	5	Sand 10-15 per- cent.
Clay, brown, with some sand-----	2	7	
Sand, fine to medium, clayey, silty, brown-----	1	8	
Sand, fine to medium, brown, with some silt-----	22	30	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2- 8C1

Type of record: Driller's log.

Altitude: 807 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, sandy, yellow-----	32	32	
Sand, fine-----	14	46	
Clay and stone-----	8	54	
Clay, blue-----	9	63	
Sand, coarse-----	7	70	

Well 33/2- 9E1

Type of record: Driller's log.

Altitude: 802 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay-----	16	16	
Sand and gravel-----	34	50	
Sand, coarse-----	17	67	

Well 33/2- 9F1

Type of record: Driller's log.

Altitude: 806 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand-----	2	2	
Clay, hard-----	4	6	
Gravel-----	12	18	
Clay, sandy-----	27	45	
Sand, muddy-----	14	59	
Gravel, dirty-----	8	67	
Sand and gravel; dirty-----	23	90	
Clay, gravelly-----	55	145	
Clay, sandy-----	5	150	
Gravel and sand-----	51	201	
Gravel-----	2	203	

Well 33/2-11L1

Type of record: Driller's log.

Altitude: 842 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	10	10	
Gravel-----	20	30	
Sand, fine, with streaks of blue clay-----	45	75	
Gravel and sand; coarse, gray----	5	80	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-12E1

Type of record: Driller's log. Altitude: 831 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	30	30	
Clay, blue, with streak of sand--	53	83	
Gravel-----	7	90	

Well 33/2-16A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	10	10	
Gravel and stone-----	40	50	
Sand, fine-----	18	68	
Clay, blue, mixed with gravel----	25	93	
Sand, coarse, clean, gray, and gravel-----	8	101	

Well 33/2-16B1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay and sand; yellow-----	15	15	
Gravel, coarse-----	15	30	
Clay, blue-----	10	40	
Gravel, brown-----	10	50	
Clay, blue-----	6	56	

Well 33/2-17M1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown-----	2	2	Silt 15-20 percent.
Sand, fine to medium, brown, with gravel-----	2	4	
Sand, fine, brown, with coarse gravel-----	3	7	
Clay, silty, brown, with some sand-----	6	13	
Sand, fine to medium, gravelly, brown-----	5	18	
Sand, fine to coarse, brown, with fine to coarse gravel-----	4	22	
Clay, brown, with fine to coarse sand and fine to coarse gravel-	3	25	Sand and gravel 20 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-17M1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, grayish-brown and brown-----	2	27	
Sand, fine to medium, brown-----	3	30	

Well 33/2-17M2

Type of record: Driller's log.

Altitude: 812 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay and gravel-----	18	18	
Gravel and sand; yellow-----	45	63	
Sand, fine-----	2	65	
Sand, coarse-----	4	69	

Well 33/2-17N1

Type of record: Driller's log.

Altitude: 763 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, brown, with some fine sand-----	2	2	
Sand, fine silty, brown-----	1	3	
Gravel, fine, sandy, clayey, brown-----	1	4	Sand 15 percent; gravel up to 1½ inches.
Do-----	2	6	Sand 20-25 per- cent; gravel up to 1 inch.
Do-----	2	8	Gravel up to 1 inch.
Sand, fine to coarse, clayey, gray, with few fine gravel-----	3	11	
Sand, fine to coarse, clayey, gray, with trace of gravel-----	7	18	Clay 25 percent.
Sand, fine to coarse, clayey, gray, with fine gravel-----	3	21	Clay 10 percent; gravel 15-20 percent.
Sand, fine to coarse, clayey, gray, with gravel-----	5	26	Clay 10-15 per- cent.
Sand, fine to coarse, clayey, gray, with fine gravel-----	4	30	Gravel 25-30 per- cent, up to 1 inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-18A1

Type of record: Driller's log.

Altitude: 766 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, sandy, black, with fine gravel-----	1	1	
Clay, silty, brown, with fine sand-----	3	4	
Sand, fine, brown-----	2	6	
Sand, fine to coarse, brown, with fine gravel-----	2	8	
Sand, fine to coarse, brown-----	3	11	
Sand, fine to coarse, brown, with fine gravel-----	16	27	
Clay, gray, with fine to coarse sand-----	3	30	Sand 10 percent.

Well 33/2-18H1

Type of record: Driller's log.

Altitude: 766 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, silty, grayish-brown, with some fine sand-----	1	1	
Clay, silty, brown, with some fine sand-----	2	3	
Sand, fine, brown, with some silt and clay lumps-----	1	4	
Sand, gravelly, brown, with clay lumps-----	2	6	
Sand, fine, brown-----	2	8	
Sand, fine to medium, brown-----	22	30	

Well 33/2-18P1

Type of record: Driller's log.

Altitude: 812 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	32	32	
Clay, sandy-----	16	48	
Clay, blue-----	11	59	
Sand, coarse-----	7	66	

Well 33/2-19B1

Type of record: Driller's log.

Altitude: 784 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and gravel-----	30	30	
Clay, blue-----	50	80	
Sand, fine, muddy-----	10	90	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-19B1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, brown-----	2	92	
Gravel-----	13	105	

Well 33/2-19D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	18	18	
Gravel with streak of clay-----	24	42	
Gravel and sand; clean-----	4	46	

Well 33/2-19E1

Type of record: Driller's log. Altitude: 802 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow, and gravel-----	28	28	
Clay, blue-----	10	38	
Gravel and sand; coarse, gray----	6	44	

Well 33/2-20D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, gravelly, brown-----	1	1	Slight organic odor; gravel 15 percent, up to ½ inch; sand mostly fine.
Sand, fine to coarse, silty, gravelly, darker brown-----	1	2	Silt 20 percent.
Sand, fine to coarse, silty, gray-brown, with trace of gravel-----	1	3	Silt 45 percent; sand mostly fine.
Silt, clayey, sandy, with gravel-----	2	5	More gravel than above.
Sand, fine to medium, silty, clayey, gray-----	1	6	Sand 60 percent.
Sand, fine to medium, silty, clayey, gray with gravel-----	5	11	Gravel up to ½ inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-20D1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, gravelly, silty, clayey, brown-----	3	14	Gravel up to ½ inch.
Do-----	2	16	Gravel 10 percent, up to ½ inch.
Gravel, silty, clayey, brown, with fine to coarse sand-----	2	18	Gravel 60 percent, up to ½ inch.
Sand, fine to coarse, gravelly, silty, clayey, brown-----	3	21	Sand 60 percent.
Gravel, silty, clayey, brown, with fine to coarse sand-----	3	24	Sand 35 percent or more; gravel up to ½ inch.
Sand, fine to medium, clayey, gray-----	2	26	Clay 25 percent.
Record missing-----	4	30	

Well 33/2-20F1

Type of record: Driller's log.

Altitude: 765 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, with few gravel and roots-----	1	1	Some organic odor.
Sand, fine to coarse, slightly silty and clayey, brown-----	3	4	Gravel 10 percent.
Do-----	3	7	Gravel 25 percent.
Do-----	3	10	Gravel 20 percent.
Sand, fine to coarse, slightly silty and clayey, brown, with few fine gravel-----	7	17	
Sand, fine to medium, slightly clayey, brown, with trace of coarse sand-----	2	19	
Sand, fine to coarse, slightly clayey, brown, with few fine gravel-----	3	22	
Sand, fine to coarse, brown, with few fine gravel and trace of clay-----	5	27	More gravel than above.
Sand, fine to coarse, brown, with some fine gravel-----	3	30	Sand mostly medium to coarse.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-23H1

Type of record: Driller's log. Altitude: 843 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Top soil and clay-----	10	10	
Gravel-----	30	40	
Sand, fine-----	47	87	

Well 33/2-25J1

Type of record: Driller's log. Altitude: 850 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	10	10	
Gravel, coarse-----	20	30	
Sand and gravel-----	10	40	
Sand-----	64	104	
Clay, blue-----	14	118	
Sand, fine, becoming coarse-----	22	140	
Gravel, pinhead-sized to pea-sized-----	6	146	

Well 33/2-26E1

Type of record: Driller's log. Altitude: 854 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	60	60	
Sand, fine-----	50	110	
Gravel, medium-----	10	120	

Well 33/2-26M1

Type of record: Driller's log. Altitude: 872 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand and gravel-----	80	80	
Sand, fine-----	60	140	
Gravel, fine-----	10	150	

Well 33/2-27C1

Type of record: Driller's log. Altitude: 827 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, blue-----	45	45	
Gravel, coarse-----	10	55	
Sand, coarse-----	11	66	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-29B1

Type of record: Driller's log.

Altitude: 763 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, brown, with roots and bits of wood-----	2	2	Slight organic odor; sand mostly fine.
Sand, fine to coarse, silty, clayey, brown-----	2	4	Sand mostly fine.
Sand, fine to coarse, silty, clayey, brown, with few fine gravel-----	2	6	
Gravel, brown, with fine to coarse sand-----	1	7	
Sand, fine to coarse, gravelly, clayey, brown-----	4	11	Gravel 40 percent, up to 1/2 inch.
Do-----	3	14	Gravel 15 percent.
Do-----	2	16	Gravel 10 percent.
Do-----	4	20	Gravel 25 percent.
Do-----	4	24	Gravel 15 percent.
Sand, fine to coarse, slightly clayey and silty, brown with trace of gravel-----	4	28	Sand mostly medium.
Sand, fine to coarse, brown, with few gravel-----	2	30	Do.

Well 33/2-29F1

Type of record: Driller's log.

Altitude: 760 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine slightly silty, brown, with few roots-----	3	3	
Sand, fine to medium, slightly silty, brown-----	2	5	
Sand, fine to coarse, clayey, gravelly, brown-----	3	8	Gravel 25 percent, up to 1/2 inch.
Do-----	3	11	Gravel 35 percent, up to 3/4 inch.
Clay, brown, with fine to coarse sand and few fine gravel-----	2	13	Sand more than 35 percent.
Sand, fine to coarse, brown, with clay and few fine gravel--	3	16	Clay 15-20 percent.
Clay, gray, with fine sand and few fine gravel-----	3	19	Sand 15 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-29F1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, gray, with fine to coarse sand and few gravel-----	7	26	Sand 30 percent.
Do-----	4	30	Sand 40 percent.
Well 33/2-29M1			
Type of record: Driller's log.		Altitude: 758 feet.	
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, silty, brown, with few fine roots-----	1	1	Slight organic odor.
Clay, slightly silty, brown, with fine to medium sand-----	2	3	Sand 35 percent.
Sand, fine to medium, clayey, brown-----	1	4	Clay 45 percent; sand mostly fine.
Sand, fine to medium, silty, clayey, darker-brown-----	1	5	Silt 25 percent; clay 15 percent.
Sand, fine to medium, silty, gray, with bits of wood-----	6	11	Silt about 15 per- cent.
Sand, fine to coarse, silty, dark-brown-----	2	13	Sand mostly fine.
Sand, fine to medium, silty, brown-----	3	16	Silt 15 percent; sand mostly fine.
Sand, fine to medium, silty, clayey, brown-----	2	18	Do.
Sand, fine to medium, silty, clayey, brown-gray-----	3	21	Do.
Sand, fine to coarse, clayey, brown, with few gravel-----	3	24	Sand mostly medium.
Sand, fine to coarse, gravelly, silty, clayey, brown-----	4	28	Gravel more than 20 percent, up to 3/8 inch.
Clay, gray, with fine to coarse sand and fine gravel-----	2	30	Sand 25 percent; gravel 10-15 percent.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-31A1

Type of record: Driller's log.

Altitude: 760 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine, silty, brown, with few roots-----	1	1	Some organic odor.
Sand, fine silty, brown-----	4	5	Less silt than above.
Sand, fine to medium, silty, brown-----	3	8	Sand mostly fine.
Sand, fine to medium, silty, gray-----	3	11	Do.
Sand, fine to coarse, silty, gray, with bits of wood-----	5	16	Silt content in-creases with depth.
Gravel and fine to coarse sand; silty, gray-----	3	19	Sand 45 percent; gravel up to 1/2 inch.
Sand, fine to coarse, gravelly, silty, clayey, gray-----	2	21	Gravel 25 percent, up to 3/8 inch.
Sand, fine to coarse, clayey, gray, with trace of gravel-----	5	26	Clay 30 percent; sand mostly fine to medium.
Record missing-----	4	30	

Well 33/2-31C1

Type of record: Driller's log.

Altitude: 760 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to coarse, brown, with trace of silt-----	2	2	Sand mostly fine.
Sand, fine to coarse, brown, with trace of silt and some fine gravel-----	1	3	More coarse sand than above.
Sand, fine to medium, gravelly, silty, brown-----	2	5	Gravel 20 percent, up to 3/8 inch.
Sand, fine to coarse, silty, gray-brown, with trace of gravel-----	3	8	Sand mostly fine.
Gravel, silty, gray-brown, with fine to coarse sand and trace of clay-----	3	11	Sand 40 percent, mostly fine to medium; gravel up to 1/2 inch.

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/2-31C1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Gravel, silty, gray-brown, with fine to coarse sand and trace of clay-----	4	15	Sand 45 percent, gravel up to 3/8 inch.
Sand, fine to coarse, gravelly, brown-----	3	18	Gravel 45 percent, up to 1/2 inch.
Do-----	3	21	Gravel 30 percent, up to 3/8 inch
Do-----	3	24	Gravel 15 percent, up to 3/8 inch; sand mostly fine.
Sand, fine to coarse, slightly clayey and silty, brown, with fine gravel-----	3	27	Gravel 25-30 percent.
Sand, fine to coarse, clayey, light-brown, with few fine gravel-----	3	30	

Well 33/2-31D1

Type of record: Driller's log.

Altitude: 758 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Sand, fine to medium, silty, dark-brown-----	1	1	Some organic odor; silt about 10 percent.
Sand, fine to medium, silty, slightly clayey, dark-brown----	1	2	Silt 20 percent.
Sand, fine to medium, silty, slightly clayey, gray-----	1	3	Silt more than 40 percent.
Silt, gray-black, with peat and trace of fine sand-----	1	4	Organic odor.
Sand, fine to medium, silty, black-----	1	5	Sand 70 percent.
Sand, fine to medium, silty, black, with fine gravel-----	1	6	Gravel 15 percent; silt 20 percent.
Sand, fine to medium, dark-gray--	4	10	Sand 80 percent.
Sand, silty, light-gray-----	8	18	Silt 30 percent.
Record missing-----	7	25	

Table 4.--Selected logs of wells and test holes in Marshall County, Ind.--Cont.

Well 33/3- 7N1

Type of record: Driller's log. Altitude: 832 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	30	30	
Clay, blue-----	30	60	
Sand, coarse-----	6	66	

Well 33/3- 7R1

Type of record: Driller's log. Altitude: 852 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Top soil, sand and gravel-----	18	18	
Clay, blue-----	30	48	
Clay, blue, soft-----	12	60	
Clay, hard, blue-----	14	74	
Sand, coarse-----	10	84	

Well 33/3- 8P1

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	21	21	
Sand, fine-----	4	25	
Clay, blue, and gravel; mixed----	35	60	
Sand, coarse-----	4	64	

Well 33/3- 8Q2

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

Quaternary System:			
Recent and Pleistocene Series:			
Clay and gravel-----	30	30	
Clay, blue, mixed with gravel----	87	117	
Gravel and sand; coarse, gray----	6	123	

Well 33/3-10D1

Type of record: Driller's log. Altitude: 841 feet.

Quaternary System:			
Recent and Pleistocene Series:			
Clay, yellow-----	10	10	
Sand and clay-----	10	20	
Clay, yellow-----	9	29	
Clay, blue-----	7	36	
Sand and gravel; muddy-----	4	40	
Clay, blue-----	35	75	
Clay, blue, with streaks of sand-	53	128	
Sand and gravel becoming coarser			
and cleaner with depth-----	12	140	