

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-16C5--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	17	102	
Clay-----	12	114	
Sand-----	20	134	
Clay-----	6	140	
Sand-----	4	144	
Clay-----	2	146	
Sand-----	4	150	
Clay-----	14	164	
Gravel-----	2	166	
Clay, blue-----	8	174	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	176	

Well 37/3-16D1

Type of record: Driller's log.

Altitude: 715 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	7	7	
Gravel, coarse-----	16	23	
Sand with some gravel-----	7	30	
Sand, coarse-----	20	50	
Sand, medium-----	13	63	

Well 37/3-16F1

Type of record: Driller's log.

Altitude: 703 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	76	76	
Sand, dirty-----	2	78	Suitable for 15-slot screen.
Clay-----	32	110	
Sand-----	2	112	Suitable for 25-slot screen.
Hardpan, mixed-----	1	113	
Sand and gravel-----	5	118	Suitable for 40-slot screen.
Sand and gravel-----	9	127	Suitable for 40- to 50-slot screen.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-16F2

Type of record: _____ Altitude: 703 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and dirt-----	2	2	
Gravel-----	2	4	
Hardpan-----	16	20	
Sand-----	31	51	
Sand and gravel-----	9	60	
Clay-----	32	92	
Sand-----	1	93	
Sand and gravel-----	8	101	
Gravel, sand, and clay-----	10	111	
Sand and fine gravel-----	17	128	
Sand and coarse gravel-----	7	135	

Well 37/3-16F4

Type of record: Driller's log. _____ Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	3	3	
Gravel-----	4	7	
Hardpan-----	37	44	
Gravel and sand-----	4	48	
Sand-----	8	56	
Clay and sand-----	8	64	
Clay-----	11	75	
Clay, yellow-----	21	96	
Sand, yellow-----	11	107	
Sand, coarse, yellow-----	5	112	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	2	114	

Well 37/3-16H1

Type of record: Driller's log. _____ Altitude: 721 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, red, and gravel-----	15	15	
Gravel, medium, yellow, and boulders-----	5	20	
Sand, medium, gray, and pea- sized gravel-----	5	25	
Sand, fine, gray-----	5	30	
Sand, fine, gray, muddier-----	3	33	

Well 37/3-16N2

Type of record: Driller's log. _____ Altitude: 721 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	8	8	
Gravel-----	15	23	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-16N2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	4	27	
Gravel, yellow-----	4	31	
Clay, yellow-----	1	32	
Sand, yellow-----	11	43	
Hardpan and boulders-----	20	63	
Sand, dirty-----	4	67	
Gravel-----	11	78	
Gravel, coarse-----	11	89	Clay at 89 feet.

Well 37/3-16N3

Type of record: Driller's log. Altitude: 719 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and fill-----	1	1	
Muck-----	2	3	
Sand and coarse gravel-----	13	16	
Clay, sandy-----	7	23	
Sand and gravel; brown-----	4	27	
Sand, fine, brown-----	3	30	
Gravel and clay-----	17	47	
Clay, sandy-----	14	61	
Sand and gravel; somewhat dirty-----	14	75	
Clay, sandy-----	4	79	
Gravel and clay-----	11	90	
Clay, smooth-----	4	94	
Gravel, sand, and clay strips---	22	116	

Well 37/3-16N4

Type of record: Driller's log. Altitude: 719 feet.

Quaternary system:			
Recent and Pleistocene series:			
Cinders-----	1	1	
Muck-----	2	3	
Sand and gravel-----	16	19	
Sand-----	2	21	
Clay, gravelly-----	27	48	
Clay, sandy-----	27	75	
Gravel, sand, and clay; strippy-----	11	86	
Clay, sandy-----	47	133	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-16R1

Type of record: Driller's log. Altitude: 723 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	7	7	
Sand, red-----	3	10	
Gravel-----	20	30	
Hardpan-----	16	46	Yellow clay at 46 feet.

Well 37/3-17M1

Type of record: Driller's log. Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	7	7	
Gravel and sand-----	51	58	
Sand, coarse-----	2	60	

Well 37/3-18D1

Type of record: Driller's log. Altitude: 700 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	20	20	
Clay-----	4	24	
Sand-----	23	47	
Sand, gray-----	4	51	
Gravel and sand-----	6	57	
Sand and gravel; gray-----	10	67	

Well 37/3-8D2

Type of record: Driller's log. Altitude: 700 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Old well-----	68	68	
Gravel and sand-----	7	75	
Hardpan-----	10	85	
Clay, blue-----	17	102	
Clay, soft, and sand-----	45	147	Shale at 147 feet.

Well 37/3-18D4

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, coarse-----	15	35	
Sand, fine-----	15	50	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-18D4--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, some coarser-----	10	60	
Sand and gravel; fine to coarse--	10	70	
Sand and blue clay-----	10	80	
Sand, very fine-----	32	112	

Well 37/3-18G4

Type of record: Driller's log.		Altitude: 712 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	25	45	
Sand, coarse-----	30	75	
Clay, blue-----	20	95	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	5	100	

Well 37/3-18G5

Type of record: Driller's log.		Altitude: 688 feet	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Gravel, fine-----	10	30	
Sand, fine-----	5	35	
Sand and gravel-----	10	45	
Sand, fine-----	5	50	
Gravel, coarse-----	5	55	
Sand, coarse-----	5	60	
Gravel, coarse-----	8	68	
Clay, blue-----	151	219	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	1	220	

Well 37/3-18K1

Type of record: Driller's log.		Altitude: 710 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	5	25	
Sand, coarse to 1/4" stones-----	65	90	
Sand, coarse to 3/8" stones-----	10	100	
Clay, blue-----	3	103	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-18P1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, coarse-----	15	35	
Sand, fine-----	5	40	
Sand, coarser-----	40	80	
Sand, coarse to 1/4" stones-----	5	85	
Sand, coarse-----	25	110	
Sand, fine-----	20	130	
Clay, blue-----	10	140	

Well 37/3-18Q1

Type of record: Driller's log. Altitude: 732 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Sand, coarse-----	32	47	
Sand, fine-----	63	110	
Sand, coarse-----	6	116	
Clay, blue-----	14	130	

Well 37/3-19B1

Type of record: Driller's log. Altitude: 732 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	21	21	
Sand, coarse-----	26	47	
Sand, fine-----	60	107	
Sand, coarse-----	8	115	
Clay, blue-----	60	175	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	8	183	

Well 37/3-19E1

Type of record: Driller's log. Altitude: 756 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil; black dirt-----	2	2	
Sand, red-----	2	4	
Sand, fine to medium yellow-----	2	6	
Sand and gravel with boulders----	3	9	
Clay, sandy, with boulders-----	4	13	
Sand and gravel with boulders----	9	22	
Sand, medium, and gravel-----	5	27	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-19E1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse, and gravel-----	20	47	
Sand and yellow clay-----	10	57	
Sand and gravel-----	3	60	
Clay, sandy, yellow-----	9	69	
Sand, muddy, and gravel-----	9	78	
Sand and heavy gravel-----	12	90	
Sand, fine-----	24	114	
Clay, sandy-----	10	124	
Sand, fine-----	5	129	
Sand, muddy, and gravel-----	5	134	
Clay, sandy, blue-----	2	136	
Gravel-----	9	145	
Clay, sandy, blue-----	2	147	
Gravel-----	8	155	
Clay, sandy-----	4	159	
Gravel-----	3	162	
Mississippian system:			
Lower Mississippian series:			
Shale-----	6	168	

Well 37/3-19R1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	40	40	
Gravel-----	10	50	
Sand-----	16	66	

Well 37/3-20D4

Type of record: Driller's log. Altitude: 762 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	30	30	
Sand and gravel; yellow-----	27	57	
Sand, coarse, and gravel; dirty--	3	60	
Sand and gravel; dirty-----	9	69	
Sand-----	18	87	
Gravel-----	1	88	
Clay, yellow-----	6	94	
Sand, coarse, and gravel-----	9	103	
Gravel, dirty-----	3	106	
Gravel, coarse-----	7	113	
Gravel-----	16	129	Clay at 129 feet.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-20D5

Type of record: Driller's log.

Altitude: 793 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and clay; yellow-----	12	12	
Sand, yellow-----	70	82	
Clay, blue-----	16	98	
Sand and gravel; with clay balls-	7	105	
Clay, blue-----	5	110	
Sand and gravel-----	6	116	

Well 37/3-20G1

Type of record: Driller's log.

Altitude: 882 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel and clay-----	53	53	
Sand and clay-----	104	157	
Sand-----	21	178	
Clay, blue-----	22	200	
Hardpan-----	31	231	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	4	235	

Well 37/3-20K1

Type of record: Driller's log.

Altitude 892 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel and sand-----	186	186	
Clay-----	21	207	
Gravel-----	3	210	
Sand, fine-----	2	212	

Well 37/3-20K2

Type of record: Driller's log.

Altitude: 892 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, sand, and clay; yellow---	17	17	
Gravel, yellow-----	129	146	
Sand, yellow-----	9	155	Streak of yellow clay balls at 155 feet.
Gravel, yellow-----	8	163	
Sand, yellow-----	16	179	
Sand, coarse, gray-----	15	194	
Gravel, coarse, gray-----	3	197	
Clay and hardpan-----	16	213	
Gravel and sand; with some clay balls	10	223	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-20K2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	3	226	

Well 37/3-21B1

Type of record: Driller's log.		Altitude: 728 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	30	30	
Clay, blue-----	6	36	
Sand, yellow-----	10	46	

Well 37/3-21G3

Type of record: Driller's log.		Altitude: 736 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	32	32	
Clay, yellow and blue-----	8	40	
Sand, yellow-----	5	45	

Well 37/3-21J1

Type of record: Driller's log.		Altitude: 805 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand-----	40	70	
Pack sand-----	15	85	
Gravel and sand-----	12	97	

Well 37/3-21Q1

Type of record: Driller's log.		Altitude: 883 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	16	16	
Sand and gravel; yellow-----	124	140	
Clay, blue-----	28	168	
Sand, yellow-----	7	175	

Well 37/3-21Q2

Type of record: Driller's log.		Altitude: 872 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	123	123	
Clay, blue-----	17	140	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-21Q2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse-----	8	148	

Well 37/3-21R1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	150	150	
Clay-----	34	184	
Sand-----	10	194	

Well 37/3-21R2

Type of record: Driller's log. Altitude: 882 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	140	140	
Clay-----	10	150	
Sand and gravel-----	26	176	

Well 37/3-22M1

Type of record: Driller's log. Altitude: 752 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Gravel-----	5	35	
Sand and gravel-----	16	51	

Well 37/3-22N1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	30	30	
Clay-----	6	36	
Hardpan-----	3	39	
Clay-----	15	54	
Pack sand-----	2	56	
Clay streaked with sand-----	21	77	
Sand, fine-----	7	84	
Sand, clean-----	9	93	
Sand and gravel-----	10	103	
Sand-----	2	105	
Gravel-----	5	110	
Clay-----	7	117	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-22R4

Type of record: Driller's log.

Altitude: 772 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	44	44	
Clay, yellow-----	13	57	
Sand, yellow-----	3	60	
Clay, yellow-----	2	62	
Sand, brown-----	7	69	

Well 37/3-25E1

Type of record: Driller's log.

Altitude: 795 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	4	4	
Sand and gravel-----	8	12	
Clay and gravel-----	33	45	
Sand and gravel-----	4	49	
Clay-----	35	84	
Sand-----	3	87	
Clay-----	18	105	
Sand and gravel-----	6	111	
Clay-----	24	135	
Mississippian system:			
Lower Mississippian series:			
Shale-----	41	176	

Well 37/3-25E2

Type of record: Driller's log.

Altitude: 807 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	23	23	
Clay and gravel-----	23	46	
Sand and gravel-----	3	49	
Sand-----	10	59	
Clay-----	29	88	
Sand, muddy-----	14	102	
Clay-----	2	104	
Sand, muddy-----	11	115	
Clay-----	10	125	
Sand, muddy-----	7	132	
Shale-----	5	137	Clay.
Gravel-----	1	138	
Mississippian system:			
Lower Mississippian series:			
Shale-----	52	190	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-25M1

Type of record: Driller's log.

Altitude: 846 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	22	22	
Sand, yellow-----	60	82	
Clay, blue-----	13	95	
Hardpan-----	3	98	
Clay, sandy-----	42	140	
Sand-----	9	149	

Well 37/3-26C2

Type of record: Driller's log.

Altitude: 837 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	40	40	
Gravel, yellow-----	40	80	
Clay, blue-----	20	100	
Sand and gravel; yellow-----	60	160	
Sand, yellow-----	7	167	

Well 37/3-26G3

Type of record: Driller's log.

Altitude: 770 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	22	22	
Clay, yellow-----	7	29	
Sand-----	5	34	
Clay, blue-----	21	55	
Sand-----	6	61	

Well 37/3-26N1

Type of record: Driller's log.

Altitude: 860 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	25	25	
Clay, blue-----	17	42	
Sand, yellow-----	53	95	
Sand and gravel; yellow-----	7	102	

Well 37/3-27E1

Type of record: Driller's log.

Altitude: 874 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Sand and gravel; yellow-----	86	116	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-27E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	21	137	
Sand and gravel; yellow-----	7	144	

Well 37/3-27E2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	25	25	
Clay, blue-----	17	42	
Sand and gravel; yellow-----	82	124	
Clay and gravel; blue-----	41	165	
Sand and gravel; yellow-----	9	174	

Well 37/3-27E3

Type of record: Driller's log. Altitude: 878 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	50	50	
Gravel-----	56	106	
Sand-----	74	180	

Well 37/3-27R1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	30	30	
Clay, blue-----	15	45	
Gravel-----	48	93	
Sand-----	10	103	

Well 37/3-28A1

Type of record: Driller's log. Altitude: 867 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	110	110	
Clay, blue-----	55	165	
Sand and gravel; yellow-----	5	170	Yellow clay at 170 feet.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-28D1

Type of record: Driller's log. Altitude: 902 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Stony material-----	40	70	
Hardpan-----	20	90	
Sand and gravel-----	83	173	

Well 37/3-28H2

Type of record: Driller's log. Altitude: 879 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	24	24	
Sand-----	100	124	
Clay-----	16	140	
Sand-----	12	152	

Well 37/3-29F1

Type of record: Driller's log. Altitude: 842 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	100	100	
Clay-----	8	108	
Sand-----	25	133	

Well 37/3-29H1

Type of record: Driller's log. Altitude: 868 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	27	27	
Sand-----	17	44	
Hardpan-----	16	60	
Sand and gravel-----	84	144	

Well 37/3-29K2

Type of record: Driller's log. Altitude: 862 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	130	130	
Clay-----	3	133	
Gravel-----	8	141	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-29K3

Type of record: Driller's log.

Altitude: 862 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Sand-----	91	109	
Clay-----	5	114	
Sand-----	24	138	

Well 37/3-29N1

Type of record: Driller's log.

Altitude: 875 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Gravel, coarse-----	55	70	
Hardpan-----	40	110	
Clay, yellow-----	10	120	
Sand and gravel; yellow-----	13	133	

Well 37/3-29N5

Type of record: Driller's log.

Altitude: 880 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Sand and gravel; yellow-----	115	130	
Sand, yellow-----	8	138	

Well 37/3-31A2

Type of record: Driller's log.

Altitude: 865 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, brown-----	7	7	
Sand, muddy, and gravel-----	13	20	
Sand and gravel; some coarse-----	69	89	
Sand, muddy, brown-----	41	130	
Sand, muddy, and clay-----	1	131	
Sand, clean, brown-----	12	143	
Sand, fine-----	8	151	
Sand and gravel; clean-----	20	171	
Sand, clean-----	4	175	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-31H1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow, and sand-----	10	10	
Clay, yellow, with gravel and sand-----	97	107	
Sand, fine, yellow-----	21	128	
Sand, coarse, yellow, and gravel-	2	130	
Sand, fine, yellow-----	17	147	
Sand, coarse, yellow-----	6	153	
Gravel, coarse, gray-----	11	164	
Clay and hardpan; yellow-----	2	166	

Well 37/3-33A2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	70	70	
Gravel, coarse-----	30	100	
Sand-----	10	110	

Well 37/3-33A3

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Gravel-----	60	80	
Rock-----	10	90	
Clay-----	30	120	
Sand-----	5	125	

Well 37/3-33A4

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	28	28	
Gravel, yellow-----	7	35	
Clay, blue-----	7	42	
Sand and gravel; yellow-----	68	110	

Well 37/3-33A6

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	40	40	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-33A6--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	50	90	
Clay-----	10	100	
Sand and gravel-----	22	122	Clay at 122 feet.

Well 37/3-33B3

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	125	125	
Clay-----	39	164	
Clay and sand-----	5	169	
Clay-----	6	175	
Sand-----	5	180	

Well 37/3-33E1

Type of record: Driller's log. Altitude: 874 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	10	10	
Clay, sandy-----	8	18	
Clay, gray-----	7	25	
Clay, fine, sandy-----	15	40	
Sand and gravel; with clay-----	5	45	
Sand and gravel-----	20	65	
Sand and gravel; with boulders---	45	110	
Sand and gravel; with traces of clay-----	28	138	
Clay-----	3	141	
Clay, gravelly-----	4	145	

Well 37/3-33J2

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	30	30	
Gravel and rock-----	40	70	
Gravel-----	20	90	
Sand-----	26	116	Bedrock at 116 feet.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/3-34A1

Type of record: Driller's log. Altitude: 860 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	38	38	
Hardpan-----	27	65	
Sand-----	36	101	Clay at 101 feet.

Well 37/3-35D2

Type of record: Driller's log. Altitude: 860 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	30	30	
Clay and gravel; yellow-----	15	45	
Clay, blue-----	10	55	
Sand and gravel; yellow-----	35	90	
Gravel, yellow-----	10	100	

Well 37/3-35M1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	70	70	
Sand and gravel-----	10	80	
Sand-----	11	91	

Well 37/3-36Q1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Clay and stone-----	22	52	
Gravel-----	54	106	

Well 37/4-6B1

Type of record: Driller's log. Altitude: 754 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill, black-----	4	4	
Sand and clay; mixed-----	11	15	
Sand and gravel-----	10	25	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-6J1

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	38	38	
Sand, fine-----	16	54	
Sand, coarse-----	16	70	
Sand, fine-----	11	81	
Clay and sandy clay-----	5	86	
Sand, fine, with some gravel-----	5	91	

Well 37/4-7A1

Type of record: Driller's log.

Altitude: 746 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	18	18	
Clay, yellow-----	6	24	
Hardpan-----	10	34	
Sand and gravel; white-----	8	42	

Well 37/4-7A3

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	44	44	
Sand and clay; yellow-----	4	48	
Sand, fine, yellow-----	12	60	
Sand and gravel; yellow-----	7	67	

Well 37/4-7B1

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand, yellow, and gravel-----	1	11	
Sand-----	6	17	
Sand and gravel-----	10	27	
Clay, sandy, and gravel-----	3	30	
Sand and gravel-----	31	61	
Sand, fine-----	7	68	
Clay, sandy-----	44	112	
Sand and gravel-----	18	130	
Sand and fine to coarse gravel---	22	152	Clay at 152 feet.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-7B2

Type of record: Driller's log.

Altitude: 746 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	54	54	
Clay, hard, and gravel-----	14	68	
Sand, medium, brown-----	34	102	
Sand and gravel, with some clay--	12	114	
Sand, clean, and gravel-----	38	152	Clay at 152 feet.

Well 37/4-7D1

Type of record: Driller's log.

Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	34	34	
Clay-----	17	51	
Sand, fine-----	4	55	
Sand and gravel-----	24	79	
Clay, yellow-----	12	91	
Sand, fine-----	14	105	
Clay-----	9	114	
Sand and gravel-----	12	126	
Clay-----	2	128	
Sand and gravel-----	26	154	

Well 37/4-7D2

Type of record: Driller's log.

Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	15	15	
Gravel and sand-----	18	33	
Gravel-----	4	37	
Clay-----	7	44	
Clay, sandy-----	9	53	
Sand and gravel-----	18	71	
Sand-----	10	81	
Clay-----	5	86	
Clay and gravel-----	19	105	
Clay with streaks of sand-----	17	122	
Sand and gravel-----	12	134	
Clay-----	5	139	
Sand and gravel-----	17	156	
Mississippian series:			
Lower Mississippian series:			
Shale-----	2	158	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-7E2

Type of record: Driller's log.

Altitude: 749 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand and gravel-----	60	61	
Clay-----	38	99	
Sand, fine-----	13	112	
Sand and gravel-----	41	153	Brown shale at 153 feet.

Well 37/4-7G1

Type of record: Driller's log.

Altitude: 742 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	45	45	
Clay, yellow-----	10	55	
Sand and gravel; yellow-----	7	62	

Well 37/4-8D1

Type of record: Driller's log.

Altitude: 740 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	37	37	
Sand, fine-----	4	41	
Clay, blue-----	8	49	
Sand, sugar-sized-----	5	54	
Clay, red-----	19	73	
Sand-----	8	81	

Well 37/4-8E2

Type of record: Driller's log.

Altitude: 722 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Clay, blue-----	14	34	
Sand-----	10	44	

Well 37/4-9A1

Type of record: Driller's log.

Altitude: 750 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface soil and sand-----	21	21	
Clay, yellow-----	39	60	
Sand-----	14	74	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-9D1

Type of record: Driller's log.

Altitude: 750 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	22	22	
Sand and gravel-----	20	42	
Sand, fine, yellow-----	11	53	
Sand, fine, silty-----	13	66	
Sand, fine, yellow-----	7	73	
Sand, fine, gray-----	12	85	
Sand and gravel-----	9	94	
Sand, coarse, and gravel-----	2	96	
Sand, fine, gray-----	4	100	

Well 37/4-9G2

Type of record: Driller's log from memory.

Altitude: 731 feet.

Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	18	18	
Clay, blue, and hard gravel-----	22	40	
Sand, coarse, mixed with gravel--	4	44	

Well 37/4-9Q1

Type of record: Driller's log from memory.

Altitude: 727 feet.

Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	25	25	
Clay, gravel, and rock-----	33	58	
Sand, coarse, and gravel; mixed--	7	65	

Well 37/4-16C2

Type of record: Driller's log.

Altitude: 736 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	30	30	
Clay and gravel-----	15	45	
Sand and gravel-----	7	52	

Well 37/4-16D1

Type of record: Driller's log.

Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	30	30	
Clay, blue-----	40	70	Three-foot boulder at 47 feet.
Sand-----	4	74	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-16G2

Type of record: Driller's log. Altitude: 741 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	23	23	
Clay, yellow-----	20	43	
Sand and gravel; yellow-----	23	66	

Well 37/4-17A1

Type of record: Driller's log. Altitude: 737 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Gravel, coarse, red-----	2	3	
Sand, gray, dirty-----	8	11	
Sand and gravel; gray-----	1	12	
Gravel and stones-----	4	16	
Clay, brown, and hardpan-----	4	20	
Clay, blue, hardpan, and stones--	10	30	
Clay, blue, hardpan, and sand----	42	72	
Sand, fine, clean-----	9	81	
Sand, fine-----	16	97	
Sand, coarse-----	4	101	
Gravel, fine-----	7	108	
Sand, coarse-----	6	114	

Well 37/4-17A2

Type of record: Driller's log. Altitude: 736 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	3	3	
Hardpan-----	3	6	
Sand-----	28	34	
Pack sand, yellow-----	16	50	
Clay and gravel; yellow-----	5	55	
Hardpan-----	12	67	
Clay and sand; yellow-----	8	75	
Sand, yellow-----	6	81	

Well 37/4-17B1

Type of record: Driller's log. Altitude: 734 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	24	24	
Hardpan-----	8	32	Clay?
Sand-----	25	57	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-17C1

Type of record: Driller's log.

Altitude: 732 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Gravel-----	1	2	
Sand-----	2	4	
Sand and gravel-----	12	16	
Hardpan-----	4	20	
Clay-----	3	23	
Clay with gravel-----	3	26	
Gravel, cemented-----	5	31	
Sand and gravel; with clay-----	3	34	
Gravel, cemented-----	2	36	
Sand and gravel-----	3	39	
Clay, sandy, with strips of cemented gravel-----	11	50	
Clay, sandy-----	8	58	
Sand and gravel-----	85	143	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	2	145	

Well 37/4-17F1

Type of record: Driller's log.

Altitude: 733 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	25	25	
Clay and gravel; blue-----	22	47	
Sand, blue-----	5	52	
Clay, sandy-----	6	58	Shale fragments at 58 feet.

Well 37/4-17H1

Type of record: Driller's log.

Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	35	35	
Clay, blue-----	13	48	
Sand, dark-----	9	57	

Well 37/4-18D1

Type of record: Driller's log.

Altitude: 729 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil; gravelly clay-----	3	3	
Gravel, sandy-----	7	10	
Gravel-----	28	38	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-18D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, gray-----	28	66	
Gravel, sandy-----	5	71	
Clay, gray-----	27	98	
Sand, fine-----	20	118	
Clay, hard, dark-brown-----	6	124	
Shale, gravelly, light-blue-----	11	135	
Mississippian system:			
Lower Mississippian series:			
Shale, light-blue-----	8	143	

Well 37/4-19M1

Type of record: Driller's log. Altitude: 742 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel, yellow-----	35	35	
Clay, yellow-----	10	45	
Sand and gravel; yellow-----	6	51	

Well 37/4-21P1

Type of record: Driller's log. Altitude: 752 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	30	30	
Clay-----	28	58	
Sand and gravel-----	6	64	

Well 37/4-28L1

Type of record: Driller's log. Altitude: 776 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	20	20	
Clay and sand; blue-----	34	54	
Sand-----	11	65	

Well 37/4-29J1

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

Quaternary system:			
Recent and Pleistocene series:			
Loam, dark-----	5	5	
Clay-----	2	7	
Sand, red-----	23	30	
Sand, light-----	14	44	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 37/4-33R1

Type of record: Driller's log.

Altitude: 805 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Quicksand with a few strips of clay-----	50	50	
Clay, blue-----	14	64	
Sand and gravel-----	6	70	

Well 38/1W-10J1

Type of record: Driller's log.

Altitude: 755 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	38	38	
Sand and gravel; brown-----	20	58	
Silt and clay-----	10	68	
Clay-----	24	92	
Sand, coarse, white-----	8	100	

Well 38/1W-10R1

Type of record: Driller's log.

Altitude:

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and clay-----	10	10	
Clay and sand; blue-----	10	20	
Sand and gravel-----	10	30	
Sand, fine, and clay-----	18	48	
Gravel-----	8	56	
Sand, white-----	20	76	

Well 38/1W-14H3

Type of record: Driller's log.

Altitude: 792 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil; loam-----	1	1	
Clay, very stiff, silty, brown and gray, with trace of fine sand-----	11	12	
Clay, hard, silty, brown and gray, with fine sand and small gravel-----	2	14	
Clay, stiff, silty, sandy, brown, with some small gravel-----	2	16	
Sand, fine to coarse, brown, with some small gravel-----	6	22	
Sand, fine to medium brown-----	8	30	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-14M2

Type of record: Driller's log.

Altitude: 800 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, gravelly, silty-----	4	4	
Clay, brown and gray, with trace of small gravel-----	2	6	
Clay, stiff, silty, brown and gray, with trace of small gravel-----	2	8	
Clay, stiff, silty, gravelly, brown and gray-----	4	12	
Sand, fine to medium brown, with trace of small gravel-----	10	22	
Sand, medium to coarse, gravelly, brown, with trace of silt-----	13	35	

Well 38/1W-14M3

Type of record: Driller's log.

Altitude: 797 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	2	2	
Clay, soft, silty, gray, with trace of sand and small gravel-----	14	16	
Clay, stiff, silty, gray, with trace of fine sand-----	13	29	
Sand, medium to coarse, brown, and gravel; with clay binder---	4	33	
Sand, medium to coarse, brown, with clay binder-----	7	40	

Well 38/1W-14N1

Type of record: Driller's log.

Altitude: 797 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft, silty, gravelly, brown and gray-----	2	2	
Silt, soft, clayey, organic, blue, with trace of small gravel-----	3	5	
Peat, very soft-----	13	18	
Silt, soft, organic, blue-----	7	25	
Clay, silty, sandy, gravelly, blue-----	6	31	
Clay, hard, silty, gravelly, blue-----	7	38	
Clay, stiff, silty, gravelly, blue-----	14	52	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-14N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine to coarse, clayey, gravelly, gray-----	4	56	
Sand, fine to coarse, gravelly, brown-----	4	60	

Well 38/1W-15E1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Gravel-----	5	35	
Gravel and clay; mixed-----	20	55	
Sand-----	10	65	

Well 38/1W-15J3

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, stiff, brown, with trace of fine sand and small gravel--	7	7	
Sand, fine to medium, brown, with clay binder-----	20	27	
Sand, fine to coarse, brown, with clay binder-----	5	32	
Sand, medium to coarse, and gravel; brown, with clay binder-----	3	35	

Well 38/1W-15K1

Type of record: Driller's log. Altitude: 805 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand-----	6	36	
Clay-----	4	40	
Gravel-----	40	80	
Sand-----	25	105	

Well 38/1W-15M1

Type of record: Driller's log. Altitude: 811 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-15M1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown mixed with gray, with trace of fine sand and small gravel-----	6	8	
Clay, brown and gray, and brown medium sand; thin seams-----	5	13	
Clay, silty, gray, with trace of sand and small gravel-----	15	28	
Sand, fine to coarse, and gravel; brown, with clay binder	5	33	
Sand, very dense, fine to coarse, and gravel; brown, with clay binder-----	12	45	

Well 38/1W-15M2

Type of record: Driller's log. Altitude: 814 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, yellow and gray, with trace of small gravel----	6	6	
Clay, silty, sandy, yellow, with trace of small gravel-----	2	8	
Clay, soft, silty, sandy, yellow, with trace of small gravel-----	4	12	
Clay, silty, gravelly, yellow----	5	17	
Sand, fine to coarse, gravelly, gray and brown-----	5	22	
Sand, fine to coarse, gravelly, brown, with trace of silt-----	4	26	
Sand, fine to coarse, brown, with trace of small gravel-----	9	35	

Well 38/1W-15R1

Type of record: Driller's log. Altitude: 798 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill; clay, gravel, and rubbish--	3	3	
Peat, brown-----	6	9	
Silt, organic-----	3	12	
Clay, silty, blue, with some gravel and trace of fine sand--	5	17	
Clay, very stiff, silty, blue, with some fine sand and gravel-	21	38	
Sand, compact, fine to medium brown, with some gravel-----	7	45	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-22R1

Type of record: Driller's log.

Altitude: 765 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	6	6	
Sand-----	34	40	Suitable for 15-slot screen.
Sand and soft clay-----	38	78	
Sand, fine-----	8	86	
Sand, fine-----	15	101	Suitable for 10-slot screen.
Sand and gravel-----	7	108	
Sand, very clean-----	3	111	

Well 38/1W-34G4

Type of record: Driller's log.

Altitude: 820 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil, black-----	1	1	
Loam, sandy, dark-----	3	4	
Sand, red-----	1	5	
Sand, coarse, brown, and gravel; dirty-----	19	24	
Gravel, brown, and yellow clay; mixed-----	2	26	
Sand, brown, and gravel; dirty---	59	85	
Sand, fine, gray-----	8	93	
Clay, sticky, blue-----	41	134	
Sand, fine, gray-----	10	144	
Gravel, coarse, and sand-----	5	149	
Clay, blue-----	12	161	
Sand, fine, gray-----	14	175	
Sand and gravel; mixed-----	5	180	
Sand, coarse, and gravel-----	12	192	

Well 38/1W-34M1

Type of record: Driller's log.

Altitude: 815 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Dirt and sand-----	18	18	
Sand, clay, and gravel-----	27	45	
Sand and gravel; brown-----	21	66	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-35D1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand and gravel; yellow-----	39	49	
Sand, gray-----	14	63	
Clay, soft, blue-----	23	86	
Sand, gray, and small gravel----	8	94	
Gravel-----	1	95	
Gravel-----	17	112	Suitable for 40-slot screen.
Sand-----	4	116	

Well 38/1W-35D2

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	15	15	
Sand-----	45	60	
Clay-----	44	104	
Gravel-----	2	106	
Hardpan-----	9	115	
Sand-----	17	132	

Well 38/1W-36D1

Type of record: Driller's log. Altitude: 752 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Clay, sandy-----	16	17	
Sand and gravel-----	13	30	
Clay-----	18	48	
Sand, fine-----	10	58	
Sand and gravel-----	7	65	
Clay-----	7	72	

Well 38/1W-36J1

Type of record: Driller's log. Altitude: 746 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	10	10	
Sand, red, and gravel-----	8	18	
Sand, red, with little gravel----	3	21	
Sand, fine to medium, reddish- gray-----	10	31	
Sand, coarse, red, and gravel----	5	36	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1W-36J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, gray-----	4	40	
Sand, medium to coarse, gray, with very little gravel-----	1	41	
Clay, runny-----	1	42	Red medium sand at 42 feet.

Well 38/1-7R1

Type of record: Driller's log.

Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, clayey, black-----	1	1	
Clay, fine, sandy, vari-colored--	2	3	
Sand, fine, clayey, with trace of silt-----	1	4	
Sand, fine to medium, and small gravel-----	4	8	
Sand, fine, silty, yellow-----	9	17	
Sand, fine, clayey, gray-----	6	23	
Sand, fine to medium, with some small gravel-----	9	32	
Sand, medium gray, and small to large gravel-----	5	37	
Sand, medium, and small gravel---	7	44	
Sand, coarse, and large gravel; brown-----	1	45	
Sand, very coarse, and small to large gravel; brown-----	2	47	
Sand, coarse, and small to large gravel; brown-----	1	48	

Well 38/1-8N2

Type of record: Driller's log.

Altitude: 738 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy, clayey, dark-----	1	1	
Clay, fine, sandy, yellow-----	2	3	
Sand, medium, yellow-----	2	5	
Sand, medium, to coarse, and small to large gravel-----	3	8	
Sand, coarse, and small gravel---	4	12	
Sand, fine, yellow, with some large gravel-----	4	16	
Sand, fine, compact, yellow, and small gravel-----	2	18	
Sand, very fine, gray-----	7	25	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-8N2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, medium, blue-----	2	27	
Sand, medium, compact-----	1	28	
Sand, medium, with trace of clay-	4	32	
Sand, medium-----	6	38	
Sand, coarse, and small to large gravel-----	2	40	

Well 38/1-13L1

Type of record: Driller's log.

Altitude: 796 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand, fine-----	12	14	
Sand and gravel; muddy-----	30	44	
Sand, fine, muddy-----	11	55	
Clay, sandy-----	13	68	
Clay-----	4	72	
Clay, sandy-----	4	76	
Sand, very fine, muddy-----	8	84	
Sand, muddy, and gravel-----	2	86	
Sand, medium to coarse-----	2	88	
Sand, coarse, and gravel-----	5	93	
Sand, medium to coarse-----	3	96	
Sand, medium-----	4	100	
Sand, fine to medium-----	4	104	
Sand, fine-----	6	110	

Well 38/1-13Q2

Type of record: Driller's log.

Altitude: 805 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	20	20	
Clay-----	8	28	
Sand and gravel-----	44	72	

Well 38/1-15E1

Type of record: Driller's log.

Altitude: 739 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Clay, sandy-----	3	4	
Sand, clayey-----	1	5	
Sand, coarse-----	19	24	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-15E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse, with shale fragments-----	5	29	
Sand, coarse-----	5	34	
Sand, coarse, with some gravel---	1	35	

Well 38/1-15K2

Type of record: Driller's log. Altitude: 794 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Silt-----	1	2	
Sand, fine-----	10	12	
Gravel-----	2	14	
Sand, fine-----	8	22	

Well 38/1-16A1

Type of record: Driller's log. Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Clay, silty, sandy-----	2	3	
Sand, clayey, with trace of gravel-----	1	4	
Sand, coarse, with trace of clay-	8	12	
Sand, medium-----	2	14	
Sand, coarse-----	21	35	

Well 38/1-16D1

Type of record: Driller's log. Altitude: 734 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand, fine to coarse, brown, with some small gravel-----	6	8	
Sand, fine to coarse, brown, and small to medium gravel-----	10	18	
Sand, fine to medium, silty, gray	5	23	
Sand, fine to medium, silty, gray, with some small gravel-----	5	28	
Sand, medium to coarse, gray, and gravel-----	22	50	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-17A2

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand, fine to coarse, brown, with clay binder-----	6	8	
Sand, medium to coarse, brown, with some small gravel-----	16	24	
Sand, fine to coarse, silty, brown-----	3	27	
Sand, medium to coarse, silty, gray, and gravel-----	5	32	

Well 38/1-23G1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, sandy, gravelly-----	6	6	
Sand, fine to medium, brown-----	7	13	
Silt, inorganic, brown-----	5	18	
Silt, very sandy, inorganic, brown-----	4	22	
Sand, fine to coarse, brown, with clay binder-----	13	35	

Well 38/1-23G4

Type of record: Driller's log. Altitude: 773 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill; clay, loam, gravel, and sand-----	8	8	
Sand, medium to coarse, brown, and small gravel; with clay binder-----	9	17	
Sand, fine, to coarse, brown, with some small gravel-----	11	28	
Sand, fine to medium, silty, brown-----	9	37	
Silt, inorganic, brown-----	9	46	
Sand, fine to coarse, compact, clayey, brown, with some small gravel-----	9	55	

Well 38/1-24E1

Type of record: Driller's log. Altitude: 794 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil, medium, clayey, brown--	5	5	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-24E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft, silty, sandy, gravelly, brown-----	3	8	
Clay, silty, sandy, gravelly brown-----	4	12	
Sand, medium to coarse, gravelly, brown-----	5	17	
Clay, very soft, silty, sandy, gravelly-----	5	22	
Sand, medium to fine, brown, with pieces of rock-----	7	29	
Sand, fine to coarse, very dense, brown, stratified with layers of silt; trace of small gravel-----	3	32	
Sand, medium to coarse, brown----	6	38	
Sand, fine to coarse, brown with silt layer and trace of small gravel-----	4	42	
Sand, fine to coarse, brown, with trace of small gravel-----	4	46	
Sand, fine to medium, silty, with trace of small gravel-----	6	52	
Sand, fine to coarse, brown, with silt layer-----	4	56	
Sand, fine to medium, silty, with trace of small gravel-----	6	62	
Silt, sandy, stratified with brown coarse sand-----	4	66	
Sand, fine to coarse, brown, with trace of small gravel-----	4	70	
Sand, fine to coarse, gravelly, brown, with trace of silt-----	7	77	
Sand, fine to coarse, brown, with some silt and small gravel-----	7	84	
Silt, blue-----	2	86	
Sand, medium to coarse, gray, with trace of small gravel-----	6	92	
Sand, fine to coarse, gravelly, gray-----	3	95	

Well 38/1-24E2

Type of record: Driller's log.

Altitude: 794 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil, sandy, black-----	5	5	
Clay, sandy, brown-----	3	8	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-24E2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, sandy, gravelly-----	6	14	
Sand, fine to medium, brown, with some gravel-----	4	18	
Sand, fine to coarse, brown, and gravel; with clay binder-----	4	22	
Sand, fine to coarse, brown, with some small gravel-----	14	36	
Sand, fine to medium, silty, brown-----	4	40	

Well 38/1-26K3

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

Quaternary system:			
Recent and Pleistocene series:			
Hardpan, yellow-----	40	40	
Clay, yellow-----	4	44	
Sand and gravel; yellow-----	32	76	

Well 38/1-26L1

Type of record: Driller's log. Altitude: 785 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dirt, black-----	3	3	
Sand-----	27	30	
Gravel and sand-----	15	45	
Sand-----	13	58	
Clay-----	5	63	
Sand, coarse, brown-----	5	68	

Well 38/1-35J1

Type of record: Driller's log. Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	23	23	
Gravel, dark-----	7	30	
Clay, blue-----	5	35	
Gravel and sand; dark-----	22	57	

Well 38/1-35J2

Type of record: Driller's log. Altitude: 742 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	39	39	
Clay, yellow-----	3	42	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/1-35J2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system: Recent and Pleistocene series: Sand and gravel; white-----	22	64	

Well 38/1-36M1

Type of record: Driller's log. Altitude: 762 feet.

Quaternary system: Recent and Pleistocene series:			
Gravel-----	48	48	
Sand, yellow-----	7	55	
Hardpan-----	5	60	
Sand and gravel-----	12	72	

Well 38/1-36M2

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

Quaternary system: Recent and Pleistocene series:			
Sand and clay; yellow-----	42	42	
Sand, gray-----	8	50	
Sand and gravel-----	12	62	
Clay, blue-----	3	65	

Well 38/2-8P2

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

Quaternary system: Recent and Pleistocene series:			
Clay, yellow-----	28	28	
Sand and gravel-----	7	35	
Clay, yellow-----	9	44	
Sand and gravel-----	20	64	

Well 38/2-9K1

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

Quaternary system: Recent and Pleistocene series:			
Sand and gravel; yellow-----	35	35	
Clay, blue-----	8	43	
Sand and gravel; white-----	31	74	

Well 38/2-12K2

Type of record: Driller's log. Altitude: 738 feet.

Quaternary system: Recent and Pleistocene series:			
Top soil-----	4	4	
Sand, yellow-----	24	28	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-12K2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse, and gravel; with some yellow clay-----	8	36	
Sand, yellow-----	19	55	
Gravel-----	10	65	
Sand, gray, and gravel-----	20	85	
Sand and gravel; with clay balls-----	2	87	

Well 38/2-13F1

Type of record: Driller's log. Altitude: 732 feet.

Quaternary system:			
Recent and Pleistocene series:			
Gravel and sand-----	84	84	
Clay, blue-----	44	128	
Sand and gravel-----	14	142	

Well 38/2-13F2

Type of record: Driller's log. Altitude: 732 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	7	7	
Sand and gravel-----	30	37	
Gravel-----	17	54	
Gravel, gray-----	6	60	

Well 38/2-14F1

Type of record: Driller's log. Altitude: 696 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	14	14	
Clay-----	7	21	
Gravel-----	14	35	
Sand-----	6	41	

Well 38/2-14N1

Type of record: Driller's log. Altitude: 701 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	58	58	
Sand, fine, and clay-----	45	103	
Sand and gravel; gray-----	9	112	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-15H2

Type of record: Driller's log.

Altitude: 723 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Clay-----	22	42	
Sand-----	20	62	

Well 38/2-15M1

Type of record: Driller's log.

Altitude: 812 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	18	18	
Clay, blue-----	40	58	
Sand and gravel-----	28	86	

Well 38/2-16B2

Type of record: Driller's log.

Altitude: 785 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill and loam-----	5	5	
Sand, muddy-----	25	30	
Sand, brown-----	5	35	
Clay, soft-----	30	65	
Sand, gray-----	10	75	
Gravel, gray-----	4	79	
Sand, brown-----	25	104	

Well 38/2-19F1

Type of record: Driller's log.

Altitude: 804 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill; gravel, brown, silt and clay-----	2	2	
Top soil, clayey-----	4	6	
Clay, silty, sandy, gravelly, brown, with trace of rock fragments-----	4	10	
Sand, fine to medium, brown, with trace of small gravel, rock fragments, and silt-----	7	17	
Sand, medium to coarse, gravelly, brown-----	3	20	
Gravel, small to medium, with some rock fragments-----	6	26	
Sand, fine to medium, clayey, gravelly, brown-----	8	34	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-19F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine to medium, clayey, silty, gravelly, brown-----	2	36	
Sand, fine to coarse, gray, with trace of small gravel-----	4	40	

Well 38/2-19P1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	3	3	
Sand and gravel-----	37	40	
Sand, fine, dirty-----	10	50	
Sand and gravel; yellow-----	30	80	
Sand, coarse, and gravel-----	46	126	
Sand, gray-----	34	160	

Well 38/2-20L1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand and gravel; dirty-----	26	27	
Sand, fine, muddy-----	13	40	
Sand, fine-----	14	54	
Clay, gray-----	38	92	
Clay and gravel-----	22	114	
Sand, fine-----	7	121	
Sand, medium-----	7	128	
Sand, fine, clean-----	2	130	

Well 38/2-22K1

Type of record: Driller's log. Altitude: 753 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	60	60	
Clay-----	28	88	
Sand-----	6	94	

Well 38/2-22K2

Type of record: Driller's log. Altitude: 737 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	20	20	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-22K2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	40	60	
Sand, light-----	20	80	

Well 38/2-22N2

Type of record: Driller's log. Altitude: 773 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam-----	1	1	
Sand, fine to coarse, silty, brown-----	3	4	
Sand, fine to coarse, brown-----	10	14	
Sand, medium to coarse, brown, with some small gravel-----	15	29	
Sand, compact, fine to medium, silty, brown-----	6	35	

Well 38/2-22P1

Type of record: Driller's log. Altitude: 766 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	5	5	
Clay and brown sand-----	25	30	
Sand, coarse, yellow-----	5	35	
Sand, fine, yellow-----	25	60	
Gravel-----	4	64	
Sand, fine, gray-----	4	68	
Clay, hard, blue-----	4	72	

Well 38/2-22P2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	14	14	
Sand, yellow-----	8	22	
Sand, coarse-----	47	69	
Clay, blue-----	26	95	
Sand-----	2	97	
Clay-----	106	203	
Hardpan and shale-----	21	224	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-22Q3

Type of record: Driller's log.

Altitude: 728 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	12	12	
Sand-----	20	32	
Sand and yellow clay; mixed-----	40	72	
Clay, blue-----	53	125	
Sand-----	5	130	
Gravel-----	6	136	
Sand-----	2	138	

Well 38/2-23F3

Type of record: Driller's log.

Altitude: 698 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	11	11	
Sand and gravel-----	24	35	
Sand and coarse gravel-----	21	56	
Sand-----	2	58	
Gravel and sand-----	6	64	
Sand and gravel-----	3	67	

Well 38/2-23F4

Type of record: Driller's log.

Altitude: 698 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	4	4	
Sand and gravel-----	11	15	
Clay, sandy-----	22	37	
Sand and gravel-----	30	67	
Sand, muddy, and gravel-----	33	100	
Gravel and sand-----	45	145	
Sand-----	2	147	

Well 38/2-23G2

Type of record: Driller's log.

Altitude: 700 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	10	10	
Clay, blue-----	24	34	
Sand-----	19	53	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-23G4

Type of record: Driller's log. Altitude: 717 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	20	20	
Clay, blue-----	20	40	
Sand and gravel; white-----	14	54	

Well 38/2-24B5

Type of record: Driller's log. Altitude: 731 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	30	30	
Clay, blue-----	5	35	
Sand and gravel; yellow-----	9	44	

Well 38/2-24B7

Type of record: Driller's log. Altitude: 727 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	21	21	
Sand-----	7	28	
Clay-----	9	37	
Sand-----	3	40	
Sand, coarse-----	11	51	

Well 38/2-24B9

Type of record: Driller's log. Altitude: 726 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	35	35	
Clay, yellow-----	3	38	
Sand and gravel; yellow-----	6	44	

Well 38/2-24J1

Type of record: Driller's log. Altitude: 725 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; red-----	19	19	
Clay, blue-----	30	49	
Sand and gravel; gray-----	20	60	Blue clay at 69 feet.

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-24K1

Type of record: Driller's log. Altitude: 724 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Clay-----	40	60	
Sand-----	10	70	

Well 38/2-24L3

Type of record: Driller's log. Altitude: 725 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, rough-----	36	36	
Clay-----	4	40	
Sand-----	10	50	

Well 38/2-24M1

Type of record: Driller's log. Altitude: 722 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	10	10	
Sand and gravel-----	30	40	
Clay, yellow-----	5	45	
Clay, blue-----	5	50	
Sand, yellow-----	10	60	

Well 38/2-24M2

Type of record: Driller's log. Altitude: 719 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Gravel, sand, and clay-----	10	11	
Sand and gravel; dirty-----	49	60	
Gravel and sand-----	11	71	
Sand, fine-----	2	73	

Well 38/2-24N1

Type of record: Driller's log. Altitude: 719 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, gravel, and boulders-----	31	31	
Clay, soft, yellow-----	3	34	
Sand, fine, muddy-----	15	49	
Clay, soft, yellow-----	5	54	
Sand, fine to medium-----	3	57	
Sand, medium to coarse-----	7	64	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-24N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, medium to coarse, with some gravel-----	3	67	
Sand, medium to coarse, and gravel-----	10	77	

Well 38/2-24Q2

Type of record: Driller's log. Altitude: 731 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	10	10	
Sand and gravel; red-----	11	21	
Sand and gravel; gray-----	14	35	
Sand, gray, with stones-----	10	45	
Sand and gravel; gray-----	12	57	
Gravel and sand; red-----	2	59	
Sand, coarse, and gravel-----	11	70	
Sand, fine, dirty-----	4	74	

Well 38/2-25A1

Type of record: Driller's log. Altitude: 731 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	26	26	
Clay, gray-----	13	39	
Sand, gray-----	7	46	

Well 38/2-25A4

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, white-----	14	14	
Gravel, yellow-----	22	36	
Sand, yellow-----	10	46	

Well 38/2-25C3

Type of record: Driller's log. Altitude: 719 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, black-----	1	1	
Clay, brown, with gravel-----	4	5	
Silt, clayey, gravelly, light- brown-----	4	9	
Silt, clayey, gray-----	5	14	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-25C3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, very tough, blue-----	3	18	
Sand, medium, light-brown-----	2	20	
Sand, medium, gray and brown-----	4	24	
Sand, medium, gray, with trace of gravel-----	5	29	
Sand, medium, gray-----	5	34	
Sand, medium, silty, gray-----	5	39	
Sand, medium, gray-----	5	44	
Sand, gray, with gravel-----	5	49	
Clay, very tough, blue-----	6	55	
Silt, clayey, gray-----	1	56	

Well 38/2-25D1

Type of record: Driller's log. Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Pit-----	7	7	
Sand, very fine-----	13	20	
Sand-----	19	39	
Sand and gravel-----	7	46	

Well 38/2-25D5

Type of record: Driller's log. Altitude: 716 feet.

Quaternary system:			
Recent and Pleistocene series:			
Silt-----	1	1	
Clay, soft, brown, with sand, gravel, and trace of silt-----	2	3	
Sand, medium, light-brown, and gravel, with brown clay and silt-----	3	6	
Sand, fine, brown-----	3	9	
Sand, medium to coarse, light- brown, with trace of gravel-----	15	24	
Sand, fine, brown, with gravel---	10	34	
Gravel, fine, silty, sandy-----	5	39	
Gravel, fine, silty, sandy, light-brown-----	6	45	
Sand, medium, silty, gravelly, (S.S.) light-brown-----	3	48	
Gravel, coarse, silty, sandy-----	2	50	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-25D10

Type of record: Driller's log.

Altitude: 721 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt, black-----	1	1	
Sand, clayey, silty, gravelly, brown-----	4	5	
Sand, medium, gravelly, brown----	5	10	
Sand, fine, silty, dark-brown----	3	13	
Clay, very tough, blue-----	2	15	
Silt, dense, gray-----	2	17	
Clay, very tough, blue-----	1	18	
Sand, medium, light-brown-----	4	22	
Silt, clayey, gray-----	3	25	
Sand, fine, silty, gray and brown-----	3	28	
Sand, medium, silty, gray, with trace of gravel-----	6	34	
Sand, medium, silty, gray-----	5	39	
Sand, medium, silty, gray, with trace of gravel-----	4	43	
Sand, medium, silty, gray, into gray sandy fine silt-----	7	50	
Sand, medium, silty, gray-----	1	51	
Clay, very tough, silty, blue----	3	54	

Well 38/2-25E4

Type of record: Driller's log.

Altitude: 730 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand and gravel-----	39	49	
Sand-----	14	63	
Clay-----	17	80	
Pack sand-----	47	127	
Sand-----	5	132	
Gravel-----	22	154	

Well 38/2-25F2

Type of record: Driller's log.

Altitude: 717 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	22	22	
Gravel-----	16	38	
Sand-----	24	62	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-25F6

Type of record: Driller's log. Altitude: 723 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	38	38	
Clay, blue-----	2	40	
Sand-----	6	46	

Well 38/2-25G2

Type of record: Driller's log. Altitude: 712 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt-----	1	1	
Gravel, medium, sandy, yellow and brown-----	5	6	
Sand, fine, silty, yellow and brown-----	4	10	
Sand, medium, silty, yellow and brown-----	5	15	
Sand, medium, silty, brown-----	5	20	
Sand, medium, gray-----	2	22	

Well 38/2-25G3

Type of record: Driller's log. Altitude: 716 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt-----	1	1	
Record missing-----	4	5	
Silt, medium to coarse, gray-----	4	9	
Sand, medium, silty, gray-----	5	14	
Sand, fine, silty, gray-----	6	20	

Well 38/2-25H1

Type of record: Driller's log. Altitude: 725 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	36	36	
Clay, blue-----	12	48	
Sand-----	8	56	

Well 38/2-25H2

Type of record: Driller's log. Altitude: 722 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt-----	1	1	
Sand, silty, gravelly, brown-----	3	4	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-25H2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, medium to coarse, yellow and brown, with trace of gravel-----	5	9	
Sand, coarse, brown, and medium gravel-----	3	12	
Gravel, medium to coarse, sandy--	8	20	
Gravel, coarse, sandy, brown-----	5	25	
Gravel, medium to coarse, sandy--	7	32	
Sand, medium to coarse, gray with trace of gravel-----	3	35	
Sand, medium to coarse, gray-----	2	37	

Well 38/2-25R1

Type of record: Driller's log.

Altitude: 729 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	5	5	
Clay-----	15	20	
Sand, fine, brown-----	38	58	
Sand and gravel-----	6	64	
Clay-----	39	103	
Sand, fine, gray-----	26	129	
Sand-----	7	136	
Sand, coarse, and gravel-----	11	147	

Well 38/2-26A1

Type of record: Driller's log.

Altitude: 718 feet.

Quaternary system:			
Recent and Pleistocene series:			
Silt, reddish-brown, sand, and gravel; with trace of clay-----	2	2	
Sand, medium, light-brown, and coarse gravel; with small chunks of clay-----	8	10	
Sand, medium, light-brown, and fine gravel; with trace of clay-----	3	13	
Sand, medium, light-brown-----	5	18	
Sand, fine, light-brown-----	2	20	
Sand, fine to medium, light- brown-----	8	28	
Sand, medium to coarse, light- brown, with trace of gravel and chunks of clay-----	2	30	
Sand, medium to coarse, light- brown, with trace of gravel-----	10	40	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-26A1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, medium, light-brown-----	5	45	
Sand, coarse, gravelly, brown----	12	57	

Well 38/2-26A5

Type of record: Driller's log. Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	6	6	
Clay, sandy, red, and gravel-----	4	10	
Sand, light-brown, and gravel----	9	19	
Sand, fine, clean-----	36	55	
Sand and gravel; gray-----	13	68	

Well 38/2-26C2

Type of record: Driller's log. Altitude: 659 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, silty, with trace of fine gravel, and organic matter-----	4	4	
Gravel, fine to medium, sandy, brown, with trace of silt-----	3	7	
Gravel, sandy-----	3	10	
Gravel, fine to medium, sandy, brown, with trace of silt and clay-----	1	11	
Clay-----	2	13	
Gravel, coarse-----	2	15	
Gravel, fine to medium, silty, gray, with trace of sand-----	3	18	
Sand, fine, silty-----	2	20	
Sand, fine, silty, gray-----	31	51	

Well 38/2-26C4

Type of record: Driller's log. Altitude: 653 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, gravelly, gray, with trace of silt-----	4	4	
Sand, gray, with trace of silt and gravel-----	3	7	
Sand, fine, silty, gray-----	7	14	
Silt, clayey, gray, with trace of fine sand-----	2	16	
Sand, fine, silty, gray-----	34	50	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-26C7

Type of record: Driller's log.

Altitude: 662 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, sandy-----	4	4	
Sand, coarse, and gravel; with trace of clay and rock fragments-----	13	17	
Sand, fine to medium, compact----	8	25	

Well 38/2-26D1

Type of record: Driller's log.

Altitude: 678 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	46	46	
Clay and gravel-----	4	50	
Sand and gravel-----	29	79	
Sand and gravel; muddy-----	1	80	

Well 38/2-26D3

Type of record: Driller's log.

Altitude: 676 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, coarse, and gravel-----	4	4	
Sand, silty, with some gravel and rock fragments-----	1	5	
Sand, fine to medium-----	2	7	
Sand, coarse, with some gravel and trace of clay-----	4	11	
Sand, coarse, with some gravel---	3	14	
Sand, coarse, and gravel; with trace of clay-----	16	30	
Sand, coarse, and gravel with shale fragments-----	7	37	

Well 38/2-26M1

Type of record: Driller's log.

Altitude: 672 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, light-----	12	12	
Clay, blue-----	8	20	
Gravel-----	15	35	
Sand-----	11	46	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-26M3

Type of record: Driller's log. Altitude: 678 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, muddy, brown-----	12	12	
Sand and gravel; muddy-----	15	27	
Gravel and sand; clean-----	22	49	
Sand, clean, brown-----	11	60	
Sand and gravel; clean, brown---	45	105	
Sand and gravel-----	12	117	
Sand and gravel; muddy-----	9	126	
Sand, fine, muddy-----	14	140	
Mississippian system:			
Lower Mississippian series:			
Shale, green-----	4	144	

Well 38/2-26M4

Type of record: Driller's log. Altitude: 678 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, muddy-----	14	14	
Sand and gravel-----	24	38	
Sand, coarse-----	28	66	
Sand and gravel-----	5	71	
Clay, sandy-----	1	72	
Gravel and sandy clay-----	13	85	
Sand and gravel-----	39	124	
Sand, fine, muddy-----	10	134	
Sand, muddy, dark-----	4	138	

Well 38/2-26R1

Type of record: Driller's log. Altitude: 723 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	40	40	
Sand and clay; yellow-----	23	63	
Clay-----	4	67	
Hardpan-----	17	84	
Clay-----	3	87	
Clay and sand-----	31	118	
Gravel-----	33	151	

Well 38/2-27C4

Type of record: Driller's log. Altitude: 759 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, silty, sandy, gravelly-----	3	3	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-27C4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; medium to coarse, brown, with clay binder-----	5	8	
Sand, fine to medium, silty, brown-----	10	18	
Sand and gravel; medium to coarse brown, with clay binder-----	16	34	
Sand, fine to medium, silty, brown, with some small gravel--	1	35	

Well 38/2-27D3

Type of record: Driller's log.

Altitude: 774 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, black-----	2	2	
Sand, fine to medium, silty, brown-----	4	6	
Sand, medium to coarse, and gravel; brown-----	6	12	
Sand, medium to coarse, silty, brown, with small to large gravel-----	1	13	
Sand, coarse, brown, with small to large gravel-----	3	16	
Sand, medium to coarse, brown, and small to large gravel; with some silt-----	8	24	
Sand, medium to coarse, silty, brown, with some small gravel--	4	28	
Sand, fine to medium, brown, with some silt-----	6	34	
Sand, fine to medium, brown, with small gravel-----	5	39	
Sand, medium, brown, with some silt-----	5	44	
Sand, medium to coarse, silty brown, and small gravel-----	6	50	

Well 38/2-27F1

Type of record: Driller's log.

Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil-----	2	2	
Sand and gravel-----	2	4	
Sand-----	24	28	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-27F1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	10	38	
Clay-----	3	41	
Sand and gravel-----	3	44	
Clay-----	17	61	
Sand and gravel-----	14	75	
Sand, fine-----	10	85	

Well 38/2-27J1

Type of record: Driller's log.

Altitude: 678 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, muddy-----	10	10	
Sand and gravel-----	31	41	
Clay, gray-----	1	42	
Sand, gray-----	4	46	
Clay, sandy-----	2	48	
Sand, brown-----	3	51	
Sand, muddy, and clay-----	7	58	
Sand, silty, muddy-----	10	68	
Sand, brown-----	10	78	
Sand and gravel; brown-----	47	125	
Sand and gravel; some coarse-----	13	138	Clay and boulders at 138 feet.

Well 38/2-29L1

Type of record: Driller's log.

Altitude: 797 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	38	38	
Clay and gravel; mixed-----	38	76	
Gravel, blue-----	24	100	

Well 38/2-30N1

Type of record: Driller's log.

Altitude: 795 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	50	50	
Clay, gray and yellow-----	2	52	
Sand and gravel; yellow-----	28	80	
Sand, yellow-----	7	87	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-30N2

Type of record: Driller's log. Altitude: 791 feet.

Material	Thick ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, coarse, yellow-----	63	63	
Clay, yellow-----	2	65	
Sand and gravel; mixed-----	30	95	

Well 38/2-31H2

Type of record: Driller's log. Altitude: 805 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	30	30	
Clay, yellow-----	10	40	
Sand-----	30	70	
Gravel, coarse-----	36	106	

Well 38/2-32J1

Type of record: Driller's log. Altitude: 757 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	2	2	
Sand, medium, yellow-----	18	20	
Sand, fine, yellow-----	6	26	
Sand, coarse, yellow-----	4	30	
Sand, very fine, yellow-----	10	40	
Sand, coarse, yellow-----	10	50	
Gravel, very coarse-----	6	56	
Sand, coarse, brown-----	11	67	
Gravel, coarse-----	13	80	

Well 38/2-32M2

Type of record: Driller's log. Altitude: 749 feet.

Quaternary system:			
Recent and Pleistocene series:			
Record missing-----	5	5	
Sand, dirty, yellow-----	55	60	
Clay, blue-----	45	105	
Clay, sandy-----	11	116	
Sand, fine, gray-----	20	136	

Well 38/2-33M1

Type of record: Driller's log. Altitude: 764 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, muddy-----	13	13	
Sand-----	14	27	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-33M1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft-----	2	29	
Sand and gravel-----	2	31	
Sand and gravel; muddy-----	5	36	
Sand and gravel-----	28	64	
Gravel, yellow-----	4	68	
Gravel, gray-----	4	72	
Gravel, yellow-----	6	78	
Sand and gravel; gray-----	6	84	
Gravel, coarse, with some sand---	16	100	
Sand, fine-----	2	102	
Sand and gravel-----	8	110	
Clay-----	5	115	

Well 38/2-34A1

Type of record: Driller's log.

Altitude: 703 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand-----	2	4	
Gravel-----	7	11	
Sand-----	2	13	
Sand, gravel, and yellow clay----	11	24	
Sand, fine, and yellow clay----	14	38	
Sand and yellow clay-----	9	47	
Sand, fine, and yellow clay----	31	78	
Sand, fine, dirty-----	15	93	
Clay, yellow-----	3	96	
Clay balls and gravel-----	1	97	
Sand, fine, and rice to pea-sized gravel-----	2	99	
Sand, medium-----	3	102	
Sand, coarse, red-----	7	109	

Well 38/2-34L1

Type of record: Driller's log.

Altitude: 742 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	40	40	
Hardpan-----	5	45	
Sand-----	19	64	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-35B7

Type of record: Driller's log. Altitude: 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	9	9	
Boulders-----	6	15	
Clay-----	11	26	
Clay, sandy-----	14	40	
Pack sand-----	27	67	
Sand-----	3	70	
Sand and gravel-----	7	77	
Gravel-----	27	104	

Well 38/2-35B8

Type of record: Driller's log. Altitude: 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill; ashes-----	5	5	
Sand with very little gravel-----	15	20	
Gravel, dirty-----	7	27	
Clay, gravelly-----	5	32	
Sand and gravel-----	6	38	
Gravel, coarse-----	3	41	
Sand, fine, dirty-----	36	77	
Gravel-----	27	104	Coarse sand at 104 feet.

Well 38/2-35B9

Type of record: Driller's log. Altitude: 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Clay, blue-----	20	30	
Quicksand-----	50	80	
Gravel-----	20	100	
Sand-----	7	107	
Gravel-----	8	115	
Clay, blue-----	4	119	
Sand and gravel-----	4	123	

Well 38/2-35J1

Type of record: Driller's log. Altitude: 675 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, yellow-----	21	21	
Clay, blue-----	37	58	
Sand, dark-----	16	74	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-35K1

Type of record: Driller's log.

Altitude: 676 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	8	8	
Clay-----	11	19	
Quicksand-----	1	20	
Clay-----	9	29	
Quicksand-----	6	35	
Clay-----	6	41	
Quicksand-----	11	52	
Clay-----	12	64	
Sand, fine-----	13	77	
Sand, coarse, and gravel-----	45	122	
Quicksand-----	5	127	
Gravel-----	19	146	Shale at 146 feet.

Well 38/2-35N2

Type of record: Driller's log.

Altitude: 698 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	3	3	
Sand and gravel-----	28	31	
Clay, blue-----	50	81	
Sand, fine-----	13	94	
Sand, coarse-----	10	104	
Sand, coarse, and gravel-----	11	115	
Sand, coarse-----	15	130	
Sand and gravel-----	24	154	Blue shale at 154 feet.

Well 38/2-35P2

Type of record: Driller's log.

Altitude: 680 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	8	8	
Sand and gravel; brown-----	2	10	
Clay-----	50	60	
Sand, fine, gray-----	20	80	
Sand, coarse, gray-----	5	85	
Gravel, coarse-----	20	105	
Sand, coarse, and gravel-----	15	120	
Sand, fine-----	8	128	
Sand, coarse, and gravel-----	7	135	

Table 3.--Selected logs of wells and test holes in St. Joseph County--Continued

Well 38/2-35P4

Type of record: Driller's log.

Altitude: 680 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	7	7	
Clay-----	13	20	
Quicksand-----	10	30	
Clay-----	16	46	
Sand-----	39	85	
Gravel, coarse-----	22	107	
Sand-----	3	110	
Gravel-----	22	132	
Sand, coarse, and gravel-----	14	146	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	147	

Well 38/2-35Q1

Type of record: Driller's log.

Altitude: 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	12	12	
Gravel, coarse-----	3	15	
Clay-----	65	80	
Clay, sandy-----	7	87	
Gravel-----	33	120	

Well 38/2-36H1

Type of record: Driller's log.

Altitude: 732 feet.

Quaternary system:			
Recent and Pleistocene series:			
Surface-----	20	20	
Clay, blue-----	20	40	
Sand, light, and quicksand-----	103	143	
Sand, medium, and gravel-----	8	151	

Well 38/2-37H2

Type of record: Driller's log.

Altitude: 730 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand-----	35	35	
Sand, yellow-----	23	58	
Sand, fine, and silt-----	70	128	
Sand, fine, and clay-----	18	146	
Sand, fine-----	19	165	
Sand, fine, with some gravel-----	5	170	