

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

Well 37/2-11R3

Type of record: Driller's log.

Altitude: 725 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	20	20	
Gravel and sand-----	7	27	
Sand and gravel-----	17	44	
Record missing-----	13	57	
Sand, coarse, yellow-----	4	61	
Sand, coarse, and gravel-----	18	79	
Clay, soft, mixed with sand-----	5	84	
Sand, coarse, dirty-----	6	90	
Sand, coarse, and gravel-----	5	95	
Sand with clay-----	2	97	

Well 37/2-11R5

Type of record: Driller's log.

Altitude: 724 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand-----	30	40	
Sand, fine-----	5	45	
Gravel-----	5	50	
Gravel, fine-----	8	58	
Sand-----	2	60	
Clay-----	18	78	
Sand, cemented-----	4	82	
Clay and fine sand-----	13	95	
Hardpan and blue clay-----	5	100	

Well 37/2-11R10

Type of record: Driller's log.

Altitude: 725 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand and loam-----	20	30	
Sand, sharp-----	10	40	
Sand, coarse, and gravel-----	5	45	
Sand, fine, and gravel-----	5	50	
Sand, fine-----	15	65	
Sand, coarse-----	5	70	
Clay-----	10	80	
Sand-----	5	85	
Sand and some gravel-----	5	90	
Sand, fine to medium-----	4	94	
Hardpan and blue clay-----	9	103	

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

Well 37/2-12C2

Type of record: Driller's log.

Altitude: 686 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	25	25	
Clay-----	30	55	
Quicksand-----	25	80	
Gravel-----	36	116	

Well 37/2-12C5

Type of record: Driller's log.

Altitude: 705 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Pit-----	10	10	
Gravel and sand-----	10	20	
Sand-----	15	35	
Clay-----	50	85	
Pack sand-----	15	100	
Gravel-----	19	119	

Well 37/2-12C6

Type of record: Driller's log.

Altitude: 684 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	11	11	
Sand and gravel-----	3	14	
Clay, soft-----	10	24	
Clay, sandy-----	2	26	
Clay, medium-----	26	52	
Clay, sandy-----	30	82	
Sand and gravel-----	23	105	
Gravel and sand-----	4	109	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	110	

Well 37/2-12C9

Type of record: Driller's log.

Altitude: 675 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	17	17	
Clay, gray-----	38	55	
Sand, fine, and silt-----	7	62	
Clay, gray-----	14	76	
Sand, fine, muddy-----	8	84	
Clay, gray-----	2	86	
Sand, fine to medium-----	3	89	
Sand and gravel; clean-----	27	116	

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

Well 37/2-12C10

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	14	14	
Gravel-----	8	22	
Clay-----	20	42	
Sand-----	10	52	
Clay-----	10	62	
Sand-----	12	74	
Clay-----	3	77	
Gravel-----	22	99	

Well 37/2-12D4

Type of record: Driller's log. Altitude: 708 feet.

Quaternary system:			
Recent and Pleistocene series:			
Pit-----	14	14	
Sand-----	46	60	
Clay-----	35	95	
Hardpan and gravel-----	25	120	
Gravel and sand-----	22	142	

Well 37/2-12D9

Type of record: Driller's log. Altitude: 708 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	17	17	
Sand-----	33	50	
Clay, blue-----	11	61	
Hardpan-----	8	69	
Clay, blue-----	15	84	
Clay, sandy-----	27	111	
Sand-----	6	117	
Gravel-----	21	138	

Well 37/2-12E1

Type of record: Driller's log. Altitude: 709 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	5	5	
Gravel, sandy-----	30	35	
Sand-----	17	52	
Gravel-----	13	65	
Sand-----	8	73	
Gravel-----	2	75	
Sand, very fine, almost like clay-----	15	90	

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

Well 37/2-12E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	5	95	
Clay, blue, and gravel-----	5	100	
Gravel-----	1	101	
Clay, blue-----	82	183	

Well 37/2-12E4

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

Quaternary system:			
Recent and Pleistocene series:			
Record missing-----	12	12	
Sand and gravel; yellow-----	26	38	
Sand and gravel-----	26	64	
Hardpan and shale-----	32	96	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	14	110	

Well 37/2-12E5

Type of record: Driller's log. Altitude: 708 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	14	14	
Sand, clean-----	30	44	
Hardpan-----	1	45	
Clay, blue-gray-----	38	83	
Sand, fine, yellow-----	41	124	
Gravel and sand-----	16	140	

Well 37/2-12E6

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

Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	38	38	
Clay, blue-----	39	77	
Sand, fine-----	18	95	Suitable for 10-slot screen.
Sand with clay balls-----	1	96	
Sand, fine-----	24	120	Suitable for 10-slot screen.
Gravel and sand-----	4	124	Suitable for 25-slot screen.
Gravel and clay-----	5	129	Suitable for 40-slot screen.

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

Well 37/2-12F1

Type of record: Driller's log.

Altitude: 706 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	7	7	
Gravel-----	14	21	
Clay, yellow-----	14	35	
Clay, blue-----	38	73	
Hardpan-----	7	80	
Clay and sand-----	3	83	
Hardpan-----	13	96	
Sand, fine-----	9	105	
Sand-----	6	111	
Sand and gravel-----	3	114	
Sand-----	5	119	Suitable for 15-slot screen.
Gravel and sand-----	9	128	Suitable for 40-slot screen.

Well 37/2-12H1

Type of record: Driller's log.

Altitude: 704 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	5	5	
Sand and some gravel-----	10	15	
Sand, light-----	15	30	
Clay-----	45	75	
Sand, dirty-----	5	80	
Sand and some gravel-----	10	90	
Sand-----	15	105	
Sand and clean gravel-----	11	116	

Well 37/2-12L1

Type of record: Driller's log.

Altitude: 711 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	55	55	
Clay and sand-----	10	65	
Clay-----	40	105	
Sand, dirty-----	16	121	

Well 37/2-12N2

Type of record: Driller's log.

Altitude: 728 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	23	23	
Gravel and clay-----	22	45	

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

Well 37/2-12N2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	16	61	Suitable for 10-slot screen.
Sand-----	10	71	Suitable for 16-slot screen.
Sand, coarse, gray-----	2	73	
Hardpan and clay-----	17	90	

Well 37/2-12N4

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	59	59	
Clay, blue-----	30	89	
Sand and gravel-----	9	98	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	100	

Well 37/2-12N5

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

Quaternary system:			
Recent and Pleistocene series:			
Pit-----	40	40	
Sand, coarse, and gravel-----	10	50	
Sand, medium, brown, with some gravel-----	4	54	
Sand and gravel-----	8	62	
Clay, blue-----	21	83	
Sand and gravel-----	12	95	Shale at 95 feet.

Well 37/2-12P2

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

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	6	6	
Sand, yellow-----	8	14	
Gravel, gray-----	4	18	
Sand, yellow-----	31	49	
Hardpan, very hard-----	11	60	
Clay, soft-----	4	64	
Sand, very fine, yellow-----	1	65	
Gravel, yellow, and sand-----	4	69	Suitable for 40-slot screen.
Gravel, yellow, sand, and clay balls-----	10	79	Suitable for 30-slot screen.

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

Well 37/2-12P2--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, yellow, and sand-----	3	82	
Sand, gray-----	4	86	Suitable for 30-slot screen.
Gravel, yellow, and sand-----	2	88	Do.
Sand, gray-----	9	97	Suitable for 25-slot screen; clay at 97 feet.

Well 37/2-12R1			
Type of record: Driller's log.			Altitude: 692 feet.
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine, mixed with blue clay-	5	25	
Clay, blue, with some sand-----	15	40	
Sand, fine, with some clay-----	5	45	
Sand, fine-----	10	55	
Sand, coarse-----	5	60	
Sand, fine, with some stones-----	5	65	
Sand, fine-----	15	80	
Sand, very fine, mixed with blue clay-----	55	135	
Clay, blue-----	150	285	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	48	333	

Well 37/2-12R3			
Type of record: Driller's log.			Altitude: 685 feet.
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Clay, blue-----	40	50	
Gravel with round coarse stones and fine sand-----	10	60	
Clay-----	50	110	
Quicksand, coarse sand, and fine gravel-----	20	130	
Clay-----	20	150	Shale at 150 feet.

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

Well 37/2-13A3

Type of record: Driller's log.

Altitude: 719 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	5	5	
Clay-----	2	7	
Sand, coarse-----	8	15	
Sand and gravel-----	5	20	
Sand with trace of gravel-----	16	36	
Clay-----	1	37	
Sand, coarse-----	8	45	
Clay-----	1	46	
Gravel with some sand-----	2	48	
Sand and clay-----	7	55	
Sand, coarse-----	19	74	
Sand and gravel-----	1	75	
Sand, muddy-----	3	78	

Well 37/2-13A5

Type of record: Driller's log.

Altitude: 712 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	6	6	
Sand and gravel-----	24	30	
Sand, medium, clean-----	20	50	
Sand, coarse-----	10	60	
Sand, coarse, and fine gravel----	15	75	

Well 37/2-13A6

Type of record: Driller's log.

Altitude: 704 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Cinder fill-----	3	3	
Sand, medium to coarse, gray----	7	10	
Sand, coarse, with little gravel----	2	12	
Sand, coarse, and gravel-----	2	14	
Loam, sandy, black-----	2	16	
Gravel, heavy-----	2	18	
Sand, coarse-----	5	23	
Sand, medium to coarse-----	12	35	
Sand, coarse, with some gravel----	13	48	
Sand, fine to medium-----	3	51	
Sand, fine to medium, and gravel----	8	59	
Clay, sandy, yellow-----	13	72	
Sand and gravel; muddy-----	2	74	
Clay, sandy-----	7	81	
Sand and gravel; muddy-----	2	83	
Gravel-----	4	87	

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

Well 37/2-13A6--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system: Lower Mississippian series: Shale, blue-----	4	91	

Well 37/2-13D1

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

Quaternary system: Recent and Pleistocene series: Sand and gravel-----	74	74	
Clay-----	12	86	
Sand and gravel-----	11	97	
Mississippian system: Lower Mississippian series: Rock-----	5	102	

Well 37/2-13E2

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

Quaternary system: Recent and Pleistocene series: Sand, yellow-----	9	9	
Gravel-----	22	31	
Gravel, coarse-----	10	41	
Clay, blue-----	3	44	
Gravel and sand-----	9	53	

Well 37/2-13E3

Type of record: Driller's log. Altitude: 733 feet.

Quaternary system: Recent and Pleistocene series: Clay and boulders-----	40	40	Suitable for 10-slot screen.
Sand, fine-----	40	80	
Sand and gravel-----	6	86	
Sand, fine-----	8	94	
Sand, packed-----	15	109	
Sand, fine-----	16	125	
Gravel-----	12	137	

Well 37/2-13E4

Type of record: Driller's log. Altitude: 733 feet.

Quaternary system: Recent and Pleistocene series: Sand and gravel-----	44	44	
Sand, yellow-----	2	46	
Clay, blue-----	45	91	
Sand-----	3	94	

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

Well 37/2-13H3

Type of record: Driller's log.

Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	24	24	
Clay-----	34	58	
Sand, dirty-----	17	75	
Gravel, yellow-----	21	96	

Well 37/2-13H5

Type of record: Driller's log.

Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	6	6	
Sand and gravel; dirty-----	14	20	
Clay, soft-----	17	37	
Sand and gravel-----	23	60	
Sand, coarse-----	20	80	
Sand, fine, muddy-----	8	88	
Clay, hard-----	10	98	

Well 37/2-13H6

Type of record: Driller's log.

Altitude: 714 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	3	3	
Sand and gravel-----	35	38	
Clay, sand, and gravel-----	10	48	
Sand with clay strips-----	12	60	
Sand with medium clay balls-----	10	70	
Sand, medium, and fine gravel; little dirty-----	14	84	Fine sand and clay at 84 feet.

Well 37/2-13H8

Type of record: Driller's log.

Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	18	18	
Sand and gravel-----	19	37	
Clay, gravelly-----	35	72	Coarse gravel at 72 feet.

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

Well 37/2-13H9

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, yellow-----	3	3	
Sand and gravel-----	5	8	
Clay, sandy, red-----	1	9	
Marl-----	33	42	
Clay, sandy-----	5	47	
Sand, coarse, and gravel-----	4	51	
Sand, medium to coarse-----	6	57	
Sand, fine to medium-----	3	60	
Sand, coarse, and gravel-----	6	66	
Sand, medium to coarse, and gravel-----	4	70	
Sand, coarse, and gravel-----	6	76	
Clay, sandy, yellow-----	9	85	
Sand, medium to coarse, muddy---	3	88	
Sand, medium to coarse, and gravel; muddy-----	2	90	
Clay, sandy, brown-----	12	102	
Sand and gravel; blue-----	8	110	
Clay, blue, and shale-----	5	115	

Well 37/2-13M2

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

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	8	8	
Top soil-----	4	12	
Sand, fine-----	12	24	
Clay, yellow-----	22	46	
Sand, coarse, and fine gravel; with small amount of clay-----	10	56	
Hardpan, sandy-----	2	58	
Sand, medium, clean-----	18	76	

Well 37/2-13M4

Type of record: Driller's log. Altitude: 750 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Hardpan-----	63	73	
Gravel with clay balls-----	7	80	
Clay-----	2	82	

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

Well 37/2-13N1

Type of record: Driller's log.

Altitude: 744 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	18	18	
Hardpan-----	51	69	
Sand and gravel; dirty-----	19	88	
Sand, yellow-----	4	92	
Gravel, blue-----	11	103	

Well 37/2-14A3

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand, coarse, and gravel-----	20	30	
Gravel-----	5	35	
Sand, coarse, and gravel-----	22	57	
Sand-----	5	62	
Clay-----	25	87	
Sand, fine to medium-fine-----	8	95	
Sand, fine, and clay-----	5	100	
Hardpan and blue clay-----	3	103	

Well 37/2-14A4

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand and gravel-----	20	30	
Gravel-----	10	40	
Sand-----	10	50	
Gravel-----	22	72	
Hardpan-----	23	95	
Gravel-----	10	105	

Well 37/2-14A5

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand-----	20	30	
Sand and gravel-----	15	45	
Sand, yellow-----	5	50	
Hardpan-----	17	67	

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

Well 37/2-14A7

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand-----	10	20	
Gravel-----	48	68	
Clay-----	17	85	
Hardpan-----	18	103	

Well 37/2-14A12

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand-----	10	20	
Gravel-----	5	25	
Sand, coarse-----	25	50	
Sand-----	5	55	
Sand, fine-----	10	65	Sand and clay at 65 feet.

Well 37/2-14A15

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Gravel, fine-----	10	20	
Sand-----	5	25	
Gravel-----	5	30	
Sand-----	10	40	
Gravel, coarse-----	27	67	
Hardpan-----	3	70	
Sand and clay-----	30	100	
Sand-----	5	105	
Gravel-----	5	110	
Hardpan-----	5	115	

Well 37/2-14B2

Type of record: Driller's log.

Altitude: 722 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	14	14	
Gravel-----	31	45	
Sand, fine-----	2	47	
Sand-----	23	70	

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

Well 37/2-14B3

Type of record: Driller's log. Altitude: 718 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	70	70	
Clay-----	19	89	
Sand, fine-----	11	100	Shale at 100 feet.

Well 37/2-14H3

Type of record: Driller's log. Altitude: 728 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand-----	22	32	
Sand and gravel-----	10	42	
Sand, coarse, and gravel-----	11	53	
Gravel, coarse-----	15	68	
Sand, and fine gravel-----	12	80	
Clay-----	2	82	

Well 37/2-14H4

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Gravel-----	10	20	
Sand-----	25	45	
Gravel-----	10	55	
Sand-----	5	60	
Sand, fine-----	25	85	
Sand, extra fine-----	30	115	
Sand and clay-----	5	120	

Well 37/2-14L1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	12	12	
Gravel and sand; yellow-----	48	60	
Gravel, light-----	14	74	
Gravel, reddish-----	6	80	Hardpan at 80 feet.

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

Well 37/2-14M1

Type of record: Driller's log.

Altitude: 723 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck and sand-----	17	17	
Sand-----	32	49	
Clay-----	7	56	
Sand, coarse-----	6	62	
Sand, fine-----	9	71	
Sand, finer-----	13	84	
Gravel and sand-----	48	132	

Well 37/2-14Q1

Type of record: Driller's log.

Altitude: 765 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface soil-----	2	2	
Sand, very fine-----	23	25	
Clay, blue-----	10	35	
Gravel, coarse, and fine sand----	4	39	
Gravel mixed with clay-----	14	53	
Gravel, round stones, and fine sand-----	39	92	
Gravel and sand; fine-----	28	120	
Gravel, light-colored, and gritty fine sand-----	7	127	
Sand, light-colored-----	10	137	
Sand, coarse, dark-colored-----	10	147	
Mississippian system:			
Lower Mississippian series:			
Shale-----	35	182	

Well 37/2-14R3

Type of record: Driller's log.

Altitude: 768 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, coarse, and gravel-----	25	45	
Sand, fine-----	15	60	
Clay-----	10	70	
Sand, fine-----	5	75	
Gravel, fine, and stones-----	5	80	
Sand, coarse-----	5	85	
Sand, fine-----	66	151	
Clay, blue-----	4	155	

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

Well 37/2-15B2

Type of record: Driller's log.

Altitude: 717 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Gravel, fine, with some sand----	30	40	
Clay with small amounts of gravel	10	50	
Sand and gravel; very coarse----	50	100	
Gravel, very coarse-----	13	113	
Sand and gravel; very coarse----	25	138	
Sand, coarse, with some pebbles--	21	159	

Well 37/2-15C1

Type of record: Driller's log.

Altitude: 717 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	7	7	
Clay-----	9	16	
Gravel and sand; coarse-----	31	47	
Muck-----	33	80	
Sand and gravel; rusty-----	49	129	
Gravel and sand; clean-----	14	143	
Sand and gravel-----	27	170	
Sand and gravel; rusty-----	21	191	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	193	

Well 37/2-15C3

Type of record: Driller's log.

Altitude: 717 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck and top soil-----	3	3	
Sand and gravel-----	127	130	
Sand, coarse-----	15	145	
Sand and gravel-----	15	160	
Sand, medium-----	6	166	

Well 37/2-15C4

Type of record: Driller's log.

Altitude: 716 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand and muck-----	3	4	
Marl-----	11	15	
Sand, muddy-----	4	19	
Sand with little gravel-----	63	82	

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

Well 37/2-15C4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	18	100	
Sand and gravel; with few boulders-----	15	115	
Sand and gravel-----	20	135	
Sand, medium-----	10	145	
Sand and gravel-----	26	171	Blue shale at 171 feet.

Well 37/2-15C6

Type of record: Driller's log.

Altitude: 716 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand and clay-----	1	3	
Sand-----	12	15	
Sand, coarse-----	7	22	
Sand-----	3	25	
Gravel and sand-----	61	86	
Clay, gravelly-----	32	118	
Sand and gravel-----	47	165	
Mississippian system:			
Lower Mississippian series:			
Shale-----	6	171	

Well 37/2-15G1

Type of record: Driller's log.

Altitude: 716 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	23	43	
Shale-----	7	50	
Gravel, heavy, and boulders-----	2	52	
Shale-----	11	63	
Clay-----	27	90	
Sand, fine-----	10	100	
Sand, coarse, with some small stones-----	10	110	
Sand and fine gravel-----	10	120	
Sand, very coarse-----	13	133	
Sand, coarse, and fine gravel-----	10	143	
Sand, very coarse, and gravel-----	10	153	
Sand, medium-----	25	178	Bedrock at 178 feet.

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

Well 37/2-15G2

Type of record: Driller's log.

Altitude: 719 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	40	40	
Sand, coarse, with some gravel---	40	80	
Record missing-----	10	90	
Sand, fine-----	10	100	
Sand, coarse-----	10	110	
Sand, coarse, and gravel-----	10	120	
Sand, very fine-----	10	130	
Sand, not as fine-----	20	150	
Clay-----	10	160	
Sand, fine-----	10	170	
Sand, very fine-----	10	180	

Well 37/2-15J1

Type of record: Driller's log.

Altitude: 722 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck and sand-----	10	10	
Sand and gravel-----	20	30	
Gravel with some sand-----	10	40	
Sand-----	10	50	
Sand and fine gravel-----	10	60	
Sand, fine, sharp-----	10	70	
Sand, coarse, with some strata of fine sand-----	65	135	

Well 37/2-15K1

Type of record: Driller's log.

Altitude: 718 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	23	43	
Boulders, gravel, and clay-----	2	45	
Clay-----	18	63	
Sand, fine-----	27	90	
Sand and fine gravel-----	10	100	
Sand, coarse, with some small stones-----	10	110	
Sand, very coarse-----	10	120	
Sand, coarse, and fine gravel----	13	133	
Sand, very coarse, and gravel----	7	140	
Sand, fine to medium-----	33	173	

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

Well 37/2-16B3

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	17	17	
Hardpan-----	2	19	
Gravel, coarse-----	18	37	
Gravel with clay balls-----	4	41	
Clay-----	3	44	
Sand, fine-----	12	56	
Clay and hardpan-----	19	75	
Sand and gravel with some clay balls-----	5	80	
Sand and gravel-----	17	97	
Sand, fine-----	3	100	

Well 37/2-16B4

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck and silt-----	9	9	
Sand and gravel-----	31	40	
Clay and gravel-----	20	60	
Hardpan-----	30	90	
Sand-----	10	100	
Sand, coarse, and gravel-----	10	110	

Well 37/3-16B5

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	60	60	
Hardpan-----	10	70	
Clay-----	7	77	
Sand, dirty-----	1	78	
Sand-----	14	92	
Sand, clean-----	22	114	
Sand, fine-----	2	116	

Well 37/2-16G2

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	3	3	
Sand-----	10	13	
Sand and gravel-----	45	58	
Clay, sandy-----	23	81	

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

Well 37/2-16G2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, muddy-----	24	105	
Clay, sandy-----	1	106	
Sand and gravel-----	62	168	
Sand, coarse-----	4	172	
Gravel, sandy-----	2	174	

Well 37/2-16G3

Type of record: Driller's log.

Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	37	37	
Clay and hardpan-----	73	110	
Sand, very fine-----	2	112	
Gravel-----	17	129	
Record missing-----	23	152	

Well 37/2-16N2

Type of record: Driller's log.

Altitude: 711 feet.

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	4	4	
Sand, fine to medium, muddy-----	8	12	
Sand, medium, red-----	24	36	
Sand and gravel-----	16	52	
Sand, fine-----	8	60	
Clay, gummy, gray-----	16	76	
Sand, fine to medium-----	19	95	
Sand, coarse, clean, with little gravel-----	23	118	
Sand, coarse, clean-----	5	123	
Sand, coarse, and gravel-----	7	130	
Gravel, fine to medium-----	12	142	

Well 37/2-17A1

Type of record: Driller's log.

Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil-----	3	3	
Sand and gravel-----	12	15	
Gravel and sand-----	24	39	
Clay, sandy-----	17	56	
Clay, gravelly-----	72	128	
Sand and gravel-----	33	161	

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

Well 37/2-17A1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system: Lower Mississippian series: Shale-----	5	166	

Well 37/2-17B1

Type of record: Driller's log. Altitude: 718 feet.

Quaternary system: Recent and Pleistocene series: Sand and gravel; yellow-----	26	26	
Clay, blue-----	12	38	
Sand, yellow-----	6	44	

Well 37/2-17K1

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

Quaternary system: Recent and Pleistocene series: Sand, brown, and pea-sized gravel-----	26	26	
Sand, gray-----	10	36	
Sand, gray, and pea-sized gravel-	14	50	

Well 37/2-17L1

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

Quaternary system: Recent and Pleistocene series: Loam and brown sand-----	6	6	
Gravel, pea-sized-----	31	37	
Gravel-----	13	50	

Well 37/2-18B2

Type of record: Driller's log. Altitude: 740 feet.

Quaternary system: Recent and Pleistocene series: Sand, brown-----	14	14	
Sand and pea-sized gravel-----	8	22	
Sand, brown-----	28	50	

Well 37/2-20P2

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

Quaternary system: Recent and Pleistocene series: Fill-----	2	2	
Muck-----	4	6	
Sand, brown, with some gravel----	18	24	

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

Well 37/2-20P2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel with some sand-----	11	35	
Sand, fine, brown-----	5	40	
Sand and gravel-----	28	68	

Well 37/2-21D2

Type of record: Driller's log.		Altitude: 714 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	3	3	
Marl-----	4	7	
Sand, gray-----	43	50	

Well 37/2-21F1

Type of record: Driller's log.		Altitude: 721 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	4	4	
Muck, red-----	6	10	
Sand, red, dirty-----	15	25	
Sand, medium, and little gravel; cleaner-----	8	33	
Sand, coarse, clean-----	10	43	
Sand, coarse, and little gravel--	10	53	
Sand, fine, dirty-----	3	56	
Sand, fine, muddy-----	4	60	
Sand, fine, and muddy clay-----	26	86	

Well 37/2-21F2

Type of record: Driller's log.		Altitude: 721 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	3	3	
Sand and clay-----	9	12	
Sand, fine-----	23	35	
Sand, coarse-----	15	50	
Sand, fine-----	3	53	Clay at 53 feet.

Well 37/2-21K1

Type of record: Driller's log.		Altitude: 777 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	6	6	
Clay, sandy, brown-----	12	18	
Clay, gray, with sand-----	32	50	

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

Well 37/2-21R3

Type of record: Driller's log.

Altitude: 781 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	60	60	
Sand-----	10	70	
Clay, blue-----	20	90	
Sand-----	11	101	

Well 37/2-22C2

Type of record: Driller's log.

Altitude: 760 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface dirt and sand-----	15	15	
Clay, sandy, yellow-----	10	25	
Sand and fine gravel-----	40	65	

Well 37/2-22C3

Type of record: Driller's log.

Altitude: 750 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	30	30	
Clay-----	10	40	
Sand-----	17	57	

Well 37/2-22G1

Type of record: Driller's log.

Altitude: 784 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	35	35	
Gravel-----	4	39	
Hardpan and clay-----	56	95	
Gravel-----	7	102	

Well 37/2-22P1

Type of record: Driller's log.

Altitude: 820 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	42	42	
Clay, blue-----	73	115	
Sand, yellow-----	7	122	

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

Well 37/2-22P2

Type of record: Driller's log.

Altitude: 821 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	60	60	
Hardpan-----	30	90	
Clay and sand; blue-----	10	100	
Hardpan-----	33	133	
Sand-----	4	137	

Well 37/2-23D1

Type of record: Driller's log.

Altitude: 805 feet.

Quaternary system:		
Recent and Pleistocene series:		
Clay, sandy-----	17	17
Sand and fine gravel-----	8	25
Clay, brown-----	1	26
Sand and gravel-----	6	32
Clay, gravelly, sand, and gravel; in thin strips-----	8	40
Clay, bouldery-----	6	46
Boulders-----	6	52
Clay, bouldery-----	6	58
Clay, soft-----	7	65
Clay, hard, bouldery-----	37	102
Sand and gravel-----	2	104
Gravel, gray, with clay balls----	2	106
Gravel and sand, with a little clay-----	1	107
Gravel and sand; gray, with a little clay-----	3	110
Sand and gravel; with clay balls----	12	122
Sand and gravel-----	1	123
Sand and gravel; with a little clay-----	4	127
Gravel, fine, and sand-----	2	129
Sand, gravel, boulders, and clay balls-----	1	130
Sand and gravel, with trace of clay-----	5	135
Sand and medium gravel-----	5	140
Gravel and sand; hard brown-----	2	142
Gravel and sand; brown, with trace of clay-----	4	146
Sand and gravel, with trace of clay-----	4	150
Clay, hard, smooth, brown-----	18	168
Clay, soft, smooth, brown-----	7	175
Clay, hard, smooth, brown-----	5	180

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

Well 37/2-23D1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian system: Lower Mississippian series: Shale, blue-green-----	12	192	

Well 37/2-23H1

Type of record: Driller's log.

Altitude: 751 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy, red-----	3	3	
Sand and boulders; muddy gray----	2	5	
Sand, fine, brown-----	2	7	
Sand, fine, yellow-----	4	11	
Sand, medium to coarse, with some gravel-----	2	13	
Sand, red-----	3	16	
Sand, medium to coarse, and gravel-----	4	20	
Sand, fine-----	24	44	
Sand, coarse, and gravel-----	10	54	
Gravel-----	16	70	
Sand, coarse, and gravel-----	8	78	
Sand-----	3	81	
Clay, sandy-----	5	86	

Well 37/2-23Q1

Type of record: Driller's log.

Altitude: 761 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	2	2	
Sand and gravel; red, with some flat rock-----	4	6	
Sand, coarse-----	2	8	
Sand, coarse, and gravel; with some boulders-----	3	11	
Sand, medium to coarse, with some gravel-----	5	16	
Sand and fine gravel-----	6	22	
Sand, coarse, with some gravel---	3	25	
Sand and fine gravel-----	4	29	
Sand-----	11	40	
Sand, coarse, and gravel, with some clay-----	27	67	
Sand, fine-----	18	85	
Sand, medium to coarse, and gravel-----	8	93	
Gravel, fine-----	11	104	
Sand with small amount of gravel-	5	109	

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

Well 37/2-23Q1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, pea-sized, with some sand-----	7	116	
Clay, blue-----	31	147	
Clay and sand-----	11	158	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	160	

Well 37/2-23R1

Type of record: Driller's log.

Altitude: 790 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand-----	10	10	
Sand and coarse gravel-----	15	25	
Sand, medium, with some gravel---	28	53	
Sand, medium-----	23	76	
Sand, coarse-----	5	81	
Sand, coarse, and gravel-----	9	90	
Sand, coarse, with some gravel---	5	95	
Sand, medium to coarse-----	13	108	
Gravel-----	3	111	
Sand and gravel; with clay balls-	3	114	
Clay, sandy-----	2	116	

Well 37/2-23R2

Type of record: Driller's log.

Altitude: 790 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, sandy-----	4	4	
Sand-----	19	23	
Sand and boulders-----	20	43	
Sand, fine-----	27	70	
Clay strips, sandy-----	7	77	
Sand, coarse-----	32	109	

Well 37/2-23R4

Type of record: Driller's log.

Altitude: 775 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand and gravel; muddy, red-----	8	9	
Gravel, coarse, and boulders-----	7	16	
Sand, red, with little gravel----	24	40	
Sand, medium, red, with little gravel-----	7	47	

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

Well 37/2-23R4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, red-----	10	57	
Sand, coarse, red-----	3	60	
Sand, medium, red-----	12	72	
Sand, medium, coarse gravel, and boulders-----	8	80	
Sand, coarse, and fine gravel----	4	84	
Clay, gritty, red-----	3	87	
Gravel, medium, and clay balls---	1	88	
Gravel, fine to medium-----	4	92	
Clay, gritty, red-----	2	94	
Sand, medium-----	2	96	
Sand, medium, and gravel-----	5	101	
Sand, medium, and coarse gravel--	1	102	
Clay, gritty, gray-----	3	105	

Well 37/2-24C1

Type of record: Driller's log. Altitude: 747 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	35	35	
Gravel-----	5	40	
Sand-----	5	45	

Well 37/2-24D1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Gravel, coarse-----	5	25	
Sand, fine-----	20	45	
Sand, coarse-----	10	55	
Sand, coarse, with some finer sand-----	5	60	
Sand, coarse-----	5	65	
Gravel, coarse, and stones-----	5	70	
Gravel, coarse-----	15	85	
Clay, blue-----	10	95	
Sand, fine-----	35	130	
Clay, blue-----	65	195	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	10	205	

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

Well 37/2-24D3

Type of record: Driller's log.

Altitude: 746 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil; black dirt-----	2	2	
Sand, dirty, and gray gravel----	2	4	
Sand, medium to coarse, and gravel-----	8	12	
Sand, medium to coarse-----	6	18	
Sand, fine-----	18	36	
Sand, coarse, brown-----	6	42	
Gravel, brown-----	11	53	
Gravel, clean-----	10	63	
Sand, coarse, and gravel-----	7	70	
Clay, blue, with sandy gravel----	29	99	
Gravel, sandy, brown-----	5	104	
Clay, sandy, brown-----	6	110	
Clay, blue, with sand and gravel-	16	126	
Mississippian system:			
Lower Mississippian series:			
Shale-----	3	129	

Well 37/2-24E1

Type of record: Driller's log.

Altitude: 750 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Clay-----	40	60	
Gravel, coarse-----	10	70	
Quicksand-----	20	90	
Clay-----	20	110	
Gravel-----	12	122	Shale at 122 feet.

Well 37/2-24F1

Type of record: Driller's log.

Altitude: 789 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	60	80	
Sand, coarse-----	5	85	
Sand, coarse, with some small pebbles-----	15	100	
Clay and sand-----	15	115	
Sand, very fine-----	45	160	
Clay, blue-----	20	180	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	5	185	

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

Well 37/2-24L1

Type of record: Driller's log.

Altitude: 802 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Sand, fine-----	20	40	
Sand, fine, with clay-----	55	95	
Sand, fine-----	35	130	
Clay-----	10	140	
Clay with sand-----	10	150	
Clay with gravel-----	5	155	
Clay-----	25	180	
Clay, blue-----	15	195	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	5	200	

Well 37/2-25A1

Type of record: Driller's log.

Altitude: 796 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	22	22	
Sand, coarse-----	15	37	
Sand, fine-----	25	62	
Sand, very fine-----	12	74	
Sand, some coarser-----	5	79	
Sand, coarse-----	26	105	
Sand, very fine-----	5	110	
Sand, coarse-----	5	115	
Sand, very fine-----	10	125	
Sand, fine, and blue clay-----	55	180	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	5	185	

Well 37/2-25E6

Type of record: Driller's log.

Altitude: 840 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	28	28	
Rocks-----	8	36	Gobbles or boulders.
Hardpan-----	14	50	
Sand-----	69	119	

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

Well 37/2-25H1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and sandy subsoil-----	10	10	
Clay, bouldery, sand, and gravel; in strips-----	10	20	
Sand, loose and cemented, and gravel-----	80	100	
Gravel, fine, and sand-----	40	140	
Clay, brown-----	5	145	
Gravel, fine, and sand-----	30	175	
Clay, sandy, brown-----	10	185	

Well 37/2-25K2

Type of record: Driller's log. Altitude: 848 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	17	17	
Gravel-----	93	110	
Sand, fine-----	21	131	
Sand, medium to coarse-----	13	144	

Well 37/2-25L4

Type of record: Driller's log. Altitude: 833 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	4	4	
Gravel and clay-----	27	31	
Gravel, dirty-----	49	80	
Sand-----	41	121	

Well 37/2-25N1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; red-----	75	75	
Clay, yellow-----	2	77	
Sand, red-----	9	86	

Well 37/2-25N7

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel, yellow-----	40	40	
Sand and clay, yellow-----	20	60	
Sand and gravel; yellow-----	15	75	

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

Well 37/2-25N8

Type of record: Driller's log.

Altitude: 819 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, brown-----	6	6	
Sand, brown-----	4	10	
Sand and pea-sized gravel-----	9	19	
Sand and gravel-----	10	29	

Well 37/2-25P4

Type of record: Driller's log.

Altitude: 845 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Gravel, yellow-----	75	95	
Sand, yellow-----	16	111	

Well 37/2-26A1

Type of record: Driller's log.

Altitude: 780 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, yellow-----	5	5	
Sand, fine, and gravel-----	42	47	
Sand, fine, yellow-----	15	62	
Sand, fine-----	37	99	
Sand and gravel-----	3	102	
Sand, coarse, and gravel-----	8	110	
Sand, coarse-----	3	113	

Well 37/2-26C1

Type of record: Driller's log.

Altitude: 802 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	1	1	
Sand, red-----	2	3	
Sand, red, and gravel; with some boulders-----	9	12	
Sand, fine to medium, yellow-----	4	16	
Sand, coarse, with some gravel---	1	17	
Sand, fine, to medium, yellow---	9	26	
Sand, coarse, with some gravel---	2	28	
Gravel, coarse, sandy-----	4	32	
Sand, fine to medium, and gravel---	3	35	
Sand, medium to coarse-----	24	59	
Sand, fine-----	16	75	
Sand and heavy gravel-----	8	83	
Clay, sandy-----	6	89	

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

Well 37/2-26C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine to medium, with some gravel-----	3	92	
Sand and gravel-----	8	100	
Clay, sandy-----	18	118	
Sand and gravel; muddy-----	7	125	
Clay, sandy-----	22	147	
Clay, hard, and soapstone-----	1	148	
Clay, hard-----	15	163	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	165	

Well 37/2-26E2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand and gravel-----	35	65	
Clay and sand-----	30	95	
Sand-----	23	118	

Well 37/2-26J1

Type of record: Driller's log. Altitude: 808 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	4	4	
Sand and gravel; dirty-----	16	20	
Sand and gravel-----	16	36	
Sand-----	10	46	
Sand with traces of gravel-----	20	66	
Sand-----	14	80	
Sand, fine-----	10	90	
Sand and gravel-----	5	95	
Sand, coarse, and gravel-----	14	109	

Well 37/2-26K1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	15	15	
Gravel-----	15	30	
Sand, yellow-----	45	75	
Sand and gravel; yellow-----	7	82	
Sand, coarse, and gravel-----	5	87	
Gravel-----	6	93	

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

Well 37/2-26L1

Type of record: Driller's log.

Altitude: 800 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	7	7	
Clay, yellow-----	13	20	
Clay-----	8	28	
Sand, yellow-----	4	32	
Clay and sand; yellow-----	28	60	
Sand-----	11	71	
Sand, yellow-----	19	90	
Sand, coarse-----	3	93	
Gravel, reddish-----	4	97	
Gravel, gray-----	13	110	
Sand-----	8	118	

Well 37/2-26L2

Type of record: Driller's log.

Altitude: 797 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, brown-----	11	11	
Clay, sandy, gray-----	10	21	
Clay, gray-----	29	50	

Well 37/2-26M1

Type of record: Driller's log.

Altitude: 805 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	7	7	
Muck-----	6	13	
Sand, gray-----	11	24	
Sand, brown-----	26	50	

Well 37/2-26M3

Type of record: Driller's log.

Altitude: 805 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	5	5	
Muck-----	8	13	
Sand, gray-----	16	29	
Clay, gray-----	21	50	

Well 37/2-26P1

Type of record: Driller's log.

Altitude: 813 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	21	21	
Sand, gray-----	7	28	
Clay, gray-----	22	50	

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

Well 37/2-27J8

Type of record: Driller's log.

Altitude: 797 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	4	4	
Sand, brown-----	10	14	
Gravel, pea-sized-----	7	21	
Sand, gray-----	8	29	
Clay, gray-----	21	50	

Well 37/2-27J9

Type of record: Driller's log.

Altitude: 801 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	17	17	
Sand, gray-----	11	28	
Clay, gray-----	22	50	

Well 37/2-27J10

Type of record: Driller's log.

Altitude: 800 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	3	3	
Sand, brown-----	21	24	
Sand, gray-----	7	31	
Clay, gray-----	19	50	

Well 37/2-27K2

Type of record: Driller's log.

Altitude: 803 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	60	60	
Clay, yellow-----	10	70	
Sand, yellow-----	24	94	

Well 37/2-27K3

Type of record: Driller's log.

Altitude: 810 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	62	62	
Clay-----	23	85	
Sand and gravel-----	18	103	

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

Well 37/2-27K4

Type of record: Driller's log. Altitude: 796 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	4	4	
Sand, brown-----	9	13	
Sand, gray-----	10	23	
Clay, gray-----	27	50	

Well 37/2-27L1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	20	20	
Clay, blue-----	10	30	
Hardpan; clay and gravel-----	40	70	
Sand and gravel; yellow-----	23	93	

Well 37/2-27M2

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

Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	50	50	
Clay, blue-----	70	120	
Sand and gravel-----	29	149	

Well 37/2-27N1

Type of record: Driller's log. Altitude:

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	10	10	
Sand, fine, and blue clay-----	66	76	
Sand, white-----	25	101	

Well 37/2-27P1

Type of record: Driller's log. Altitude:

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	45	45	
Clay-----	25	70	
Sand and gravel-----	44	114	

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

Well 37/2-28E1

Type of record: Driller's log.

Altitude: 805 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel; yellow-----	40	40	
Clay, blue-----	55	95	
Sand, fine, gray-----	55	150	
Gravel, dark-----	8	158	

Well 37/2-28G1

Type of record: Driller's log.

Altitude: 775 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	23	23	
Sand, yellow-----	3	26	
Clay, blue-----	45	71	
Gravel, dark-----	10	81	

Well 37/2-28J1

Type of record: Driller's log.

Altitude: 830 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	26	26	
Sand, yellow-----	10	36	
Clay, yellow-----	29	65	
Gravel-----	10	75	
Sand and gravel-----	35	110	
Sand, coarse-----	10	120	

Well 37/2-28J2

Type of record: Driller's log.

Altitude: 830 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Sand-----	40	60	
Clay-----	20	80	
Sand-----	21	101	

Well 37/2-28K2

Type of record: Driller's log.

Altitude: 800 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, blue-----	35	35	
Clay, blue-----	45	80	
Sand and gravel; yellow-----	8	88	

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

Well 37/2-29D1

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	3	3	
Marl-----	9	12	
Sand, very fine-----	28	40	
Clay-----	11	51	
Gravel-----	16	67	
Clay, sandy, with gravel strips--	4	71	
Clay and rocks-----	40	111	
Clay with strips of sand-----	10	121	
Gravel-----	39	160	
Clay-----	11	171	

Well 37/2-29F1

Type of record: Driller's log.

Altitude: 740 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	10	10	
Sand, blue-----	38	48	
Clay, blue-----	6	54	
Sand, dark-----	18	72	

Well 37/2-29J1

Type of record: Driller's log.

Altitude: 740 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	32	32	
Clay, blue-----	18	50	
Sand, white-----	17	67	
Clay, blue-----	33	100	
Sand and gravel; white-----	7	107	

Well 37/2-29J2

Type of record: Driller's log.

Altitude: 738 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	30	30	
Clay, blue-----	116	146	
Sand and gravel-----	4	150	

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

Well 37/2-31A1

Type of record: Driller's log. Altitude: 750 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, coarse-----	18	18	
Sand, yellow-----	14	32	
Hardpan-----	28	60	
Sand, light-----	18	78	

Well 37/2-32L1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	36	36	
Clay-----	2	38	
Sand and gravel-----	33	71	

Well 37/2-32P2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	40	40	
Marl-----	2	42	
Clay-----	6	48	
Sand-----	34	82	

Well 37/2-33B1

Type of record: Driller's log. Altitude: 825 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Clay-----	120	130	
Sand-----	12	142	

Well 37/2-33C1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	40	40	
Quicksand, gray-----	12	52	
Clay, blue-----	50	102	
Gravel and hardpan-----	18	120	
Sand-----	18	138	

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

Well 37/2-33E1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	22	22	
Sand and gravel; white-----	38	60	
Sand, white-----	5	65	

Well 37/2-33F1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	40	40	
Sand and gravel-----	60	100	
Sand and stone-----	10	110	
Sand-----	9	119	

Well 37/2-33M1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	80	80	
Sand-----	20	100	
Clay-----	20	120	
Sand, fine-----	20	140	
Sand, coarse-----	13	153	

Well 37/2-33P2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	22	22	
Sand, yellow-----	8	30	
Clay, blue-----	38	68	
Sand and gravel; dark-----	13	81	

Well 37/2-34C1

Type of record: Driller's log. Altitude:

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	38	38	
Clay, blue-----	66	104	
Sand, yellow-----	7	111	

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

Well 37/2-35B1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	18	18	
Clay, yellow-----	18	36	
Sand and gravel; yellow-----	9	45	

Well 37/2-35G2

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	27	27	
Clay, yellow-----	8	35	
Sand, coarse, and gravel-----	45	80	
Sand, fine-----	15	95	
Sand, coarse, and gravel-----	12	107	

Well 37/2-35H1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; dark-----	41	41	
Clay, blue-----	2	43	
Sand, yellow-----	18	61	

Well 37/2-35J4

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	4	4	
Clay-----	16	20	
Sand and gravel-----	48	68	
Clay-----	2	70	
Sand-----	10	80	

Well 37/2-36C1

Type of record: Driller's log. Altitude:

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Gravel-----	70	100	
Sand-----	13	113	

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

Well 37/2-36F1

Type of record: Driller's log.

Altitude:

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill; gravel-----	5	5	
Sand and gravel-----	31	36	
Clay, gravelly-----	3	39	
Sand and gravel-----	59	98	
Sand, fine-----	5	103	
Sand, fine to medium-----	21	124	

Well 37/2-36F3

Type of record: Driller's log.

Altitude:

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	50	50	
Gravel, coarse, yellow-----	10	60	
Sand, yellow-----	30	90	
Clay, yellow-----	2	92	
Sand, yellow-----	8	100	

Well 37/2-36L3

Type of record: Driller's log.

Altitude:

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	40	40	
Hardpan-----	35	75	
Sand and gravel; yellow-----	18	93	Clay at 93 feet.

Well 37/2-36M5

Type of record: Driller's log.

Altitude:

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	20	20	
Clay, yellow-----	3	23	
Sand and gravel; yellow-----	35	58	

Well 37/2-36N3

Type of record: Driller's log.

Altitude: 805 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Hardpan, yellow-----	15	30	
Sand and gravel; yellow-----	28	58	

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

Well 37/2-36P4

Type of record: Driller's log.

Altitude: 825 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Gravel-----	37	57	
Sand and gravel-----	5	62	

Well 37/2-36Q2

Type of record: Driller's log.

Altitude: 845 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	12	12	
Hardpan-----	4	16	
Sand and gravel; yellow-----	79	95	

Well 37/2-36Q3

Type of record: Driller's log.

Altitude: 845 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	4	4	
Gravel-----	76	80	
Sand-----	13	93	

Well 37/2-36R4

Type of record: Driller's log.

Altitude: 855 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Sand and gravel-----	65	80	
Sand-----	22	102	

Well 37/3-1K1

Type of record: Driller's log.

Altitude: 742 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand, dirty-----	11	13	
Sand and gravel-----	7	20	
Clay-----	76	96	
Clay, sandy-----	16	112	
Gravel, small-----	19	131	

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

Well 37/3-1R1

Type of record: Driller's log.

Altitude: 742 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	3	3	
Sand, fine, light-brown-----	6	9	
Sand, fine, light-brown mixed with gravel and stones-----	8	17	
Sand, coarse, and gravel-----	5	22	
Gravel, coarse, gray, with some stones-----	10	32	
Sand, fine, gray, and stones-----	8	40	
Sand-----	2	42	
Sand, coarse-----	4	46	
Sand, coarse, very active-----	4	50	
Clay, sticky, blue-----	23	73	
Mud-----	3	76	
Clay, blue, and hardpan-----	18	94	
Sand, fine, silty, and clay balls-----	10	104	
Sand, medium to coarse-----	6	110	
Sand, coarse, with few stones-----	10	120	

Well 37/3-2E1

Type of record: Driller's log.

Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	18	18	
Clay and gravel; blue-----	32	50	
Sand, gray-----	7	57	

Well 37/3-2L1

Type of record: Driller's log.

Altitude: 746 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	15	15	
Clay and gravel-----	3	18	
Sand, fine-----	34	52	
Sand, medium-----	10	62	

Well 37/3-2N2

Type of record: Driller's log.

Altitude: 745 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	20	20	
Gravel, yellow-----	16	36	
Sand and gravel; yellow-----	17	53	

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

Well 37/3-3G1

Type of record: Driller's log.

Altitude: 743 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	15	15	
Clay, blue-----	10	25	
Sand, gray-----	19	44	

Well 37/3-3K1

Type of record: Driller's log.

Altitude: 745 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	16	16	
Clay and gravel; hard-----	28	44	
Sand and gravel-----	6	50	Clay at 50 feet.

Well 37/3-3N2

Type of record: Driller's log.

Altitude: 741 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	5	5	
Sand and gravel-----	5	10	
Clay-----	2	12	
Clay, sandy, with gravel-----	20	32	
Clay, sandy, with strips of gravel-----	20	52	
Sand and gravel-----	15	67	
Clay, sandy, with gravel and boulders-----	5	72	
Clay, sandy, with gravel-----	28	100	
Clay, sandy-----	12	112	
Sand and gravel-----	64	176	
Sand and gravel with traces of clay-----	19	195	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	197	

Well 37/3-3N4

Type of record: Driller's log.

Altitude: 741 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand, silty-----	4	5	
Sand-----	6	11	
Clay, gravelly-----	14	25	
Clay, sandy-----	10	35	

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

Well 37/3-3N4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, gravelly, with strips of gray very sticky clay-----	72	107	
Sand with some gravel-----	60	167	
Clay, gray-----	7	174	

Well 37/3-4J2

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

Quaternary system:			
Recent and Pleistocene series:			
Muck and soil-----	3	3	
Gravel and sand; clean-----	14	17	
Sand, fine, silty-----	3	20	

Well 37/3-4L1

Type of record: Driller's log. Altitude: 739 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, sandy-----	2	2	
Sand-----	8	10	
Sand and gravel-----	4	14	
Gravel and clay-----	118	132	
Sand and gravel-----	58	190	
Mississippian system:			
Lower Mississippian series:			
Shale-----	3	193	

Well 37/3-4R1

Type of record: Driller's log. Altitude: 743 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand-----	6	6	
Sand, medium, red-----	12	18	
Sand and gravel-----	22	40	
Sand, medium, muddy, gray-----	13	53	
Clay and gray sand in strips-----	12	65	
Sand, medium, muddy, gray-----	7	72	
Clay, sandy, gray-----	4	76	
Clay, gray-----	39	115	
Sand, fine, muddy, gray-----	3	118	
Sand, fine-----	5	123	
Sand, medium, with some gravel---	2	125	
Sand mixed with gravel-----	2	127	
Gravel, fine, and sand-----	10	137	Blue shale at 137 feet.

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

Well 37/3-5C1

Type of record: Driller's log.

Altitude: 747 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand, red, with little gravel----	13	14	
Gravel, fine-----	12	26	
Sand, medium, yellow-----	4	30	
Gravel, fine, gray, and fine to coarse sand-----	4	34	
Sand, fine to medium-----	19	53	
Clay, soft, gummy, blue-----	47	100	
Clay, hard, blue-----	6	106	
Clay, soft, gummy-----	19	125	
Sand, hard, and clay-----	10	135	
Clay, hard, gravelly-----	35	170	
Gravel, fine to coarse-----	10	180	
Sand, medium, and coarse gravel--	7	187	
Gravel, coarse, and sand; with shale fragments-----	1	188	
Gravel, fine, and medium sand---	9	197	
Sand, coarse, and fine to coarse gravel-----	3	200	
Sand, coarse, with little gravel--	3	203	
Gravel, medium, and sand-----	2	205	Shale at 205 feet.

Well 37/3-5C2

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	3	3	
Sand and gravel-----	47	50	
Clay, blue-----	96	146	
Gravel, coarse, with some sand---	57	203	

Well 37/3-5E2

Type of record: Driller's log.

Altitude: 747 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	38	38	
Clay, hard, gritty-----	3	41	
Sand-----	8	49	
Sand, fine, muddy-----	9	58	
Sand, fine-----	8	66	
Clay-----	42	108	
Sand, fine, muddy-----	11	119	
Clay, gritty-----	14	133	
Sand-----	9	142	
Gravel, coarse, and sand-----	64	206	Shale at 206 feet.

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

Well 37/3-5L1

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, yellow-----	17	18	
Sand and gravel-----	3	21	
Clay, blue-----	63	84	
Clay, sandy-----	62	146	
Sand, dirty, and gravel-----	14	160	
Sand, coarse, and gravel-----	13	173	

Well 37/3-5P1

Type of record: Driller's log.

Altitude: 750 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, yellow-----	18	18	
Sand, yellow-----	18	36	
Sand, yellow and gray; mixed-----	17	53	
Sand and gravel; gray-----	27	80	

Well 37/3-6A1

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	14	14	
Gravel, coarse-----	12	26	
Gravel, fine-----	1	27	
Clay, gritty-----	34	61	
Sand, fine-----	25	86	
Clay-----	23	109	
Sand, fine-----	11	120	
Clay-----	9	129	
Sand, fine-----	11	140	
Sand and gravel-----	3	143	
Sand, fine, muddy-----	13	156	
Clay, hard, gritty-----	4	160	
Boulders-----	1	161	
Sand, fine, muddy-----	7	168	
Gravel-----	5	173	
Sand-----	5	178	
Gravel, coarse-----	34	212	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	213	

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

Well 37/3-6H2

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil and clay-----	14	14	
Gravel-----	11	25	
Sand, coarse-----	15	40	
Sand, coarse, and gravel-----	20	60	
Sand, coarse-----	12	72	
Sand, coarse, and gravel-----	4	76	
Clay-----	52	128	
Clay, gritty-----	24	152	
Gravel-----	33	185	
Gravel, sandy, and clay-----	4	189	

Well 37/3-6H3

Type of record: Driller's log.

Altitude: 748 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil-----	6	6	
Gravel, coarse-----	20	26	
Clay, gritty-----	8	34	
Sand, fine, muddy-----	36	70	

Well 37/3-6N1

Type of record: Driller's log.

Altitude: 745 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	45	45	
Clay and gravel; mixed-----	95	140	
Sand-----	12	152	

Well 37/3-7H1

Type of record: Driller's log.

Altitude: 736 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	21	21	
Clay, blue-----	64	85	
Sand and gravel; yellow-----	15	100	

Well 37/3-7K1

Type of record: Driller's log.

Altitude: 724 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Clay, sandy, blue-----	60	90	
Sand-----	8	98	

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

Well 37/3-7N1

Type of record: Driller's log. Altitude: 695 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	18	18	
Marl-----	10	28	
Sand and gravel-----	4	32	
Clay-----	1	33	
Gravel-----	6	39	
Clay-----	1	40	
Sand and gravel-----	27	67	
Marl-----	5	72	

Well 37/3-7P1

Type of record: Driller's log. Altitude: 706 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	20	20	
Clay-----	5	25	
Sand-----	15	40	
Sand, very fine-----	30	70	
Sand and clay-----	10	80	
Clay, blue-----	40	120	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	31	151	

Well 37/3-7R1

Type of record: Driller's log. Altitude: 711 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Sand, fine-----	10	25	
Sand, coarse-----	20	45	
Sand, fine-----	20	65	
Sand, coarse-----	45	110	
Sand, fine-----	5	115	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	7	122	

Well 37/3-7R2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, gravel, and boulders-----	5	5	
Marl-----	20	25	

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

Well 37/3-7R2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, sandy, gray-----	10	35	
Sand, fine-----	2	37	
Sand and gravel-----	1	38	
Clay, sandy-----	2	40	
Sand, fine, gray-----	12	52	
Clay, sandy-----	3	55	
Sand and gravel-----	54	109	
Sand, medium, fine-----	5	114	
Sand and heavy gravel-----	5	119	
Sand, coarse, brown, and gravel--	2	121	
Sand, medium-----	2	123	
Sand and heavy gravel-----	1	124	
Clay, green-----	2	126	
Sand and heavy gravel-----	1	127	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	7	134	

Well 37/3-8G1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand and gravel-----	17	27	
Hardpan-----	18	45	
Sand-----	1	46	
Clay and sand-----	37	83	
Sand-----	2	85	
Clay and sand-----	20	105	
Sand-----	17	122	

Well 37/3-10B1

Type of record: Driller's log. Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill; cinders-----	6	6	
Sand, yellow-----	12	18	
Clay, sandy-----	39	57	
Sand, fine, gray-----	18	75	

Well 37/3-10G1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	28	28	

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

Jose

Well 37/3-10G1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	48	
Sand, yellow-----	4	52	

Well 37/3-10G2

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand and gravel-----	46	47	
Clay, sandy, gray-----	15	62	
Sand and gravel; muddy-----	2	64	
Sand, fine, muddy-----	5	69	
Clay, gray, with gravel-----	11	80	
Clay, blue, with shale-----	20	100	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	12	112	

Well 37/3-11E2

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	18	18	
Clay-----	27	45	
Sand, fine-----	10	55	
Gravel-----	7	62	

Well 37/3-11F1

Type of record: Driller's log. Altitude: 744 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Gravel-----	20	40	
Sand-----	13	53	

Well 37/3-11G1

Type of record: Driller's log. Altitude: 744 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	30	30	
Clay, blue-----	6	36	
Sand, white-----	10	46	

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

Well 37/3-11N2

Type of record: Driller's log.

Altitude: 701 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	42	42	
Sand, fine to medium-----	17	59	
Gravel, medium-----	29	88	
Gravel, coarse-----	3	91	
Clay, gravelly, gray-----	36	127	
Gravel, fine, with little clay---	8	135	
Clay, hard, brown-----	2	137	
Gravel, fine, black, streaked with clay-----	11	148	
Gravel, coarse, black-----	9	157	
Pebbles, shale-----	11	168	
Boulders, shale, chipped-----	7	175	
Clay, gray, with shale pebbles---	5	180	
Boulders, shale, chipped-----	7	187	
Boulders, shale, with clay-----	10	197	
Clay, gray-----	33	230	
Sand, coarse, shale pebbles, and clay-----	40	270	
Sand, coarse, and shale pebbles--	43	313	
Clay-----	2	315	
Sand, coarse, and shale pebbles--	24	339	

Well 37/3-11N3

Type of record: Driller's log.

Altitude: 701 feet.

Quaternary system:			
Recent and Pleistocene series:			
Gravel, coarse, and sand-----	42	42	
Sand, coarse-----	28	70	
Boulders and coarse gravel-----	28	98	
Clay and gravel; in strips-----	99	197	
Clay-----	33	230	
Gravel, coarse, and sand-----	15	245	
Clay-----	45	290	
Gravel and sand-----	39	329	

Well 37/3-11P1

Type of record: Driller's log.

Altitude: 710 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil, clay, sandy, and gravel-----	24	24	
Sand and gravel-----	36	60	
Sand and gravel; coarse-----	38	98	
Clay and stones-----	1	99	

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

Well 37/3-11P3

Type of record: Driller's log.

Altitude: 697 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	36	36	
Gravel and clay-----	37	73	
Gravel, sand, and clay-----	8	81	
Gravel and clay-----	34	115	
Sand and gravel-----	7	122	
Gravel and clay-----	8	130	

Well 37/3-11P4

Type of record: Driller's log.

Altitude: 696 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand-----	5	5	
Sand and gravel-----	10	15	
Gravel and clay-----	32	47	
Sand, medium to coarse-----	13	60	
Gravel and clay-----	10	70	
Sand, gray, and gravel-----	5	75	
Gravel and clay-----	7	82	
Sand, light-----	18	100	
Sand and gravel-----	33	133	

Well 37/3-11P6

Type of record: Driller's log.

Altitude: 696 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	20	20	
Clay, soft-----	33	53	
Gravel and sand-----	6	59	
Boulders, gravel, and clay-----	29	88	
Sand and gravel-----	7	95	
Clay and gravel-----	15	110	
Sand and gravel-----	10	120	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	121	

Well 37/3-11P7

Type of record: Driller's log.

Altitude: 698 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	50	50	
Clay, sand, and gravel; in strips-----	33	83	

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

Well 37/3-11P7--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	12	95	
Clay-----	5	100	
Sand and gravel; dirty-----	20	120	Sandy clay at 120 feet.

Well 37/3-11Q1

Type of record: Driller's log. Altitude: 702 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	6	6	
Sand, coarse, and gravel-----	7	13	
Sand, coarse-----	12	25	
Sand, fine to medium-----	9	34	
Sand, medium to coarse-----	17	51	
Gravel and clay-----	14	65	
Sand, coarse, clean-----	18	83	
Sand, coarse, gravel, and boulders-----	5	88	
Gravel and clay-----	7	95	
Sand, medium-----	10	105	
Sand, medium, with little gravel-----	14	119	Hard blue stone at 119 feet.

Well 37/3-11R4

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	3	3	
Sand, brown, and gravel-----	10	13	
Sand, coarse, with some gravel---	6	19	
Sand, coarse-----	6	25	
Sand-----	10	35	
Sand and gravel-----	4	39	
Gravel-----	2	41	
Sand, fine, and gravel-----	9	50	
Sand, fine, gray-----	8	58	
Sand, fine, and clay-----	4	62	

Well 37/3-12G1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	7	7	
Sand and gravel-----	42	49	

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

Well 37/3-12G1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	3	52	
Clay, sandy-----	50	102	
Sand with gravel-----	23	125	
Record missing-----	6	131	

Well 37/3-12H1

Type of record: Driller's log. Altitude: 748 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand, fine-----	27	28	
Sand and coarse gravel-----	21	49	
Sand, fine, muddy-----	18	67	
Clay, hard, with some gravel----	7	74	
Clay, sandy, with some gravel----	20	94	
Sand, fine, muddy, gray-----	10	104	
Sand, fine, dirty, brown-----	11	115	
Sand, fine, clean-----	7	122	
Sand, fine, clean, and gravel----	2	124	
Sand and coarse gravel; with clay balls-----	3	127	
Sand, fine, clean, and gravel----	23	150	

Well 37/3-12N2

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Gravel-----	4	12	
Sand, dirty-----	8	20	
Gravel-----	6	26	
Sand-----	22	48	
Clay and sand-----	20	68	
Gravel, sand, and clay-----	15	83	
Sand, gray-----	15	98	
Sand, yellow-----	13	111	

Well 37/3-13E2

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand and gravel-----	48	50	
Sand, muddy, and gravel-----	15	65	

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

Well 37/3-13E2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	45	110	
Gravel and sand-----	10	120	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	16	136	

Well 37/3-14B1

Type of record: Driller's log. Altitude: 702 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil, sand, and gravel-----	7	7	
Gravel, coarse-----	8	15	
Sand, coarse-----	45	60	
Sand, coarse, with some gravel---	35	95	
Sand, coarse, and gravel-----	12	107	

Well 37/3-14K1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Hardpan-----	1	3	
Sand and hardpan-----	3	6	
Gravel-----	3	9	
Sand-----	4	13	
Gravel-----	11	24	
Clay-----	11	35	
Sand, fine, white-----	15	50	
Sand, fine, yellow-----	38	88	
Clay with gravel-----	12	100	
Clay-----	8	108	
Clay with gravel-----	4	112	
Gravel and sand-----	15	127	
Clay-----	3	130	
Clay with some hardpan-----	16	146	
Mississippian system:			
Lower Mississippian series:			
Shale-----	18	164	

Well 37/3-14K2

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

Quaternary system:			
Recent and Pleistocene series:			
Soil, black-----	4	4	
Boulders-----	4	8	

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

Well 37/3-14K2--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	4	12	
Gravel and boulders-----	7	19	
Clay-----	14	33	
Sand-----	1	34	
Clay-----	9	43	
Sand-----	3	46	
Clay-----	8	54	
Sand-----	7	61	
Clay-----	2	63	
Sand-----	21	84	
Sand and rocks-----	4	88	
Clay and gravel-----	2	90	
Sand-----	14	104	
Clay and gravel-----	3	107	
Sand-----	16	123	
Clay and gravel-----	3	126	
Gravel-----	4	130	
Sand-----	16	146	Shale at 146 feet.

Well 37/3-14K3

Type of record: Driller's log.

Altitude: 724 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil, black-----	2	2	
Sand and gravel; with large boulders-----	8	10	
Sand and gravel-----	13	23	
Clay, gray-----	4	27	
Sand, fine-----	56	83	
Sand and gravel; with boulders---	5	88	
Clay, sandy, gray-----	14	102	
Sand and gravel; clean-----	10	112	
Sand, fine, muddy, with some clay-----	3	115	
Sand and small gravel; yellow----	9	124	
Sand and small gravel; gray-----	13	137	
Sand, fine to medium, gray-----	5	142	

Well 37/3-14N1

Type of record: Driller's log.

Altitude: 729 feet.

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	1	1	
Sand and gravel-----	24	25	
Sand, medium-----	9	34	
Sand, coarse, and gravel-----	12	46	

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

Well 37/3-14N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, red-----	2	48	
Sand, fine, muddy-----	8	56	
Clay, soft, sandy-----	76	132	
Gravel-----	6	138	
Gravel and some sand-----	2	140	
Clay-----	6	146	

Well 37/3-15C1

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

Quaternary system:			
Recent and Pleistocene series:			
Gravel, coarse, yellow-----	20	20	
Clay, blue-----	15	35	
Gravel, coarse-----	15	50	
Sand, blue-----	25	75	

Well 37/3-15H1

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

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	7	7	
Sand-----	13	20	
Sand and some gravel-----	20	40	
Clay-----	4	44	
Sand, fine-----	24	68	
Clay-----	15	83	
Gravel-----	9	92	Suitable for 40-slot screen.
Gravel-----	5	97	Suitable for 20-slot screen.
Sand, fine-----	4	101	

Well 37/3-15M2

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

Quaternary system:			
Recent and Pleistocene series:			
Cement-----	1	1	
Fill-----	3	4	
Sand and gravel; muddy-----	21	25	
Sand and gravel-----	22	47	
Sand, fine-----	2	49	
Sand, coarse, and gravel-----	9	58	
Sand, clean, and gravel-----	7	65	
Sand, fine, clean-----	1	66	

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

Well 37/3-15R1

Type of record: Driller's log.

Altitude: 724 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Gravel, sand, and clay-----	9	10	
Sand and gravel-----	58	68	
Clay and muddy sand-----	7	75	

Well 37/3-16A1

Type of record: Driller's log.

Altitude: 703 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	10	10	
Gravel, coarse-----	9	19	
Clay, yellow-----	11	30	
Clay, blue-----	13	43	
Mississippian(?) system:			
Lower Mississippian(?) series:			
Shale(?), blue-----	7	50	

Well 37/3-16B2

Type of record: Driller's log.

Altitude: 692 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Cinders-----	3	3	
Clay, sandy-----	4	7	
Sand and gravel-----	5	12	
Sand-----	5	17	
Clay, silty-----	5	22	
Clay, sandy-----	4	26	
Sand, muddy-----	4	30	
Sand and gravel-----	3	33	
Sand, muddy-----	2	35	
Sand and gravel-----	1	36	
Clay, silty-----	1	37	
Sand and gravel-----	3	40	
Clay, blue-----	1	41	

Well 37/3-16C3

Type of record: Driller's log.

Altitude: 695 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	3	3	
Gravel-----	5	8	
Hardpan-----	27	35	
Sand, yellow-----	11	46	

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

Well 37/3-16C3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	7	53	
Hardpan-----	7	60	
Clay-----	19	79	
Clay, yellow, and gravel-----	21	100	
Gravel, hard, with clay-----	13	113	
Sand, coarse-----	6	119	

Well 37/3-16C4

Type of record: Driller's log.

Altitude: 695 feet.

Quaternary system:				
Recent and Pleistocene series:				
Muck-----	6	6		
Boulders-----	9	15		
Hardpan-----	25	40		
Sand and clay-----	2	42		
Sand-----	6	48		
Sand, clean-----	4	52		
Sand, coarse-----	8	60	Suitable for 15-slot screen.	
Sand, fine-----	3	63		
Clay and sand-----	4	67		
Sand with few gravel-----	9	76		
Clay-----	1	77		
Sand, yellow-----	7	84		
Clay, yellow-----	10	94		
Clay, hard, blue-----	12	106		
Sand, yellow-----	2	108		
Mississippian system:				
Lower Mississippian series:				
Shale, blue-----	17	125		

Well 37/3-16C5

Type of record: Driller's log.

Altitude: 715 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	2	2	
Sand and gravel-----	48	50	
Clay-----	2	52	
Sand and gravel-----	5	57	
Clay-----	1	58	
Sand and gravel-----	9	67	
Clay-----	3	70	
Gravel-----	2	72	
Clay-----	3	75	
Clay with gravel-----	10	85	