

38/2-3383	City of South Bend	Layne-Northern Co., Inc.	6-18-59	783 Dr	108	6-2	47	61	G.Sd	P1 U	47	T	See log well 3381.
3391	P. C. Winther	Srivor Drilling Co.	6-7-49	750 J	80	2			Sd,G	P1			Dd 3 ft pumping 25 gpm; for sprinkling lawn; screen, upper 4 ft 12 in, lower 5 ft 18 in; Ca, L.
3401	A. A. Toth		11-18-53	703 Dr	108	4			Sd,G	P1			
3421	V. C. Hastings			738 J	76	2			Sd	P1	34	D	Yellow sand and gravel from 0-87 ft.
3432	L. Krops	Srivor Drilling Co.	9-28-51	731 J	87	2		28	Sd,G	P1 U	41	D	Water level 2 ft below lsd, 7-1-53; well SJ 53-8
3441	M. Conway		9-18-54	742 J	84	2			Sd	P1	44	D	
3531	St. Mary's College			670 Dr	108	6			Sd,G	P1 C		N	water level 2 ft below lsd, 7-1-53; well SJ 53-4 (KS, 1948).
3532				670 Dr	80	8			Sd,G	P1 C		N	Dd 8 ft pumping 150 gpm; water level 2 ft below lsd, (KS, 1948).
3533				675 Dr	90	10			Sd,G	P1 C		N	Dd 20 ft pumping 75 gpm; water level 10 ft below lsd, 7-1-53; well SJ 53-2 (KS, 1948).
3534				675 Dr	100	8			Sd,G	P1 C		N	Dd 14 ft pumping 150 gpm; water level 10 ft below lsd, 7-1-53; well SJ 53-3 (KS, 1948).
3535				675 Dr	118	12			Sd,G	P1 C		O	Dd J. 5 ft pumping 150 gpm; Observation well St. Joseph 18; water level measured 6.30 ft below lsd, 3-24-45; well SJ 53-5 (KS, 1948).
3536				675 Dr	105	12			Sd,G	P1 C		Ac.	Yield 650 gpm; water level 9 ft below lsd, 1951.
3537		Indiana-Michigan Water Development Co.	9-29-35	675 Dr	104	12		64	Sd,G	P1 C	10	P	Dd 1 ft pumping 150 gpm; well SJ 53-1 (KS, 1948); L.
3538		Dunbar Drilling and Supply Co.		675 Dr	104	14		72	Sd,G	P1 C	8	Ac.	Dd 26 ft pumping 1,000 gpm; screen, upper 3 ft 80 in, lower 17 ft 125 in; L.
3539				675 Dr	123	6			Sd,G	P1 C	+2	T	Well SJ 8-31 (KS, 1948); L.
3531	B. Cebulski, Sr.	Srivor Drilling Co.	1911	675 J	74	2		16	Sd	P1 C		D	Flowed; L.
3532	H. Cebulski, Jr.		7-21-54	675 J	59	2		0	Sd	P1 C		D	See log well 3531.
3531	City of South Bend			676 Dr	148	2 1/2		64	Sd,G	P1 C	+6	T	Bedrock at 148 ft; well SJ 8-2 (KS, 1948); L.
3531	Suaodsson		1911	697 Dr	97	6			Sd	P1		N	Dd 28 ft pumping 30 gpm; water level 18 ft below lsd, 7-11-59; well SJ 68 (KS, 1948).
3532	Drowrys, Ltd., U. S. A., Inc.	Layne-Northern Co. Inc.	10-2-43	698 Dr	154			70	Sd,G	P1 C	17	T	Bedrock at 154 ft; L.
3533			11-30-43	698 Dr	147	26		66	Sd,G	P1 C	18	I	Dd 23.5 ft after 3 hr pumping 1,240 gpm; see log well 3532; well SJ 12-3 (KS, 1948); Ca.
3531	Sobenito, Inc.	Indiana-Michigan Development Co.	8-3-43	680 Dr	124	8		79	Sd,G	P1 C	+1	I	Yield 35 gpm; see log well 3534; well SJ 62 (KS, 1948); Ca.
3532			5-5-48	680 Dr	135	8		75	Sd,G	P1 C	4	I	Dd less than 5 ft pumping 180 gpm; L.
3533	D. W. Lynch			680 Dr	110	1 1/2			Sd,G	P1 C		O	Observation well St. Joseph 13; water level measured 2.54 ft below lsd, 3-0-45; well SJ 87 (KS, 1948).
3534	City of South Bend			680 Dr	147	2 1/2		101	G.Sd	P1 C	+5	T	Bedrock at 146 ft; well SJ 8-1 (KS, 1948); L.
3531	Lock Joint Tube Co.	Indiana-Michigan Water Development Co.	12-28-44	680 Dr	120	8		33	G	P1 C	6	I	Ca, L.

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Data completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone					Water level (feet)	Use	Type of pump and horsepower	Remarks
									Depth to top (feet)	Thickness (feet)	Character	Geologic age	Conditions of occurrence				
38/2-35Q2	Lock Joint Tubo Co.	Indiana-Michigan Water Development Co.	9-13-57	680	Dr	126	8	S; 10ft, 25al, dia 7 1/2								Dr 19.5 ft pumping 370 gpm; well log well 1584; L.	
36K1	University of Notre Dame		Before 1911	732	--	151	2									Well SJ 8-31 (KS, 1948); L.	
36H2	-----do-----		1027	730	Dr	170	8									Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
36K1	-----do-----	R. Norsey	1027	732	Dr	161	12	S; 20ft								Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
36K2	-----do-----	Indiana-Michigan Water Development Co.	10-12-39	732	Dr	157	12	S; 20ft, 25al, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
36K3	-----do-----		5-13-43	725	Dr	184	12	S; 30ft, 50g, dia 10								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
36K4	-----do-----		11- 8-37	724	Dr	40	6									Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
38/3- 9P1	H. Bonney	Srilver Drilling Co.	8-24-50	827	J	97	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
13G1	P. S. Smith	-----do-----	5-11-47	806	J	44	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
13M1	J. Goist	-----do-----	4-22-47	797	J	44	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
13K2	S. J. Jamason	-----do-----	9- 9-46	796	J	40	3	S; 5ft, 60g, dia 2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
13P1	D. Woolley	-----do-----	3-16-54	796	J	42	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
14J1	P. Nemeth	Indiana-Michigan Water Development Co.	12-25-45	794	Dr	83	6	S; 15ft, 15al, dia 5 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
14M1	E. R. Ayers	Srilver Drilling Co.	8-25-49	791	J	38	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
16P1	F. Triplett	-----do-----	-----	811	J	89	2	S								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
16K1	F. Szabo	Srilver Drilling Co.	10-28-48	726	J	91	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
16N1	V. Brown	W. Rodgers	8-20-53	833	J	97	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
16Q1	L. Sabe	Srilver Drilling Co.	5- 1-48	817	J	81	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17E1	A. S. Dominick	-----do-----	5-14-48	817	J	94	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17E2	H. Lake	-----do-----	7-18-51	808	J	90	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17E3	L. Guin	-----do-----	10- 2-57	793	J	94	3	S; 5ft, 60g, dia 2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17J1	M. H. Dinsick	-----do-----	4-18-51	812	J	93	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17J2	R. Evans	-----do-----	8-16-56	821	J	90	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17K1	P. Van Es	-----do-----	10-24-49	816	J	92	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17N1	T. Terkleson	-----do-----	7-17-50	807	J	94	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
17R2	R. Grabbe	-----do-----	-----	789	J	72	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
18F1	N. K. Stemann	-----do-----	-----	782	J	43	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
19A1	C. E. Savery	-----do-----	7-21-50	795	J	58	2	S; 3ft, 60g, dia 1 1/2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
18N1	P. Yuhasz	-----do-----	-----	725	J	41	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
20F1	O. R. Shupp	-----do-----	3-25-49	817	J	90	2	-----do-----								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	
20J1	E. Greenwood	-----do-----	5-12-50	811	J	95	3	S; 5ft, 60g, dia 2								Dr 44 ft pumping 170 gpm; water level 58 ft below land 9-23; Well SJ 52-2 (KS, 1948) 9-23; Dr 28.7 ft pumping 260 gpm; water level measured 37.4 ft below land 3-15-45; well SJ 52-3 (KS, 1948)	

Well No.	Owner	Location	Company	Date	Drill	Depth	Log	Remarks	Notes
2081	W. Fuenak	---	Sliver Drilling Co.	8-5-48	795 J	78	2	S; 3ft. 80g, dia 1 1/4	68
2082	M. Smith	---	---	4-10-58	804 J	101	2	S; 3 1/2 ft, 80g, dia 1 1/4	82
2083	C. Van Bellingham	---	---	6-23-49	786 J	62	2	S; 3ft, 80g, dia 1 1/4	50
2084	L. Nagy	---	---	7-3-52	790 J	68	2	S; 3 1/2 ft, 80g, dia 1 1/4	50
21A1	G. Smith	---	---	1-28-48	812 J	60	2	S; 3ft, 80g, dia 1 1/4	62
21C1	R. Bennett	---	---	1958	814 J	82	2	S; 3 1/2 ft, 108l, dia 1 1/4	62
21D1	C. Hurvich	---	---	4-13-56	819 J	94	2	S; 5ft, 60g, dia 2	68
21E1	A. Hunsbrell	---	---	2-28-55	804 J	61	2	S; 3ft, 80g, dia 1 1/4	48
21N1	A. J. Taylor	---	---	1-20-54	792 J	70	2	---	48
21P1	P. Hoy	---	---	---	801 J	78	2	S; 3 1/2 ft, 60g, dia 1 1/4	54
21Q1	F. Wachowak	---	---	4-17-51	785 J	64	2	S; 3 1/2 ft, 80g, dia 1 1/4	42
21Q2	J. L. Powell	---	---	---	795 J	67	2	S; 3ft, 80g, dia 1 1/4	44
21Q3	F. Rehmel	---	---	4-11-51	801 J	68	2	S; 3 1/2 ft, 60g, dia 1 1/4	51
21Q4	W. Coy	---	Layne-Northern Co., Inc.	1-15-54	783 Dr	82	6	S; 10ft, dia 4	36
21R1	J. Nyergus	---	Sliver Drilling Co.	6-50	787 J	58	2	S; 3ft, 60g, dia 1 1/4	30
21R2	D. C. Bauer	---	---	4-25-53	787 J	61	2	S; 3 1/2 ft, 80g, dia 1 1/4	36
22J1	J. Whitmer	---	---	8-50	787 J	48	3	S; 5ft, 60g, dia 2	28
22K1	O. Hannon	---	---	7-5-48	787 Dr	45	2	---	26
22C1	C. E. Ruggen	---	---	2-23-55	789 J	45	3	---	10
22N1	Indiana Toll Road Commission	---	Case Foundation Co.	5-25-54	788 B	30	---	---	29
23Y2	---	---	---	5-25-54	786 B	30	---	---	20
24T1	---	---	---	5-26-54	785 B	40	---	---	15
24T2	---	---	---	5-26-54	789 B	30	---	---	10
24F3	---	---	---	5-28-54	785 B	30	---	---	10
24F4	---	---	---	5-26-54	785 B	30	---	---	17
24F5	---	---	---	5-27-54	787 B	42	---	---	20
23N1	---	---	---	---	755 Dn	14	14	---	10
26D1	Indiana Toll Road Commission	---	Case Foundation Co.	5-27-59	786 D	40	---	---	27
26D2	---	---	---	5-25-54	786 B	30	---	---	27
26D3	---	---	---	5-27-54	786 B	41	---	---	20
27C1	I. Royce	---	Sliver Drilling Co.	9-22-49	781 J	39	2	S; 3ft, 60g, dia 1 1/4	28
27G1	Indiana Toll Road Commission	---	Case Foundation Co.	5-26-54	784 D	56	---	---	13
27G2	---	---	---	5-25-54	783 B	30	---	---	9
27G3	---	---	---	5-25-54	763 B	30	---	---	14
27G4	---	---	---	5-26-54	782 B	40	---	---	11
27H1	---	---	---	5-25-54	782 B	30	---	---	14
27M1	---	---	---	5-24-54	752 B	20	---	---	6
28E1	St. Joseph Valley Memorial Park	---	Indiana-Michigan Water Development Co.	5-21-50	777 Dr	119	12	S; 20ft, 306l, dia 1 1/4	---
28E2	---	---	---	3-31-51	777 Dr	81	12	---	30
28C1	F. Nield	---	Sliver Drilling Co.	3-21-46	786 J	58	2	S; 3ft, 60g, dia 1 1/4	48
28K1	Indiana Toll Road Commission	---	Case Foundation Co.	5-21-54	763 D	30	---	---	21
28K2	---	---	---	5-24-54	783 B	43	---	---	21
28K3	---	---	---	5-24-54	762 B	30	---	---	22
28L1	---	---	---	5-21-54	761 B	32	---	---	30
28L2	---	---	---	5-24-54	764 B	50	---	---	22
28M1	---	---	---	5-21-54	764 B	52	---	---	22

Table 2.--Records of wells and test holes in St. Joseph County, Indiana--Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land-surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone				Use	Type of pump and horsepower	Remarks	
									Depth to top (feet)	Thickness (feet)	Character	Geologic age				Conditions of occurrence
38/J-28N2	Indiana Toll Road Commission	Caso Foundation Co.	5-20-54	763 B	30											
28N3	do	do	5-20-54	762 B	30											No water reported; see log well 28N1.
28N4	do	do	5-18-54	762 B	40											Do.
28N5	do	do	5-21-54	757 B	27											L.
28N1	U. S. Rubber Co.	Indiana-Michigan Water Development Co.	12-30-53	752 Dr	52	8	3	S; 10ft, 10in								See log well 28M1. For fire protection; L. Dark sand overlain by 18 ft yellow sand.
28P1	T. De Moyer	Srifer Drilling Co.		749 J	51	3	5	5ft, 60g, dia 2								L.
28D1	G. Racz	do	3-28-54	797 J	95	2 1/2	9	3 1/2ft, 10in, dia								Yellow sand and gravel from 0-11 1/2 ft.
28D2	E. Mamua	do	4-20-54	810 J	113	2	5	5ft, 60g, dia 1 1/2								J1
28J1	R. E. McGarr	do	9-10-48	762 J	58	2	5	2 1/2ft, 80g, dia								
28J2	Mr. Vendorly	do	5-19-47	762 J	48	2	5	3ft, 60g, dia 1 1/2								Sand and gravel from 0-48 ft.
28J3	Mr. Palmer	do	4-10-48	761 J	40	2	5	2 1/2ft, 60g, dia 1 1/2								L.
28J4	Indiana Toll Road Commission	Caso Foundation Co.	5-19-54	745 D	20											
28J5	do	do	5-19-54	746 B	22											See log well 28J4. No water reported; L.
28K1	do	do	5-19-54	764 B	31											No water reported; see log well 28M1.
28K2	do	do	5-19-54	760 D	31											Yield 10 gpm; coarse sand from 0-40 ft.
30B1	T. Begue	Srifer Drilling Co.	5-10-49	759 J	85	2	5	3ft, 60g, dia 1 1/2								L.
30E1	W. Bender	W. Rodgers		720 J	40	2		do								See log well 30E2.
30E2	Indiana Toll Road Commission	Caso Foundation	5-14-54	721 D	60											Do.
30E3	do	do	5-17-54	792 B	32											Do.
30E4	do	do	5-17-54	774 B	20											Do.
30E5	do	do	5-18-54	719 B	20											L.
30F1	do	do	5-17-54	719 B	20											L.
30H1	R. Haunsholl	Srifer Drilling Co.	3-8-50	784 J	63	2	5	10ft								Sand and gravel from 0-63 ft.
30H2	H. Blako	do	8-50	768 J	71	2	5	3 1/2ft, 60g, dia								Sand and gravel from 0-73 ft.
30J1	Arcolo-Midwest Construction Co. Inc.	do	2-10-55	761 Dr	59	4	5	7ft, 60g, dia 2 1/2								Sand and gravel from 0-69 ft.
30J2	Indiana Toll Road Commission	Caso Foundation Co.	5-19-54	765 B	48											L.
30J3	do	do	5-18-54	761 D	31											No water reported; see log well 30J2.
30J4	do	do	5-18-54	759 B	41											Do.
30M1	E. Vande Zande	Srifer Drilling Co.	8-15-54	726 J	43	2	5	4ft, 60g, dia								Ca, L.
30M2	J. Repler	do	8-16-52	727 J	39	2	5	3 1/2ft, 10in, dia								Yellow sand and gravel from 0-39 ft.
30M3	H. E. Cooper	do		797 J	41	3	5	3ft, 60g, dia 2								Sand from 0-41 ft.
30M4	F. A. Baltosor	do	6-15-53	729 J	45	2	5	3ft, 60g, dia 1 1/2								Sand and gravel from 0-45 ft.

38/3-3081	Trustees, Clay Township	Striver Drilling Co.	3-1-54	755 J	163	3	S; 5 1/2 ft., 10al, dia 1 1/2	150	10	G	Pl	C	31	P	J1/2	Ca, L.
3101	B. Locks	do	2-7-58	743 Dn	29	2	S; 3 ft., 60g, dia 1 1/2	---	---	Sd,G	Pl	U	25	D	---	L.
3102	C. Tirota	do	2-3-54	740 J	50	2	S; 3 ft., 60g, dia 1 1/2	45	5	Sd	Pl	C	25	---	---	Yellow sand and gravel from 0-37 ft.
3103	L. Marks	do	2-3-54	734 J	37	2	S; 3 ft., 60g, dia 1 1/2	28	9	Sd,G	Pl	U	28	D	---	L.
3104	University of Notre Dame	Layno-Northern Co., Inc.	12-7-58	730 Dr	187	8 1/2	---	115	72	Sd,G	Pl	C	22	T	---	Do 34 ft after 8 hr pumping 1,100 gpm; L. Bedrock at 250 ft; L. Yield 1,100 gpm; Ca, L.
3105	do	do	3-18-57	730 Dr	187	26	Gp; S; 30ft., 80al, dia 12	143	44	Sd,G	Pl	C	25	P	---	L.
3106	do	do	4-17-51	732 Dr	250	6	---	---	---	Sd,G	Pl	---	25	T	---	See log well 39F4, Ca, L.
3107	do	do	3-1-52	732 Dr	180	28	Gp; S; 30ft., 105al, dia 12	128	52	Sd,G	Pl	C	22	P	---	L.
3108	do	do	---	733 J	61	2	S; 3 1/2 ft., 80g, dia 1 1/2	---	---	Sd	Pl	---	19	D	---	---
3109	do	do	---	734 J	59	2	S; 3 1/2 ft., 80g, dia 1 1/2	---	---	Sd	Pl	---	10	S	---	---
3110	do	do	10-13-53	732 J	55	2	S; 3 ft., 80g, dia 1 1/2	43	12	Sd	Pl	C	14	D	---	---
3111	do	do	7-13-51	734 J	37	2	S; 3 1/2 ft., 80g, dia 1 1/2	40	11	Sd	Pl	C	19	D	---	---
3112	do	do	8-25-54	741 J	35	2 1/2	S; 4 1/2 ft., 10al, dia 1 1/2	18	17	Sd	Pl	U	18	D	---	---
3113	do	do	1-21-53	742 J	52	2	S; 3 ft., 80g, dia 1 1/2	45	7	Sd	Pl	C	12	D	---	---
3114	do	do	8-10-48	745 Dr	88	6	S; 12ft., 15al, dia 5 1/2	21	47	Sd,G	Pl	C	21	D	---	---
3115	do	do	7-17-48	737 Dr	200	6	---	107	93	Sd,G	Pl	C	32	T	---	Do, less than 12 ft pumping 55 gpm; see log well 31D1. Bedrock at 200 ft; L.
3116	do	do	10-3-46	737 Dr	187	12	S; 20ft., 100al, dia 1 1/2	107	93	Sd,G	Pl	C	34	P	---	Bedrock at 200 ft; see log well 31M1.
3117	do	do	3-21-55	749 J	51	2	S; 3 ft., 80g, dia 1 1/2	44	7	Sd	Pl	C	20	D	---	L.
3118	do	do	10-18-47	785 J	64	2	S; 3 1/2 ft., 80g, dia 1 1/2	47	17	Sd,G	Pl	U	47	D	---	Sand and gravel from 0-64 ft.
3119	do	do	---	755 J	43	2	S; 3 ft., 80g, dia 1 1/2	36	7	Sd,G	Pl	U	36	D	---	Sand and gravel from 0-43 ft.
3120	do	do	7-21-54	755 J	46	2	---	34	12	Sd,G	Pl	U	34	D	---	Sand from 0-46 ft.
3121	do	do	1958	755 J	46	2	---	28	18	Sd	Pl	U	28	D	---	Coarse sand overlain by 40 ft sand and gravel; Ca.
3122	do	do	0-15-56	780 J	50	2 1/2	S; 5 ft., 80g, dia 1 1/2	32	18	Sd,G	Pl	U	32	D	---	Sand and gravel from 0-50 ft.
3123	do	do	9-10-58	750 J	50	2	S; 3 1/2 ft., 80g, dia 1 1/2	16	34	Sd,G	Pl	U	16	D	---	Do.
3124	do	do	7-11-53	755 J	49	5	---	---	---	Sd	Pl	---	30	---	---	Yellow sand and gravel from 0-47 ft.
3125	do	do	4-18-54	756 J	47	2 1/2	S; 5 1/2 ft., 60g, dia 1 1/2	31	16	Sd,G	Pl	U	31	D	---	---
3126	do	do	5-24-45	756 J	53	2	S; 3 ft., 80g, dia 1 1/2	28	---	Sd,G	Pl	U	28	D	---	Sand and gravel from 0-45 ft.
3127	do	do	10-23-53	753 J	45	2	S; 3 ft., 80g, dia 1 1/2	28	17	Sd,G	Pl	U	28	D	---	Yellow sand and gravel from 0-41 ft.
3128	do	do	2-13-54	748 J	41	2	---	---	---	Sd,G	Pl	U	28	D	---	O-41 ft.
3129	do	do	---	758 J	48	2	---	14	34	Sd,G	Pl	U	14	D	---	Sand and gravel from 0-48 ft.
3130	do	do	---	753 J	41	2	---	20	15	Sd,G	Pl	U	20	D	---	Yellow sand and gravel from 0-41 ft.
3131	do	do	6-31-54	751 J	40	2	---	24	16	Sd,G	Pl	U	24	D	---	Sand and gravel from 0-40 ft.
3132	do	do	9-21-54	749 J	45	2	---	21	24	Sd	Pl	U	21	D	---	Sand from 0-45 ft.
3133	do	do	---	750 J	40	2	S; 3 1/2 ft., 7al, dia 1 1/2	28	12	G,Sd	Pl	U	28	D	---	Ca, L.
3134	do	do	9-21-53	751 J	40	2	S; 3 ft., 80g, dia 1 1/2	28	18	Sd,G	Pl	U	28	D	---	Sand and gravel from 0-46 ft.
3135	do	do	5-8-53	752 J	45	2	S; 3 1/2 ft., 80g, dia 1 1/2	28	17	Sd	Pl	U	28	D	---	Yellow sand from 0-45 ft.
3136	do	do	5-30-45	747 Dr	63	4	S; 3 ft., 60g, dia 3	19	44	Sd	Pl	U	19	P	---	Sand from 0-63 ft; clay at 89 ft; Ca.
3137	do	do	---	747 J	36	2	S; 3 ft., 60g, dia 1 1/2	22	14	Sd,G	Pl	U	22	D	---	Yellow sand and gravel from 0-36 ft; Ca.
3138	do	do	1925	743 Dr	178	8	---	---	---	Sd,G	Pl	---	---	---	---	---
3139	do	do	1925	743 Dr	40	8	---	---	---	Sd,G	Pl	---	---	---	---	---
3140	do	do	11-6-59	756 J	46	3	S; 4 ft., 10al, dia 2	---	---	Sd,G	Pl	---	---	---	---	Yield 16 gpm; Ca, L.
3141	do	do	---	756 J	46	3	---	---	---	Sd,G	Pl	---	---	---	---	---

Table 2.---Records of wells and test holes in St. Joseph County, Indiana---Continued

Well	Owner	Driller	Date completed	Altitude (feet)	Type of well	Depth of well below land surface (feet)	Diameter of well (inches)	Finish	Water-bearing zone				Type of pump and horsepower	Remarks	
									Depth to top (feet)	Thickness (feet)	Character	Geologic age			Conditions of occurrence
3B/A-7P1	K. Roberts	Striver Drilling Co.	2-21-58	805 J	J	48	2	S; 3 1/2 ft, 80g, dia 1 1/4	25	Sd, G	Pl	U	25	D	Sand and gravel from 0-48 ft.
6K1	Central Hardware	-----do-----	6-50	807 J	Dr	43	2	S; 7 ft, 80g, dia 1 1/4	16	Sd	Pl	U	16	D	Sand from 0-43 ft.
18B1	Harris Township Fire Department	-----do-----	11-15-57	800 Dr	Dr	51	4	S; 7 ft, 80g, dia 2 1/2	12	Sd, G	Pl	U	12	P	For fire protection; sand and gravel from 0-51 ft; Ca.
18C1	Standard Oil Co.	Layne-Northern Co., Inc.	4-15-53	807 Dr	Dr	80	8	S; 10 ft, 58g, dia 6	24	Sd	Pl	U	24	P	Dr 16 ft after 2.5 hr pumping 220 gpm; Ca, L.
19E1	Indiana Toll Road Commission	Case Foundation Co.	5-27-54	774 B	B	20	---	-----	7	Sd	Pl	U	7	T	See log well 19F1.
19F1	-----do-----	-----do-----	5-27-54	789 B	B	42	---	-----	20	Sd	Pl	U	20	T	L.
19G1	-----do-----	-----do-----	7-69	789 B	Dr	32	---	-----	18	Sd	Pl	U	18	T	Oil test; bedrock at 146 ft;
20B1	E. Warden	J. H. McLean	5-21-41	777 Dr	Dr	642	8-5 1/2	-----	---	Sd, G	Pl	---	---	---	Oil test; bedrock at 146 ft; well G-SJ E20-2 (NS, 1948); L.
20D1	R. Knoblock	Robert Allen Crude Oils	8-15-40	780 Dr	Dr	500	8-5 1/2	-----	---	---	---	---	---	---	Oil test; bedrock at 147 ft; 383 ft shale underlain by 170 ft dolomite containing water.
20E1	Indiana Toll Road Commission	Case Foundation Co.	5-27-54	774 B	B	22	---	-----	5	Sd	Pl	U	5	T	L.
20J1	-----do-----	-----do-----	5-23-54	774 B	B	42	---	-----	4	Sd, G	Pl	U	4	T	Oil test; water-bearing limestone from 528-580 ft; well G-SJ E20-1 (NS, 1948); L.
20K1	University of Notre Dame	-----do-----	9-28-44	788 Dr	Dr	1,045	5 1/2	-----	---	---	---	---	---	---	Oil test; water-bearing limestone from 528-580 ft; well G-SJ E20-1 (NS, 1948); L.
21A1	M. Burggraf	Striver Drilling Co.	9-1-51	787 J	J	42	2	S; 3 ft, 80g, dia 1 1/4	16	Sd	Pl	U	16	D	Yellow sand from 0-42 ft; Ca.
21J1	Indiana Toll Road Commission	Indiana-Michigan Water Development Co.	4-1-55	777 Dr	Dr	73	8	S; 10 ft, 40s1, dia 7 1/4	7	Sd, G	Pl	U	7	P	Dr 18 ft after 8 hr pumping 150 gpm; Ca, L.
21J2	-----do-----	-----do-----	3-28-54	776 B	B	42	---	-----	11	Sd, G	Pl	U	11	T	L.
21J3	-----do-----	-----do-----	5-27-54	776 B	B	30	---	-----	10	Sd	Pl	U	10	T	L.
21J4	-----do-----	-----do-----	5-28-54	776 B	B	30	---	-----	9	Sd	Pl	U	9	T	L.
21L1	-----do-----	-----do-----	5-28-54	770 B	B	22	---	-----	5	Sd, G	Pl	U	5	T	L.
21M1	-----do-----	-----do-----	7-74	774 B	B	32	---	-----	4	Sd, G	Pl	U	4	T	L.
28J1	R. and G. Wall	Robert Allen Crude Oils	6-24-40	764 Dr	Dr	574	8-5	-----	---	---	---	---	---	---	See log well 21M1.
28N1	R. A. Hamlinger	Striver Drilling Co.	-----	762 J	J	52	2	S; 4 1/2 ft, 80g, dia 1 1/4	16	G, Sd	Pl	U	16	D	Oil test; bedrock at 224 ft; 301 ft shale underlain by 43 ft limestone (?); water-bearing shale from 243-253 ft; water-bearing limestone(?) from 547-574 ft; well G-SJ E29-1 (NS, 1948); L.
31P1	M. Osejnik	Striver Drilling Co.	8-13-59	758 J	J	44	2	S; 4 ft, 10s1, dia 1 1/4	10	Sd, G	Pl	U	10	D	See log well 21M1.
33E1	V. Kubitrcheck	Barratt and Kama M. C. Pletcher	3-1-45	765 Dr	Dr	523	8 1/2	-----	---	---	---	---	---	---	Oil test; bedrock at 175 ft; water-bearing shale from 185-190 ft; well G-SJ E23-1 (NS, 1948); L.
33E2	-----do-----	Calumet Oil Producers	7-16-54	764 Dr	Dr	700	8-5	-----	---	Sd, G	Pl	---	---	---	Oil test; bedrock at 215 ft; L.

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

Well 35/1W-12B1

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	25	25	
Sand-----	6	31	
Sand, coarse-----	4	35	

Well 35/1W-13G1

Type of record: Driller's log.

Altitude: 718 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	12	12	
Hardpan-----	12	24	
Sand and gravel-----	11	35	
Sand, white-----	16	51	

Well 35/1W-23J2

Type of record: Driller's log.

Altitude: 715 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	11	11	
Sand, gray-----	24	35	
Stones and clay-----	32	67	
Sand, fine, dirty-----	12	79	
Sand, fine, clean-----	3	82	
Gravel and sand-----	5	87	Suitable for 30-slot screen.
Clay with very hard boulders-----	19	106	
Clay, soft-----	8	114	
Clay, hard-----	3	117	
Gravel-----	1	118	Suitable for 100-slot screen.
Gravel and sand-----	6	124	
Sand, clean-----	5	129	Suitable for 15-slot screen.
Gravel with clay-----	7	136	
Gravel-----	8	144	Suitable for 25-slot screen.
Sand, clean-----	9	153	Suitable for 15-slot screen.
Clay-----	10	163	Shale at 163 feet.

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

Well 35/1W-23R1

Type of record: Driller's log.

Altitude: 718 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil-----	4	4	
Gravel, hard-----	1	5	
Sand, sugar-sized-----	24	29	
Gravel and sand-----	11	40	
Clay and sand-----	48	88	
Sand-----	10	98	Suitable for 8-slot screen.
Clay, soft-----	4	102	
Clay, hard-----	7	109	
Gravel and sand-----	15	124	Suitable for 80-slot screen.

Well 35/1W-24M1

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	13	13	
Sand, gray-----	25	38	
Gravel-----	2	40	
Sand, fine-----	32	72	
Clay with boulders-----	7	79	
Gravel and clay; mixed-----	4	83	
Sand, fine, clean-----	5	88	
Gravel-----	1	89	
Sand, clean-----	4	93	Suitable for 20-slot screen.
Sand and gravel-----	4	97	Suitable for 50-slot screen.
Sand, fine, and clay; mixed-----	18	115	
Clay, hard-----	7	122	
Gravel-----	5	127	Suitable for 80-slot screen.
Clay-----	1	128	
Sand-----	9	137	Suitable for 25-slot screen.
Gravel-----	5	142	Suitable for 50-slot screen.

Well 35/1W-24M2

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, yellow-----	19	19	
Sand, gray-----	23	42	

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

Well 35/1W-24M2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Boulders and clay-----	14	56	
Sand, fine-----	20	76	
Clay, blue, and gravel-----	38	114	
Hardpan-----	8	122	
Gravel and sand; dirty-----	11	133	Suitable for 40-slot screen.
Gravel-----	8	141	Suitable for 60-slot screen.

Well 35/1W-25C1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	9	9	
Sand, yellow-----	44	53	
Sand, fine-----	7	60	
Sand and clay-----	15	75	
Sand, muddy-----	11	86	
Clay and sand-----	5	91	
Clay, soft-----	9	100	
Clay with some coarse gravel-----	20	120	
Gravel and clay balls-----	2	122	
Sand-----	8	130	
Sand, fine-----	11	141	
Clay-----	7	148	

Well 35/1W-25D1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	30	30	
Sand, coarse-----	5	35	
Sand, fine, yellow-----	16	51	
Sand-----	11	62	
Gravel, coarse-----	2	64	
Hardpan-----	54	118	
Clay, sandy-----	18	136	

Well 35/1W-25E1

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

Quaternary system:			
Recent and Pleistocene series:			
Gravel, yellow-----	20	20	
Clay, yellow-----	20	40	

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

Well 35/1W-25E1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	10	50	
Gravel, medium-----	4	54	

Well 35/1-1A2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Clay, blue-----	16	36	
Sand, coarse, and fine gravel----	72	108	

Well 35/1-1D1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	18	18	
Clay, blue-----	30	48	
Gravel, pea-sized-----	9	57	

Well 35/1-1J1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Gravel-----	5	35	
Clay, blue-----	10	45	
Sand-----	20	65	

Well 35/1-9J1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Sand, yellow-----	2	32	
Clay, blue-----	50	82	
Sand, yellow-----	6	88	

Well 35/1-12J1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	32	32	
Sand, yellow-----	6	38	

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

Well 35/1-12J1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	22	60	
Sand-----	8	68	

Well 35/1-17J1

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

Quaternary system:			
Recent and Pleistocene series:			
Loam-----	10	10	
Clay, yellow-----	30	40	
Clay, blue-----	8	48	
Sand-----	6	54	
Gravel-----	4	58	

Well 35/2-1F1

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

Quaternary system:			
Recent and Pleistocene series:			
Loam-----	9	9	
Sand and gravel-----	9	18	
Clay-----	12	30	
Sand and gravel-----	10	40	

Well 35/2-2K1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Gravel-----	20	40	
Sand and gravel-----	9	49	

Well 35/2-2P1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	23	23	
Clay and gravel-----	5	28	
Sand and gravel-----	11	39	

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

Well 35/2-4R1

Type of record: Driller's log.

Altitude: 870 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	22	22	
Clay, blue-----	78	100	
Sand and clay; blue-----	4	104	
Sand-----	7	111	

Well 35/2-6A1

Type of record: Driller's log.

Altitude: 810 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	20	20	
Sandstone-----	3	23	Boulder (?).
Clay, blue-----	51	74	
Sand-----	10	84	

Well 35/2-8B1

Type of record: Driller's log.

Altitude: 885 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand-----	40	70	
Hardpan-----	20	90	
Sand-----	15	105	

Well 35/2-8N1

Type of record: Driller's log.

Altitude: 852 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, coarse-----	21	21	
Clay, blue-----	19	40	
Gravel, coarse-----	30	70	
Gravel, fine-----	17	87	

Well 35/2-10D1

Type of record: Driller's log.

Altitude: 870 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Clay, blue-----	30	60	
Sand, coarse, and fine gravel----	10	70	
Clay, blue-----	30	100	
Sand, coarse, and fine gravel----	26	126	

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

Well 35/2-14H1

Type of record: Driller's log.

Altitude: 832 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam and clay-----	22	22	
Sand-----	5	27	
Clay-----	9	36	
Sand-----	9	45	

Well 35/2-16H1

Type of record: Driller's log.

Altitude: 873 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Overburden and clay-----	24	24	
Sand, fine, and gravel-----	12	36	
Sand, fine-----	4	40	
Sand and gravel-----	9	49	

Well 35/2-18E1

Type of record: Driller's log.

Altitude: 816 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	21	21	
Clay, blue, and gravel; mixed----	9	30	
Gravel, coarse-----	10	40	

Well 35/3-11D1

Type of record: Driller's log.

Altitude: 820 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow, with little sand---	28	28	
Sand, fine-----	4	32	
Clay, blue, with little sand----	60	92	
Gravel, coarse, gray, and sand---	6	98	

Well 35/3-16E1

Type of record: Driller's log.

Altitude: 847 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	28	28	
Clay, blue, and gravel-----	103	131	
Sand and gravel-----	8	139	

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

Well 35/3-18E1

Type of record: Driller's log.

Altitude: 832 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Sand, yellow-----	12	30	
Clay-----	30	60	
Sand-----	10	70	

Well 36/1W-25P1

Type of record: Driller's log from memory.

Altitude: 704 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	20	20	
Sand, white-----	16	36	
Sand, fine-----	14	50	
Gravel, coarse-----	8	58	

Well 36/1W-35B1

Type of record: Driller's log.

Altitude: 705 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	18	18	
Clay-----	7	25	
Sand-----	15	40	

Well 36/1-1F1

Type of record: Driller's log.

Altitude: 745 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Sand, fine, dirty, with small stones-----	17	25	
Sand, fine, brown, with small stones-----	20	45	
Sand, fine, reddish-gray-----	9	54	
Sand, fine, red-----	3	57	
Gravel with clay-----	21	78	
Sand with some fine gravel-----	9	87	
Gravel-----	1	88	

Well 36/1-1N1

Type of record: Driller's log.

Altitude: 740 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel-----	15	15	

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

Well 36/1-1N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	12	27	
Sand, coarse, light-----	12	39	

Well 36/1-8Q1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	40	40	
Clay, blue-----	35	75	
Sand, yellow-----	12	87	

Well 36/1-8R1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	40	40	
Clay, blue-----	30	70	
Sand, yellow-----	17	87	

Well 36/1-10C2

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

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	7	7	
Gravel-----	18	25	
Hardpan-----	5	30	
Sand, light-----	20	50	

Well 36/1-13H1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	88	88	
Clay, blue-----	18	106	
Sand and gravel; dark-----	14	120	

Well 36/1-13K1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	60	60	
Clay, yellow-----	24	84	

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

Well 36/1-13K1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and clay; yellow-----	6	90	
Sand, yellow-----	10	100	

Well 36/1-21D1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	20	20	
Clay, blue-----	9	29	
Sand, yellow-----	9	38	

Well 36/1-25J1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	190	190	
Gravel-----	5	195	
Gravel and sand; coarse-----	5	200	
Sand and gravel; fine-----	5	205	
Sand and gravel; coarse-----	13	218	
Sand, light-brown-----	7	225	
Mississippian and Devonian systems:			
Lower Mississippian and Upper Devonian series:			
Shale, brown-----	5	230	
Shale, dark-brown-----	4	234	
Shale, dark, mixed-----	3	237	
Shale, light-brown-----	3	240	
Shale, brown and black-----	2	242	
Shale, light-brown-----	4	246	
Shale, black-----	4	250	
Shale, black, mixed-----	6	256	
Shale, black, and gray lime- stone; mixed-----	14	270	Total depth of well 300 feet; rest of log indefinite.

Well 36/1-28C1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, clay, and gravel-----	202	202	

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

Well 36/1-28C1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Mississippian and Devonian systems:			
Lower Mississippian and Upper Devonian series:			
Shale, gray, green, and brown----	3	205	
Shale, light-brown-----	5	210	
Shale, green and gray-----	9	219	
Shale, dark-brown-----	67	286	
Devonian system:			
Middle Devonian series:			
Dolomite, fine, sucrose-----	2	288	
Shale and hard dolomite-----	7	295	
Shale with quartz grains-----	1	296	
Dolomite, calcareous, brown-----	11	307	
Dolomite with quartz grains-----	3	310	
Dolomite, light-buff-----	3	313	
Limestone, light-buff-----	2	315	
Dolomite, calcareous, light-buff-	4	319	
Limestone, light-buff-----	67	386	
Limestone, brown and gray-----	27	413	
Dolomite, brown-----	35	448	
Silurian(?) system; undifferentiated:			
Dolomite, light-gray-----	7	455	
Dolomite with some sand-----	5	460	
Dolomite, gray-white-----	111	571	
Dolomite-----	366	937	
Dolomite, milky to cherty-----	33	970	
Dolomite, no chert-----	20	990	
Dolomite, white, with chert-----	65	1,055	
Ordovician system; undifferentiated:			
Dolomite, with green-shale streak-----	142	1,197	
Shale, green-gray-----	13	1,210	
Shale, soft, green-gray-----	65	1,275	
Shale, brown and light-brown----	122	1,397	
Dolomite, buff to brown-----	117	1,514	

Well 36/1-28E1

Type of record: Driller's log from memory.

Altitude: 722 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel; mixed-----	30	30	
Clay, yellow-----	10	40	
Sand, gray-----	20	60	
Gravel, very coarse, or coarse sand-----	3	63	

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

Well 36/1-28N2

Type of record: Driller's log.

Altitude: 728 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	3	3	
Sand, coarse-----	16	19	
Clay, sand, and gravel-----	21	40	
Sand, fine-----	5	45	
Sand, coarse, and gravel-----	25	70	
Sand, medium-----	5	75	
Gravel-----	25	100	

Well 36/1-32G2

Type of record: Driller's log.

Altitude: 727 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, white-----	20	20	
Clay, blue-----	15	35	
Gravel-----	14	49	

Well 36/1-33B1

Type of record: Driller's log.

Altitude: 730 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	21	21	
Clay-----	21	42	
Sand-----	25	67	

Well 36/1-33D1

Type of record: Driller's log.

Altitude: 735 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	8	8	
Sand, red-----	15	23	
Sand, fine, clean-----	22	45	
Sand, fine, dirty-----	6	51	
Gravel and sand-----	4	55	
Sand, clean, with some gravel----	18	73	

Well 36/1-35M2

Type of record: Driller's log.

Altitude: 753 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	40	40	
Quicksand-----	12	52	
Clay, blue-----	6	58	
Sand and gravel-----	18	76	

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

Well 36/2-1C1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Gravel-----	25	45	
Sand-----	6	51	

Well 36/2-1C3

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	21	21	
Gravel-----	28	49	
Sand-----	3	52	

Well 36/2-2A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand-----	18	18	
Clay-----	7	25	
Sand and gravel-----	34	59	

Well 36/2-2Q4

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	45	45	
Gravel-----	55	100	
Sand and gravel-----	13	113	

Well 36/2-2R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Gravel, yellow-----	57	87	
Sand and gravel; yellow-----	31	118	

Well 36/2-2R2

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

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

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

Well 36/2-2R2--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	30	110	
Sand-----	11	121	

Well 36/2-2R5

Type of record: Driller's log.		Altitude: 885 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Clay, very stony-----	25	25	
Clay-----	35	60	
Gravel and sand-----	56	116	

Well 36/2-3A1

Type of record: Driller's log.		Altitude: 825 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	30	20	
Clay-----	15	45	
Sand and gravel-----	18	63	Very stony from 55-60 feet.

Well 36/2-3B1

Type of record: Driller's log.		Altitude: 815 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	42	42	
Clay-----	8	50	
Sand and gravel-----	12	62	

Well 36/2-3G1

Type of record: Driller's log.		Altitude: 830 feet.	
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	20	20	
Clay, yellow-----	5	25	
Sand, yellow-----	25	50	
Clay, blue-----	10	60	
Sand, fine, blue-----	20	80	
Sand and gravel-----	17	97	

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

Well 36/2-3N1

Type of record: Driller's log.

Altitude: 840 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	18	18	
Gravel-----	50	68	
Clay, blue-----	20	88	
Gravel-----	7	95	

Well 36/2-3P1

Type of record: Driller's log.

Altitude: 840 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	15	15	
Gravel-----	15	30	
Clay, blue-----	35	65	
Sand and gravel-----	18	83	

Well 36/2-3R2

Type of record: Driller's log.

Altitude: 845 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	4	4	
Clay and sand-----	21	25	
Gravel-----	13	38	
Sand, fine-----	32	70	
Sand, fine, and clay-----	6	76	
Sand-----	8	84	Suitable for 20-slot screen.
Sand-----	12	96	Suitable for 15-slot screen.
Gravel-----	2	98	
Clay-----	15	113	
Hardpan-----	28	141	
Clay-----	17	158	
Gravel-----	18	176	

Well 36/2-3R3

Type of record: Driller's log.

Altitude: 845 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	22	22	
Sand, clean, and gravel-----	8	30	
Clay, blue-----	15	45	
Hardpan-----	25	70	
Clay, blue-----	10	80	
Clay, sandy-----	16	96	

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

Well 36/2-3R3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	9	105	Suitable for 15-slot screen.
Sand and clay-----	15	120	
Clay, blue-----	29	149	
Sand, fine-----	15	164	
Gravel and yellow sand-----	16	180	

Well 36/2-3R4

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	18	18	
Sand and gravel-----	6	24	
Clay, blue-----	11	35	
Hardpan and coarse gravel-----	35	70	
Clay, sandy, and gravel-----	28	98	
Clay and dirty sand-----	6	104	
Sand, clean-----	5	109	
Sand, dirty-----	5	114	
Clay-----	26	140	
Gravel and clay-----	3	143	
Sand-----	5	148	
Sand, coarse-----	6	154	
Clay, soft, yellow-----	3	157	

Well 36/2-3R5

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	67	67	
Sand, gray-----	76	143	
Clay-----	3	146	
Sand-----	31	177	

Well 36/2-4M1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	66	66	
Sand and clay-----	39	105	
Sand-----	9	114	

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

Well 36/2-4M3

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, clayey, blue-----	148	148	
Sand, fine-----	8	156	
Sand and gravel; yellow-----	6	162	

Well 36/2-5D1

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	32	32	
Clay, blue-----	21	53	
Sand, fine, yellow-----	6	59	
Sand, yellow-----	7	66	

Well 36/2-5L3

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

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	40	40	
Clay-----	35	75	
Gravel, fine-----	19	94	

Well 36/2-5M2

Type of record: Driller's log. Altitude: 765 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	60	60	
Clay, blue-----	9	69	
Sand and gravel-----	8	77	

Well 36/2-5N1

Type of record: Driller's log. Altitude: 765 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	16	16	
Gravel, yellow-----	34	50	
Clay, blue-----	8	58	
Sand, yellow-----	10	68	

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

Well 36/2-5Q1

Type of record: Driller's log.

Altitude: 825 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	46	46	
Clay, yellow-----	7	53	
Sand, fine, yellow-----	35	88	
Clay, blue-----	36	124	
Sand, coarse, dark-----	10	134	

Well 36/2-5Q2

Type of record: Driller's log.

Altitude: 795 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	34	34	
Clay-----	50	84	
Sand-----	10	94	

Well 36/2-5Q3

Type of record: Driller's log.

Altitude: 825 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	40	40	
Gravel and blue clay-----	20	60	
Clay, blue-----	40	100	
Gravel and sand; coarse-----	20	120	

Well 36/2-6A1

Type of record: Driller's log.

Altitude: 765 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	54	54	
Clay, blue-----	22	76	
Sand and gravel; yellow-----	10	86	

Well 36/2-6F1

Type of record: Driller's log.

Altitude: 760 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	20	20	
Clay, blue-----	10	30	
Clay, yellow-----	20	50	
Sand and gravel; yellow-----	10	60	

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

Well 36/2-6F2

Type of record: Driller's log.

Altitude: 760 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	50	50	
Clay, blue-----	2	52	
Sand, yellow-----	5	57	

Well 36/2-8D2

Type of record: Driller's log.

Altitude: 775 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	7	7	
Sand and gravel-----	26	33	
Clay-----	33	66	
Sand-----	6	72	

Well 36/2-8J1

Type of record: Driller's log.

Altitude:

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	60	60	
Clay, yellow-----	20	80	
Clay and sand; blue-----	50	130	
Clay, blue-----	15	145	
Sand-----	15	160	

Well 36/2-11B3

Type of record: Driller's log.

Altitude: 870 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	24	24	
Hardpan-----	26	50	
Gravel and sand-----	36	86	

Well 36/2-11N1

Type of record: Driller's log.

Altitude: 850 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft, brown-----	15	15	
Sand and gravel; brown-----	10	25	
Clay, soft, blue-gray-----	26	51	
Clay and gravel; hard, blue-gray-	4	55	
Gravel, coarse, hard, mixed			
colors-----	13	68	
Sand and fine gravel; soft, light-			
brown-----	8	76	

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

Well 36/2-11P6

Type of record: Driller's log.

Altitude: 860 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	35	35	
Sand and gravel; yellow-----	25	60	
Sand-----	16	76	

Well 36/2-12Q1

Type of record: Driller's log.

Altitude: 875 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	35	35	
Sand and hardpan-----	25	60	
Sand-----	34	94	

Well 36/2-13Q1

Type of record: Driller's log.

Altitude: 855 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Silt-----	16	16	
Sand, coarse-----	14	30	
Clay and gravel-----	8	38	
Hardpan-----	17	55	
Sand, fine-----	15	70	
Sand-----	24	94	

Well 36/2-14B1

Type of record: Driller's log.

Altitude: 860 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Clay-----	20	40	
Gravel-----	40	80	
Sand-----	17	97	

Well 36/2-14F1

Type of record: Driller's log.

Altitude: 860 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	21	21	
Clay, blue-----	15	36	
Sand and gravel; yellow-----	39	75	

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

Well 36/2-14H2

Type of record: Driller's log.

Altitude: 865 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	40	40	
Sand, yellow-----	20	60	
Sand, white-----	16	76	

Well 36/2-14R1

Type of record: Driller's log.

Altitude: 850 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	35	35	
Gravel, coarse, yellow-----	25	60	
Sand and gravel; yellow-----	36	96	

Well 36/2-18C1

Type of record: Driller's log.

Altitude:

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, and yellow clay-----	85	85	
Sand, fine, blue-----	30	115	
Sand, coarse, and gravel-----	15	130	

Well 36/2-20B1

Type of record: Driller's log.

Altitude: 870 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	25	25	
Sand-----	15	40	
Clay, blue-----	5	45	
Sand-----	34	79	

Well 36/2-22F1

Type of record: Driller's log.

Altitude: 865 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Clay and gravel; yellow-----	30	60	
Sand and gravel-----	40	100	

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

Well 36/2-25P1

Type of record: Driller's log.

Altitude: 840 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	18	18	
Sand and gravel; mixed-----	20	38	
Clay, blue-----	30	68	
Sand, yellow-----	11	79	

Well 36/2-26M1

Type of record: Driller's log.

Altitude: 855 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	26	26	
Gravel-----	34	60	
Sand, yellow-----	7	67	

Well 36/2-27A1

Type of record: Driller's log.

Altitude: 855 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	45	45	
Clay, yellow-----	2	47	
Sand and gravel; yellow-----	29	76	

Well 36/2-30C1

Type of record: Driller's log.

Altitude: 810 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	50	50	
Clay, blue-----	45	95	
Sand-----	2	97	
Clay, hard, blue-----	5	102	
Sand, tan-----	7	109	

Well 36/2-32B1

Type of record: Driller's log.

Altitude: 855 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown-----	15	15	
Gravel-----	35	50	
Clay and gravel-----	15	65	
Gravel-----	20	85	
Sand-----	6	91	

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

Well 36/2-32M1

Type of record: Driller's log. Altitude: 824 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil and yellow clay-----	5	5	
Clay, yellow, and sand-----	24	29	
Sand, red, and gravel-----	19	48	
Gravel, gray, with some red and gray sand-----	12	60	
Sand, gray-----	33	93	Suitable for 15-slot screen.
Sand, yellow-----	2	95	

Well 36/2-32R2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	60	60	
Gravel-----	40	100	
Clay, blue-----	20	120	
Gravel-----	20	140	
Clay, blue, sand, and gravel-----	44	184	

Well 36/2-33Q2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	32	32	
Gravel, dark-----	4	36	
Clay, blue, with few layers of sand-----	141	177	
Sand, light-----	6	183	

Well 36/2-33R1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	36	36	
Clay and gravel-----	6	42	
Sand-----	6	48	

Well 36/2-34J1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	8	8	
Clay, sandy-----	20	28	

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

Well 36/2-34J1--Continued			
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and yellow fine gravel-----	3	31	
Sand, coarse-----	10	41	
Sand, coarse, and gravel-----	9	50	
Sand, muddy-----	12	62	
Sand, coarse, and gravel-----	22	84	
Sand, fine-----	2	86	
Well 36/2-34R1			
Type of record: Driller's log.			Altitude: 845 feet.
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	35	35	
Sand, dirty-----	8	43	
Gravel-----	8	51	
Clay and sand-----	14	65	
Gravel-----	15	80	
Sand and gravel-----	1	81	
Well 36/2-35L1			
Type of record: Driller's log.			Altitude: 840 feet.
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	10	10	
Sand, gray-----	20	30	
Clay, blue-----	16	46	
Sand-----	12	58	
Well 36/2-36C1			
Type of record: Driller's log.			Altitude: 840 feet.
Quaternary system:			
Recent and Pleistocene series:			
Loam, sand, and gravel-----	28	28	
Clay-----	26	54	
Sand-----	4	58	
Well 36/3-1M1			
Type of record: Driller's log.			Altitude: 855 feet.
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	66	66	
Gravel-----	14	80	
Sand-----	18	98	

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

Well 36/3-1M2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand-----	40	70	
Clay-----	10	80	
Sand-----	19	99	

Well 36/3-1N1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	80	80	
Stone and gravel-----	10	90	
Gravel-----	5	95	
Sand-----	13	108	

Well 36/3-1P1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	22	22	
Sand-----	4	26	
Clay and streaks of sand-----	82	108	
Gravel-----	8	116	

Well 36/3-2E2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Gravel-----	6	36	
Clay, blue-----	24	60	
Sand and gravel-----	33	93	

Well 36/3-2M1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	20	20	
Sand, yellow-----	60	80	
Clay, blue-----	10	90	
Sand-----	41	131	

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

Well 36/3-2R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Sand, yellow-----	10	40	
Clay, blue-----	54	94	
Sand-----	19	113	

Well 36/3-3F1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Clay, blue-----	24	54	
Sand and gravel-----	47	101	

Well 36/3-4J1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	40	40	
Clay, yellow-----	40	80	
Sand and gravel-----	22	102	

Well 36/3-7C1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Record missing-----	108	108	
Sand-----	67	175	
Clay-----	25	200	
Sand-----	10	210	

Well 36/3-8B1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	45	45	
Hardpan-----	20	65	
Quicksand-----	25	90	
Clay-----	3	93	
Sand and gravel-----	7	100	

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

Well 36/3-10E1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	38	38	
Gravel, blue and rocks-----	8	46	
Sand, yellow-----	34	80	
Clay, yellow-----	3	83	

Well 36/3-15N2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Sand-----	4	22	
Clay-----	54	76	
Sand-----	16	92	

Well 36/3-16R1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Sand-----	28	46	
Clay-----	39	85	
Sand-----	9	94	

Well 36/3-17B2

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

Quaternary system:			
Recent and Pleistocene series:			
Clay-----	30	30	
Sand-----	30	60	
Gravel-----	10	70	
Sand-----	10	80	

Well 36/3-17Q1

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

Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	30	30	
Clay, blue-----	10	40	
Sand and gravel-----	17	57	

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

Well 36/3-19C4

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue-----	90	90	Rough drilling.
Gravel, blue-----	15	105	
Sand, yellow-----	18	123	

Well 36/3-19C7

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, red-----	6	6	
Sand-----	9	15	
Clay, red, and gravel-----	15	30	
Clay, blue-----	74	104	
Sand, red-----	22	126	
Clay, blue-----	1	127	
Sand-----	4	131	
Sand, clean-----	6	137	

Well 36/3-19P1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	18	18	
Sand, yellow-----	82	100	
Sand and gravel-----	12	112	

Well 36/3-19R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Gravel and clay; hardpan-----	40	60	
Quicksand and clay-----	70	130	
Gravel-----	10	140	

Well 36/3-21D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	36	36	Boulder.
Rock-----	4	40	
Clay, sandy-----	20	60	
Sand-----	14	74	

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

Well 36/3-21R1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	70	70	
Sand-----	24	94	
Clay and hardpan-----	3	97	
Gravel-----	6	103	

Well 36/3-27A1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Surface dirt and clay-----	26	26	
Gravel-----	32	58	
Clay and gravel-----	102	160	
Clay, very hard, sandy, sticky---	17	177	Blue shale at 177 feet.

Well 36/3-30D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel; blue-----	50	50	
Gravel and sand; coarse, yellow--	13	63	
Sand, yellow-----	17	80	

Well 36/3-32C1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay-----	20	20	
Sand-----	45	65	
Clay, soft-----	35	100	
Gravel and sand-----	20	120	

Well 36/3-35B2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel; mixed-----	87	87	
Clay, sandy-----	13	100	
Gravel, coarse-----	5	105	

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

Well 36/4-6M1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, soft, brown-----	42	42	
Clay, blue-----	10	52	
Sand and gravel-----	24	76	

Well 36/4-16E1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, blue, sand, and gravel-----	115	115	
Sand, coarse, gray, and gravel---	1	116	
Clay balls, brown, sand, and gravel-----	17	133	Blue shale at 133 feet.

Well 36/4-18M1

Type of record: Driller's log. Altitude:

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, brown and blue, sand, and gravel-----	40	40	
Gravel, coarse, and stones-----	7	47	
Clay, blue, sand, and gravel-----	68	115	
Stone, broken, hard-packed, and gravel-----	2	117	

Well 37/1W-11D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay and sand-----	15	15	
Sand-----	15	30	
Gravel-----	70	100	
Sand and little gravel-----	40	140	
Sand, fine, and silt-----	5	145	
Sand, fine-----	6	151	
Sand, coarse, brown-----	9	160	

Well 37/1W-14H1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	8	8	

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

Well 37/1W-14H1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	25	33	
Sand, gray-----	27	60	Clay at 60 feet.

Well 37/1W-24D1

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

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	7	7	
Clay-----	6	13	
Sand, medium-----	10	23	
Sand, coarse, with some gravel---	25	48	
Clay-----	2	50	
Sand, medium-----	69	119	

Well 37/1-1L1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	30	30	
Sand and clay; yellow-----	5	35	
Sand, yellow-----	20	55	
Gravel-----	11	66	

Well 37/1-1M1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	14	14	
Sand, fine, gray-----	24	38	
Sand, very fine-----	1	39	
Sand, gray-----	5	44	
Gravel-----	18	62	

Well 37/1-1M2

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

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	3	3	
Sand, fine, gray-----	34	37	
Sand, fine, with some clay-----	8	45	
Sand-----	9	54	
Gravel-----	10	64	
Gravel and boulders-----	12	76	

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

Well 37/1-2G1

Type of record: Driller's log.

Altitude: 746 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red, and clay-----	5	5	
Sand, coarse, red, and clay-----	5	10	
Sand, fine, red, and clay-----	5	15	
Sand, coarse, red, and clay-----	5	20	
Sand, fine, red, and clay-----	5	25	
Sand, fine, red-----	15	40	
Sand, coarse, gray, and pea-sized gravel-----	5	45	
Gravel, rice-sized to pea-sized--	10	55	
Gravel, coarse, gray-----	10	65	
Gravel, rice-sized, red-----	10	75	
Sand, coarse, gray-----	10	85	
Sand, finer, gray-----	5	90	
Sand, coarse, gray-----	10	100	
Clay, blue-----	4	104	

Well 37/1-7F1

Type of record: Driller's log.

Altitude: 728 feet.

Quaternary system:			
Recent and Pleistocene series:			
Clay and gravel-----	18	18	
Gravel-----	67	85	
Sand, brown, and gravel-----	4	89	

Well 37/1-10H1

Type of record: Driller's log.

Altitude: 717 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	6	6	
Sand, yellow-----	4	10	
Sand, gray-----	8	18	
Sand, coarse-----	7	25	
Gravel-----	13	38	
Sand, coarse-----	3	41	

Well 37/1-14A1

Type of record: Driller's log.

Altitude: 730 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	18	18	
Gravel, yellow-----	4	22	
Sand, yellow-----	22	44	

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

Well 37/1-23Q1

Type of record: Driller's log.

Altitude: 712 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Clay, yellow-----	4	4	
Sand and gravel; yellow-----	6	10	
Clay, yellow-----	2	12	
Gravel, yellow-----	5	17	
Clay, gray-----	10	27	
Sand, white-----	4	31	Clay at 31 feet.

Well 37/1-31E1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam, dark-----	3	3	
Sand-----	7	10	
Sand, light-----	7	17	

Well 37/1-32H1

Type of record: Driller's log.

Altitude: 702 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine, and silt-----	12	12	
Gravel-----	4	16	
Sand, coarse, brown-----	6	22	

Well 37/1-36E1

Type of record: Driller's log.

Altitude: 715 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Cinders and fill-----	4	4	
Muck-----	14	18	
Sand, fine-----	20	38	
Clay, soft-----	6	44	
Clay, soft, and fine sand; in layers-----	15	59	
Sand, fine-----	21	80	
Sand, fine, muddy-----	20	100	
Clay, soft, and sand-----	20	120	
Gravel and fine sand-----	7	127	
Sand, fine-----	3	130	
Gravel and fine sand-----	6	136	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	1	137	

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

Well 37/2-1F1

Type of record: Driller's log.

Altitude: 672 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	2	2	
Sand and gravel-----	13	15	
Sand, clean, and coarse gravel---	11	26	
Clay, gray-----	32	58	
Sand, fine-----	7	65	
Sand, fine, and coarse gravel----	43	108	Clay at 108 feet.

Well 37/2-1F2

Type of record: Driller's log.

Altitude: 672 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Fill-----	4	4	
Sand and gravel-----	16	20	
Clay, gray-----	27	47	
Sand, fine, silty, with some clay	18	65	
Sand and gravel-----	39	104	Large boulders near base of deposit.

Well 37/2-1L1

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, red-----	10	10	
Sand, medium, gray-----	30	40	
Clay, blue-----	15	55	

Well 37/2-1L2

Type of record: Driller's log.

Altitude: 695 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and some gravel-----	6	6	
Sand, medium-----	23	29	
Clay, blue-----	11	40	
Quicksand-----	10	50	

Well 37/2-1L4

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-----	12	12	
Clay, gravelly-----	5	17	
Sand and some clay-----	5	22	

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

Well 37/2-1L4--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent Pleistocene series:			
Clay, sandy-----	34	56	
Sand, fine-----	12	68	
Clay-----	5	73	
Clay and gravel-----	3	76	
Sand, coarse, and gravel-----	18	94	
Sand, medium to coarse-----	6	100	
Sand, coarse, and boulders-----	3	103	

Well 37/2-1L5

Type of record: Driller's log.

Altitude: 680 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and sand-----	10	10	
Gravel, coarse-----	9	19	
Clay, brown-----	9	28	
Quicksand and clay; mixed-----	26	54	
Sand, fine to medium-----	15	69	
Gravel, coarse, and sand-----	9	78	
Gravel, fine to coarse-----	22	100	
Sand, coarse-----	5	105	
Sand, coarse, and gravel-----	5	110	

Well 37/2-1L6

Type of record: Driller's log.

Altitude: 679 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and gravel-----	13	13	
Clay, tough-----	17	30	
Clay, soft-----	28	58	
Clay, gritty-----	10	68	
Gravel, coarse-----	20	88	
Gravel, medium-----	22	110	Shale at 110 feet.

Well 37/2-1M1

Type of record: Driller's log.

Altitude: 675 feet.

Quaternary system:			
Recent and Pleistocene series:			
Dirt-----	2	2	
Sand-----	15	17	
Clay, tough-----	13	30	
Clay, gritty-----	24	54	
Sand, fine-----	13	67	
Gravel and sand; medium-----	6	73	
Gravel and sand; coarse-----	14	87	
Gravel and sand-----	25	112	

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

Well 37/2-1M1--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Mississippian system: Lower Mississippian series: Shale-----	2	114	

Well 37/2-1M3

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

Quaternary system: Recent and Pleistocene series:			
Fill-----	4	4	
Gravel and sand; coarse-----	7	11	
Clay, blue-----	4	15	
Quicksand-----	3	18	
Clay, blue-----	20	38	
Quicksand-----	3	41	
Clay, blue-----	21	62	
Quicksand-----	17	79	
Gravel and sand; coarse-----	26	105	
Gravel and sand; medium-----	16	121	
Mississippian system: Lower Mississippian series: Shale-----	4	125	

Well 37/2-1M6

Type of record: Driller's log. Altitude: 685 feet.

Quaternary system: Recent and Pleistocene series:			
Sand, gravel, and boulders-----	16	16	
Clay, dark-gray-----	45	61	
Clay, hard, blue-----	15	76	
Gravel and sand-----	12	88	
Sand and gravel-----	10	98	
Sand, gravel, and boulders-----	13	111	

Well 37/2-1P4

Type of record: Driller's log. Altitude: 680 feet.

Quaternary system: Recent and Pleistocene series:			
Fill-----	10	10	
Clay, blue-----	40	50	
Clay and sand-----	25	75	
Gravel-----	3	78	
Sand and gravel-----	24	102	

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

Well 37/2-2A1

Type of record: Driller's log.

Altitude: 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	12	12	
Clay-----	19	31	
Quicksand-----	13	44	
Sand, fine-----	24	68	
Sand and gravel-----	50	118	
Clay-----	6	124	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	125	

Well 37/2-2B1

Type of record: Driller's log.

Altitude: 685 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Sand and gravel-----	6	21	
Quicksand-----	5	26	
Clay-----	21	47	
Quicksand-----	46	93	
Sand, fine-----	13	106	
Gravel, coarse-----	42	148	Shale at 148 feet.

Well 37/2-2C1

Type of record: Driller's log.

Altitude: 706 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	8	8	
Clay-----	12	20	
Quicksand-----	8	28	
Clay-----	16	44	
Sand-----	38	82	
Gravel, coarse-----	22	104	
Sand-----	4	108	
Gravel-----	20	128	
Sand and gravel; coarse-----	16	144	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	146	

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

Well 37/2-2C3

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	23	23	Boulder at 12 and 23 feet.
Sand, fine, white-----	19	42	
Clay-----	35	77	
Sand, medium, white-----	33	110	
Gravel-----	42	152	Shale at 152 feet.

Well 37/2-2D1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Soil, sand, and gravel-----	32	32	
Clay-----	30	62	
Sand-----	32	94	
Sand, fine, and gravel-----	4	98	
Sand, medium, gray, and gravel---	30	128	

Well 37/2-2D2

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel and sand; coarse-----	26	26	
Sand, coarse-----	10	36	
Clay, smooth, gray-----	81	117	
Sand, medium to coarse-----	25	142	

Well 37/2-2D5

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, muddy, red, and gravel-----	10	10	
Sand, clean, and gravel-----	16	26	
Clay, gummy, gray-----	5	31	
Sand, fine, gray-----	5	36	
Clay, gummy, blue-----	34	70	
Clay, sandy, gray-----	2	72	
Sand, very fine, muddy, gray-----	8	80	
Sand, fine, gray-----	20	100	
Sand, fine to medium-----	10	110	
Sand, coarse, and medium gravel--	12	122	
Sand, fine, with little gravel---	4	126	
Sand, coarse, with little gravel-	15	141	
Sand, fine-----	7	148	
Gravel, medium, with little sand-	7	155	

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

Well 37/2-2D5--Continued

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system: Recent and Pleistocene series: Sand, coarse, with little gravel-	2	157	

Well 37/2-2D7

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

Quaternary system: Recent and Pleistocene series: Top soil-----	2	2	
Gravel and sand-----	21	23	
Clay, blue-----	54	77	
Quicksand-----	31	108	
Gravel and sand-----	17	125	
Sand, coarse, with some gravel---	5	130	
Gravel and sand; coarse-----	11	141	
Sand, coarse, and very little gravel-----	4	145	
Sand, medium, with some gravel---	14	159	
Mississippian system: Lower Mississippian series: Shale-----	2	161	

Well 37/2-2D9

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

Quaternary system: Recent and Pleistocene series: Top soil-----	1	1	
Sand and gravel-----	18	19	
Clay and some gravel-----	21	40	
Clay-----	45	85	
Sand, fine-----	22	107	
Sand and gravel-----	37	144	Clay at 144 feet.

Well 37/2-2M1

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

Quaternary system: Recent and Pleistocene series: Top soil-----	10	10	
Sand, fine-----	10	20	
Sand, coarse-----	20	40	
Clay-----	40	80	
Sand, very fine, and fine shale washings-----	10	90	
Sand, very fine-----	10	100	
Sand, very coarse-----	20	120	
Sand, coarse-----	20	140	

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

Well 37/2-2M1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	20	160	
Sand, very fine-----	20	180	
Sand, coarse-----	20	200	
Sand, very coarse-----	14	214	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	215	

Well 37/2-3D2

Type of record: Driller's log.

Altitude: 700 feet.

Quaternary system:			
Recent and Pleistocene series:			
Pit-----	18	18	
Sand and gravel-----	30	48	
Sand-----	4	52	
Clay and sand; yellow-----	5	57	
Clay-----	38	95	
Sand, fine, dirty-----	33	128	
Sand-----	5	133	
Sand and gravel-----	15	148	Suitable for 40-slot screen.
Sand-----	8	156	

Well 37/2-3D4

Type of record: Driller's log.

Altitude: 700 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Sand, yellow and gray-----	26	34	
Gravel and sand-----	29	63	
Clay and hardpan-----	56	119	
Sand, yellow and gray-----	12	131	
Gravel and sand; yellow-----	6	137	
Sand and gravel; gray-----	7	144	
Sand, fine, yellow-----	7	151	

Well 37/2-3J3

Type of record: Driller's log.

Altitude: 712 feet.

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	24	24	
Gravel-----	31	55	
Clay-----	19	74	
Clay and very fine sand-----	16	90	
Sand, fine-----	20	110	

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

Well 37/2-3J3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	1	111	
Gravel and sand-----	22	133	

Well 37/2-3J5

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	5	5	
Sand-----	15	20	
Sand and gravel-----	10	30	
Gravel-----	4	34	
Clay-----	32	66	
Hardpan-----	30	96	Clay and sand (?)
Pack-sand-----	14	110	
Gravel and sand-----	5	115	
Sand-----	2	117	
Gravel-----	34	151	

Well 37/2-3L1

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

Quaternary system:			
Recent and Pleistocene series:			
Soil-----	10	10	
Sand and gravel-----	35	45	
Clay-----	39	84	
Sand, muddy-----	16	100	
Sand, fine-----	20	120	
Sand and gravel-----	30	150	
Gravel-----	18	168	
Sand, fine-----	10	178	
Sand and gravel-----	8	186	

Well 37/2-3N1

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

Quaternary system:			
Recent and Pleistocene series:			
Muck-----	10	10	
Sand, yellow-----	40	50	
Sand, fine-----	15	65	
Clay-----	1	66	
Sand and small gravel-----	9	75	
Sand, fine, yellow-----	83	158	
Clay-----	1	159	
Sand and gravel-----	19	178	Suitable for 25-slot screen

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

Well 37/2-3N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	20	198	Suitable for 35-slot screen.
Clay, sand, and gravel-----	8	206	

Well 37/2-3N4

Type of record: Driller's log.

Altitude: 713 feet.

Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	12	12	
Sand, medium to coarse, yellow- ish tint-----	13	25	
Sand, coarse, and medium gravel--	24	49	
Sand, coarse, and medium gravel; mixed with clay-----	2	51	
Clay and medium sand-----	1	52	
Sand, fine, mixed with clay-----	13	65	
Sand, coarse-----	19	84	
Sand, medium, mixed with clay----	3	87	
Clay, sandy, and hardpan-----	18	105	
Sand, fine, mixed with clay-----	29	134	
Sand, fine, dark-yellowish tint--	34	168	
Sand, coarse, and medium gravel--	41	209	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	210	

Well 37/2-3N5

Type of record: Driller's log.

Altitude: 713 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	15	15	
Sand and fine gravel-----	9	24	
Sand, coarse, and fine gravel----	21	45	
Sand, coarse-----	18	63	
Sand, fine-----	62	125	
Clay, hard, mixed with sand-----	2	127	
Sand, medium, and fine gravel; mixed with clay-----	38	165	
Sand, coarse, clean-----	5	170	
Sand, fine, mixed with clay-----	2	172	
Gravel, fine-----	3	175	
Clay-----	2	177	
Clay and coarse sand; mixed-----	2	179	
Clay-----	2	181	
Clay mixed with some gravel-----	2	183	

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

Well 37/2-3N5--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel, fine, clean-----	3	186	
Clay and gravel; mixed-----	4	190	
Clay and sand; mixed-----	4	194	
Clay mixed with fine sand and gravel-----	4	198	
Clay and hardpan-----	4	202	
Mississippian system:			
Lower Mississippian series:			
Shale-----	3	205	

Well 37/2-3N7

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

Quaternary system:			
Recent and Pleistocene series:			
Sand-----	10	10	
Sand and gravel-----	25	35	
Clay-----	51	86	
Sand and gravel-----	66	152	
Sand, cemented-----	11	163	Hardpan.
Sand and gravel-----	32	195	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	196	

Well 37/2-4E1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; yellow-----	29	29	
Clay, blue-----	5	34	
Sand and gravel; yellow-----	17	51	

Well 37/2-4J1

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

Quaternary system:			
Recent and Pleistocene series:			
Top soil and fill-----	12	12	
Sand, coarse-----	12	24	
Sand, coarse, and fine gravel----	5	29	
Gravel, medium-----	16	45	
Clay, hard-----	135	180	
Mississippian system:			
Lower Mississippian series:			
Shale-----	2	182	

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

Well 37/2-4J2

Type of record: Driller's log.

Altitude: 712 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil and sand; mixed-----	12	12	
Sand, coarse, and fine gravel----	8	20	
Gravel, fine-----	14	34	
Clay, hard, mixed with gravel----	51	85	
Clay, gluey, mixed with some gravel-----	10	95	
Clay, soft, mixed with sand-----	45	140	
Hardpan; clay and gravel; mixed--	10	150	
Sand and clay; in layers-----	10	160	
Sand, fine-----	25	185	
Sand with fine gravel-----	5	190	
Gravel, fine-----	5	195	
Sand, coarse, clean-----	2	197	
Sand, coarse, mixed with clay----	1	198	
Sand, coarse-----	2	200	
Clay-----	4	204	
Mississippian system:			
Lower Mississippian series:			
Shale-----	1	205	

Well 37/2-4J3

Type of record: Driller's log.

Altitude: 712 feet.

Quaternary system:			
Recent and Pleistocene series:			
Pit-----	19	19	
Gravel and boulders-----	14	33	
Clay-----	5	38	
Sand and gravel-----	22	60	Suitable for 50-slot screen.

Well 37/2-4N1

Type of record: Driller's log.

Altitude: 721 feet.

Quaternary system:			
Recent and Pleistocene series:			
Hardpan-----	35	35	
Sand-----	2	37	
Clay-----	2	39	
Sand-----	5	44	

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

Well 37/2-4R1

Type of record: Driller's log.

Altitude: 712 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil, sand, and fill-----	12	12	
Sand, medium-----	13	25	
Sand, coarse-----	45	70	
Sand, coarse, mixed with clay----	5	75	
Clay-----	23	98	
Sand, coarse, mixed with gravel--	8	106	
Sand, fine-----	35	141	
Sand, fine, mixed with shale-----	1	142	

Well 37/2-4R2

Type of record: Driller's log.

Altitude: 711 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	10	10	
Gravel-----	10	20	
Sand and gravel-----	30	50	
Clay-----	10	60	
Clay and sand-----	10	70	
Clay-----	10	80	
Sand-----	70	150	
Sand and gravel-----	20	170	

Well 37/2-4R3

Type of record: Driller's log.

Altitude: 710 feet.

Material	Thick-ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Muck-----	15	15	
Sand-----	5	20	
Gravel-----	10	30	
Sand and gravel-----	17	47	
Clay-----	4	51	
Sand and gravel-----	29	80	
Gravel-----	10	90	
Sand and gravel-----	20	110	
Sand-----	70	180	
Sand and gravel-----	20	200	
Mississippian system:			
Lower Mississippian series:			
Shale-----	3	203	

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

Well 37/2-5B1

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

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	30	30	
Gravel-----	5	35	
Clay-----	10	45	
Sand-----	11	56	

Well 37/2-5H2

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	40	40	
Clay-----	35	75	
Sand and gravel-----	5	80	

Well 37/2-5H3

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel-----	28	28	
Clay, blue-----	7	35	
Sand and gravel; yellow-----	18	53	

Well 37/2-6G3

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

Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	18	18	
Sand and pea-sized gravel-----	9	27	
Sand, brown-----	8	35	
Sand and pea-sized gravel-----	15	50	

Well 37/2-7H1

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

Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; red-----	50	50	
Sand and gravel; blue-----	10	60	
Sand, gray-----	7	67	

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

Well 37/2-7M2

Type of record: Driller's log.

Altitude: 740 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow-----	16	16	
Sand and gravel; yellow-----	14	30	
Sand, coarse, with some gravel---	6	36	
Sand, fine-----	12	48	
Gravel-----	8	56	
Clay balls-----	7	63	
Sand, coarse, and gravel-----	9	72	
Sand, coarse-----	12	84	

Well 37/2-7Q1

Type of record: Driller's log.

Altitude: 742 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, brown-----	14	14	
Sand and pea-sized gravel-----	10	24	
Sand, brown-----	26	50	

Well 37/2-8A1

Type of record: Driller's log.

Altitude: 722 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	1	1	
Sand, fine-----	3	4	
Sand and heavy gravel-----	10	14	
Clay-----	1	15	
Sand and gravel; dirty-----	6	21	
Sand, clean-----	3	24	
Sand and gravel-----	12	36	
Clay-----	2	38	
Sand, fine-----	11	49	
Sand and gravel-----	22	71	
Clay-----	19	90	
Sand, fine, muddy-----	7	97	
Clay-----	15	112	
Sand, muddy-----	11	123	
Sand, clean-----	4	127	
Sand, fine, muddy-----	19	146	
Sand, fine-----	7	153	
Sand and gravel-----	5	158	
Sand, clean-----	5	163	
Sand and gravel, with streaks of clay-----	5	168	
Sand and gravel-----	11	179	
Clay-----	3	182	

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

Well 37/2-8E1

Type of record: Driller's log.		Altitude: 737 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	40	40	
Clay, sandy-----	30	70	
Gravel-----	5	75	
Sand-----	5	80	

Well 37/2-8F3

Type of record: Driller's log.		Altitude: 732 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, yellow, and clay; mixed----	28	28	
Clay, blue-----	18	46	
Sand, fine, gray-----	16	62	
Gravel and sand-----	9	71	
Clay, blue-----	5	76	

Well 37/2-8H1

Type of record: Driller's log.		Altitude: 717 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	20	20	
Clay, blue-----	28	48	
Gravel-----	10	58	

Well 37/2-8L1

Type of record: Driller's log.		Altitude: 726 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand and gravel; mixed-----	17	17	
Clay, blue-----	18	35	
Sand, dark-----	9	44	

Well 37/2-8L4

Type of record: Driller's log.		Altitude: 730 feet.	
Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	20	20	
Clay, blue-----	29	49	
Sand-----	4	53	

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

Well 37/2-9A1

Type of record: Driller's log.

Altitude: 709 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand, very fine-----	30	40	
Sand-----	10	50	
Sand, coarser-----	10	60	
Sand, very fine-----	60	120	
Sand, powdered-----	10	130	
Sand, fine to medium-----	56	186	

Well 37/2-9J1

Type of record: Driller's log.

Altitude: 714 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	10	10	
Sand, fine-----	10	20	
Sand and gravel-----	30	50	
Sand, coarse-----	80	130	
Sand, finer-----	30	160	
Sand, coarse-----	33	193	Bedrock at 193 feet.

Well 37/2-9J2

Type of record: Driller's log.

Altitude: 714 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam-----	8	8	
Sand, fine-----	62	70	
Clay-----	10	80	
Sand and gravel-----	120	200	

Well 37/2-9R1

Type of record: Driller's log.

Altitude: 714 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Loam, sandy-----	10	10	
Sand, fine-----	55	65	
Clay-----	20	85	
Clay, hard-----	5	90	
Sand and gravel-----	110	200	Bedrock at 200 feet.

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

Well 37/2-10B1

Type of record: Driller's log.

Altitude: 717 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Sand, brown-----	42	50	
Gravel and sand-----	18	68	
Hardpan-----	22	90	
Clay and fine sand-----	2	92	
Sand-----	6	98	Suitable for 20-slot screen.
Sand-----	23	121	
Sand-----	9	130	Suitable for 30-slot screen.

Well 37/2-10D2

Type of record: Driller's log.

Altitude: 712 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	4	4	
Sand, fine, yellowish-----	15	19	
Gravel, fine-----	16	35	
Clay-----	3	38	
Gravel, fine-----	33	71	
Sand, fine-----	7	78	
Gravel, medium-----	14	92	
Sand, fine-----	12	104	
Gravel, medium to coarse-----	23	127	
Clay mixed with coarse sand and gravel-----	14	141	
Sand, coarse-----	38	179	
Gravel, coarse-----	2	181	
Clay and sand; mixed-----	7	188	
Sand, medium-----	13	201	

Well 37/2-10E1

Type of record: Driller's log.

Altitude: 713 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Sand-----	4	12	
Sand and gravel-----	8	20	
Gravel and coarse sand-----	10	30	
Gravel and coarse sand; muddy----	10	40	
Clay and some hardpan-----	10	50	
Sand and gravel-----	10	60	
Gravel-----	10	70	
Quicksand-----	10	80	

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

Well 37/2-10E1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, fine-----	10	90	
Sand with some gravel-----	10	100	
Sand, coarse, and fine gravel----	10	110	
Sand, coarse, and fine gravel----	10	120	More sand than above.
Sand, finer, with small amount of gravel-----	10	130	
Sand, finer, with small amount of gravel-----	10	140	More gravel than above.
Gravel, small, and fine sand-----	20	160	
Gravel, small, and fine sand-----	10	170	More sand than above.
Gravel, small, and fine sand-----	10	180	More gravel than above.
Sand, finer, getting muddy-----	10	190	
Mud-----	21	211	Mostly clay; shale at 211 feet.

Well 37/2-10E2

Type of record: Driller's log.

Altitude: 713 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	7	7	
Sand and gravel-----	13	20	
Gravel, coarse-----	12	32	
Clay and gravel-----	8	40	
Clay-----	5	45	
Quicksand-----	25	70	
Gravel-----	9	79	
Clay-----	1	80	
Sand, coarse-----	10	90	
Sand and gravel-----	50	140	
Sand-----	20	160	
Sand and gravel-----	10	170	
Sand-----	20	190	
Sand and gravel-----	17	207	
Mississippian system:			
Lower Mississippian series:			
Shale-----	3	210	

Well 37/2-10G3

Type of record: Driller's log.

Altitude: 714 feet.

Quaternary system:			
Recent and Pleistocene series:			
Soil and sand-----	3	3	
Sand, gray-----	7	10	

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

Well 37/2-10G3--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	7	17	
Boulders-----	5	22	
Sand, coarse, gray-----	8	30	
Gravel, coarse, gray-----	2	32	
Sand and gravel; coarse-----	15	47	
Sand, fine, sharp, clean-----	10	57	
Sand, fine, and coarse gravel----	4	61	
Clay with some gravel-----	25	86	
Sand, fine, and clay-----	4	90	
Sand, coarse, and gravel-----	11	101	
Sand, coarse-----	14	115	
Sand, fine-----	11	126	
Gravel, coarse, and rocks-----	6	132	
Sand and gravel; coarse-----	6	138	

Well 37/2-10H1

Type of record: Driller's log.

Altitude: 717 feet.

Quaternary system:			
Recent and Pleistocene series:			
Fill-----	1	1	
Clay, sandy-----	2	3	
Sand, yellow-----	7	10	
Sand and gravel-----	31	41	
Clay, gravelly, yellow-----	24	65	
Clay, blue-----	26	91	
Sand and gravel-----	4	95	
Sand, coarse-----	24	119	Clay at 119 feet.

Well 37/2-10N1

Type of record: Driller's log.

Altitude: 715 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Sand and gravel-----	17	25	
Hardpan-----	7	32	
Sand and gravel-----	12	44	
Sand, gravel, and boulders-----	22	66	
Sand and gravel, with some boulders-----	11	77	
Gravel-----	8	85	
Sand, fine, with some gravel----	20	105	
Sand, fine-----	19	124	
Hardpan-----	3	127	
Sand, coarse-----	28	155	
Sand, fine-----	15	170	

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

Well 37/2-10N1--Continued

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand, finer-----	10	180	
Sand, fine, with some clay-----	8	188	
Mississippian system:			
Lower Mississippian series:			
Shale-----	6	194	

Well 37/2-10P1

Type of record: Driller's log. Altitude: 714 feet.

Quaternary system:			
Recent and Pleistocene series:			
Top soil-----	8	8	
Gravel-----	12	20	
Sand, light-colored-----	8	28	
Sand, cemented-----	7	35	
Sand and gravel-----	12	47	
Sand and gravel, somewhat coarser-----	28	75	
Gravel-----	50	125	
Sand and gravel-----	25	150	
Sand and gravel; somewhat coarser-----	26	176	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	8	184	

Well 37/2-11H1

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

Quaternary system:			
Recent and Pleistocene series:			
Record missing-----	10	10	
Gravel, coarse-----	2	12	
Sand-----	3	15	
Gravel, coarse-----	3	18	
Clay, brown-----	2	20	
Gravel-----	3	23	
Hardpan, gravelly, blue-----	18	41	
Clay, blue-----	7	48	
Sand, fine-----	2	50	
Gravel, coarse-----	4	54	
Sand, fine, with some clay-----	2	56	
Gravel, coarse, red-----	14	70	
Gravel, coarse, gray-----	5	75	Brown hardpan at 75 feet.

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

Well 37/2-11J1

Type of record: Driller's log.

Altitude: 720 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Sand-----	9	9	
Sand, fine, white-----	17	26	
Clay and sand-----	9	35	
Sand-----	29	64	

Well 37/2-11K2

Type of record: Driller's log.

Altitude: 718 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Cinders and soil-----	1	1	
Sand and gravel-----	45	46	
Sand and gravel; fine-----	10	56	
Sand, medium, clean-----	4	60	
Sand and gravel; fine-----	15	75	
Sand, black-----	4	79	
Clay-----	1	80	
Sand, clean, and gravel-----	5	85	
Sand, fine, clean-----	5	90	
Sand, clean, and gravel-----	7	97	
Sand, strippy, and clay-----	7	104	
Sand, fine-----	3	107	
Clay, blue-----	18	125	

Well 37/2-11R1

Type of record: Driller's log.

Altitude: 724 feet.

Material	Thick- ness (feet)	Depth (feet)	Remarks
Quaternary system:			
Recent and Pleistocene series:			
Gravel-----	28	28	
Gravel-----	19	47	Suitable for 40-slot screen.
Sand and gravel-----	21	68	Suitable for 30-slot screen.
Sand-----	4	72	Do.
Clay and stones-----	1	73	
Clay-----	15	88	
Sand-----	3	91	Suitable for 20-slot screen.
Hardpan-----	3	94	
Mississippian system:			
Lower Mississippian series:			
Shale, blue-----	7	101	