

Results of Pumping Tests made on
the State Mental Health Institute Well at
Mt. Pleasant, Iowa
January 13, 14, and 17, 1955

Name:	Mental Health Institute (1955)'
Location:	NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T. 71 N., R. 6 W., Henry County
Contractor:	Varner Well & Pump Company
Driller:	Charles Bonar
Drilling dates:	June 1954 to January 1955
Total Depth:	1875 feet
Casing and hole data:	Hole record. 29"-315', 25" 315-547, 23" 547-592, 20" 592-862, 17" 862-1216 15" 1216-1225, 12" 1225-1875. Casing record. 618'7" of 16" O.D. from +2-616'7", 606'5" of 12" I.D. from 616'7" to 1223'. Cemented in.
Chief aquifer:	Prairie du Chien, Jordan, and St. Lawrence
Test Pump:	Turbine - gas powered -- connected by drive shaft. 275 ft. of 8" and 200 ft. of 10" drop pipe, 10 feet of 10" bowls, 20 ft. of 8" tail pipe.
Water level meas:	Water level measurements were made by use of an electric line. The reference point was flange on pump base 2' above l. s. and 1' above platform.
Discharge Meas.	Discharge was measured by use of 4 3/4" orifice in a 6" pipe.
Observers:	J. B. Cooper and R. G. McMurtry

Mental Health Institute
Mt. Pleasant, Iowa
January 1955

Pumped Well

Time	Depth to water (ft.)	G. P. M.	Temperature (deg. F.)	Orifice (in.)	Remarks
January 13, 1955					
4:10 p. m.	135.25				Pump on at 4:28 p. m. water dirty- gray
	174.72				
	151.44				
	149.28				
4:33		305		9	adjust valve to 9"
4:34	147.93				
4:35	147.78				
4:36	147.71				
4:37	147.98				
4:38 1/2	148.60				
4:39 1/2	147.40				
4:40 1/2	147.79				
4:41 1/2	147.83				
4:43	147.67				
4:45	147.52				
4:53	145.65				
5:03	145.70			16	
5:10	141.70				
6:15	152	419		17	Opened valve to 25"-508 water clearing
6:30	165	508		25	
7:00	163.08	490	72°	24	
7:30	161.50	487		23	
8:00	160.25	477		22	
8:30	159.26	471		21 1/2	
9:00	158.43	463		20 3/4	water fairly clean speeded pump
9:30	159.03	469		21 1/4	
9:40	179.34	608	71+	35 3/4	
10:00	180.35	608		35 3/4	water fairly clean
10:30	181.10	610		36	

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January 1955

Time	Depth to water (ft.)	G. P. M.	Temperature (Deg. F.)	Orifice (in.)	Remarks
11:00	180.90	610		36	speeded pump
11:05	193.10	698		47	
11:30	193.00	670		43½	
11:35			71°		water sample
11:38					stopped pump
11:55					pump on - higher speed
January 14, 1955					
12:05a.m.	245.80	826		66	
12:35	238.00	868		73	
1:00	239.20	850		70	
1:30	239.45	850		70	
2:00	239.75	850		70	
2:30	236.75	850		70	
3:00	236.10	844		69	
3:30	237.50	847		69½	
4:00	238.08	844		69	
4:30	238.16	844		69	
5:00	238.58	850		70	
5:30	238.66	850		70	
6:00	238.91	850		70	
6:30	240.50	850		70	
7:00	240.58	850		70	
7:30	241.58	856		71	
8:00	241.66	856		71	
8:30	242.00	858		71½	
9:00	243.00	858	71°	71½	
9:15					Pump stopped
9:32					Pump started water clear
10:00	228.42	833		67¼	
10:30	230.83	834		67½	
11:00	231.50				
11:03					Speeded pump
11:10	233.96	874		74	
11:30	232.40	890		76½	

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January 1955

Time	Depth to water (ft.)	G. P. M.	Temperature (deg. F.)	Orifice (in.)	Remarks
12:00		880		75	
12:30		880		75	Slowed pump
2:35		626		38	
2:40			71°		Water sample
2:50					adjusted motor and valve to pump at 35" on orifice
2:55					Pump off

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January 17, 1955

Time	Depth to water (ft.)	G. P. M.	Temperature (deg. F.)	Orifice (in.)	Remarks
January 17, 1955					
8:10 a.m.	119.92				Electric line
8:20	120.4				Steel tape
8:50	120.00				Electric line
9:00					Started pump) broke water
9:03					Stopped pump) line
9:28	119.85				Pump on at 9:30
9:34	180.55	610		36	Head not adjusted
9:35	176.20				water slightly
9:36	175.35				rusty
9:37	175.20				
9:38	175.14				
9:39	175.40				
9:40	175.43	606		35½	Water clear
9:41	175.52				
9:42	175.66				
9:43	175.70				
9:44	175.72				
9:46	175.80	604		35¼	
9:47		606		35½	
9:48	175.92				
9:50	175.98	606		35½	
9:54	176.50	610		36	
9:58	176.83	612		36¼	
10:02	177.10	610		36	
10:06	177.33			36	
10:10	177.33			36	
10:15	177.65	612		36¼	Water clean
10:20	177.65	615		36¼	
10:30	178.04	615		36 3/4	
10:40	178.43		71°	36 3/4	
10:50	178.70	617		37	

Time	Depth to water (ft.)	G. P. M. Temperature (deg. F.)	Orifice (in.)	Remarks
11:00 a.m.	178.78	617	37	
11:10	179.77	622	37 $\frac{1}{2}$	adjusted valve to 36"
11:15	177.90	610	36	
11:18				pump slowed down for a few seconds
11:22	177.82	612	36 $\frac{1}{4}$	
11:30	177.94	612	36 $\frac{1}{4}$	
11:40	177.91	612	36 $\frac{1}{4}$	
11:50	177.86	612	36 $\frac{1}{4}$	
12:00	177.93	612	36 $\frac{1}{4}$	
12:10	178.02	612	36 $\frac{1}{4}$	
12:20	177.94	612	36 $\frac{1}{4}$	
12:30	177.98	612	36 $\frac{1}{4}$	
12:40	178.03	612	36 $\frac{1}{4}$	
12:50	178.01	612	36 $\frac{1}{4}$	
1:00	178.06	612	36 $\frac{1}{4}$	
1:20	178.17	612	36 $\frac{1}{4}$	
1:40	178.12	612	36 $\frac{1}{4}$	
2:00	178.35	612	36 $\frac{1}{4}$	
2:03				Adjusted valve
2:06		602	35	
2:15	176.95	602	35	
2:32	176.42	602	35	
2:35				Adjusted valve
2:45	177.35	602	35	
3:00	177.32	602	35	Adjusted water down
3:09	170.53	552	29 $\frac{1}{2}$	
3:15	170.00	552	29 $\frac{1}{2}$	
3:30	170.24	547	29	Adjusted valve to 29 $\frac{1}{2}$ "
3:45	170.71	552	29 $\frac{1}{2}$	
4:00	170.75			
4:05				Adjusted valve to 24 $\frac{1}{2}$ "
4:08	163.93	502	24 $\frac{1}{2}$	Water sample