

Marion City Well No. 4  
March 8, 1966

SWL ( 161' Before shot  
( 153' After shot  
( 222' On this date

Elev. 795, land surface  
Pump Set 395'

<u>Time</u>	<u>Air Line</u>	<u>P.L.</u>	<u>D.D.</u>	<u>2" Weir</u>	<u>GPM</u>	<u>Remarks</u>
8:30	173					Pump on
8:32	156	239	17	3½	458	Water cloudy
8:34	158	237	15	3½	458	Water cloudy
8:36	157	238	16	3 5/8	483	Water cloudy
8:38	159	236	14	3 5/8	458	Water cloudy
8:40	160	235	13	3 5/8	458	Water cloudy
8:42	160	235	13	3 5/8	458	Water cloudy
8:45	161	234	12	3½	458	Water cloudy
8:50	160	235	13	3½	458	Water cloudy Temp. 58°
9:00	159	236	14	3½	458	Water cloudy
9:15	163	232	10	3½	458	
9:22						Increased Pumping Rate
9:24	143	252	30	5"	800±	Water cloudy
9:25	127	268	46	5"	800±	Water cloudy
9:26	125	270	48	5"+	800±	Water cloudy
9:28	124	271	49	5"	773	Water still cloudy
9:30	124	271	49	5"	773	Pumping sand Temp. 58°
9:38	123	272	50	5"	773	Water cloudy Temp. 58°
9:45	122	273	51	4 7/8+	750	Water cloudy Temp. 58°
10:00	122	273	51	4 7/8"	750	Water cloudy Temp. 58°
10:15	122	273	51	4 7/8+	750	Water cloudy 58°
10:30	122	273	51	4 7/8+	750	Water cloudy 58°
10:45	122	273	51	4 7/8	750	Water slightly cloudy
11:00	122	273	51	4 3/4 to 735±		Water slightly cloudy
				4 7/8		
11:15	122	273	51	4 3/4 to 735±		Water slightly cloudy Temp. 59°
				4 7/8		
11:30	122	273	51	4 7/8	735±	Water slightly cloudy
11:30	Pump off	to remove	sand from Weir	-	Removed about 5½ gallons of sand	
12:30	88	307	85	5 7/8	977	Pump on
12:35	58	337	115	6½	1131	Water slightly cloudy
12:40	50	345	123	6½	1068	2000 RPM
12:45	48	347	125	6½	1068	
12:50	47	348	126	6½	1068	Water cloudy Temp. 59°
12:55	47	348	126	6½	1068	Water cloudy
1:00	47	348	126	6½	1068	Water cloudy
1:15	46	349	127	6½	1050±	Water cloudy took water sample
1:30	46	349	127	6½	1050±	Pump off

Marion City Well No. 4

March 8, 1966

RECOVERY

<u>Time</u>	<u>Air</u> <u>Line</u>	<u>P.L.</u>	<u>D.D.</u>	<u>2" Weir</u>	<u>GPM</u>	<u>Remarks</u>
			Water Level		Recovery	
1:32	105		295			
1:34	125		270			
1:35	129		266			
1:36	145		250			
1:37	156		239			
1:38	167		228			
1:40	189		206			
1:42	200		195			
1:45	204		191			

Marion City Well # 4

Pumping Test # 2

April 6, 1966

SWL= 158'  
Pump Set @ 390'

Time	Air Line	PL	Drawdown	2' Weir	GPM	Remarks
8:00 AM						Pump on
8:04	70	270		6 3/4	1194	1700 RPM
8:10	66	274		6 3/4	1194	1700 RPM surging
8:12						cut back pumping rate
8:13	106	234		5 1/4	830	
8:17	106	234		5 1/2	888	1500 RPM
8:25	108	232		5 1/2	830	water cloudy 60°
8:35	107	233		5 1/2	830	water cloudy 60°
8:50	107	233		5 1/2	830	water cloudy 60°
9:00	107	233		5 1/2	830	water less cloudy 60°
9:12	107	233		5 1/2	830	pumping a little sand
9:15	97	243		5 1/2	888	water slightly cloudy 1575 RPM
9:30	95	245		5 1/2	888	water slightly cloudy
9:45	95	245		5 1/2	888	water slightly cloudy
9:48						increased rate to 1650 RPM
9:50	87	253		5 5/8	917	water slightly cloudy Temp. 60° less sand than before
10:00	87	253		5 5/8	917	trace of sand
10:15	87	253		5 5/8	917	
10:30	86	254		5 5/8	917	increased rate to 1675 RPM
10:31	78	262		5 3/4	947	water slightly cloudy trace sand
10:45	78	262		5 3/4+	960±	water slightly cloudy
11:00	79	261		5 3/4	947	water slightly cloudy
11:15	79	261		5 3/4	947	water slightly cloudy
11:17	69	271		6 +	1020±	increased rate to 1725 RPM
						temp. 61° water slightly cloudy-trace sand
11:30	69	271		6 +	1020 ±	
11:45	69	271		6 +	1020 ±	
12:00 PM	69	271		6 +	1020 ±	increased rate to 1800
12:02	56	284		6 3/8	1100 ±	
12:15	55	285		6 3/8	1100 ±	
12:57	55	285		6 3/8	1100 +	
1:12	55	285		6 3/8	1100 ±	Temp.=61°
						Increased Pumping Rate to 1900
1:15	31	309		7 1/8	1275±	Water slightly cloudy-trace sand
1:30	28	312		7	1258	water slightly cloudy
1:45	23	317		7	1258	water slightly cloudy
2:00	27	313		7	1258	water slightly cloudy
2:15	27	313		7	1258	water slightly cloudy
2:16	out of water			7 5/8	1422	increased to 2000 RPM
2:22						trouble with belts pump off
2:22 - 3:08	-	-	Fixed belts and pump and cleaned out weir			
3:08	62	278		6 3/4	1194	pump on 1825 RPM- no load

Time	Air Line	PL	Drawdown	2' Weir	GPM	Remarks
3:12	60	280		6 3/4	1194	
3:14	43	297		7	1258	inc. Rate to 1900 RPM - water slightly cloudy
3:20	39	301		7	1258	
3:30	38	302		7	1258	water sli. cloudy-very little sand
3:45	36	304		7	1258	
3:57	34	306		7	1258	pump off for checking impeller
4:04	32	308		7 1/2	1323	pump on - 1900 RPM
4:15	27	313		7 1/8	1300±	
4:17				7 1/2	1389	pump off
4:21	52	288		7 1/2	1389	pump off
4:26	9	331		7 1/2	1389	
4:29	out of water	below 340		7 7/8	1490	2050 RPM(pump's total capacity)
4:35	11	329		7 1/2	1323	reduced rate to 1900 RPM
4:38	18	322		7 1/2	1323	
4:45	18	322		7 1/2	1323	
5:00	17	323		7 1/2	1323	water still slightly cloudy, and pumping small amount of sand
5:15	17	323		7 1/2	1323	water still slightly cloudy
5:30	16	324		7 1/2	1323	1425 RPM
6:00	16	324		7 1/2	1323	1425 RPM
6:30	16	324		7 1/2	1323	water clear - trace of sand
6:55	30	331		7 1/2	1389	trace of sand
7:00	24	316		7 1/2	1323	trace of sand
7:10	20	320		7 1/2	1323	
7:30p.m.	20	320		7 1/2	1323	1935 RPM. Water clear -trace sand
8:00	20	320		7 1/2	1323	1935 RPM. water clear - trace sand
8:30	19	319		7 1/2	1323	1935 RPM. water clear - trace sand
8:45 P.M.						Took water sample Pump off

Marion City Well # 4  
 April 19-20, 1966

April 21, 1966

SWL = 156'  
 pump set = @395'  
 air line set @ 390'  
 after acidizing well with 4120 gal. HCL

Time	Air Line	PL	Draw-Down	2' Weir	GPM	RPM	Remarks
10:15							
10:17	92	298	142	8½	1661	1700	pump on-water full of acid and foams
10:19	92	298	142	8½	1661	1700	1700 water foamy
10:30	93	297	141	8	1524	1700	1700 water foamy
10:45	93	297	141	8	1524	1700	1700 water foamy
11:00	94	296	140	8	1524	1700	1700 slightly foamy
11:15	94	296	140	8	1524	1700	1700 slightly foamy
11:16							pump off to adjust belts and impellers 3½ turns
11:45	68	322	166	9½	1873	1700	pump on-water sli. foamy
11:55	60	320	174	9 1/8	1840	1700	trace of sand
12:10	63	327	171	9	1802	1700	water sli. foamy
12:25	60	330	174	8 3/4	1731	1700	water sli. foamy
12:35	60	330	174	8 7/8	1767	1700	water sli. foamy
12:40	58	332	176	8 3/4	1731	1700	water sli. foamy
12:45	58	332	176	8 3/4	1731	1700	water sli. foamy temp.61°
1:00	57	333	177	8 3/4	1731	1700	water sli. foamy trace sand
1:15	57	333	177	8 3/4	1731	1700	water sli. foamy trace sand
1:30	58	332	176	8 3/4	1731	1700	water sli. foamy temp.61°
1:35	58	332	176	8 3/4	1731	1700	
1:36							increased pump rate
1:42	35	355	199	9 1/8	1835±	1800	water sli. foamy
1:50	37	353	197	9 1/8	1835±	1800	water sli. foamy
2:00	36	354	198	9	1802	1800	water sli. foamy
2:15	36	354	198	9	1802	1800	water sli. foamy
2:30	35	355	199	9	1802	1800	water sli. foamy
2:45	35	355	199	9	1802	1800	water sli. foamy
3:00	35	355	199	8½	1661	1800	water sli. foamy
3:04							pump off to adjust weir scale
3:15						1800	pump on
3:18	39	351	195	9 1/8	1835±	1800	water sli. foamy
3:21	35	355	199	9.0	1802	1800	water sli. foamy
3:30	32	358	203	9.0	1802	1800	pump off-shut down to switch to 3' weir

Time	Air Line	PL	Draw-Down	3' Weir	GPM	RPM	Remarks
4:15				6 3/4	1827	1900	pump on-water foamy
4:20	45	345	189	6 3/4	1827	1900	water foamy
4:30	46	344	188	6 7/8	1877	1900	water foamy
4:45	42	348	192	6 7/8	1877	1900	water foamy very small trace of sand
5:00	42	348	192	6 7/8	1877	1900	water foamy
5:01				pump off to adjust impellers preparatory to resuming at Maximum capacity			
5:05						1950	pump on
5:10	42	348	192	6 7/8	1877	1950	water sli. foamy-smells of acid
5:20	46	344	188	6 3/4	1827	1950	water sli. foamy Temp. 61°
5:30	46	344	188	6 3/4	1827	1950	water sli. foamy
6:00	46	344	188	6 3/4	1827	1950	water sli. foamy
6:30	46	344	188	6 3/4	1827	1950	water sli. foamy
7:00	46	344	188	6 3/4	1827	1950	water clearing
8:00	46	344	188	6 3/4	1827	1950	water clearing
8:30	46	344	188	6 3/4	1827	1950	water clearing
9:00	46	344	188	6 3/4	1827	1950	water clearing
9:30	46	344	188	6 3/4	1827	1950	water clearing
10:00	46	344	188	6 3/4	1827	1950	water clearing
10:30	46	344	188	6 3/4	1827	1950	water clearing
11:00	46	344	186	6 3/4	1827	1950	water clear-no sand
11:30	46	344	186	6 3/4	1827	1950	water clear-no sand
12:00AM	46	344	186	6 3/4	1827	1950	water clear-no sand
12:30	46	344	186	6 3/4	1827	1950	water clear-no sand
1:00	46	344	186	6 3/4	1827	1950	water clear-no sand
1:30	46	344	186	6 3/4	1827	1950	water clear-no sand
2:00	46	344	186	6 3/4	1827	1950	water clear-no sand
2:30	46	344	186	6 3/4	1827	1950	water clear-no sand
3:00	46	344	186	6 3/4	1827	1950	water clear-no sand
3:30	46	344	186	6 3/4	1827	1950	water clear-no sand
4:00	46	344	186	6 3/4	1827	1950	water clear-no sand
4:30	46	344	186	6 3/4	1827	1950	water clear-no sand
5:00	46	344	186	6 3/4	1827	1950	water clear-no sand
6:00	46	344	186	6 3/4	1827	1950	water clear-no sand
6:30	46	344	186	6 3/4	1827	1950	water clear-no sand
7:00	46	344	186	6 3/4	1827	1950	Pump off-cleaned weir box for limestone chips no sand
8:12		320		6 1/2	1740	1900	pump on-took water sample temp. 61°-water clear
8:45		320		6 1/2	1740	1900	PH 7.0 to 7.1 pump off