6295

AR 1.7 0010

WELL PLANT WELL 1

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-13-84	2-26-85	7-10-85	10-9-85	2-03-86	6-2-86	9-17-86	12-10-86	4-21-87	
pH	7.1	7.1	7.9	6.8	7.1	6.8	7.9	7.4	7.1	
CONDUCTIVITY, umhos/cm	1370	1380	1112	1190	1140	1200	1440	1410	1370	
TOTAL DISSOLVED SOLIDS mg/L	1040	922	728	740	636	831	1100	1010	880	
SODIUM ADSORPTION RATIO	1.60	1.21	1.30	0.86	0.88	1.03	1.92	1.52	1.22	
TOTAL HARDNESS AS $CaCO_3$	640	629	550	569	516	643	596	647	556	
CALCIUM AS Ca	136	135	118	124	106	142	133	140	127	
MAGNESIUM AS Mg	73	71	62	63	61	70	64	71	58	
SODIUM AS Na	73	70	43	47	46	63	74	89	66	
POTASSIUM AS K	24	19	17	13	10	18	13	13	12	
TOTAL ALKALINITY AS $CaCO_3$	444	419	494	381	425	424	410	423	411	
BICARBONATE ALKALINITY AS HCO_3	542	511	603	465	519	517	500	516	502	
CARBONATE ALKALINITY AS CO_3	0	0	0	0	0	0	0	0	0	
HYDROXIDE ALKALINITY AS OH	0	0	0	0	0	0	0	0	0	
CHLORIDE AS Cl	141	109	55	65	65	111	144	165	100	
FLUORIDE AS F	1.75	1.60	1.25	1.97	0.96	1.3	1.13	0.99	0.86	
NITRATE + NITRITE AS N	11.9	6.32	6.43	17.5	4.34	8.15	8.09	7.64	6.58	
SULFATE AS SO4	166	172	85	115	113	165	138	129	125	
ACIDITY	0.00	0	0	0	0	0	0	0	0	
ARSENIC AS As	0.007	0.008	0.005	0.005	0.005	0.006	0.039	0.005	0.005	
CADMIUM AS Cd (BY ICP)	0.192	0.201	0.114	0.089	0.009	0.138	—	—	—	
CADMIUM AS Cd (BY FURNACE)					0.005	0.02	0.166	0.245	0.132	
CHROMIUM AS Cr	0.02	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	
COPPER AS Cu		0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
IRON AS Fe	0.05	0.05	0.05	0.05	0.1	0.02	0.05	0.09	0.07	
LEAD AS Pb	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.04	0.02	
MANGANESE AS Mn	0.02	0.02	0.04	0.02	0.05	0.02	0.02	0.11	0.02	
SELENIUM AS Se	0.005	0.025	0.012	0.015	0.009	0.027	0.024	0.024	0.025	
SILVER AS Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
VANADIUM AS V	0.08	0.05	0.02	0.07	0.2	0.2	0.2	0.2	0.2	
ZINC AS Zn	0.18	0.24	0.18	0.13	0.11	0.37	0.19	0.18	0.16	
STATIC WATER LEVEL										

DUPLICATE

	Initials	Date
Prepared by		
Approved by		

WELL Plant Well 2

	1	2	3	4	5	6	7	8	9	10
	11.13.84	3.26.85	7.11.85	10.9.85	2.3.86	6.5.86	9.17.86	12.9.86	4.21.87	
pH	7.4	7.6	7.0	6.7	7.2	6.9	7.0	7.5	7.6	
Conductivity, umhos/cm	1130	1260	1020	940	988	737	370	776	902	
Total dissolved solids mg/l	782	754	582	620	500	631	712	640	600	
Sodium adsorption ratio	0.70	0.69	0.38	0.28	0.54	0.43	0.39	0.36	0.35	
Total hardness as $CaCO_3$	548	572	525	529	446	539	511	521	484	
Calcium as Ca	124	127	117	123	96	105	114	118	113	
Magnesium as Mg	38	60	56	54	50	55	55	55	49	
Sodium as Na	38	38	30	15	26	28	15	19	18	
Potassium as K	12	10	6	5	4	7	5	4	5	
Total alkalinity as $CaCO_3$	425	416	496	332	411	415	397	399	393	
Bicarbonate alkalinity as HCO_3	519	508	605	415	502	516	484	487	480	
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0	0	0	
Hydroxide alkalinity as OH	0	0	0	0	0	0	0	0	0	
Chloride as Cl	38	38	22	22	20	45	35	25	25	
Fluoride as F	0.69	0.79	0.44	0.45	0.49	0.36	0.41	0.36	0.71	
Nitrate + nitrite as N	10.5	6.10	3.78	27.6	3.28	6.81	7.00	6.65	5.87	
Sulfate as SO_4	95	100	49	79	76	74	84	83	50	
Acidity	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
Arsenic as As	-0.005	0.005	0.013	0.005	0.006	0.003	0.008	-0.005	-0.005	
Cadmium as Cd (by ICP)	-0.005	0.025	0.012	0.025	0.012	0.006	—	-0-	—	
Cadmium as Cd (by furnace)				0.020	-0.005	—	-0.005	0.007	-0.005	
Chromium as Cr	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Copper as Cu		-0.02	-0.02	0.13	-0.02	0.02	-0.02	-0.02	-0.02	
Iron as Fe	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	0.07	-0.05	
Lead as Pb	0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Manganese as Mn	-0.02	-0.02	0.03	-0.02	-0.02	-0.02	-0.02	0.07	-0.02	
Selenium as Se	-0.005	-0.009	0.005	-0.005	-0.005	0.005	-0.005	-0.005	-0.005	
Silver as Ag	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	
Vanadium as V	0.05	-0.02	-0.02	0.06	-0.02	-0.02	-0.02	-0.02	-0.02	
Zinc as Zn	0.02	0.02	-0.02	0.09	-0.02	0.04	0.08	0.04	-0.02	
Static water level										

	Initials	Date
Prepared by		
Approved by		

WELL PLANT WELL 3

	1	2	3	4	5	6	7	8	9	10
	11-13-84	2-23-85	7-10-85	10-9-85	2-3-86	6-3-86	9-17-86	10-9-86	4-21-87	
pH	7.2	7.2	7.6	6.6	7.3	6.9	7.2	7.5	7.2	
CONDUCTIVITY, umhos/cm	1080	1040	1008	1133	1010	894	1126	904	872	
TOTAL DISSOLVED SOLIDS mg/L	756	675	548	672	545	636	708	644	588	
SODIUM ADSORPTION RATIO	0.61	0.54	0.57	0.57	0.63	0.45	0.41	0.42	0.50	
TOTAL HARDNESS AS $CaCO_3$	513	551	492	515	486	530	494	481	439	
CALCIUM AS Ca	115	125	113	119	109	123	117	110	95	
MAGNESIUM AS Mg	36	38	51	53	52	53	49	50	49	
SODIUM AS Na	32	29	19	30	32	24	21	21	25	
POTASSIUM AS K	9	9	6	4	5	7	5	4	5	
TOTAL ALKALINITY AS $CaCO_3$	429	410	458	300	416	415	397	389	395	
BICARBONATE ALKALINITY AS HCO_3	524	500	559	366	508	506	484	475	433	
CARBONATE ALKALINITY AS CO_3	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
HYDROXIDE ALKALINITY AS OH	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
CHLORIDE AS Cl	45	45	22	30	34	40	35	27	28	
FLUORIDE AS F	0.55	0.58	0.42	0.42	0.43	0.49	0.44	0.37	0.42	
NITRATE + NITRITE AS N	10	5.33	5.60		3.35	6.40	7.00	6.18	5.36	
SULFATE AS SO_4	84	84	55	81	95	52	84	78	84	
ACIDITY	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
ARSENIC AS As	-0.005	-0.005	-0.005	0.005	-0.005	0.005	0.014	-0.005	-0.005	
CADMIUM AS Cd (BY ICP)	-0.005	0.016	-0.005	0.004	0.004	—	—	0	-0	
CADMIUM AS Cd (BY FURNACE)				0.012	0.014	-0.005	0.007	0.013	0.010	
CHROMIUM AS Cr	-0.02	-0.02	0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	
COPPER AS Cu	-0-	-0.02	-0.02	0.05	-0.02	0.02	-0.02	-0.02	-0.02	
IRON AS Fe	-0.05	-0.05	0.05	0.05	0.11	0.05	-0.05	0.07	-0.05	
LEAD AS Pb	-0.02	0.02	0.02	-0.02	0.02	0.02	0.02	-0.02	-0.02	
MANGANESE AS Mn	-0.02	0.02	0.03	0.02	0.04	0.02	-0.02	0.09	-0.02	
SELENIUM AS Se	0.005	-0.005	-0.005	0.005	-0.005	0.005	-0.005	-0.005	0.006	
SILVER AS Ag	-0.02	0.02	-0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02	
VANADIUM AS V	0.06	-0.05	0.04	0.09	0.2	0.02	-0.2	-0.2	-0.2	
ZINC AS Zn	-0.02	-0.02	-0.02	0.08	0.02	-0.02	0.02	-0.02	-0.02	
STATIC WATER LEVEL										

	Initials	Date
Prepared by		
Approved by		

WELL Test Well 2

	1	2	3	4	5	6	7	8	9	10
	11-13-84	2-21-85	2-3-86	9-18-86	2-9-86	4-22-87				
pH	7.0	7.4	7.4	7.0	7.7	6.9				
Conductivity, umhos/cm	783	1020	990	756	1010	943				
Total dissolved solids mg/l	712	709	544	708	672	640				
Sodium adsorption ratio	0.02	0.27	0.32	0.28	0.33	0.36				
Total hardness as $CaCO_3$	571	514	530	508	538	545				
Calcium as Ca	132	112	115	113	123	121				
Magnesium as Mg	138	57	59	59	61	59				
Sodium as Na	35	14	17	15	18	19				
Potassium as K	16	5	6	3	4	4				
Total alkalinity as $CaCO_3$	792	430	444	418	432	441				
Bicarbonate alkalinity as HCO_3	967	525	542	510	552	538				
Carbonate alkalinity as CO_3	0	0	0	0	0	0				
Hydroxide alkalinity as OH	0	0	0	0	0	0				
Chloride as Cl	42	21	18	25	23	25				
Fluoride as F	1.26	0.27	0.32	0.26	0.21	0.53				
Nitrate + nitrite as N	6.91	0.78	3.02	5.35	5.71	4.80				
Sulfate as SO_4	134	56	91	89	88	92				
Acidity	0	0	0	0	0	0				
Arsenic as As	0.005	0.005	0.005	0.005	0.005	<0.005				
Cadmium as Cd (by ICP)	0.005	0.005	0.005	—	—	—				
Cadmium as Cd (by furnace)			0.005	0.005	0.005	<0.005				
Chromium as Cr	0.02	0.02	0.02	0.02	0.02	<0.02				
Copper as Cu	0.05	0.02	0.02	0.02	0.02	0.05				
Iron as Fe	0.02	0.05	0.1	0.13	0.08	<0.05				
Lead as Pb	0.02	0.02	0.02	0.02	0.03	0.05				
Manganese as Mn	0.02	0.02	0.02	0.03	0.10	<0.02				
Selenium as Se	0.005	0.005	0.002	0.005	0.005	<0.005				
Silver as Ag	0.02	0.02	0.02	0.02	0.02	<0.02				
Vanadium as V	0.06	0.05	0.02	0.2	0.2	<0.2				
Zinc as Zn	0.29	0.58	0.81	3.00	0.75	1.10				
Static water level										

WELL Test Well 3

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-10-84	2-27-85								
pH	6.0	6.9								
Conductivity, umhos/cm	1600	1710								
Total Dissolved Solids mg/l	1160	1240								
Sodium Adsorption Ratio	1.4	0.96								
Total Hardness as $CaCO_3$	1013	942								
Calcium as Ca	123	115								
Magnesium as Mg	178	150								
Sodium as Na	54	54								
Potassium as K	18	14								
Total Alkalinity as $CaCO_3$	970	954								
Bicarbonate Alkalinity as HCO_3	1184	1164								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	75	70								
Fluoride as F	1.2	1.4								
Nitrate & Nitrite as N	<0.05	<0.05								
Sulfate as SO_4	123	98								
Acidity	<0	<0								
Arsenic as As	<0.005	<0.005								
Cadmium as Cd (by ICP)	<0.005	<0.005								
Cadmium as Cd (by Furnace)										
Chromium as Cr	<0.02	<0.02								
Copper as Cu		<0.02								
Iron as Fe	0.09	1.5								
Lead as Pb	<0.02	<0.02								
Manganese as Mn	0.02	0.27								
Selenium as Se	<0.005	<0.005								
Silver as Ag	<0.02	<0.02								
Vanadium as V	<0.02	<0.05								
Zinc as Zn	<0.02	<0.05								
Static Water Level										

WELL TEST WELL 4

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-9-84	2-27-85								
pH	6.2	6.7								
CONDUCTIVITY, umhos/cm	1860	1860								
TOTAL DISSOLVED SOLIDS mg/l	1142	1250								
SODIUM ADSORPTION RATIO	0	0.49								
TOTAL HARDNESS AS $CaCO_3$	1023	1036								
CALCIUM AS Ca	148	148								
MAGNESIUM AS Mg	171	174								
SODIUM AS Na	34	36								
POTASSIUM AS K	17	16								
TOTAL ALKALINITY AS $CaCO_3$	999	1000								
BICARBONATE ALKALINITY AS HCO_3	1219	1215								
CARBONATE ALKALINITY AS CO_3	0	0								
HYDROXIDE ALKALINITY AS OH	0	0								
CHLORIDE AS Cl	26	27								
FLUORIDE AS F	0.7	0.70								
NITRATE & NITRITE AS N	<0.03	<0.03								
SULFATE AS SO_4	125	96								
ACIDITY	0	0								
ARSENIC AS As	<0.5	<0.5								
CADMIUM AS Cd (BY ICP)	<0.05	<0.05								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	<0.03	<0.02								
COPPER AS Cu		<0.03								
IRON AS Fe	14.2	15.5								
LEAD AS Pb	<0.03	<0.03								
MANGANESE AS Mn	0.6	<0.60								
SELENIUM AS Se	<0.05	<0.05								
SILVER AS Ag	<0.03	<0.03								
VANADIUM AS V	<0.03	<0.05								
ZINC AS Zn	<0.11	<0.08								
STATIC WATER LEVEL										

WELL Test Well 5

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-9-84	2-19-85	10-9-85	2-6-86	7-1-86					
pH	6.8	6.8	6.8	7.1						
Conductivity, umhos/cm	2820	2810	2460	2860						
Total dissolved solids mg/l	2000	1900	1670	1320						
Sodium adsorption ratio	1.78	1.44	2.19	2.37						
Total hardness as $CaCO_3$	909	867	804	739						
Calcium as Ca	173	166	149	131						
Magnesium as Mg	116	110	105	102						
Sodium as Na	193	165	142	148						
Potassium as K	144	130	124	81						
Total alkalinity as $CaCO_3$	290	314	207	335						
Bicarbonate alkalinity as HCO_3	354	383	252	409						
Carbonate alkalinity as CO_3	0	0	0	0						
Hydroxide alkalinity as OH	0	0	0	0						
Chloride as Cl	332	230	303	234						
Fluoride as F	12.7	12.3	9.87	9.3	7.6					
Nitrate + nitrite as N	12.6	11.7	12.6	7.73						
Sulfate as SO_4	632	640	264	515						
Acidity	-0-	-0-	-0-	-0-						
Arsenic as As	0.005	0.005	0.005	0.005						
Cadmium as Cd (by ICP)	0.211	0.348	0.185	0.234						
Cadmium as Cd (by furnace)				-0-						
Chromium as Cr	0.11	0.02	0.02	0.08						
Copper as Cu		0.02	0.02	0.02						
Iron as Fe	0.05	0.05	0.05	0.16						
Lead as Pb	0.02	0.02	0.02	0.08						
Manganese as Mn	3.43	4.45	1.90	0.59						
Selenium as Se	0.011	0.010	0.009	0.021						
Silver as Ag	0.02	0.02	0.02	0.02						
Vanadium as V	0.03	0.05	0.04	0.4						
Zinc as Zn	1.33	1.16	1.30	1.81						
Static water level										

	Initials	Date
Prepared by		
Approved by		

WELL TEST WELL 6

	1	2	3	4	5	6	7	8	9	10
	11-9-84	2-19-85	10-9-85	2-6-86	7-1-86					
pH	6.9	7.0	6.7	7.0						
CONDUCTIVITY, umhos/cm	2900	2660	2300	2240						
TOTAL DISSOLVED SOLIDS mg/l	2030	1870	1570	1440						
SODIUM ADSORPTION RATIO	2.73	2.43	2.41	2.22						
TOTAL HARDNESS AS $CaCO_3$	784	882	812	750						
CALCIUM AS Ca	156	172	159	142						
MAGNESIUM AS Mg	96	110	101	96						
SODIUM AS Na	175	169	158	140						
POTASSIUM AS K	149	129	133	62						
TOTAL ALKALINITY AS $CaCO_3$	356	355	304	388						
BICARBONATE ALKALINITY AS HCO_3	312	433	371	474						
CARBONATE ALKALINITY AS CO_3	0	0	0	0						
HYDROXIDE ALKALINITY AS OH	0	0	0	0						
CHLORIDE AS Cl	231	230	267	193						
FLUORIDE AS F	12.9	14.4	12.2	12.0	12.9					
NITRATE & NITRITE AS N	13.4	9.99	16.5	7.03						
SULFATE AS SO4	663	622	566	448						
ACIDITY	-0-	-0-	-0-	-0-						
ARSENIC AS As	0.005	-0.005	0.012	.009						
CADMIUM AS Cd (BY ICP)	0.47	0.007	0.49	0.310						
CADMIUM AS Cd (BY FURNACE)			—	—						
CHROMIUM AS Cr	0.125	0.02	-0.02	.09						
COPPER AS Cu		-0.02	-0.02	-0.02						
IRON AS Fe	-0.05	1.95	-0.05	0.14						
LEAD AS Pb	-0.02	-0.02	-0.02	0.08						
MANGANESE AS Mn	3.73	5.66	4.77	0.1						
SELENIUM AS Se	0.029	0.026	0.037	0.028						
SILVER AS Ag	0.02	0.02	0.02	0.00						
VANADIUM AS V	0.07	0.05	0.06	0.3						
ZINC AS Zn	3.19	1.48	3.41	3.04						
STATIC WATER LEVEL										

WELL TEST WELL 9

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 10 84	2 27 85								
pH	6.4	7.3								
CONDUCTIVITY, umhos/cm	1870	1820								
TOTAL DISSOLVED SOLIDS mg/l	1130	1210								
SODIUM ADSORPTION RATIO	0.61	0.53								
TOTAL HARDNESS AS $CaCO_3$	976	1065								
CALCIUM AS Ca	109	104								
MAGNESIUM AS Mg	171	198								
SODIUM AS Na	44	40								
POTASSIUM AS K	23	20								
TOTAL ALKALINITY AS $CaCO_3$	960	979								
BICARBONATE ALKALINITY AS HCO_3	1172	1193								
CARBONATE ALKALINITY AS CO_3	0	0								
HYDROXIDE ALKALINITY AS OH	-0	0								
CHLORIDE AS Cl	41	40								
FLUORIDE AS F	0.4	0.37								
NITRATE + NITRITE AS N	-0.05	0.05								
SULFATE AS SO_4	84	98								
ACIDITY	-0	-0								
ARSENIC AS As	-0.005	-0.005								
CADMIUM AS Cd (BY ICP)	-0.005	-0.005								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	-0.02	-0.02								
COPPER AS Cu		-0.02								
IRON AS Fe	5.61	4.03								
LEAD AS Pb	-0.02	-0.02								
MANGANESE AS Mn	0.8	0.23								
SELENIUM AS Se	-0.005	-0.005								
SILVER AS Ag	-0.02	0.02								
VANADIUM AS V	0.032	0.05								
ZINC AS Zn	-0.02	0.02								
STATIC WATER LEVEL										

WELL Test well 5

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-10-84	2-27-85								
pH	7.1	7.8								
Conductivity, umhos/cm	3417	3434								
Total Dissolved Solids mg/l	1590	1620								
Sodium Adsorption Ratio	0.49	.69								
Total Hardness as $CaCO_3$	1662	1637								
Calcium as Ca	46	54								
Magnesium as Mg	374	317								
Sodium as Na	96	51								
Potassium as K	22	26								
Total Alkalinity as $CaCO_3$	1660	1454								
Bicarbonate Alkalinity as HCO_3	2026	1810								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	14	16								
Fluoride as F	0.25	0.2								
Nitrate + Nitrite as N	0.05	0.05								
Sulfate as SO_4	75	44								
Acidity	0	0								
Arsenic as As	0.005	0.005								
Cadmium as Cd (by ICP)	0.005	0.005								
Cadmium as Cd (by furnace)										
Chromium as Cr	0.02	0.02								
Copper as Cu	0.02	0.02								
Iron as Fe	0.05	0.05								
Lead as Pb	0.02	0.02								
Manganese as Mn	0.02	0.02								
Selenium as Se	0.005	0.005								
Silver as Ag	0.02	0.02								
Vanadium as V	0.05	0.05								
Zinc as Zn	0.03	0.02								
Sample Water Level										

Prepared by	Initials	Date
Approved by		

WELL TEST WELL 9

	1	2	3	4	5	6	7	8	9	10
	11 9 84	2 27 85								
pH	6.2	6.2								
CONDUCTIVITY, micromhos/cm	1940	1750								
TOTAL DISSOLVED SOLIDS mg/l	1260	1370								
SODIUM ADSORPTION RATIO	0.50	0.50								
TOTAL HARDNESS AS $CaCO_3$	1162	1103								
CALCIUM AS Ca	169	150								
MAGNESIUM AS Mg	180	177								
SODIUM AS Na	59	40								
POTASSIUM AS K	18	16								
TOTAL ALKALINITY AS $CaCO_3$	1160	1060								
BICARBONATE ALKALINITY AS HCO_3	1416	1294								
CARBONATE ALKALINITY AS CO_3	0	0								
HYDROXIDE ALKALINITY AS OH	0	0								
CHLORIDE AS Cl	79	71								
FLUORIDE AS F	0.85	0.90								
NITRATE & NITRITE AS N	0.05	0.05								
SULFATE AS SO_4	105	100								
ACIDITY	0	0								
ARSENIC AS As	0.005	0.005								
CADMIUM AS Cd (BY ICP)	0.005	0.005								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	0.03	0.03								
COPPER AS Cu		0.03								
IRON AS Fe	10.8	8.76								
LEAD AS Pb	0.02	0.03								
MANGANESE AS Mn	0.58	0.42								
SELENIUM AS Se	0.005	0.005								
SILVER AS Ag	0.02	0.03								
VANADIUM AS V	0.02	0.03								
ZINC AS Zn	0.03	0.05								
STATIC WATER LEVEL										

11

WELL TEST WELL 10

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-9-84	2-21-85	7-10-85	10-11-85	3-6-86	6-3-86	8-28-86	9-17-86	12-12-86	
pH	6.7	7.6	6.9	6.7	7.1	7.1		7.1	7.7	1
CONDUCTIVITY, umhos/cm	1680	1320	1197	1230	1180	1010		1180	1240	2
TOTAL DISSOLVED SOLIDS mg/l	1080	1020	786	884	643	688		852	772	3
SODIUM ADSORPTION RATIO	0.66	0.84	1.58	1.44	1.32	1.23		1.27	1.29	
TOTAL HARDNESS AS $CaCO_3$	876	774	548	497	477	563		524	524	5
CALCIUM AS Ca	125	114	94	87	74	103		93	88	6
MAGNESIUM AS Mg	137	119	76	68	71	74		71	74	7
SODIUM AS Na	45	54	35	74	76	67		67	63	8
POTASSIUM AS K	15	14	15	11	9	11		8	9	9
TOTAL ALKALINITY AS $CaCO_3$	849	648	480	164	416	429		415	391	10
BICARBONATE ALKALINITY AS HCO_3	1036	791	586	200	508	524		506	477	11
CARBONATE ALKALINITY AS CO_3	0	0	0	0	0	0		0	0	12
HYDROXIDE ALKALINITY AS OH	0	0	0	0	0	0		0	0	13
CHLORIDE AS Cl	71	107	99	76	84	95		99	101	14
FLUORIDE AS F	0.87	1.17	1.87	2.16	1.8	1.8	1.9	1.66	1.97	15
NITRATE + NITRITE AS N	2.03	2.46	5.28	2	2.75	4.67		4.73	4.84	16
SULFATE AS SO_4	93	101	124	96	98	119		119	103	17
ACIDITY	0	0	0	0	0	0		0	0	18
ARSENIC AS As	0.005	0.005	0.005	0.005	0.007	0.007		0.008	0.005	19
CADMIUM AS Cd (BY ICP)	0.005	0.005	0.005	0.005	0.005	—		—	—	20
CADMIUM AS Cd (BY FURNACE)				0.005	0.005	0.005		0.005	0.005	21
CHROMIUM AS Cr	0.06	0.02	0.02	0.02	0.02	0.02		0.02	0.02	22
COPPER AS Cu		0.02	0.02	0.02	0.02	0.02		0.02	0.02	23
IRON AS Fe	1.27	0.03	0.05	0.05	0.13	0.05		0.05	0.09	
LEAD AS Pb	0.02	0.02	0.02	0.02	0.02	0.02		0.02	0.02	25
MANGANESE AS Mn	2	0.33	0.05	0.02	0.07	0.02		0.02	0.11	26
SELENIUM AS Se	0.005	0.005	0.009	0.005	0.005	0.013		0.02	0.005	27
SILVER AS Ag	0.02	0.02	0.02	0.02	0.02	0.02		0.005	0.02	28
VANADIUM AS V	0.02	0.05	0.02	0.06	0.2	0.2		0.02	0.2	29
ZINC AS Zn	0.06	0.04	0.02	0.03	0.02	0.02		0.02	0.02	30
STATIC WATER LEVEL										

WELL Test Well 10 (cont)

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	1/22/87									
pH	7.4									
Conductivity, umhos/cm	1170									
Total Dissolved Solids mg/l	752									
Sodium Adsorption Ratio	1.34									
Total Hardness as $CaCO_3$	405									
Calcium as Ca	62									
Magnesium as Mg	68									
Sodium as Na	68									
Potassium as K	10									
Total Alkalinity as $CaCO_3$	352									
Bicarbonate Alkalinity as HCO_3	364									
Carbonate Alkalinity as CO_3	2									
Hydroxide Alkalinity as OH	0									
Chloride as Cl	107									
Fluoride as F	1.58									
Nitrate & Nitrite as N	4.85									
Sulfate as SO_4	108									
Acidity	<0									
Arsenic as As	<0.005									
Cadmium as Cd (by ICP)	—									
Cadmium as Cd (by furnace)	<0.005									
Chromium as Cr	<0.02									
Copper as Cu	<0.02									
Iron as Fe	<0.02									
Lead as Pb	<0.02									
Manganese as Mn	<0.02									
Selenium as Se	0.005									
Silver as Ag	<0.02									
Vanadium as V	<0.2									
Zinc as Zn	0.05									
Static Water Level										

WELL Test Well 11

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-19-86	3-28-89								
pH	7.4	7.7								
Conductivity, umhos/cm	1340	1430								
Total Dissolved Solids mg/l	995	1030								
Sodium Adsorption Ratio	1 DL	1 DL								
Total Hardness as CaCO3	647	606								
Calcium as Ca	167	157								
Magnesium as Mg	54	56								
Sodium as Na	109	101								
Potassium as K	6	7								
Total Alkalinity as CaCO3	473	442								
Bicarbonate Alkalinity as HCO3	577	516								
Carbonate Alkalinity as CO3	0	U								
Hydroxide Alkalinity as OH	0	U								
Chloride as Cl	114	107								
Fluoride as F	U .26	0 .27								
Nitrate & Nitrite as N	5 .5	4 .55								
Sulfate as SO4	264	195								
Acidity	-0-	U								
Arsenic as As	-0- .005	-0- .005								
Cadmium as Cd (by ICP)	-0- .005	-0- .005								
Cadmium as Cd (by furnace)										
Chromium as Cr	-0- .02	-0- .02								
Copper as Cu		-0- .02								
Iron as Fe	-0- .05	-0- .05								
Lead as Pb	-0- .02	-0- .02								
Manganese as Mn	0 .02	-0- .02								
Selenium as Se	0 .005	0 .005								
Silver as Ag	0 .02	0 .02								
Vanadium as V	0 .02	0 .05								
Zinc as Zn	-0- .02	-0- .02								
Static Water Level										

WELL TEST WELL 12

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-13-84	2-28-85	7-13-85	10-10-85	2-6-86	6-3-86	9-17-86	12-12-86	4-22-87	
pH	8.4	7.2	7.3	7.1	7.7	7.2	7.8	7.8	7.2	
Conductivity, umhos/cm	2440	2170	2736	2790	3130	2470	2950	2990	3200	
Total dissolved solids mg/l	1440	1770	1730	1750	1820	1700	2050	1940	2000	
Sodium adsorption ratio	3.76	5.14	5.45	5.73	4.84	5.93	6.23	5.94	6.56	
Total hardness as $CaCO_3$	672	724	712	699	786	670	705	665	848	
Calcium as Ca	167	178	178	173	188	168	178	169	188	
Magnesium as Mg	62	68	65	65	77	61	66	59	55	
Sodium as Na	224	315	334	348	315	353	380	352	439	
Potassium as K	10	8	15	11	13	21	14	11	14	
Total alkalinity as $CaCO_3$	456	414	471	498	411	179	555	416	447	
Bicarbonate alkalinity as HCO_3	557	505	675	486	502	218	409	508	546	
Carbonate alkalinity as CO_3	0	0	0	0	0	0	-0-	-0-	-0-	
Hydroxide alkalinity as OH	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	-0-	
Chloride as Cl	233	302	270	314	332	366	356	319	335	
Fluoride as F	0.25	0.08	0.05	0.23	0.36	0.36	0.31	0.30	0.44	
Nitrate & nitrite as N	9.23	8.66	9.57	8.06	5.47	16.6	12.9	12.0	10.40	
Sulfate as SO_4	475	574	660	681	731	706	800	777	535	
Acidity	-0-	0	-0-	0	0	0	-0-	-0-	-0-	
Arsenic as As	-0.005	0.005	0.021	-0.005	0.006	0.005	0.006	-0.005	<0.005	
Cadmium as Cd (by ICP)	-0.005	0.005	-0.005	-0.005	0.009	—	—	—	—	
Cadmium as Cd (by furnace)				-0.005	0.010	-0.005	0.012	-0.005	<0.005	
Chromium as Cr	-0.02	-0.02	0.02	-0.02	0.04	-0.02	-0.02	-0.02	<0.02	
Copper as Cu		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	<0.02	
Iron as Fe	-0.05	-0.05	-0.05	0.05	0.14	0.03	-0.05	0.07	<0.05	
Lead as Pb	-0.02	-0.02	-0.02	-0.02	0.08	-0.02	0.04	-0.02	<0.02	
Manganese as Mn	0.08	0.08	0.15	0.04	0.2	0.18	0.15	0.18	0.10	
Selenium as Se	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	0.005	
Silver as Ag	0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	<0.02	
Vanadium as V	0.61	0.67	0.92	0.59	0.2	0.9	1.00	0.9	1.02	
Zinc as Zn	-0.02	-0.02	-0.02	-0.02	0.04	0.02	0.05	-0.02	0.03	
Static water level										

14

WELL Test Well 13

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 7 84	2 19 85								
pH	7.1	7.4								
Conductivity, umhos/cm	867	900								
Total Dissolved Solids mg/l	541	510								
Sodium Adsorption Ratio	0.43	0.12								
Total Hardness as $CaCO_3$	432	487								
Calcium as Ca	103	124								
Magnesium as Mg	44	46								
Sodium as Na	21	6								
Potassium as K	3	9								
Total Alkalinity as $CaCO_3$	434	411								
Bicarbonate Alkalinity as HCO_3	534	502								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	16	10								
Fluoride as F	0.22	0.11								
Nitrate & Nitrite as N	4.15	3.79								
Sulfate as SO_4	36	43								
Acidity	0	0								
Arsenic as As	0 0.005	0 0.005								
Cadmium as Cd (by ICP)	0 0.005	0 0.005								
Cadmium as Cd (by furnace)										
Chromium as Cr	0 0.03	0 0.03								
Copper as Cu		0 0.03								
Iron as Fe	0 0.05	0 0.05								
Lead as Pb	0 0.03	0 0.03								
Manganese as Mn	0 0.03	0 0.04								
Selenium as Se	0 0.005	0 0.005								
Silver as Ag	0 0.03	0 0.03								
Vanadium as V	0 0.04	0 0.05								
Zinc as Zn	0 0.03	0 0.03								
Static Water Level										

WELL Test Well 14

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-7-84	3-19-85								
pH	7.2	7.1								
Conductivity, umhos/cm	379	400								
Total Dissolved Solids mg/L	326	312								
Sodium Adsorption Ratio	0.42	0.13								
Total Hardness as $CaCO_3$	115	189								
Calcium as Ca	36	40								
Magnesium as Mg	24	26								
Sodium as Na	21	6								
Potassium as K	3	3								
Total Alkalinity as $CaCO_3$	446	411								
Bicarbonate Alkalinity as HCO_3	544	502								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	7	10								
Fluoride as F	0.28	1.05								
Nitrate & Nitrite as N	3.74	3.79								
Sulfate as SO_4	58	43								
Acidity	0	0								
Arsenic as As	<0.005	<0.005								
Cadmium as Cd (by ICP)	<0.005	<0.005								
Cadmium as Cd (by Furnace)										
Chromium as Cr	<0.03	<0.03								
Copper as Cu		<0.03								
Iron as Fe	<0.05	<0.05								
Lead as Pb	<0.03	<0.03								
Manganese as Mn	<0.03	<0.06								
Selenium as Se	<0.005	<0.005								
Silver as Ag	<0.03	<0.03								
Vanadium as V	<0.03	<0.03								
Zinc as Zn	<0.03	<0.03								
Static Water Level										

WELL Test Well 15

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 7 84	2 19 85	7-10-85	10 10 85	2-04-86	6 3 86	7 11 86	12 11 1986	4-22 87	
pH	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Conductivity, micromhos/cm	964	967	964	1[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Total Dissolved Solids mg/l	542	452	446	346	348	412	720	440	466	
Sodium Adsorption Ratio	0.4	1.1	0.30	0.39	0.15	0.19	0.11	0.19	0.20	
Total Hardness as $CaCO_3$	450	509	472	487	304	227	421	438	368	
Calcium as Ca	123	132	119	119	51	44	101	103	78	
Magnesium as Mg	42	43	45	46	43	41	41	34	42	
Sodium as Na	19	6	10	26	6	11	5	9	5	
Potassium as K	3	3	2	1	2	4	3	3	3	
Total Alkalinity as $CaCO_3$	417	424	490	492	345	231	392	391	342	
Bicarbonate Alkalinity as HCO_3	521	517	598	515	399	281	478	477	417	
Carbonate Alkalinity as CO_3	0	0	0	0	0	0	0	0	0	
Hydroxide Alkalinity as OH	0	0	0	0	0	0	0	0	0	
Chloride as Cl	13	11	12	11	10	10	11	10	10	
Fluoride as F	1.19	0.74	0.9	1.33	0.34	1.35	0.03	1.2	1.2	
Nitrate & Nitrite as N	4.24	3.79	3.37	3.16	4.33	3.38	3.34	3.08	0.36	
Sulfate as SO_4	62	49	14	62	36	34	41	34	36	
Acidity	0	0	0	0	0	0	0	0	0	
Arsenic as As	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<0.005	
Cadmium as Cd (by ICP)	0.005	0.005	0.005	0.005	0.005	—	—	—	—	
Cadmium as Cd (by Furnace)										
Chromium as Cr	0.03	0.03	0.03	0.03	0.03	0.005	0.005	0.005	<0.005	
Copper as Cu	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	<0.03	
Iron as Fe	0.05	0.05	0.05	0.05	0.19	0.03	0.03	0.03	<0.03	
Lead as Pb	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.12	<0.05	
Manganese as Mn	0.03	0.03	0.03	0.03	0.17	0.03	0.03	0.03	<0.03	
Selenium as Se	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	<0.005	
Silver as Ag	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	<0.03	
Vanadium as V	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	<0.03	
Zinc as Zn	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	<0.03	
Static Water Level										

WELL TEST WELL 16

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 5 84	2 22 85	7-10-85	10 10 85	3-4-86	6 8 86	8 28 86	4 16 86	12-11-86	
pH	1.9	7.2	6.5	6.4	7.3	6.9		8.0	7.4	
CONDUCTIVITY, umhos/cm	1740	1710	1624	1300	1480	1400		1500	1510	
TOTAL DISSOLVED SOLIDS mg/l	1090	1090	1030	1140	920	1040		1100	984	
SODIUM ADSORPTION RATIO	1.80	1.30	1.64	1.31	1.34	1.42		1.29	1.16	
TOTAL HARDNESS AS $CaCO_3$	681	643	733	708	678	681		689	674	
CALCIUM AS Ca	139	124	150	145	133	131		134	133	
MAGNESIUM AS Mg	81	81	87	84	84	86		86	80	
SODIUM AS Na	108	100	102	80	80	85		78	69	
POTASSIUM AS K	20	14	17	14	13	16		13	11	
TOTAL ALKALINITY AS $CaCO_3$	563	514	630	550	527	570		569	554	
BICARBONATE ALKALINITY AS HCO_3	687	627	769	671	643	676		694	676	
CARBONATE ALKALINITY AS CO_3	0	0	-0-	0	0	0		0	0	
HYDROXIDE ALKALINITY AS OH	0	0	-0-	0	0	0		0	0	
CHLORIDE AS Cl	121	115	83	87	95	124		82	74	
FLUORIDE AS F	1.43	8.05	6.3	5.71	5.8	4.7	4.4	3.43	4.23	
NITRATE & NITRITE AS N	10.2	4.92	8.69	6.68	8.67	8.34		9.02	8.88	
SULFATE AS SO4	222	194	170	171	165	131		170	160	
ACIDITY	0	0	-0-	0	0	0		0	-0-	
ARSENIC AS As	0.037	0.027	-0.005	0.005	0.017	0.022		0.030	0.000	
CADMIUM AS Cd (BY ICP)	1.41	1.49	1.06	0.902	1.47					
CADMIUM AS Cd (BY FURNACE)						0.942		1.28	1.26	
CHROMIUM AS Cr	0.02	0.02	-0.02	0.02	0.03	0.02		0.02	-0.02	
COPPER AS Cu		-0.02	-0.02	-0.02	-0.02	0.02		-0.02	-0.02	
IRON AS Fe	-0.05	-0.05	-0.05	0.05	0.13	0.05		-0.05	0.5	
LEAD AS Pb	0.02	0.02	-0.02	0.02	0.03	0.02		0.02	0.04	
MANGANESE AS Mn	0.21	0.22	0.18	0.08	0.33	0.13		0.13	0.23	
SELENIUM AS Se		0.170	0.102	0.44	0.157	0.160		0.194	0.134	
SILVER AS Ag		0.02	-0.02	0.02	-0.02	0.02		0.24	0.02	
VANADIUM AS V		0.24	0.12	0.23	0.02	0.02		0.2	0.2	
ZINC AS Zn		3.71	4.50	3.14	4.75	5.16		4.40	3.64	
STATIC WATER LEVEL										

WELL TEST WELL 16 (cont)

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	4 22 87									
pH	6.9									
Conductivity, umhos/cm	1367									
Total Dissolved Solids mg/l	734									
Sodium Adsorption Ratio	1.15									
Total Hardness as $CaCO_3$	667									
Calcium as Ca	137									
Magnesium as Mg	79									
Sodium as Na	70									
Potassium as K	1.8									
Total Alkalinity as $CaCO_3$	513									
Bicarbonate Alkalinity as HCO_3	626									
Carbonate Alkalinity as CO_3	0									
Hydroxide Alkalinity as OH	0									
Chloride as Cl	70									
Fluoride as F	3.21									
Nitrate & Nitrite as N	7.50									
Sulfate as SO_4	161									
Acidity	-									
Arsenic as As	<.34									
Cadmium as Cd (by ICP)										
Cadmium as Cd (by Furnace)	<.007									
Chromium as Cr	<.02									
Copper as Cu	<.02									
Iron as Fe	<.05									
Lead as Pb	<.02									
Manganese as Mn	.13									
Selenium as Se	<.66									
Silver as Ag	<.03									
Vanadium as V	<.2									
Zinc as Zn	.39									
Static Water Level										

5

WELL TEST WELL 17

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-8-84	2-25-85	7-13-85	10-10-85	2-4-86	6-3-86	8-28-86	9-17-86	12-11-86	
pH	7.3	7.7	7.2	7.0	7.7	7.4		7.7	7.8	
CONDUCTIVITY, umhos/cm	2140	2130	1962	1880	1900	1690		1990	1980	1
TOTAL DISSOLVED SOLIDS mg/L	1400	1410	1280	1260	1120	1240		1590	1280	2
SODIUM ADSORPTION RATIO	2.19	2.02	1.80	1.61	1.72	1.33		1.31	1.46	3
TOTAL HARDNESS AS $CaCO_3$	805	835	825	877	791	870		830	870	
CALCIUM AS Ca	72	61	57	53	48	45		47	52	5
MAGNESIUM AS Mg	132	166	166	181	163	184		173	180	6
SODIUM AS Na	143	134	123	110	111	104		100	99	7
POTASSIUM AS K	26	21	24	22	17	21		18	17	8
TOTAL ALKALINITY AS $CaCO_3$	361	349	431	360	379	394		405	393	9
BICARBONATE ALKALINITY AS HCO_3	441	426	526	439	463	481		494	480	10
CARBONATE ALKALINITY AS CO_3	0	0	-0-	0		0		0	-0-	11
HYDROXIDE ALKALINITY AS OH	0	0	-0-	0		0		0	-0-	12
CHLORIDE AS Cl	341	302	244	278	254	280		260	247	13
FLUORIDE AS F	8.14	6.61	7.25	5.48	4.2	4.3	4.8	3.61	4.23	14
NITRATE & NITRITE AS N	1.3	0.37	0.25	0.05	0.27	0.10		0.05	0.12	15
SULFATE AS SO_4	328	316	327	328	319	302		326	312	16
ACIDITY	-0-	0	-0-	0	-0-	0		-0-	-0-	17
ARSENIC AS As	0.005	0.005	0.012	0.005	0.006	0.005		0.007	0.005	18
CADMIUM AS Cd (BY ICP)	0.081	0.025	0.005	0.007	0.010					19
CADMIUM AS Cd (BY FURNACE)				0.007	0.019	0.005		0.011	0.013	20
CHROMIUM AS Cr	0.02	0.02	0.02	0.02	0.03	0.02		0.02	-0.02	21
COPPER AS Cu		0.02	-0.02	0.02	0.01	0.02		-0.02	-0.02	22
IRON AS Fe	0.05	0.05	0.11	0.11	0.89	0.13		0.13	0.24	23
LEAD AS Pb	0.02	0.02	-0.02	0.02	0.09	0.02		0.04	-0.02	
MANGANESE AS Mn	1.4	1.29	1.17	1.10	1.74	1.23		1.35	1.47	25
SELENIUM AS Se	0.008	0.012	0.012	0.015	0.008	0.006		0.009	0.010	26
SILVER AS Ag	0.02	0.02	0.02	0.02	-0.02	0.02		-0.02	-0.02	27
VANADIUM AS V	0.03	0.05	-0.02	0.03	-0.02	0.02		0.2	-0.2	28
ZINC AS Zn	0.16	0.10	0.06	0.04	0.17	0.18		0.13	0.06	29
STATIC WATER LEVEL										30

WELL Test Well 17 (cont)

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	1/22/87									
pH	7.4									
Conductivity, umhos/cm	1950									
Total Dissolved Solids mg/l	1280									
Sodium Adsorption Ratio	1.4									
Total Hardness as $CaCO_3$	831									
Calcium as Ca	141									
Magnesium as Mg	177									
Sodium as Na	95									
Potassium as K	19									
Total Alkalinity as $CaCO_3$	348									
Bicarbonate Alkalinity as HCO_3	348									
Carbonate Alkalinity as CO_3	0									
Hydroxide Alkalinity as OH	0									
Chloride as Cl	242									
Fluoride as F	0.49									
Nitrate & Nitrite as N	<0.01									
Sulfate as SO_4	307									
Acidity	0									
Arsenic as As	<0.005									
Cadmium as Cd (by ICP)										
Cadmium as Cd (by Furnace)	<0.005									
Chromium as Cr	<0.02									
Copper as Cu	<0.02									
Iron as Fe	0.07									
Lead as Pb	<0.02									
Manganese as Mn	1.5									
Selenium as Se	<0.005									
Silver as Ag	<0.02									
Vanadium as V	[illegible]									
Zinc as Zn	<0.02									
Sample Water Level										

WELL Test Well 18

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 3 84	3 22 85	7-10-85	10 10 85	2-4-86	6 3 86	9 16 86	12-11-86	4-22-87	
pH	6.6	6.7	6.7	6.8	6.7	6.7	6.7	7.2	6.5	
Conductivity, umhos/cm	1360	1370	1770	1630	1160	1270	1740	1700	1700	
Total Dissolved Solids mg/l	1270	1150	1060	1100	1090	1160	1140	1120	1350	
Sodium Adsorption Ratio	0.49	0.51	0.49	0.49	0.60	0.54	0.46	0.60	0.71	
Total Hardness as $CaCO_3$	722	1009	1060	1031	756	1009	972	1039	977	
Calcium as Ca	71	51	90	62	59	71	84	89	79	
Magnesium as Mg	181	196	209	213	148	213	187	196	180	
Sodium as Na	34	37	37	36	30	31	38	37	37	
Potassium as K	21	16	21	17	15	17	18	15	17	
Total Alkalinity as $CaCO_3$	931	1030	1150	1016	768	827	1064	1050	1030	
Bicarbonate Alkalinity as HCO_3	1136	1257	1270	1240	1131	1063	1299	1281	1257	
Carbonate Alkalinity as CO_3	0	0	0	0	0	0	0	0	0	
Hydroxide Alkalinity as OH	0	0	0	0	0	0	0	0	0	
Chloride as Cl	21	20	17	17	17	17	16	14	14	
Fluoride as F	0.20	0.20	0.20	0.20	0.30	0.41	0.30	0.29	0.27	
Nitrate & Nitrite as N	0.03	0.03	0.05	0.30	0.37	0.46	0.05	0.05	<0.05	
Sulfate as SO_4	35	30	49	37	15	51	54	54	60	
Acidity	0	0	0	0	0	0	0	0	0	
Arsenic as As	<0.005	0.004	0.004	0.005	0.004	<0.005	<0.11	0.005	<0.005	
Cadmium as Cd (by ICP)	<0.005	0.006	0.005	<0.005	<0.005					
Cadmium as Cd (by furnace)										
Chromium as Cr	<0.03	0.00	0.02	0.02	0.03	0.03	<0.03	0.03	<0.03	
Copper as Cu		0.02	0.02	0.03	0.02	0.03	0.02	0.02	<0.02	
Iron as Fe	4.36	5.68	4.58	0.21	4.97	8.65	6.68	7.72	5.71	
Lead as Pb	<0.03	0.02	0.05	0.02	0.02	0.02	0.02	0.02	<0.02	
Manganese as Mn	<0.19	0.16	0.21	0.02	0.51	0.39	0.39	0.48	0.29	
Selenium as Se	<0.005	0.00	0.005	0.006	<0.005	<0.005	0.00	0.005	<0.005	
Silver as Ag	0.03	0.03	0.03	0.03	0.03	0.03	0.02	0.02	<0.02	
Vanadium as V	<0.03	<0.05	0.03	<0.06	<0.03	0.3	0.2	0.2	<0.02	
Zinc as Zn	<0.04	<0.03	<0.03	<0.12	<0.05	<0.03	0.02	0.02	<0.02	
Static Water Level										

20

WELL Test Well 19

Prepared by	Initials	Date
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-14-84	3-20-84								
pH	7.4	7.5								
Conductivity, umhos/cm	1,300	1,300								
Total Dissolved Solids, mg/L	972	940								
Sodium Adsorption Ratio	0.61	1.72								
Total Hardness as $CaCO_3$	671	619								
Calcium as Ca	131	141								
Magnesium as Mg	82	77								
Sodium as Na	88	91								
Potassium as K	7	6								
Total Alkalinity as $CaCO_3$	332	331								
Bicarbonate Alkalinity as HCO_3	412	404								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	77	69								
Fluoride as F	1.05	1.37								
Nitrate + Nitrite as N	7.2	7.71								
Sulfate as SO_4	266	266								
Acidity	0	0								
Arsenic as As	<0.05	<0.005								
Cadmium as Cd (by ICP)	<0.005	<0.005								
Cadmium as Cd (by Furnace)										
Chromium as Cr	<0.02	<0.02								
Copper as Cu		<0.02								
Iron as Fe	0.16	<0.05								
Lead as Pb	<0.10	<0.02								
Manganese as Mn	<0.02	<0.02								
Selenium as Se	<0.005	<0.005								
Silver as Ag	<0.02	<0.02								
Vanadium as V	<0.05	<0.05								
Zinc as Zn	<0.02	<0.02								
Static Water Level										

WELL Test Well 20

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-14-84	2-27-85	7-11-85	10-10-85	2-6-86	6-2-86	9-17-86	12-11-86		
pH	7.8	7.6	7.1	7.2	7.3	7.1	7.3	7.6		
Conductivity, umhos/cm	1110	1190	1112	1110	1270	1140	1170	1420		
Total dissolved solids mg/l	800	868	756	732	836	1183	1080	1030		
Sodium adsorption ratio	0.78	0.88	0.86	0.86	1.95	1.90	0.75	1.01		
Total hardness as $CaCO_3$	570	213	540	541	609	638	618	635		
Calcium as Ca	113	105	119	126	133	158	142	149		
Magnesium as Mg	70	61	59	55	66	64	64	76		
Sodium as Na	43	46	46	46	54	53	45	61		
Potassium as K	8	24	13	16	15	18	14	20		
Total alkalinity as $CaCO_3$	346	269	311	264	300	284	269	298		
Bicarbonate alkalinity as HCO_3	422	328	380	320	366	347	328	364		
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0	0		
Hydroxide alkalinity as OH	0	0	0	0	0	0	0	0		
Chloride as Cl	58	63	54	57	62	96	80	66		
Fluoride as F	1.1	2.68	4.34	1.76	6.3	4.7	3.76	6.75		
Nitrate + nitrite as N	7.36	6.70	4.37	3.84	5.60	3.79	3.96	6.96		
Sulfate as SO_4	210	244	253	264	302	331	349	368		
Acidity	0	0	0	0	0	0	0	0		
Arsenic as As	0.005	0.005	0.005	0.005	0.006	0.007	0.009	0.005		
Cadmium as Cd (by ICP)	0.005	0.005	0.005	0.005	0.011		0			
Cadmium as Cd (by furnace)				0.005	0.016	0.005	0.007	0.020		
Chromium as Cr	0.02	0.02	0.02	0.02	0.09	0.02	0.02	0.02		
Copper as Cu			0.02	0.02	0.06	0.02	0.02	0.02		
Iron as Fe	0.05	0.05	0.05	0.05	0.11	0.06	0.07	0.09		
Lead as Pb	0.02	0.02	0.02	0.02	0.13	0.02	0.03	0.02		
Manganese as Mn	0.02	0.02	0.03	0.02	0.06	0.02	0.02	0.10		
Selenium as Se	0.005	0.005	0.005	0.005	0.01	0.390	0.006	0.010		
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Vanadium as V	0.04	0.05	0.03	0.05	0.02	0.1	0.2	0.2		
Zinc as Zn	0.02	0.06	0.03	0.07	0.14	0.15	0.14	0.16		
Static water level										

	Initials	Date
Prepared by		
Approved by		

WELL TEST WELL 21

	1	2	3	4	5	6	7	8	9	10
	11 14 84	1 22 85								
pH	8.4	7.9								
Conductivity, µmhos/cm	1900	1930								
Total Dissolved Solids mg/l	1216	1240								
Sodium Adsorption Ratio	0.89	1.1								
Total Hardness as $CaCO_3$	1116	1090								
Calcium as Ca	53	51								
Magnesium as Mg	239	238								
Sodium as Na	38	38								
Potassium as K	1.2	1.6								
Total Alkalinity as $CaCO_3$	1100	1190								
Bicarbonate Alkalinity as HCO_3	1342	1330								
Carbonate Alkalinity as CO_3	0	0								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	14	20								
Fluoride as F	0.33	0.26								
Nitrate & Nitrite as N	0.22	0.17								
Sulfate as SO_4	54	23								
Acidity	0	0								
Arsenic as As	<0.03	0.005								
Cadmium as Cd (BY ICP)	<0.005	0.005								
Cadmium as Cd (BY FURNACE)										
Chromium as Cr	<0.02	0.02								
Copper as Cu		0.02								
Iron as Fe	0.01	0.08								
Lead as Pb	0.02	0.02								
Manganese as Mn	0.18	0.08								
Selenium as Se	<0.005	<0.005								
Silver as Ag	0.02	0.02								
Vanadium as V	0.04	0.05								
Zinc as Zn	0.02	0.04								
Static Water Level										

WELL Test Well 22

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 8 84	2-15-85	7-10-85	2-7-86	6 3 86	8-25 86	7-16 86	12 11-86		
pH	7.5	5.9	6.3	7.1	6.5		7.4	7.7		
Conductivity, micromhos/cm	1750	2840	2432	2500	2150		2130	2100		1
Total Dissolved Solids mg/l	1100	2124	1970	1710	1770		1690	1720		2
Sodium Adsorption Ratio	1.04	3.13	3.08	2.24	3.3		2.28	3.01		3
Total Hardness as $CaCO_3$	1166	1109	1043	975	991		877	994		
Calcium as Ca	237	250	241	192	174		171	185		5
Magnesium as Mg	130	125	129	124	111		114	117		6
Sodium as Na	198	166	192	161	158		151	163		7
Potassium as K	17	84	81	64	73		41	48		8
Total Alkalinity as $CaCO_3$	224	244	246	245	240		227	271		9
Bicarbonate Alkalinity as HCO_3	273	298	323	299	291		338	351		10
Carbonate Alkalinity as CO_3	0	0	0	0	0		0	0		11
Hydroxide Alkalinity as OH	0	0	0	0	0		0	0		12
Chloride as Cl	312	282	241	219	200		198	175		13
Fluoride as F	0.45	1.3	1.0	7.6	7.6	8.2	6.29	6.75		14
Nitrate + Nitrite as N	13.4	12.6	14.4	10.50	10.4		10.4	11.3		15
Sulfate as SO_4	897	912	841	746	727		798	724		16
Acidity	0	0	0	0	0		0	0		17
Arsenic as As	0 0.05	0 0.07	0 0.05	0 0.07	0 0.07		0 0.05	0 0.05		18
Cadmium as Cd (by ICP)	0 0.01	0 0.13	0 0.04	0 0.04						19
Cadmium as Cd (by Furnace)				0 0.04	0 0.03		0 0.03	0 0.04		20
Chromium as Cr	0 0.02	0 0.05	0 0.02	0 0.06	0 0.02		0 0.03	0 0.02		21
Copper as Cu		0 0.03	0 0.02	0 0.02	0 0.02		0 0.02	0 0.02		22
Iron as Fe	0 0.2	0 0.05	0 0.05	0 0.2	0 0.05		0 0.05	0 0.2		23
Lead as Pb	0 0.02	0 0.02	0 0.02	0 0.13	0 0.02		0 0.04	0 0.08		
Manganese as Mn	1.3	0 0.10	1.7	1.80	1.67		1.67	1.44		25
Selenium as Se	0 0.05	0 0.06	0 0.05	0 0.07	0 0.05		0 0.03	0 0.03		26
Silver as Ag	0 0.02	0 0.02	0 0.02	0 0.02	0 0.02		0 0.02	0 0.02		27
Vanadium as V	0 0.13	0 0.07	0 0.08	0 0.02	0 0.7		0 0.3	0 0.3		28
Zinc as Zn	0 0.9	0 0.04	0 0.05	0 0.18	0 0.09		0 0.23	0 0.19		29
Single Water Level										30

WELL Test Well 23

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 8 84	2 18 85	7 10 85	10 10 85	2 4 86	6 3 86	9 16 86	12 11 86		
pH	6.9	6.8	6.0	6.4	6.9	6.1	6.7	6.9		
Conductivity, umhos/cm	2011	2000	1933	1700	2120	1870	1330	1970		
Total dissolved solids mg/l	1470	1430	1390	1360	1360	1740	2030	1360		
Sodium adsorption ratio	0.70	0.54	0.51	0.63	0.63	1.33	0.56	0.56		
Total hardness as $CaCO_3$	1095	1104	1124	1045	1104	1216	1171	1152		
Calcium as Ca	188	180	165	102	162	159	169	163		
Magnesium as Mg	152	159	173	192	170	199	182	181		
Sodium as Na	53	41	39	47	48	42	44	44		
Potassium as K	26	20	21	17	15	18	16	16		
Total alkalinity as $CaCO_3$	659	618	743	562	439	471	508	476		
Bicarbonate alkalinity as HCO_3	804	734	407	686	536	573	620	581		
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0	0		
Hydroxide alkalinity as OH	0	0	0	0	0	0	0	0		
Chloride as Cl	112	83	98	108	167	104	156	189		
Fluoride as F	1.31	1.47	1.89	1.52	1.1	1.5	0.93	0.84		
Nitrate + nitrite as N	0.2	0.05	0.05	0.06	0.28	0.05	0.05	0.05		
Sulfate as SO4	455	431	413	447	612	621	570	549		
Acidity	0	0	0	0	0	0	0	0		
Arsenic as As	0.007	0.005	0.005	0.005	0.007	0.005	0.005	0.005		
Cadmium as Cd (by ICP)	0.004	0.013	0.005	0.005	0.016					
Cadmium as Cd (by furnace)				0.005	0.010	0.005	0.005	0.005		
Chromium as Cr	0.02	0.02	0.02	0.02	0.09	0.02	0.02	0.02		
Copper as Cu		0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Iron as Fe	5.3	5.28	0.03	0.05	4.1	6.36	4.87	7.72		
Lead as Pb	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.05		
Manganese as Mn	0.92	0.19	0.54	0.24	1.05	0.38	0.48	0.66		
Selenium as Se	0.007	0.005	0.005	0.005	0.019	0.005	0.005	0.005		
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Vanadium as V	0.03	0.05	0.02	0.14	0.02	0.2	0.0	0.2		
Zinc as Zn	0.12	0.07	0.03	0.05	0.03	0.05	0.02	0.02		
Static water level										

WELL Test Well 24

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10	
	11 5 84	3 15 83									
pH	10	11									
Conductivity, µmhos/cm	2190	2100									1
Total Dissolved Solids mg/l	1910	1710									2
Sodium Adsorption Ratio	3 0.2	9 0.9									3
Total Hardness as $CaCO_3$	638	577									
Calcium as Ca	205	148									5
Magnesium as Mg	51	3									6
Sodium as Na	154	153									7
Potassium as K	14	17									8
Total Alkalinity as $CaCO_3$	122	275									9
Bicarbonate Alkalinity as HCO_3	178	0									10
Carbonate Alkalinity as CO_3	13	114									11
Hydroxide Alkalinity as OH	0	26									12
Chloride as Cl	293	227									13
Fluoride as F	2 0.8	4 0.0									14
Nitrate + Nitrite as N	14 L	9 0.7									15
Sulfate as SO_4	464	641									16
Acidity	0	<10									17
Arsenic as As	0 0.03	0 0.05									18
Cadmium as Cd (by ICP)	0 0.07	0 0.7									19
Cadmium as Cd (by Furnace)											20
Chromium as Cr	0 0.2	0 0.3									21
Copper as Cu		0 0.2									22
Iron as Fe	0 0.5	0 0.4									23
Lead as Pb	0 0.2	0 0.3									
Manganese as Mn	0 0.4	0 0.2									25
Selenium as Se	0 0.06	0 0.16									26
Silver as Ag	0 0.2	0 0.2									27
Vanadium as V	0 0.9	0 0.5									28
Zinc as Zn	0 0.9	0 0.0									29
Static Water Level											30

WELL Test Well 25

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 13 84	3 2 85								
pH	8	8								
Conductivity, umhos/cm	1270	1710								
Total Dissolved Solids mg/l	746	1200								
Sodium Adsorption Ratio	3.17	0.50								
Total Hardness as CaCO3	533	1034								
Calcium as Ca	71	35								
Magnesium as Mg	112	134								
Sodium as Na	168	38								
Potassium as K	21	6								
Total Alkalinity as CaCO3	204	605								
Bicarbonate Alkalinity as HCO3	167	563								
Carbonate Alkalinity as CO3	91	86								
Hydroxide Alkalinity as OH	0	0								
Chloride as Cl	106	113								
Fluoride as F	0.75	0.93								
Nitrate & Nitrite as N	0.05	0.05								
Sulfate as SO4	321	360								
Acidity	0	0								
Arsenic as As	0.005	0.005								
Cadmium as Cd (by ICP)	0.005	0.005								
Cadmium as Cd (by furnace)										
Chromium as Cr	0.03	0.03								
Copper as Cu		0.03								
Iron as Fe	0.05	0.05								
Lead as Pb	0.03	0.03								
Manganese as Mn	0.03	0.03								
Selenium as Se	0.005	0.005								
Silver as Ag	0.03	0.03								
Vanadium as V	0.03	0.03								
Zinc as Zn	0.03	0.03								
Static Water Level										

WELL Test Well 26

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 12 84	3 1 85	7 10 85	10 11 85	2 6 86	6 9 86	9 16 86	12 11 86		
pH	7.0	7.6	6.7	6.5	7.5	7.0	7.5	7.6		
Conductivity, umhos/cm	1400	2000	1900	1850	1850	1600	1150	1500		
Total dissolved solids mg/l	1200	1260	1400	1350	1400	1230	1320	1300		
Sodium adsorption ratio	1.0	1.16	1.19	1.35	1.46	1.70	1.58	1.61		
Total hardness as $CaCO_3$	920	980	960	1050	850	750	780	770		
Calcium as Ca	150	117	121	140	120	111	107	110		
Magnesium as Mg	140	165	160	130	130	119	126	120		
Sodium as Na	56	84	85	92	98	111	102	97		
Potassium as K	17	16	19	17	16	20	16	19		
Total alkalinity as $CaCO_3$	371	339	383	422	376	428	362	378		
Bicarbonate alkalinity as HCO_3	453	414	467	711	457	522	434	456		
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0	0		
Hydroxide alkalinity as OH	0	0	0	0	0	0	0	0		
Chloride as Cl	152	175	152	159	141	119	126	0.3		
Fluoride as F	0.69	1.76	1.46	1.34	1.73	1.97	1.71	1.71		
Nitrate + nitrite as N	6.63	7.15	5.69	3.8	6.54	7.44	6.90	8.03		
Sulfate as SO_4	456	536	542	542	479	453	450	454		
Acidity	0	0	0	0	0	0	0	0		
Arsenic as As	0.007	0.005	0.005	0.005	0.001	0.005	0.005	0.005		
Cadmium as Cd (by ICP)	0.011	0.005	0.005	0.006	0.005	0.005	0.005	0.005		
Cadmium as Cd (by furnace)										
Chromium as Cr	0.03	0.03	0.03	0.01	0.05	0.05	0.05	0.03		
Copper as Cu		0.03	0.03	0.03	0.03	0.03	0.03	0.03		
Iron as Fe	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03		
Lead as Pb	0.03	0.03	0.03	0.03	0.03	0.09	0.10	0.05		
Manganese as Mn	0.13	0.13	0.12	0.03	0.09	0.03	0.03	0.03		
Selenium as Se	0.006	0.005	0.005	0.96	0.82	0.88	0.10	0.20		
Silver as Ag	0.03	0.03	0.03	0.05	0.05	0.03	0.005	0.005		
Vanadium as V	0.04	0.05	0.03	0.03	0.03	0.03	0.03	0.04		
Zinc as Zn	0.04	0.07	0.04	0.03	0.03	0.2	0.2	0.2		
Static water level				0.00	0.00	0.10	0.04	0.08		

WELL Test Well 27

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-12-84	2-24-85	7-13-85							
pH	7.1	7.8	7.5							
Conductivity, umhos/cm	1280	1710	1690							
Total dissolved solids mg/l	170	1310	1260							
Sodium adsorption ratio	1.79	1.96	1.79							
Total hardness as $CaCO_3$	725	687	750							
Calcium as Ca	170	168	177							
Magnesium as Mg	73	65	70							
Sodium as Na	107	118	111							
Potassium as K	34	17	34							
Total alkalinity as $CaCO_3$	427	234	369							
Bicarbonate alkalinity as HCO_3	524	310	451							
Carbonate alkalinity as CO_3	0	0	0							
Hydroxide alkalinity as OH	0	0	0							
Chloride as Cl	71	65	62							
Fluoride as F	4.11	2.68	3.13							
Nitrate + nitrite as N	13	12.8	8.86							
Sulfate as SO_4	414	533	512							
Acidity	0	0	0							
Arsenic as As	0.011	0.008	0.005							
Cadmium as Cd (by ICP)	0.039	0.024	0.031							
Cadmium as Cd (by furnace)										
Chromium as Cr	0.02	0.02	0.02							
Copper as Cu		0.02	0.00							
Iron as Fe	0.12	0.05	0.05							
Lead as Pb	0.02	0.02	0.02							
Manganese as Mn	0.36	0.13	0.68							
Selenium as Se	0.048	0.028	0.070							
Silver as Ag	0.02	0.02	0.02							
Vanadium as V	0.06	0.05	0.02							
Zinc as Zn	0.1	0.09	0.06							
Static water level										

WELL Test Well 28

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-13-84	2-27-85	7-12-85	10-11-85	3-4-86	6-3-86	8-28-86	9-16-86	12-11-86	
pH	6.3	7.1	6.9	6.3	7.0	6.7		7.0		
Conductivity, umhos/cm	1530	1460	1573	1410	1402	1110		527		
Total Dissolved Solids mg/l	720	1050	524	720	534	538		556		
Sodium Adsorption Ratio	0.55	0.39	0.41	0.31	0.45	0.46		0.35		
Total Hardness as $CaCO_3$	510	521	514	560	737	501		347		
Calcium as Ca	177	154	170	183	149	54		149		
Magnesium as Mg	72	57	49	48	39	39		21		
Sodium as Na	34	19	27	21	25	24		32		
Potassium as K	5	6	5	7	7	7		6		
Total Alkalinity as $CaCO_3$	344	736	570	749	746	421		677		
Bicarbonate Alkalinity as HCO_3	1.0.3	249	1096	760	710	514		546		
Carbonate Alkalinity as CO_3	0	0	0	0	0	0		0		
Hydroxide Alkalinity as OH	0	0	0	0	0	0		0		
Chloride as Cl	22	27	22	26	24	13		21		
Fluoride as F	1.0	1.22	0.16	1.32	0.29	1.38	0.31	1.34		
Nitrate + Nitrite as N	3.97	3.68	4.37	3.34	3.40	3.39		4.47		
Sulfate as SO_4	12	70	76	70	45	72		66		
Acidity	0	0	0	0		0		0		
Arsenic as As	0.006	<0.005	<0.005	<0.005	0.004	<0.005		<0.005		
Cadmium as Cd (by ICP)	0.006	0.005	<0.005	<0.005	0.011					
Cadmium as Cd (by Furnace)										
Chromium as Cr	0.02	<0.02	<0.02	<0.02	0.010	<0.02		<0.02		
Copper as Cu		<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Iron as Fe	0.05	0.06	<0.05	<0.05	<0.02	<0.05		<0.05		
Lead as Pb	0.05	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Manganese as Mn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Selenium as Se	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005		
Silver as Ag	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Vanadium as V	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Zinc as Zn	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02		
Sum Noted Ions										

WELL TEST WELL 29

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 13 86	3 20 89								
pH	6.7	7.2								
CONDUCTIVITY, umhos/cm	1560	1190								
TOTAL DISSOLVED SOLIDS mg/l	910	700								
SODIUM ADSORPTION RATIO	0.46	2.39								
TOTAL HARDNESS AS $CaCO_3$	765	671								
CALCIUM AS Ca	155	150								
MAGNESIUM AS Mg	78	72								
SODIUM AS Na	78	23								
POTASSIUM AS K	6	4								
TOTAL ALKALINITY AS $CaCO_3$	705	547								
BICARBONATE ALKALINITY AS HCO_3	560	668								
CARBONATE ALKALINITY AS CO_3	0	0								
HYDROXIDE ALKALINITY AS OH	0	0								
CHLORIDE AS Cl	71	17								
FLUORIDE AS F	0.39	0.33								
NITRATE & NITRITE AS N	5.99	5.18								
SULFATE AS SO_4	14	56								
ACIDITY	0	0								
ARSENIC AS As	<0.005	<0.005								
CADMIUM AS Cd (BY ICP)	<0.005	<0.005								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	<0.02	<0.02								
COPPER AS Cu										
IRON AS Fe	<0.05	<0.05								
LEAD AS Pb	<0.02	<0.02								
MANGANESE AS Mn	<0.02	<0.02								
SELENIUM AS Se	<0.005	<0.005								
SILVER AS Ag	<0.02	<0.02								
VANADIUM AS V	<0.02	<0.02								
ZINC AS Zn	<0.02	<0.02								
STATIC WATER LEVEL										

WELL Test Well 30

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 14 84	2 21 85	7 11 85	10 4 85	2 3 86	9.19.86				
pH	7.1	7.2	7.1	6.8	7.3	7.3				
Conductivity, umhos/cm	2240	2090	2117	1810	2020	1360				
Total dissolved solids mg/l	1140	1410	1330	1360	1360	1650				
Sodium adsorption ratio	2.91	2.47	2.78	2.16	2.38	2.18				
Total hardness as $CaCO_3$	675	739	725	740	752	770				
Calcium as Ca	130	149	147	148	148	152				
Magnesium as Mg	85	89	87	90	93	95				
Sodium as Na	174	134	172	135	150	139				
Potassium as K	11	33	50	43	41	30				
Total alkalinity as $CaCO_3$	400	397	460	337	400	385				
Bicarbonate alkalinity as HCO_3	488	484	561	411	513	714				
Carbonate alkalinity as CO_3	0	0	0	0	0	0				
Hydroxide alkalinity as OH	0	0	0	0	0	0				
Chloride as Cl	141	189	192	200	218	232				
Fluoride as F	2.6	3.61	3.31	3.39	3.2	2.65				
Nitrate + nitrite as N	1.5	9.82	11.2		12.0	13.6				
Sulfate as SO_4	389	367	344	334	351	392				
Acidity	0	0	0	0	0	0				
Arsenic as As	0.005	0.005	0.005	0.005	0.008	0.006				
Cadmium as Cd (by ICP)	0.015	0.005	0.018	0.005	0.014					
Cadmium as Cd (by furnace)				0.005	0.005	0.019				
Chromium as Cr	0.03	0.03	0.02	0.02	0.05	0.08				
Copper as Cu	0.03	0.03	0.02	0.02	0.02	0.08				
Iron as Fe	0.05	0.05	0.05	0.08	0.19	0.15				
Lead as Pb	0.02	0.02	0.02	0.02	0.05	0.05				
Manganese as Mn	0.02	0.02	0.05	0.02	0.15	0.04				
Selenium as Se	0.005	0.007	0.005	0.022	0.016	0.016				
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02				
Vanadium as V	0.07	0.05	0.03	0.17	0.02	0.2				
Zinc as Zn	0.02	0.02	0.09	0.04	0.05	0.26				
Static water level										

WELL TEST WELL 31

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	12-14-84	2-20-85								
pH	7.8	7.7								
CONDUCTIVITY, umhos/cm	440	524								
TOTAL DISSOLVED SOLIDS mg/l	274	460								
SODIUM ADSORPTION RATIO	0.6	0.45								
TOTAL HARDNESS AS $CaCO_3$	169	416								
CALCIUM AS Ca	38	109								
MAGNESIUM AS Mg	13	35								
SODIUM AS Na	13	21								
POTASSIUM AS K	7	3								
TOTAL ALKALINITY AS $CaCO_3$	131	355								
BICARBONATE ALKALINITY AS HCO_3	160	433								
CARBONATE ALKALINITY AS CO_3	-	11								
HYDROXIDE ALKALINITY AS OH	-	0								
CHLORIDE AS Cl	18	18								
FLUORIDE AS F	0.42	0.34								
NITRATE + NITRITE AS N	13.26	4.79								
SULFATE AS SO4	40	45								
ACIDITY	-	-								
ARSENIC AS As	0.007	-0.005								
CADMIUM AS Cd (BY ICP)	0.005	0.005								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	-0.02	-0.02								
COPPER AS Cu		0.02								
IRON AS Fe	0.56	-0.05								
LEAD AS Pb	0.02	-0.02								
MANGANESE AS Mn	0.04	-0.02								
SELENIUM AS Se	0.005	-0.005								
SILVER AS Ag	-0.02	-0.02								
VANADIUM AS V	0.12	0.16								
ZINC AS Zn	0.02	-0.02								
STATIC WATER LEVEL										

WELL TEST WELL 32

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	13 14 84	2 23 85								
pH	11.12	8.1								
CONDUCTIVITY, umhos/cm	1000	464								
TOTAL DISSOLVED SOLIDS mg/l	440	294								
SODIUM ADSORPTION RATIO	0.31	0.90								
TOTAL HARDNESS AS $CaCO_3$	339	170								
CALCIUM AS Ca	142	17								
MAGNESIUM AS Mg	1	31								
SODIUM AS Na	22	27								
POTASSIUM AS K	27	10								
TOTAL ALKALINITY AS $CaCO_3$	332	134								
BICARBONATE ALKALINITY AS HCO_3	429	164								
CARBONATE ALKALINITY AS CO_3	0	0								
HYDROXIDE ALKALINITY AS OH	0	0								
CHLORIDE AS Cl	18	22								
FLUORIDE AS F	0.26	0.22								
NITRATE + NITRITE AS N	6.9	7.1								
SULFATE AS SO4	36	45								
ACIDITY	0	0								
ARSENIC AS As	0.003	0.005								
CADMIUM AS Cd (BY ICP)	0.003	0.005								
CADMIUM AS Cd (BY FURNACE)										
CHROMIUM AS Cr	0.02	0.02								
COPPER AS Cu		0.02								
IRON AS Fe	0.05	0.05								
LEAD AS Pb	0.02	0.02								
MANGANESE AS Mn	0.02	0.02								
SELENIUM AS Se	0.005	0.005								
SILVER AS Ag	0.02	0.02								
VANADIUM AS V	0.03	0.31								
ZINC AS Zn	0.02	0.02								
STATIC WATER LEVEL										

WELL TEST WELL 33

	1	2	3	4	5	6	7	8	9	10
	12 14 84	2.28.85	7.13.85	10/10/85	6/3/86	9.17.86	12.1.86			
pH	8.0	7.0	7.6	7.4	7.9	7.5	8.0			
Conductivity, umhos/cm	640	399	524	511	740	791	650			
Total Dissolved Solids mg/L	351	362	306	347	347	424	365			
Sodium Adsorption Ratio	0.37	0.32	0.44	0.70	0.46	0.49	0.44			
Total Hardness as CaCO3	312	179	174	177	310	352	342			
Calcium as Ca	69	126	127	124	57	115	110			
Magnesium as Mg	36	4.0	4.3	4.0	4.1	4.0	4.0			
Sodium as Na	15	16	23	23	27	24	24			
Potassium as K	4	2	3	1	2	2	3			
Total Alkalinity as CaCO3	253	400	441	357	251	400	402			
Bicarbonate Alkalinity as HCO3	308	491	238	560	251	468	491			
Carbonate Alkalinity as CO3	0	0	0	0	0	0	0			
Hydroxide Alkalinity as OH	0	0	0	0	0	0	0			
Chloride as Cl	20	13	24	18	34	44	39			
Fluoride as F	0.37	0.24	0.32	0.23	0.28	0.27	0.25			
Nitrate & Nitrite as N	5.73	7.60	5.16	1.82	6.94	5.31	5.15			
Sulfate as SO4	53	73	44	42	44	30	43			
Acidity	0	0	0	0	0	0	0			
Arsenic as As	0.003	0.005	0.004	0.005	0.010	0.005	0.005			
Cadmium as Cd (by ICP)	0.003	0.003	0.005	0.005	—	—	—			
Cadmium as Cd (by Furnace)				0.005	0.005	0.005	0.005			
Chromium as Cr	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
Copper as Cu		0.05	0.03	0.03	0.05	0.05	0.05			
Iron as Fe	0.11	0.05	0.05	0.03	0.03	0.02	0.02			
Lead as Pb	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
Manganese as Mn	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
Selenium as Se	0.005	0.005	0.005	0.005	0.005	0.005	0.005			
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
Vanadium as V	0.27	0.34	0.28	0.24	0.3	0.4	0.4			
Zinc as Zn	0.02	0.09	0.02	0.02	0.02	0.02	0.02			
Strain Noise Levels										

WELL Test Well 34

	Initials	Date
Prepared by		
Approved by		

	1	2
	13 14 84	2 26 85
pH	7.6	7.8
Conductivity, umhos/cm	1100	1190
Total dissolved solids mg/l	506	853
Sodium adsorption ratio	0.13	0.30
Total hardness as $CaCO_3$	290	698
Calcium as Ca	88	123
Magnesium as Mg	90	95
Sodium as Na	10	15
Potassium as K	5	6
Total alkalinity as $CaCO_3$	402	402
Bicarbonate alkalinity as HCO_3	214	491
Carbonate alkalinity as CO_3	0	0
Hydroxide alkalinity as OH	0	0
Chloride as Cl	44	64
Fluoride as F	0.46	0.44
Nitrate & nitrite as N	0.62	0.65
Sulfate as SO_4	100	215
Acidity	0	0
Arsenic as As	0.005	0.005
Cadmium as Cd (by ICP)	0.005	0.005
Cadmium as Cd (by furnace)		
Chromium as Cr	0.02	0.02
Copper as Cu		0.02
Iron as Fe	0.21	0.16
Lead as Pb	0.02	0.02
Manganese as Mn	0.01	0.27
Selenium as Se	0.005	0.005
Silver as Ag	0.02	0.02
Vanadium as V	0.02	0.05
Zinc as Zn	0.02	0.02
Static water level		

WELL Test Well 35

	1	2	3	4	5	6	7	8	9	10
		3-26-85	7-13-85	10-11-85	3-6-86	6-3-86	8-25-86	9-17-86	10-10-86	
pH		7.2	6.9	6.8	7.2	6.7		7.3	5.1	
Conductivity, umhos/cm		1591	1797	1797	1530	1594		1654	1594	
Total Dissolved Solids mg/L		1320	1030	1000	1100	1210		1280	1200	
Sodium Adsorption Ratio		0.44	0.41	0.27	0.43	0.34		0.50	0.44	
Total Hardness as $CaCO_3$		499	509	1036	527	1456		746	1024	
Calcium as Ca		109	59	79	76	6		69	61	
Magnesium as Mg		356	174	257	146	253		138	252	
Sodium as Na		96	29	23	23	25		21	26	
Potassium as K		16	15	14	14	14		13	14	
Total Alkalinity as $CaCO_3$		1200	1274	1274	1350	1174		728	1140	
Bicarbonate Alkalinity as HCO_3		1464	1550	1311	1400	1434		1133	1391	
Carbonate Alkalinity as CO_3		0	0	0	0	0		0	0	
Hydroxide Alkalinity as OH		0	0	0	0	0		0	0	
Chloride as Cl		24	18	21	23	18		18	17	
Fluoride as F		0.87	0.22	0.20	0.30	0.31	0.81	0.26	0.20	
Nitrate & Nitrite as N		0.05	0.09	0.12	0.10	0.05		0.05	0.05	
Sulfate as SO_4		58	92	82	67	71		56	71	
Acidity		0	0	0	0	0		0	0	
Arsenic as As		0.005	0.006	0.005	0.011	0.005		0.005	0.005	
Cadmium as Cd (by ICP)		0.006	0.005	0.006	0.005				0.005	
Cadmium as Cd (by furnace)				0.005	0.005	0.005		0.005	0.005	
Chromium as Cr		0.03	0.02	0.03	0.03	0.03		0.03	0.02	
Copper as Cu		0.03	0.03	0.03	0.03	0.03		0.03	0.02	
Iron as Fe		0.31	0.03	0.05	0.11	0.79		0.79	0.02	
Lead as Pb		0.03	0.03	0.03	0.04	0.03		0.03	0.04	
Manganese as Mn		0.21	0.17	0.17	0.58	0.18		0.16	0.26	
Selenium as Se		0.005	0.005	0.005	0.005	0.005		0.005	0.005	
Silver as Ag		0.03	0.03	0.03	0.03	0.03		0.03	0.03	
Vanadium as V		0.05	0.03	0.03	0.03	0.03		0.03	0.03	
Zinc as Zn		0.06	0.03	0.03	0.03	0.03		0.03	0.03	
Static Water Level										

WELL Test Well 36

	Initials	Date
Prepared by		
Approved by		

	2-26-85	7-11-85	10-10-85	2-6-86	6-3-86	9-17-86	12-12-86
pH	7.2	7.4	6.9	7.1	7.2	7.5	7.6
Conductivity, umhos/cm	1500	1352	1420	1420	1338	1420	1460
Total dissolved solids mg/l	1070	994	1050	984	1170	1290	1000
Sodium adsorption ratio	1.03	1.09	0.92	1.05	0.92	0.88	0.92
Total hardness as $CaCO_3$	706	695	727	666	709	711	710
Calcium as Ca	131	136	136	120	137	138	131
Magnesium as Mg	92	87	94	89	94	89	93
Sodium as Na	63	66	57	62	57	54	56
Potassium as K	28	31	29	20	27	20	22
Total alkalinity as $CaCO_3$	283	351	290	284	301	282	283
Bicarbonate alkalinity as HCO_3	351	428	354	347	367	344	342
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0
Hydroxide alkalinity as OH	0	0	0	0	0	0	0
Chloride as Cl	101	76	88	80	44	77	81
Fluoride as F	11.9	16.0	10.5	11.0	10	7.55	10.3
Nitrate + nitrite as N	9.06	5.47	5.39	6.15	7.34	7.32	7.18
Sulfate as SO_4	385	339	378	356	407	409	382
Acidity	0	0	0	0	0	0	0
Arsenic as As	0.005	0.005	0.005	0.011	—	0.005	0.005
Cadmium as Cd (by ICP)	0.058	0.117	0.058	—	—	—	—
Cadmium as Cd (by furnace)		—	0.046	0.048	0.077	0.058	0.093
Chromium as Cr	0.02	0.02	0.02	0.04	0.02	0.02	0.02
Copper as Cu	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Iron as Fe	0.05	0.05	0.05	0.14	0.12	0.05	0.10
Lead as Pb	0.02	0.02	0.02	0.06	0.02	0.02	0.02
Manganese as Mn	0.08	0.12	0.04	0.29	0.08	0.06	0.18
Selenium as Se	0.078	0.088	0.33	0.081	0.482	0.068	0.048
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Vanadium as V	0.05	0.04	0.02	0.02	0.2	0.2	0.2
Zinc as Zn	0.70	1.08	1.12	1.4	1.01	1.79	1.40
Static water level							

WELL Test Well 37

	1	2	3	4	5	6	7	8	9	10
		2 19 85	7 10 85	10 10 85	2 1 86	6 3 86	9 16 86	10 11 86		
pH		7.5	6.9	6.9	7.0	6.7	7.6	7.2		
Conductivity, umhos/cm		2660	2017	2330	1350	1177	1890	2100		
Total Dissolved Solids mg/L		1860	1298	1694	1111	1229	1650	1999		
Sodium Adsorption Ratio		2.2	0.9	2.45	1.0	1.6	1.87	2.04		
Total Hardness as $CaCO_3$		992	693	771	587	783	767	803		
Calcium as Ca		247	192	159	118	151	139	161		
Magnesium as Mg		98	78	71	44	57	90	95		
Sodium as Na		168	122	154	97	100	119	133		
Potassium as K		108	94	109	77	81	55	75		
Total Alkalinity as $CaCO_3$		434	393	394	372	364	358	346		
Bicarbonate Alkalinity as HCO_3		527	447	354	437	443	437	422		
Carbonate Alkalinity as CO_3		0	0	0	0	0	0	-		
Hydroxide Alkalinity as OH		0	0	0	0	0	-	-		
Chloride as Cl		274	214	211	178	164	141	170		
Fluoride as F		2.8	2.4	1.6	3.0	1.5	1.3	1.8		
Nitrate + Nitrite as N		1.4	4.3	2.5	3.4	5.86	1.3	1.8		
Sulfate as SO_4		600	428	307	311	403	443	455		
Acidity		0	0	0	0	0	0	0		
Arsenic as As		<0.005	<0.005	<0.003	<0.004	<0.003	<0.000	<0.011		
Cadmium as Cd (by ICP)		<0.01	<0.03	<0.00	—	—	—	—		
Cadmium as Cd (by Furnace)		—	—	—	0.78	<0.05	<0.58	<0.21		
Chromium as Cr		<0.05	<0.00	<0.04	<0.1	<0.00	<0.03	<0.07		
Copper as Cu		<0.03	<0.03	<0.00	<0.03	<0.00	<0.03	<0.03		
Iron as Fe		<0.06	<0.03	<0.04	<0.09	<0.06	<0.87	<0.76		
Lead as Pb		<0.03	<0.03	<0.03	<0.03	<0.00	<0.05	<0.00		
Manganese as Mn		<0.50	<0.57	<0.83	<0.61	<0.03	<0.75	<0.86		
Selenium as Se		<0.066	<0.02	<0.19	<0.03	<0.03	<0.03	<0.06		
Silver as Ag		<0.03	<0.00	<0.03	<0.03	<0.00	<0.03	<0.03		
Vanadium as V		<0.15	<0.14	<0.17	<0.34	<0.1	<0.2	<0.3		
Zinc as Zn		<0.30	<0.6	<0.08	<0.08	<0.1	<0.64	<0.60		
Sodium Hydroxide Added										

WELL Test Well 35

	1	2	3	4	5	6	7	8	9	10
		3 1 85	2 6 86							
pH		7.4	7.6							
Conductivity umhos/cm		9164	11800							
Total Dissolved Solids mg/l		6356	7600							
Sodium Adsorption Ratio		0.46	1.00							
Total Hardness as $CaCO_3$		916	506							
Calcium as Ca		126	126							
Magnesium as Mg		49	49							
Sodium as Na		74	92							
Potassium as K		2	5							
Total Alkalinity as $CaCO_3$		406	372							
Bicarbonate Alkalinity as HCO_3		495	453							
Carbonate Alkalinity as CO_3		0	0							
Hydroxide Alkalinity as OH		0	0							
Chloride as Cl		347	439							
Fluoride as F		0.41	0.39							
Nitrate + Nitrite as N		4.6	5.56							
Sulfate as SO_4		56	1000							
Acidity		0	0							
Arsenic as As		0.005	0.005							
Cadmium as Cd (by ICP)		0.005	0.005							
Cadmium as Cd (by furnace)			0.005							
Chromium as Cr		0.03	0.03							
Copper as Cu		0.03	0.05							
Iron as Fe		0.05	0.06							
Lead as Pb		0.03	0.03							
Manganese as Mn		0.03	0.04							
Selenium as Se		0.005	0.005							
Silver as Ag		0.03	0.03							
Vanadium as V		0.05	0.6							
Zinc as Zn		0.03	0.03							
Sialis Naisa level										

Prepared by
Approved by

WELL Test Well 39

	1	2	3	4	5	6	7	8	9	10
		2-25-85	7-13-85	10-11-85	3-6-86	6-3-86	9-25-86	9-17-86	12-12-86	
pH		8.5	7.3	7.0	7.4	7.0		7.3	7.2	
Conductivity umhos/cm		1270	1500	1440	1460	1300		1440	1630	
Total Dissolved Solids mg/l		574	1040	1060	1030	1030		1300	1050	
Sodium Adsorption Ratio		1.33	1.32	1.38	1.10	1.03		0.77	1.25	
Total Hardness as $CaCO_3$		499	610	704	716	739		681	754	
Calcium as Ca		73	115	116	114	110		112	120	
Magnesium as Mg		77	65	79	100	108		100	110	
Sodium as Na		71	79	75	67	63		60	67	
Potassium as K		3.7	7.8	7.4	1.8	2.4		2.9	2.1	
Total Alkalinity as $CaCO_3$		174	358	361	321	322		356	339	
Bicarbonate Alkalinity as HCO_3		715	327	348	346	341		349	335	
Carbonate Alkalinity as CO_3		0	0	0	0	0		0	0	
Hydroxide Alkalinity as OH		0	0	0	0	0		0	0	
Chloride as Cl		37	5	7.8	4.7	7.9		2.0	7.8	
Fluoride as F		0.88	0.74	0.76	1.6	7.3	0.7	0.98	7.4	
Nitrate + Nitrite as N		7.49	0.95	0.90	4.31	0.1		0.56	5.7	
Sulfate as SO_4		306	346	346	324	341		345	366	
Acidity		0	0	0	0	0		0	0	
Arsenic as As		0.008	0.011	0.005	0.009	0.006		0.004	0.005	
Cadmium as Cd (by ICP)		0.003	0.013	0.010	0.011	—		—	—	
Cadmium as Cd (by Furnace)				0.033	0.019	0.018		0.004	0.026	
Chromium as Cr		0.03	0.03	0.03	0.07	0.03		0.03	0.03	
Copper as Cu		0.03	0.03	0.03	0.13	0.03		0.03	0.03	
Iron as Fe		0.05	0.05	0.05	0.06	0.03		0.11	0.12	
Lead as Pb		0.03	0.03	0.03	0.09	0.04		0.04	0.03	
Manganese as Mn		0.03	0.05	0.03	0.09	0.03		0.03	0.12	
Selenium as Se		0.008	0.027	0.014	0.03	0.03		0.03	0.004	
Silver as Ag		0.03	0.03	0.03	0.03	0.03		0.03	0.03	
Vanadium as V		0.03	0.03	0.03	0.03	0.03		0.03	0.2	
Zinc as Zn		0.03	0.19	0.19	0.03	0.04		0.03	0.03	
Sum of Ions Total										

WELL *Test Well 40*

	2-23-85	7-11-85	10-9-85	2-3-86
pH	6.9	6.4	6.4	7.0
Conductivity, umhos/cm	6180	4450	2150	3070
Total dissolved solids mg/l	4900	3420	2120	2170
Sodium adsorption ratio	5.70	4.73	4.43	3.12
Total hardness as $CaCO_3$	1910	1209	814	1049
Calcium as Ca	451	280	191	242
Magnesium as Mg	193	124	93	168
Sodium as Na	270	378	301	232
Potassium as K	439	279	163	90
Total alkalinity as $CaCO_3$	94	267	282	276
Bicarbonate alkalinity as HCO_3	113	326	283	361
Carbonate alkalinity as CO_3	0	0	0	0
Hydroxide alkalinity as OH	0	0	0	0
Chloride as Cl	1180	704	433	437
Fluoride as F	11.9	13.9	10.8	9.7
Nitrate + nitrite as N	19.5	22.1	31.8	21.30
Sulfate as SO4	1770	1020	639	649
Acidity	0	0	0	0
Arsenic as As	0.007	0.018	0.009	0.014
Cadmium as Cd (by ICP)	70.4	33.6	13.4	5.34
Cadmium as Cd (by furnace)				
Chromium as Cr	0.02	0.02	0.02	0.12
Copper as Cu	0.04	0.02	0.02	0.08
Iron as Fe	0.03	0.05	0.05	0.02
Lead as Pb	0.02	0.16	0.02	0.12
Manganese as Mn	11.8	6.50	3.43	1.78
Selenium as Se	0.053	0.046	0.16	0.02
Silver as Ag	0.02	0.02	0.02	0.02
Vanadium as V	0.16	0.17	0.4	0.02
Zinc as Zn	165	80.0	33.3	6.05
Stain water level				

WELL Test Well 41

Prepared by	Initials	Date
Approved by		

	1	2	3	4	5	6	7	8	9	10
			7-11-85	10-9-85	2-3-86					
pH			7.1	7.1	7.1					
Conductivity umhos/cm			1600	1220	1770					
Total Dissolved Solids mg/L			1230	950	1140					
Sodium Adsorption Ratio			2.33	2.35	2.31					
Total Hardness as $CaCO_3$			716	672	647					
Calcium as Ca			165	177	179					
Magnesium as Mg			74	74	74					
Sodium as Na			140	124	133					
Potassium as K			3.3	3.4	4					
Total Alkalinity as $CaCO_3$			440	407	427					
Bicarbonate Alkalinity as HCO_3			537	497	523					
Carbonate Alkalinity as CO_3			0	0	0					
Hydroxide Alkalinity as OH			0	0	0					
Chloride as Cl			149	145	146					
Fluoride as F			2.40	2.33	2.9					
Nitrate + Nitrite as N			10.7		12.3					
Sulfate as SO_4			322	263	249					
Acidity			0	0	0					
Arsenic as As			0.008	0.008	0.003					
Cadmium as Cd (by ICP)			0.005	0.005	0.003					
Cadmium as Cd (by Furnace)			—	0.03	0.03					
Chromium as Cr			0.03	0.03	0.03					
Copper as Cu			0.03	0.03	0.03					
Iron as Fe			0.03	0.03	0.03					
Lead as Pb			0.03	0.03	0.03					
Manganese as Mn			0.05	0.05	0.03					
Selenium as Se			0.004	0.004	0.003					
Silver as Ag			0.03	0.03	0.03					
Vanadium as V			0.03	0.03	0.03					
Zinc as Zn			0.03	0.03	0.03					
Static water level										

WELL Test Well 42

	Initials	Date
Prepared by		
Approved by		

	7-10-85	10-9-85	2-3-86	6-5-86	9-18-86	12-12-86
pH	6.9	6.6	7.2	6.7	7.2	7.2
Conductivity, umhos/cm	2760	2150	2180	2120	2010	2100
Total dissolved solids mg/l	2190	1340	1450	1720	1750	1480
Sodium adsorption ratio	3.4	2.36	2.19	2.01	2.01	1.67
Total hardness as $CaCO_3$	934	787	846	721	830	865
Calcium as Ca	211	172	177	204	181	198
Magnesium as Mg	99	87	77	107	92	90
Sodium as Na	221	152	140	140	133	113
Potassium as K	137	70	14	63	38	50
Total alkalinity as $CaCO_3$	342	347	407	406	427	418
Bicarbonate alkalinity as HCO_3	478	417	499	493	221	510
Carbonate alkalinity as CO_3	0	0	0	0	0	0
Hydroxide alkalinity as OH	0	0	0	0	0	0
Chloride as Cl	377	252	224	266	224	216
Fluoride as F	9.60	5.71	5.1	5.5	4.93	5.96
Nitrate & nitrite as N	16.0	24.8	13.70	13.9	13.3	13.4
Sulfate as SO4	624	424	393	445	388	359
Acidity	0	0	0	0	0	0
Arsenic as As	0.007	0.005	0.021	0.019	0.016	0.018
Cadmium as Cd (by ICP)	13.8	4.9	1.67	—	—	—
Cadmium as Cd (by furnace)				1.96	1.13	3.37
Chromium as Cr	0.02	0.02	0.09	0.02	0.02	0.02
Copper as Cu	0.02	0.02	0.03	0.02	0.02	0.02
Iron as Fe	0.03	0.05	0.13	0.03	0.03	0.12
Lead as Pb	0.06	0.02	0.07	0.02	0.02	0.02
Manganese as Mn	2.94	1.26	0.75	0.96	0.89	1.20
Selenium as Se	0.049	0.27	0.091	0.341	0.194	0.146
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02
Vanadium as V	0.08	0.05	2.46	0.2	0.2	0.2
Zinc as Zn	38	4.43	3.39	6.33	7.09	8.40
Static water level						

WELL TEST WELL 43

	7-11-85	10-09-85	3-5-86	6-5-86	9-18-86	12-10-86
pH	6.8	6.4	6.9	6.6	7.2	7.1
CONDUCTIVITY, umhos/cm	6660	3380	4130	3600	4020	4500
TOTAL DISSOLVED SOLIDS mg/l	5670	4400	2830	2680	3180	3440
SODIUM ADSORPTION RATIO	5.64	5.33	4.02	4.69	4.98	4.34
TOTAL HARDNESS AS $CaCO_3$	1770	874	1309	1084	1137	1380
CALCIUM AS Ca	462	204	323	253	276	355
MAGNESIUM AS Mg	150	91	127	110	109	120
SODIUM AS Na	545	362	337	355	386	388
POTASSIUM AS K	532	162	108	144	91	105
TOTAL ALKALINITY AS $CaCO_3$	104	229	254	311	287	303
BICARBONATE ALKALINITY AS HCO_3	107	219	310	380	350	370
CARBONATE ALKALINITY AS CO_3	-0-	0		0	-0-	0
HYDROXIDE ALKALINITY AS OH	-0-	0		0	-0-	-0-
CHLORIDE AS Cl	1120	560	636	699	849	977
FLUORIDE AS F	14.6	13.2	11.0	11	8.48	9.90
NITRATE + NITRITE AS N	33.9	35.4	26.3	18.6	19.9	24.7
SULFATE AS SO4	1640	689	867	622	573	680
ACIDITY	-0-	-0-	0	-0-	-0-	-0-
ARSENIC AS As	0.08	0.008	0.007	0.029	0.014	0.017
CADMIUM AS Cd (BY ICP)	62.5	9.90	3.66			
CADMIUM AS Cd (BY FURNACE)				8.73	1.68	15.80
CHROMIUM AS Cr	0.08	-0.02	0.21	0.03	0.06	-0.02
COPPER AS Cu	-0.02	-0.02	0.12	0.02	-0.02	-0.02
IRON AS Fe	-0.05	-0.05	0.15	0.06	-0.05	0.14
LEAD AS Pb	0.24	-0.02	0.2	0.05	0.07	0.02
MANGANESE AS Mn	0.04	1.40	1.8	1.35	0.70	1.46
SELENIUM AS Se	0.046	0.95	0.151	0.786	0.512	0.320
SILVER AS Ag	-0.02	-0.02	0.02	0.00	0.02	-0.02
VANADIUM AS V	0.28	0.20	0.16	1.3	-0.2	0.4
ZINC AS Zn	116	23.3	2.99	13.6	4.70	18.60
SIBILL WATER LEVEL						

WELL TEST WELL 44

	7-13-85	10-11-85	2-6-86	6-3-86	9-16-86
pH	7.4	6.7	7.7	7.5	7.2
CONDUCTIVITY, umhos/cm	3020	1670	1480	1370	1460
TOTAL DISSOLVED SOLIDS mg/l	1800	1080	904	1030	1110
SODIUM ADSORPTION RATIO	1.39	0.30	0.58	0.45	0.45
TOTAL HARDNESS AS $CaCO_3$	986	913	653	143	907
CALCIUM AS Ca	103	36	44	63	60
MAGNESIUM AS Mg	177	200	132	141	184
SODIUM AS Na	93	85	34	32	31
POTASSIUM AS K	36	14	11	34	19
TOTAL ALKALINITY AS $CaCO_3$	949	681	1111	1000	920
BICARBONATE ALKALINITY AS HCO_3	1136	831	1122	1220	1123
CARBONATE ALKALINITY AS CO_3	0	0	0	0	0
HYDROXIDE ALKALINITY AS OH	0	0	0	0	0
CHLORIDE AS Cl	2	17	19	19	34
FLUORIDE AS F	1.71	0.54	1.79	1.1	0.95
NITRATE + NITRITE AS N	3.66	68.1	0.45	0.26	0.05
SULFATE AS SO_4	202	43	21	14	32
ACIDITY	0	0	0	0	0
ARSENIC AS As	0.016	0.007	0.005	0.05	0.005
CADMIUM AS Cd (BY ICP)	0.002	0.005	0.005		
CADMIUM AS Cd (BY FURNACE)		0.005	0.005	0.005	0.005
CHROMIUM AS Cr	0.02	0.02	0.05	0.02	0.02
COPPER AS Cu	0.02	0.02	0.08	0.02	0.02
IRON AS Fe	0.05	1.54	0.54	0.19	1.78
LEAD AS Pb	0.02	0.02	0.05	0.02	0.02
MANGANESE AS Mn	0.50	0.36	0.48	0.28	0.37
SELENIUM AS Se	0.024	0.005	0.008	0.005	0.007
SILVER AS Ag	0.02	0.02	0.02	0.02	0.02
VANADIUM AS V	0.19	0.08	0.2	0.2	0.2
ZINC AS Zn	1.83	0.02	0.08	0.02	0.06
STATIC WATER LEVEL					

WELL LEWIS WELL

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-14-1984	2-15-85	7-11-85	10-11-85	2-3-86	6-2-86	9-19-86	12-9-86		
pH	7.4	7.2		7.2	7.1	7.0	7.3	7.7		
Conductivity, umhos/cm	1140	1150	1145	1050	1190	1260	1270	1330		
Total dissolved solids mg/l	742	832	678	656	728	757	1130	936		
Sodium adsorption ratio	0.97	0.73	0.83	0.97	1.77	0.86	0.96	0.94		
Total hardness as $CaCO_3$	542	552	557	544	615	663	647	674		
Calcium as Ca	118	119	119	114	131	142	142	143		
Magnesium as Mg	60	62	63	63	70	75	71	77		
Sodium as Na	52	42	46	52	44	51	56	56		
Potassium as K	8	7	5	5	7	8	7	7		
Total alkalinity as $CaCO_3$	417	397	469	391	388	408	385	386		
Bicarbonate alkalinity as HCO_3	509	484	572	477	474	498	470	471		
Carbonate alkalinity as CO_3	0	0	0	0	0	0	-0-	-0-		
Hydroxide alkalinity as OH	0	-0-	-0-	-0-	0	-0-	-0-	-0-		
Chloride as Cl	55	59	49	48	57	82	82	79		
Fluoride as F	0.35	0.31	0.40	0.38	0.44	0.47	0.41	0.36		
Nitrate & nitrite as N	9.28	6.56	7.01	4.36	3.95	8.96	9.13	7.96		
Sulfate as SO4	120	139	96	161	195	243	244	250		
Acidity	0	-0-	-0-	0	0	-0-	-0-	-0-		
Arsenic as As	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Cadmium as Cd (by ICP)	-0.005	-0.005	-0.005	-0.005	-0.005					
Cadmium as Cd (by furnace)				-0.005	-0.005	-0.005	-0.005	-0.005		
Chromium as Cr	-0.005	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Copper as Cu		-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Iron as Fe	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05	-0.05		
Lead as Pb	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Manganese as Mn	-0.02	-0.02	-0.02	-0.02	-0.04	-0.02	-0.02	-0.04		
Selenium as Se	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005		
Silver as Ag	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02		
Vanadium as V	-0.05	-0.05	-0.02	-0.05	-0.02	-0.02	-0.02	-0.02		
Zinc as Zn	0.06	0.09	0.07	0.04	0.27	0.07	0.10	0.08		
Static water level										

WELL SPG

Prepared by	Initials	Date
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 14 84	2 15 85	7-11-85	10 5 85	8 26 86	9-19-86				
pH	7.1	7.2		7.8		7.8				
Conductivity, umhos/cm	1370	1300	1210	1170		1370				
Total Dissolved Solids mg/l	980	956	860	636		1040				
Sodium Adsorption Ratio	1.03	0.40	0.87	0.95		0.36				
Total Hardness as $CaCO_3$	604	608	594	551		731				
Calcium as Ca	143	132	121	117		166				
Magnesium as Mg	72	73	71	64		77				
Sodium as Na	58	52	47	51		75				
Potassium as K	23	24	24	18		11				
Total Alkalinity as $CaCO_3$	311	292	290	337		446				
Bicarbonate Alkalinity as HCO_3	305	356	415	411		446				
Carbonate Alkalinity as CO_3	0	0	0	0		0				
Hydroxide Alkalinity as OH	0	0	0	0		0				
Chloride as Cl	51	56	62	55	Found not	58				
Fluoride as F	1.2	1.32	1.90	1.76	1.43 4.7	1.74				
Nitrate & Nitrite as N	7.46	6.06	6.31	8.53	15.2 3.5	10.69				
Sulfate as SO_4	277	291	272	247	15 75 2.5	216				
Acidity	0	0	0	0	10 00 3.5	0				
Arsenic as As	0.005	0.005	0.005	0.005		0.005				
Cadmium as Cd (by ICP)	0.005	0.005	0.19	0.005		0.005				
Cadmium as Cd (by Furnace)				0.005						
Chromium as Cr	0.03	0.03	0.00	0.03		0.03				
Copper as Cu	0.06	0.06	0.06	0.10		0.03				
Iron as Fe	0.05	0.05	0.05	0.10		0.05				
Lead as Pb	0.02	0.02	0.07	0.00		0.00				
Manganese as Mn	0.00	0.03	0.03	0.00		0.03				
Selenium as Se	0.005	0.005	0.005	0.005		0.005				
Silver as Ag	0.02	0.03	0.03	0.03		0.03				
Vanadium as V	0.06	0.05	0.03	0.07		0.3				
Zinc as Zn	0.05	0.07	0.33	0.07		0.03				
Static water level										

WELL SOUTHWEST SPRINGS

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11.09.84	2.13.85	7.11.85	10.5.85	2.3.86	6.2.86	9.17.86	12.9.86	4.23.87	
pH	6.8	6.9	6.8	6.7	6.5	6.8	7.0	7.7	6.8	
Conductivity, umhos/cm	1660	1630	1500	1620	1500	1310	1530	1530	1520	
Total Dissolved Solids mg/l	1044	1150	910	1013	952	760	1086	1000	944	
Sodium Adsorption Ratio	0.80	0.69	0.77	0.74	0.90	0.85	0.75	0.77	0.78	
Total Hardness as $CaCO_3$	599	567	794	551	764	657	835	812	778	
Calcium as Ca	133	127	142	124	84	77	117	119	104	
Magnesium as Mg	138	134	126	134	124	134	132	125	126	
Sodium as Na	55	47	50	50	55	50	48	47	50	
Potassium as K	16	15	21	14	11	13	12	12	12	
Total Alkalinity as $CaCO_3$	792	508	595	674	762	612	804	791	766	
Bicarbonate Alkalinity as HCO_3	967	786	1097	823	730	747	774	965	935	
Carbonate Alkalinity as CO_3	0	0	0	0	0	0	0	0	0	
Hydroxide Alkalinity as OH	0	0	0	0	0	0	0	0	0	
Chloride as Cl	42	35	30	27	35	34	32	31	28	
Fluoride as F	1.26	1.6	1.79	1.25	1.30	1.51	1.37	1.45	1.42	
Nitrate & Nitrite as N	6.91	3.63	3.49		2.36	3.14	3.22	3.91	3.49	
Sulfate as SO_4	134	113	66	104	109	35	98	86	95	
Acidity	0	0	0	0	0		0	0	0	
Arsenic as As	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	
Cadmium as Cd (by ICP)	0.001	0.001	0.001	0.005	0.005					
Cadmium as Cd (by Furnace)				0.005	0.005	0.005	0.005	0.005	0.005	
Chromium as Cr	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Copper as Cu	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Iron as Fe	0.05	0.02	0.05	0.05	0.15	0.15	0.05	0.17	0.05	
Lead as Pb	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Manganese as Mn	0.02	0.17	0.03	0.02	0.1	0.07	0.03	0.39	0.04	
Selenium as Se	0.007	0.006	0.008	0.009	0.009	0.009	0.009	0.009	0.008	
Silver as Ag	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Vanadium as V	0.02	0.06	0.02	0.09	0.3	0.2	0.2	0.2	0.2	
Zinc as Zn	0.02	0.08	0.08	0.07	0.07	0.57	0.10	0.10	0.10	
Static Water Level										

WELL Arnon Spring

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-09-84	2-18-85	7-11-85	10-5-85	2-9-86	6-2-86	8-29-86	9-19-86	10-9-86	
pH	7.1	7.2	7.2	7.3	7.2	7.2		7.2	7.9	
Conductivity umhos/cm	1450	1430	1034	1430	1300	1560		1300	1340	1
Total Dissolved Solids mg/l	942	1050	980	938	745	907		1070	584	2
Sodium Adsorption Ratio	1.26	1.13	1.09	1.55	1.13	1.16		1.03	1.07	3
Total Hardness as $CaCO_3$	642	632	647	551	589	644		594	385	
Calcium as Ca	117	193	121	114	104	144		124	104	5
Magnesium as Mg	79	79	79	72	80	75		72	74	6
Sodium as Na	75	65	80	65	66	65		58	58	7
Potassium as K	27	22	79	65	64	74		64	65	8
Total Alkalinity as $CaCO_3$	339	310	383	463	416	310		393	346	9
Bicarbonate Alkalinity as HCO_3	414	378	467	565	508	456		480		10
Carbonate Alkalinity as CO_3	0	0	0	0	0	0		0	0	11
Hydroxide Alkalinity as OH	0	0	0	0	0	0		0	0	12
Chloride as Cl	112	79	88	93	93	88		74	80	13
Fluoride as F	0.77	1.0	1.0	0.71	0.9	1.6	6.0	0.76	0.97	14
Nitrate + Nitrite as N	6.49	6.59	6.50	1.54	3.73	6.09		5.56	5.02	15
Sulfate as SO_4	285	293	285	88	175	297		194	200	16
Acidity	0	0	0	0	0	0		0	0	17
Arsenic as As	0.005	0.005	0.005	0.005	0.005	0.005		0.005	0.005	18
Cadmium as Cd (by ICP)	0.038	0.038	0.02	0.011	0.05					19
Cadmium as Cd (by Furnace)				0.011	0.05	0.008		0.008	0.024	20
Chromium as Cr	0.02	0.02	0.02	0.01	0.03	0.03		0.03	0.03	21
Copper as Cu		0.02	0.08	0.02	0.02	0.02		0.03	0.03	22
Iron as Fe	0.05	0.05	0.05	0.05	0.11	0.05		0.08	0.05	23
Lead as Pb	0.02	0.02	0.02	0.02	0.04	0.02		0.02	0.02	
Manganese as Mn	0.02	0.02	0.02	0.02	0.05	0.02		0.02	0.02	25
Selenium as Se	0.011	0.009	0.004	0.005	0.005	0.03		0.02	0.02	26
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.03		0.025	0.025	27
Vanadium as V	0.03	0.05	0.03	0.08	0.02	0.03		0.03	0.03	28
Zinc as Zn	0.3	0.3	0.3	0.3	0.02	0.7		0.2	0.2	29
Static Water Level								0.08	0.25	30

WELL MORMON SPRING (CONT

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	1-23 87									
pH	7.3									
Conductivity umhos/cm	1460									
Total dissolved solids mg/l	760									
Sodium adsorption ratio	1.3									
Total hardness as $CaCO_3$	525									
Calcium as Ca	103									
Magnesium as Mg	65									
Sodium as Na	57									
Potassium as K	1.4									
Total alkalinity as $CaCO_3$	375									
Bicarbonate alkalinity as HCO_3	458									
Carbonate alkalinity as CO_3	0									
Hydroxide alkalinity as OH	0									
Chloride as Cl	77									
Fluoride as F	1.3									
Nitrate + nitrite as N	1.9									
Sulfate as SO_4	162									
Acidity	<0									
Arsenic as As	<0.2									
Cadmium as Cd (by ICP)	0.2									
Cadmium as Cd (by furnace)	0.2									
Chromium as Cr	<0.2									
Copper as Cu	<0.2									
Iron as Fe	<0.5									
Lead as Pb	<0.2									
Manganese as Mn	<0.2									
Selenium as Se	0.3									
Silver as Ag	<0.2									
Vanadium as V	<0.2									
Zinc as Zn	0.2									
Static water level										

WELL *Hooper Springs*

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11-09-84	2-15-85	7-11-85	10-8-85	2-3-86	6-2-86	9-19-86	12-9-86	4-23-87	
pH	6.3	6.4	6.2	6.2	6.4	7.9	6.4	7.0	6.1	
Conductivity, umhos/cm	1420	1440	1319	1330	1430	1140	1420	1310	1310	
Total dissolved solids mg/l	860	750	834	796	808	816	1040	896	872	
Sodium adsorption ratio	0.53	0.36	0.47	0.50	0.52	0.56	0.39	0.45	0.33	
Total hardness as $CaCO_3$	726	773	774	767	513	537	770	731	669	
Calcium as Ca	111	115	109	111	67	14	117	108	72	
Magnesium as Mg	109	118	122	119	84	122	116	112	119	
Sodium as Na	33	23	30	32	27	30	25	28	35	
Potassium as K	14	14	17	12	11	15	11	11	12	
Total alkalinity as $CaCO_3$	733	787	881	709	813	531	759	755	704	
Bicarbonate alkalinity as HCO_3	919	960	1075	865	792	648	926	921	859	
Carbonate alkalinity as CO_3	0	0	0	0	1	0	0	0	0	
Hydroxide alkalinity as OH	0	0	0	0	0	0	0	0	0	
Chloride as Cl	8	8	1	13	13	13	16	10	15	
Fluoride as F	0.4	0.38	0.38	0.43	0.47	0.47	0.46	0.30	0.45	
Nitrate & nitrite as N	0.05	0.05	0.09		0.30	0.05	0.05	0.44	0.05	
Sulfate as SO4	35	54	53	52	61	75	61	54	57	
Acidity	0	0	0	0		0	0	0	0	
Arsenic as As	0.005	0.005	0.005	0.005	0.005	0.005	0.012	0.005	0.005	
Cadmium as Cd (by ICP)	0.005	0.005	0.005	0.005	0.005					
Cadmium as Cd (by furnace)				0.005		0.005	0.005	0.005	0.005	
Chromium as Cr	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Copper as Cu		0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Iron as Fe	4.54	5.27	3.98	4.62	3.60	3.66	5.64	6.02	5.04	
Lead as Pb	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Manganese as Mn	0.21	0.17	0.23	0.15	0.03	0.01	0.29	0.45	0.27	
Selenium as Se	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
Silver as Ag	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	
Vanadium as V	0.02	0.05	0.02	0.07	0.4	0.2	0.2	0.2	0.2	
Zinc as Zn	0.02	0.02	0.02	0.02	0.13	0.02	0.02	0.03	0.02	
Static water level										

WELL Doc SPRING

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11 19 84	3 18 85	7-11-85	2-3 86	6-2-86	9 17 86	12 9 86			
pH	6.2	6.3	4.9	6.8	6.0	6.4	7.0			
Conductivity, umhos/cm	1322	1470	1417	1470	1300	1370	1360			
Total dissolved solids mg/l	906	920	866	832	1211	1044	916			
Sodium adsorption ratio	0.53	0.40	0.46	0.52	0.61	0.56	0.49			
Total hardness as $CaCO_3$	750	816	762	706	581	766	774			
Calcium as Ca	109	116	104	113	30	104	109			
Magnesium as Mg	116	128	122	103	123	123	122			
Sodium as Na	33	26	29	32	34	25	31			
Potassium as K	13	15	18	11	15	11	12			
Total alkalinity as $CaCO_3$	801	813	934	748	296	815	800			
Bicarbonate alkalinity as HCO_3	778	772	1140	713	713	995	976			
Carbonate alkalinity as CO_3	0	0	0	0	0	0	0			
Hydroxide alkalinity as OH	0	0	0	0	0	0	0			
Chloride as Cl	24	12	11	17	14	14	11			
Fluoride as F	0.44	0.63	0.33	0.51	0.49	0.48	0.48			
Nitrate + nitrite as N	0.18	0.05	0.07	0.10	0.51	0.44	0.05			
Sulfate as SO4	36	59	48	58	59	46	56			
Acidity	0	0	0	0	0	0	0			
Arsenic as As	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005	-0.005			
Cadmium as Cd (by ICP)	-0.005	-0.005	0.017	0.005						
Cadmium as Cd (by furnace)				-0.005	-0.005	-0.005	-0.005			
Chromium as Cr	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Copper as Cu		-0.02	-0.02	0.02	-0.02	-0.02	-0.02			
Iron as Fe	5.79	7.20	4.92	1.91	8.39	5.40	7.15			
Lead as Pb	0.02	-0.02	-0.02	0.02	-0.02	-0.02	-0.02			
Manganese as Mn	0.20	0.16	0.20	0.33	0.37	0.31	0.44			
Selenium as Se	-0.005	-0.005	-0.005	0.005	-0.005	-0.005	-0.005			
Silver as Ag	-0.02	0.02	-0.02	-0.02	-0.02	-0.02	-0.02			
Vanadium as V	0.02	0.05	-0.02	0.3	0.2	-0.2	0.2			
Zinc as Zn	0.02	0.01	0.15	0.02	0.42	0.03	0.02			
Static water level										

WELL CALF SPRING

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11.09.84	2.18.85	7.11.85	10.8.85	2.3.86	6.2.86	8.29.86	9.19.86	12.9.86	
pH	7.0	7.8	5.7	7.2	7.3	7.9		7.5	7.7	
CONDUCTIVITY, umhos/cm	1490	1410	1406	1210	1130	1140		1250	1100	
TOTAL DISSOLVED SOLIDS mg/l	1230	1030	746	748	648	810		980	764	
SODIUM ADSORPTION RATIO	1.14	1.05	1.16	1.05	1.30	1.88		0.77	0.67	
TOTAL HARDNESS AS $CaCO_3$	651	637	613	579	522	588		569	553	
CALCIUM AS Ca	132	128	120	113	110	120		117	116	
MAGNESIUM AS Mg	78	77	76	72	60	70		66	64	
SODIUM AS Na	67	61	66	58	42	49		42	36	
POTASSIUM AS K	25	21	27	18	12	18		15	12	
TOTAL ALKALINITY AS $CaCO_3$	317	298	383	372	430	418		435	436	
BICARBONATE ALKALINITY AS HCO_3	387	364	467	464	522	510		531	535	
CARBONATE ALKALINITY AS CO_3	0	0	0	0	0	0		0	0	
HYDROXIDE ALKALINITY AS OH	0	0	0	0	0	0		0	0	
CHLORIDE AS Cl	91	64	72	72	45	53		45	36	
FLUORIDE AS F	8.14	8.85	7.96	7.05	4.4	5.9	7.5	4.39	5.02	
NITRATE + NITRITE AS N	7.76	6.45	6.75	3.50	1.36	4.13		3.63	2.83	
SULFATE AS SO_4	323	316	273	196	133	187		178	189	
ACIDITY	0	0	0	0	0	0		0	0	
ARSENIC AS As	0.006	0.005	0.005	0.005	0.005	0.005		0.004	0.005	
CADMIUM AS Cd (BY ICP)	0.005	0.005	0.005	0.005	0.005					
CADMIUM AS Cd (BY FURNACE)				0.005	0.005	0.005		0.005	0.005	
CHROMIUM AS Cr	0.02	0.02	0.02	0.02	0.02	0.02		0.02	0.02	
COPPER AS Cu		0.02	0.02	0.02	0.02	0.02		0.02	0.02	
IRON AS Fe	0.05	0.05	0.05	0.05	0.05	0.06		0.07	0.11	
LEAD AS Pb	0.02	0.02	0.02	0.02	0.03	0.02		0.02	0.02	
MANGANESE AS Mn	0.02	0.02	0.03	0.02	0.1	0.02		0.02	0.11	
SELENIUM AS Se	0.006	0.005	0.005	0.005	0.012	0.27		0.005	0.005	
SILVER AS Ag	0.02	0.02	0.02	0.02	0.02	0.02		0.02	0.02	
VANADIUM AS V	0.03	0.05	0.03	0.07	0.3	0.3		0.2	0.2	
ZINC AS Zn	0.08	0.08	0.08	0.08	0.07	0.05		0.08	0.06	
STATIC WATER LEVEL										

WELL CALF SPRING CONT.

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	4 23 87									
pH	7.2									
Conductivity, umhos/cm	900									
Total Dissolved Solids mg/l	704									
Sodium Adsorption Ratio	0.70									
Total Hardness as $CaCO_3$	556									
Calcium as Ca	120									
Magnesium as Mg	62									
Sodium as Na	38									
Potassium as K	1.7									
Total Alkalinity as $CaCO_3$	450									
Bicarbonate Alkalinity as HCO_3	548									
Carbonate Alkalinity as CO_3	0									
Hydroxide Alkalinity as OH	0									
Chloride as Cl	41									
Fluoride as F	.79									
Nitrate & Nitrite as N	.66									
Sulfate as SO_4	123									
Acidity	0									
Arsenic as As	<0.005									
Cadmium as Cd (by ICP)	—									
Cadmium as Cd (by Furnace)	<0.005									
Chromium as Cr	<0.02									
Copper as Cu	<0.02									
Iron as Fe	<0.05									
Lead as Pb	<0.02									
Manganese as Mn	<0.02									
Selenium as Se	<0.005									
Silver as Ag	<0.02									
Vanadium as V	<0.2									
Zinc as Zn	0.06									
Static Water Level										

	Initials	Date
Prepared by		
Approved by		

WELL EFFLUENT

	1	2	3	4	5	6	7	8	9	10
	11-09-84	2-19-85	2-03-86	9-19-86	4-23-87					
pH	7.9	8.1	7.9	8.1	8.1					
CONDUCTIVITY, umhos/cm	1340	1220	1150	979	1170					
TOTAL DISSOLVED SOLIDS mg/L	872	804	780	964	728					
SODIUM ADSORPTION RATIO	1.72	1.33	1.20	1.00	1.14					
TOTAL HARDNESS AS $CaCO_3$	508	558	562	558	524					
CALCIUM AS Ca	116	126	119	126	124					
MAGNESIUM AS Mg	53	59	62	59	52					
SODIUM AS Na	89	75	119	54	60					
POTASSIUM AS K	11	10	8	10	8					
TOTAL ALKALINITY AS $CaCO_3$	398	422	411	422	407					
BICARBONATE ALKALINITY AS HCO_3	486	515	508	515	497					
CARBONATE ALKALINITY AS CO_3	0	-0-	-0-	-0-	0					
HYDROXIDE ALKALINITY AS OH	0	-0-	-0-	-0-	0					
CHLORIDE AS Cl	134	75	170	93	78					
FLUORIDE AS F	1.69	1.02	0.76	0.76	0.59					
NITRATE & NITRITE AS N	6.78	5.68	4.21	7.09	5.72					
SULFATE AS SO_4	110	136	110	117	102					
ACIDITY	-0-	-0-	-0-	-0-	-0-					
ARSENIC AS As	0.01	-0.005	0.014	0.004	-0.05					
CADMIUM AS Cd (BY ICP)	0.022	0.030	0.022	/	-					
CADMIUM AS Cd (BY FURNACE)			0.020	0.004	0.046					
CHROMIUM AS Cr	-0.02	-0.02	-0.02	-0.02	<0.02					
COPPER AS Cu		-0.02	0.02	-0.02	<0.02					
IRON AS Fe	-0.05	-0.05	0.06	-0.05	<0.05					
LEAD AS Pb	-0.02	-0.02	0.03	-0.02	<0.02					
MANGANESE AS Mn	-0.02	-0.02	0.03	-0.02	<0.02					
SELENIUM AS Se	0.004	-0.005	0.009	0.009	0.008					
SILVER AS Ag	0.02	0.02	-0.02	-0.02	<0.02					
VANADIUM AS V	0.05	-0.05	0.3	-0.2	<0.2					
ZINC AS Zn	0.03	-0.05	0.07	0.07	0.07					
STATIC WATER LEVEL										

WELL [illegible]

	Initials	Date
Prepared by		
Approved by		

	1	2	3	4	5	6	7	8	9	10
	11.13.84	3.26.85	7.10.85	10.9.85	2.03.86	6.2.86	9.17.86	12.1.86	4.21.87	
pH	7.5	7.4	7.1	6.5	7.2	6.8	7.2	7.4	7.2	
Conductivity, umhos/cm	1370	1950	1112	1190	1170	1200	1400	1400	1370	
Total Dissolved Solids mg/L	1094	920	728	794	634	1031	1000	1010	880	
Sodium Adsorption Ratio	1.00	1.31	1.30	0.86	0.88	1.05	1.03	1.22	1.23	
Total Hardness as $CaCO_3$	644	629	550	569	516	648	570	647	556	
Calcium as Ca	128	135	118	124	106	142	133	140	127	
Magnesium as Mg	73	71	64	63	61	74	64	74	58	
Sodium as Na	73	70	43	47	44	63	74	59	66	
Potassium as K	14	15	17	13	10	15	13	13	12	
Total Alkalinity as $CaCO_3$	494	419	494	381	425	424	410	423	411	
Bicarbonate Alkalinity as HCO_3	542	511	603	465	517	517	500	516	502	
Carbonate Alkalinity as CO_3	0	0	0	0	0	0	-	-	0	
Hydroxide Alkalinity as OH	0	0	0	0	0	0	-	-	0	
Chloride as Cl	141	109	35	65	65	110	120	166	100	
Fluoride as F	1.79	1.60	1.03	1.97	0.96	1.5	1.19	0.99	0.86	
Nitrate + Nitrite as N	11.9	6.32	6.03	17.5	9.94	8.15	8.09	7.64	6.58	
Sulfate as SO_4	144	172	55	115	123	163	138	129	125	
Acidity	0.00	0	0	0	0	-	-	-	-	
Arsenic as As	0.007	0.008	0.008	0.005	0.005	0.006	0.009	0.008	0.008	
Cadmium as Cd (by ICP)	0.190	0.300	0.09	0.09	0.09	0.130	-	-	-	
Cadmium as Cd (by furnace)										
Chromium as Cr	0.02	0.03	0.03	0.02	0.02	0.03	0.05	0.04	0.03	
Copper as Cu		0.03	0.03	0.02	0.02	0.03	0.03	0.02	0.02	
Iron as Fe	0.05	0.05	0.05	0.05	0.1	0.03	0.03	0.02	0.02	
Lead as Pb	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.09	0.09	
Manganese as Mn	0.02	0.03	0.02	0.02	0.05	0.08	0.03	0.11	0.02	
Selenium as Se	0.005	0.005	0.005	0.015	0.007	0.03	0.03	0.005	0.005	
Silver as Ag	0.03	0.03	0.03	0.07	0.03	0.1	0.03	0.03	0.03	
Vanadium as V	0.05	0.05	0.05	0.2	0.2	0.2	0.2	0.2	0.2	
Zinc as Zn	0.18	0.24	0.18	0.19	0.11	0.97	0.19	0.18	0.16	
Sialic Acid (SiO2)										

Monsanto Sampling Plan

Proposed Sample Location	Analytical Parameters	Sampling Rationale
TW15	metals, ions, organics	Background well
TW38	metals, ions	Background well
TW40	metals, ions, organics	Potential source - Near old clarifier pond.
TW37	metals, ions	Potential source - Near underflow solids ponds.
TW22	metals, ions	Potential source - Near Coke & Quartzite pond.
TW17	metals, ions	Potential source - Near North West pond.
TW36	metals, ions	Down gradient - Near effluent ponds.
TW39	metals, ions	Down gradient - Near effluent ponds.
SWG	metals, ions	Down gradient - Off site well
PW1	metals, ions, organics	Down gradient
PW2	metals, ions, organics	Down gradient
PW3	metals, ions, organics	Down gradient
Mormon Springs	metals, ions, organics	Down gradient - off site well
NPDES monitor station	metals, ions	Down gradient - irrigation water
North West Pond	metals, ions (Liquid & Solid)	Characterize contaminants in pond
Old underflow ponds		
Coke & Quartzite slurry pond		
Effluent settling pond		
* Seal water pond		
* Phossy water surge pond		
* Sewage evaporation lagoons		

Domestic wells (plant facility)

* Require further ~~investigation~~ research into possible contaminants

Note: All samples taken from shallow aquifers with fresh water only.