JIM WELLS COUNTY, TEXAS

Records of wells, driller's logs, water analyses, and map showing location of wells.

TEXAS STATE BOARD OF WATER ENGINEERS

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Prepared in cooperation with the United States Department of the Interior, Geological Survey Introduction

By

Walter N. White Senior Hydraulic Engineer

This release contains records of wells in Jim Wells County, together with tables of well logs and well water analyses. It is illustrated by a map on which the wells listed are shown, each well being given a number on the map corresponding to the number assigned to it in the tables. The records were obtained during the summer and fall of 1933 by Samuel F. Turner, Walter A. Lynch and James C. Cumley in the course of an investigation by the Texas Board of Water Engineers in co-operation with the United States Department of the Interior, Geological Survey. Samples of water were taken from a large number of the wells and tested in the field to determine approximately the hardness of the water and its chloride content. Altogether about 400 wells fairly well distributed through the county are described in the tables.

The southern part of the county, from Ella to the Brooks County line, was studied more intensively and from these studies the following facts are summarized: altogether 157 wells were recorded and mapped in this part of the county in 1933, of which 139 are deep (300 to 900 feet) and the others shallow, of these wells 61 were used for irrigation as well as for domestic use and stock, with about 360 acres being irrigated or an average of about 6 acres to each well, the irrigated crops consisted mostly of citrus fruits and garden truck, the total withdrawal of ground water in this part of the county in 1933 was estimated as amounting to 700 to 800 acre-feet.

From a partial inventory, made in April 1940, it is estimated that there has been a reduction of approximately 60% in the total irrigated acreage as compared with that in 1953-34. The reduction has been due to the almost complete cessation of irrigation by the owners of the smaller citrus groves and to a reduction in the acreage of truck farms irrigated with ground water. However the farmers who have maintained operations are now irrigating more thoroughly, and as the groves are older and the trees larger, more water is used to the acre than was used in 1933-34. Therefore it is probable that there has been little change in the total amount of ground-water used for irrigation since 1933-34.

The public water supply of Alice, the county seat, is obtained from four wells (Nos. 153 to 156) ranging from 535 to 992 feet in depth. The average daily pumpage from these wells in 1938 varied from about 240,000 to about 450,000 gallons a day, and averaged 346,100 gallons a day. A fifth well (No. 410) was being completed at the time this was written. The town of Premont is supplied from a well (No. 418) 520 feet in depth, which is reported to yield about 120 gallons a minute.

Since the summer of 1933 periodic measurements of water levels in 10 selected wells have been made in the south central and southern parts of the county. Seven of these wells are less than 100 feet in depth, one is 125 feet, one is 475 feet and one is 629 feet in depth.

The records show that the water levels in the shallow observation wells fluctuates with the rainfall. Some of them were lower in October 1939 than they were in October 1933 and others were slightly higher. The deep wells apparently have

been affected to some extent by withdrawals of ground water for irrigation in this county and in an adjacent area in the northern part of Brooks County. One of the deep observation wells showed a net decline of 1-3/4 feet and the other a net decline of about 7 feet during the seven years.

In most of the county, water encountered at shallow depths is somewhat highly mineralized, although there are numerous exceptions to that rule. In general the best water is obtained from wells 250 to 700 feet deep in the south central and southern parts of the county.

The records given in this release serve as a guide to land owners and others who need information regarding wells and pumping plants in different parts of the area, and the quantity and quality of water yielded by the wells.

The publication was mimeographed by employees of the Work Projects Administration project No. 10443.

Records of wells in Jim Wells County, Texas (Principal water-bearing beds are sand or sandstone.)

	(Pri:	ncipal water-bea	ring beds are	sand (or san	dstone.		
		1					Water-be	earing bod
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter ·	to top	ness of
	Orange Grove			ple-	well	of	of bed	bed
				ted	(ft.)		(ft.)	(ft.)
				a/	1	(in.)		
	17 miles	L. Rodrigues		 	65		-	-
	west northwest							İ
2	17 miles	0. Rodrigues	-	-	74	4	-	-
	west northwest			1				
		Allegreia Est.	-	-	135	4	_	-
				1	1			
	do.	Pedro Trevino	-	-	158	$4\frac{1}{4}$	-	-
				1		1		
<u> </u>	16 miles	Jose Maria		-	178	4	165	-
	west northwest	Salinas						1
7 6	do.	School Dist.	G. Cosa	1930	80	4	-	-
		No. 16		ł				
				1				<u> </u>
7	16 miles	S. E.	-	-	170	4	-	-
	west northwest	1						
	15½ miles	Mrs.	Davis	1913	105	4	105	_
	west northwest							
5		H. Hyman	-	1927	158	4	† <u>-</u>	_
10	15 miles	Mrs.	_	 	102	6	_	
	west northwest	l .		1				
7.1	15 miles	S. N. Smith	S. N. Smith	1930	118	4	115	3
J	west northwest	F .	24 24 2412 511	1.000		-		
12		M. E. Ellict	-		115	6		
7.9	15 miles	J. T. Reeves			118	4	_	
	west northwest	į.				_		
14	14 miles	Mrs.		01d	85	4 -	 -	
	west northwest	į.		014	"	- -		
1.5	13½ miles	E. R. Davidson	-	 	295	4분	255	40
	west northwest	200140011		1	200	-4	1	
e/ 16	13 miles	S. M. Freeborn	A. C. White	1926	275	4분	232	42
2/ 10	west northwest	1		1 -020	~	-4]	
77	12 miles	Mrs.			200	6		
- '	west northwest	i				_		
1.8	16 miles	do.		1929	280	_		
3. 0	west northwest			1				
10	14 miles	do.		 -	200	_	-	
J. C.	west northwest	1			~~~			
20	12 miles	do.	_	 -	90	6	 	
۵۷	west northwest	1		_	1	ľ	1	
2]		do.		 	280	6		-
دى	TT MITTOS WOSE				1 200	Ĭ		
	ļ	L	<u> </u>	<u> </u>	<u> </u>	<u> </u>	1	1

a/Old, probably completed prior to 1910.

b/H, hand pump or rope and bucket; W, windmill; A, air lift; T, deep well turbine; J, jack pump; E, electric motor; G, gasoline engine or oil engine.

c/P, public supply; RR, locomotives; I, irrigation; Ind, industrial; D, domestic; S, stock; N, not used.

Hardness as calcium carbonate by the soap method.

	(A1)	l wells are dr level	illed unle	ss other			
™o.	Depth below		-Mother of	II-c -C	Field		3
4O .			Method of				Remarks
		measurement	lift and	water		lion)	
	bench mark		amount of	<u>c/</u>	Chlo-		
	(ft.)		power		ride	ness d/	
	53.8	Nov. 20, 1933	b/	D,S	0.5	<u> </u>	On harland mark
1	55.6	NOV. 20, 1900) 41	D,S	85	500	On bank of creek.
2	50.0	do.	H	D,S	220	500	do.
3	102	do.	H	N	1,100	1,300	
 4	-	do.	W	D	440	460	
5	_	_	H	D,S	1,000	1,000	
			<u></u>	<u> </u>	ļ		
6	50.2	Nov. 18, 1933	H	P	210	360	Well is near permanent pool in creek. 70 feet of 4 inch casing. Temper
7	-	-	ΥŲ	D,S	170	370	
8	•-		Ŧ	D,S	800	950	Struck water under hard rock.
9	-		W	D,S	340	500	First water at 90 feet.
10			1 7 7	S	1,200	1,400	
11	-	***	1 7	D,S	440	700	First water at 85 feet.
12	76.8	Nov. 16, 1933	, , , , ,	S	440	550	
13	95.2	do.	W	S	-	-	
14		<u></u>	ěŽ	S	750	850	
15	**************************************		l w	D,S	500	500	
		75 07 7094					
16	71.0	Mar. 21, 1934	1	D,S	400		Well cased to 232 feet.
17	-	prop	พ	S	700	700	
18	-	nggantakan nggantakan nggantakan nggantakan nggantakan nggantakan nggantakan nggantakan nggantakan nggantakan Tagan	77	Š		_	
19			₹7	S	-	-	ages vanditiere trentroment inserval vandelen kommit en omentempretegen de op van meet de name de same
20		aller	भूग	S	550	850	
21	-	100	77	D,S		-	
!	į		1	i	į		

For analysis of water see under well number in table pp 54 ,

F/Reported by driller.

g/Measured by S. S. Nye, U. S. Geological Survey.

h/Sulphate test by turbidity method and may be as much as 25 per cent error. T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

Records of wells in Jim Wells County -- Continued

	Record	is of wells in	Jim Wells Count	у	Contin			
							Water-bea	
No.	Distance	Owner	Driller	1			Depth	Thick-
	from			com-		eter	to top	ness of
	Orange Grove			1 -	well	of	of bed	bed
				ted	(ft,)	well	(ft.)	(ft.)
				a/		(in)		
22	14 miles west	Mrs.	100	Old	80		-	-
		R. Shaeffer						į
23	142 miles	do.	_	1929	280	4-	-	
~~	west			1000				
24	17 miles west	de.		1928	380	11	350	30
27	TI WITTER MERC	uo.	_	1320	300	44	500	
0.5	362	3.		1	1 700	1		
25	15½ miles	do,	-	Old	180	44	_	_
	west			<u> </u>				
26	$13\frac{1}{2}$ miles	do.	-	-	200	-	-	-
	west							
27	ll를 miles	do.	-	-	280	-	-	-
	west							
28	12 miles west	do.	THE PERSON OF TH	-	190	_	-	-
29	do.	Mrs.	Gulf Pro-	1932	3,044	5-5/8	-	
NC		R. Shaeffer	duction Co.	1002	0,011) 0,0		
			duction oo.					
30	70 1	No. 5	7	 	750			
30	10 miles west	T. L.	L. Jurgens	-	350	144	_	-
		Delemater		<u> </u>				
31	do.	Mrs.	-	-	400	4-2	-	-
		M. Stehle						
32	12 miles	Mrs. R.	Gulf Pro-	1931	2,362	6-5/8	-	-
	west northwest	Shaeffer, No.4	duction Co.	1	1			
33	10 miles	Mrs. R.	do.	1931	2,861	10		-
	northwest	Shaeffer, No. 3			'			
34	8 miles	Mrs. R.	do.	1931	3,007	6-5/8	-	
	northwest	Shaeffer, No. 2			,			
35	7를 miles	M. T. Kelso	J. Cemisack	1925	248	3	239	9
	west northwest	12. 1. 110100	O. Cominging	1 220	210	Ŭ	200	ľ
	Mesc Holouwesc							•
7.0	6 miles	D 0 7	T T	7074		41	7.77	70
50		Dr. C. Frey	L. Jurgens	1934	212	42	174	30
77.5	west northwest	<u> </u>	<u> </u>	1				
37	$5\frac{1}{2}$ miles	Charles Cook	, –	1929	4,795	152	-	-
-	north northwest		Petroleum					
38	4호 miles north	John Benson	-	Old	80	44	-	-
	northwest							
					1			ļ
39	$3\frac{1}{2}$ miles north	H. Fuhrken	A. C. White	1932	341	6		_
	northwest]		
40	3 miles north	A. C. Fuhrken	David Usel	1913	125	4-	-	
	northwest							
41	4 miles	Smith	L. Jurgens	1933	256	1	236	20
	southwest	Dill off	D. Ourgons	1300	200	T	200	20
	20 M OT IM C 2 C			1	1			ŀ
					1			1
	2/4 : 1			 -		ļ		
42	3/4 mile west	L. A. Straub	-	-	175	4	-	-
	, , , , , , , , , , , , , , , , , , , ,							
43	1/4 mile north	B. Cornelius	L. Jurgens	1925	245	4	-	-
€/44	In Orange	Mrs.	J. Cemisack	1927	217	5	-	_
	Grove	G. F. Teller						
45	6 miles north	Wade, No. 1	Simms Oil Co.	-	2,966	-	-	
į	northeast	1			_			
		1	1		L	I		<u> </u>

~. *******	· · · · · · · · · · · · · · · · · · ·		drilled unie	755 00110			
		level				tests	
	Depth below	1	Method of	1			Remarks
		measurement	i	water	milli		
	bench mark		amount of	c/	Chlo-	Hard-	
	(ft.)		power		ride	ness	
			<u>b</u> /			<u>d</u> /	
22	-	-	M	D,S	-	-	Small supply of water.
				<u> </u>	<u> </u>		
23	114.2	Feb. 1, 19		S	1,000	950	
24	-	-	W	S	500		Two good sands above 350 feet.
25		-	W	S	1,400	1,600	
26	-		77	S	-	-	
27	-	may .	791	S	220	430	
28	-		vj	S	-	-	
29	•		-	-	-	_	Oil test, Initial pro- estimated at 7,000,000 cubic feet of gas a day!
30	133.4	Jan. 25, 19	34 W	D,S	500	370	Small supply of water reported.
31	164.7	do.	M	D,S	750	1,000	
32	-	-	=14	-	-	-	Oil test. No production reported. i
33	_	end	-	-	-	-	Oil test. No production.
34	-		-	-	-	-	do.
35	-	-	भ	D,S	-		Casing; 239 feet of 3 inch. First strata at 157 feet. Weak supply.
36	-	***	-	N	-	-	New well, pump not yet installed.
37	-	-	-	-	-	-	Oil test. No production,
38	66.5	Feb. 10 19	34 T	D,S	150	420	Reported water level as 15 to 20 feet below surface about 1914.
39	101.3	Feb. 6, 19	34 -	N	-	-	Well drilled to supply water for drilling oil
40	105.5	do.	T.J	D,S	850	950	test.
41	-	-	म	S	_	_	Casing; 256 feet of 4 inch with bottom 20 feet perforated. First water stratum found at 125 feet
42	•••	-	77	D,S	-	-	
43	***	ess.	म	D,S	-	-	Casing; 209 feet of 4 inch.
44	150.6	Mar. 21, 19	34 W	D	500	500	Cased to bottom. Temperature 78° F.
		 		}			Oil test. No production.

	Record	ds of wells in a	Jim Wells Count	y (Contin	ıed		
Market Mark Market Co.			1	1	<u> </u>		Water-bea	ring bed
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	Orange Grove			ple-	well	of	of bed	bed
				ted	(ft.)	well	(ft.)	(ft.)
				a/	1	(in.)	3 '	1 (100)
7 40	15 33	D	17 G D 11		1 335			
e/ 46	5 miles east	Tom Bowden	W. C. David	1931	115	44	112	3+
	northeast					<u> </u>		
47	7분 miles	N. Bruni,	Simms Oil Co.	-	2,737		-	-
	northeast	No. 1					ļ	
48	9 miles	A. T. Teller	A. T. Teller	1930	72	44	70	2+
~~	northeast		1	1		-4	·	
4.0		TI O		 	110	1		
49	7분 miles	Harry Cade	-	_	110	4	-	_
	northeast							
50	3½ miles	Mrs.	-	Old	192	44	-	-
	east	W. Wiechring						1
51	2-3/4 miles	F. B. Boerner	-	01d	150	5-3/	16 -	_
	southeast					/		
	L			7000	3,003	120 -		
52	4호 miles	Ragland,	R. & G.	1929	10,000	10	_	_
	south	No. 1	Corporation		<u> </u>	<u> 1</u>		<u> </u>
				I	1	i	Water-bea	ring bed
No.	Distance	Cwner	Driller	Date	Depth	Diam-	Depth	Thick-
_,	from			com-	of	eter	to top	ness of
	•			1	well	of	of bed	bed
	Alice			ple-		Ŧ	1	1
				ted	(ft.)	well	(ft.)	(ft.)
				a/		(in.)		
53	14 miles	Eduardo	R. A. Raba	1928	273	4	-	-
	northwest	Barrera		ĺ				
54	13를 miles	do.		1922	240	4		
01	1 ~			1022	21.7	_		
	northwest	·				 		
55	13 miles	G. B.		Old	80	-	_	_
	northwest	de Garcia	-					
56	do.	Francisco	F. G. Garcia	1914	150	5	-	-
		Barrera		1				
57	125 miles	G. B.		Old	90	4		
01	northwest	de Garcia		010		_		
	northwest	de Garcia						
58	12 miles	James Luby,	-	-	131	4	-	-
	northwest	Est.		1				
59	do.	M. E. Barrow	-	_	142	4	-	_
•								
co.	$13\frac{1}{2}$ miles	Tomog Luber		 	155	5		
00	. ~	James Luby,	_	_	155	3		-
	northwest	Est.		ļ	 			
61		do.	_	-	110	5	_	_
	northwest				L			
62	13 miles	Mrs.	_	1928	400	-		-
	northwest	R. Shaeffer		[
63	12 miles	Black & Beall		<u> </u>		6		
00		Diack & Deali		_	_	Ŭ		
	northwest				100			
64	12 miles	D. Saueda		1908	126	4	-	-
	northwest							
65	do.	Nestor	Juan Hinojosa	1860	62	72	-	-
		Villareal	ŭ					
66	do.	J. B.		1925	110	4		
00	αο.	· .	_	1360	110	#	-	_
		Resendes		7.00				
e/ 67	do.	Manuel Trejo	L. Rodrigues	1926	150	$4\frac{1}{4}$	145	5
	_				L			
68	ll miles	Felix Trejo		_	105	-	-	_
	northwest							
69	<u> </u>	James Luby,	_		147	5		_
09	αυ.	•	-	-	7.4.	J		_
		Est.		7.00-	2.5			
70	ll miles north	W. T. Wright	Turner	1903	206	6	-	_

				-8-			
	(Al:	l wells are dri	illed unle	ss other	wise :	stated	in remarks.)
	Water	level			Field	tests	
No.	Depth below	Date of	Method of	Use of	(Part	s per	Remarks
		measurement	lift and	water	mill		
	bench mark		amount of			Hard-	
	Ŧ		•	_ 2∕	•	I	
	(ft.)		power		ride	ness	
			<u>b/</u>	<u> </u>	<u> </u>	₫/	
46	! -	-	E	D,P	250	370	Casing; 112 feet of $4\frac{1}{2}$
							inch. Temperature 76° F.
27		_			 		Oil test. No production.
•			_	1 -	_	_	off cest, we production.
48	42.4	Feb. 6, 1934	H	D,S	75	420	,
					1.		inch.
49	77.6	do.	W	D,S	240	420	
50	120.0	do.	W	D,S	700	750	
50	120.0	uo,	1 1	ν,ο	100	750	
				<u> </u>			
51	-	-	TV	D,S	550	500	
				}			
52	-	_	_	-	_		Oil test. No production.
J.				1			i i i i i i i i i i i i i i i i i i i
		1				1 	
	Water	level	i		Field	tests	
No.	Depth below	Date of	Method of	Use of	(Part	s per	Remarks
	surface or	measurement	lift and	water	mill		
	bench mark		amount of			Hard-	
	6		1	<u>o</u> /		1	1
	(ft.)		power	l	ride	ness	
			<u>b</u> /				
53	-	-	W	D,S	460	330	
				'	1		
54			7.7	S		 	200 feet of 4 inch
O±	_	_	**		_	_	
							casing.First water at
55	-	-	W	D,S	-	-	Dug well. 60 feet, bad.
					ļ	l	
56	-	-	W	D,S		-	
			1	- ,-			
57			W	D,S	 	 	Oni ni no 13 m du n mo 11 OF
57	_		7.1	ס, ע	-	-	Originally dug well 85
			† }				feet deep. Drilled to 90
						1	feet in 1905 and filled
58	_	••	M	D,S	700	850	Dug well around casing
			1				to 63 feet, drilled to
59			l 13	D,S	650	900	131 feet
03	_	_	13	D,0	000	300	101 1660
					<u> </u>		
60	-	-	Ţ	D,S	-	-	
				1	İ		
61	_	-	W,H	N	 	T -	
~					1		
62			W	S	 	 	
30	-	-	72	5	-	-	
63	89.9	Nov. 22, 1933	W	D,S	1,200	650	
		_	-		1		
64	59.3	do.	77	D,S	800	850	
O#	09.0	uo.	17	υ,ο	1 000	000	
					<u></u>	<u> </u>	
65	56,9	do.	W	D,S	1,300	1,500	Dug well, cypress curb-
				<u> </u>		1	ing to 50 feet.
66	-	-	H	D,S	450	450	
30			-	, ~,~	1	1	
- 65	64.0	Mars 01 3074	TH.		1 200		1145 0-24 0 44 : 3
67	64.9	Mar. 21, 1934	é¥	D,S	1,000	850	145 feet of $4\frac{1}{4}$ inch
			<u> </u>	i 	<u></u>	<u></u> _	casing.
68	60	-	' II	D,S	1,900	1,500	
					1	1	
69	**	_	W	D,S	650	1,100	
		•	••	∪ون	000	1,100	
				D 2	7 5 -		
70	-	-	W	D,S	T,000	1,100	
	1	i .		,	1		1

Records of wells in Jim Wells County -- Continued

	Recor	ds of wells in J	im Wells Count	y C	Continu			
			The state of the s				Water-bea	ring bed
$\mathbb{N}o$.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	Alice			ple-	well	of	of bed	bed
	,			ted	(ft.)	well	(ft.)	(ft.)
				<u>a</u> /	1,000	(in.)	(100)	(10,)
	12 miles	Francisco		1 2/	125	1113/		
1.	[F	ł	_	-	125	-	-	_
	northwest	Gonzales		<u> </u>	<u> </u>			
72	리b miles	Cumilo	_	-	125	-	-	-
	northwest	Palacios						
7	3 11 miles	James Luby,	-	Old	236	5	-	-
	northwest	Est,			1	1		
74	do.	Mrs. Martha		1890	78	60		
		Gonzales		1000	1			
				1010		100		
7	do.	R. Robles	-	1910	85	60	-	~
		<u> </u>			<u> </u>			
7	$6 10\frac{1}{2}$ miles	Amando G.	-	-	154	5	-	-
	northwest	Martinez						
7'	do,	James Luby,		-	137	6	_	_
	,	Est.						
		1360.						
7.	170 27	T		1000	60	72		
73	3 10 miles	Juanita V.	-	1888	02	12		-
	northwest	Everette						
	l		L		l			
78	Ba do.	do.	-	1908	200	6		-
]]		
79	10 miles north	Francisco	Panteleon	1850	68	72		
, ,	northwest	Gonzales	Rostro	7		~		
0/		Clemente	105010	1921	130	4		
00	9½ miles north	1	_	1921	130	+	-	-
	northwest	Hinojosa		ļ				
8	do.	Antonio Perez	-	-	226	-	-	-
82	do.	Clemente	-	1909	200	6	_	_
		Hinojosa						
8!	3 11 miles north	L. Jurgens	 	1910	160	4분		
0.6		D. ourgons		?	100	74		
	northeast	<u> </u>	 		000		070	
84	10 miles north	W. W. Perry	John Riggins	1921	290	5	270	20
	northeast							
85	do.	School Dist.	-	1914	267	$4\frac{1}{4}$	-	-
		No. 12						
86	9를 miles north	B. Cornelius	L. Jurgens	-	243	4		-
	northeast						1	
O.	8 miles	J. H.	1	1913	255	6		
0	1	1	_	1910	200	٠	-	_
	northeast	Hoelscher		1205=		<u> </u>		460
88	7 miles	Alamo	-	1927	429	4	390	429
	northeast	National Bank						
e/ 89	6 miles north	N. S. Wimbs	-	1928	431	6	- [-
	northeast					1	Ì	
90	$6\frac{1}{2}$ miles	W.B. Gregory	N.B. Gregory	_	150	6		
	northwest	"• = • ar o g = r y						
- 0	$4\frac{1}{4}$ miles north	San Antonio	Whitson	1926	375	$-\frac{1}{4^{\frac{1}{4}}}$	363	12
J.	1 44 milles north		1 :	1320	010	4	000	14
		Loan & Trust Co	Bros.				-	
92	5 miles	7. C.	-	1926	417	44	-	-
	northeast	Wedimeyer					1	
		U				1	l	
				ı	ŀ	1	1	
	7½ miles	V. E. Bird	Whitson	1925	314	6	295	19
J.	,	A. D. DIIG	1	1000	017	<u> </u>	200	
	northeast		Bros.	i		L	1.	·

	(Al)	wells are dri	lled unles	ss other			in remarks,)
	·	level			Field		
No.	Depth below	Date of	Method of				Remarks
	surface or	measurement	lift and	water	milli		
	bench mark		amount of	c/	Chlo-	Hard-	
	(ft.)		power	_	ride	ness	
			<u>b</u> /			₫√	
71	-		ग्र	D,S	-	-	
72			W	D,S		-	
12	_						
73	 		J,G,-	S	1 100	1.800	Water used for irrigation
13	_	_	0,0,	_	.,	, , , , , ,	until 5 years ago when
							the water became salty.
	07.0	N. 03 1077	W	D,S	750	800	Dug well.
74	63.0	Nov. 21, 1933	-3.8	ν,υ	1007	000	Dag worr
				70.0	1 700	7 900	Dug well 85 feet deep
75	72.0	do.	T	D,S	1,100	1,000	with uncased, drilled
					ļ		well 12 feet deeper.
76	-	-	W	D,S	-	-	well is leet deeper.
							77 77 2 2 3 3 3
77	-	_	W	S	-	-	Well was originally dug
						Į.	110 feet deep, drilled
							to 137 feet and filled
78	54.2	Nov. 10, 1933	-	N	1,000	2,000	Dug well, around casing.
							Was used until 1908 when
							well was drilled deeper.
78	a 60.4	do.	VI	D,S	750	1.200	Casing of drilled well
10	a. 00•4: 1	uo.		2,0		-,	stands above water in
	65.4	Nov. 12, 1933	 	N	 	-	Dug dug well, No. 78.
79	62.4	NOV. 12, 1900	_	14			well,
	0.7	17 0 1077	707	s			
80	63.4	Nov. 9, 1933	M	5	-	-	60 feet of 4 inch casing.
		1075			<u> </u>		
81	135.8	Nov. 12, 1933	N	D,S	-	-	
	<u> </u>				ļ	ļ	
82	86.0	Nov. 9, 1933	T	D,S	-	-	Owner reports this well
			<u> </u>				has small supply of water
83	-	-	W	D,S	-	-	
84	-	-	J.G	D,S	950	650	Water reported recently
							turned salty.
85	_	-	TÝ.	P	400	270	
86	_	_	ŸĪ	D,S	_	_	Original well 105 feet
							deep, deepened for more
87		-	1 7	S	 	_	dependable supply.
0,				_			
88	90.0	Feb. 1, 1934	A,G,-	D,S	650	500	
50	1	1	,,	-,-			
89	96.8	Feb. 10, 1934	A,G,-	D,S	650	600	
U S	30.0	160, 10, 1301	, d, –	υ, ν	000	500	
	75 6	Nov. 15, 1933	W	D,S	 		Originally had old dug
90	35.6	MOA 19, 1999	1 34	ס,ע	-	_	
	 		727	+==	+ ===		well 35 feet deep.
91	-	_	W	D,S	750	550	Casing; 6 inches at sur-
				1			face and $4\frac{1}{4}$ inch set
							at 375 feet with lower
92	91.1	Jan. 26, 1934	ম	D,S	650	440	Cas- 8 feet perforated.
							ing; 284 feet of 5 inch
							and 220 feet of 42 inch
					1	i .	with bottom joint perfor-
93	105.2	Feb. 8, 1934	77	D,S	700	440	ated.
	_		variation and the second				

	Recor	rds of wells in	Jim Wells Coun	ty	Contin	nued		
					T		Water-bea	
^ч о.	Distance	Owner	Driller	Date	Depth	Diam-	Tepth	Thick-
	from			com-	of	eter	to top	ness of
	Alice			ple-	well	of	of bed	bed
				ted	(ft.)		(ft,)	(ft.)
	1			a/	(,	(in,)		, ,
94	8 miles	John Bird	Whitson Bros.	1925	348	6	328	20
-	northeast	00mm Dan 0	111200011 2105.	1	010	Ŭ	020	- /
	1			l	1			
a7 95	9 miles	E. Whitley		1005	1,600	7 24		
9/ 30	northeast	e. mrcrey	_	1303	1,000	1.5		_
-7-00		TT		 -	175			
e/ 96	$9\frac{1}{4}$ miles	Hayden and	_	-	1/5	-	-	_
	northeast	Reeves		1.000				
97	9 miles east	E. Sain	Frank Thitson	1932	521	4 ¹	515	6+
···	northeast		and a second of the second					
98		Temple Lumber	-	-	380	6	-	-
	northeast	Co.		<u> </u>				
99	$3\frac{1}{4}$ miles north	Pablo Perez	-	-	45	48	-	-
				1				
99	a do.	do.	***	1 -	112	6	•••	_
	*			1				
				1	}			
					İ			•
100	1-3/4 miles	Mrs.	Whitson Bros.	1925	336	6	308	28
100	north	Vera Blinka	Will Cach Di Os.	1320	000	Ŭ	00.0	20
	1101 011	Vera Dillika						
7.01	01	M 4 II 00		1000	170			
101	9½ miles west	N. A. Hoffman	-	1900	138	6	-	-
- 100	northwest			1 ?				
102	30.	James Luby,	-	Old	71	60	~	-
		Est.	enter a manager in the William and an analysis and an an an an an an an an an an an an an	<u> </u>			-	
103	9 miles west	M. J. Luby	-	-	95	6	-	-
	northwest							
104	do.	R. C. Elliot	-	-	197	4	-	-
				1				
105	7 miles west	Otto Brandt	-	-	260	4		-
	northwest							
106	$8\frac{1}{2}$ miles	Hawkins and	Tom Leary	1906	1,866	8출	545	5
	northwest	Wallis			_,	±	1,550	20
107	7 miles	M. L. Luby		 	349			
4.77	northwest	m. H. Haoy			010			
708	9 miles west	J. H. Reynolds	Joe Gonzales	1927	114	6		
100	3 milios wose	o. n. neynords	OCO GONZATOS	102	111	Ŭ		
=7200		W T Taban		01d	87	5		
<u>e</u> /109	do.	M. J. Luby	-	010	01	5	-	_
		-		ļ	3.65			******************************
110	do.	Lawrence	-	-	135	4	-	-
		Tiblier						
111	8 miles west	Lucio	Ernest Riley	1919	120	5		-
	eliti i i anno de la constitui de la Constitui de la Constitui de la Constitui de la Constitui de la Constitui	Arredondo						
112	do.	Reguilo Gomez	-	1913	130	4	-	-
e/113	7 miles west	James Walker	-	-	50	6		-
e/114	do.	C.F. Longwish,		Old	53	6		
		Est.					į	
	·	<u> </u>	المحسسات مما يعيسيا		است سا			

a/Cld, probably completed prior to 1910.
b/ H, hand pump or rope and bucket; \(\text{V} \), windmill; \(\text{A} \), air lift; \(\text{T} \), deep well turbine;

J, jack pump; E, electric motor; G, gasoline engine or oil engine.

c/P, public supply; RR, locometives; I, irrigation; Ind., industrial; D, domestic; S, stock; N, not used.

d/ Hardness as calcium carbonate by the scap method.

	(A)	l wel	ls a	re dr	illèd unle	ess othe	rwise	stated	l in remarks.)
	Water						Field		
No.	Depth below	Date	of		Method of	Use of	(Parts	s per	
	surface or	measi	ıreme	∍nt	lift and	water	mil	lion)	Remarks
	bench mark				amount of	c/	Chlo-	Hard-	
	(ft.)				power	نب	1	ness	
					<u>b</u> /			₫/	
94	107.3	Feb.	8,	1934	W	D,S	800	550	Casing; 6 inch at surface
						,			and $4\frac{1}{4}$ inch to 348 feet
		ĺ							with bottom 20 feet per-
95	91.0		do.		া স	D,S	600	270	
						,			
96	_				W	DS	600	550	
								ļ	
97	82.4	Feb.	8.	1934	भ	D,S	450	350	Casing; 521 feet of 42
			,			,			inch.
98	-				Ti Ti	D,S	1.500	1,200	
						,	,	-,	
99	31.3	Nov.	2.	1933	 -	D,S		 	Dug well, too weak for
			•			_,			use during dry weather.
998	31.3		do.		स	D,S	_		Drilled well in bottom of
			•			-,-			dug well, No. 99, with
									casing perforated so both
									stratas are connected.
100	-				71	D,S		 	Casing; 6 inch at surface
					1	.,.			and $4\frac{1}{4}$ inch to 336 feet
									with lower 20 feet per-
101					H	· N	 		forated,
#1.7					11	1/		_	Toracou,
102	65.5	Nov.	27.	1933	স	S	450	650	Dug well.
		•	· ,			_		000	
103	62.3		do.		77	S			makan mayakan di makan di dalah dan di makan dan di makan man dan perumpuan yang mayamatan dan dan dan dan dan dan dan dan dan d
	-					_			
104			-		777	S			
105	+=		_		7.7	D,S			
						,			
106	18.			1933	_	N		_	Well abandoned, plugged
	g/102.8	Mar.	3.	1928					at 56 feet.
107	=	· · · ·				•	_	_	and the second s
108	**		-		W	D,S	220	230	15 feet of 6 inch casing.
						,			
109	37.5	Jan.	4.	1934	H	N		_	
20			-,			1,			
110	61.0		do.		=	D,S	500	400	
					-	,-			
111	-		_		ष	D,S	410	450	14 feet of 5 inch casing.
						,-			
112	_				H	D,S	1,200	1,300	20 feet of 4 inch casing.
						-,~	, , , ,	_,,,,,	The state of the s
113	34.0	Jan.	8.	1934	Ŋ	D,S	120	290	Small garden irrigated.
	± m v =:		- •			- , -	-~~	200	
774	35 0		do.			N			
114	35.9		do.		_	1//	-	-	
	i 1				1		1	1	

For analysis of water see under well number in table pp. 54 .

e/ For analysis of water see under well number in table pp. 54.

f/ Reported by driller.

g/ Measured by S. S. Nye, U. S. Geological Survey.

h/ Sulphate test by turbidity method and may be as much as 25 per cent in error.

[/] T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

-13-Records of wells in Jim Wells County -- Continued Water-bearing bed No. Distance Owner Driller Date Depth Diam-Depth Thickfrom to top ness of comof eter Alice plewell of of bed bed (ft.) (ft.) (ft.) ted well. <u>a</u>/ (in. 115 7 miles west A. Koopmann 265 01de/116 A. L. Stokes 5-3/16 do. Tom Leary 1907 1,500 Mrs. 117 7 miles west Clyde Miller 4분 1918 350 H. F. Clark A. Bowen R. Albert 6 118 7 miles west 1927 89 southwest P. T. Wright 4 8 miles west 1916 120 southwest 120 7 miles west G. J. Paschall 1929 160 5-3/16 -Ernest Riley southwest 121 6 miles west 5-3/16| -John Stromberg J.W. Davis 1913 147 southwest 122 5층 miles west J. S. Floyd 68 2등 123 do. do. Joe Gonzales 1931 456 6-5/8 A. C. White O. W. Schmidt 6 20 124 do. 1928 310 290 125 44 miles west Ernesto Uresta, 1908 85 3등 et al. Holmgreen and 123 4층 miles west 1910 130 4 southwest Martins 127 5 miles 188 Wm. Franks R. Albert 1932 southwest 128 do. 110 do. A. C. White 58 5-3/16/300 129 7 miles M. E. Book 360 1926 southwest 18 C. A. Austin 4를 130 do. dο. 1930 234 216 131 3층 miles Pablo Pena 3 $\frac{\text{west}}{e/132} \frac{3\frac{1}{4} \text{ miles west}}{3\frac{1}{4} \text{ miles west}}$ 5 Anastacio Nicolas 120 Martinez Lopez David Pena 400+4 133 3 miles west $134 \frac{3}{4}$ miles W. R. Perkins 141 southwest 135 | 3-3/4 miles Taylor Bros. R. A. Albert 1929 206 southwest 136 4-3/4 miles Richard Albert do. 1933 122 4 110 17 southwest 137 5 miles Otto Goldapp 1925 191 5-3/16/182 8 do. southwest 218 138 5늘 miles W. J. Schutte do. 1925 4분 208 10 southwest

R. Albert &

A. C. White

1925

1933

351

4-

115

208

325

L. A. Schutte

139 6 miles

southwest

10

2

26

	(All	wells are dri	illed unlea	ss other	wise s	stated	in remarks.)
	Vater				ι.	tests	
MO.	Depth below		Method of	i	(parts		Remarks
	surface or bench mark	measurement	lift and	water	mil Chlo-	lion)	
	(ft.)		amount of power	<u>°/</u>	ride	nara- ness	
	(10.7		b/		1140	<u>d</u> /	
115	109.0	Jan. 8, 1934	7	D,S	190	170	
116	-		71	D,S,I	210	120	Small garden irrigated.
117		-	N	D,S	900	750	
118	60.9	Jan. 10, 1934		D,S	900	800	Very weak supply.
119	91,1	Jan. 5, 1934		D,S	1,100	1,000	entre en la rese desse vitra electronica accessor de distribución de vitra en la constitución de la constitu
120	-		N	D,S	1,400	1,200	Casing; 145 feet of 5-
						·	3/16 inch. Had old well
							80 feet deep, reported as weak supply and bad water
121		_	W	D,S	1.300	1.400	Very little casing in
				_,-	_,	2, 200	well.
122	55.0	Jan. 7, 1933	-	N	1,500	1,200	Dug well.
123	102.8	do.	Ţ.	D,S,I	380	370	Casing; 250 feet of 6-
							5/8 inch balance uncased
124			N	D,S	500	400	Garden irrigated. Casing; 310 feet of 6
1.6.1			7 64	D,5	300	400	inch.
125	56.9	Jan. 16, 1933	.7	D,S	480	550	
126	93.0	Jan. 8, 1934	W	D,S	1,500	1,800	Tell on property line.
127	**	-	71	D,S	1,500	1,500	Casing; 185 feet of 4 inch.
128	-		-	И	1,100	1	Well abandoned because of bad water.
129		Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Marie Ma Marie Marie J,G,-	D,S	550	380	Casing; 300 feet of 5-3/16 inch.	
130	The second section is a second of the second section of the section of the second section of the second section of the second section of the section	mber salandaringker allger september under dere spiler besonden sommet gener den der bleven steme dankt	J	D,S	1,000	650	Other sands at 90 and 130 feet reported as bad wate
131	60.r	Jan. 16, 1933	Ţ.Ţ	D,S	450	550	
132	57.95	Jan. 3, 1934	-17	D,S	800	850	and the section of the control of th
133	61.1	Jan. 16, 1933	77	D,S	450	600	age dagayi da dalamada jada malamadan a sanab sahawa da danada da Amada sana da an Sanaman Baramanara - N. Filis
134	102.9	Jan. 10, 1934	1 7	D,S	1,300	1,100	Casing; 200 feet of 4-
135	92.6	Jan. 9, 1934	77	D,S	2,800	2,600	inch. Water was good until
			national designation of the second se				about one year ago. Cas- ing leaks now.
136	_	-	<u> </u>	N	_		Ing leaks now.
							Casing; 185
137	96.3	Jan. 5, 1934	77	D,S	900	750	feet of $5-3/16$ inch. Casing; 209 feet of $4\frac{1}{4}$
138	-		Ŋ	D,S	450	470	inch. Original well, 239 feet deep, was too weak,
139		e-e	7	D,S	460	330	deepened to 351 feet for
							larger supply Casing; 200 feet of $4\frac{1}{4}$ inch, 160 feet
•							of $3\frac{1}{4}$ inch with bottom
	aurenda ar ar an an ar ar ar ar ar ar ar ar ar ar ar ar ar	adied distribution distribution price addition are not son the strategic and					30 feet perforated.

-15-

	Recor	ds of wells in	Jim Wells Count	y (Continu	ied.		
							Water-bea	ring bed
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	Alice			ple-	well	of	of bed	bed
				ted	(ft.)	well	(ft.)	(ft.)
				a/]	(in.)		
140	5 miles south	Chas.	Ignacio	1924	138	41/4	_	-
	scuthwest	Stillwell	Trevino					
141	1-3/4 miles	Norton	Marie and the second of the se	 - -	† - <u>-</u> -	41/4		
	west							
e/142	$l_{4}^{\frac{1}{2}}$ miles west	J. B. Polk		1924	129	5-3/	16 128	ᆙ
27 111	14 111100 4000	0. D. 101K		1021	120	0 0/		+2
1/2	2 ¹ / ₄ miles south	Total on Proc	A. C. White	1926	380	4	360	20
140		Taylor Bros.	A. C. Mite	1920	300	4	300	20
3.4.6	southwest	0 0		13005	0.07			
144	1-3/4 miles	Geo. A. Clegg	-	1905	863	4	-	-
	south			?	ļ			L
145	2-3/4 miles	S. C. Ingram	-	1910	460	34	-	-
	south			?				
146	4 miles south	B. J. Lyan	A. B. Fuller	1909	521	5	-	-
				1				
147	를 mile west	B. A. Kempe	A. C. White	1930	140	6	111	9
		_]			133	7
148	Alice	City of Alice	Layne Texas	1928	751	12	376	30
							482	56
				1				
					İ			
				j				
				1				
149	$\frac{1}{4}$ mile west	Central Power	A. C. White	1925	5 60	6	505	55
		& Light Co.						
		Ŭ		1				
150	Alice	do.	do.	1928	120	6	107	13
		·						
e/151	1/4 mile west	Alice Cotton	A. B. Fuller	1909	544	6	500	44
<u> </u>	4 11110 11000	Oil Mill	11, D. Parior	1000	011	Ŭ	0.70	
150	Alice		do.	1927	141	6		
102	ATIGO	do,	ao.	1361	7.47	U	_	_
- 7				2000			400	
e/153	do.	City of Alice	-	1938	622	5	600	22
		No. 4						
154	do.	City of Alice	**	1936	535	5	400	23
		No. 3	!				510	25 33
e/155	do.	City of Alice	Whitson Bros.	1920	550	5-3/	16 502	33
		No. 2					1	
		**····································				·		

		level		 	1 	m: -1.3	tests	• • • • • • • • • • • • • • • • • • • •
3.T				3.5 13 3 0		• .		
No.	Depth below			Method of		(Part	 .	Remarks
	surface or	measure	ement	lift and	water	mill		
	bench mark			amount of	c/	Chlo-	Hard-	
	(ft.)	İ		power		ride	ness	
	` '			b/	1		<u>a</u> /	
140	83.2	Jan. 8.	1934	W	D,S	800	600	
	00.2	oan.	, 1001	· ·	12,0	000	000	
141	93,6	T 7 (3, 1933	¥J	70.5	350	000	0333 :3
T. T	30.0	oan. 10	, 1900	34	D,S	350	200	Small garden irrigated.
142	90.2	Feb. 4	1, 1933	W	D,S	-	-	129 feet of 5-3/16 inch
		1						casing.
143	-	_		ΨV	D,S	430	180	380 feet of 4 inch
				1				casing.
144				ŢŢ	D,S	340	40	
*				1	1 2,0	010	10	
1 4 5		 		 		7 000	7 000	757
145	-	_		14	D,S	0,000	3,000	Water was good when well
-								was completed.
146	107.8	Jan. S	9, 1934	177	D,S	650	250	
147	80.9	Jan. 15	5, 1934	J,E,-	D,S	95	200	Water used to make ice
			•		1			by C. P. & L. Co.
148	120.8	Jan 3	3, 1934	 	N			Casing; 378 feet of 12
140	1200	van.), IOUT		17			inch, 200 feet of 6 inch
						1		with 36 foot lap and
						1		strainers from 378 to
					1			408 and 483 to 539.
								Water level reported as
								115 feet when completed,
								June 9, 1928. f/
149	g/123.2	Mar. 3	1928	A,E,-	Ind.	650	220	Casing; 505 feet of 6
140	133.3	ł	5, 1934	1	I III.	000	220	inch. Used for cooling
	100.0	oan. 1), 130g					~
		<u> </u>			ļ <u></u>			purposes,
150	84.5	Mar. 3	5, 1928	-	N	-	_	This well was abandoned,
								filled to 78 feet and
								was dry Jan. 3, 1934.
151	-	-		A,E,-	Ind.	460	700	Used for cooling
								purposes.
152		<u> </u>		 			_	Reported to have had
200				1		1		good water but weak sup-
		ĺ						ply. Now abandoned.
3 6 6				 	 	 		pry. Now anandoned.
153	-	-		A,0,-	P	-	_	
	•	1		1		1		
	<u> </u>							
154	143.2	Jan. 18	1934	A,0,-	P	450	210	
155	_	_		A,0,-	P	430	230	502 feet of 5-3/16 inch
]	~~~	casing. Temperature 82°F.
	<u> </u>	<u> </u>		1	·	<u> </u>	<u> </u>	Locotités Tombolaonie on L'

-17-

Records of wells in Jim Wells County -- Continued Water-bearing bed Date Depth Diam- Depth No. Distance Owner Driller Thickfrom com- of eter to top ness of of bed bed Alice ple-|well of (ft.) |well (ft.) (ft.) ted (in.) a/ City of Alice Layne 837 24 5/156 Alice Texas 1928 992 16 No. 1 945 43 -- Curlock 157 158 1 mile south J. A. Rohans 1920 140 4 Martinez ? Martinez 159 A. F. Blaschke 540 4 do. 1926 160 1 miles south W. W. Thigben 135± 4 southeast 161 2 miles south Emma Little 5 southeast 162 la miles F. A. Goldapp A. C. White 1917 154 3 southeast 163 2 miles east J. A. Smith 142 5 164 3号 miles C. A. Williams A. C. White 1926 395 5 northeast 165 4 miles F. V. Nicholas 4분 1928 443 405 do. 38 northeast 166 3 miles east F. A. Goldapp do. 1926 138 4 L. Muil D. Redner 5 167 5-3/4 miles 340 east northeast 168 7 miles east G. N. Hammick 1910 110 4-J. Boepple 169 4 miles John Boepple 1933 79 6 64 15 southeast 170 4호 miles south R. R. Mullins southeast 5 Martindale Whitson Bros. 4분 171 6 miles east 1924 105 100

southeast

Loan Co.

			ii e ui	TIIOU UNIO	ss oune			in remarks.)
	Water	<u> </u>]		1	tests	l .
No.	Depth below	Date of		Method of	i e	1 '		Remarks
	1	measurem	ent	lift and	water	milli		
	bench mark			amount of	c/	Chlo-	Hard-	
	(ft.)	İ		power		ride	ness	
				<u>b</u> /			<u>a/</u>	
156	g/ 55.5	Feb. 27,	1928	T,E,40	P	270	110	Well drilled to 2,068
	58.5	Jan. 2,	1934	Н,Р,				feet. Casing; 250 feet of 16 inch, 1,108 feet of 8 inch with 12 foot lap into 16 inch, 653 feet of 6 inch with 16 foot lap into 8 inch and 89 feet of 4 inch with swedge nipple. Strainers set at 837 to 867, 945 to 986, 1,078 to 1,139, 1,280 to 1,327, and 1,958 to 2,004 feet. Well tested, then plugged at 1,347 feet, tested again and plugged at 992 feet. See analysis table for analyses of water from various strata.
157	85.5	Jan. 27,	1933	31	D,S	550	700	various scrata,
158		-		W	S	2,600	1,500	Temperature 76° F.
159	90.0	Jan. 27,	1933	J,G,-	D,S	800	600	AND TO CONTROL TO LIGHT CONTROL OF THE CONTROL OF T
160	80.6	do.		ŦĪ	S	3,000	2,300	Sulphate 900 parts per million. h/
161	94.6	Feb. 24,	1933	W	S	1,800	1,400	
162	74.2	Jan. 15	1934	VI	D,S	600	400	
163	75.6	do,		77	D,S	1,100	1,000	
164	_	-		W	D,S	550	370	Casing; 300 feet of 4 inch, 100 feet of $3\frac{1}{4}$ inch with 2 feet perfo-
165	***			J,G,-	P	800	350	443 feet of $4\frac{1}{4}$ rated inch casing with 42 feet
166	82.0	Jan. 15,	1934	W	S	2,000	1,400	138 feet of perforated. 4 inch casing.
167	100.4	Feb. 19,	1934	W	D,S	1,100	750	
168	93.4	Feb. 9,	1934	অ	D,S	-		a e e de la production de la constitución de la constitución de la constitución de la constitución de la const
169	***	-		H	D,S	280	210	10 feet of 6 inch casing Water found in Caliche.
170	68.1	Jan. 27,	1933	W	S	1,700	1,000	A STATE OF THE STA
•	1		i	i				

Records of wells in Jim Wells County -- Continued ater-bearing bed Distance Owner Driller Date Depth Piam-Depth Thickο. from to top ness of com- of eter Ben Bolt ple- |well of bed ofbed ted i(ft.) |well (ft.) (ft.) (in.)! 172 3-3/4 miles August Doring 5-3/16 448 northeast Diamond S. $173 \frac{3}{2}$ miles 4,344 Deering No. 1 northeast Oil Co. 174 | 2-3/4 milesC. E. Savage 1929 5-3/16 -480 north northeast e/175 2 miles north W. F. Botard John Riggins 3 1921 349 northeast 176 4 miles Mary Shear A. C. White 1926 460 3등 northeast 177 5 miles east E. L. Kelly 1916 198 $\overline{4}$ northeast ? 178 ਿੰਡ miles east Magnolia Tom Leary 1909 1,510 4-435 35 northeast Colony 880 38 179 3 miles east W. E. Seefeld 90 180 4 miles east Pedro Garcia $181 \frac{1}{2}$ miles east Romana V. A. C. White 460 4--420 $\overline{40}$ de Garcia 182 1-3/4 miles J. W. Startz L. Jurgens 1920 130 4 north northwest 183 3 miles west do. 1923 135 6 ? 184 24 miles west J. J. Thite A, C. White 1926 423 4± 383 40 185 la miles west C. E. Stacy 4 130 186 2늘 miles west N. A. Hoffman southwest 187 1 mile west W. A. Sodek 3 110 southwest 188 4 mile west J. P. Blake 44 southwest 189 Ben Bolt School Dist. A. C. White 1934 398 4분 345 50 No. 7

^{9/}Old, probably completed prior to 1910.

 $^{^{\}sim}$ H, hand pump or rope and bucket; $^{\sim}$, windmill; A, air lift; T, deep well turbine;

J, jack pump; E, electric motor; G, gasoline engine or oil engine.

[/] P, public supply; RR, locomotives; I, irrigation; Ind., industrial; D, domestic; S, stock; N, not used.

 $[\]gamma^\prime$ Hardness as calcium carbonate by the soap method.

	(Al	l wells are dr	illed unle	ss othe				remarks.)
	Water	level				d test		
No.	Depth below	Date of	Mothod of					
		measurement	lift and	water		Hard-		
	bench mark		amount of	<u>c/</u>	ride		phat	ce
	(ft.)		power			<u>d</u> / -		
			<u>b</u> /					
172	89.5	Jan. 27, 1933	W	D,S	1,200	1,300	-	
100				N				Oil test. No pro-
173	-	-	-	<u>P</u> i	-	-	-	duction.
174			W	D,S	700	400		duo cron.
T (+ ±	_	-	78	ن و ر	100	400		
175	_		W,E	D,S	330	120	-	Irrigates small
110	_		ندر ۱۰	0, ر	300	120		garden.
176			M	D,S	330	120		460 feet of 3-1/3
110			/ 2	ν,υ		120		inch casing.
177	-	-	W	S	4.800	2,800	_	Unfit for domestic
				~	2,000	2,030		use. Cattle do not
								like to drink it.
178	67.2	Feb. 5, 1934	W	D,S	340	150	-	Water became salty
								in 1928. Well repair
								ed by inserting 250
								feet of $4\frac{1}{4}$ inch cas-
								ing with packer in
								end and cementing be-
								tween new and old
179	-	-	.A	S	650	550	-	Tile at casings,
						····		top.
180	-	-	W	S	2,200	1,300	-	
101		<u> </u>			220	146	 	ACO 0
181	-	_	্ৰে	D,S	330	140	-	460 feet of $4\frac{1}{4}$ inch
182			<u> </u>	D,S	3 600	1,500	 	casing.
102	_	-	j îV	ט,ט	1,000	1,500	-	casing.
183	108.1	Jan. 10, 1934	13.7	D,S	2 000	1,900	├─ <u>-</u>	Not used for drinking
100	100.1	0011. 10, 1001		D,0	2,000	1,000		Hard rock from 23
								feet nearly to bot-
184	82.7	do.	W	D,S	500	140	-	390 feet of tom.
	_							4 ¹ / ₄ inch casing.
185	-	**	Ά	S	4,000	2,000	-	8 feet of 4 inch cas-
								ing at top. Rock to
186	-	_	M	S	1,000	600	-	bottom.

187	-	-	Ŋ	S	2,400	1,400	-	
							ļ	
188	-	-	IJ	D,S	280	130	-	
100	704 4	Hob 3 3084	7.7	<u> </u>		700		700 8001 00 41 1-1
189	104.4	Feb. 1, 1934	11	P	600	320	-	398 feet of $4\frac{1}{4}$ inch
								casing with bottom
					}			20 feet perforated. Weak water stratas
					ļ			at 90, 160 and 260
								feet.
	<u> </u>	L	1	<u> </u>	<u></u>		ــبـــــــــــــــــــــــــــــــــــ	1

e/ For analysis of water see under well number in table pp. 54.

 $[\]overline{f}$ / Reported by driller.

Measured by S. S. Nye, U. S. Geological Survey.

^{5/} Sulphate test by turbidity method and may be as much as 25 per cent in error.

1/ T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

-21-Records of wells in Jim Wells County -- Continued Water-bearing bed Io. Distance Owner Driller Date Depth Diam-Depth Thickfrom cometer to top ness of $\circ f$ Ben Bolt ple- |well of bed bed of(ft.) well (ft.) (ft.) ted (in.) 2 190 를 mile east C. E. Stacy Tecdolo $\overline{114}$ Martinez e/191 Ben Bolt Romana V. Pete 1924 500 385 40 de Garcia Christensen 450 192 3/4 mile Mrs. -- Morris 395 4분 south Maggie Kinney 193 8 miles M. Morales 010 40+ 40 west 194 8 miles west 4-4 90 Ferman Lopez 195 8를 miles west 5-3/16 | -Pedro G. 1915 ? Lopez 196 do. Santos Garcia F. Foster 1910 8 197 do. Ysidre Saenz 1910 ? Eduardo Lopez 198 do. 1930 100 5-5/8 199 Ferman Lopez 1910 do. 60 ? 200 6 miles west C. D. Dick Howard 1903 6-5/8 | southwest Fitzimmons $201 8\frac{1}{8}$ miles west Santos Garcia 5-3/16 | -Francisco G. 1918 southwest Chacon 202 8 miles west do. do. 1918 97 southwest Dan Tobin 203 1930 6-5/8 do. 100+ 204 Jesus Tobin do. 1903 50 205 7 miles west 5-3/16 | -Norman 1905 165 southwest Fitzimmons e/206 Emilia Barrera 1880 $\overline{75}$ 48 do. milia Barrera 5-3/16 207 6 miles west Roman Saenz Tiodelo 1920 scuthwest Martinez N. A. Hoffman 208 6 miles west southwest 5-3/16 209 45 miles west do. southwest Jose Garza 210 6 miles west 1923 5-3/16 1 southwest N. A. Hoffman 211 3-3/4 miles Stanolind Oil 1931 6,464 125 west southwest No. 1 & Gas Co. 1931 212 do. N. A. Hoffman 5-3/16 213 2-3/4 miles do. 1929 450

1910

Miguel Cadena

98

southwest

southwest

Miguel Y

Ygnacio Cadena

214 8 miles

No. of the latest designation of the latest			illed unle	ss othe				(All wells are drilled unless otherwise stated in remarks.)								
1	Water				1	eld tes										
No.	Depth below	1	Method of													
,		measurement	lift and	1 ,	1	Hard-	1	3								
!	bench mark (ft.)	1	amount of	` º/	ride	1 . 1	pha	<u>te</u>								
			power b/			đ./										
190	97.8	Jan. 11, 1934	N	D,S	950	650	-1									
191	93.4	- Mar. 20, 1934	कर्म हर्	D,S	250	110	-	Temperature 81° F.								
192		**	ŢŢ.	D,S	650	450	-	Reported that water becomes brackish in								
193	28.5	June 30, 1933	H	DS	625	1,100	100	1								
194	43.2	do.	A	D S	15	450	50									
195	-	-	W	D,S	190	440	70									
196	-	-	177 8 2. F	D,S	600	1,000	80	20 feet of $4\frac{1}{4}$ inch casing.								
197	42.8	June 30, 1933	3 W	D,S	700	1,100	200									
198	-	-	W	D,S	600	600	100	3 feet of 6-5/8 inch casing at top, un- cased through rock to								
199	31.9	June 30, 1933	3 W	D,S	180	490	50									
200	-	-	N	S	650	700		20 feet of 6-5/8 inch casing at top, uncased to bottom.								
201	33.8	June 30, 1933	3 77	D,S	300	460	60									
202	35.5	do.	W	D,S	600	700	100	Tile casing used.								
203	57.3	do.	W	D,S	1,400	1,700	200									
204		-	77	S	100	400	20									
205		**************************************	W	D,S	650			124 feet of 5-3/16 inch casing.								
206		June 30, 1933		D,S				Dug well.								
207	77.0	June 29, 1933		D,S	915	1,500										
208		***	W	D,S	700	700	-									
209	p	=	Ŋ	S	1,800	1,600										
210	-	-	77	D,S	900	900	-									
211	-	Ser	-	-	† -	-	-	Oil test. No production.								
212	-	**	J,G,-	S	320	140	-									
213	88.2	June 29, 1933	3 W	D,S	340	150	-									
214	47.4	July 1, 1933	3 H	D,S	160	320	60	15 feet of casing.								
																

			-23-													
	Recor	rds of wells in	Jim Tells Coun	ţу	Contin	ued										
								ring bed								
No.	Distance	Owner	Driller	•			Depth	Thick-								
	from		-	ccm-	5	eter	to top	ness of								
	Ben Bolt			1-	well	of	of bed	bed								
				ted	(ft.)		(ft.)	(ft.)								
01.0	10			<u>a/</u>		(in.)										
215	9 miles	Manuel Cadena	-	1870	70	60	-	-								
01.6	southwest	Antonio Tobin				1										
210	7½ miles southwest	Antonio Tobin	_	-	461	_	-	-								
217	do.	Valentia		12020		L., <u>.</u> .										
£11	uo.	Gonzales	_	1910	903	44	-	-								
218	7 miles	Mrs. A. Ch.	Teodolo	1915	160	6		are and the second								
210	southwest	Gonzales	Martinez	1910	100	O	_	-								
219	do.	Porfirio	Teodolo	1925	298	4=	296	2+								
210	αυ.	Zamora	Rodriguez	1323	230	72	200	۵.								
220	6 miles	Porfirio	Luis Tamez	1910	330	4計										
220	west southwest	Garcia	Daib lanci	7		14										
221	8 miles	Feliz Perez		1850	65+	60										
227	southwest	Cadena		?			·									
222	do.	Manuel Cadena		1850	60	60		nanananananan aras aras aras da santa da santa da santa da santa da santa da santa da santa da santa da santa d Santa da santa ~~~		ladituoi oadoita		?		Ŭ.,		
223	do.	Nicolas Cadena		1905	110	6	_	-								
						_										
224	9 miles	Moos	_	 -	_	6										
	southwest															
225	9½ miles	Romulo Valdez	-	1927	_	5-3/	16 -	-								
	southwest			1		ĺ										
226	$10\frac{1}{2}$ miles	Mateo Valdez	-	-		5-3/	16 -									
	southwest															
227	ll miles	Victor Garcia	Santos	1925	130	4	-	-								
	southwest		Barrera													
228	10 miles	do.		1890	100	60	_	_								
	southwest			?												
229	ll miles	do.	Santos	1925	300	5-3/	16 -	-								
	southwest		Barrera													
230	9 miles	do.	-	1915	180	6	-	-								
	southwest			?		1										
231	10 miles	Clara D.	-	01d	-	5-3/	16 -									
0.70	southwest	Sevier														
232	do.	E. G. Lloyd	-	1916	454	R	-	_								
		17 A 17 O C		12000												
233	6 miles	N. A. Hoffman	-	1900	400	. 5	-	-								
074	southwest	J. M.	T BE	?	340											
204	5 miles southwest	1	J.M. McPherson	1925	142	44	-	_								
235	L	McPherson J. P. Blake	McFnerson													
200	α υ •	o. r. brake	_	_	-	-	-	_								
276	4 miles south	Mrs.	B. L. Tamez	1927	422	- 3글										
200	southwest	F. M. Stewart	D. D. Talliez	1361	422	2	_	_								
237	5 miles	J. P. Blake				$\frac{1}{4\frac{1}{4}}$										
704	southwest	o. i. blako				14										
238	do.	do.	The both and and the second se			4										
200	•••															
239	7 miles	W. R. Edmund	T. Martinez	1922	96	5-3/	161-	-								
,00	southwest	LI G. L. G. LINGTH COMMING				1										
240	8 miles south	Clara D.	-	1920		5-3/	16 -									
	southwest	Sevier			1	T										
$2\overline{4}1$	72 miles south	do.		1900	1	5-3/	161-									
, i	s outhwest			?		T										
242	$6\frac{1}{2}$ miles south		_	- T	- 1	5-3/	161 -									
		King, Est.														
.,																

-24-less otherwise stated in remarks.)

		l wells are dr	illed unle	ess othe				remarks.)
	Water			Field tests				
⋈o •	Depth below		Method of					
	surface or	measurement	lift and		Chlo-	Hard-	Sul-	•
	bench mark		amount of	c/	ride	ness	phat	ce
	(ft.)		power			<u>d</u> /	_	
			b/			<u> </u>		
215	77.9	July 1, 1933	ন	D,S	650	900	80	Dug well.
216	**	**	N	S	1,700	1,600	400	and the second s
217		=	W	D,S	500	750	300	
218	64.9	July 1, 19 3 3	7,	D,S	1,600	1,600	240	
219		**	N	D,S	220	270	-	
220	-	-	W	D,S	220	210		Dug well.
221	59.2	July 1, 1933	¥	D,S	1,635	1,700	250	do.
222	56.6	do.	W	D,S	430		150	do.
223	62.2	do.	ŢŢ.	S		3,500		
224	82,9	do.	पर्ग	D,S		1,200		
225	84.8	do.	W	D,S	1,300	1,300	120	
226		do.	To The state of th	S	1 -	1,500 1,515		van Austria, ja varia pitali pitalisia valika kalkata kanda en disende kuniyat kampakan keriskima men
227	85.0	do.	7	S	1,700	2,000	300	
228	84.0	do.	শ্	S		·		Dug well.
229	89.2	do.	শ	S	220	260	150	
230	-	•	7.1	S	2,000	1,700		
231	53.6	June 8, 1933		S	420	440		
232	76,2	June 22, 1933		D,S	210			
233	_		V	D,S	210			
234	-	-	77	S		2,400		
235	-	-	ভ	Ŝ		1,600		
236	66.7	Jan. 16, 1933		D,S	220			422 feet of $3\frac{1}{2}$ inch casing, perforated
237	76.2	June 22, 1933		D,S,I	300			One acre at bottom. of citrus fruits ir-
238	•••	-	W	S		1,200		rigated.
239	85.2	June 22, 1933		D,S	330			
240	-		गत्	S	320			
241	73.8	June 7, 1933		D,S	3 30	270		
242	55.6	June 13, 1933	ij	S	-	-	-	Altitude 158.3 feet above sea level.

Records of wells in Jim Wells County -- Continued Water-bearing bed To. Distance Owner Driller Date Depth Diam-Depth Thicketer to top ness of from of com-Premont plewell ofof bed bed (ft.) well (ft.) (ft.) ted (in.) a/ 243 10 miles north 1900 Clara D. 5-3/16 -? Sevier 244 do. Mrs. H. M. 6-5/8 King, Est. Clara D. 5-3/16 245 85 miles north $\overline{o}_{1}\overline{a}$ Sevier 246 9 miles north 5-3/16 | do, northwest 01d 5-3/16 | -247 8 miles north do. northwest 247 6 Ed Vela 1917 248 9 miles northwest 41 E. Canales 1930 277 249 do. "Nick" Garcia 250 8층 miles 200+ northwest e/251 75 miles Ed Vela 5-3/16 --- Riggins 1926 250 northwest 252 8 miles C. Hinojosa 1915 60 48 northwest 72 253 do. San Juana 1900 125 Hinojosa 5-3/16 -7 miles Felipe Santiago 1933 120 northwest Hinojosa Barrera Jose F. 230 255 do. Fuentes 256 do. Justo Suarez 1925 200 5-3/16 -5-3/16 -6층 miles Charlie 1923 270 257 northwest Premont 258 6 miles Frank Bennett 1917 260 6-5/8 northwest 5-3/16 $259 \frac{6}{2} \text{ miles}$ Santiago 1927 Nicholas 112 northwest Miguel Barrera 260 6 miles -- Chopa 5-3/16 northwest 4-261 -- Bailez do. 262 5 miles north Seeligson 480 northwest Bros. Wash Storm 506 8 450 56 263 5 miles Elmer Rupp 1930 northwest 12등 1932 6,010 264 6 miles north Seeligson Magnolia No. 1 Petroleum Co. northwest 12 6층 miles north Seeligson Old 1,001 549 82 Bros. 500+ 5-3/16 -266 7 miles north do. 500+ 5-3/16 -267 6 miles north do. northeast

		ll wells are dr	111ed unle	ess othe				remarks.)
0	Depth below	level	Math - 2 - A	II.a C		eld tes		Dome when
0.		į	Method of					
	surface or	measurement	lift and	water	Chlo-		i	1
	bench mark		amount of	<u>c/</u>	ride	1 ,	phat	ce
	(ft.)		power			d/		 -
			<u>b</u> /					
$24\bar{3}$	45.4	June 7, 1933	<u>b/</u>	S	500	460	_	
					į			
244	57.5	Feb. 7, 1933	W	S	150	170	 	
		1000	,,	Ü	1		l	
245			₩.	S	370	230	 	
240	_	_	*4	۵	310	230	_	
240	65.1	T 0 1077	W	S	100		 	
246	09.1	June 8, 1933	ÜV	٥	180	210	_	
						<u> </u>		anagan ayanta ayan ayan ayang kayayaya ayang maray ayang kayang ayan da da da da da da da da da da da da da
247	51.3	do.	IJ	S	220	350	-	
						<u> </u>		
248	66,8	June 19, 1933	ŢŢ	D,S	150	230	-	
249	73.1	do.	Ħ	D,S	170	240	_	
		-						
250		•	M	S	1,300	700	_	
200				ì	2,000	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
251			W	D,S	190	260		CONTRACTOR OF THE PROPERTY OF
251	_		£A	ט,ט	190	200	-	
250		7. 7.0 7.000					ļ	
252	53,6	June 19, 1933	Ţ.	D,S	295	570	-	Dug well.
253	56.7	do.	W	D,S	650	500	-	Dug well with bored
								well in bottom.
254	-	-	-	N	-	_	_	Well just completed.
							•	
255	65.5	Apr. 25, 1933	W	D,S	210	190	-	
	-	1 ,,		,				
256	66,∩	do.	W	D,S	210	310		
	3341		•	2,0	10 x. 17	0.10		
257	60	do.	¹₩	D,S	190	210		
LUI	90	uo.	• •	10,0	130	210	_	
258				- N A	100	260		
258	-	-		D,S	190	200	-	
						<u> </u>		
259	-	-	Α	D,S	750	700	-	
			· · · · · · · · · · · · · · · · · · ·			<u> </u>		
260	-	-	τĄ	D,S	1,000	1,500	-	
						l		
261	-	•	H	D,S	160	280	-	
						1		
262	-	_	J,G,-	D,S	170	180	_	Drilled to supply
						ĺ		water for drilling
263	-	-	T,G,10	D,S,I	200	320	_	Three oil test.
200			H.P.		200	020		acres of vegetables
			1101			l		irrigated. Casing;
								106 feet of 8 inch
						1		100 feet of 6 inch
						ļ		and $5\pm3/16$ inch to
264	-	-	-	**	-	-	-	Oil test. bottom.
								No production.
265	g/ 23.3	Mar. 2, 1928	W	D,S	170	210	-	Reported flow (prior
	47.4	Apr. 27, 1933						to 1907) 8 gallons a
£ <u>66</u>	-	- i	M	5	140	155	-	minute. i/
		1						•
267	_	_	য়	S	180	210	-	
~ 51	j			-			. 1	
							·	

Records of wells in Jim Wells County -- Continued Vater-bearing bed No. Distance Owner Thick-Driller Date Depth Diam-Depth from com- $\circ f$ eter to top ness of of bed Premont plewell $\circ f$ bed (ft.) well (ft.) (ft.) a/ (in.) 268 5 miles north Seeligson 1923 560 northeast Bros. R. P. Wynne 4 miles north 500+ 5-3/16 -270 de. Giberson -- Tamez 1926 500+8 -Conrad Development Co 6 miles west 44 Francisco Luis Tamez 1931 288 northwest Gonzales Miguel Santos 1910 400+ 4± 272 do. Ed Howell 1930 271 do. W. Zimmerman 50 273 6-5/8 221 5 miles west Arturo Lozano Fermin 1926 300+ 6-5/8 northwest Sancoceda 275 de. do. -- Banahan 276 1927 5-3/16 do. 277 5 miles west G. B. Arthur 1929 360 10 northwest 278 5분 miles west Peter 317 6-5/8 S. M. Foster 1911 Schneider northwest 279 4-3/4 miles Edwin Kershaw 1911 320 5-3/16 | west northwest Felipe Perez 1932 327 4 319 8+ 280 4 miles west Fermin northwest Sancoceda

Old, probably completed prior to 1910.

b/ H, hand pump or rope and bucket; W, windmill; A, air lift; T, deep well turbine; J, jack pump; E, electric motor; G, gasoline engine or oil engine.

c/P, public supply; RR, locomotives; I, irrigation; Ind., industrial; D, domestic; S, stock; N, not used.

i/ Hardness as calcium carbonate by the soap method.

		l wells are dr	LLIOU WILLC	sa (one)	MIDE	o ca cou	JII I	emarks.)
	"Jater				eld te			
No .	Depth below	Date of	Method of	Use of	parts	per m	illio	n Remarks
	surface or	measurement	lift and	water	Chlo-	Hard-	Sul-	
	bench mark		amount of	c/	ride	ness	phat	e
	(ft.)		power	-		d/		
			<u>b</u> /		<u> </u>			
268	-	***	ग्य	S	180	220	-	
269	27	April 25, 1933	<u>1</u> 3 77	D,S	170	210	-	
270	37.4 37.9	Jan. 13, 1933 Aug. 4, 1933	Т, G, -	D,S,I				Water level reported by owner as 23 feet below surface when well was completed in 1926, and 35 feet when pump was installed ed in 1929. Casing; 92 feet of 8 inch and 5-3/16 inch to bot- tom. Irrigates 28,000 seedling citrus-trees Altitude of top of casing, 145.7 feet above sea level.
271	65.8	June 7, 1933	W.	D,\$	240	280	-	asove sea level.
272	58.3	do.	W	D,S	220	240	-	
273	-	40	7. J	D,S	210	230	1 1	8 feet of perforated
274	_	••	-V	D S	200	230		casing at bottom.
275	-	••	70	N	-	-	1 1	Windmill broken, well not used.
276	-	-	71	D,S,I	210	250		Small garden irrigated.
277	65.6	April 25, 1933	1 5 70	D.S,I	200	230		do.
278	58,	do.	¥	D,S,I	200	270		Casing; 10 feet of 6 5/8 inch and 5-3/16 inch to bottom. 3 acres of citrus fruits and one acre of vegetables irri-
279		-	ÍΑ	D,S,I	200	290	-	Small garden gated. irrigated. Irrigated 5 acres using air lift about 1923.
280	-		W	D,S	200	250	-	319 feet of $4\frac{1}{4}$ inch casing.

For analysis of water see under well number in table pp 54.

f/ Reported by driller.

Z/ Measured by S. S. Nye, U. S. Geological Survey.

h/ Sulphate test by turbidity method and may be as much as 25 per cent in error. T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

Records of wells in Jim Wells County -- Continued Water-bearing bed No. Distance Owner Driller Depth Diam-Depth Thick-Date from eter to top com- $\circ f$ ness of Premont of bed well pleof bed (ft.) (ft.) well (ft.) ted a/ (in.) 281 4 miles west L. R. Stegall Levi Shively 1932 387 4-50 337 northwest 282 3 miles E.E. 400+ 5-3/16 -01d northwest Daugherty 283 4 miles west H. W. 5-3/16 northwest Wohlgemuth 284 3-3/4 miles . E. Kuether 5-3/161 west northwest 285 do. Mrs. S. M. Foster 1916 130 5-3/16 W. F. Martens 286 do. John Luellen do. 1914 373 4분 287 34 miles west A. E. Kuether Foster & 1912 448 6-5/8 northwest Nelson 288 | 2-3/4 miles Fred C. Thomas 4분 Elmer Rupp 1932 475 475 west northwest $289 \ 1-3/4 \ \text{miles}$ L. T. Hewett 550+ 4분 west northwest 290 2-3/4 miles Charlie 1907 150 4north northwest Lofland 291 2 miles north -- Andres 1908 150+ 4급 northwest 292 3/4 mile A. Mertens 524 1925 10 475 49 northwest 5-3/16 461 293 = mile north H. II. 1932 531 70 northwest Luerksen 294 2 miles north W. A. 720 5-3/16 | -Seeligson northeast 295 3 miles Canales F. Rosales 01d 440 5-3/16 northeast Estate 296 do. do. 490+ 5-3/16 | -297 3 miles east do. 490+ 5-3/16 | -Benito Tamez 6点 miles west Heinrich Nagel 1927 353 5-3/16 300 50 299 6 miles west Phillip Nagel do. 1927 355 5-3/16 | -300 5-3/4 miles C. M. Maderer Johnson & 1910 370+ 5-3/16 | west Hosack 301 6 miles west Ed Howell 1912 -- Byrd 300+ 5-3/16 -302 5층 miles west H. H. Fleming 1914 396 5-3/16 | -303 6층 miles west Teodora Davila Benito Tamez 1923 365 4-1/4 | 335 30

-30-

		ll wells are di	rilled unle	-30- ss othe				remarks.)
No.	Depth below	level Date of measurement	Method of lift and amount of power	water	parts Chlc-		lllio	
			b/			İ		
281	57	Apr. 25, 1933		D,S	210	240		335 feet of $4\frac{1}{4}$ inch casing. Salt water reported at 177 to 185 feet and good water at 211 to 219
28 2	_	**	Ψ¥	D,S	200	230	-	feet.
283	-		A	D,S	200	240	-	
284	_	•	H	D,S	210	270	-	
285	92.5	Feb. 11, 1933	W	D,S,I	1,700	2,100	-	Small garden irri- gated,
286	uin.	400	17	D,S,I	220	220	-	do.
287	-	_	N	D,S	190	280	-	<u> </u>
288	_	wb	W	D,S	210	240	-	
289	56.3	Jan. 27, 1933	77	D,S	230	250	-	
290	_		- ' 4	S	2,200	1,700	-	
291	-	-	Ţ,	N	_	-	-	Windmill broken.
292	45.5	Jan. 27, 1933	VV	D,S,I	250	320	-	Small garden irri- gated.
293	47.4	do.	A,G,- W	D,S,I	250	270		Casing set at 461 feet. 2 acres of citrus fruit irrigated.
294	38.5	Apr. 25, 1933	. W	D,S	200	240	-	
295	-	-	ŢŢ.	D,S	250	250	-	Reported flow(prior to 1907) 80 gallons
296	-	-	W	D,S	250	230	-	a minute. i/
297	51.3	Apr. 27, 1933	W.	D,S	250	260	-	
298	-		77	D,S,I	200	230	65	329 feet of 5-3/16 inch casing. 2 acres of citrus fruit irri
299	-	-	ŢV	D.S,I	200	230	40	Small garden gated. irrigated.
300	-	-	শ্ব	D,S,I	200	270	40	
301	-	***	N	D,S	230	340	45	Drilled to 800 feet but 300 foot sand wa
302	_	-	TV TV	D,S,I	210	250	100	
303	35.0	Dec. 6, 1932	21	D,S	225	290	100	II WI II II II WOULD

Records of wells in Jim Wells County -- Continued

	Reco	rds of wells in	Jim Tells Count	ty	Contin			
								aring bed
`[n.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	Premont			ple-	well	of	of bed	bed
				ted	(ft.)		(ft.)	(ft.)
					(TOO)	(in.)	(10.)	(101)
704	C 2 3	D D Dist	NT - 3	<u>a/</u>	7.00		7.00	
SU4.	6 miles west	E. R. Disbro	Nelson Foster	1920	366	44	366	
				<u> </u>				
305	$6^{\frac{1}{2}}$ miles west	Miguel	-	-	385	$4\frac{1}{4}$	- :	+
		Castellana						
306	6 miles west	B. Gartner	Charlie	1892	530	5-3/1	6 -	-
			Premont	?				
				į				
				}				
				}				
					1			
307	5-3/4 miles	A. R. Clarke	Chester Downs	1919	390	5-3/	16 350	40
	west			1				
				1		-		
				1				
308	do.	F. Castellano	Luis Tamez	1002	408	12	ļ	
300	ao.	F. Castellano	Luis Tamez	1902	408	$4\frac{1}{4}$	_	-
	,			?		<u> </u>	<u> </u>	
309	5½ miles west	V. E. Bevins	-	1911	-	5-3/	16 -	-
310	$5\frac{1}{4}$ miles west	Mrs. Rebecca	-	1913	400	5-3/	16!-	_
	#	Stauffer						
777	4늘 miles west	Charles		 	420	5-3/	7.61	
311	45 miles west	1	-	-	420	3-3/	<u> </u>	_
··	— — — — — — — — — —	Lofland		<u> </u>				
312	$4\frac{1}{4}$ miles west	Reid	-	-	-	-	-	-
				l			•	
313	3½ miles west	W. T.	-	Old	379	5-3/	16 -	_
		Nicholsen						
314	2-3/4 miles	**		-		4=		-
	west				1	T		
315	2-3/4 miles	J. P. Fast	Tamez	1915	584	5-3/	161 -	
010	west southwest	1	Ianoz	7	1 004	0-07		
77.0		C. T. Hewitt		 	700	- 7	1	
210	1-3/4 miles		-	-	700	5-3/	<u>-</u>	-
	west southwest			<u> </u>	ļ			
317	2 miles west	R. S. McBride	_	-	-	5-3/	16 -	-
	southwest				<u></u>	L		
318	$l^{\frac{1}{2}}$ miles west	M. H. Zieger	Luis Tamez	1928	489	8-5/	8 -	-
	southwest	l	Í		1	'		
319	1 miles west	Joe Lange		-	500-	<u>'</u>		
010	southwest	200 2000			"	-		
720	1 mile	J. L. Reid			538	5-3/	161	
520	1	J. L. Kera	-	-	900	0-0/	10] -	-
	southwest							
							-	
						1		
					1	1		
					1	-		
				}	1	1		
701	a a	Thoodore Marca		 	530	5-3/	161	
321	do.	Theodore Myer	-	-	550	0-0/	- [_
				ļ	 	l,		
322	do.	Haldeman	Luis Tamez	-	500	+ 5-3/	16] -	-
			L		L	L	!	
323	3/4 mile	Eudoxio Garcia	do.	1929	533	6-5/	8 -	••
	southwest					ĺ .		
		!					·	<u> </u>

		l wells are dr	illed unle	ss othe				remarks.)
	Water			<u> </u>	1	eld tes		
No.	Depth below	1	Method of					
	1	measurement	lift and	1 ,		Hard-		1
	bench mark		amount of	<u>c/</u>	ride		phat	<u>e</u>
	(ft.)		power b	1	!	₫/		
304	-		A, G, -	D,S,I	190	280	40	Garden irrigated.
0 - 2			77		101/	1 200		111111111111111111111111111111111111111
305	-	-	W	D,S	200	250	35	The state of the s
306	30.4	Dec. 1, 1932	N	D,S,I	240	320	90	Well reported to have had large flow when completed. Water level less than 15 feet below ground level in 1910. Old Falconina well of Seeligson ranch. Small garden
30 7	43.8	Dec. 6, 1932	W	D,S	180	260	70	Casing; irrigated. 100 feet of 5-3/16 inch and $4\frac{1}{4}$ inch set at 350 feet.
308	duri .	-	W	D,S	190	230	65	
309	-	***	77	D,S,I	200	280	-	5 acres of vegetables irrigated.
310		-	एव	D,S,I	200	230	-	Small garden irri- gated.
311	-		77	D,S	210	200	30	
312	42.	Dec. 27, 1932	ŢŊ.	D,S	210	210	45	
313	-	AND ADDRESS OF THE PARTY OF THE	V.	DS	210	230	 	e ngandaganggan ayan aya ya gaadan sa saadalka sa sa sa saa sa sa sa sa sa sa sa sa s
314	41.6	Dec. 27, 1932	भ	D,S	220	200	40	and a stranger, is upon upon . We strange distant that refine to the second
315		understag spieger gegen van derhalte anderste opdigend die soeler verste verden er forste forste forste forste delse	M	D.S.I	220	220	1	Small garden irriga- ted,
316	48.4	Dec. 26, 1932	V4	D,S	220	190	35	The second secon
317	40.2	Dec. 27 1932	: f	S	220	190	35	
318	45.7	Aug. 24, 1933		D,S,I	230	1		6 acres of citrus fruit irrigated.
319		do.	T,G,-	D,S,I	220	!		5 acres of citrus fruit irrigated.
320	_	- -	A,G,22 H.P.	D,S,I	220	210	25	3 acres of citrus fruit and 20 acres of vegetables and feed crop irrigated. Temperature 82° F. Yield 150 gallons a minute, measured Dec.
321		Aug. 24, 1933	<u>;</u>	D,S,I	220			One acre 29, 1932. of citrus fruit irri-
322		Dec. 29 , 1932		D,S	210		!	the state of the s
323	50,5	Dec. 23, 1932	· ·	S	200	180	30	

Records of wells in Jim Wells County -- Continued Nater-bearing bed Ye. Distance 0wner Driller Date Depth Diam-Depth fickf~om com- cf eter to top ness of Premont ple- well ofof bed hed ted (ft.) well (ft.) (ft.) (in.) 324 Premont Charlie Lofland 325 do. Premont Gin Chester Downs 535 475 1928 76 60 Co. 326 Raul Tijerina Raul Tijerina 1923 4-1 do. 400+ 327 Luis Tamez do. Benito Tamez 1908? 328 3/4 mile Canales Estate 490 5-3/16 -Old east 329 를 mile south San Antonio & 41 Luis Tamez 1924 553 Aransas Pass RR. 330 la miles L. H. Franz Perry Downs 540 12 south 331 do. L. S. Elwell -- Randolph 510 332 do. do. la miles south 333 C. C. Wehrnan Luis Tamez 1926 540 10 southeast 334 la miles J. R. Friesen 1926 550 southeast 335 la miles C. T. Jones 700± 12 southeast la miles 初. F. Van O. M. Boone 336 southeast Meter 337 Mrs. Chester Downs do. 500+ --Stubblefield 500± 338 2 miles Chris Hansen Luis Tamez 1925 44 southeast 339 D. Lobrecht 12 do. -- Sanderson Luis Tamez 5-3/16 340 do. 500± 341 7 miles west L. E. Pierce 1911 640 southwest 01d Charlie 342 W. L. Singer 475 6 do. Premont Chester Downs 5-3/16 | -343 6를 miles west Mrs. 1921 495 southwest M. Christ 5-3/16 344 5 miles west C. E. -- Tamez 1917 580 southwest Knellinger 6 miles 5-3/16 345 Charlie Charlie Old 454 southwest Premont Premont

	(Al	l wells are dr	illed unle	ss other	rwise :	stated	in	remarks,)
	Water				Fie	old tes	ts	
No.	Depth below	Date of	Method of	Use of	parts	per mi	<u>l</u> li	on Remarks
	surface or	measurement	lift and	water	Chlo-	Hard-	Sul	
	bench mark		amount of	c/	ride	ness	pha	te
	(ft.)		power	_		₫/		
			<u>b</u> /			_		
324		900	य	D,I	250	200	-	1/2 acre of citrus
								fruit irrigated.
325		***	A,0,25	P, Ind.	260	280	-	Casing; 200 feet of
			H.P.	l				6 inch and $4\frac{1}{5}$ inch
					1			to bottom with lower
								60 feet perforated.
3 26	-	-	भ	D,S	270	240	-	Altitude of top of
						i !		water pipe clamp,
·					<u> </u>			153.5 feet above sea
327	-	-	H	D,S	250	280	-	This well is <u>level</u> .
						:		reported to have
					ı	i i		stopped flowing in
								1909. Altitude 144.1
			1 1			i	-	feet above sea level
328	41.8	April 27, 1933	3 W	DS	240	300	-	Small garden irriga-
					1		L	ted. Altitude 139.7
329	44.4	Oct. 24, 1932	W	D,S	-	-	-	Supplies water feet.
			1 1 1					for shipping pens
								and dipping vet.Alti-
330	42.5	July 31, 1933	N	D,S,I	240	210	45	
-								acres of citrus
331	37.2	Aug. 18, 1933	W	D,S,I	230	200	25	The state of the s
				<u> </u>			· 	do.
33 2	-	-	W	D,S,I	-	-	-	3 acres of citrus
12 82 87	25 0	D- 15 1020	737	 	000	000	1 40	fruit irrigated.
3 33	37,8	Dec. 15, 1932	W	D,S,I	220	220	40	ł
]	1	below top of casing
334	43.8	Doc 20 1079	- w	D,S,I	230	200	FO	in 1926, reported by
∂0 4	40.0	Dec. 26, 1932	4.8	1,00,1	230	200	50	} \
335	42.3	do.	W	D,S,I	220	250	75	citrus fruit irriga- 4 acres of cit- ted.
000	46.U	do.	1 2 X	1,0,0	620	200	1 00	rus fruit irrigated.
336	39.2	Aug. 18, 1933	·W	D,S,I	220	250	35	5 acres of citrus
000	03.2	Mug. 10, 1900		1,0,0	220	200	. 00	fruit irrigated.
337	_	_	A,G,22	D,S,I	190	290	100	7 acres of citrus
001	-	_	H.P.	10,00	130	230	100	fruit irrigated.
₹38	35.7	Aug. 18, 1933		D,S,I	230	180	35	20 acres of citrus
500	00.1	1146, 10, 1000	,	D, 0, 1	1 500	100	00	fruit irrigated.
339	36.5	July 31, 1933	7	D,S,I	230	200	20	4 acres of citrus
550	1			, , , , ,	1		~ ′′	fruit irrigated.
340	33,4	Dec. 27, 1932	70	D,S,I	230	210	50	5 acres of citrus
0 10	1	200, 21, 2002	-	2,0,1				fruit irrigated.
341	_	_	-	D.S	200	250	50	
011	i			1 2,2				
342	25.8	Dec. 1, 1932	N	D,S	200	200	40	Reported flow(prior
012	20.0	,		-,-		1		to 1907) 75 gallons
343	_	_	 	D,S	200	170	80	
0.1.0			} }	, ,		i		Control of the Contro
344	-	-	; II	D,S,I	190	280	90	Garden irrigated.
OIF	about the same of		1	-,-,-	-0.5	1		
345	52.8	Dec. 6, 1932	 	N	 -	 	+-	5-3/16 inch drilled
- 20				1		1	1	well in bottom of 25
				I	1	1	į	foot pump pit. Report-
			Ì	•	1		1	ed flow(prior to 1907)
					İ	!		50 gallons a minute.
			1		1	1		<u>i</u> /

-35-Records of wells in Jim Wells County -- Continued Water-bearing bed No. Distance Owner Driller Date Depth Diam - Depth Thickfrom to top ness of comofeter Premont ple-|well ofof bed bed (ft,) well (ft.) (ft.) ted (in.) 346 6 miles Charlie Luis Tamez 1930? 482 southwest Premont 347 4 miles west 1915? 365 L. D. Atkinson 5-3/16 | southwest 9/3483 miles west W. A. Keith 6-5/8 1926 486 Chester Downs southwest 349 3章 miles west -- Johnston 6-5/8 southwest 4 miles 350 C. T. Hewett 6-5/8 southwest 2-3/4 miles 351 M. F. Mertens 384 southwest 352 2층 miles J. F. Carroll 1912 540 5-3/16 | southwest 3 miles 353 Dr. -- Collins southwest Dr. -- Dozier 354 2등 miles south 1932 6-5/8 southwest 355 do. H. C. -- Vermeen 535 4분 Valentine 356 do, C. M. Miles Benito Tamez 520 4-1 1916 1-3/4 miles Nelson English Benito Tamez 532 10 357 south 3 miles south Bill Watkins 1913 705 358 5-3/16 |-359 $3\frac{1}{4}$ miles J. F. Langen Chester Downs 1915 488 south 500+ 5-3/16 | -360 3号 miles south Walter Blumer do. 2-3/4 miles Lindquist Luis Tamez 520 490 30 9/361 1925 south Bros. 3 miles south C. F. H. Von Charlie 362

3 miles south

southeast 3-3/4 miles

southeast

363

364

Premont

-- Foster

1918

490

5-3/16 | -

5-3/16

Blucher

do.

Canales Estate

a/Old, probably completed prior to 1910.

b/H, hand pump or rope and bucket; M, windmill; A, airlift; T, deep well turbine; J, jack pump; E, electric motor; G, gasoline engine or oil engine.

c/P, public supply; RR, locomotives; I, irrigation; Ind, industrial; D, domestic; S, stock; N, not used.

d/ Hardness as calcium carbonate by the soap method.

Water level No. Depth below Eat of surface or bench mark (ft.) Method of Use of parts per million Remarks Method of Use of parts per million Remarks Remarks Method of Use of parts per million Remarks Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of parts per million Remarks Method of Use of Dile			l wells are dr	illed unle	ss othe				remarks.)
Surface or measurement lift and mmount of power po									
Seach mark (ft.) Seach S	No.				Use of	parts	per mi	llic	n Remarks
Cft.		1	measurement .	Ī.	. ,		1	3	•
346				Ī	<u>c/</u>	ride		phat	e e
346 28.5 Dec. 6, 1932 7		(ft.)					<u>d</u> /		
347 -				<u>b/</u>					
348	346	28.5	Dec. 6, 1932	W	D,S	190	210	40	
348									
349 -	34 7	-	-	W	D,S,I	220	190	40	
349 -									
350 -	348	***	-	ΔŢ	D,S	210	190	60	
350 -						ŀ	İ		
350	349	_	**	Ţ	D,S,I	200	210	45	Small garden irri-
350									
351	350	-	-	গ	D.S.I	220	180	30	
352					, ,				
352	351	-	-	ন্	DSJ	230	190	40	talling of the security beautiful and the second security of the second
Truit irrigated Truit irri				·	2.4,4				
Truit irrigated Truit irri	352	-	delikerinkan medilak dapan mendiran mendiran mendiran mendiran dapan mendiran dapan dapan mendiran dapan dapan Men	A.G	DST	200	790	70	2 acres of citrus
353	, , ,			, u,	2, ~ , 2	200	1	'	
354	353			ান	2.0	210	200	50	11010 1111180000
The standard of the standard	000			,	D,0	210	200		
The standard of the standard	354			767	Det	220	370	50	20 sance of eitrus
The second color of the	004	_	_	4.5	D,O,I	22()	170	30	
Solution Solution	755				n c T	210	100	40	
The second color of the	555	_	-	£¥	D,O,I	210	100	40	
357 36.4 Dec. 26, 1932 A,G,- D,S,I 210 200 25 19 acres perforated. of citrus fruit irri- 358 36.1 do. W D,S,I 210 190 45 Small garden gated. 359 g/ 25.2 Mar. 2, 1928 W D,S,I 200 240 45 Small garden irrigated. 360 29.2 Aug. 1, 1933 W D,S,I 190 210 45 5 acres of citrus fruit irrigated. Altitude 135.8 feet above 361 g/ 30 Mar. 2, 1928 W D,S,I 8 acres sea level. 35.6 Oct. 24, 1932 Of citrus fruit irrigated. Altitude of top of casing, 142.6 feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 -	75.0			*7-1	D 0 F	03.0	100		
357 36.4 Dec. 26, 1932 A,G,- D,S,I 210 200 25 19 acres perforated. of citrus fruit irri- 358 36.1 do. W D,S,I 210 190 45 Small garden gated. 359 g/25.2 Mar. 2, 1928 W D,S,I 200 240 45 Small garden gated. 360 29.2 Aug. 1, 1933 W D,S,I 190 210 45 Sacres of citrus 501 g/30 Mar. 2, 1928 W D,S,I 190 210 45 Sacres of citrus 502 fruit irrigated. Altitude 135.8 feet above 503 35.6 Oct. 24, 1932 Oct. 24, 1932 Oct. 24, 1933 Oct. 24, 1933 Oct. 24, 1933 Oct. 24, 1935	996	-	-	3.4	Д,8,1	210	190	40	
Second Second	200	7.0	D 00 7070				000		
358 36.1 do. W D,S,I 210 190 45 Small garden gated.	357	36.4	Dec. 26, 1932	A) G, –	D,S,I	210	200	25	
359 g/25.2 Mar. 2, 1928 N D,S,I 200 240 45 Small garden irrigated.	- 2 - 0	70.1		707	- 	-030	100		
359 g/25.2 Mar. 2, 1928 N D,S,I 200 240 45 Small garden irrigated.	990	20.1	ao.	*4	D, S, I	210	190	45	
30.0 Dec. 26, 1932 gated.	75.0	7.05.0	76 7000					=	
360 29.2 Aug. 1, 1933 W D,S,I 190 210 45 5 acres of citrus fruit irrigated. Altitude 135.8 feet above 361 g/30 Mar. 2, 1928 W D,S,I - - 8 acres sea level. of citrus fruit irrigated. Altitude of citrus fruit irrigated. Altitude of top of casing, 142.6 feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 -	359	g/ 25.2			D'S'T	200	240	45	
fruit irrigated.Altitude 135.8 feet above 361 g 30	7.00								
Solution Solution	360	29.2	Aug. 1, 1933	3.1	D,S,1	190	210	45	
361 g/30 Mar. 2, 1928 W D,S,I - - 8 acres sea level. of citrus fruit irrigated. Altitude of top of casing, 142.6 feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 -									
35.6 Oct. 24, 1932 of citrus fruit irrigated. Altitude of top of casing, 142.6 feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 -		7 50							
36.6 July 31, 1933 gated. Altitude of top of casing, 142.6 feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 - 7 S 210 200 60 joints perforated. 363 32.4 Apr. 27, 1933 N D,S 210 240 -	361	g/ 30	- 4	Я	D,S,I	-	-	-	
top of casing, 142.6 feet. Casing; 60 feet of 10 inch, $4\frac{1}{2}$ inch set at 498 feet, two 362 - $\ddot{3}$ S 210 200 60 joints perforated.		1							
feet. Casing; 60 feet of 10 inch, 4½ inch set at 498 feet, two 362 - 7 S 210 200 60 joints perforated. 363 32.4 Apr. 27, 1933 N D,S 210 240 -		36.6	July 31, 1933						
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									
362 - - S 210 200 60 joints perforated. 363 32.4 Apr. 27, 1933 N D,S 210 240 -						i			
363 32.4 Apr. 27, 1933 W D,S 210 240 -]	set at 498 feet, two
	362		-	7.7	S	210	200	60	joints perforated.
	363	32.4	Apr. 27, 1933	7	D,S	210	240	- 1	
364 X S 220 240 -					-				
	364	_	-	<u>.</u> 7	S	220	240	-1	
								.	

^{6/} For analysis of water see under well number in table pp 54.

f/Reported by driller.
g/Measured by S. S. Nye, U. S. Geological Survey.
h/Sulphate test by turbidity method and may be as much as 25 per cent in error. 1/ T. U. Taylor, underground waters of Coastal Plain of Texas; U. S. Geological Survey, Water-Supply Paper 190, 1907.

	Reco	rds of wells in	Jim Wells Coun	ty	Conti			
	_						Water-bea	
No.	Distance	Owner	Driller		Depth		Depth	Thick-
	from			com-	of	eter	to top	ness of
	La Gloria			1	well	of	of bed	bed
				ted	(ft,)		(ft.)	(ft.)
				a/		(in.)		
365	5 miles west	R. E. McBride	Night & Haunz	1927	465	6	<u> </u>	-
				1			ļ	
366	$5\frac{1}{2}$ miles west	Star Lumber	-	1912	600±	5	-	-
·		Co.		<u> </u>				
367	5 miles west	Mrs. H. G.	_	01 d	650±	6	-	-
		Schellenherg						
						}		
								1
							<u> </u>	
368	5½ miles west	W. G. Ward	Tamez	19203	300+	5-3/1	6 -	-
				1	1		l	
							ĺ	
369	do.	G. L. Crothers	Bill Williams	1920	448	5-3/1	6 -	_
						'		
370	do.	do.	_	Old	133	4之	-	
					l	•		
371	5 miles west	Luis Guerra	•	1900?	70	5-3/1	6 -	-
					İ		•	
372	5-3/4 miles	Clarence	Chester Downs	1912	430	8	-	
	west southwest	Burdette			•			
373	$5\frac{1}{4}$ miles west	Mrs. P. H.	-	1928	500	6	_	-
	southwest	Chilton] ,		i		
]	ļ			
e/374	5 miles west	E. G. Maun	W. Zimmermann	-	475	6-5/8	-	_
	southwest]			
375	do.	C. H. Hornsby	O. M. Boone	1929	460	5-3/1	6 -	
							1	
376	$3\frac{1}{2}$ miles west	Cliff Burdette	Benito Tamez	1914	480	5-3/1	6 -	-
	southwest						ĺ	
				1				
				1	İ			
377	3 miles west	Dale Maun	-	1925	495	10	460	35
	southwest			ł]		
378	$2\frac{1}{2}$ miles west	S. Maun	T. Herring	Old	470	5-3/1	6 -	
	southwest		J	1		′		
379	$2\frac{1}{4}$ miles	R. A. Jordan	W. Zimmermann	1931	498	8	472	26
	southwest							
				1				
380	2½ miles west	Robert Adair	-	 - 	_	5-3/1	6 -	
-						/ -		
381	ੀ miles west	C. D. Osborne	Chester Downs		500+	4-1/4	_	_
	southwest			1	300.5]/ -		1
		L	<u> </u>	<u>. </u>	<u> </u>	1	<u> </u>	<u> </u>

-38(All wells are drilled unless otherwise stated in remarks.)

~ ~ ~~~~		l wells are dr	illed unle	ess othe				remarks.)
	Water					eld tes		
٠, ا	Depth below	Date of	Method of	Use of				
	surface or	measurement	lift and	water	Chlo-	Hard-	Sul-	
	bench mark		amount of	c/	ride	ness	phat	e
	(ft.)		power			d/		
			<u>b</u> /					
365	48.9	Dec. 6, 1932	W	D,S	1,100	550	100	Furnished good water
				,	1			when first completed
					l			but water soon turn-
						Ì		ed salty. Water can
					l			not be used for irri-
366	_	-	W	D,S	230	280	40	gation.
				-,-	1			L.C.
367	-		TAT T	D,S	480	290	65	Well reported to have
			*					had a flow until
						1		about 1914 but water
								level now is about
								25 feet below ground.
368		_	77	D,S,I	260	250	20	3 acres of citrus
2 3 3				_,_,_	~00	200	~~	fruits and l acre of
						İ		vegetables irrigated.
								Temperature 81° F.
								Windmill pumped 25
								gallons a minute in
								moderate wind, Dec.1
369			W	D,S,I	260	225	20	2 acres of 1932.
505	_	_		⊥ و ∪و ط	200	220	20	citrus fruits irri-
370			H	N		 		
370	_	-	11	1//	-	_	-	Old salt gated. water well.
371	42.6	Dec. 1, 1932	H	S	2,000	750	160	water werr.
0/1	10.0	1, 1000	11		2,000	1 700	100	
372		-	Ŋ	D,S,I	240	160	20	5 acres of citrus
• • •				-,-,-				fruits irrigated.
373	_		W	D,S,I	210	170	20	3 acres of citrus
								fruits irrigated.
						1		Altitude 162.2 feet.
374	16.8	Oct. 23, 1932	म	D,S	208	190	20	Altitude of top of
		, , , , , , , , , , , , , , , , , , , ,		_,-				casing, 155.6 feet
								above sea level.
375	_	-	A,G,-	D,S,I	230	200	20	
5.0			,-,	- , - , -	~~~		-	fruits irrigated.
376	5.6	Dec. 6, 1932	\overline{n}	D,S	220	180	30	Well had strong flow
0,0	3.0	3, 2002		~,~	520			originally. Stopped
								flowing about 1926.
								Altitude of top of
								casing 135.4 feet.
377	9.6	do.	W	D,S,I	220	170	25	Altitude of top of
011	J. U	uo.	**	⊥ ر ∪ و ∪	220	1 10	20	casing, 135.2 feet.
378	7.4	do.	W	D,S	220	190	25	
0,0	کتب و ز	~~•		٠,٠	220	100	20	to 1907) 100 gallons
379	12.9	Dec. 5, 1932	H	D,S	220	170	35	Cas- a minute. i/
5,5		200, 0, 1002		~ , **	520	-,0		ing; 42 feet of 8
				-		1		inch and 4 inch drill
								stem to top of sand.
. <u> </u>	18.2	Dec. 6, 1932	Н	D,S	250	200	30	a cent co cop or sand.
500	TO • 12	בטטע טיי בטטב	11	٠,٠	200	200	UU	
381	-		7/	D,S	250	210	30	
551			'-	~,~	200			
	L		<u> </u>		L	`		

	Reco	rds of wells in	Jim Wells Coun	ty	Contin		NTL	
	D		D	<u>.</u>				aring be
.o.,	Distance	Owner	Driller				Depth	Thick-
,	from			com-		eter	to top	ness of
,	La Gloria			ple-	well	of	of bed	bed
				ted		well	(ft.)	(ft.)
				a/	(200)	(in.)	(= 0.)	(= 0,)
382	2 miles west	J. H.		<u>a/</u>	 -	6		
002	r mrres west	3	_	_				
707	71	Patzakowsky	7 . • . M	3005	1	ļ	 	<u> </u>
383	3½ miles west	Charlie	Luis Tamez	1925	585	=	-	_
	northwest	Lofland			<u> </u>	<u> </u>		
384	$2\frac{1}{2}$ miles west	Sinclair	-	-	-	=	-	-
	northwest				1			
385	ੀ miles north	Llano Colony	Shively	T -	500±	-	· -	_
		Ů	·		-			
386	do.	Mrs.	do.	1932	 	6-5/8		_
900	uo.	Hazzard	40.	1302		0-070		1
		nazzaro		1				
				1				
					1			<u> </u>
387	3/4 mile west	Z. D.	Schrock & Rupp	1926	490	8	445	45
		Culpepper		Į.				l
				1				
				1				
388	1/4 mile west	A. A. Cosby	Downing	1905	7 480	5-3/1	 	
000	1/ 1 11110 11000	A. A. Octoy	DOMITTIE	1300	1	0-0/1		
700		7	777. 70	1077	405		4.00	177
389	l mile south	James Darche	Elmer Rupp	1933	485	6	468	17+
				1				Ì
390	$1^{\frac{1}{2}}$ miles south	C. Barrera	Chester Downs	1925	580±	4-1/4	_	_
	,				_			
			D	12000		170	<u> </u>	E
391	2 miles south	O. A. Fore	Porter & Rupp	1929	629	10	579	50
				1]		
						}		
				Į.			1	
						1		
						1		
						ł		
							1	
	1			ĺ	l			
		}			1			
				<u> </u>		<u> </u>		
392	La Gloria	F. P.	Downing?	1904	€50+	5-3/1	6 -	_
		Fitgerald	1		-	1		†
			•		1	1		
								1
			1			1]
	1 70 1 7	 	0 34 70	13000	+	<u> </u>	 	
39 3	1/2 mile east	Dr Padgett	O. M. Boone	1932	540	8	_	_
						ļ		
394	l mile east	A. Garza	Byrd	1912	900 <u>+</u>	4-1/4	580	-
	_		<u> </u>			<u></u>		
395	la miles east	J. H. Holmgran	Chester Downs	1928	635	12	-	-
	~			1				
					1			
	1		t	•				

-40-

(All wells are drilled unless otherwise stated in remarks.) Water level Field tests Depth below Date of Method of Use of parts per million No. Remarks surface or measurement lift and water Chlo- Hard- Sulbench mark amount of ride ness c/ phate (ft.) power d/b/ 382 22.1 Aug. 30, 1933 270 W,A,G,20 D,S 270 40 Temperature 83° F. H.P. 383 D,S.I 200 200 25 384 27.1 Aug. 30, 1933 īT D.S 210 180 30 385 H D.S 30 210 190 29.7 386 Aug. 1, 1933 V D,S,I 220 190 30 Altitude of top of casing, 135.3 feet. 20 acres of citrus fruits irrigated. 387 23.6 Aug. 30, 1933 W D.S.I 270 250 35 5 acres of citrus fruits irrigated.Casing; 44 feet of 8 inch, 5-3/16 and $4\frac{1}{4}$ 388 25.9 July 31, 1933 ,श D,S 200 210 35 inch to bottom. 389 23.7 June 7. 1933 H D,S 270 230 Casing: 60 feet of 6 inch and 408 feet of $4\frac{1}{4}$ inch connected by 390 27.5 Dec. 5, 1932 V. D.S 220 160 Report- swivel joint. ed water level 12 feet below surface in 1925. Altitude of top of casing 121.1 391 21.8 Dec. 1, 1932 T,E,7층 D,S,I 185 240 100 Casing; 100 feet. H.P. feet of 10 inch and 489 feet of 6 inch with 10 foot lap set at top of second sand. First sand at 480 to 509 feet. Temperature 84½° F. Yield 200 gallons a minute, measured Dec. 1 1932 6 acres of citrus fruits and 15 acres of vegetables irrigated. Altitude of top of turbine base, 392 27.5 5, 1932 W D.S Dec. 260; 230 35 Well 125.8 feet. originally had large flow. Altitude of top of water pipe clamp, 132.2 feet. 30 10 acres of young 393 26.7 Aug. 12, 1933 ্ন্ D,S,I 270 190 citrus trees to be 'n. 394 D,S 260 230 50 irrigated. 395 220 Ţ D,S,I 200 150 6 acres of vegetables J,G,6 irrigated. Tempera-H.P. ture 86° F.

Records of wells in Jim Wells County -- Continued

	Record	s of wells in J	im Wells Count	y (Contin	ued		
					Ī	Ţ	Vater-be	aring bed
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	La Gloria			ple-	well	of	of bed	bed
	}			ted	(ft.)		(ft.)	(ft.)
				a/	(/	(in.)	(= -• /	(/
396	1-3/4 miles	Charles	Chester Downs	1918	485	10	_	
	cast	Boerjan						
397	7 miles east	John Minter	do.	1914	540	_	_	
398	1 milo	J. P. Gonzales	do.	1929	471	6-5/8	_	
	southeast	1		2020	1	0 0,0		
			•	1				
					į			
399	1/2 mile south	O. M. Boone	O. M. Boone	1928	600	12	560	40
000	1/5 11110 500011	O. M. BOOM	o. m. boone	1020	000	12	000	70
					1		Ī	
								ļ
								1
		1					•	
								l
		ļ						
i		1						1
					i i			ł
400	l mile south	-	Brown	1905	?		480+	-
					1		_	į
401	1-1/4 miles	Mrs. M. A.	Downing	1905	600	12불	520	20
	southeast	Kempshall				~	560	40
		1						l
					Ì		\$ •	
ĺ							!	1
1 2 7 7 7		0	0 M 25		400	0 5 /0		
402	1-1/2 miles	L. W. Moore	O. M. Boone	-	471	6-5/8	-	-
rie popienia in inch	south southeast		-					
403		Joe Myrick	Chester Downs	-	580	4-1/4	-	-
Lings Bernelike	south southeast					· · · · · · · · · · · · · · · · · · ·		
404	2-1/4 miles	, A. Saenz		-	521	4-1/4	-	-
	southeast							
		a to be described to the latest	417					

Old, probably completed prior to 1910.

^{5/01}d, probably completed prior to 1910.

b/ II, hand pump or rope and bucket; W. windmill; A, air lift; T, deep well turbine;

J. jack pump; R. electric mater; G. gaseline engine or oil engine.

o/ P. public supply: RR, lecomptives; I, irrigation; Ind, industrial; D, domestic; S. slock; N. not used.

d/ Hardness as calcium carbonate by the seap method.

nuture teller		ll wells are dr	illed unie	ss otne				emarks.)
27 -	The same of the sa	level	1			eld tes		Dame lan
No.	Depth below	1	Method of					
	surface or	measurement	lift and	1 /	7	Hard-	1	1
	bench mark		amount of	2∕	ride	1 4	phat	<u>e</u> J
	(ft.)		power <u>b</u> /			<u>d</u> /	i	
396	-	-	177	D,S,I	240	210	50	2 acres of citrus
					<u> </u>			fruits irrigated.
397	25.2	Aug. 12, 1933	,V	D,S I	250	180		10 acres of citrus
398	24.6	Dec. 26, 1932	1 - 77	D,S,I	240	190		fruits irrigated. Casing; 60 feet of
080	24.0	Dec. 20, 1352	''	U, O, I	240	130	00	6-5/8 inch and $4\frac{1}{4}$
								inch to bottom with
								one joint perforated.
399	21.4	Dec. 5, 1932	T,E,15	D,S,I	220	200	40	Casing; 100 feet of
			H.P.					12 inch, 460 feet of
								8 inch with 4 feet
								perforated in top of
								sand with uncased
		,					İ	hole to bottom.First
								sand at 460 to 500
								feet. Yield 400 gal-
								lons a minute, Dec.5,
								1932. 18 acres of
								citrus fruits and 25
						1		acres of vetegables
								irrigated. Altitude
400			H	D,S	250	190	15	of top of casing
400	-	_	Π.	۵, ⊄	200	130	15	127.7 feet.
401	1.5	Dec. 23, 1932	77	D,S,I	240	160	25	Casing; 20 feet of
								$12\frac{1}{2}$ inch and $4\frac{1}{4}$ inch
								to bottom with stra-
								iners at 520 to 540
								feet and 560 to 600
								feet. Top of first
								sand at 450 feet. Well had flow of 165 gal-
								lons a minute when
								completed, 5 acres of
								citrus fruits and 20
								acres of vegetables
402	25.9	Dec. 23, 1932	Ŋ	D,S,I	230	130	20	Small irrigated.
H-14-1-1-1-1-1								garden irrigated.
403	-	-	<u> </u>	D,S,I	230	190	50	
404	-	and the second s	W	D,S,I	220	150	25	relicion (escripto) () emperatore relicionario está a tida, made interioridades está
101				,				

e/ For analysis of water see under well number in table pp 54.

f/Reported by driller.
g/Measured by S. S. Nye, U. S. Geological Survey.
h/Sulphate test by turbidity method and may be as

Sulphate test by turbidity method and may be as much as 25 per cent in error. T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

j		<u> </u>						earing bed
√o•	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
]	from			com-			to top	ness of
ĺ	Orange				well		of bed	bed
1	Grove				(ft.)		(ft.)	(ft.)
ļ	GIOVE			a/	(10.)	(in.)	\ 1 0 ·)	(100)
405	5 miles	Robert Adams	Smith & Story	1936	360 <u>+</u>	5	-	_
3/40 6	southwest 5½ miles	do.	Rowen & Hope	1936	400+	5	-	
	southwest				_		1	
<u>407</u>	7 miles	Ed. Adams	Ed Jergins	1936	411	4	-	-
1	southwest						 	
	. .		70 177					earing bed
No•	Distance	Owner	Driller		Depth		Depth	Thick-
	from			com-		eter	to top	ness of
-	Alice			ple-	well	of	of bed	bed
				ted	(ft.)	well	(ft.)	(ft.)
				a/		(in.)		
408	¼ mile	Magnolia Pet.	H. C. White	1939	550	7	497	53
	north	Co.					4	
/409	$2\frac{1}{2}$ miles		_	1930	? 900+	10	-	-
	east							
410	In Alice	City of Alice	Texas Water	1940	647	10	500	35
		No. 5	Supply & Devel	opmen	Co.	 	540	20
		1,00					567	10
				 		· • • • • • • • • • • • • • • • • • • •	Water-b	earing be
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from					eter	to top	ness of
	Premont				well		of bed	bed
					(ft.)		(ft.)	(ft.)
	T. STORY			a/	(10.)	(in.)	1,100,	1 120.7
411	7 miles	Ritter	Glascock	1937	500+		_	
	northwest				_			}
412	$6\frac{1}{2}$ miles	Johnson	Tom Graham	1937	500+	6	-	-
4377	northwest	Ohna Tarrahii		1000	500	<u> </u>	<u> </u>	<u> </u>
413	64 miles northwest	Chas. Laughlin	-	1939	500+	6	-	-
414	$5\frac{1}{4}$ miles	Wash Storm	A. A. Porter	1939	370	6	358	12
415	northwest 48 miles	Seeligson	Magnolia Pet.	1938	460	7	410	50
140	north	Ranch	Co.					
	3				Prid Odd - Transporter da - S			
				1	İ	1	1	

Old, probably completed prior to 1910.

H, hand pump or rope and bucket; W, windmill; A, air lift; T, deep well turbine; J, jack pump; E, electric motor; G, gasoline engine or oil engine.

P, public supply; RR, locomotives; I, irrigation; Ind. industrial; D, domestic; S, stock; N, not used.

^{1/} Hardness as calcium carbonate by the soap method.

	·	ll wells are			~			,
		level				eld te		
210 €	Depth below	Date of	Method of	Use of	parts	per m	illion	Remarks
	surface or	measurement	lift and	water		:Hard-		i
	bench mark		amount of		ride		phate	
	(ft.)		power	<u>≅</u> /	1146		phate	
	(10+)		-			<u>a</u> /		
			<u>b</u> /		ļ	 		77-1
405	_	- ;	A,0	Ind	-	-	-	Water well for oil
					<u></u>			test
406	-	-	A,0	Ind	-	-	-	Do•
					!			
407	_	-	A,0	Ind	-	-	-	Casing: 411 feet of
] 	<u> </u>			4-inch.
No.	Water	level			Fi	eld te	sts	
	Depth below		. Method of	Use of	3			Remarks
	surface or	measurement		water		Hard-		
	bench mark	modbar chion b	amount of	1 ,	ride	4	phate	
	(ft.)				Tiue	1 .	phace	•
	(10.)		power		1	<u>d</u> /		i I
	 		<u>b/</u> T,E	72 77 72	<u> </u>	!		107
±08	-	-	T,E	D, Ind	-	-	_	Casing: 493 feet of
						1		7-inch, screen set
				<u> </u>				from 489 to 550
								feet. Yield 21
				1	İ			gallons a minute
				İ	į			at completion. Re-
								ported yield of
	:							sand at 129 to 148
						į		feet was 10 gallons
409	ļ		W	70 0	ļ			
409	-	-	ΔV	D,S	-	}	-	Started a minute.
	: :				Į	i		as oil test but
	[<u> </u>			abandoned at about
±10	-	-		P	-	-	-	Casing: 900 feet.
	•					1 †		502 feet of 10-inch
	1				Ì	İ		Screen set from 502
	; !					1		to 647 feet.
\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Water	level		<u> </u>	i Fri	eld te	et e	
	Depth below		Method of	Use of	•			Remarks
		measurement		water		Hard-		TIOMET NO
	bench mark	ineasurement.	amount of	1 .	I	1	ì	
	4	•		<u>c</u> /	ride		phate	
	(ft.)		power	1		¦ ₫/		
	<u> </u>		<u>b/</u>	-				-
411	-	1	A,0	Ind	-	-	-	Water well for oil
	i L	1		1	<u> </u>			test.
412	-	-	A,0	Ind	-	-	_	Do.
		i 		i	Ĺ			<u> </u>
413	_	-	A,0	Ind	T -	 	T -	Do.
			•	•	1	İ	1	•
$\overline{414}$			A,0	Irr	T _	 	 	Casing: 358 feet of
	1		-+, ·	; -		}		6-inch.
415		1	A,0	D	+	 		Casing: 405 feet of
410	_	- !	А,О	ע	_	1	-	
					1	1		7-inch, 88 feet of
					Í]		5-inch with lap of
	•			1	\$		1	33 feet into 7-inch
					1	1		5-inch casing per-
				1		1	1	forated from 415
	1			1		i	į	to 460 feet.
	· · · · · · · · · · · · · · · · · · ·	 						

For analysis of water see under well number in table pp. 54.

[/] Reported by driller.

Z/ Measured by S. S. Nye, U. S. Geological Survey.

[/] Sulphate test by turbidity method and may be as much as 25 per cent in error. \underline{i} / Sulphate test by turbidity method and may be as much as 25 per cent in error. \underline{i} / T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological

Survey, Water-Supply Paper 190, 1907.

\$-45-\$ Records of wells in Jim Wells County -- Continued

	-					:	Water-be	earing bed
No.	Distance	Owner	Driller	Date	Depth	Diam-	Depth	Thick-
	from			com-	of	eter	to top	ness of
	Premont			ple-	well	of	of bed	bed
					(ft.)		(ft.)	(ft.)
	!			<u>a</u> /	•	(in.)		
416	6 miles	Seeligson	Magnolia Pet.	1938	647	7	568	62
	northeast	Ranch	Co.			!	i •	1
	ì			}		1	! }	i ! !
						i		1
				,	;	1	; ;	1
		_				!	<u> </u>	
417	do.	do.	do∙	1938	515	7	420	25
				1		i	450	65
				,	, E		!	
						1	1	} f
430	In Premont	City of	Dougle Com	1939	520	8	410	110
418	in Premont	Premont	Peurifoy & Patterson	11939	520	0	410	, TTO
	1 1	rremone	ratterson	ł	: •	Í	i,	t !
					• !	· •		
				:	, 1		i 	
	į			1	1	!	1	•
			•	4		i i		•
				,		<u> </u>	Water-h	earing bed
No.	Distance	Owner	Driller	Date	Denth	Diam-		Thick-
110•	from			com-		eter	to top	ness of
	La Gloria				well	of	of bed	bed
				ited	(ft.)	1	(ft.)	(ft.)
				<u>a</u> /	i .	(in.)	1 - 1	,,
ਰ/419	$1\frac{3}{4}$ miles	Sam Maun	Magnolia Pet.	1940	516	7	458	58
	southwest		Co.		1	† <i>‡</i>	* ?	

a/ Old, probably completed prior to 1910.

b/ H, hand pump or rope and bucket; W, windmill; A, air lift; T, deep well turbine; J, jack pump; E, electric motor; G, gasoline engine or oil engine.

c/P, public supply; RR, locomotives; I, irrigation; Ind, industrial; D, domestic;

S, stock; N, not used.

^{1/} Hardness as calcium carbonate by the soap method.

-46(All wells are drilled unless otherwise stated in remarks.)

L	; Water	level		,	Fi	eld tes	sts	
N_{O}	Depth below	Date of	Method of	Use of				Remarks
_	1	measurement	lift and					
	bench mark		amount of	c/	ride	ness	phate	
	(ft.)		power	_	}	<u>d</u> /	_	
			h/					
416	-	-	A , 0	N	-	-	-	Casing: 558 feet of
					İ	į		7-inch, 113 feet of
					ļ			5-inch with 24 feet
					ĺ			lap into 7-inch. 5-
					•			inch casing per-
						İ		forated from 558 to
417	-	-	A,0	Ind	-	-	-	Casing: 647 feet.
						•		413 feet of 7-inch.
						ļ		Screens set from
					1	ĺ		413 to 515 feet.
\								Water well for oil
418	-	-	T,E	P	-	-	-	Casing: 120 test.
						ļ	1	feet of 8-inch, 285
	;				1			feet of 6-inch with
								8x6 swedge. Report-
				}				ed yield of 122 gal-
					! }	1		lons a minute when
				1	<u></u>	<u> </u>		tested Feb.11,1940.
	Water	level		1		eld te		
$No \cdot$	Depth below	Date of	Method of	Use of	parts	per m	illion	Remarks
	surface or	measurement	lift and	water	Chlo-	Hard-	Sul-	
	bench mark		amount of		ride	ness	phate	
	(ft.)		power			<u>d</u> /		
		!	b/				<u> </u>	
419	-	-	A,0	Ind	-	_	-	Casing: 458 feet of
						-		7 and 5-inch.

e/ For analysis of water see under well number in table pp.54.

f/ Reported by driller.

g/ Measured by S. S. Nye, U. S. Geological Survey.

h/ Sulphate test by turbidity method and may be as much as 25 per cent in error.

i/ T. U. Taylor, underground waters of Coastal Plain of Texas: U. S. Geological Survey, Water-Supply Paper 190, 1907.

		ckness		Thickness	Depth
		reet)	(feet)	(feet)	(feet)
Driller's lo	og of	well 2	9	Driller's log of well 33	
Gulf Production Cor	npany,	Mrs.	R. Shaef-	Gulf Production Company, Mrs. R. S.	haeffer
fer Number 5.		4		Number 3.	C 7
Caliche	-		4 50	Hard, sandy, caliche rock- 53	53
Hard clay and shale		46	,	Caliche 10	63
Hard sand and calich		103	153	Red clay 57	120
Caliche		25	178	Red gumbo and lime 82	202
Clay	-	7	185	Red clay 20	222
Sand	-	43	228	Soft sand 58	270
Shale		52	280	Sandy shale 31	301
Sand and gravel -	-	10	290	Red gumbo 20	321
Shale	_	100	390	Red gumbo and lime 69	390
Sand	-	12	402	Sand 90	480
Gummy shale	-	46	448	Gumbo 79	559
Sand		16	464	Hard shale 2	561
Shale	-	114	578	Hard gray shale 49	610
Gumbo	-	17	595	Sticky shale 24	634
Sandy shale	-	42	637	Sand 16	650
Tough sticky shale	**	41	678	Sandy shale 40	690
Sticky shale	-	10	688	Gumbo 10	700
Sand and gravel -	-	31	719	Red gumbo 100	800
Shale	-	16	735	Gumbo and lime 62	862
Sticky shale	***	15	750	Sand 59	921
Sandy shale and				Red sandy clay 54	975
boulders	eca.	16	766	Gumbo and lime 45	1020
Sand	-	14	780	Sandy shale 15	1035
Sandy shale	-	5	785	Gumbo 37	1072
Sand		28	823	Sandy shale 28	1100
Sandy shale	-	73	896	Sand 60	1160
Sticky shale	-	45	941	Sand and shale 19	1179
Sandy shale	-	42	983	Sandy shale 21	1200
Sand		7	990	Gumbo 30	1230
Sandy shale	-	40	1030	Gumbo and lime 75	1305
Sticky shale	-	44	1074	Red gumbo and lime 45	1350
Shale	-	26	1100	Red gumbo 70	1420
Dry shale	-	50	1150	Sandy shale 40	1460
Sticky shale	-	28	1178	Gumbo 84	1544
Shale, with sand				TOTAL DEPTH	2861
streaks	-	34	1222		
Sticky shale		28	1250		
Shale with streaks	of			Driller's log of well 37	
hard sand	-	13	1263		
Hard sand	~	28	1291	Magnolia Petroleum Company, Charle	s Cook
Shale	-	17	1308	Number 1.	
Sand	-	82	1390	Surface clay	6
Sticky shale	-	58	1448	Caliche 50	56
Sticky shale	-	124	1572	Shale 19	175
TOTAL DEPTH			3044	Sand 10	185
			1	Shale 107	292
				Broken sand 67	3 59
				Shale 47	406
				Sand rocks 2	408
				Streaks of sand 78	486
				(Continued on next page)	
				· †	

Thickness	Depth	Thickness	Depth
(feet)	(feet)	(feet)	(feet)
Duillanta la accumi		D :11. 1 2 0 11 50	• 1
Driller's log of well 37 - conti	nueu	Driller's log of well 52 - cont	inuea
Sandy shale 96	582	Clay 3	453
Water sand 13	595	Sand 24	487
Streaks of sand 120	715	Tough gumbo 15	502
Gummy gypsum 97	812	Gumbo 12	514
Sand 18	830	Sand 24	5 38
Gumbo 15	845	Gumbo 18	556
Broken sand and shale - 75	920	Sand 22	578
Gumbo 12	932	Gumbo 9	587
Shale 11	943	Hard sand and lime 48	635
Sand 13	956	Sticky shale 29	664
Gumbo 78	1034	Lime rock 2	666
Sticky shale 16	1050	Gumbo 18	684
Gumbo 30	1080	Sand 11	695
Gummy lime 20	1100	Gumbo 85	7 80
Sticky shale 80	1180	Sticky shale 25	805
Sand 12	1192	Sand 21	826
Shale 28	1220	Sticky shale 35	861
Sticky shale 5	1225	Sand 42	903
Gumbo 28	1253	Gumbo 9	912
Sand 32	1285	Sand 48	960
Shale 45	1330	Gumbo 52	1012
Gumbe 21	1351	Sticky shale 18	1030
Shale 25	1376	Gumbo 42	1072
Streaks of shale 53	1429	Sticky shale 149	1221
Sticky shale 55	1484	Hard shale 5	1226
Sand 19	1503	Gumbo 18	1244
Streaks of shale 42	1545	Send 9	1253
Sand 23	1568	Sticky shale 43	1296
Shale 17	1585	Sandy shale 8	1304
TOTAL DEPTH	4795	Sticky shale 31	1335
		Gumbo 20	1355
		Sticky shale 66	1421
Driller's log of well 52		Sand 14	1435
R. and G. Corp. Ragland Number 1.	- ,	Gumbo 35	1470
Surface 14	14	Sand 8	1478
Clay 6	20	Gumbo 31	1509
Caliche and sand 24	44	Sand 52	1561
Clay 28	72	Sand and lime 49	1610
Caliche 12	84	Gumbo 17	1627
Lime rock 3	87	TOTAL DEPTH	3003
Sand 3 . Clay 67	90		
· /	157 168	D.::33a1a 3an at31 03	
· - ·	1	Driller's log of well 91	
· ·	188	San Antonia Torra and Warrant Common	
Yellow clay 27 Sand 20	215 235	San Antonio Loan and Trust Compan Clay 39	
		1 0	39 60
Yellow clay 28	263	Rock 21	60 120
Sand 5	268	Caliche 60	120
Yellow clay 29	297	Clay 52	172
Sand 9	306	Sand 8	180
Red clay 42	348	Clay 183	363 375
Sand 102	450	Water sand 12	375
	}		

Thickne (feet			ckness Depth feet) (feet
	· · · · · · · · · · · · · · · · · · ·		er tantada,
Driller's log of well	93	Driller's log of well 19	66 - continued
V. E. Bird, owner.	1	Packed sand	16 26
Clay 20	20	White clay and gravel-	58 84
Sand 20	40	Hard rock	6 90
Clay 40	80		66 156
Caliche rock 18	98	Hard clay and gravel -	43 199
Clay 11	109	Soft yellow clay	194 393
Caliche 31	140	Rock	1 394
Clay 19	159	Clay	9 403
Salt water sand 10	169	Fine brown sand	20 423
Clay 126	295	Clay	73 496
Water sand 19	314	Fine brown sand	39 535
		Gumbo	3 538
The state of the s		Sand	15 553
Driller's lcg of well	116	Rock	1 554
		Hard clay	41 595
A. L. Stokes, owner.	1	Sand	27 622
Brown sand 40	40	Gumbo	4 62 ^R
Lime rck 45	85	Rock	1 627
Yellow clay 95	180	Sand	18 645
White clay and hard		Gumbo	14 659
sand 60	240	Sand	19 678
Red and yellow clay - 15	255		21 698
Hard water sand 20	275	Gumbo	22 720
Brown clay 25	300	Shale	92 812
Brown clay and	400	Gumbo	25 837 24 861
boulders 180 Brown water sand	480	Sand Hard shale and sand -	88 949
	503	Fine sand	43 992
U	50.5	Gumbo	90 1083
Red clay, bouldres and gypsum 247	750	Fine sand	58 1142
Red clay, boulders	750	Gumbo	135 1277
and gypsum 550	1300	Fine sand	51 1329
Boulders and clay,	1000	Gumbo	46 1375
hard 200	1500	Hard sand	10 1385
nara sino	1 1000	Gumbo	61 1447
	al per a market also riprovide recompanyment and an analysis of the second	Gumbo and thin sand	
Driller's log of well	136	layers	111 1558
		Fine blue sand	22 1580
Richard Albert, owner.	i	Gumbo	72 1653
Sand 2	2	Sand	14 1667
Clay and caliche 7	9	Gumbo	214 1881
Soft sand and caliche		Shale	81 1962
with layers of hard	- Carrier Carr	Sand, good, no breaks-	23 1985
caliche 81	90	Sand and shale, very	
Red and yellow clay - 20	110	broken	82 2068
Water sand 17	127		
	3.50		
Driller's log of well	156		
City of Alice, owner.			
Soil 4	4		
Thite clay 6	1 70		

White clay -

	Thickness (feet)	Depth (feet)	Thickness Depth (feet) (feet
D :33- 1- 3-	taran da da da da da da da da da da da da da		
Driller's log	or well 178		Driller's log of well 178continued
"Magnolia Colony", ow	mer.		Soft rock 18 1065
Black soil	- 2	2	Clay and boulders 7 1072
Brown sandy clay -	- 4	6	Brown clay and
Thite sand	- 22	28	boulders 22 1094
White clay and			Hard green clay 36 1120
chalk rock	- 22	50	Hard, tough shale 14 1134
White clay	- 70	120	Soft, crumbly shale - 19 1153
Pink clay and rock			Hard green clay 14 1167
(Chalk)	- 58	178	Shale and clay 12 1179
Hard white rock and			Gumbo 7 1186
brown shale	- 16	194	Green shale and
Thite clay	- 34	228	rock 18 1204
Pink clay, sticky -	- 92	320	Green and brown
Soft lime rock	- 8	328	shale 28 1232
Light brown clay -	- 66	394	Hard brown shale - 47 1279
Sandy clay	- 4	398	White rock and
Scapstone		412	boulders 3 1282
Gumbo	- 23	435	Light brown clay 24 1306
Water sand and	50	,,,,	Tough green clay 92 1398
boulders	- 35	470	Tough brown clay - 75 1473
Sticky white clay -	- 23	493	Soapstone and soft
Reddish sandy clay-	- 11	504	slate 37 1510
Sand, red clay and	- 11	1 004	State= = = = = = = = = = = = = = = = = = =
boulders	- 76	580	
Clay and sand rock-	- 8	588	Driller's log of well 189
Sandy clay	- 18	606	Diliter S log of well 100
Sticky gumbo	- 10 - 12	618	Independent School District Number 7.
Sand, clay and	- 12	010	Surface soil 3 3
boulders	- 57	675	Reddish sandy caliche - 37 40
Boulders and clay -		682	
· · · · · · · · · · · · · · · · · · ·	- 7 - 7	1 1	Caliche with very small
Tough gumbo	- '	689	supply of water at
Tough sandy brown	211	800	90 and 160 feet 160 200
clay	- 111	800	Pink clay 60 260 Sand 3 263
White rock and	0.0	997	
clay	- 27	827	Pink clay 82 345
Lead colored shale-	- 23	850	Water sand 53 398
White rock and	7.0	000	
clay	- 30	880	D + 11 - 1 - 1 - 0 - 0 - 11 004
Gray and yellow	70	07.0	Driller's log of well 264
sand	- 38	918	Manual da Datura da Carrer Carrer
Greenish white shale		950	Magnolia Petroleum Company, Seeligson
Shale and bouldres-		993	Number 1.
Soft rock	- 19	1012	Surface sand 11 11
Hard brown clay -	- 18	1030	Clay 3 14
Boulders and shale-	- 17	1047	Caliche clay 26 40
			Water sand 20 60
			(Continued on next page)

	Thickness	Depth	Thickness	Dept!
		1	· ·	fee-
				
f well	264 - cont	inued	Driller's log of well 288 - con	tinue
	· 50	110	Red clay 31	400
	20	130		41
	***	170	1 · · · · · · · · · · · · · · · · · · ·	47
	24	194	· 1	
	. 61	255		
		275	The state of the board	
	- 27	302		
	- 68	370	Driller's log of well 389	
		395		
	1	420	James Darche, owner.	
	. 45	465		12
	- 60			13
	1	1	1	1.
				19
				1.2
	i i		· •	28
			[20
	~ -	1		4.6
	- 1		•	42
	V- 1			43
	~ + 1			53
	i		L #	56
			•	
			. •	
	. 120			67
				77
	37			78
	- 515	1		
	26			103
		_		104
	4()			132
		6010		
				150
lcg o	f well 288		white clay 36	186
		I	Hard sandy clay with	
		:	l }	19
			Soft, white and pink	
		ŧ I	sandy clay with	
		1	caliche 12	201
			Hard, white caliche - 3	210
		l :	Clay and caliche 15	225
		1	Sandy clay with	
	- 10	55	streaks of caliche - 15	240
	- 10	65	Clay and caliche 10	250
	. 30	95		•
	- 11	106		
	- 29	135	caliche 57	307
	85	220	1 1	
	- 18	238	, ,	330
	. 2	240	Soft, gray, sandy	1
	. 20	260	l clay with streaks of	i
	- 20 - 9	260 269	clay with streaks of sand 20	350
	lcg o	(feet) f well 264 - cont 50 20 40 24 61 20 27 - 68 25 45 60 30 10 30 35 1 - 81 21 17 37 - 25 130 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 - 43 20 40 log of well 288 owner. log of well 288 owner.	(feet) (feet) f well 264 - continued 50 110 20 130 40 170 24 194 61 255 - 20 275 - 27 302 - 68 370 - 25 395 - 25 420 - 45 465 - 60 525 - 30 555 - 10 565 - 30 595 - 35 630 - 35 630 - 35 630 - 30 595 - 30 595 - 37 840 - 21 786 - 17 803 - 27 865 - 37 1095 - 43 1058 - 37 1095 - 25 35 - 30 105 - 30 100 - 30 95<	F well 264 - continued

Thickness De	epth	Thickness Depth
	feet)	(feet) (feet
Driller's log of well 389continu	1ed	Driller's log of well 415continued
Red and brown clay 10	360	Sandy shale60 350
Hard, red and gray clay 15	375	Shale 25 375
Hard, red clay with streaks	1	Clay 35 410
of rock 15	390	Sand 50 460
Hard, red clay 10	400	CASING RECORD: 405 feet of 7-inch;
Red and white clay and sand 15	415	88 feet of 5-inch with 33-foot lap into
Hard red clay 15	430	7-inch. Five-inch casing perforated
Soft, red and white clay - 10	440	from 415 feet to 460 feet.
Hard red clay 15	455	Trom 415 feet to 400 feet.
	468	D 411 1 0 1 . 47.0
	i i	Driller's log of well 416
Red sand and gravel 2	470	
Soft red sand 15 '	485	Seeligson Ranch - Magnolia Oil Company.
	1	Sand 10 10
Driller's log of well 408	1	Hard caliche 15 25
	1	Yellow clay 105 130
Magnolia Petroleum Company.	1	Sandy shale 103 233
Surface soil 8	8	Sand 24 257
Sand 6	14	Shale 53 310
Caliche 66	80	Sandy shale 10 320
Sand (dry) 11	91	Sand 13 333
Hard shale 25	116	Shale 67 400
Sand (water) 7	123	Sand 35 435
Shale 6	129	Sandy shale 15 450
Sand (water)		Sand 40 490
(Tested 10 g.p.m.) 19	148	Shale 5 495
Shale 12	160	Sand 25 520
Sandy shale 36	196	Hard sand and shale - 48 566
	238	676
	285	1
1	1	1
Clay 11	296	CASING RECORD: 558 feet of 7-inch;
Sandy shale 149	445	113 feet of 5-inch perforated casing se
Clay 20	465	from 558 to 647, with 24-foot lap into
Sand 7	472	7-inch casing.
Shale 25	497	
Sand (water) 53	550	Driller's log of well 417
CASING RECORD: 493 feet of 7-inch;		
feet of $5\frac{1}{2}$ -inch screen set from 489		Seeligson Ranch - Magnolia Oil Company
550, with 4-inch lap into 7-inch cas	ing.	Sand 10 10
Tested 21 g.p.m. on completion.		Caliche 15 25
		Yellow clay 115 140
Driller's log of well 415	ļ	Sandy shale 90 230
		Sand 30 260
Seeligson Ranch - Magnolia Petroleum		Sticky shale 10 270
Company.		Sand 20 290
Surface soil 10	10	Sticky shale 27 317
Clay 30	40	Sand 18 335
Caliche 20	60	Shale 5 340
·	110	Sand 15 355
· ·		l l
Clay 45	155	
Shale 30	185	Sand 25 445
Olay 35	220	Sandy shale 5 450
Sandy shale 55	275	Sand 65 515
Clay 15	290	CASING RECORD: 413 feet of 7-inch; 4
)	i	and 5-inch screens set from 413 to 515.

and 5-inch screens set from 413 to 515.

-53Table of Drillers' Logs, Jim Wells County -- Continued

Thickness Depth (feet) (feet)	Thickness Dept (feet) (fee	
Driller's log of well 418	Driller's log of well 419continued	<u>-</u>
City well at Premont, Texas.	Sand rock 17 2	25
Caliche 16 16	Caliche 32 5	7
Saliche with clay streaks 234 250	Sand 9 6	66
Candy red shale 160 410	Clay 82 14	.8
Sand 110 520	Sand 10 15	8
CASING RECORD: 120 feet of 8-inch;	Clay 66 22	4
8-inch x 1 foot, 4-inch swedge; 284½	Sandy shale 28 25	, ,
feet of 6-inch. Yield 122 g.p.m. on	Hard shale 18 27	0
Feb. 11, 1940.	Sandy shale 35 30	15
	Clay 8 31	.3
Driller's log of well 419	Sand 58 37	1
	Shale 39 41	.0.
Magnolia Petroleum Company. Water well	Sand 13 42	3
on Sam Maun lease.	Clay 35 45	8
Surface soil 8 8	Sand 58 51	.6
	CASING RECORD: 458 feet of 7 and 5-in	ich

Analyses of water from Jim Wells County, Texas

(Parts	Analyses o s per million. Well num							, recorda	of wells)
(rar o	s per milition: well hum	0612	COII	as pond	to number	T III vai	016 01	records	OI WEITE!
Well	Owner	Date of			Total	Silica	Iron	Calcium	Magnesium
No.	V. 2.02	collection		dissolved	L L	1 1	(Ca)	(Mg)	
					solids	1 122/	, , ,	(04)	(
6	School Dist. No. 16	Mar.	21.	1934	a/ 785	- 	1.0	41	14
			,		<u></u> ,		-		
16	S. M. Freeborn	Mar.	31,	1934	a/ 940	-	. 97	83	28
44	Mrs. G. E. Teller	Mar.	21,	1934	a/1,326		1.8	102	45
46	T. L. Bowden		do.		<u>a</u> / 781	-	•33	77	31
67	Manuel Trejo		do.		<u>a</u> /2,462		1.2	99	55
89	W. S. Wimbs	Mar.	1,	1928	1,818	26	1.1	68	50
	E. Whitley	Mar.	4,	1913	A-0-	_	0	_	
96	Hayden & Reeves		do.		***		0	•••	
	M. J. Luby		go.		_	-	0		-
	James Walker		do.		<u></u>		5.0	-	
	C. F. Longwish Est.		do.				3.0	-	
	A. L. Stokes		do.				5.0		-
	Anastacio Lopez		do.				0	<u>~</u>	
142	J. B. Polk	Feb.	28,	1928	806	46	1.2	34	21
	Alice Cotton Oil Co.	May	3,	1913			0		-
***************************************	City of Alice	Mar.		1913				-	
153	do.	Apr.	18,	1940	798	-		-	
154	do.	7.	do.	1.000	1,163		-	43	29
155	do.	Mar.	5,	1928	1,234	25	.17	43	24
155	3	A 75	10	1040	1 005			50	28
	do.			1940	1,085 2,336			70	17
<u>d</u> /156 <u>e</u> /156	do.			1928	6,227		-	246	31
E\ 120	do.	Apr.	10,	1928	0,227	-		240	21
<u>f/156</u>	do.	Apr.	20,	1928	6,669			267	34
g/156	do.	May	$\frac{z_0}{1}$.	1928	3,103			104	24
h/156	do.	Jan.		1928	4,387			46	9
i/156	do.	Jan.	20,	1928	5,041	-		155	17
i/156	do.	Apr.		1940	1,109			34	17
175		Mar.			a/1,082		.44	22	17
-	· - · · ·		,		.,.,.				
191	Romana V. de Garcia	Mar.	21,	1934	a/ 777	**	2.0	16	12
	Emilia Barrera	Mar.	29,	1934	a/2,289	_	•26	220	107
214	Miguel y Ygnacio Cadena		do.		<u>a</u> / 621	-	3.6	73	56
251	Ed. Vela		do.		<u>a</u> / 591	-	•53	36	15
348	W. A. Keith	Apr.	7,	1933	<u>a</u> / 699	**	1.5	46	18
361	Lindquist Bros.	Mar.	2,	1928	745	37	•11	47	19
374	E. G. Maun	Apr.	7,	1933	<u>a</u> / 601	-	2.6	40	18
406	Robert Adams	Apr.		1940	1,154	-		94	32
407	Ed. Adams		do.		1.032	_	_	41	28
	Dr. Adkinson	Apr.		1940	845		-	-	_
-	Johnson	Apr.		1940	751	**	-	61	20
	Sam Maun	Apr.	5,	1940	645		•=-	38	19 .
a/ Ca	lculated.								

a/ Calculated.

b/ Determined.
c/ Sample collected by David Donoghue under the supervision of Alex Deussen.
d/ Water from strainers at 837 to 867 feet and 945 to 986 feet.
e/ Water from strainer at 1,078 to 1,139 feet.
f/ Water from strainer at 1,280 to 1,327 feet.

Analyses of water from Jim Wells County, Texas

,				s of war						
(Par	ts per mill	ion.								records of wells
			Potas-	Bicar-	Sul-	Chlo-	Fluor-	Ni-	Total	Analyst
Well	Sodium		sium	bonate	phate	ride	ide	trate	hardness	
.10·	(Na)		(K)	(HCO ₃)			(F)	(NO ₃)	as CaCO3	
	, ,		(/	3'	(10-4)	() = /	(-,	(3)	(calc.)	
6	- 37	252		438	59	199	2.0	2.5	160	Margaret D.
O	<u>a</u> /	202		400	0.5	100	2.0	2.0	100	Foster
7.0		047	.,	F7.3.C	e 1	nne.			322	
16	<u>a/</u> _	241		316	51	375	•4	5.8		Do•
44	<u>a/</u>	333		355	192	472	•5	6.9	440	Do•
46	<u>a</u> /	181		374	68	235	•8	4.0	320	Do.
67	<u>a</u> /	746		401	416	938	1.0	9.2	473	Do.
89	513		9.6	402	283	615	-	21	375	Do.
95				257	328	586	-		<u>h</u> /168	W. T. Read c/
96				392	287	290	-		<u>b</u> /300	Do.
109				332	119	249	_	_	b/186	Do.
113				295	19	73	_		<u>b</u> /298	Do.
114		-		408	49	140		-	<u>b</u> /290	Do.
116				355	30	181			<u>b</u> /128	Do•
132			····	256	222	665			b/260	Do.
	075		A A					3 77		
142	235		4.4	358	42	246		1.3	171	Margaret D.
									7	Foster
151		_		314	186	387			b/202	W. T. Read c/
153				392	5 8	271		-	<u>b</u> /182	Do•
153		287		318	115	220			87	E. W. Lohr
154		363		320	149	412	~		226	Do.
155	374		10	318	151	430	-	17	206	Margaret D.
										Foster
155		330		354	113	390		_	240	E. W. Lohr
156	<u>a</u> /	789		280	1,190	355	~		245	?
156		,646		223	3,187	579			642	Curtis
100	<u>a</u> / 1	,0±0		ಸಿಸಲ	0,201	0,0			012	Laboratories
156	- 71	760		200	72 1672	613			807	Do.
		,760			3,463					
156	a/	841		274	1,327	409			358 3.58	Do.
156		,368		209	1,947	660			152	Do.
156	<u>a</u> /1	,422		211	2,352	657			457	Do.
156		361		332	228	305		_	155	E. W. Lohr
175	<u>a</u> /	371		388	156	306	2.7	16	125	Margaret D.
· · · · · · · · · · · · · · · · · · ·							· · · · · · · · · · · · · · · · · · ·	-		Foster
191	a/	271		306	74	241	•3	12	89	Do•
206	a/	462		360	399	890	.7	33	989	Do.
214	<u>a</u> /	85		436	45	118	1.8	27	412	Do.
251	<u>a</u> /	174		321	67	137	• 4	3.7	152	Do.
348	3/	194		298	90	180	_	24	189	Do.
361	193		6.2	304	84	189	-	.20	195	Do.
374	a/	172		278	26	208		•50	174	Do.
406		307		318	62	502	_	_	366	E. W. Lohr
407		318		420	140	298	-		217	Do.
409		316		350	135	215			63	Do.
-	,		· · · · · · · · · · · · · · · · · · ·							
412		199		345	111	190			234	Do.
419		191		294	24	2 2 8	-	_	173	Do.

g/ Water from strainers at 837 to 867 feet 945 to 986 feet, 1,078 to 1,139 feet, and 1,280 to 1,327 feet.

h/ Water from strainer at 1,958 to 2,004 feet.

^{1/2} Water from strainers at 837 to 869 feet, 945 to 986 feet, 1,078 to 1,139 feet, 1,280 to 1,327 feet and 1,958 to 2,004 feet.

j/ Well developed from test water from strainers at 837 to 867 feet, and 945 to 986 feet.

