Texas Board of Water Engineers

C. S. Clark, Chairman
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WELLS IN WINTER GARDEN DISTRICT IN DIMMIT, AND ZAVALLA COUNTIES AND EASTERN MAVERICK COUNTY, TEXAS

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

PREPARED IN COOPERATION WITH THE UNITED STATES DEPARTMENT
OF THE INTERIOR, GEOLOGICAL SURVEY.

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ILLUSTRATIONS

WELLS IN WINTER GARDEN DISTRICT IN DIMMIT AND ZAVALA COUNTIES AND EASTERN MAVERICK COUNTY, TEXAS

Introduction

By

Walter N. White
Senior Hydraulic Engineer

This release contains records of wells and pumping plants and the amount of land irrigated from them in Dimmit and Zavala counties and the eastern part of Maverick County, Texas, together with well logs and tables giving the results of well water analyses and tests for chloride. It is illustrated by three maps 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. One map shows the wells recorded in Zavala County and the eastern part of Maverick County (pl. 1); another shows those recorded in Dimmit County (pl. 2); the third, in larger scale, shows the wells in the area adjacent to Carrizo Springs (pl. 3).

The wells are designated by letters and numbers and grouped in rectangular subdivisions, the boundaries of which are shown on the map. For example well N4-1 in Zavala County, 13½ miles northwest of Crystal City, is well 1 of 57 wells in subdivision N4. The county in which the wells are located is not indicated in the well table but the reader should have no difficulty in finding them if he refers to the second column of the table giving the direction and distance of the wells from the more important towns. Subdivisions M9, N7 to N9 and O7 are located partly in Zavala County and partly in Dimmit County.

The records were obtained in the course of investigations by the Texas Board of Water Engineers in cooperation with the Geological Survey of the U. S. Department of the Interior. A large part of them were obtained in 1929-30 by Samuel F. Turner and Thomas W. Robinson of the Geological Survey. In a re-survey by Gerald H. Cromack in 1938-39, the earlier records were brought up to date and records of new wells and pumping data for 1938-39 were added. The well table shows the ownership, pumping equipment and use or non-use of the wells and pumping plants as they were in 1938-39. It gives the amount of land irrigated from each pumping unit in the two seasons, 1929-30 and 1938-39. Most of the analyses were made in the laboratories of the Geological Survey at Washington, D. C. and Austin, Texas by Margaret D. Foster and E. W. Lohr. A few were made in the laboratory of The University of Texas by W. T. Reed.

The records obtained in 1929-30 were tabulated and released in photostatic form in 1934 to the Chambers of Commerce at Crystal City, Carrizo Springs and Catarina, and copies were placed on file and made available for public reference at the offices of the Geological Survey at Washington, D. C. and Austin, Texas and the Texas Board of Water Engineers at Austin. Two reports on the ground-water resources of the area prepared in cooperation between the Geological Survey and Board of Water Engineers have been published in mimeographed form, as follows: "Survey of the underground waters of Texas", pps. 7 to 23, February 16, 1931; and "Ground water in Dimmit and Zavala counties, Texas", April 11, 1934.

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.

Fluctuations in Chloride in Well Waters During Pumping

By

Penn P. Livingston

On pages 124-141 is a table showing fluctuations in chloride in irrigation well waters in Dimmit and Zavala Counties, Texas, during pumping tests made in the pumping season of 1938-39. The wells tested are distributed rather widely. However, they comprise only a minor part of the total number of wells pumped for irrigation in the area, and it is not known, therefore, whether conditions in them represent the average. In most of this territory the water-bearing beds that supply fresh water to the wells lie below beds that contain salty water, and if a well casing is defective some of the salty water may enter the well and mix with the fresh water. If the chloride in the water from a well fluctuates during pumping, it is an indication that the well is subject to a salt water leak. A well may be considered free from salt water leaks if it yields water throughout the pumping test with chloride nearly constant at less than 100 parts per million. When the chloride rises after the pump is started, and then drops to a low constant figure after only a few minutes of pumping, the leak is small and perhaps may be safely disregarded for the present although in time it may become larger. Thus far no data have been found in this area to indicate that the fresh water sands have become contaminated by the invasion of salty water. Therefore, it is concluded that if the leaks are stopped, a well that is now leaking should yield water of as good quality as it did when it was drilled. The record shows, however, that there are many wells in the area with casing leaks so large that they should be repaired as soon as possible, or in lieu of such repairs they should be plugged to prevent the salt water contamination spreading to adjacent wells.

(The figures for chloride in the table, pages 121 to 124, are based on field tests which, although approximate, are sufficiently accurate to indicate whether or not there is any material change in the chloride content of the water discharged from individual wells as pumping progresses. In most cases the figures are given to the nearest multiple of 10).

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County, Texas
("Depth to top" and "Thickness of Carrizo sand", from owners' and drillers' records.)

o.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
G9-1	16½ miles northwest	C. B. Fenley	--	--	125	4	--	--	--
G9-2	13½ miles northwest	--	--	--	3,614	--	--	--	--
H7-1	10 miles north	C. L. Bloom, et al	--	1920	687	--	--	--	--
H7-2	do.	N. B. Pulliam	--	1909	40	6	38	--	--
H7-3 *	9 miles northwest	E. B. Flowers	--	--	100	5	--	--	--
H7-4	3 miles north	Washer Bros.	--	1927	640	8	150	--	--
H7-5	do.	do.	--	1930	3,065+	--	--	--	--
H7-6	7 miles northwest	Turk Ranch	--	--	48	--	--	--	--
H7-7	5 miles northwest	-- Tepley	B. F. Kite	1911 c/	155 c/	10	155 c/	58	--
H7-8	do.	-- McCrary	do.	--	--	8	--	--	--
H7-9	do.	do.	do.	--	--	--	--	--	--
H7-10	do.	J. N. Wheeless	do.	1926 d/	144 d/	6	144 d/	112	--
H7-11	5 miles north	--	--	--	--	5	--	--	--
H7-12	do.	-- Perkins	B. F. Kite	1923 d/	175 d/	10	175 d/	80	--
H7-13 *	do.	Roy Cornett	do.	1912 c/	172 c/	10	172 c/	95	--
H7-14	4½ miles north	Frank Wampler	Cox & Davis	1929	133	8	--	--	--
H7-15	5 miles north	A. E. Wampler	B. F. Kite	1912	170	10-3/8	170	95	--
H7-16	do.	do.	do.	1927	150	6	--	--	--
H7-17	4½ miles north	C. & M. Produce Co.	L. F. Kite	1926	240 d/	10	230 d/	60	140
H7-18	do.	B. F. Kite	B. F. Kite	1922	1,730	8	--	90	145
H7-19	do.	C. & M. Produce Co.	Cribbs & Davidson	--	1,150	--	--	100	135

a/ T, turbine; Cf, centrifugal, C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, Natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.
b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.
* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

Records obtained by Thomas W. Robinson, Samuel F. Turner and Gerald H. Cromack

(All wells are drilled unless otherwise indicated in "Remarks" column.)

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
G9-1	47.7	Dec. 12, 1929	C,W	D,S	--	--	
G9-2	--	--	--	N	--	--	H. L. Graves well 1, oil test.
H7-1	--	--	--	--	--	--	R. L. Anderson well 2, gas test. Basalt reported at 650 to 654 feet and 684 to 687 feet.
H7-2	34.4	Oct. 8, 1929	C,W	D,S	--	--	
H7-3	83.1	Apr. 4, 1930	C,W	D,S	--	--	
H7-4	--	--	--	--	--	--	Casing: 130 feet of 8-inch; 20 feet of 8-inch perforated with ½-inch holes. Well plugged back to 200 feet. Water reported slightly brackish.
H7-5	--	--	--	--	--	--	Southern Crude Production Company well 1
H7-6	42.1	Apr. 4, 1930	C,W	S	--	--	Dug well. Washer, gas test.
H7-7	99.8	Nov. 19, 1929 c/	C,W	D,S	--	--	Casing: 95 feet of 10-inch; 60 feet of 10-inch perforated. c/
H7-8	111.1	do.	C,G	N	--	--	
H7-9	112.0	do.	C,W	D,S	--	--	
H7-10	111.3	do.	C,W	D,S	--	--	Casing: 124 feet of 6-inch; 20 feet of 6-inch perforated. e/
H7-11	114.4	do.	C,W	D,S	--	--	
H7-12	114.5	do.	--	N	--	--	Casing: 115 feet of 10-inch; 60 feet of 10-inch perforated with ½ and 5/8-inch holes. e/
H7-13	113.3	Nov. 7, 1929	--	N	--	--	Casing: 132 feet of 10-inch; 40 feet of 10-inch perforated.
H7-14	111.4	Nov. 19, 1929	C,G, 2½	D	--	--	
H7-15	--	--	T,Tr, 30	D,S,I	50	0	Screen set at 130 to 170 feet. c/ Temperature, 75° F.
H7-16	--	--	C,W	D	--	--	
H7-17	103	Feb. 8, 1928 d/	T,E, 40	I	160	160	Casing: 130 feet of 10-inch; 100 feet of 10-inch perforated with 5/8-inch holes. d/ Temperature, 76° F.
H7-18	--	--	--	--	--	--	Gas well, now sealed.
H7-19	--	--	--	--	--	--	Gas test, abandoned and filled.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
H7-20 *	5½ miles north	W. A. Butler	B. F. Kite	1926	130 d/	6	130 d/	93	67
H7-21 *	do.	do.	Cribbs & Davidson	1934	164	12	164	50	94
H7-22 *	do.	do.	do.	1954	192	12	192	140	37
H7-23 *	4¾ miles north	do.	do.	1934	182	12½	168	110	57
H8-1 *	9½ miles northeast	A. W. West	--	--	120	5	--	--	--
H8-2	10 miles northeast	West - Burns	--	1905	240	6	--	--	--
H8-3	10 miles northwest	A. W. West	--	1905	200	6	--	--	--

No.	Distance from Batesville	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
H8-4	9½ miles northwest	A. W. West	--	--	1,470	--	--	--	--
H8-5	do.	do.	--	--	850	--	--	--	--
H8-6	10½ miles northwest	T. P. Lee	--	1909	400	6	--	--	--
H8-7	9 miles northwest	A. W. West	--	--	1,308	--	--	--	--

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
H8-8	6½ miles north	I. T. Pryor	--	1926	3,503	--	--	--	--
H8-9 **	5 miles northeast	I. T. Pryor, Jr.	--	1930	1,155	--	--	85	143
H8-10	do.	do.	--	1930	946+	--	--	30	--
H8-11	8 miles northeast	--	--	--	1,046	--	--	--	130
H8-12	9 miles northeast	--	--	1921	1,395	--	--	53	144

a/ T, turbine; Cf, centrifugal, C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
H7-20	73.0	Nov. 13, 1929	C,W	D,S	--	--	Casing: 90 feet of 6-inch; 40 feet of 6-inch perforated. e/
H7-21	--	--	--	--	--	--	Casing: 70 feet of 12-inch; 94 feet of 12-inch perforated. e/
H7-22	--	--	T,E, 40	I	--	--	Supply reported weak. Assists H7-23. e/
H7-23	--	--	T,E, 40	I	--	380	Casing: 101 feet of 12½-inch; 67 feet of 10-inch perforated. e/
H8-1	79.0	Nov. 11, 1929	C,W	S	--	--	
H8-2	--	--	C,W	S	--	--	
H8-3	81.0	Dec. 23, 1929	C,W	S	--	--	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
H8-4	--	--	--	--	--	--	Mission Drilling Company well 1, West, gas test.
H8-5	--	--	--	--	--	--	Keystone well 1, West, gas well.
H8-6	67.8	Nov. 29, 1929	C,W	S	--	--	Supply reported weak with no water below 80 feet.
H8-7	--	--	--	--	--	--	Pundt well 1 West, gas test.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
H8-8	--	--	--	--	--	--	Continental-Old Dominion Co., I. T. Pryor well 1, oil test.
H8-9	--	--	--	--	--	--	State well 1, gas test in Nueces River bed.
H8-10	--	--	--	--	--	--	Texas Gas Utility Co., well 1 gas test, not completed.
H8-11	--	--	--	--	--	--	Anglin Oil & Gas Co., well 5, gas test.
H8-12	--	--	--	--	--	--	La Pryor Oil & Gas Co., well 1, gas test.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Batesville	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
H3-13	8½ miles northwest	--	--	--	1,193	--	--	--	--
H3-14	do.	A. W. West	--	--	1,200	--	--	0	--
H3-15	do.	--	--	1929	1,125	8	860	48	147
H3-16	do.	A. W. West	--	--	1,100	--	--	0	192
H3-17 *	do.	do.	Munroe Fenley	1937	234	6	--	--	--
H3-18	7 miles northwest	Smith - Flowers	--	--	1,320	--	--	240	--
H3-19	6½ miles northwest	T. P. Lee	--	1927	310	6	290	256	--
H9-1 *	8½ miles north	--	--	--	58	6	--	--	--
H9-2 *	8½ miles northeast	Kincaid Bros.	--	1904	250	6	--	--	--
H9-3	11 miles northeast	do.	Munroe Fenley	1929	204	6	--	0	200
H9-4	4 miles north	-- Baxter	--	1929	45	48	--	--	--
I7-1	12 miles northeast	Kincaid Bros.	--	1907	140	--	--	--	--
I7-2	10 miles northeast	do.	--	--	--	6	--	--	--
I7-3 *	11 miles northeast	--	--	--	--	6	--	--	--
I7-4	13 miles northeast	H. J. Tiller	--	--	120	6	--	--	--
I7-5	do.	do.	--	--	115	12	--	--	--

No.	Distance from Black Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M2-1	1½ miles northwest	-- Fessman	--	--	500	--	--	--	--
M2-2	2 miles southwest	Gus Black Est.	Charley Lindenborn	--	130	--	--	--	--
M2-3	1½ miles southwest	do.	F. M. Woods	--	--	--	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually car motor); Ng, Natural Gas; O, oil or semi-diesel; D, diesel, Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
H8-13	--	--	--	--	--	--	Sun Company, West-Pryor well 1, Gas well.
H8-14	--	--	--	--	--	--	Fee well 1, gas test.
H8-15	--	--	--	--	--	--	Oil test.
H8-16	--	--	--	--	--	--	Witherspoon well 3, West, gas test.
H8-17	179.0	Nov. 28, 1929	C,W	S	--	--	Temperature, 72½° F.
H8-18	--	--	--	--	--	--	Navarro Oil Co., well 1, gas test.
H8-19	131.5	Nov. 30, 1929	--	N	--	--	Casing: 250 feet of 6-inch; 40 feet of 6-inch perforated with ½-inch holes.
H9-1	49.5	Nov. 4, 1929	C,W	S	--	--	
H9-2	186.2	Nov. 5, 1929	C,W	S	--	--	
H9-3	160.5	do.	C,W	S	--	--	
H9-4	42.0	Nov. 12, 1929	B,H	D	--	--	In gravel.
I7-1	91.6	Nov. 9, 1929	C,W	S	--	--	
I7-2	43.4	Nov. 6, 1929	C,W	S	--	--	
I7-3	78.0	Feb. 10, 1930	C,W	D,S	--	--	
I7-4	77.8	do.	C,W	D,S	--	--	
I7-5	81.6	do.	C,W	S	--	--	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
M2-1	--	--	C,W	N	--	--	Weak well yielding salt water.
M2-2	--	--	C,W	S	--	--	
M2-3	--	--	--	N	--	--	United Texas Petroleum Co., oil test.

a/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
c/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Burke Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
Z-1	5 miles northwest	Chitten Estate	--	--	--	12	--	--	--

No.	Distance from Rambie Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-1	4½ miles north	-- Lens	--	1939	208	8	--	--	--
M3-2 * c/	5½ miles northeast	-- Fenley	--	--	--	--	--	--	--
M3-3 * **	4 miles northeast	-- Ingram	--	--	--	6	--	--	--
M3-4	2 miles west	H. Rambie	Cox & Davis	1928	--	--	--	--	--
M3-5	1½ miles west	do.	do.	1928	68	6	--	--	40
M3-6 *	Rambie Ranch	do.	do.	1927	100	10	60	--	100
M3-7 **	do.	do.	--	1900	40	5	--	--	--
M3-8	1½ miles north	H. P. Street	--	--	47	3	--	--	--
M3-9	1 mile northeast	Geo. Park	Cox & Davis	1928	132	--	None	--	132
M3-10	do.	do.	--	1910	--	5	--	--	--
M3-11 **	3 miles northeast	R. W. Norton	--	--	194	6	20	--	--
M3-12 **	3½ miles east	do.	--	--	150	--	--	--	--
M3-13 **	6 miles east	do.	--	--	150	8	--	--	--

No.	Distance from Black Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-14	1½ miles north	Gus Black, Est.	Charley Lindenborn	--	250	--	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually auto motor); Ng, natural gas; O, oil or semi-diesel; D, diesel, Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1928-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M2-4	3.0	Mar. 13, 1930	C,W	S	--	--	Chilipotin oil test, used as stock well.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-1	--	--	C,W	S	--	--	Yields salt water.
M3-2	--	--	--	--	--	--	c/ Do.
M3-3	71.0	Mar. 30, 1930	C,T	D,S	--	--	Temperature, 75° F.
M3-4	--	--	--	N	--	--	Salt water in sand from 220 to 230 feet. Abandoned and filled.
M3-5	42.5	Mar. 30, 1930	C,W	S	--	--	
M3-6	--	--	T,-, --	N	15	0	Casing: 40 feet of 10-inch; 20 feet of 10-inch perforated. Reported in 1938 no irrigation since 1934. Temperature, 78° F. c/
M3-7	30.5	Jan. 27, 1930	--	N	--	--	
M3-8	--	--	C,W	D,S	--	--	Supply reported weak.
M3-9	--	--	--	N	--	--	
M3-10	50.9	Jan. 27, 1930	--	N	--	--	
M3-11	91.0	Mar. 30, 1930	C,W	D,S	--	--	
M3-12	--	--	C,T	S	--	--	
M3-13	52.4	Mar. 30, 1930	C,W	S	--	--	Temperature, 75° F.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-14	--	--	--	N	--	--	Found only small salt water seep. Abandoned and filled.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Black Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-15 **	Black Ranch	Gus Black, Est.	Munroe Fenley	1928	120	8	20	--	--
M3-16	do.	do.	Charley Lindenborn	--	100	--	--	--	--
M3-17	2 miles northeast	G. W. Williams	Cox & Davis	1928	104	10	103	--	104
M3-18	1½ miles south	Gus Black, Est.	Joe York	1912	80	6	20	--	--
M3-19 **	2½ miles south	do.	Charley Lindenborn	1910	90	6	20	--	--
M3-20	1¼ miles southeast	do.	Cox & Davis	1928	80	6	20	--	--
M3-21	1½ miles east	--	--	--	81	6	--	--	--
M3-22	2⅔ miles east	G. W. Williams	Cox & Davis	1929	70	6¼	57	--	--

No.	Distance from Rambie Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-23	1 mile southwest	G. W. Williams	Cox & Davis	1929	107	3	--	--	--
M3-24 **	¼ mile south	C. F. Jackson	do.	1929	102	10	82	--	102
M3-25	½ mile southeast	do.	--	--	24	48	--	--	--
M3-26	¾ mile south	do.	--	1910	35	5	--	--	--
M3-27	2 miles southeast	do.	W. H. Rose	1910	32	5	20	--	--
M3-28	do.	Hope & Perkins	Cox & Davis	1928	123	10	80	--	--
M3-29 **	3¼ miles east	R. W. Norton	--	--	150	6	--	--	--
M3-30	3½ miles southeast	Hope & Perkins	Cox & Davis	1927	65	5	65	--	--
M3-31 **	4½ miles southeast	do.	--	--	115	5	--	--	--
M3-32	5 miles southeast	G. W. Williams	--	--	175	4	--	--	--
M3-33	6 miles southeast	do.	--	--	--	4	--	--	--
M3-34	do.	Hope & Perkins	--	--	--	6	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-15	51.0	Feb. 12, 1930	C,W	D,S	--	--	Temperature, 76° F.
M3-16	--	--	--	N	--	--	Bad water reported. Abandoned.
M3-17	--	--	C,W	D,S	--	--	Casing: 24 feet of 10-inch; 80 feet of 10-inch perforated.
M3-18	46.3	May 19, 1930	C,W	S	--	--	
M3-19	38.4	do.	C,W	S	--	--	Temperature, 75° F.
M3-20	50.6	Feb. 12, 1930	--	N	--	--	c/
M3-21	44.6	Feb. 6, 1930	--	N	--	--	
M3-22	--	--	C,W	S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-23	56.5	Feb. 12, 1930	C,W	D,S	--	--	
M3-24	--	--	--	N	20	0	Reported no irrigation for several years prior to 1937-38. c/
M3-25	--	--	C,W	N	--	--	Dug well, abandoned because creek overflows into it.
M3-26	31.4	Feb. 12, 1930	C,W	D,S	--	--	
M3-27	--	--	C,W	S	--	--	
M3-28	41.5	Feb. 12, 1930	--	N	--	--	
M3-29	96.0	Jan. 25, 1930	C,W	S	--	--	
M3-30	26.8	Feb. 12, 1930	C,W	S	--	--	
M3-31	70.5	do.	C,W	S	--	--	
M3-32	--	--	C,W	S	--	--	Water reported slightly salty.
M3-33	--	--	C,W	S	--	--	
M3-34	46.3	Feb. 12, 1930	C,W	S	--	--	

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Clark Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-35 **	½ mile north	Chitten Estate	--	--	--	6	--	--	--
M3-36 *	do.	Willie Clark	Cox & Davis	1928	263	8	191	210	--
M3-37	Clark Ranch	do.	--	--	--	12	--	--	--
M3-38	1½ miles northeast	Chitten Estate	--	--	--	6	--	--	--
M3-39	2 miles east	R. W. Norton	--	--	--	--	--	--	--

No.	Distance from Rambic Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-40	1 mile south	C. F. Jackson	Elmo Owen	1935	148	12	20	60	68
M3-41	1½ miles south	do.	do.	1935	120	12	20	--	--
M3-42	1½ miles southeast	do.	do.	1935	112	12	20	--	--
M3-43	3 miles southeast	do.	do.	1935	108	12	20	--	--

No.	Distance from Black Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M3-44	½ mile east	Gus Black Est.	Elmo Owen	1935	93	10	20	0	--

No.	Distance from Burke Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M6-1	4½ miles southwest	Chitten Estate	Joe York	--	--	--	--	--	--
M6-1 **	Burke Ranch	do.	--	--	--	--	--	--	--
M6-2 *_**	do.	do.	--	--	--	--	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-35	32.6	Feb. 11, 1930	C,W	S	--	--	
M3-36	--	--	C,W	S	--	--	
M3-37	39.0	Feb. 11, 1930	C,W	D,S	--	--	
M3-38	10.5	do.	C,W	S	--	--	Once flowed according to report.
M3-39	--	--	C,W	S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-40	--	--	T,G	I	0	353	
M3-41	--	--	T,D	I	0		
M3-42	--	--	T,G	D,I	0		
M3-43	14	May --, 1935 f/	T,D	I	0		

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M3-44	--	--	T,D	S,I	--	0	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M5-1	--	--	C,W	S	--	--	Reported weak. Yields salt water.
M6-1	--	--	C,W	S	--	--	
M6-2	--	--	C,W	D,S	--	--	

a/ Information by Alexander Duessen, U. S. Geological Survey.
b/ Information by S. S. Nye, U. S. Geological Survey.
c/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Burke Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M6-3	2½ miles south	Chittem Estate	--	--	--	6	--	--	--
M6-4 **	3½ miles south	do.	--	--	--	4	--	0	--
M6-5 **	4 miles southeast	Plumley & Stewart	--	--	--	4	--	0	--

No.	Distance from Clark Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M6-6	2½ miles south	Chittem Estate	--	--	--	6	--	--	--
M6-7	3½ miles south	-- Plumley	--	1928	--	6	--	--	--
M6-8	5 miles south	King Ware	Will Terry	1905	228	5-5/8	160	160	--
M6-9 **	do.	do.	Elmo Owen	1928	335	--	--	--	--
M6-10 **	7 miles south	W. M. Van Cleve	Harry Bowers	1914	150	5-5/8	96	90	--

No.	Distance from Burke Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M6-11 **	4½ miles south	Chittem Estate	--	--	--	5	--	--	--
M6-12 **	6 miles south	do.	--	--	140	6	--	--	--
M6-13 **	7 miles south	do.	--	--	--	16	--	--	--
M6-14 **	10 miles south	do.	--	--	--	4	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M6-3	--	--	C,W	S	--	--	Reported weak. Yields salt water.
M6-4	68.0	May 19, 1930	C,W	S	--	--	
M6-5	75.8	do.	C,W	S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M6-6	--	--	C,W	S	--	--	Water reported mineralized.
M6-7	25.5	Jan. 17, 1930	C,W	S	--	--	Water reported salty.
M6-8	--	--	C,W	S	--	--	Ninety feet deep and salty when first drilled, later deepened and salt cased off.
M6-9	67.8	Jan. 17, 1930	C,W	S	--	--	Water reported salty.
M6-10	69.6	Jan. 21, 1930	C,W	D,S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
M6-11	58.5	Mar. 12, 1930	C,W	S	--	--	
M6-12	64.0	do.	C,W	S	--	--	
M6-13	66.8	Mar. 11, 1930	C,W	S	--	--	
M6-14	88.4	Mar. 13, 1930	C,W	S	--	--	

c/ Information by Alexander Dusson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water formerly pumped from river.

Records of Wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
[illegible]-15	6½ miles northwest	Chitton Estate	--	--	--	6	--	--	--
[illegible]-16	do.	J. S. Steward	Will Clark	--	--	5-3/16	--	--	--
[illegible]-17	6 miles northwest	C. Van Cleve	Ive White	1904	180	5-5/8	100	100	--
[illegible]-18	4½ miles northwest	H. E. Ware	Charley Lindenborn	1904	550	5-5/8	--	--	--
[illegible]-19	3½ miles west	L. D. Van Cleve	Ive White	1903	180	5-5/8	100	--	--
[illegible]-20	4½ miles north	J. W. Stewart	W. E. Campbell	1910	715	6	440	250	170
[illegible]-21	1½ miles north	A. W. Allison	Charley Lindenborn	1929	420	--	--	--	--
[illegible]-22	1½ miles north	Amelia Houser Murray	--	1900	--	--	--	--	--
[illegible]-23	2½ miles north	do.	L. D. Stripling	1934	522	10	192	300	200
M9-1 * **	Cometa	T. B. Ware	Charley Lindenborn	1904	335	6	60	250	--
M9-2	do.	A. W. Allison	do.	--	425	5	--	250	--
M9-3 **	do.	Fred Erskine	John Mac Farland	1907	414	10-5/8	219	230	--
M9-4 *	2 miles west	Chitton Estate	Harry Bowers	1900	200	8	--	--	--
M9-5	2½ miles southwest	Pablo Sanchez	J. Golan	1926	100	6	20	--	--
M9-6	3½ miles southwest	Farias Ranch	--	--	460	--	--	--	--
M9-7	2½ miles southwest	W. H. Singleton	--	--	700	--	--	--	--
M9-8	do.	do.	--	1928	100	6	--	--	--
M9-9 **	do.	-- Meyers	--	--	--	10	--	--	--
M9-10	4½ miles southwest	Farias Ranch	--	1910	250	--	--	--	--
M9-11	4 miles south	-- Meyers	M. McCorkley	1924	110	3	--	--	--
M9-12	8 miles south	--	Geo. Petty	1920	200	6	200	--	--
M9-13	do.	--	--	--	2,285	--	--	--	--
M9-14 *	Cometa	B. H. Erskine	L. D. Stripling	1937	410	10	256	275	125

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
M6-15	37.2	Mar. 12, 1930	C,W	S	--	--	
M6-16	42.7	Jan. 17, 1930	C,W	D,S	--	--	
M6-17	41.7	Jan. 21, 1930	C,W	D,S	--	--	
M6-18	35.7	Jan. 17, 1930	C,W	D,S	--	--	
M6-19	49.5	do.	C,W	D,S	--	--	
M6-20	39.2	Jan. 19, 1930	A	N	--	--	
M6-21	--	--	--	N	260	0	
M6-22	--	--	T,C,	D,S,I	--	125	
M6-23	--	--	T,O, 20	S,I	--	55	Temperature, 91° F.
M9-1	58.2	Dec. 19, 1929	C,W	D,S	--	--	Water stood 20 feet below surface in 1913. c/ Temperature, 80° F.
M9-2	--	--	--	N	--	--	Pluggod and abandoned.
M9-3	--	--	T,O, 40	D,S,I	--	--	Casing: 20 feet of 10-5/8-inch drive pipe; 200 feet of 8-inch. Used in conjunction with M9-14.e/
M9-4	51.4	Feb. 4, 1930	C,W	S	--	--	
M9-5	76.0	do.	C,W	D,S	--	--	
M9-6	--	--	C,W	N	--	--	Salt water seeps reported at 40, 80 and 460 feet.
M9-7	--	--	C,W	N	--	--	Water reported salty.
M9-8	29.2	May 15, 1930	C,W	D,S	--	--	
M9-9	75.0	Dec. 12, 1929	C,W	S	--	--	
M9-10	--	--	C,W	N	--	--	Yields salt water.
M9-11	--	--	C,W	S	--	--	
M9-12	--	--	C,W	S	--	--	Reported weak. Yields salt water.
M9-13	--	--	--	N	--	--	Hanchett oil test.
M9-14	--	--	T,Tr, 30	I	--	180	Irrigated land supplied in part from well.

c/ Information by Alexander Duessen, U. S. Geological Survey.
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e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N1-1	5½ miles northwest	A. R. Hibbon	B. F. Kite	1919	200	6	--	--	--
N1-2	do.	do.	do.	1922	300	8	--	--	--
N1-3	4 miles northwest	A. F. Parr	do.	1910	150	10-5/8	--	108 c/	--
N1-4	do.	Chas. Couser	do.	1910	165 c/	10-5/8	--	108 c/	--
N1-5	3½ miles northwest	I. T. Pryor, Est.	do.	1914	178	10-5/8	178	103	--
N1-6	4 miles northwest	B. F. Kite	do.	1910	170	10-5/8	170	145	--
N1-7 * d/	4½ miles northwest	D. H. Monkhouse	--	1912	161	10-5/8	161	100	--
N1-8 *	4 miles northwest	August Noack d/	B. F. Kite	1910 c/	180 c/	7-7/8	180 c/	102 c/	--
N1-9	4 miles north	C. & N. Produce Co.	do.	1928	240	--	--	--	--
N1-10	3½ miles north	do.	do.	1928	225	12	--	--	--
N1-11 c/	do.	do.	do.	1910	255	8-5/8	255	100	140
N1-12	do.	B. F. Kite	do.	1912	160	10-5/8	160	58	--
N1-13 **	3½ miles north	C. & N. Produce Co.	Charley Lindenborn	1928	225	--	--	--	--
N1-14 **	9 miles west	R. W. Norton	--	--	150	8	--	--	--
N1-15 **	6½ miles west	Mathews Ranch	--	--	--	6	--	--	--
N1-16 **	6 miles west	do.	B. F. Kite	1929	157	8	--	90	--
N1-17 *-**	5 miles west	do.	--	--	--	8	--	--	--
N1-18 **	5½ miles northwest	do.	--	--	--	--	--	--	--
N1-19	5 miles northwest	do.	Cribbs & Davidson	1930	--	--	--	--	--
N1-20 **	do.	do.	--	--	--	--	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline; (Usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N1-1	135.8	Nov. 19, 1929	C,W	D,S	--	--	
N1-2	111.4	do.	C,G, 6	S	--	--	Owner reports that gas came in at bottom of well and water is bad.
N1-3	119.8	Dec. 23, 1929	C,H	N	--	--	Temperature, 75½° F. c/
N1-4	119.9	do.	T,O, 25	D,S,I	45	21½	Do.
N1-5	--	--	C,W	D,S	40	0	Casing: 118 feet of 10-5/8-inch; 60 feet of 10-5/8-inch perforated with ⅓-inch holes. Reported used for irrigation until 1930. e/
N1-6	--	--	C,W	D,S	--	--	Casing: 110 feet of 10-5/8-inch; 60 feet of 10-5/8-inch perforated with 5/8-inch holes. d/ Tempera-
N1-7	112.0	Feb. 8, 1928	C,W	D,S	--	--	Casing: 121 feet ture, 75½° F. c/ of 10-5/8-inch; 40 feet of 10-5/8-inch perforated. Temperature,
N1-8	109.7	do. d/	T,O	I	--	--	Used in conjunction with 76° F. N1-69. Screen set from 100 to 180 feet. c/Temperature, 75½° F.
N1-9	--	--	T,E, 40	I	160	160	Temperature, 76° F. c/
N1-10	--	--	T,E, 40	I	160	160	Do.
N1-11	--	--	C,H	D	--	--	Casing: 95 feet of 8-5/8-inch; 160 feet of 8-5/8-inch perforated.
N1-12	109.7	Jan. 3, 1928	C,W	D,S	--	--	
N1-13	--	--	T,E, 40	I	665	200	Used in conjunction with N1-33, N1-34 and N1-36 in 1929-30. Tem-
N1-14	66.4	Mar. 30, 1930	C,W	S	--	--	Temperature, perature 76° F. 78° F.
N1-15	--	--	C,W	S	--	--	
N1-16	74.4	Mar. 26, 1930	C,W	S	--	--	Temperature, 76° F.
N1-17	126.1	Jan. 27, 1930	C,W	S	--	--	
N1-18	--	--	C,W	D,S	--	--	
N1-19	--	--	--	N	--	--	Gas test. Abandoned and filled.
N1-20	--	--	C,W	S	--	--	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N1-21	3 miles northwest	A. R. Hibbon	B. F. Kite	1913	264	8-5/8	264	175	--
N1-22	2½ miles northwest	Helena Noack	C. C. Richey	--	--	8	--	--	--
N1-23	2½ miles west	J. C. Williams	B. F. Kite	1917	350	12	350	250	--
N1-24	do.	do.	do.	1915	300	8	300	275	--
N1-25 d/	3½ miles north	W. S. Bond	do.	1919	200	10	200	120	--
N1-26 d/	3 miles north	Andy Able	--	1912	229	10-5/8	229	120	--
N1-27 d/	1½ miles north	Ollie Trees	--	1912	369	10	253	315	--
N1-28 * d/	1½ miles northwest	A. R. Hibbon	--	1910	222	8	220	--	--
N1-29	2½ miles north	Ollie Hibbon	W. H. Rose	--	--	6	--	--	--
N1-30 d/	3 miles north	J. P. Warren	B. F. Kite	1925	180	8	180	120	--
N1-31 c/	2½ miles north	Fred Burdett	S. M. Gibbons	--	185	--	--	175	--
N1-32	1½ miles north	C. & M. Produce Co.	Charley Lindenborn	1929	398	12½	300	302	--
N1-33 **	2½ miles north	do.	do.	1928	290	--	--	165	115
N1-34	2½ miles north	do.	do.	1929	295	12½	--	165	130
N1-35	do.	do.	--	--	275	--	--	135	140
N1-36 **	3 miles north	do.	Charley Lindenborn	1928	265	10	--	150	115
N1-37 **	1½ miles north	do.	B. F. Kite	1929	347	--	--	245	95
N1-38	1½ miles north	do.	do.	1926	380 d/	10	376 d/	280	95
N1-39	8½ miles west	R. W. Norton	Monroe Gibbons	1925	300	6	--	--	--
N1-40	2 miles southwest	I. T. Pryor	B. F. Kite	--	--	10	--	--	--
N1-41	1¾ miles southwest	Bertha Hester	do.	--	330	8	--	--	--
N1-42	1½ miles west	I. T. Pryor, Est.	C. C. Richey	1915	332	8	332	290	--

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N1-21	--	--	C,G, 6	D,S,I	2	0	Casing: 204 feet of 8-5/8-inch; 60 feet of 8-5/8-inch perforated with ½-inch holes d/. Reported no irrigation for several years prior to 1937-38. e/
N1-22	115.1	Jan. 4, 1930	B,H	D,S	--	--	
N1-23	--	--	--	N	10	0	Casing: 140 feet of 12½-inch; 210 feet of 10-inch perforated. Reported in 1938 no irrigation since 1930.
N1-24	120.3	Dec. 23, 1929	C,G, 5	D,S	--	--	
N1-25	--	--	C,-, --	N	--	--	Casing: 140 feet of 10-inch; 60 feet of 10-inch perforated with ½ and 1-inch holes. e/
N1-26	--	--	C,W	--	--	--	Temperature, 76° F.
N1-27	--	--	C,W	--	--	--	Casing: 233 feet of 10-inch; 30 feet of 8½-inch perforated.
N1-28	--	--	C,W	--	--	--	Screen from 160 to 220 feet. Water sand from 175 to 222 feet.
N1-29	103.5	Jan. 4, 1930	--	N	--	--	
N1-30	--	--	C,W	D,S	--	--	Casing: 140 feet of 8-inch; 40 feet of 8-inch perforated. e/
N1-31	--	--	--	N	--	--	
N1-32	--	--	T,E, 40	I	168	160	Casing: 158 feet 9-inches of 12½-inch; 152 feet 10-inches of 10-inch casing. Temperature, 80½° F.
N1-33	--	--	T,E, 40	I	--	940	Used in conjunction with N1-34, N1-36, N1-72, N2-1, N2-2 and N2-21. Temperature, 77½° F.
N1-34	--	--	T,E, 40	I	--	--	Temperature, 78° F.
N1-35	--	--	--	N	--	--	Well would not produce enough water for irrigation. Abandoned.
N1-36	--	--	T,E, 40	I	--	--	
N1-37	--	--	T,E, 40	I	590	600	Used in conjunction with N2-8 and N2-10. Temperature, 78° F.
N1-38	--	--	--	N	--	--	Temperature, 80° F. e/
N1-39	74.3	Jan. 25, 1930	C,W	S	--	--	
N1-40	107.3	Jan. 4, 1930	C,W	S	--	--	
N1-41	125.3	Dec. 23, 1929	--	N	--	--	Top of water sand at 256 feet.
N1-42	--	--	--	N	--	--	Casing: 317 feet of 8-inch; 15 feet of sand strainer.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M1-43	1½ miles southwest	Homer P. Rainey	B. F. Kite	--	230	8-5/8	230	--	--
M1-44	1 mile west	Helena Noack	do.	1912	193	8-5/8	190	--	--
M1-45	½ mile northwest	W. R. Terpening	do.	--	515	10-5/8	255	248	--
M1-46 c/	La Pryor	Epifinio Enriquez	do.	--	515	10-5/8	515	275	--
M1-47	do.	John Karl	S. [illegible] Gibbons	--	378	--	--	--	--
M1-48 c/	¾ mile north	Paul Ehlers	C. C. Richey	1912	422	10-5/8	422	325	97
M1-49 *	La Pryor	Central Light & Power Co.	--	1927	520	10	520	460	--
M1-50 c/	do.	do.	--	--	303	10	--	--	--
M1-51	do.	T. W. Alexander	B. F. Kite	1925	570	6	550	519	--
M1-52	1½ miles south	J. F. Kreuger	do.	1927	740	10	720	675	--
M1-53	1½ miles south	J. A. Michalk	do.	1910	245	8	245	--	--
M1-54	do.	I. T. Pryor, Est.	--	1909	100	6	--	--	--
M1-55	do.	do.	W. H. Mitchell	1909	800	8	726	720	60
M1-56 *	2 miles south	T. L. Pitts	B. F. Kite	1925	230	6	230	--	--
M1-57 *-**	2½ miles south	T. J. Dube	do.	1919	97	5	97	--	--
M1-58 *	10 miles southwest	R. W. Norton	Lunroe Fenley	--	202	6	202	--	--
M1-59	12½ miles southwest	do.	--	--	--	6	--	--	--
M1-60	9½ miles southwest	do.	--	--	--	6	--	--	--
M1-61	do.	do.	--	--	--	4	--	--	--

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N1-43	--	--	C,W	S	--	--	Casing: 190 feet of 8-5/8-inch; 40 feet of 6-5/8-inch perforated. Water sand from 200 to 230 feet.
N1-44	--	--	C,G, 9	D,S	--	--	Casing: 133 feet of 8-5/8-inch; 30 feet of 6-5/8-inch perforated. Water sand from 135 to 193 feet.
N1-45	--	--	C,W	D,S	--	--	Perforated casing in sand. e/
N1-46	--	--	C,G, 1½	D,S	--	--	
N1-47	--	--	C,G, 5	D,S	--	--	
N1-48	--	--	C,W	D	--	--	Casing: 321 feet of 10-5/8-inch; 8¼-inch perforated through sand.
N1-49	129.3	Jan. 28, 1930	C,E, 7½	P	--	--	Casing: Temperature, 78° F. Length of 10-inch unknown; 425 feet of 6-5/8-inch; 60 feet of 6-5/8-inch perforated. Tempera-
N1-50	129.3	--	--	N	--	--	La Pryor's old ture, 73° F. municipal well.
N1-51	--	--	C,G, 5	D,S	--	--	Casing perforated with ½-inch holes from 510 to 550
N1-52	--	--	T,G, 32	N	--	--	Casing perforated with feet. c/ ½-inch holes from 640 to 720 feet.
N1-53	--	--	C,W	D,S	--	--	Casing: 165 feet of 8-inch; d/ 40 feet of 8-inch perforated. Water sand from 210 to 245 feet. e/
N1-54	91.9	Dec. 20, 1929	--	N	--	--	Obtains water from gravel.
N1-55	--	--	C,W	S	--	--	Casing: 726 feet of 8-inch. Open hole through sand. e/
N1-56	91.6	Dec. 27, 1929	C,W	D,S	--	--	Casing: 190 feet of 6-inch; 40 feet 6-inch perforated with ½-inch holes. Water from 200 to 230 feet. Temperature,
N1-57	86.3	do.	C,W	D,S	--	--	Casing: 82 feet of 78° F. e/ 8-inch; 15 feet of 5-inch per- forated. Water from gravel at 86 to 97 feet. Temperature, 76° F. e/
N1-58	61.5	Feb. 6, 1930	C,W	D,S	--	--	
N1-59	39.8	do.	C,W	S	--	--	
N1-60	--	--	C,W	S	--	--	
N1-61	18.0	Feb. 6, 1930	--	N	--	--	Water reported salty.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M1-62 *	4 miles southwest	Mathews Ranch	B. F. Kite	1950	650	6	--	530	--
M1-63 **	5 miles southwest	do.	--	--	--	6	--	--	--
M1-64	6 miles west	R. W. Norton	B. F. Kite	--	490 c/	6	482 c/	440 c/	--
M1-65	8 miles south	do.	--	--	--	6	--	--	--
M1-66 *	4 miles south	I. T. Pryor, Est.	B. F. Kite	1924	655	8	600	600	--
M1-67	7 miles south	do.	--	--	550	10	--	--	--
M1-68 *	4½ miles west	R. W. Alger	Cribbs & Davidson	1935	300	12	300	200	100
M1-69 **	3½ miles northwest	August Noack	B. F. Kite	1936	200	12	200	160	40
M1-70 **	3½ miles northwest	W. S. Bond	do.	1938	240	10	205	150	40
M1-71	3 miles northwest	Dr. N. H. McCoach	--	1952	--	--	--	--	--
M1-72 **	2 miles north	C. & M. Produce Co.	L. F. Kite	1932	410	10	375	310	40
M2-1	3 miles north	do.	Charley Lindenborn	1928	275	12	275	160	110
M2-2	3½ miles northeast	do.	do.	1928	255	12	235	140	90
M2-3 **	do.	do.	do.	1928	215	12	--	130	85
M2-4 *	3½ miles northeast	do.	B. F. Kite	1928	338	12	--	--	--
M2-5	2½ miles north	do.	--	1930	1,818	--	--	190	175
M2-6	do.	do.	--	--	3,434	--	--	210	145
M2-7	3½ miles northeast	Frank Burdette	W. H. Rose	1910	50	5-5/16	50	--	--
M2-8 **	2 miles north	C. & M. Produce Co.	Charley Lindenborn	1928	376	--	--	232	138
M2-9	2½ miles northeast	do.	B. F. Kite	1912	256	10-5/8	256 c/	229 c/	--
M2-10	1½ miles northeast	do.	Charley Lindenborn	1928	435	--	--	270	165
M2-11 * d/	2½ miles northeast	W. M. Clark	--	--	123	8	--	--	--
M2-12	1½ miles northeast	J. D. Jesse, Est.	B. F. Kite	--	--	--	--	--	--
M2-13	3 miles east	Hope & Perkins	--	--	34	--	--	--	--

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N1-62	--	--	C,W	S	--	--	Temperature, 80° F.
N1-63	--	--	C,W	S	--	--	Do.
N1-64	--	--	C,W	S	--	--	Casing: 442 feet of 6-inch; 40 feet of 6-inch perforated with
N1-65	--	--	C,W	S	--	--	$\frac{1}{8}$-inch holes.
N1-66	--	--	C,W	S	--	--	Casing: 560 feet of 8-inch; 40 feet of 8-inch perforated with $\frac{1}{8}$-
N1-67	263.7	Oct. 23, 1929	C,W	S	--	--	inch holes. c/
N1-68	--	--	T,G, 40	D,S,I	--	95	Casing: 200 feet of 12-inch; 100 feet of 12-inch perforated.
N1-69	131.7	May 4, 1939	T,G, 40	I	--	185	Casing: 160 feet of 12-inch; 40 feet of 12-inch perforated. Used in conjunction with N1-8.
N1-70	--	--	T,Tr, --	I	--	152	Casing: 165 feet of 10-inch; 40 feet of 10-inch perforated.
N1-71	--	--	T,-, --	N	--	0	Reported in 1938, no irrigation since 1936.
N1-72	110	-- 1932 f/	T,E, 40	I	--	--	Used in conjunction with N1-33, N1-34, N1-36, N2-1, N2-2 and N2-
N2-1	--	--	T,E, 40	I	940	--	21. 12-inch casing to top of sand, 10-inch perforated casing through sand. Temperature, 77° F.
N2-2	--	--	T,E, 40	I	--	--	12-inch casing to top of sand, 10-inch perforated casing through sand. Temperature, 76° F.
N2-3	--	--	T,E, 40	I	--	1,340 g/	Used in conjunction with N2-4 and N2-20. Temperature, 76° F.
N2-4	--	--	T,E, 40	I	--	--	Temperature, 77° F.
N2-5	--	--	--	N	--	--	Gas test. Casing pulled and well filled.
N2-6	--	--	--	N	--	--	Do.
N2-7	--	--	C,W	D,S	--	--	In river gravel.
N2-8	--	--	T,E, 40	I	--	--	Temperature, 78° F.
N2-9	140.2	Dec. 27, 1929	--	N	--	--	Abandoned and filled.
N2-10	--	--	T,E, 40	I	--	--	Temperature, 79° F.
N2-11	--	--	C,H	D,S	--	--	Sand from 107 to 123 feet.
N2-12	136.6	Dec. 27, 1929	C,W	D,S	--	--	
N2-13	--	--	C,W	D,S	--	--	Dug well, yields water from river gravel at 27 to 34 feet.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from La Pryor	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.) +	Thickness of Carrizo sand (ft.)
N2-14	1½ miles southeast	Dietrich Heirs	S. M. Gibbons	1909	298	--	--	--	--
N2-15	1⅓ miles southeast	J. A. Michalk	B. F. Kite	--	139	8-5/8	139	--	--
N2-16	1¾ miles southeast	M. Dietrich	do.	1910	315	8-5/8	--	--	--
N2-17	2⅔ miles southeast	Jimmie Hope	--	--	--	8	--	--	--
N2-18 d/	3⅔ miles east	I. T. Pryor, Est.	--	--	28	6	28	--	--
N2-19 *	6⅔ miles east	do.	--	1921	2,680	--	--	565	165
N2-20	3 miles northeast	C. & M. Produce Co.	L. F. Kite	1930	325	10	211	240	85
N2-21 **	2⅔ miles north	do.	do.	1950	327	10	327	245	30

No.	Distance from Bates-ville	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N3-1	1¾ miles northwest	Carl White	--	1929	56	12	--	--	--
N3-2	1½ miles north	J. B. Reeves	-- Pate	1929	132	6	--	--	--
N3-3	do.	do.	--	--	45	--	--	--	--
N3-4 *	Bates-ville	E. W. King	--	1928	54	5-5/8	54	--	--
N3-5 *	3 miles southeast	O'Keefe Bros.	Herman Crawford	1937	60	12½	60	--	--
N3-6 *	do.	do.	do.	1937	60	12½	60	--	--
N3-7 *	3½ miles southeast	do.	do.	1937	60	10	60	--	--
N3-8 *-**	3¾ miles southeast	do.	do.	1938	60	15½	60	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N2-14	--	--	C,W	D,S	--	--	Water reported lower after pumping ½ day.
N2-15	--	--	C,W	S	--	--	Sand from 87 to 139 feet..
N2-16	--	--	C,C, 7½	D,S	--	0	
N2-17	84.7	Dec. 20, 1929	C,W	S	--	--	
N2-18	--	--	C,W	S	--	--	Water in gravel and sand at 11 to 28 feet. Casing perforated with ½-inch holes from 8 to 28 feet. Reported test yield of 400 gal-
N2-19	--	--	C,W	S	--	--	Gas test now lons a minute. used as stock well.
N2-20	110	-- 1930 f/	T,E, 40	I	--	--	
N2-21	110	-- 1930 f/	T,E, 40	I	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N3-1	43.4	Nov. 30, 1929	T,G, 6	S	5	0	Gravel well. Located on river terrace. e/
N3-2	15	Feb. 5, 1930	C,W	D,S	5	0	Water sand from 110 to 120 feet.
N3-3	30	do.	--	N	--	--	Caved in by flood waters and abandoned.
N3-4	43.2	Feb. 9, 1930	C,W	D,S	--	--	Gravel well from 45 to 54 feet. Casing perforated from 45 to 54 feet. Temperature, 72° F.
N3-5	--	--	T,O, 25	I	--		Gravel well. Bottom 20 feet of casing is perforated.
N3-6	--	--	T,O, 25	I	--	350	Do.
N3-7	--	--	T,O, 42	I	--		Do.
N3-8	--	--	T,O, 42	I	--		Do.

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Ney, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N4-1	13½ miles northwest	R. W. Norton	--	--	--	6	--	--	--
N4-2	13 miles northwest	do.	B. F. Kite	--	400	6	--	--	--
N4-3	10½ miles northwest	do.	--	--	150	6	--	--	--
N4-4 d/	10 miles north	R. A. Nash	--	1927	803	12½	303	643	121
N4-5	10 miles northwest	R. W. Norton	-- Dawson	1909	641	6	--	600	--
N4-6 c/	7 miles north	Thomas H. Davidson	R. E. Homer	1911	668	8¼	640	666	--
N4-7	do.	do.	do.	1911	732	8¼	130	--	--
N4-8	6½ miles north	Northeastern Farms Co.	do.	1911	923	8¼	727	--	--
N4-9	9 miles northwest	R. W. Norton	--	1907	--	6	--	--	--
N4-10	do.	do.	--	1911	746	6	510	490	250
N4-11	8½ miles northwest	do.	--	1911	741	6	741	430	240
N4-12	7½ miles west	S. B. Carr	-- Harris	1912	500	8	--	--	--
N4-13	7 miles west	do.	Cribbs & Davidson	1923	766	10	766	574	192
N4-14 **	6½ miles northwest	Fannie A. Keller	do.	1928	820	10	565	600	220
N4-15	6½ miles west	Clark & Keller	--	1912	704	8	704	--	--
N4-16	7 miles northwest	E. D. Watrus, Est.	E. L. Johnson	1912	700	6-5/3	--	--	--
N4-17	6 miles northwest	L. M. Davenport	Cribbs & Davidson	1923	632	10	682	605	--
N4-18	5½ miles northwest	John T. Span	Holland & Dawson	1911 c/	700 c/	6 c/	600	637	--
N4-19	do.	Zavala Co. Bank	E. L. Johnson	1911	700	5	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline; (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N4-1	--	--	C,W	S	--	--	Old well. Reported flowing until 1920.
N4-2	--	--	C,W	D,S	--	--	
N4-3	--	--	C,W	S	--	--	
N4-4	152	Jan. 16, 1928	T,O, 40	D,S,I	0	10	Casing: 203½ feet of 12½-inch; 305 feet of 8¼-inch; 308½ feet of 6-5/8-inch perforated. Both reductions made with swedge nip-
N4-5	--	--	C,W	D,S	--	--	Reported flowing until plos. c/ 1924.
N4-6	--	--	--	N	--	--	
N4-7	--	--	--	N	--	--	Yields salt water from 180 to 232 feet.
N4-8	--	--	T,-, --	N	3	0	Reported, in 1938, no irrigation for several years.
N4-9	53.4	Feb. 6, 1930	C,W	S	--	--	Reported flowing until 1924.
N4-10	--	--	C,W	S	--	--	Do.
N4-11	--	--	C,W	D,S	--	--	Reported flowing until 1924. 485 feet of 6-inch casing and 285 feet of 4-inch perforated casing.
N4-12	47.7	Dec. 27, 1929	A,O, 25	D,S,I	60	60	Reported static head 20 feet above ground when drilled.
N4-13	--	--	T,O, 25	D,S,I	190	137	Casing: 546 feet of 10-inch; 230 feet of 8-inch perforated. e/
N4-14	64	Nov. 15, 1928	T,O, 25	D,S,I	105	130	Casing: 309 feet of 10-inch; 256 feet of 8-inch. Temperature,
N4-15	--	--	T,O, 25	D,S,I	38	175	Temperature, 87° F. 86° F.
N4-16	--	--	--	N	77	0	Reported casing corroded through and water became too highly mineralized for irrigation in
N4-17	--	--	C,H	D,S	50	0	Casing: 264 feet of 10- 1930. inch; 536 feet of 8-inch; 144 feet of 6-5/8-inch liner. Reported, in 1938, no irrigation since 1935. Temperature, 86° F.
N4-18	--	--	A,Tr, 30	S,I	57	10	Casing: 360 feet of 6-inch; 100 feet of 5-inch. c/ Tempera-
N4-19	71.4	Dec. 23, 1929	--	N	50	0	Reported, in 1938, ture 87° F. no irrigation since 1932.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (ft.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N4-20 c/	6 miles northwest	Scott Pegues	Cribbs & Davidson	1927	652	10	652	592	--
N4-21	do.	do.	Dawson & Holland	1910	707	4	540	--	--
N4-22	5½ miles northwest	A. F. Bellows	Cribbs & Davidson	1927	828	8	828	591	237
N4-23	6 miles northwest	Franklin Rutledge	do.	1928	812	10	812	650	--
N4-24	5½ miles northwest	do.	--	1905	910	10	720	720	185
N4-25 **	4½ miles northwest	Jack Chinn	--	--	960	--	--	--	--
N4-26	4½ miles northwest	F. W. Pulliam	I. L. Dingman	1928	975	12⅓	975	710	240
N4-27 **	4½ miles north	Dr. W. L. Fickey	Cribbs & Davidson	1929	950	10	950	760	190
N4-28	5 miles north	F. W. Pulliam	do.	1928	950	12	950	650	260
N4-29 **	4½ miles north	R. C. Donnell	I. L. Dingman	1927	976	12½	976	743	147
N4-30	4½ miles north	F. W. Pulliam	--	1926	967	12⅓	967	--	--
N4-31	9½ miles west	John Flanagan	Harry Bowers	1910	582	6-7/8	532	300	--
N4-32 **	6½ miles west	Wayne Browning	Cribbs & Davidson	1928	680	10	680	454	226
N4-33 **	3½ miles northwest	Mrs. M. A. Lyman	do.	1927	939	10	939	740	199
N4-34 *-**	3½ miles north	W. Y. Giesler	Floyd Trimm	1927	1,035	12½	1,035	750	280
N4-35	2¾ miles north	-- Shock	--	1914	985	18	985	--	--
N4-36 **	3½ miles north	John W. Laird	Tom Leary	1912	966	6	--	790	--
N4-37	do.	Myers Y. Cooper	Dawson & Balch	1908	1,400	6	800	--	--
N4-38	10½ miles west	F. M. Dunkle	--	1905	450	8	--	--	--
N4-39	do.	Geo. Vaughn	--	--	--	--	--	--	--

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N4-20	--	--	--	N	110	0	Casing: 251 feet of 10-inch; 300 feet of 8-inch; 147 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1934.
N4-21	79.6	Dec. 23, 1929	--	N	--	--	Casing: 360 feet of 4-inch; 180 feet of 3-inch.
N4-22	70.0	do.	T,G, 65	D,S,I	50	0	Casing: 272 feet of 8-inch; 280 feet of 6-5/8-inch; 290 feet of
N4-23	--	--	T,G, 60	S,I	105	40	Casing: 240 feet of 10-inch; 383 feet of 8-inch; 185 feet of 6-5/8-inch perforated. Used in conjunction with N4-24.
N4-24	--	--	T,G, 60	D,S,I	--	--	5-inch perforated.
N4-25	--	--	T,0, 40	D,S,I	100	20	Temperature, 88° F.
N4-26	--	--	T,Ng, 30	D,S,I	70	65	Casing: 200 feet of 12½-inch; 506 feet of 8-inch; 6-5/8-inch
N4-27	--	--	T,Ng, 36	D,S,I	160	54	Casing: 331 feet of 10-inch; 411 feet of 8-inch; 225 feet of 6-inch perforated through sand.
N4-28	122	Oct. 3, 1929	T,-, --	N	240	0	Casing: 274 feet of 12-inch; 10-inch to 634 feet; 328 feet of 8¼-inch perforated.
N4-29	86.9	Dec. 23, 1929	T,0, 25	D,S,I	90	90	Casing: 220 feet of 12½-inch; 417 feet of 8¼-inch; 369 feet of 6-5/8-inch blank and perforated.
N4-30	--	--	T,0, 40	D,S,I	165	321	Casing: 250 feet of 12½-inch; 8¼-inch to sand; 6-5/8-inch through sand. Temperature, 85° F.
N4-31	39	June --, 1929 f/	T,0, 15	N	40	0	Reported, in 1938, no irrigation since 1932.
N4-32	--	--	T,0, 36	D,S,I	150	150	Casing: 214 feet of 10-inch; 240 feet of 8-inch; 226 feet of 6-5/8-inch perforated.
N4-33	--	--	T,D, 55	D,S,I	60	38	Casing: 10-inch, 8-inch and 6-5/8-inch perforated. Temperature, 88° F.
N4-34	126	Oct. 3, 1929	T,D, 60	D,S,I	115	350	Casing: 240 feet of 12½-inch; 510 feet of 10-inch; 280 feet of 8-inch perforated. Temperature, 90° F. d/
N4-35	--	--	T,-, --	D,S	320	0	Casing: 75 feet of 18-inch; 900 feet of 8-inch; 85 feet of 6-5/8-inch perforated.
N4-36	98.7	Dec. 16, 1929 c/	T,0, 20	D,S,I	--	30	Temperature, 88° F. Temperature, 87° F. e/
N4-37	--	--	T,Tr, --	D,S,I	60	40	
N4-38	17.5	June 18, 1930	T,0, 25	D,S,I	45	76	Reported flowing in summer of 1927.
N4-39	--	--	C,W	D,S	14	0	Reported, in 1938, no irrigation since 1930.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M4-40	10½ miles west	Mrs. Lucille Pulliam	Geo. Leonard	1914	562	8	562	--	--
M4-41 **	8 miles west	Holsonback & Williams	--	1910	400	10	--	--	--
M4-42	do.	R. A. Gunther	A. Coe	1908	660 c/	6	--	520	--
M4-43	7½ miles west	do.	A. Coe & Geo. Leonard	1909	606	8	500	--	--
M4-44	4½ miles west	M. Balsamo	Cribbs & Davidson	1928	810	12	810	650	--
M4-45	3 miles west	Byrd Cattle Co.	--	1928	915	10	--	540	375
M4-46 **	do.	Milam & Busey	Cribbs & Davidson	--	948	10	948	810	138
M4-47	2½ miles west	C. R. Jarrett	do.	1928	943	10	948	800	140
M4-48	2½ miles west	Dick Prassel	Tom Leary	1912	1,015 c/	8	1,015 c/	897 c/	--
M4-49 **	1½ miles northwest	A. Fehlis	J. P. Jones	1913	976	6	976	--	--
M4-50	2½ miles northwest	Henry Leuders	Cribbs & Davidson	1928	960	10	960	814	136
M4-51 **	1½ miles northwest	Grand Lodge order Sons of Herman	Tom Leary	1914	967	8	967	--	--
M4-52	1½ miles northwest	Meyers Y. Cooper	J. N. Lawson	1910	983	6	983	--	--
M4-53	3½ miles northwest	Julius DeVinnie	Cribbs & Davidson	1933	960	10	960	760	200
M4-54	3½ miles northwest	Byrd Cattle Co.	do.	1929	906	10	906	775	131
M4-55 *_**	7 miles west	Holsonback & Williams	do.	1934	703	10	703	520	165
M4-56	9 miles west	do.	do.	1938	520	10	520	380	140+
M4-57	do.	Oscar Poppa	--	--	--	--	--	--	--
M5-1	8½ miles north	J. G. Lowe	Cribbs & Davidson	--	827	10	827	659	166
M5-2	9 miles north	H. F. Schurmann	I. L. Dingman	1923	954	12½	954	744	186

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N4-40	--	--	T,O, 15	D,S,I	13	42	
N4-41	17.8	Oct. 30, 1929	T,O, 25	D,S,I	--	146	Casing: 4-inch set inside of 10-inch.
N4-42	--	--	T,O, 20	D,S,I	30	73	Reported flowing in 1928. Temperature, 82° F. c/
N4-43	9.5	Oct. 30, 1929	--	N	--	--	Do.
N4-44	--	--	T,Tr, 42	D,S,I	720 g/	0	Reported, in 1938, no irrigation since 1933. Used in conjunction with lake pump during drought.
N4-45	--	--	T,-, --	N	480 g/	0	Casing: 200 feet of 10-inch; 340 feet of 3-inch. Reported no irrigation for several years prior to 1937-38. Temperature, 84° F.
N4-46	91.0	Dec. 14, 1928	T,O, 50	D,S,I	156	105	Casing: 754 feet of 10-inch; 198 feet of 8½-inch perforated.
N4-47	--	--	T,G, 65	D,S,I	190	100	Casing: 600 feet of 10-inch; 200 feet of 8-inch; 148 feet of 8-inch perforated. Temperature, 88° F.
N4-48	--	--	T,O, 42	D,S,I	203	160	Casing: 650 feet of 8-inch; 365 feet of 6-inch; length of perforated unknown.
N4-49	--	--	T,O, 25	D,S,I	80	161	
N4-50	--	--	T,Ng, 40	D,S,I	95	60	Casing: 254 feet of 10-inch; 554 feet of 8-inch; 160 feet of 6-5/8-inch perforated.
N4-51	--	--	T,O, 20	D,S,I	--	30	Temperature, 88° F.
N4-52	--	--	T,O, 25	D,S,I	70	0	Casing: 898 feet of 6-inch; 85 feet of 5-3/16-inch perforated.
N4-53	--	--	T,E, 30	I	--	120	Casing: 740 feet of 10-inch; 251 feet of 8½-inch perforated.
N4-54	--	--	T,E, 40	N	--	0	Casing: 370 feet of 10-inch; 401 feet of 8-inch; 153 feet of 6-5/8-perforated set with lead seal. Reported, in 1938, no irrigation since 1936.
N4-55	60	Dec. 8, 1937 f/	T,O, 37	D,S,I	--	200	Casing: 517 feet of 10-inch; 193 feet of 8-inch perforated. c/
N4-56	--	--	T,O, 15	I	--	0	Casing: 133 feet of 10-inch; 247 feet of 8-inch set with swedge nipple.
N4-57	--	--	T,O, 25	S,I	--	0	Reported, in 1938, no irrigation since 1936.
N5-1	--	--	T,G, 60	D,S,I	315 g/	0	Casing: 282 feet of 10-inch; 368 feet of 8½-inch; 181 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1934.
N5-2	--	--	T,D, 60	D,S,I	250 g/	364 g/	Casing: 248 feet of 12⅝-inch; 359 feet of 8½-inch; 371 feet of 6-5/8-inch perforated.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N5-3	9 miles north	Phoenix Corp.	--	--	--	8¼	--	--	--
N5-4	8½ miles north	A. J. Plummer	Tom Leary	1913	987	6	987	794	152
N5-5	do.	Sweeney & Newton	R. E. Homer	1910	990	8¼	990	720	270
N5-6	8½ miles northeast	Phoenix Corp.	--	--	--	8	--	--	--
N5-7 *	9½ miles northeast	do.	Pat McQuirt	1929	1,001	8	--	--	--
N5-8	10 miles northeast	Sweeney & Newton	--	--	5,010	--	--	965	55
N5-9 *-**	7 miles north	E. W. Hays	Cribbs & Davidson	1928	950	10	858	675	170
N5-10 **	do.	L. S. Riggs	-- Morgan	1910	985	8¼	--	--	--
N5-11	6½ miles north	Mrs. Tom Leary	Tom Leary	--	--	6	--	--	--
N5-12	do.	E. C. Hardaway	do.	1911	965 c/	6	965 c/	748	144
N5-13	7½ miles north	Mrs. Margarite D. Rutledge	--	--	--	8	--	--	--
N5-14	do.	A. Jackson	--	--	--	8	--	--	--
N5-15	6½ miles north	Mrs. -- Hyman	--	--	--	8¼	--	--	--
N5-16	7½ miles northeast	Federal Land Bank	Hardy Robinson	1911	906	8¼	906	702	193
N5-17	6 miles north	J. R. Heilman	do.	1911	925	8	--	--	--
N5-18 **	6½ miles northeast	L. J. Mazzoni	I. L. Dirkman	1928	955	12½	955	758	172
N5-19	6 miles northeast	do.	Hardy Robinson	1910	1,007	8¼	886	888	66
N5-20	5½ miles northeast	Clark Wright, Est.	--	--	--	8¼	--	--	--
N5-21	8 miles northeast	Phoenix Corp.	--	1909	1,000	8	--	--	--
N5-22 *	do.	Wyllis Britton	Geo. Leonard	1911	260	6	--	--	--
N5-23	7 miles northeast	J. C. Brochausen	--	1910	1,000	--	--	--	--
N5-24	6 miles northeast	Northeastern Farm Co.	Tom Leary	1911	1,017	8	1,017	840	177

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N5-3	72.0	Nov. 22, 1929	T,-, --	I	--	0	
N5-4	72.6	do.	--	N	--	--	
N5-5	--	--	--	N	--	--	Casing: 757 feet of 8¼-inch; 243 feet of 7¼-inch perforated.
N5-6	59.7	Nov. 22, 1929	C,W	S	--	--	
N5-7	66.8	do.	T,-, --	N	0	0	Temperature, 89° F.
N5-8	--	--	--	N	--	--	Oil test, abandoned and filled.
N5-9	--	--	T,E, 50	D,S,I	130 a/	0	Casing: 251 feet of 10-inch; 430 feet of 8-inch; 200 feet of 6-5/8-inch perforated. Temperature, 79° F. a/
N5-10	68.5	Nov. 20, 1929	T,E, 30	S,I	0	80	
N5-11	--	--	--	N	--	--	Bridged at 57 feet.
N5-13	--	--	T,E, 20	I	--	40	Casing: 840 feet of 8-inch; 125 feet of 4-inch perforated. c/
N5-15	70.4	Nov. 20, 1929	--	N	--	--	
N5-14	--	--	--	N	--	--	Bridged at 19 feet.
N5-15	85.8	Nov. 23, 1929	--	N	--	--	
N5-16	92.2	do.	T,G, 24	I	41	0	Casing: 708 feet of 8¼-inch; 204 feet of 8¼-inch perforated. Reported, in 1938, no irrigation since 1936.
N5-17	--	--	--	N	80	0	
N5-18	--	--	T,O, 40	D,S,I	320	0	Casing: 250 feet of 12½-inch; 508 feet of 8-inch; 197 feet of 6-5/8-inch perforated. Used in conjunction with N5-19 and N5-78 in 1929-30. Reported, in 1938, no irrigation since 1936. Temperature, 88° F. a/
N5-19	--	--	T,O, 25	I	--	0	Reported, in 1938, no irrigation since 1936.
N5-20	77.0	Nov. 23, 1929	T,-, --	I	--	120	
N5-21	--	--	T,O, 40	D,S,I	0	0	Reported, in 1938, no irrigation since 1932.
N5-22	--	--	--	N	--	--	Bridged at 28 feet in 1938.
N5-23	--	--	--	N	40	0	Reported, in 1938, no irrigation since 1936.
N5-24	--	--	C,W	D,S	180	0	Reported, in 1938, no irrigation for several years. Temperature, 89° F.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N5-25	4¾ miles north	A. D. Eidson	Cribbs & Davidson	1929	818	10	818	640	175
N5-26	3¼ miles north	Federal Land Bank	--	--	--	6	--	--	--
N5-27	3½ miles north	Winter Garden Irr. & Farm Co.	--	1908	993	6	--	--	--
N5-28	4⅓ miles north	H. P. Walker	Cribbs & Davidson	--	890	10	890	695	195
N5-29	2¾ miles northeast	Bert Fry	Floyd Trimm	--	949	10	949	683	262
N5-30	do.	C. & M. Produce Co.	I. L. Dingman	1923	940	12½	--	715	215
N5-31	3½ miles northeast	do.	--	--	930	8	--	--	--
N5-32	4¼ miles northeast	N. J. Thoreen	Jos. Davis	--	775	6	775	--	--
N5-33	4⅜ miles northeast	B. Masterson	Hardy Robinson	1910	--	--	--	--	--
N5-34	1⅓ miles north	C. C. Hacket	Cribbs & Davidson	1929	941	8¼	941	775	166
N5-35 **	½ mile north	Holsonback & Garner	--	1923	--	--	--	--	--
N5-36	1¾ miles north	H. L. Harkey	R. F. Schroeder	1923	1,040	15½	1,040	--	--
N5-37	1 mile north	Bruce Holsonback	-- Balch	--	--	8	--	--	--
N5-38	1 mile northeast	M. A. McClarin	L. H. Duncan	1926	1,000	12	1,000	--	--
N5-39	2¼ miles northeast	C. R. Jarrett	Cribbs & Davidson	1929	940	12½	940	720	220
N5-40	2½ miles east	do.	do.	1929	1,070	12½	1,070	830	240
N5-41	4 miles east	A. A. Akin	Tom Wren	1910	1,000 c/	8	1,000 c/	850 c/	--
N5-42	3⅜ miles east	Mrs. G. F. Thomas	H. H. Bailey	1926	1,082	12½	1,082	--	--
N5-43 **	4¼ miles east	Case & Roscoe	Cribbs & Davidson	1929	997	10	997	780	217

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N5-25	--	--	T,E, 50	I	200 g/	0	Casing: 307 feet of 10-inch; 317 feet of 8-inch; 210 feet of 6¼-inch perforated. Temperature, 85° F.
N5-26	--	--	T,O, 25	D,S,I	80	32	
N5-27	--	--	T,E, 20	D,S,I	176 g/	94	Temperature, 87° F.
N5-28	--	--	T,Tr, --	I	80	0	Casing: 253 feet of 10-inch; 423 feet of 8-inch; 224 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1932.
N5-29	97.0	Dec. 12, 1929	T,E, 35	I	120 g/	0	Casing: 334 feet of 10-inch; 347 feet of 8-inch. Reported, in 1938, no irrigation since 1934.
N5-30	--	--	T,E, 50	I	575 g/	0	Reported, in 1938, no irrigation since 1936.
N5-31	78.3	Nov. 26, 1929	--	N	--	--	Reported casing corroded through prior to 1937-38 and water became too highly mineralized for irrigation use.
N5-32	--	--	T,G, 60	D,S,I	34	23	
N5-33	--	--	T,-, --	N	0	0	Reported, in 1938, no irrigation for over 10 years.
N5-34	--	--	T,G, 60	D,S,I	--	150	Casing: 768 feet of 8¼-inch; 178 feet of 6-5/8-inch perforated.
N5-35	77.0	Dec. 4, 1927 d/	T,G, 60	D,S,I	140	197	
N5-36	--	--	T,O, 42	D,S,I	150	58	Casing: 85 feet of 15⅝-inch; 755 feet of 8-inch; 200 feet of 8-inch perforated.
N5-37	--	--	T,G, 60	D,S,I	86	50	
N5-38	--	--	T,O, 42	D,S,I	200	88	Casing: 200 feet of 12-inch; 8-inch to sand; perforated to bottom. Temperature, 88° F.
N5-39	74.6	Nov. 26, 1929	T,-, --	I	600 g/	0	Casing: 260 feet of 12½-inch; 460 feet of 10-inch; 242 feet of 8½-inch perforated. Reported, in 1938, no irrigation since 1935.
N5-40	80.4	do.	T,-, --	I		0	Casing: 272 feet of 12⅛-inch; 538 feet of 10-inch; 268 feet of 8½-inch perforated. Reported, in 1938, no irrigation since 1935. Temperature, 86.5° F.
N5-41	--	--	T,E, 25	N	--	--	Casing: 800 feet of 8-inch; 50 feet of 6-inch; Temperature, 87° F.
N5-42	--	--	T,O, 50	D,S,I	160	160	Casing: 200 feet of 12½-inch; 650 feet of 8-inch; 232 feet of 6-5/8-inch perforated. screened.
N5-43	--	--	T,E, 50	I	240	0	Casing: 353 feet of 10-inch; 408 feet of 8-inch; 251 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1933. Temperature, 89° F. Temperature, 89° F.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N5-44	4¾ miles east	Mrs. J. A. Matthews	Floyd Trimm	1926	--	--	--	--	--
N5-45	5 miles east	J. H. Compton	I. L. Dingman	1927	1,038	12½	--	--	--
N5-46	5½ miles east	W. T. Best	--	--	--	--	--	--	--
N5-47 **	6 miles east	A. Wagner	H. Hardy Robinson	1912	--	8	--	--	--
N5-48 *-**	Crystal City	City of Crystal City	Floyd Trimm	1927	1,050	12	1,050	970	--
N5-49 **	do.	do.	A. Coe	1906	1,070	6	--	--	--
N5-50 *	1½ miles southeast	C. F. Jackson	Will Byrd & C. H. Goodlink	1912	912	6	912 c/	820 c/	--
N5-51	¾ mile east	Mrs. Sally Packingham, Est.	James A. Wilson	1910	1,100	8	--	--	--
N5-52	do.	G. C. Miller	Will Byrd	1911	955	6¾	--	--	--
N5-53	1½ miles southeast	Anna Hudson	Cribbs & Davidson	1928	1,053	--	--	808	242
N5-54	2 miles east	Roy Chastin	do.	1927	1,065	10	1,065	800	265
N5-55	do.	Cribbs & Davidson	do.	1928	1,070	10	1,070	895	175
N5-56	2¼ miles east	H. C. Plumley	do.	1926	1,147	10	1,147	940	207
N5-57	do.	Mrs. D. N. Holsonback	do.	1929	1,030	12½	1,030	790	240
N5-58 *	3½ miles east	Temple Lumber Co.	Floyd Trimm	1925	1,038	12½	1,038	--	--
N5-59 *	do.	Agnes Seele	P. C. Paul	1910	970 c/	8¼ c/	--	900 c/	--
N5-60	4 miles east	Julius DeWinnie	--	--	--	--	--	--	--
N5-61	4½ miles east	H. W. Hartung	I. L. Dingman	1928	1,100	12½	--	--	--
N5-62	do.	F. W. Pulliam	do.	1927	1,100	12½	--	--	--
N5-65	do.	J. Black	P. C. Paul	1911	999 c/	8	780 c/	390 c/	--

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N5-44	--	--	T,O, 50	D,I	350	180	Temperature, 89° F.
N5-45	--	--	T,O, 42	D,S,I	160	10	Casing: 200 feet of 12⅓-inch; 8-inch to sand; 6-5/8-inch perforated through sand. Tempera-
N5-46	--	--	T,O, 42	D,S,I	0	58	ture, 89° F.
N5-47	105.1	Nov. 26, 1929	C,W	S	--	--	
N5-48	--	--	T,E, 50	P	--	--	Main supply for Crystal City.
N5-49	--	--	T,E, --	P	--	--	Supplements N5-48 for peak loads.
N5-50	--	--	--	I	--	50	Casing: 640 feet of 6-inch; 200 feet of 5-5/16-inch; 4½-inch perforated to bottom.
N5-51	74.0	Oct. 3, 1929	T,G, 60	D,S,I	35	60	Temperature, 90° F.
N5-52	--	--	--	N	80	0	Casing: 665 feet of 6¼-inch; rest unknown. Reported, in 1938, no
N5-53	--	--	T,G, 60	D,S,I	75	110	irrigation since 1933.
N5-54	--	--	T,E, 25	D,S,I	125 g/	0	Casing: 258 feet of 10-inch; 551 feet of 8-inch; 278 feet of 6-5/8-inch perforated. Reported no irrigation for several years
N5-55	81.6	Nov. 27, 1929	T,E, 40	I	120 g/	0	Casing: 250 prior to 1937-38. feet of 10-inch; 620 feet of 8-inch; 245 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1935. Tempera-
N5-56	--	--	T,E, 30	D,I	224 g/	0	ture, 88½° F. Casing: 264 feet of 10-inch; 636 feet of 8-inch; 261 feet of 6-5/8-inch perforated. Reported no irrigation for several years prior to 1937-38.
N5-57	83.5	Nov. 26, 1929	T,E, 40	I	475 g/	525 g/	Casing: 219⅓ feet of 12½-inch; 570⅓ feet of 8-inch; 248 feet of 6-5/8-inch perforated.
N5-58	--	--	T,O, 50	D,S,I	240	240	Casing: 200 feet of 12⅓-inch.
N5-59	--	--	--	N	--	--	Casing: 820 feet of 8¼-inch. Temperature, 88° F.
N5-60	81.0	Nov. 16, 1929	T,-, --	D,I	160	0	Reported, in 1938, no irrigation since 1932.
N5-61	--	--	T,D, 50	D,S,I	200	195	
N5-62	--	--	T,D, 50	D,I	200	65	
N5-65	79.0	Oct. 31, 1929	T,O, 25	D,S,I	80	20	Casing: 780 feet of 8-inch.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N5-64	5½ miles east	John Hughes	Geo. Leonard	1913	1,000	8	--	--	--
N5-65	7 miles east	Adolf Wagner	W. J. Campbell & Tom Leary	1911	982 c/	6	--	936	--
N5-66 **	4¾ miles northeast	Bob Milam	Cribbs & Davidson	1932	1,001	12½	725	735	266
N5-67 *	5 miles northeast	do.	do.	1954	1,057	12½	1,057	845	212
N5-68	4½ miles east	Northeastern Farm Co.	L. D. Stripling	1930	1,114	10	805	889	225
N5-69 **	6½ miles east	C. F. Jackson	Cribbs & Davidson	1932	1,228	12	1,228	975	252
N5-70 **	7 miles east	do.	do.	1932	1,225	12	1,225	980	225
N5-71	4¼ miles north	Federal Land Bank	L. D. Stripling	1933	835	10	907	709	196
N5-72 *	6½ miles northeast	C. L. Coleman	Cribbs & Davidson	1934	1,160	12½	1,160	935	222
N5-73	10 miles north	Phoenix Corp.	L. D. Stripling	1929	903	10	903	692	211
N5-74	10½ miles north	do.	Cribbs & Davidson	1930	900	12½	900	701	199
N5-75	9½ miles north	do.	do.	1930	950	12½	950	674	276
N5-76 *-**	7 miles north	Ira Cribbs	do.	1951	950	12½	950	725	225
N5-77	6½ miles north	do.	do.	1932	950	10	--	--	--
N5-78	6 miles north	L. J. Mazzoni	do.	1932	940	10	940	725	215

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric: G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N5-64	--	--	--	N	--	--	
N5-65	100.4	Nov. 26, 1929	C,W	S	--	--	
N5-66	--	--	T,O, 40	I	--	630	Casing: 327 feet of 12½-inch; 398 feet of 10-inch.
N5-67	--	--	T,O, 40	S,I	--		Casing: 340 feet of 13-inch; 487 feet of 10-inch; 256 feet of 8-
N5-68	--	--	T,O, 40	D,S,I	--	80	Casing: 275 inch perforated. e/ feet of 10-inch; 530 feet of 8-inch. Swedge nipple between 8
N5-69	--	--	T,D, 70	D,S,I	--	1,310	Casing: 361 feet and 10-inch. of 12-inch; 593 feet of 8-inch cemented; 292 feet of 6½-inch perforated, used in conjunction with N5-70 and N8-110. e/
N5-70	--	--	T,D, 70	D,S,I	--	--	Casing: 327 feet of 12-inch; 645 feet of 8-inch; 274 feet of 6½-
N5-71	--	--	C,H	D,S	--	30	Casing: 274 inch perforated. feet of 10-inch; 435 feet of 8½-inch set in cement. Swedge nipple between 8½ and 10-inch.
N5-72	75	Dec. 8, 1937 f/	T,D, 65	D,S,I	--	320	Casing: 325 feet of 12½-inch; 579 feet of 10-inch; 280 feet of 8¼-inch perforated. Swedge nipple
N5-73	--	--	T,G, 45	I	--	100	Casing: between 8½ and 10-inch. e/ 642 feet of 10-inch; 261 feet of
N5-74	--	--	T,G, 45	I	--	0	Casing: 267 8-inch perforated. feet of 12½-inch; 409 feet of 8-inch; 248 feet of 6-5/8-inch per-
N5-75	--	--	T,E, 25	I	--	0	Casing: 248 feet of forated. 12½-inch; 402 feet of 8-inch.
N5-76	--	--	T,E, 75	S,I	--	330	Casing: 329 feet of 12½-inch; 398 feet of 10-inch; 258 feet of 8½-
N5-77	--	--	T,E, 35	I	--	300	inch perforated.
N5-78	--	--	T,O, 25	I	--	0	Casing: 278 feet of 10-inch; 437 feet of 8-inch set with lead seal at 253 feet; 247 feet of 6-5/8-inch perforated cemented with 20 sacks of cement at 715 feet.

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Loma Vista	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N6-1	In Loma Vista	W. L. Gates	--	--	47	--	--	--	--
N6-2 *	2 miles southeast	--	--	1930	--	--	--	--	--
N6-3	4½ miles south	L. G. Gates	--	1911	1,313	8	1,313	1,159	120

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-1	¼ mile southeast	B. H. Erskine	-- McFarland	1906	580	8	260	275	--
N7-2 **	¼ mile southeast	Gene Greene	Charley Lindenborn	--	400	8	60	250	--
N7-3	1 mile southeast	Frank Harris	--	--	--	--	--	--	--
N7-4	1 mile east	do.	--	--	--	8	--	--	--
N7-5	do.	do.	--	--	--	--	--	--	--

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-6	3 miles southwest	Carl Reiter	C. F. Seward	1922	1,021	10	603	758	859

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-7 **	1 mile southeast	E. C. Sorrel	Charley Lindenborn	1905	475	12	60	200	--
N7-8	1½ miles east	J. F. Harris	do.	1906	450	3	150	250	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.
b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N6-1	--	--	C,W	D,S	--	--	Dug well.
N6-2	--	--	--	--	--	--	Loma Vista oil test by Wiegand Bros.
N6-3	80	Aug. -- 1929 f/	T,O, 35	D,S,I	15	0	Casing: 1,000 feet of 8-inch; 159 feet of 6-inch; screened. e/

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-1	--	--	C,W	D,S	18	0	Casing: 200 feet of 8¼-inch; 60 feet of 7-5/8-inch. Reported flowing until 1920. Reported, in 1938, no irrigation since 1932.
N7-2	26.5	Oct. 30, 1929	C,H	D	--	--	
N7-3	--	--	T,O, 15	I	55	64	
N7-4	21.9	Oct. 30, 1929	--	N	--	--	
N7-5	--	--	T,O, 42	D,S,I	76	0	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-6	--	--	T,-, --	I	195	0	Reported, in 1938, no irrigation for several years. Formerly used in conjunction with N7-35. e/

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-7	--	--	T,O, 15	D,S,I	17	24	Reported flowing about 500 gallons a minute when drilled. c/
N7-8	--	--	--	N	--	--	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-9	1½ miles east	J. F. Harris	Charley Lindenborn	--	450	8	150	250	--
N7-10	1½ miles southeast	W. G. Orr	do.	1904	475	8½	100	250	--
N7-11	2 miles southeast	do.	--	1904	450	10	100	250	--
N7-12	1½ miles southeast	O. J. Koehler	I. L. White	1904	450	8¼	60	250	--
N7-13	2½ miles southeast	J. E. Stone	Frank Kellogg	1917	402	8	40	260	--
N7-14	3½ miles southeast	B. C. White	B. C. White	1927	319	12	60	--	--
N7-15	do.	L. A. Watts	L. A. Watts	1926	376	10	35	319	--
N7-16	3½ miles southeast	Earl Stone	Frank Kellogg	1928	360	10	20	--	--
N7-17	do.	Percy Herman	--	--	--	6	--	--	--
N7-18	do.	Ida O. Straus	Elmo Owen	1914	400	6	--	125	125
N7-19	4½ miles southeast	Mrs. O. V. Underwood	--	--	185	8	--	--	--
N7-20 **	3½ miles southeast	Earl Stone	G. A. Petty	1928	330	12	--	--	--
N7-21	do.	do.	--	1926	425	10	280	--	--
N7-22	4½ miles southeast	Mrs. O. V. Underwood	S. M. Owen	1910	400	8	--	--	--
N7-23	4 miles southeast	Mary H. White	do.	1916	472	8	200	--	--
N7-24	4½ miles southeast	J. N. Stern	I. White	1903	450	6¼	100 c/	350 c/	--
N7-25	do.	Mrs. Ella Perrin	Geo. Petty	1925	350	6	--	--	--
N7-26	5½ miles southeast	Catlett & Bennett	Elmo Owen	1928	352	10	39	235	--
N7-27 *	do.	-- Eardley Est.	Charley Lindenborn	1929	472	10	--	250	112
N7-28	6 miles southeast	Stanley Davidson	-- Owen	1928	240	10	40	92	148
N7-29	do.	do.	Floyd Trimm	1930	1,580	--	--	106	142
N7-30	do.	Catlett & Bennett	Frank Kellogg	1929	495	10	65	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

c/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-9	--	--	C,W	D,S	10	0	Reported, in 1938, no irrigation for several years.
N7-10	4	1913 f/	T,O, 20	D,S,I	170	0	Reported flowing about 400 gallons a minute when drilled. c/
N7-11	4	1913 f/	T,O, 25	I	--	50.5	Used in conjunction with N7-10.
N7-12	41.4	May 29, 1930	C,W	S	--	--	
N7-13	--	--	T,O, 25	D,S,I	40	61	
N7-14	--	--	T,O, 20	D,S,I	45	23	
N7-15	--	--	--	N	9	0	Reported, in 1938, no irrigation since 1936.
N7-16	--	--	T,O, 20	D,S,I	40	37	
N7-17	78.7	Mar. 10, 1930	--	N	--	--	
N7-18	91.7	Dec. 19, 1929	C,W	D	--	--	
N7-19	65.0	do.	C,W	S	--	--	
N7-20	--	--	T,O, 25	D,S,I	45	40	
N7-21	66.2	Oct. 29, 1929	T,O, 25	D,S,I	--	39	
N7-22	--	--	--	N	--	--	
N7-23	--	--	C,W	D,S	20	0	Reported, in 1938, no irrigation since 1934.
N7-24	31.4	Feb. 2, 1928 d/	--	N	15	0	Reported flowing 400 gallons a minute when drilled. Reported, in 1938, no irrigation since 1933.
N7-25	52.3	May 14, 1930	--	N	0	0	
N7-26	--	--	T,G, 60	D,S,I	103	39	Casing: 39 feet of 10-inch.
N7-27	58.0	Oct. 28, 1930	T,O, 25	D,S,I	100	44.5	Temperature, 79° F.
N7-28	65.0	do.	C,E, ½	D,S	31	0	Land now irrigated from N7-29.
N7-29	--	--	T,G, 65	I	--	19	Drilled as gas test, now used for irrigation.
N7-30	--	--	T,Tr, 40	I	120	10	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-31	3 miles west	Byrd Cattle Co.	Floyd Trimm	1928	755	10	--	--	--
N7-32	do.	do.	--	1910	980 c/	8¼	360	500	--
N7-33	2½ miles west	do.	--	1910	614 c/	10	--	--	--
N7-34	1¾ miles northwest	do.	Floyd Trimm	--	--	8	--	--	--
N7-35	1½ miles north	Carl Reiker	do.	1938	921	8	--	--	--

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-36	6 miles south	-- Williams et al	--	--	140	6	--	--	--
N7-37	5½ miles south	J. A. Webb	Geo. Petty	1913	100	6	--	--	--
N7-38 *	5 miles south	do.	--	--	900±	--	--	--	--
N7-39	6½ miles southeast	I. O. Kotchman	Geo. Petty	1913	115	6	--	--	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-40 *	6½ miles northwest	Lynch Bros.	Frank Kellogg	1927	188	10	78	0	188

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-41	3 miles west	A. N. Box	S. M. Owen	1906	504 c/	8¼	80	290	210
N7-42 **	¼ mile west	Byrd Cattle Co.	Floyd Trimm	--	--	--	--	--	--
N7-43	1 mile west	do.	Geo. Leonard	1910	840 c/	8¼	483	660	155

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-31	--	--	T,E, 25	D,S,I	20	160	
N7-32	--	--	T,G, 65	D,S,I	160	180	Reported flowing 75 gallons a minute in 1913. c/
N7-33	--	--	--	N	--	--	
N7-34	50.7	Dec. 7, 1929	C,W	S	--	--	
N7-35	--	--	T,O, 25	D,S,I	--	45	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-36	77.0	Feb. 7, 1930	C,W	S	--	--	
N7-37	--	--	C,W	S	--	--	
N7-38	51.6	Feb. 7, 1929	C,W	S	--	--	
N7-39	82.2	Dec. 19, 1929	C,W	S	--	--	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-40	--	--	T,O, 10	I	18	0	Reported, in 1938, no irrigation since 1935. Temperature, 76°F. e/

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-41	41.0	May 9, 1930	T,G, 42	I	40	5	Reported flowing 150 gallons a minute in 1913.
N7-42	--	--	T,G, 85	I	800	410	Used in conjunction with N7-41 and N7-45.
N7-43	--	--	T,Ng, 85	I	--	--	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-44	½ mile west	Byrd Cattle Co.	-- Barnett	1910	960 c/	5-3/16	--	660	155
N7-45	½ mile north	do.	Geo. Leonard	1913	805	10	605	--	--
N7-46 *	1 mile north	State of Texas	Cribbs & Davidson	1930	1,022	12½	1,022	780	242
N7-47	1 mile northeast	Dr. C. Matteson Heirs	do.	1927	992	10	780	768	224
N7-48 **	½ mile northeast	H. Hagelstein	Geo. Crowell	1926	1,001	--	--	710	286
N7-49	½ mile north	do.	do.	1926	830	12½	--	--	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-50 **	3 miles northwest	Ben Patterson	John Bell	1920	90	6	--	--	--
N7-51	6 miles northwest	Sam McKnight	Elmo Owen	1930	282	10	--	--	98
N7-52	5 miles northwest	E. Hutcherson	Frank Kellogg	1928	176	10	40	--	166
N7-53	do.	do.	--	--	--	10	--	--	--
N7-54 **	do.	Eardley, Est.	Elmo Owen	1928	176	10	--	--	166
N7-55	4 miles north	R. W. Williams	Frank Kellogg	1929	370	6	--	--	--
N7-56 *	do.	H. H. Herrington	S. M. Owen	1909	600	10	400	--	--

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-57	2½ miles south	W. G. Hundley	--	1927	705	8	--	--	--
N7-58	2 miles southwest	A. R. Ponder	Floyd Trimm	1925	700	6	500	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.
b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.
* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-44	--	--	T,Ng, 85	D,S,I	--	--	
N7-45	--	--	T,Ng, --	I	--	0	
N7-46	90	July , 1930	T,E, 50	D,S,I	0	58.5	Casing: 254 feet of 12½-inch; 523 feet of 8-inch; 264 feet of 6-5/8-inch perforated. Tempera-
N7-47	--	--	T,G, 40	D,S,I	45	6	Temperature, 91° F. ture, 91° F.
N7-48	61.0	Oct. 9, 1929	T,G, 65	D,I	70	8	
N7-49	--	--	C,-, --	P	22.5	0	Supplies Winter Haven. Reported no irrigation for several years prior to 1937-38.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-50	58	May 15, 1930	C,W	S	--	--	
N7-51	--	--	C,W	S	--	--	e/
N7-52	--	--	T,G, 15	I	19	26	
N7-53	80.5	Dec. 19, 1930	C,W	D,S	--	--	
N7-54	--	--	T,G, 22	I	20	0	Reported, in 1938, no irrigation since 1936. Temperature, 76½° F.
N7-55	--	--	C,W	D,S	--	--	
N7-56	65.5	May 15, 1930	T,G, 65	D,S,I	20	5	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-57	67.7	Oct. 3, 1930	T,G, 60	D,S,I	63	0	Reported, in 1938, no irrigation since 1936. Temperature, 86° F.
N7-58	--	--	--	N	--	--	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M7-59	1½ miles southwest	A. R. Pender	Geo. Leonard	1924	752	10	550	550	202
M7-60	1½ miles southwest	do.	--	1921	800	10	--	--	--
M7-61	½ mile west	C. Zedler	--	--	760	12	525	625	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M7-62	6⅔ miles west	Central Securities Co.	--	--	--	6	--	--	--
M7-63	5 miles west	Sam McKnight	Humble Oil Co.	1928	5,004	--	--		--
M7-64	3½ miles northwest	Henry Moses	Geo. Petty	--	375	--	--	--	--
M7-65	4 miles northwest	L. A. Warren	Elmo Owen	1928	230	12	230	--	230
M7-66	3½ miles northwest	J. A. Hoyman	W. D. Morrison	1927	332	12	79	--	280
M7-67 *	3½ miles northwest	Dr. B. F. Smith	do.	1927	310	10	90	--	--
M7-68	2¾ miles northwest	J. M. Davis	Geo. Petty	1927	210 d/	10	--	--	--
M7-69	3¼ miles north	G. E. Whitney	do.	1923	504	8¼	160	350	--
M7-70 *	3½ miles north	H. V. Haston	S. M. Owen	1905	530 c/	6¼	60	--	--
M7-71	3½ miles north	S. M. Owen	do.	1929	500	8	165	400	--
M7-72	8⅔ miles west	Dr. R. F. Miller, Est.	Geo. Petty	1912	140	6	--	--	--
M7-73 **	6 miles west	Sam McKnight	--	--	40	6	--	--	--
M7-74 *	5 miles west	do.	G. B. Williams	--	--	8	--	--	--
M7-75 *	4 miles west	F. Kirk	--	--	306	10	--	--	--
M7-76	do.	do.	--	1926	309	10	--	--	--
M7-77	3 miles west	Sam McKnight	W. D. Morrison	1930	436	8	251	--	75
M7-78	2 miles northwest	C. Schmitt	Sam Howard	1915	300	10	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-59	--	--	T,O, 40	I	150	125	
N7-60	--	--	T,G, 65	D,S	--	0	
N7-61	--	--	T,Tr, 52	D,I	42	20	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-62	20.6	June 19, 1930	C,W	S	--	--	
N7-63	--	--	--	N	--	--	Abandoned deep oil test.
N7-64	--	--	T,O, 20	I	2	0	Reported, in 1938, no irrigation since 1936.
N7-65	49.2	Oct. 29, 1929	C,W	D,S	--	--	e/
N7-66	--	--	T,O, 20	D,S,I	40	5	Temperature, 78½° F. e/
N7-67	93.1	Oct. 28, 1929	T,O, 25	D,S,I	20	31.25	Temperature, 78° F.
N7-68	87.9	Feb. 2, 1928 d/	--	N	--	--	
N7-69	--	--	T,O, 20	D,S,I	45	87.75	
N7-70	8	-- 1913 c/	C,W	D,S	--	--	Reported flowing 125 gallons a minute in 1905. c/
N7-71	--	--	C,O, 6	D,S,I	14	0	Reported flowing 75 gallons a minute in 1907. c/ Reported, in 1938, no irrigation since 1936.
N7-72	79.5	Feb. 7, 1930	C,W	S	--	--	
N7-73	9.6	Jan. 16, 1930	C,W	S	--	--	
N7-74	72.0	Sept.24, 1929	C,W	D,S	--	--	Temperature, 78° F.
N7-75	--	--	C,W	S	--	--	
N7-76	--	--	C,W	S	--	--	
N7-77	105	May --, 1930	C,W	S	--	--	e/
N7-78	91.2	Jan. 6, 1930	C,G, 6	D,S,I	2	.5	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-79	1½ miles northwest	M. E. Fuller	Frank Kellogg	--	--	6	--	--	--
N7-80	1½ miles northwest	T. A. Smith	Elmo Owen	1929	356	10	59½	--	--
N7-81	1½ miles north	Mayhew Lumber Co.	Frank Kellogg	1926	525	10	--	--	--
N7-82	do.	do.	Sam Howard	--	312	3	--	--	--
N7-83	1½ miles north	P. Tijarena	A. Brown	1927	300	8	--	--	--
N7-84	2½ miles north	Mayhew & Gardner	Elmo Owen	--	315	8	--	--	--
N7-85	2½ miles north	do.	do.	--	318	8	40	--	--
N7-86 **	2 miles north	Gus Jeffery	Geo. Petty	1922	456	--	--	412	--
N7-87 **	2½ miles north	M. L. Norwood	S. M. Owen	1924	312	12	169	--	--
N7-88	do.	Mayhew & Gardner	Elmo Owen	1922	305	10	40	--	--
N7-89	2½ miles north	do.	do.	--	315	2	--	--	--
N7-90	3 miles north	Dr. -- Crosby	S. M. Owen	1910 c/	454	8½	80	390 c/	--
N7-91	2¾ miles north	G. O. Bell	--	--	510	5	--	--	--
N7-92	2¾ miles north	Citizens State Bank	S. M. Owen	1914 d/	324	18	140	--	--
N7-93	2¾ miles north	J. L. Spear	A. E. Petty	1918	350	5	40	--	--
N7-94	3 miles north	Mary Witherspoon	S. M. Owen	1916	608	12	100	--	--
N7-95	3¼ miles west	M. E. Cook	G. A. Petty	1915	232	10½	--	--	--
N7-96	3¾ miles west	Central Securities Co.	W. D. Morrison	1930	272	10	25	--	232
N7-97	2¾ miles southwest	T. M. Leavers	--	--	200	--	--	--	--
N7-98	1½ miles west	Spears Dairy	-- Petty	--	400	10	50	--	--
N7-99 *	1 mile north	Mobley Bros.	Frank Kellogg	1925	410	12	--	--	--
N7-100	1½ miles north	E. K. Crockett	S. M. Owen	1920	455	10	40	--	--
N7-101	1¼ miles north	do.	--	1930	388	--	--	187	153
N7-102	1½ miles north	Gus Jeffery	S. M. Owen	1925	325	--	--	240	--
N7-103	2 miles north	R. P. Childress	--	1917	315	10	140	--	--

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-79	--	--	C,O, 6	D,S,I	10	10.5	
N7-80	--	--	C,O, 6	D,S,I	9	16	
N7-81	--	--	C,O, 6	I	58	12	
N7-82	--	--	T,O, 15	I	5	0	
N7-83	--	--	C,O, 10	D,S,I	27	10	
N7-84	--	--	--	N	--	--	
N7-85	--	--	--	N	0	0	
N7-86	--	--	C,G, 65	D,S,I	55	37	
N7-87	--	--	T,E, 15	D,S,I	35	46	
N7-88	--	--	C,O, 6	D,S,I	40	5	
N7-89	--	--	--	N	--	--	
N7-90	--	--	C,O, 10	D,I	20	0	Reported, in 1938, no irrigation since 1936.
N7-91	--	--	A,O, 20	D,S,I	23	0	Do.
N7-92	--	--	T,O, 37	D,S,I	75	30	Open unused well 320 feet deep, 12 feet east. d/
N7-93	--	--	--	N	24	0	Reported, in 1938, no irrigation since 1931.
N7-94	--	--	T,G, 65	D,S,I	60	2	
N7-95	69.5	Jan. 6, 1930	D,[illegible]	D,S	--	--	
N7-96	65	May --, 1930	C,W	S	--	--	e/
N7-97	--	--	C,O, 6	D,S,I	--	0	
N7-98	--	--	C,W	D,S	--	0	
N7-99	--	--	T,O, 20	I	75	57	
N7-100	--	--	C,-, --	I	20	0	Reported no irrigation for several years, prior to 1937-38.
N7-101	--	--	--	N	--	--	
N7-102	--	--	--	N	32	0	Reported, in 1938, no irrigation since 1934.
N7-103	--	--	--	N	15	0	Reported, in 1938, no irrigation since 1932.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-104	1½ miles north	I. Martinez	Elmo Owen	--	230	8	--	--	--
N7-105	do.	Ben Wheeler	G. A. Petty	1920	347	10	140	147	--
N7-106	1¾ miles north	R. P. Childress	do.	1917	315	10	140	--	--
N7-107	2 miles north	Seguin Milling Co.	do.	1920	321	7¾	60	--	--
N7-108	3½ miles northeast	M. Nistler	-- Simpson	1922	450	10	--	--	--
N7-109 **	1½ miles northeast	R. T. Mooreman	Sam Howard	1912	315 c/	10	48	--	--
N7-110 *	do.	H. C. Dubold	do.	1912	312 c/	8¼	60 c/	212	--
N7-111	1¾ miles northeast	B. F. Wheeler	Frank Kellogg	1925	250	8	100	112	--
N7-112 **	do.	Mayhew & Gardner	A. E. Eardly	1910	--	10	--	--	--
N7-113	1¾ miles north	R. T. Mooreman	John Eardly	1911 c/	301 c/	8¼	60	190	--
N7-114 **	1¾ miles northeast	W. J. King	S. M. Owen	1916	316	12	60	--	--
N7-115 **	2 miles north	H. H. Childress	G. A. Petty	1916	318	9¾	--	--	--
N7-116	2 miles northeast	Citizens State Bank	-- Simpson	1916	325	16	140	--	--
N7-117	2¼ miles northeast	A. M. Thorpe	Chas. Petrie	1905	500	18	0	--	--
N7-118	1¾ miles west	G. A. Bryant	Frank Kellogg	1927	476	10	150	--	--
N7-119	1¼ miles west	B. C. Clements	do.	1928	380	--	--	--	--
N7-120	1¼ miles southwest	G. R. Taylor	W. D. Morrison	1927	252	10	40	--	--
N7-121	do.	John Stahl	--	--	--	--	--	--	--
N7-122	½ mile southwest	Mrs. Ive White	W. D. Morrison	1927	404	10	20	--	--
N7-123	1 mile southwest	do.	do.	1927	344	10	40	--	--
N7-124	½ mile southwest	A. Tocquigny	--	1918	349	12	20	--	--
N7-125 **	Carrizo Springs	Joe Gardner	--	1910 d/	133 d/	6	--	--	--
N7-126 *	do.	City of Carrizo Springs	W. D. Morrison	1928	522	12½	123	--	520
N7-127	1 mile northeast	Mrs. F. F. Kellogg	G. A. Petty	1912	450	6	150	--	--
N7-128	do.	H. O. Case	do.	1919	325	10	--	--	--

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
N7-104	--	--	C,G, 3	D,S,I	5	5	
N7-105	--	--	T,E, 15	D,S,I	45	23	
N7-106	--	--	C,O, 10	N	14	0	Reported, in 1938, no irrigation since 1932.
N7-107	--	--	C,G, 7	D,I	8	6	
N7-108	--	--	T,G, 60	D,S,I	32	47	Well cleaned out in 1938. Re-cased: 140 feet of 10-inch; 100 feet of 8-inch perforated lapped 20 feet into 10-inch.
N7-109	18	Feb. 19, 1913 c/	T,E, 10	D,S,I	37	28	Tempera- ture, 80° F.
N7-110	4	do.	C,G, 6	D,S,I	10	.5	Temperature, 78° F. d/
N7-111	--	--	T,E, 7½	D,S,I	14.5	17	
N7-113	70.4	Mar. 3, 1930	T,O, 15	D,I	40	64.75	Temperature, 78½° F.
N7-115	4	Feb. 15, 1913 c/	--	N	--	--	Temperature, 78° F. c/
N7-114	--	--	A,G, 15	D,S,I	23	10	
N7-115	--	--	T,E, 7½	D,S,I	16	5.25	
N7-116	--	--	T,O, 30	I	90	80	
N7-117	--	--	T,-, --	N	5.5	0	Reported, in 1938, no irrigation since 1935.
N7-118	--	--	C,W	D,S	4	4	
N7-119	--	--	C,G, 7	D,S,I	20	5	
N7-120	--	--	--	N	--	--	
N7-121	--	--	C,G, 6	D,S,I	15	12	
N7-122	56.5	Feb. 2, 1928 d/	C,W	D,S	--	--	
N7-123	--	--	C,H	D,S	5	0	Reported no irrigation for several years prior to 1937-38.
N7-124	--	--	C,G, 6	D,S,I	5	6	
N7-125	56.4	Nov. 22, 1929	--	N	--	--	Temperature, 76° F.
N7-126	82.4	Mar. 12, 1930	T,E, 30	P	--	--	Supplies Carrizo Springs.
N7-127	58.1	Oct. 8, 1929	--	N	--	--	
N7-128	73.5	do.	T,G, 65	D,S,I	32	32	

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
M7-129	1½ miles northeast	E. M. McClendon	G. A. Petty	1924	246	8	--	--	--
M7-130	1 mile northeast	Mrs. F. F. Kellogg	--	--	23	54	--	--	--
M7-131	1½ miles northeast	Mrs. W. C. Butler	--	1890	--	6	--	--	--
M7-132	1¾ miles northeast	Mrs. Gus Joffory	G. A. Petty	1922	300	6	--	--	--
M7-133 **	do.	do.	S. M. Owen	1921	510	6	60	--	--
M7-134	do.	A. M. Thorpe	do.	1904	560	14	0	--	--
M7-135	1¾ miles southwest	J. L. Bell	J. L. Bell	1921	106	6	20	--	--
M7-136	do.	Wm. Haun	--	1929	112	8	15	--	--
M7-137 *	¾ mile east	G. A. Hero, Est.	--	--	31	36	--	--	--
M7-138	1 mile east	A. Dickens, Est.	--	--	--	6	--	--	--
M7-139	do.	Tom Allinder	--	1920	140	10	--	--	--
M7-140	1½ miles southeast	M. Mistler	--	1924	480	10	150	--	--
M7-141	do.	Joe Gardner	--	--	235	10	80	90	--
M7-142 *	2½ miles north	L. M. Bills	Elmo Owen	1932	420	6	--	--	--
M7-143	1¾ miles north	Locadio Zarate	do.	1932	485	10	20	88	--
M7-144 **	do.	Mayhew & Gardner	do.	1933	300	8	200	--	--
M7-145 *	1 mile north	Mobley Bros.	--	1917	340	10	--	--	--
M7-146 *	1½ miles southwest	R. C. Johnson	Frank Kellogg	1934	300	6	20	--	--
M7-147	1½ miles southeast	M. Mistler	Elmo Owen	1932	130	12	140	--	--
M7-148	Carrizo Springs	J. H. Long	Petty Bros.	1937	400	8¼	230	--	--
M7-149 *_**	1 mile east	Tom Allinder	L. D. Stripling	1934	280	3½	140	140	35
M7-150	3½ miles west	M. E. Cook	--	--	565	10	--	--	--
M7-151	3¾ miles north	E. Goodwin	Petty Bros.	1936	355	8	200	--	--
M7-152 *	1 mile west	S. A. Templer	Sam Howard	1913	375	10	88	--	--
M7-153 *	do.	L. H. Upchurch	Petty Bros.	1936	215	8	51	--	--

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1939-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-129	--	--	C,W	D,S	66	0	Reported in 1938 no irrigation since 1935.
N7-130	13.5	May 5, 1930	--	N	--	--	Dug well. Water formerly used locally for medicinal purposes.
N7-131	--	--	C,W	D,S	--	--	
N7-132	86.1	Apr. 11, 1930	--	N	--	--	
N7-133	--	--	A,O, 20	D,I	30	15	
N7-134	--	--	C,C, 20	U	5	0	Reported, in 1938, no irrigation since 1935. Temperature, 80½° F.
N7-135	25.0	Jan. 7, 1930	--	N	--	--	
N7-136	41.0	Feb. 5, 1930	C,H	D,S	--	--	
N7-137	26.5	Apr. 30, 1930	--	N	--	--	
N7-138	50.0	Oct. 24, 1929	--	N	--	--	
N7-139	--	--	C,-, --	--	10	0	Reported no irrigation for several years prior to 1937-38.
N7-140	--	--	--	N	33	0	Well replaced by N7-147 in 1932. Temperature, 79½° F.
N7-141	--	--	T,E, 15	D,S,I	45	54	
N7-142	--	--	T,O, 10	D,S,I	--	12.25	
N7-143	--	--	C,C 6	D,S,I	--	13	Casing: 20 feet of 10-inch.
N7-144	--	--	T,O, 15	D,S,I	--	--	Casing: 200 feet of 8-inch. Used in conjunction with N7-112.
N7-145	--	--	C,O, 10	D,S,I	--	--	Used in conjunction with N7-99.
N7-146	--	--	C,C, 6	D,S,I	--	2	Casing: 20 feet of 6-inch.
N7-147	--	--	T,C, 60	D,S,I	--	9	Casing: 140 feet of 12-inch.
N7-148	86.81	Dec. 7, 1937	C,E, 3½	D	--	0	Casing: 230 feet of 8¼-inch. e/
N7-149	--	--	T,C, 65	D,P, S,I	--	18	Casing: 140 feet of 8¼-inch. Supplies public swimming pool.
N7-150	--	--	C,C, 10	I	--	0	Reported, in 1938, no irrigation since 1932.
N7-151	--	--	C,O, 6	D,S,I	--	0	Casing: 200 feet of 8-inch. Reported, in 1938, no irrigation
N7-152	--	--	C,O, 6	I	--	6	Casing: 88 feet of since 1936. e/ 10-inch galvanized tin.
N7-153	95	Feb. --, 1936 f/	C,O, 7½	D,S,I	--	4	e/

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Cometa	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-154 *-**	1 mile north	A. W. Allison	--	1914	380	17	80	--	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N7-155	1 mile west	J. H. McGee	--	--	--	--	--	--	--
N7-156	1¾ miles northwest	Ben Fleming	--	--	--	--	--	--	--

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-1	2 miles south	W. G. Orr	Geo. Leonard	1911 c/	1,060 c/	6¼	810	--	--
N8-2	1½ miles southeast	C. F. Jackson	Cribbs & Davidson	1927	1,080	10	1,080	840	222
N8-3	do.	S. C. Freed	A. B. Brown	1928	92	6	--	--	--
N8-4	2½ miles southeast	Mrs. M. B. White	do.	1928	77	6-5/8	--	--	--
N8-5	do.	do.	do.	1928	100	6-5/8	100	--	--
N8-6	3½ miles southeast	do.	Cribbs & Davidson	1927	1,208	10	1,208	984	221
N8-7 **	3½ miles east	Walter Bidelspach	R. F. Schroeder	1923	1,085	15½	1,085	925	--
N8-8 *	4½ miles east	R. W. Brown	Geo. Leonard	1911 c/	1,212 c/	7¼	1,012	1,010 c/	202 c/
N8-9 *	4½ miles east	A. Wagner	Tom Leary	1912 c/	1,094	8¼	--	--	--
N8-10	4¾ miles east	Dr. S. R. Bates	L. D. Stripling	1929	1,080	12⅝	1,053	790	270
N8-11	5½ miles east	J. E. Baylor	Tom Leary	--	1,210 c/	8	--	1,020	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N7-154	--	--	T,O, 20	D,S,I	--	40	
N7-155	--	--	C,O, 6	D,S	--	0	Reported no irrigation for several years prior to 1937-38.
N7-156	--	--	C,O, 6	D,S,I	--	0	
N8-1	--	--	--	N	288	0	Formerly used in conjunction with N8-2.
N8-2	--	--	T,-, --	I	--	120	Casing: 190 feet of 10-inch; 620 feet of 8-inch; 270 feet of 6-5/8-inch perforated.
N8-3	53	Nov. 14, 1929	--	N	--	--	
N8-4	37.5	Nov. 13, 1929	C,H	D	--	--	
N8-5	44.6	Nov. 14, 1929	C,W	D,S	--	--	
N8-6	--	--	T,Tr, 30	D,S,I	465 g/	150 g/	Reported no irrigation for several years prior to 1937-38.
N8-7	73.0	Nov. 27, 1929	T,O, 25	D,S,I	320 g/	320 g/	Casing: 120 feet of 15½-inch; 757 feet of 8-inch; 320 feet of 6¼-inch perforated.
N8-8	--	--	T,O, 20	D,S,I	192	0	Reported, in 1938, no irrigation since 1935.
N8-9	66.5	Oct. 31, 1929	T,-, --	N	60	0	Reported, in 1938, no irrigation since 1930.
N8-10	--	--	T,-, --	N	160	0	Casing: 200 feet of 12½-inch; 527 feet of 8-inch; 333 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since 1932.
N8-11	85.6	Nov. 26, 1929	C,W	S	--	--	e/

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-12	1⅓ miles east	Zavala County Bank	Cribbs & Davidson	--	1,020	10	760	815	205

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-13	2½ miles south	L. Wagner	Cribbs & Davidson	1928	1,140	10	1,140	965	175
N8-14	3 miles south	J. C. Bookout	A. B. Webb	1912	1,137	6	1,137	--	--
N8-15	3 miles southeast	T. R. Carter	--	1925	1,175	--	--	--	--
N8-16	3⅓ miles southeast	E. P. Curtis	S. M. Owen	1910 c/	1,116 c/	8¼	1,116	1,000	--
N8-17	4⅓ miles southeast	J. M. Merriwether	I. L. Dingman	1927	--	12	--	--	--
N8-18	5 miles southeast	J. E. Baylor	Tom Leary	1913	1,210 c/	8	--	--	--

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-19	1½ miles southeast	C. W. Wilkeson	--	--	--	--	--	--	--
N8-20	3½ miles east	F. H. Booth	Floyd Trimm	1927	1,250	12	--	--	--
N8-21 **	3½ miles east	Mrs. E. Alexander	A. Coe	1912 c/	1,070	8	--	--	--
N8-22 **	4 miles east	Adolf Grasso	S. M. Owen	1910 c/	1,100 c/	8¼	--	--	--
N8-23	do.	Fred Foster	A. B. Webb	1910 c/	--	8	1,100	900	200
N8-24 *	3⅓ miles southeast	H. P. Bailey	--	--	66	8	--	--	--
N8-25	do.	do.	S. M. Owen	1907 c/	654	6	--	574	--
N8-26	4 miles southeast	Geo. Rheia	--	1908 c/	818	8	--	675	143

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-12	--	--	T,-, --	N	60	0	Reported no irrigation for several years prior to 1937-38.
N8-13	--	--	T,E, 30	D,S,I	62 g/	0	Casing: 284 feet of 10-inch; [illegible] feet of 8-inch; 168 feet of 6-5/8-inch perforated. Reported, in 1938, no irrigation since spring of 1937. Temperature, 91° F.
N8-14	61.0	Nov. 14, 1929	--	N	--	--	
N8-15	67.5	do.	T,O, 37	I	160	0	Reported, in 1938, no irrigation since 1933. Temperature, 92° F.
N8-16	73.0	do.	T,Tr, 55	D,S,I	190 g/	0	Reported, in 1938, no irrigation since 1933.
N8-17	--	--	T,-, --	N	300	0	Reported no irrigation for several years prior to 1937-38.
N8-18	--	--	C,W	S	16	0	Do.
N8-19	91.39	Apr. 7, 1939	--	N	--	--	Drilled for irrigation. Never used.
N8-20	--	--	T,E, 35	I	200 g/	0	Reported, in 1937-38, no irrigation since 1935. Temperature, 91° F.
N8-21	--	--	T,-, --	N	45	0	Reported, in 1937-38, no irrigation since 1934. Temperature, 91° F.
N8-22	--	--	T,E, 20	D,S,I	90 g/	105 g/	
N8-23	73.2	Nov. 15, 1929	--	N	--	--	Reported flowing 50 gallons a minute in 1913. c/
N8-24	20.2	Nov. 18, 1929	--	N	--	--	Temperature, 79½° F.
N8-25	42.0	do.	C,W	S	--	--	Reported flowing 100 gallons a minute in 1907 and 75 gallons a minute in 1913. c/
N8-26	62.5	do.	T,Tr, 55	D,S,I	--	22	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tablos of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Winter Haven	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-27	3½ miles southeast	W. W. DeLange	A. B. Webb	1909	813	6	650	675	143
N8-28	do.	G. W. Weston	-- Petty	1928	1,008	6	--	--	--
N8-29 *	4 miles east	J. C. & O. E. Bookout	Cribbs & Davidson	1928	1,005	12½	1,005	750	225

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-30 *	2½ miles northeast	I. J. New	Frank Kellogg	1930	435	8	--	405	--
N8-31	2⅓ miles northeast	J. M. Stone	S. M. Owen	1925	387	10	150	300	--
N8-32	2¾ miles northeast	L. D. Stripling	-- Owen	1910 c/	--	6	--	--	--
N8-33	1½ miles northeast	Mobley Bros.	--	1900	333	5-3/16	60	200	--
N8-34	2 miles northeast	Dr. F. A. Fitch	Frank Kellogg	1928	460	10	--	--	--
N8-35	2⅓ miles northeast	John Stone	A. E. Eardley	1916	504	10	--	--	--
N8-36	do.	do.	G. A. Petty	1920	440	10	--	--	--
N8-37	do.	Chas. Williams	A. B. Webb	1903 c/	510	7-5/8	50	350	--
N8-38 **	do.	do.	Elmo Owen	1928	454	10	150	--	--
N8-39	2⅔ miles northeast	W. S. Moore	A. E. Eardley	1910	459 c/	6¼	228	--	--
N8-40	do.	John Stahl	--	1910	380 c/	5⅓	--	--	--
N8-41	do.	do.	--	1910	--	6	--	--	--
N8-42 *-**	2⅓ miles northeast	W. Wilcox	K. B. Ayers	1907	425	5-3/8	55	--	--
N8-43 **	do.	do.	Frank Kellogg	1930	522	10	176	370	--
N8-44 **	3 miles northeast	J. F. House	-- Moehrig	1903	550	5-5/8	330	380	120

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-27	61.5	Nov. 18, 1929	T,E, 10	D,S,I	--	0	Reported flowing, 50 gallons a minute in 1913. c/ Temperature, 86° F.
N8-28	64.8	do.	C,W	D,S	--	--	
N8-29	65.7	Nov. 15, 1929	T,E, 40	D,S,I	340 g/	526 g/	Casing: 210 feet of 12½-inch; 53[illegible] feet of 8-inch; 286 feet of 6-5/8-inch perforated. Temperature, 38° F.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-30	64.0	May 15, 1930	C,E, ½	D,S	--	--	
N8-31	--	--	C,O, 6	D,S,I	38	13	
N8-32	--	--	T,O, 15	D,S,I	16	0	Reported, in 1938, no irrigation since 1934.
N8-33	--	--	C,W	D,S	--	--	Reported flowing 100 gallons a minute when drilled. c/
N8-34	--	--	T,G, 60	D,S,I	55	20	
N8-35	--	--	T,E, 10	D S,I	44	7	
N8-36	--	--	--	N	--	--	
N8-37	--	--	A,Tr, 55	D,S,I	18	15	
N8-38	--	--	--	--	30	0	Reported, in 1938, no irrigation since 1936.
N8-39	--	--	A,O, 15	D,S,I	--	8	Reported flowing 100 gallons a minute when drilled and 30 gallons a minute in 1935. d/
N8-40	43.6	Dec. 16, 1929	--	N	27	0	Replaced by N-106 located [illegible] feet SW.
N8-41	--	--	--	N	--	--	
N8-42	43.0	May 7, 1930	--	N	45	0	Replaced by N-43.
N8-43	41.6	do.	T,D, 83	D,S,I	--	10	e/
N8-44	--	--	A,O, 20	D,S,I	22	0	Reported flowing 150 gallons a minute in 1907.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-45	1¾ miles east	Eardley, Est.	A. E. Eardley	1904	500 c/	6	80	400	--
N8-46	do.	G. W. Baylor	--	--	590 c/	6	--	--	--
N8-47	do.	C. W. Miller	--	--	500?	6	--	--	--
N8-48 **	2 miles east	do.	W. D. Morrison	1927	545	10	--	--	--
N8-49	2¼ miles east	do.	do.	--	475	6	--	--	--
N8-50	2½ miles east	I. O. Kotchman	--	1904	570	5-5/8	--	400	170
N8-51	3 miles east	do.	Frank Kellogg	1927	707½	8	707	--	--
N8-52	4 miles northeast	G. L. Smith	A. B. Webb	1924	565	8	--	--	--
N8-53	4¼ miles northeast	W. A. Farley	Geo. Petty	1928	645	8	430	--	--
N8-54	do.	Mrs. Beatrice McClean	A. B. Webb	1925	640	8	250	--	--
N8-55	4 miles northeast	Pete Wilson	Geo. Petty	1929	733	8	500	490	243
N8-56	4¼ miles northeast	R. N. Mitchell	A. B. Webb	1925	700?	10	--	--	--
N8-57	5⅓ miles northeast	Mrs. Texie McBrayer	--	1924	855	8	--	--	--
N8-58	6 miles northeast	G. Denton, Est.	--	--	834	8	--	--	--

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-59	5¼ miles west	Mrs. Jennie Campbell	--	--	35	8	--	--	--
N8-60	2 miles southwest	W. S. Swart	--	--	--	6	--	--	--
N8-61 *	1¼ miles west	O. L. Jackson	A. B. Webb	1912 c/	1,170 c/	10	1,170 c/	--	--
N8-62 **	½ mile west	O. H. Nance	Tom Wren	1910	1,200 c/	6	--	--	--
N8-63	¾ mile northwest	Mrs. W. H. Hopson	do.	1910	1,190 c/	6	--	--	--
N8-64	In Brundage	City of Brundage	-- Wheeler	1909 c/	1,170 c/	6	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-45	86.2	Oct. 9, 1929	--	N	0	0	
N8-46	--	--	C,W	D,S	2	0	Reported, in 1937, no irrigation since 1934. Temperature, 79° F.
N8-47	95.7	Oct. 12, 1929	--	N	--	--	
N8-48	--	--	C,0, 10	I	16	12	
N8-49	91.0	Oct. 12, 1929	C,W	D,S	--	--	
N8-50	73.8	Oct. 14, 1929	--	N	--	--	Reported flowing 400 gallons a minute when drilled. c/
N8-51	--	--	C,W	D,S	40	0	Reported, in 1938, no irrigation since 1935.
N8-52	--	--	T,0, 15	D,S,I	30	2	
N8-53	--	--	T,0, 15	I	23	7	
N8-54	--	--	T,0, 20	N	47	0	Reported, in 1938, no irrigation since 1934.
N8-55	--	--	T,0, 15	D,S,I	7	20	
N8-56	59.0	Oct. 14, 1929	C,0, 10	D,S	0	0	
N8-57	--	--	T,0, 20	D,S	--	--	
N8-58	45.7	Oct. 16, 1929	--	N	--	--	Deep oil test plugged back and formerly used for irrigation.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-59	22.8	Oct. 16, 1929	--	N	--	--	Probably yields water by seepage from Nueces River.
N8-60	38.9	Oct. 18, 1929	C,W	S	--	--	
N8-61	--	--	T,0, 25	D,S,I	30	26	
N8-62	--	--	T,0, 25	D,S,I	0	35	
N8-63	--	--	T,0, 20	D,S,I	40	42.5	Temperature, 93° F.
N8-64	--	--	C,0, 15	M	--	--	Supplies Brundage.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-65 **	2 miles east	Prouty & Tillman	W. D. Morrison	1927	725	10	--	--	--
N8-66 *	do.	do.	Elmo Owen	1929	408	12	--	295	--
N8-67	do.	C. O. Harris	L. Simpson	1925	495	12	180	340	--
N8-68	3 miles east	J. Spears	S. M. Owen	--	512	10	--	--	--
N8-69	4 miles east	do.	Geo. Petty	1928	680	10	542	542	--
N8-70	4½ miles east	G. Denton, Est.	--	1917	545	12	12	--	--

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-71	5½ miles southwest	Dr. B. E. Pickett	-- Seward	1927	--	8	--	--	--
N8-72	4½ miles southwest	Reeves & Eardley	do.	1928	866	10	630	630	--
N8-73	2½ miles southwest	Mrs. Moody Beascon	C. W. Wheeler	--	--	6	--	--	--
N8-74	2¾ miles south	Nueces Land & Irrigation Co.	--	1908	960	8	860	--	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-75 *	2 miles southeast	Ehler Bros.	-- Petty	1928	440	10	150	--	--
N8-76 **	do.	do.	A. E. Eardley	1917	700	10	150	--	--
N8-77	2½ miles southeast	do.	L. Simpson	1925	441	10	150	--	--
N8-78	do.	U. R. Brown	Frank Kellogg	1925	500	10	150	--	--
N8-79	3½ miles east	Mrs. A. F. Childress	W. D. Morrison	--	615	10	--	496	--
N8-80	do.	do.	A. E. Eardley	1903 c/	600 c/	8	80	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-65	--	--	T,E, 15	I	85	28	
N8-66	--	--	T,O, 20	D,S,I	--	--	Used in conjunction with N8-65.
N8-67	--	--	C,O, 15	D,S,I	109.5	30	Temperature, 81° F.
N8-68	--	--	C,W	S	16	0	Reported no irrigation for several years prior to 1937-38.
N8-69	--	--	C,O, 10	D,S,I	17.5	11	
N8-70	56.5	Nov. 29, 1930	C,W	D,S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-71	52.9	Nov. 29, 1930	T,O, 20	D,S,I	0	40 g/	Measuring point, top of pump base 1½ feet below ground surface.
N8-72	--	--	T,O, 25	D,S,I	139 g/	64	Casing: 260 feet of 10-inch; 370 feet of 8-inch.
N8-73	30.0	Oct. 21, 1929	C,W	S	--	--	
N8-74	2	Feb. --, 1928 d/	T,O, 25	I	80	120	Casing: 660 feet of 8-inch; 200 feet of 7¼-inch perforated. Temperature, 88° F.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-75	--	--	T,E, 25	D,S,I	166	126.5	Temperature, 81° F.
N8-76	--	--	T,O, 15	D,S,I	--	--	Used in conjunction with N8-75. Temperature, 80° F.
N8-77	--	--	--	N	--	--	Abandoned and plugged in 1950. Temperature, 80° F.
N8-78	--	--	C,O, 15	D,S,I	49	18	
N8-79	--	--	--	N	--	--	
N8-80	75.2	June 26, 1930	A,O, 20	N	--	--	Reported flowing 200 gallons a minute in 1903; no flow in 1913. c/

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-81	4 miles east	Mrs. Cramor M. Bell	A. E. Eardley	1900 c/	590	6	60	500	--
N8-82	4½ miles east	R. N. Mitchell	A. B. Webb	1907 c/	660	6¼	240	--	--
N8-83	4½ miles east	W. E. Wroe	--	--	650	8	350	--	--
N8-84	5 miles east	do.	W. W. Miller	1926	660	12	320	--	--
N8-85	do.	do.	--	1921	660	15	350	424	220
N8-86	do.	do.	A. B. Webb	1910 c/	660	8	48	--	--
N8-87	5½ miles southeast	do.	--	1910 c/	643 c/	5-5/8	48	--	--
N8-88 **	do.	do.	--	1920	660	12	--	--	--
N8-89	5½ miles east	Eardley Est.	Miller Bros.	1910 c/	663	6	320	--	--
N8-90	do.	Wm. Volbrect	A. E. Eardley	1903 c/	720	10	50	462	220
N8-91	6 miles east	Eardley Est.	W. W. Miller	1903 c/	725	8	350	--	--

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-92	7½ miles southwest	Eardley Est.	--	1916	625+	10	400	--	--
N8-93	do.	do.	--	1913	675	8	400	--	--
N8-94	7 miles southwest	do.	--	1920	670	10	--	--	--
N8-95	do.	do.	--	--	--	6	--	--	--
N8-96	do.	do.	W. W. Miller	1916	675	10	373	--	--
N8-97	5 miles southwest	Nueces Land & Irrigation Co.	Layne-Texas Co.	--	897	--	--	640	145
N8-98	4½ miles southwest	do.	--	--	--	8	--	--	--
N8-99	do.	do.	--	1906 c/	852	6-5/8 c/	--	--	--
N8-100	5 miles southwest	do.	R. J. Baucreisen	--	1,100+	--	--	--	--
N8-101 *	do.	do.	E. & F. Eckert	1927	1,155	10	960	706	156
N8-102 *	4½ miles southwest	do.	Layne-Texas Co.	--	1,224	15½	1,224	685	110

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-81	--	--	--	N	--	--	Reported flowing 200 gallons a minute in 1905; no flow in 1913. c/
N8-82	--	--	T,O, 30	D,S,I	16	35	Reported flowing 500 gallons a minute when drilled; no flow in 1913. c/ Temperature, 82° F.
N8-83	--	--	T,-, --	D,S,I	361	155	Used in conjunction with N8-84, N8-85 and N8-88.
N8-84	--	--	T,-, --	I	--	--	
N8-85	--	--	T,-, --	I	--	--	
N8-86	--	--	--	N	0	0	Reported flowing 700 gallons a minute when drilled. c/
N8-87	--	--	C, /	D,S	--	--	
N8-88	--	--	T,O, 45	I	--	--	
N8-89	56.1	June 3, 1930	A,O, 16	D,S	--	--	Reported flowing 400 gallons a minute when drilled. c/ Tempera-
N8-90	--	--	C,E	S	59	0	Reported flowing ture, 82° F. 1,200 gallons a minute when drilled. c/ Reported no irrigation for several years prior to 1937-
N8-91	--	--	--	N	--	--	Reported flowing 450 gal- 38. e/ lons a minute when drilled. c/

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-92	--	--	C,E	D,S	15	0	Reported no irrigation for several years prior to 1937-38.
N8-93	--	--	--	N	--	--	Do.
N8-94	--	--	--	N	55	0	Do.
N8-95	--	--	--	N	--	--	Do.
N8-96	--	--	--	N	--	--	Do.
N8-97	--	--	T,O, 60	I	350	1035.5 g/	Used in conjunction with N8-100, N8-101, N8-102 and N8-103.
N8-98	30	Feb. --, 1928 d/	--	N	180	0	Reported, in 1938, no irrigation since 1934.
N8-99	30	do.	--	N	--	--	Reported flowing 500 gallons a minute in 1906. c/
N8-100	--	--	T,O, 25	I	--	--	
N8-101	39	Feb. --, 1928 d/	T,O, 25	I	353 g/	--	
N8-102	--	--	T,O, 60	I	--	--	e/

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-103	4½ miles south	Nueces Land & Irrigation Co.	E. & F. Eckert	1927	780	10	--	694	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N8-104 *	3¾ miles northeast	Hiram G. Hines	G. A. Petty	1936	582	8	437	437	155
N8-105	3½ miles east	T. G. Paterson	Elmo Owen	1928	566	8	515	--	--
N8-106 *	2¾ miles northeast	John Stahl	Petty Bros.	1936	450	8	150	--	--
N8-107	4½ miles northeast	Mrs. -- Campbell	--	--	--	--	--	--	--
N8-108 *	3½ miles northeast	Henry Moses	Elmo Owen	1935	564	10	--	--	--

No.	Distance from Crystal City	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sandstone (ft.)	Thickness of Carrizo sandstone (ft.)
N8-109	3½ miles east	Sam Ward	Cribbs & Davidson	1931	1,204	8	1,011	1,011	189
N8-110 **	7 miles east	C. F. Jackson	do.	1932	1,200	12	1,200	955	245

No.	Distance from Big Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-1	6 miles northwest	W. C. Coffey	Floyd Trimm	1926	1,400	10	1,400	--	--
N9-2	4¾ miles north	S. A. Armstrong	--	--	2,000	6	--	1,550 c/	235 c/

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-103	40	Nov. 26, 1929	T,O, 25	D,S,I	160 g/	--	
N8-104	35.77	Dec. 4, 1937	--	N	--	0	Drilled for irrigation. Never used. e/
N8-105	--	--	C,O, 6	D,S	--	0	
N8-106	57	Mar. 15, 1936 f/	T,G, 65	D,S,I	--	21	e/
N8-107	--	--	T,O, 15	S	--	0	
N8-108	39.80	July 15, 1939	T,G, 60	I	--	13	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N8-109	91	Dec. --, 1931 f/	T,Tr, 55	I	--	0	Casing: 1,011 feet of 10-inch; 212 feet of 8-inch perforated.
N8-110	--	--	T,D, 70	D,S,I	--	--	Casing: 290 feet of 12-inch; 644 feet of 8-inch; 297 feet of 6½-inch perforated.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N9-1	--	--	C,W	D,S	23	0	Reported no irrigation for several years prior to 1937-38.
N9-2	51.3	Jan. 31, 1930	C,W	D,S	--	--	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-3 *-**	1½ miles north	Duncanson & Milam	--	1912	1,236	6	1,200	--	--
N9-4 **	do.	Graham & Hodges	--	1920	--	--	--	--	--
N9-5 **	3 miles northeast	P. C. Levering	Howell & Stalter	1912	1,353	8	1,350	1,200	--

No.	Distance from Big Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-6 *-**	3⅛ miles northwest	O. H. Nance	Ed. Homer	1912	1,448	8	1,306	1,290	--
N9-7 *	2½ miles north	J. T. Kinnard	Patterson, Zarderson & Rodley	1911	1,600	8	--	--	--
N9-8 *-**	1¼ miles north	T. S. Buchanan	C. W. Wheeler	1909	1,412 c/	8	1,412	1,200	200
N9-9	2 miles west	W. H. Zimmerman	Ed. Homer	1914	1,147	8	1,147	--	--
N9-10	2 miles northwest	Commercial National Bank	--	--	1,470 c/	8	--	--	--
N9-11	1¼ miles west	T. P. Bowles	Floyd Trimm	1928	1,553	10	1,553	--	--
N9-12	1 mile west	Federal Land Bank	--	1911	1,469 c/	10	1,469 c/	--	--
N9-13	½ mile northwest	do.	W. E. Stalter	1912	1,580 c/	8	1,580 c/	--	--
N9-14	do.	B. F. Pickett	Cribbs & Davidson	1928	1,416	10	1,416	1,205	206
N9-15 *	In Big Wells	City of Big Wells	Geo. Crowell	1909	1,580	6¼	1,580	--	--
N9-16 **	1½ miles east	R. B. White Co.	R. E. Homer	1914	1,640	8	--	1,380	230

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N9-3	26.1	Jan. 31, 1928 d/	T,O, 20	D,S,I	66	93	Casing: 900 feet of 6-inch; 300 feet of 5-inch perforated. Temperature, 95° F.
N9-4	33.6	Nov. 27, 1929	T,O, 20	I	80	38	
N9-5	90.6	Nov. 29, 1929	T,O, 25	D,S,I	130	138	Casing: 920 feet of 8-inch; 250 feet of 7¼-inch; 175 feet of 6¼-inch perforated.
N9-6	24.7	Feb. 1, 1929	T,O, 25	D,S,I	50	64	Casing: 1,306 feet of 8-inch. Temperature, 98° F.
N9-7	--	--	T,O, 25	D,S,I	--	63	Temperature, 96° F. c/
N9-8	54.1	Nov. 30, 1929	T,O, 25	D,S,I	30	24	Casing: 808 feet of 8-inch; 404 feet of 5-inch; 200 feet of 5-inch perforated. Temperature, 98½° F.
N9-9	32.5	Oct. 18, 1929	T,E, 15	D,S	22	0	Reported static head was 18½ feet above ground in 1910.
N9-10	--	--	C,W	S	--	--	Temperature, 96° F. c/
N9-11	26.0	Jan. 31, 1928	T,O, 25	D,S	--	0	Casing: 220 feet of 10-inch; 1,200 feet of 8-inch; 312 feet of
N9-12	17.8	Oct. 18, 1929	C,W	S	--	--	Casing: 302 6¼-inch perforated. feet of 8-inch; 883 feet of 6-inch; 284 feet of 6-inch perforated. c/
N9-13	--	--	A,O, 25	D,S,I	--	19	Casing: 840 feet of 8-inch; 260 feet of 7¼-inch; 480 feet of 6¼-inch perforated at intervals. c/
N9-14	--	--	T,O, 25	D,S,I	44	57.5	Casing: 406 feet of 10-inch; 829½ feet of 8-inch; 218½ feet of 6-5/8-inch perforated.
N9-15	--	--	--	N	--	--	Plugged and abandoned. Replaced by N9-46.
N9-16	74.0	Nov. 18, 1929	T,O, 42	D,S,I	100	230	Casing: 121 feet of 8-inch; 1,259 feet of 7¼-inch. Temperature, 102° F.

c/ Information by Alexander Duossen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Brundage	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-17 **	½ mile southeast	Citizens State Bank	-- McCrary	1913 c/	1,200 c/	8	--	--	--
N9-18	1 mile east	City of Brundage	A. E. Eardley	1909	1,137 c/	8	1,137	--	--
N9-19	4 miles south	Nueces Land & Irrigation Co.	Layne-Texas Co.	1909	1,224	10	--	--	--
N9-20	4¼ miles south	do.	R. J. Bauereisen	--	--	--	--	--	--
N9-21 **	2½ miles east	Hancock Bros.	Littlejohn Drilling Co.	1911 c/	1,365 c/	8	1,365 c/	--	--
N9-22	3 miles east	J. F. Webb	Geo. Leonard	1912	1,410	6	1,400	--	--
N9-23 **	3 miles southeast	Joe Pfeifer	Littlejohn Drilling Co.	--	--	--	--	--	--
N9-24	do.	Order of Calonthia	Cribbs & Davidson	1927	1,305	12½	1,305	1,035	175
N9-25	4 miles southeast	do.	--	--	1,300?	10	--	--	--
N9-26	do.	Dr. L. B. Jackson	--	--	--	20	--	--	--

No.	Distance from Big Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-27	½ mile west	Mrs. Regina Dullnig	C. W. Wheeler	1912	1,540	8	--	--	--
N9-28	1½ miles southwest	Mrs. Anna Rothe, Est.	do.	1910	1,394	6	--	--	--
N9-29 **	1¾ miles southwest	do.	G. W. Crowell	1909	1,240	6¼	--	--	--
N9-30	2½ miles southwest	Mrs. R. B. White	W. E. Stalter	1912	1,226	8	1,226	--	--
N9-31 **	2¾ miles south	P. J. Lewis	do.	1911	1,408	8	1,408	--	--
N9-32 **	2½ miles south	do.	do.	--	1,428	8	1,428	1,270	--
N9-33	2¾ miles south	do.	C. W. Wheeler	1909	1,523	6	--	1,297	174
N9-34	3¼ miles south	-- Frito Co.	--	--	--	6	--	--	--
N9-35	4¼ miles south	V. I. Powers	--	--	--	10	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N9-17	--	--	T,O, 25	D,S,I	43	48	
N9-18	--	--	--	N	31	0	Reported, in 1938, no irrigation since 1934.
N9-19	30.6	Nov. 30, 1929	C,W	S	--	--	
N9-20	--	--	T,O, 60	D,S,I	100	201.5	
N9-21	--	--	T,O, 25	D,S,I	80	131	Temperature, 94° F.
N9-22	--	--	A,-, --	D,S	45	25	Casing: 1,022 feet of 6-inch; 383 feet of 5-inch perforated. c/
N9-23	--	--	T,Tr, 55	D,S,I	60	45	
N9-24	60.2	Nov. 29, 1929	--	N	--	--	Casing: 208 feet of 12½-inch; 828 feet of 10-inch; 275 feet of 8½-inch perforated. e/
N9-25	17.7	do.	T,O, 25	D,S,I	--	211	Reported flowing in 1925.
N9-26	17.1	do.	T,O, 15	D,S,I	55	19.5	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N9-27	--	--	C,G, 8	I	102	0	Reported, in 1938, no irrigation since 1936.
N9-28	--	--	A,O, 25	D,S,I	48	45	
N9-29	Flows	Nov. 30, 1929	--	N	--	--	Temperature, 95° F. c/
N9-30	--	--	T,O, 20	I	62	70	
N9-31	--	--	T,O, 25	I	8		Casing: 868 feet of 8-inch; 260 feet of 7½-inch; 300 feet of 6½-
N9-32	22.8	Dec. 3, 1929	T,O, 25	D,S,I	--	455	Casing: inch perforated. e/ 860 feet of 8-inch; 400 feet of 7½-inch; 158 feet of 6½-inch per-
N9-33	--	--	C,W	S,I	--		Casing: 806 feet of forated. e/ 6-inch; 256 feet of 5-inch; 450 feet of 5-inch perforated. e/
N9-34	--	--	--	N	--	--	
N9-35	--	--	T,O, 25	I	--	18	

c/ Information by Alexander Duossen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Big Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
N9-36	4½ miles south	-- Frito Co.	--	--	--	6	--	--	--
N9-37	4¾ miles south	do.	--	--	1,500±	6	--	--	--
N9-38	4¼ miles south	Mrs. A. H. Blocker	C. W. Wheeler	1914	1,720 c/	10	--	1,420 c/	160
N9-39	4 miles south	V. Murrell	W. M. Doods	1912	1,529	8	--	1,465	--
N9-40	2¼ miles southeast	Vernon Standifer	--	--	--	8	--	--	--
N9-41	4¼ miles east	Jim Standifer	--	--	--	36	--	--	--
N9-42 *	4½ miles southeast	Wallace Rogers	--	--	120	6	--	--	--
N9-43	5 miles southeast	do.	--	--	1,760 c/	8	1,760	1,535	--
N9-44	4⅓ miles southeast	Mortgage Land & Inv. Co.	--	--	100	5	--	--	--
N9-45 *	1½ miles northwest	Federal Land Bank	--	--	--	6	--	--	--
N9-46 *	In Big Wells	City of Big Wells	Cribbs & Davidson	1937	1,355	10	400	1,170	90
07-1	9 miles northeast	G. W. Hatch	Trinity Drillers Co.	1928	2,200	12	--	1,690	--
07-2	do.	do.	Bob Roberts	1929	1,800	12	--	--	--
07-3 **	do.	do.	do.	1929	1,800	12	--	--	--
07-4	10 miles northeast	do.	do.	1929	1,400	12	--	--	--
07-5	5 miles northeast	F. V. Standifer	Bob Hall	--	110	5	--	--	--
07-6 **	6 miles east	Jim Standifer	do.	--	140	5	--	--	--
07-7	6⅓ miles east	do.	do.	--	160	5	--	--	--
07-8	5 miles southeast	Bankers Mortgage Co.	Floyd Trimm	1910	1,800	10	--	--	--
07-9	9 miles southeast	H. D. Thompson	Jack Ward	1909	1,800	6¼	--	1,660	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
N9-36	8.7	Jan. 16, 1930	--	N	--	--	
N9-37	--	--	T,O, 25	D,S,I	20	0	No irrigation during 1937-38 season.
N9-38	--	--	A,O, 20	D,S,I	90	0	No irrigation during 1937-38 season. Temperature, 96° F.
N9-39	23.1	Jan. 16, 1930	T,O, 20	D,S,I	50	37	Casing: 1,026 feet of 8-inch; 83 feet 6-5/8-inch; 420 feet 6-5/8-inch perforated.
N9-40	--	--	T,O, 25	D,S,I	25	60.75	
N9-41	35.3	Dec. 3, 1929	--	N	--	--	
N9-42	--	--	C,W	S	--	--	Reported water highly mineralized. Temperature, 80° F.
N9-43	27.0	Jan. 3, 1930	T,O, 20	S,I	--	59	
N9-44	--	--	--	N	--	--	
N9-45	--	--	A,O, 20	D,S,I	--	57	
N9-46	--	--	T,E, 20	P	--	--	Casing: 400 feet of 10-inch. Broken sand at 895 to 950 feet.
07-1	172	Mar. 15, 1928	T,-, --	D,S	0	0	Supplies Big Wells. c/
07-2	--	--	--	N	--	--	
07-3	96.1	Nov. 18, 1929	C,W	D,S	--	--	
07-4	--	--	--	N	--	--	
07-5	61.0	Oct. 22, 1929	C,W	D,S	--	--	
07-6	29.5	do.	C,W	S	--	--	
07-7	58.5	do.	C,W	S	--	--	
07-8	41.0	Jan. 4, 1930	C,W	D,S	--	--	Temperature, 99° F.
07-9	--	--	C,W	D,S	--	--	

c/ Information by Alexander Duossen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Red Ranch	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
R3-1 **	3 miles north	John Bonham	--	--	--	--	--	--	--
R3-2	At Red Ranch	Hal A. Hamilton	--	--	--	6	--	--	--
R3-3	1 mile south	do.	--	--	--	6	--	--	--
R3-4	1 mile east	do.	--	--	--	6	--	--	--
R3-5 **	2 miles southeast	do.	--	--	--	6	--	--	--
R3-6 *	do.	W. C. Ammann	-- Owen	1930	475	6	--	--	--
R3-7	3 miles southeast	--	-- Howard	--	600	6	--	--	--
R3-8 **	do.	Carl Johnson	-- Owen	1930	253	6	--	--	250
R3-9	4 miles south	Hal A. Hamilton	--	--	50	6	--	--	--
R3-10 **	5 miles south	do.	-- Owen	1929	--	10	--	--	--
R3-11	do.	do.	--	--	--	6	--	--	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S1-1 **	6 miles southwest	S. E. McKnight	--	1915	250	10	--	--	150
S1-2	3⅜ miles southwest	do.	--	1930	253	10	15	--	225
S1-3	2⅜ miles southwest	Jack Sterns	Charley L. Lindenborn	1928	320	10	--	--	--
S1-4	2⅝ miles southwest	Mrs. Chas. Bradshaw	Frank Kellogg	1927	462	10	--	--	--
S1-5	2¼ miles southwest	J. B . Finhaute	Elmo Owen	1930	250	12	12	--	235
S1-6	do.	J. M. White	S. M. Owen	1916	235	10	100	--	235
S1-7	do.	F. B. Cartwright	Charley L. Lindenborn	1928	325	12	0	--	325
S1-8	2⅜ miles southwest	Mrs. Chas. Bradshaw	do.	1927	312	10	--	--	--
S1-9	3 miles southwest	Mrs. F. K. Davis	Elmo Owen	--	210	10	20	--	200

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
R3-1	--	--	C,W	D,S	--	--	
R3-2	--	--	C,W	S	--	--	
R3-3	--	--	C,W	S	--	--	
R3-4	--	--	C,W	S	--	--	
R3-5	--	--	C,W	D,S	--	--	
R3-6	--	--	C,W	D,S	--	--	Reported sands at 210 to 220 feet and 230 to 240 feet. Temperature, 81° F.
R3-7	--	--	--	N	--	--	
R3-8	--	--	C,W	S	--	--	
R3-9	42.6	Feb. 10, 1930	C,W	S	--	--	
R3-10	105.3	do.	C,W	S	--	--	
R3-11	--	--	C,W	S	--	--	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power c/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S1-1	101.6	Jan. 9, 1930	C,G, 1	D	--	--	
S1-2	67.0	May 13, 1930	C,W	S	--	--	
S1-3	--	--	T,E, 15	D,S,I	57	22	
S1-4	--	--	T,G, 65	D,S,I	--	27	
S1-5	--	--	C,O, 6	D,S,I	0	2.5	
S1-6	--	--	C,O, 6	D,S,I	6	5	
S1-7	--	--	C,E, 5	D,S,I	9	6	
S1-8	--	--	C,W	S	14	0	Reported no irrigation for several years prior to 1937-38.
S1-9	--	--	T,G, 60	D,S,I	0	6.5	

c/ Information by Alexander Duosson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date com-ple	Depth of well (ft.)	Diam-eter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S1-10	3 miles southwest	J. E. Jones	W. D. Morrison	1929	250	10	30	--	240
S1-11	2¾ miles southwest	Dr. W. L. Northcut	Charley Lindenborn	1928	150	15	6	--	145
S1-12 **	2 miles south	Citizens State Bank	Luke Simpson	1924	440	10	100+	100	250
S1-13 **	do.	Conner & Gray	Elmo Owen	1928	256	10	93	114	256
S1-14	5½ miles southwest	Central Securities Co.	--	1930	240	10	20	--	195
S1-15	6 miles southwest	do.	--	1930	270	10	20	--	260
S1-16	4½ miles southwest	C. W. Gilfillan & Son	--	1929	295	10	20	63	290
S1-17 **	4½ miles southwest	J. C. Johnson	Frank Kellogg	--	200	10	--	--	--
S1-18 *	4¼ miles south	Central Securities Co.	--	1930	321	10	30	--	320
S1-19	3¾ miles south	Erskine Rhodes	Frank Kellogg	1925	360	10	90	--	--
S1-20	3½ miles south	G. E. Light	--	--	--	6	--	--	--
S1-21	3 miles southeast	W. J. Baugh	Frank Kellogg	--	410	--	--	--	--
S1-22	3½ miles southeast	San Antonio Loan & Trust Co.	do.	--	420	8	--	--	--
S1-23 *-**	3½ miles southeast	Henry Rosier	do.	1924	452	10	150	--	--
S1-24 **	5½ miles southwest	O. P. Leonard	--	1930	--	10	--	--	--
S1-25	6 miles southwest	Johnson Ranch	--	--	--	10	--	--	--
S1-26	5½ miles south	Judge S. G. Tayloe	A. E. Eardley	1902 c/	350 c/	6¼	100 c/	--	--
S1-27	5 miles south	do.	--	--	--	6	--	--	--
S1-28	4½ miles southeast	Frank Bushik, Jr.	S. M. Owen	--	--	--	--	--	--
S1-29	8½ miles southwest	C. T. Shook, Est.	--	--	--	5	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
Sl-10	--	--	T,G, 60	D,S,I	10	11.5	
Sl-11	45.2	Jan. 7, 1930	--	N	--	--	
Sl-12	--	--	T,-, --	N	30	0	Reported, in 1938, no irrigation since 1936.
Sl-13	--	--	C,O, 10	D,S,I	9	5	
Sl-14	56.4	Mar. 4, 1930	--	N	0	0	
Sl-15	52.2	Apr. 1, 1930	--	N	0	0	Temperature, 79° F.
Sl-16	54.7	Mar. 1, 1930	T,E, 10	D,S,I	10	45	
Sl-17	39.0	Nov. 14, 1929	C,W	D,S	--	--	
Sl-18	106.7	Apr. 5, 1939	--	N	0	0	Temperature, 79½° F. e/
Sl-19	88.0	Mar. 7, 1930	C,O, 10	D,S,I	15	12	
Sl-20	94.0	Mar. 8, 1930	--	N	--	--	
Sl-21	--	--	T,O, 25	D,S,I	13	25	Reported drilled through three stata of sand.
Sl-22	--	--	T,O, 15	D,S,I	29	0	Reported no irrigation for several years prior to 1937-38.
Sl-23	--	--	T,O, 25	D,S,I	30	32	Temperature, 80° F.
Sl-24	51	Feb. 20, 1930	T,G, 65	I	--	--	
Sl-25	56.0	Nov. 12, 1930	C,W	D,S	--	--	
Sl-26	50.4	Mar. 8, 1930	C,W	D,S	--	--	
Sl-27	50.7	do.	--	N	--	--	
Sl-28	--	--	T,O, 20	D,S,I	0	90	
Sl-29	--	--	C,W	S	--	--	

c/ Information by Alexander Duesser, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Dentonio	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S1-30	3¾ miles north	H. A. Fitzsimmons	--	--	280	8	--	--	--
S1-31 **	6½ miles northeast	John Garner	A. E. Eardley	1903	640	8	100	600	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S1-32 *	6 miles southwest	H. C. Umburn	--	1932	--	--	--	--	--
S1-33	4¾ miles southwest	Laurie Huck	--	--	--	8	--	--	--
S1-34	5 miles south	E. G. Bennett	--	1930	380	10	--	--	--
S1-35	do.	R. C. Salisbury	G. A. Petty	1932	323	10	29	--	--
S1-36	4¾ miles south	Jeff Fowler	do.	1932	326	10	39	--	--
S1-37 *	6 miles southwest	O. P. Leonard	--	1930	--	8	--	--	--
S1-38	6½ miles southwest	G. J. Kroscheusky	Elmo Owen	1930	--	8	--	--	--
S1-39	do.	Sam Abrunel	do.	1932	--	8	--	--	--
S1-40	7½ miles southwest	H. Brauyer	do.	1936	--	--	--	--	--
S2-1 *	3½ miles southeast	C. Vandervort	--	1925	510	8	50	300	118
S2-2 **	3½ miles southeast	Dr. G. A. Mattison	-- Burkett	1926	600	--	--	--	--
S2-3 *-**	3½ miles southeast	do.	do.	1926	600	--	--	--	--
S2-4 *-**	3¾ miles southeast	J. A. Oelkors	Cribbs & Davidson	1927	694	10	--	400	140
S2-5 *	do.	do.	--	--	634	10	--	--	--
S2-6	do.	W. E. Wroe	A. E. Eardley	1903 c/	638 c/	6¼	100 c/	--	--
S2-7 **	4 miles southeast	Fred Ehlers	L. Simpson	1921	720	10	500	--	--
S2-8 *-**	4¼ miles southeast	Eardley, Est.	W. W. Miller	1918	670	10	320+	--	--
S2-9	4½ miles southeast	do.	A. B. Webb	--	670	8	320	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S1-30	197.2	Nov. 12, 1930	C,W	S	--	--	
S1-31	20	1913 f/	C,W	D,S	--	--	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S1-32	--	--	T,E, 15	D,S,I	--	72	
S1-33	--	--	T,-, --	I	--	8	
S1-34	--	--	T,O, 20	I	--	10	
S1-35	--	--	T,O, 20	I	--	--	
S1-36	--	--	C,G, 6	D,I	--	--	
S1-37	--	--	--	N	--	--	
S1-38	--	--	T,O, 20	D,S,I	--	37.75	
S1-39	--	--	T,O, 30	D,S,I	--	18	
S1-40	--	--	T,O, 30	D,S,I	--	24	
S2-1	--	--	C,O, 10	D,S,I	34	15	
S2-2	--	--	T,O, 30	D,S,I	335	49	
S2-3	--	--	T,E, 25	D,S,I		25	Temperature, 83° F.
S2-4	100	Feb. 20, 1927 f/	T,E, 15	I	100	202.25	Temperature, 83½° F. e/
S2-5	--	--	C,W	D,S	--	--	
S2-6	--	--	--	N	--	--	Reported flowing 100 gallons a minute in 1903; none in 1913. c/ Bridged at 33 feet in 1938.
S2-7	--	--	T,E, 25	D,S,I	65	113.5	Temperature, 85° F.
S2-8	--	--	T,O, 25	D,S,I	266	43	Formerly used in conjunction with S2-9, S2-10 and S2-11. Temperature 83° F.
S2-9	--	--	A,O, 20	I	--	0	

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-10	4½ miles southeast	Eardley, Est.	W. W. Miller	1926	670	10	265	--	--
S2-11	do.	do.	do.	1934	640	10	100 f/	--	--
S2-12	5 miles southeast	Mrs. Martha I. Richardson	--	1900	601	12	--	--	--
S2-13 **	do.	do.	--	1915	601	12	--	--	--
S2-14	6 miles east	John O. Gibson	--	--	--	--	--	--	--
S2-15	7 miles east	Francis Giller	--	1913	700	8	300±	--	--
S2-16	7½ miles east	W. S. Minus	Luke Simpson	1910	723	8¼	153	550	150
S2-17	7 miles east	Francis Giller	do.	1910	700	6	350	--	--
S2-18 *_**	4½ miles southeast	C. M. Bushik	Elmo Owen	1930	670	10	518	325	140
S2-19	do.	Alamo Lumber Co.	A. B. Webb	1903 e/	600	5-5/8	215 e/	350	--
S2-20	4 miles southeast	do.	do.	1903 e/	418	6¼	200 e/	350	--
S2-21	3 miles southeast	Joe White	A. E. Eardley	1934	500	8	80	--	--
S2-22	do.	Alamo Lumber Co.	--	1915	740	12	740	--	--
S2-23	5 miles southeast	F. Votaw	--	1916	600	6	--	--	--
S2-24 *_**	6 miles southeast	L. V. Richardson	W. W. Miller	1928	667	12	290	--	--
S2-25 *	6½ miles southeast	Oscar Pollard	Luke Simpson	1927	677	10	420	420	248

No.	Distance from Asherton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-26	3½ miles northeast	G. A. Heye, Est.	--	--	--	10	--	--	--
S2-27	5½ miles northeast	Mrs. J. A. McDonald	W. W. Miller	Before 1910	1,000	8	--	--	--
S2-28	4 miles northeast	F. T. Fuller	Luke Simpson	1924	820	6	820	700	--
S2-29	5 miles northwest	E. W. Tackett	-- Petty	1928	680	10	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of power b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-10	--	--	C,O, 20	I	--	0	
S2-11	--	--	A,O, 20	I	--	0	
S2-12	--	--	T,O, 20	I	--	262	Temperature, 84° F.
S2-13	--	--	T,O, 40	D,S,I	10		Temperature, 83° F.
S2-14	--	--	--	N	--	--	No record.
S2-15	--	--	T,O, 25	I	45	105	
S2-16	--	--	--	N	--	--	
S2-17	--	--	--	N	50	0	
S2-18	--	--	T,O, 25	D,S,I	--	25	Temperature, 83° F.
S2-19	--	--	--	N	--	--	
S2-20	--	--	--	N	--	--	
S2-21	--	--	C,W	D,S	8	--	Reported no irrigation for several years prior to 1937-38.
S2-22	--	--	C,O, 25	D,S,I	100	118	Casing: 200 feet of 12-inch; 400 feet of 8-inch; 140 feet of 5-inch perforated.
S2-23	--	--	A,O, 20	D,S,I	20	0	Temperature, 83° F.
S2-24	116.0	Nov. 15, 1929	T,E, 25	D,S,I	92	105.5	Temperature, 83½° F.
S2-25	--	--	T,O, 20	D,S,I	40	60	

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-26	--	--	--	N	--	--	
S2-27	75.2	Nov. 26, 1929	T,G, 60	D,S	--	0	
S2-28	--	--	C,W	D,S	--	--	
S2-29	87.8	Oct. 22, 1929	B,H	D	56	0	Original depth, 380 feet. Deepened to 680 feet. Reported, in 1938, no irrigation since 1933.

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastorn Maverick County--Continued

No.	Distance from Asherton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-30 **	2¼ miles west	L. M. Wallace	Frank Kellogg	1925	650	10	250	--	--
S2-31	2 miles west	Wm. Werner	--	1927	625	6	375	375	245
S2-32	1½ miles northwest	C. D. Pollard	L. Simpson	1927	693	10	377	385	298
S2-33	1¾ miles west	Kimble Land & Cattle Co.	--	--	--	6	400+	--	--
S2-34	1¼ miles west	C. L. Stephens	A. E. Eardley	Before 1910	1,000	--	--	--	--
S2-35	1½ miles northwest	do.	L. Simpson	--	600	--	--	--	--
S2-36	1¾ miles northwest	Mrs. Cecilia Logan	do.	Before 1915	675	6	450	--	--
S2-37	do.	E. F. Schumann	--	--	--	6¼	--	--	--
S2-38	do.	Mrs. E. M. Ford	--	--	--	6¼	--	--	--
S2-39 **	do.	R. W. Taylor	--	--	500	5¼	500	--	--
S2-40	do.	W. W. Miller	J. C. Moore	1911	800	6¼	--	--	--
S2-41	1 mile north	M. L. V. Smith	W. W. Miller	Before 1910	--	--	--	--	--
S2-42	1½ miles north	do.	--	1928	--	10	--	--	--
S2-43	1½ miles north	do.	--	1929	700	10	300+	--	--
S2-44 **	1¾ miles north	J. C. Minus	W. D. Morrison	1929	600	10	300	520	--
S2-45	1¾ miles northeast	C. H. Oliver	--	1912	650	6	--	530	--
S2-46 **	3¼ miles southwest	W. E. Wroe	W. W. Miller	1922	--	12	350	365	--
S2-47	2¼ miles west	do.	C. Davenport	1922	803	12	350	380	100
S2-48	2 miles west	W. D. McGee	L. Simpson	1926	601	10	350	--	--
S2-49	1¾ miles west	C. H. Risley	N. Simpson	1909	666	6	400+	--	--
S2-50	1½ miles west	do.	J. C. Moore	1909	860	6	460 c/	460 c/	--
S2-51	1 mile west	Mrs. R. D. Campbell	N. Simpson	1909	643	6	373	--	--
S2-52	do.	do.	do.	1909	650	6	373	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.
b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.
* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1920-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-30	--	--	T,O, 25	D,S,I	55	93.5	
S2-31	--	--	T,O, 20	D,S,I	30	24	
S2-32	--	--	T,O, 25	D,S,I	83	57	
S2-33	--	--	--	N	--	--	
S2-34	--	--	T,C, 25	D,S,I	70	44	
S2-35	--	--	T,O, 20	I	70	0	Reported no irrigation for several years prior to 1937-38.
S2-36	--	--	A,O, 25	D,S,I	69	30	
S2-37	--	--	A,O, 20	D,S,I	--	23.75	
S2-38	--	--	A,O, 20	D,S,I	--	9	
S2-39	--	--	A,O, 20	D,S,I	40	4	
S2-40	--	--	A,O, 20	D,S	--	--	
S2-41	--	--	--	N	--	--	
S2-42	56.7	Oct. 15, 1929	--	N	40	0	Reported no irrigation for several years prior to 1937-38.
S2-43	--	--	C,W	S	--	--	
S2-44	--	--	C,W	D,S	30	0	Temperature, 81½° F.
S2-45	--	--	C,W	S	--	--	Reported flowed until 1917.
S2-46	180	May --, 1929 f/	T,O, 60	D,S,I	259.5	18.25	
S2-47	--	--	T,O, 65	I			Well shot with nitro-glycerine, reported capacity increased from 200 to 900 gallons a minute.
S2-48	--	--	T,O, 25	I	64	5.5	
S2-49	--	--	A,O, 20	I	8	24.5	
S2-50	--	--	--	N	--	--	
S2-51	--	--	A,O, 20	D,S,I	21	0	Reported no irrigation for several years prior to 1937-38.
S2-52	--	--	--	N	--	--	

a/ Information by Alexander Duessen, U. S. Geological Survey.
b/ Information by S. S. Nye, U. S. Geological Survey.
c/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
s/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Asherton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-53 **	1½ miles west	W. C. Smith	W. W. Miller	1917	680	6	400	--	--
S2-54 **	1 mile west	P. C. Scruggs	Cribbs & Davidson	1911	625	12½	320	479	156
S2-55	do.	do.	--	--	--	10	--	--	--
S2-56	3 miles southwest	W. H. Allen	C. Davenport	1922	499	10	350	390	--
S2-57	2⅔ miles southwest	W. A. Williams	--	1911	691	6¼	320	--	--
S2-58	2½ miles southwest	Geo. Herwick	N. Simpson	1910	749	6	310	--	--
S2-59	1¾ miles southwest	W. D. McGee	--	1923	537	10	350	--	--
S2-60 **	¾ mile southwest	Tom Courtney	N. Simpson	Before 1910	703	8	--	--	--
S2-61	In Asherton	W. C. Campbell	L. Simpson	--	--	6	--	--	--
S2-62 *	do.	Central Light & Power Co.	Layne-Texas Co.	1926	640	12	352	566	--
S2-63	⅓ mile northeast	Alamo Lumber Co.	W. W. Miller	1907	600	6	--	--	--
S2-64 *	do.	do.	do.	1914	740	12½	300	--	--
S2-65	⅓ mile east	Polo Vasquez	Geo. Crowell	1910	774	12	774	525	245
S2-66	¾ mile east	do.	--	Before 1905	774	6	300	--	--
S2-67	1 mile east	do.	--	1921	740	6	360	--	--
S2-68	1¼ miles northeast	E.F. Schumann	--	1910	600	6	--	--	--
S2-69	1 mile northeast	L. Fair	--	1917	586	6	350	--	--
S2-70	do.	Mrs. Maggie Tollet	--	--	--	6	--	--	--
S2-71	1¼ miles northeast	F. C. Goethe	--	1915	716	6	300	--	--
S2-72	1½ miles northeast	do.	Geo. Crowell	1915	680	8	300	--	--
S2-73	1⅔ miles northeast	Mrs. W. R. Harris	Fred Poole	1917	730	6	--	--	--
S2-74	do.	C. M. Mathis	S. M. Owen	1917	736	8	--	--	--
S2-75	2 miles northeast	Alamo Lumber Co.	--	--	--	6	--	--	--
S2-76	do.	C. K. Braune	G. A. Petty	1928	690	10	400	490	200
S2-77	2½ miles northeast	Gordon Smith	--	Before 1910	--	10	--	--	--

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S2-53	--	--	T,O, 15	D,S,I	33	11	
S2-54	--	--	T,E, 30	I	78	37	
S2-55	--	--	--	N	--	--	
S2-56	--	--	A,O, 25	D,S	22	0	Reported, in 1938, no irrigation since 1932.
S2-57	--	--	C,W	D,S	--	--	
S2-58	--	--	T,O, 25	D,S,I	63	63	Reported flowing 125 gallons a minute when drilled.
S2-59	--	--	T,O, 25	I	100	30	
S2-60	--	--	T,O, 20	D,S,I	21	29.25	
S2-61	--	--	--	N	60	0	Reported, in 1938, no irrigation since 1935.
S2-62	52.5	June 19, 1927 d/	T,E, 25	P	--	--	Supplies city of Asherton. Temperature, 82° F.
S2-63	--	--	--	N	--	--	Reported flowing 300 gallons a minute in 1908.
S2-64	93.3	Oct. 15, 1929	T,O, 25	I	125	121.5	Temperature, 84° F.
S2-65	--	--	--	N	110	0	Casing: 320 feet of 12-inch; 454 feet of 9-5/8-inch perforated.
S2-66	--	--	--	N	0	0	
S2-67	--	--	T,G, 60	D,S,I	--	17	
S2-68	--	--	A,O, 25	I	--	2.5	
S2-69	--	--	A,O, 20	D,S,I	--	16	
S2-70	67.8	Dec. 21, 1938	T,O, 20	D,S,I	--	2	
S2-71	--	--	T,-, --	N	--	--	
S2-72	--	--	--	N	--	--	
S2-73	--	--	A,O, 20	D,S,I	--	2	
S2-74	--	--	--	N	8	0	Reported, in 1938, no irrigation since 1933.
S2-75	--	--	--	N	--	--	
S2-76	--	--	C,O, 10	D,S,I	18	19.5	Casing: 240 feet of 10-inch; 160 feet of 8-inch. Temperature, 86° F.
S2-77	--	--	C,W	D,S	20	0	Reported, in 1938, no irrigation since 1932.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Asherton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-78	2½ miles southeast	J. W. Robinson	N. Simpson	1911	1,000	12	400	--	--
S2-79	3 miles southeast	Roger Brown	L. Simpson	1910	960	12	250	--	--
S2-80	2¾ miles southeast	P. G. Scruggs	Cribbs & Davidson	1926	933	10	312	730	203
S2-81 **	3½ miles east	C. C. Hull	--	--	--	--	--	--	--
S2-82 **	3¾ miles east	Alamo Lumber Co.	Fred Poole	--	--	--	--	--	--
S2-83	4¼ miles east	R. E. Brooks	Floyd Trimm	1926	1,100	10	830	--	--
S2-84	3¾ miles southeast	C. M. Decker	T. W. Miller	1917	822	8¼	822	655	--
S2-85	do.	A. E. Powell	Cribbs & Davidson	1928	985	10	742	710	204
S2-86 **	4 miles southeast	J. P. Luthold	Fred Poole	1928	1,021	10	727	835	170
S2-87	3½ miles southeast	Miller & Holsonback	--	1928	996	10	712	712	281
S2-88 **	4¼ miles southeast	M. G. Howard	Fred Poole	1928	1,020	10	--	860	147
S2-89 **	do.	Joe Moss	Cribbs & Davidson	1928	1,016	10	795	785	225
S2-90	6 miles east	R. E. Brooks	--	1928	--	10	--	--	--
S2-91	4¾ miles south	L. Zanbrecher	--	--	1,385	10	--	1,004	202
S2-92	5 miles southeast	Wm. Hallman	Fred Poole	--	1,018	10	1,018	832	183
S2-93	do.	A. L. Stover	Floyd Trimm	1926	1,085	10	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S2-78	191.0	Dec. 7, 1930	C,G, 6	D,S	60	0	Reported, in 1938, no irrigation since 1933. Temperature, 88° F.
S2-79	--	--	C,O, 20	I	20	0	Reported, in 1938, no irrigation since spring of 1937.
S2-80	--	--	T,G, 60	D,S,I	100	60	
S2-81	--	--	T,O, 20	D,S,I	55	12	
S2-82	144.9	Dec. 20, 1938	T,O, 37½	D,S,I	113	82	Temperature, 89° F.
S2-83	--	--	T,O, 25	S	85	0	Casing: 165 feet of 10-inch; 400 feet of 8-inch; 265 feet of 6-5/8-inch perforated. Temperature,
S2-84	--	--	A,O, 25	S	5	0	Casing: 400 feet of 8¼-inch; 422 feet of 7¼-inch perforated. Reported, in 1938, no irrigation since 1932. 88°F.
S2-85	--	--	T,E, 30	I	75	0	Casing: 302 feet of 10-inch; 440 feet of 8-inch. Reported, in 1938, no irrigation since 1932. Temperature,
S2-86	--	--	--	N	77	0	Reported, in 1938, no irrigation since 1936. Temperature, 89° F.
S2-87	--	--	T,E, 30	I	80	0	Casing: 344 feet of 10-inch; 368 feet of 8¼-inch. Reported, in 1938, no irrigation since 1933. Temperature, 88° F.
S2-88	--	--	T,E, 20	D,S,I	145	70	Temperature, 80° F.
S2-89	--	--	T,D, 60	D,S,I	90	73	
S2-90	127.5	Dec. 14, 1929	T,Tr, 30	D,S,I	120	85	Temperature, 89½° F.
S2-91	153.5	Dec. 13, 1929	--	N	--	--	
S2-92	--	--	T,-, --	--	100	0	Casing: 400 feet of 10-inch; 320 feet of 8¼-inch; 321 feet of 5-3/16-inch perforated. Reported, in 1938, no irrigation since
S2-93	--	--	T,-, --	N	30	0	Reported, in 1938, no irrigation since 1930. 1933.

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Catarina	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-94	9 miles west	Catarina Farms	--	--	1,424	10	--	1,215	209
S2-95 **	5 miles west	Wm. Raver	Fred Poole	1928	1,141	8	872	867	273
S2-96	5½ miles northwest	Lulling Foundation	--	--	1,081	--	--	805	217
S2-97	4½ miles northwest	J. H. Long	--	1928	1,099	8	809	864	230
S2-98	4½ miles west	Catarina Farms	Fred Poole	1928	1,195	10	871	876	317
S2-99 **	4½ miles west	C. M. Kilgore	Floyd Trimm	1927	1,143	10	790	780	--
S2-100	4 miles northwest	R. A. Smith	--	--	--	10	--	--	--
S2-101	3¾ miles northwest	J. P. Giles	Floyd Trimm	1926	1,188	10	--	--	--
S2-102	3½ miles northwest	do.	do.	1926	1,185	10	--	900	--

No.	Distance from Carrizo Springs	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-103 *	4¼ miles southeast	M. W. Fardwell	--	1932	512	8¼	90	--	--
S2-104 **	4½ miles southeast	Joe Gardner	--	1928	350	8¼	200±	--	--
S2-105	5 miles southeast	C. A. Johnson	--	1931	500	8¼	--	--	--
S2-106	do.	Mrs. Felix Reynolds	--	1931	503	8¼	--	--	--
S2-107	4 miles southeast	Alamo Lumber Co.	--	1931	728	10	563	563	165

No.	Distance from Asherton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-108	½ mile northeast	L. F. Kleeman	--	--	--	--	--	--	--
S2-109 **	1 mile southwest	Frank Pfeiffer	--	--	650	8	650	400	150
S2-110 *	¾ mile north	J. F. Simpson	--	--	--	6	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-94	190.7	Dec. 10, 1929	C,W	S	--	--	c/
S2-95	--	--	C,W	D,S	31	0	Casing: 8-inch cemented at 872 feet. Reported, in 1938, no irrigation since 1931.
S2-96	--	--	T,E, 25	D,S,I	74.5	120	Temperature, 90° F.
S2-97	--	--	T,-, --	I	70	0	Reported, in 1938, no irrigation since 1935.
S2-98	--	--	C,W	D,S	50	0	Reported, in 1938, no irrigation since 1931.
S2-99	--	--	T,-, --	I	43	0	Reported, in 1938, no irrigation since 1935. Temperature, 91½° F.
S2-100	138.2	Nov. 20, 1929	C,W	D,S	45	0	Reported, in 1938, no irrigation since 1934. Temperature, 91° F.
S2-101	--	--	T,O, 25	D,S,I	75	7	
S2-102	110.8	Oct. 25, 1929	T,O, 25	D,S,I	130	0	Not used during 1937-38 season.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-103	80	-- 1932 f/	T,O, 20	D,S,I	--	34	
S2-104	--	--	C,O, 10	D,S,I	--	16	
S2-105	--	--	C,O, 6	D,S,I	--	10	
S2-106	--	--	C,G, 65	D,S,I	--	6	
S2-107	--	--	T,O, 35	I	--	69	Casing: 305 feet of 10-inch; 123 feet of 8-inch set at 563 feet.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S2-108	--	--	T,G, 60	D,S,I	--	15	
S2-109	--	--	T,O, 25	D,S,I	--	44	Casing: 400 feet of 8-inch; 250 feet of 5-3/16-inch perforated.
S2-110	--	--	A,O, 20	D,S,I	--	10	Temperature, 81° F.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Catarina	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-111	4¾ miles west	J. H. Long	--	1931	--	--	--	--	--

No.	Distance from Ashorton	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S2-112	¾ mile northeast	Joseph Herman	--	--	--	--	--	--	--

No.	Distance from Valley Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S3-1 *-**	1 mile west	Wm. O'Brien	A. H. Rife	1910	1,800+	6	1,800	--	--
S3-2 **	½ mile north	W. G. Shumate	Floyd Trimm	--	1,668	8	--	--	--
S3-3	½ mile north	Weaver & Gary	do.	1924	1,697	8	1,400	--	--
S3-4 *-**	Valley Wells	Shumate, Green, et al	W. M. Dodds	--	1,776	8	1,776	--	--

No.	Distance from Catarina	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S3-5	8 miles northwest	R. E. Brooks	--	--	--	--	--	--	--
S3-6	do.	do.	--	1927	--	--	--	--	--
S3-7	5 miles north	Emerson, O'Banion & Rick	Floyd Trimm	1929	1,400	8	1,098	1,098	308
S3-8	3 miles north	Catarina Farms	do.	--	1,263	12	--	950	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S2-111	--	--	T,0, 25	D,S,I	--	85	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S2-112	--	--	T,0, 20	I	--	19	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
S3-1	Flows	Jan. 4, 1930	Cf,0, 20	D,S,I	0	48	Casing: 1,400 feet of 6-inch; 400 feet of 5¾-inch perforated. Reported temperature, 104° F. when drilled.
S3-2	Flows	Jan. 31, 1930	A,0, 15	D,S,I	16	20	
S3-3	Flows	Jan. 4, 1930	Cf,0, 20	D,S,I	0	53	
S3-4	Flows	do.	A,0, 20	D,S,I	0	50	Casing: 1,400 feet of 8-inch; 376 feet of 7⅜-inch perforated. Reported flowing 50 gallons a minute Jan. 4, 1930. Temperature, 99° F., Feb. 1, 1928.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1920-30 (acres)	Season 1937-38 (acres)	
S3-5	78	Jan. --, 1928 f/	T,Tr, 30	D,S,I	60	0	Reported no irrigation for several years prior to 1937-38.
S3-6	78.3	Mar. 21, 1927 f/	T,-, --	N	72	0	Do.
S3-7	--	--	T,Tr, 30	S	80	0	8-inch casing set and cemented at 1,098 feet. Reported, in 1938, no irrigation since 1935.
S3-8	146.3	Nov. 19, 1929	C,W	D,S	160	0	Reported, in 1938, no irrigation since 1932. Temperature, 93° F.

c/ Information by Alexander Duessen, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Catarina	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S3-9	3½ miles north	Fred Schrack	--	1928	1,283	10	970	960	320
S3-10 *-**	5 miles northeast	Catarina Farms Co.	--	1928	1,419	8	--	1,130	285
S3-11	5⅓ miles northeast	Silverlake Ranch	Floyd Trimm	1924	1,470	8	--	--	--
S3-12	2⅔ miles northwest	Catarina Farms Co.	--	--	--	--	--	--	--
S3-13 **	2 miles north	C. N. Boasley	Floyd Trimm	1926	1,315	10	980	980	200
S3-14	2⅓ miles north	Irwin & Mosley	--	1928	1,226	10	951	1,030	--
S3-15	2¾ miles north	-- Nolte	--	--	--	--	--	--	--
S3-16	2⅔ miles west	Catarina Farms Co.	--	--	--	10	--	--	--
S3-17	1½ miles west	do.	--	1928	1,339	10	1,021	1,021	239
S3-18	¾ mile north	do.	--	1928	1,335	--	985	1,042	218
S3-19	1¾ miles northeast	E. E. Siotz	--	1927	1,297	10	1,008	--	--
S3-20	2½ miles west	H. A. Dillon	Frod Poole	--	1,280	10	1,259	1,006	269
S3-21	¾ mile south	C. F. C. Ladd	--	1928	1,351	--	1,028	1,028	312
S3-22	In Catarina	Catarina Farms Co.	Floyd Trimm	--	1,140	12½	1,025	980	--
S3-23	1 mile east	Franklin Shank	--	--	--	--	--	--	--

No.	Distance from Dentonio	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S4-1 d/	1⅓ miles north	W. W. McRory	--	1914	600	6	200	--	--
S4-2 c/	¾ mile north	McRory Est.	A. E. Eardley	1911	960	10	--	--	--
S4-3	In Dentonio	Dentonio School Board	L. Simpson	1925 d/	515+ d/	6	250 d/	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S3-9	--	--	T,Tr, 40	D,S,I	80	0	10-inch casing set and cemented at 970 feet. Reported, in 1938, no irrigation since 1935.
S3-10	84.0	Dec. 17, 1929	C,W	S	47	0	Reported, in 1938, no irrigation since 1934. Temperature, 96° F.
S3-11	15	Jan. --, 1930	C,W	S	28	0	Reported no irrigation for several years prior to 1937-38. Tem-
S3-12	--	--	C,W	S	138	0	Reported, in perature, 94° F. 1938, no irrigation since 1933.
S3-13	115	Oct. --, 1929	T,E, 30	D,S,I	100	152	Casing: 150 feet of 10-inch; 830 feet of 8-inch. Temperature,
S3-14	--	--	T,-, --	N	65	0	Casing: 10-inch set at 95° F. 951 feet. Reported, in 1938, no
S3-15	--	--	T,Tr, 30	I	50	0	Reported, irrigation since 1932. in 1938, no irrigation since 1933.
S3-16	140.6	Apr. 8, 1939	--	N	--	--	
S3-17	--	--	T,C, 65	I	20	35	Casing: 10-inch set and cemented at 1,021 feet.
S3-18	71.0	Nov. 19, 1929	--	N	120	0	Reported, in 1938, no irrigation since 1934.
S3-19	--	--	T,G, 65	I	--	33.75	Casing: 525 feet of 10-inch; 483 feet of 8-inch set with lead seal.
S3-20	104	July 17, 1929 f/	C,W.	D,S	65	0	Casing: 315 Temperature, 93° F. feet of 10-inch; 629 feet of 8-inch; 515 feet of 8-inch perforated. Reported, in 1938, no irri-
S3-21	110.8	Nov. 5, 1929	T,-, --	N	135	0	Reported, in gation since 1931. 1938, no irrigation since 1935.
S3-22	102.6	Dec. 22, 1938	T,E, 30	P,I	--	75	Casing: 307 feet of 12½-inch; 718 feet of 10-inch. Supplies Catarina. Temperature, 99° F.
S3-23	--	--	C,W	D,S	140	0	Reported, in 1938, no irrigation since 1930.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S4-1	145+	-- 1927	C,W	D,S	30	0	Sand reported from 380 to 400 feet. Reported, in 1938,
S4-2	174	Feb. 7, 1928	C,W	D,S	--	--	e/ no irrigation since 1932.
S4-3	181.7	Nov. 12, 1929	C,W	P	--	--	Sand reported from 450 to 475 feet.

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Catarina	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
S5-1	10 miles west	Catarina Farms Co.	--	--	--	4	--	--	--
S5-2	9½ miles west	do.	--	--	1,375	10	1,056	1,156	215
S5-3	5½ miles west	do.	--	1928	1,422	10	1,044	1,180	234
S5-4	13 miles west	do.	--	--	--	6	--	--	--
S5-5 *-**	13½ miles southwest	do.	--	1928	1,374	12	1,083	1,085	255
S5-6	9½ miles southwest	Dr. E. A. Gilson, Est.	--	1928	1,524	10	1,344	1,344	178
S5-7	8 miles southwest	E. C. Smith	--	1928	1,655	10	--	1,500	153
S5-8	6 miles southwest	Alex Durst	--	--	1,632	--	--	1,385	--
S5-9	do.	Catarina Farms Co.	--	1928	1,540	10	--	1,330	--
S5-10	5½ miles southwest	do.	--	--	1,615	10	--	1,405	--
S6-1	1½ miles southwest	Fred Reyher	J. Culberson	--	1,302	10	977	979	325
S6-2	1 mile south	R. H. Sims	--	--	1,170	10	1,026	1,028	--
S6-3	4½ miles east	C. L. Howard	Floyd Trimm	--	1,574	10	--	--	--
S6-4 *	2 miles southeast	O. V. Ray	Fred Poole	--	1,432	10	1,071	1,071	361
S6-5	4 miles southeast	C. E. Luker	-- Seward	1929	1,816	10	1,760	1,557	108
S6-6	1½ miles south	Dr. W. A. Finley	Floyd Trimm	1931	1,362	8¼	1,014	1,014	--

No.	Distance from Valley Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
T1-1 **	1½ miles east	Geo. W. Petchornick	Floyd Trimm	--	--	--	--	--	--
T1-2 *	4½ miles northeast	Jack Ward	Jack Ward	1909	--	6	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
S5-1	--	--	C,W	S	--	--	
S5-2	194.8	Dec. 10, 1929	C,W	S	--	--	Casing: 394 feet of 10-inch; 662 feet of 8¼-inch.
S5-3	122.2	do.	C,W	S	--	--	
S5-4	115.1	Dec. 12, 1929	C,W	S	--	--	
S5-5	73.2	Dec. 10, 1929	C,W	D,S	--	--	Casing: 380 feet of 12-inch; 703 feet of 10-inch.
S5-6	72.0	Dec. 11, 1929	C,W	S	120	0	Reported, in 1938, no irrigation since 1935.
S5-7	--	--	C,W	S	--	--	Yielded 512 gallons a minute on test of Nov. 20, 1928.
S5-8	--	--	--	N	--	--	Casing pulled.
S5-9	--	--	--	N	--	--	Do.
S5-10	85.9	Dec. 11, 1929	C,W	S	--	--	
S6-1	--	--	T,0, 44	D,S,I	20	115	Casing: 300 feet of 10-inch; 677 feet of 8-inch.
S6-2	69.0	Dec. 11, 1920	--	N	80	0	Casing: 305 feet of 10-inch; 725 feet of 8-inch. Reported, in 1938, no irrigation since 1937.
S6-3	15.0	July 5, 1930	T,G, 20	S	27	0	Reported, in 1938, no irrigation since 1935.
S6-4	24.2	Oct. 15, 1930	C,W	S	--	--	Temperature, 94° F.
S6-5	49.5	Oct. 21, 1930	--	N	--	--	Casing: 1,170 feet of 10-inch; 590 feet of 8½-inch perforated from 1,555 to 1,618 feet.
S6-6	--	--	T,0, 20	S,I	--	70	Casing: 1,014 feet of 8¼-inch. Surface water sand 70 to 97 feet. Other sands 1,014 to 1,358 feet with several lenses of shale.

No.	Water level: Depth below surface (ft.)	Water level: Date of measurement	Method of lift and power a/	Use of water b/	Land irrigated: Season 1929-30 (acres)	Land irrigated: Season 1937-38 (acres)	Remarks
T1-1	Flows	Feb. 1, 1928 d/	Cf,0, 15	D,S,I	0	149	
T1-2	--	--	C,W	D,S	--	--	Temperature, 102° F. c/

c/ Information by Alexander Duesson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Records of wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

No.	Distance from Valley Wells	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
T1-3 **	In Valley Wells	J. T. Babor	-- Dodd	1912	1,700	8	--	1,465	235
T1-4 **	1½ miles southeast	Martin & McCauley	Floyd Trimm	--	--	3	--	--	--
T1-5 *	3½ miles east	R. W. Wilson	--	1913 c/	1,710 c/	8	--	1,550	--
T1-6	6½ miles southeast	Silverlake Ranch	--	1910	--	--	--	--	--

No.	Distance from Light Station	Owner	Driller	Date completed	Depth of well (ft.)	Diameter of well (in.)	Depth to which well is cased (ft.)	Depth to top Carrizo sand (ft.)	Thickness of Carrizo sand (ft.)
T4-1	At Light Station	G. E. Light	--	1910	2,040	--	--	--	--

a/ T, turbine; Cf, centrifugal; C, cylinder; A, air; E, electric; G, gasoline (usually a car motor); Ng, natural gas; O, oil or semi-diesel; D, diesel; Tr, tractor; W, windmill; H, hand; number indicates horsepower.

b/ I, irrigation; P, public; D, domestic; S, stock; N, not used.

* For analysis see table, pps. 116-121. ** For chloride see table, pps. 122-3.

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
T1-3	Flows	Jan. 3, 1930	Cf,O, 20	D,S,I	55	44	e/
T1-4	Flows	do.	T,O, 20	D,S,I	40	110	Temperature, 100° F.
T1-5	25	Jan. 6, 1930	C,W	D,S	--	--	Reported flowing Feb. 1928. d/ Temperature, 86° F.
T1-6	Flows	Oct. 26, 1930	C,W	D,S	--	--	

No.	Water level		Method of lift and power a/	Use of water b/	Land irrigated		Remarks
	Depth below surface (ft.)	Date of measurement			Season 1929-30 (acres)	Season 1937-38 (acres)	
T4-1	58	Oct. 26, 1930	T,O, 35	D,S	--	0	

c/ Information by Alexander Dusson, U. S. Geological Survey.
d/ Information by S. S. Nye, U. S. Geological Survey.
e/ Log of well in tables of drillers' logs.
f/ Water level reported by owner or driller.
g/ Used to supplement water supply pumped from river.

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County, Texas

H 7-10	Thickness (feet)	Depth (feet)
Soil	3	3
Clay	27	30
Clay, gravel and sand	50	80
Sand and gravel	32	112
Water sand	28	140
Blue sandy shale	4	144
TOTAL DEPTH		144

H 7-12		
Soil	3	3
Clay	17	20
Clay and "hard pan"	50	70
Clay and gravel	5	75
Sand and clay	5	80
Dry white sand	28	108
Water sand	57	165
Sand and red clay	5	170
Sand	5	175
TOTAL DEPTH		175

H 7-20		
Soil	3	3
Yellow clay	22	25
Clay and gravel	38	63
Gravel; water	4	67
Dry sand	18	85
Light-colored clay	8	93
Water sand	37	130
TOTAL DEPTH		130

H 7-21		
Soil	4	4
Yellow clay	46	50
Water sand	94	144
Shale	20	164
TOTAL DEPTH		164

H 7-22		
Soil	3	3
Yellow clay	52	55
Coarse gravel	10	65
Sand	35	100
Gumbo	20	120
Yellow sand	17	137
Sandy shale	3	140
Gray sand	37	177
Brown shale	15	192
TOTAL DEPTH		192

H 7-23		
Soil	4	4
Yellow clay	33	37
Loose white sand	73	110
Yellow sand	5	115
Gumbo	13	128
Hard sand	14	142
Loose gray sand	25	167
Gumbo	15	182
TOTAL DEPTH		182

M 3-6		
White sand	40	40
Black basalt rock	1½	41½
White water sand	10	51½
Yellow to red water sand	48½	100
TOTAL DEPTH		100

M 3-20		
Dry sand	50	50
"Shell"	2	52
Water sand	28	80
TOTAL DEPTH		80

M 3-24		
Dry sand	48	48
Water sand	12	60
Dry yellow sand	20	80
Hard rock	10	90
Water sand	12	102
TOTAL DEPTH		102

M 9-3		
Rock	40	40
Blue clay	10	50
Sand rock and blue clay	10	60
Hard rock	2	62
Tough blue shale	18	80
Sandy clay	47	127
Sand; water tasted sweet	13	140
Hard rock	7	147
Shale	11	158
Sand rock	57	215
Clay and sandy clay	65	280
Pack sand with some water. Contained particles of lignite and rotten wood	56	336
Coarse white water sand	90	426
Fine gray sand	6	432
TOTAL DEPTH		432

N 1-5		
Soil	2½	2½
Brown and light-colored clay	52½	55
Gravel and clay	20	75
Dry sand and clay	28	103
Water sand	74½	177½
TOTAL DEPTH		177½

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 1-21		
Soil	3	3
Light-colored clay	32	35
"Hard pan"	10	45
Sandstone	2	47
Blue sand	5	52
Yellow sand	18	70
Blue shale	15	85
Blue sand and shale	10	95
Blue shale	7	102
Water sand	13	115
Blue sandstone	5	120
Dark-colored shale	5	125
Blue shale	5	130
Water sand	7	137
Blue shale	38	175
Water sand	20	195
Yellow clay	5	200
Water sand	64	264
TOTAL DEPTH		264
N 1-25		
Soil	3	3
Light-colored clay	27	30
Clay and "hard pan"	40	70
Gravel and clay	24	94
Light-blue clay	26	120
Sand and clay	45	165
Water sand	35	200
TOTAL DEPTH		200
N 1-30		
Soil	3	3
Clay	9	12
Sandstone	2	14
Sand and clay	6	20
"Joint" clay	5	25
Light-blue clay	15	40
Sandy shale	20	60
Lignite and shale	3	63
Brown shale	8	71
Sand and shale	9	80
Dark-colored shale	20	100
Light-blue shale	17	117
Yellow clay and sand	3	120
Water sand	60	180
TOTAL DEPTH		180
N 1-38		
Soil	3	3
Clay	37	40
Sand and clay	20	60
Light-colored clay	40	100
Blue clay	20	120
N 1-38--Continued		
Shale and pyrites	1	121
Dark-colored clay	4	125
Brown clay	5	130
Sandy shale	10	140
Sandstone	5	145
Hard gray shale	5	150
Sandy gray shale	10	160
Dark sandy shale	35	195
Soft sandstone	1	196
Dark sandy shale	14	210
Gray sandy shale	24	234
Black shale and coal	11	245
Gray sand; small amount of water	15	260
Light-blue shale	15	275
Dark-colored shale	5	280
Fine gray sand; water	45	325
Water sand	50	375
Sticky blue shale	5	380
N 1-45		
Soil, clay and sand	80	80
Red sandy clay	15	95
Blue clay	25	120
Water sand	20	140
Blue shale	60	200
Water sand	15	215
Dark-colored and blue shale	33	248
Water sand	67	315
TOTAL DEPTH		315
N 1-51		
Soil	3	3
Clay	17	20
Clay and "hard pan"	20	40
Clay	55	95
Blue sand	5	100
Rock shell	1	101
Light-blue clay	19	120
Sandstone	3	123
Sandy shale; water	47	170
Dark-colored shale	5	175
Gray shale	20	195
Lignite and shale	10	205
Dark-colored shale	45	250
Sandy shale	25	275
Dark-colored shale	105	380
Dark-colored sandy shale	50	430
Blue shale	40	470
Sand and pyrites	49	519
Water sand	51	570
TOTAL DEPTH		570

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 1-53		
Soil	3	3
Silty clay-loam	10	13
Sandy clay	64	77
Blue shale	123	200
Blue clay	10	210
Water sand	35	245
TOTAL DEPTH		245
N 1-55		
Surface	94	94
Red sand and clay	6	100
Blue shale and boulders	111	211
Blue sand	8	219
Hard rock	2	221
Blue sand	8	229
Blue shale	144	373
Blue shale with streaks of asphalt	18	391
Shale, "soapstone" and asphalt	107	498
Hard rock	7	505
Shale, "soapstone" and asphalt	15	520
Hard rock	4	524
Shale and "soapstone"	26	550
Packed sand	50	600
Hard shale	120	720
White water sand	60	780
Shale	20	800
TOTAL DEPTH		800
N 1-56		
Soil	3	3
Clay	84	87
Gravel	3	90
"Joint" clay	10	100
Light-colored clay	15	115
Blue clay	25	140
Dark-colored sandy shale; water	10	150
Blue shale	35	185
Sandy shale	15	200
Pepper sand and gravel; water	30	230
TOTAL DEPTH		230
N 1-57		
Soil	3	3
Light-colored clay	17	20
"Hardpan" and clay	20	40
Sand and clay	46	86
Gravel; water	11	97
TOTAL DEPTH		97

	Thickness (feet)	Depth (feet)
N 1-66		
Soil	3	3
Clay	27	30
Gravel and sand	5	35
Yellow clay	50	85
Light-blue clay	35	120
Gray water sand	5	125
Dark-colored clay	10	135
Light-blue clay	15	150
Gray sand	5	155
Light-blue shale	10	165
Rock	2	167
Light-blue shale	13	180
Brown shale	5	185
Blue shale	10	195
Rock	2	197
Dark-colored shale	3	200
Blue shale	15	215
Brown shale	5	220
Blue shale	30	250
Rock	1	251
Shale and coal	9	260
Rock	1	261
Dark-colored shale	39	300
Sandy shale	35	335
Hard sandstone	3	338
Sandy shale	42	380
Sandstone	2	382
Sandy shale	18	400
Sandstone	2	402
Sandy shale	31	433
Sandstone	2	435
Gray sand	9	444
Dark-colored shale	6	450
Gray sand	15	465
Gray sandy shale	70	535
Sand	25	560
Shale and sand	20	580
Sand	15	595
Dark-colored shale	5	600
Water sand	55	655
TOTAL DEPTH		655
N 3-1		
Yellow clay	40	40
Gravel	5	45
Blue clay	65	110
Fine water sand	10	120
Blue clay	12	132
TOTAL DEPTH		132

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 4-4		
Red sandy soil	30	30
Broken boulders	10	40
Yellow clay	30	70
Hard gray and blue shale	40	110
Yellow sand	23	133
Blue shale	70	203
Rock	29	232
Shale	38	270
Hard shale with thin rock stratas	88	358
Shale and boulders	90	448
Soft shale	41	489
Rock	1	490
Sandy shale and rock	34	524
Water sand	26	550
Blue shale	12	562
Very hard rock	3	565
Shale and boulders	7	572
Rock	5	577
Shale and rock	13	590
Brown shale	29	619
Rock	5	624
Sandy shale and boulders	19	643
Water sand	15	658
Shale and sand	7	665
Rock	5	670
Broken sand and shale	6	676
Coarse water sand	84	760
Hard black sand	4	764
Soft shale	12	776
Rock	1	777
Sticky shale	25	802
Rock	1	803
TOTAL DEPTH		803
N 4-13		
Soil	5	5
Yellow clay	25	30
Blue shale	30	60
Sandy water	20	80
Blue shale	50	130
Brown shale	5	135
Blue shale	85	220
Water sand	10	230
Blue shale	25	255
Lime	3	258
Blue shale	32	290
Brown shale	13	303
Blue shale	27	330
Brown shale	7	337
Blue shale	7	344
Brown shale	26	370
Sand; 2 bailers	10	380
N 4-13--Continued		
Blue shale	25	405
Sand; hole full of water	10	415
Lime	2	417
Brown sandy shale	13	430
Lime	3	433
Water sand	7	440
Brown shale	40	480
Sandy shale	10	490
Lime	3	493
Sandy shale	7	500
Water sand	8	508
Lime	2	510
Brown shale	20	530
Coarse sand	13	543
Lime	5	548
Blue shale	2	550
Sand	10	560
Brown shale	14	574
Big sand	46	620
Loose sand	146	766
TOTAL DEPTH		766
N 4-36		
Yellow clay	60	60
Soft white limestone	20	80
Blue shale and hard sand-rock	70	150
Tough gumbo	125	275
Blue shale	225	500
Hard broken shale and boulders	290	790
Hard sandrock	20	810
Sandrock; water	70	880
Fine water sand	10	890
Coarse water sand	76	966
TOTAL DEPTH		966
N 4-55		
Soil	3	3
Yellow clay	22	25
Blue shale	155	180
Brown shale	10	190
Blue shale	20	210
Brown shale	5	215
Blue shale	73	288
Hard lime	2	290
Blue shale	6	296
Brown sandy shale; water	17	313
Lime "shell"	1	314
Brown shale	21	335
Light-colored water sand	15	350
Blue shale	50	400

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Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 4-55--Continued		
Sandy shale	15	415
Blue shale	25	440
Sandy shale	7	447
Limestone	3	450
Blue gumbo	10	460
Brown gumbo	60	520
Sand	65	585
Brown gumbo	18	703
TOTAL DEPTH		703
N 5-9		
Soil	30	30
Yellow sand	45	75
Yellow clay	15	90
Blue gumbo	35	125
Sandy shale	10	135
Brown shale	10	145
Blue shale	60	205
Sandy shale	10	215
Blue shale	15	230
Brown shale	10	240
Blue shale	11	251
Hard lime "shell"	3	254
Blue shale	41	295
Lime	5	300
Blue shale	20	320
Brown shale	5	325
Water sand	25	350
Blue gumbo	60	410
Sandy shale	5	415
Water sand	25	440
Blue shale	35	475
Lime	5	480
Blue shale	50	530
Water sand	5	535
Brown gumbo	29	564
Lime "shell"	1	565
Water sand	15	580
Brown gumbo	95	675
Water sand	100	775
Lime and iron pyrites	5	780
Water sand	73	853
Red gumbo	5	858
TOTAL DEPTH		858
N 5-19		
Soil	3	3
Yellow clay	33	36
Gravel	5	41
Yellow clay	39	80
Blue clay	62	142
Soft sandrock	1	143
Shale, streaked with rock	20	163
N 5-19--Continued		
Shale	48	211
Shale, streaked with rock	29	240
Hard sandstone	1	241
Gumbo	9	250
Sandrock	1	251
Hard shale with layers of sandrock	31	282
Hard shale	8	290
Sandstone	5	295
Hard shale	3	298
Sandrock	18	316
Blue shale with layers of rock	17	333
Soft blue shale	61	394
Sandrock	1	395
Soft blue shale	48	443
Hard blue shale with layers of sandrock	46	489
Brown shale and boulders	52	541
Sandrock	1	542
Blue shale and boulders	71	613
Sandrock	6	619
Blue shale and boulders	62	681
Blue shale with layers of hard sandrock	15	696
Shale and boulders	29	725
Blue shale with layers of sandrock	39	764
Soft blue shale and gumbo	122	886
Soft sandrock	2	888
Water sand	66	954
Blue gumbo	10	964
Soft sandrock	1	965
Blue gumbo	42	1007
TOTAL DEPTH		1007
N 5-67		
Soil	4	4
Yellow clay	66	70
Blue shale	85	155
Brown shale	10	165
Gray shale	30	195
Water sand	25	220
Light-colored shale	20	240
Brown shale	20	260
Blue shale	33	293
Brown shale	7	300
Blue shale	15	315
Water sand	18	333
Brown shale	27	360
Blue shale	35	395
Sand; small amount of water	5	400

(Continued on next page)

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 5-67--Continued		
Blue shale	50	450
Brown shale	10	460
Hard sand; water	5	465
Light-colored shale	45	510
Hard "shell"	2	512
Sandy shale	8	520
Water sand	33	553
Gray shale	19	572
Sandy shale	13	585
Blue shale	15	600
Brown gumbo	45	645
Blue gumbo	25	670
Brown gumbo	45	715
Limestone	1	716
Brown gumbo	22	738
Limestone	2	740
Brown gumbo	17	757
Broken sand	22	779
Lime "shell"	2	781
Sandy shale and gumbo	35	816
Limestone	2	818
Sandy shale	7	825
Limestone	3	828
Brown gumbo	17	845
Sand	45	890
Brown gumbo	37	927
Pyrites	3	930
Sand	60	990
Gumbo	15	1005
Sand	52	1057
Brown shale	3	1060
TOTAL DEPTH		1060
N 5-69		
Soil	5	5
Brown shale	25	30
Yellow sand	20	50
Yellow clay	20	70
Blue shale	10	80
Brown shale	10	90
Blue shale	80	170
Brown shale	30	200
Blue shale	75	275
Brown shale	20	295
Blue shale	28	323
Limestone	2	325
Brown shale	35	360
Hard rock "shell"	4	364
Brown shale	31	395
Blue shale	55	450
Brown shale	10	460
Blue shale	5	465
Sandy shale; water	7	472
N 5-69--Continued		
Brown shale	13	485
Blue shale	55	540
Brown shale	20	560
Water sand	10	570
Blue shale	200	770
Sandy shale	27	797
Limestone	3	800
Blue shale	10	810
Brown shale	30	840
Sand	30	870
Sandy shale	45	915
Brown gumbo	35	950
Limestone and iron	4	954
Brown sandy shale	21	975
Sand	160	1135
Shale and iron	25	1160
Sand	15	1175
Broken sand	22	1197
Sand	30	1227
Shale	1	1228
TOTAL DEPTH		1228
N 5-72		
Soil	5	5
Yellow clay	77	80
Blue shale	120	200
Sand, hole full of water	20	220
Limestone	5	225
Blue shale	25	250
Lime "shells"	5	255
Blue shale	25	280
Sand water	30	310
Blue shale	50	360
Brown shale	20	380
Blue shale	40	420
Brown shale	20	440
Blue shale	43	483
Sand; small amount of water	5	488
Lime "shells" and shale	25	513
Sand; hole full of water	17	530
Brown shale	5	535
Water sand	15	550
Lime	2	552
Water sand	48	600
Blue gumbo	15	615
Gray sand	20	635
Gumbo	5	640
Gray sand	20	660
Brown gumbo	8	668
Blue gumbo	42	710
Gray sand	8	718
Hard lime and iron	3	721

(Continued on next page)

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 5-72--Continued		
Gray sand	11	732
Hard sandrock	8	740
Gray sand	25	765
Brown shale	30	795
Hard sand	25	820
Brown shale	20	840
Hard lime	4	844
Brown shale	38	882
Hard lime	2	884
Brown gumbo	8	892
Hard lime	3	895
Brown gumbo	9	904
Sand	7	911
Hard lime	3	914
Brown gumbo	11	925
Sandy shale	10	935
Water sand	101	1036
Lime and iron	10	1046
Sand	111	1157
Brown gumbo	3	1160
TOTAL DEPTH		1160
N 6-3		
Yellow clay	30	30
Coal (lignite)	6	36
Hard shale	122	158
Rock (sandstone)	4	162
Shaly gumbo	190	352
Hard rock (sandstone)	6	358
Soft gumbo and shale	152	510
Rock	5	515
Rock, shale, and gumbo	89	604
Gumbo	117	721
Rock and shale	5	726
Gumbo	73	799
Rock and gumbo	5	804
Gumbo	60	864
Hard gumbo	9	873
Sandrock	4	877
Hard gumbo	30	907
Rocky shale	34	941
Blue gumbo	56	997
Very hard rock	5	1002
Hard gumbo and shale	60	1062
Shale and rock	20	1082
Rock	5	1087
Shale and gumbo	20	1107
Shale and sand	30	1137
Shale	22	1159
Fine sand	20	1179
White sand	100	1279
Shale and gumbo	8	1287
N 6-3--Continued		
Deepened to 1,313 in 1929		
Blue sticky gumbo or shale	26	1313
TOTAL DEPTH		1313
N 7-6		
Soil	2	2
Red clay	5	7
Yellow clay	17	24
Yellow sand	8	32
White clay	12	44
Hard sand	14	58
Dry sand	27	85
Brown shale	160	245
Hard lime	2	247
Sandy shale	23	270
Water sand	12	282
Gray shale	173	455
Dark shale	34	489
Gray sandy shale	33	522
Lime	3	525
Hard brown shale	58	583
Sandy shale	15	598
Water sand	52	650
Hard fine sand; water	25	675
Brown shale	35	710
Sandy shale with lense of sand	48	758
Water sand	32	790
Black clay	4	794
Coarse water sand	223	1017
Green shale	4	1021
TOTAL DEPTH		1021
N 7-40		
Caliche and white sand	25	25
Gray and blue shale	27	52
Medium-fine yellow sand	24	76
Coarse water sand	112	188
TOTAL DEPTH		188
N 7-51		
Soil	4	4
Caliche	20	24
Dry sand	70	94
Water sand	4	98
Blue gumbo with pyrites	67	165
Water sand	40	205
Blue clay	77	282
TOTAL DEPTH		282

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 7-65		
Soil	7	7
Sandrock	40	47
Water sand	23	70
Sand and clay	35	105
Water sand	20	125
Sand, clay and shale	105	230
TOTAL DEPTH		230
N 7-66		
Soil and caliche	20	20
Soft sandrock	35	55
Gray shale	15	70
Water sand	145	215
Gray shale	25	240
Water sand	15	255
Brown shale	5	260
Water sand	20	280
Brown shale	52	332
TOTAL DEPTH		332
N 7-77		
Soil	3	3
Clay	9	12
Sandstone	61	73
Blue shale	29	102
Gray sandy shale	22	124
Hard sandstone	3	127
Water sand	18	145
Gray shale	43	188
Hard sandstone	7	195
Sandy shale	5	200
Gray shale	15	215
Sand and shale; water	37	252
Gray shale	38	290
White shale	15	305
Gray shale	113	418
Gray sandy shale	2	420
Gray shale	16	436
TOTAL DEPTH		436
N 7-96		
Soil	3	3
Clay	5	8
Sandstone	32	40
Sand	25	65
Brown shale	15	80
Water sand	16	96
Brown shale	2	98
Water sand	12	110
Lignite	1	111
Water sand	7	118
Brown shale	2	120
Water sand	4	124
Brown shale	2	126
Water sand	19	145
Sandy shale	20	165
Water sand	13	178
Gray shale	54	232
Water sand	8	240
Gray shale	32	272
TOTAL DEPTH		272
N 7-148		
Soil	1	1
Brown clay and sand	5	6
Brown sand	4	10
White sandy clay	12	22
White dry sand	20	42
Yellow sandy clay; water	8	50
Blue shale	3	53
Brown sandy shale	14	67
Blue sandy shale	7	74
Brown sandy shale	11	85
Blue sand; salt water	8	93
Coal and brown mud	3	96
Brown shale	10	106
Brown sandy shale	13	119
Coal (lignite)	7	126
Brown sandy shale	2	128
Blue sandy shale	6	134
Blue shale	4	138
Blue sandy shale	30	168
Blue shale	4	172
Blue sandy shale	14	186
Blue shale	7	193
Brown shale	5	198
Brown shale and coal	7	205
Brown shale	4	209
Gray rock	3	212
Blue sand	14	226
Blue shale	3	229
Blue sand	11	240
Blue shale	10	250
Brown shale	3	253
Blue sand	5	258
Blue sandy shale	26	284
Fine blue sand	15	299
Blue shale	1	300
Fine blue sand	5	305
Brown shale	2	307
Fine blue sand	38	345

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Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 7-148--Continued		
Medium blue sand	12	357
Brown shale	2	359
Fine blue sand	8	367
Blue sandy shale	25	392
Blue granite	5	397
"Soapstone"	3	400
TOTAL DEPTH		400
N 7-151		
Surface soil	2	2
Yellow clay	17	19
Yellow sandy clay	17	36
Dark-brown shale	6	42
Blue shale	24	66
Brown shale	6	72
Blue sandy shale	20	92
Blue salty sand	22	114
Brown shale	34	148
Blue shale	12	160
Brown shale	45	205
Blue sandy shale	7	212
Gray sand	16	228
Blue sandy shale	18	246
Brown shale	12	258
Blue shale	32	290
Sand	65	355
TOTAL DEPTH		355
N 7-153		
Soil	1½	1½
Yellow clay	3½	5
Yellow sand	19	24
Gray sand	4	28
Yellow clay	18	46
Brown rock	3	49
Coal	2	51
Blue sandy shale	32	83
Light-blue sand	22	105
Coarse gray sand	17	122
Light-blue sand	46	168
Hard blue sand	3	171
Dark-brown shale	11	182
Light-brown shale	33	215
TOTAL DEPTH		215
N 8-10		
Soil	3	3
Hard yellow clay	17	20
Rock sand	40	60
Blue and black shale	75	135
Pink sandy shale	6	141
Hard blue sand	9	150
Brown sand	5	155
Blue shale and clay	108	263
Hard lime	5	268
Blue sandy shale	97	365
Salt water sand	15	380
Blue sandy shale	55	435
Salt water sand	30	465
Sandy shale	120	585
Blue shale with ledges of hard lime	202	787
Water sand with streaks of iron pyrites	148	935
Blue shale	77	1012
Pyrite of iron	2	1014
Very coarse white quartz sand	46	1060
Brown gumbo	20	1080
TOTAL DEPTH		1080
N 8-43		
Soil	24	24
Quicksand	6	30
Blue clay	50	80
Salt water sand	2	82
Blue clay	46	128
Salt water sand	2	130
Blue clay	30	160
Salt water sand	8	168
Blue clay	203	371
Fine to gradually coarse-grained sand	87	458
Tough blue-gray clay	18	476
Coarse sand	46	522
TOTAL DEPTH		522
N 8-90		
Light-red soil and clay	3	3
Pale-blue clay	6	9
Sand and yellow clay	25	34
Yellow clay	30	64
Pale to dark-blue clay	35	99
Sandstone; salt water	3	102
Sticky blue clay	50	152
Blue clay with thin lenses of coal	100	252
Sand and clay	45	297
Fine-grained sandstone	15	312
Sand and clay	20	332
Blue clay	45	377
Dark-blue clay	40	417
Sand and clay	45	462
Fine-grained sandrock; water	60	522

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Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 8-90--Continued		
Sandstone, water - -	160	632
Fine sand and clay -	38	720
TOTAL DEPTH - - -		720
N 3-102		
Soil - - - - - -	15	15
Sand and gravel; water	15	30
Sand - - - - - -	25	55
Blue shale - - -	120	175
Quicksand; salty water-	73	248
Blue shale - - -	7	255
Water sand - - -	13	268
Hard sandy shale - -	102	370
Hard sand - - - -	20	390
Blue shale - - -	30	420
Hard sand - - - -	20	440
Brown shale - - -	20	460
Sandy shale - - -	35	495
Hard lime rock - -	10	505
Sandy shale - - -	55	560
Blue shale - - -	32	592
Sandy shale - - -	10	602
Soft gray shale - -	16	618
Hard sandy shale - -	67	685
Water sand - - -	85	770
Gumbo - - - - -	20	790
Water sand - - -	5	795
Blue shale - - -	15	810
Gray sandy shale - -	57	867
Blue shale - - -	23	890
Water sand - - -	55	945
Blue shale - - -	10	955
Sandy shale - - -	25	980
Water sand - - -	9	989
Blue shale - - -	46	1035
Water sand - - -	7	1042
Blue shale - - -	8	1050
Water sand - - -	10	1060
Blue shale - - -	3	1063
Water sand - - -	7	1070
Blue shale - - -	35	1105
Water sand - - -	60	1165
Blue shale - - -	10	1175
Sandy shale - - -	22	1197
Water sand - - -	8	1205
Blue shale - - -	5	1210
Water sand - - -	7	1217
Blue shale - - -	7	1224
TOTAL DEPTH - - -		1224

	Thickness (feet)	Depth (feet)
N 8-104		
Soil - - - - - -	1	1
Yellow clay - - - -	2	3
Yellow sandy clay - -	46	49
Yellow sand and gravel; salt water - - -	5	54
Blue sand and rock - -	2	56
Blue sandy shale - -	18	74
Blue "soapstone" - -	5	79
Blue sandy shale - -	8	87
Blue shale - - - -	27	114
Brown shale - - - -	7	121
Gray salt water sand- -	6	127
Brown shale - - - -	8	135
Blue sandy shale - -	16	151
Pyrites and rock - -	2	153
Blue sandy shale - -	28	181
Brown shale - - - -	2	183
Blue shale - - - -	13	196
Blue salt water sand- -	13½	209½
Hard blue rock - - -	4½	214
Blue salty sand - - -	26	240
Blue shale - - - -	11	251
Blue rock - - - -	1	252
Blue sandy shale - -	33	285
Blue shale - - - -	27	312
Brown shale - - - -	25	337
Brown sandy shale - -	61	398
Blue boulder - - -	2	400
Brown shale - - - -	5	405
Blue shale - - - -	10	415
Blue boulder - - -	1	416
Blue shale - - - -	18	434
Pyrite and rock - - -	½	434½
Coarse white sand - -	5½	440
Blue sandy shale - -	11	451
Fine white sand - - -	12	463
Brown shale - - - -	4	467
Fine white sand - - -	18	485
Blue shale - - - -	7	492
Fine white sand - - -	16	508
Medium white sand - -	43	551
Coarse white sand - -	10	561
Pyrite, coal and coarse sand - - - - -	7	568
Medium white sand - -	9	577
Brown shale - - - -	5	582
TOTAL DEPTH - - - -		582

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
N 8-106		
Soil	1	1
Yellow clay	2	3
White clay (caliche)	6	9
Fine yellow water sand	10	19
Yellow sandy clay	19	38
Blue mud	3	41
Blue sand	15	56
Blue sandy shale	21	77
Light-brown shale	14	91
Blue sand	3	94
Blue sandy shale	10	104
Dark-brown shale	4	108
Blue sandy shale	26	134
Gray sandy shale	38	172
Blue mud and rock	51	225
Brown sandy shale	14	237
Blue sandy shale	33	270
Blue granite boulder	2	272
Blue sandy shale	20	292
White sand	12	304
Brown shale	10	314
White sand	21	335
Fine white sand	53	388
Coarse white sand	58	446
Blue "soapstone"	4	450
TOTAL DEPTH		450
N 9-24		
Soil	2	2
Yellow gumbo	23	25
Lime	3	28
Brown and blue shale	282	310
Lime	5	315
Water sand	5	320
Blue shale	75	395
Water sand	5	400
Brown and blue shale	25	425
Water sand	5	430
Light shale	15	445
Water sand	10	455
Blue shale	17	472
Water sand	5	477
Sandy shale	13	490
Water sand	15	505
Brown and blue gumbo or shale	145	650
Sandy shale	10	660
Water sand	18	678
Brown and blue shale	72	750
Water sand	5	755
Blue shale	15	770
Water sand	5	775
Brown shale	3	778
Water sand	20	798
Brown shale	237	1035
Artesian sand	175	1210
Brown shale	40	1250
Artesian sand	5	1255
Brown shale	50	1305
TOTAL DEPTH		1305
N 9-33		
Soil	4½	4½
Yellow clay	33½	38
Coarse yellow gravel	2	40
Soft-blue shale	12	52
Blue to dark-colored shale, small boulders and pyrites	73	125
Shale and few boulders	681	806
Shale	101	917
Dark-colored medium-grained sand	7	924
Hard shale with dark-colored specks	96	1020
Sand; small amount of water	7	1027
Hard sand and pyrite	253	1280
Boulder	1	1281
Dark-blue sticky gumbo	16	1297
Lenses of white sand and shale	174	1471
Hard sand rock	1½	1472½
Hard sand	5	1477½
Hard black shale	17	1494½
Hard lime "shell"	4½	1499
No record	8	1507
Coarse white water sand	16	1523
TOTAL DEPTH		1523
N 9-46		
Yellow clay	20	20
Blue shale	140	160
Water sand	30	190
Blue shale	17	207
Gray shale	15	222
Blue shale	8	230
Brown shale	30	260
Gray shale	50	310
Sandy shale; small amount of water	10	320
Sand; hole full of water	10	330
Blue shale	66	396
Red shale	4	400
Blue shale	45	445

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Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
S 9-46--Continued		
Hard gray shale	20	465
Brown lignite	14	479
Gray sandy shale	19	498
Brown shale	17	515
Gray shale	35	550
Brown shale	15	565
Gray shale	15	580
Blue shale	18	598
Gray shale	8	606
Water sand	26	632
Gray shale	18	650
Brown shale	5	655
Gray shale	10	665
Sandy shale	5	670
Sand; hole full of water	25	695
Blue shale	29	724
Gray sandy shale	26	750
Brown sandy shale	8	758
Red shale	7	765
Broken sand	30	795
Sandy shale	17	812
Blue shale	13	825
Brown shale	18	843
Blue shale	10	853
Gray gumbo	42	895
Broken water sand	55	950
Gummy shale	45	995
Sandy shale	15	1010
Brown shale	60	1170
Water sand	90	1260
Brown shale	95	1355
TOTAL DEPTH		1355
S 1-18		
Soil	4	4
Gray sandy clay	26	30
Brown sandstone	70	100
Gray and white water sand	220	320
TOTAL DEPTH		320
S 2-4		
Soil	5	5
Brown clay	10	15
Lime	2	17
Blue shale	83	100
Brown shale	130	230
Sandy shale	65	295
Water sand	10	305
Brown sand	42	347
Gumbo	56	403
Water sand	77	480
Brown gumbo	10	490
Water sand	50	540

	Thickness (feet)	Depth (feet)
S 2-4--Continued		
Gumbo	28	568
Lime	2	570
Hard sand	5	575
Brown sandy shale	15	590
Water sand	10	600
Gumbo	20	620
Sand	50	670
Gumbo	7	677
Water sand	15	692
Gumbo	2	694
TOTAL DEPTH		694
S 2-94		
Soil	8	8
Yellow clay	67	75
Blue shale	103	178
Lime	5	183
Gray shale	130	313
Sandy shale	32	345
Blue shale	45	390
Sandy gray shale	113	503
Salt water sand	22	525
Red shale	28	553
Sand	74	627
Brown shale with some coal	5	632
Sand	54	686
Red shale	8	694
Sand	36	730
Brown and gray shale	76	806
Hard sandy shale	19	825
Blue shale and sand	57	882
Brown, gray and red shale	107	989
Sandy shale	16	1005
Brown shale	65	1070
Hard sand	13	1083
Sand	35	1118
Dark brown shale	10	1128
Sand	37	1165
Brown shale	15	1180
Sand	22	1202
Brown shale	13	1215
Water sand	209	1424
TOTAL DEPTH		1424
S 4-2		
Soil	3	3
Soft yellow clay	57	60
Blue "soapstone"	7	67
Hard sand rock	6	73
Hard black coal	3	76
Blue clay	62	138

(Continued on next page)

Table of Drillers' Logs, Dimmit and Zavala Counties and Eastern Maverick County--Continued

	Thickness (feet)	Depth (feet)
S 4-2--Continued		
Soft sand rock	8	146
Black coal	1	147
Blue and brown clay	50	197
Soft sand rock	10	207
Coal	2	209
Blue "soapstone"	25	234
Brown clay	3	237
Coal	2	239
Sand rock with salt water	25	264
Sand and white clay	13	277
Blue and brown clay	90	367
Sand rock with bitter water	30	397
Brown clay and sand	25	422
Sand rock with good water	18	440
Brown clay, sand and gravel	154	594
Brown clay and sand	186	780
Blue sand rock	3	783
Brown clay	42	825
Sand rock with good water	20	845
Blue clay and sand	16	861
Sand rock with good water	30	891
Blue clay and sand	9	900
White water sand	41	941
"Soapstone"	19	960
TOTAL DEPTH		960
T 1-3		
Soil	45	45
Gravel	40	85
Black shale	25	110
Sand	8	118
White shale	27	145
Sand	20	165
White shale	20	185
Salt water sand	25	210
White shale	105	315
Sand "shells"	15	330
White shale	113	443
Water sand	22	465
White shale	45	510
Sand; some water	8	518
White shale and "shell"	37	555
Sand	20	575

	Thickness (feet)	Depth (feet)
T 1-3--Continued		
White shale	41	616
Sand	7	623
Brown shale	15	638
Sand; some water	20	658
Brown shale	17	675
Sand; small flow of soda water	45	720
Brown and waite shale	75	795
Sand	35	830
White shale	10	840
Sand	35	875
Brown shale	37	912
Brown "shell"	43	955
Sand	22	977
Lignite	2	979
Brown shale	13	992
Water sand	33	1025
White shale	10	1035
Green sand	30	1065
Brown shale	10	1075
Sand	20	1095
Shale, lignite and asphalt?	25	1120
Sand, 50 G.P.M. flow	48	1168
White shale and "shell"	17	1185
Sand and "shell"	40	1225
Shale, sand and "shell"	130	1355
Sand	10	1365
Shale, sand, and "shell"	53	1418
Sand	7	1425
Shale, sand, and "shell"	12	1437
Sand	21	1458
Very hard sand	7	1465
Sand; some water	25	1490
Brown shale	15	1505
Water sand	40	1545
Good sand	90	1635
Sand and shale	25	1660
Hard sand	5	1665
Water sand	35	1700
TOTAL DEPTH		1700

Analyses of water from wells in Dimmit and Zavala Counties and Eastern Maverick County, Texas

Well	Owner	Date of collection	Depth of well (ft.)	Total dissolved solids (calc.)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)
H7-3	L. B. Flowers	May 20, 1930	100	a/1,126	-	3.1	140	47
H7-13	Roy Cornett	Apr. 9, 1930	172	422	16	4.9	110	20
H7-20	W. R. Terpening	May 20, 1930	130	a/ 450	-	-	130	19
H7-21	W. A. Butler	Dec. 10, 1937	164	-	-	-	101	17
H7-23	do.	do.	182	-	-	-	-	-
H8-1	A. W. West	Apr. 9, 1930	120	3,742	12	15	401	265
H8-17	do.	Apr. 8, 1930	234	549	32	.43	128	17
H9-1	-	Nov. 26, 1930	58	a/ 894	-	69	222	25
H9-2	Kincaid Bros.	Apr. 17, 1930	250	516	30	.15	111	9.1
I7-3	-	May 21, 1930	-	a/ 588	-	-	135	20
M5-2	-	Jan. - , 1913	-	-	-	-	-	-
M5-3	-	do.	-	-	-	-	-	-
M5-6	M. Rambie	Apr. 18, 1930	100	623	55	.06	88	13
M5-36	Willie Clark	Dec. 9, 1938	263	a/ 624	-	-	-	-
M6-2	Chittem Est.	Nov. 14, 1938	-	a/ 634	-	-	-	-
M6-10	W. M. Van Cleve	Apr. 16, 1930	150	559	25	.13	21	8.6
M9-1	T. B. Mear	do.	535	545	16	.29	40	12
M9-4	Chittem Est.	Nov. 18, 1930	200	a/ 564	-	-	-	-
M9-14	B. H. Erskine	Apr. 6, 1939	410	a/ 322	-	-	-	-
N1-7	D. H. Monkhouse	Feb. 9, 1928	161	360	20	.54	91	17
N1-8	August Noack	Mar. - 1913	180	-	-	-	-	-
N1-17	Mathews Ranch	Oct. 18, 1930	-	a/ 390	-	.06	60	19
N1-28	A. R. Hibbon	Jan. - , 1913	222	-	-	-	-	-
N1-49	Central P.& L.Co.	Apr. 3, 1930	520	270	20	5.6	70	15
N1-56	T. L. Pitts	Feb. 8, 1928	230	376	29	2.0	48	16
N1-57	T. J. Dube	Feb. 9, 1928	97	536	27	.40	131	26
N1-58	R. W. Norton	Apr. 18, 1930	202	569	26	.15	34	15
N1-62	Mathews Ranch	Oct. 18, 1930	630	a/ 367	-	4.6	74	22
N1-66	I. T. Pryor Est.	do.	655	a/ 324	-	1.6	78	18
N1-68	K. W. Alger	May 4, 1939	300	a/ 363	-	-	-	-
N2-4	C. & M. Produce Co.	Oct. 25, 1930	338	a/1,172	-	2.0	281	54
N2-11	W. M. Clark	Feb. 9, 1928	123	446	35	.07	82	24
N2-19	I. T. Pryor Est.	- - 1930	2,680	a/ 754	-	1.6	99	27
N3-4	E. W. King	Feb. 9, 1928	54	520	25	.06	125	18
N3-5	O'Keefe Bros.	May 3, 1939	60	a/ 635	-	-	-	-
N3-6	do.	do.	60	a/ 687	-	-	-	-
N3-7	do.	do.	60	a/ 685	-	-	-	-
N3-8	do.	do.	60	a/ 672	-	-	-	-
N4-34	W. Y. Giesler	Feb. 6, 1928	1,035	366	19	.24	54	15
N4-55	Holsomback & Whit.	Dec. 10, 1937	703	-	-	-	-	-
N4-55	do.	Apr. 27, 1939	703	a/ 312	-	-	-	-
N5-7	Phoenix Corp.	Oct. 25, 1930	1,001	a/ 634	-	4.6	92	20
N5-9	E. W. Hays	Apr. 19, 1930	858	922	17	.29	92	26
N5-22	Wyllis Britton	June 28, 1919	260	a/6,136	38	.25	145	65
N5-48	Crystal City	Apr. 26, 1930	1,050	411	22	.48	66	18
N5-48	do.	May 4, 1939	1,050	a/ 459	-	-	-	-
N5-50	C. F. Jackson	Jan. - , 1913	912	-	-	-	-	-
N5-58	Temple Lumber Co.	Jan. 20, 1930	1,038	523	26	1.1	96	21
N5-59	Agnes Seele	Jan. - , 1913	970	-	-	-	-	-
N5-67	Bob Milam	Apr. 29, 1939	1,057	a/ 453	-	-	-	-
N5-72	C. L. Coleman	Dec. 9, 1937	1,160	-	-	-	-	-
N5-72	do.	Apr. 11, 1939	1,160	a/ 465	-	-	-	-

a/ Calculated.
b/ By turbidity.

(Parts per million. Well numbers correspond to numbers in tables of well records)

Well	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$	Analyst
H7-3	a/ 203	-	483	313	185	-	.60	a/ 543	Margaret D. Foster
H7-13	20	2.8	372	33	44	-	1.1	a/ 357	Do.
H7-20	a/ 20	-	475	b/ 29	18	-	.20	a/ 403	Do.
H7-21	a/ 42	-	343	b/ 34	67	.1	1.9	a/ 321	E. W. Lohr
H7-23	-	-	388	b/ 30	39	.2	.20	285	Do.
H8-1	431	25	666	1,535	642	-	1.1	a/2,089	Margaret D. Foster
H8-17	35	3.8	361	69	71	-	1.2	a/ 390	Do.
H9-1	a/ 90	-	548	b/ 5	282	-	.20	a/ 658	Do.
H9-2	50	4.5	281	45	94	-	22.0	a/ 315	Do.
I7-3	a/ 53	-	344	113	93	-	4.0	a/ 420	Do.
M3-2	-	-	278	205	482	-	-	156	c/W. T. Reed
M3-3	-	-	214	32	226	-	-	232	Do.
M3-6	97	4.5	287	78	120	-	10.0	a/ 273	Margaret D. Foster
M3-36	a/ 180	-	309	149	98	.6	.20	156	E. W. Lohr
M6-2	a/ 161	-	328	102	167	-	.40	261	Do.
M6-10	172	6.1	341	92	73	-	.70	a/ 88	Margaret D. Foster
M9-1	75	4.2	293	41	26	-	.52	a/ 149	Do.
M9-4	a/ 112	-	238	b/ 75	153	-	11.0	255	E. W. Lohr
M9-14	a/ 70	-	286	37	20	-	-	150	Do.
N1-7	17	2.1	324	33	23	-	.22	a/ 297	Margaret D. Foster
N1-8	-	-	254	25	32	-	-	186	c/W. T. Reed
N1-17	a/ 60	-	248	b/ 66	60	-	3.3	a/ 228	Margaret D. Foster
N1-28	-	-	387	32	20	-	-	167	c/W. T. Reed
N1-49	12	2.8	280	13	14	-	.15	a/ 236	Margaret D. Foster
N1-56	66	5.1	338	38	16	-	.05	a/ 186	Do.
N1-57	19	2.5	373	39	90	-	1.3	a/ 434	Do.
N1-58	154	5.6	332	82	94	-	.30	a/ 146	Do.
N1-62	a/ 36	-	322	b/ 48	28	-	.0	a/ 275	Do.
N1-66	a/ 22	-	312	b/ 36	16	-	.0	a/ 269	Do.
N1-68	a/ 15	-	200	49	75	-	5.8	292	E. W. Lohr
N2-4	a/ 75	-	353	b/ 88	500	-	.42	a/ 924	Margaret D. Foster
N2-11	32	4.0	300	93	24	-	.15	a/ 303	Do.
N2-19	a/ 136	-	345	b/ 150	152	-	.30	a/ 358	Do.
N3-4	30	2.9	364	90	33	-	7.3	a/ 386	Do.
N3-5	a/ 35	-	477	108	52	-	1.9	502	E. W. Lohr
N3-6	a/ 35	-	428	159	62	-	6.2	552	Do.
N3-7	a/ 30	-	454	112	91	-	2.8	555	Do.
N3-8	a/ 41	-	432	141	67	-	5.0	510	Do.
N4-34	61	3.6	265	46	45	-	.21	a/ 196	Margaret D. Foster
N4-55	-	-	278	b/ 24	21	.3	.10	147	E. W. Lohr
N4-55	a/ 21	-	290	31	17	-	.0	248	Do.
N5-7	a/ 122	-	366	b/ 92	128	-	.10	a/ 312	Margaret D. Foster
N5-9	202	7.2	306	118	296	-	.58	a/ 337	Do.
N5-22	a/2,031	-	139	805	2,895	-	4.8	-	Nathaniel Fuchs
N5-48	57	5.6	306	66	38	-	.13	a/ 239	Margaret D. Foster
N5-48	a/ 60	-	298	109	36	-	.0	278	E. W. Lohr
N5-50	-	-	261	42	38	-	-	168	c/W. T. Reed
N5-58	56	6.0	344	94	53	-	.62	a/ 326	Margaret D. Foster
N5-59	-	-	289	65	49	-	-	191	c/W. T. Reed
N5-67	a/ 15	-	354	87	36	-	.0	382	E. W. Lohr
N5-72	-	-	316	b/ 100	38	.2	.10	279	Do.
N5-72	a/ 33	-	346	79	41	-	.0	352	Do.

c/ Analysed in the University of Texas Laboratories.

Analyses of water from wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

Well	Owner	Date of collection	Depth of well (ft.)	Total dissolved solids (calc.)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)
M5-76	Cribbs & Davidson	Apr. 26, 1939	950	a/ 462	-	-	-	-
N6-2	Wiegand Bros.	- - , 1930	-	a/ 377	-	-	b/44	-
N7-27	Eardley Est.	Apr. 4, 1930	472	326	16	.06	32	11
N7-38	J. A. Webb	Nov. 21, 1938	900±	a/1,381	-	-	-	-
N7-40	Lynch Bros.	June 26, 1930	188	345	44	.02	39	11
N7-46	State of Texas	July 24, 1930	1,022	335	21	.02	44	14
N7-46	do.	Nov. 29, 1938	1,022	a/ 561	-	-	-	-
N7-56	H. H. Herrington	Dec. - , 1938	600	a/ 478	-	-	b/30	-
N7-67	Dr. B. F. Smith	Feb. 2, 1928	510	355	21	.21	38	12
N7-70	H. V. Hasten	Nov. 20, 1938	530	a/2,956	-	-	-	-
N7-74	Sam McKnight	Mar. 28, 1930	-	604	26	1.4	111	22
N7-74	do.	Apr. 14, 1939	-	a/ 436	-	-	-	-
N7-75	F. Kirk	June - , 1913	306	-	-	-	-	-
N7-99	Mobley Bros.	Dec. 21, 1938	410	-	-	-	60	20
N7-110	H. C. Dubold	Mar. - , 1913	312	-	-	-	-	-
N7-125	Joe Gardner	Feb. 7, 1928	153	584	57	.08	69	14
N7-126	Carrizo Springs	Mar. 15, 1930	322	515	23	.06	39	14
N7-137	G. A. Hero Est.	Mar. - , 1913	31	-	-	-	-	-
N7-142	L. M. Bills	Apr. 6, 1939	420	a/ 292	-	-	-	-
N7-145	Mobley Bros.	Dec. 21, 1938	340	-	-	-	37	18
N7-146	R. C. Johnson	Apr. 26, 1930	300	a/1,816	-	-	-	-
N7-149	Tom Allinder	Feb. 20, 1939	280	a/ 386	-	-	-	-
N7-152	S. A. Templer	Mar. 13, 1939	375	a/ 454	-	-	-	-
N7-153	L. H. Upchurch	Dec. 7, 1938	215	a/ 637	-	-	-	-
N8-8	R. W. Brown	Mar. - , 1913	1,212	-	-	-	-	-
N8-9	A. Wagner	Mar. - , 1913	1,094	866	-	1.6	24	12
N8-24	H. P. Bailey	Apr. 7, 1930	66	4,264	14	1.8	69	53
N8-29	J.C. & C.E. Bookout	May 24, 1930	1,005	1,548	19	.10	25	9.3
N8-30	I. J. New	May 6, 1930	435	11,790	12	1.1	385	218
N8-42	W. Wilcox	Mar. 15, 1930	425	a/ 667	-	-	-	-
N8-61	O. L. Jackson	June - , 1914	1,170	423	-	.40	44	15
N8-66	Prouty & Tillman	Mar. 29, 1930	408	386	23	.71	23	9
N8-75	Ehlers Bros.	Nov. 23, 1938	440	a/ 464	-	-	-	-
N8-82	R. N. Mitchell	Mar. - , 1913	660	-	-	-	-	-
N8-82	do.	June 26, 1930	660	391	27	.22	27	9.2
N8-101	Nueces Land&Irr.Co.	Feb. 7, 1928	1,135	427	20	.04	17	6.5
N8-102	do.	Feb. 11, 1928	1,224	1,384	24	.27	18	9.4
N8-104	H. G. Hines	Dec. 4, 1937	582	a/2,912	-	-	-	-
N8-106	John Stahl	Dec. 6, 1937	450	a/1,415	-	-	-	-
N8-108	Henry Moses	Dec. 2, 1937	564	a/ 716	-	-	-	-
N9-3	Duncanson & Milam	Dec. - , 1913	1,236	-	-	-	-	-
N9-3	do.	June 21, 1930	1,236	410	29	.58	38	12
N9-6	O. H. Nance	Dec. 1, 1938	1,448	-	-	-	-	-
N9-7	J. T. Kinnard	Mar. - , 1913	1,600	-	-	-	-	-
N9-8	T. S. Buchanan	Dec. 1, 1938	1,412	a/ 954	-	-	-	-
N9-15	City of Big Wells	Mar. - , 1913	1,580	-	-	-	-	-
N9-42	J. E. Webb	do.	120	-	-	-	-	-
N9-45	Federal Land Bank	Feb. 27, 1939	-	a/ 410	-	-	-	-
N9-46	City of Big Wells	Dec. 9, 1937	1,355	a/ 567	-	-	-	-
N9-46	do.	Feb. 27, 1939	1,355	a/ 573	-	-	-	-
R3-6	W. C. Ammann	May 20, 1930	475	1,277	35	.10	116	25
S1-18	Cen. Securities Co.	Mar. 18, 1930	321	456	a/ 38	.32	67	13
S1-23	Henry Rosier	Nov. 21, 1938	452	a/ 509	-	-	-	-

(Parts per million. Well numbers correspond to numbers in tables of well records)

Well	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$	Analyst
N5-76	a/ 37	-	332	90	37	-	.0	338	E. W. Lohr
N6-2	a/ 98	-	294	b/ 60	30	-	.05	a/ 132	Margaret D. Foster
N7-27	75	4.2	259	38	31	-	.0	a/ 125	Do.
N7-38	a/ 262	-	162	1,088	139	-	.25	892	E. W. Lohr
N7-40	53	4.4	124	41	80	-	6.4	a/ 143	Margaret D. Foster
N7-46	59	3.0	267	37	28	-	.05	a/ 167	Do.
N7-46	a/ 200	-	310	92	108	.3	.20	69	E. W. Lohr
N7-56	a/ 157	-	288	50	105	-	.15	99	Do.
N7-67	76	5.5	282	40	30	-	.15	a/ 144	Margaret D. Foster
N7-70	a/ 806	-	183	1,001	875	-	1.6	675	E. W. Lohr
N7-74	56	6.6	265	81	141	-	.23	a/ 368	Margaret D. Foster
N7-74	a/ 36	-	239	61	95	-	-	315	E. W. Lohr
N7-75	-	-	254	82	16	-	-	100	c/W. T. Reed
N7-99	a/ 122	-	222	123	132	-	.25	a/ 232	E. W. Lohr
N7-110	-	-	260	82	16	-	-	100	c/W. T. Reed
N7-125	110	3.7	314	107	130	-	4.0	a/ 230	Margaret D. Foster
N7-126	127	5.8	221	94	113	-	.26	a/ 155	Do.
N7-137	-	-	366	574	1,580	-	-	1,210	c/W. T. Reed
N7-142	a/ 76	-	206	43	37	-	-	100	E. W. Lohr
N7-145	a/ 127	-	266	76	85	-	.0	a/ 142	Do.
N7-146	a/ 274	-	121	402	720	-	-	938	Do.
N7-149	a/ 121	-	288	52	46	-	-	92	Do.
N7-152	a/ 151	-	220	85	95	-	-	75	Do.
N7-153	-	-	197	112	195	.1	2.4	321	Do.
N8-8	-	-	280	84	48	-	-	180	c/W. T. Reed
N8-9	a/ 260	-	265	130	228	-	-	109	Do.
N8-24	1,438	22.0	372	806	1,713	-	2.9	a/ 590	Margaret D. Foster
N8-29	535	7.2	385	173	585	-	.10	a/ 101	Do.
N8-30	3,389	50.0	278	4,066	3,419	-	2.1	a/1,856	Do.
N8-42	a/ 219	-	306	139	136	-	-	112	E. W. Lohr
N8-61	a/ 92	-	237	50	60	-	-	a/ 172	c/W. T. Reed
N8-66	107	5.0	234	47	38	-	.36	a/ 94	Margaret D. Foster
N8-75	a/ 144	-	295	b/ 90	56	-	1.8	102	E. W. Lohr
N8-82	-	-	265	46	40	-	-	118	c/W. T. Reed
N8-82	102	4.3	281	48	38	-	.30	a/ 105	Margaret D. Foster
N8-101	133	5.4	318	51	44	-	.18	69	Do.
N8-102	493	5.2	499	154	420	-	.0	84	S. K. Love
N8-104	-	-	130	491	1,320	-	.0	22	E. W. Lohr
N8-106	-	-	330	335	435	.2	.0	348	Do.
N8-108	-	-	280	133	185	.2	.0	162	Do.
N9-3	-	-	389	50	119	-	-	a/ 184	c/W. T. Reed
N9-3	96	6.4	303	55	37	-	.25	a/ 144	Margaret D. Foster
N9-6	-	-	222	40	29	.4	.10	-	E. W. Lohr
N9-7	-	-	246	67	36	-	-	130	c/W. T. Reed
N9-8	a/ 321	-	347	85	340	-	1.0	156	E. W. Lohr
N9-15	-	-	394	50	60	-	-	100	c/W. T. Reed
N9-42	-	-	158	574	564	-	-	1,200	Do.
N9-45	a/ 135	-	266	72	49	-	-	69	E. W. Lohr
N9-46	-	-	361	91	85	.8	.70	10	Do.
N9-46	a/ 250	-	343	96	85	-	-	16	Do.
R3-6	291	9.5	502	385	169	-	.12	a/ 392	Margaret D. Foster
S1-18	64	6.2	202	73	39	-	.05	a/ 221	Do.
S1-23	a/ 120	-	207	108	74	.2	.20	192	E. W. Lohr

Analyses of water from wells in Dimmit and Zavala Counties and Eastern Maverick County--Continued

Well	Owner	Date of collection	Depth of well (ft.)	Total dissolved solids (calc.)	Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)
S1-32	H. C. Umburn	Nov. 19, 1938	-	a/ 451	-	-	-	-
S1-37	O. P. Leonard	Mar. 21, 1939	-	a/ 424	-	-	-	-
S2-1	C. Vandervort	Oct. - , 1913	510	-	-	-	-	-
S2-3	G. A. Mattison	Nov. 21, 1938	600	a/ 518	-	-	-	-
S2-4	J. A. Oelkers	do.	694	a/ 478	-	-	-	-
S2-5	do.	do.	634	a/ 555	-	-	-	-
S2-8	Eardley Est.	Nov. 22, 1938	670	a/ 414	-	-	-	-
S2-18	C. M. Bushick	Dec. 7, 1938	670	a/1,079	-	-	-	-
S2-24	L. V. Richardson	Nov. 21, 1938	667	513	23	.08	26	7.5
S2-25	Oscar Pollard	June 4, 1930	677	6,396	26	.26	350	207
S2-62	Central P. & L. Co.	Mar. 28, 1930	640	704	20	.08	53	14
S2-86	J. P. Luthold	Mar. 23, 1930	1,021	742	23	.09	35	11
S2-103	M. W. Fardwell	Nov. 21, 1938	512	a/ 574	-	-	-	-
S2-110	E. F. Schumann	Mar. 28, 1939	-	a/ 889	-	-	-	-
S3-1	Wm. O'Brien	Dec. 7, 1938	1,800±	a/ 734	-	-	-	-
S3-4	Shumate, Green et al.	do.	1,776	a/ 757	-	-	-	-
S3-10	Catarina Farms Co.	Apr. 17, 1930	1,419	576	20	.04	9.5	4.2
S5-5	do.	Mar. 19, 1930	1,374	720	46	.15	22	10
S6-4	O. V. Ray	Apr. 17, 1930	1,432	7,428	14	.15	68	34
T1-2	Jack Ward	Dec. - , 1914	-	-	-	-	-	-
T1-5	R. W. Wilson	Mar. - , 1913	1,710	-	-	-	-	-
T1-5	do.	Apr. 4, 1930	1,710	474	23	.54	11	5.8

a/ Calculated.
b/ By turbidity.

(Parts per million. Well numbers correspond to numbers in tables of well records)

Well	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulphate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Total hardness as $CaCO_3$	Analyst
S1-32	a/ 54	-	175	b/ 75	75	-	.15	125	E. W. Lohr
S1-37	a/ 73	-	154	76	118	-	-	213	Do.
S2-1	-	-	268	168	272	-	-	100	c/ T. T. Reed
S2-3	a/ 164	-	281	111	80	-	.25	102	E. W. Lohr
S2-4	a/ 148	-	232	90	72	.3	.20	105	Do.
S2-5	a/ 168	-	292	b/ 90	116	-	.25	152	Do.
S2-8	a/ 133	-	302	b/ 60	49	-	.10	90	Do.
S2-18	a/ 275	-	290	172	190	-	.0	87	Do.
S2-24	152	6.4	381	84	86	-	.12	a/ 95	Margaret D. Foster
S2-25	1,607	23	521	1,609	2,348	-	3.0	a/ 1,724	Do.
S2-62	172	6.8	246	193	123	-	.15	a/ 190	Do.
S2-86	207	7.0	242	195	148	-	.21	a/ 133	Do.
S3-103	a/ 157	-	304	129	87	.4	.15	165	E. W. Lohr
S3-110	a/ 268	-	338	195	261	-	-	183	Do.
S3-1	a/ 271	-	378	111	165	-	.0	68	Do.
S3-4	a/ 285	-	398	115	165	-	.0	58	Do.
S3-10	195	4.8	205	102	116	-	.29	a/ 41	Margaret D. Foster
S5-5	201	8.8	248	1,243	71	-	.32	96	Do.
S6-4	2,625	26	333	956	3,459	-	2.3	309	Do.
T1-2	-	-	272	63	32	-	-	53	c/ T. T. Reed
T1-5	-	-	290	67	48	-	-	380	Do.
T1-5	153	4.6	302	72	60	-	.73	a/ 51	Margaret D. Foster

c/ Analysed in the University of Texas Laboratory.

Chloride in well waters of Dimmit and Zavala Counties and Eastern Maverick County, Texas

Tests were made in the laboratory unless otherwise indicated. (Parts per million)

Well	Date of Collection	Chloride	Well	Date of Collection	Chloride
H8- 9	Oct. 29, 1929	16 a/	N4-36	Apr. 28, 1939	28
M3- 3	Mar. 30, 1930	212 a/	N4-41	Dec. 12, 1939	18
M3- 7	do.	70 a/	N4-46	Apr. 28, 1939	26
M3-11	do.	50 a/	N4-49	Apr. 24, 1939	255
M3-12	do.	190 a/	N4-49	Dec. 12, 1939	108
M3-13	do.	174 a/	N4-51	Apr. 29, 1939	28
M3-15	Mar. 31, 1930	42 a/	N4-55	May 4, 1939	15
M3-19	do.	272 a/	N5- 9	May 22, 1939	92
M3-24	Mar. 30, 1930	120 a/	N5-10	Dec. 12, 1939	35
M3-29	do.	220 a/	N5-18	Apr. 19, 1930	60 a/
M3-31	do.	84 a/	N5-35	May 2, 1939	47
M3-35	Feb. 11, 1930	174 a/	N5-43	Mar. 25, 1930	62 a/
M6- 1	Feb. 4, 1930	174 a/	N5-47	Apr. 19, 1930	710 a/
M6- 2	do.	182 a/	N5-48	May 4, 1939	35
M6- 4	do.	166 a/	N5-49	Feb. 12, 1930	650 a/
M6- 5	do.	164 a/	N5-66	Dec. 12, 1939	41
M6- 9	Jan. 17, 1930	798 a/	N5-69	Dec. 10, 1939	37
M6-11	Mar. 12, 1930	155 a/	N5-70	do.	34
M6-12	do.	450 a/	N5-76	Dec. 12, 1939	40
M6-13	Mar. 11, 1930	450 a/	N7- 2	Aug. 14, 1939	165
M6-14	Mar. 13, 1930	330 a/	N7- 7	Dec. 12, 1939	59
M9- 1	May 1, 1939	31	N7-20	May 14, 1939	192
M9- 3	Dec. 12, 1939	21	N7-42	May 10, 1930	40 a/
M9- 9	Apr. 21, 1939	810	N7-42	Dec. 12, 1939	25
N1-13	Dec. 13, 1939	35	N7-48	Mar. 24, 1930	105 a/
N1-14	May 19, 1930	176 a/	N7-50	May 15, 1930	162 a/
N1-15	Mar. 26, 1930	336 a/	N7-54	June 5, 1930	84 a/
N1-16	do.	92 a/	N7-73	Mar. 17, 1930	84 a/
N1-17	Dec. 13, 1939	28	N7-86	Aug. 14, 1939	46
N1-18	Mar. 27, 1930	122 a/	N7-87	do.	34
N1-20	do.	120 a/	N7-109	May 2, 1930	270 a/
N1-33	Dec. 13, 1939	14	N7-112	May 3, 1930	56 a/
N1-36	do.	13	N7-114	May 2, 1930	905 a/
N1-37	do.	13	N7-115	do.	2,010 a/
N1-57	May 3, 1939	68	N7-133	Aug. 26, 1939	38
N1-63	Mar. 26, 1930	300 a/	N7-144	Dec. 13, 1939	36
N1-69	Dec. 13, 1939	33	N7-149	Aug. 14, 1939	48
N1-70	do.	28	N7-154	Apr. 19, 1939	20
N1-72	do.	14	N8- 7	do.	40
N2- 3	Apr. 3, 1930	30 a/	N8-21	Feb. 12, 1930	1,025 a/
N2- 8	Dec. 13, 1939	13	N8-22	do.	545 a/
N2-21	Dec. 7, 1939	146	N8-38	Apr. 11, 1930	205 a/
N3- 8	May 3, 1939	67	N8-42	Apr. 10, 1930	88 a/
N4-14	May 1, 1939	16	N8-43	May 6, 1930	580 a/
N4-25	Apr. 30, 1939	25	N8-44	Apr. 9, 1930	56 a/
N4-27	do.	30	N8-48	Dec. 11, 1939	37
N4-29	do.	116	N8-62	do.	44
N4-32	Apr. 27, 1939	22	N8-65	Feb. 12, 1930	82 a/
N4-33	do.	27	N8-76	Dec. 9, 1939	63
N4-34	do.	29	N8-88	do.	37
N4-34	Dec. 12, 1939	27	N8-110	Dec. 10, 1939	33

a/ Field test.

Chloride in well waters of Dimmit and Zavala Counties and Eastern Maverick County, Texas--Continued

Tests were made in the laboratory unless otherwise indicated. (Parts per million)

Well	Date of Collection	Chloride	Well	Date of Collection	Chloride
N9- 3	Apr. 21, 1930	50 a/	S2- 7	Aug. 14, 1939	56
N9- 3	Dec. 11, 1939	37	S2- 7	Dec. 13, 1939	56
N9- 4	do.	35	S2- 8	Dec. 9, 1939	40
N9- 5	do.	35	S2-13	Nov. 22, 1938	48
N9- 6	do.	27	S2-18	Dec. 13, 1939	117
N9- 8	Apr. 20, 1939	141	S2-24	do.	94
N9- 8	Dec. 11, 1939	46	S2-30	Dec. 9, 1939	67
N9-16	Apr. 22, 1930	42 a/	S2-39	do.	98
N9-16	Apr. 20, 1939	59	S2-44	June 3, 1930	190 a/
N9-16	Dec. 11, 1939	47	S2-46	Dec. 9, 1939	88
N9-17	do.	38	S2-53	do.	105
N9-21	do.	37	S2-54	do.	119
N9-23	do.	37	S2-60	do.	138
N9-29	Nov. 11, 1939	820 a/	S2-64	June 18. 1930	176 a/
N9-31	Dec. 11, 1939	40	S2-64	Dec. 8, 1939	152
N9-32	do.	64	S2-81	do.	302
O7- 3	Apr. 19, 1939	31	S2-82	Dec. 7, 1939	157
O7- 6	do.	1,030	S2-88	Dec. 8, 1939	270
R3- 1	Nov. 22, 1938	1,630	S2-89	May 26, 1930	380 a/
R3- 5	May 20, 1930	115 a/	S2-95	May 27, 1930	160 a/
R3- 8	do.	100 a/	S2-99	do.	390 a/
R3-10	do.	375 a/	S2-104	Apr. 24, 1939	83
S1- 1	Dec. 12, 1939	216	S2-104	Dec. 9, 1939	83
S1-12	do.	84	S2-109	Apr. 24, 1939	118
S1-13	do.	106	S3- 1	Dec. 11, 1939	108
S1-17	Mar. 18, 1930	200 a/	S3- 2	do.	107
S1-23	Aug. 14, 1939	74	S3- 4	do.	140
S1-24	Dec. 9, 1939	115	S3-10	Apr. 15, 1939	1,645
S1-31	Apr. 24, 1939	115	S3-13	Dec. 8, 1939	200
S2- 2	Dec. 9, 1939	96	S5- 5	Apr. 15, 1939	78
S2- 3	Dec. 12, 1939	82	T1- 1	Dec. 11, 1939	46
S2- 4	Aug. 14, 1939	79	T1- 3	do.	61
S2- 4	Dec. 12, 1939	70	T1- 4	do.	78

a/ Field test .

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	M6-22	M6-23	M9-3	M9-14	N4-14	N4-15	N4-18	N4-22	N4-25
Date of test	5-18-39	5-18-39	5-18-39	4-19-39	5-3-39	5-11-39	5-3-39	4-8-39	5-10-39
Estimated discharge Gals. a min.	--	--	500	600	200	350	75	150	700
Time pump was idle before test	3 days	30± days	15 days	14 days	15 hrs.	14 hrs.	12 hrs.	--	7 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	20	20	20	20	20	20	20	100	40
1/4	310	40	20	20	20	40	20	100	--
1/2	360	70	--	--	--	960	--	100	--
3/4	360	70	20	20	20	960	20	110	40
1	240	40	--	--	--	910	--	110	--
1 1/4	210	30	20	20	20	310	20	110	60
1 1/2	40	--	--	--	--	--	--	110	--
1 3/4	20	30	20	20	20	190	20	110	80
2	--	--	--	--	--	--	--	110	--
2 1/4	20	20	20	20	20	40	20	110	310
2 1/2	--	--	--	--	--	--	--	100	760
2 3/4	20	20	20	20	20	30	20	100	660
3	--	--	--	--	--	--	--	310	650
3 1/4	20	20	20	20	20	20	20	2,700	410
3 1/2	--	--	--	--	--	--	--	2,200	--
3 3/4	20	20	20	20	20	20	20	2,300	310
4	--	--	--	--	--	--	--	2,700	--
4 1/4	20	20	20	20	20	20	20	2,750	40
4 1/2	--	--	--	--	--	--	--	2,700	--
4 3/4	20	20	20	20	20	20	20	2,700	40
5	--	--	--	--	--	--	--	2,650	--
5 1/2	20	20	20	20	20	20	20	2,200	40
6	--	--	--	--	--	--	--	1,450	--
6 1/2	20	20	20	20	20	20	20	960	40
7	--	--	--	--	--	--	--	--	--
8	20	20	20	20	20	20	20	710	40
10	--	--	--	--	--	--	--	--	--
12	20	20	20	20	20	20	20	710	40
15	20	20	20	--	--	20	--	690	40
20	20	--	20	--	20	20	20	690	40
30	20	20	20	20	20	20	20	680	40
40	--	--	--	--	20	20	--	290	40
60	--	--	--	--	20	20	--	210	40
70	--	--	--	--	--	--	--	170	--
90	--	--	--	--	--	--	--	--	--
90+									

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N4-26	N4-27	N4-29	N4-30	N4-33	N4-34	N4-36	N4-38	N4-44
Date of test	5-4-39	5-8-39	5-2-39	5-4-39	5-2-39	4-29-39	4-28-39	6-8-39	4-29-39
Estimated discharge Gals. a min.	600	700	600	--	250	700	225	300	150
Time pump was idle before test.	60 hrs.	90 hrs.	36 hrs.	18 hrs.	70 hrs.	12 hrs.	12 hrs.	48 hrs.	6 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	30	40	110	160	30	30	40	20	660
¼	30	80	110	--	2,100	30	40	20	860
½	40	210	--	--	2,950	--	40	30	--
¾	310	1,700	110	170	2,700	30	40	30	860
1	110	1,700	--	--	1,950	--	30	30	--
1¼	80	1,700	110	200	1,450	30	30	30	960
1½	60	1,700	--	--	--	--	--	30	--
1¾	60	1,700	--	330	700	30	30	20	1,200
2	60	1,700	--	--	--	--	--	--	--
2¼	60	1,700	110	560	100	30	30	20	1,950
2½	60	1,700	--	--	--	--	--	--	1,950
2¾	60	1,700	130	810	50	30	30	20	1,950
3	50	1,700	--	--	--	--	--	--	2,100
3¼	50	1,700	860	1,000	30	30	30	20	2,000
3½	50	1,500	--	--	--	--	--	--	2,000
3¾	50	710	1,700	1,200	30	30	30	20	1,950
4	40	--	--	--	--	--	--	--	2,050
4½	30	460	2,050	1,250	30	30	30	20	1,950
4½	--	--	--	--	--	--	--	--	1,950
4¾	30	410	2,200	1,450	30	30	30	20	1,950
5	--	--	2,200	1,450	--	--	--	--	1,950
5½	30	310	2,350	1,450	30	30	30	20	1,950
6	--	--	2,350	1,450	--	--	--	--	1,800
6½	30	220	2,200	1,450	30	30	30	20	960
7	--	--	1,950	1,450	--	--	--	--	960
8	30	210	1,700	1,450	30	30	30	20	860
10	--	--	--	1,350	--	--	--	20	810
12	30	160	1,350	1,200	30	30	30	20	760
15	30	80	--	1,200	--	--	--	20	710
20	30	60	1,200	1,000	30	30	30	20	710
30	30	60	--	610	30	30	30	20	710
40	30	50	860	610	--	30	30	20	710
60	30	50	860	410	30	30	30	20	710
70	--	--	760	--	--	--	--	--	--
90	--	40	--	210	--	--	--	--	710
90+			1/	2/					

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N4-46	N4-48	N4-49	N4-55	N5-1	N5-9	N5-10	N5-12	N5-21
Date of test	5-18-39	5-3-39	4-29-39	5-17-39	5-27-39	5-22-39	5-27-39	5-27-39	5-9-39
Estimated discharge Gals. a min.	700	300	300	--	800	--	300	--	--
Time pump was idle before test.	3 days	--	--	14 days	3 days	3 days	14 days	24 hrs.	4 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	30	150	890	--	40	100	40	170	60
	1/4	30	180	2,450	20	40	110	40	510	60
	1/2	--	1,150	--	20	--	--	--	610	60
	3/4	30	860	2,550	--	40	110	40	560	60
	1	--	--	--	20	--	--	--	410	70
	1 1/4	30	360	2,700	--	40	110	40	330	80
	1 1/2	--	--	--	20	--	--	100	310	100
	1 3/4	30	210	2,950	--	40	110	90	510	80
	2	--	--	--	20	--	--	80	660	70
	2 1/4	30	160	2,950	--	40	110	70	560	60
	2 1/2	--	--	2,950	20	--	120	70	330	--
	2 3/4	30	160	3,050	--	40	140	70	210	60
	3	--	--	2,850	20	--	2,050	--	210	--
	3 1/4	30	130	2,650	--	40	3,450	60	310	50
	3 1/2	--	--	--	20	--	3,450	--	310	--
	3 3/4	30	130	1,950	--	40	3,450	50	160	50
	4	--	--	--	20	--	3,450	--	--	--
	4 1/4	30	110	1,700	--	40	2,850	40	110	50
	4 1/2	--	--	1,850	20	--	1,550	--	--	--
	4 3/4	30	110	1,700	--	40	560	40	60	50
	5	--	--	--	20	--	--	--	--	--
	5 1/2	30	110	1,550	--	40	220	40	60	50
	6	--	--	--	20	--	--	--	--	--
	6 1/2	30	110	1,450	--	40	130	40	50	40
	7	--	160	--	20	--	--	--	--	--
	8	30	260	1,350	--	40	120	40	50	40
	10	--	70	--	20	--	--	--	--	--
	12	30	70	1,250	--	40	100	40	40	40
	15	30	70	--	20	40	--	40	40	40
	20	30	70	1,200	20	--	70	40	40	40
	30	30	70	--	20	--	70	40	40	40
	40	--	60	960	20	--	70	--	40	--
	60	--	60	760	20	--	70	--	40	--
	70	--	--	--	--	--	--	--	--	--
	90	--	60	710	--	--	--	--	--	--
	90+			3/						

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N5-27	N5-30	N5-32	N5-34	N5-35	N5-36	N5-37	N5-38	N5-42
Date of test	5-18-39	5-23-39	5-9-39	4-27-39	5-11-39	4-27-39	6-1-39	5-4-39	5-15-39
Estimated discharge Gals. a min.	350 +	800	300	300	300	800	400	800	700
Time pump was idle before test.	2 days	6+ mos.	10 days	17 hrs.	7 days	7 days	5 days	16 hrs.	5 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	40	60	650	50	250	140	30	50	60
	1/4	--	--	650	40	250	--	30	60	2,950
	1/2	--	--	--	--	--	160	--	--	--
	3/4	40	60	650	40	250	160	30	60	3,200
	1	--	--	--	--	--	--	--	--	--
	1 1/4	--	60	650	40	350	180	30	60	3,200
	1 1/2	--	--	--	--	--	--	--	--	--
	1 3/4	40	60	650	40	400	190	30	60	3,450
	2	--	--	--	--	--	--	--	--	3,450
	2 1/4	--	60	650	40	400	210	30	60	3,450
	2 1/2	--	--	750	--	--	--	--	--	3,450
	2 3/4	40	60	1,450	40	400	210	30	60	3,450
	3	110	--	--	610	--	--	--	--	--
	3 1/4	190	60	3,200	2,250	700	220	30	60	2,700
	3 1/2	170	--	--	2,100	--	--	--	--	--
	3 3/4	140	50	3,450	1,500	850	230	30	60	1,950
	4	--	--	3,700	860	1,350	230	--	60	--
	4 1/4	90	50	3,450	--	1,350	230	30	80	1,650
	4 1/2	--	--	--	160	1,300	230	--	130	--
	4 3/4	60	50	2,950	--	1,300	230	30	220	1,200
	5	--	--	--	60	1,300	230	--	240	--
	5 1/2	50	40	1,700	50	1,200	230	30	320	860
	6	--	--	--	40	--	230	--	310	--
	6 1/2	--	40	1,450	--	1,200	220	30	280	710
	7	40	--	--	40	--	220	--	210	--
	8	--	40	1,200	--	950	220	30	160	660
	10	40	40	--	--	950	210	--	--	560
	12	--	40	1,150	40	950	210	30	110	460
	15	40	40	--	40	850	210	--	--	310
	20	40	40	1,000	40	850	220	30	80	180
	30	40	40	950	--	650	210	30	60	60
	40	--	40	900	--	500	210	30	60	--
	60	--	40	700	--	400	210	30	50	--
	70	--	--	700	--	--	--	--	--	--
	90	--	--	--	--	300	--	--	--	--
	90+					4/				

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N5-46	N5-53	N5-54	N5-55	N5-56	N5-58	N5-61	N5-63	N5-69
Date of test	5-20-39	6-1-39	6-3-39	5-26-39	5-26-39	5-23-39	5-24-39	5-20-39	5-3-39
Estimated discharge Gals. a min.	400	550	600	800	350	--	800	--	700
Time pump was idle before test	24 hrs.	3 days	3 days	21 days	3 days	7 days	7 days	21 days	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	40	40	50	40	40	40	40	2,250	60
1/4	40	40	40	40	40	70	40	2,200	--
1/2	--	--	--	--	--	110	--	--	--
3/4	40	40	40	40	40	100	40	2,200	60
1	--	--	--	40	--	50	--	--	--
1 1/4	40	40	40	570	40	--	40	2,350	60
1 1/2	--	--	--	3,700	--	--	--	--	--
1 3/4	40	40	40	3,350	40	--	40	2,450	60
2	50	--	--	3,200	--	--	--	--	--
2 1/4	80	40	40	2,700	40	--	40	2,700	60
2 1/2	70	--	--	1,950	--	--	--	--	--
2 3/4	60	40	40	870	40	--	40	2,950	60
3	--	40	--	370	--	--	--	--	--
3 1/4	40	440	40	150	40	--	40	3,200	60
3 1/2	--	1,020	--	--	--	--	--	--	--
3 3/4	40	50	40	120	40	--	40	3,200	60
4	--	--	--	--	--	--	--	3,200	--
4 1/4	40	40	40	120	40	--	40	3,200	60
4 1/2	--	--	--	--	--	--	--	3,350	--
4 3/4	40	40	40	100	40	--	40	3,250	70
5	--	--	--	--	--	--	--	3,200	90
5 1/2	40	30	40	90	40	--	40	3,200	110
6	--	--	--	--	--	--	--	--	100
6 1/2	40	30	40	60	40	--	40	3,150	90
7	--	--	40	--	--	--	--	--	90
8	40	30	40	50	--	--	40	2,550	90
10	--	--	40	40	--	--	--	--	--
12	--	30	40	40	40	--	40	1,950	80
15	--	--	40	40	40	--	40	1,800	--
20	--	30	40	40	40	--	40	1,950	70
30	--	30	40	40	40	--	40	1,950	--
40	--	30	40	40	--	--	40	2,000	60
60	--	30	40	40	--	--	40	2,050	60
70	--	--	--	--	--	--	--	--	--
90	--	--	--	--	--	--	--	2,200	--
90+	5/					6/		7/	

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N5-70	N5-72	N5-76	N7-7	N7-21	N7-35	N7-36	N7-57	N7-71
Date of test	6-12-39	5-19-39	5-26-39	6-10-39	6-8-39	6-23-39	4-26-39	2-27-39	2-21-39
Estimated discharge Gals. a min.	1,000	700	1,300	300	450	150	200	--	--
Time pump was idle before test	90 days	3 days	20 hrs.	24 hrs.	7 days	7 days	16 hrs.	--	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	40	40	40	30	20	480	30	70	30
1/4	40	--	40	310	90	330	--	30	--
1/2	--	--	--	330	80	350	--	--	40
3/4	40	40	40	290	80	360	50	30	--
1	--	--	--	290	90	360	--	--	30
1 1/4	40	40	40	290	90	360	60	--	--
1 1/2	--	--	--	210	90	--	--	--	40
1 3/4	40	40	40	90	80	350	60	30	--
2	--	--	--	--	--	350	--	--	--
2 1/4	40	40	40	60	60	350	60	--	--
2 1/2	--	--	--	--	--	--	--	--	--
2 3/4	40	40	40	60	40	260	60	30	--
3	--	--	--	--	--	--	--	--	--
3 1/4	40	40	40	50	40	210	60	--	--
3 1/2	--	--	--	--	--	--	--	--	--
3 3/4	40	40	40	50	30	200	60	30	--
4	--	--	--	--	--	180	--	--	--
4 1/4	40	40	40	50	30	160	60	--	--
4 1/2	--	--	--	--	--	--	--	--	--
4 3/4	40	40	40	40	30	160	60	30	--
5	--	--	--	--	--	--	--	--	--
5 1/2	40	40	40	30	20	160	50	--	--
6	--	--	--	--	--	130	--	--	30
6 1/2	40	40	40	30	20	150	50	30	--
7	--	--	--	--	--	160	--	--	--
8	40	40	40	30	20	180	50	--	--
10	40	--	--	--	20	210	--	--	--
12	40	40	40	30	20	230	50	30	--
15	40	40	40	30	20	260	50	--	--
20	40	40	40	30	--	290	50	--	--
30	40	40	40	30	20	330	50	30	--
40	--	--	--	30	--	350	30	30	--
60	--	--	--	30	20	350	--	--	--
70	--	--	--	--	--	--	--	--	--
90	--	--	--	--	--	350	--	--	--
90+						8/			

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N7-78	N7-86	N7-87	N7-88	N7-91	N7-108	N7-111	N7-114	N7-115
Date of test	4-14-39	4-3-39	4-7-39	4-6-39	4-8-39	4-3-39	1-30-39	4-5-39	1-31-39
Estimated discharge Gals. a min.	40	150	300	75	75	200	175	100	--
Time pump was idle before test	18 hrs.	36 hrs.	18 hrs.	16 hrs.	48 hrs.	60 hrs.	--	48 hrs.	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	170	60	40	40	710	460	60	50	40
1/4	170	60	40	--	710	760	840	--	40
1/2	--	--	--	--	660	750	820	--	90
3/4	170	60	40	40	660	730	720	310	110
1	--	--	--	60	--	660	--	560	110
1 1/4	170	50	40	230	--	630	470	590	110
1 1/2	--	--	--	580	--	--	--	610	110
1 3/4	170	50	40	630	410	560	320	560	90
2	--	--	--	580	--	--	--	560	80
2 1/4	170	50	40	530	--	490	200	530	60
2 1/2	--	--	--	--	--	--	--	--	60
2 3/4	170	50	40	380	280	410	200	510	60
3	--	--	--	--	--	--	--	--	50
3 1/4	170	50	40	300	--	280	170	--	--
3 1/2	--	--	--	--	--	--	--	--	--
3 3/4	170	50	40	250	230	210	150	410	--
4	--	--	--	--	--	--	--	--	--
4 1/4	170	50	40	210	--	170	150	--	--
4 1/2	--	--	--	--	--	--	--	--	--
4 3/4	170	50	40	180	160	140	130	360	--
5	--	--	--	--	--	--	--	--	40
5 1/2	--	50	40	--	--	110	110	--	--
6	--	--	--	--	--	--	--	--	--
6 1/2	210	50	40	70	60	70	70	330	--
7	220	--	--	--	--	--	--	--	--
8	230	50	40	--	--	60	--	210	--
10	210	--	--	--	--	--	--	--	--
12	210	50	40	50	40	60	40	180	--
15	210	--	--	--	--	50	40	140	--
20	210	50	40	50	40	50	40	120	--
30	210	50	--	--	--	40	--	--	--
40	200	50	40	50	40	40	--	50	--
60	200	50	40	40	--	40	--	--	--
70	--	--	--	--	--	--	--	--	--
90	190	--	--	--	--	--	--	--	--
90+							9/		

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N7-119	N7-124	N7-133	N7-142	N7-143	N7-147	N7-149	N7-155	N8-13
Date of test	4-15-39	4-11-39	4-25-39	4-4-39	4-12-39	4-5-39	3-28-39	4-10-39	6-12-39
Estimated discharge Gals. a min.	40	40	--	75	50	150	400	50	800
Time pump was idle before test	24 hrs.	6 hrs.	18 hrs.	24 hrs.	18 hrs.	--	--	90± days	36 hrs.

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	200	130	50	40	50	80	60	200	40
	¼	200	130	50	--	50	70	60	--	40
	½	--	--	50	40	--	--	--	--	40
	¾	200	130	100	40	50	60	60	200	40
	1	--	--	70	--	--	--	--	--	40
	1¼	200	130	50	50	50	50	60	--	40
	1½	--	--	50	170	--	--	--	--	40
	1¾	200	130	50	470	50	50	60	200	190
	2	--	--	--	670	--	--	--	--	970
	2¼	200	130	50	570	50	50	60	--	190
	2½	--	--	--	520	--	--	--	--	90
	2¾	200	130	50	520	50	50	60	200	40
	3	--	--	--	--	--	--	--	--	40
	3¼	200	130	50	470	50	50	50	--	40
	3½	--	--	--	--	--	--	--	--	--
	3¾	200	130	50	300	50	50	50	200	--
	4	--	--	--	--	--	--	--	--	--
	4¼	200	210	--	270	50	50	50	--	--
	4½	--	310	50	--	--	--	--	--	--
	4¾	200	360	--	190	50	50	50	200	--
	5	--	360	--	--	--	--	--	--	--
	5½	200	310	50	140	50	50	50	--	--
	6	--	310	--	--	--	--	--	--	--
	6½	200	310	--	70	50	60	50	200	--
	7	--	--	50	60	--	--	--	--	--
	8	200	310	--	60	50	60	50	--	--
	10	200	--	--	60	--	--	--	--	--
	12	200	260	50	50	50	60	50	200	--
	15	200	--	50	40	--	70	--	--	--
	20	200	230	50	40	50	80	50	--	--
	30	200	190	50	40	--	70	50	--	--
	40	200	130	50	40	50	70	50	200	--
	60	--	130	50	40	50	70	50	200	--
	70	--	--	--	--	--	--	--	--	--
	90	--	--	--	--	--	--	--	--	--
	90+									10/

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N8-28	N8-34	N8-37	N8-39	N8-43	N8-48	N8-61	N8-62	N8-63
Date of test	6-17-39	4-3-39	4-8-39	4-13-39	3-20-39	3-9-39	3-7-39	3-6-39	3-7-39
Estimated discharge Gals. a min.	--	100	75	100	350	--	350	200	250
Time pump was idle before test	7 days	48 hrs.	14 days	--	48 hrs.	--	--	--	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	600	50	40	40	60	50	40	70	40
1/4	550	510	100	40	100	--	--	--	--
1/2	--	560	610	--	750	--	--	--	--
3/4	550	560	560	40	850	50	40	80	40
1	--	560	610	--	950	--	--	--	--
1 1/4	550	560	460	40	1,150	--	--	--	--
1 1/2	--	560	310	--	1,150	--	--	--	--
1 3/4	550	560	260	40	1,200	50	40	80	40
2	--	560	--	--	1,200	--	--	810	--
2 1/4	500	560	130	40	1,200	--	--	1,450	--
2 1/2	--	560	--	--	--	--	--	1,500	--
2 3/4	500	560	110	40	1,150	50	80	1,600	40
3	--	560	--	--	--	--	--	1,650	--
3 1/4	500	560	90	40	1,150	--	--	1,700	--
3 1/2	--	560	--	--	1,150	--	--	1,700	--
3 3/4	520	560	60	40	1,150	50	330	1,600	40
4	--	540	--	--	--	--	--	--	--
4 1/4	520	540	50	40	1,150	--	410	1,600	--
4 1/2	--	--	--	--	--	--	430	--	--
4 3/4	520	510	50	40	1,150	50	430	1,600	40
5	--	--	--	--	1,050	--	430	--	--
5 1/2	520	460	50	40	950	--	420	1,350	--
6	--	--	--	--	--	--	--	--	--
6 1/2	520	460	40	40	700	50	390	1,200	40
7	520	460	--	--	600	--	--	--	--
8	500	--	40	40	550	--	--	660	--
10	500	460	--	--	400	--	--	--	--
12	500	460	40	40	250	40	--	260	--
15	550	460	--	--	200	--	--	--	40
20	550	460	40	40	100	40	130	90	40
30	550	330	--	40	60	40	70	--	--
40	520	190	--	40	--	--	--	--	--
60	--	80	--	40	--	--	40	70	--
70	--	--	--	--	--	--	--	--	--
90	--	50	--	--	--	--	--	--	--
90+			11/						

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N8-66	N8-69	N8-72	N8-74	N8-78	N8-82	N8-103	N8-105	N8-106
Date of test	3-7-39	1-19-39	4-10-39	6-20-39	3-27-39	1-20-39	6-14-39	2-25-39	7-1-39
Estimated discharge Gals. a min.	--	75	300	--	100	300	--	20	--
Time pump was idle before test	3 hrs.	8 hrs.	17 hrs.	19 hrs.	10 days	12+ hrs.	3 days	--	2 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	60	110	40	50	180	80	40	130	900
	1/4	60	--	40	50	180	--	40	--	900
	1/2	60	--	--	70	--	--	--	--	--
	3/4	80	--	40	80	180	40	40	--	850
	1	80	60	--	480	--	--	140	130	--
	1 1/4	80	--	40	480	180	--	150	--	850
	1 1/2	70	--	--	530	--	--	140	--	--
	1 3/4	70	--	40	480	180	--	110	--	850
	2	--	80	--	480	--	40	--	130	--
	2 1/4	60	--	40	680	180	290	80	--	850
	2 1/2	--	--	--	780	--	290	--	--	--
	2 3/4	60	--	40	350	180	330	80	--	800
	3	--	80	--	140	--	180	--	110	700
	3 1/4	60	--	40	100	180	160	80	--	650
	3 1/2	--	--	--	100	--	--	--	--	600
	3 3/4	60	--	40	100	180	150	80	--	520
	4	--	100	--	110	--	--	--	110	600
	4 1/4	60	--	40	130	180	--	80	--	550
	4 1/2	--	100	--	110	--	--	--	--	550
	4 3/4	60	--	40	70	180	110	70	--	500
	5	--	100	--	50	--	--	--	110	450
	5 1/2	60	150	40	50	180	--	60	2,450	450
	6	--	290	--	50	--	--	--	--	600
	6 1/2	60	--	40	50	180	100	40	--	770
	7	--	390	--	50	--	--	40	--	800
	8	60	480	40	50	180	--	40	--	800
	10	--	480	--	50	180	--	40	--	800
	12	60	320	40	50	180	60	40	--	800
	15	--	--	40	50	180	--	40	--	800
	20	60	60	40	50	180	--	40	1,050	850
	30	60	--	40	50	180	50	40	--	850
	40	60	--	--	--	180	--	--	370	850
	60	60	--	--	--	180	40	--	260	850
	70	--	--	--	--	--	--	--	--	--
	90	--	--	--	--	--	--	--	210	850
	90+		12/						13/	14/

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	N9-14	N9-20	N9-28	N9-31	N9-32	N9-43	S1-9	S1-10
Date of test	6-9-39	6-14-39	3-1-39	3-15-39	3-15-39	3-18-39	4-18-39	4-6-39
Estimated discharge Gals. a min.	400	850	--	500	300	--	--	200
Time pump was idle before test	24 hrs.	4 days	--	--	--	--	24 hrs.	14 hrs.

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
	0	40	40	70	40	50	40	80	80
	1/4	40	40	--	--	--	--	80	--
	1/2	--	--	--	--	--	--	--	--
	3/4	40	40	430	40	50	40	80	80
	1	--	--	--	--	--	--	--	--
	1 1/4	40	40	--	--	--	--	80	--
	1 1/2	--	--	--	--	--	--	--	--
	1 3/4	40	40	430	40	50	40	80	80
	2	--	40	680	--	--	--	--	--
	2 1/4	40	50	1,180	--	--	--	80	--
	2 1/2	--	100	1,130	--	--	--	--	--
	2 3/4	40	110	1,130	--	60	40	80	80
	3	--	80	1,080	--	--	--	--	--
	3 1/4	40	40	--	40	--	40	80	--
	3 1/2	--	--	--	--	--	--	--	--
	3 3/4	40	40	730	40	250	40	80	80
	4	--	--	--	--	230	--	--	--
	4 1/4	40	40	--	40	930	40	80	--
	4 1/2	--	--	--	--	930	--	--	--
	4 3/4	40	40	680	--	880	40	80	80
	5	--	--	--	--	--	--	--	--
	5 1/2	40	40	--	40	--	40	80	--
	6	--	--	--	--	--	--	--	--
	6 1/2	40	40	--	--	530	40	80	80
	7	--	--	650	40	--	--	--	--
	8	40	40	--	--	--	40	80	--
	10	40	--	--	--	--	--	--	--
	12	40	40	--	--	--	40	80	--
	15	40	40	600	40	80	--	80	--
	20	40	40	--	40	70	--	80	80
	30	40	40	--	40	70	40	80	--
	40	40	--	380	--	70	--	--	--
	60	40	--	290	--	--	40	--	--
	70	--	--	--	--	--	--	--	--
	90	--	--	280	--	--	--	--	--
	90+			15/					

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S1-13	S1-16	S1-21	S1-22	S1-23	S1-38	S1-40	S2-1	S2-2
Date of test	3-29-39	2-21-39	3-11-39	4-5-39	3-8-39	4-14-39	4-41-39	3-31-39	3-3-39
Estimated discharge Gals. a min.	--	--	150	200	--	--	250	75	500
Time pump was idle before test	4 hrs.	--	2 days	6 hrs.	18 hrs.	72 hrs.	19 hrs.	72 hrs.	60 days

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	70	90	40	90	40	170	90	70	170
	¼	70	--	60	160	--	--	90	70	--
	½	--	--	280	210	--	--	--	--	140
	¾	70	80	240	180	50	160	90	80	120
	1	--	--	--	140	--	--	--	--	--
	1¼	70	--	160	130	--	160	90	80	--
	1½	--	--	--	130	--	--	--	--	--
	1¾	70	80	130	110	50	160	90	90	90
	2	--	--	--	90	--	--	--	--	--
	2¼	70	--	--	80	--	160	90	90	--
	2½	--	--	--	--	--	--	--	--	--
	2¾	70	--	90	80	50	160	90	90	70
	3	--	--	--	--	--	--	--	--	--
	3¼	70	--	--	80	--	160	90	110	--
	3½	--	--	--	--	--	--	--	120	--
	3¾	70	70	70	80	40	160	90	460	70
	4	--	--	--	--	--	--	--	610	--
	4¼	70	--	--	80	--	160	90	610	--
	4½	--	--	--	--	--	--	--	610	--
	4¾	70	--	70	80	40	150	90	560	70
	5	--	--	--	--	--	--	--	--	--
	5½	70	--	--	80	--	150	90	530	--
	6	--	70	--	--	--	--	--	--	--
	6½	70	--	60	80	40	150	90	520	70
	7	--	--	--	--	--	--	--	--	--
	8	70	--	--	80	--	150	--	460	--
	10	--	--	--	--	--	--	--	--	--
	12	70	--	50	80	40	150	--	460	70
	15	--	70	--	--	--	--	--	440	--
	20	70	--	--	80	--	150	--	380	60
	30	70	--	--	80	--	150	--	310	60
	40	70	70	--	80	--	150	--	260	60
	60	70	--	--	80	--	150	--	260	--
	70	--	--	--	--	--	--	--	--	--
	90	--	--	--	--	--	--	--	--	--
	90+			16/						

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S2-3	S2-4	S2-7	S2-8	S2-13	S2-18	S2-27	S2-31	S2-37
Date of test	3-30-39	2-24-39	2-25-39	1-17-39	2-24-39	3-9-39	3-2-39	3-21-39	3-24-39
Estimated discharge Gals. a min.	--	280	275	--	1,000	125	--	175	200
Time pump was idle before test	7+ days	--	--	15 hrs.	10 hrs.	15 hrs.	3 days	--	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes									
0	60	40	40	40	40	100	400	70	130
1/4	--	--	--	40	100	--	--	80	130
1/2	--	--	--	--	90	--	--	110	130
3/4	100	40	40	40	60	100	400	190	130
1	--	--	--	--	60	--	--	150	300
1 1/4	120	--	--	--	--	--	--	150	1,100
1 1/2	130	--	--	--	--	--	--	140	1,100
1 3/4	140	40	40	40	60	80	750	140	1,100
2	140	--	--	--	--	--	--	--	1,150
2 1/4	140	--	--	--	--	--	--	110	1,100
2 1/2	--	--	--	--	--	--	--	--	1,100
2 3/4	130	40	40	40	50	70	800	80	1,100
3	--	--	--	--	--	--	--	--	950
3 1/4	100	--	--	--	--	--	800	--	750
3 1/2	--	--	--	--	--	--	820	--	580
3 3/4	90	40	40	40	40	60	850	70	550
4	--	--	--	--	--	--	810	--	--
4 1/4	80	40	--	--	--	--	--	--	430
4 1/2	--	--	--	--	--	--	--	--	--
4 3/4	80	50	40	40	40	60	800	70	320
5	--	--	--	--	--	--	--	--	--
5 1/2	70	--	--	--	--	70	800	--	210
6	--	--	--	--	--	--	--	--	--
6 1/2	70	50	40	40	40	80	800	--	150
7	--	--	--	--	--	--	--	--	--
8	70	50	--	--	--	80	--	--	130
10	--	--	--	--	--	80	--	--	130
12	70	50	40	40	40	100	450	--	130
15	--	--	--	--	--	100	--	--	130
20	70	50	--	--	--	90	400	70	130
30	--	--	40	--	40	90	350	--	130
40	60	40	--	--	--	--	350	--	--
60	60	40	40	--	40	110	350	--	130
70	--	--	--	--	--	--	--	--	--
90	--	--	--	--	--	110	--	--	--
90+						17/			

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S2-38	S2-51	S2-53	S2-56	S2-57	S2-68	S2-69	S2-70	S2-73
Date of test	3-24-39	2-20-39	4-4-39	4-1-39	3-25-39	3-29-39	1-23-39	12-21-39	1-14-39
Estimated discharge Gals. a min.	200	100	200	--	200	200	--	150	75
Time pump was idle before test	--	--	72 hrs.	7 days	--	--	--	6 days	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes										
	0	100	150	170	70	350	350	130	320	1,700
	1/4	100	150	--	70	700	350	--	450	--
	1/2	--	--	--	--	3,200	--	--	2,950	--
	3/4	100	--	800	70	3,200	450	--	2,850	--
	1	--	--	--	--	2,950	--	--	2,100	1,700
	1 1/4	100	600	1,050	70	2,950	450	--	2,100	--
	1 1/2	--	--	1,050	--	2,100	--	--	2,200	1,200
	1 3/4	100	700	1,100	70	1,950	1,100	--	2,320	--
	2	--	--	1,100	--	--	3,000	130	2,390	1,200
	2 1/4	100	700	1,100	80	1,950	3,550	--	2,350	--
	2 1/2	--	--	1,100	--	--	2,900	--	2,450	1,450
	2 3/4	100	700	1,050	90	1,950	2,800	--	2,550	--
	3	--	--	--	--	--	--	130	--	1,450
	3 1/4	100	--	1,050	90	1,700	2,700	--	2,450	--
	3 1/2	--	700	--	--	--	--	--	--	1,350
	3 3/4	100	--	1,050	100	1,700	2,550	--	2,500	--
	4	--	--	--	--	--	--	--	--	1,450
	4 1/4	100	--	1,030	100	1,700	--	--	2,550	--
	4 1/2	--	550	--	--	--	--	120	--	1,200
	4 3/4	100	--	1,000	100	1,700	1,950	--	--	--
	5	--	--	--	--	--	--	--	--	1,200
	5 1/2	100	350	720	100	1,450	1,730	--	--	1,050
	6	--	--	--	--	--	--	120	--	900
	6 1/2	100	--	500	100	1,350	1,500	--	2,500	950
	7	--	350	--	100	--	--	--	--	1,150
	8	100	--	--	100	1,200	1,050	120	--	1,200
	10	100	400	--	90	--	--	130	--	1,300
	12	100	--	--	90	800	850	--	2,270	1,400
	15	--	350	--	90	--	--	--	--	1,700
	20	100	--	--	90	450	--	--	--	1,700
	30	--	300	300	80	--	550	140	2,070	1,950
	40	--	--	260	80	--	550	140	1,950	1,900
	60	100	--	180	80	350	550	130	1,700	1,900
	70	--	--	--	--	--	--	--	--	--
	90	--	150	130	70	--	--	--	--	--
	90+			18/		19/			20/	

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S2-76	S2-81	S2-82	S2-88	S2-89	S2-92	S2-96	S2-103
Date of test	1-11-39	3-30-39	12-20-38	12-22-38	2-16-39	5-29-39	12-30-39	3-10-39
Estimated discharge Gals. a min.	100	--	350	250	300	300	--	100
Time pump was idle before test	--	18 hrs.	10 days	12+ hrs.	--	6 yrs.	7 days	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes								
0	---	--	300	350	600	350	260	70
1/4	---	300	370	300	--	2,200	--	--
1/2	---	--	680	330	--	950	--	--
3/4	--	300	690	300	600	950	300	80
1	---	--	710	330	--	950	410	--
1 1/4	--	300	800	460	--	900	1,550	80
1 1/2	--	--	1,640	550	--	850	1,500	--
1 3/4	--	300	1,690	560	600	850	1,400	90
2	--	--	--	480	--	850	1,550	90
2 1/4	--	300	1,840	560	--	850	1,600	--
2 1/2	--	--	--	--	--	850	1,550	--
2 3/4	--	300	1,950	490	600	850	1,700	70
3	--	--	2,000	--	--	--	1,700	--
3 1/4	--	300	2,020	--	--	850	1,700	--
3 1/2	--	600	2,100	--	--	--	1,700	--
3 3/4	--	1,100	2,050	--	--	850	1,730	70
4	--	1,700	--	490	--	--	1,710	--
4 1/4	--	2,200	2,050	--	--	850	1,700	--
4 1/2	--	2,250	--	--	600	--	1,800	--
4 3/4	500	2,450	--	--	--	850	1,800	70
5	--	2,450	--	510	--	--	1,830	--
5 1/2	--	2,450	--	--	--	850	--	--
6	--	2,450	2,060	540	--	--	1,730	--
6 1/2	--	2,450	2,120	--	--	850	1,730	60
7	--	2,600	2,100	--	600	800	1,750	--
8	--	2,700	--	520	--	--	1,400	--
10	--	2,700	1,980	--	--	--	--	--
12	500	2,750	---	500	--	--	--	60
15	--	2,050	--	--	600	--	920	--
20	520	700	1,850	580	--	--	890	--
30	560	450	1,810	530	600	--	--	60
40	500	300	--	--	600	--	550	--
60	--	300	--	270	600	--	370	--
70	--	--	1,420	--	--	--	290	--
90	--	--	1,000	--	600	--	--	--
90+	21/		22/	23/		24/		

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S2-105	S2-106	S2-108	S2-109	S2-110	S2-111	S3-4	S3-6
Date of test	3-11-39	3-14-39	3-14-39	12-27-38	3-28-39	3-17-39	4-22-39	3-22-39
Estimated discharge Gals. a min.	50	40	--	300	200	--	300	--
Time pump was idle before test	--	--	--	7 days	7 days	24 hrs.	48 hrs.	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes								
0	70	60	400	110	210	70	150	80
1/4	--	--	3,450	1,420	--	--	150	1,050
1/2	--	--	3,950	2,350	--	--	--	1,200
3/4	--	--	4,200	2,260	250	70	150	1,050
1	--	--	4,450	2,070	--	--	--	1,100
1 1/4	--	--	4,200	2,010	250	70	150	1,350
1 1/2	70	60	--	1,950	--	--	--	1,150
1 3/4	--	--	3,700	1,950	250	70	150	1,000
2	240	--	--	2,110	--	--	--	960
2 1/4	--	--	3,950	2,150	1,200	--	150	960
2 1/2	250	--	4,200	1,920	--	--	--	930
2 3/4	--	--	3,950	1,500	1,700	70	150	910
3	170	--	--	--	--	--	--	--
3 1/4	--	--	--	--	2,700	--	150	910
3 1/2	--	80	2,450	--	--	--	--	--
3 3/4	--	--	--	--	3,200	70	150	860
4	100	--	--	--	--	--	--	--
4 1/4	--	--	--	470	3,450	70	150	810
4 1/2	--	80	2,450	--	3,520	--	1,200	--
4 3/4	--	--	--	--	3,700	70	1,100	780
5	--	90	--	--	3,700	--	1,070	--
5 1/2	--	--	--	--	3,550	--	1,050	640
6	--	90	--	--	--	--	1,050	--
6 1/2	--	--	--	350	3,450	70	1,000	600
7	--	90	--	--	--	--	1,050	--
8	--	80	1,950	--	2,700	--	1,050	510
10	70	70	--	--	2,200	--	550	--
12	--	--	1,900	250	1,900	70	500	390
15	--	--	--	--	1,570	--	--	310
20	--	60	1,700	200	1,450	70	500	140
30	70	60	850	--	1,410	70	500	100
40	70	--	850	120	1,400	70	--	80
60	70	--	650	--	1,200	70	400	80
70	--	--	620	--	--	--	--	--
90	--	--	--	--	1,050	--	--	--
90+				25/			26/	

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	S3-7	S3-9	S3-13	S3-19	S3-22	S6-1	T1-4
Date of test	2-14-39	1-6-39	1-4-39	12-30-38	12-22-38	1-3-39	3-18-39
Estimated discharge Gal..a min.	200	150	325	260	450	500	600
Time pump was idle before test	--	--	12± hrs.	--	22 hrs.	7 days	--

Chloride in parts per million determined from field tests

Time interval after pump was started, in minutes								
	0	3,650	300	250	150	--	260	50
	¼	3,950	--	2,700	--	340	--	--
	½	--	300	3,750	--	370	--	--
	¾	3,950	--	4,050	150	350	--	60
	1	4,450	--	4,700	--	350	--	--
	1¼	4,450	300	4,750	--	360	260	--
	1½	4,200	--	3,450	--	300	--	--
	1¾	3,950	350	1,90?	--	270	--	60
	2	--	350	950	--	210	--	--
	2¼	4,200	--	550	150	250	260	--
	2½	--	350	350	--	390	--	--
	2¾	3,950	400	300	--	550	260	60
	3	--	--	250	--	620	--	--
	3¼	4,200	--	250	150	760	260	--
	3½	--	400	250	--	860	--	--
	3¾	3,950	450	250	--	940	260	60
	4	--	400	260	--	1,070	--	--
	4¼	3,950	450	410	150	1,170	260	--
	4½	--	450	700	--	1,250	260	--
	4¾	3,950	450	770	150	1,450	1,350	100
	5	--	450	800	--	1,400	2,050	--
	5½	3,950	450	750	--	710	2,250	--
	6	--	450	420	150	510	1,250	--
	6½	4,200	1,200	230	--	250	370	420
	7	--	1,950	--	--	230	280	470
	8	4,200	1,950	220	--	220	260	470
	10	1,700	2,050	220	--	--	260	470
	12	--	2,000	--	150	220	--	420
	15	1,220	1,880	200	--	220	220	--
	20	1,200	1,700	200	150	230	200	90
	30	--	1,200	200	150	250	--	80
	40	1,200	1,200	--	--	270	150	70
	60	980	1,000	200	--	300	--	60
	70	--	1,000	--	--	--	--	--
	90	--	850	--	--	350	--	--
	90+		27/			28/		

For footnotes, see page 141.

FLUCTUATIONS IN CHLORIDE IN WELL WATERS DURING PUMPING TESTS IN DIMMIT AND ZAVALA COUNTIES, TEXAS, 1938-39

The samples tested were taken from pump discharge at intervals during early stages of pumping following periods in which pump was idle

Well No.	
Date of test	
Estimated discharge Gals. a min.	
Time pump was idle before test	

Chloride in parts per million determined from field tests

	Footnotes

1/ 160 parts per million after 205 minutes of pumping.
160 parts per million after 310 minutes of pumping.
2/ 260 parts per million after 120 minutes of pumping.
260 parts per million after 180 minutes of pumping
90 parts per million after 19 hours of pumping.
3/ 700 parts per million after 120 minutes of pumping.
4/ 300 parts per million after 120 minutes of pumping.
5/ Power failed.
6/ Ditch caved and covered discharge pipe.
7/ 2,200 parts per million after 120 minutes of pumping.
8/ 350 parts per million after 125 minutes of pumping.
9/ 60 parts per million after 7½ minutes of pumping.
50 parts per million after 9 minutes of pumping.
10/ Power failed.
11/ Power failed.
12/ 210 parts per million after 14 minutes of pumping.
60 parts per million after 18 minutes of pumping.
13/ Pumped intermittently.
14/ 850 parts per million after 120 minutes of pumping.
15/ 280 parts per million after 120 minutes of pumping.
16/ Power failed.
17/ 120 parts per million after 135 minutes of pumping.
18/ 100 parts per million after 120 minutes of pumping.
19/ Power failed.
20/ 700 parts per million after 104 minutes of pumping.
380 parts per million after 126 minutes of pumping.
340 parts per million after 140 minutes of pumping.
21/ Power failed.
22/ 790 parts per million after 110 minutes of pumping.
650 parts per million after 130 minutes of pumping.
560 parts per million after 154 minutes of pumping.
520 parts per million after 160 minutes of pumping.
23/ 260 parts per million after 115 minutes of pumping.
24/ Power failed.
25/ 110 parts per million after 50 minutes of pumping.
26/ 270 parts per million after 4 hours of pumping.
27/ 600 parts per million after 3 hours of pumping.
500 parts per million after 4 hours of pumping.
28/ 385 parts per million after 185 minutes of pumping.

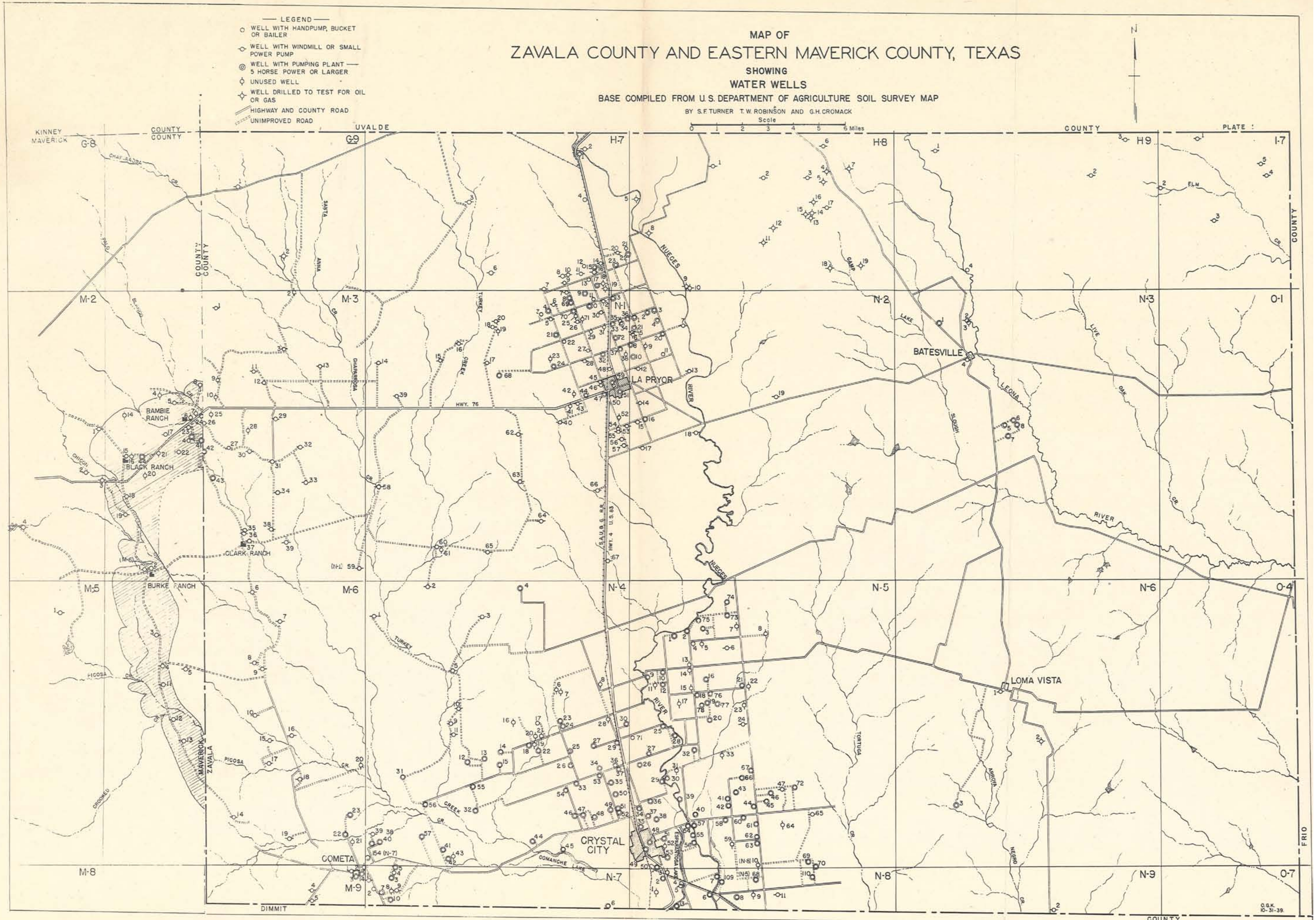
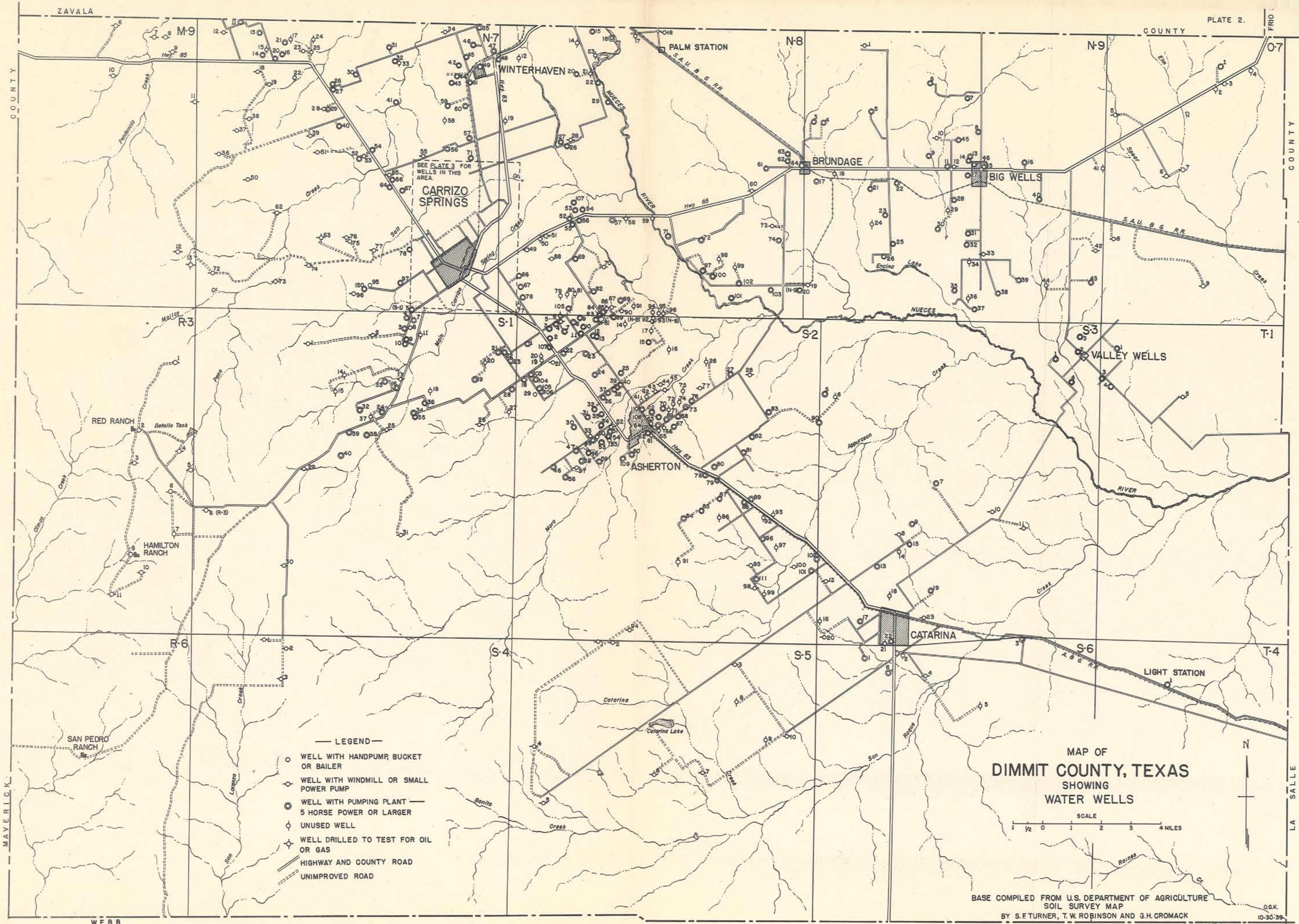

MAP OF
ZAVALA COUNTY AND EASTERN MAVERICK COUNTY, TEXAS
SHOWING
WATER WELLS
BASE COMPILED FROM U.S. DEPARTMENT OF AGRICULTURE SOIL SURVEY MAP
BY S.F. TURNER T.W. ROBINSON AND G.H. CROMACK
Scale
0 1 2 3 4 5 6 Miles
LEGEND
WELL WITH HANDPUMP, BUCKET OR BAILER
WELL WITH WINDMILL OR SMALL POWER PUMP
WELL WITH PUMPING PLANT — 5 HORSE POWER OR LARGER
UNUSED WELL
WELL DRILLED TO TEST FOR OIL OR GAS
HIGHWAY AND COUNTY ROAD
UNIMPROVED ROAD
N
KINNEY COUNTY
MAVERICK COUNTY
UVALDE COUNTY
DIMMIT COUNTY
FRIO COUNTY
MAVERICK COUNTY
ZAVALA COUNTY
PLATE
G-8
G-9
H-7
H-8
H-9
I-7
M-2
M-3
N-1
N-2
N-3
O-1
M-5
M-6
N-4
N-5
N-6
O-4
M-8
M-9
N-7
N-8
N-9
O-7
LA PRYOR
BATESVILLE
CRYSTAL CITY
LOMA VISTA
COMETA
RAMBIE RANCH
BLACK RANCH
CLARK RANCH
BURKE RANCH
NUECES RIVER
LEONA RIVER
HWY. 76
S.A.U.&G. R.R.
HWY. 4 U.S. 83
TURKEY CREEK
COMANCHE LAKE
PICOSA CR.
CHAPARROSA
ELM
LIVE OAK CR.
CAMP
LAKE
SLOUGH
TORTUGA
ARROYA
NEGRO CR.
CROOKED
CHICON
SANTA ANNA CR.
O.G.K.
10-31-39.

PLATE 2.


ZAVALA COUNTY
FRIO
LA SALLE COUNTY
MAVERICK COUNTY
WEBB COUNTY
M-9
N-7
N-8
N-9
O-7
R-3
S-1
S-2
S-3
T-1
R-6
S-4
S-5
S-6
T-4
WINTERHAVEN
PALM STATION
BRUNDAGE
BIG WELLS
CARRIZO SPRINGS
SEE PLATE 3 FOR WELLS IN THIS AREA.
VALLEY WELLS
RED RANCH
HAMILTON RANCH
ASHERTON
CATARINA
LIGHT STATION
SAN PEDRO RANCH
NUECES RIVER
S.A.U. & G. R.R.
Catarina Lake
LEGEND
WELL WITH HANDPUMP, BUCKET OR BAILER
WELL WITH WINDMILL OR SMALL POWER PUMP
WELL WITH PUMPING PLANT — 5 HORSE POWER OR LARGER
UNUSED WELL
WELL DRILLED TO TEST FOR OIL OR GAS
HIGHWAY AND COUNTY ROAD
UNIMPROVED ROAD
MAP OF
DIMMIT COUNTY, TEXAS
SHOWING
WATER WELLS
SCALE
1 1/2 0 1 2 3 4 MILES
N
BASE COMPILED FROM U.S. DEPARTMENT OF AGRICULTURE SOIL SURVEY MAP
BY S. F. TURNER, T. W. ROBINSON AND S. H. CROMACK
O.G.K.
10-30-39

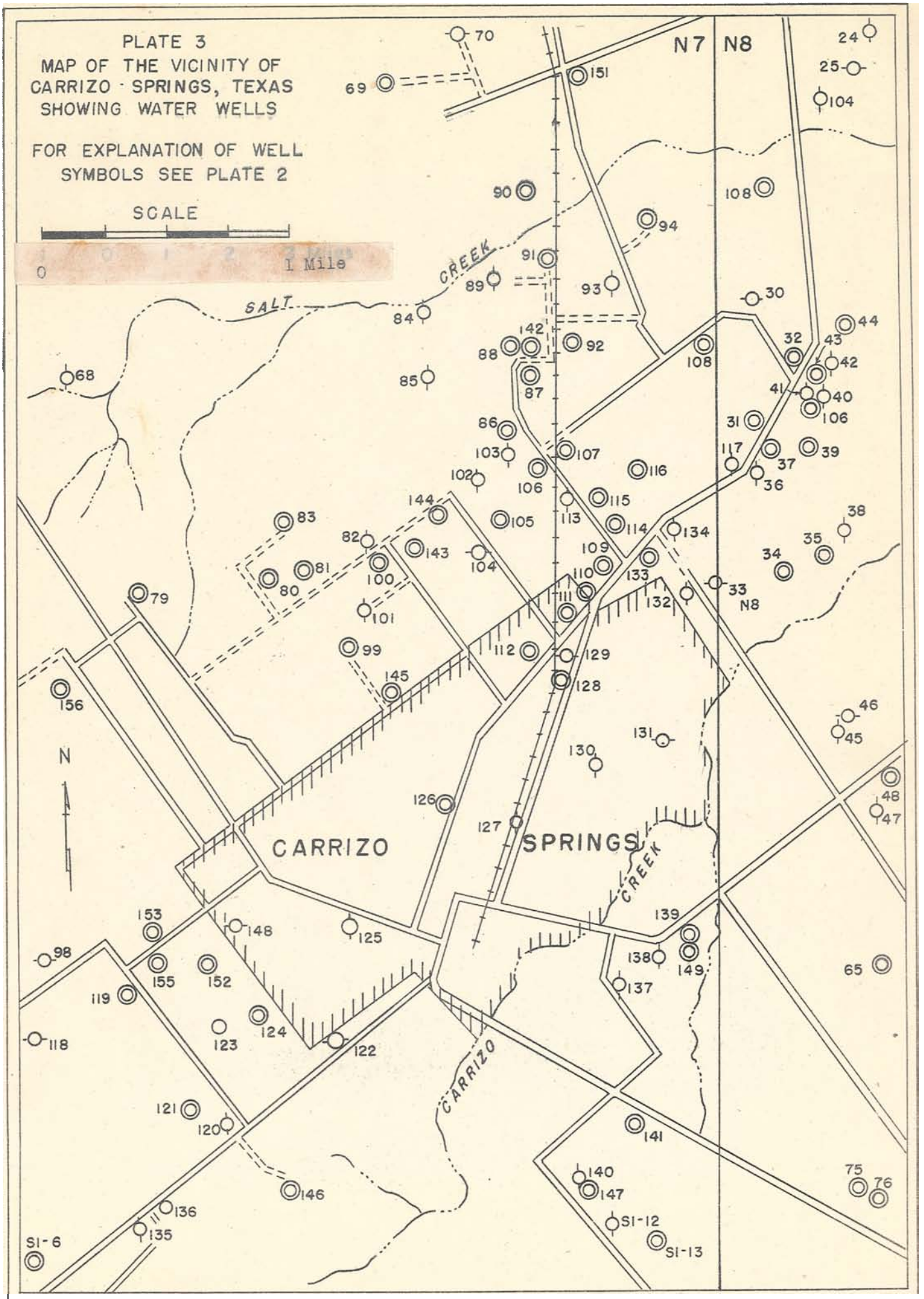


PLATE 3
MAP OF THE VICINITY OF
CARRIZO · SPRINGS, TEXAS
SHOWING WATER WELLS
FOR EXPLANATION OF WELL
SYMBOLS SEE PLATE 2
SCALE
0
1 Mile
N7
N8
SALT CREEK
CARRIZO SPRINGS
CREEK
CARRIZO
N
70
69
151
24
25
104
90
108
94
91
89
93
84
30
142
88
92
108
44
43
42
32
68
85
87
41
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106
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31
103
107
117
37
39
102
106
116
36
144
115
113
38
83
105
114
134
35
82
143
104
109
34
81
80
100
110
133
33
N8
79
101
111
132
99
112
129
145
128
156
46
45
131
130
126
48
47
127
153
148
125
139
98
155
152
138
149
65
119
137
118
123
124
122
121
120
141
146
140
147
75
76
136
135
SI-6
SI-12
SI-13