TEXAS BOARD OF WATER ENGINEERS

BULLETIN 5909

WATER-LEVEL MEASUREMENTS AND MAPS NORTHERN HIGH PLAINS, TEXAS 1958 AND 1959

Compiled by

F. A. Rayner, Geological Engineer
Texas Board of Water Engineers

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

August 1959

TABLE OF CONTENTS

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INTRODUCTION

In order to evaluate the effects of ground-water development, in relation to available supply, periodic measurements of water levels are made in selected observation wells throughout the state as a part of an observation well program conducted cooperatively by the Texas Board of Water Engineers and the United States Geological Survey.

This publication contains water-level measurements made in observation wells in eight Northern High Plains Counties in 1958 and 1959. The measurements of the depth to water are in feet below the land-surface.

A map showing changes in water levels accompanies the individual water-level tables for each of the eight counties. Changes in the water levels from 1958 to 1959 are indicated by red (decline) or blue (rise) figures.

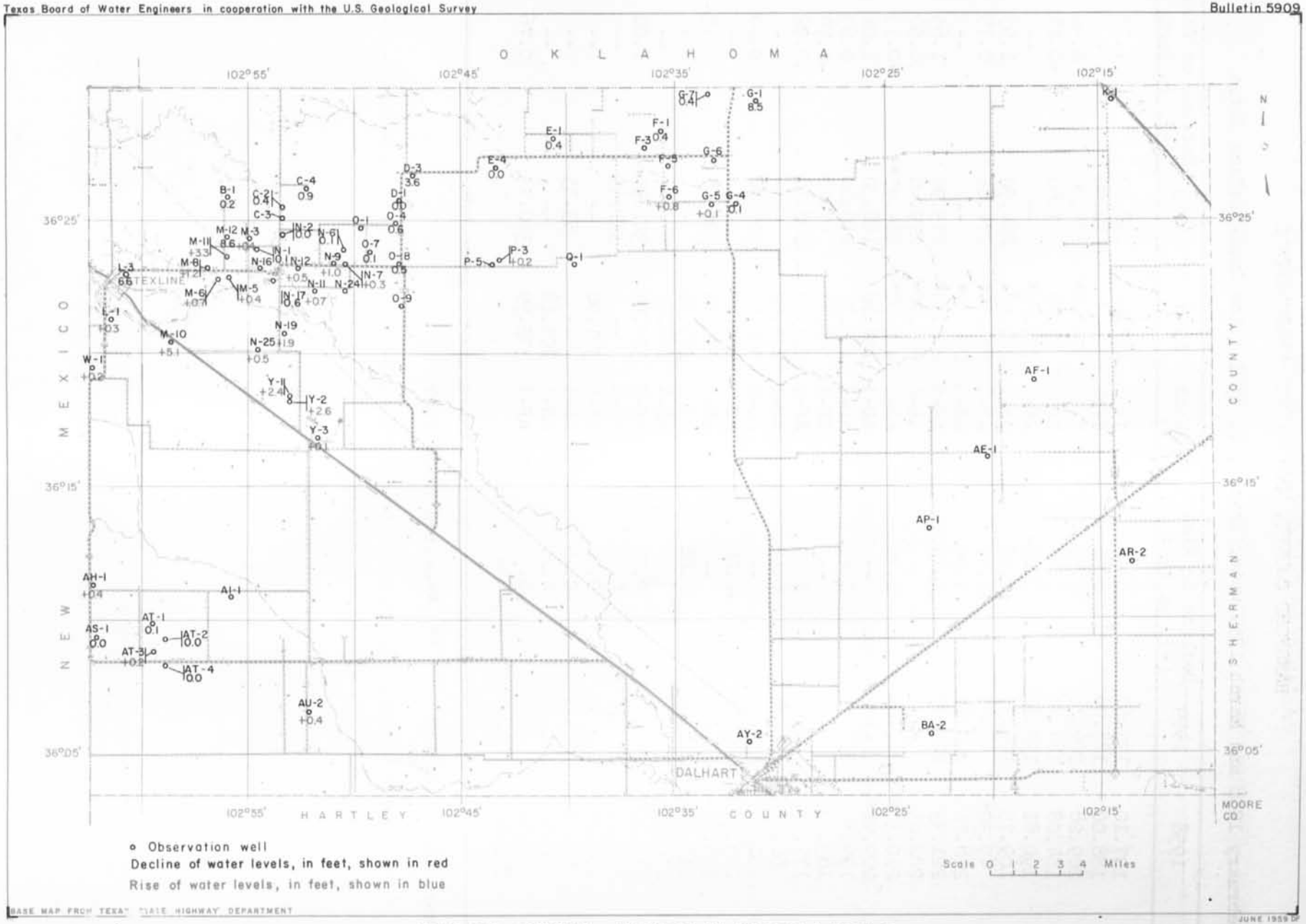
The assistance of the North Plains Ground-Water Conservation District No. 2 North of the Canadian River, in the Northern High Plains observation well program, is gratefully acknowledged.

DALLAM COUNTY, WATER-LEVEL MEASUREMENTS

April 1958 and March 1959 water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet	Well	1958	1959	Decline or Rise (+), in feet
B-1	99.65	99.82	0.17	N-12	72.30	71.83	+0.47
C-2	47.56	47.96	0.40	N-16	--	56.82	--
C-3	--	60.28	--	N-17	58.40	59.04	0.64
C-4	76.80	77.74	0.94	N-19	24.87	23.01	+1.86
D-1	3.53	3.53	0.00	N-24	--	37.96	--
D-3	18.87	22.48	3.61	N-25	41.30	40.82*	+0.48
E-1	63.00	63.40	0.40	O-1	73.87	--	--
E-4	28.86	28.84	+0.02	O-4	9.88	10.46	0.58
F-1	32.90	33.27	0.37	O-7	28.05	28.10	0.05
F-3	--	49.28	--	O-8	47.80	48.25	0.45
F-5	--	38.10	--	O-9	17.30	--	--
F-6	11.38	10.59*	+0.79	P-3	20.10	19.95	+0.15
G-1	77.75	86.20	8.45	P-5	--	13.45	--
G-4	52.57	52.71	0.14	Q-1	--	126.65	--
G-5	63.16	63.07	+0.09	W-1	88.85**	88.68	+0.17
G-6	55.03	--	--	Y-1	37.55	35.11	+2.44
G-7	56.58	56.99	0.41	Y-2	38.89	36.28	+2.61
K-1	--	255.29	--	Y-3	133.70	133.60	+0.10
L-1	81.54	81.27	+0.27	AE-1	--	331.02*	--
L-3	73.00	79.62	6.62	AF-1	--	295.06*	--
M-3	68.67	68.31	+0.36	AH-1	126.65	126.22	+0.43
M-5	55.60	55.16	+0.44	AI-1	83.60	--	--
M-6	56.85**	56.11	+0.74	AP-1	--	344.60*	--
M-8	54.03**	52.88	+1.15	AR-2	--	283.71*	--
M-10	56.97	51.91*	+5.06	AS-1	111.74	111.70	+0.04
M-11	77.70	74.42	+3.28	AT-1	98.76**	98.89	0.13
M-12	52.74	61.38	8.64	AT-2	93.00**	92.96	+0.04
N-1	66.53	66.58	0.05	AT-3	108.65**	108.45	+0.20
N-2	71.12	71.10	+0.02	AT-4	83.17**	83.15	+0.02
N-6	41.88	41.98	0.10	AU-2	142.85**	142.50	+0.35
N-7	40.70	40.38	+0.32	AY-2	--	254.78*	--
N-9	53.48	52.48	+1.00	BA-2	--	301.27	--
N-11	56.22	55.54	+0.68				

* Measured in April ** Measured in March



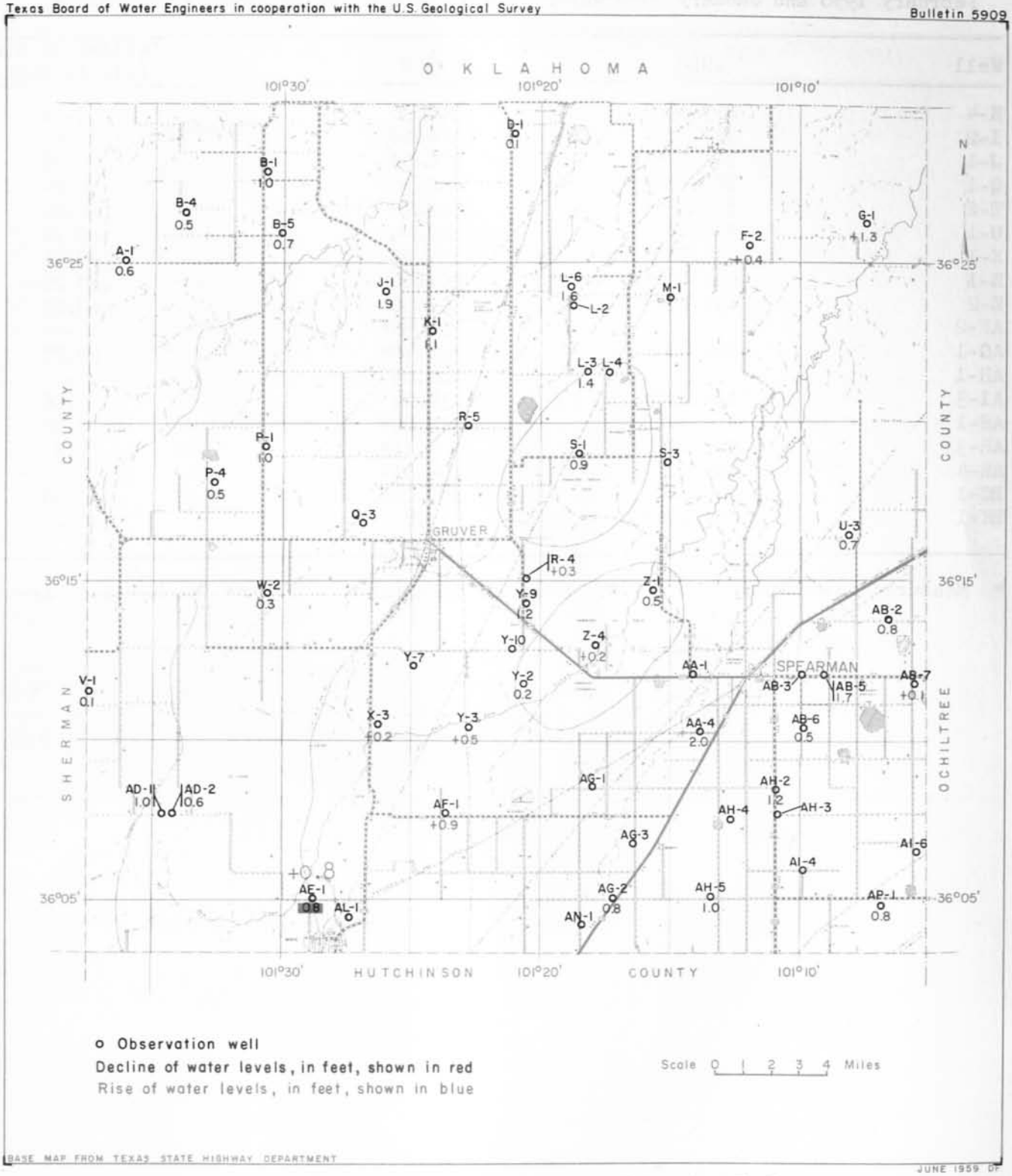
DALLAM COUNTY, CHANGE IN WATER LEVELS
APRIL 1958 TO MARCH 1959

HANSFORD COUNTY, WATER-LEVEL MEASUREMENTS

February 1958 and March 1959 water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet	Well	1958	1959	Decline or Rise (+), in feet
A-1	137.10	137.67	0.57	Y-9	197.60	198.80	1.20
B-1	188.00	188.96	0.96	Y-10	--	192.90	--
B-4	209.28	209.78	0.50	Z-1	74.40*	74.90	0.50
B-5	184.08	184.78	0.70	Z-4	57.78	57.60	+0.18
D-1	190.81	190.86	0.05	AA-1	236.80*	--	--
F-2	189.75	189.35	+0.40	AA-4	262.55	264.50	1.95
G-1	49.30*	48.05	+1.25	AB-2	273.90*	274.65	0.75
J-1	218.78	220.68	1.90	AB-3	266.50*	--	--
K-1	221.39	222.53	1.14	AB-5	272.25*	273.90	1.65
L-2	202.81	--	--	AB-6	278.90*	279.40	0.50
L-3	210.30*	211.65	1.35	AB-7	285.08*	284.95**	+0.13
L-4	209.92*	--	--	AD-1	157.28	158.30	1.02
L-6	199.80	201.40	1.60	AD-2	155.37	156.00	0.63
M-1	183.53*	--	--	AE-1	48.77	47.98	+0.79
P-1	177.57	178.60	1.03	AF-1	207.10	206.18	+0.92
P-4	180.05	180.57	0.52	AG-1	278.52	--	--
Q-3	161.36	--	--	AG-2	308.00	308.80	0.80
R-4	203.38	203.10	+0.28	AG-3	295.12	--	--
R-5	225.55	--	--	AH-2	291.55	292.70	1.15
S-1	217.12*	218.00	0.88	AH-3	295.50	--	--
S-3	216.95*	--	--	AH-4	298.87	--	--
U-3	244.10*	244.80	0.70	AH-5	320.95	321.95	1.00
V-1	152.20	152.28**	0.08	AI-4	--	331.65	--
W-2	154.00	154.32	0.32	AI-6	331.00	--	--
X-3	60.35	60.17	+0.18	AL-1	--	53.35	--
Y-2	58.90	59.10	0.20	AN-1	293.18	--	--
Y-3	27.02	26.50	+0.52	AP-1	339.59	340.35	0.76
Y-7	182.40	--	--				

* Measured in January ** Measured in February



o Observation well

Decline of water levels, in feet, shown in red

Rise of water levels, in feet, shown in blue

BASE MAP FROM TEXAS STATE HIGHWAY DEPARTMENT

JUNE 1959 DF

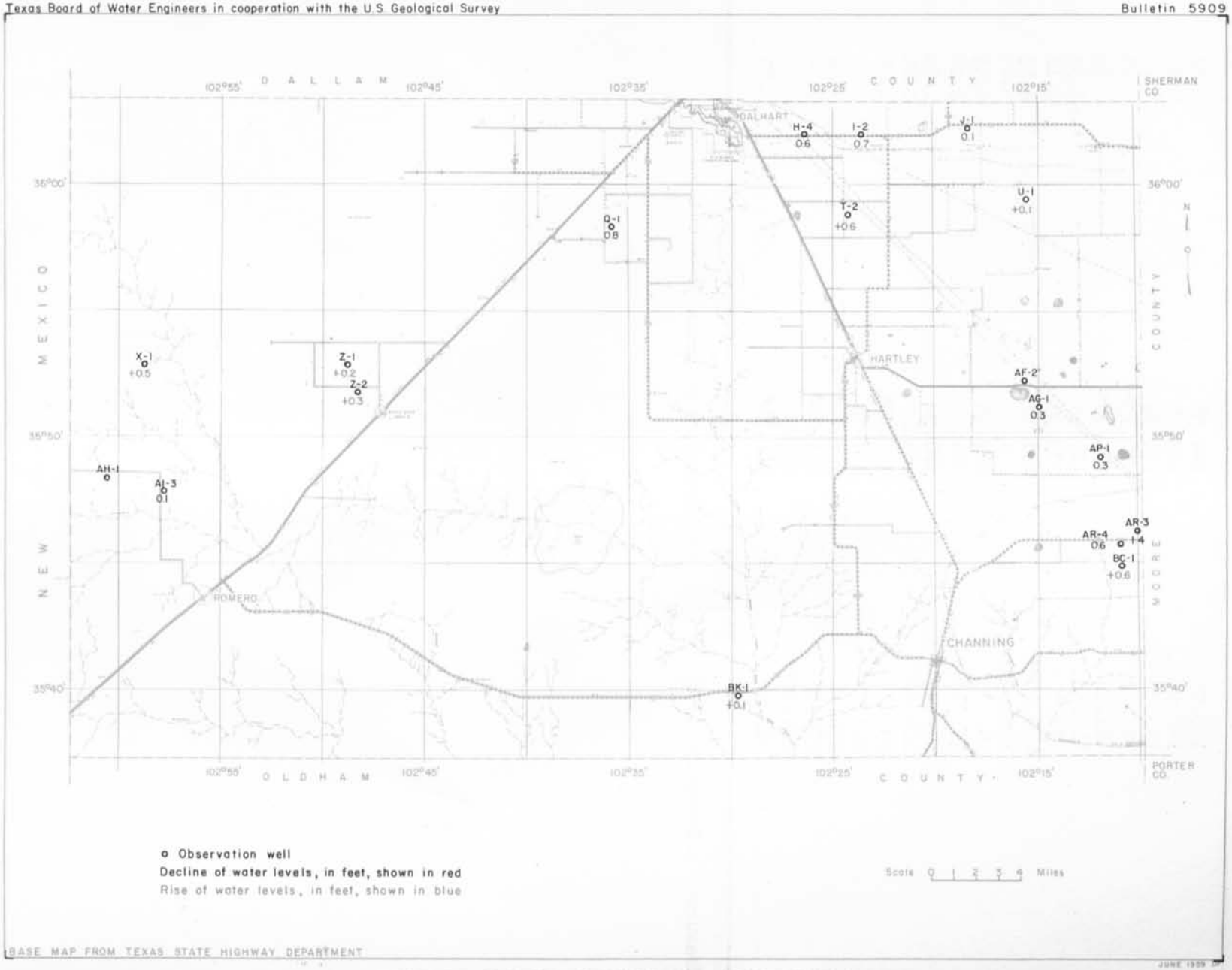
HANSFORD COUNTY, CHANGE IN WATER LEVELS
FEBRUARY 1958 TO MARCH 1959

HARTLEY COUNTY, WATER-LEVEL MEASUREMENTS

February 1958 and January 1959 water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet
H-4	299.80	300.36	0.56
I-2	313.55	314.20	0.65
J-1	301.50**	301.59	0.09
Q-1	181.75***	182.59	0.84
T-2	330.30**	329.70	+0.60
U-1	308.08	307.94	+0.14
X-1	134.75**	134.30	+0.45
Z-1	202.00**	201.80	+0.20
Z-2	199.75**	199.50	+0.25
AF-2	--	327.56*	--
AG-1	320.48	320.75*	0.27
AH-1	--	186.03	--
AI-3	134.18**	134.24	0.06
AR-1	312.50	312.80*	0.30
AR-3	301.80	303.15*	1.35
AR-4	294.00	294.57*	0.57
BC-1	287.70	287.10*	+0.60
BK-1	34.05**	33.98	+0.07

* Measured in February ** Measured in March *** Measured in April



o Observation well
Decline of water levels, in feet, shown in red
Rise of water levels, in feet, shown in blue

BASE MAP FROM TEXAS STATE HIGHWAY DEPARTMENT

JUNE 1959

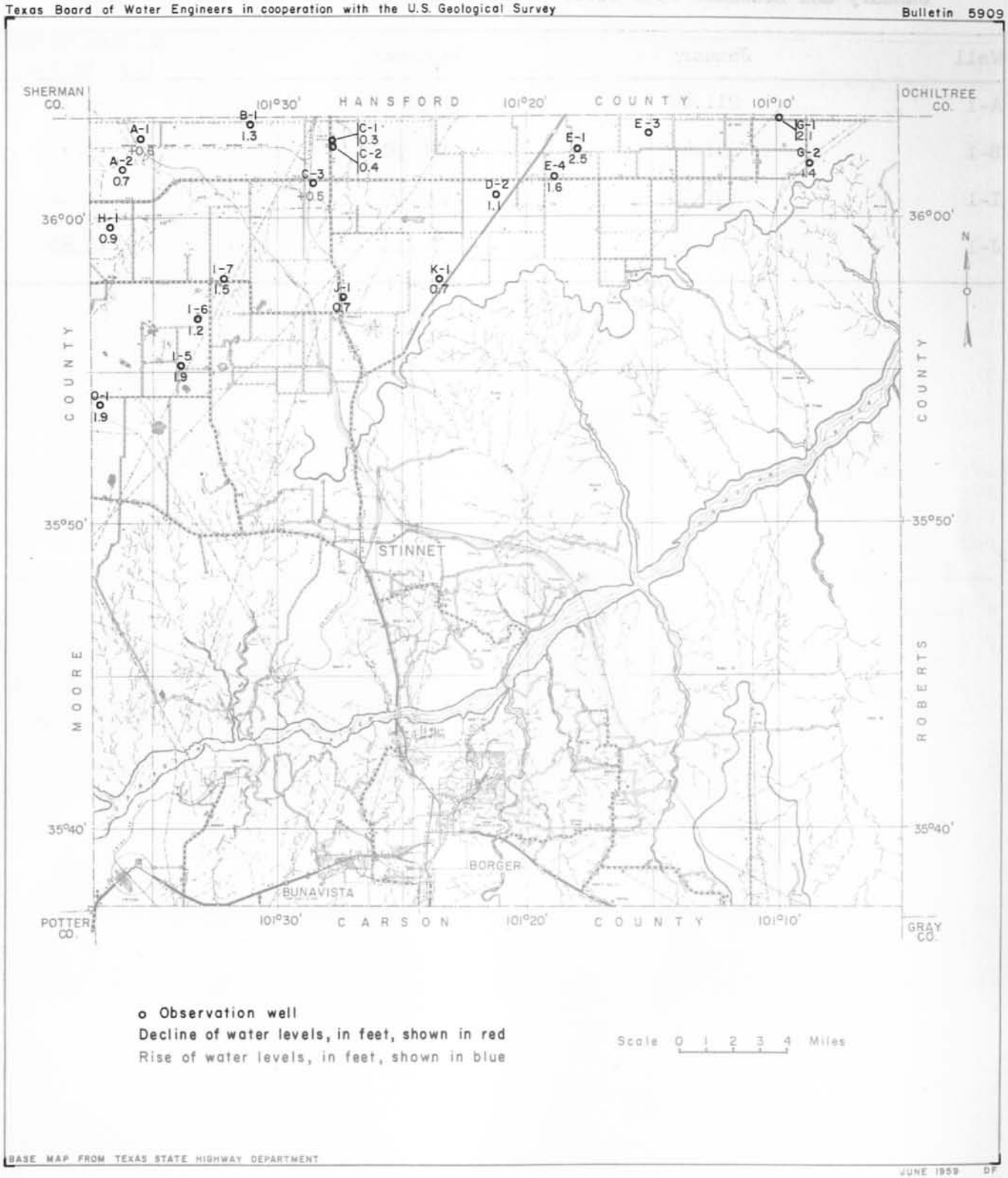
HARTLEY COUNTY, CHANGE IN WATER LEVELS
FEBRUARY 1958 TO JANUARY 1959

HUTCHINSON COUNTY, WATER-LEVEL MEASUREMENTS

February water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet
A-1	145.00	144.38	+0.62
A-2	148.65	149.35	0.70
B-1	150.75	152.00	1.25
C-1	72.20	72.45*	0.25
C-2	91.62	91.98*	0.36
C-3	110.88	110.35	+0.53
D-2	274.80	275.92	1.12
E-1	289.10**	291.63	2.53
E-3	327.85**	--	--
E-4	280.75	282.30	1.55
G-1	341.90**	344.00	2.10
G-2	361.25**	362.60	1.35
H-1	162.80	163.65	0.85
I-5	236.05	237.90*	1.85
I-6	213.35	214.55	1.20
I-7	206.18	207.70*	1.52
J-1	213.16	213.90*	0.74
K-1	264.70**	265.35	0.65
O-1	223.48	225.35*	1.87

* Measured in December 1958 ** Measured in January

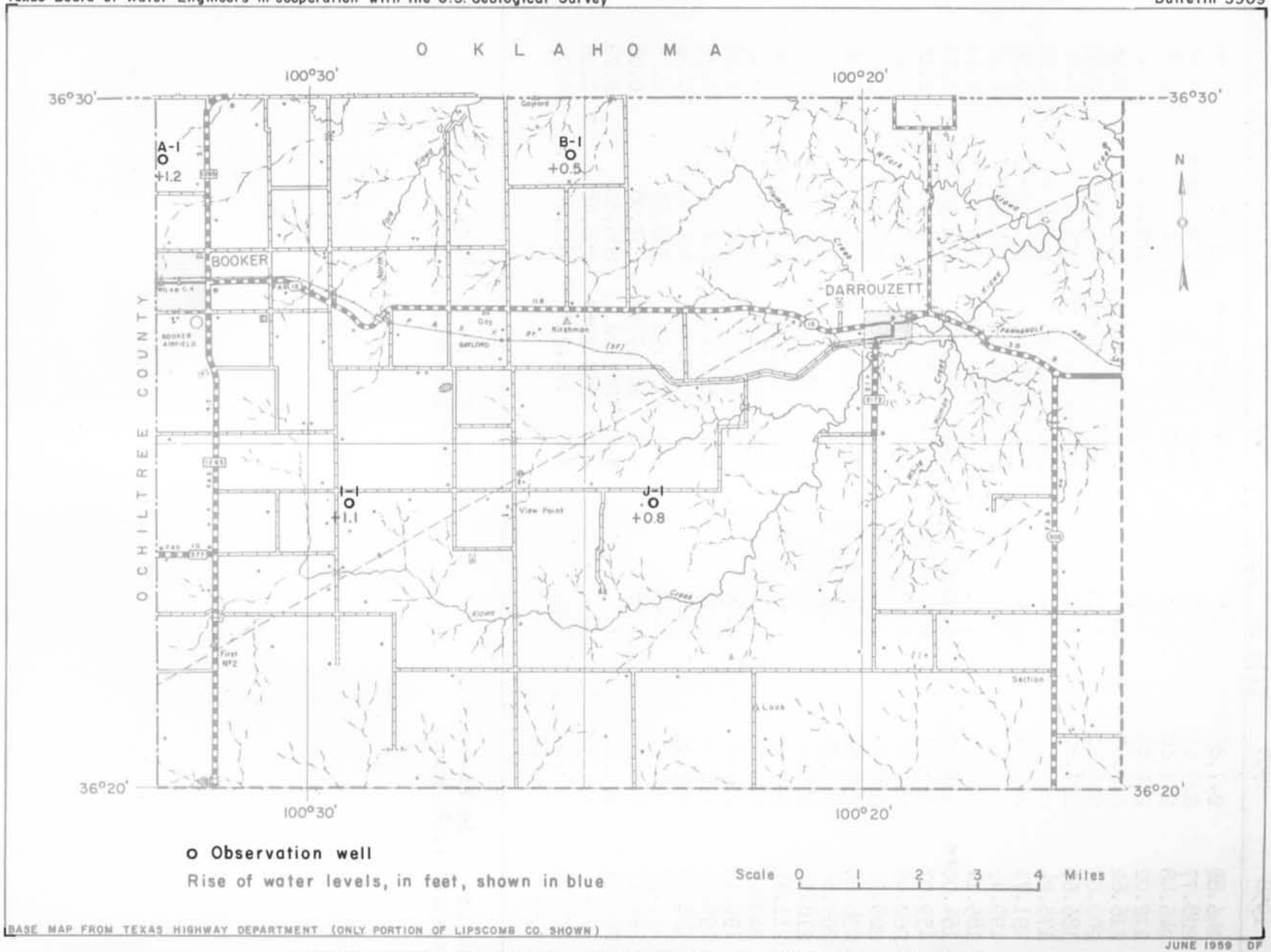


HUTCHINSON COUNTY, CHANGE IN WATER LEVELS
FEBRUARY 1958 TO FEBRUARY 1959

LIPSCOMB COUNTY, WATER-LEVEL MEASUREMENTS

January and December 1958 water levels, in feet below land-surface datum

Well	January	December	Decline or Rise (+), in feet
A-1	211.80	210.64	+1.16
B-1	201.45	200.98	+0.47
I-1	191.16	190.02	+1.14
J-1	175.15	174.35	+0.80



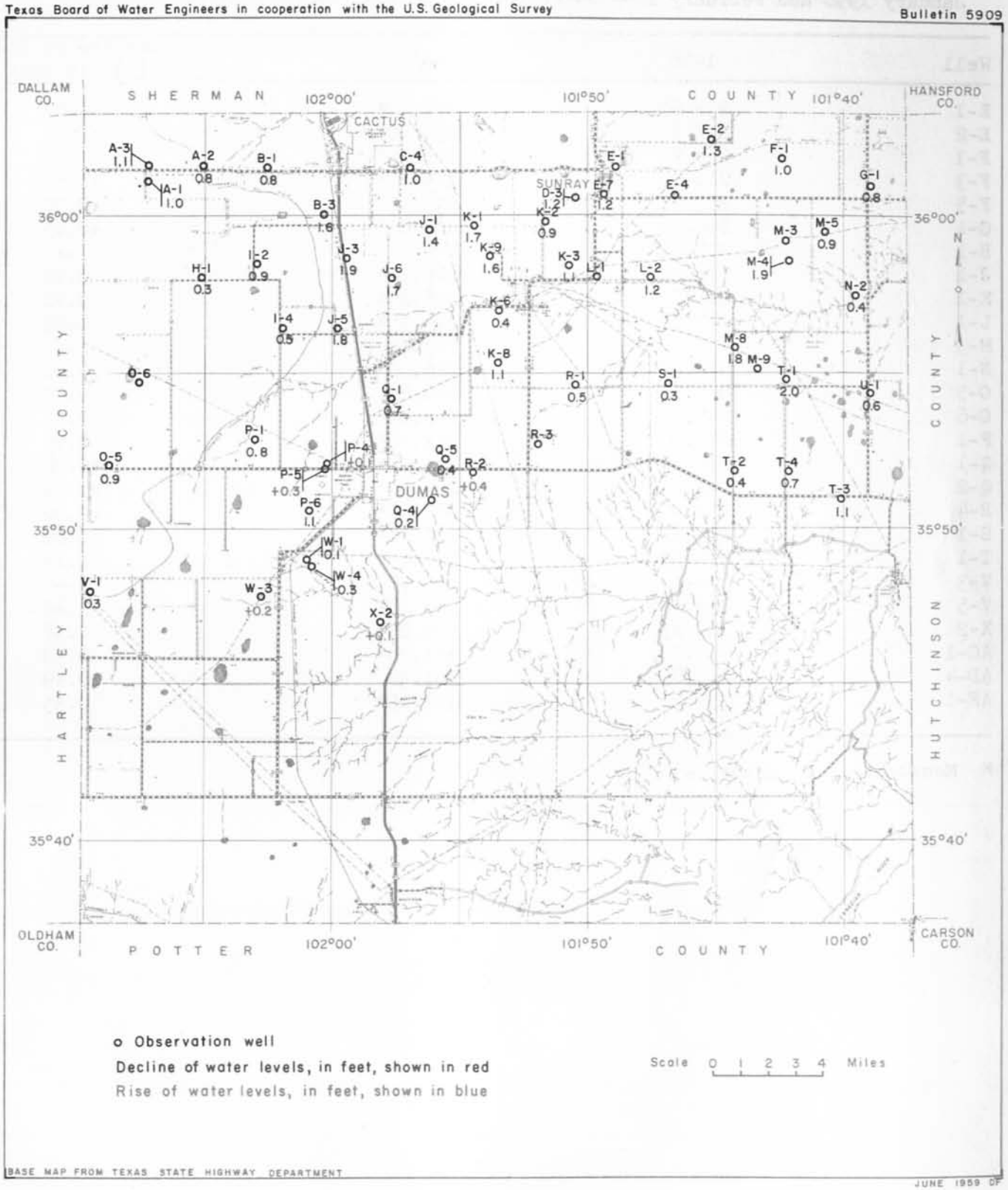
LIPSCOMB COUNTY, CHANGE IN WATER LEVELS
JANUARY TO DECEMBER 1958

MOORE COUNTY, WATER-LEVEL MEASUREMENTS

March 1958 and February 1959 water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet	Well	1958	1959	Decline or Rise (+), in feet
A-1	246.88	247.85	0.97	M-4	184.95**	186.85	1.90
A-2	228.77	229.60	0.83	M-5	177.85	178.85***	0.90
A-3	246.48	247.60	1.12	M-8	162.23	164.00	1.77
B-1	212.02	212.84	0.82	M-9	--	182.45	--
B-3	216.62	218.25	1.63	N-2	113.25**	113.61*	0.36
C-4	200.07	201.10	1.03	O-5	304.00**	304.85	0.85
D-3	186.65	187.80	1.15	O-6	--	271.55	--
E-1	175.24	--	--	P-1	248.65	249.47*	0.82
E-2	191.71	193.01	1.30	P-4	257.26	257.17*	+0.09
E-4	199.49	--	--	P-5	262.54	262.28*	+0.26
E-7	185.14	186.35	1.21	P-6	273.20**	274.33	1.13
F-1	164.00**	165.00	1.00	Q-1	237.79	238.50	0.71
G-1	159.07	159.83	0.76	Q-4	247.05	247.20	0.15
H-1	260.49	260.76	0.27	Q-5	240.37	240.80	0.43
I-2	228.01	228.95	0.94	R-1	201.98	202.50	0.52
I-4	238.26	238.80	0.54	R-2	253.48	253.10	+0.38
J-1	205.80	207.20	1.40	R-3	--	236.00	--
J-3	218.54	220.40	1.86	S-1	180.72	181.00	0.28
J-5	211.34	213.10	1.76	T-1	179.32	181.30	1.98
J-6	210.10	211.75	1.65	T-2	200.65	201.05	0.40
K-1	199.19	200.85	1.66	T-3	226.62	227.70	1.08
K-2	195.50	196.40	0.90	T-4	206.25	206.95	0.70
K-3	191.88	192.95	1.07	U-1	203.92	204.50	0.58
K-6	197.97	198.40	0.43	V-1	310.32	310.57	0.25
K-8	204.17	205.25	1.08	W-1	267.90**	267.98	0.08
K-9	209.53	211.10	1.57	W-3	287.02	286.80	+0.22
L-1	--	191.32	--	W-4	250.20**	250.48	0.28
L-2	176.90	178.10	1.20	X-2	101.25****	101.20	+0.05
M-3	--	190.12	--				

* Measured in December 1958
** Measured in February
*** Measured in March
**** Measured in April



o Observation well

Decline of water levels, in feet, shown in red

Rise of water levels, in feet, shown in blue

Scale 0 1 2 3 4 Miles

BASE MAP FROM TEXAS STATE HIGHWAY DEPARTMENT

JUNE 1959

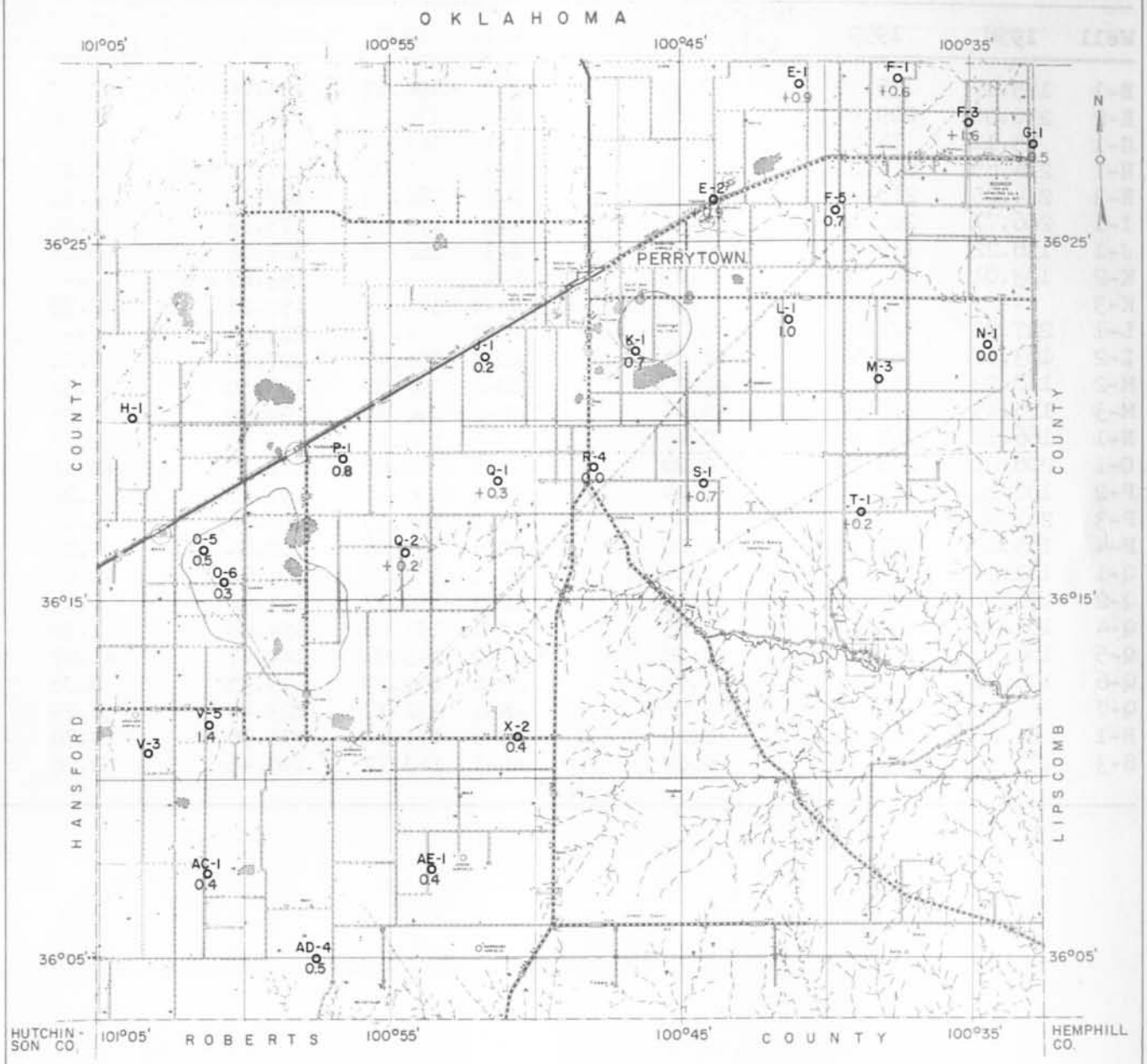
MOORE COUNTY, CHANGE IN WATER LEVELS
MARCH 1958 TO FEBRUARY 1959

OCHILTREE COUNTY, WATER-LEVEL MEASUREMENTS

January 1958 and February 1959 water levels, in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet
E-1	232.95	232.10*	+0.85
E-2	237.74	236.90*	+0.84
F-1	215.90	215.34*	+0.56
F-3	211.54	209.96*	+1.58
F-5	233.75	234.45	0.70
G-1	206.30	205.85*	+0.45
H-1	224.38*	--	--
J-1	248.95	249.10*	0.15
K-1	225.52	226.23*	0.71
L-1	243.20	244.15*	0.95
M-3	--	233.60	--
N-1	216.00	216.00*	0.00
O-5	240.35	240.88	0.53
O-6	245.07	245.40	0.33
P-1	242.40	243.15*	0.75
Q-1	254.00	253.72*	+0.28
Q-2	243.23	243.00	+0.23
R-4	262.90	262.88*	+0.02
S-1	204.82	204.14*	+0.68
T-1	261.90	261.75*	+0.15
V-3	--	293.70	--
V-5	283.78	285.18*	1.40
X-2	303.87	304.25*	0.38
AC-1	340.70	341.08*	0.38
AD-4	380.85	381.34	0.49
AE-1	356.80	357.15*	0.35

* Measured in December 1958



o Observation well
Decline of water levels, in feet, shown in red
Rise of Water levels, in feet, shown in blue

Scale 0 1 2 3 4 Miles

BASE MAP FROM TEXAS STATE HIGHWAY DEPARTMENT

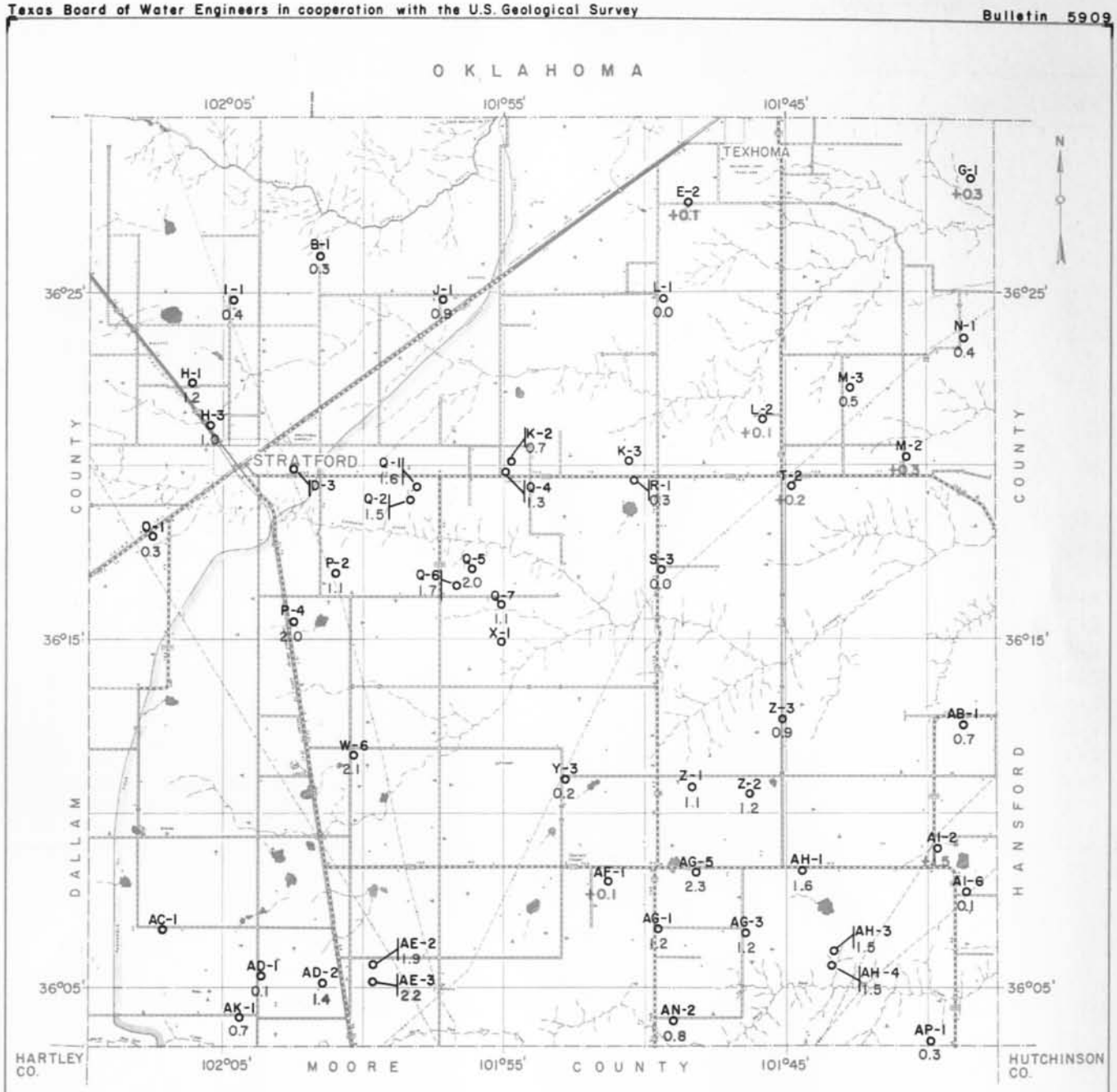
JUNE 1959

OCHILTREE COUNTY, CHANGE IN WATER LEVELS
JANUARY 1958 TO FEBRUARY 1959

SHERMAN COUNTY, WATER-LEVEL MEASUREMENTS

Water levels (measurements made in January, February or March), in feet below land-surface datum

Well	1958	1959	Decline or Rise (+), in feet	Well	1958	1959	Decline or Rise (+), in feet
B-1	175.17	175.50	0.33	T-2	196.17	196.00	+0.17
E-2	230.00	229.94	+0.06	W-6	176.70	178.80	2.10
G-1	75.11	74.85	+0.26	X-1	163.47	--	--
H-1	214.85	216.02	1.17	Y-3	157.08	157.31	0.23
H-3	214.05	215.03	0.98	Z-1	186.01	187.12	1.11
I-1	206.71	207.15	0.44	Z-2	174.62	175.86	1.24
J-1	138.22	139.14	0.92	Z-3	166.18	167.05	0.87
K-2	183.01	183.70	0.69	Z-4	--	193.62	--
K-3	--	188.25	--	AB-1	149.53	150.25	0.72
L-1	227.20	227.20	0.00	AC-1	--	221.04	--
L-2	183.57	183.52	+0.05	AD-1	206.97	207.08	0.11
M-2	158.20	157.91	+0.29	AD-2	192.08	193.50	1.42
M-3	175.45	175.90	0.45	AE-2	192.24	194.10	1.86
N-1	166.11	166.54	0.43	AE-3	195.67	197.85	2.18
O-1	208.01	208.29	0.28	AF-1	212.88	212.77	+0.11
P-2	182.10	183.24	1.14	AG-1	196.00	197.22	1.22
P-3	201.57	--	--	AG-3	166.55	167.74	1.19
P-4	185.10	187.10	2.00	AG-5	190.58	192.85	2.27
Q-1	181.54	183.15	1.61	AH-1	155.06	156.66	1.60
Q-2	178.17	179.70	1.53	AH-3	150.37	151.90	1.53
Q-4	181.35	182.60	1.25	AH-4	153.36	154.88	1.52
Q-5	168.50	170.50	2.00	AI-2	145.94	144.47	+1.47
Q-6	176.30	177.95	1.65	AI-6	149.29	149.35	0.06
Q-7	166.12	167.23	1.11	AK-1	222.70	223.44	0.74
R-1	185.80	186.09	0.29	AN-2	171.20	171.96	0.76
S-3	175.88	175.92	0.04	AP-1	148.17	148.45	0.28



o Observation well

Decline of water levels, in feet, shown in red

Rise of water levels, in feet, shown in blue

Scale 0 1 2 3 4 Miles

BASE MAP FROM TEXAS STATE HIGHWAY DEPARTMENT

JUNE 1959 DF

SHERMAN COUNTY, CHANGE IN WATER LEVELS 1958 TO 1959