

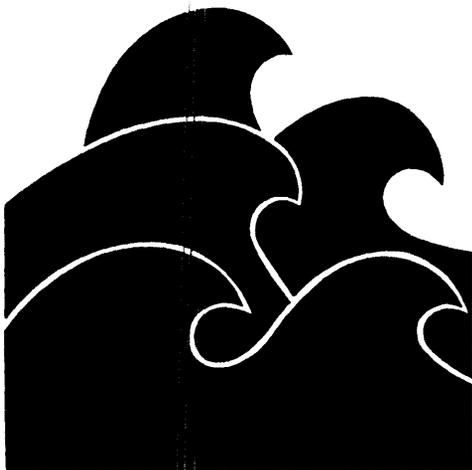
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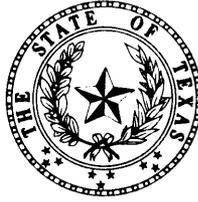
Report 288

***EVALUATING THE GROUND-WATER
RESOURCES OF THE HIGH PLAINS
OF TEXAS***

Records of Wells, and Maps Showing Well Locations, Base of Aquifer,
Water Levels, and Saturated Thickness

Volume 4





TEXAS DEPARTMENT OF WATER RESOURCES

REPORT 288

**EVALUATING THE GROUND-WATER RESOURCES
OF THE HIGH PLAINS OF TEXAS**

Volume 4

**Records of Wells, and Maps Showing Well
Locations, Base of Aquifer, Water Levels,
and Saturated Thickness**

By

Tommy Knowles, Phillip Nordstrom,
and William B. Klemt

Prepared by the Texas Department of Water Resources in cooperation with the U.S. Geological Survey, High Plains Underground Water Conservation District No. 1, North Plains Ground Water Conservation District No. 2, and Panhandle Ground Water Conservation District No. 3

DECEMBER 1984

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Published and distributed
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Texas Department of Water Resources
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TABLE OF CONTENTS

Page

INTRODUCTION..... 1

<u>County</u>	<u>Tables</u>	<u>Maps</u>			
	<u>Records of wells</u>	<u>Well locations</u>	<u>Base of aquifer</u>	<u>Water levels, 1979-80</u>	<u>Saturated thickness, 1980</u>
Andrews	4	35	37	39	41
Borden	43	45	47	49	51
Cochran	53	79	81	83	85
Dawson	87	105	107	109	111
Ector	113	125	127	129	131
Gaines	133	175	177	179	181
Garza	183	187	189	191	193
Glasscock	195	199	201	203	205
Hockley	207	243	245	247	249
Howard	251	261	263	265	267
Lubbock	269	309	311	313	315
Lynn	317	343	345	347	349
Martin	351	365	367	369	371
Midland	373	383	385	387	389
Terry	391	413	415	417	419
Yoakum	421	443	445	447	449

EVALUATING THE GROUND-WATER RESOURCES OF THE HIGH PLAINS OF TEXAS

Volume 4

INTRODUCTION

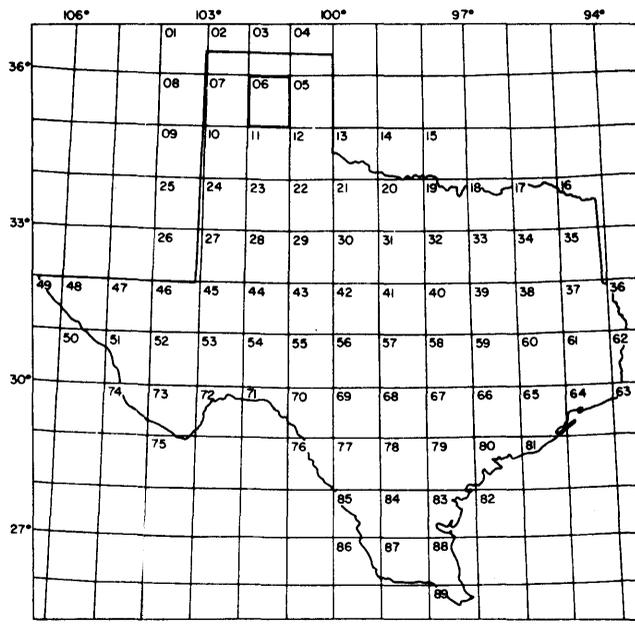
This report is prepared in four volumes. Volume 1 contains interpretive information presented as text and related tables and regional figures. Volumes 2 through 4 contain supporting basic data including records of approximately 12,200 wells and county maps depicting well locations, elevation of the base of the High Plains aquifer, elevation of water levels in 1980, and saturated thicknesses in 1980. Volume 4 contains the basic data for the counties in the southern third of the study area as shown on the accompanying map.

Well-Numbering System

To facilitate the location of wells and to avoid duplication of well numbers in present and future studies, the Texas Department of Water Resources has adopted a statewide well-numbering system. This system is based on division of the State into a grid of 1 -degree quadrangles formed by degrees of latitude and longitude, and the repeated division of these quadrangles into smaller ones as shown in the following diagram.

Each 1 -degree quadrangle is divided into sixty-four $7\frac{1}{2}$ -minute quadrangles, each of which is further divided into nine $2\frac{1}{2}$ -minute quadrangles. Each 1 -degree quadrangle in the State has been assigned an identification number. The $7\frac{1}{2}$ -minute quadrangles are numbered consecutively from left to right, beginning in the upper left-hand corner of the 1 -degree quadrangle, and the $2\frac{1}{2}$ -minute quadrangles within each $7\frac{1}{2}$ -minute quadrangle are similarly numbered. The first two digits of a well number identify the 1 -degree quadrangle; the third and fourth digits, the $7\frac{1}{2}$ -minute quadrangle; the fifth digit identifies the $2\frac{1}{2}$ -minute quadrangle; and the last two digits or letter identify the well within the $2\frac{1}{2}$ -minute quadrangle.

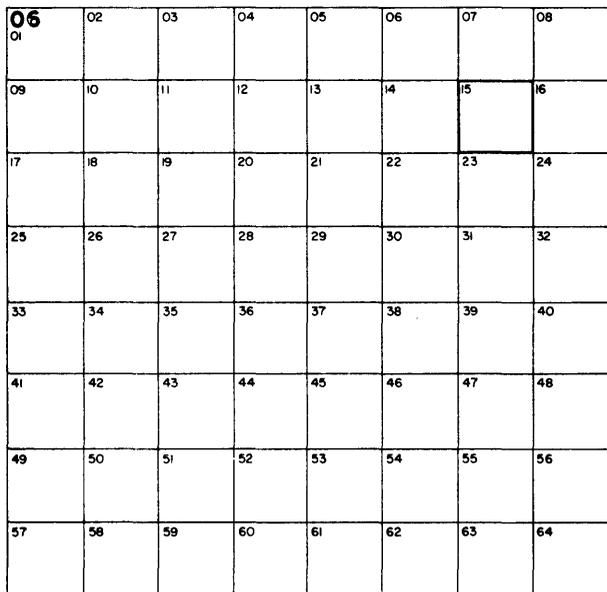
On the well-location maps in this report, the 1 -degree grid lines are identified with large open-block numerals, and the $7\frac{1}{2}$ -minute quadrangles are numbered in their northwest corners. The 3-digit number or number-letter shown with the well symbol contains the number of the $2\frac{1}{2}$ -minute quadrangle in which the well is located and the number of the well within that quadrangle.



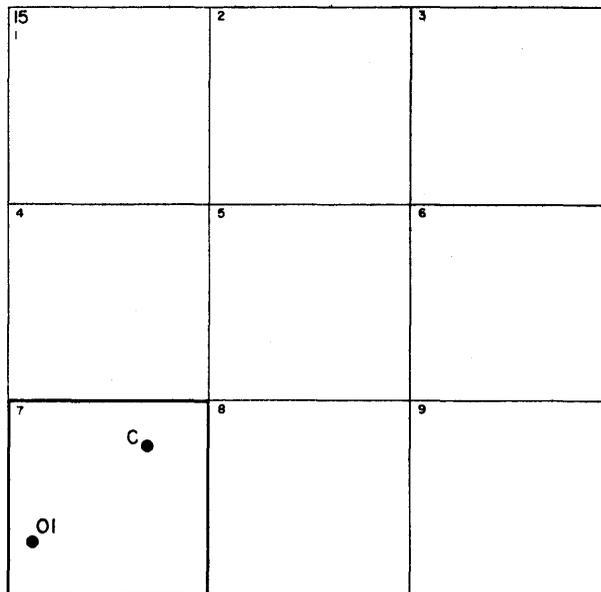
1 - degree Quadrangles

Location of Wells 06-15-70I and 7C

- 06 1-degree quadrangle
- 15 7 1/2 - minute quadrangle
- 7 2 1/2 - minute quadrangle
- 01,C Well number within 2 1/2 - minute quadrangle



7 1/2 - minute Quadrangles



2 1/2 minute Quadrangles

Well Numbering System

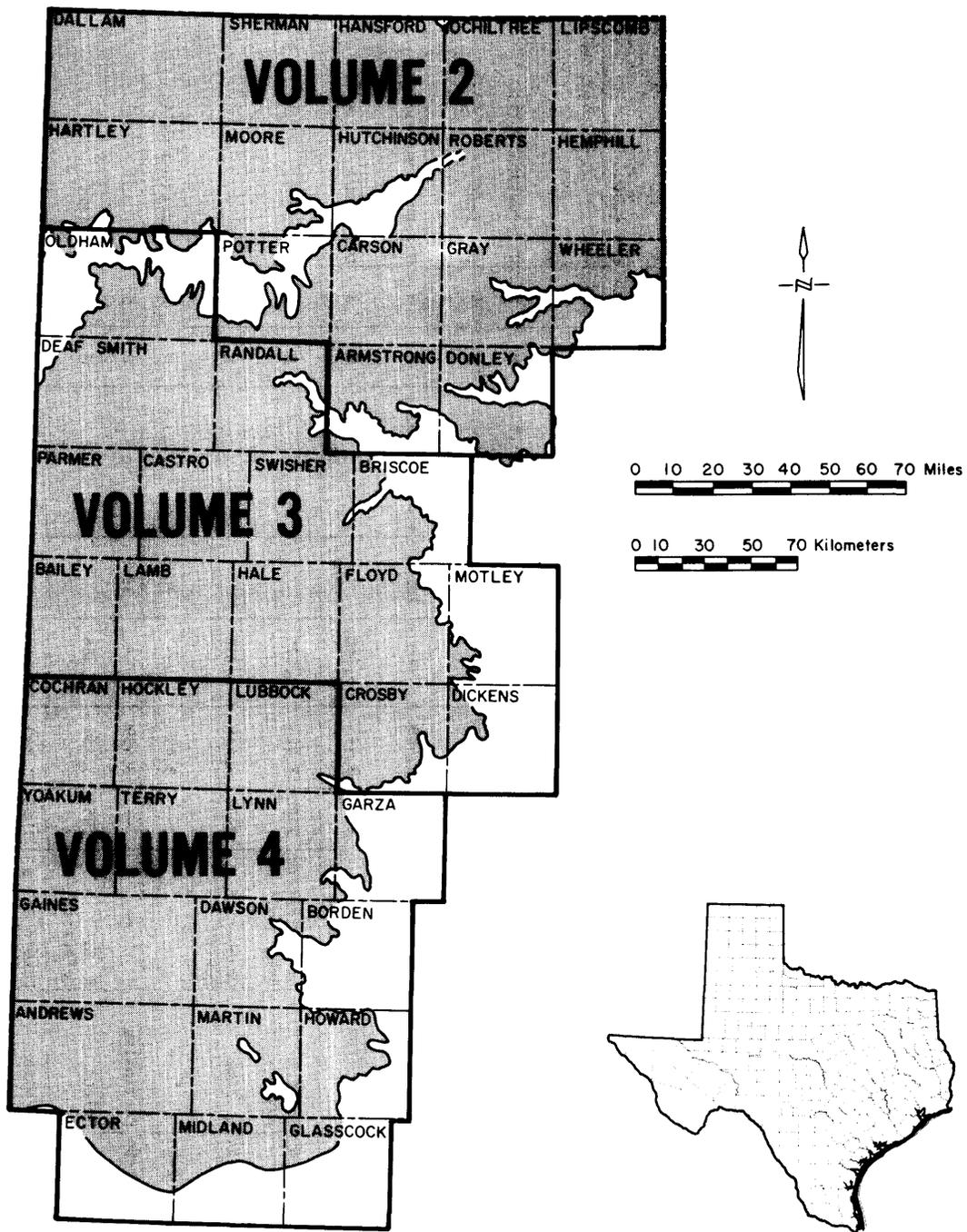
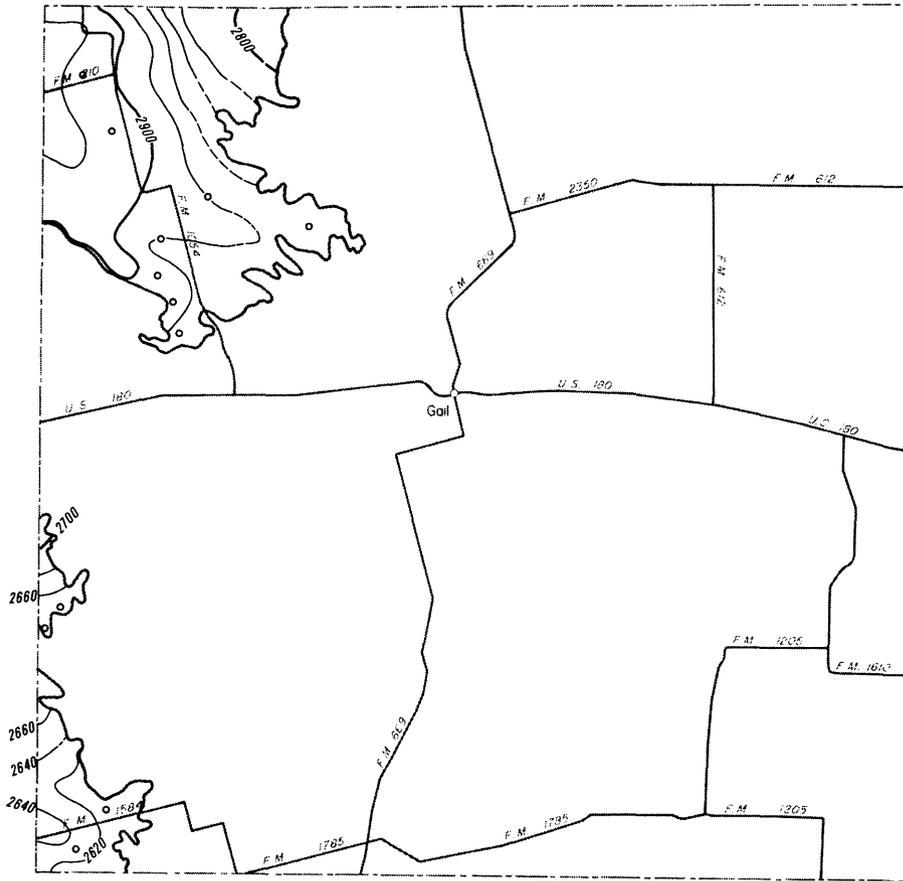


Figure 1
 Extent of the High Plains Aquifer in Texas
 and Index to Volumes 2, 3, and 4



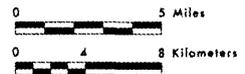
EXPLANATION

○
Well used for control
—2800—

Line showing approximate altitude of the base
of the High Plains Aquifer
Dashed where control is limited
Interval 20 feet

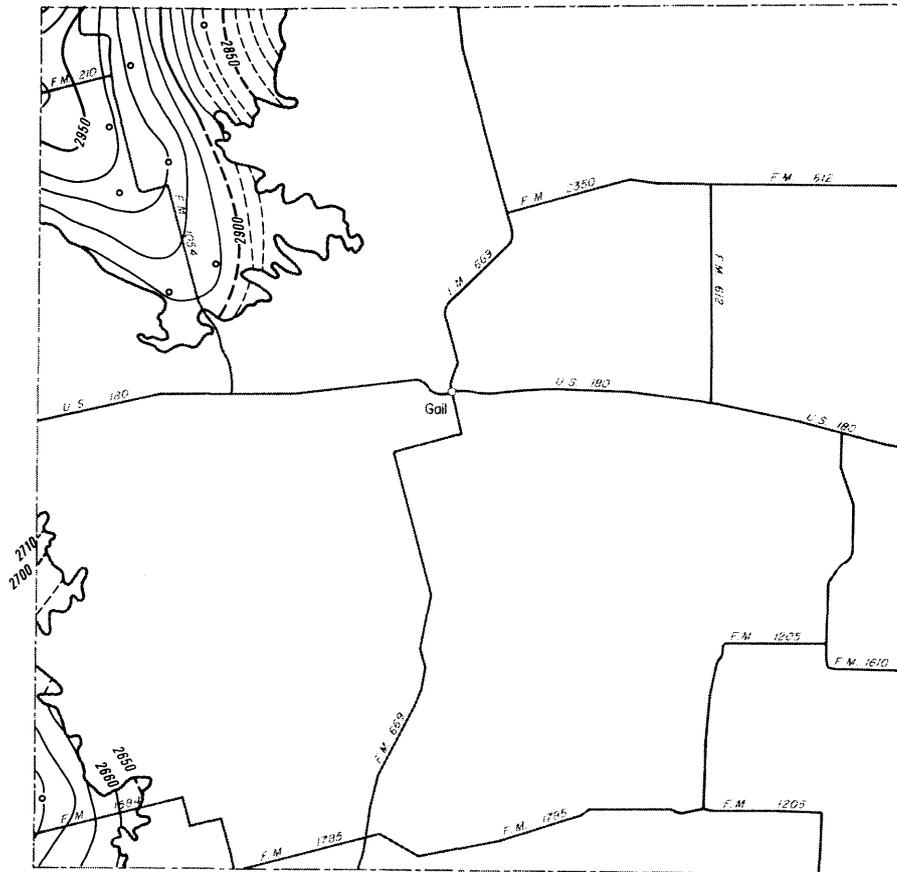
Datum is mean sea level

Note: Not all data points are presented
which were used in contouring



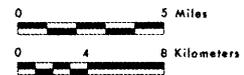
Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of the Base of the
High Plains Aquifer, Borden County, Texas**



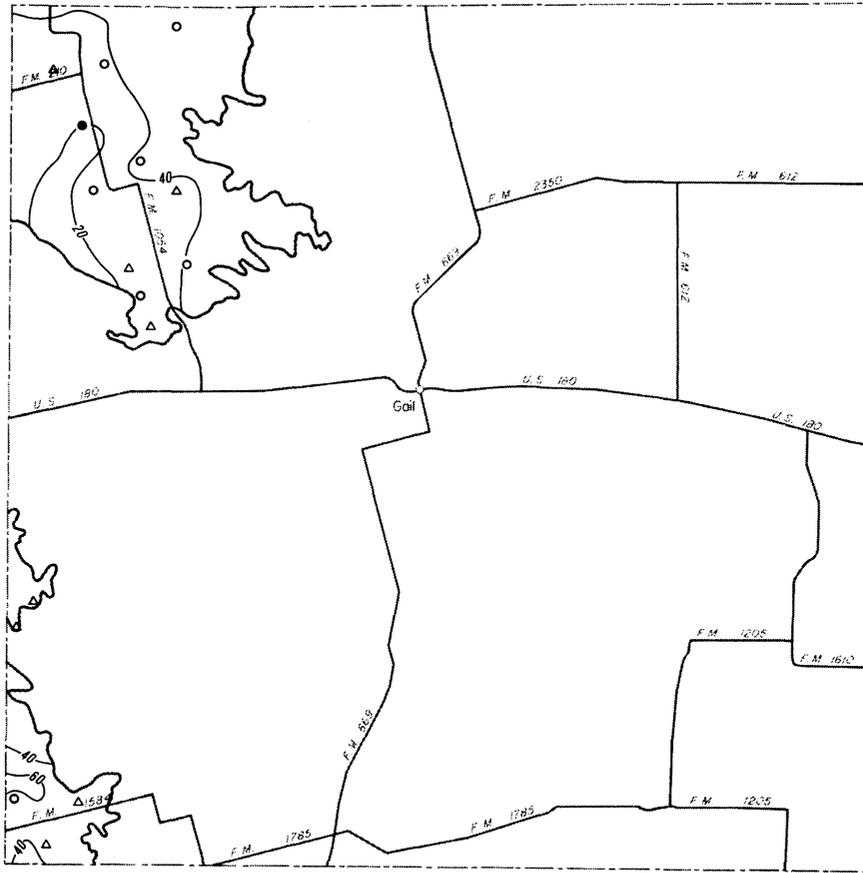
EXPLANATION

- Well used for control
- 2800 —
Line showing approximate altitude of water levels in the High Plains Aquifer
Dashed where control is limited
Interval 10 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Borden County, Texas**

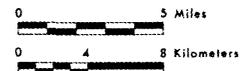


EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

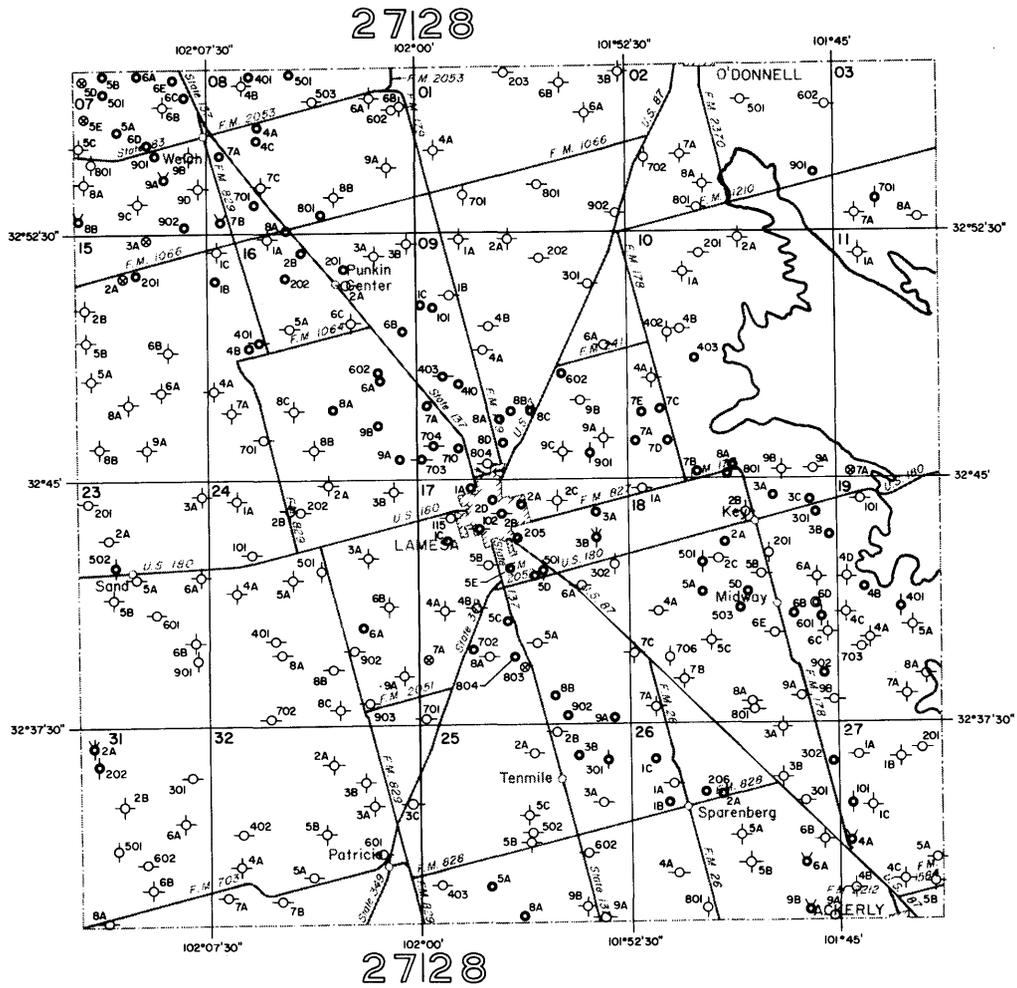
— 40 —
 Line showing approximate saturated thickness of the High Plains Aquifer
 Interval 20 feet

Note: Not all data points are presented which were used in contouring



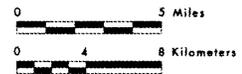
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Borden County, Texas



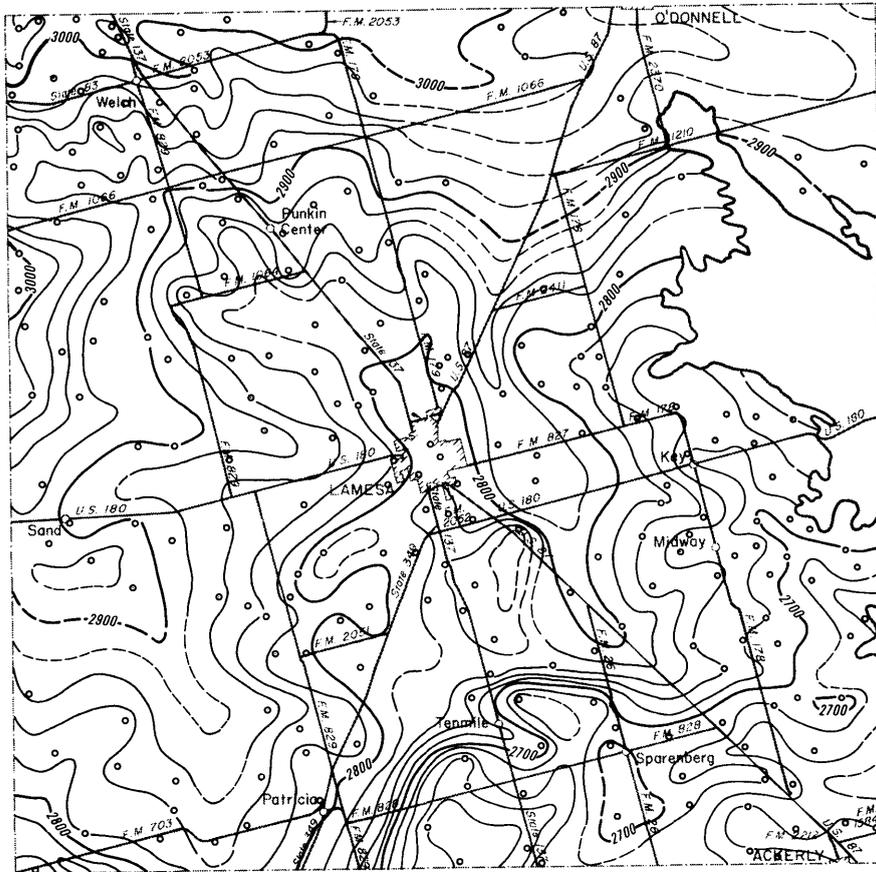
EXPLANATION

- | | |
|--|----------------------------------|
| | |
| | |
| | 201 |
| | Last three digits of well number |
| | 2A |
| | Temporary well number |



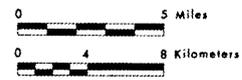
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Location of Control Wells, Dawson County, Texas



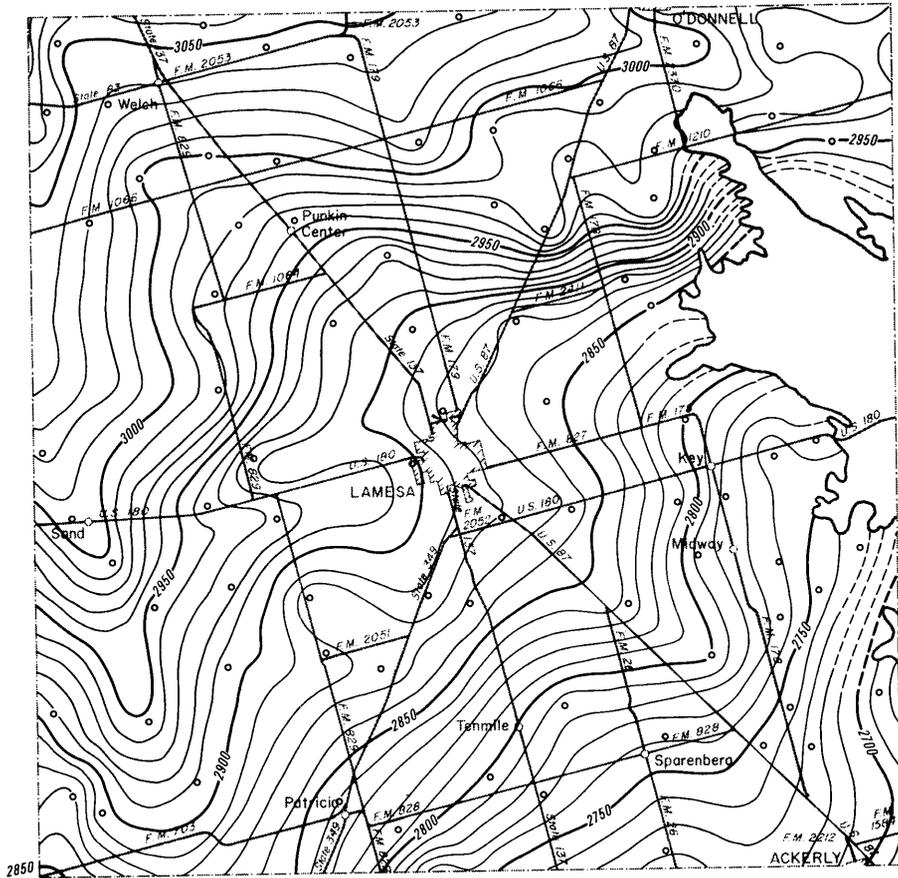
EXPLANATION

- Well used for control
- 2800 ———
- Line showing approximate altitude of the base of the High Plains Aquifer
Dashed where control is limited
- Interval 20 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Dawson County, Texas



EXPLANATION

○
Well used for control

— 2900 —
Line showing approximate altitude of water levels in the High Plains Aquifer

- - -
Dashed where control is limited
Interval 10 feet

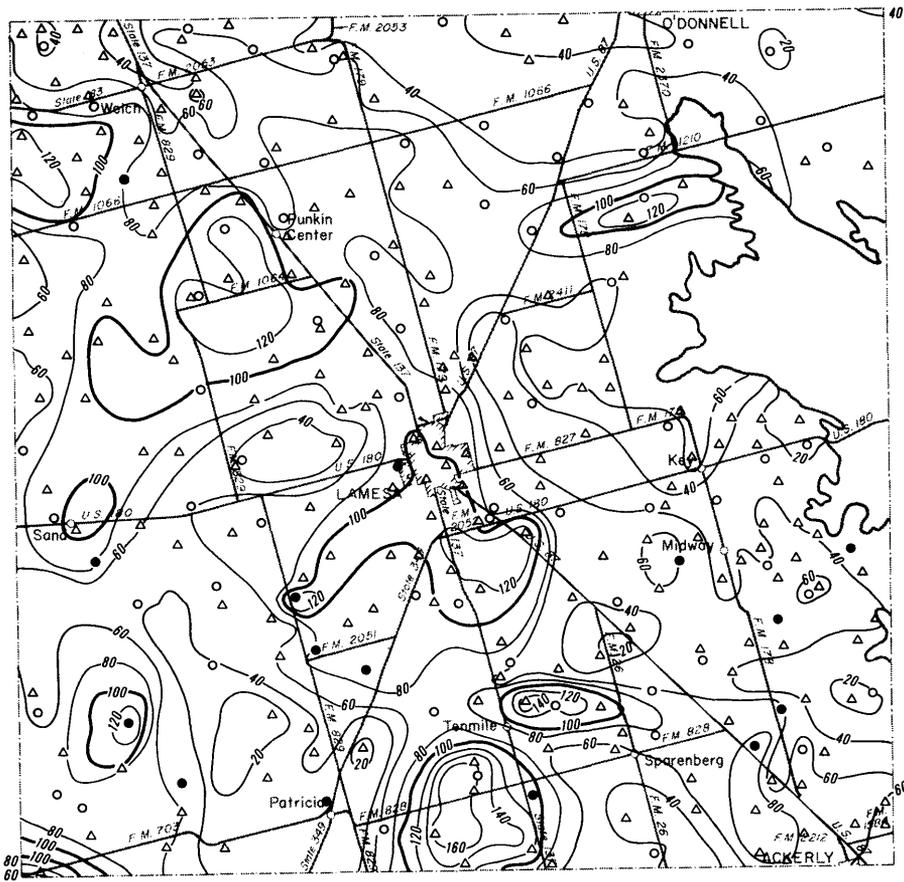
Datum is mean sea level

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Dawson County, Texas**



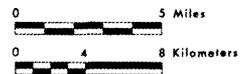
EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- ▲ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

— 60 —

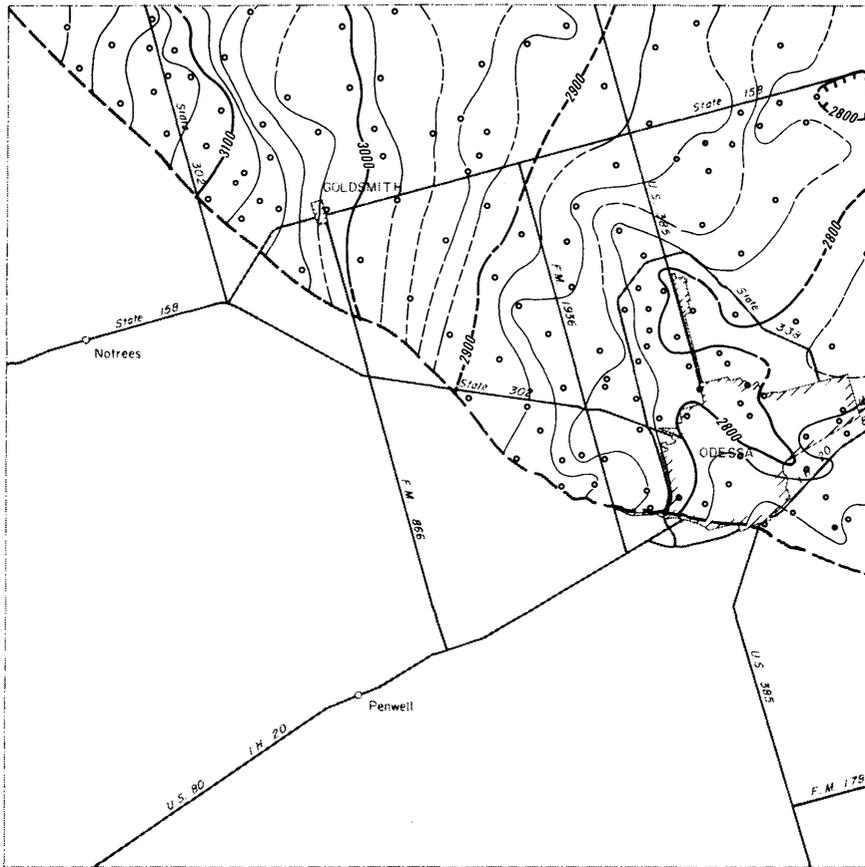
Line showing approximate saturated thickness of the High Plains Aquifer
Interval 20 feet

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Dawson County, Texas



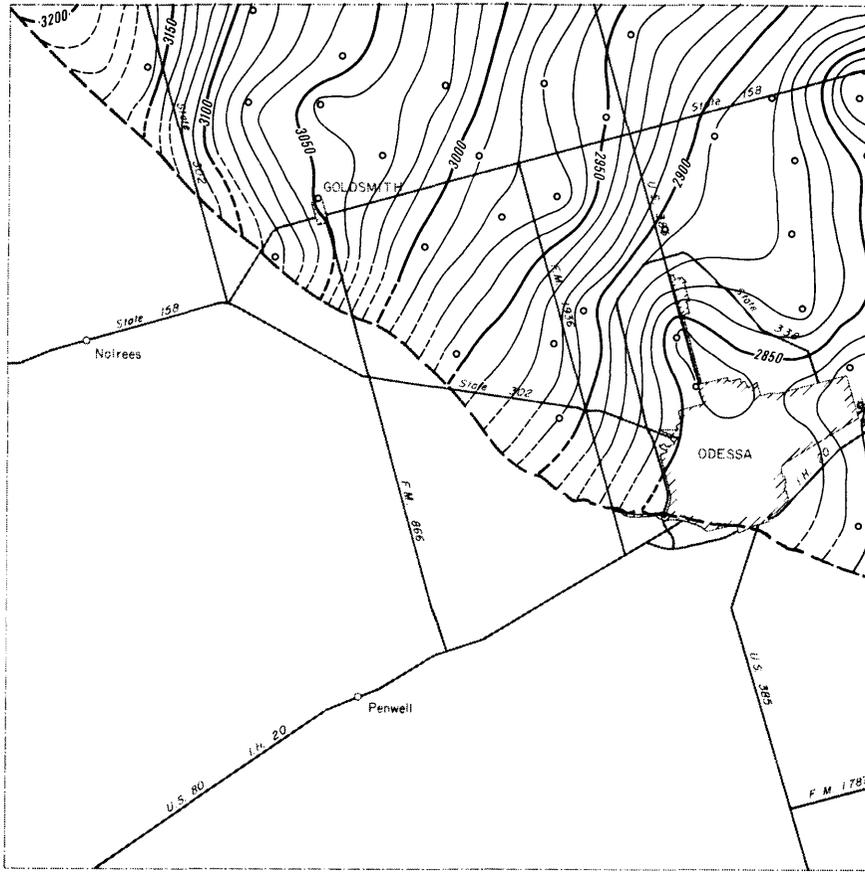
EXPLANATION

- Well used for control
- 2900 ——
- Line showing approximate altitude of the base of the High Plains Aquifer
- Dashed where control is limited
- Interval 20 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Ector County, Texas



EXPLANATION

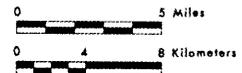
○
Well used for control
—— 3000 ——

Line showing approximate altitude of
water levels in the High Plains Aquifer

Dashed where control is limited
Interval 10 feet

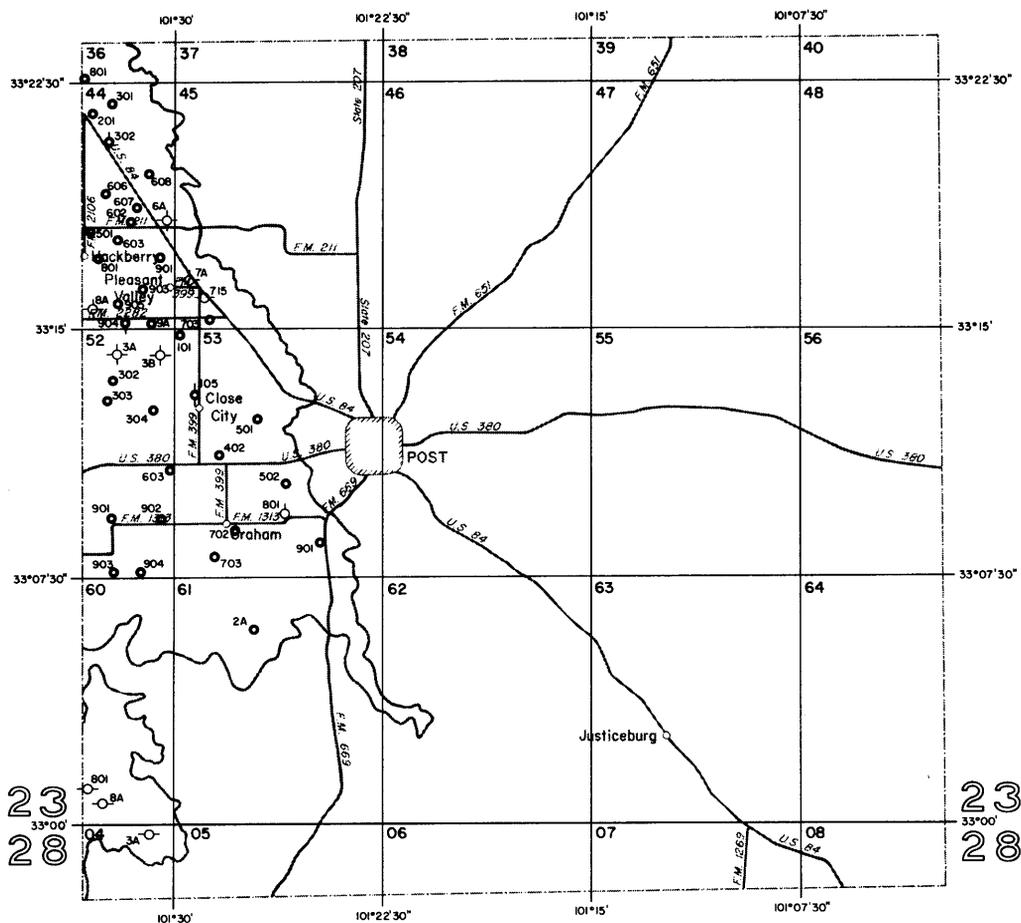
Datum is mean sea level

Note: Not all data points are presented
which were used in contouring



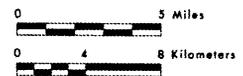
Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Ector County, Texas**



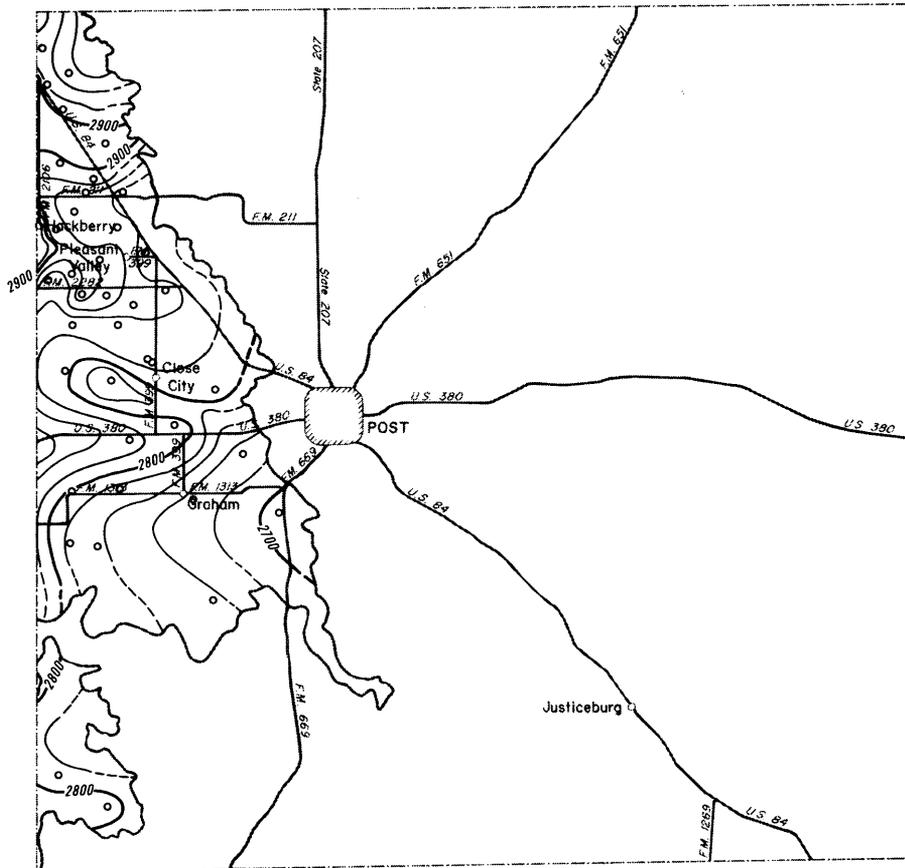
EXPLANATION

- | | |
|----------------------------|----------------------------------|
| | |
| Public supply well | Test hole |
| | |
| Industrial well | Unused or abandoned well |
| | 201 |
| Irrigation well | Last three digits of well number |
| | 2A |
| Domestic or livestock well | Temporary well number |
| | |
| Oil or gas well | |



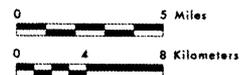
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Location of Control Wells, Garza County, Texas



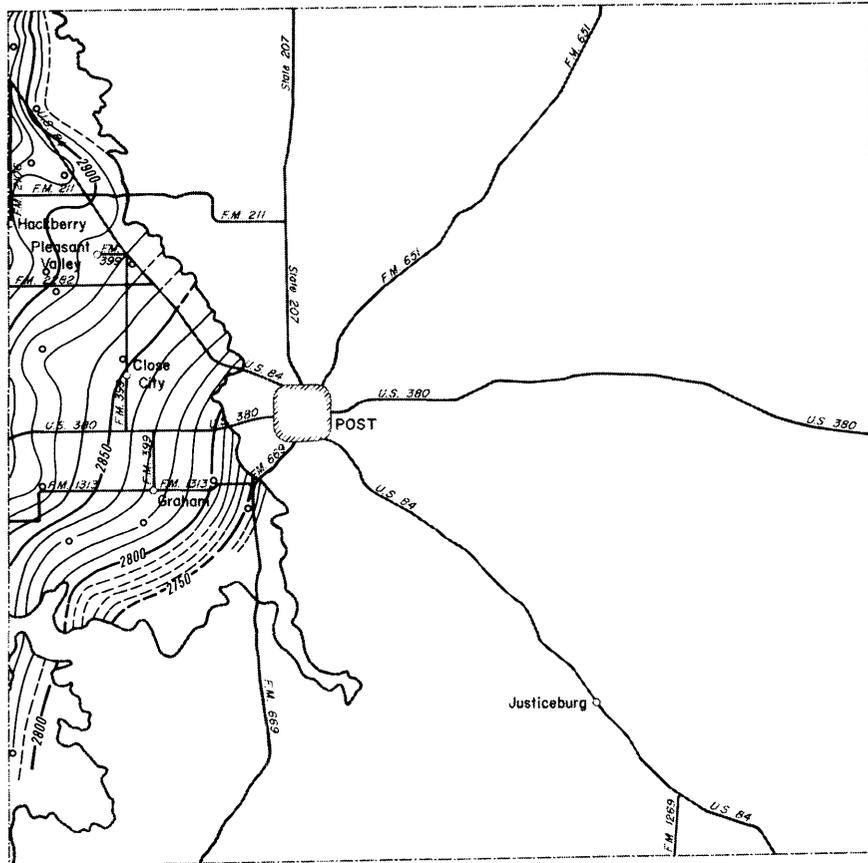
EXPLANATION

- Well used for control
- 2900 —
Line showing approximate altitude of the base of the High Plains Aquifer
Dashed where control is limited
Interval 20 feet
Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Garza County, Texas



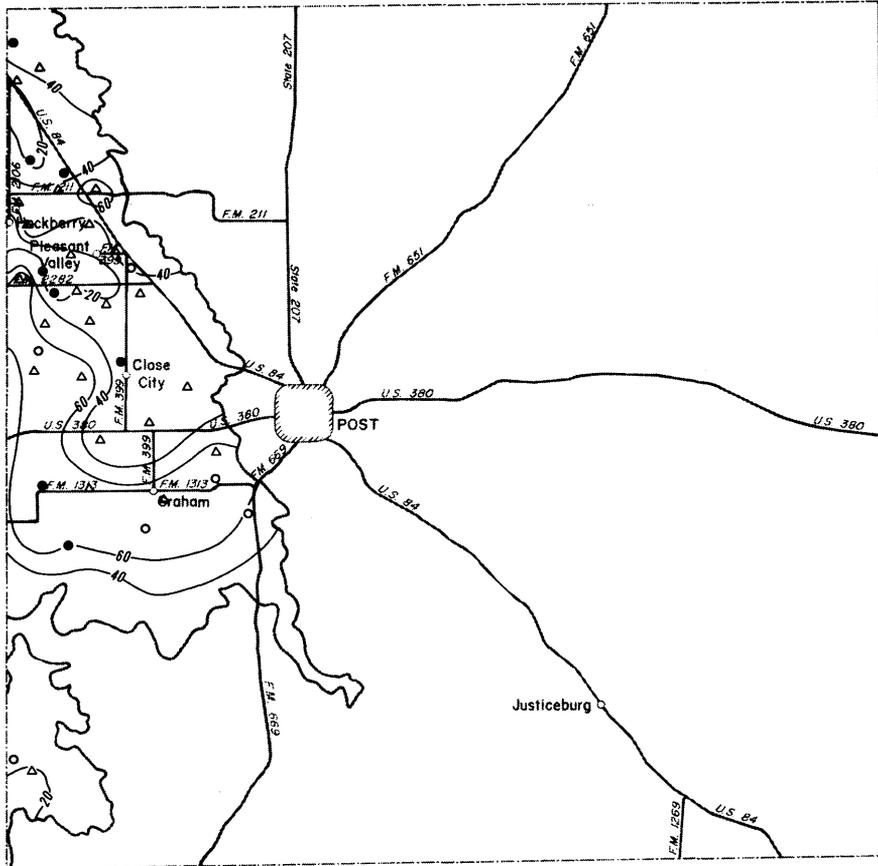
EXPLANATION

- Well used for control
- 2800 —
Line showing approximate altitude of water levels in the High Plains Aquifer
Dashed where control is limited
Interval 10 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adopted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of Water Levels in the High Plains Aquifer, Winter 1979-80, Garza County, Texas

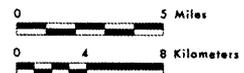


EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

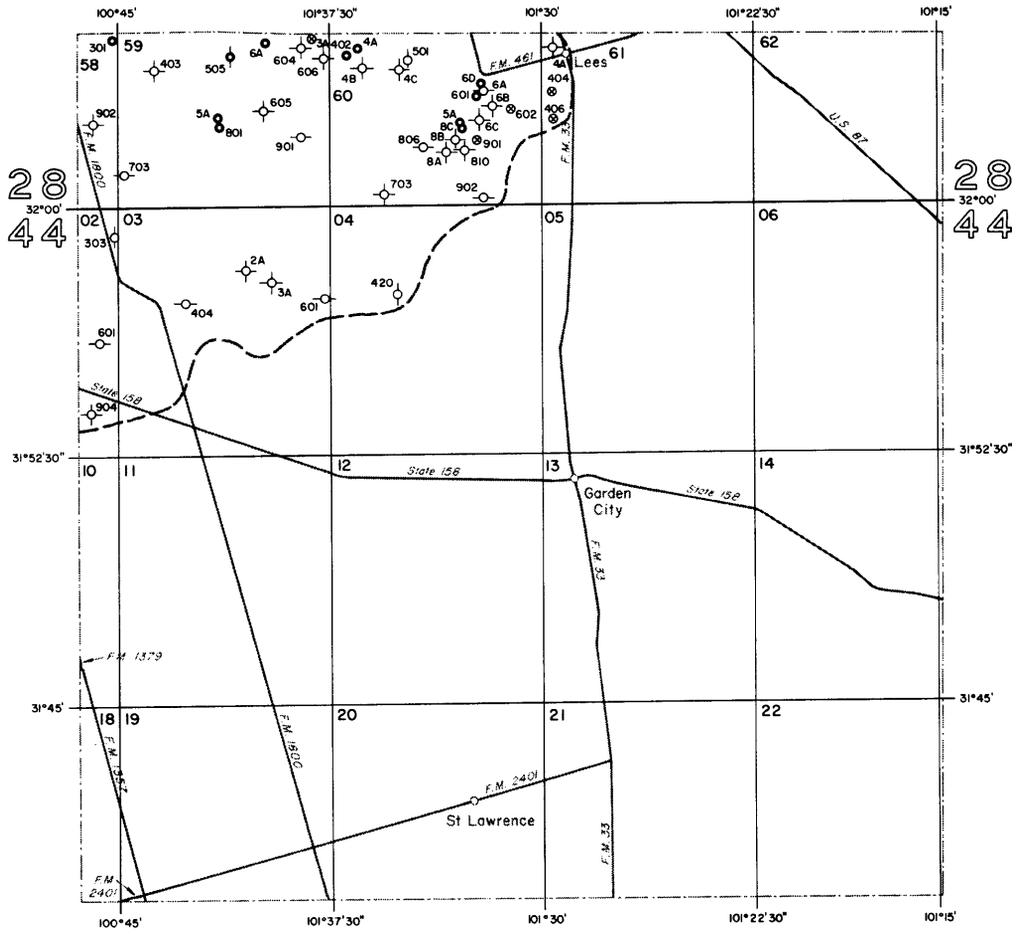
— 40 —
 Line showing approximate saturated thickness of the High Plains Aquifer
 Interval 20 feet

Note: Not all data points are presented which were used in contouring



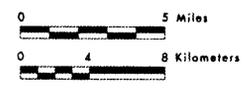
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Garza County, Texas



EXPLANATION

- | | | | |
|--|-----------------------------------|------------|---|
| | Public supply well | | Test hole |
| | Industrial well | | Unused or abandoned well |
| | Irrigation well | 201 | Last three digits of well number |
| | Domestic or livestock well | 2A | Temporary well number |
| | Oil or gas well | | |



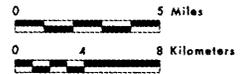
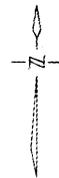
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Location of Control Wells, Glasscock County, Texas



EXPLANATION

- Well used for control
- 2400 —
Line showing approximate altitude of the base of the High Plains Aquifer
Dashed where control is limited
Interval 20 feet
Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Glasscock County, Texas



EXPLANATION

○
Well used for control

— 2500 —

Line showing approximate altitude of water levels in the High Plains Aquifer

Dashed where control is limited
Interval 10 feet

Datum is mean sea level

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Glasscock County, Texas**



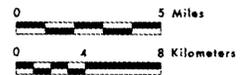
EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

————— 160 —————

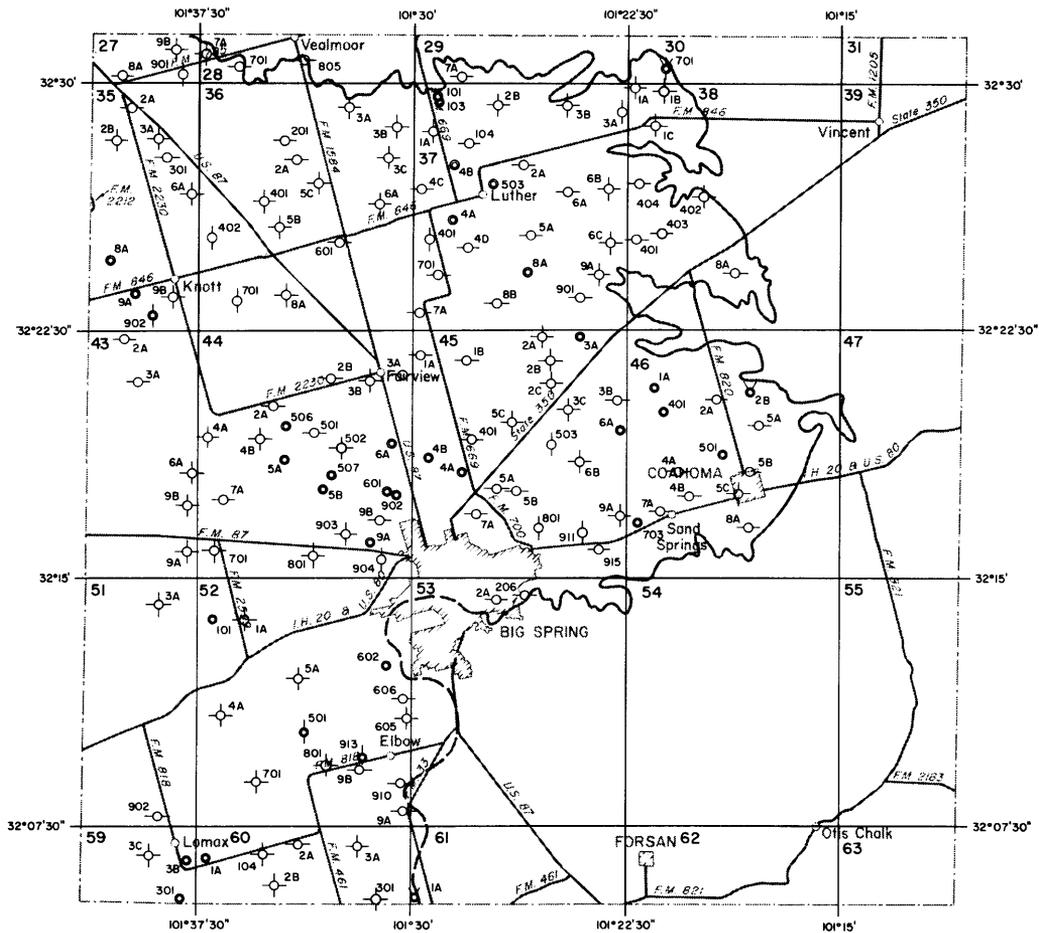
Line showing approximate saturated thickness of the High Plains Aquifer
Interval 20 feet

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Glasscock County, Texas



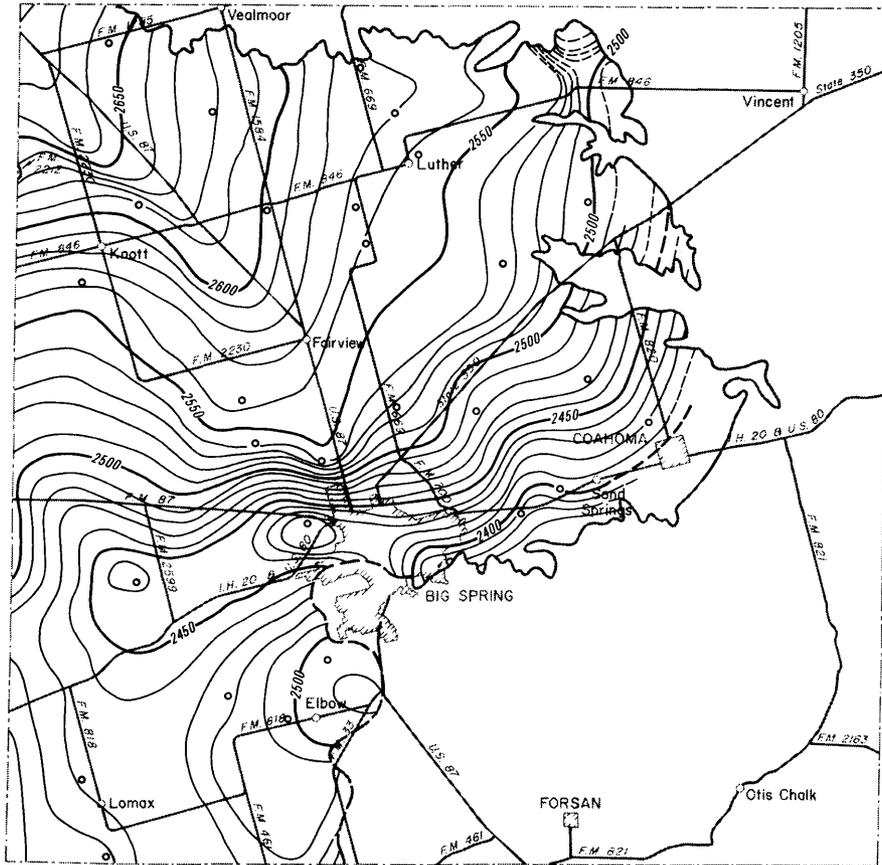
EXPLANATION

- Public supply well
 - ⊗ Industrial well
 - Irrigation well
 - Domestic or livestock well
 - ⊕ Oil or gas well
 - ⊙ Test hole
 - ⊕ ⊗ ⊙ Unused or abandoned well
 - 201 Last three digits of well number
 - 2A Temporary well number
- All wells in Howard County are in 1-degree quadrangle number 28



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Location of Control Wells, Howard County, Texas



EXPLANATION

○
Well used for control
— 2500 —

Line showing approximate altitude of
water levels in the High Plains Aquifer
Dashed where control is limited
Interval 10 feet

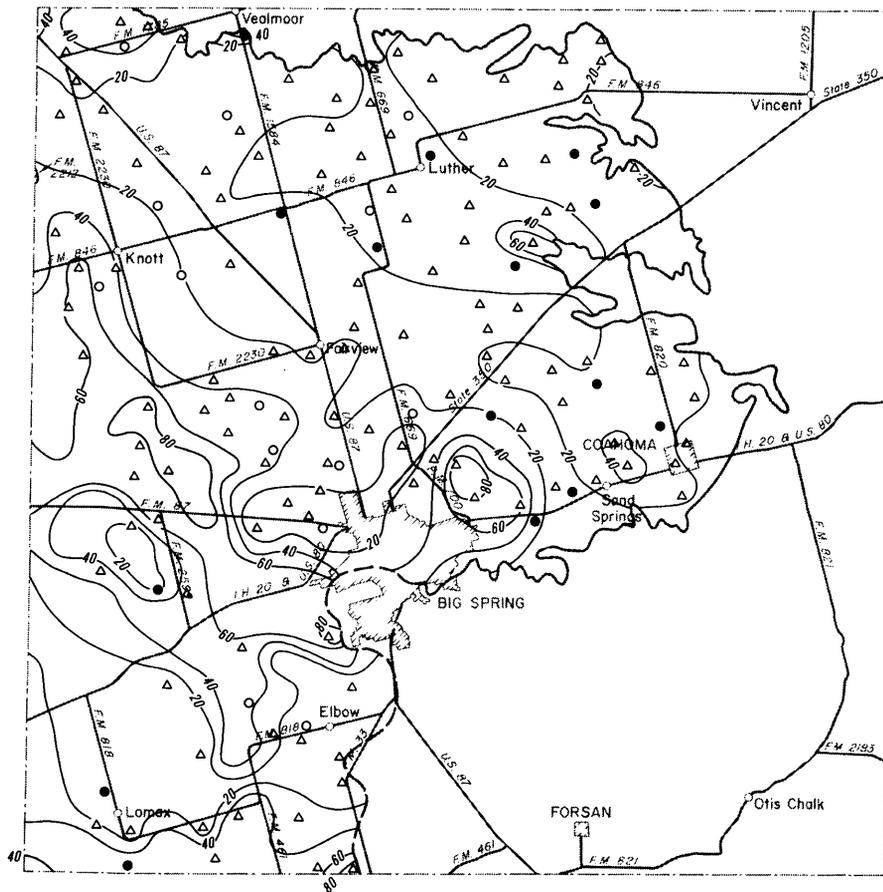
Datum is mean sea level

Note: Not all data points are presented
which were used in contouring



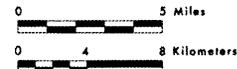
Base adopted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Howard County, Texas**



EXPLANATION

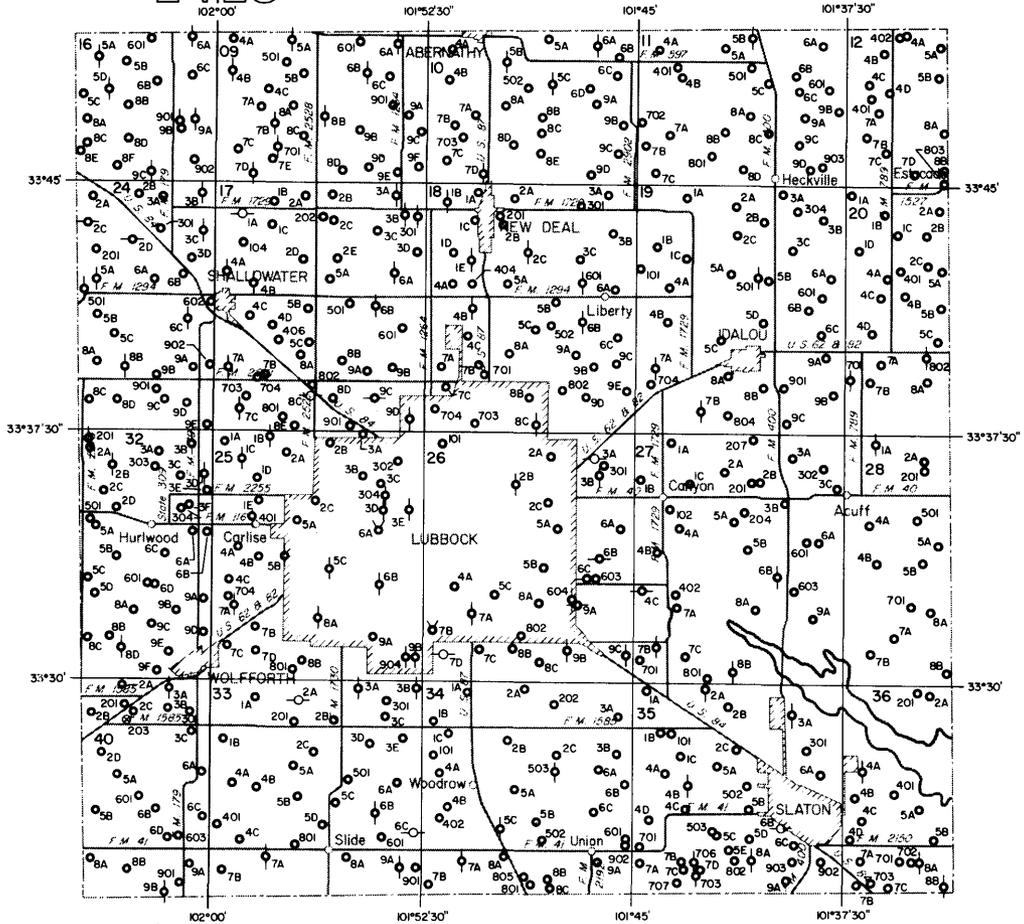
- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
 - △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
 - Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer
 - 40 —
Line showing approximate saturated thickness of the High Plains Aquifer
Interval 20 feet
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Howard County, Texas

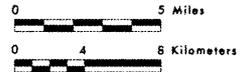
2423



2423

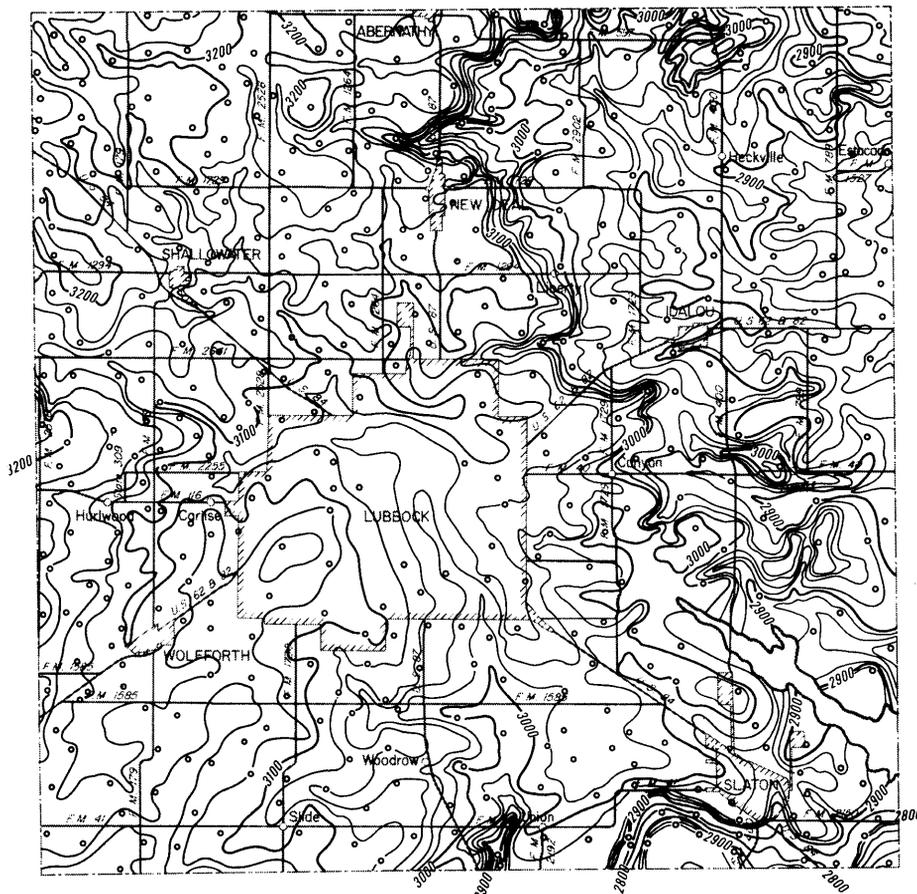
EXPLANATION

- Public supply well
 - Industrial well
 - Irrigation well
 - Domestic or livestock well
 - Oil or gas well
 - Test hole
 - Unused or abandoned well
 - 201
 - Last three digits of well number
 - 2A
 - Temporary well number
- Map completed by High Plains Underground
Water Conservation District No. 1



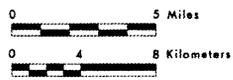
Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

Location of Control Wells, Lubbock County, Texas



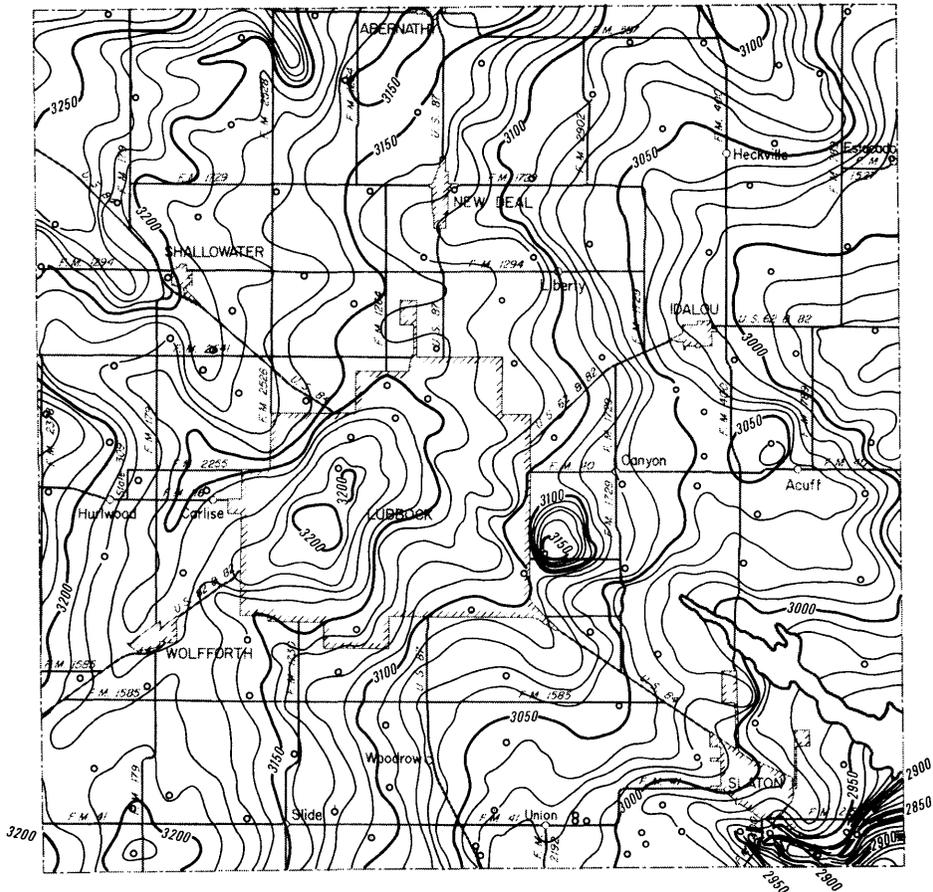
EXPLANATION

- Well used for control
- 3000 —
Line showing approximate altitude of the base of the High Plains Aquifer
- - - - -
Dashed where control is limited
- Interval 20 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring
- Map completed by High Plains Underground
- Water Conservation District No. 1



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Lubbock County, Texas



EXPLANATION

○
Well used for control
——— 3100 ———

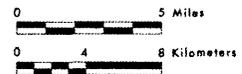
Line showing approximate altitude of water levels in the High Plains Aquifer

Dashed where control is limited
Interval 10 feet

Datum is mean sea level

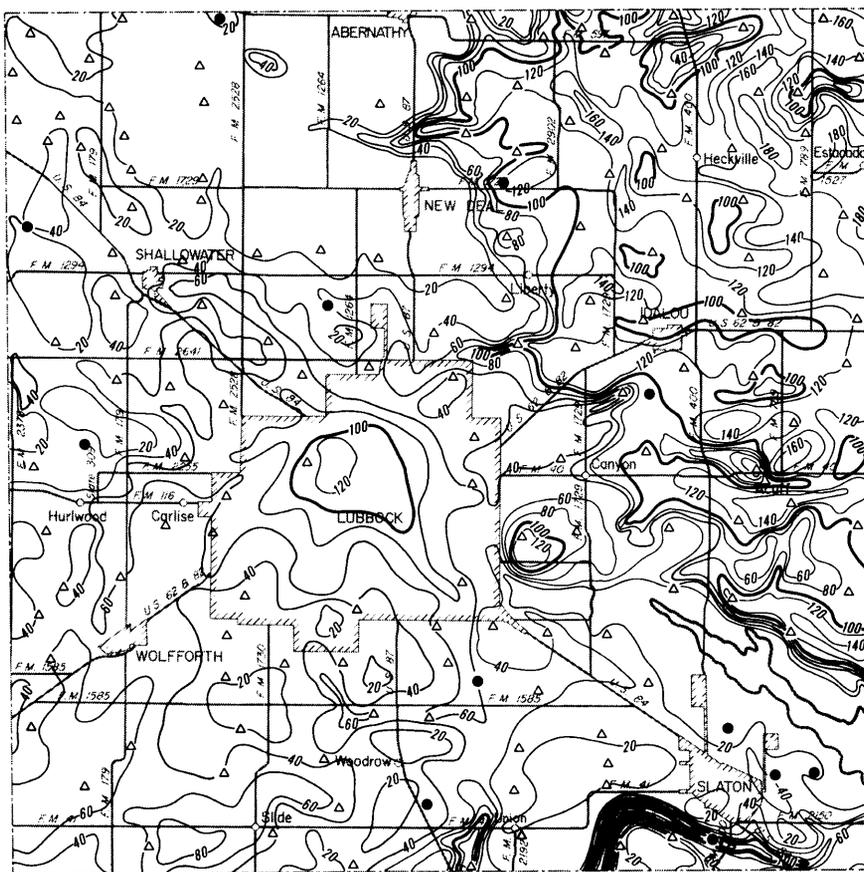
Note: Not all data points are presented which were used in contouring

Map completed by High Plains Underground
Water Conservation District No. 1



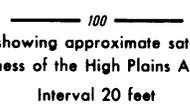
Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Lubbock County, Texas**



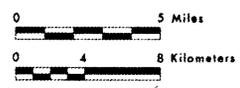
EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer



Note: Not all data points are presented which were used in contouring

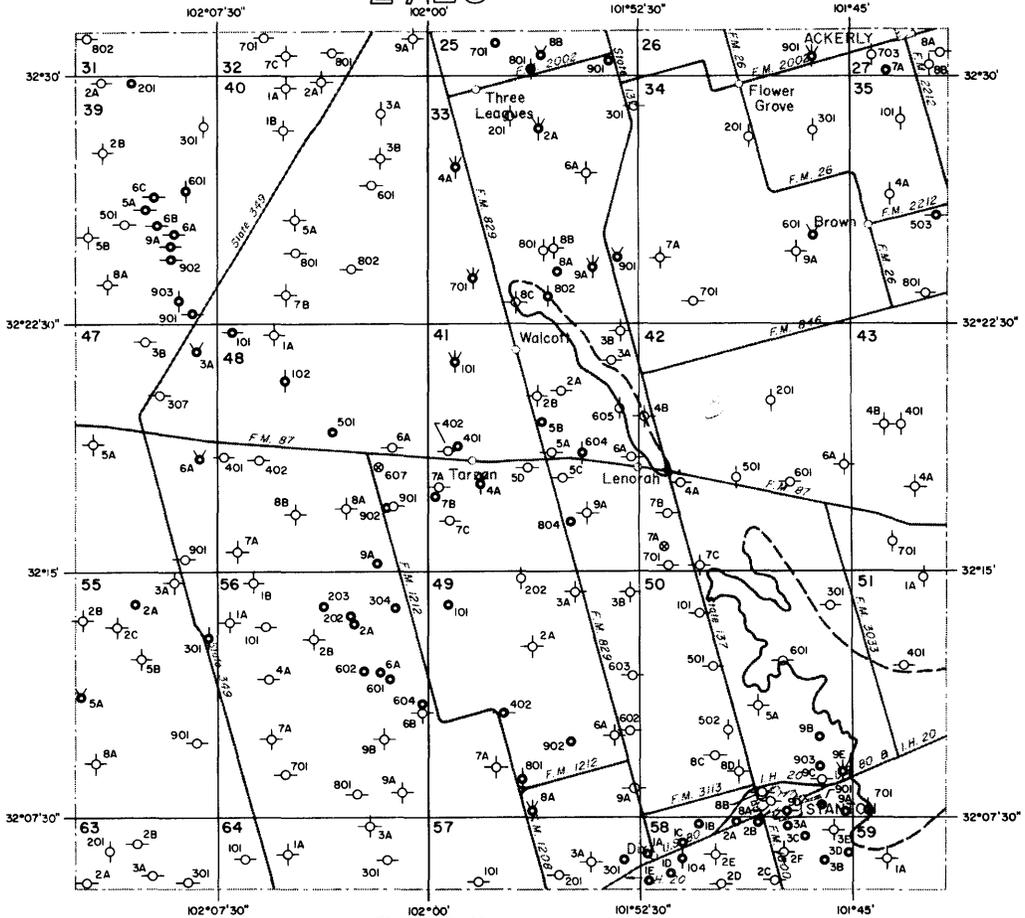
Map completed by High Plains Underground
Water Conservation District No. 1



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Lubbock County, Texas

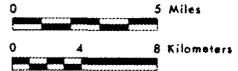
2728



2728

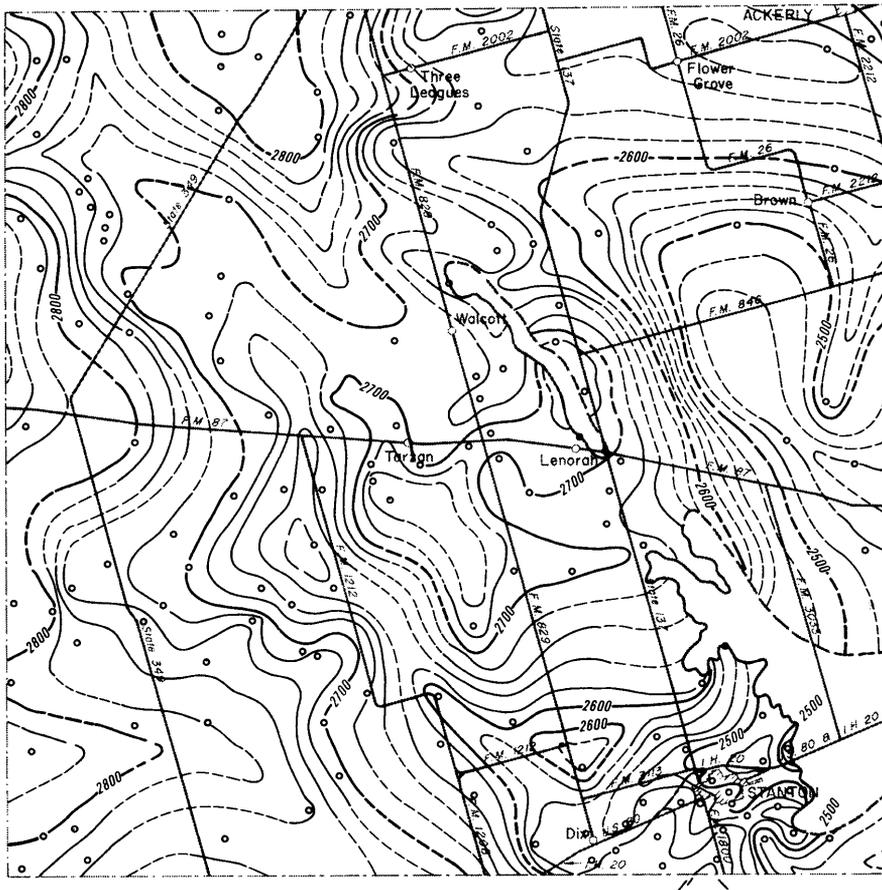
EXPLANATION

- Public supply well
- ⊕ Industrial well
- Irrigation well
- Domestic or livestock well
- ⊕ Oil or gas well
- Test hole
- ⊕ ⊕ ⊕ ⊕ Unused or abandoned well
- 201 Last three digits of well number
- 2A Temporary well number



Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

Location of Control Wells, Martin County, Texas



EXPLANATION

○
Well used for control
——— 2700 ———

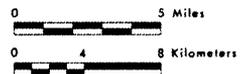
Line showing approximate altitude of the base
of the High Plains Aquifer

Dashed where control is limited

Interval 20 feet

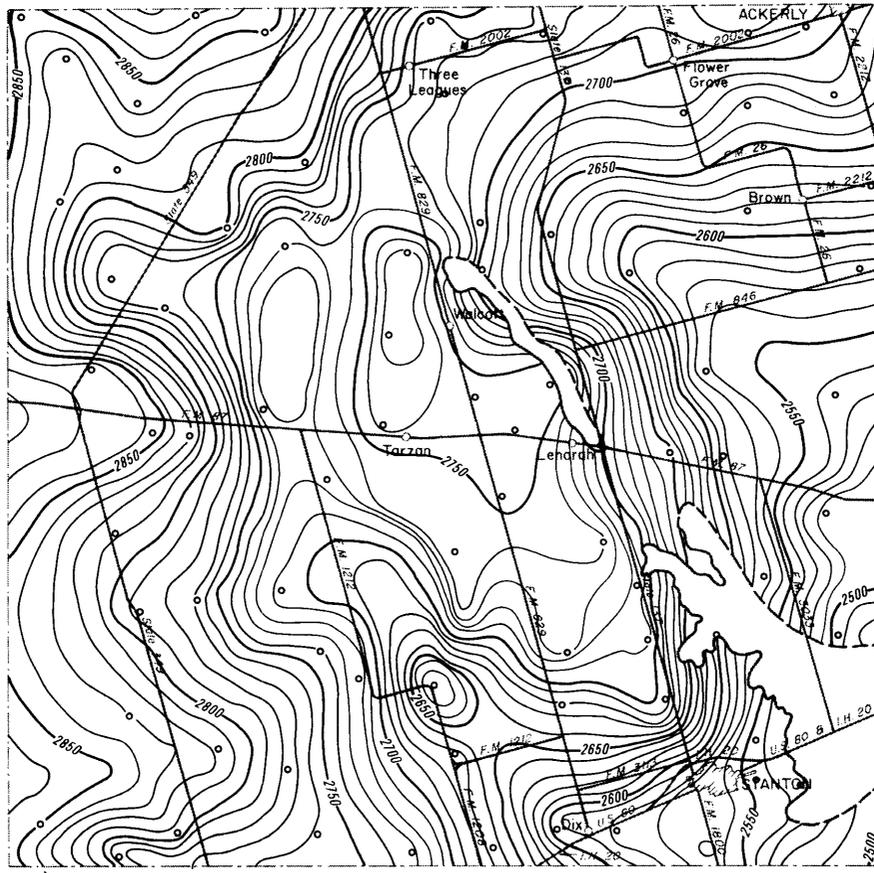
Datum is mean sea level

Note: Not all data points are presented
which were used in contouring



Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of the Base of the
High Plains Aquifer, Martin County, Texas**



EXPLANATION

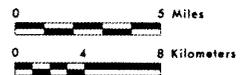
○
Well used for control
——— 2700 ———

Line showing approximate altitude of
water levels in the High Plains Aquifer

Dashed where control is limited
Interval 10 feet

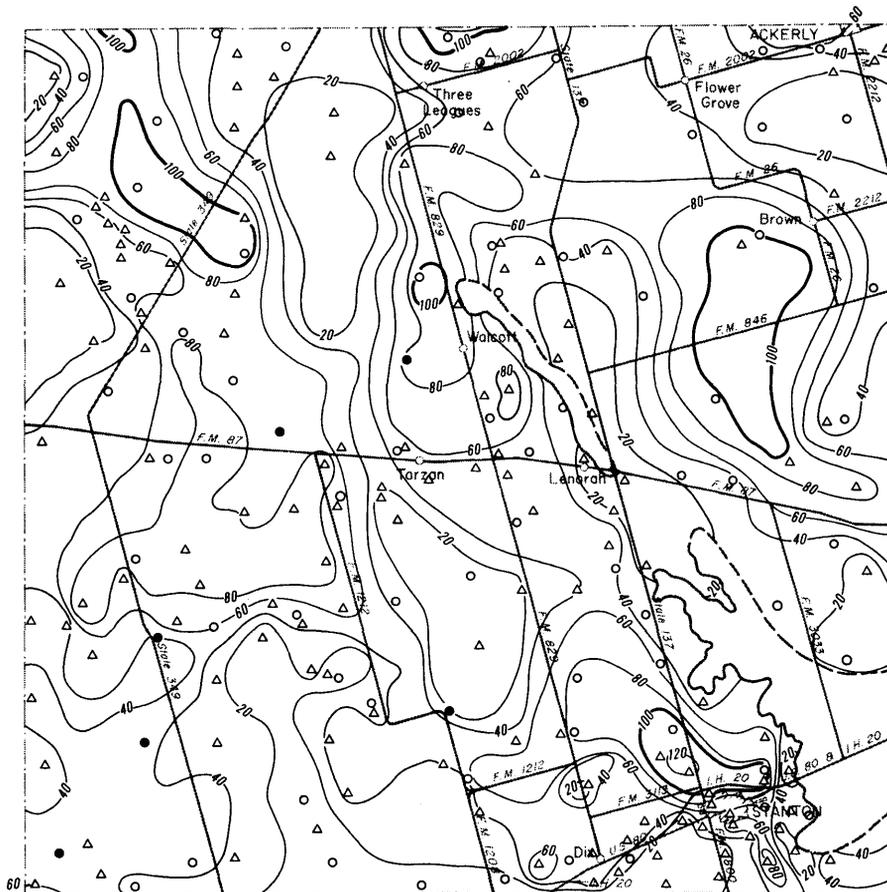
Datum is mean sea level

Note: Not all data points are presented
which were used in contouring



Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Martin County, Texas**



EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

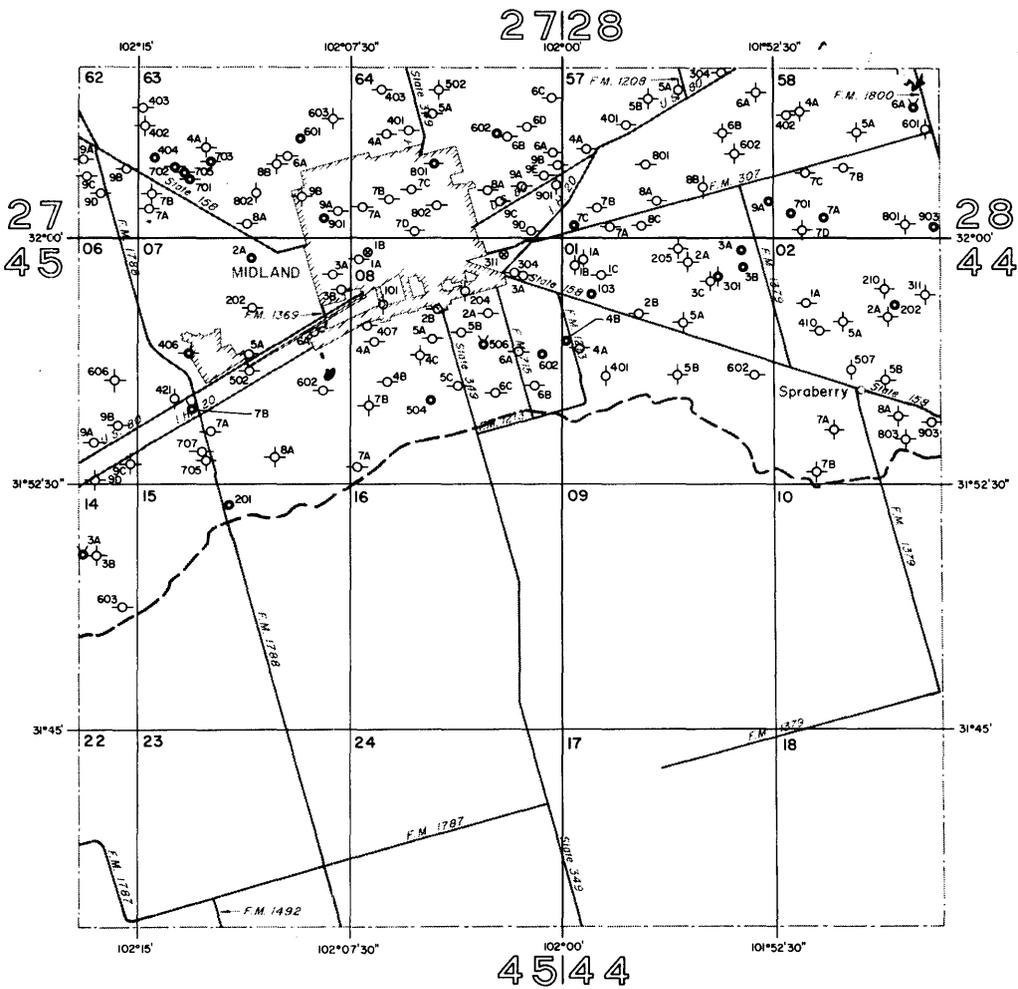
— 80 —
 Line showing approximate saturated thickness of the High Plains Aquifer
 Interval 20 feet

Note: Not all data points are presented which were used in contouring



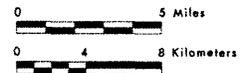
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Martin County, Texas



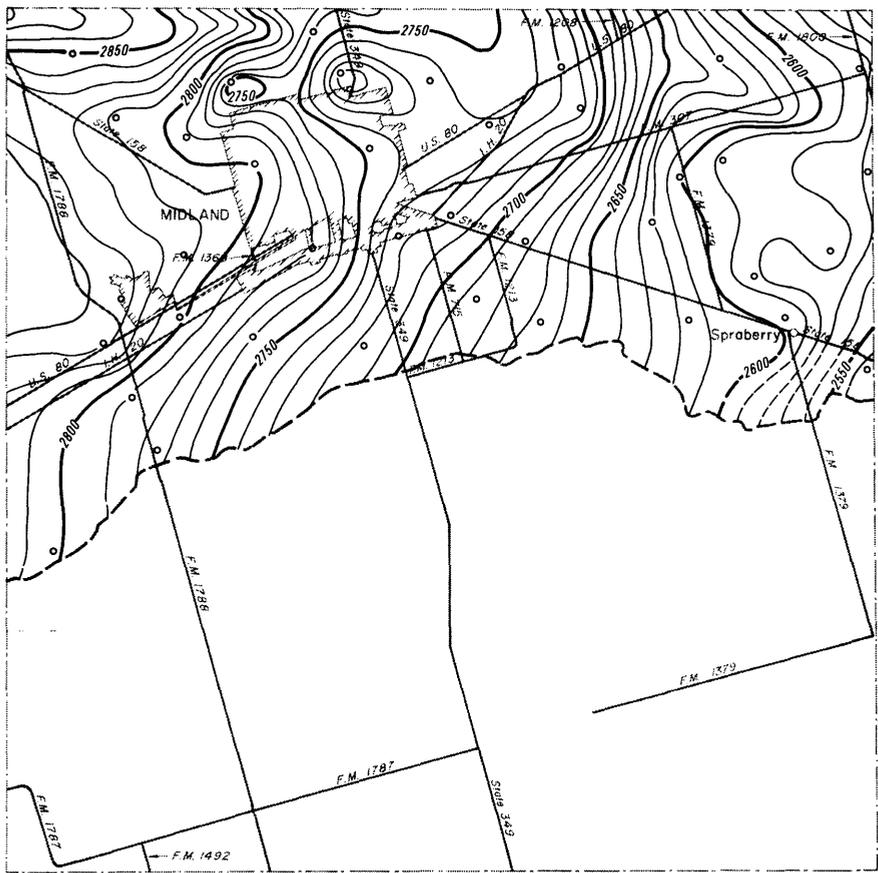
EXPLANATION

- | | | | |
|---|----------------------------|-----|----------------------------------|
| ⊙ | Public supply well | ⊙ | Test hole |
| ⊗ | Industrial well | ⊗ | Unused or abandoned well |
| ○ | Irrigation well | 201 | Last three digits of well number |
| ⊖ | Domestic or livestock well | 2A | Temporary well number |
| ⊕ | Oil or gas well | | |



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Location of Control Wells, Midland County, Texas



EXPLANATION

○
Well used for control
—— 2700 ——

Line showing approximate altitude of
water levels in the High Plains Aquifer

Dashed where control is limited
Interval 10 feet

Datum is mean sea level

Note: Not all data points are presented
which were used in contouring

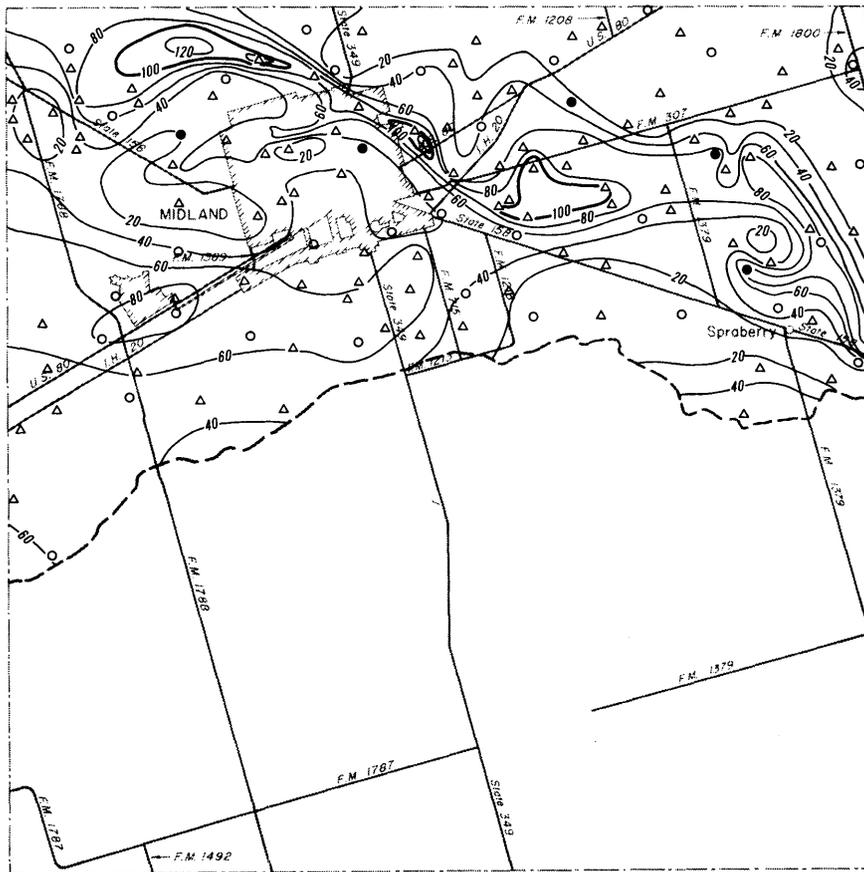


0 5 Miles

0 4 8 Kilometers

Base adapted from county highway maps
by the Texas Department of Highways
and Public Transportation

**Approximate Altitude of Water Levels in the High Plains Aquifer,
Winter 1979-80, Midland County, Texas**

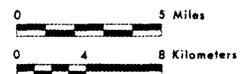


EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

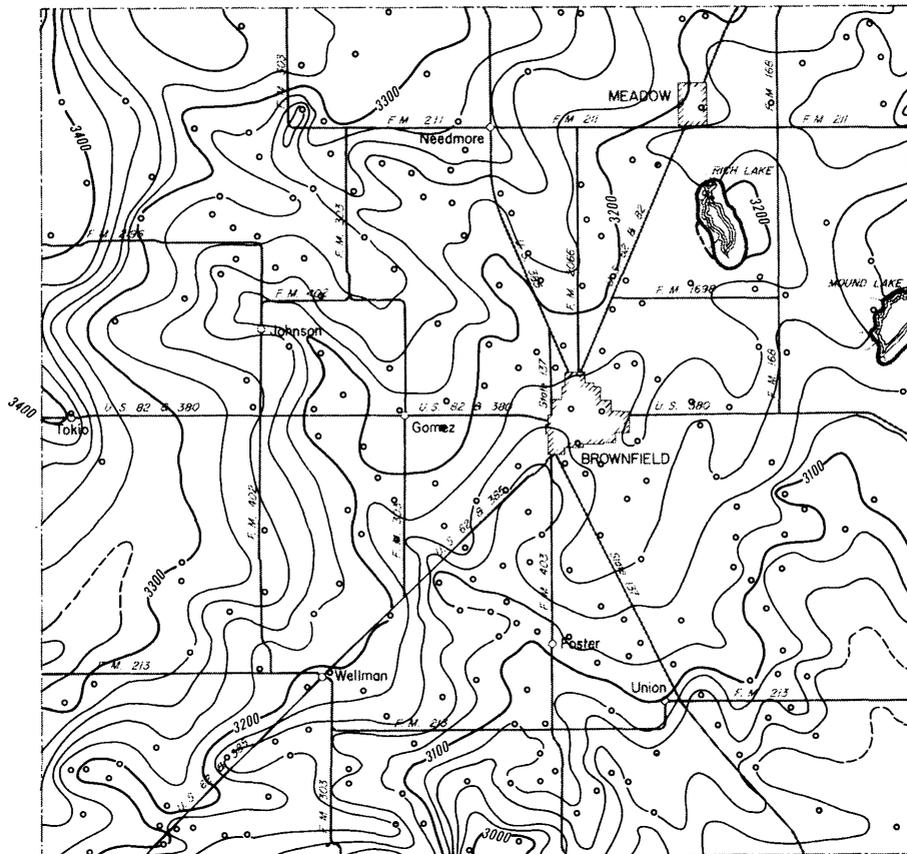
— 80 —
 Line showing approximate saturated thickness of the High Plains Aquifer
 Interval 20 feet

Note: Not all data points are presented which were used in contouring



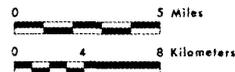
Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Midland County, Texas



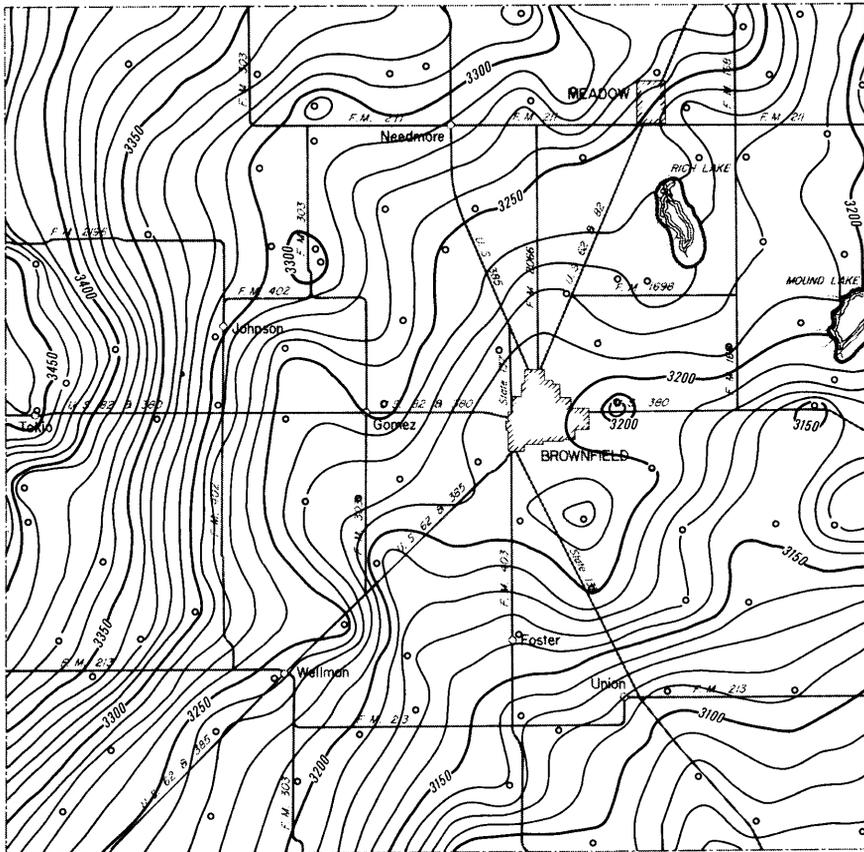
EXPLANATION

- Well used for control
- 3200 —
Line showing approximate altitude of the base of the High Plains Aquifer
Dashed where control is limited
Interval 20 feet
Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of the Base of the High Plains Aquifer, Terry County, Texas



EXPLANATION

Well used for control
 ———— 3200 ————

Line showing approximate altitude of water levels in the High Plains Aquifer
 Dashed where control is limited
 Interval 10 feet

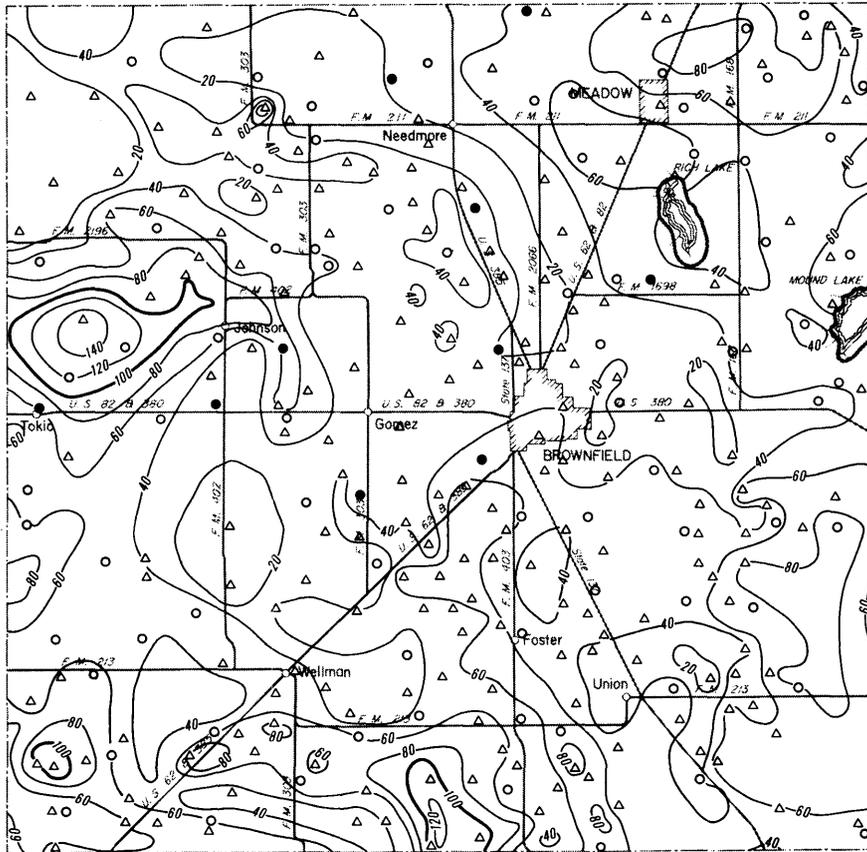
Datum is mean sea level

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of Water Levels in the High Plains Aquifer, Winter 1979-80, Terry County, Texas

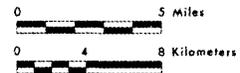


EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer

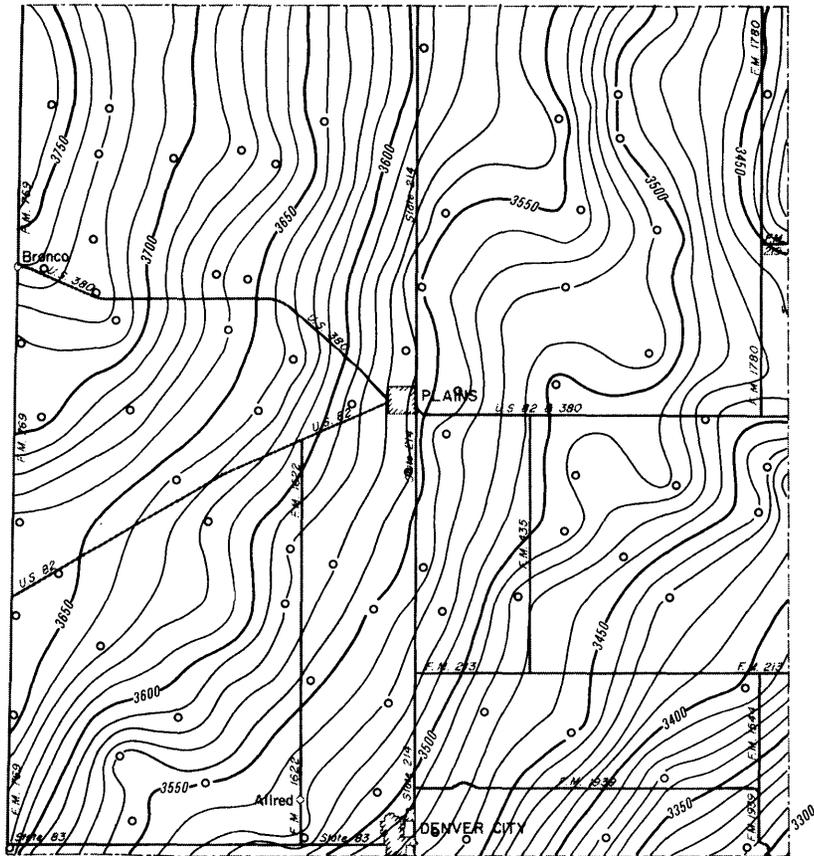
— 60 —
 Line showing approximate saturated thickness of the High Plains Aquifer
 Interval 20 feet

Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Terry County, Texas



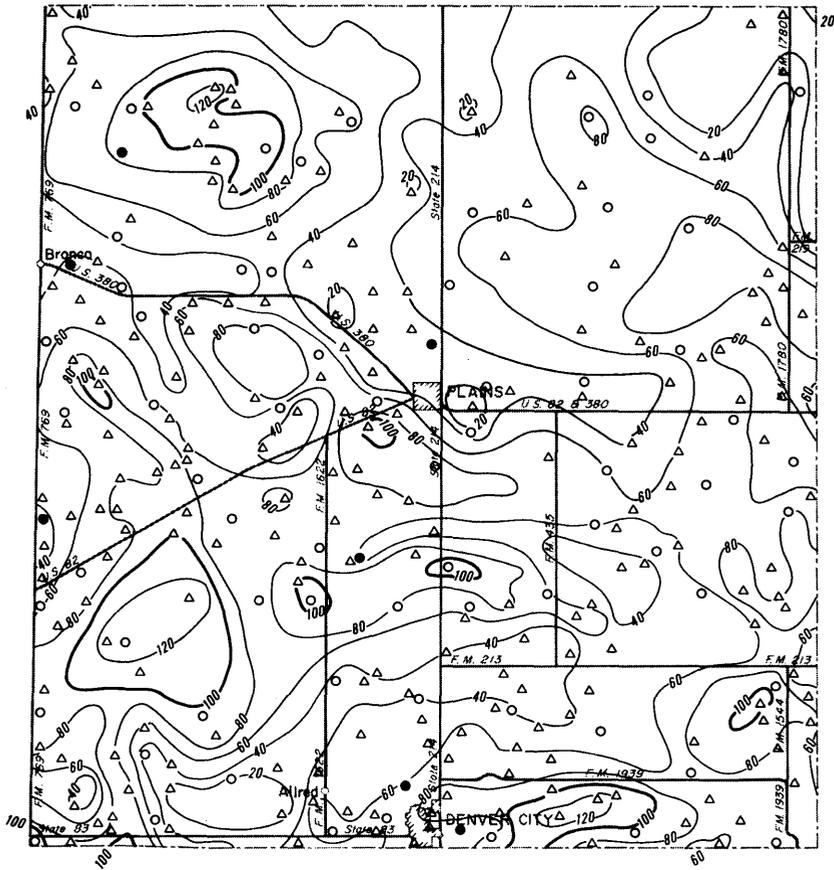
EXPLANATION

- Well used for control
- 3600 ———
Line showing approximate altitude of water levels in the High Plains Aquifer
Dashed where control is limited
Interval 10 feet
- Datum is mean sea level
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Altitude of Water Levels in the High Plains Aquifer, Winter 1979-80, Yoakum County, Texas



EXPLANATION

- Location of well having a Winter 1979-80 water-level elevation and a known elevation of base of aquifer
- △ Location of well having a known elevation of base of aquifer and an estimated Winter 1979-80 water-level elevation
- Location of well having a Winter 1979-80 water-level elevation and an estimated elevation of base of aquifer
- 100 —
Line showing approximate saturated thickness of the High Plains Aquifer
Interval 20 feet
- Note: Not all data points are presented which were used in contouring



Base adapted from county highway maps by the Texas Department of Highways and Public Transportation

Approximate Saturated Thickness of the High Plains Aquifer, 1980, Yoakum County, Texas