

**RECORDS OF WATER LEVELS IN THE BIG SIOUX AQUIFER,
MINNEHAHA COUNTY, SOUTH DAKOTA, 1981**

By Douglas R. Winter

WITH HYDROGRAPHS FOR THE ENTIRE
PERIOD OF RECORD

U.S. GEOLOGICAL SURVEY

Open-File Report 82-1020

Prepared in cooperation with the
CITY OF SIOUX FALLS



Huron, South Dakota

1983

UNITED STATES DEPARTMENT OF THE INTERIOR

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GEOLOGICAL SURVEY

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CONTENTS

	Page
Introduction	1
Well- and site-numbering systems	2
References	5

ILLUSTRATIONS

Figure 1. Well-numbering diagram	3
2. Location of observation wells	4

TABLE

Table 1. Records of water levels in the Big Sioux aquifer, Minnehaha County, South Dakota	7
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RECORDS OF WATER LEVELS IN THE BIG SIOUX AQUIFER,
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INTRODUCTION

This report, prepared in cooperation with the City of Sioux Falls, South Dakota, contains a tabulation of water levels in wells tapping the Big Sioux aquifer in Minnehaha County. The data table (table 1) is a compilation of all water levels measured by the U.S. Geological Survey and State agencies during 1981. An earlier report (Bradford, 1981) tabulated all water levels for the period of record through 1980.

The water levels were measured by field personnel with a weighted steel tape and all water-level data are given in feet below land-surface datum. For readers who may prefer to use metric units rather than inch-pound units, the term feet may be converted to meters by multiplying by 0.3048.

In addition to the tabulated water levels, hydrographs for each well for the entire period of record are shown on the page facing the tabulation. Water levels, in feet below land surface, are posted on the left side of the hydrograph and are marked by horizontal grid lines. Ticks for water-surface elevation are placed on the right and are referenced to the National Geodetic Vertical Datum of 1929 (NGVD). NGVD is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level."

WELL- AND SITE-NUMBERING SYSTEMS

Wells are numbered according to a system based on the Federal land-survey of eastern South Dakota (fig. 1). The well number consists of township followed by "N", range followed by "W", and section number, followed by a maximum of four upper-case letters that indicate, respectively, the 160-, 40-, 10-, and 2½-acre tract in which the well is located. These letters are assigned in a counter-clockwise direction beginning with "A" in the northeast quarter. A serial number following the last letter is used to distinguish between wells in the same tract. Thus, well 104N49W31CCCC (fig. 1) is in the SW¼, SW¼, SW¼, SW¼, sec. 31, T. 104 N., R. 49 W.

The site-numbering system of the U.S. Geological Survey is based on the international latitude and longitude system. The number contains 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude. The next seven digits denote degrees, minutes, and seconds of longitude. The last two digits are sequential numbers for wells within the stated 1-second square. The system gives the geographic location of the well and a unique number for each well. The short number and letter sequence located at the upper left on the water-level tables is an office designation used by field personnel for easy reference.

Field locations of the observation wells are shown in figure 2. The wells are listed in table 1 in ascending order by well number.

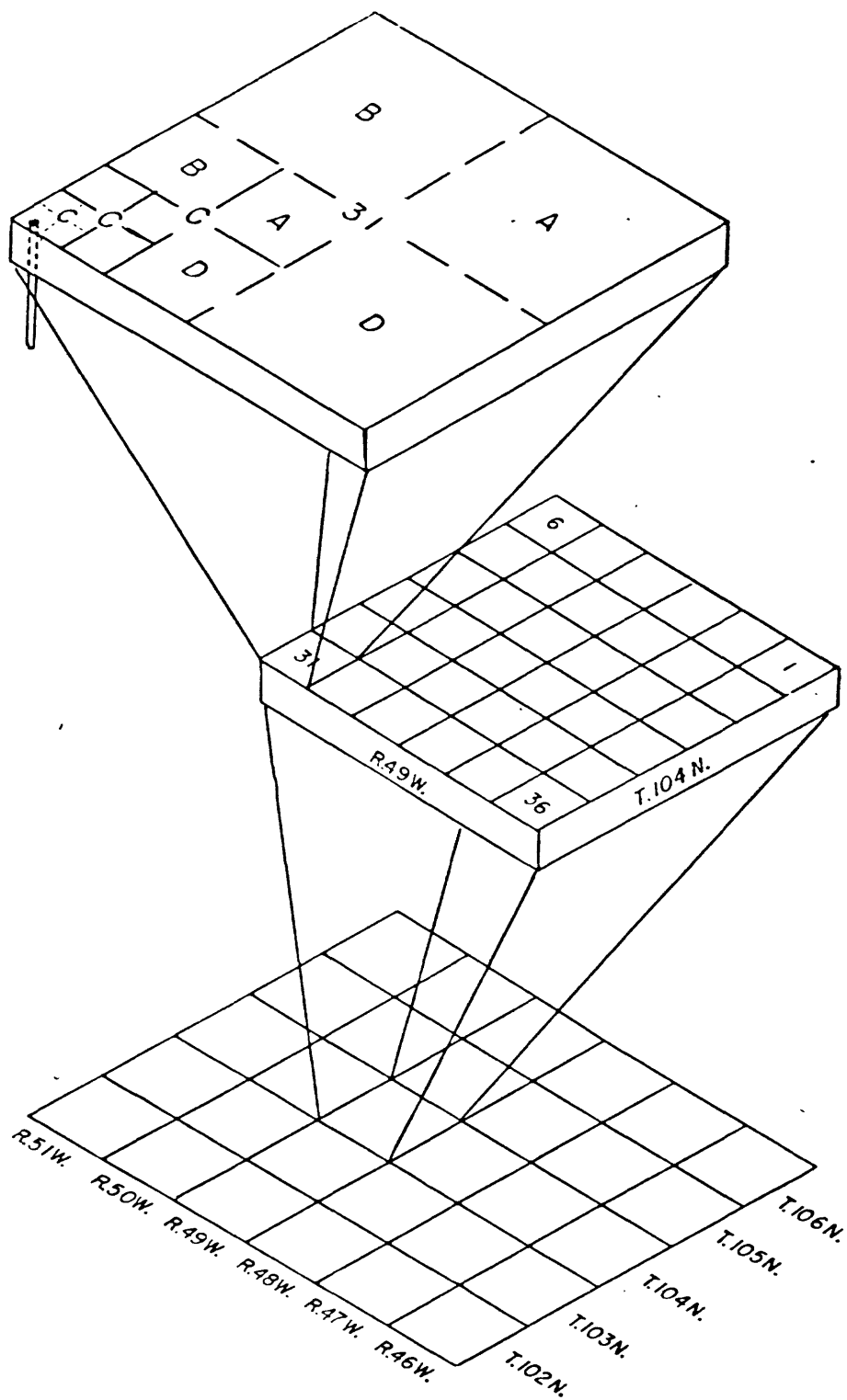


Figure 1.--Well numbering diagram showing location of well 104N49W31CCCC.

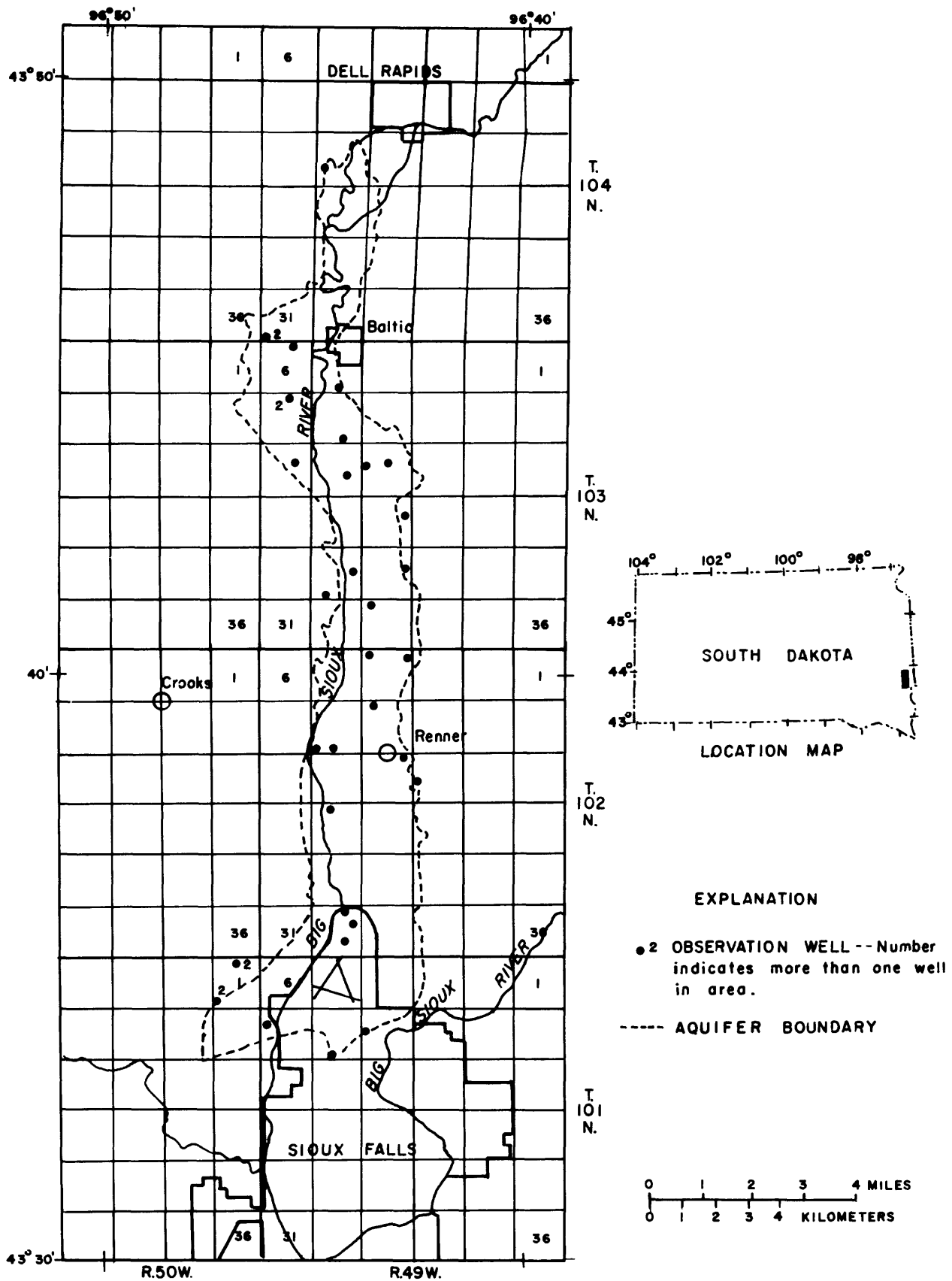


Figure 2.-- Location of observation wells

REFERENCES

Bradford, W. L., 1981, Water-level records for the Big Sioux aquifer, Minnehaha County, South Dakota: U.S. Geological Survey Open-File Report 81-222, 50 p.

Table 1.--Records of water levels in the Big Sioux aquifer, Minnehaha County,
South Dakota

WELL 101N49W 78C8C

SITE NUMBER 433407096461301

RS

HIGHEST WATER LEVEL 14.15 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 15.16 FEET BELOW LAND SURFACE DATUM NOV 24, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1425.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	14.15	APR 16, 1981	14.23	JUL 30, 1981	14.68	OCT 29, 1981	15.01
FEB 17	14.32	MAY 26	14.29	AUG 20	14.76	NOV 24	15.16
MAR 19	14.46	JUN 23	14.49	SEP 22	15.00	DEC 29	15.02

WELL 101N49W 8C8AD

SITE NUMBER 433337096443001

NC

HIGHEST WATER LEVEL 6.92 FEET BELOW LAND SURFACE DATUM JUL 30, 1981.

LOWEST WATER LEVEL 9.03 FEET BELOW LAND SURFACE DATUM MAR 19, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1415.8 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	8.52	APR 16, 1981	7.63	JUL 30, 1981	6.92	OCT 29, 1981	7.81
FEB 17	8.89	MAY 26	7.18	AUG 20	7.42	NOV 24	7.21
MAR 19	9.03	JUN 23	7.06	SEP 22	8.17	DEC 29	8.97

WELL 101N49W 98CB

SITE NUMBER 433404096435001

S-29

HIGHEST WATER LEVEL 11.40 FEET BELOW LAND SURFACE DATUM APR 16, 1981.

LOWEST WATER LEVEL 12.23 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1418.9 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	11.52	APR 16, 1981	11.40	JUL 30, 1981	11.73	OCT 29, 1981	12.11
FEB 17	11.56	MAY 26	11.59	AUG 20	11.83	NOV 24	12.18
MAR 19	11.56	JUN 23	11.60	SEP 22	12.02	DEC 29	12.23

WELL 101N50W 1AB8D

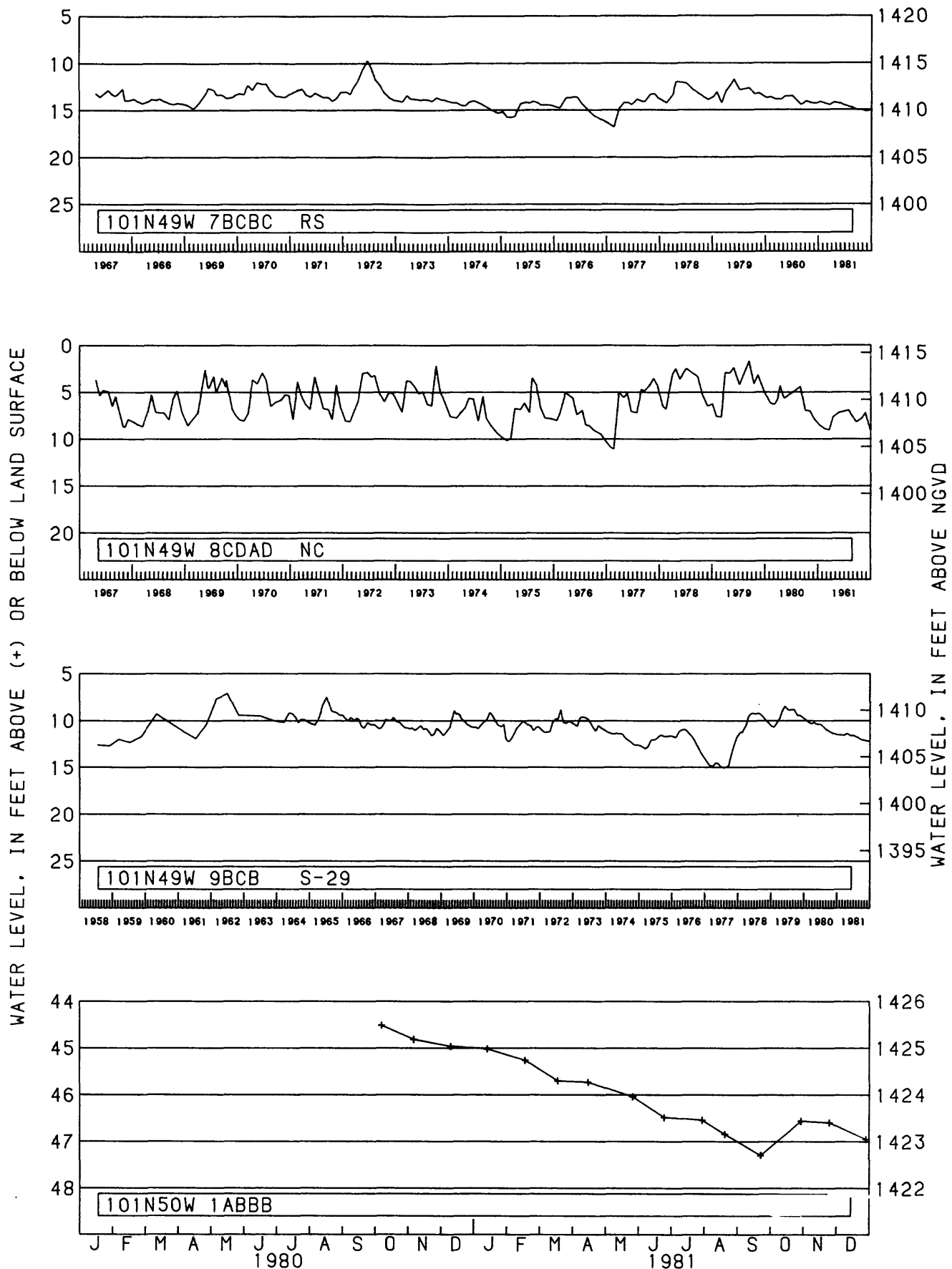
SITE NUMBER 433512096464901

HIGHEST WATER LEVEL 45.02 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 47.29 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1470.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	45.02	APR 16, 1981	45.73	JUL 30, 1981	46.54	OCT 29, 1981	46.56
FEB 17	45.26	MAY 27	46.04	AUG 20	46.84	NOV 24	46.59
MAR 19	45.70	JUN 23	46.48	SEP 22	47.29	DEC 26	46.95



WELL 101NS0W 1ABBB2

SITE NUMBER 433512096464902

HIGHEST WATER LEVEL 42.51 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 45.52 FEET BELOW LAND SURFACE DATUM DEC 28, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1470.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	42.51	APR 16, 1981	43.29	JUL 30, 1981	44.23	OCT 29, 1981	44.74
FEB 17	42.82	MAY 27	43.93	AUG 20	44.49	NOV 24	45.09
MAR 19	43.42	JUN 25	44.31	SEP 22	44.83	DEC 28	45.52

WELL 101NS0W 1CCCC

SITE NUMBER 433425096472401

HIGHEST WATER LEVEL 26.02 FEET BELOW LAND SURFACE DATUM MAR 19, 1981.

LOWEST WATER LEVEL 28.73 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1447.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	26.86	APR 16, 1981	27.38	JUL 30, 1981	28.19	OCT 29, 1981	28.27
FEB 17	27.07	MAY 27	27.73	AUG 20	28.39	NOV 24	28.05
MAR 19	26.02	JUN 25	27.96	SEP 22	28.73	DEC 28	28.21

WELL 101NS0W 1CCCC2

SITE NUMBER 433425096472402

HIGHEST WATER LEVEL 12.36 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 14.16 FEET BELOW LAND SURFACE DATUM DEC 28, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1447.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	12.36	APR 16, 1981	12.43	JUL 30, 1981	13.34	OCT 29, 1981	14.03
FEB 17	12.49	MAY 27	12.83	AUG 20	13.86	NOV 24	14.09
MAR 19	12.59	JUN 25	12.93	SEP 22	14.04	DEC 28	14.16

WELL 102N49W 4AAA

SITE NUMBER 434027096424001

L1

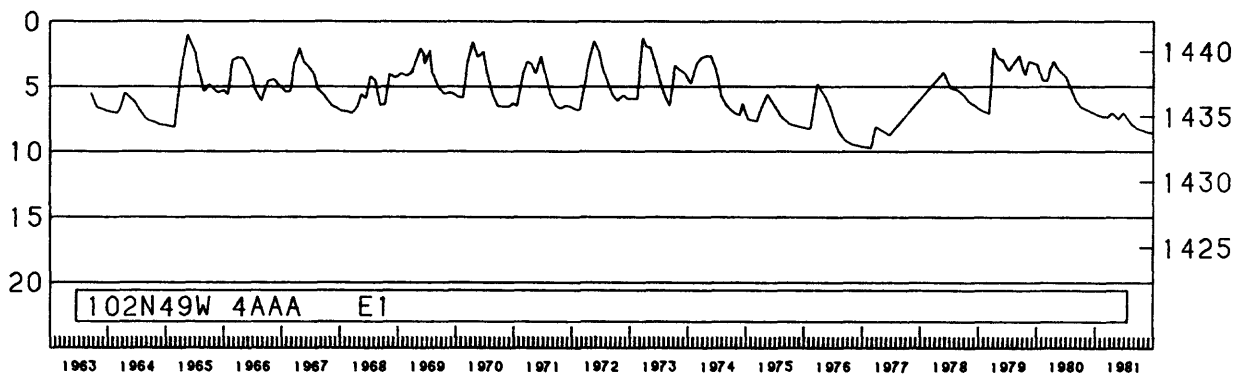
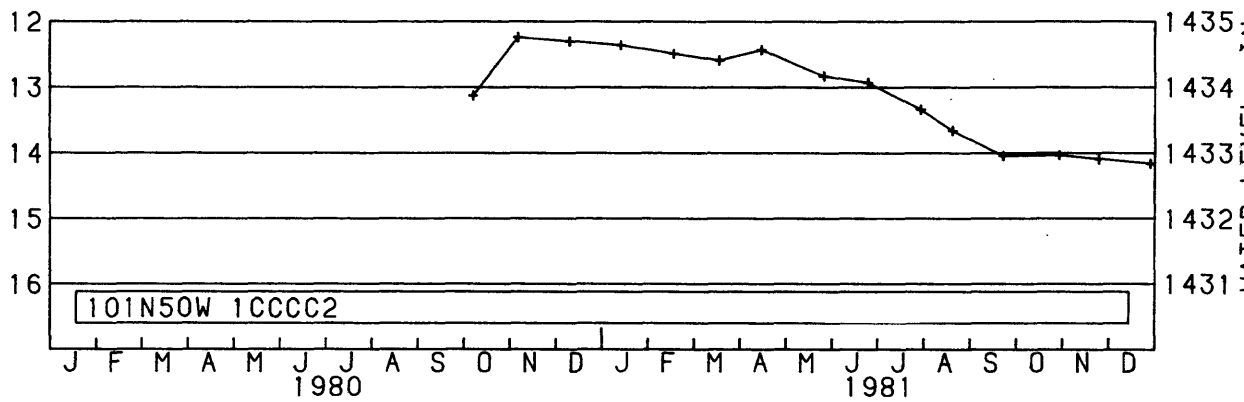
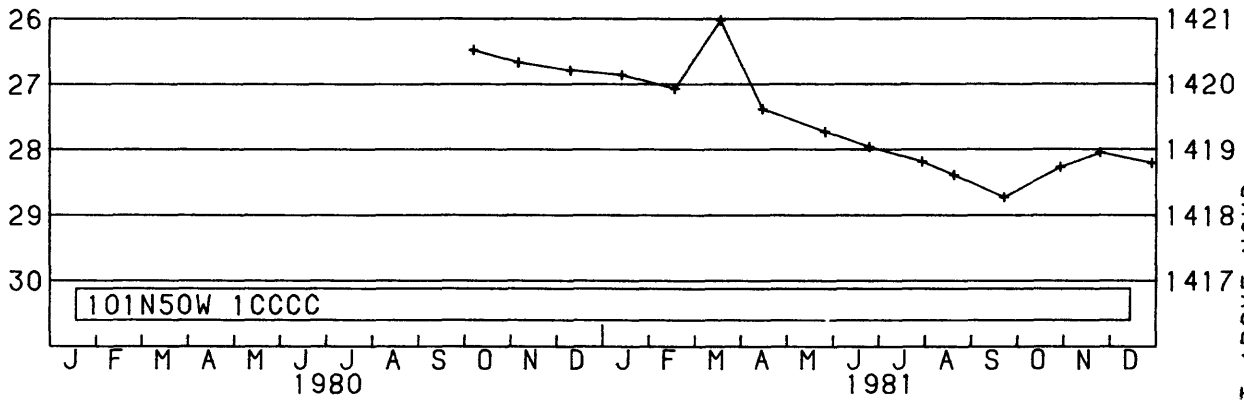
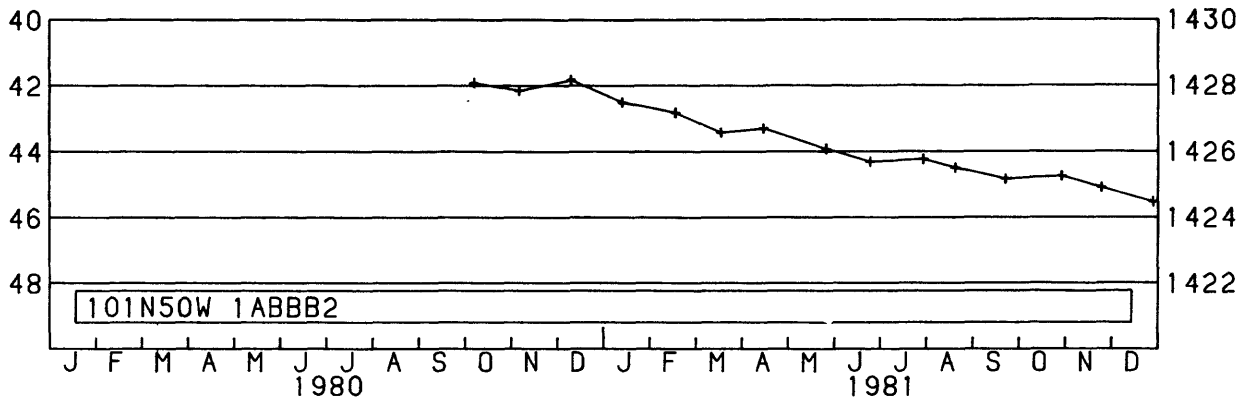
HIGHEST WATER LEVEL 7.04 FEET BELOW LAND SURFACE DATUM APR 15, 1981; JUN 25, 1981.

LOWEST WATER LEVEL 8.59 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1442.3 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	7.16	APR 15, 1981	7.64	JUL 30, 1981	7.58	OCT 29, 1981	8.39
FEB 17	7.31	MAY 27	7.48	AUG 20	7.91	NOV 24	8.50
MAR 18	7.39	JUN 25	7.04	SEP 22	8.23	DEC 29	8.59

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE



WELL 102N49W 4888

SITE NUMBER 434027096433401

E3

HIGHEST WATER LEVEL 6.54 FEET BELOW LAND SURFACE DATUM JUL 30, 1981.

LOWEST WATER LEVEL 10.15 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1443.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	9.00	APR 15, 1981	9.00	JUL 30, 1981	6.54	OCT 29, 1981	10.06
FEB 17	9.04	MAY 27	9.27	AUG 20	9.77	NOV 24	10.12
MAR 16	9.14	JUN 25	9.50	SEP 22	10.02	DEC 29	10.15

WELL 102N49W 8CCC

SITE NUMBER 433845096445501

D4

HIGHEST WATER LEVEL 12.69 FEET BELOW LAND SURFACE DATUM APR 16, 1981.

LOWEST WATER LEVEL 14.72 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1437.7 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.34	APR 16, 1981	12.69	JUL 30, 1981	13.43	OCT 29, 1981	12.96
FEB 17	12.94	MAY 27	13.43	AUG 20	13.04	NOV 24	13.27
MAR 19	12.80	JUN 25	14.52	SEP 22	14.72	DEC 29	13.58

WELL 102N49W 8C0CC

SITE NUMBER 433843096444301

HIGHEST WATER LEVEL 9.65 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 10.66 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1436.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	9.65	APR 16, 1981	9.68	JUL 30, 1981	10.72	OCT 29, 1981	10.38
FEB 17	9.91	MAY 27	10.20	AUG 20	10.43	NOV 24	10.58
MAR 19	9.86	JUN 25	10.68	SEP 22	10.57	DEC 29	10.66

WELL 102N49W 988AB

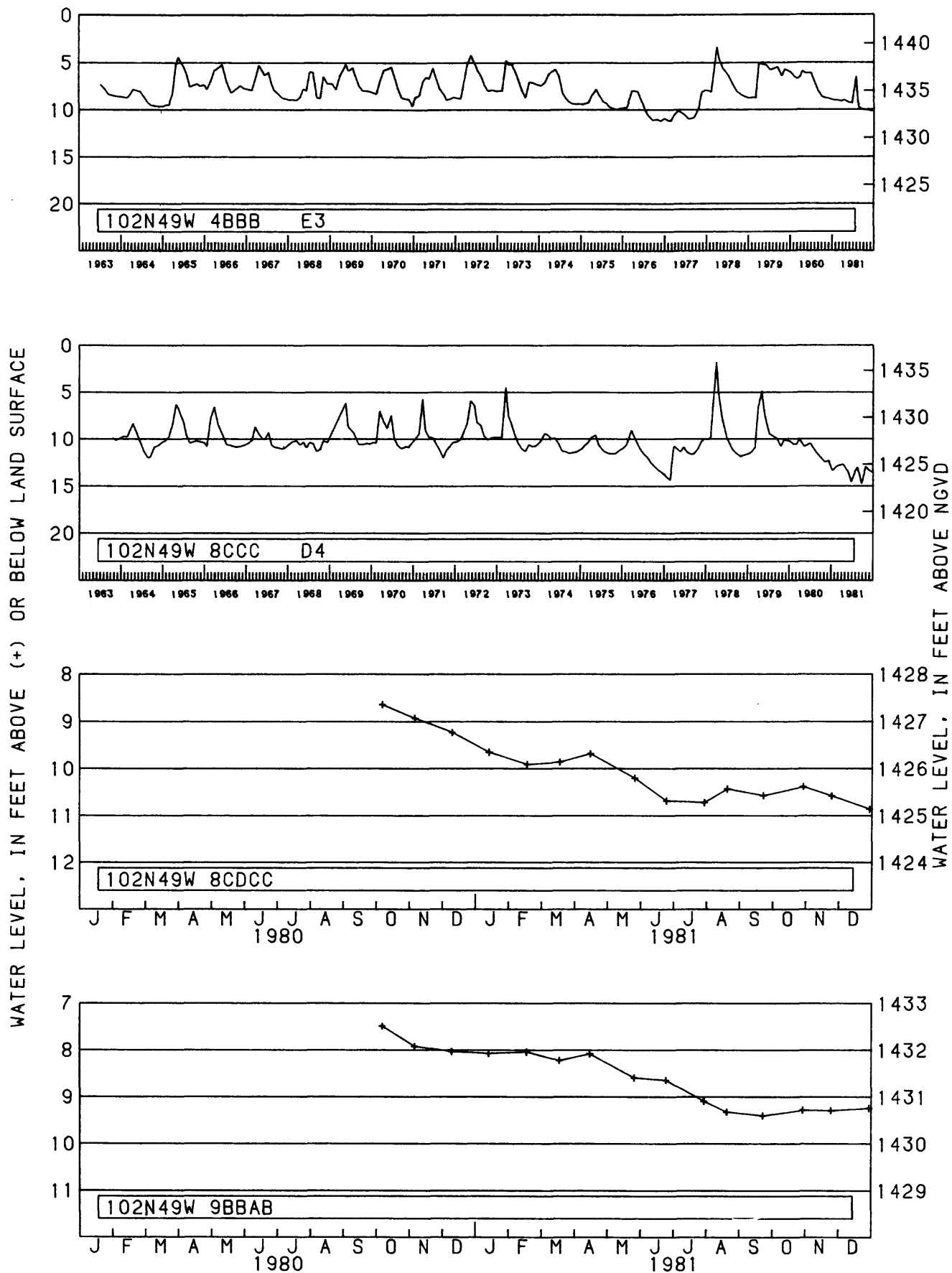
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HIGHEST WATER LEVEL 8.04 FEET BELOW LAND SURFACE DATUM FEB 17, 1981.

LOWEST WATER LEVEL 9.40 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1440.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	8.07	APR 16, 1981	8.08	JUL 30, 1981	9.09	OCT 29, 1981	9.28
FEB 17	8.04	MAY 27	8.59	AUG 20	9.32	NOV 24	9.29
MAR 19	8.22	JUN 25	8.64	SEP 22	9.40	DEC 29	9.24



WELL 102N49W15C886

SITE NUMBER 433614096423601

HIGHEST WATER LEVEL 30.80 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 32.67 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1436.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	30.80	APR 16, 1981	31.43	JUL 30, 1981	32.21	OCT 29, 1981	31.86
FEB 17	31.12	MAY 27	31.78	SEP 20	32.37	NOV 24	31.82
MAR 19	31.35	JUN 25	32.03	22	32.67	DEC 29	32.14

WELL 102N49W16A88

SITE NUMBER 433643096431701

SPD1

HIGHEST WATER LEVEL 8.00 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 10.27 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1436.5 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	8.00	APR 16, 1981	8.32	JUL 30, 1981	9.21	OCT 29, 1981	9.93
FEB 17	8.11	MAY 27	8.78	AUG 20	9.44	NOV 24	10.10
MAR 19	8.32	JUN 25	8.66	SEP 22	9.74	DEC 29	10.27

WELL 102N49W20B88

SITE NUMBER 433750096444501

C9

HIGHEST WATER LEVEL 13.36 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 15.63 FEET BELOW LAND SURFACE DATUM OCT 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1432.9 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.36	APR 16, 1981	14.38	JUL 30, 1981	15.08	OCT 29, 1981	15.63
FEB 17	13.76	MAY 27	14.71	AUG 20	15.04	NOV 24	15.32
MAR 19	14.17	JUN 25	14.97	SEP 22	15.51	DEC 29	15.22

WELL 102N49W32A886

SITE NUMBER 433607096440001

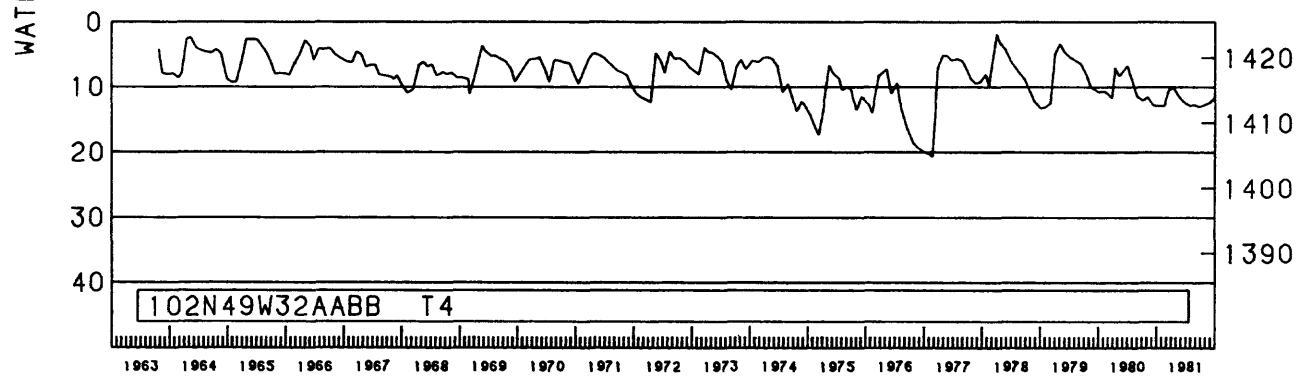
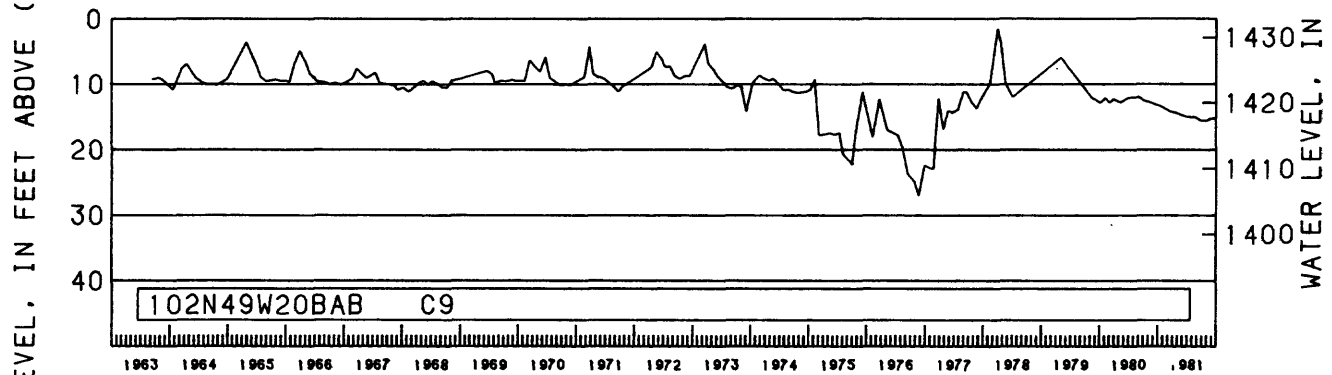
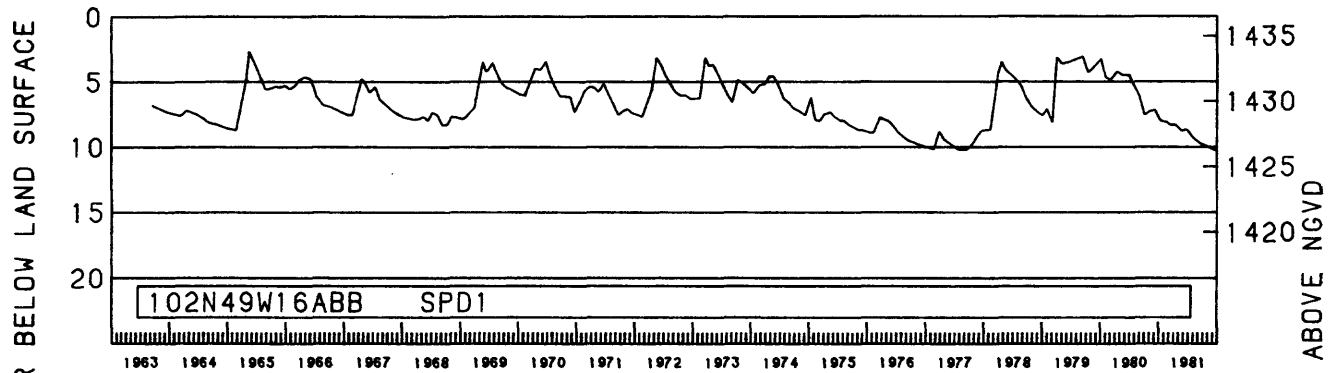
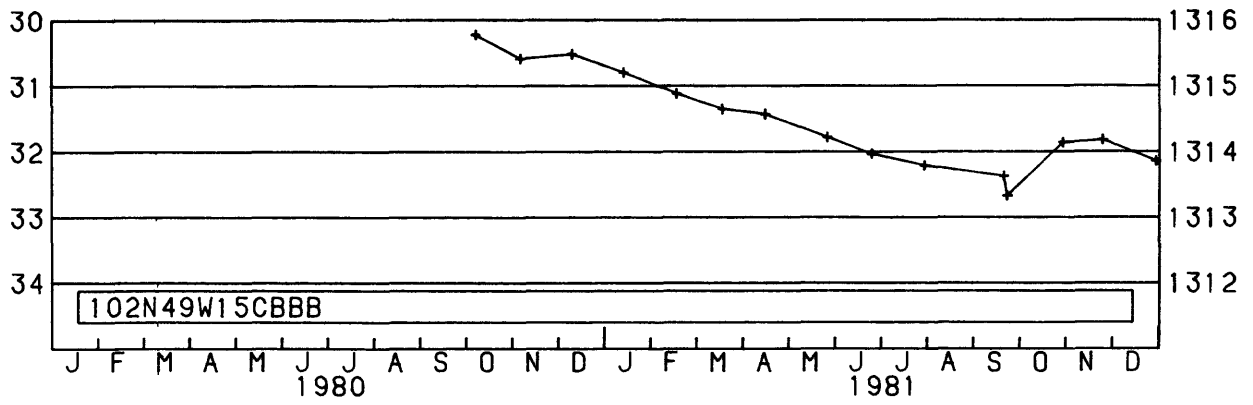
T4

HIGHEST WATER LEVEL 10.06 FEET BELOW LAND SURFACE DATUM APR 16, 1981.

LOWEST WATER LEVEL 13.03 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1425.5 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	12.85	APR 16, 1981	10.06	JUL 30, 1981	12.87	OCT 29, 1981	12.64
FEB 17	12.86	MAY 26	11.60	AUG 20	12.88	NOV 24	12.40
MAR 19	10.47	JUN 25	12.35	SEP 22	13.03	DEC 28	11.71



WELL 102N49W32ADAC

SITE NUMBER 433553096440001

A

HIGHEST WATER LEVEL 15.01 FEET BELOW LAND SURFACE DATUM MAR 19, 1981.

LOWEST WATER LEVEL 17.11 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1426.1 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	16.48	APR 16, 1981	15.13	JUL 30, 1981	16.95	OCT 30, 1981	16.66
FEB 17	16.56	MAY 26	16.17	AUG 20	17.06	NOV 24	16.59
MAR 19	15.01	JUN 25	16.51	SEP 22	17.11	DEC 26	15.62

WELL 102N49W32DBAL

SITE NUMBER 433536096441301

FF

HIGHEST WATER LEVEL 17.24 FEET BELOW LAND SURFACE DATUM APR 16, 1981.

LOWEST WATER LEVEL 18.99 FEET BELOW LAND SURFACE DATUM DEC 28, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1425.2 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	17.82	MAY 26, 1981	17.46	AUG 20, 1981	16.14	NOV 24, 1981	18.71
MAR 18	17.62	JUN 25	17.69	SEP 22	16.32	DEC 26	18.99
APR 16	17.24	JUL 30	16.23	OCT 30	16.76		

WELL 103N49W 5DLC

SITE NUMBER 434448096442501

SPH1

HIGHEST WATER LEVEL 11.06 FEET BELOW LAND SURFACE DATUM APR 15, 1981.

LOWEST WATER LEVEL 12.16 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1459.4 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	11.25	APR 15, 1981	11.06	JUL 30, 1981	11.86	OCT 29, 1981	11.93
FEB 17	11.35	MAY 27	11.39	AUG 20	12.02		
MAR 18	11.24	JUN 25	11.68	SEP 22	12.16		

WELL 103N49W 6ABB

SITE NUMBER 434540096453301

H3

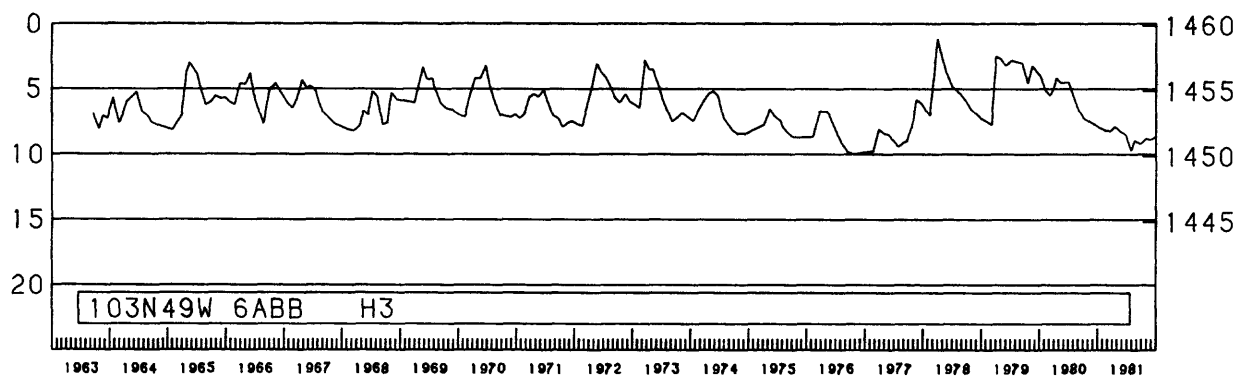
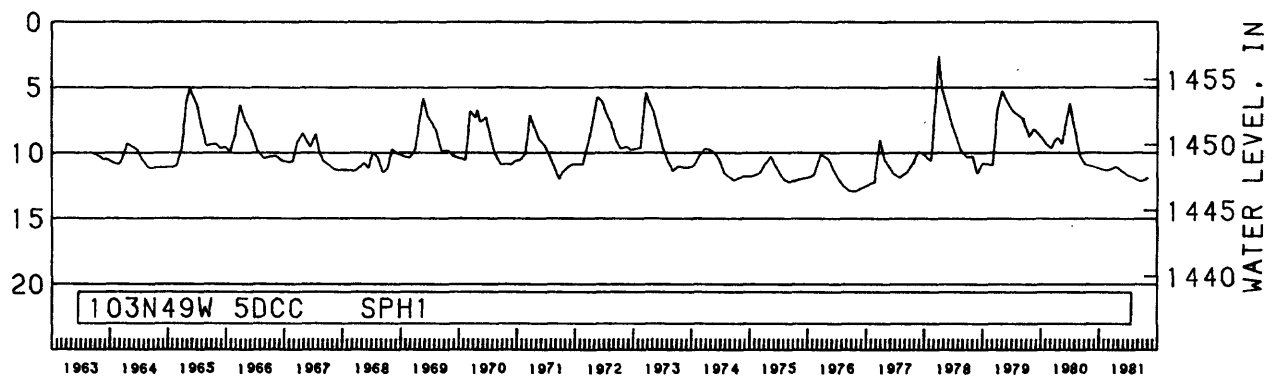
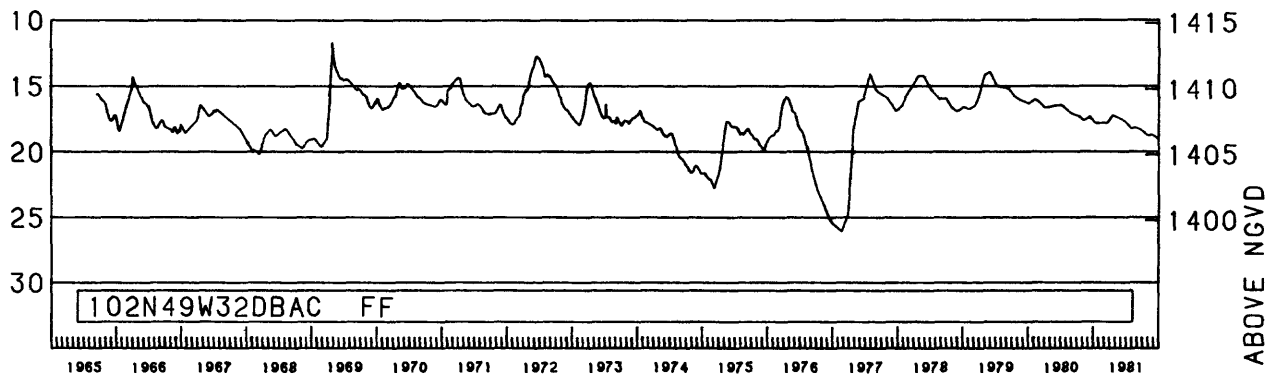
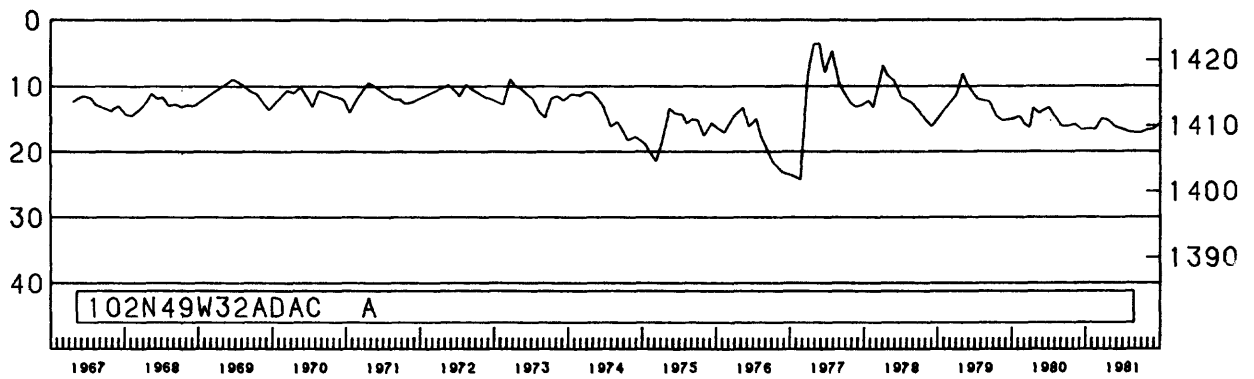
HIGHEST WATER LEVEL 7.90 FEET BELOW LAND SURFACE DATUM APR 15, 1981.

LOWEST WATER LEVEL 9.71 FEET BELOW LAND SURFACE DATUM JUL 30, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1460.2 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	7.98	APR 15, 1981	7.90	JUL 30, 1981	9.71	OCT 29, 1981	8.79
FEB 17	8.17	MAY 27	8.27	AUG 20	8.94	NOV 24	8.87
MAR 18	8.23	JUN 25	8.51	SEP 22	9.20	DEC 29	8.65

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE



WELL 103N49W 78AAA

SITE NUMBER 434446096454101

HIGHEST WATER LEVEL 13.17 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 14.14 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1450.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.17	APR 15, 1981	13.36	JUL 30, 1981	13.92	OCT 29, 1981	14.11
FEB 17	13.32	MAY 27	13.52	AUG 20	14.02	NOV 24	14.12
MAR 18	13.40	JUN 25	13.71	SEP 22	14.14	DEC 29	13.97

WELL 103N49W 78AAA2

SITE NUMBER 434446096454102

HIGHEST WATER LEVEL 13.48 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 14.45 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1450.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.48	APR 18, 1981	13.68	JUL 30, 1981	14.23	OCT 29, 1981	14.42
FEB 17	13.62	MAY 27	13.83	AUG 20	14.33	NOV 24	14.42
MAR 18	13.61	JUN 25	14.02	SEP 22	14.45	DEC 29	14.28

WELL 103N49W 80CC

SITE NUMBER 434358096441701

62

HIGHEST WATER LEVEL 9.28 FEET BELOW LAND SURFACE DATUM FEB 17, 1981.

LOWEST WATER LEVEL 10.17 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1453.5 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	10.17	APR 15, 1981	9.44	JUL 30, 1981	9.78	OCT 29, 1981	10.05
FEB 17	9.28	MAY 27	9.56	AUG 20	9.83	NOV 24	10.06
MAR 18	9.42	JUN 25	9.66	SEP 22	10.00	DEC 29	10.09

WELL 103N49W 16ACCL

SITE NUMBER 434330096431201

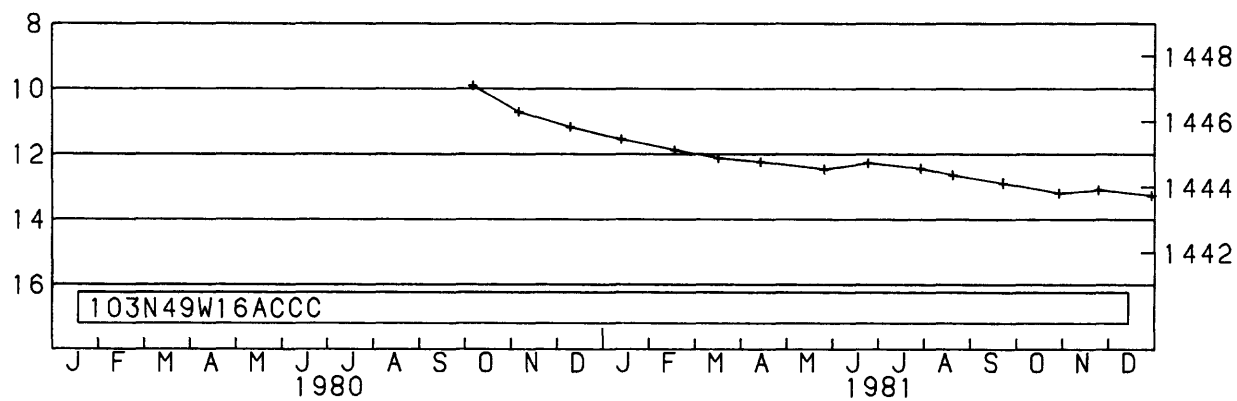
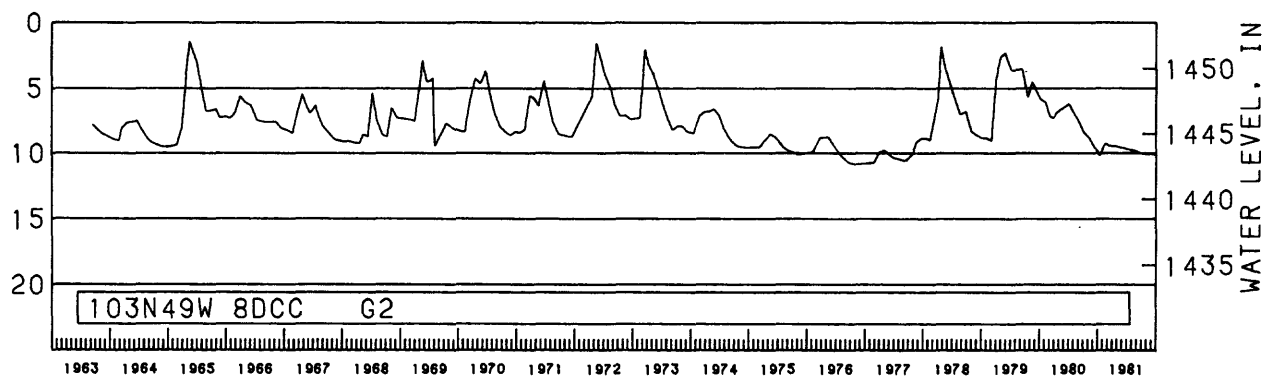
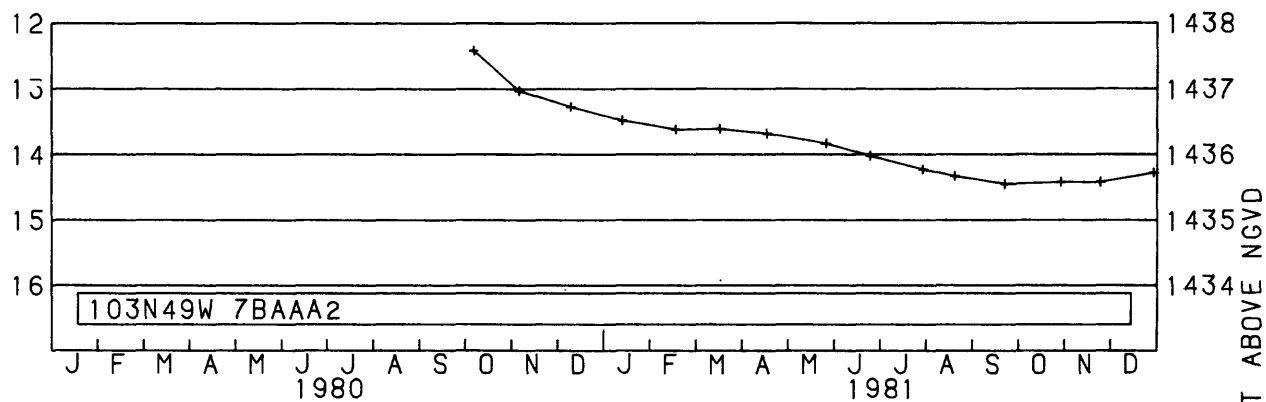
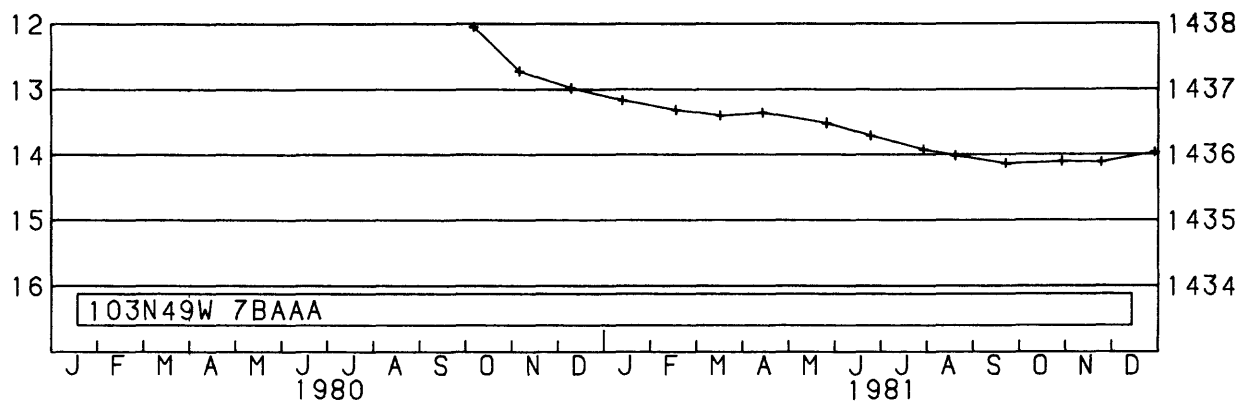
HIGHEST WATER LEVEL 11.54 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 13.26 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1457.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	11.54	APR 15, 1981	12.24	JUL 30, 1981	12.43	OCT 29, 1981	13.19
FEB 17	11.87	MAY 27	12.46	AUG 20	12.64	NOV 24	13.09
MAR 18	12.12	JUN 25	12.27	SEP 22	12.89	DEC 29	13.26

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE



WELL 103N49W16BCCC

SITE NUMBER 434330096434801

HIGHEST WATER LEVEL 8.56 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 9.82 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1453.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	8.56	MAY 21, 1981	9.09	AUG 20, 1981	9.37	NOV 24, 1981	9.78
MAR 18	8.88	JUN 25	8.99	SEP 22	8.90	DEC 29	9.82
APR 15	8.89	JUL 30	9.19	OCT 29	9.73		

WELL 103N49W17DBB

SITE NUMBER 434316096441501

S-25

HIGHEST WATER LEVEL 9.94 FEET BELOW LAND SURFACE DATUM APR 15, 1981.

LOWEST WATER LEVEL 10.86 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1451.7 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	9.97	MAY 27, 1981	10.31	AUG 20, 1981	10.67	NOV 24, 1981	10.83
FEB 17	9.97	JUN 25	10.45	SEP 22	10.66	DEC 29	10.58
APR 15	9.94	JUL 30	10.55	OCT 29	10.66		

WELL 103N49W18ACBB

SITE NUMBER 434340096453701

HIGHEST WATER LEVEL 13.16 FEET BELOW LAND SURFACE DATUM FEB 17, 1981.

LOWEST WATER LEVEL 14.11 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1451.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.23	APR 15, 1981	13.18	JUL 30, 1981	13.84	OCT 29, 1981	13.73
FEB 17	13.16	MAY 27	13.53	AUG 20	13.95	NOV 24	13.86
MAR 18	13.32	JUN 25	13.79	SEP 22	14.11	DEC 29	13.52

WELL 103N49W21DABB

SITE NUMBER 434237096425501

SPF 3

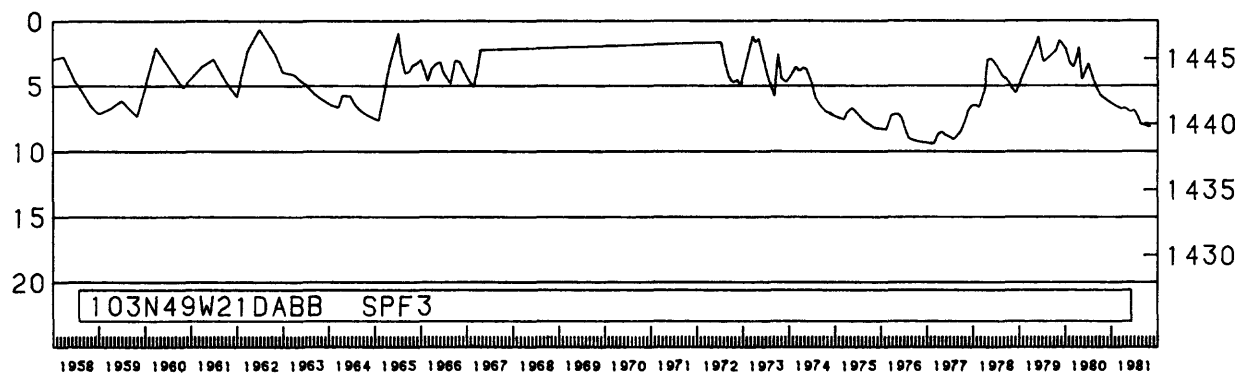
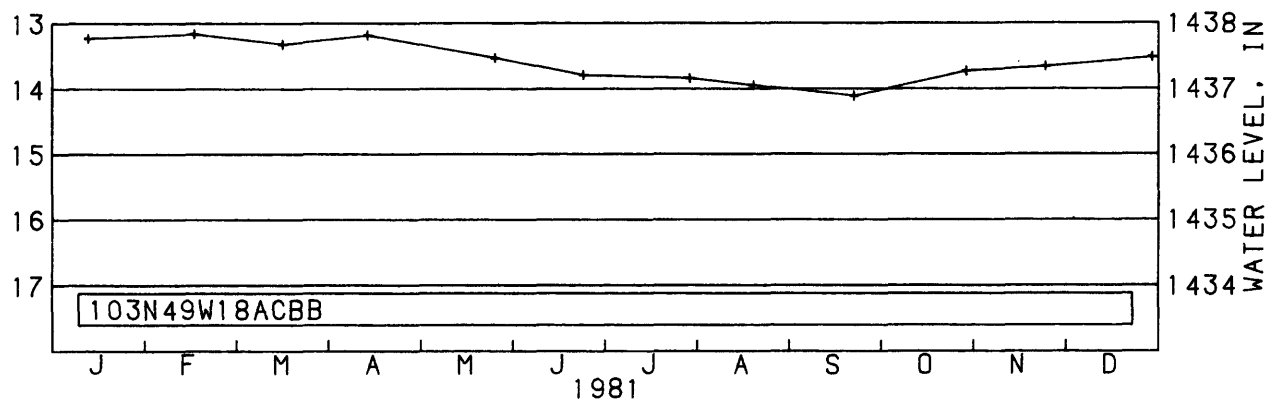
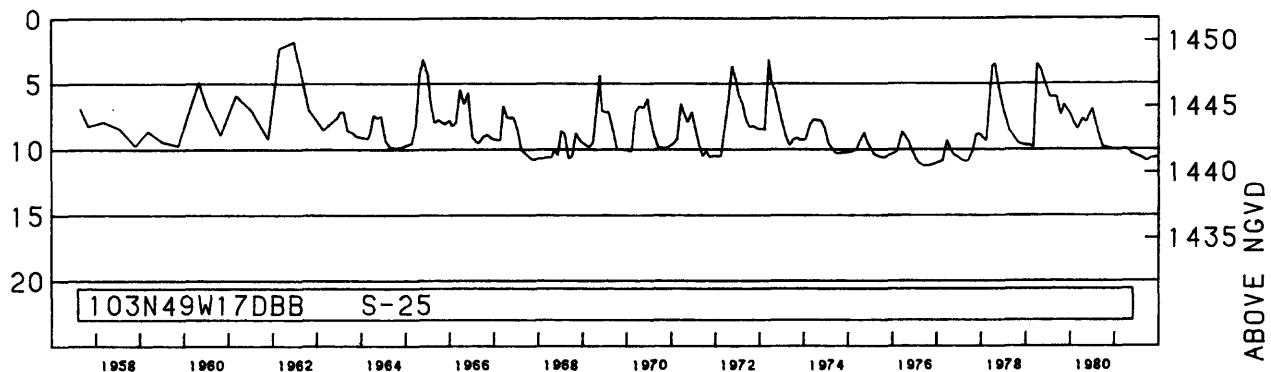
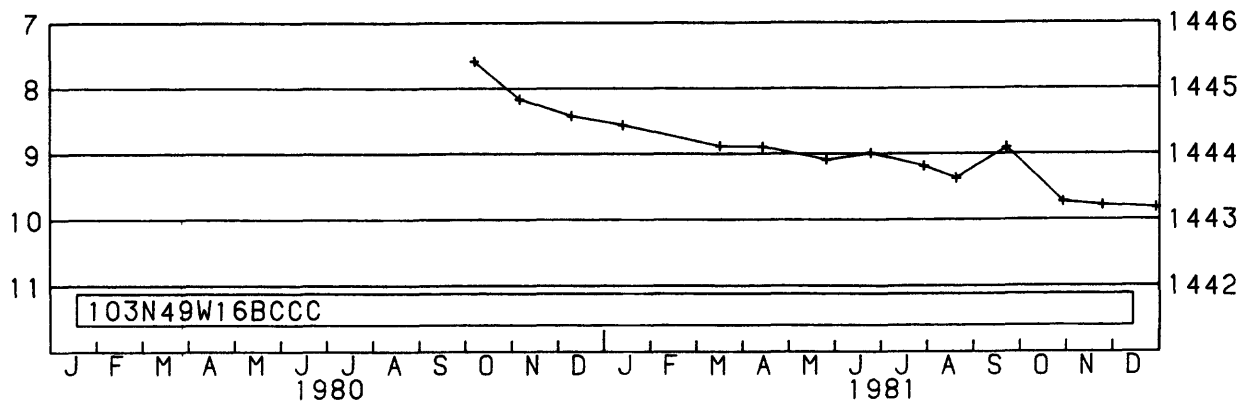
HIGHEST WATER LEVEL 6.43 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 8.11 FEET BELOW LAND SURFACE DATUM OCT 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1447.9 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	6.43	MAY 27, 1981	6.98	JUL 30, 1981	7.42	SEP 22, 1981	8.00
MAR 18	6.76	JUN 25	6.86	AUG 20	7.94	OCT 29	8.11
APR 15	6.71						

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE



WELL 103N49W28ADU

SITE NUMBER 434216096424501

SPF2

HIGHEST WATER LEVEL 6.59 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 8.34 FEET BELOW LAND SURFACE DATUM AUG 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1445.5 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	6.59	APR 15, 1981	6.70	JUL 30, 1981	7.80	OCT 29, 1981	8.10
FEB 17	6.75	MAY 27	7.52	AUG 20	8.34	NOV 24	8.15
MAR 18	6.88	JUN 25	7.14	SEP 22	8.13	DEC 29	8.20

WELL 103N49W29AUC

SITE NUMBER 434120096440301

SPF1

HIGHEST WATER LEVEL 8.93 FEET BELOW LAND SURFACE DATUM FEB 17, 1981.

LOWEST WATER LEVEL 9.93 FEET BELOW LAND SURFACE DATUM SEP 22, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1447.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	8.97	APR 15, 1981	8.97	JUL 30, 1981	9.62	OCT 29, 1981	9.86
FEB 17	8.93	MAY 27	9.27	AUG 20	9.77	NOV 24	9.85
MAR 18	9.07	JUN 25	9.51	SEP 22	9.93	DEC 29	9.74

WELL 103N49W29CUCU

SITE NUMBER 434120096444301

HIGHEST WATER LEVEL 18.59 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 21.6 FEET BELOW LAND SURFACE DATUM AUG 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1480.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	18.59	APR 15, 1981	19.07	JUN 30, 1981	20.29	NOV 24, 1981	20.29
FEB 17	18.77	MAY 27	19.49	AUG 20	21.6	DEC 29	20.24
MAR 18	18.96	JUN 25	19.88	SEP 22	21.22		

WELL 103N49W338B8A

SITE NUMBER 434117096434401

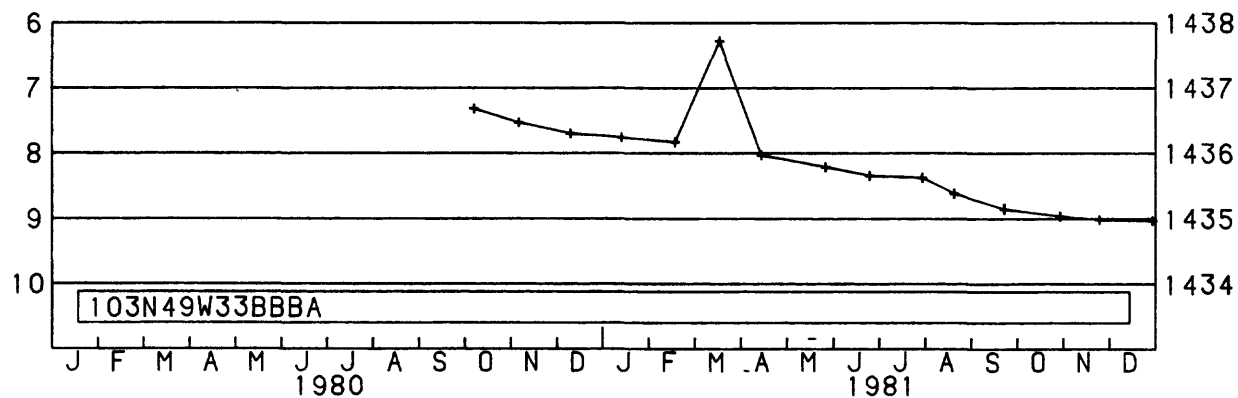
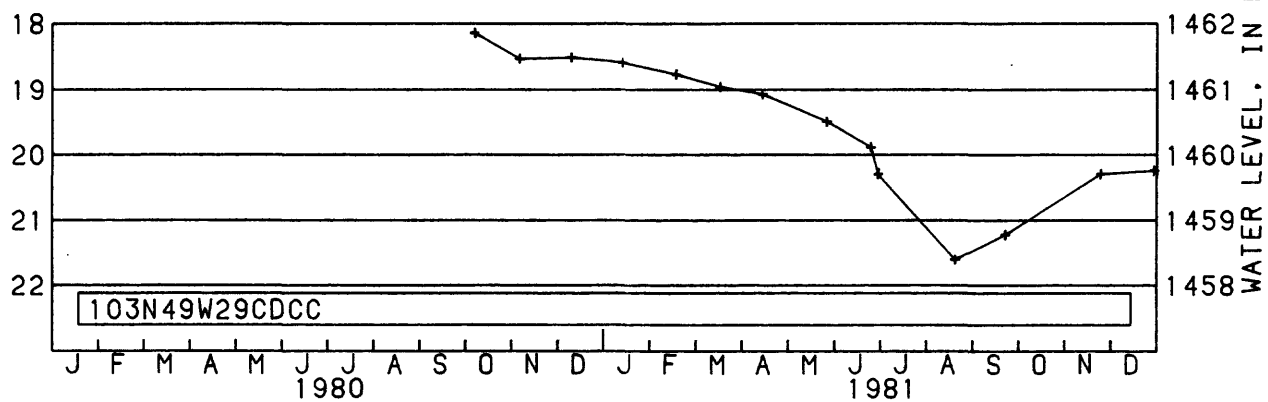
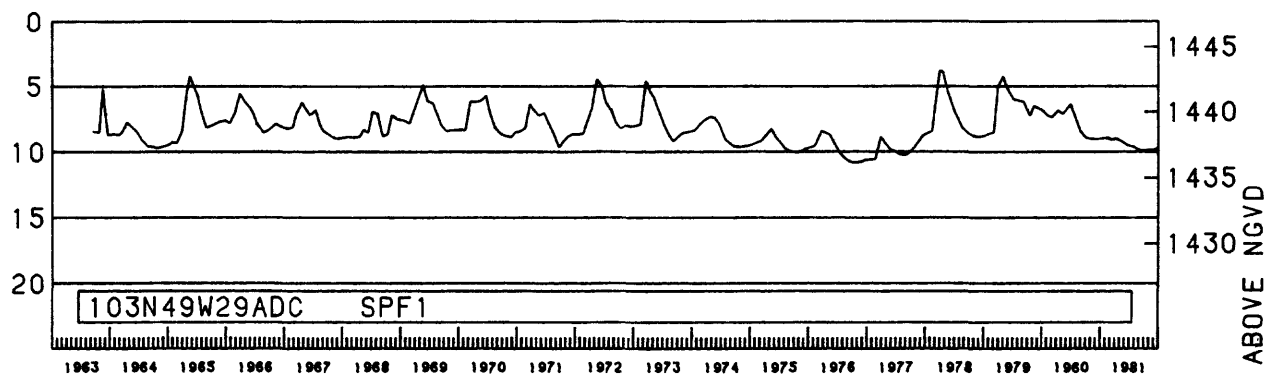
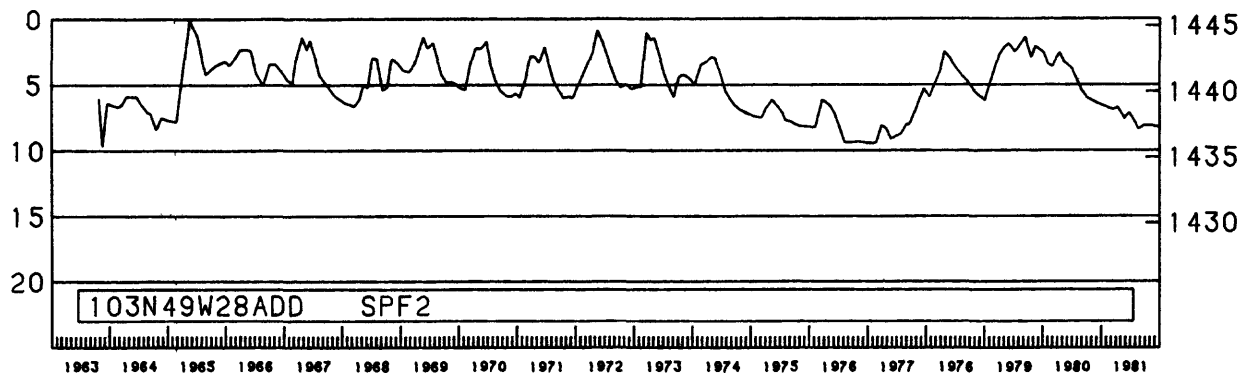
HIGHEST WATER LEVEL 6.28 FEET BELOW LAND SURFACE DATUM MAR 18, 1981.

LOWEST WATER LEVEL 9.03 FEET BELOW LAND SURFACE DATUM DEC 29, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1444.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	7.76	APR 15, 1981	8.03	JUL 30, 1981	8.37	OCT 29, 1981	8.96
FEB 17	7.83	MAY 27	8.21	AUG 20	8.61	NOV 24	9.01
MAR 18	6.28	JUN 25	8.34	SEP 22	8.85	DEC 29	9.03

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE



WELL 104N49W17CCAB

SITE NUMBER 434827096445201

HIGHEST WATER LEVEL 9.73 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 11.78 FEET BELOW LAND SURFACE DATUM AUG 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1474.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	9.73	APR 15, 1981	10.95	JUL 30, 1981	11.67	OCT 29, 1981	11.13
FEB 17	10.60	MAY 27	11.21	AUG 20	11.78	NOV 24	11.41
MAR 18	11.11	JUN 25	11.74	SEP 22	11.65	DEC 29	11.32

WELL 104N49W31CCCC2

SITE NUMBER 434540096461502

HIGHEST WATER LEVEL 12.62 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 14.14 FEET BELOW LAND SURFACE DATUM NOV 24, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1463.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	12.62	APR 15, 1981	13.11	JUL 30, 1981	13.75	OCT 29, 1981	14.07
FEB 17	12.91	MAY 27	13.27	AUG 20	13.90	NOV 24	14.14
MAR 18	13.11	JUN 25	13.49	SEP 22	14.11	DEC 29	14.03

WELL 104N49W31CCLL

SITE NUMBER 434540096461501

S-24

HIGHEST WATER LEVEL 13.53 FEET BELOW LAND SURFACE DATUM JAN 13, 1981.

LOWEST WATER LEVEL 15.05 FEET BELOW LAND SURFACE DATUM NOV 24, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM. ALTITUDE OF LAND SURFACE 1465.0 FEET.

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 13, 1981	13.53	APR 15, 1981	14.04	JUL 30, 1981	14.67	OCT 29, 1981	15.00
FEB 17	13.63	MAY 27	14.19	AUG 20	14.62	NOV 24	15.05
MAR 18	14.04	JUN 25	14.41	SEP 22	15.01	DEC 29	14.93

WATER LEVEL, IN FEET ABOVE (+) OR BELOW LAND SURFACE

