GROUND-WATER LEVELS IN WYOMING, 1984 THROUGH SEPTEMBER 1993

By Hugh I. Kennedy and Sharon L. Green

U.S. GEOLOGICAL SURVEY
Open-File Report 94-466

Prepared in cooperation with the
WYOMING STATE ENGINEER

Cheyenne, Wyoming

1994

U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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Cheyenne, Wyoming 82001-5662

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Earth Science Infomation Center
Open-File Reports Section
Box 25286, Denver Federal Center
Denver, Colorado 80225

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CONVERSION FACTORS

Multiply	By	To obtain
acre	0.4047	hectare
foot (ft)	.3048	meter
mile (mi)	1.609	kilometer

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ABSTRACT

Water levels were monitored in a network of 83 observation wells in Wyoming, as of September 1993, mostly in areas where ground water is used in large quantities for irrigation or municipal purposes. The observation-well program is conducted by the U.S. Geological Survey in cooperation with the Wyoming State Engineer. In this report, water-level data was collected by personnel of the Wyoming State Engineer's office at 79 of the 83 observation wells monitored. This report includes maps showing the location of the observation wells, tables listing well history and highest and lowest water levels for the period of record, and hydrographs showing water-level fluctuations for 1984 through September 1993 or for the period of record if less than 10 years.

INTRODUCTION

Since 1940 the U.S. Geological Survey, in cooperation with city, State, and other Federal agencies, periodically has measured ground-water levels in a large number of wells in Wyoming. A more extensive program was started in 1972 in an effort to expand the ground-water-level data base throughout the State. Part of the expansion included the installation of continuous water-level recorders on selected wells in the observation-well network. The observation-well program currently is conducted by the U.S. Geological Survey in cooperation with the Wyoming State Engineer.

Ground-water levels were monitored in a network of 83 observation wells in Wyoming, mostly in areas where ground water is used in large quantities for irrigation or municipal purposes. At least one observation well was monitored in 15 of the 23 counties in Wyoming. During 1993, a continuous record of water levels was obtained from 63 wells equipped with float-driven digital water-level recorders, and a continuous record of hydraulic heads above land surface was obtained from 2 flowing wells equipped with pressure-sensing transducers and electronic data recorders. The remaining 18 wells periodically were measured by hand using a steel drop tape.

Wyoming water-level data and hydrographs for periods prior to 1992 can be found in 12 previous reports of ground-water levels, compiled by the U.S. Geological Survey (Ringen, 1973 and 1974; Ballance and Freudenthal, 1975, 1976, and 1977; Stevens, 1978; Ragsdale, 1982; Ragsdale and Oberender, 1985; Kennedy and Oberender, 1987; Kennedy and Green, 1988, 1990, and 1992).

PRESENTATION OF DATA

The data are presented by county, and the counties for which water-level data are available for 1984 through September 1993 (fig. 1) are listed alphabetically. Records of observation wells for each county are listed in a table preceded by a map showing the location of the wells in that county (figs. 2-16). Water-level hydrographs or hydraulic-head hydrographs for 1984 through September 1993 or for the period of record, if less than 10 years, follow the table for each county.

The hydrographs for the 83 observation wells were plotted using data from either continuous water-level records or periodic water-level measurements. The daily maximum water level was used in plotting hydrographs for those wells equipped with continuous recorders. These hydrographs depict water-level fluctuations and water-level trends for 1984 through September 1993. If more precise water levels are needed, tabulations of actual water-level measurements (recorded to the nearest one-hundredth of a foot) are available from the U.S. Geological Survey, 2617 East Lincolnway, Suite B, Cheyenne, Wyoming 82001 (telephone 307/778-2931, extension 2153).

Numbering System for Wells

Identification numbers of most wells in this report, except those on the Wind River Indian Reservation, are numbered according to the Federal system of land subdivision. The first two digits denote the township north of the 40th Parallel Base Line, the next two or three digits denote the range west of the Sixth Principal Meridian, and the third two digits denote the section. A section is divided into quarters of 160 acres each; each quarter is designated a, b, c, or d in a counterclockwise direction, beginning in the northeast quarter. Each quarter is divided into quarters of 40 acres each and again into quarters (10-acre tracts). A numeral appearing after the letters distinguishes that well from other numbered wells within the same 10-acre tract.

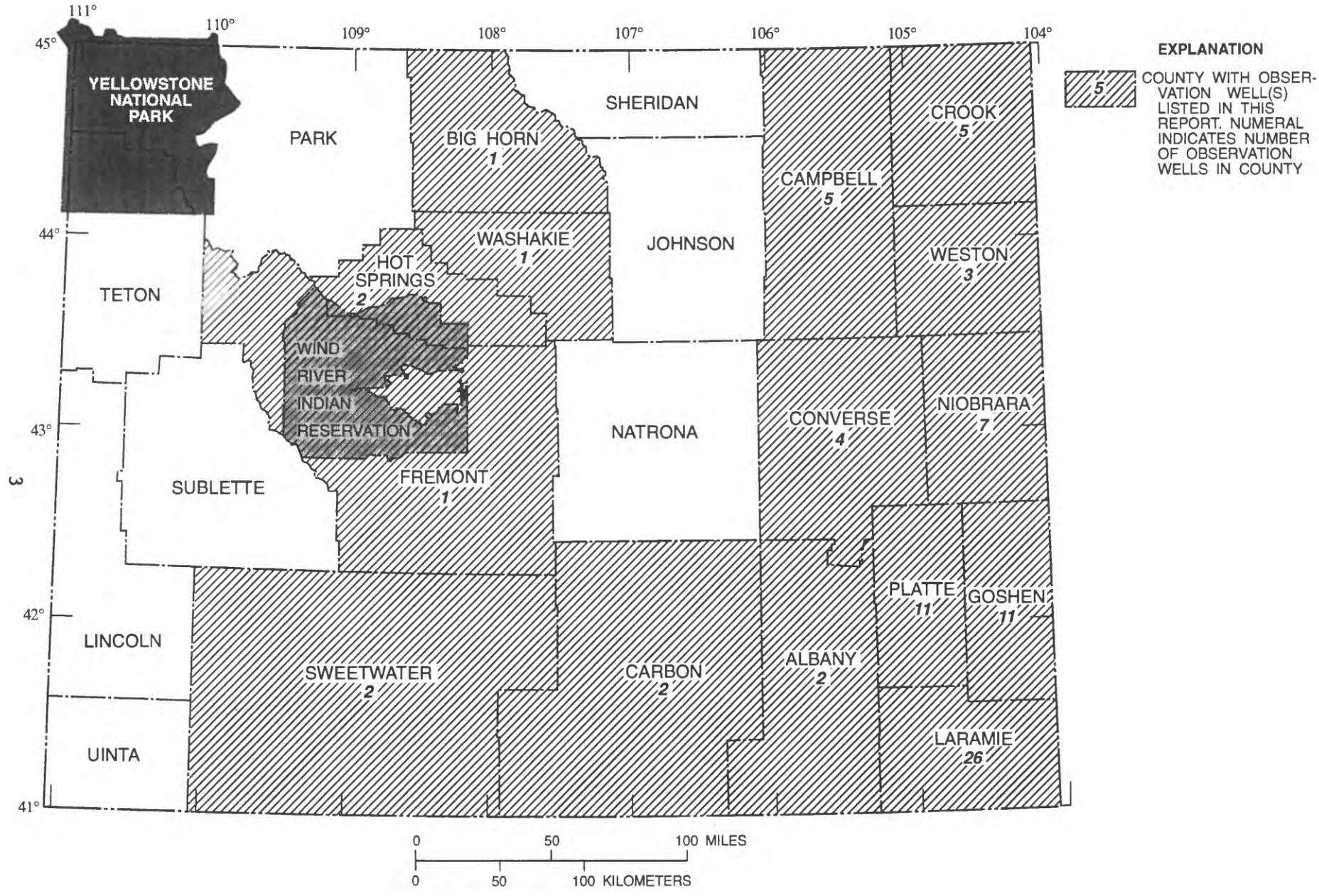
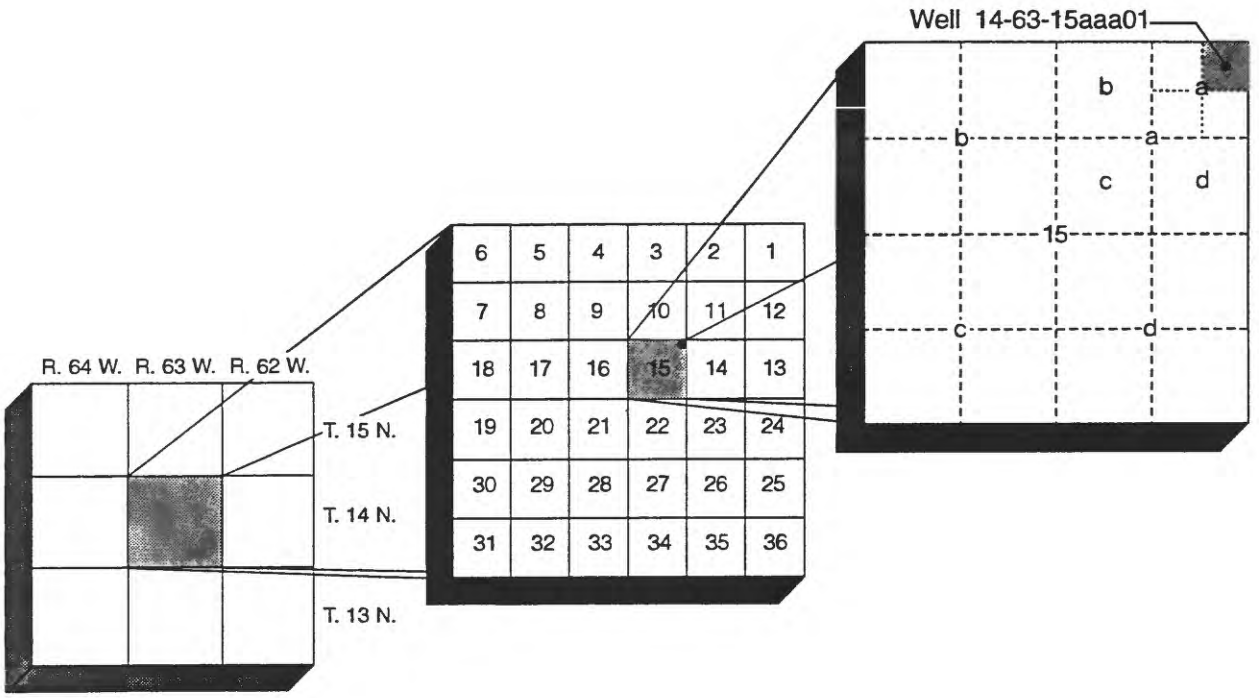


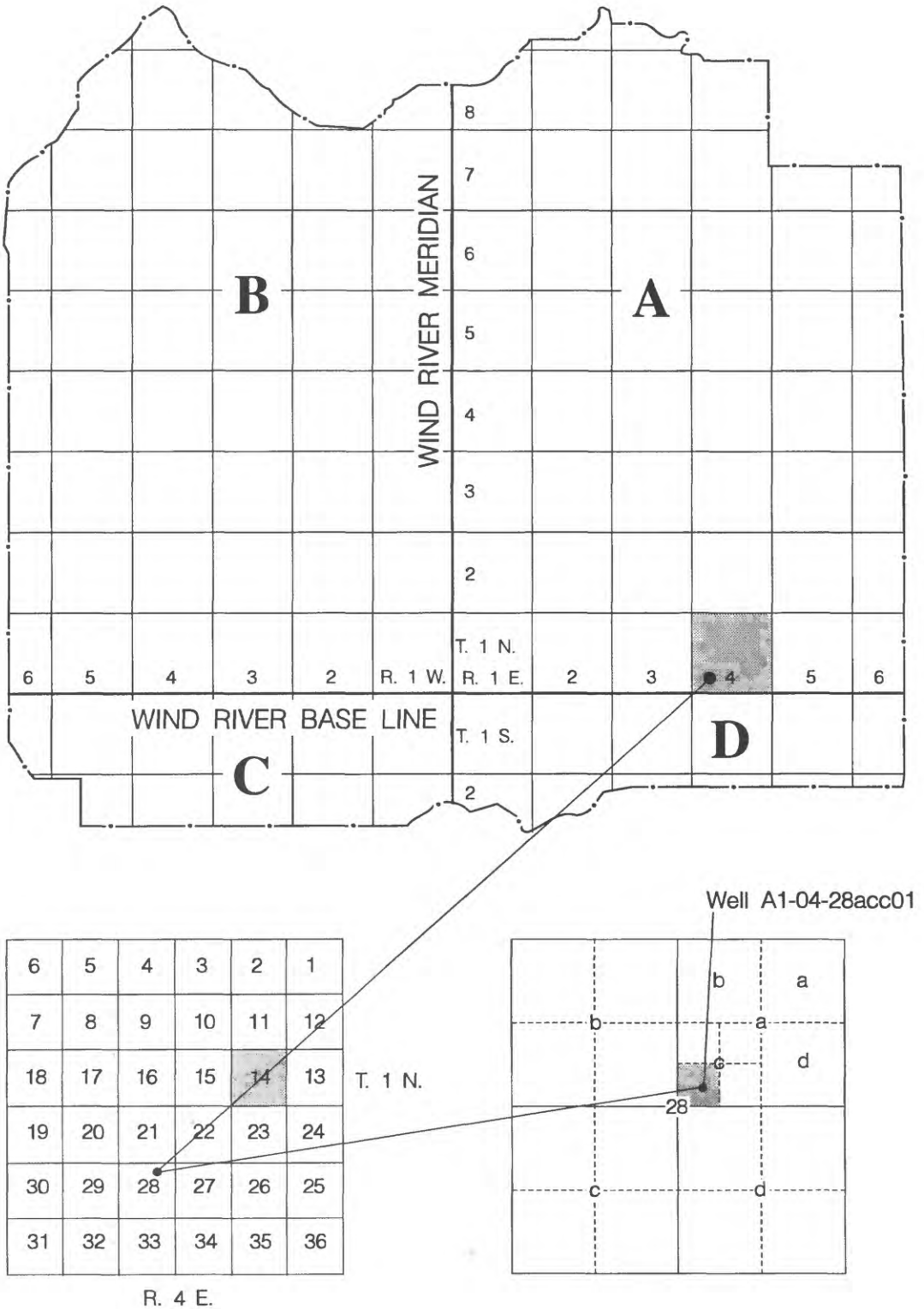
Figure 1.--Location of counties in Wyoming with observation wells, as of September 1993.

The following illustration shows the location of well 14-63-15aaa01 in Laramie County:



Observation wells within the original surveyed boundary of the Wind River Indian Reservation in Fremont County (fig. 8) are similarly identified; however, they are in a land subdivision that is referenced as the Wind River Base Line and Meridian (McGreevy and others, 1969). Wells within the reservoir boundary may be in the northeast, northwest, southwest, or southeast quadrants of this base-line and meridian net. Well numbers in this land net have uppercase-letter prefixes that designate the quadrants: A designates the northeast quadrant, B the northwest, C the southwest, and D the southeast.

The following illustration shows the location of well A1-04-28acc01 in Fremont County:



The latitude, longitude, and sequence number (shown in the upper right-hand corner of the hydrograph for each well) is an identification number assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote the degrees, minutes, and seconds of longitude, and the last two digits identify the well within a 1-second grid.

Explanation of Column Headings for Tables of Well Records

Well number: See text for description of the well-numbering system.

Well depth: Depth of well, in feet below land surface. Dashes indicate the depth is not known.

Use of water: H, domestic; I, irrigation; P, municipal; S, stock; U, unused. Dashes indicate the use of water is not known.

Principal geologic source: The codes for the principal geologic source are from the Water Data Storage and Retrieval System (WATSTORE) of the U.S. Geological Survey and may not follow the current usage of the U.S. Geological Survey. Dashes indicate the principal geologic source is not known.

Principal geologic source	
Code	Geologic unit and age
111ALVM	Alluvium (Holocene)
111TRRC	Terrace deposits (Holocene)
121NRPK	North Park Formation (Pliocene)
1210GLL	Ogallala Formation (Pliocene)
122ARKR	Arikaree Formation (Miocene)
123BRUL	Brule Formation (Oligocene)
123CDRN	Chadron Formation (Oligocene)
124WDRV	Wind River Formation (Eocene)
124WSTC	Wasatch Formation (Eocene)
125FRUN	Frontier Formation (Paleocene)
125LEBO	Lebo Member of Fort Union Formation (Paleocene)
211FXHL	Fox Hills Sandstone (Late Cretaceous)
217LKOT	Lakota Formation (Early Cretaceous)
311PRKC	Park City Formation (Permian)
317CSPR	Casper Formation (Early Permian and Middle and Late Pennsylvanian)
317MNLS	Minnelusa Formation (Early Permian and Pennsylvanian)
317TSLP	Tensleep Sandstone (Early Permian and Middle and Late Pennsylvanian)
331MDSN	Madison Limestone (Early and Late Mississippian)
337PHSP	Pahasapa Limestone (Early Mississippian)
374FLTD	Flathead Sandstone (Middle Cambrian)

Record available: Years for which water-level measurements are available.

Water levels or hydraulic heads: The highest and lowest water levels or hydraulic heads are for the period of record and represent the static water levels or hydraulic heads unless otherwise footnoted.

Explanation of Hydrographs

——— Water-level or hydraulic-head data obtained by electronic data recorders or pressure transducers. Missing sections of lines indicate periods of no data.

□— — —□ Individual water-level measurements. Dashed line represents periods of no data between measurements.

The local reference name of the observation well plus any additional information is listed below the hydrograph.

REFERENCES CITED

Ballance, W.C., and Freudenthal, P.B., 1975, Ground-water levels in Wyoming, 1974: U.S. Geological Survey Open-File Report, 186 p.

_____ 1976, Ground-water levels in Wyoming, 1975: U.S. Geological Survey Open-File Report 76-598, 170 p.

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Kennedy, H.I., and Oberender, C.B., 1987, Ground-water levels in Wyoming, 1976-1985: U.S. Geological Survey Open-File Report 87-456, 122 p.

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McGreevy, L.J., Hodson, W.G., and Rucker, S.J., IV, 1969, Ground-water resources of the Wind River Indian Reservation, Wyoming: U.S. Geological Survey Water-Supply Paper 1576-I, 145 p.

Ragsdale, J.O., 1982, Ground-water levels in Wyoming, 1971 through part of 1980: U.S. Geological Survey Open-File Report 82-859, 200 p.

Ragsdale, J.O., and Oberender, C.B., 1985, Ground-water levels in Wyoming, 1974 through 1983: U.S. Geological Survey Open-File Report 85-403, 194 p.

Ringen, B.H., 1973, Records of ground-water levels in Wyoming, 1940-1971: Wyoming State Engineer's Office, Wyoming Water Planning Program Report No. 13, 479 p.

_____ 1974, Ground-water levels in Wyoming, 1972-73: Wyoming State Engineer's Office, Wyoming Water Planning Program Report No. 13, Supplement No. 1, 158 p.

Stevens, M.D., 1978, Ground-water levels in Wyoming, 1977: U.S. Geological Survey Open-File Report 78-605, 203 p.

GROUND-WATER LEVELS BY COUNTY

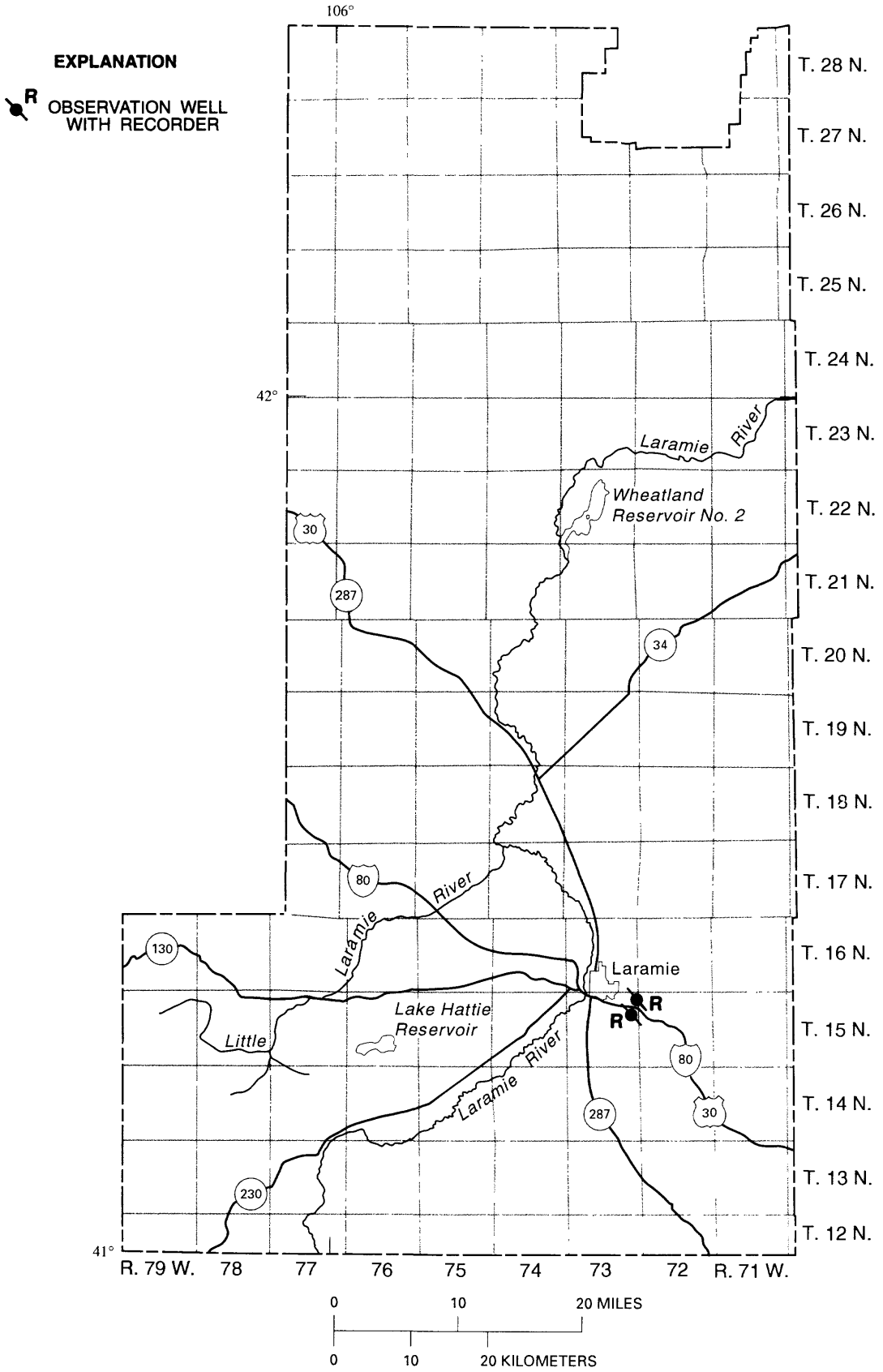
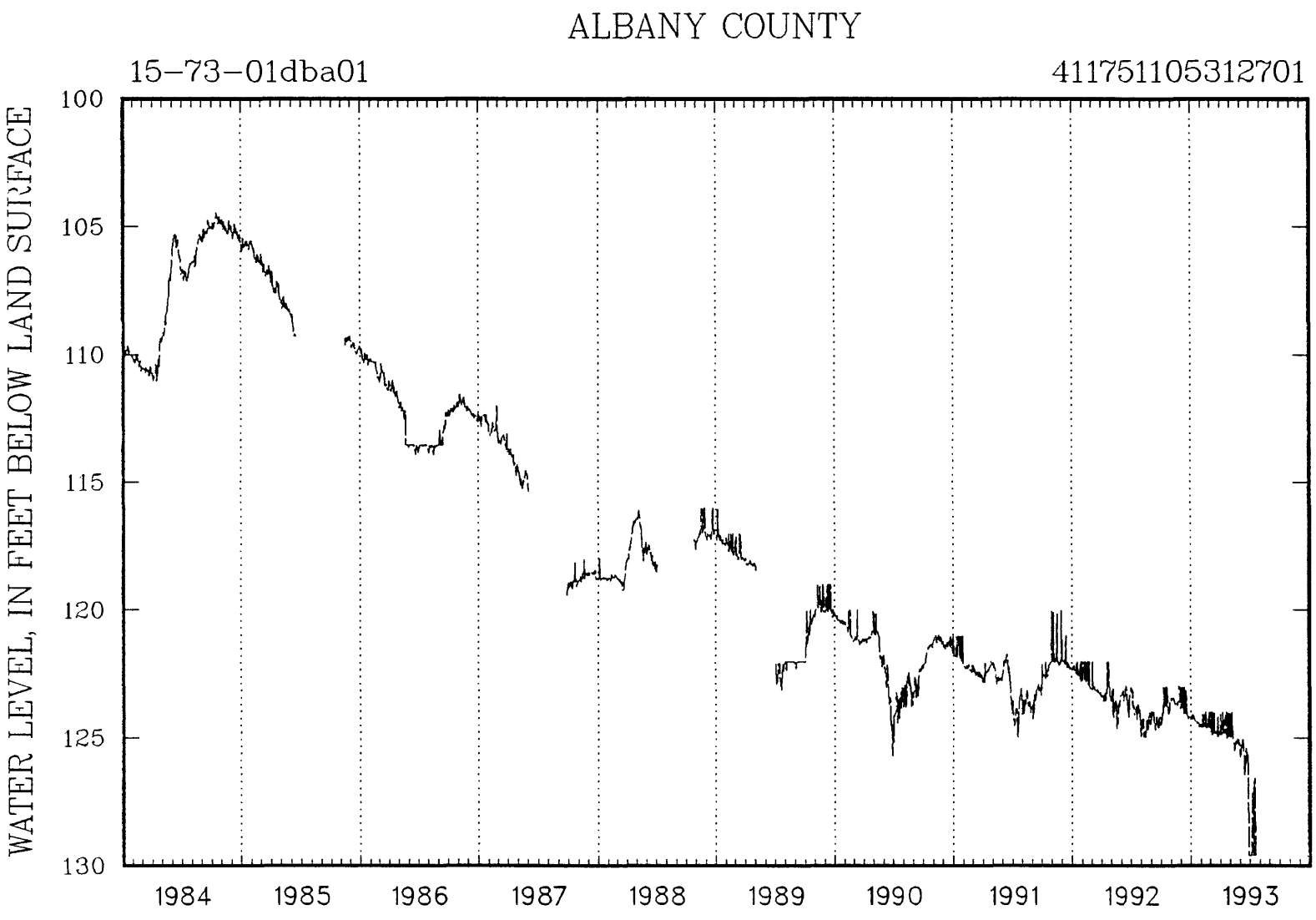


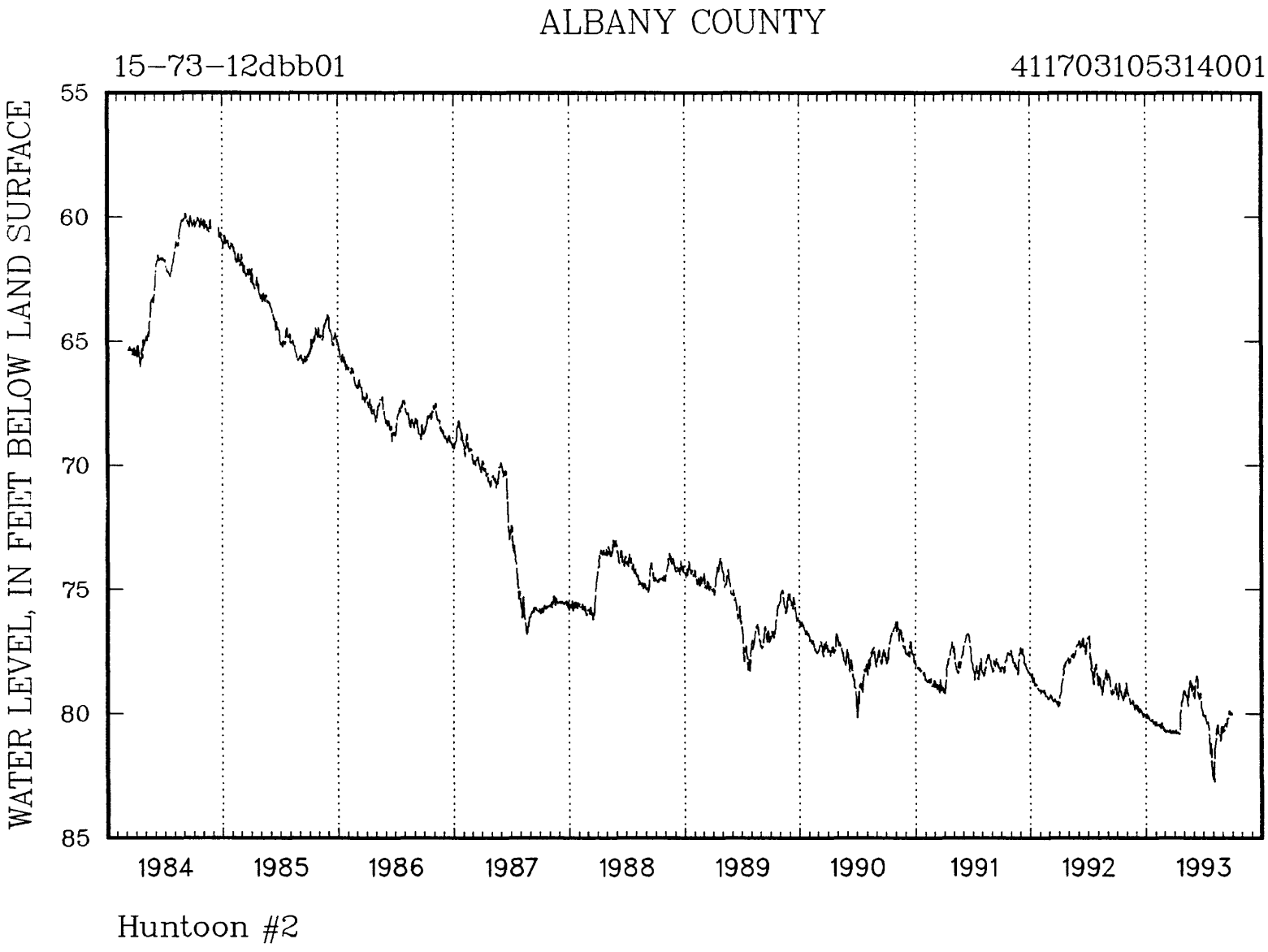
Figure 2.--Location of observation wells in Albany County, Wyoming.

Records of observation wells in Albany County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
15-73-01dba01	182	S	317CSPR	1977-93	104.45	10-84	[1]129.80	08-79
15-73-12dbb01	243	S	317CSPR	1978-93	59.84	09-84	[1]85.56	05-82

[1] From hand-measured data.


ALBANY COUNTY
15-73-01dba01
411751105312701
WATER LEVEL, IN FEET BELOW LAND SURFACE
100
105
110
115
120
125
130
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Huntoon #1


ALBANY COUNTY
15-73-12dbb01
411703105314001
WATER LEVEL, IN FEET BELOW LAND SURFACE
55
60
65
70
75
80
85
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Huntoon #2

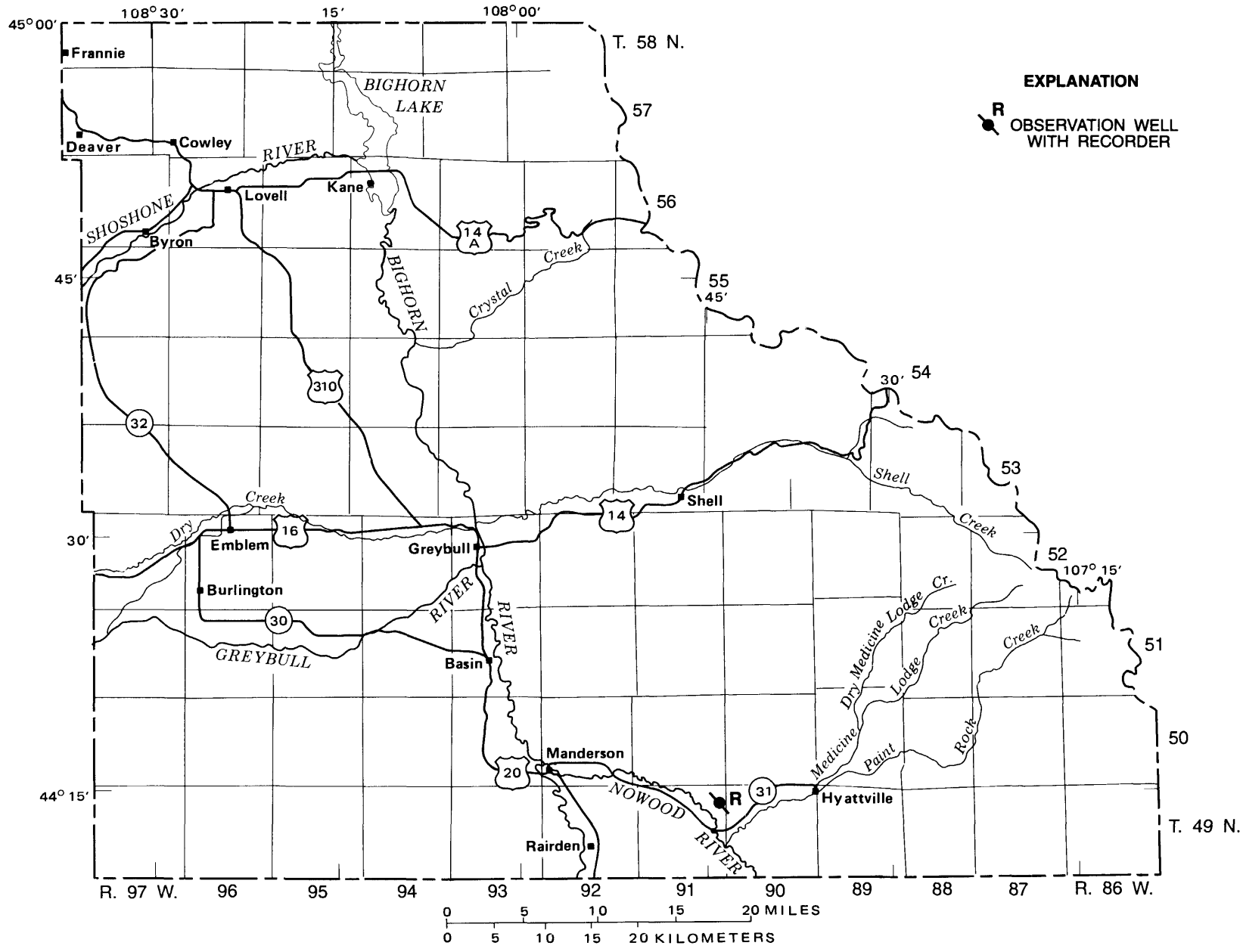


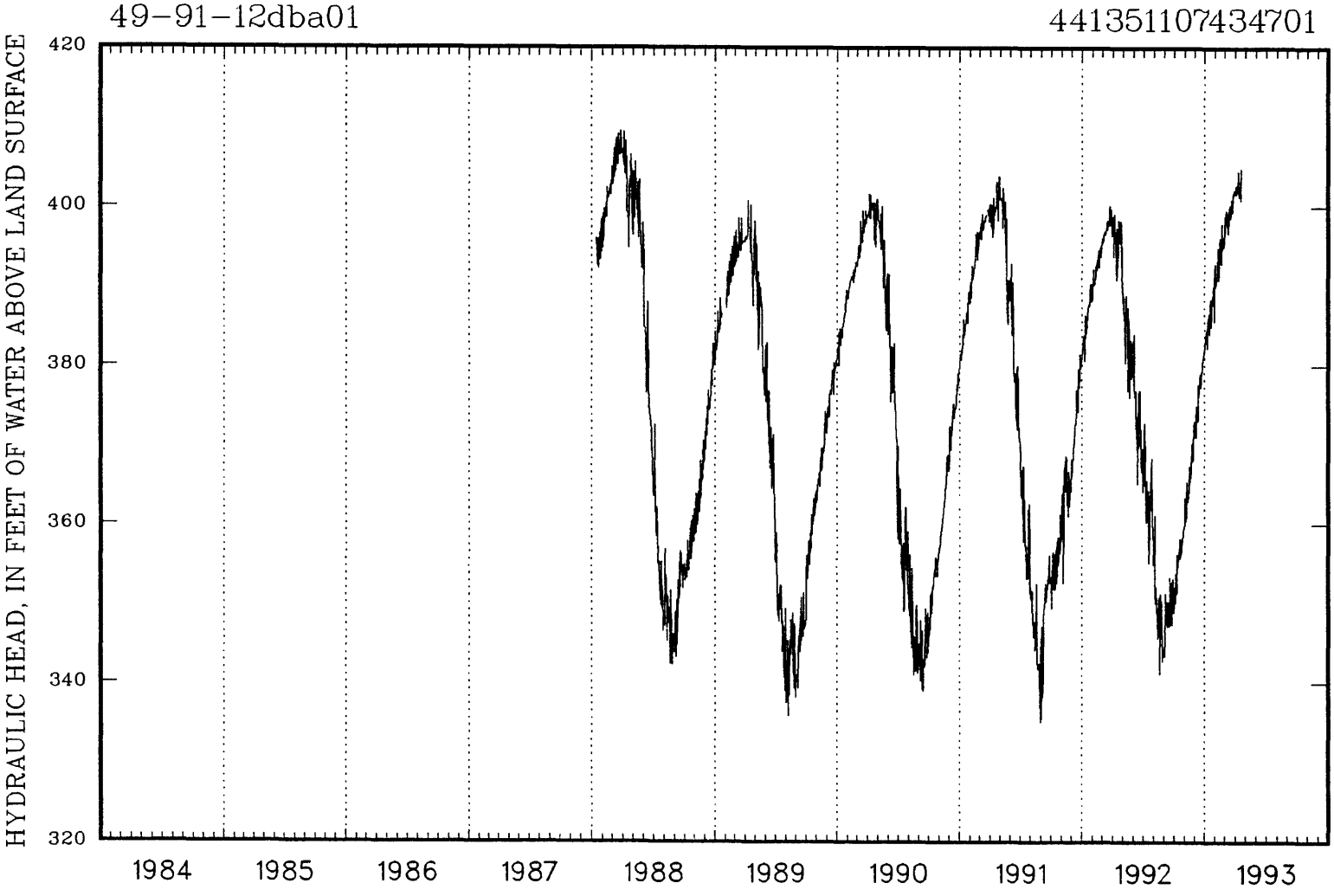
Figure 3.--Location of observation well in Big Horn County, Wyoming.

Record of observation well in Big Horn County, Wyoming, and highest and lowest recorded hydraulic heads, in feet above land surface. Continuous water-level measurements made by the U.S. Geological Survey. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Hydraulic heads			
					Highest		Lowest	
					Heads (feet)	Month-year	Heads (feet)	Month-year
49-91-12dba01	4,210	H	331MDSN	1988-93	[1]409.50	03-88	[1]335.12	08-91

[1] Flowing well, shut-in pressure was measured by pressure transducer and converted to hydraulic head above land surface for illustration purposes. Hydraulic head, in feet above land surface, was calculated by multiplying the shut-in pressure in pounds per square inch times 2.31.

BIG HORN COUNTY



Worland-1
Flowing well.

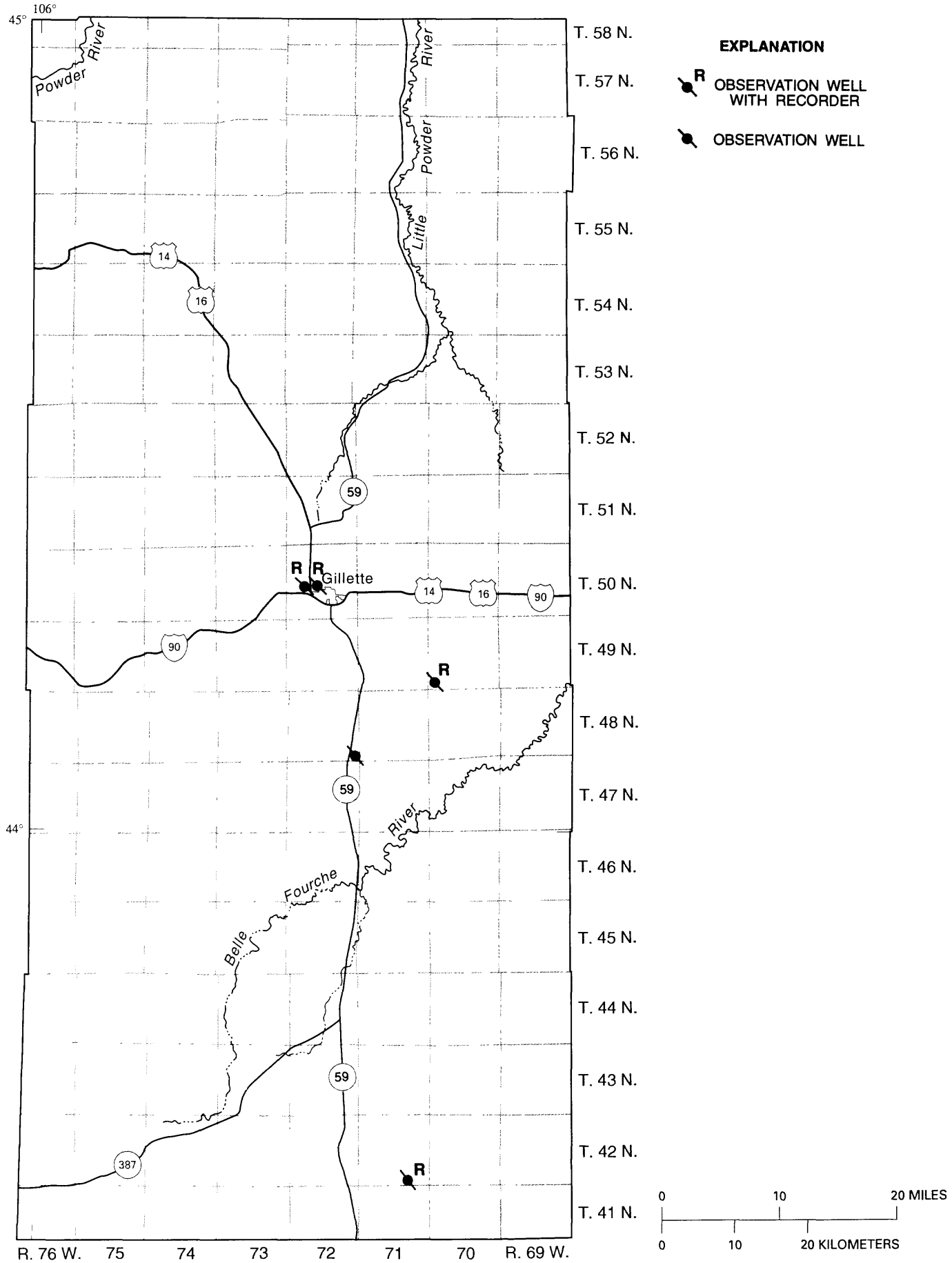
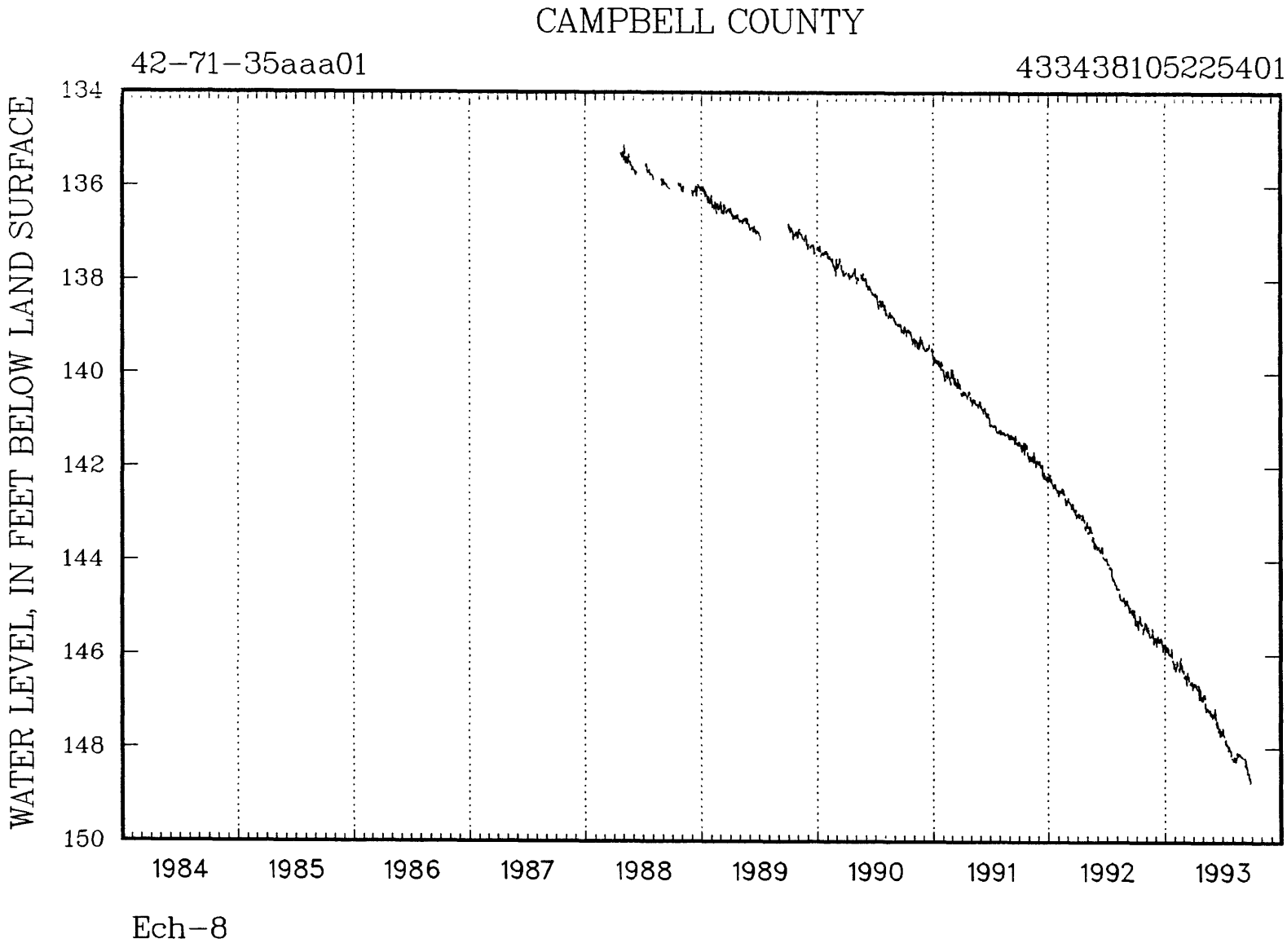


Figure 4.--Location of observation wells in Campbell County, Wyoming.

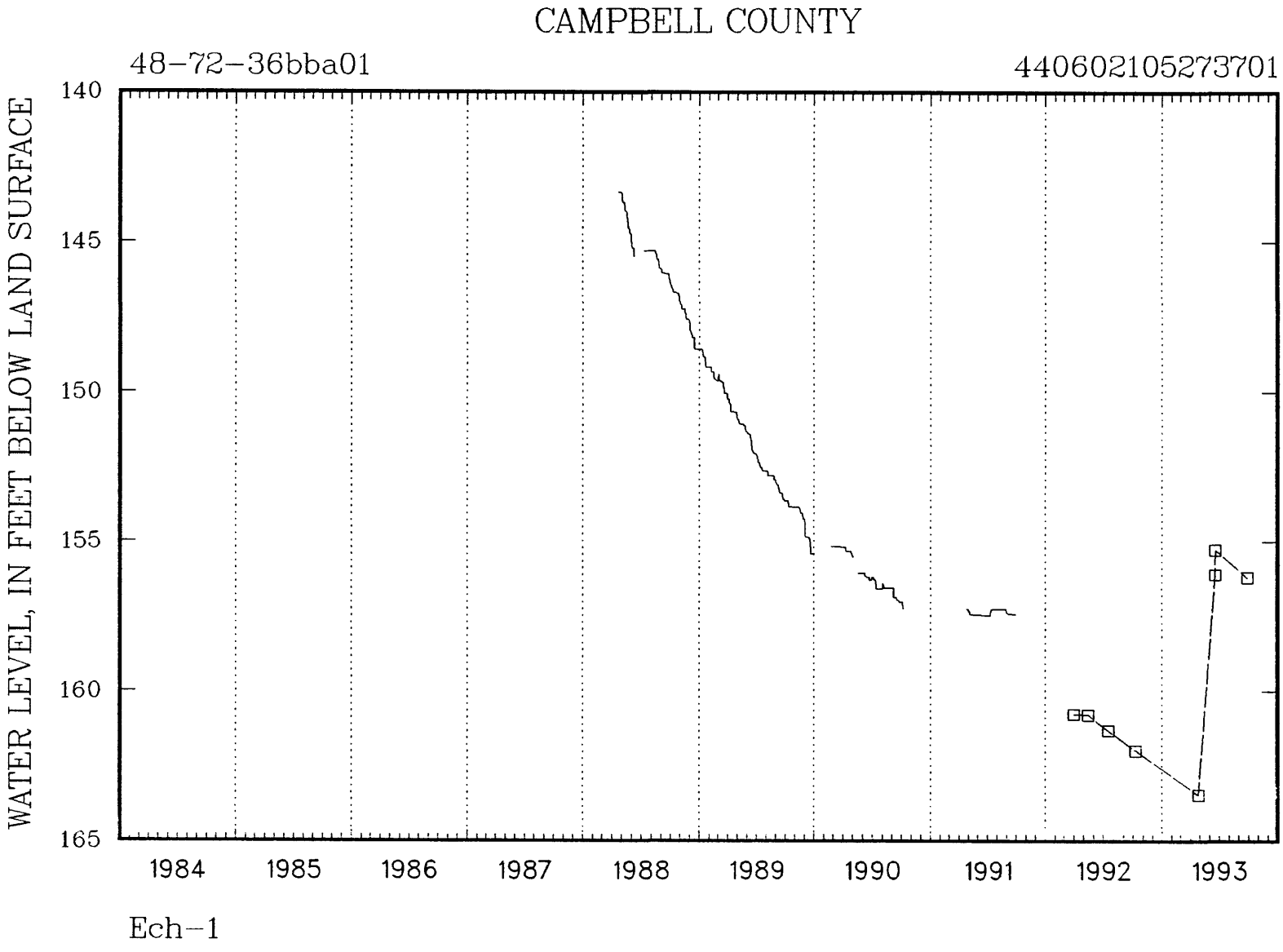
Records of observation wells in Campbell County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous and individual water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

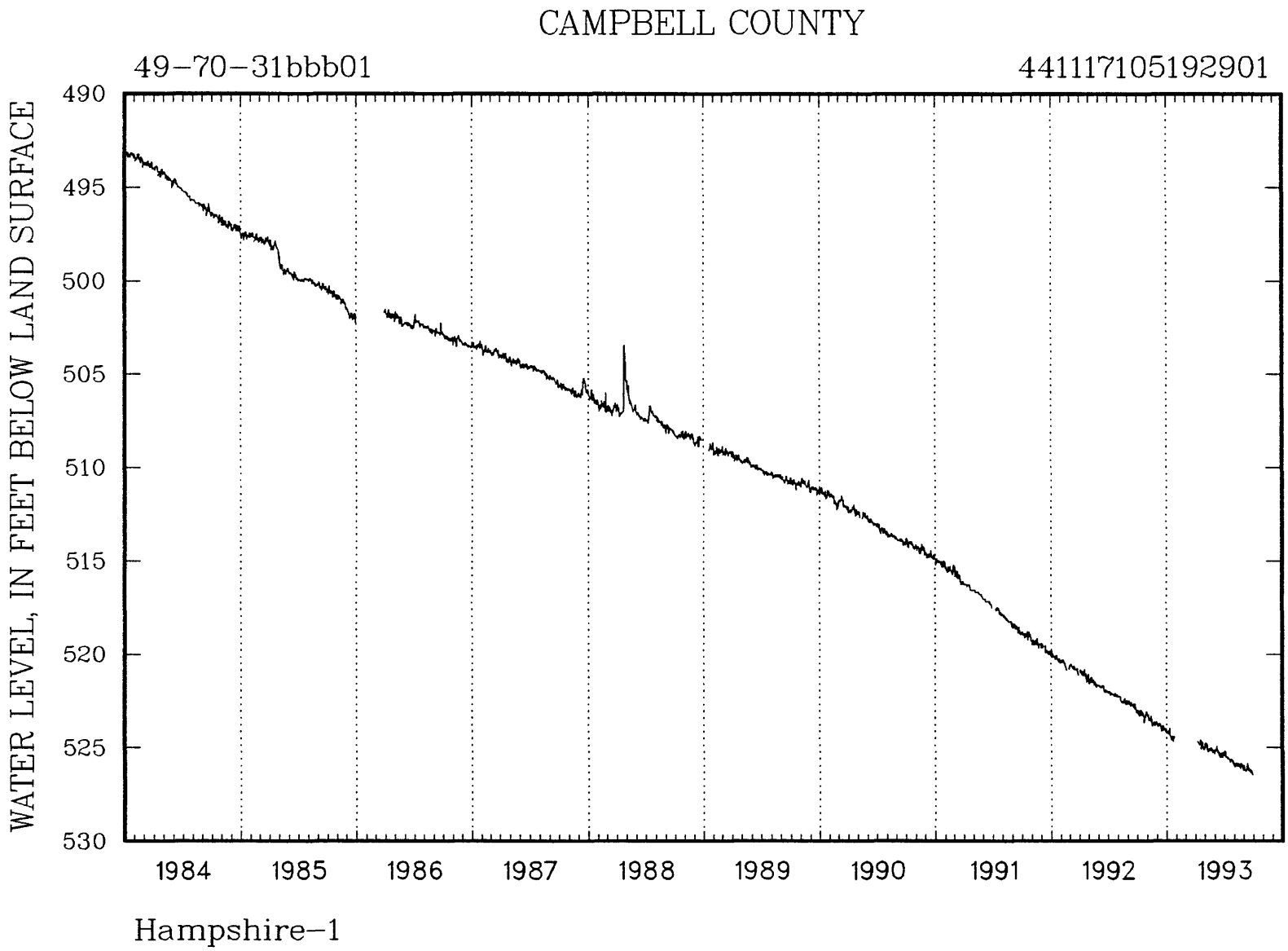
Well number	Well depth (feet below land suface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
42-71-35aaa01	399	U	124WSTC	1988-93	135.13	05-88	148.73	09-93
48-72-36bba01	380	U	124WSTC	1988-93	143.34	04-88	[1]163.45	04-93
49-70-31bbb01	3,754	U	211FXHL	1983-93	491.98	09-83	526.48	09-93
50-72-20cab01	1,255	U	125LEBO	1985-93	712.08	02-90	803.12	09-91
50-72-21aba01	320	P	124WSTC	1983-93	61.21	09-93	95.71	06-83

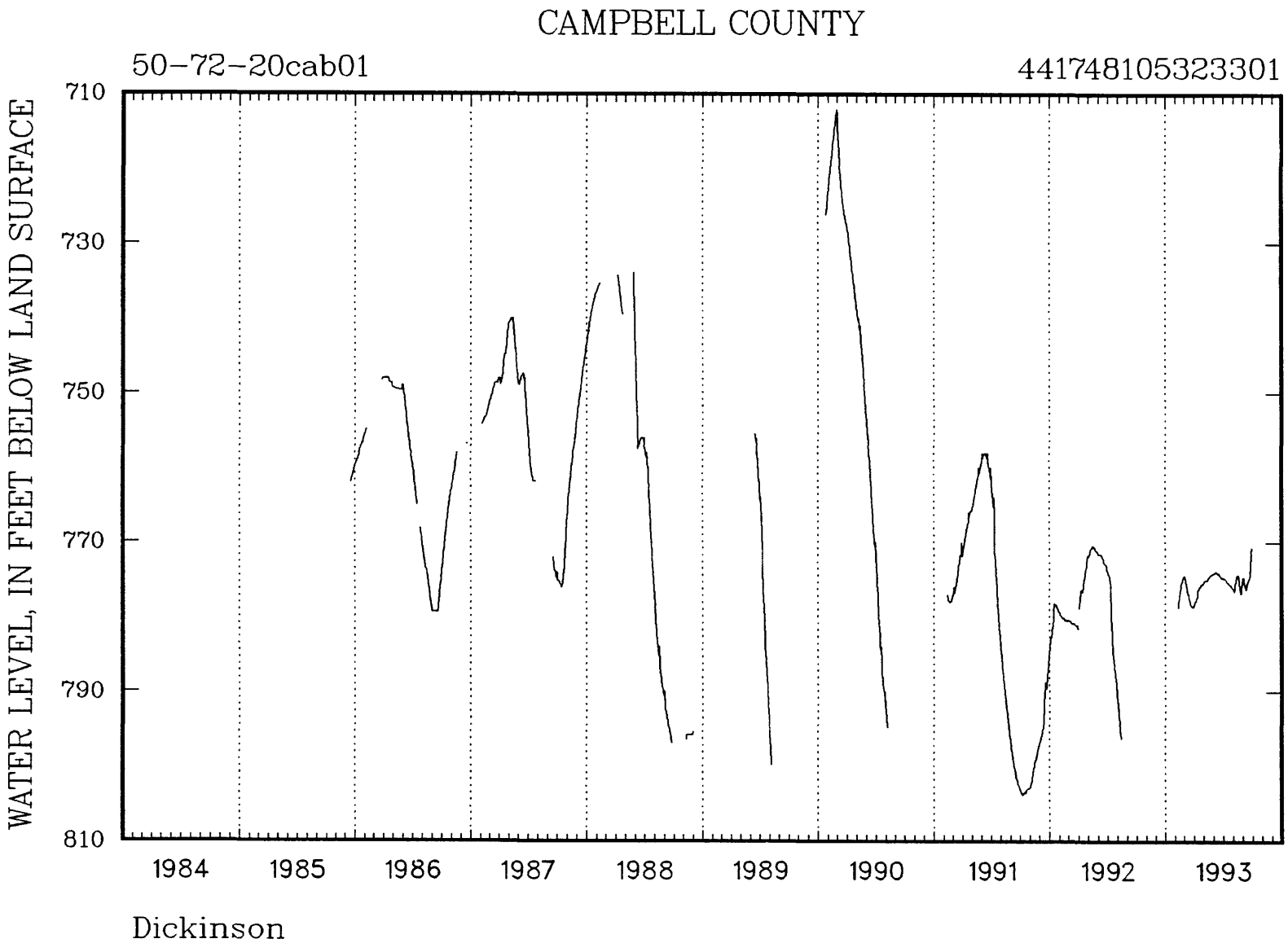
[1] From hand-measured data.

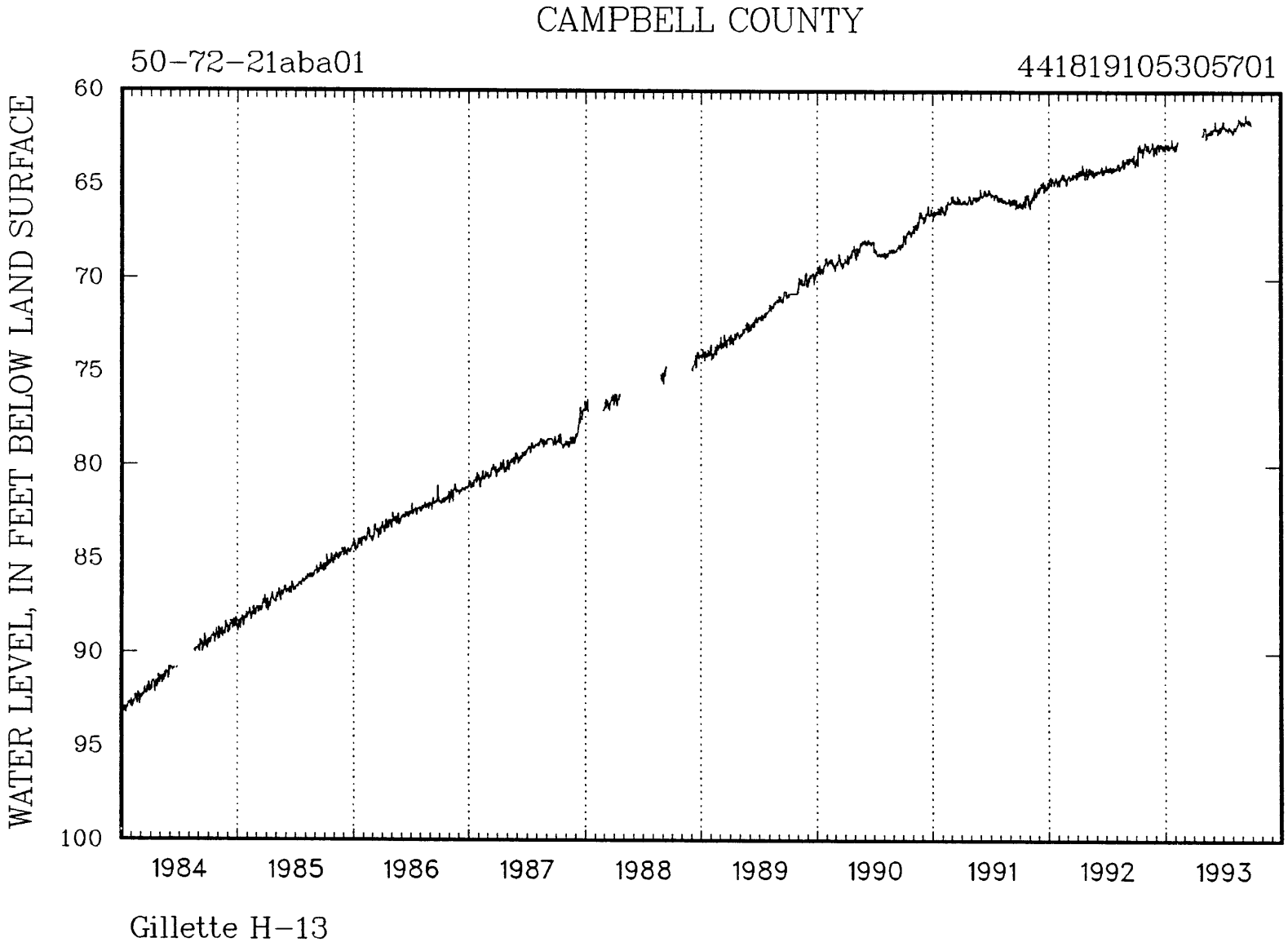

CAMPBELL COUNTY
42-71-35aaa01
433438105225401
WATER LEVEL, IN FEET BELOW LAND SURFACE
134
136
138
140
142
144
146
148
150
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993

Ech-8


CAMPBELL COUNTY
48-72-36bba01
440602105273701
WATER LEVEL, IN FEET BELOW LAND SURFACE
140
145
150
155
160
165
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Ech-1


CAMPBELL COUNTY
49-70-31bbb01
441117105192901
WATER LEVEL, IN FEET BELOW LAND SURFACE
490
495
500
505
510
515
520
525
530
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Hampshire-1


CAMPBELL COUNTY
50-72-20cab01
441748105323301
WATER LEVEL, IN FEET BELOW LAND SURFACE
710
730
750
770
790
810
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Dickinson


CAMPBELL COUNTY
50-72-21aba01
441819105305701
WATER LEVEL, IN FEET BELOW LAND SURFACE
60
65
70
75
80
85
90
95
100
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Gillette H-13

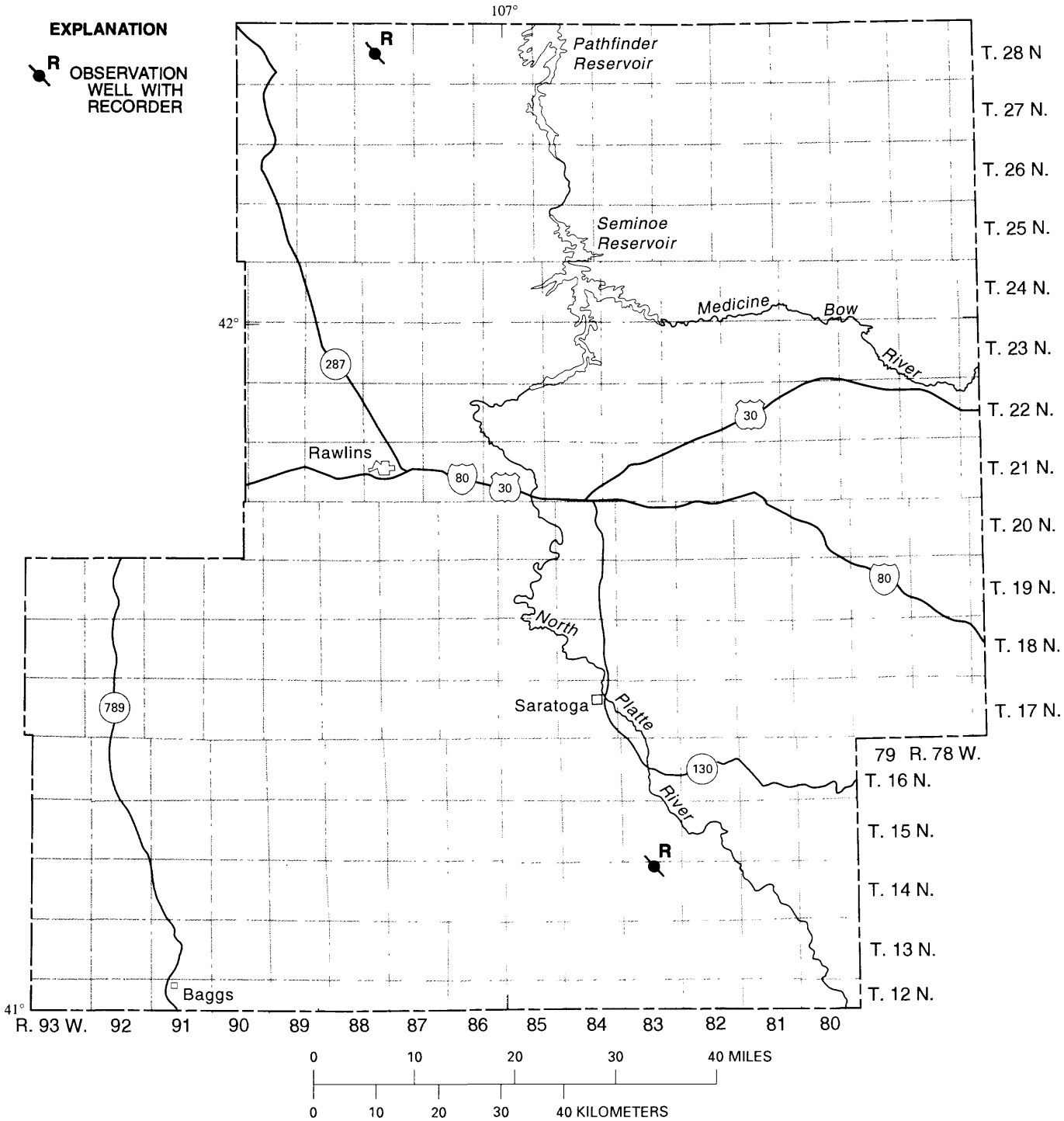
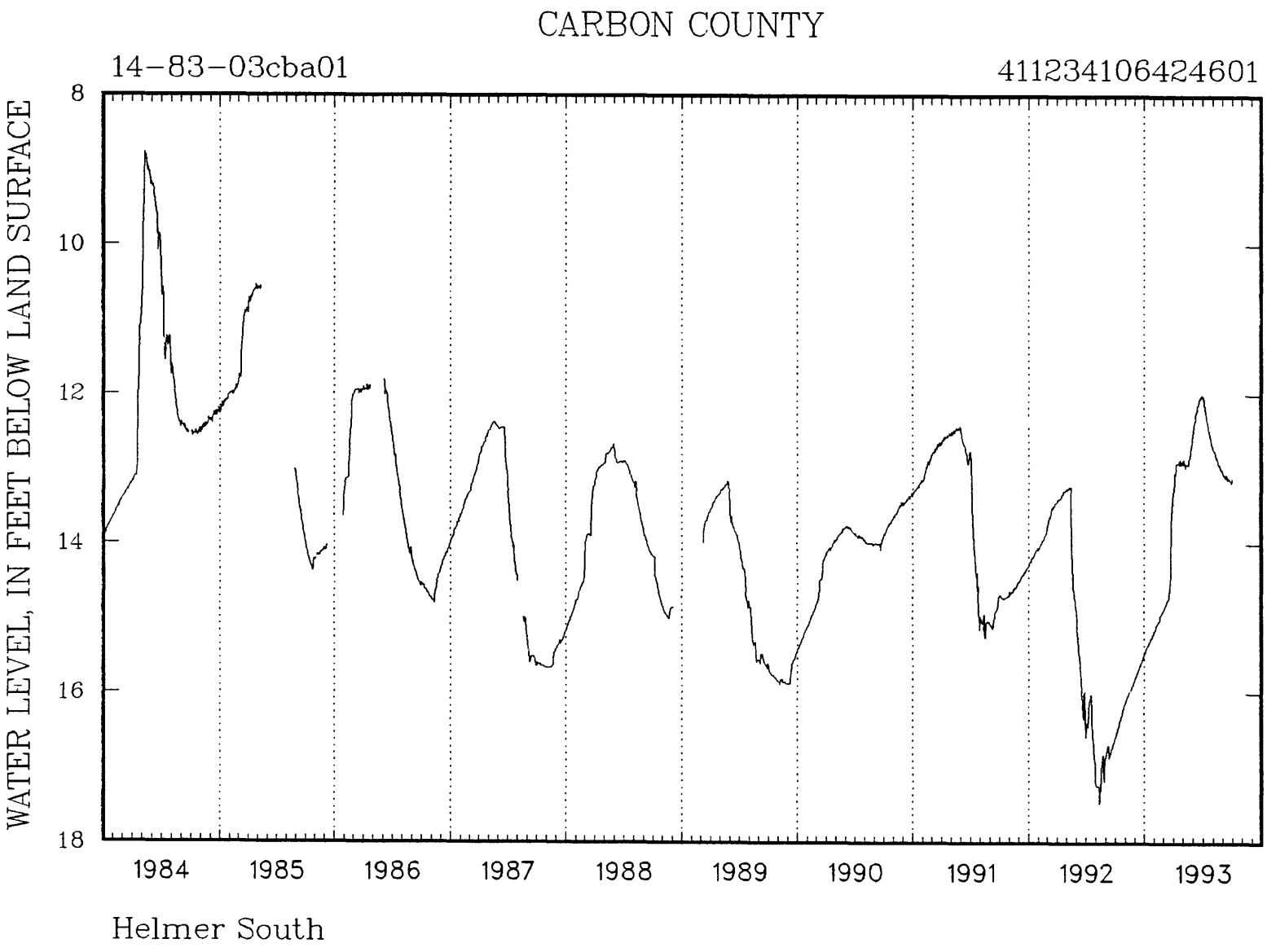


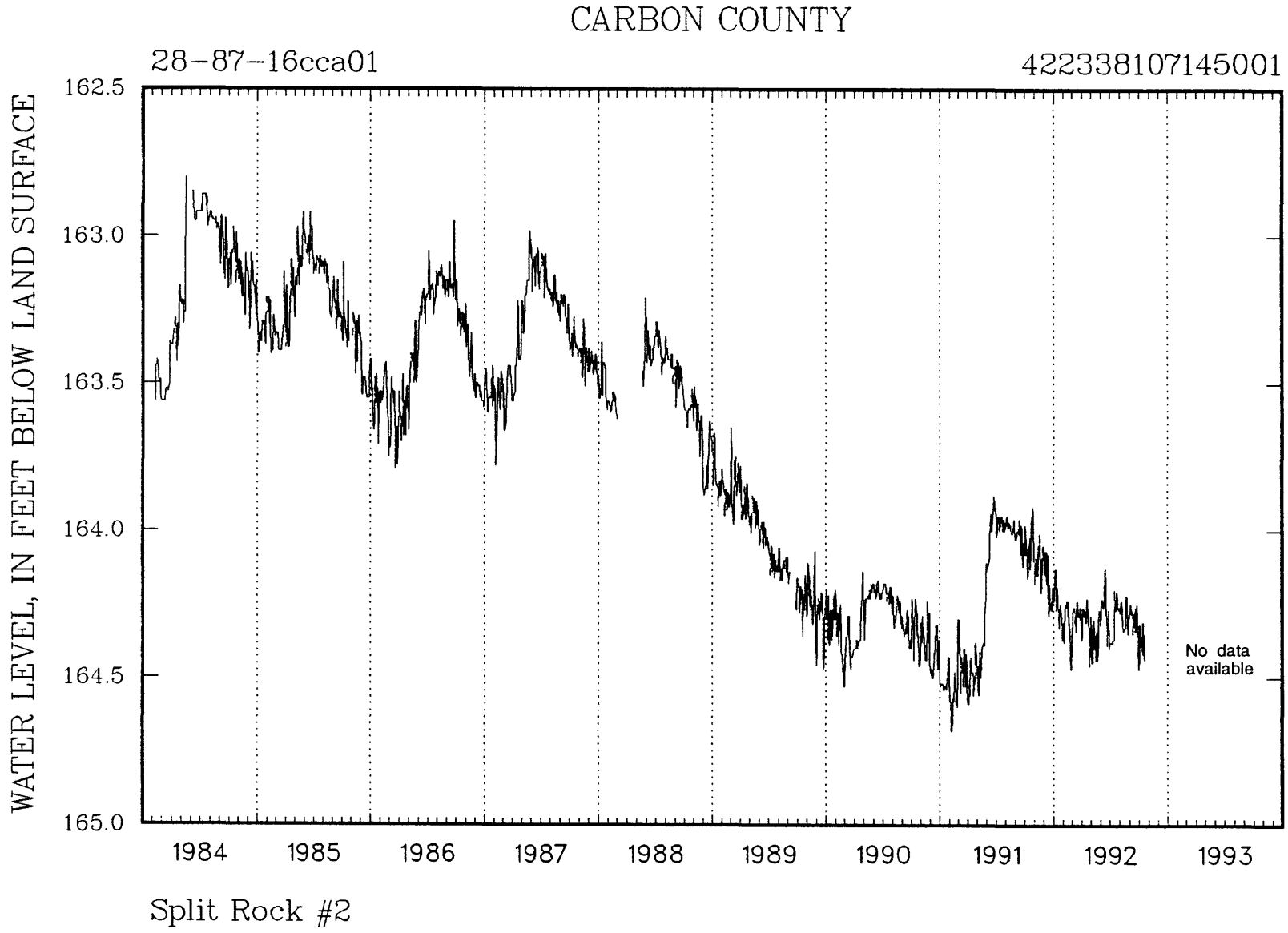
Figure 5.--Location of observation wells in Carbon County, Wyoming.

Records of observation wells in Carbon County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office and the U.S. Geological Survey. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (years)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
14-83-03cba01	58	I	121NRPK	1980-93	8.77	05-84	16.40	09-82
28-87-16cca01	812	U	122ARKR	1981-93	162.80	05-84	[1]182.66	10-81

[1] Nearby well being pumped.


CARBON COUNTY
14-83-03cba01
411234106424601
WATER LEVEL, IN FEET BELOW LAND SURFACE
8
10
12
14
16
18
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Helmer South


CARBON COUNTY
28-87-16cca01
422338107145001
WATER LEVEL, IN FEET BELOW LAND SURFACE
162.5
163.0
163.5
164.0
164.5
165.0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
No data available
Split Rock #2

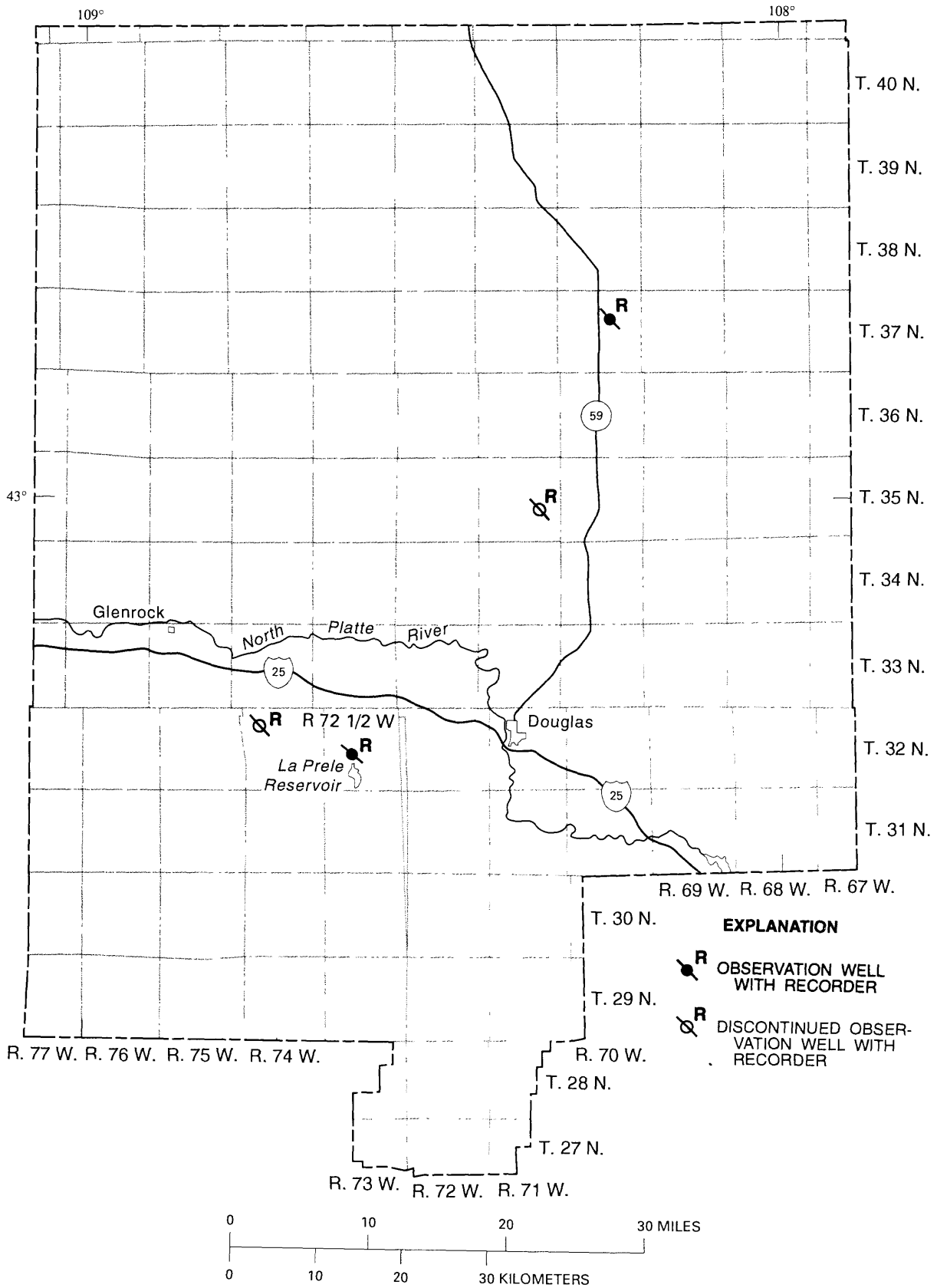
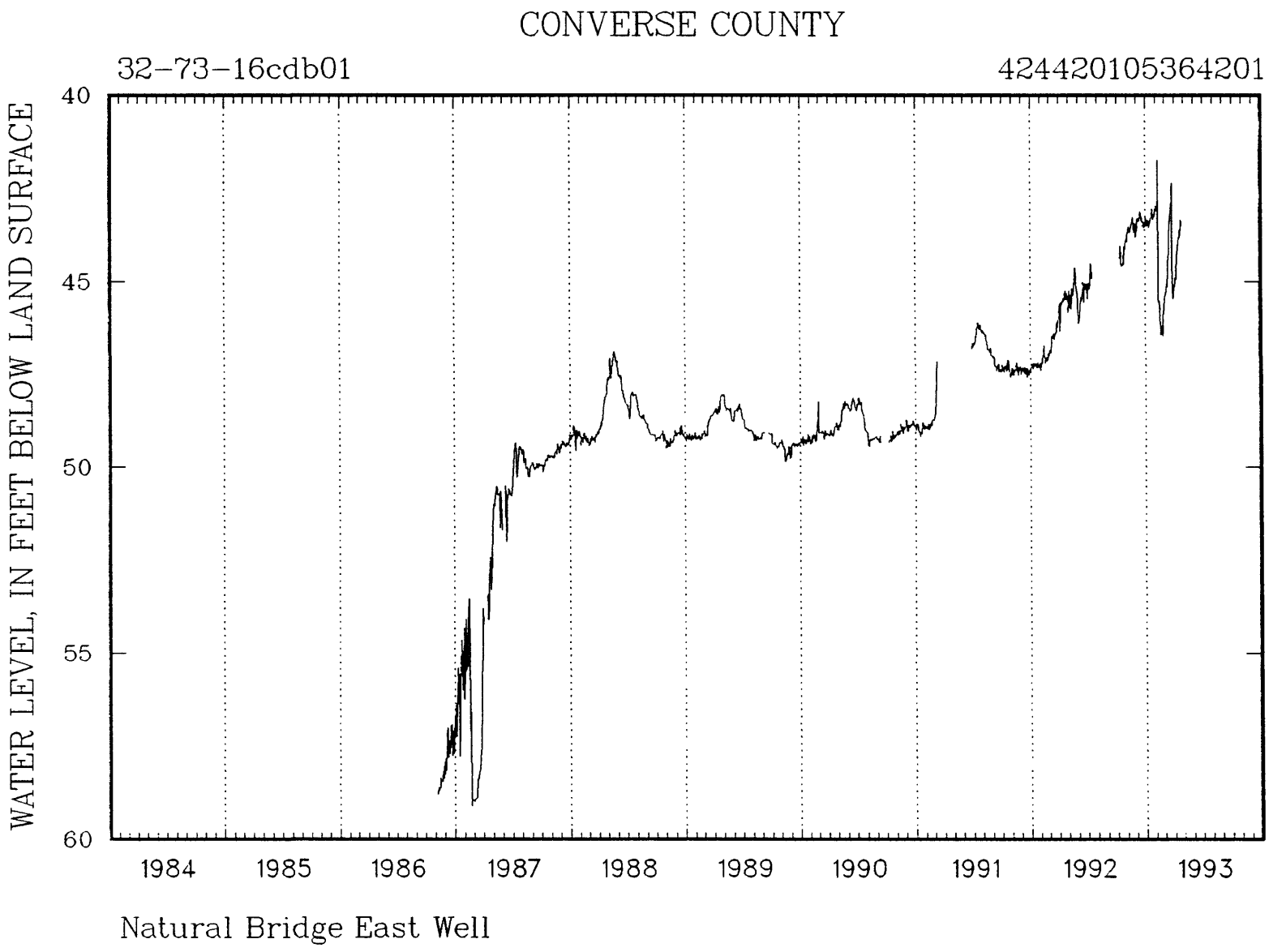


Figure 6.--Location of observation wells in Converse County, Wyoming.

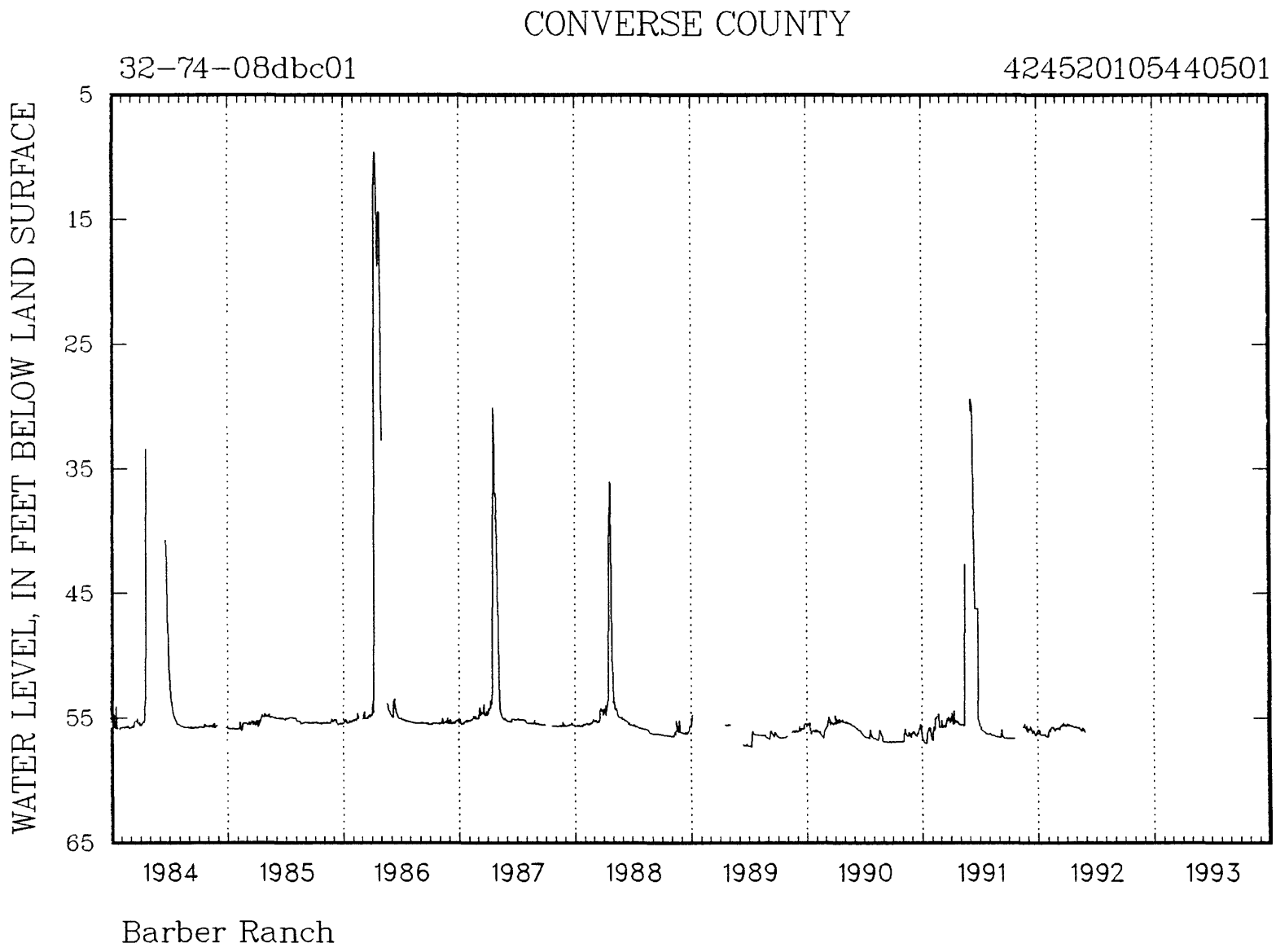
Records of observation wells in Converse County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

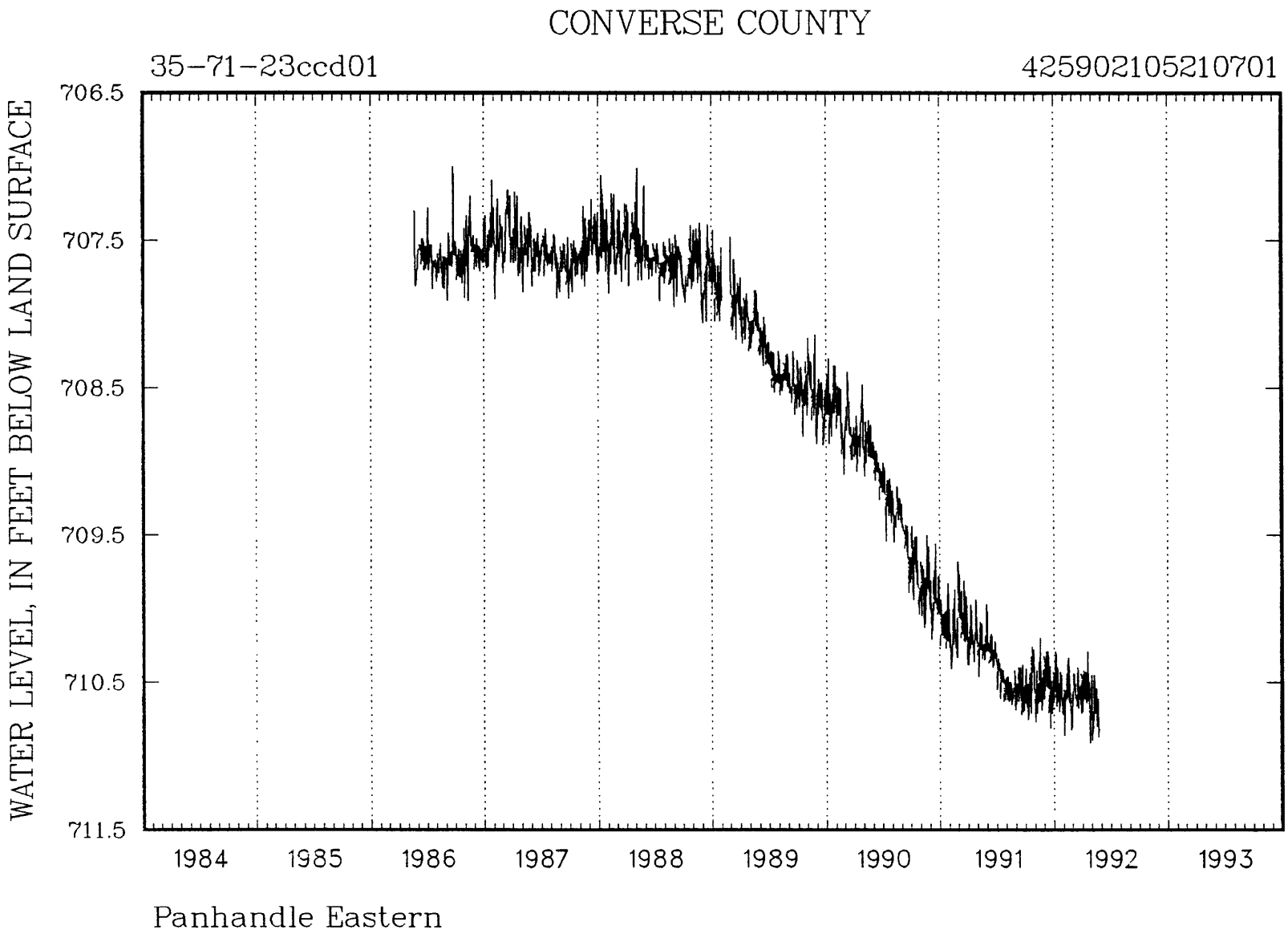
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
32-73-16cdb01	220	U	317CSPR	1986-93	41.75	02-93	59.12	02-87
32-74-08dbc01	100	U	331MDSN	[1]1980-92	5.51	05-83	58.50	09-82
35-71-23ccd01	6,330	U	211FXHL	[1]1986-92	707.00	09-86	710.91	04-92
37-70-10cbb01	268	U	124WSTC	1986-93	18.52	05-93	25.38	08-88

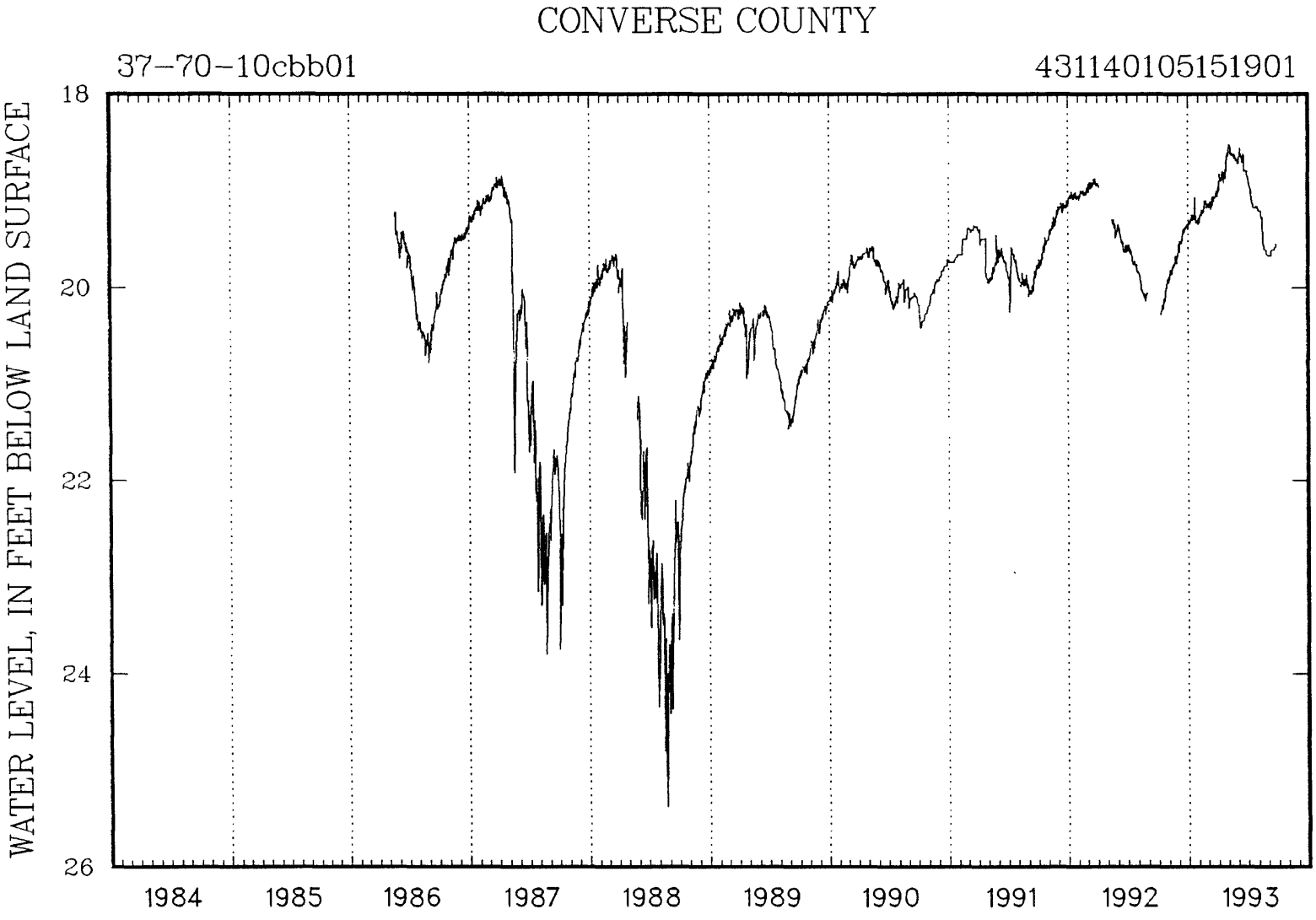
[1] Discontinued.



Natural Bridge East Well


CONVERSE COUNTY
32-74-08dbc01
424520105440501
WATER LEVEL, IN FEET BELOW LAND SURFACE
5
15
25
35
45
55
65
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Barber Ranch


CONVERSE COUNTY
35-71-23ccd01
425902105210701
WATER LEVEL, IN FEET BELOW LAND SURFACE
706.5
707.5
708.5
709.5
710.5
711.5
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Panhandle Eastern


CONVERSE COUNTY
37-70-10cbb01
431140105151901
WATER LEVEL, IN FEET BELOW LAND SURFACE
18
20
22
24
26
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993

Bill #6

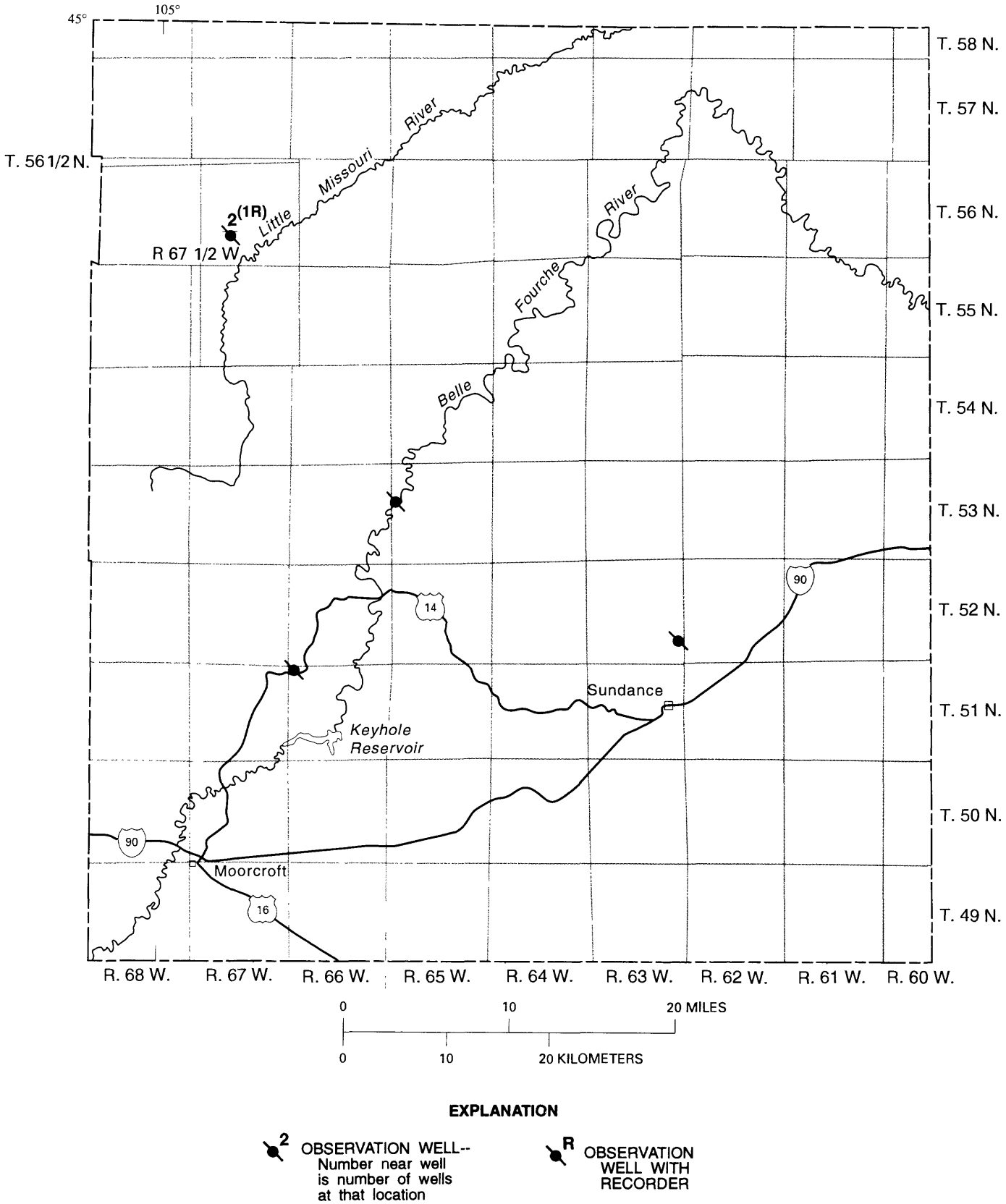
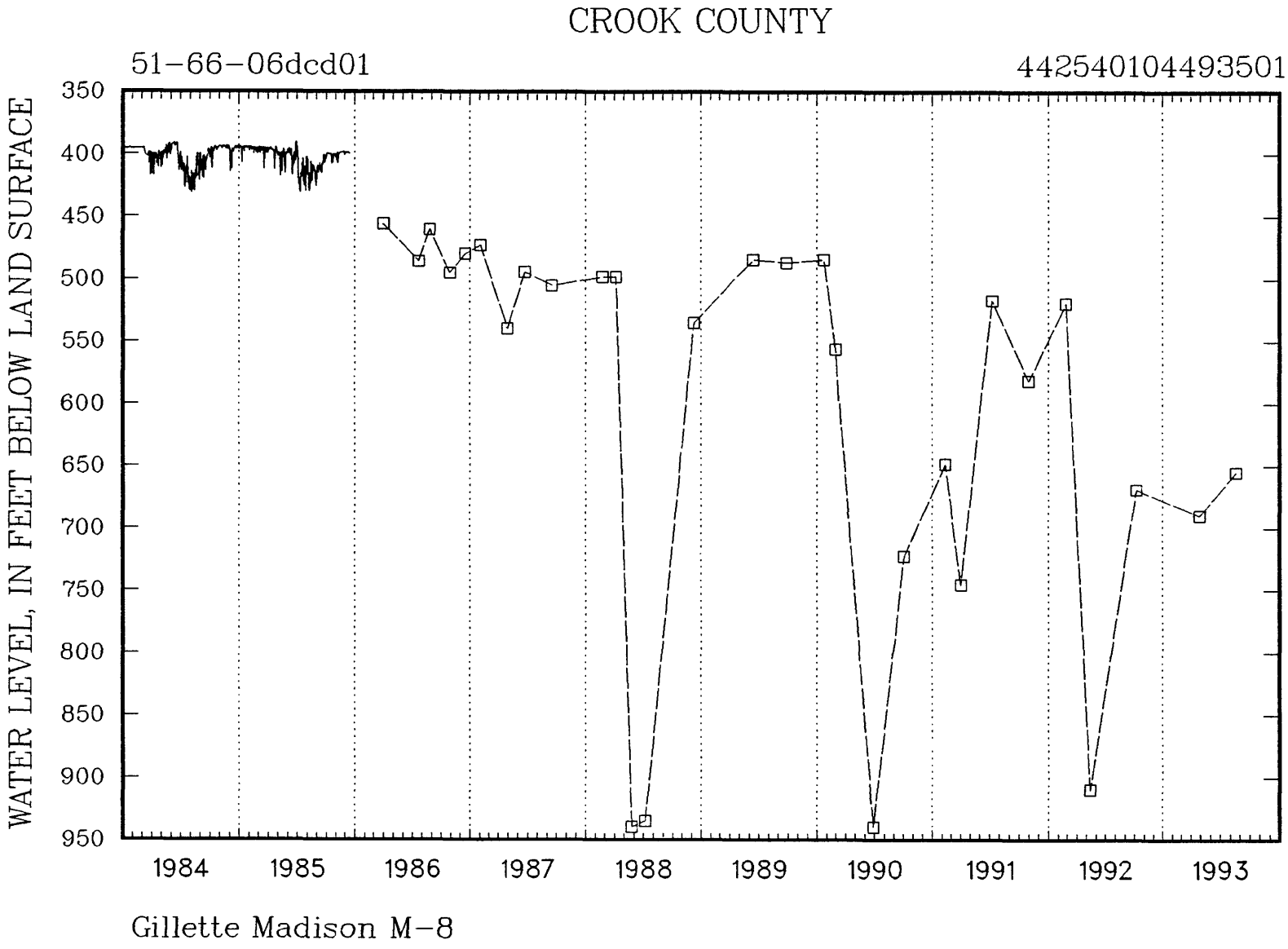


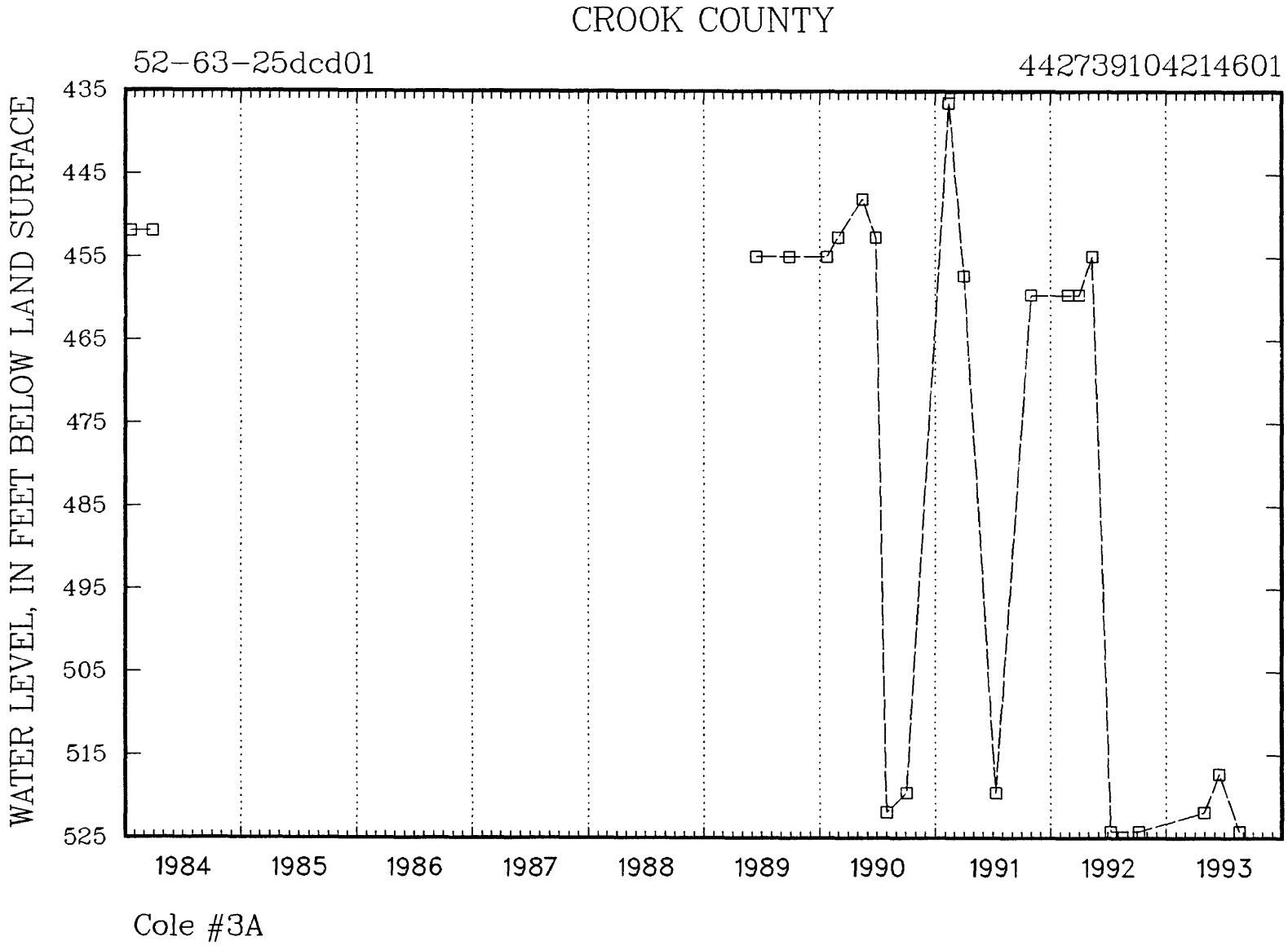
Figure 7.--Location of observation wells in Crook County, Wyoming.

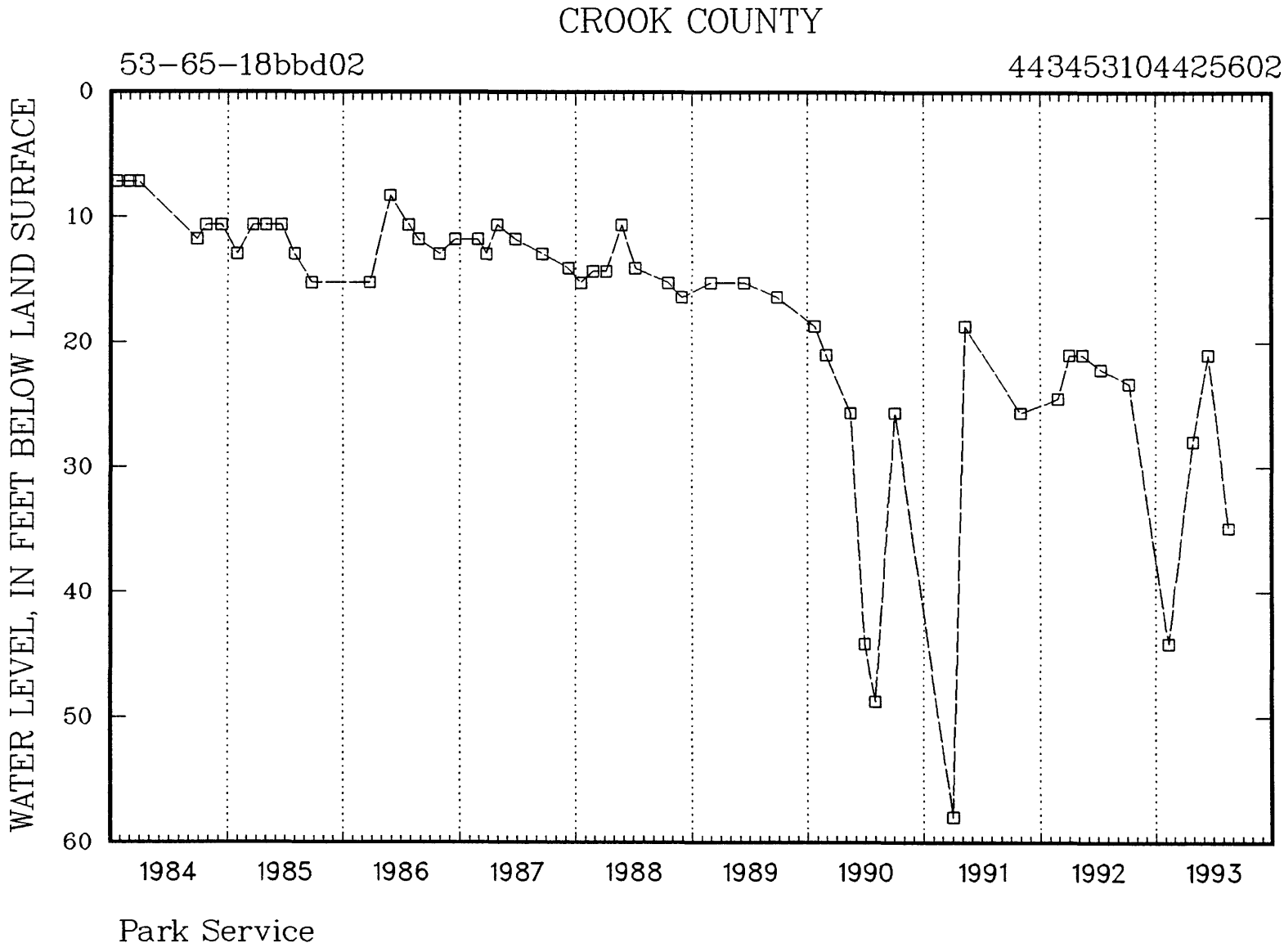
Records of observation wells in Crook County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous and individual water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in text.

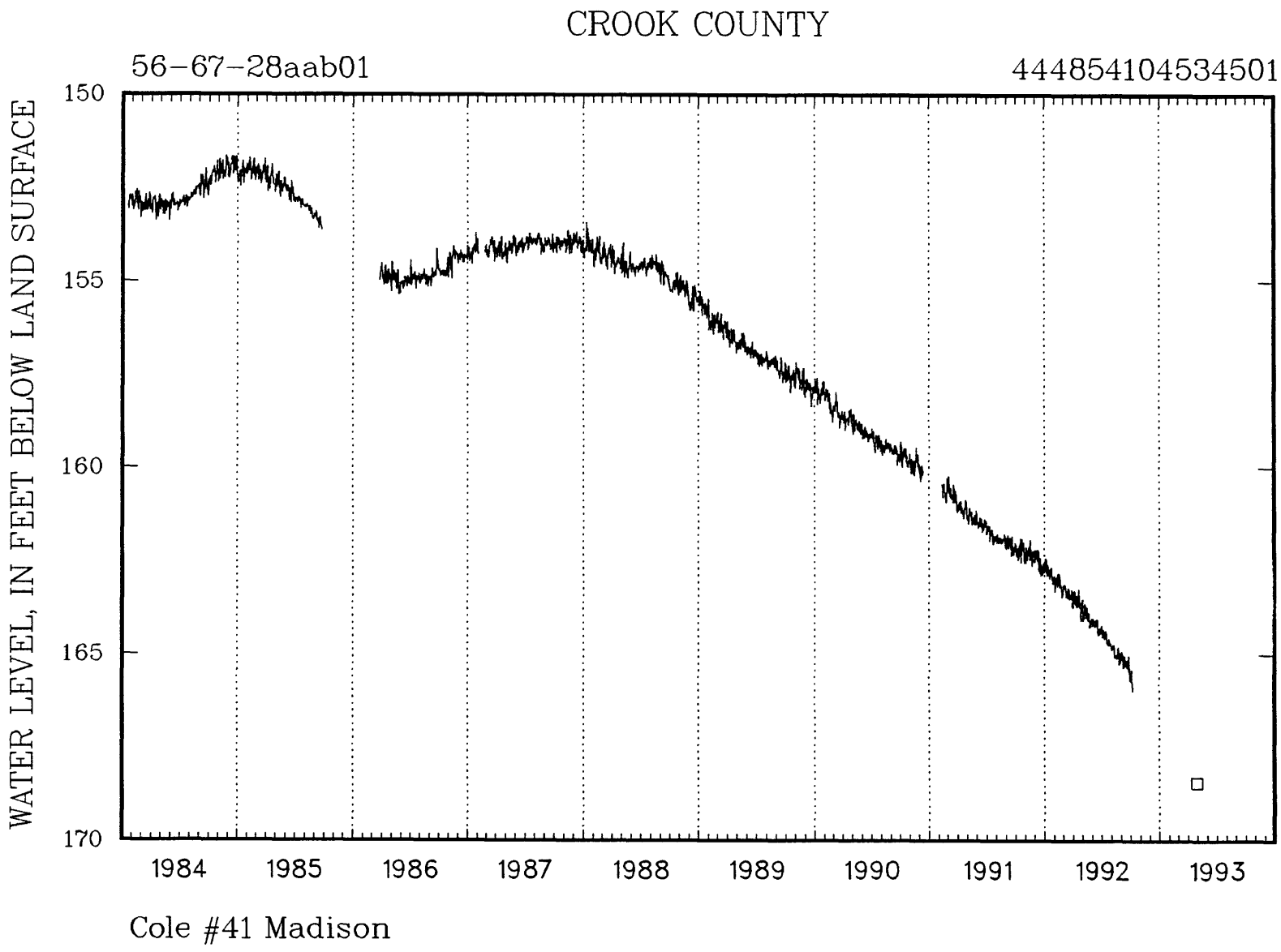
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
51-66-06dcd01	3,001	P	331MDSN	1981-93	388.66	05-83	[1]939.60	05-88, 06,90
52-63-25dcd01	1,123	P	331MDSN	1982-84, 1989-93	[1]436.41	02-91	[1]524.19	07-92, 10-92, 08-93
53-65-18bbd02	1,341	P	337PHSP	1962-93	[1]3.90	09-76	[1]57.97	04-91
56-67-28aab01	3,320	U	331MDSN	1982-93	151.65	11-84	[1]168.44	04-93
56-67-28aab02	2,240	U	331MDSN	1983-93	128.18	05-87	149.25	09-93

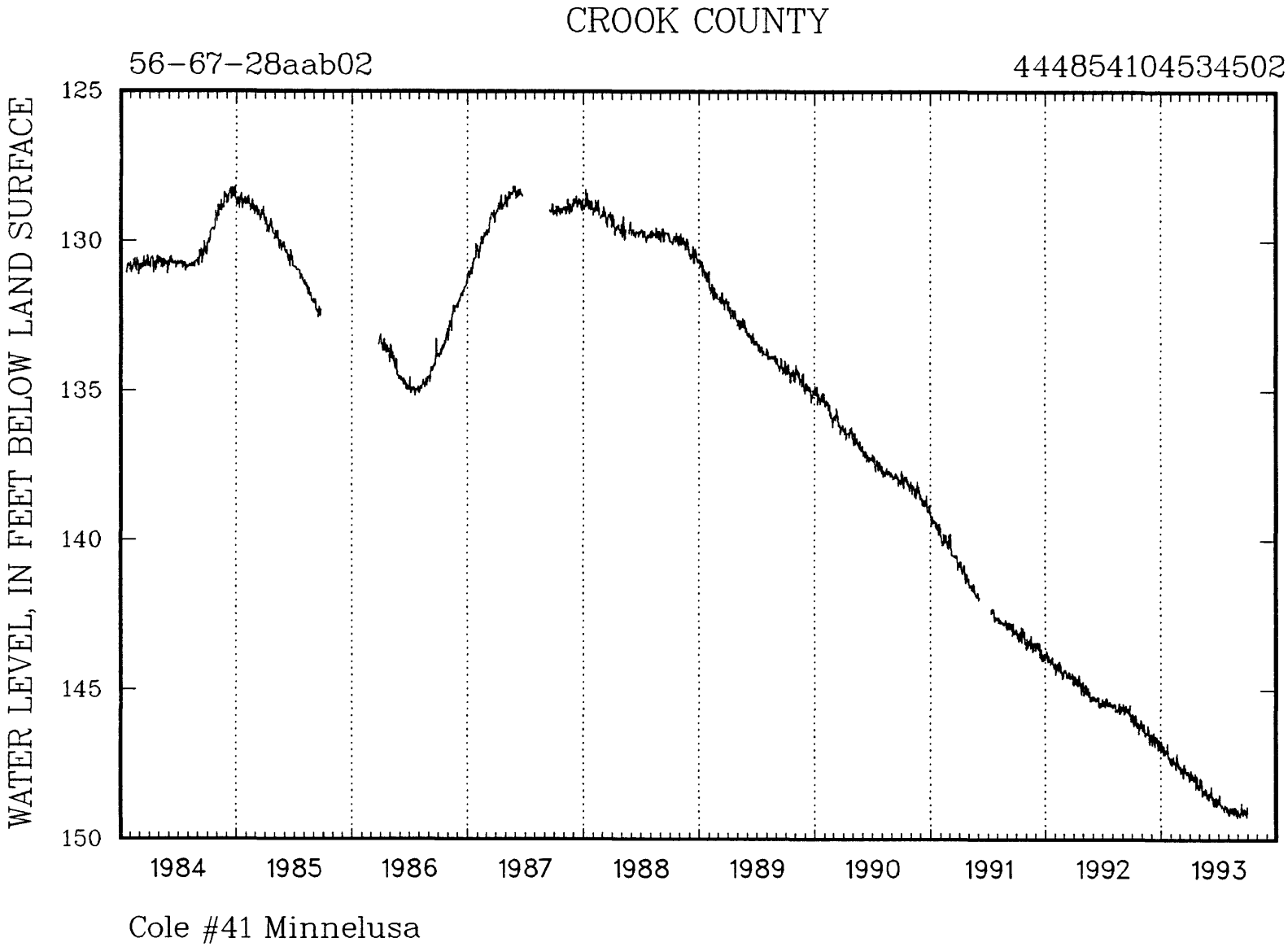
[1] From hand-measured data.


CROOK COUNTY
51-66-06dcd01
442540104493501
WATER LEVEL, IN FEET BELOW LAND SURFACE
350
400
450
500
550
600
650
700
750
800
850
900
950
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Gillette Madison M-8


CROOK COUNTY
52-63-25dcd01
442739104214601
WATER LEVEL, IN FEET BELOW LAND SURFACE
435
445
455
465
475
485
495
505
515
525
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Cole #3A


CROOK COUNTY
53-65-18bbd02
443453104425602
WATER LEVEL, IN FEET BELOW LAND SURFACE
0
10
20
30
40
50
60
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Park Service


CROOK COUNTY
56-67-28aab01
444854104534501
WATER LEVEL, IN FEET BELOW LAND SURFACE
150
155
160
165
170
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Cole #41 Madison


CROOK COUNTY
56-67-28aab02
444854104534502
WATER LEVEL, IN FEET BELOW LAND SURFACE
125
130
135
140
145
150
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Cole #41 Minnelusa

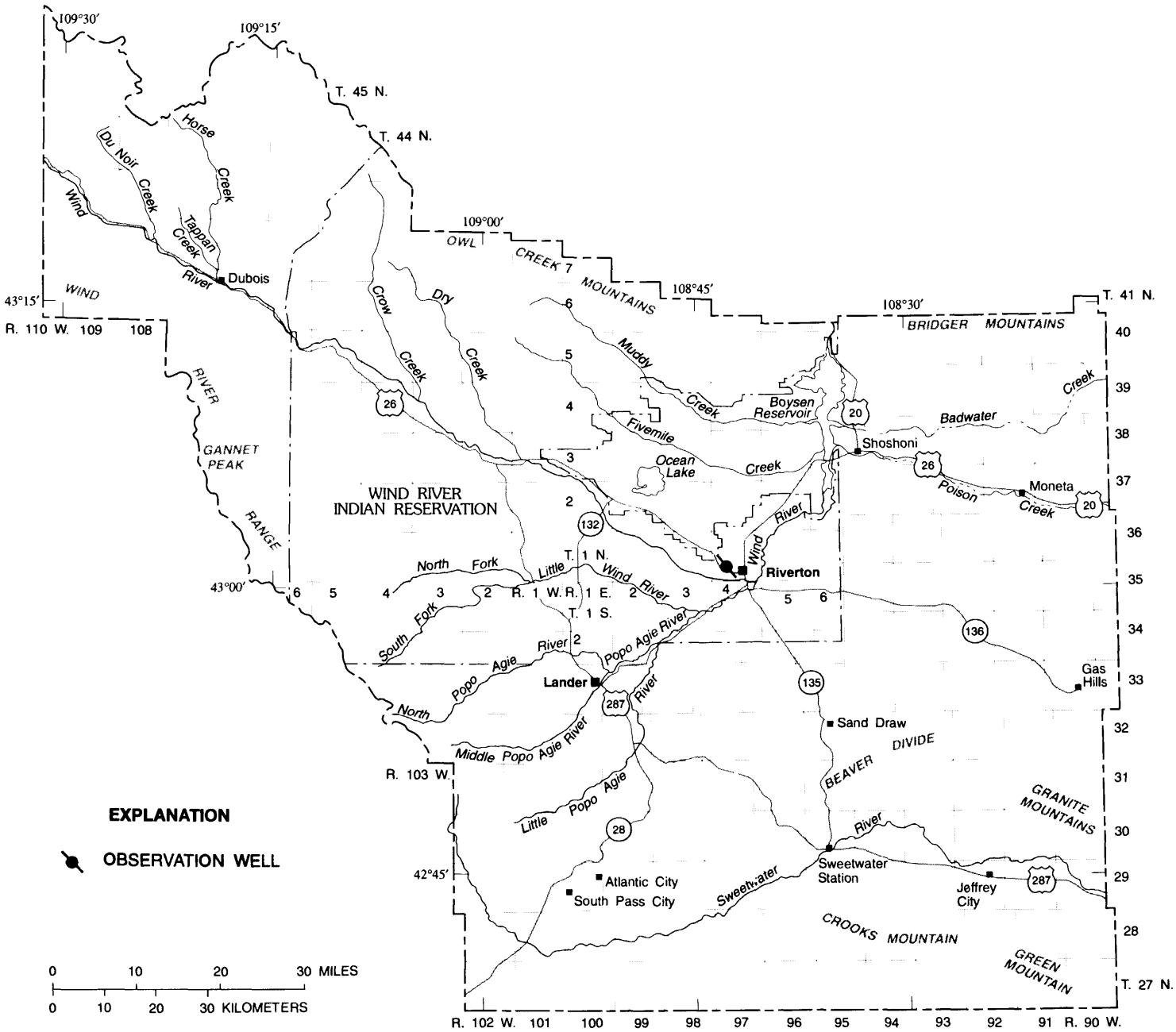
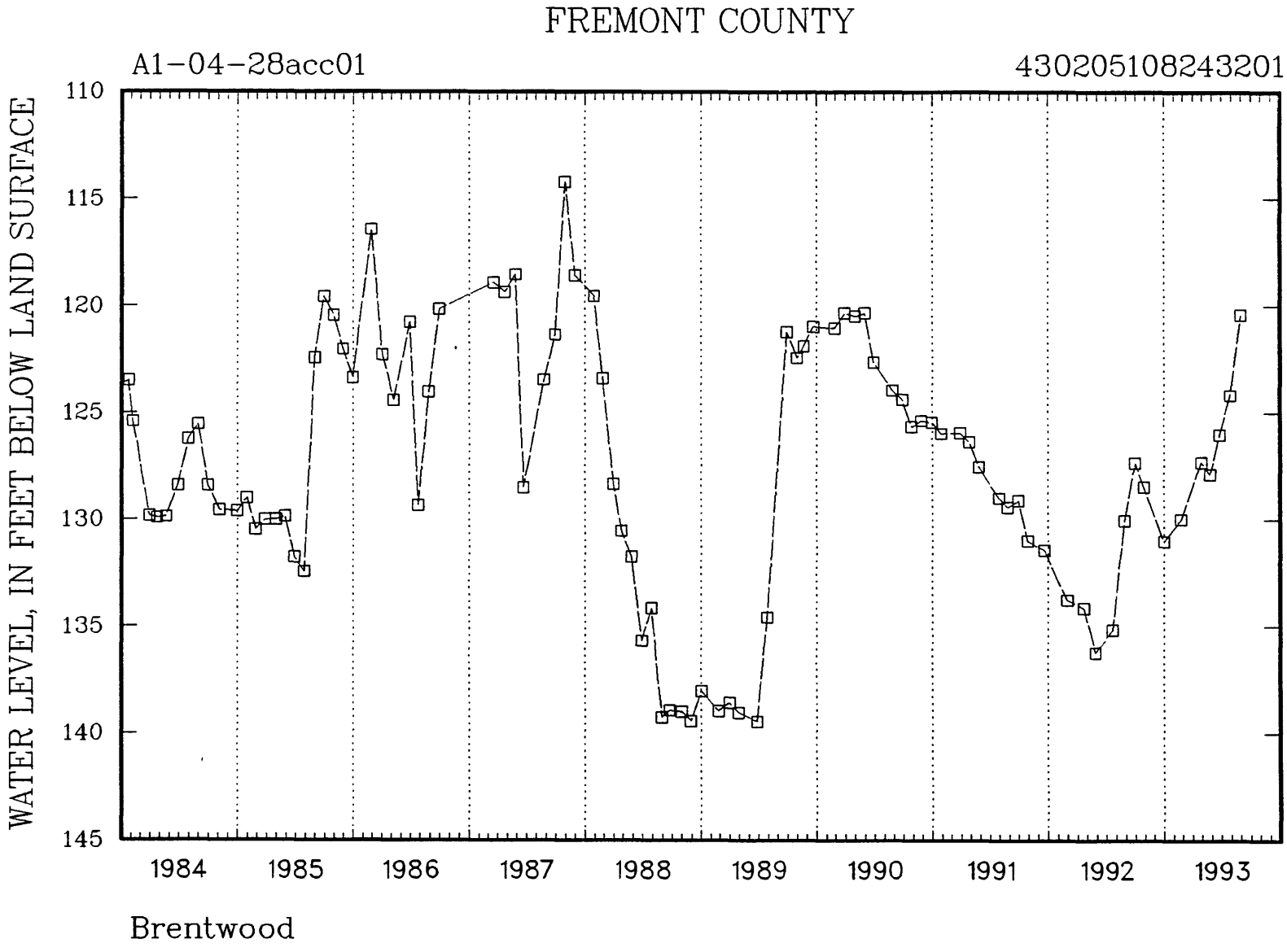


Figure 8.--Location of observation well in Fremont County, Wyoming.

Records of observation well in Fremont County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Individual water-level measurements made by the U.S. Geological Survey. Numbering system for wells and explanation of column headings for tables and hdyrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
A1-04-28acc01	440	U	124WDRV	1983-93	[1]114.22	10-87	[1]139.45	06-89

[1] From hand-measured data.


FREMONT COUNTY
A1-04-28acc01
430205108243201
WATER LEVEL, IN FEET BELOW LAND SURFACE
110
115
120
125
130
135
140
145
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Brentwood

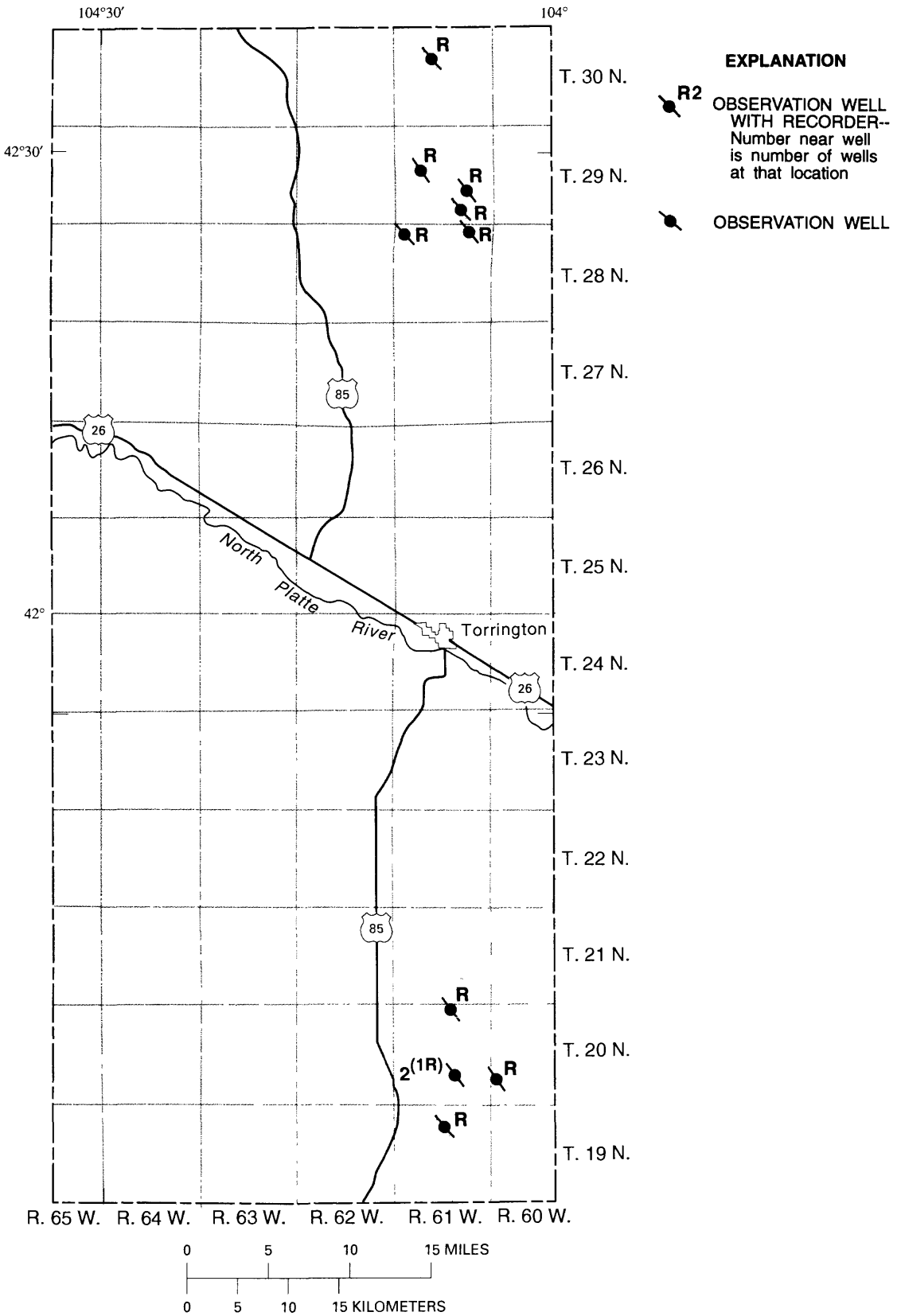
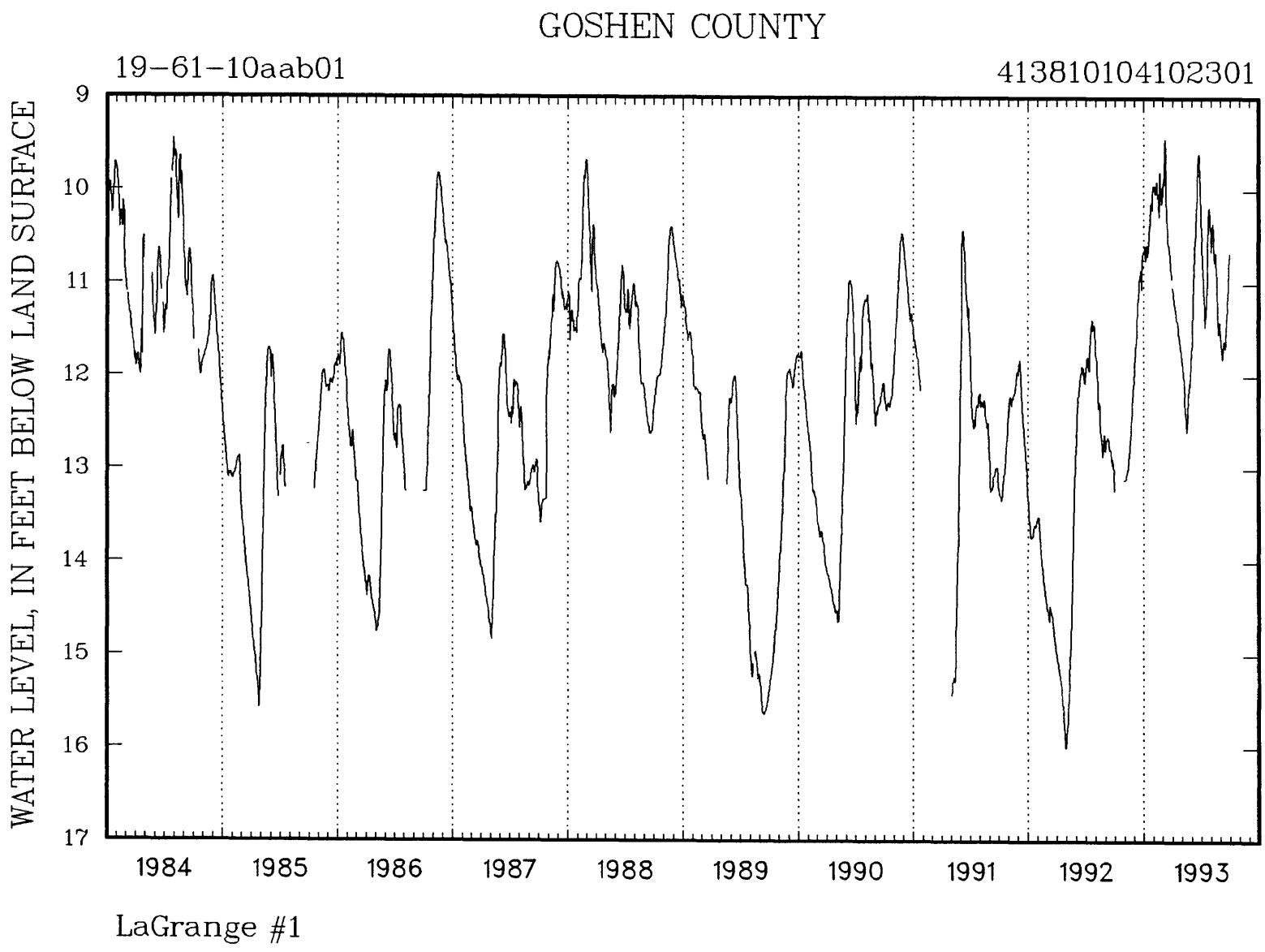


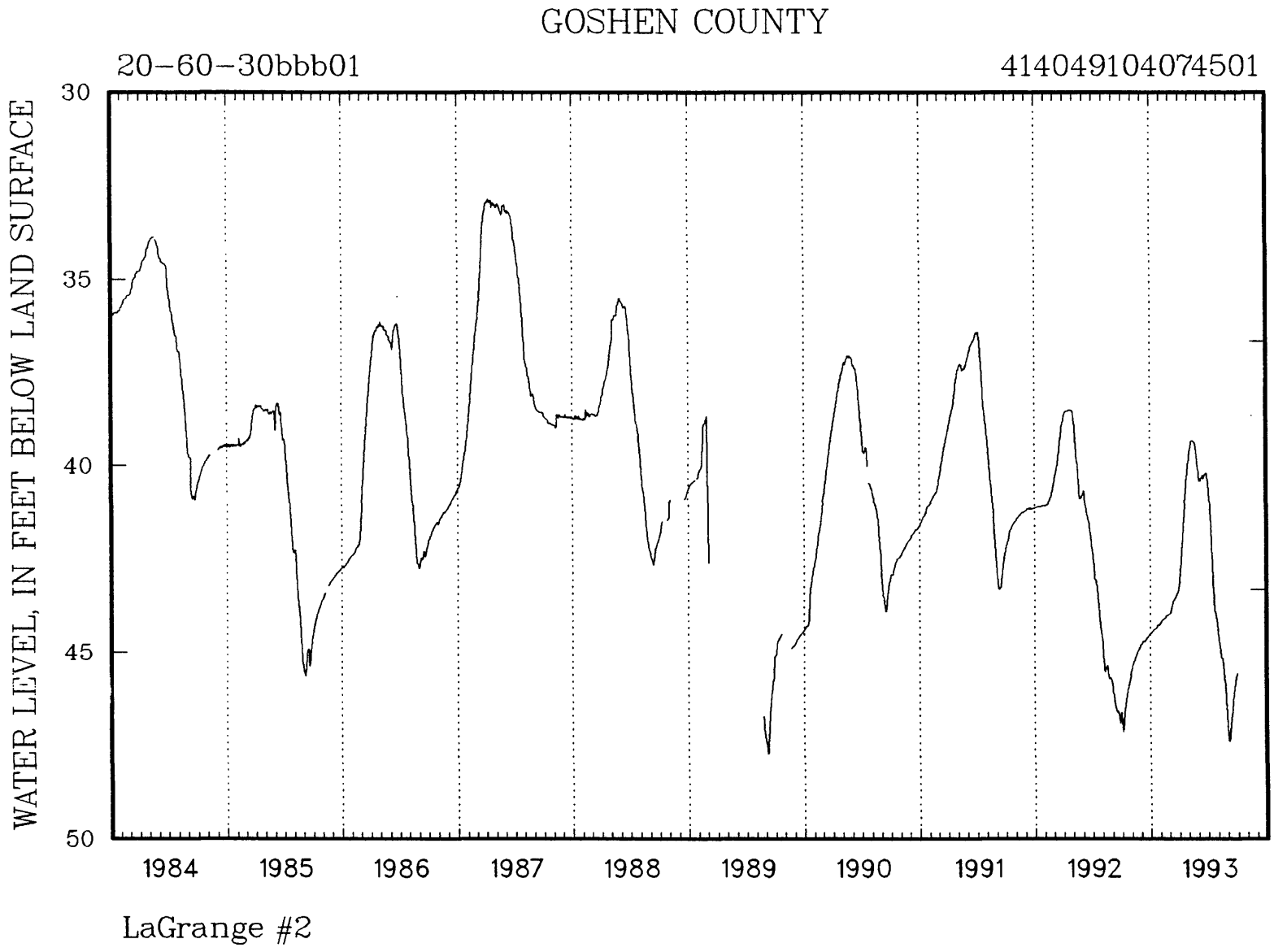
Figure 9.--Location of observation wells in Goshen County, Wyoming.

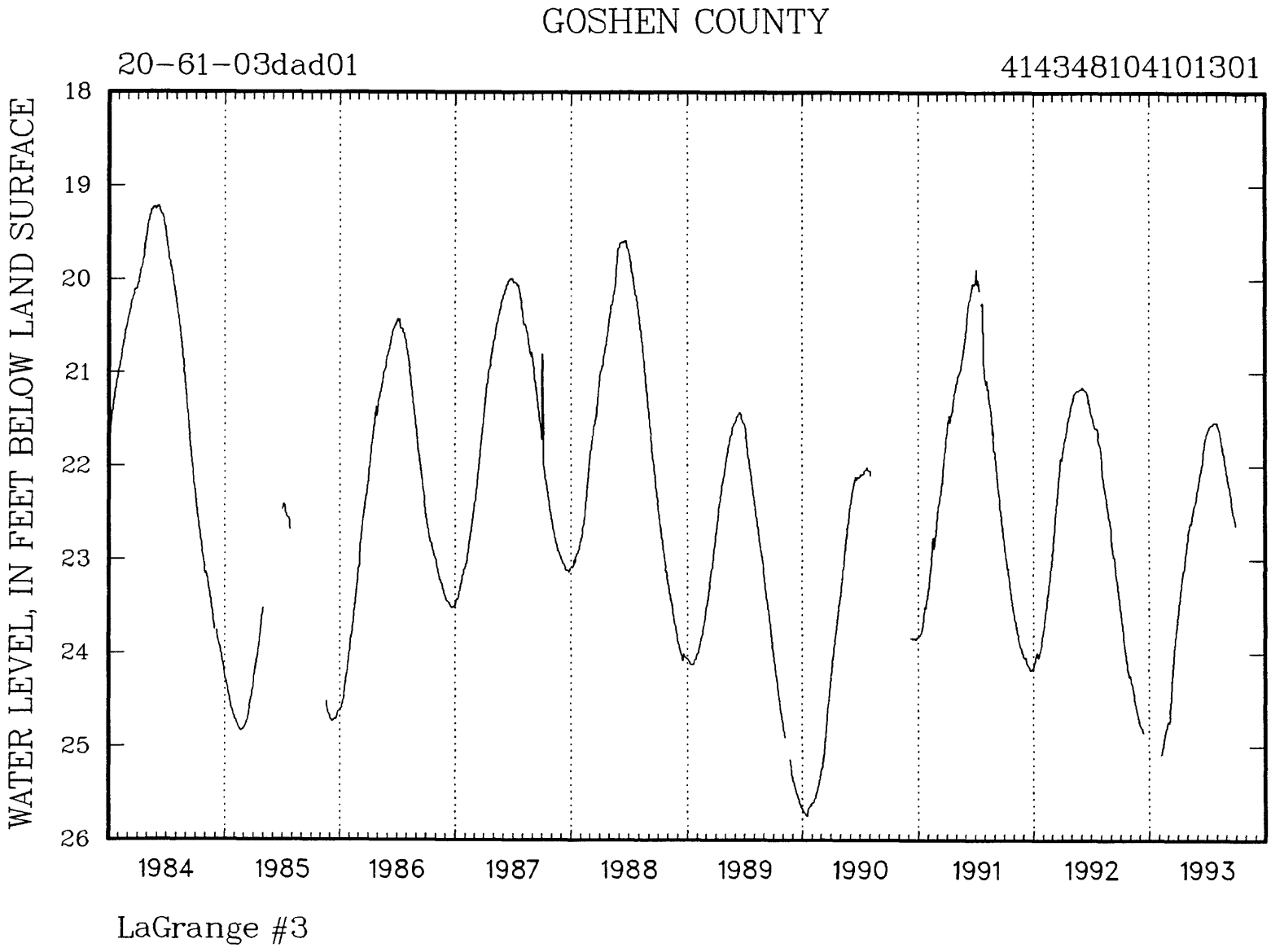
Records of observation wells in Goshen County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous and individual water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

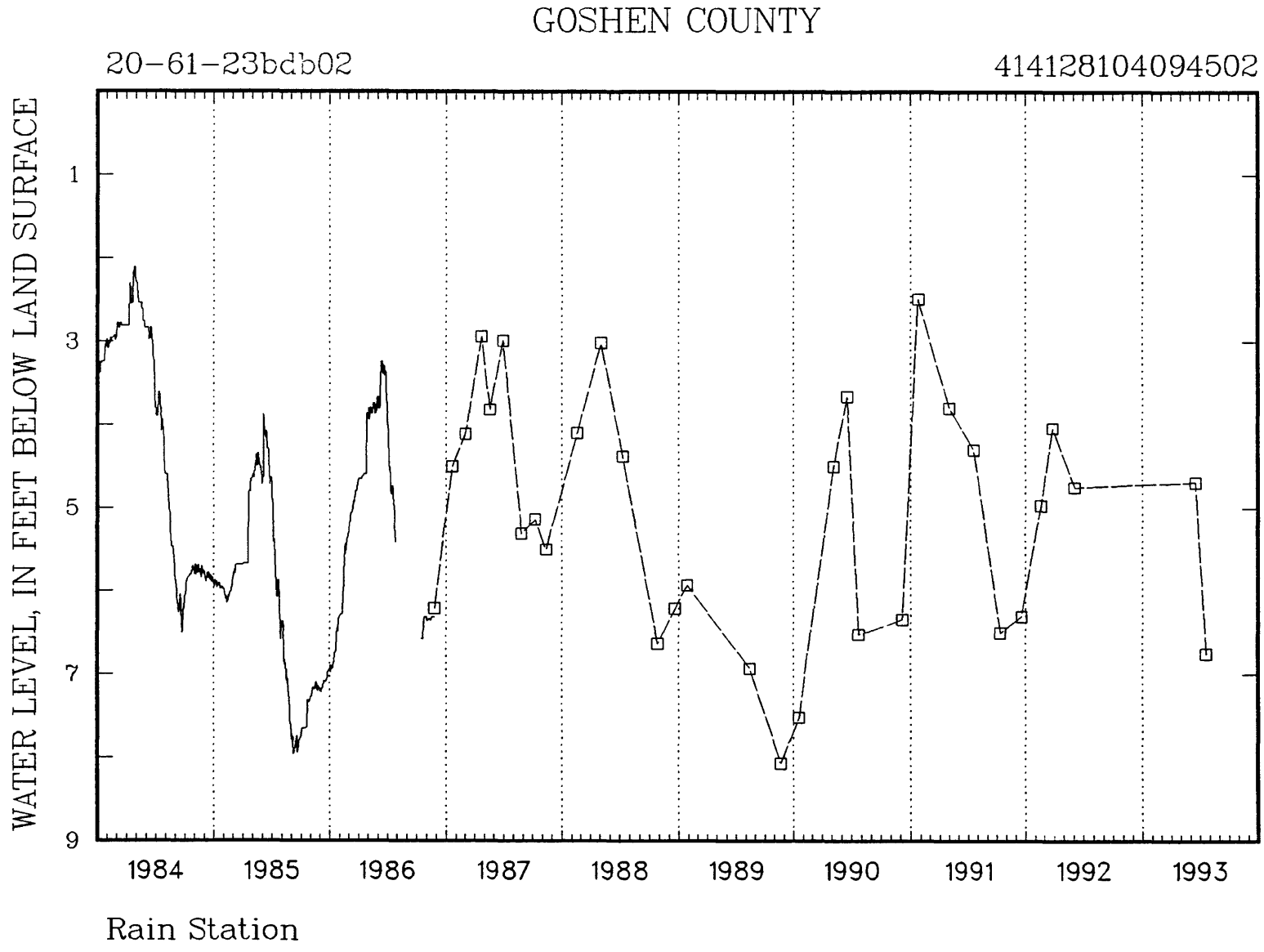
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
19-61-10aab01	220	U	123BRUL	1980-93	8.56	06-83	16.00	04-92
20-60-30bbb01	70	U	123BRUL	1978-93	31.40	06-83	[1]61.25	07-78
20-61-03dad01	100	U	123CDRN	1980-93	16.85	06-83	25.74	01-90
20-61-23bdb02	98	U	123BRUL	1978-93	2.10	04-84	[1]26.74	09-78
20-61-23ccc01	82	U	111ALVM	1972-93	9.89	05-87	[1]32.59	09-78
28-61-02ccd01	255	U	122ARKR	1986-93	161.31	05-86	166.23	09-93
28-61-06aba01	220	U	122ARKR	1979-93	127.23	05-79	135.65	09-93
29-61-17aad01	220	U	122ARKR	1980-93	124.50	01-81	127.92	04-93
29-61-23abb01	300	U	122ARKR	1979-93	198.29	06-87	214.49	05-93
29-61-26cbb01	200	U	122ARKR	1980-93	131.89	05-81	137.77	09-93
30-61-09bbb01	220	U	122ARKR	1981-93	80.61	05-81	85.86	09-92

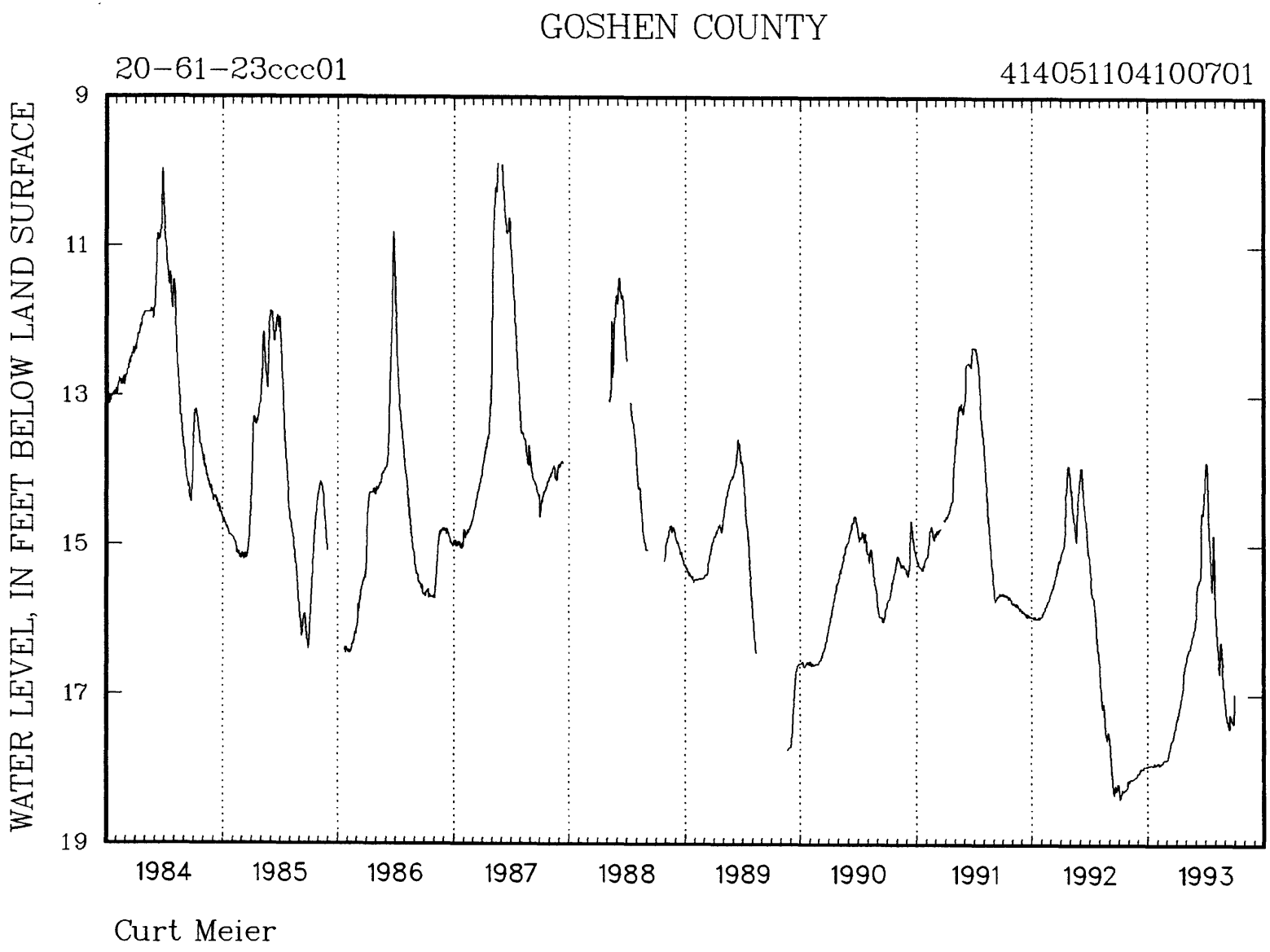
[1] From hand-measured data.

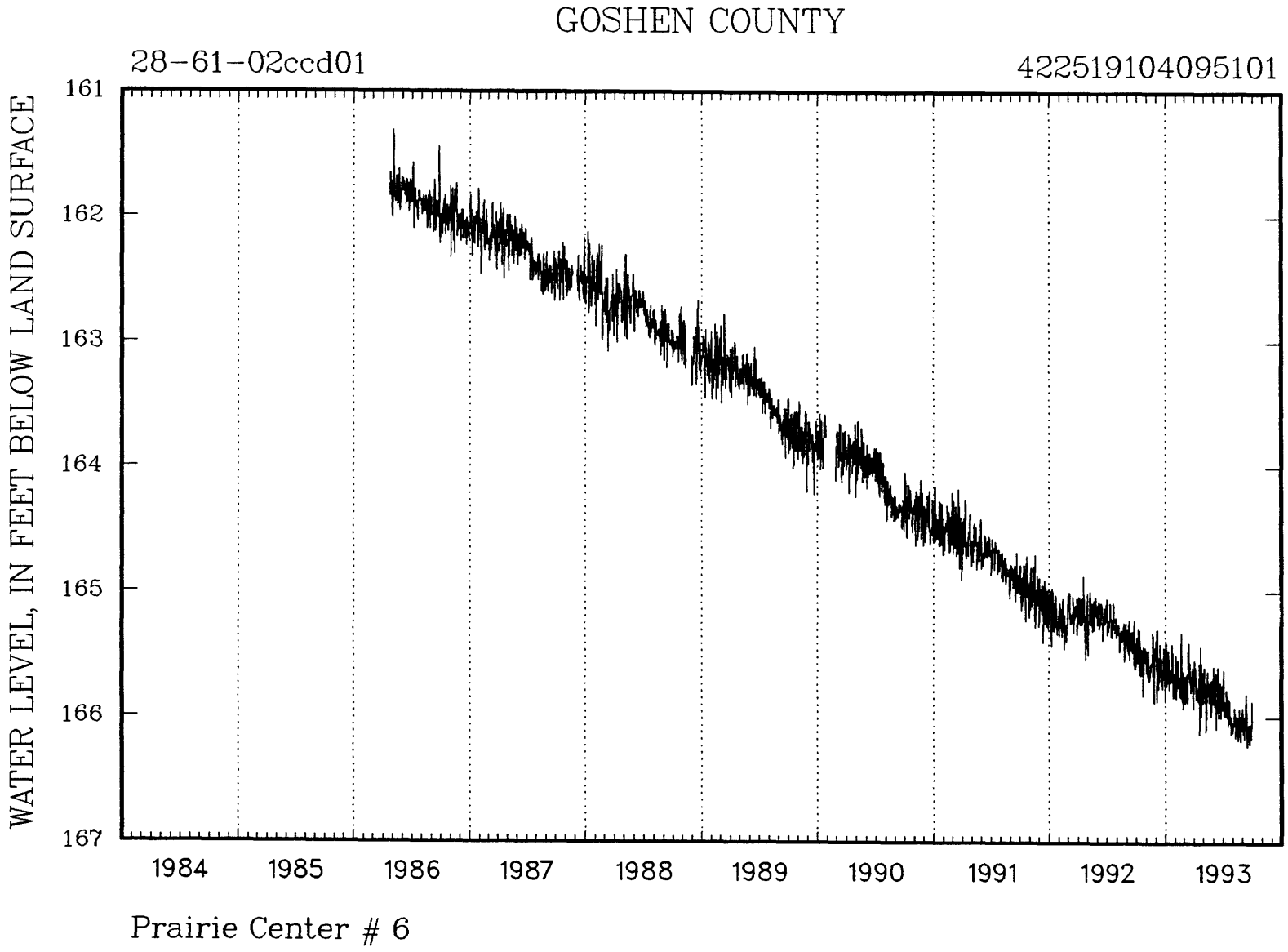

GOSHEN COUNTY
19-61-10aab01
413810104102301
WATER LEVEL, IN FEET BELOW LAND SURFACE
9
10
11
12
13
14
15
16
17
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
LaGrange #1

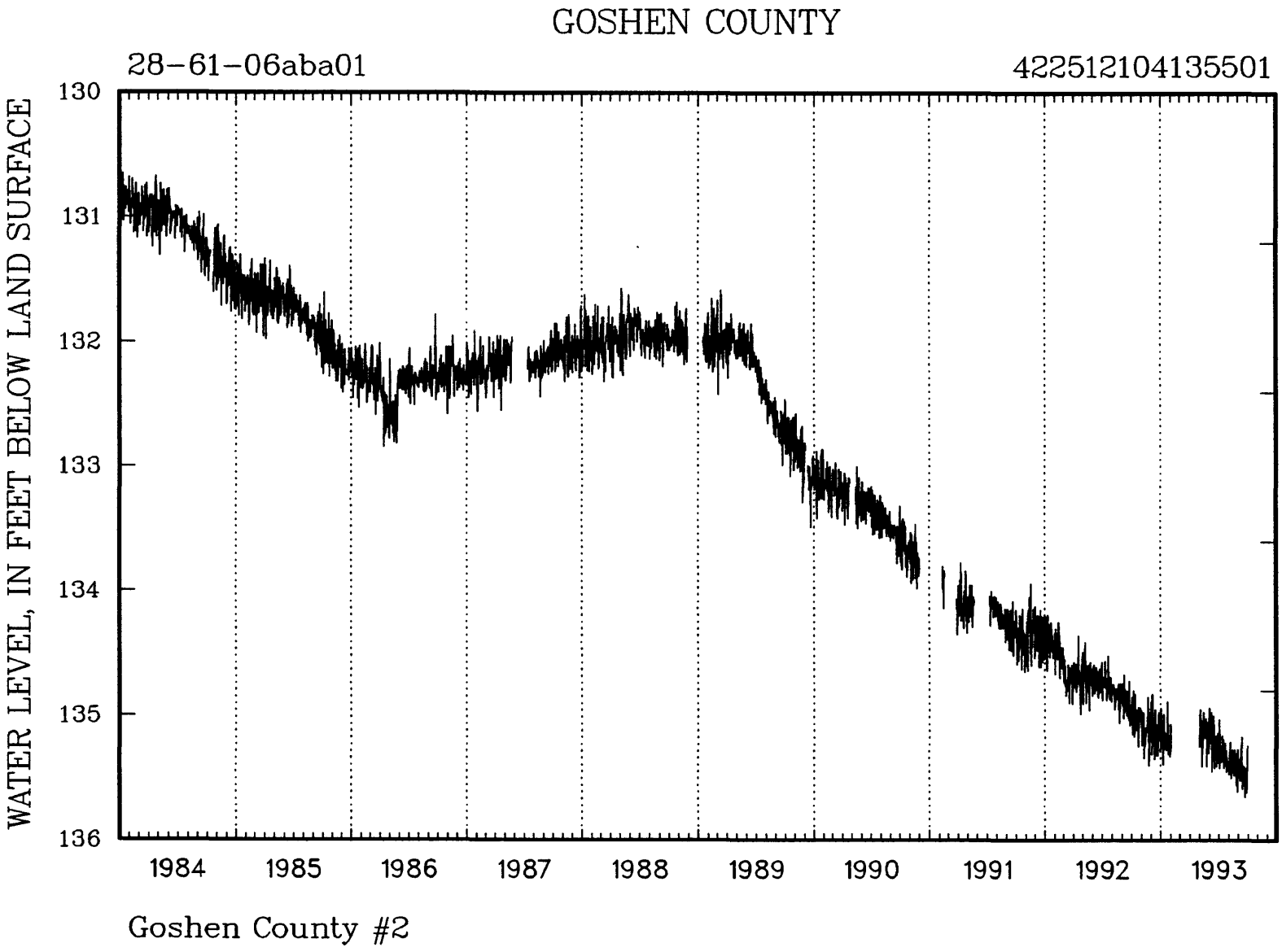

GOSHEN COUNTY
20-60-30bbb01
414049104074501
WATER LEVEL, IN FEET BELOW LAND SURFACE
30
35
40
45
50
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
LaGrange #2

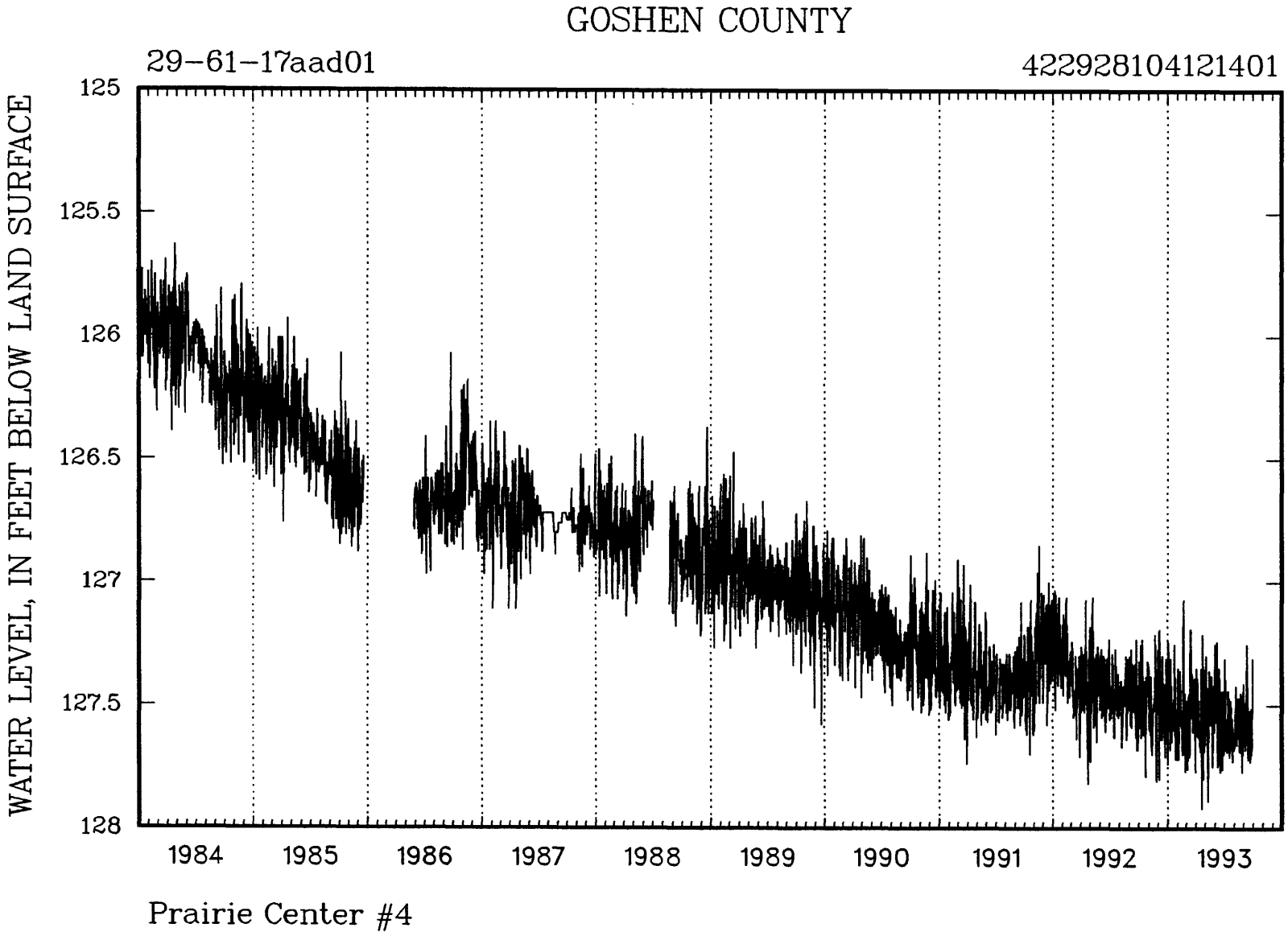

GOSHEN COUNTY
20-61-03dad01
414348104101301
WATER LEVEL, IN FEET BELOW LAND SURFACE
18
19
20
21
22
23
24
25
26
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
LaGrange #3

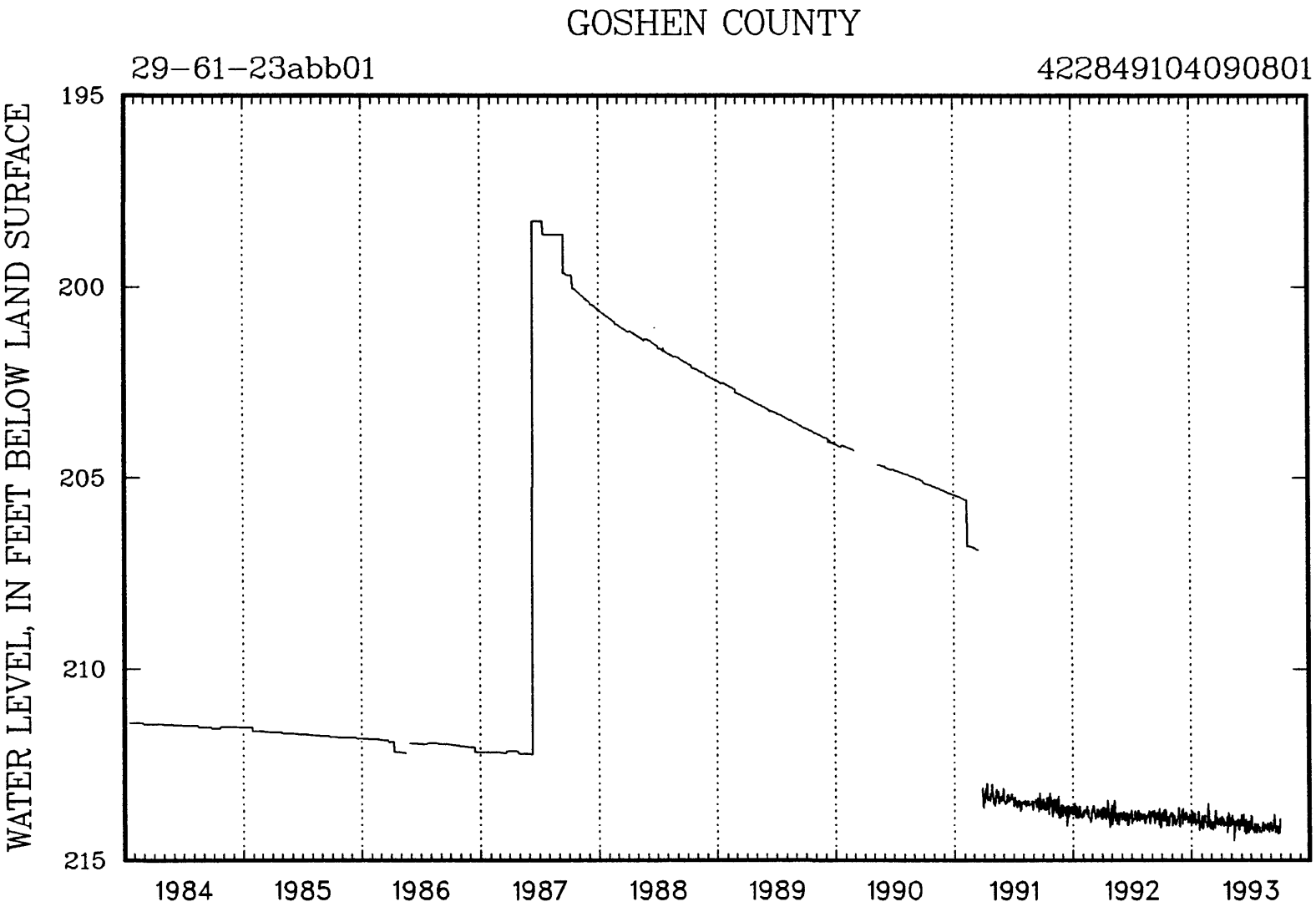

GOSHEN COUNTY
20-61-23bdb02
414128104094502
WATER LEVEL, IN FEET BELOW LAND SURFACE
1
3
5
7
9
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Rain Station


GOSHEN COUNTY
20-61-23ccc01
414051104100701
WATER LEVEL, IN FEET BELOW LAND SURFACE
9
11
13
15
17
19
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Curt Meier

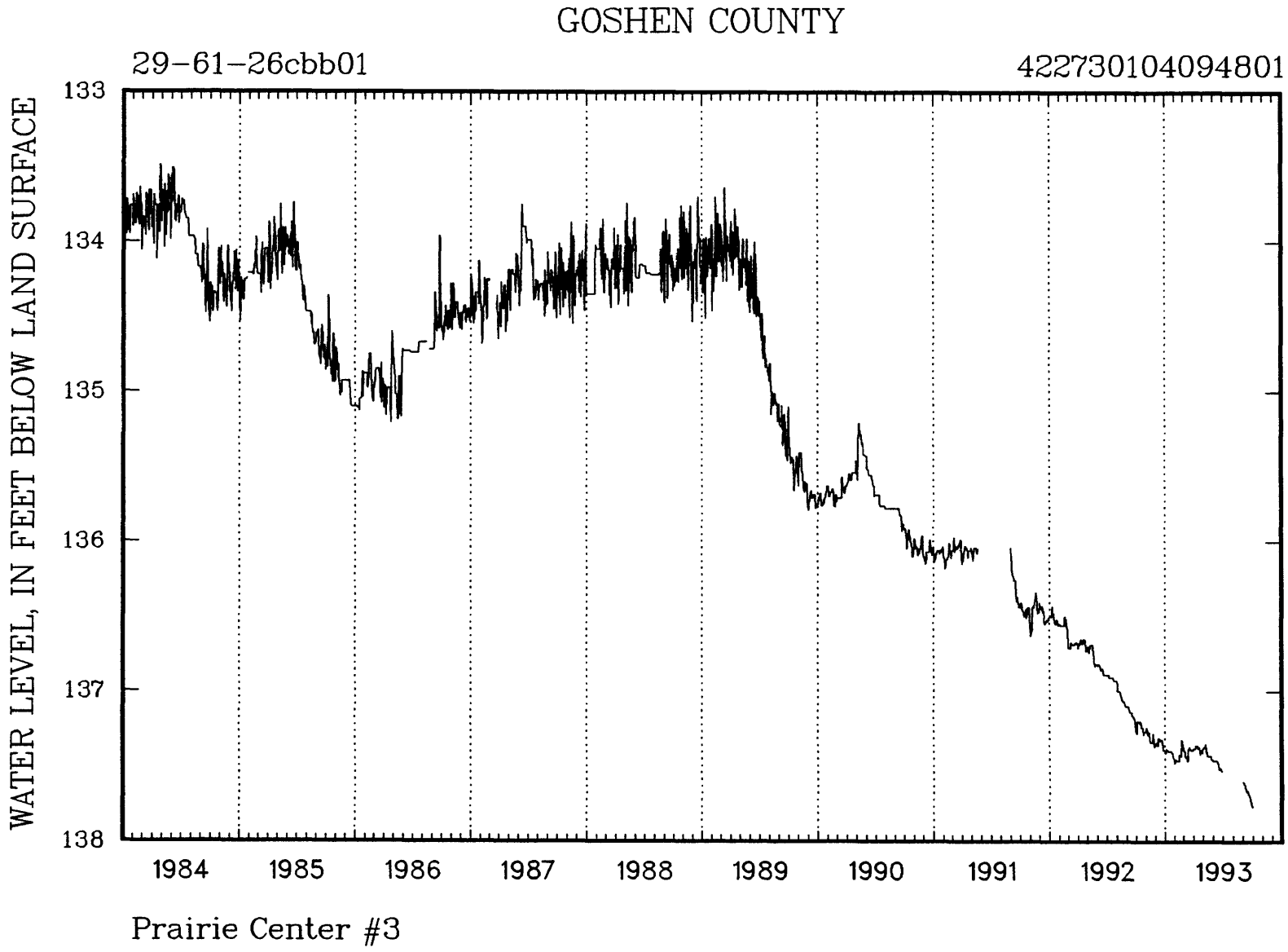

GOSHEN COUNTY
28-61-02ccd01
422519104095101
WATER LEVEL, IN FEET BELOW LAND SURFACE
161
162
163
164
165
166
167
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Prairie Center # 6


GOSHEN COUNTY
28-61-06aba01
422512104135501
WATER LEVEL, IN FEET BELOW LAND SURFACE
130
131
132
133
134
135
136
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Goshen County #2


GOSHEN COUNTY
29-61-17aad01
422928104121401
WATER LEVEL, IN FEET BELOW LAND SURFACE
125
125.5
126
126.5
127
127.5
128
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Prairie Center #4

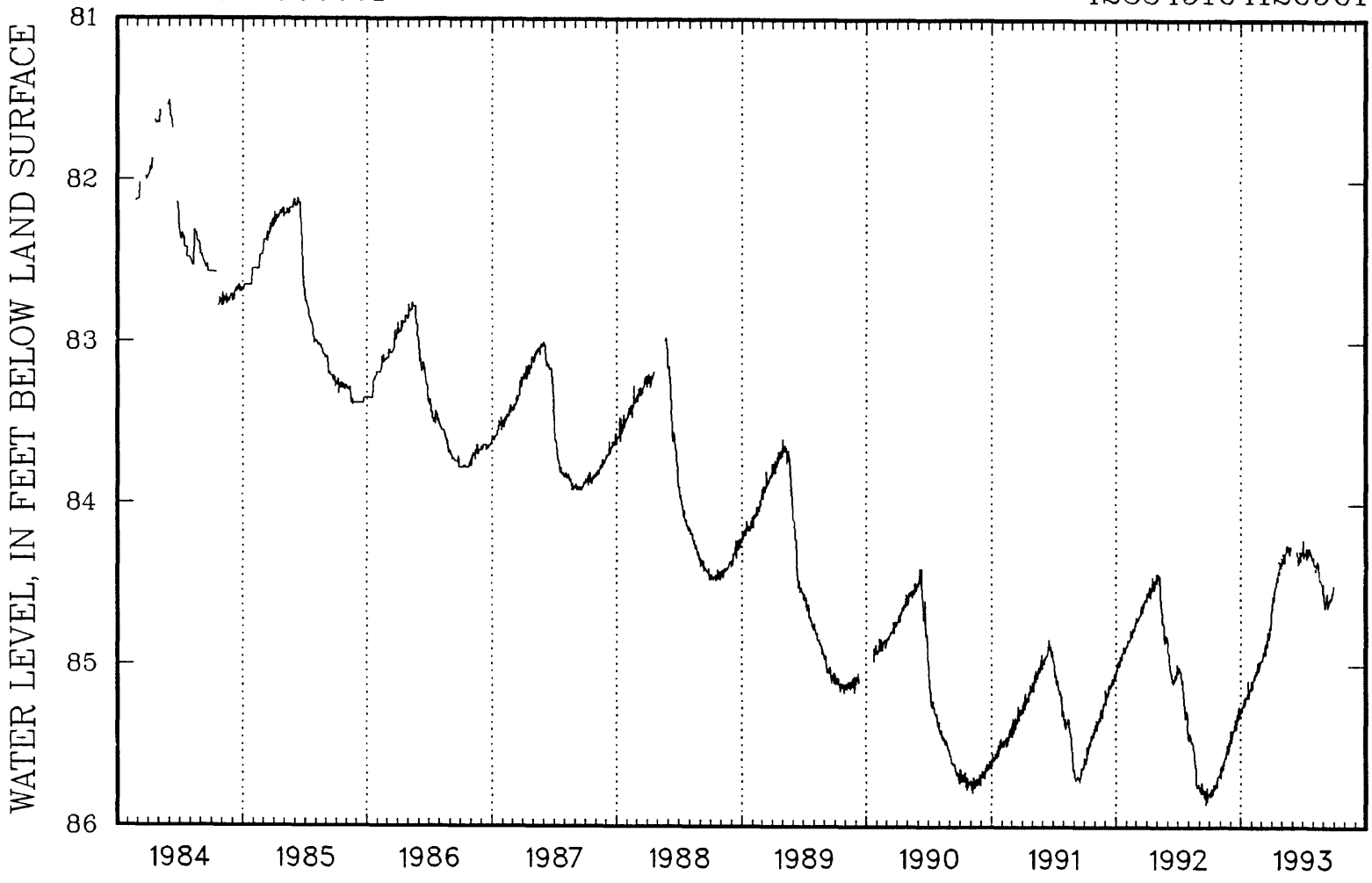


Goshen County #1
Slug test by instantaneous recharge conducted in June 1987.


GOSHEN COUNTY
29-61-26cbb01
422730104094801
WATER LEVEL, IN FEET BELOW LAND SURFACE
133
134
135
136
137
138
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Prairie Center #3

GOSHEN COUNTY

30-61-09bbb01 423549104120901



Prairie Center #5

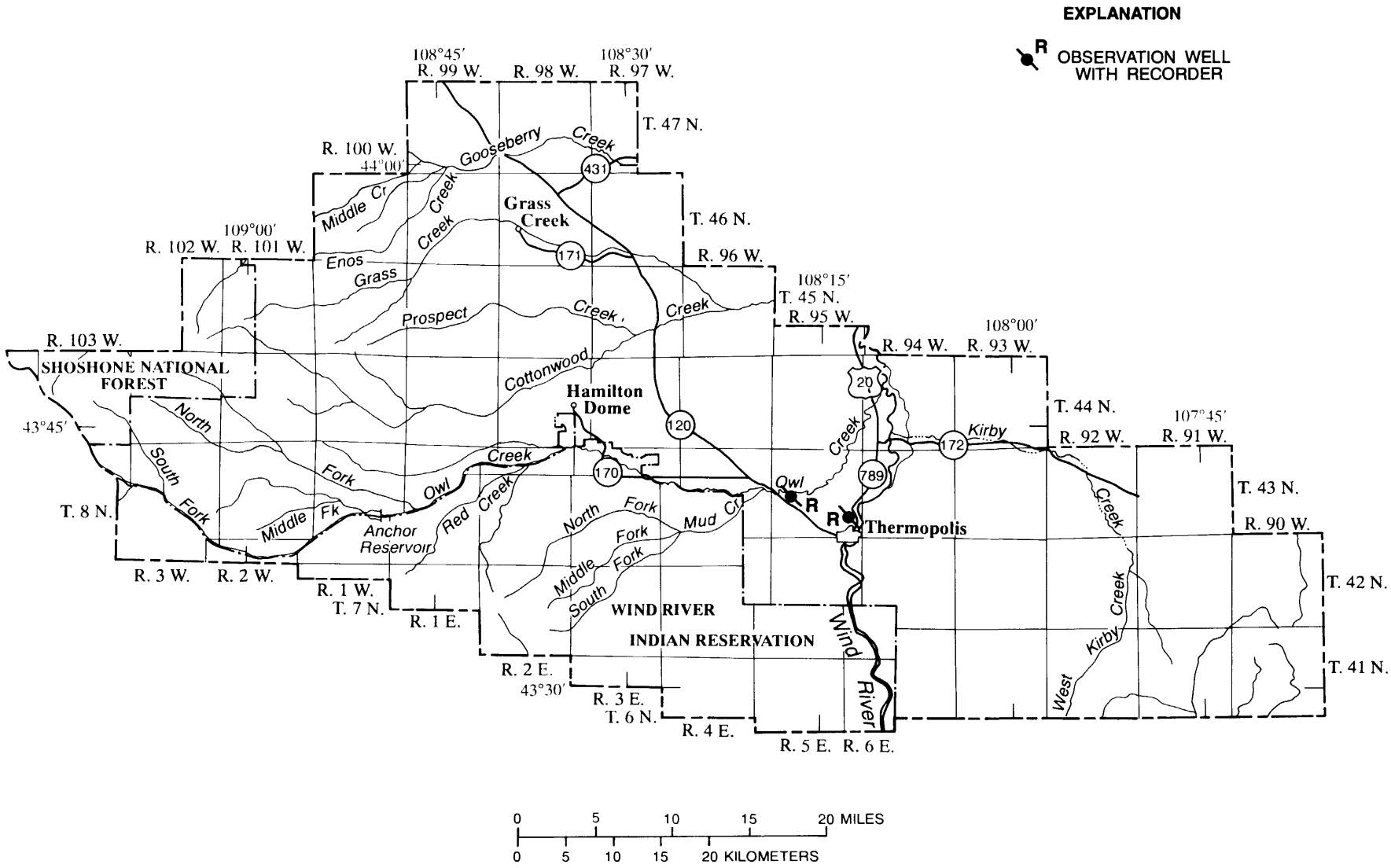
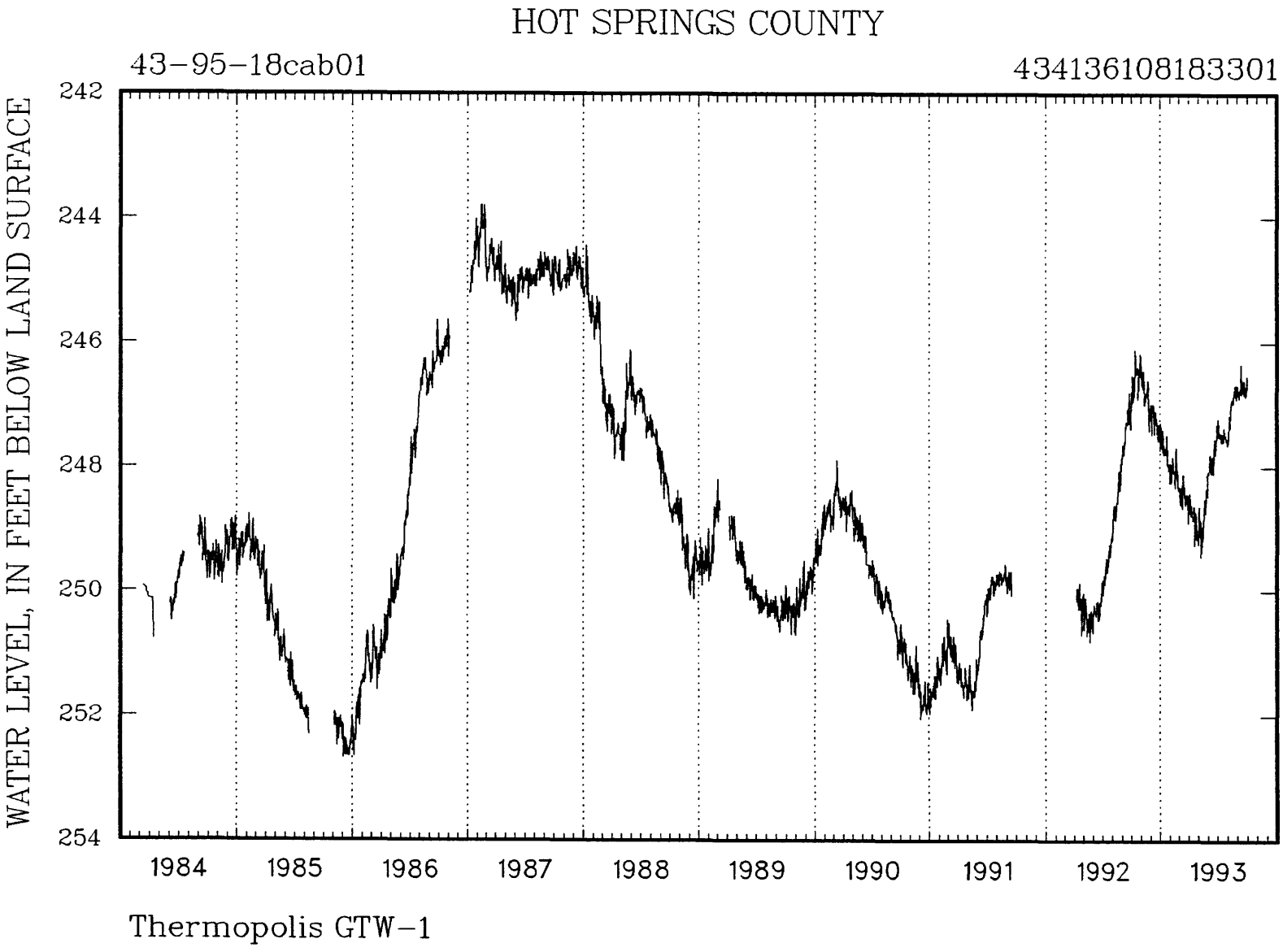
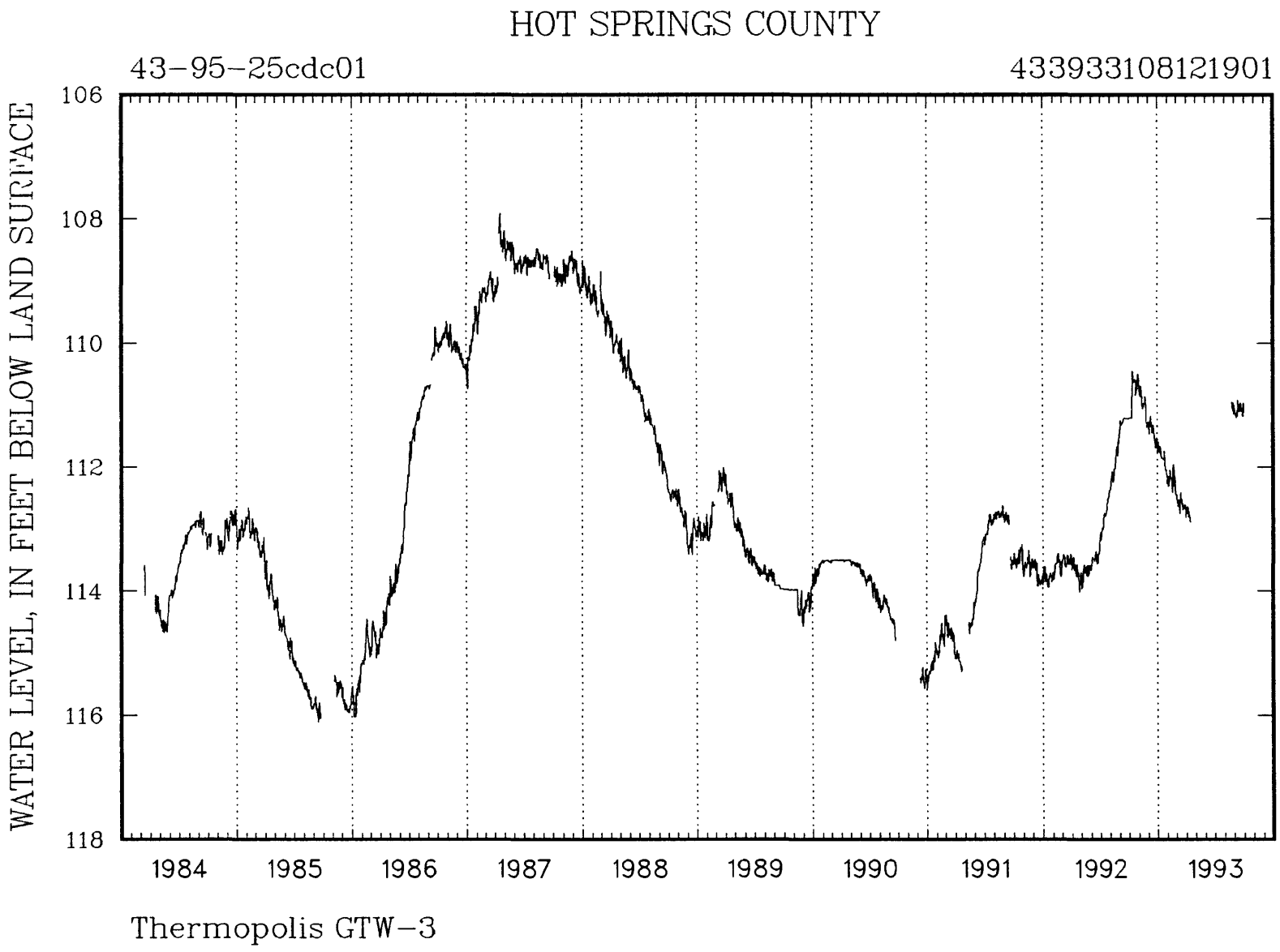


Figure 10.--Location of observation wells in Hot Springs County, Wyoming.

Records of observation wells in Hot Springs County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
43-95-18cab01	354	U	317TSLP	1983-93	243.79	02-87	253.74	09-83
43-95-25cdc01	228	U	311PRKC	1983-93	107.91	04-87	116.11	09-85


HOT SPRINGS COUNTY
43-95-18cab01
434136108183301
WATER LEVEL, IN FEET BELOW LAND SURFACE
242
244
246
248
250
252
254
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Thermopolis GTW-1


HOT SPRINGS COUNTY
43-95-25cdc01
433933108121901
WATER LEVEL, IN FEET BELOW LAND SURFACE
106
108
110
112
114
116
118
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Thermopolis GTW-3

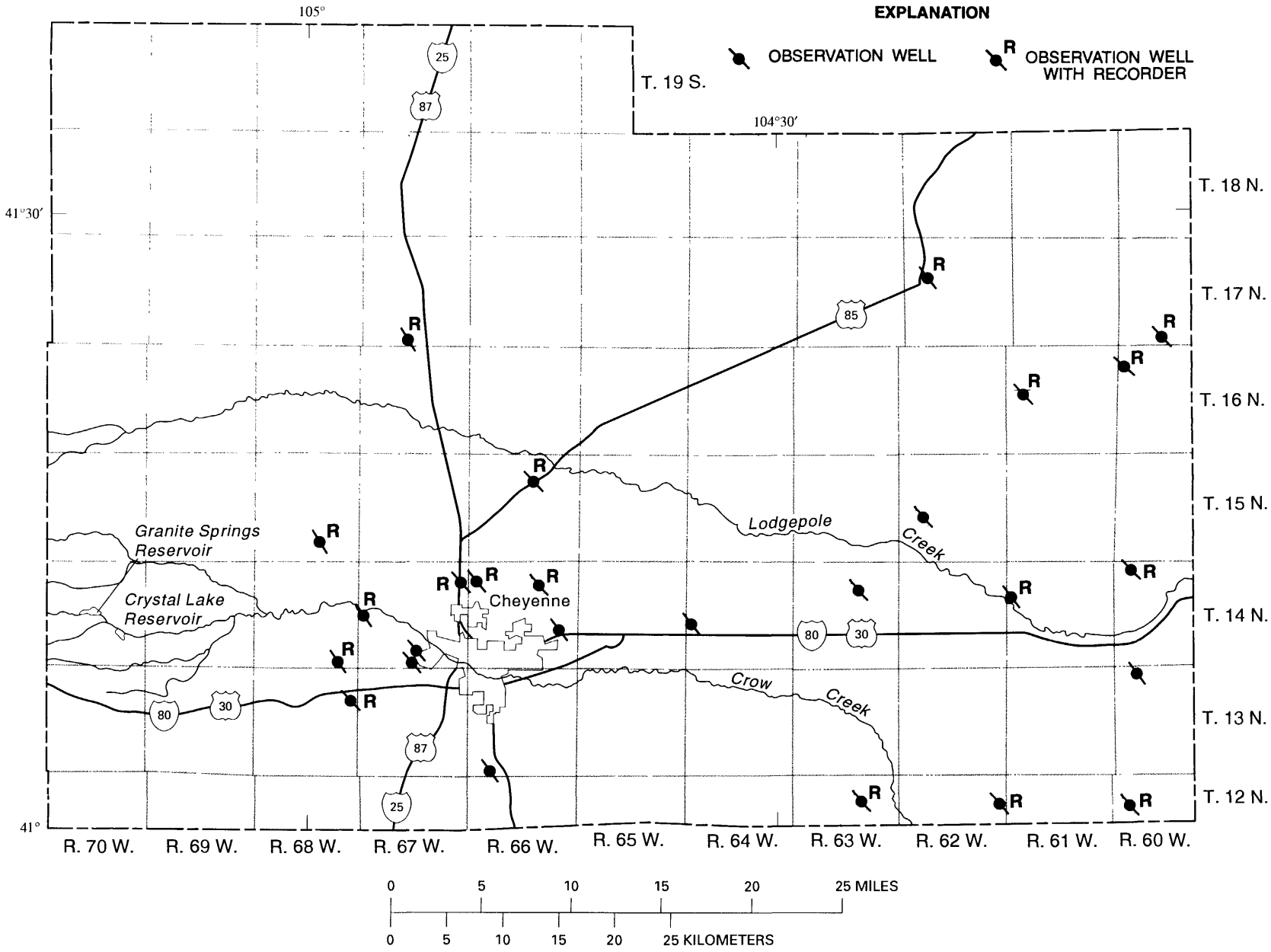


Figure 11.--Location of observation wells in Laramie County, Wyoming.

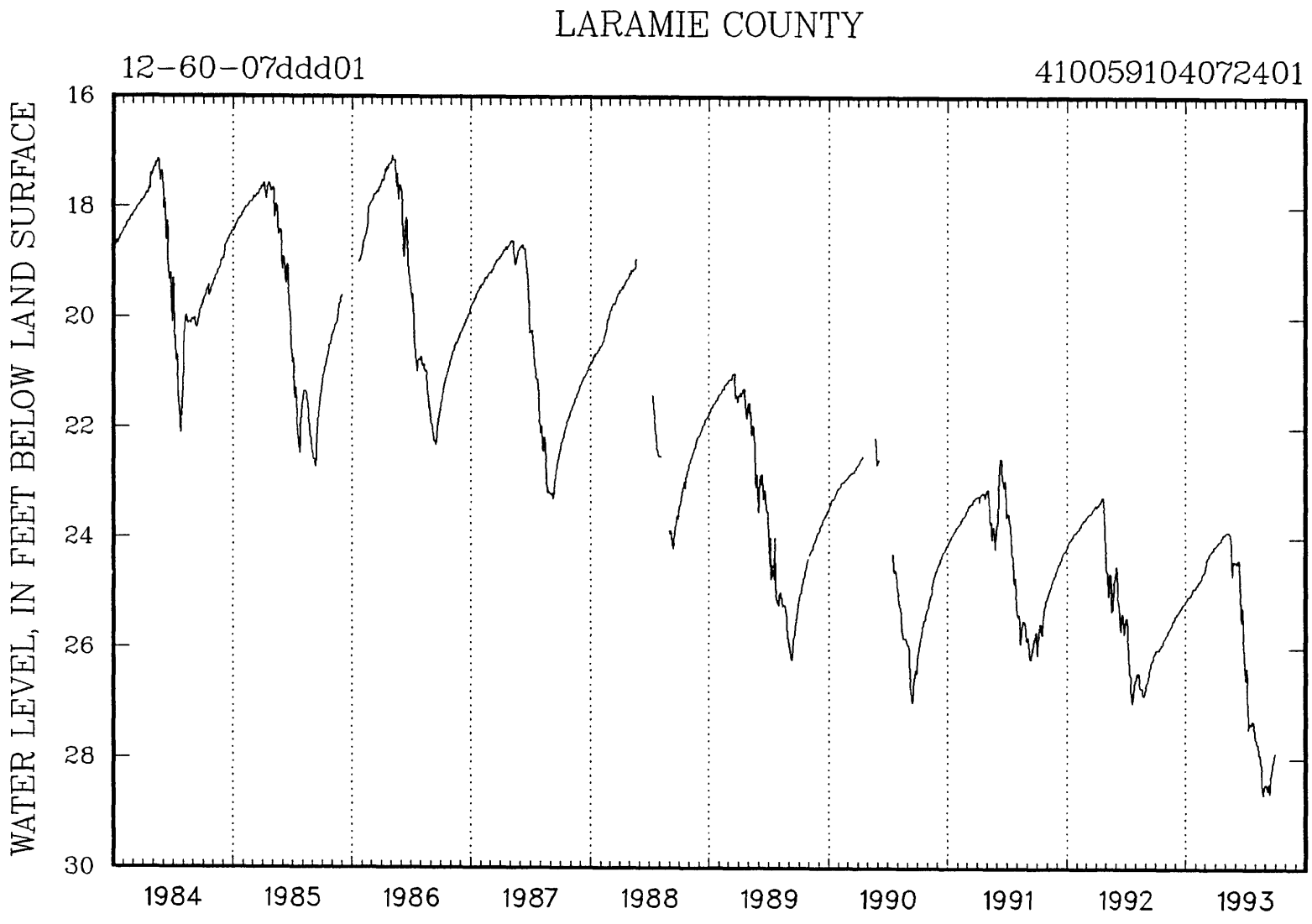
Records of observation wells in Laramie County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous and individual water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
12-60-07ddd01	120	U	123BRUL	1978-93	14.90	05-80	28.65	08-93
12-62-13baa01	198	U	111TRRC	1975-93	38.53	05-75	68.92	09-91
12-63-15aaa02	110	U	123BRUL	1973-93	14.11	04-74	46.86	09-78
13-60-05ccb01	100	U	123BRUL	1969-93	34.18	05-84	63.52	10-79
13-66-32bbd01	160	U	121OGLL	1986-93	[1]44.34	12-91	47.95	07-88
13-68-13ccc01	--	U	121OGLL	1942-50, 1969-93	36.78	03-45	87.89	07-83
14-60-05bcb01	98	U	123BRUL	1957-93	28.96	04-85	56.62	07-77
14-61-18ddd01	90	U	123BRUL	1977-93	9.08	06-84	22.79	10-79
14-63-15aaa01	165	U	122ARKR	1977-93	45.48	06-80	[1]50.43	03-93
14-64-19bcc01	180	U	121OGLL	1977-93	[1]157.08	02-91	[1]159.83	09-92
14-66-07add01	300	U	121OGLL	1984-93	81.71	03-91	100.27	07-89
14-66-10aba01	190	U	121OGLL	1977-93	125.82	02-79	132.35	08-93
14-66-23ddd01	216	U	121OGLL	1986-93	[1]140.35	07-90	[1]141.67	02-92
14-67-12abb01	220	U	121OGLL	1984-93	93.62	03-89	114.04	07-89
14-67-18ddc01	229	U	121OGLL	1956-93	12.48	09-57	48.25	08-78
14-67-27bac01	140	U	121OGLL	1986-93	20.71	04-86	[1]23.91	08-89
14-67-34bbc01	162	U	121OGLL	1986-93	7.72	04-86	12.28	07-87
14-68-35ddc02	230	U	121OGLL	1969-93	91.00	03-92	113.26	09-81
15-62-20aaa01	165	U	121OGLL	1977-93	96.03	05-89	[1]100.03	05-91
15-66-10bab01	210	U	121OGLL	1977-93	58.60	11-88	86.70	09-78

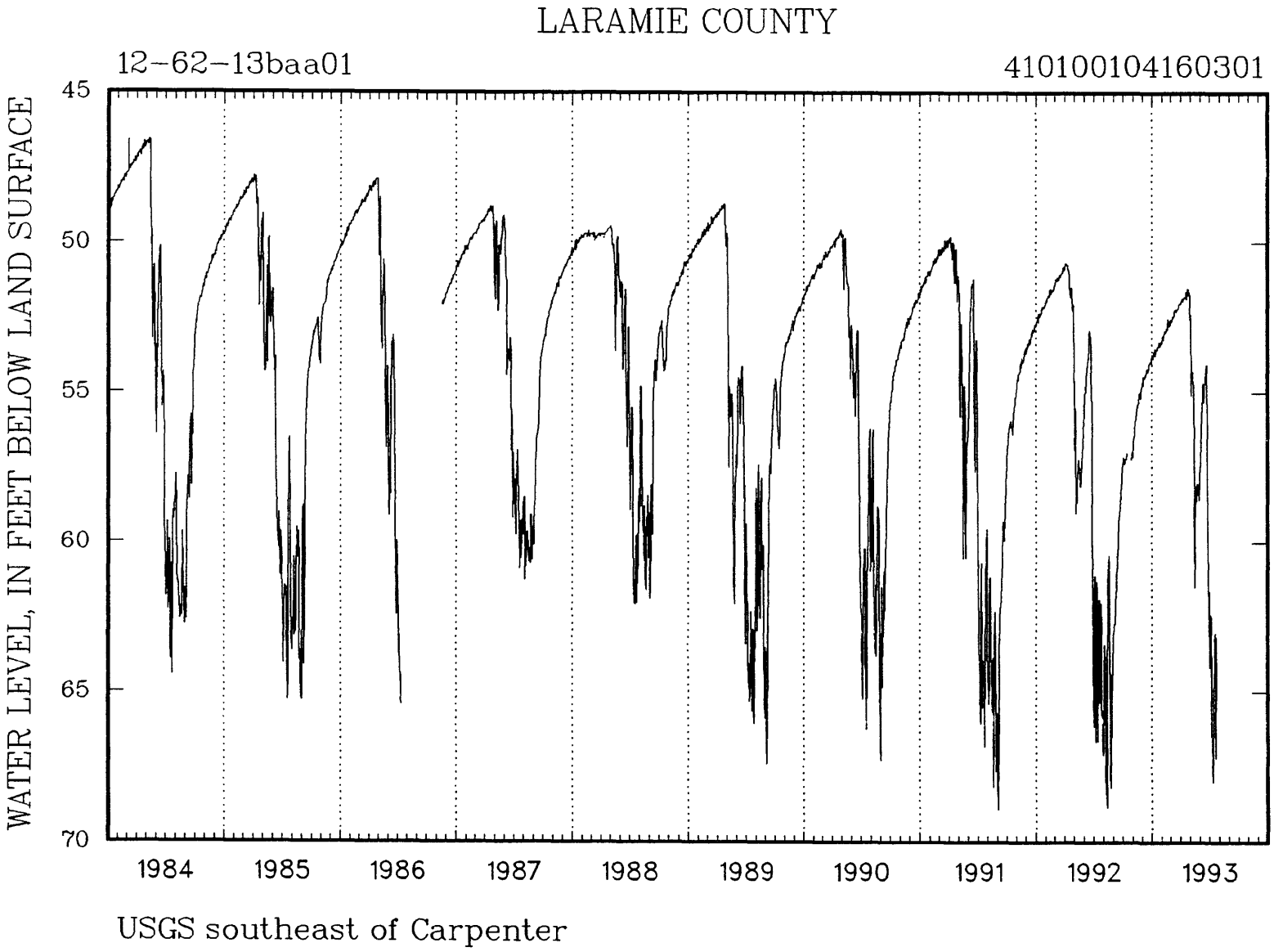
Records of observation wells in Laramie County, Wyoming, and highest and lowest recorded water levels, in feet below land surface--Continued.

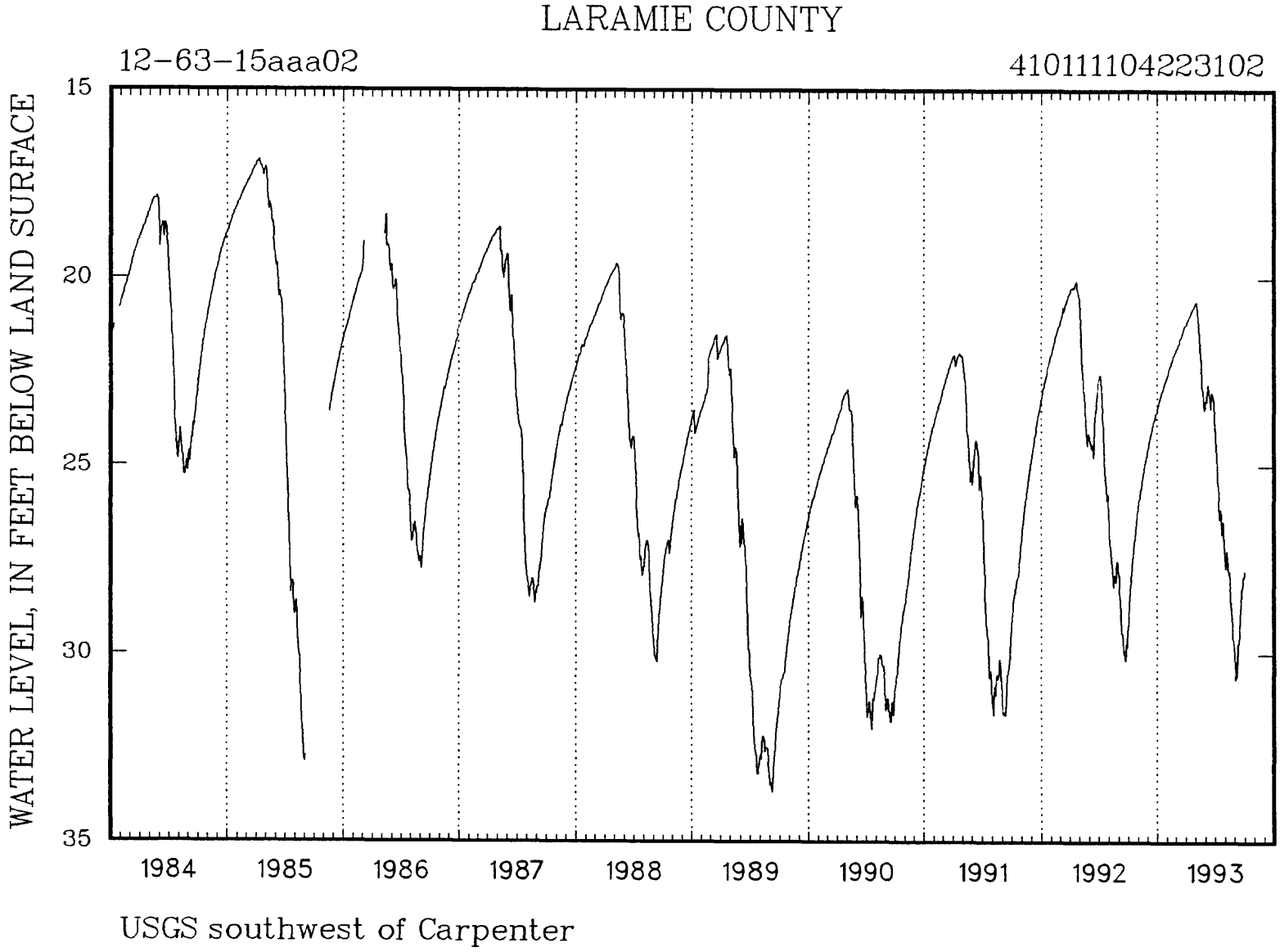
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
15-68-27ccc01	350	U	121OGLL	1984-93	165.84	09-86	174.30	01-85
16-60-07bbb02	215	U	121OGLL	1983-93	147.06	05-91	149.55	09-83
16-61-17aaa01	285	U	121OGLL	1977-93	195.15	05-91	201.32	12-77
17-60-33cbb01	275	U	123OGLL	1975-93	177.52	05-75	214.71	11-92
17-62-17ccc01	360	U	121OGLL	1982-93	223.38	09-93	227.03	12-85
17-67-33baa01	200	U	121OGLL	1984-93	132.26	01-85	151.14	07-93

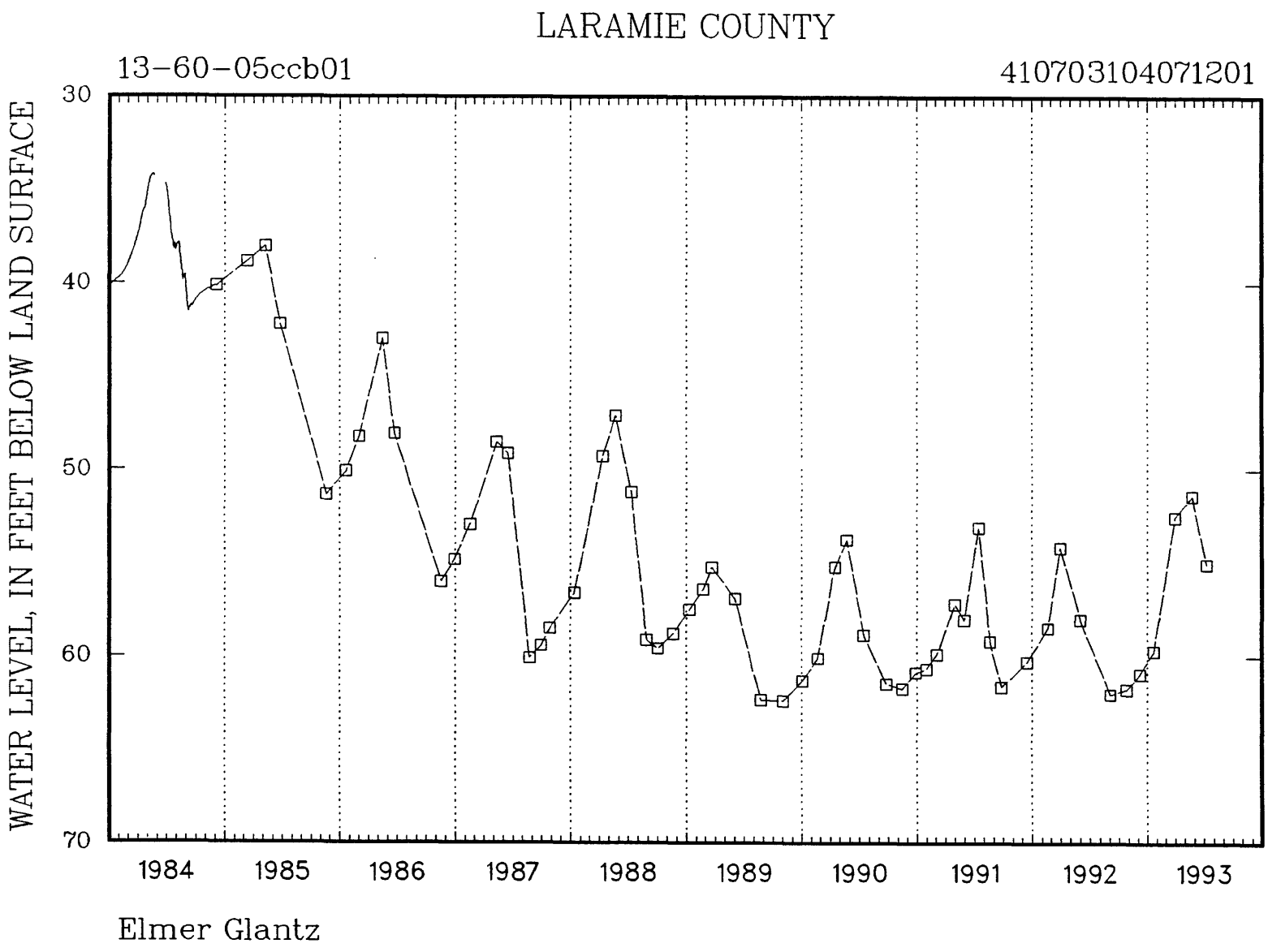
[1] From hand-measured data.

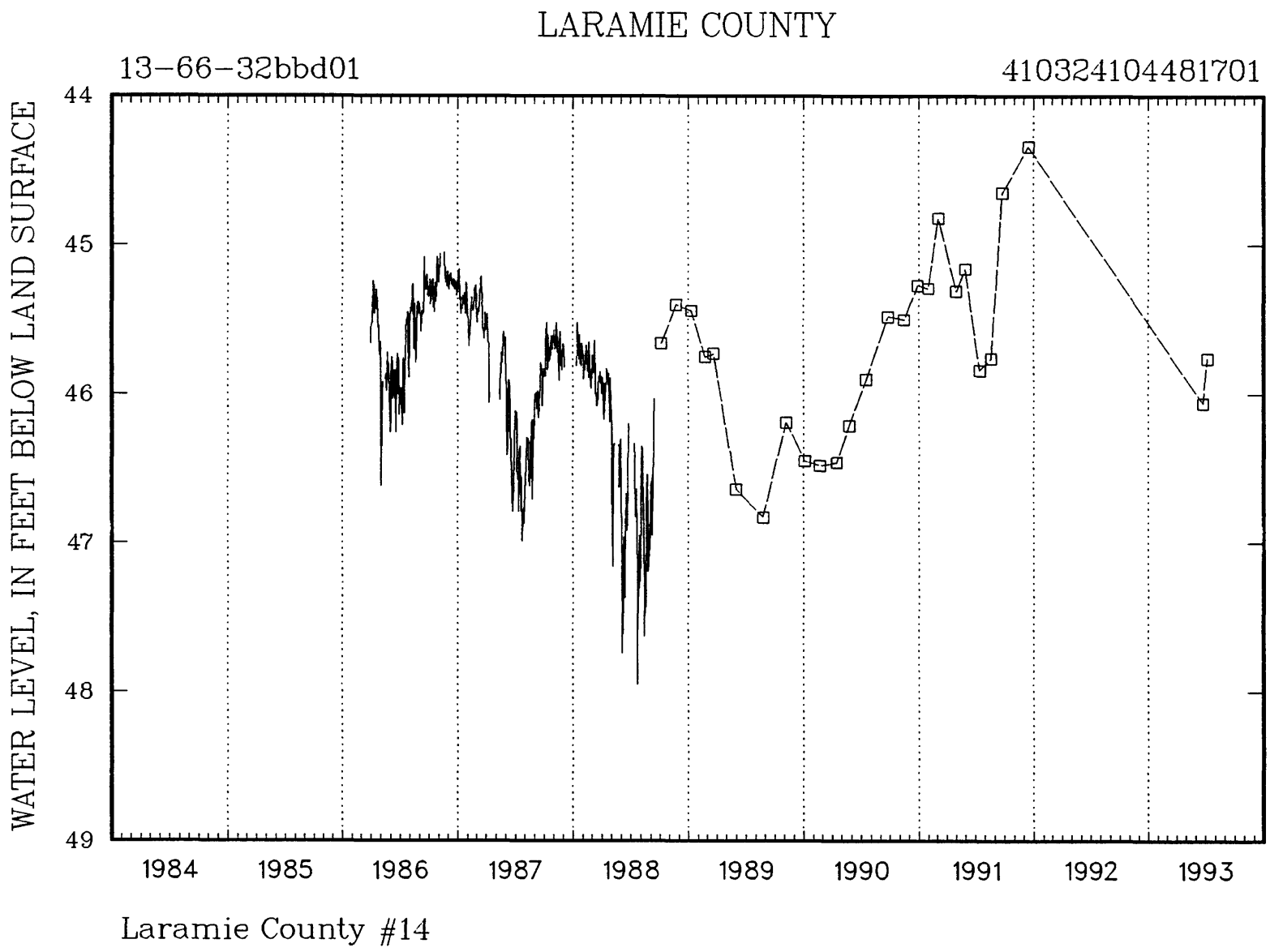


Laramie County #1

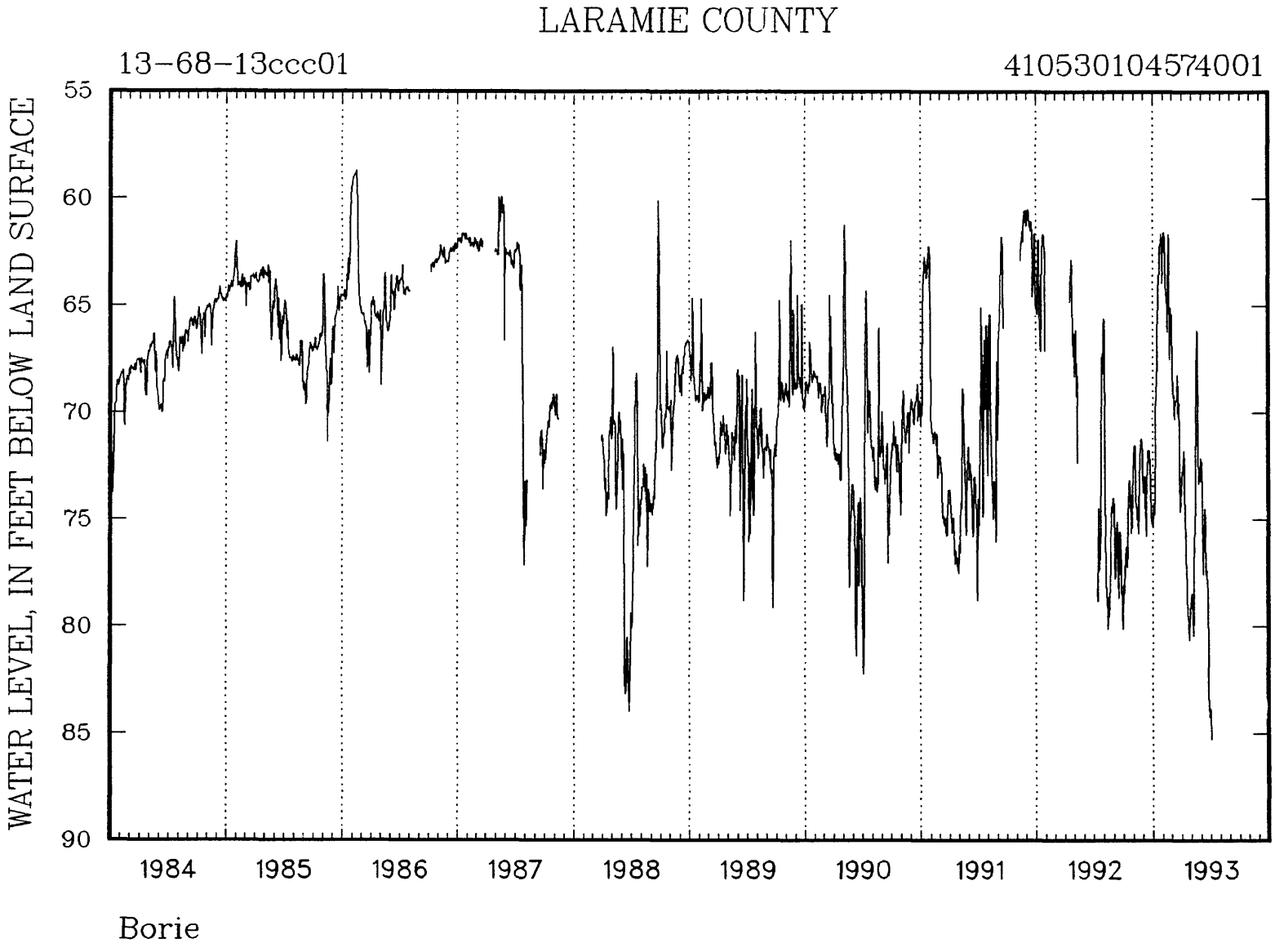

LARAMIE COUNTY
12-62-13baa01
410100104160301
WATER LEVEL, IN FEET BELOW LAND SURFACE
45
50
55
60
65
70
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
USGS southeast of Carpenter


LARAMIE COUNTY
12-63-15aaa02
410111104223102
WATER LEVEL, IN FEET BELOW LAND SURFACE
15
20
25
30
35
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
USGS southwest of Carpenter


LARAMIE COUNTY
13-60-05ccb01
410703104071201
WATER LEVEL, IN FEET BELOW LAND SURFACE
30
40
50
60
70
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Elmer Glantz



Laramie County #14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13-68-13ccc01
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WATER LEVEL, IN FEET BELOW LAND SURFACE
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90
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1987
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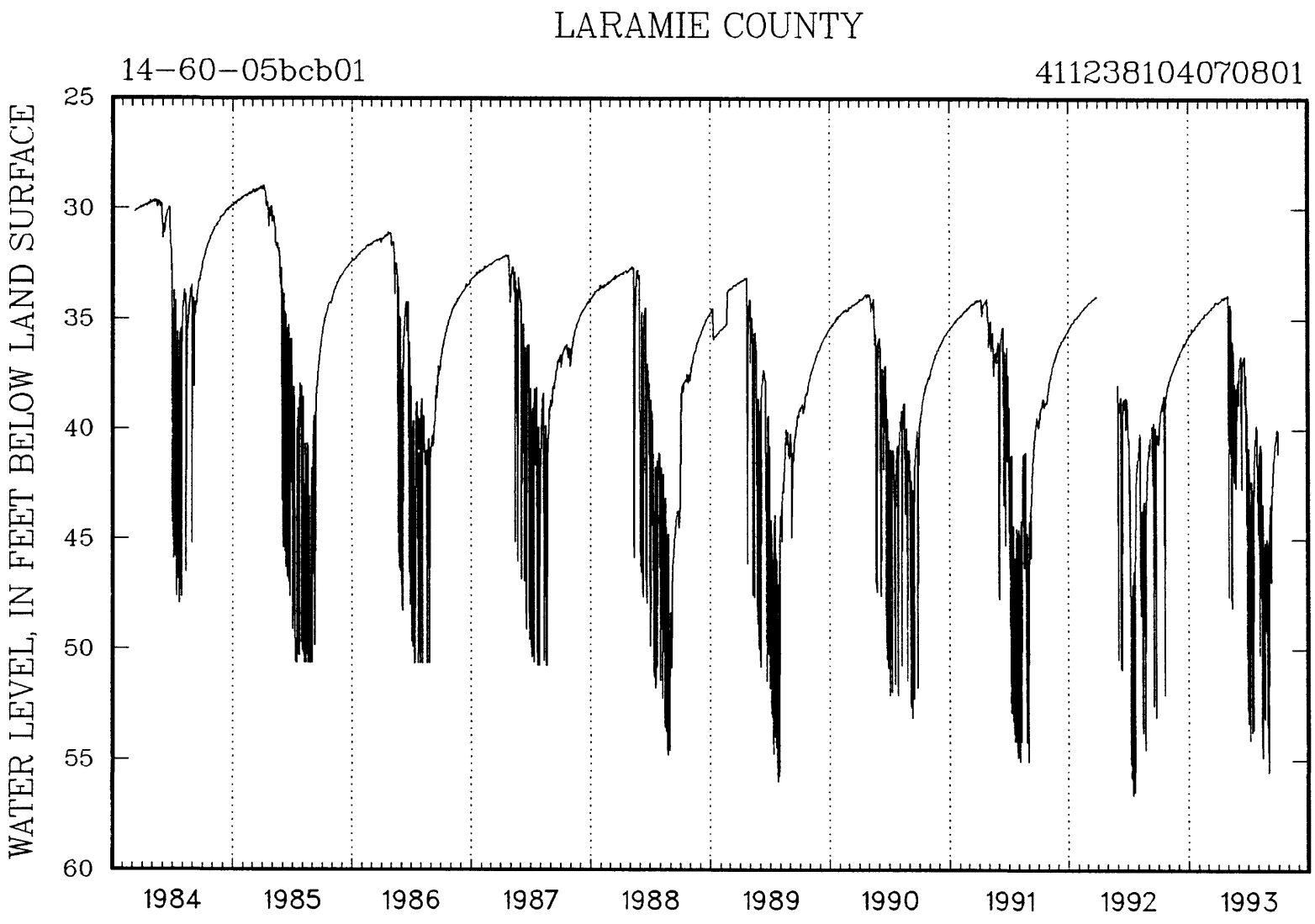
1993
Borie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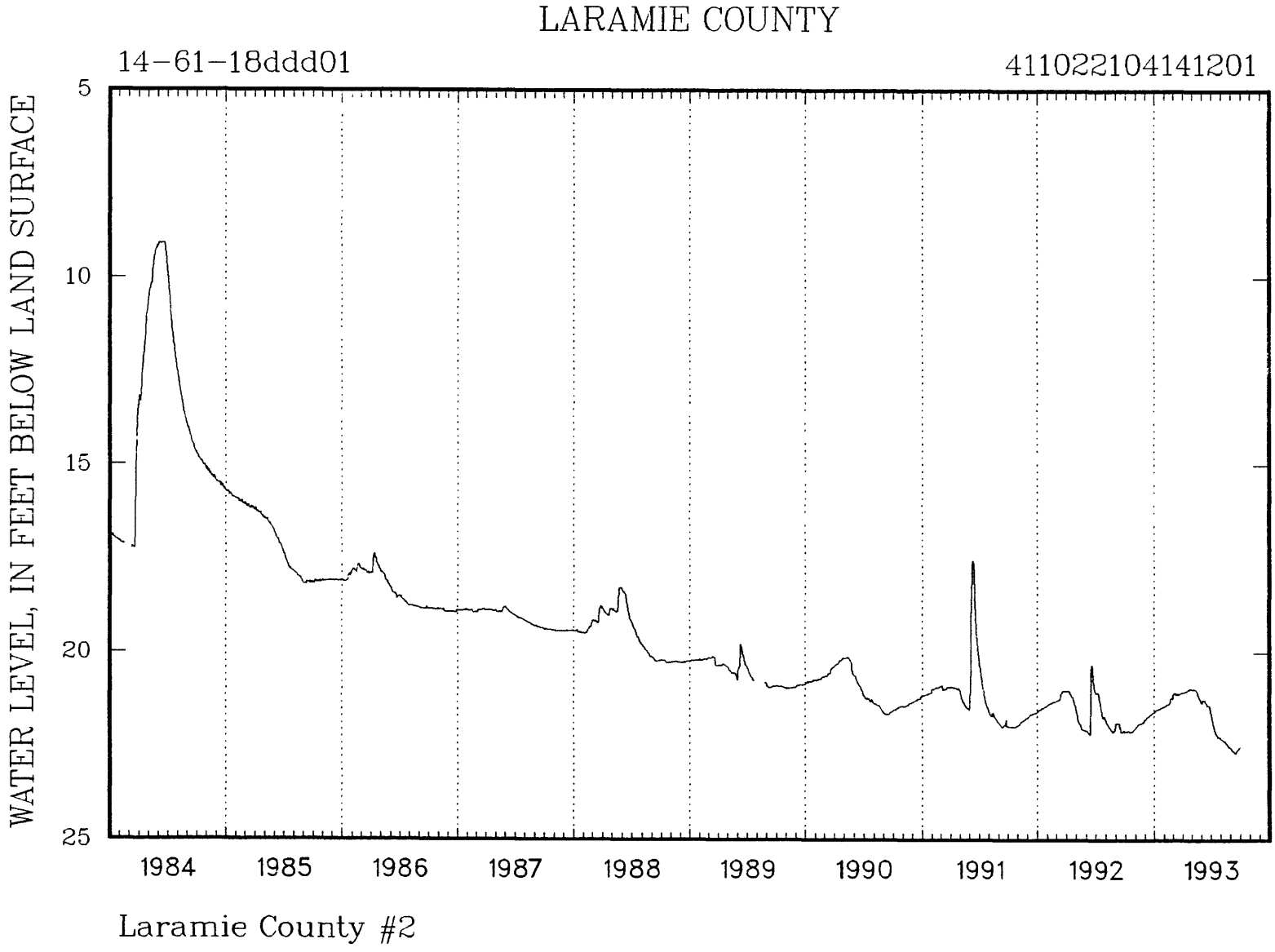
C. C. Gross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10
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1989
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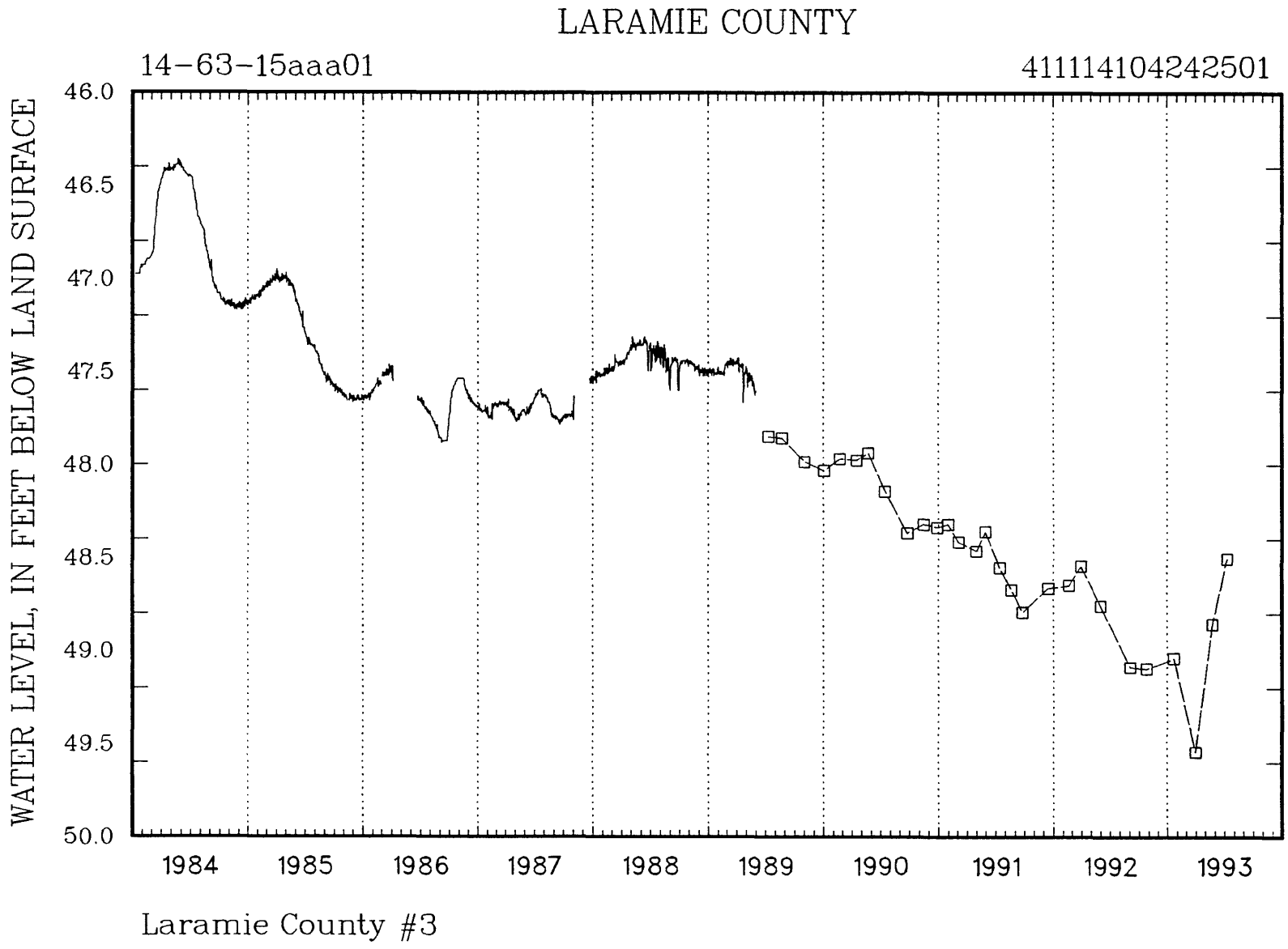
1993
Laramie County #2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47.5
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1985
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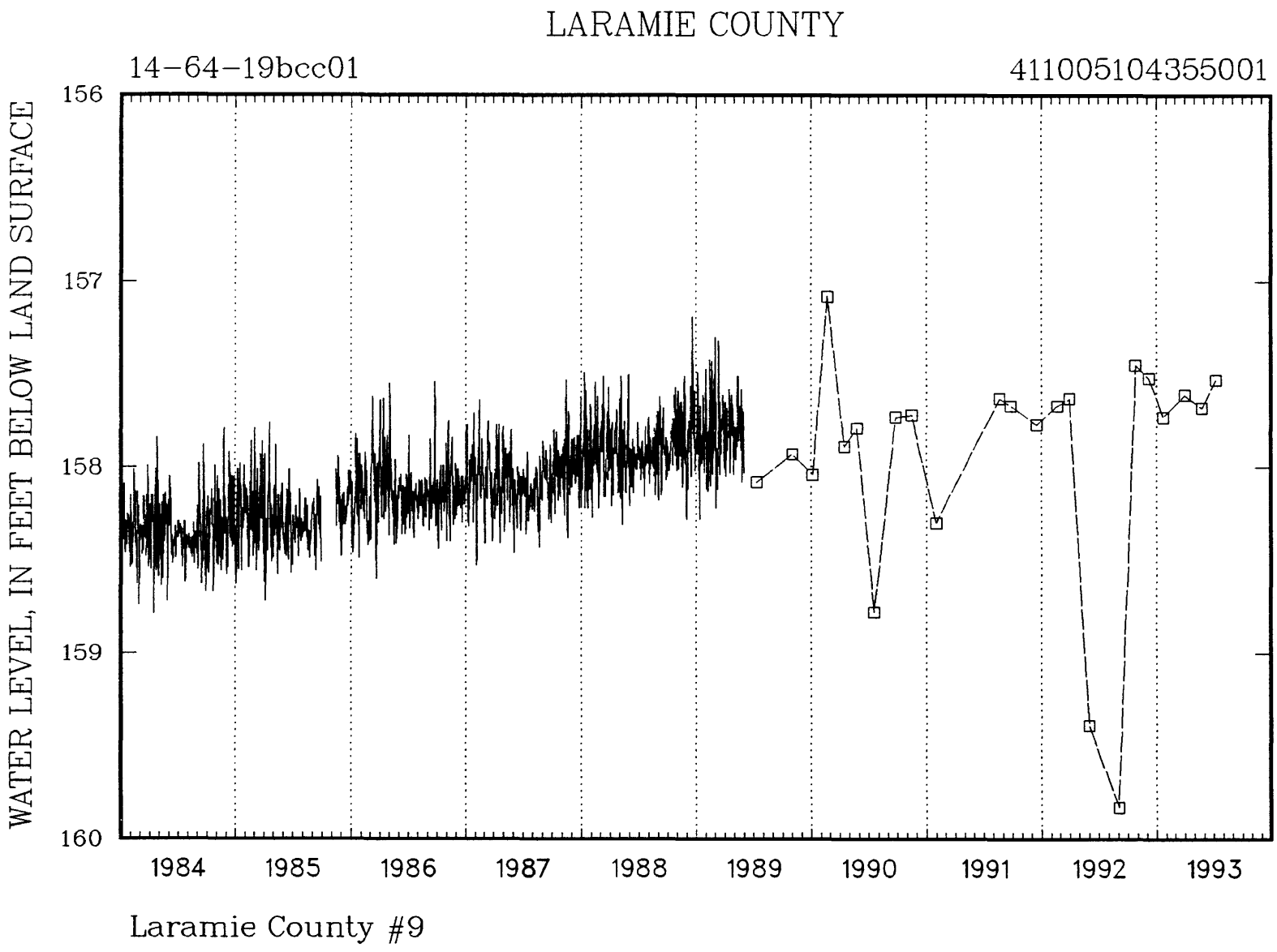
1988
1989
1990
1991
1992
1993
Laramie County #3



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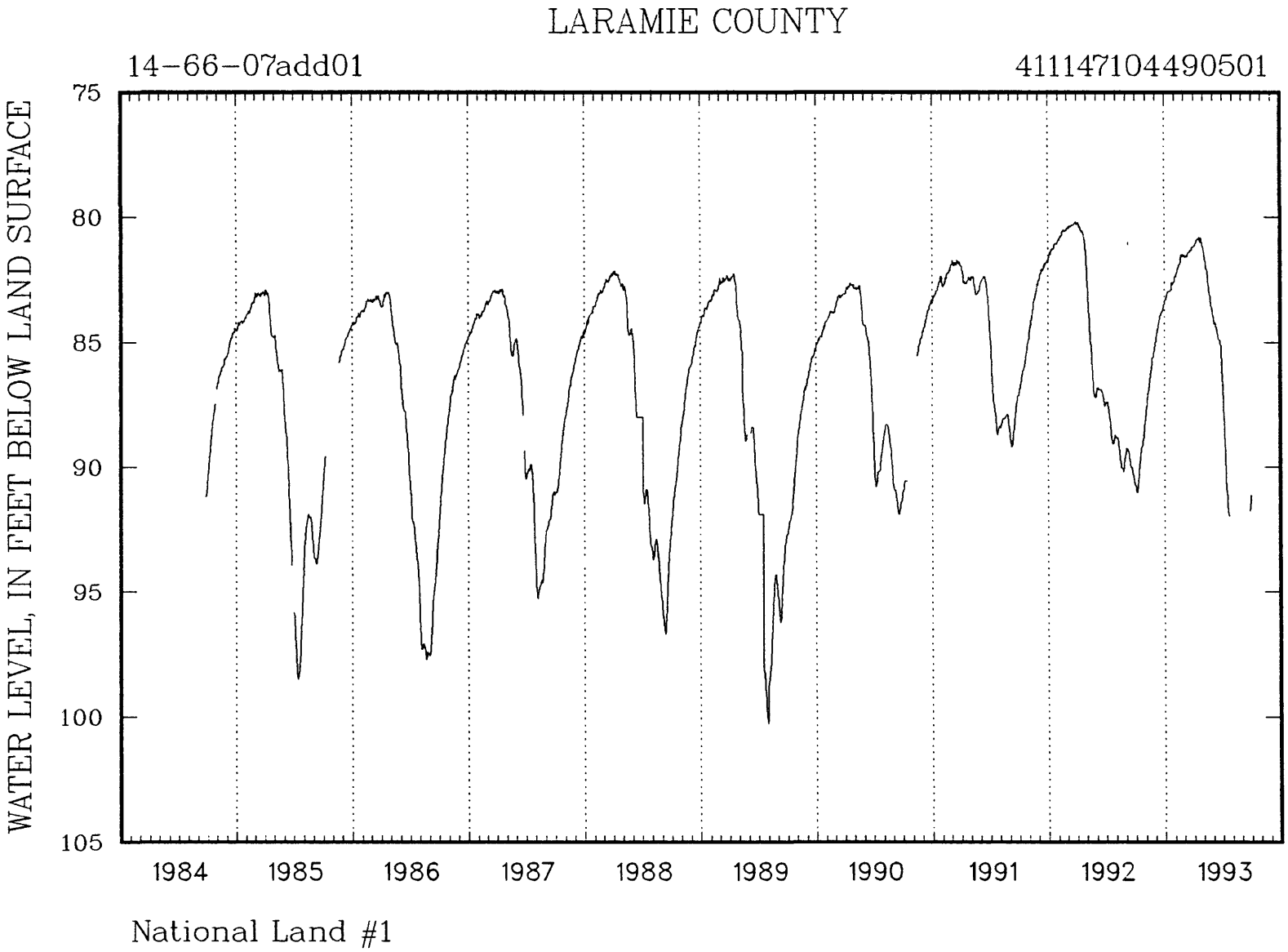
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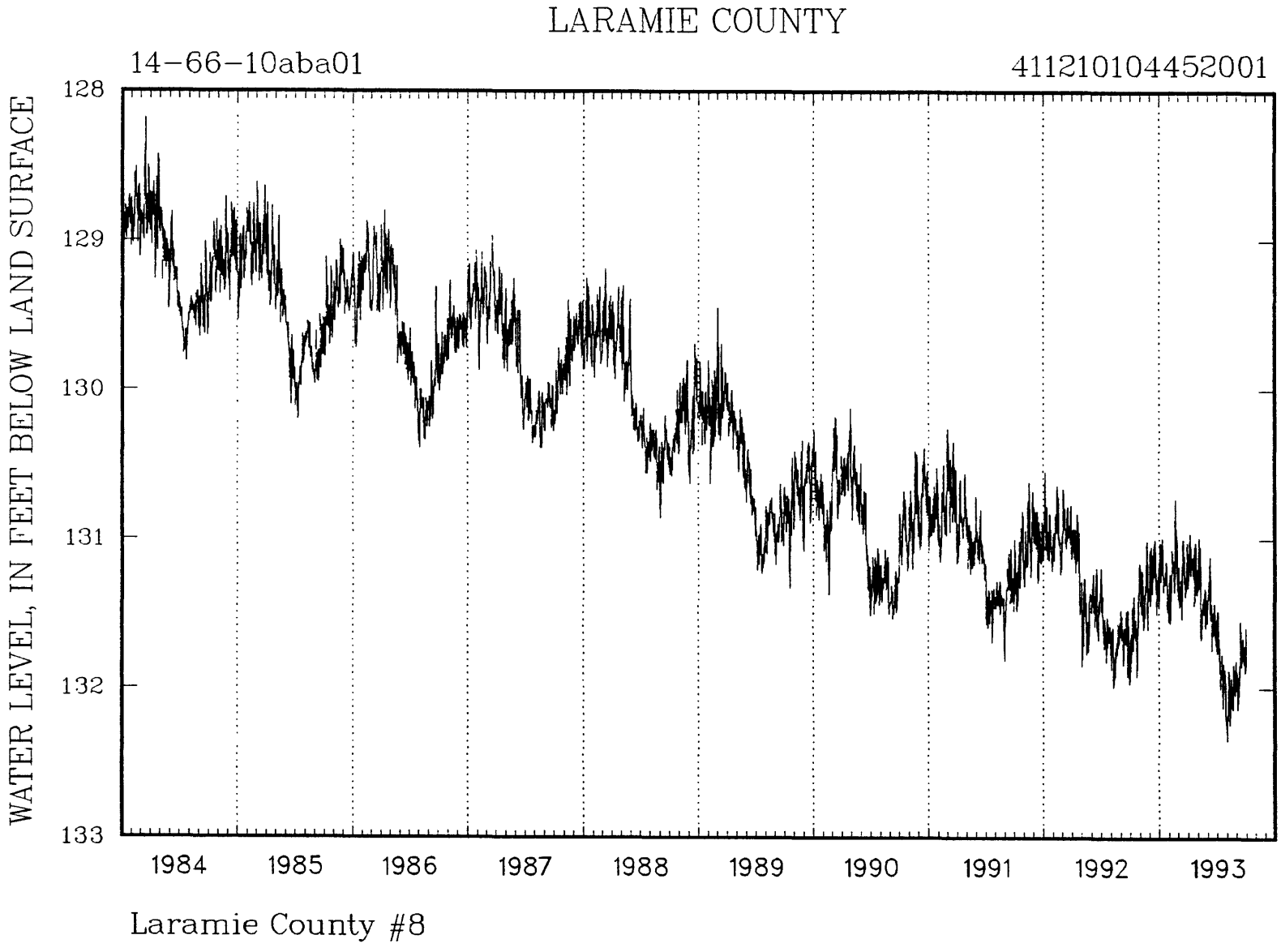
1992
1993
National Land #1



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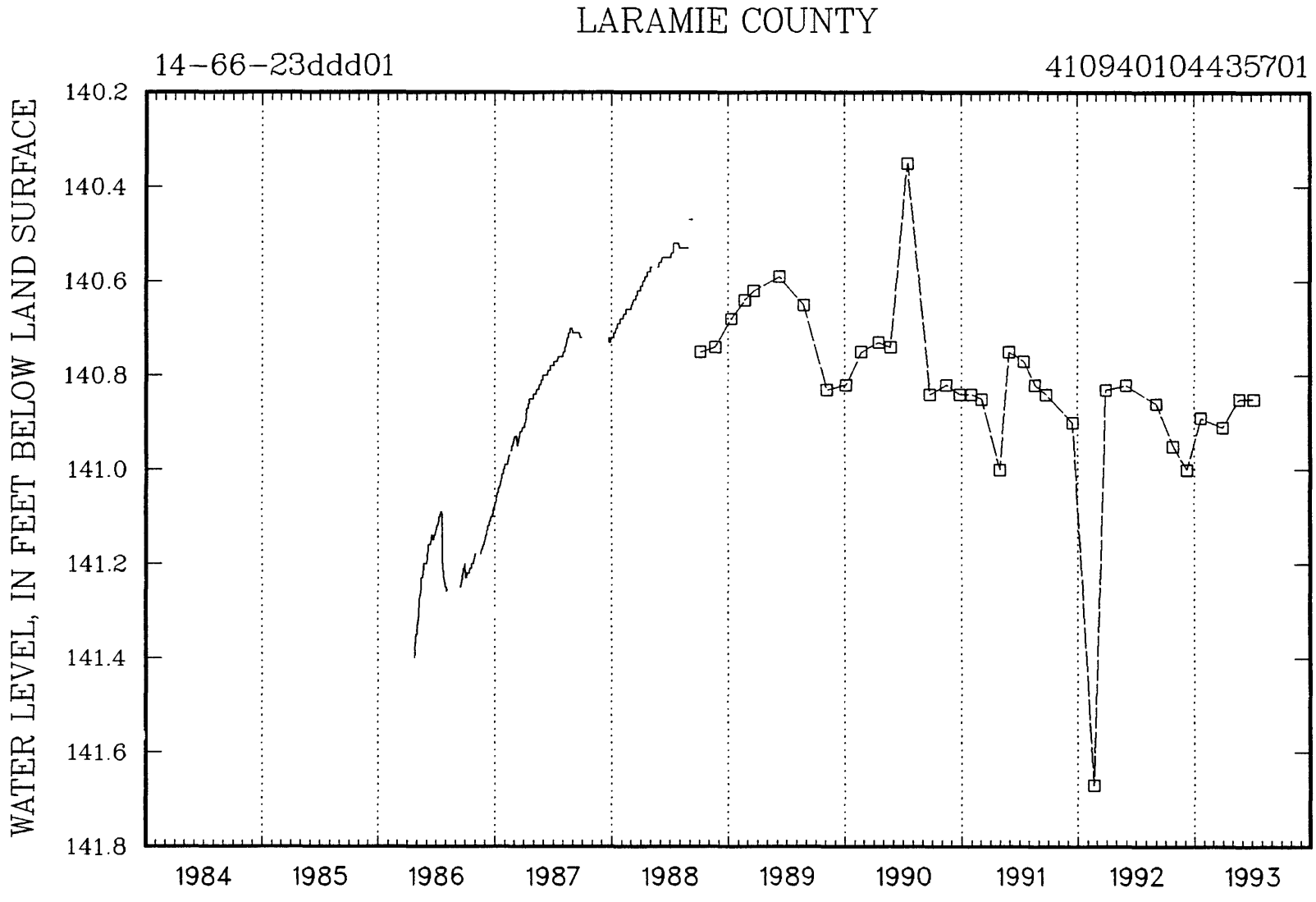

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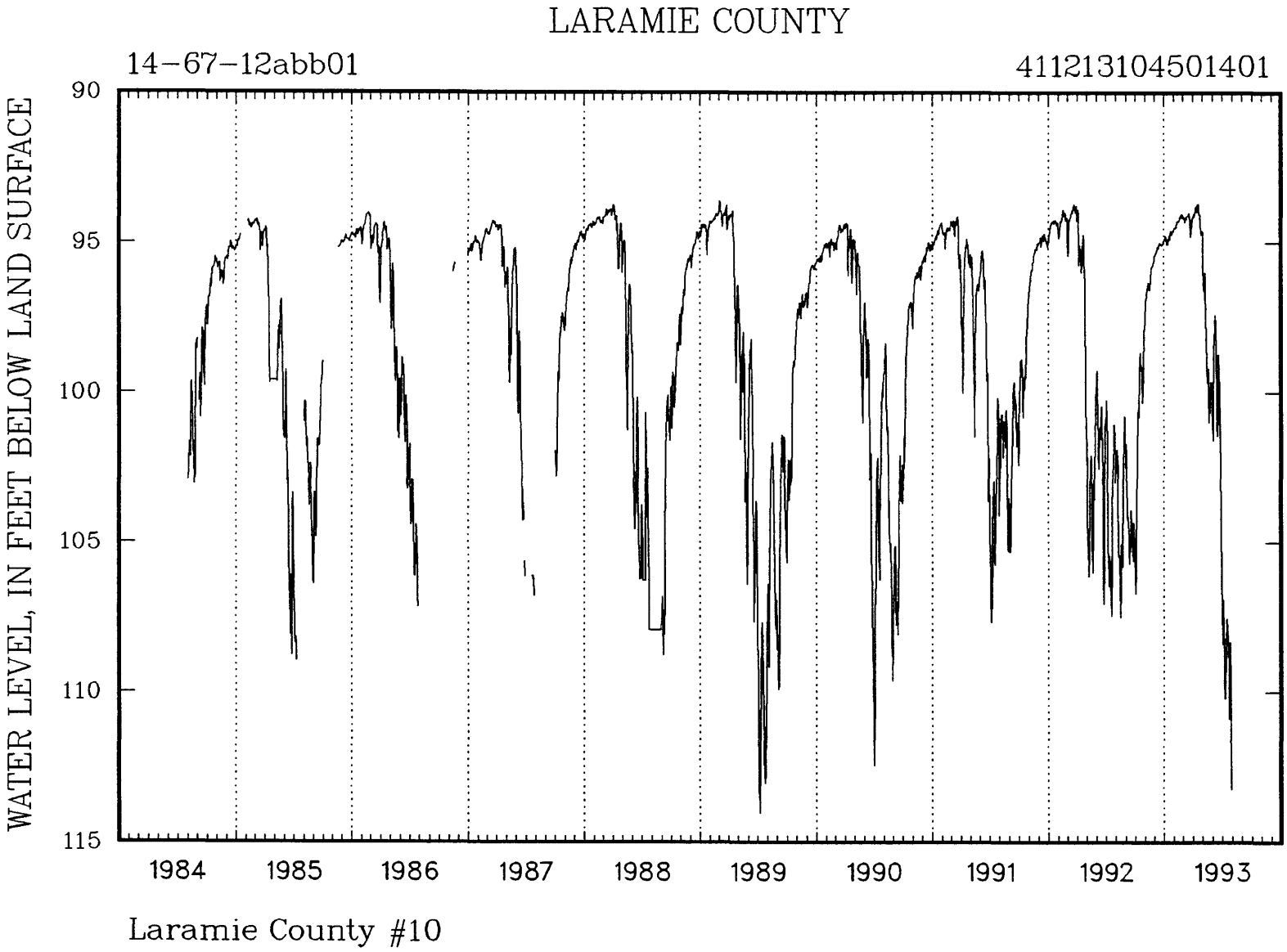

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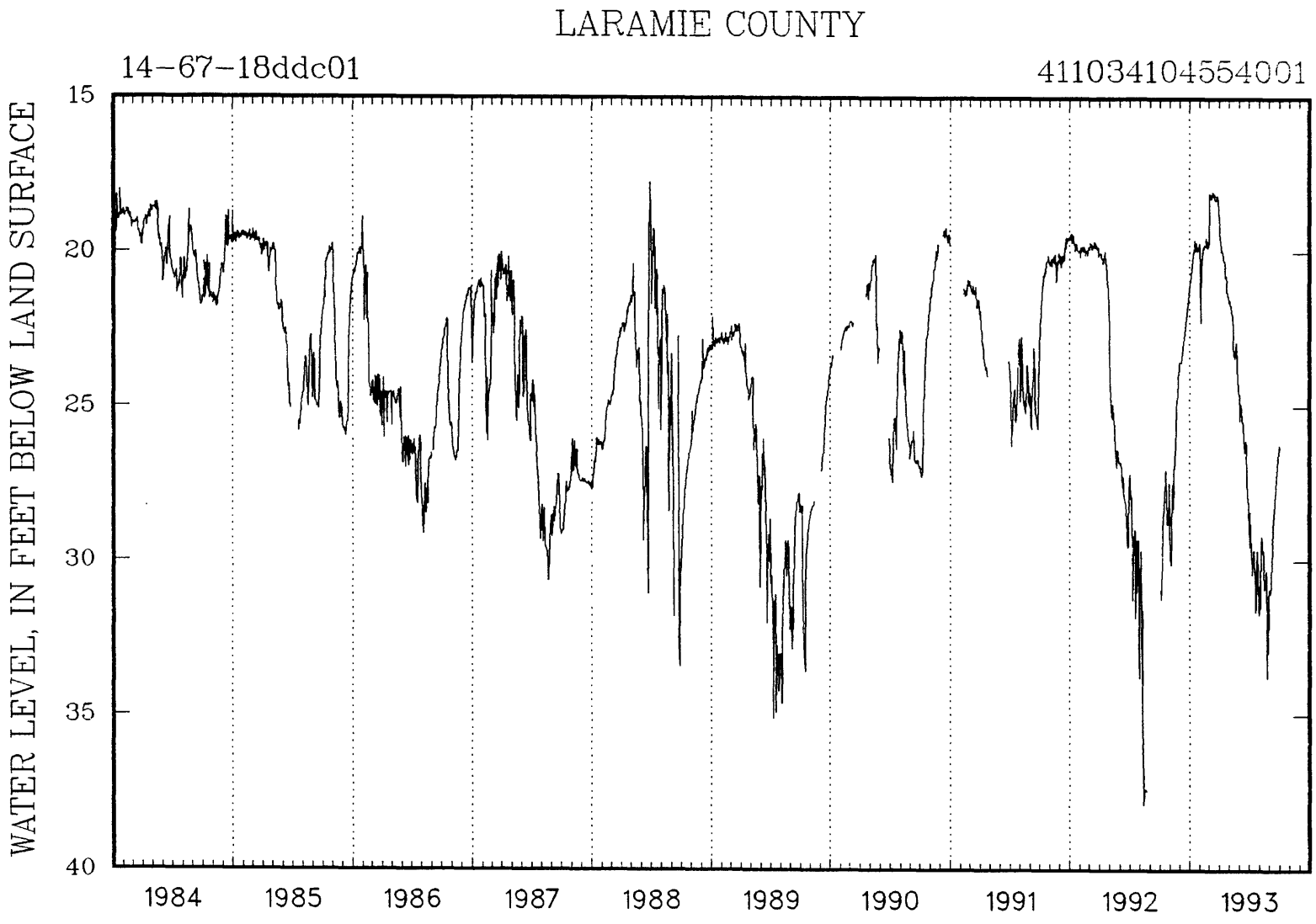
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WATER LEVEL, IN FEET BELOW LAND SURFACE
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20
25
30
35
40
1984
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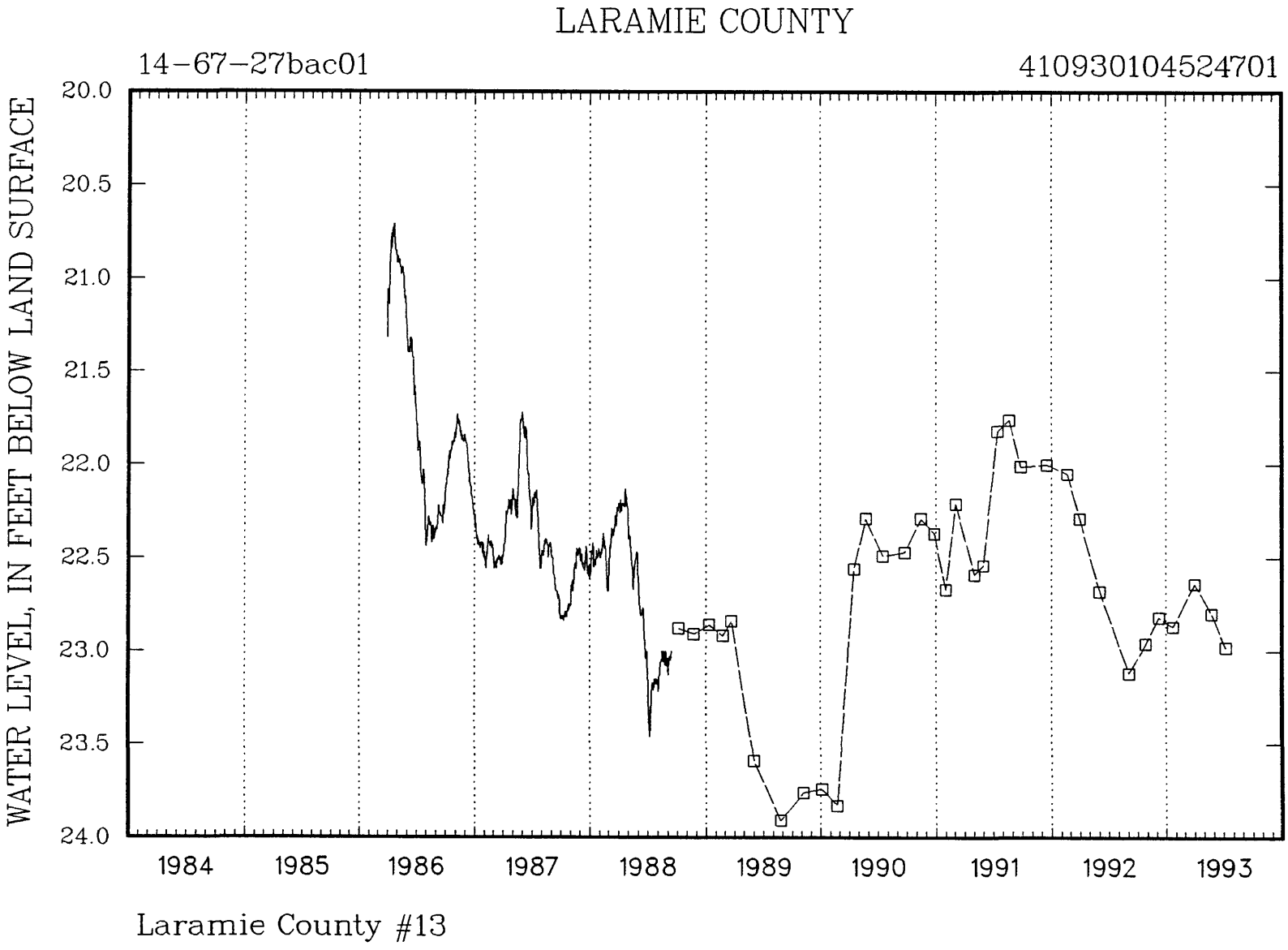
1987
1988
1989
1990
1991
1992
1993
Bell #14


LARAMIE COUNTY
14-67-27bac01
410930104524701
WATER LEVEL, IN FEET BELOW LAND SURFACE
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21.0
21.5
22.0
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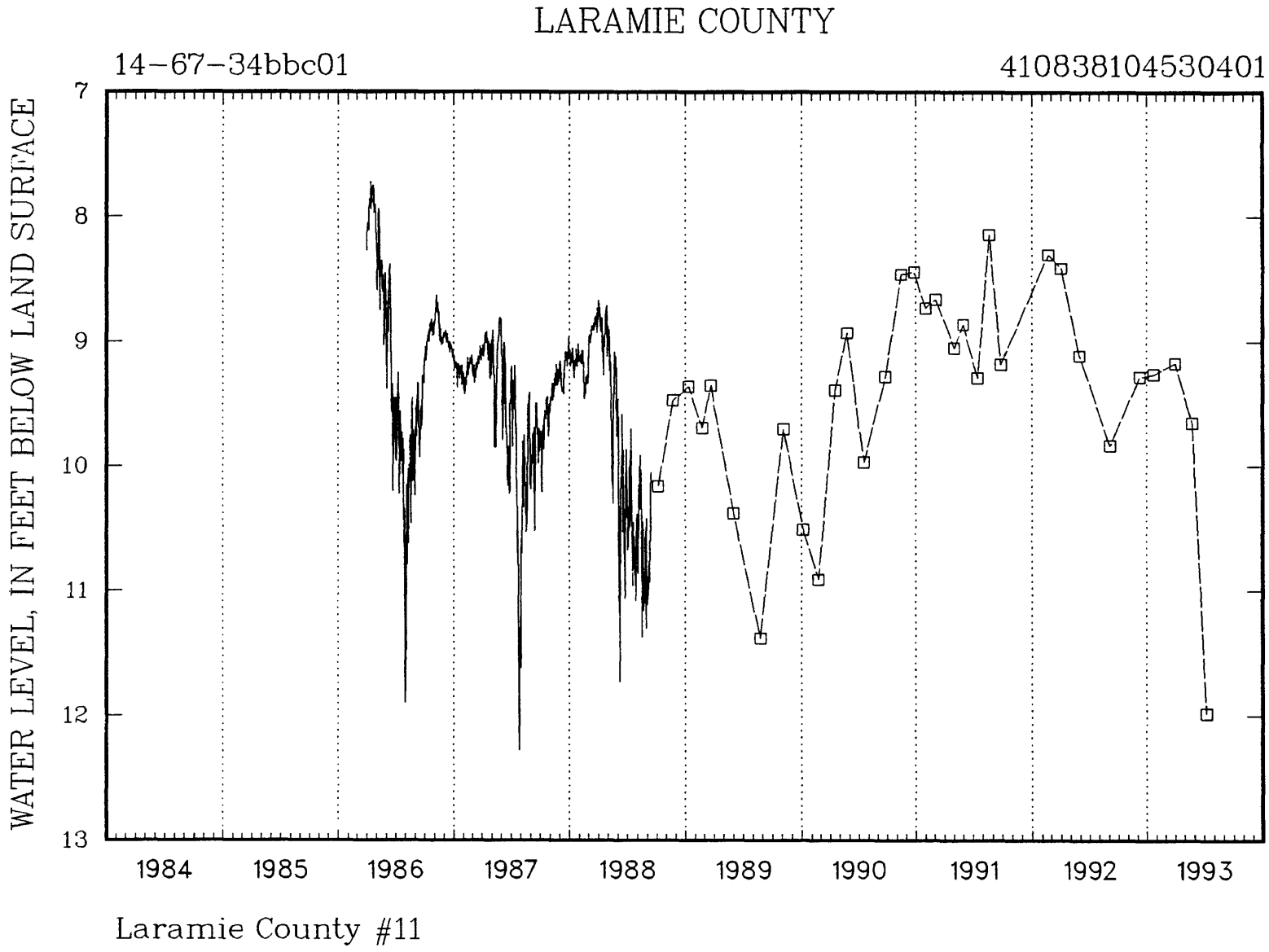
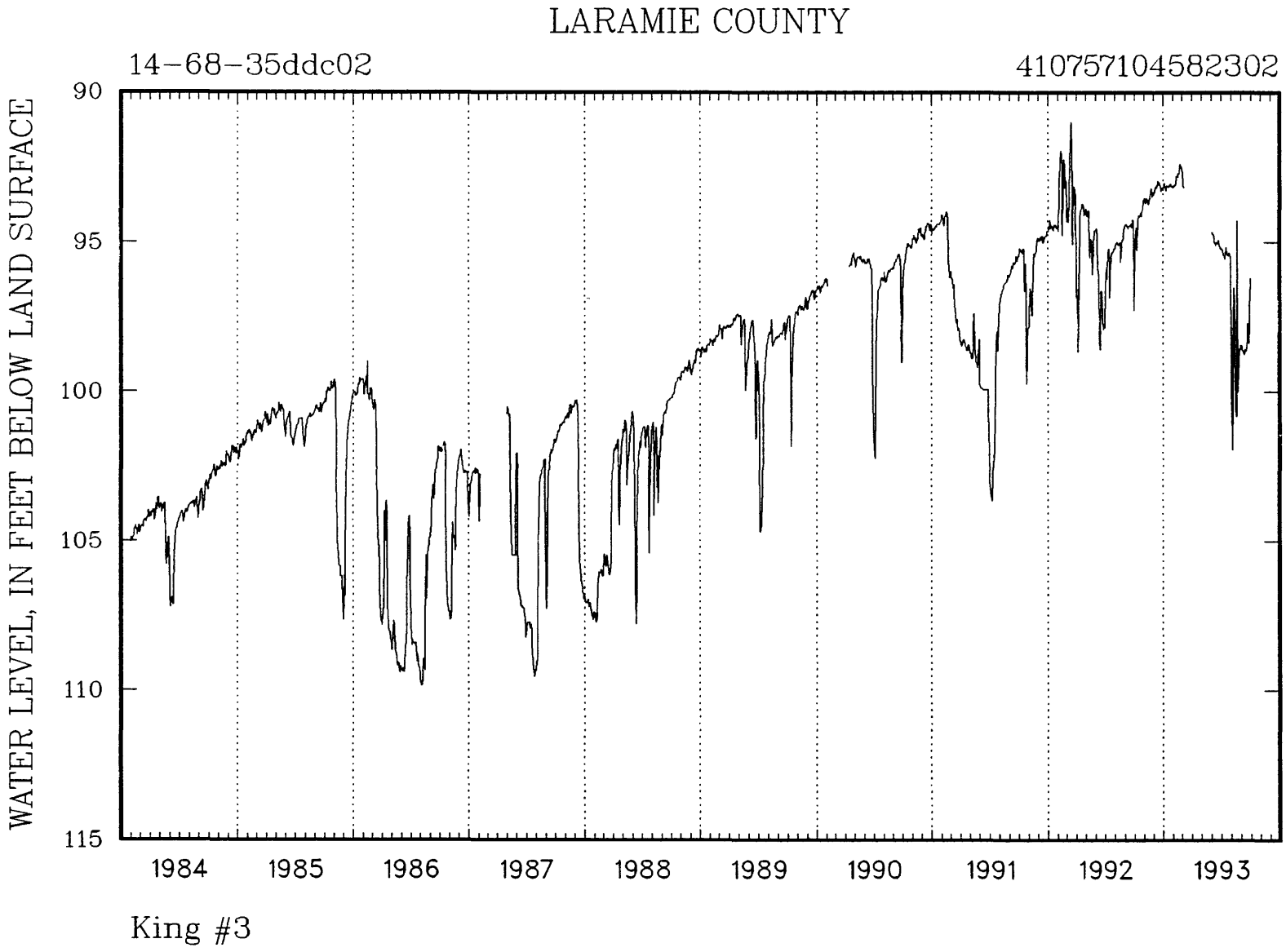
23.5
24.0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Laramie County #13



Laramie County #11


LARAMIE COUNTY
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WATER LEVEL, IN FEET BELOW LAND SURFACE
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95
100
105
110
115
1984
1985
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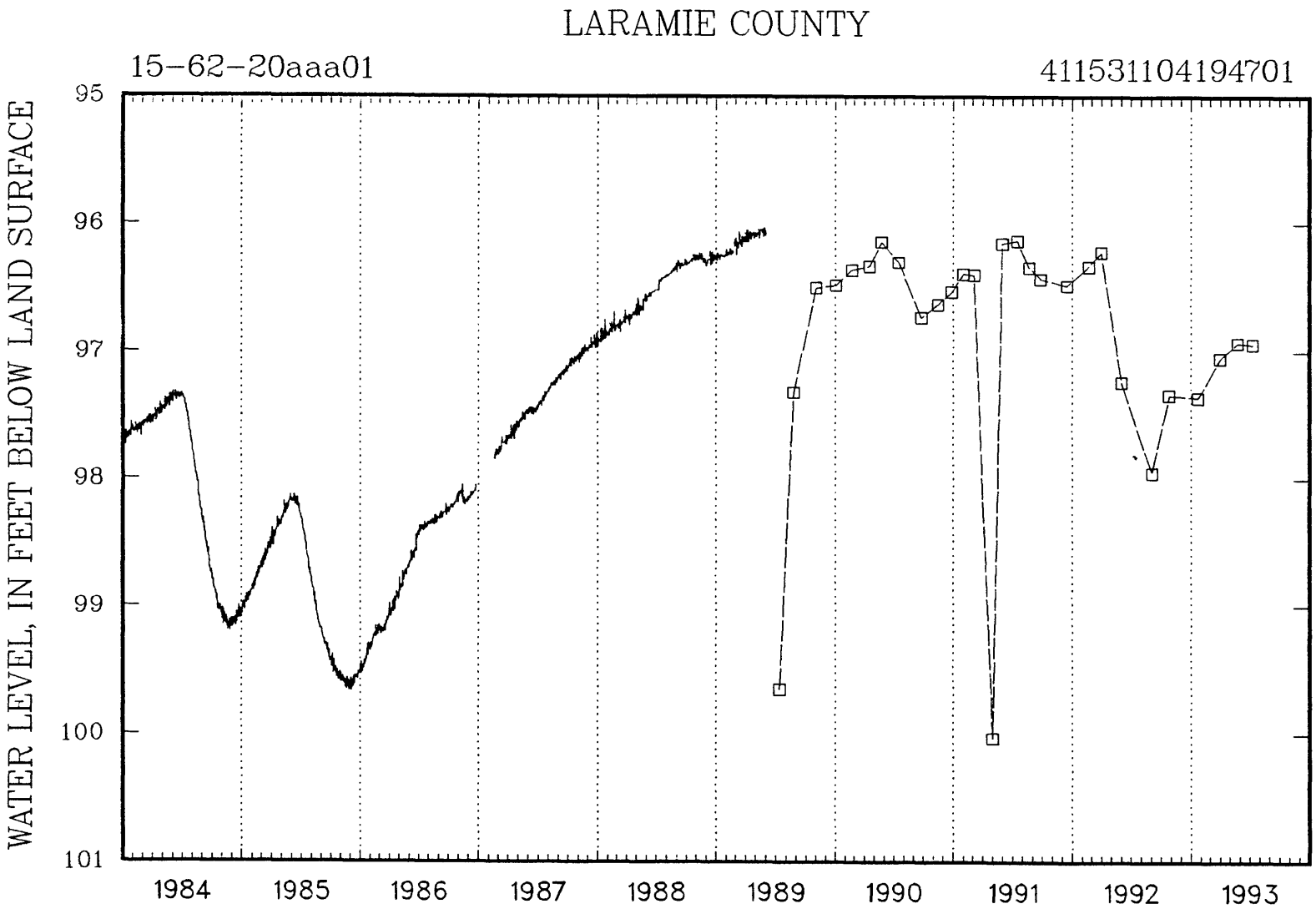
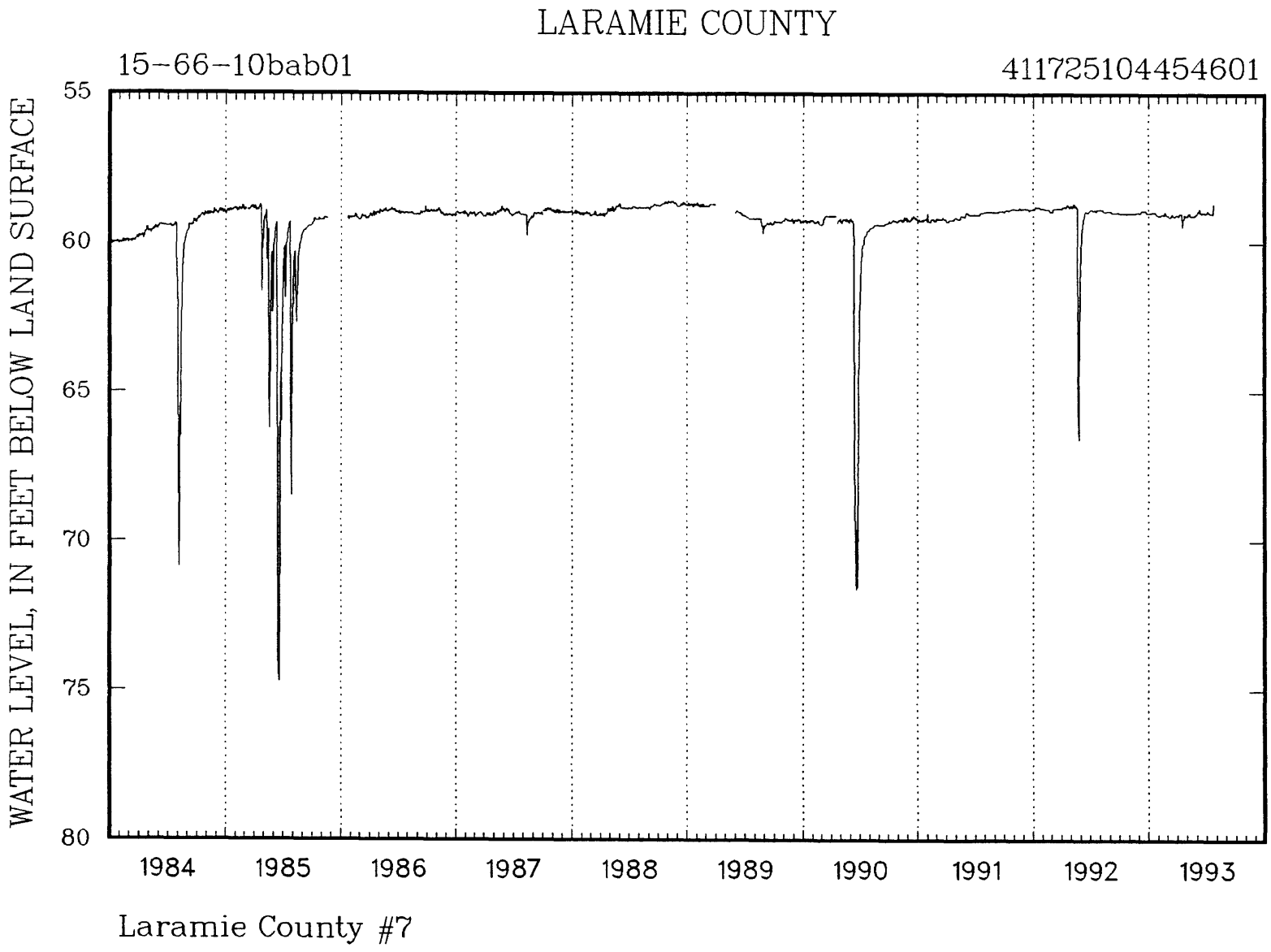
1988
1989
1990
1991
1992
1993
King #3



Laramie County #4


LARAMIE COUNTY
15-66-10bab01
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WATER LEVEL, IN FEET BELOW LAND SURFACE
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60
65
70
75
80
1984
1985
1986
1987
1988
1989
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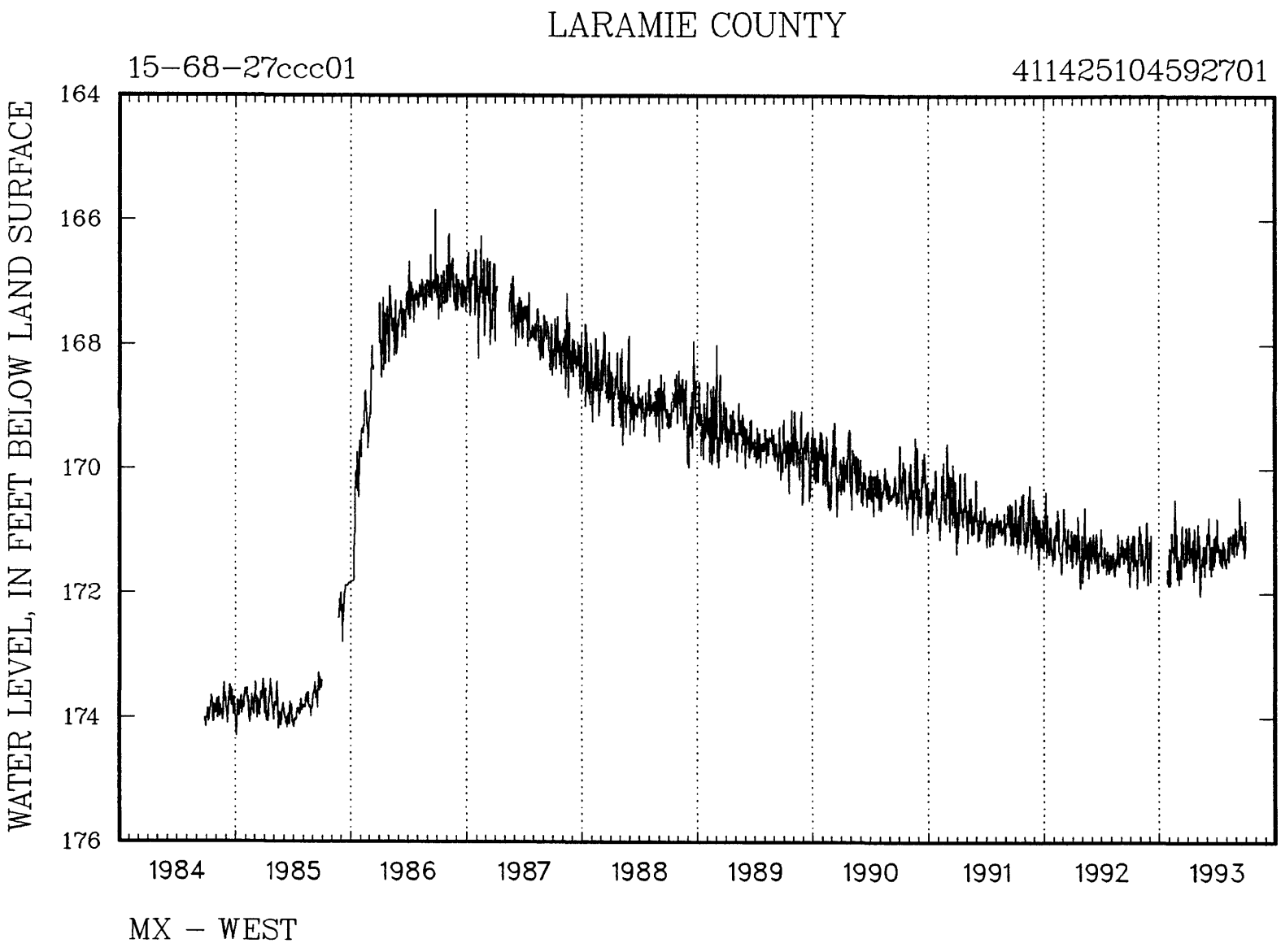
1991
1992
1993
Laramie County #7


LARAMIE COUNTY
15-68-27ccc01
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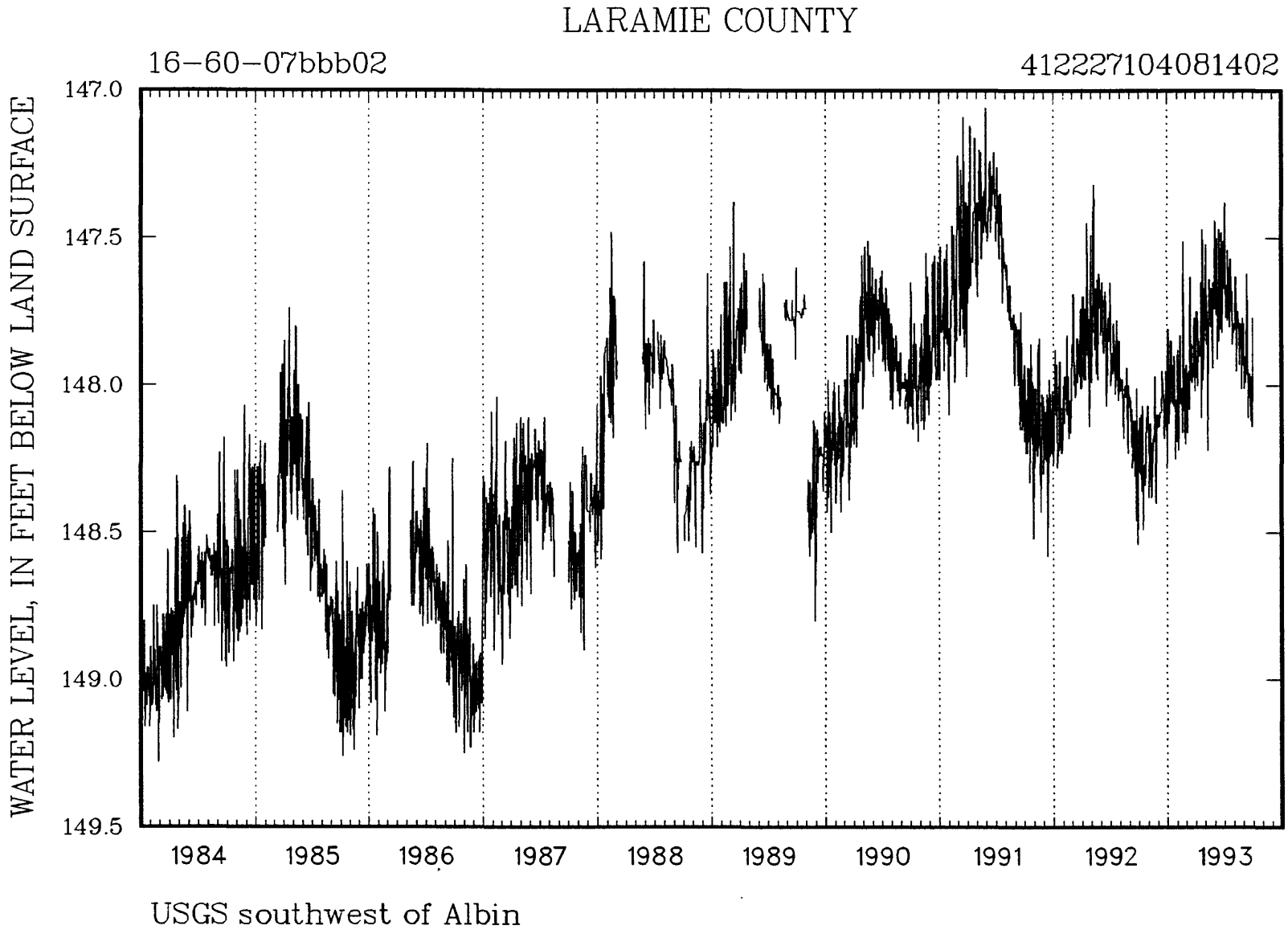
WATER LEVEL, IN FEET BELOW LAND SURFACE
164
166
168
170
172
174
176
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
MX - WEST


LARAMIE COUNTY
16-60-07bbb02
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WATER LEVEL, IN FEET BELOW LAND SURFACE
147.0
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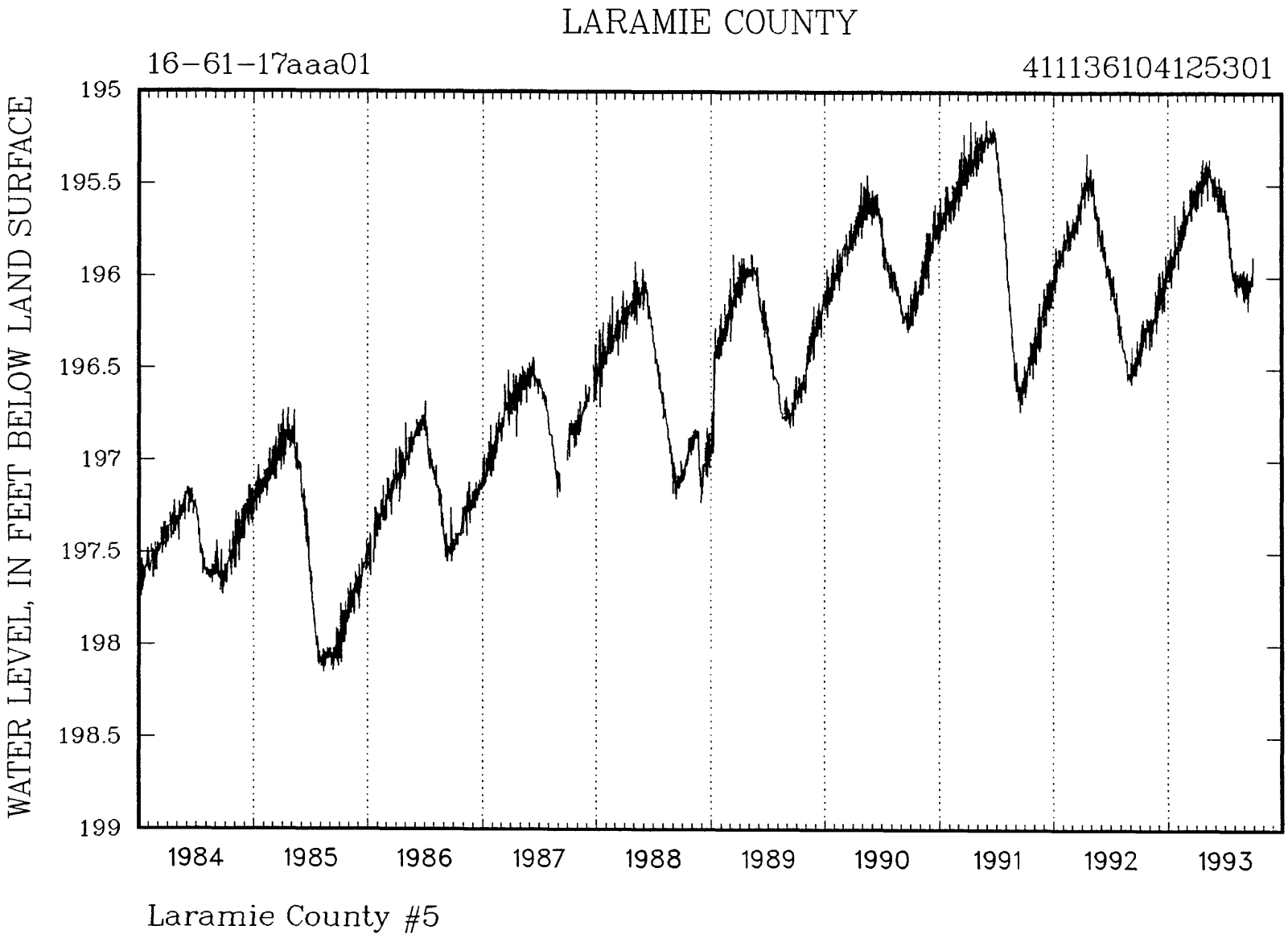
149.0
149.5
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
USGS southwest of Albin


LARAMIE COUNTY
16-61-17aaa01
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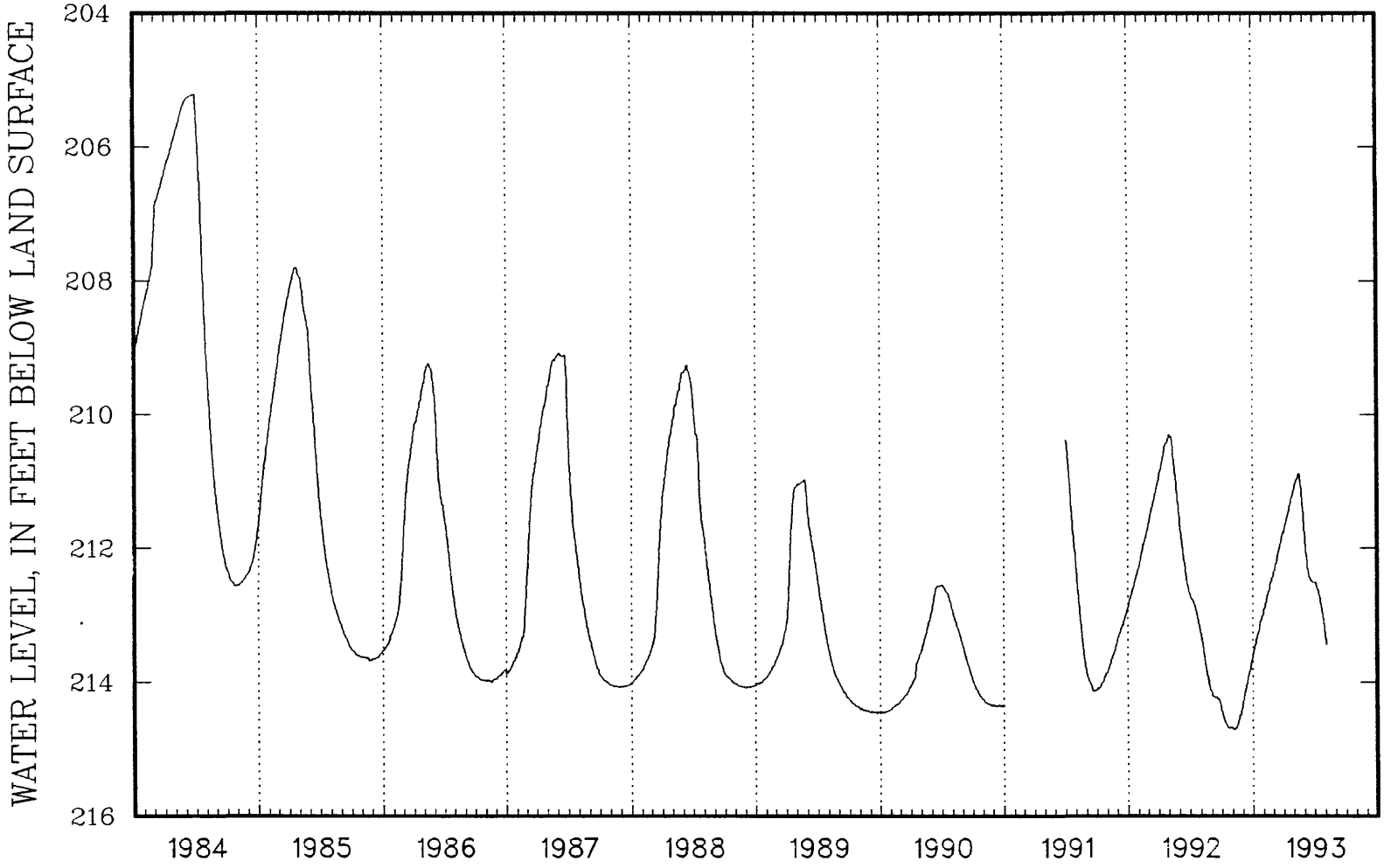
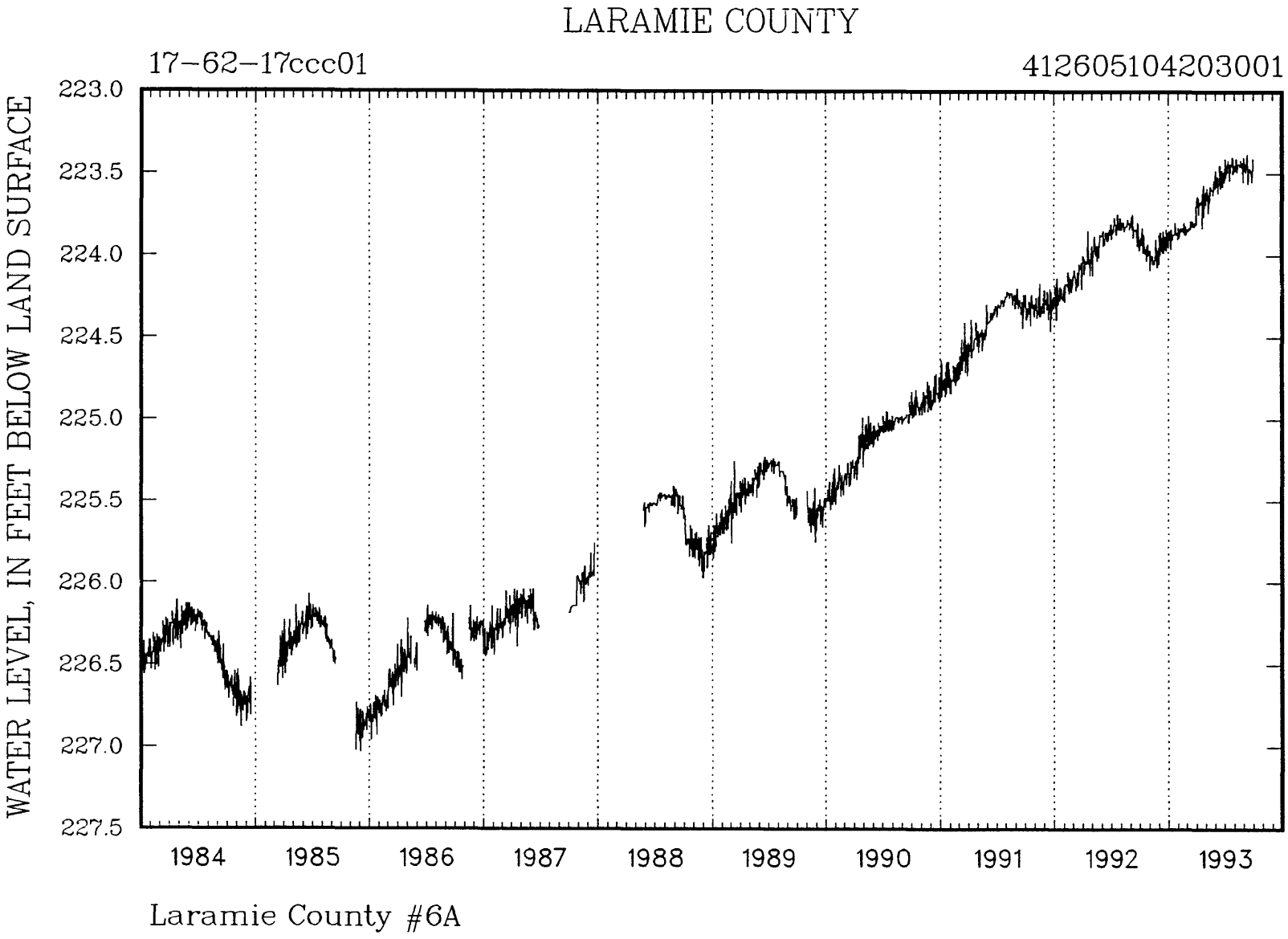
WATER LEVEL, IN FEET BELOW LAND SURFACE
195
195.5
196
196.5
197
197.5
198
198.5
199
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Laramie County #5

LARAMIE COUNTY

17-60-33cbb01 412343104053101



USGS south of Albin
Well flushed in March 1991 to improve connection between aquifer and well.


LARAMIE COUNTY
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WATER LEVEL, IN FEET BELOW LAND SURFACE
223.0
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224.0
224.5
225.0
225.5
226.0
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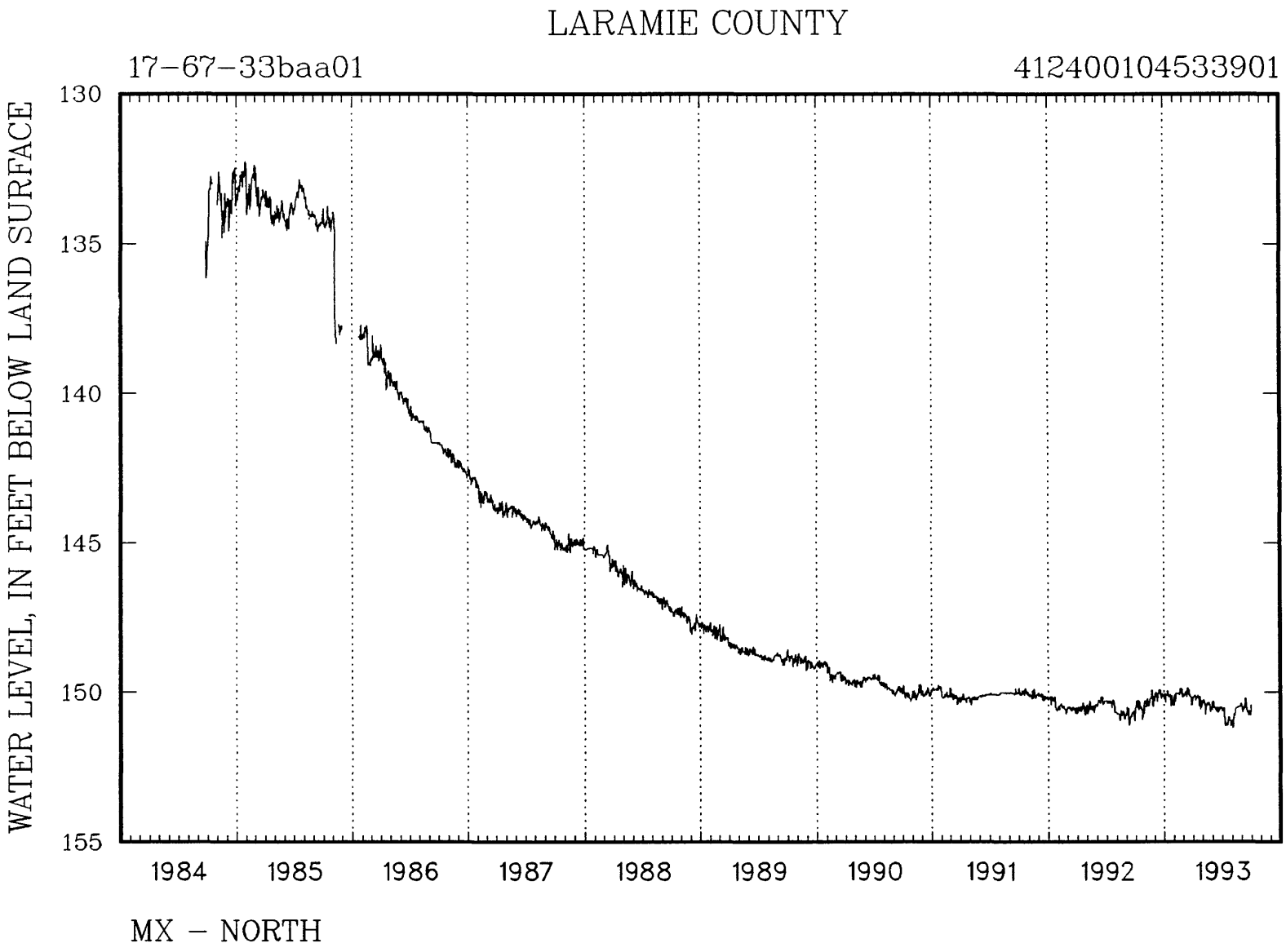
227.0
227.5
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Laramie County #6A


LARAMIE COUNTY
17-67-33baa01
412400104533901
WATER LEVEL, IN FEET BELOW LAND SURFACE
130
135
140
145
150
155
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
MX - NORTH

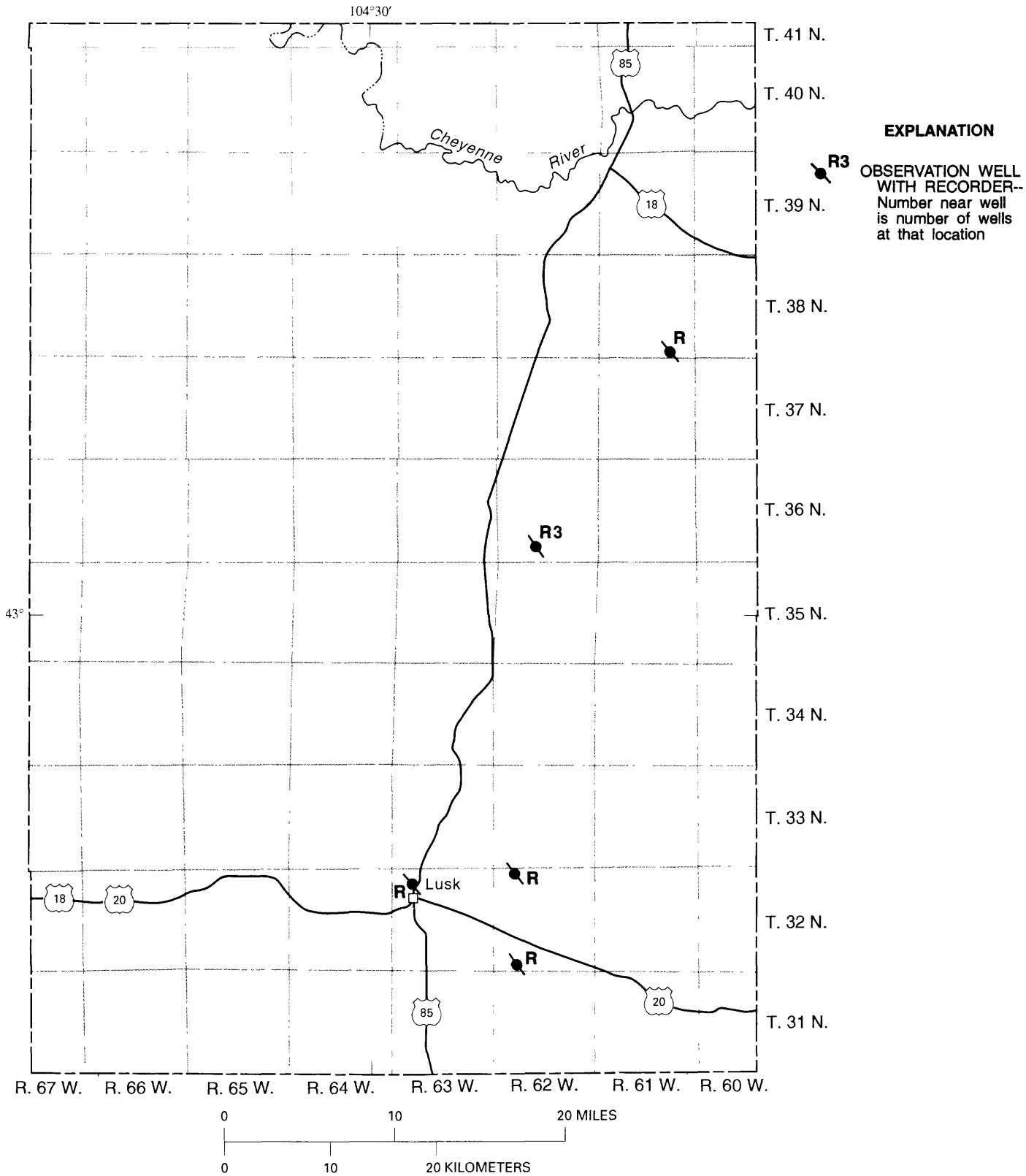
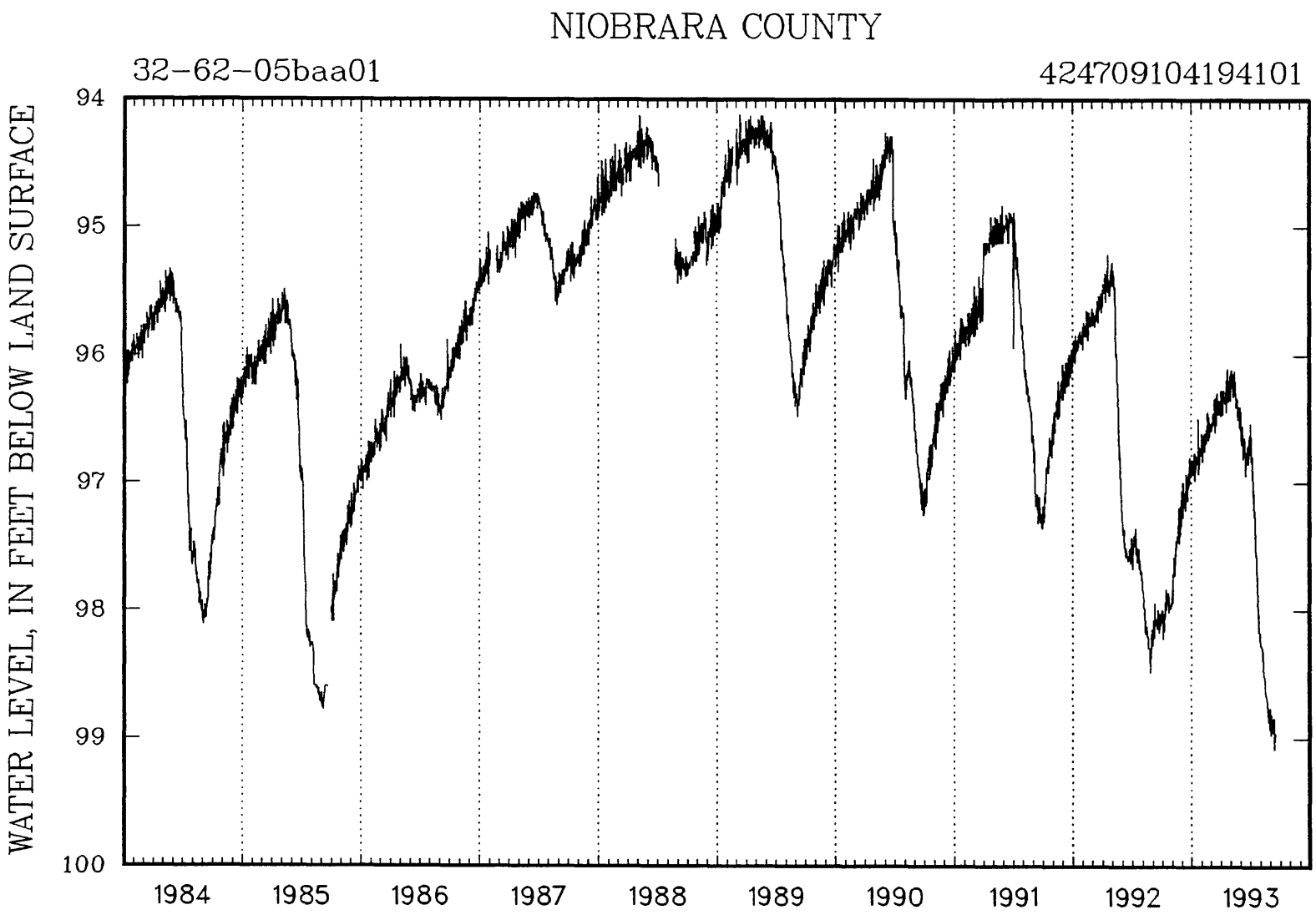


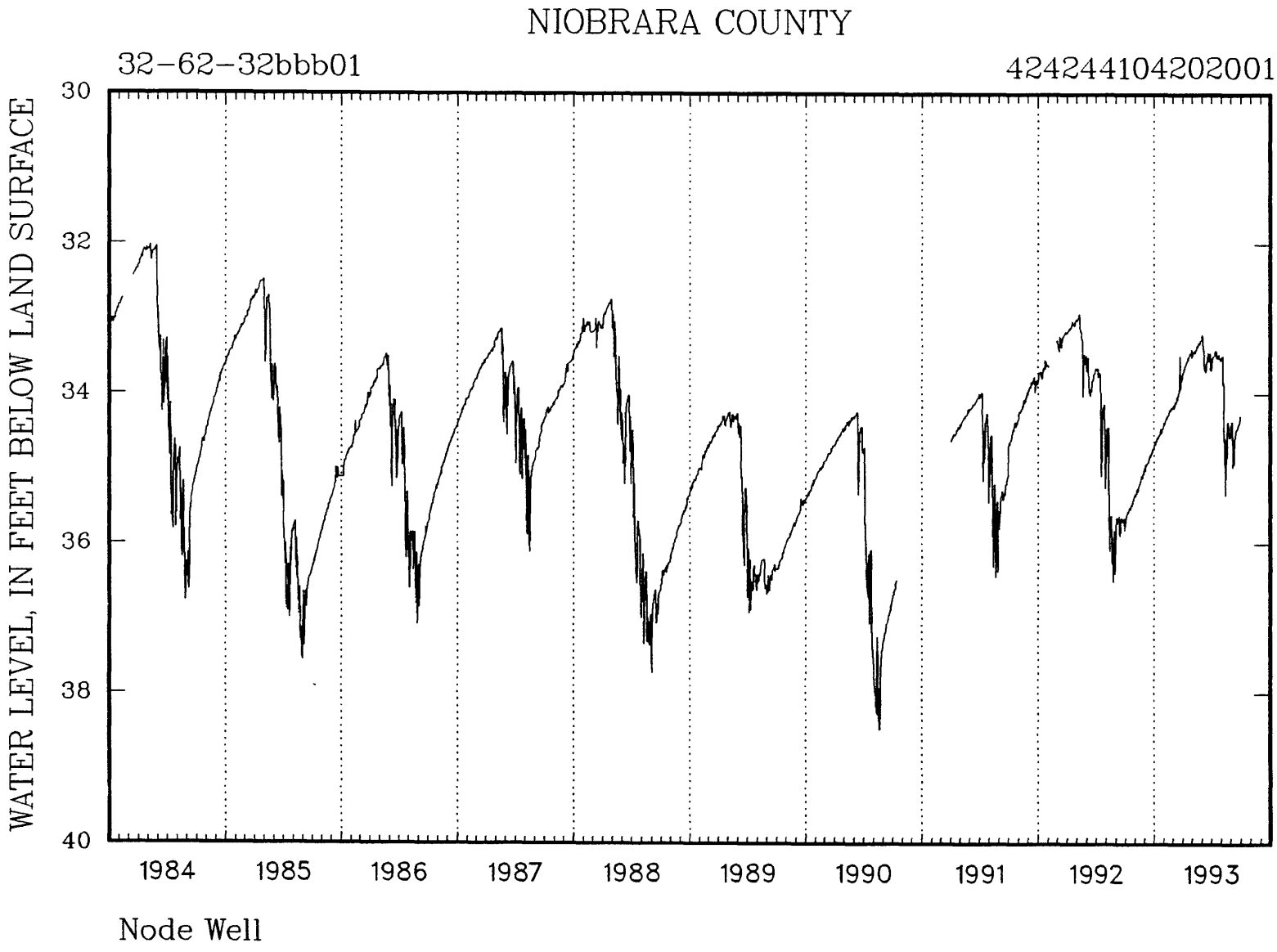
Figure 12.--Location of observation wells in Niobrara County, Wyoming.

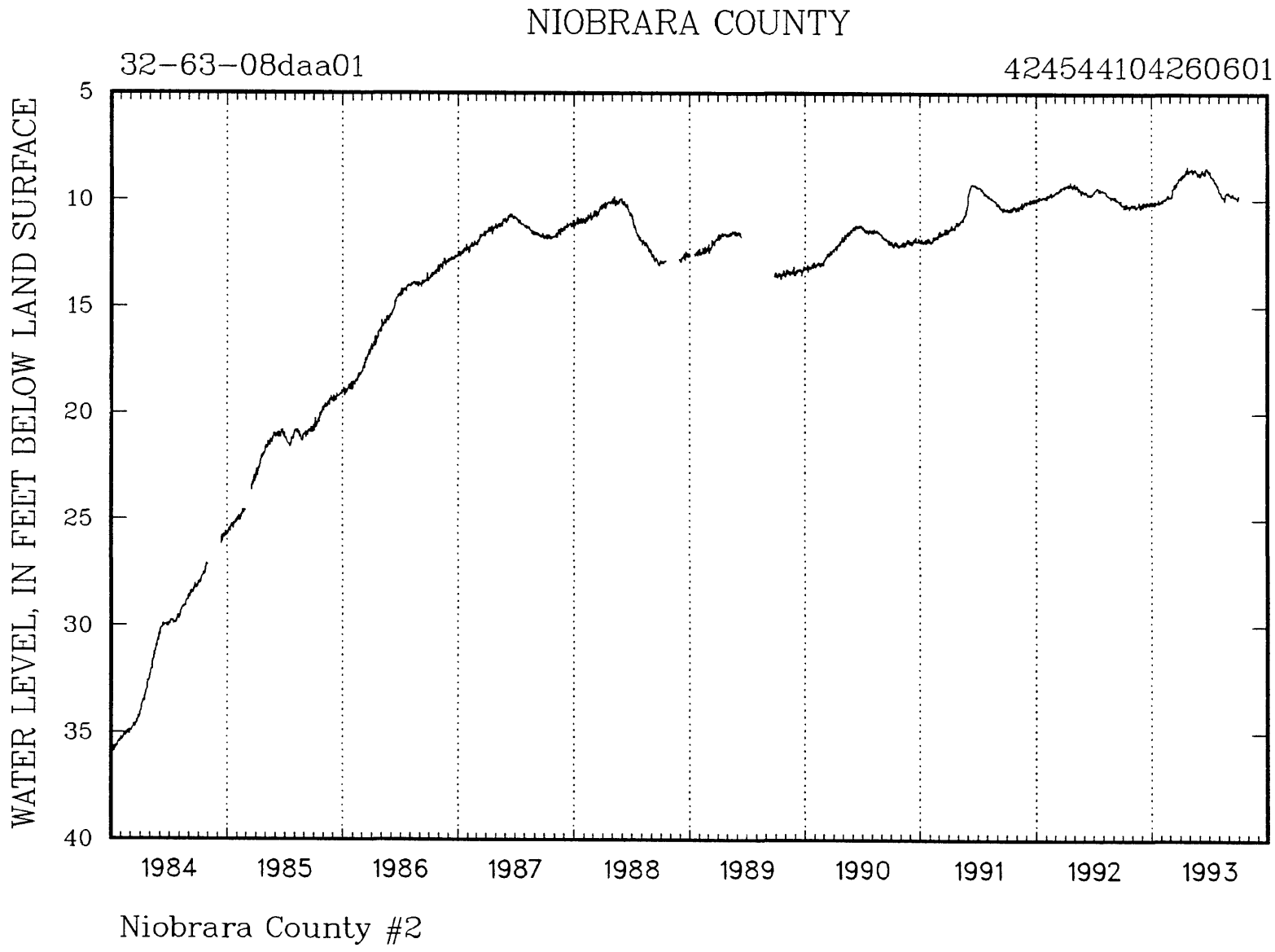
Records of observation wells in Niobrara County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

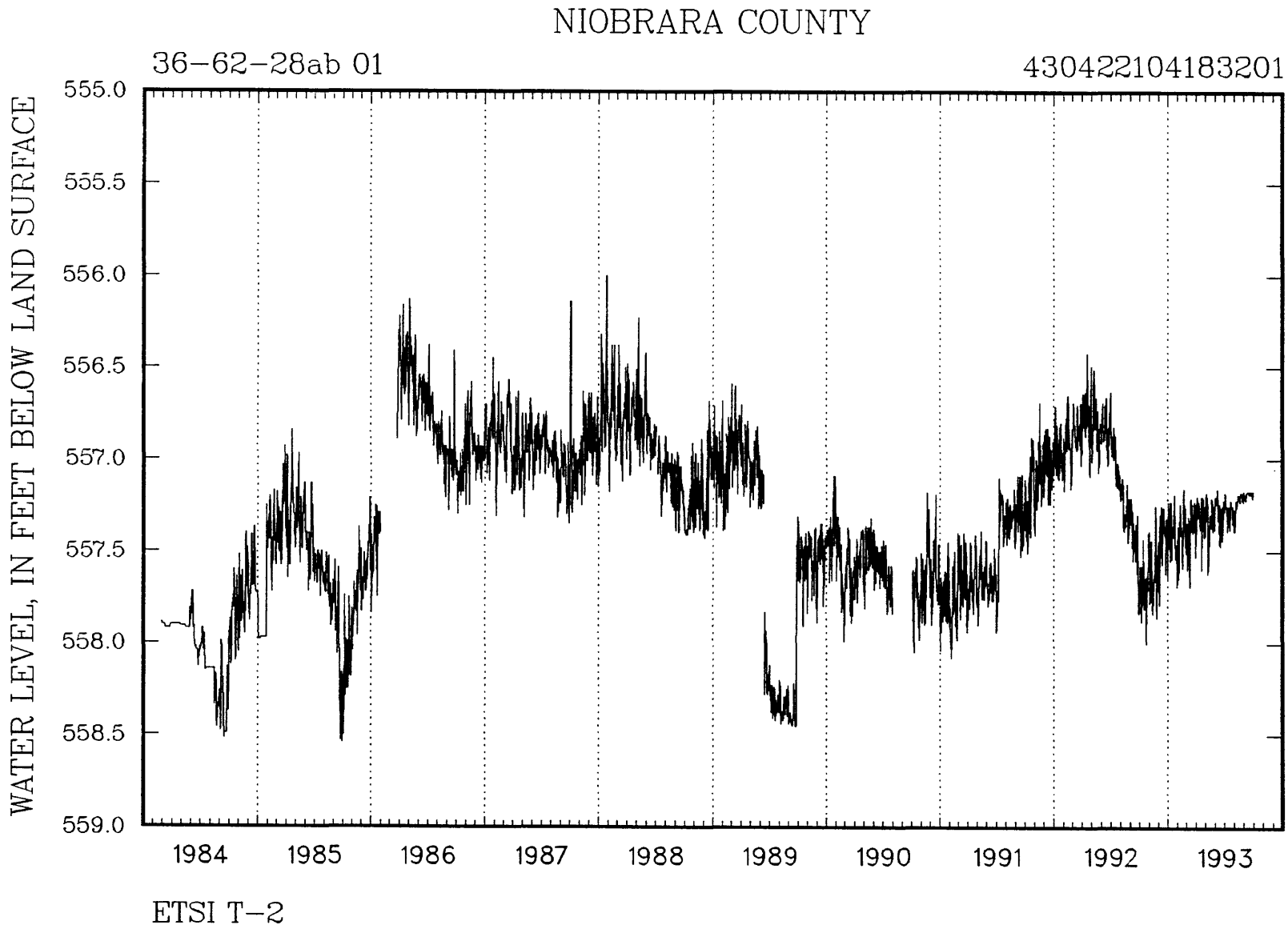
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
32-62-05baa01	177	U	122ARKR	1979-93	92.26	06-80	99.08	09-93
32-62-32bbb01	485	U	122ARKR	1970-93	20.93	06-70	38.48	08-90
32-63-08daa01	178	U	122ARKR	1979-93	8.41	04-93	48.96	09-82
36-62-28ab 01	3,269	U	331MDSN	1974-93	[1]549.00	05-74	558.54	09-85
36-62-28ab 02	505	U	217LKOT	1974-93	[1]233.87	08-74	256.24	02-92, 03-92, 04-92
36-62-28bbd01	1,513	U	317MNLS	1980-93	552.00	09-86	554.67	09-89
38-61-35dca01	5,155	U	331MDSN	1983-93	700.62	09-93	716.05	10-83

[1] From hand-measured data.


NIOBRARA COUNTY
32-62-05baa01
424709104194101
WATER LEVEL, IN FEET BELOW LAND SURFACE
94
95
96
97
98
99
100
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Niobrara County #1


NIOBRARA COUNTY
32-62-32bbb01
424244104202001
WATER LEVEL, IN FEET BELOW LAND SURFACE
30
32
34
36
38
40
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Node Well


NIOBRARA COUNTY
32-63-08daa01
424544104260601
WATER LEVEL, IN FEET BELOW LAND SURFACE
5
10
15
20
25
30
35
40
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Niobrara County #2


NIOBRARA COUNTY
36-62-28ab 01
430422104183201
WATER LEVEL, IN FEET BELOW LAND SURFACE
555.0
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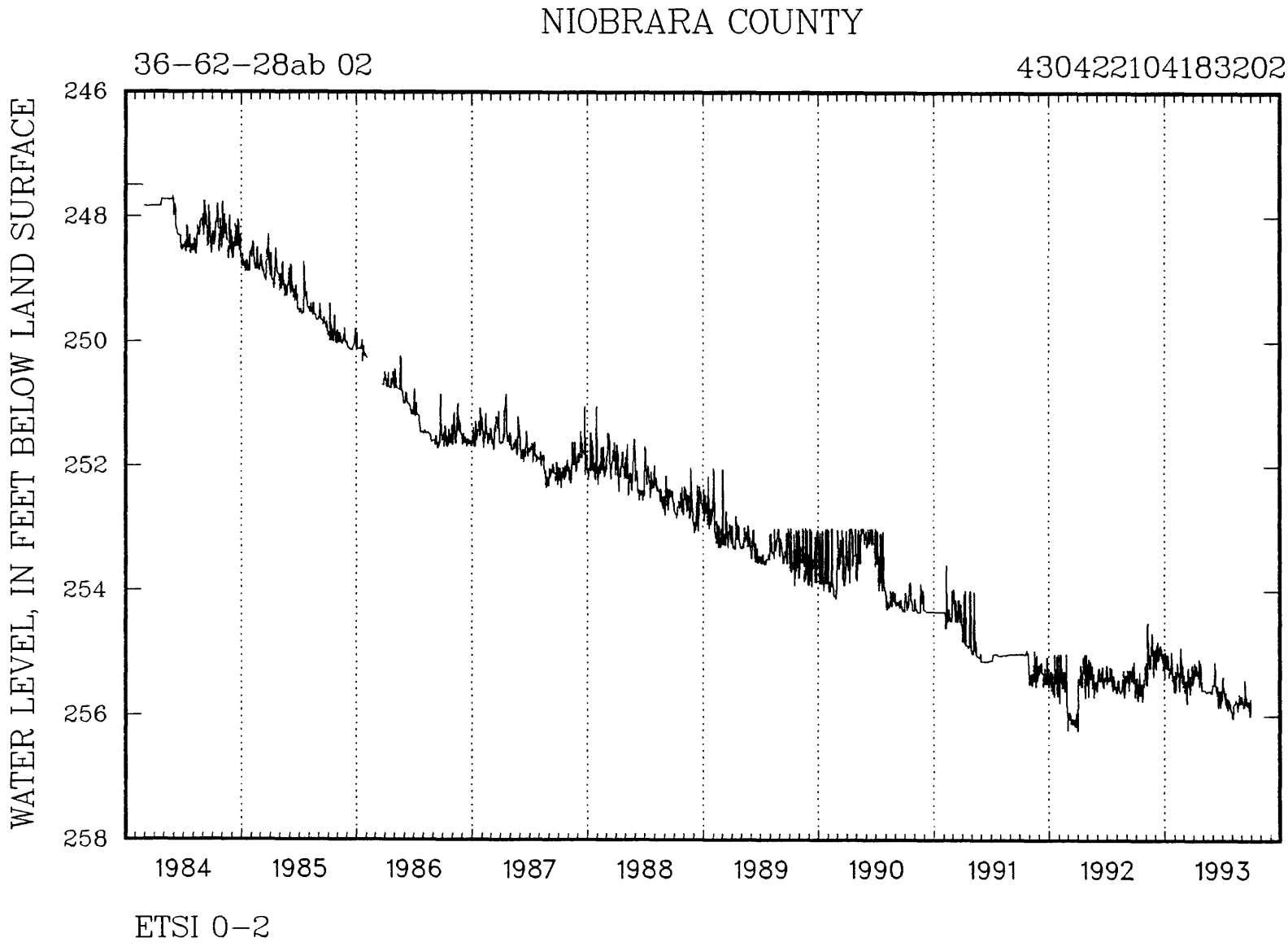
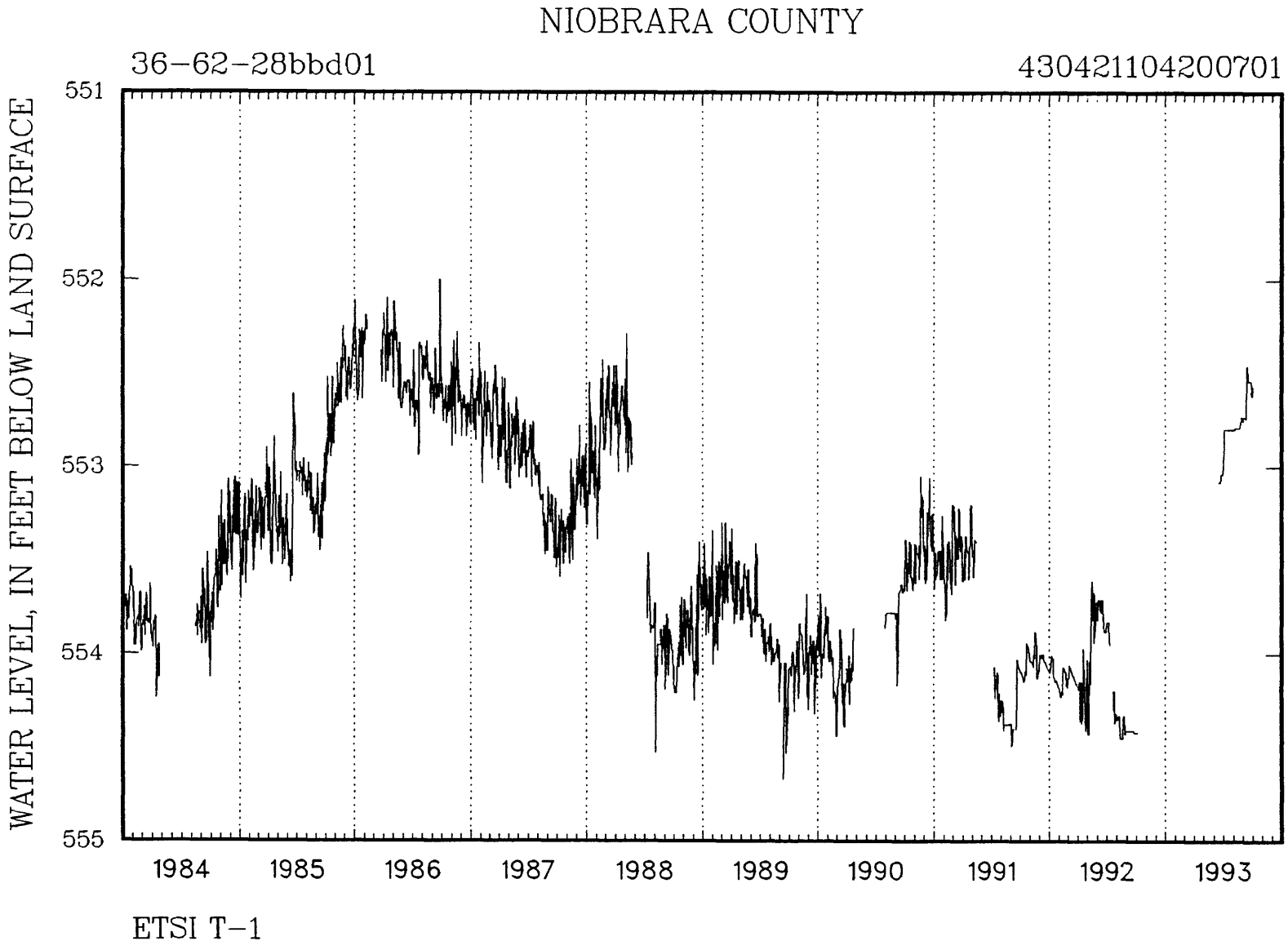
556.0
556.5
557.0
557.5
558.0
558.5
559.0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
ETSI T-2


NIOBRARA COUNTY
36-62-28ab 02
430422104183202
WATER LEVEL, IN FEET BELOW LAND SURFACE
246
248
250
252
254
256
258
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
ETSI 0-2


NIOBRARA COUNTY
36-62-28bbd01
430421104200701
WATER LEVEL, IN FEET BELOW LAND SURFACE
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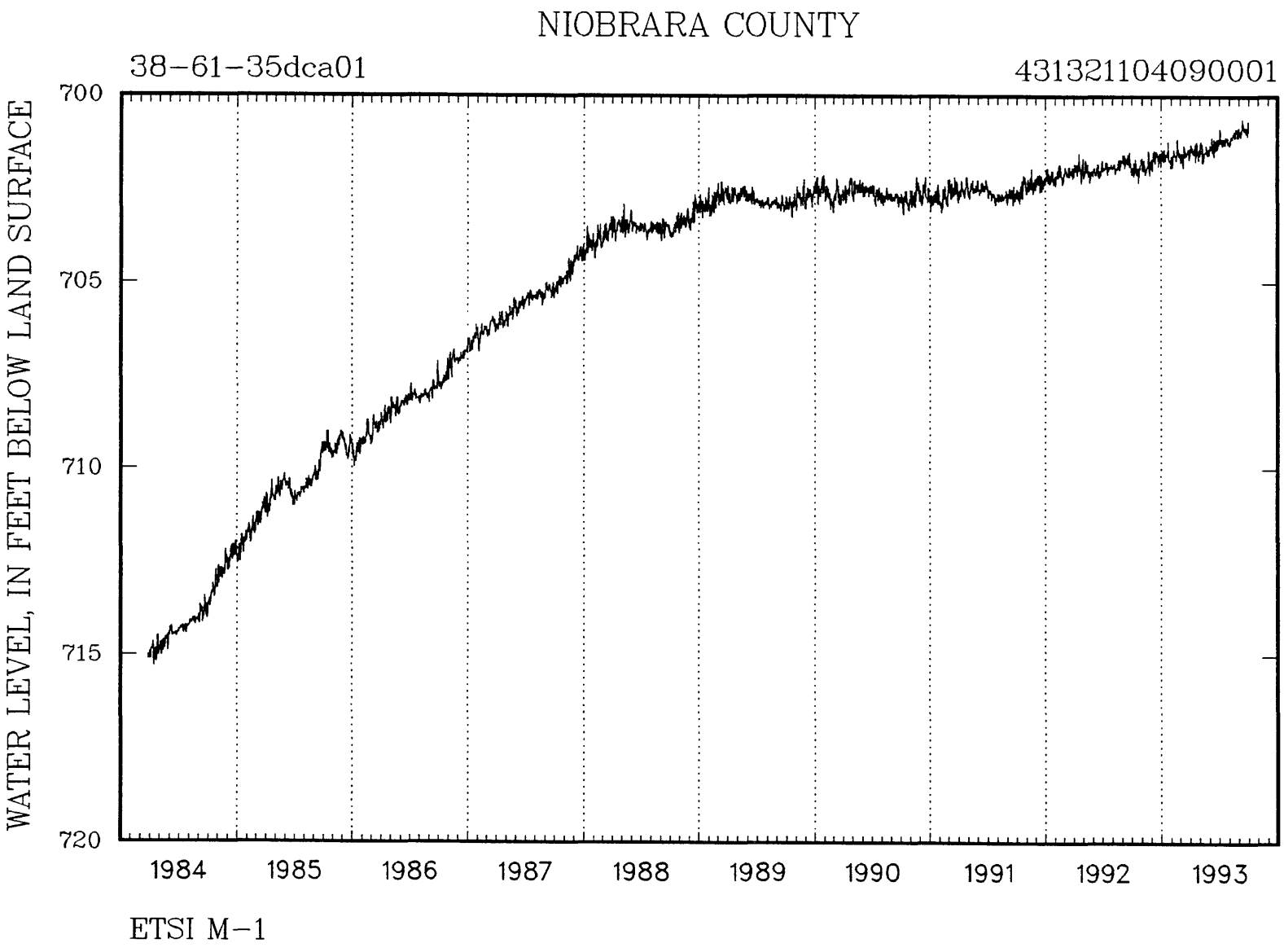
552
553
554
555
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
ETSI T-1


NIOBRARA COUNTY
38-61-35dca01
431321104090001
WATER LEVEL, IN FEET BELOW LAND SURFACE
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705
710
715
720
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
ETSI M-1

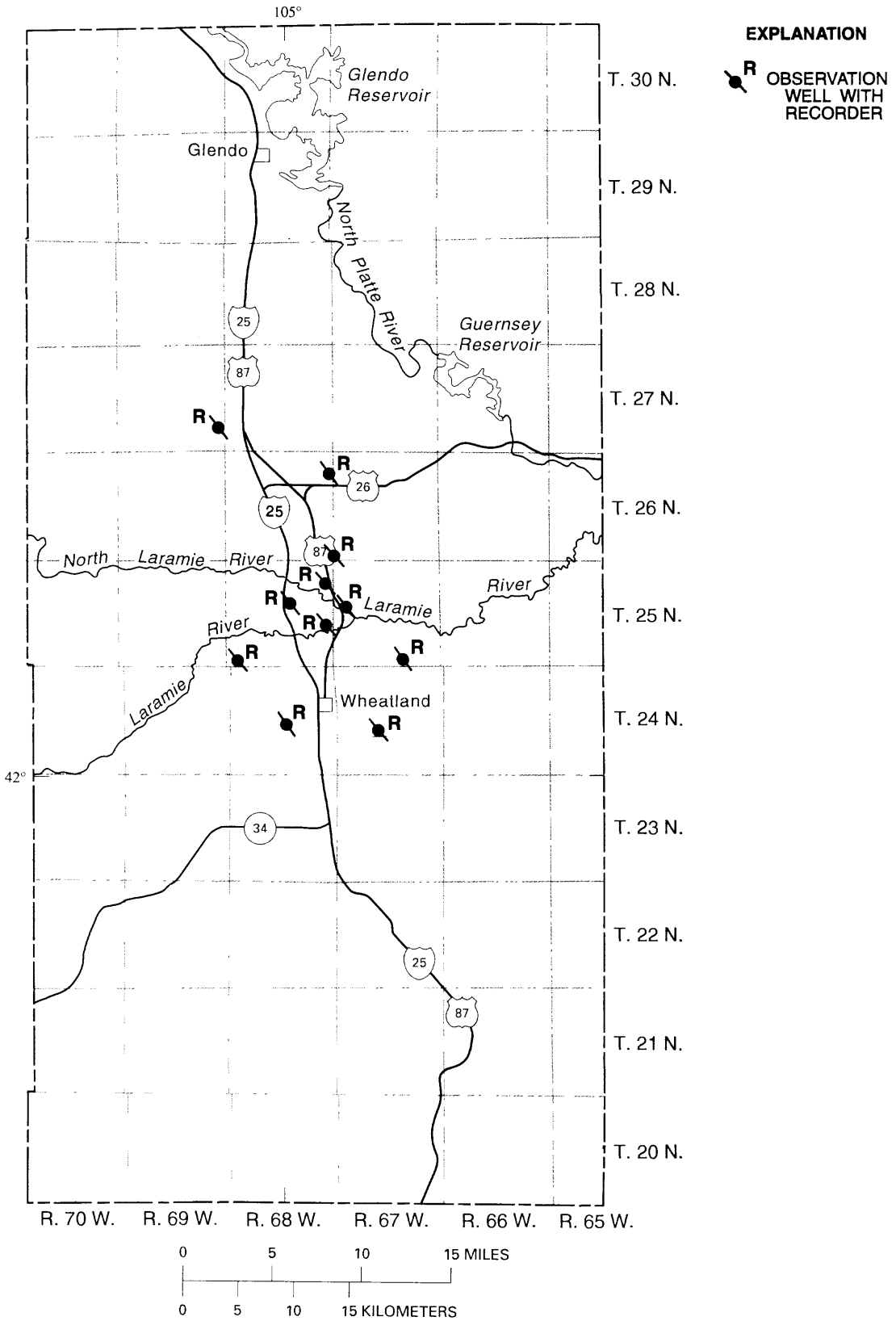
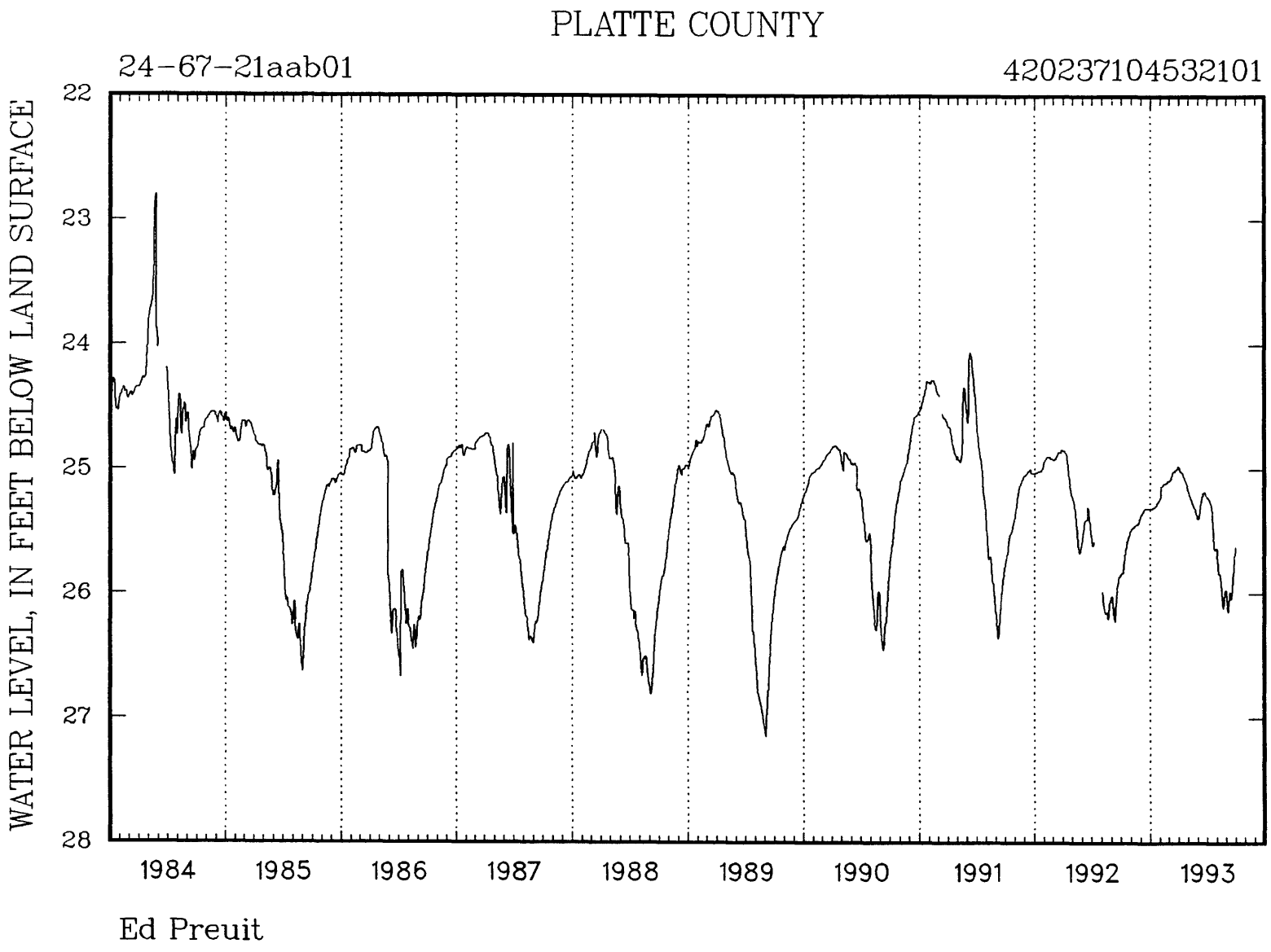


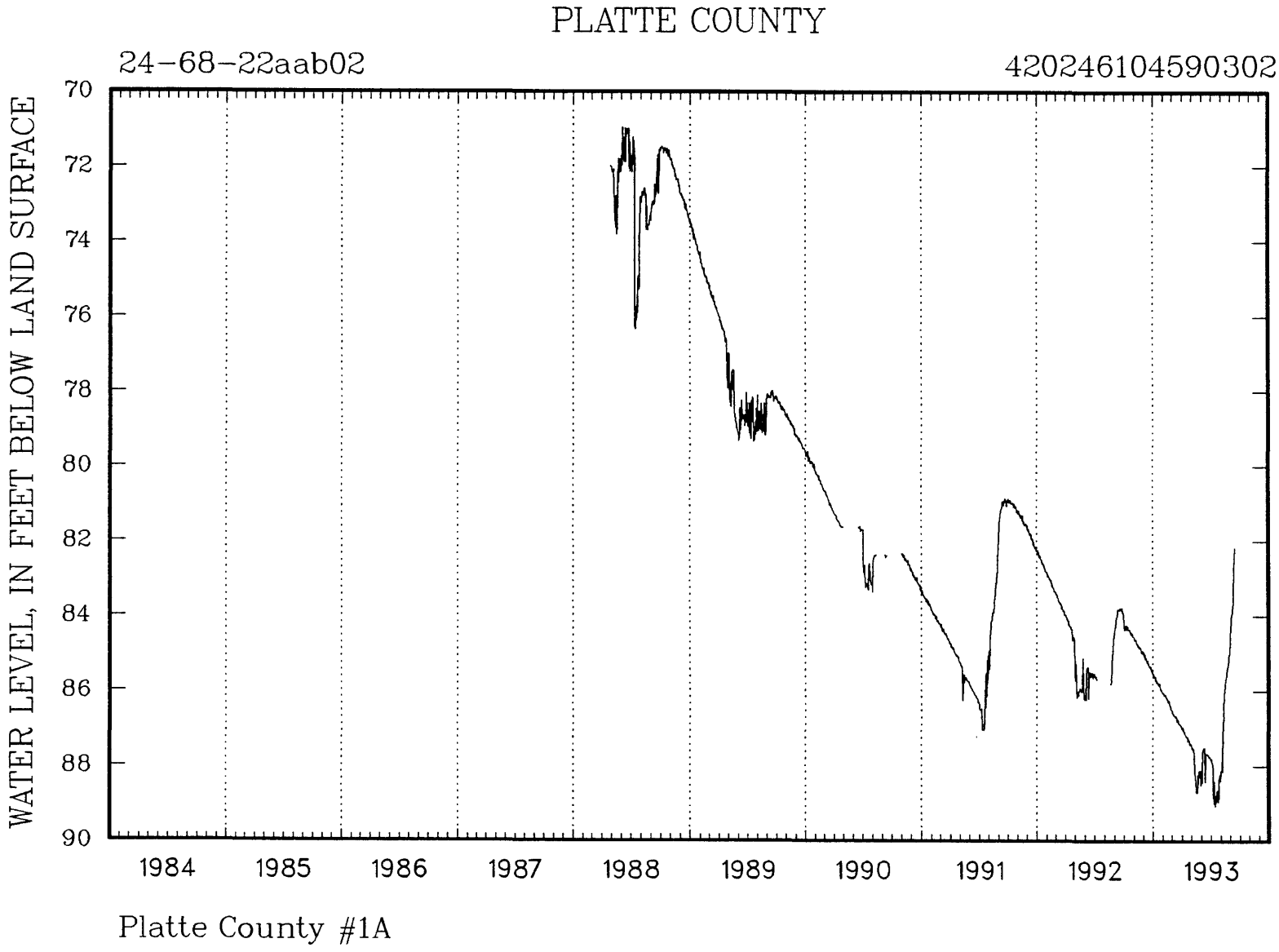
Figure 13.--Location of observation wells in Platte County, Wyoming.

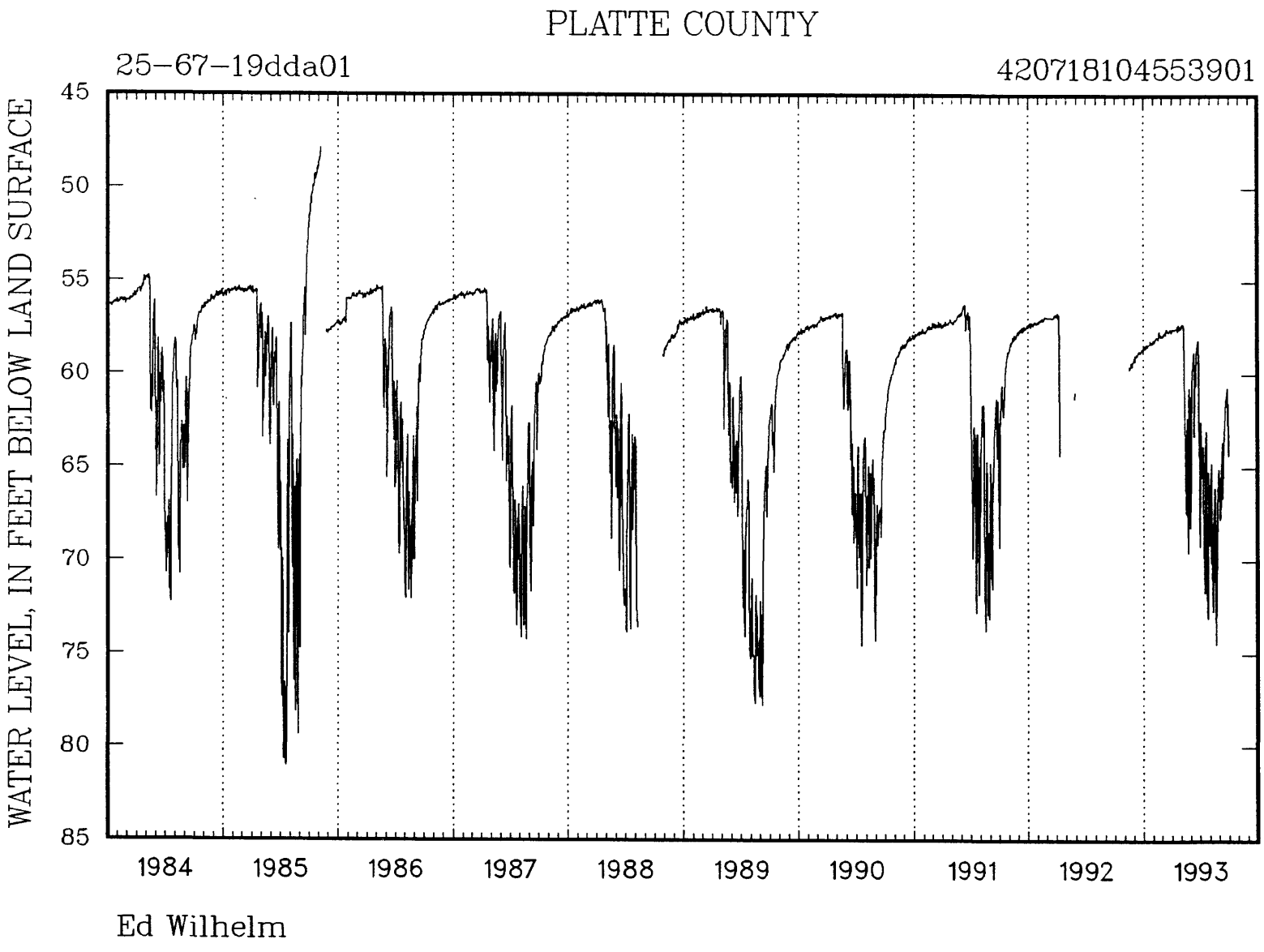
Records of observation wells in Platte County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

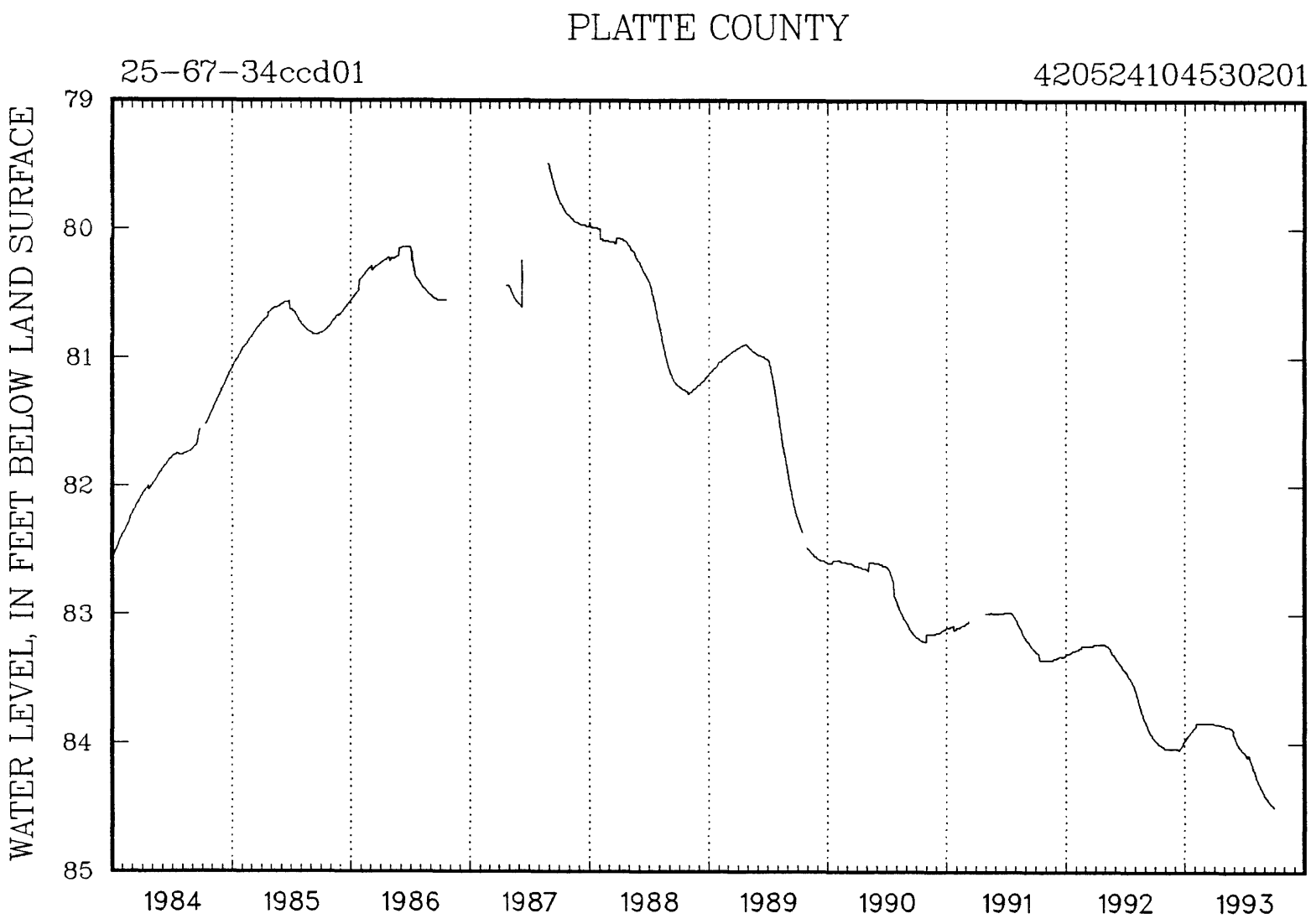
Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
24-67-21aab01	41	U	111ALVM	1979-93	[1]21.93	05-79	27.15	09-89
24-68-22aab02	200	U	122ARKR	1988-93	70.95	06-88	89.06	07-93
25-67-19dda01	760	U	122ARKR	1979-93	47.88	11-85	81.04	07-85
25-67-34ccd01	380	U	122ARKR	1980-93	79.49	08-87	87.35	09-80
25-68-12dda01	100	U	122ARKR	1980-93	13.30	06-84	22.60	09-90
25-68-15bbd01	220	U	122ARKR	1980-93	42.50	02-81	115.31	06-92
25-68-24aad01	240	U	122ARKR	1980-93	69.44	04-88	72.44	09-92
25-68-31aaa01	400	U	122ARKR	1979-93	20.13	11-86	34.62	08-92
26-68-12cbd01	320	U	122ARKR	1980-93	130.53	06-93	153.20	10-80
26-68-36bbb01	200	U	122ARKR	1981-93	145.23	05-88	153.41	08-82
27-69-25abc01	200	U	122ARKR	1981-93	1.63	10-88	27.03	05-82

[1] From hand-measured data.

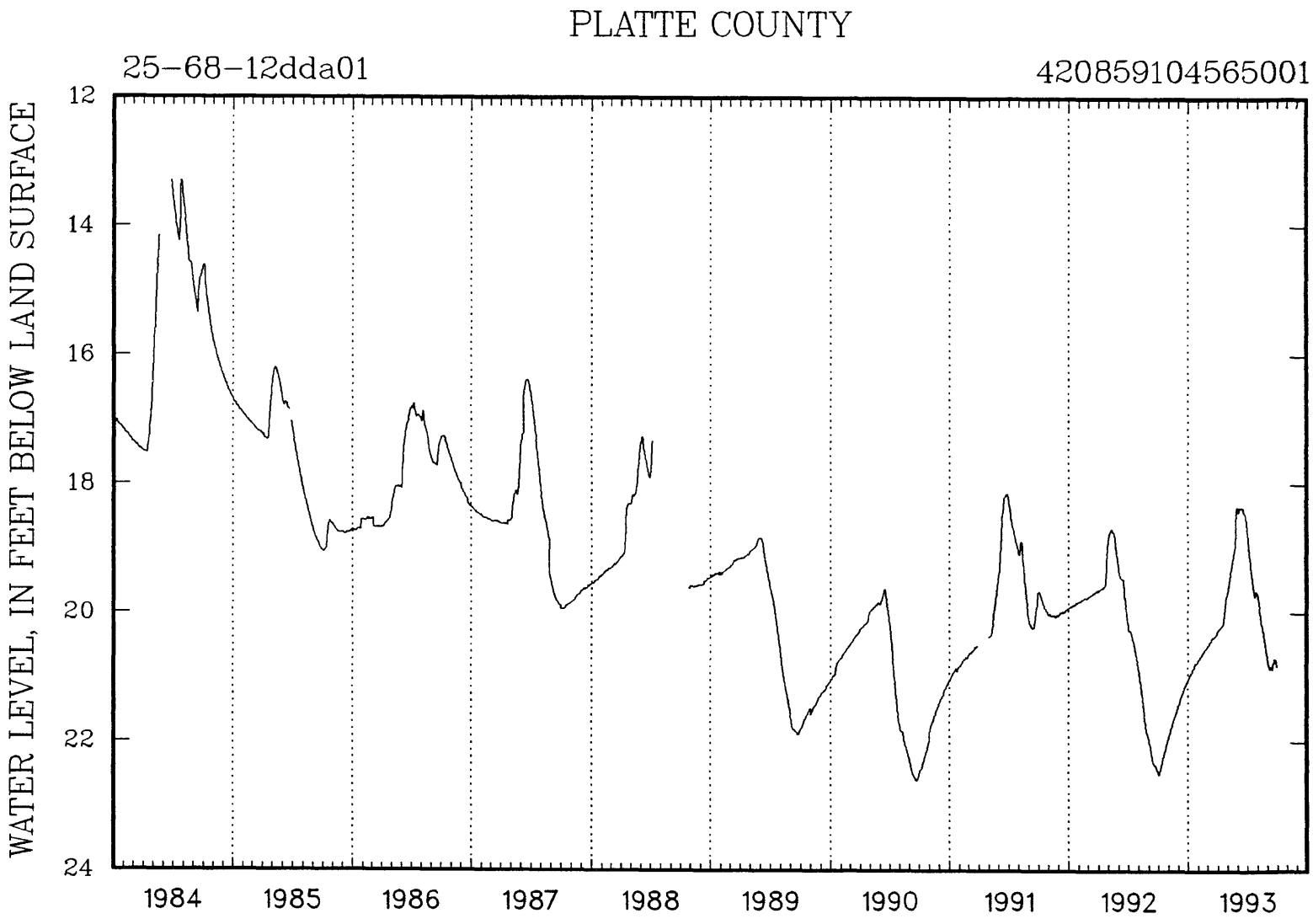

PLATTE COUNTY
24-67-21aab01
420237104532101
WATER LEVEL, IN FEET BELOW LAND SURFACE
22
23
24
25
26
27
28
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Ed Preuit


PLATTE COUNTY
24-68-22aab02
420246104590302
WATER LEVEL, IN FEET BELOW LAND SURFACE
70
72
74
76
78
80
82
84
86
88
90
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Platte County #1A

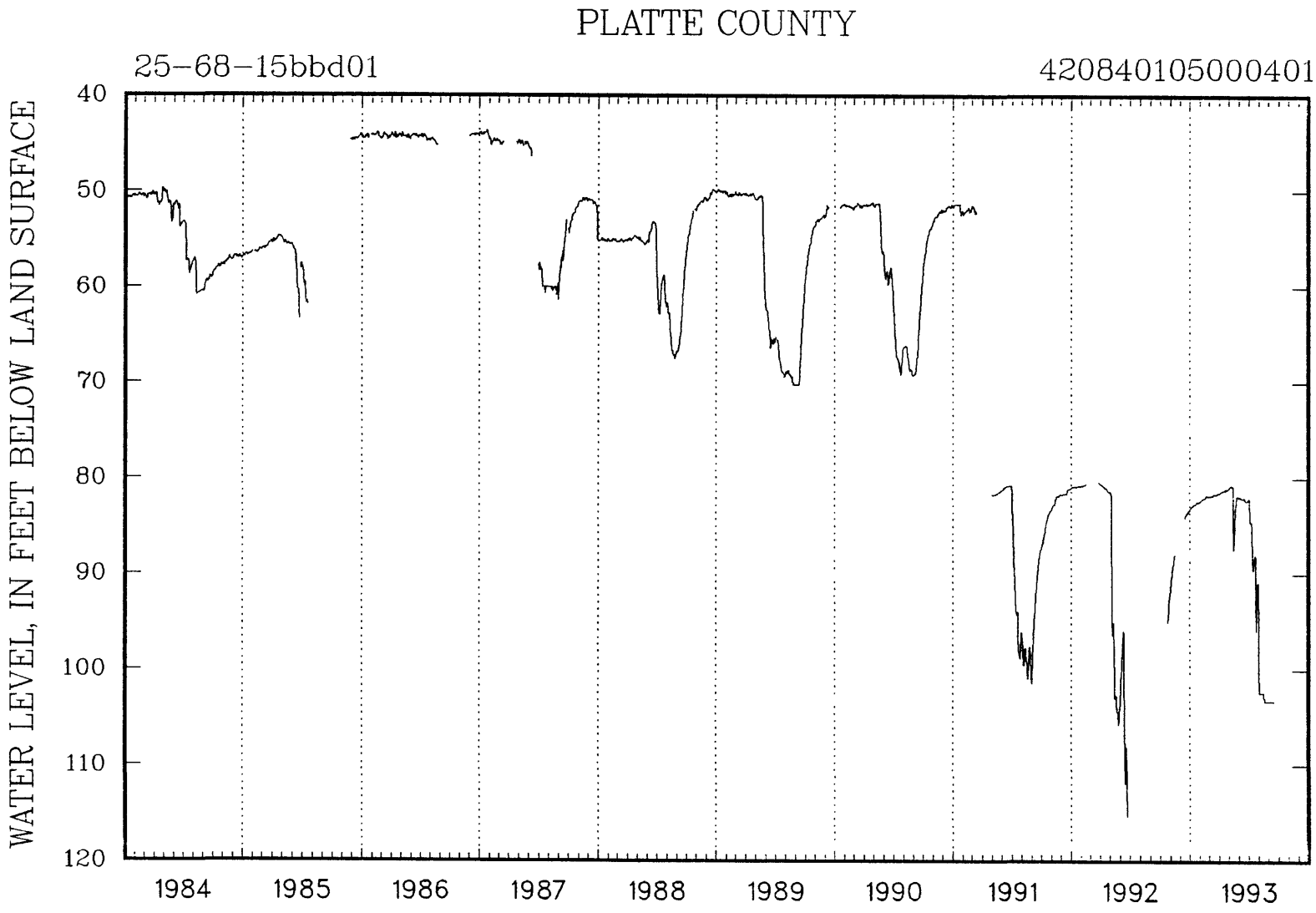

PLATTE COUNTY
25-67-19dda01
420718104553901
WATER LEVEL, IN FEET BELOW LAND SURFACE
45
50
55
60
65
70
75
80
85
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Ed Wilhelm



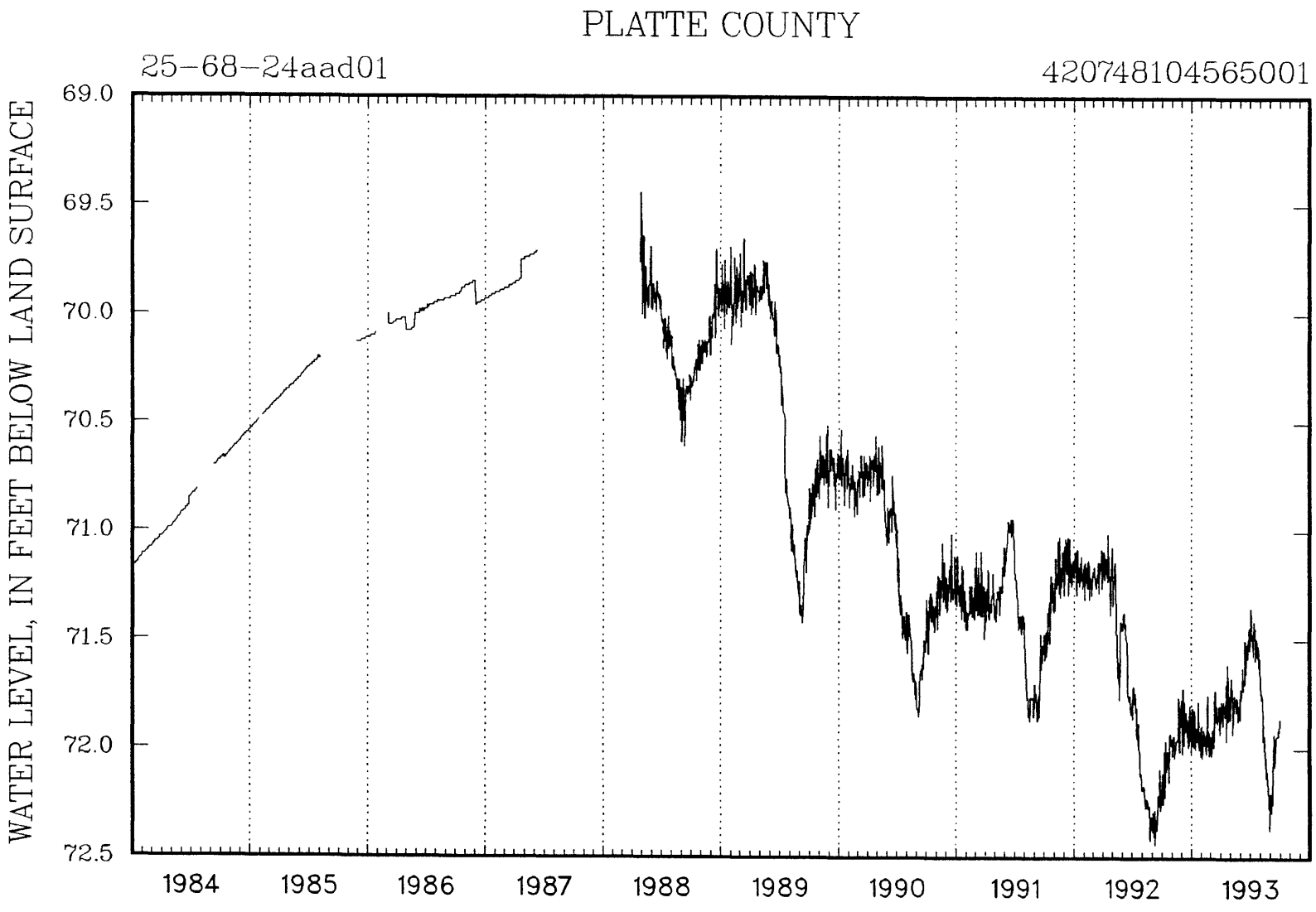
Platte County #2

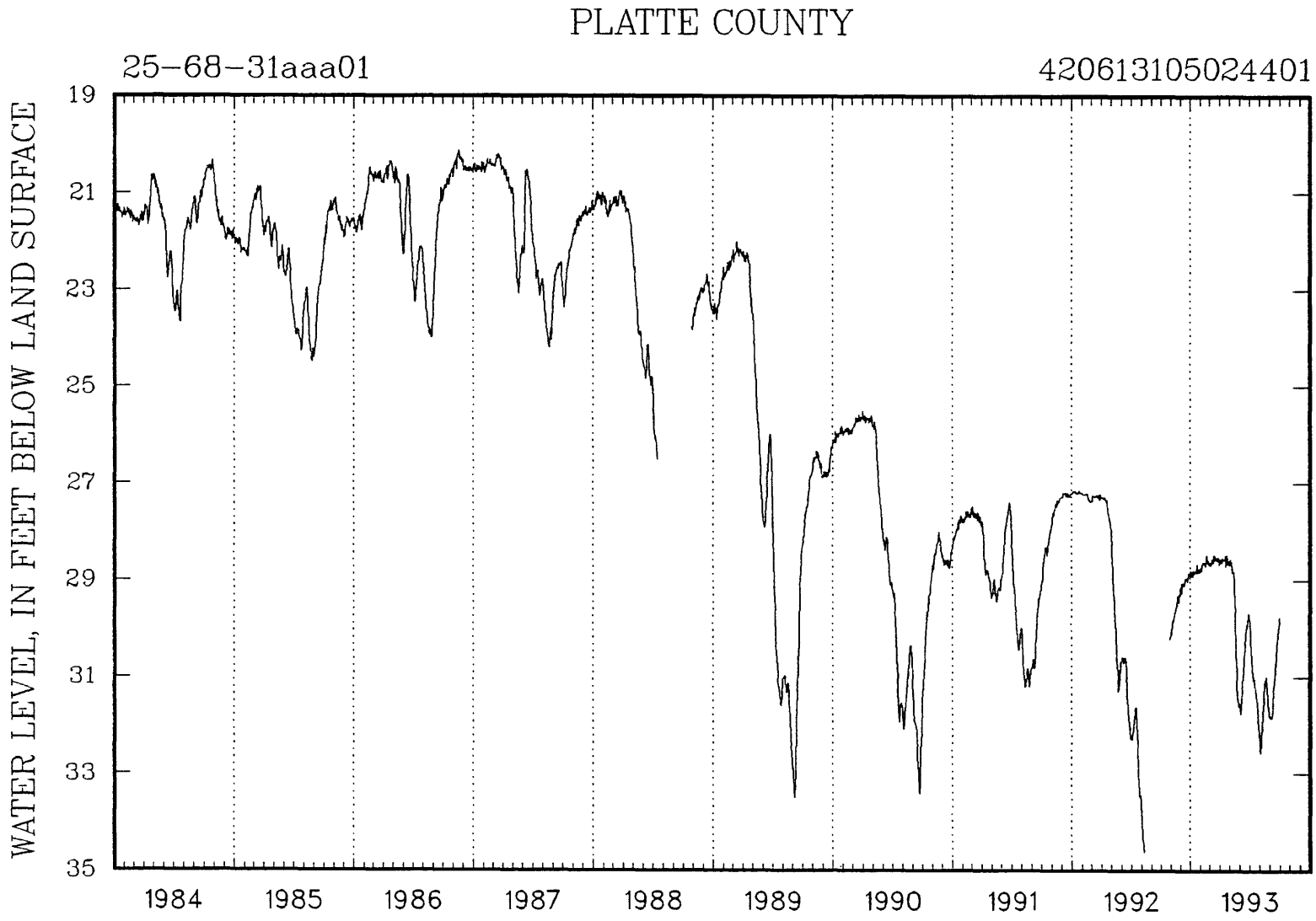


Platte County #4

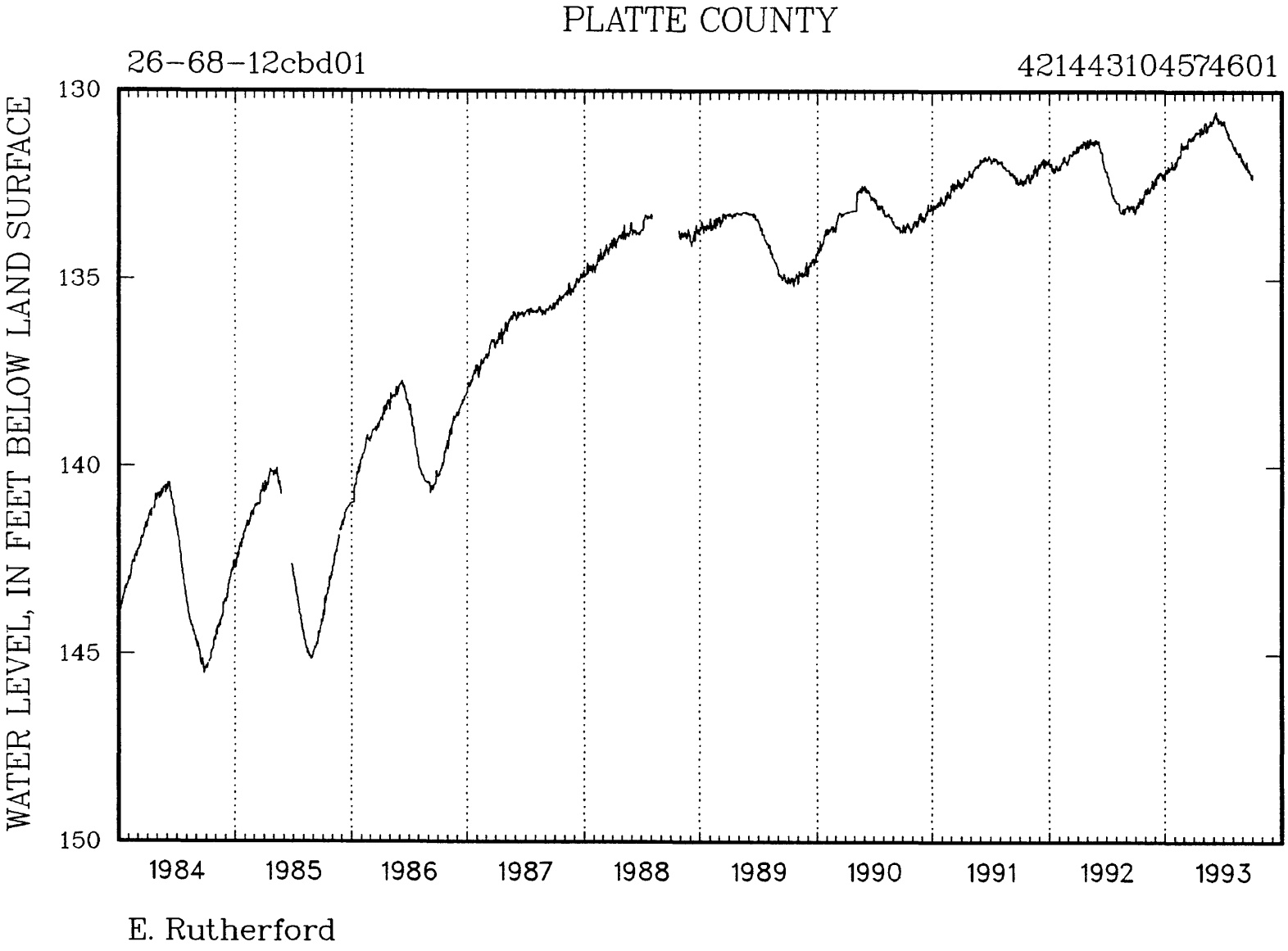


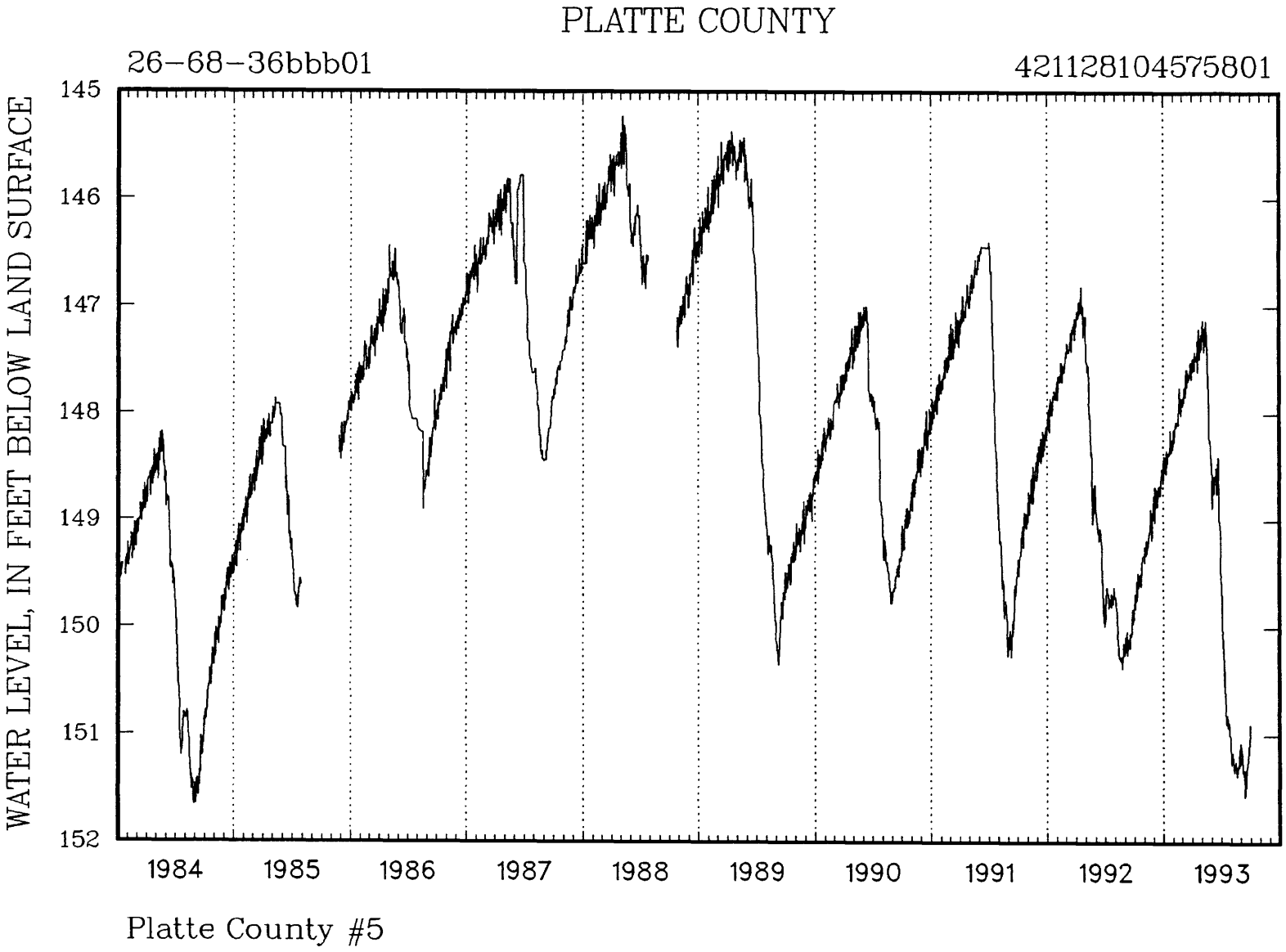
Platte County #6


PLATTE COUNTY
25-68-24aad01
420748104565001
WATER LEVEL, IN FEET BELOW LAND SURFACE
69.0
69.5
70.0
70.5
71.0
71.5
72.0
72.5
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Platte County #3

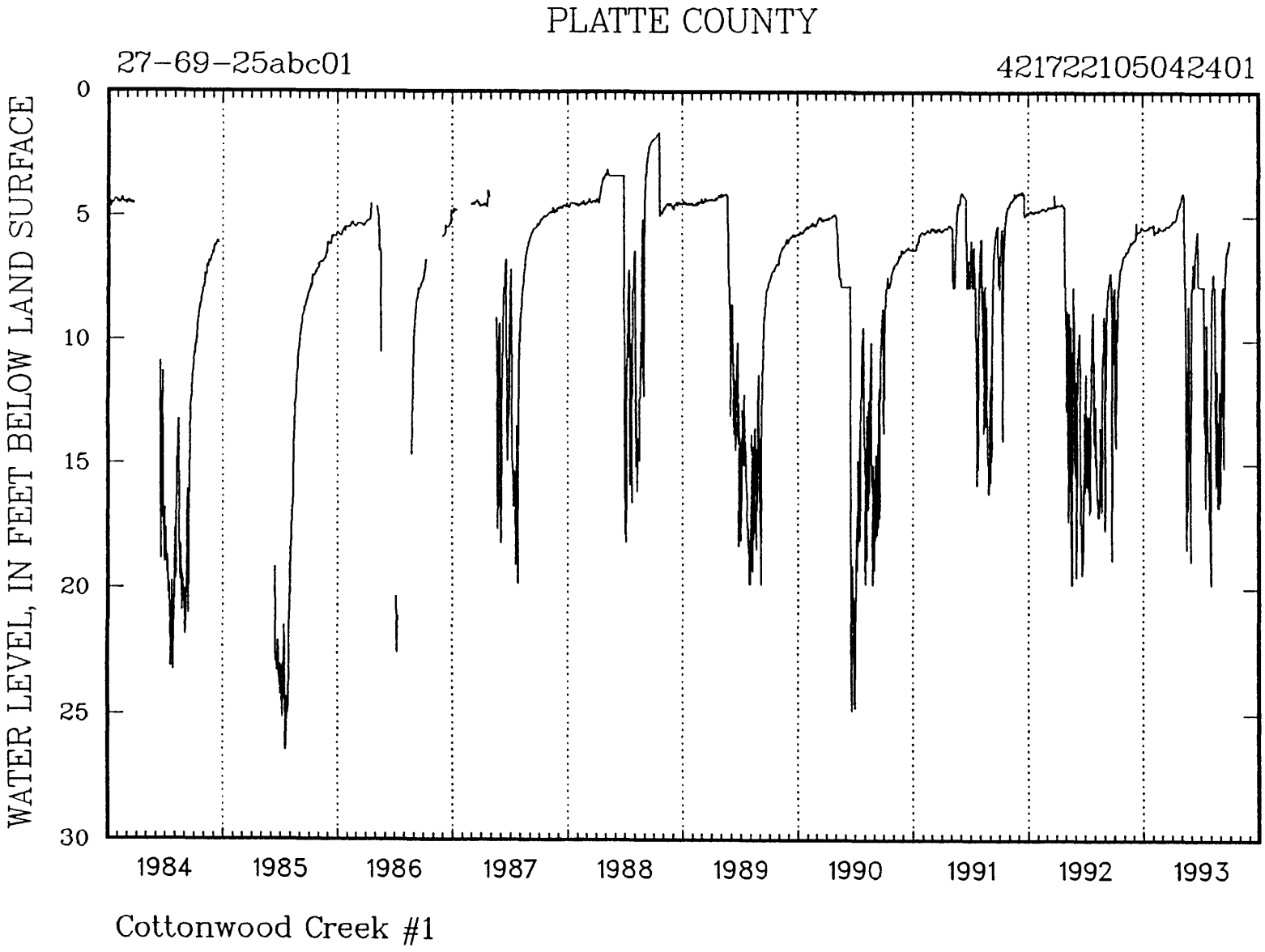


Platte County #7


PLATTE COUNTY
26-68-12cbd01
421443104574601
WATER LEVEL, IN FEET BELOW LAND SURFACE
130
135
140
145
150
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
E. Rutherford



Platte County #5


PLATTE COUNTY
27-69-25abc01
421722105042401
WATER LEVEL, IN FEET BELOW LAND SURFACE
0
5
10
15
20
25
30
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Cottonwood Creek #1

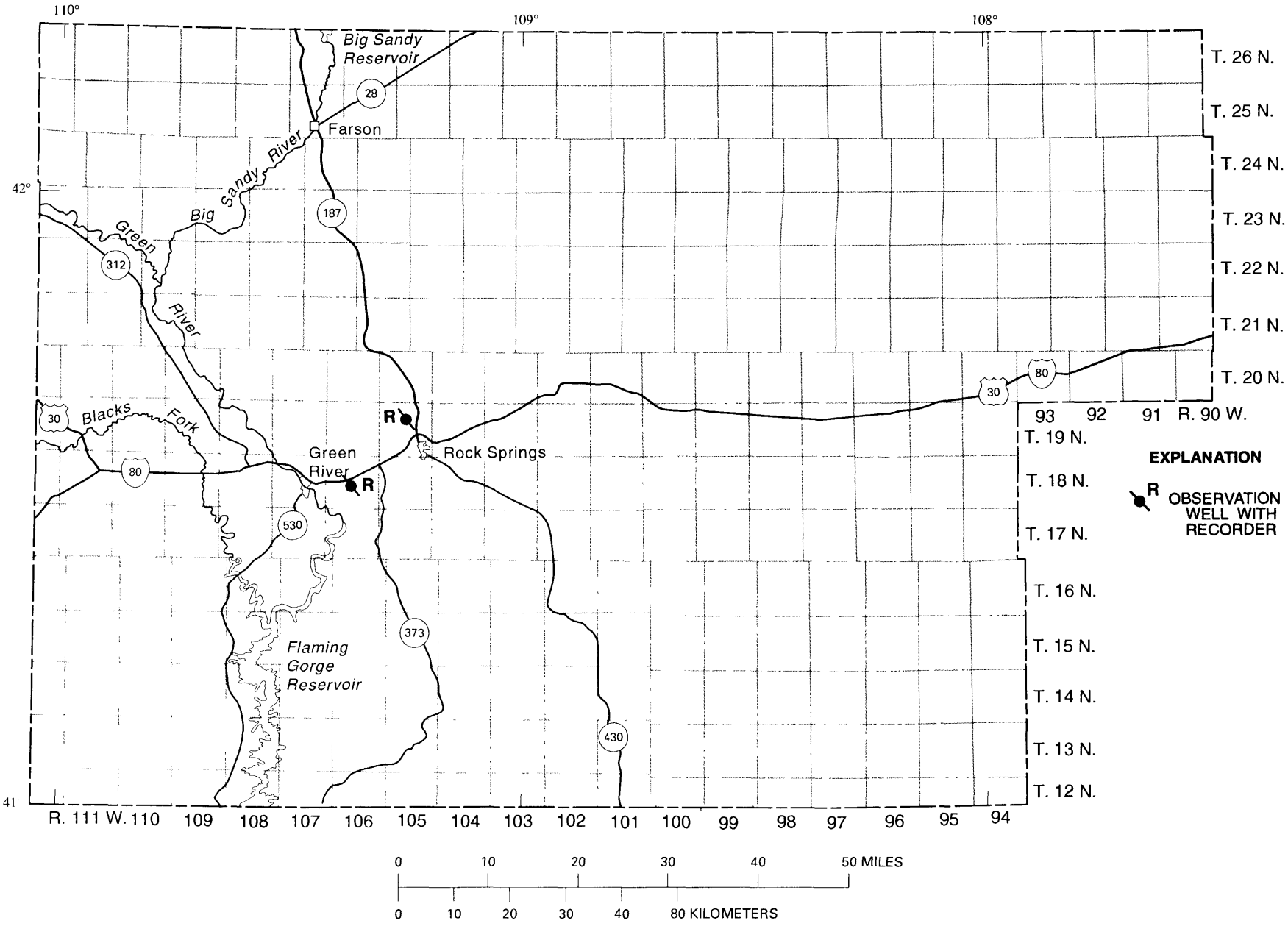
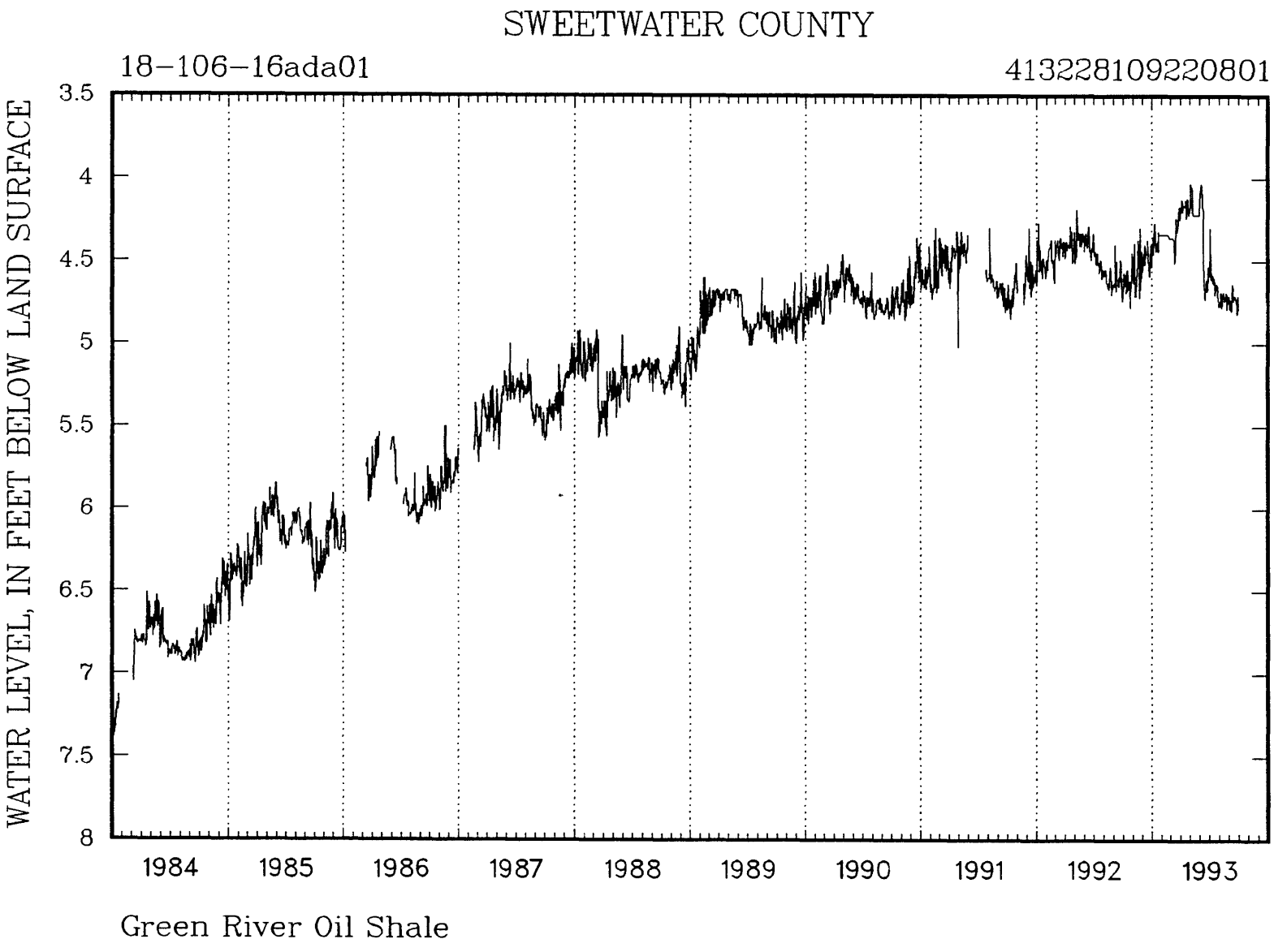
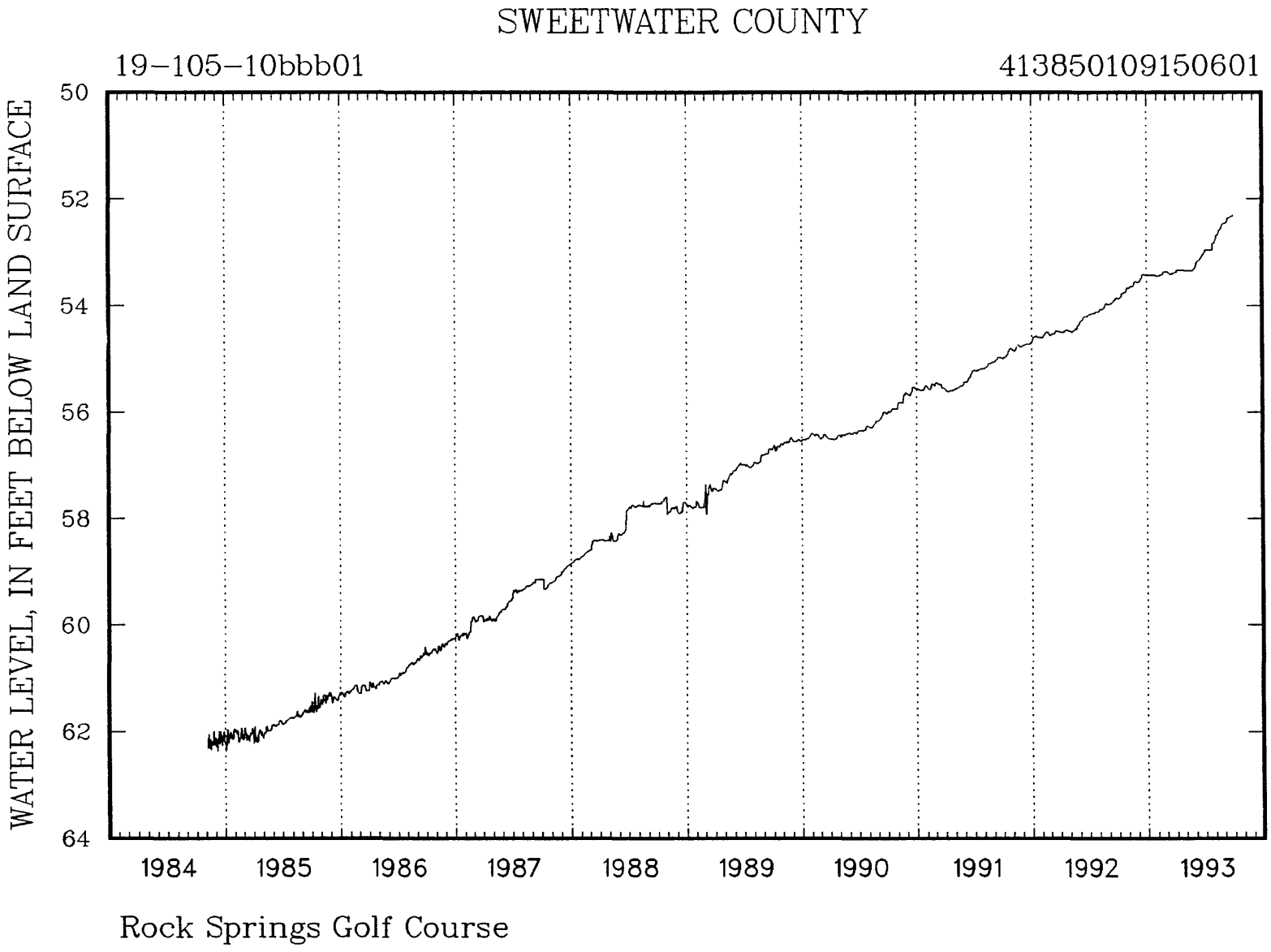


Figure 14.--Location of observation wells in Sweetwater County, Wyoming.

Records of observation wells in Sweetwater County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Continuous water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
18-106-16ada01	1,030	U	124WSTC	1981-93	4.03	05-93, 06-93	12.97	12-81
19-105-10bbb01	240	U	125FRUN	1984-93	52.30	09-93	62.36	12-84


SWEETWATER COUNTY
18-106-16ada01
413228109220801
WATER LEVEL, IN FEET BELOW LAND SURFACE
3.5
4
4.5
5
5.5
6
6.5
7
7.5
8
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Green River Oil Shale


SWEETWATER COUNTY
19-105-10bbb01
413850109150601
WATER LEVEL, IN FEET BELOW LAND SURFACE
50
52
54
56
58
60
62
64
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Rock Springs Golf Course

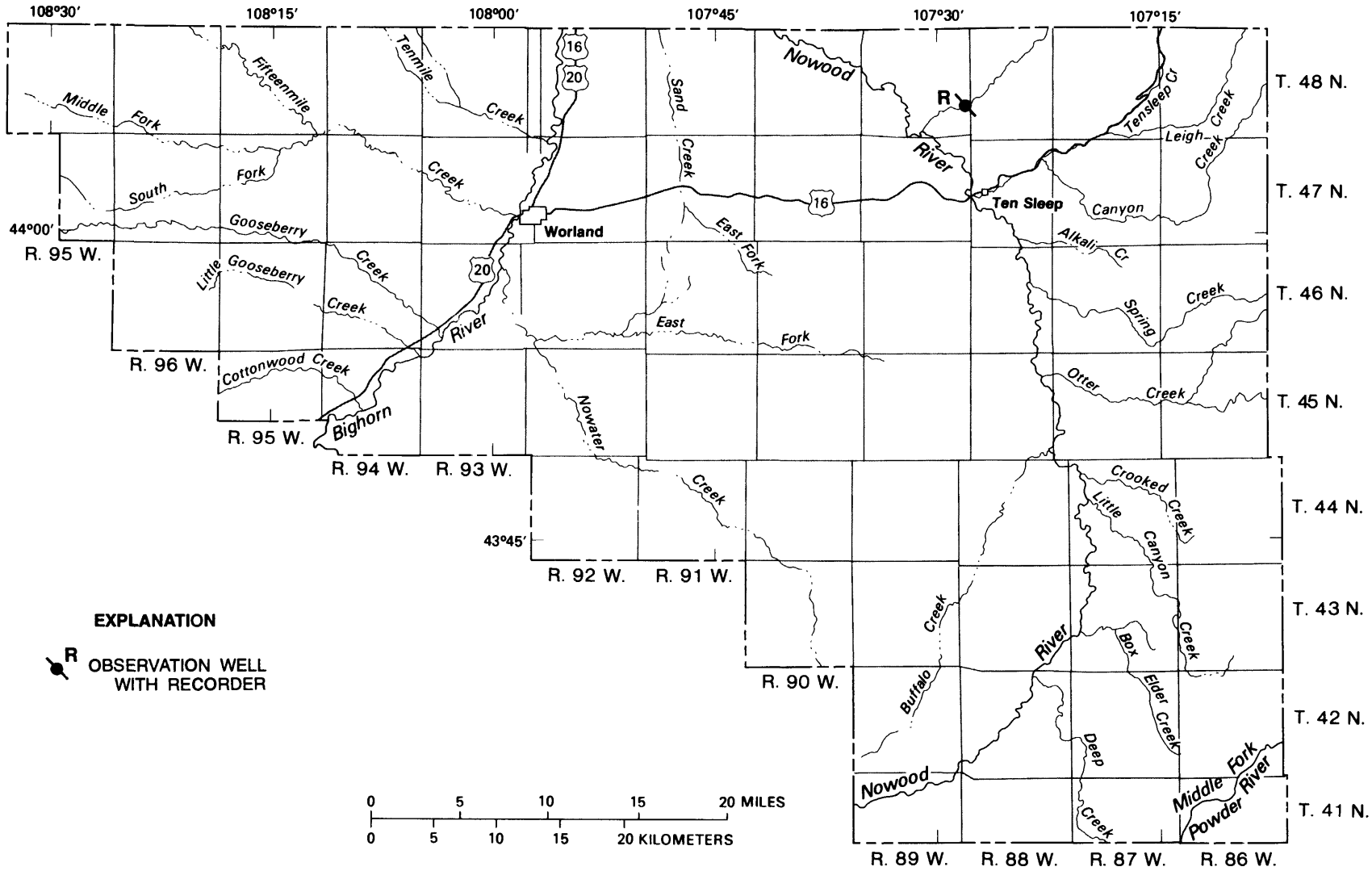


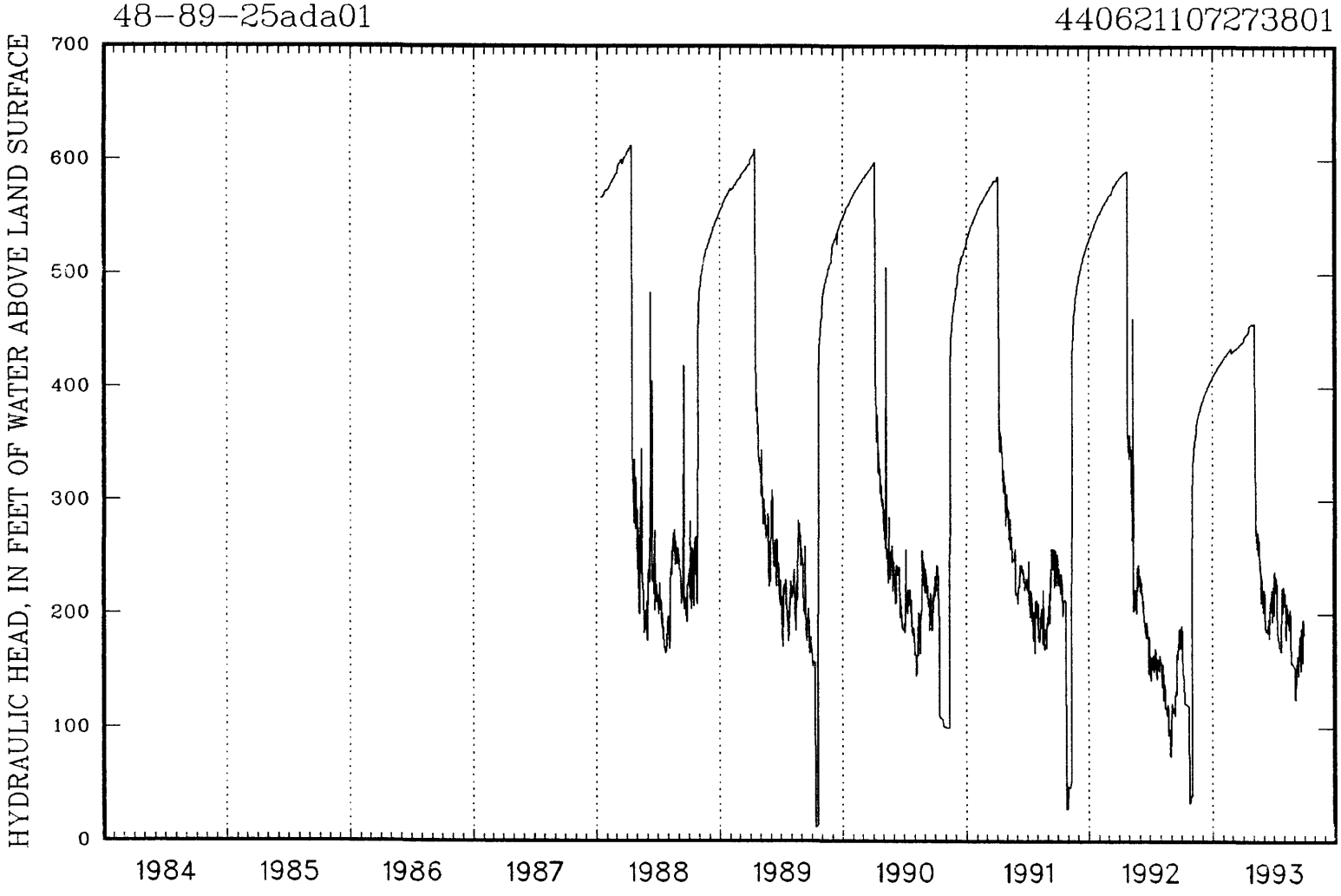
Figure 15.--Location of observation well in Washakie County, Wyoming.

Record of observation well in Washakie County, Wyoming, and highest and lowest recorded hydraulic heads, in feet above land surface. Continuous water-level measurements made by the U.S. Geological Survey. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Hydraulic heads			
					Highest		Lowest	
					Head (feet)	Month-year	Head (feet)	Month-year
48-89-25ada01	2,287	I	374FLTD	1988-93	[1]612.20	04-88	[1]11.90	10-89

[1] Flowing well, shut-in pressure was measured by pressure transducer and converted to hydraulic head above land surface for illustration purposes. Hydraulic head, in feet above land surface, was calculated by multiplying the shut-in pressure in pounds per square inch times 2.31.

WASHAKIE COUNTY



Mills
Flowing well.

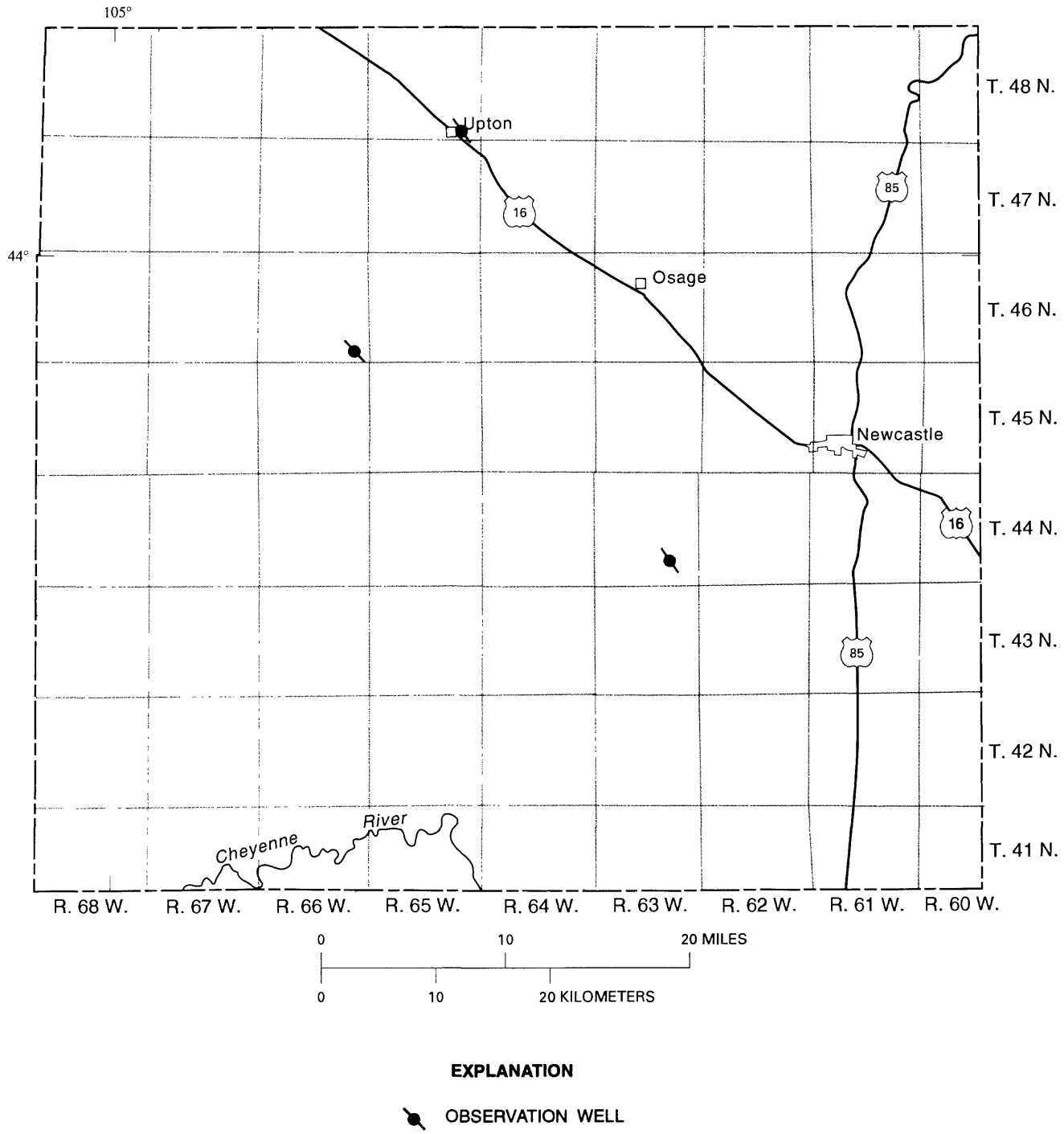
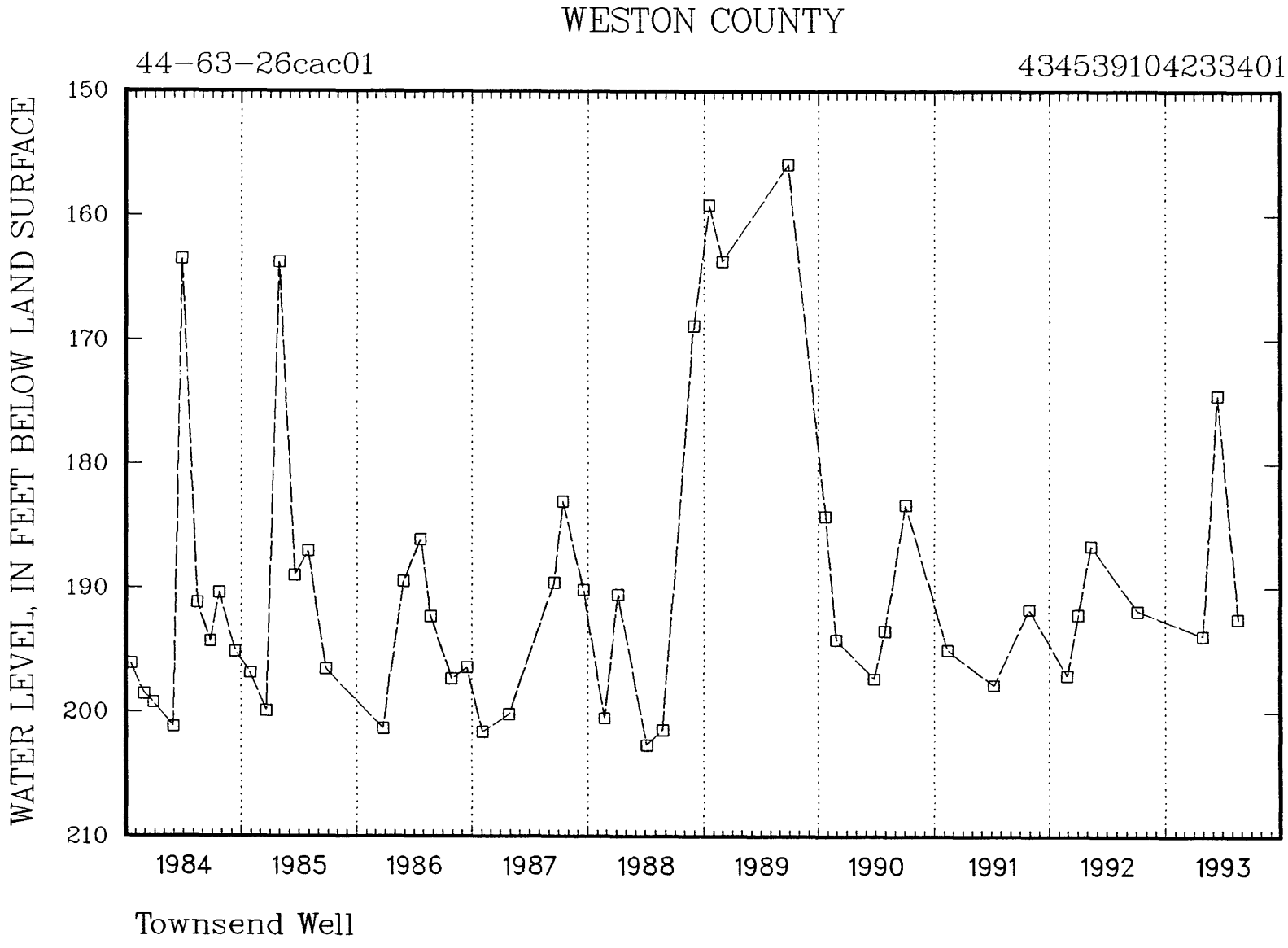


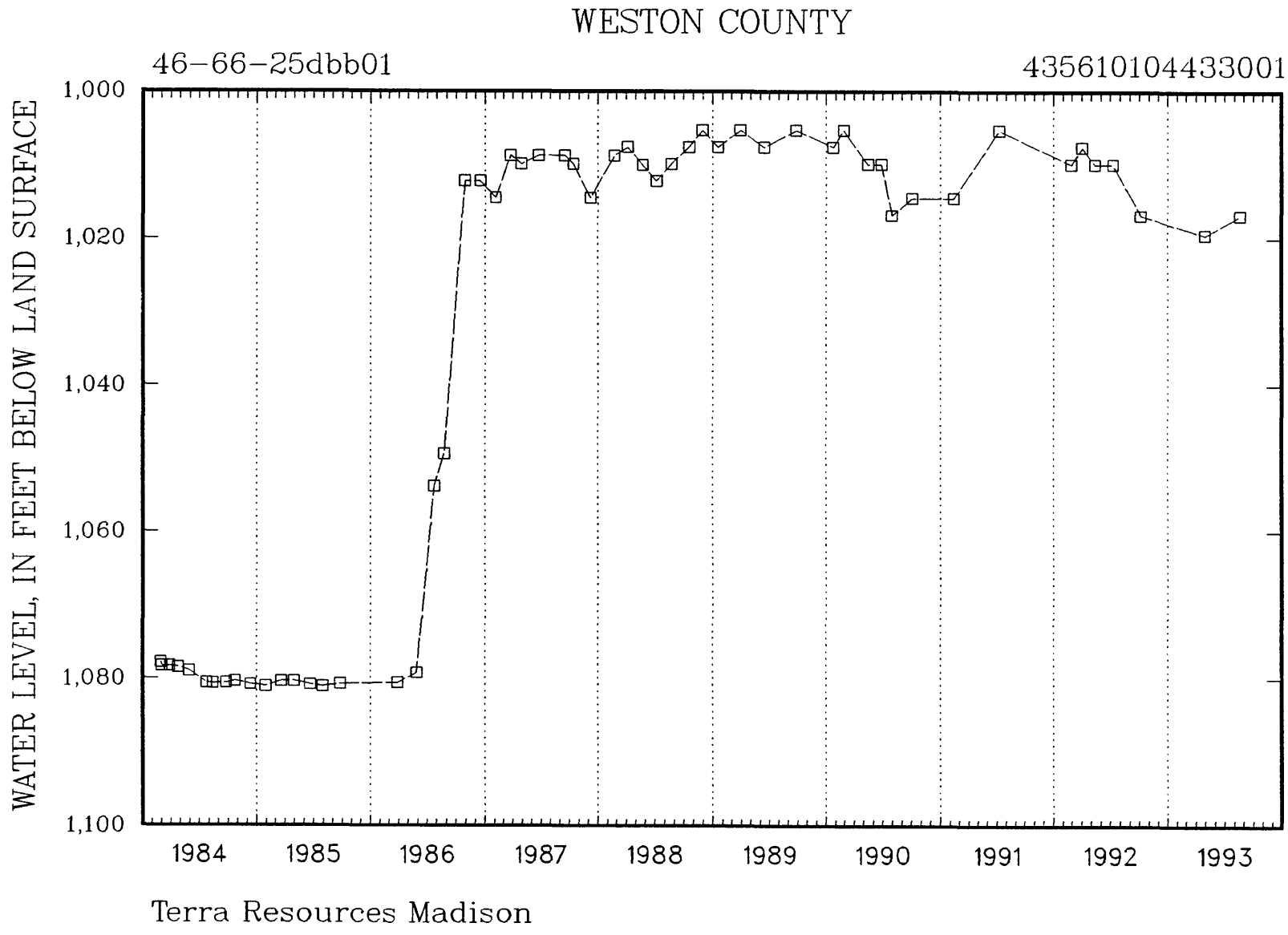
Figure 16.--Location of observation wells in Weston County, Wyoming.

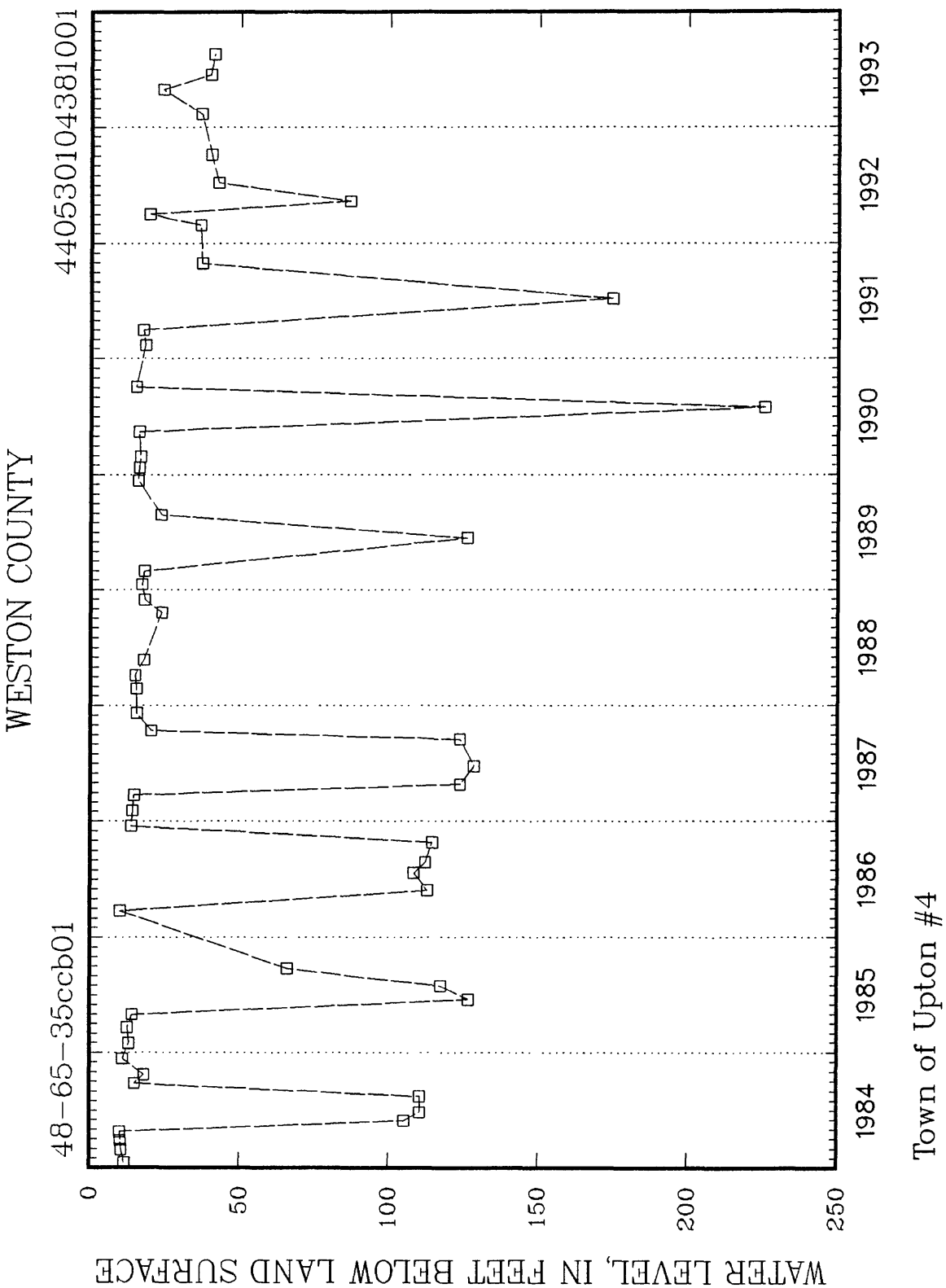
Records of observation wells in Weston County, Wyoming, and highest and lowest recorded water levels, in feet below land surface. Individual water-level measurements provided by the Wyoming State Engineer's Office. Numbering system for wells and explanation of column headings for tables and hydrographs are presented in the text.

Well number	Well depth (feet below land surface)	Use of water	Principal geologic source	Record available (year)	Water levels			
					Highest		Lowest	
					Level (feet)	Month-year	Level (feet)	Month-year
44-63-26cac01	6,881	H,S,I	337PHSP	1982-93	[1]155.89	09-89	[1,2]204.10	08-83
46-66-25dbb01	8,780	U	331MDSN	1982-93	[1]1,005.29	11-88, 03-89, 07-91	[1]1,081.75	09-85
48-65-35ccb01	3,193	P	337PHSP	1982-93	[1]10.20	03-86	[1,2]225.43	07-90

[1] From hand-measured data.
[2] Well being pumped.


WESTON COUNTY
44-63-26cac01
434539104233401
WATER LEVEL, IN FEET BELOW LAND SURFACE
150
160
170
180
190
200
210
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Townsend Well


WESTON COUNTY
46-66-25dbb01
435610104433001
WATER LEVEL, IN FEET BELOW LAND SURFACE
1,000
1,020
1,040
1,060
1,080
1,100
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
Terra Resources Madison



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