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no. 81-489

# WATER-LEVEL DATA

FOR WELLS IN AND NEAR BURIAL  
GROUND 3, OAK RIDGE NATIONAL  
LABORATORY, TENNESSEE 1975-1979

U.S. GEOLOGICAL SURVEY



OPEN-FILE REPORT 81-489



PREPARED IN COOPERATION WITH THE  
UNITED STATES DEPARTMENT OF ENERGY



Cover picture: View of Burial Ground 3 from east to west, September 1978, during period of water-level record. The same view of the disposal site following removal of the materials stored on the ground is shown in figure 1.



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Knoxville, Tennessee

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Open-file report  
United States  
Geological Survey

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UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Doyle G. Frederick, Acting Director

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For additional information write to:

U.S. Geological Survey  
A-413 Federal Building  
U.S. Courthouse  
Nashville, Tennessee 37203



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ABSTRACT

This report presents data pertaining to wells in the general vicinity of Burial Ground 3 at Oak Ridge National Laboratory, Tennessee, for the period 1975 to 1979. It includes an inventory of wells, measurements of water levels, well hydrographs, and a map showing the location of the wells.

INTRODUCTION

Solid waste materials contaminated by low levels of radioactivity are usually disposed of by shallow trench burial in areas termed "burial grounds". As part of a hydrogeologic investigation of the burial grounds at Oak Ridge National Laboratory (ORNL), personnel of the Geological Survey have made frequent measurements of water levels in wells located in or near these disposal sites. With the completion of this phase of the investigation, the data are being published to serve the needs of the operators and managers of the sites and of the scientists that are performing various studies in them.

This report presents data pertaining to the wells and water-level fluctuations in wells in the vicinity of Burial Ground 3 for the period 1975 through 1979. These data have been collected to document recent hydrologic conditions at that site, to provide a foundation for interpretive reports that are to follow, to offer measured values for numerical models that simulate the ground-water flow system, and ultimately to aid in efforts leading to the design of a network for monitoring the movement of radionuclides from the waste-disposal sites.

The information is presented in three parts. Part 1 (Table 1) is a well inventory, giving the location of the wells and certain characteristics about them. Part 2 (Table 2) lists the depth to water measurements at each well, by date. Part 3 consists of hydrographs that illustrate the fluctuations of the water surface in each well during the period of record.

A map showing the location of the wells is included at the end of the report.



#### Acknowledgments

Collection of the data has been performed in cooperation with the Oak Ridge Operations Office of the United States Department of Energy.

The authors gratefully acknowledge the assistance of D. D. Huff, Environmental Sciences Division, ORNL, and personnel of the Computer Sciences Division, ORNL, who have furnished computer-generated hydrographs of the water-level data. Although the hydrographs contained in this report have been drafted, the computer graphics have been very useful for identifying and correcting anomalies in the data base. The authors also express their appreciation to personnel in the Engineering Division, Union Carbide Corporation-Nuclear Division, for their generous provision of map and survey data pertaining to the wells reported herein. Without this information, the usefulness of the report would be considerably diminished.

#### Reference

Stockdale, P. B., 1951, Geological conditions at the Oak Ridge National Laboratory (X-10) area relevant to the disposal of radioactive waste: U.S. Atomic Energy Commission, Oak Ridge Operations (Report) ORO-58, 87 p.

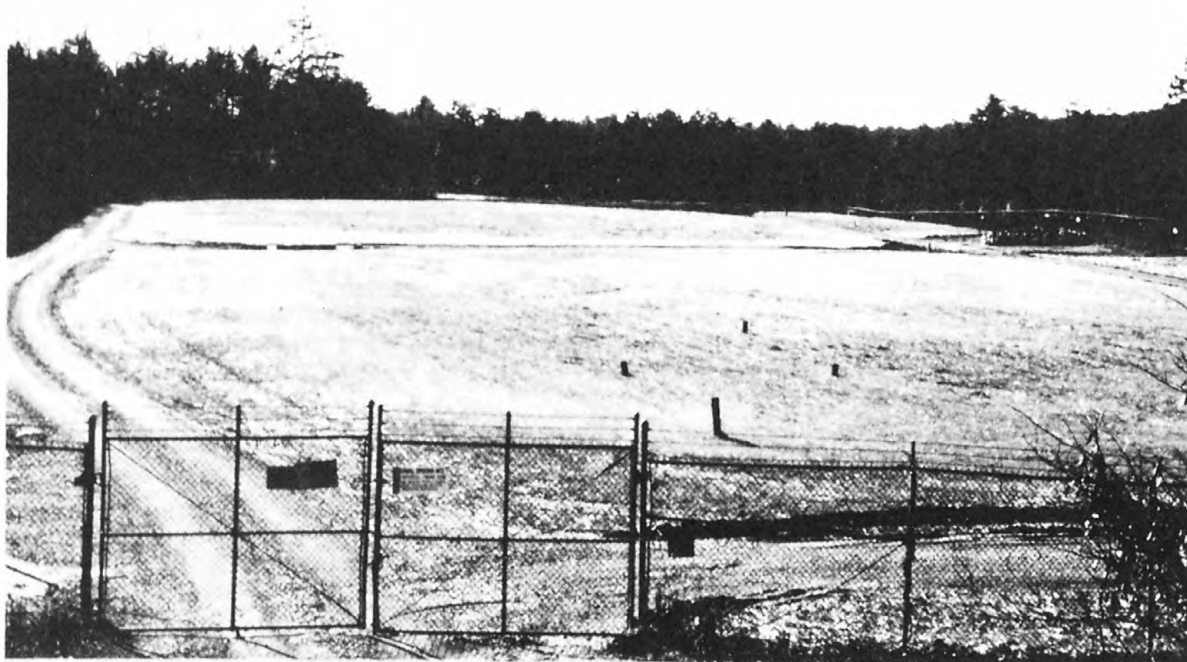


Figure 1.--View of Burial Ground 3 from east to west, November 1979, following site renovation.



PART 1.--WELL INVENTORY

## WELL INVENTORY

Data from an inventory of wells in and near Burial Ground 3 are summarized in Table 1. The inventory was begun in April 1975 and updated as changes occurred in existing wells.

The following wells of record near Burial Ground 3 were destroyed prior to April 1975:

Well number    5  
                  48

The reader is cautioned that both Burial Ground 3 and Burial Ground 6 have wells identified by the numbers 301, 302, and 303. Care should be exercised that references to these wells also identify the particular disposal site.

### Latitude and Longitude

Latitude and longitude have been estimated by plotting the well locations on the 7½-minute Bethel Valley Quadrangle map, and measuring these values. As such, the degree of accuracy provided is within a range of +3 seconds and is adequate for the computer identification of wells. For certain more demanding purposes, the reader may desire to refer the most recent ORNL grid coordinates of the wells to the Tennessee State Plane Survey for a precise determination of latitude and longitude.

### Explanation of Terms

WELL NO. - Well identification number which corresponds to the well numbers shown on the map following Part 3.

ORNL GRID - Coordinates of well sites reported in feet north and east from the Point of Beginning of the ORNL Grid Survey.

DEPTH OF WELL - The distance, rounded to the nearest foot, between land surface and the bottom of the well.

YEAR COMPLETED - The year in which the well was completed.

CASING DIAMETER - The inside diameter of the casing, expressed in inches.

CASING TYPE - The material of which the well casing is made. The following letter denotes casing material:  
S - steel



FINISH - Refers to the character and subsurface position of the openings that permit water to enter the well.

CHARACTER is denoted by the following letters:

Prf - perforated casing

Opn - open borehole

DEPTH INTERVAL - The distance, rounded to the nearest foot, between land surface and the upper and lower limits of the openings through which water can enter the well. A query (?) denotes unknown interval.

ALTITUDE - The altitude of the land surface at the well, in feet above the National Geodetic Vertical Datum (NGVD) of 1929. Altitudes listed are from a re-survey in 1980, minus the measuring point distance.

MEASURING POINT - Refers to the point at the top of the casing at which repetitive water-level measurements were made.

DISTANCE ABOVE LAND SURFACE - The distance in feet from the measuring point to land surface.

DATE DETERMINED - The date when the measuring point was established.

DEPTH TO WATER BELOW LAND SURFACE - A summary of the data extremes that appear in Table 2.

MINIMUM - The minimum measured depth to water, in feet below land surface, during the period of record.

MAXIMUM - The maximum depth to water, in feet below land surface, during the period of record.

STATUS OF WELL 12/79 - The status of the well as determined by field inspection on December 26, 1979. Status is denoted by the following letters:

A - Casing undamaged. Water level is measureable and samples are obtainable.

B - Casing is damaged, but water level is measureable and samples are obtainable. Measuring point distance reported herein and top of casing altitude (not reported herein) may or may not require adjustment.

Table 1.--Data of observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee

Well number	Location			Depth of well (ft)	Year completed	Casing Finish				Altitude of land surface (ft above NGVD)	Measuring Point		Depth to Water below land surface			Status of well 12/79
	Latitude (deg., m, s)	Longitude (deg., m, s)	ORNL Grid (ft) (ft)			Diameter (in)	Type	Character	Depth interval (ft)		Distance above land surface (ft)	Date determined (m/d/yr)	Period of record (yrs)	Minimum (ft)	Maximum (ft)	
3 <sup>a</sup>	35 55 07	84 19 42	N21630 E26428	251	1950	3 3/16	S	Opn	(?)	839.44	0.56	6/20/79	1975-79	4.51	10.58	A
9	35 55 03	84 19 49	N21671 E26010	99	1950	3 3/16	S	Opn	(?)	848.95	0.75	4/21/75	1975-79	16.95	21.23	A
15	35 55 03	84 19 52	N21726 E25698	100	1950	3 3/16	S	Opn	(?)	848.20	1.00	4/21/75	1975-79	19.34	32.82	A
16	35 55 04	84 19 54	N21871 E25668	100	1950	3 3/16	S	Opn	12-100	840.80	1.00	4/21/75	1975-79	18.98	28.75	A
20	35 55 07	84 19 53	N22013 E25821	99	1950	3 3/16	S	Opn	12-99	836.20	1.40	4/21/75	1975-79	20.63	21.01	A
21	35 55 08	84 19 49	N21925 E26076	100	1950	3 3/16	S	Opn	12-100	834.85	0.95	4/21/75	1975-79	24.30	25.59	A
22	35 55 10	84 19 44	N21934 E26510	100	1950	3 3/16	S	Opn	11-100	826.80	0.40	4/21/75	1975-79	8.05	16.04	A
23	35 55 10	84 19 43	N21807 E26679	100	1950	3 3/16	S	Opn	10-100	828.30	0.70	4/21/75	1975-79	0.04	6.40	A
32	35 55 09	84 19 40	N21621 E26682	99	1950	3 3/16	S	Opn	9-99	840.70	0.70	4/21/75	1975-79	4.99	11.54	A
41	35 55 13	84 19 39	N21990 E27070	33	1950	3 3/16	S	Opn	11-33	833.35	0.25	4/21/75	1975-79	31.39	32.47	A
42	35 55 12	84 19 32	N21613 E27449	49	1950	3 3/16	S	Opn	7-49	834.00	0.40	4/21/75	1975-79	10.90	20.90	A
43	35 55 16	84 19 30	N21849 E27885	46	1950	3 3/16	S	Opn	9-46	799.40	0.90	4/21/75	1975-79	1.21	5.92	A
44	35 55 15	84 19 26	N21575 E28113	49	1950	3 3/16	S	Opn	9-49	813.40	0.90	4/21/75	1975-79	17.66	19.46	A
45	35 55 19	84 19 24	N21841 E28475	24	1950	3 3/16	S	Opn	12-24	794.40	1.10	4/16/75	1975-79	0.53	4.08	A
46	35 55 18	84 19 22	N21634 E28552	50	1950	3 3/16	S	Opn	6-50	788.50	0.60	4/21/75	1975-79	1.04	3.88	A
49	35 55 17	84 19 12	N21079 E29188	47	1950	3 3/16	S	Opn	20-47	778.70	1.40	4/21/75	1975-79	0.77	2.72	A
301	35 55 07	84 19 50	N21856 E26106	14	1964	6 7/8	S	Prf	0-14	841.08	2.62	8/24/76	1975-79	4.81	12.58	A
302	35 55 08	84 19 47	N21837 E26293	6	1964	6 7/8	S	Prf	0-6	836.33	2.77	8/24/76	1976-79	0.57	6.20	A
303	35 55 10	84 19 45	N21855 E26612	6	1964	6 7/8	S	Prf	0-6	831.53	2.37	8/24/76	1976-79	0.75	5.73	B

<sup>a</sup> Casing had been removed to a point several inches below land surface prior to the initial inventory. During the period of record, the measuring point for this well was land surface, and the measuring point distance was 0.0 feet. In May 1979, the damaged casing stub was removed and a section of 4-inch I.D. plastic pipe was emplaced over the upper end of the steel casing. The new measuring point is 0.56 feet above land surface.



PART 2. -- WATER-LEVEL DATA

Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee

Well No.	Dates of measurement											
	4/21/75	10/21/75	3/16/76	8/24/76	11/01/76	12/01/76	12/17/76	1/06/77	1/28/77	2/16/77	3/02/77	3/16/77
3	6.08	6.10	5.11	10.40	5.98	5.90	5.13	5.81	7.10	7.66	5.73	4.95
9	18.80	18.69	18.98	21.23	19.01	18.93	18.79	19.30	20.17	20.55	19.33	18.19
15	28.67	28.91	27.45	29.88	24.78	26.99	26.98	27.45	28.07	28.48	26.62	21.71
16	28.60	28.69	28.58	28.71	28.70	28.70	28.68	28.67	28.69	28.68	28.68	25.05
20	20.89	20.96	20.93	20.95	20.94	20.92	20.87	20.63	20.90	20.83	20.91	20.93
21	25.25	25.22	25.07	25.44	25.11	24.95	24.71	24.84	25.16	25.20	24.57	24.53
22	11.85	14.56	10.89	15.38	12.55	12.53	11.11	10.43	12.89	13.81	10.09	9.26
23	2.66	2.75	1.48	6.28	0.64	1.01	0.86	1.41	3.74	4.46	1.11	0.87
32	6.20	7.20	5.32	11.51	6.27	5.37	5.60	6.14	6.77	8.15	5.79	5.15
41	32.15	32.21	32.15	32.13	32.11	32.16	31.39	32.15	32.19	32.19	32.13	32.12
42	17.33	18.58	15.44	19.58	17.04	16.90	13.55	13.00	15.78	17.87	14.43	13.45
43	5.26	4.99	5.29	5.78	5.08	4.77	5.05	5.12	5.25	5.30	4.92	4.70
44	18.72	19.42	18.73	19.25	19.25	18.97	18.68	18.41	18.32	18.68	18.94	18.77
45	1.24	1.52	1.11	-	1.54	1.30	1.18	1.09	1.29	1.31	0.99	0.91
46	1.68	1.75	1.85	2.93	1.68	1.65	1.63	1.58	1.90	1.04	1.62	1.60
49	1.25	1.49	1.35	-	1.31	1.30	1.29	1.17	1.58	1.48	1.24	1.29
301	8.26	6.56	7.20	11.90	5.68	6.70	5.33	6.81	7.90	9.28	6.76	5.83
302	-	-	-	6.20	2.98	3.31	2.52	2.40	3.61	2.99	3.22	2.79
303	-	-	-	5.73	1.18	2.06	1.95	2.19	3.88	2.55	2.20	2.18



Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee--Continued

Well No.	Dates of measurement											
	4/01/77	4/12/77	4/26/77	5/13/77	5/23/77	6/09/77	6/24/77	7/12/77	7/28/77	8/24/77	9/06/77	9/20/77
3	5.21	5.67	7.47	6.87	8.83	9.49	7.99	9.28	9.49	9.50	9.35	5.38
9	18.34	18.07	19.32	19.29	20.30	20.77	20.39	20.00	20.49	20.75	20.81	18.90
15	23.97	25.51	28.18	28.16	28.76	29.38	29.16	28.75	29.10	29.45	29.58	27.41
16	28.35	28.65	28.64	28.70	28.71	28.72	28.71	28.71	28.70	28.68	28.70	28.70
20	20.91	20.93	20.95	20.94	20.95	20.95	20.95	20.95	20.94	20.93	20.95	20.92
21	24.46	24.66	25.33	25.39	25.44	25.47	25.40	25.39	25.46	25.46	25.53	25.15
22	8.16	11.18	13.76	13.32	14.11	14.68	12.30	14.65	15.23	15.70	15.90	11.29
23	0.47	1.92	3.43	3.82	5.39	5.93	2.64	5.40	5.77	5.53	5.80	1.13
32	5.04	5.26	8.13	7.92	9.80	10.55	8.23	10.37	10.50	9.90	10.67	5.54
41	31.98	32.15	32.18	32.20	32.20	32.20	32.17	32.17	32.17	32.23	32.22	32.16
42	14.80	14.35	17.63	18.03	18.55	19.28	19.93	18.93	19.61	20.44	20.73	20.77
43	4.47	5.24	5.37	5.40	5.49	5.62	5.35	5.53	5.57	5.74	5.92	4.25
44	18.59	18.65	18.82	18.83	18.97	19.13	19.06	19.20	19.31	19.46	19.24	19.15
45	0.81	1.10	1.51	1.63	2.32	3.10	2.10	2.52	3.14	3.68	4.08	1.60
46	1.48	2.10	2.31	2.35	2.70	2.92	1.90	2.81	2.77	3.88	3.28	1.88
49	1.15	1.71	1.98	2.08	2.36	2.72	1.19	2.54	2.41	2.37	2.70	1.14
301	5.12	6.60	8.19	6.81	8.17	9.80	8.55	7.77	9.50	4.97	-	4.99
302	1.64	3.14	3.40	3.43	4.17	4.93	1.68	4.41	4.15	2.88	5.03	1.47
303	1.78	2.70	3.07	2.67	3.98	5.03	1.05	3.42	3.71	1.73	3.50	1.29

Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee--Continued

Well No.	Dates of measurement											
	10/06/77	10/19/77	11/01/77	11/18/77	12/02/77	12/20/77	1/11/78	2/03/78	2/15/78	3/06/78	3/20/78	4/03/78
3	8.00	7.77	6.67	5.02	4.51	5.44	5.14	5.72	5.61	4.60	5.06	5.89
9	20.17	20.23	19.72	18.50	16.95	18.75	18.28	19.15	19.39	19.00	19.12	19.83
15	28.50	28.24	27.68	24.97	19.95	26.18	23.28	26.40	28.86	26.07	26.44	27.29
16	28.69	28.70	28.71	28.60	22.78	28.62	28.08	28.68	28.65	28.69	28.71	28.71
20	20.95	20.93	20.94	20.92	20.90	20.88	20.87	20.96	20.71	20.67	20.88	20.93
21	25.40	25.33	25.15	24.30	24.31	24.73	24.53	24.95	25.04	24.60	24.73	25.30
22	14.47	14.35	13.90	9.73	8.05	9.41	8.83	11.05	11.28	10.14	9.25	12.63
23	4.27	4.18	3.48	0.57	0.04	1.36	0.94	2.07	1.67	1.22	1.41	3.23
32	9.29	9.05	7.97	5.28	4.99	5.45	5.20	6.13	6.20	5.65	5.28	6.09
41	32.27	32.20	32.20	32.13	32.34	32.18	32.15	31.52	32.06	32.10	32.05	32.08
42	20.90	17.99	16.91	14.76	10.90	13.09	11.56	14.24	15.46	13.37	13.82	16.69
43	5.39	5.34	5.25	4.00	4.65	4.99	4.69	5.26	4.99	4.94	5.26	5.35
44	19.34	19.24	19.17	18.73	18.60	18.50	18.35	-	18.24	18.12	18.40	18.45
45	1.83	1.62	1.39	0.91	0.83	1.05	0.90	1.11	0.89	0.77	0.94	1.32
46	2.30	2.30	2.13	1.54	1.65	1.86	1.86	2.11	1.62	1.75	1.92	2.19
49	1.87	1.78	1.57	1.15	1.24	1.30	1.46	1.62	1.13	1.24	1.36	1.63
301	6.55	6.98	6.27	5.06	5.35	6.33	5.32	6.56	7.73	7.26	6.18	7.22
302	3.60	3.53	3.42	2.28	1.50	1.68	2.06	2.56	1.35	1.74	-	2.53
303	2.47	2.63	2.30	1.40	1.37	1.84	2.12	2.78	1.59	2.01	2.39	2.61



Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee--Continued

Well No.	Dates of measurement											
	4/17/78	5/02/78	5/16/78	5/31/78	6/14/78	6/29/78	7/12/78	7/26/78	8/08/78	8/22/78	9/07/78	9/19/78
3	6.99	6.27	5.01	7.17	6.76	8.10	8.70	7.21	5.02	7.47	8.12	8.35
9	20.37	19.50	18.94	20.11	19.05	19.99	20.47	19.57	18.39	19.68	20.42	20.63
15	27.67	27.16	26.57	27.65	26.76	27.80	28.04	27.40	25.91	27.58	27.84	28.15
16	28.74	28.72	28.68	28.70	28.40	28.72	28.75	28.72	28.17	28.64	28.69	28.70
20	21.00	20.64	20.84	20.98	20.96	20.96	21.01	20.90	20.72	20.94	20.96	20.96
21	25.46	25.29	24.80	25.39	25.19	25.45	25.50	25.37	24.46	25.29	25.42	25.46
22	13.93	10.82	10.82	13.78	12.92	14.22	14.78	13.15	10.72	13.92	14.44	14.83
23	4.82	1.65	1.42	4.05	2.68	4.62	5.25	2.89	0.63	3.96	4.87	5.02
32	8.48	7.80	7.01	8.80	8.48	9.89	10.31	8.98	6.68	8.95	9.84	10.04
41	32.09	32.20	32.17	32.09	32.20	32.27	32.22	32.17	32.25	32.23	32.19	32.18
42	18.09	16.39	13.88	17.25	17.03	17.86	19.65	18.90	16.20	15.05	17.22	18.13
43	5.48	5.25	5.09	5.55	5.36	5.57	5.62	5.22	1.21	5.41	5.49	5.49
44	18.58	18.60	18.49	18.65	18.70	18.87	19.05	18.48	17.66	18.83	18.86	19.04
45	1.74	0.93	0.53	1.74	1.32	2.41	3.05	1.57	0.57	1.65	2.15	2.30
46	2.49	1.71	1.60	2.56	2.32	2.92	2.99	1.70	1.07	2.48	2.72	2.70
49	1.90	1.20	1.11	2.10	1.84	2.49	2.43	1.16	0.77	1.99	2.10	1.94
301	8.81	5.78	5.28	6.88	5.96	8.04	9.34	7.08	4.81	6.36	8.12	9.28
302	3.32	1.11	1.00	2.73	1.61	2.77	3.53	1.13	0.57	2.11	2.85	3.35
303	3.60	1.34	1.38	2.58	1.87	2.68	3.23	1.28	1.12	2.30	2.66	2.67

Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee--Continued

Well No.	Dates of measurement											
	10/03/78	10/17/78	10/31/78	11/15/78	11/28/78	12/18/78	1/05/79	1/26/79	2/20/79	3/07/79	3/22/79	4/11/79
3	8.92	10.47	10.58	10.07	7.28	7.78	5.71	5.87	5.75	4.92	6.77	5.97
9	20.88	21.07	21.23	21.19	19.81	19.34	17.85	18.04	19.18	16.96	19.24	19.13
15	28.48	28.71	28.96	28.81	27.71	27.00	20.43	22.19	26.34	19.34	26.57	26.36
16	28.72	28.71	28.72	28.68	28.68	28.70	22.70	26.02	28.69	18.98	28.63	28.65
20	20.98	21.00	20.98	20.98	20.90	20.94	20.81	20.63	20.69	20.76	20.83	20.85
21	25.54	25.54	25.58	25.59	25.47	25.16	24.43	24.49	24.83	24.44	25.00	24.74
22	15.20	15.53	15.82	16.04	14.04	13.26	10.44	10.45	11.45	9.15	11.85	10.12
23	5.45	6.00	6.36	6.40	2.94	2.68	0.84	1.01	1.50	0.25	2.37	1.42
32	10.40	11.05	11.54	11.49	8.82	7.89	6.58	6.44	6.92	6.45	7.37	7.22
41	32.23	32.20	32.17	32.25	32.23	32.21	31.84	32.22	32.14	32.47	32.23	32.24
42	19.00	19.35	20.16	21.15	17.93	14.39	11.56	11.95	13.72	10.95	14.51	13.97
43	5.51	5.56	5.62	5.55	5.11	5.05	4.50	4.69	5.15	4.70	5.10	4.95
44	19.01	19.24	19.38	19.44	19.19	18.90	18.66	18.58	18.54	18.21	18.40	18.52
45	2.92	3.33	3.56	3.67	1.52	1.30	1.04	0.98	0.92	0.90	1.18	1.09
46	2.74	2.83	2.85	2.72	1.52	1.81	1.76	1.63	1.74	1.71	2.10	1.74
49	1.73	1.84	1.85	1.63	1.08	1.22	1.35	1.15	1.19	1.14	1.49	1.20
301	10.38	11.21	11.96	12.58	9.84	5.83	4.96	5.15	5.11	5.09	6.19	-
302	3.59	4.50	5.15	4.91	2.38	3.36	3.20	2.62	1.86	1.86	2.75	-
303	3.23	3.88	4.48	3.96	1.28	1.45	1.71	1.43	0.75	1.51	2.21	-

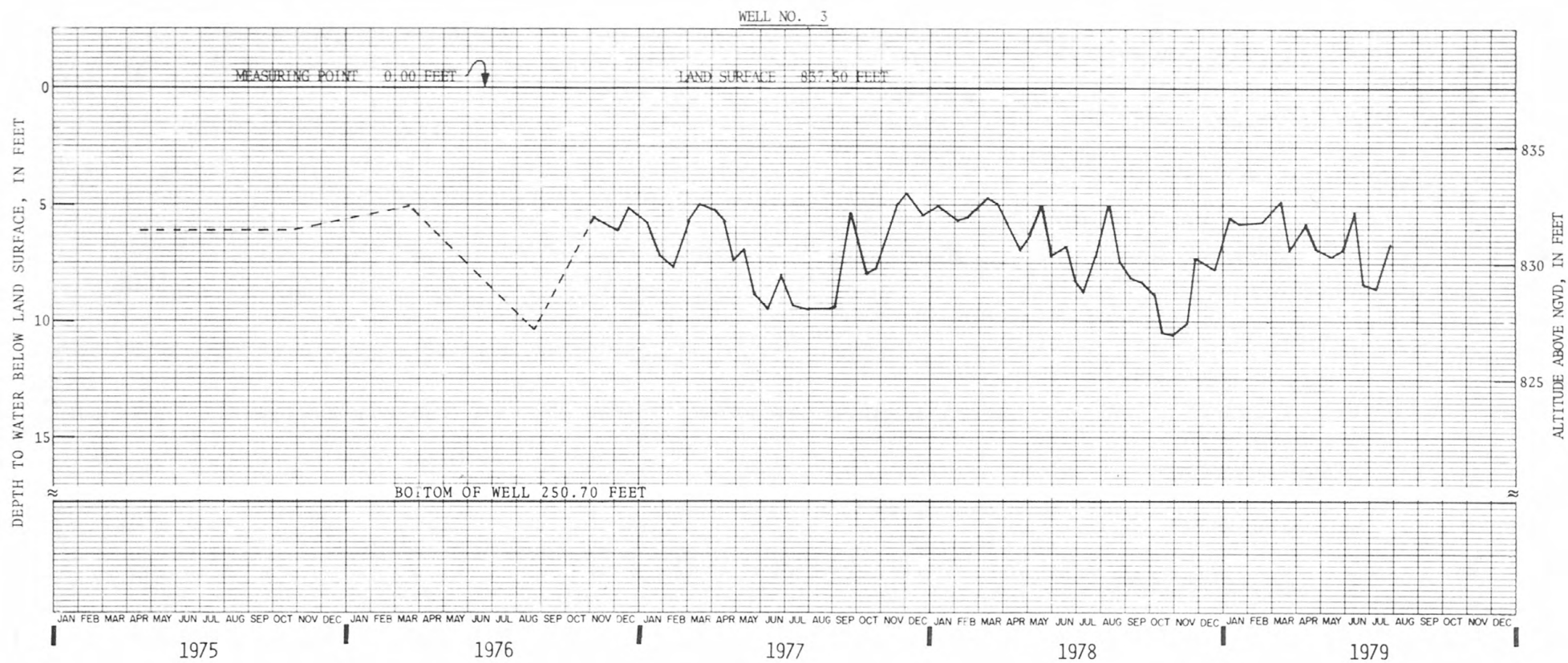
Table 2. -- Depth to water, in feet below land surface, in observation wells in and near Burial Ground 3, Oak Ridge National Laboratory, Roane County, Tennessee--Continued

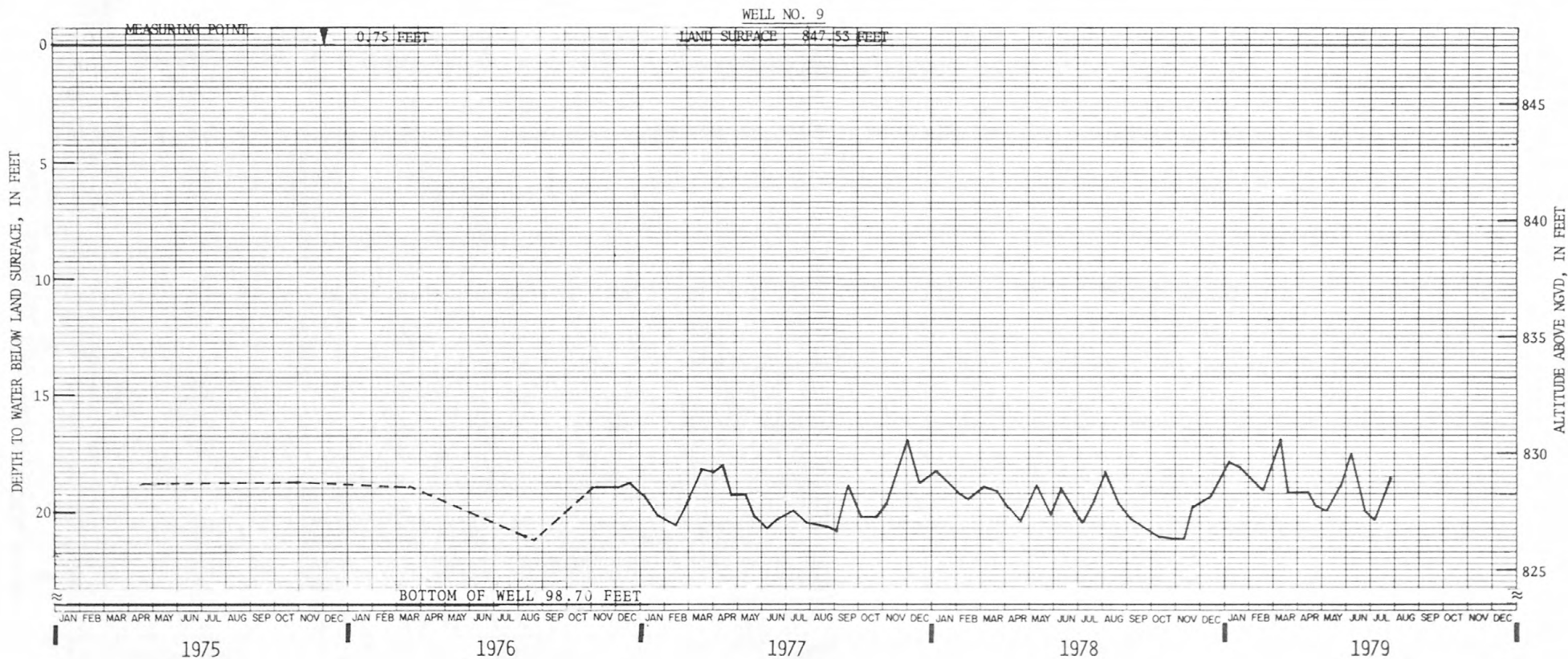
Well No.	Dates of measurement						
	4/27/79	5/11/79	5/30/79	6/06/79	6/20/79	7/05/79	7/30/79
3	6.90	7.24	6.85	5.30	8.44	8.76	6.39
9	19.63	19.97	18.99	17.59	19.86	20.30	18.55
15	26.85	27.16	30.86	23.96	32.73	32.82	28.84
16	28.62	28.16	28.71	21.06	28.68	28.61	28.60
20	20.88	20.92	20.88	20.85	20.89	20.92	20.89
21	25.07	25.24	25.02	24.65	25.34	25.40	24.76
22	11.07	13.06	11.11	9.56	13.71	14.28	11.61
23	1.95	3.30	1.84	0.89	4.60	4.92	2.51
32	7.61	8.21	7.78	6.72	9.24	9.86	7.73
41	32.25	32.28	32.21	32.11	32.25	32.23	32.24
42	15.65	15.97	15.01	12.59	16.29	18.14	12.83
43	5.08	5.25	5.11	4.65	5.39	5.47	5.02
44	18.34	18.56	18.66	18.43	18.75	18.89	18.53
45	1.02	1.43	1.14	0.95	1.89	2.03	1.18
46	1.75	2.28	1.98	1.85	2.79	2.95	1.96
49	1.10	1.39	1.54	1.44	2.45	2.44	1.46
301	6.73	7.25	5.61	5.07	6.57	7.60	4.83
302	2.44	3.08	3.29	2.91	3.20	3.73	2.82
303	1.20	1.95	1.36	1.28	2.39	2.37	1.16

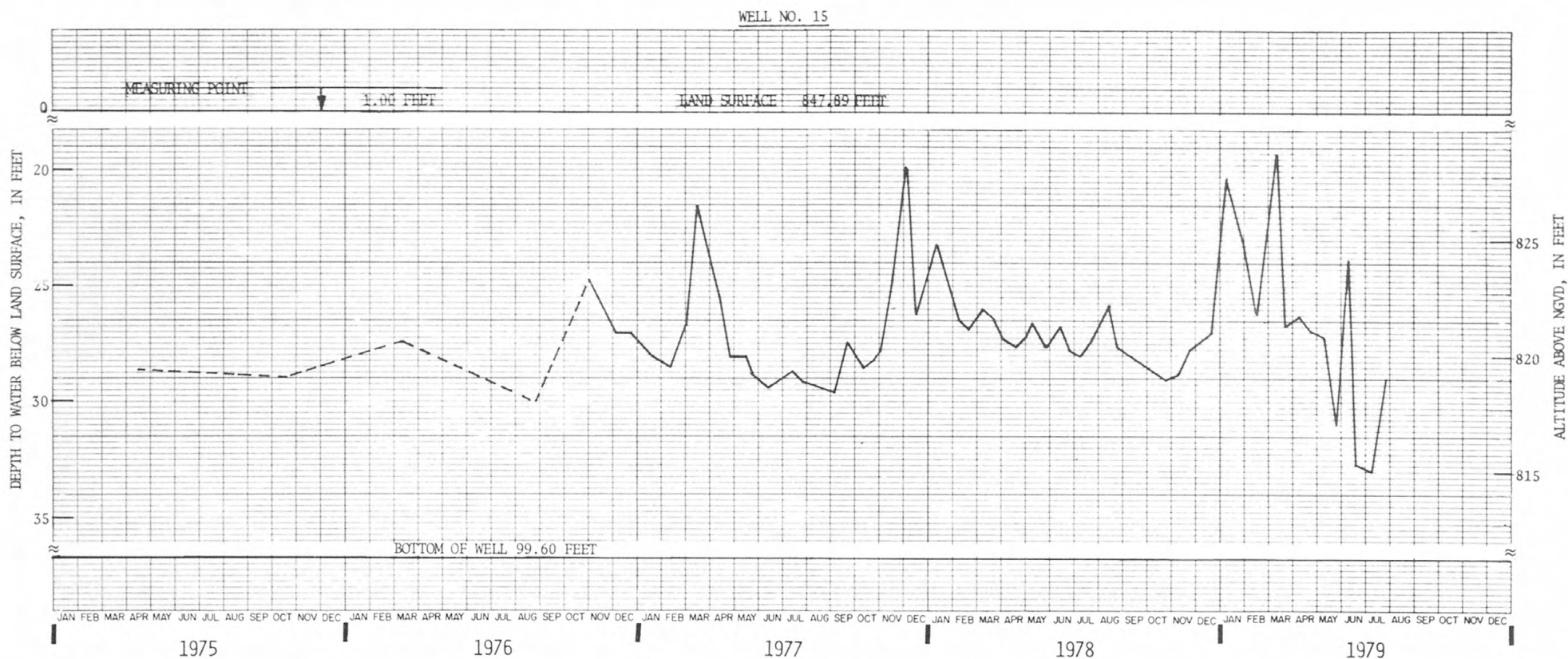




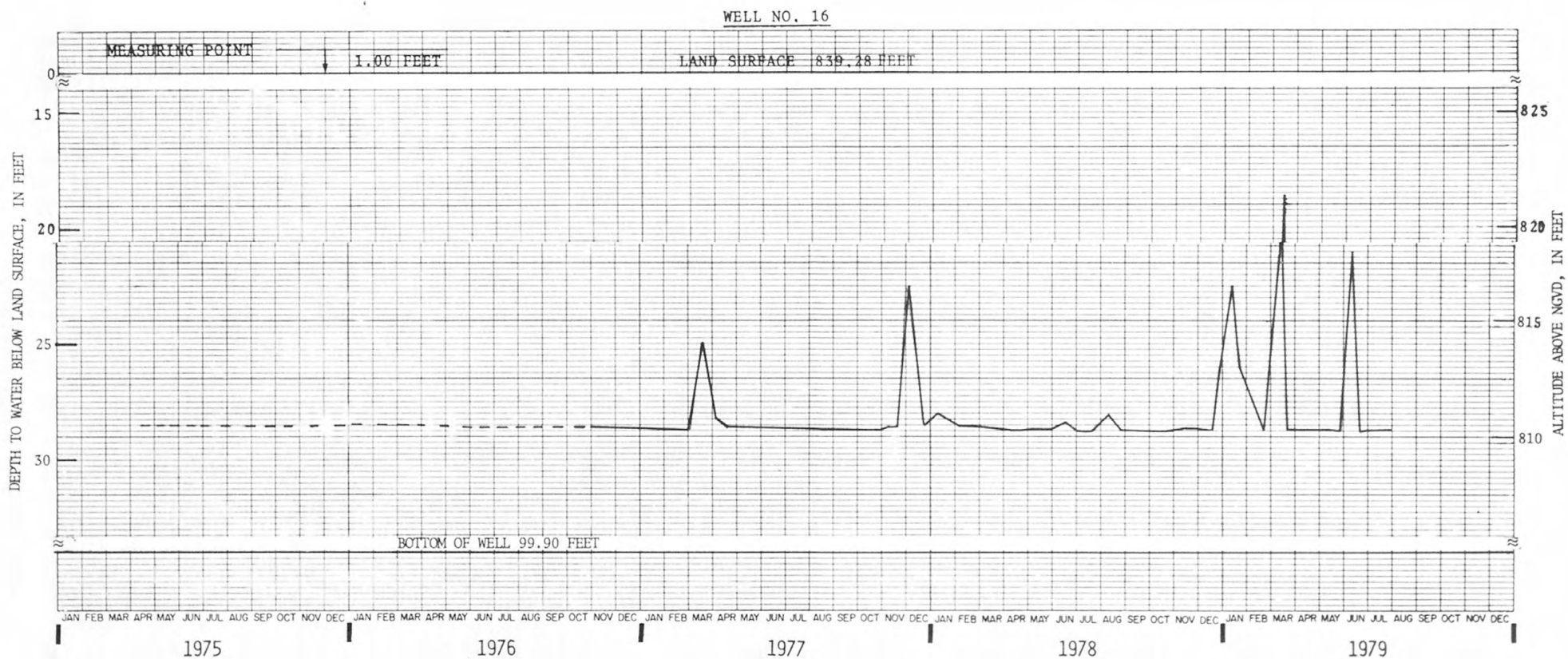
PART 3. -- HYDROGRAPHS

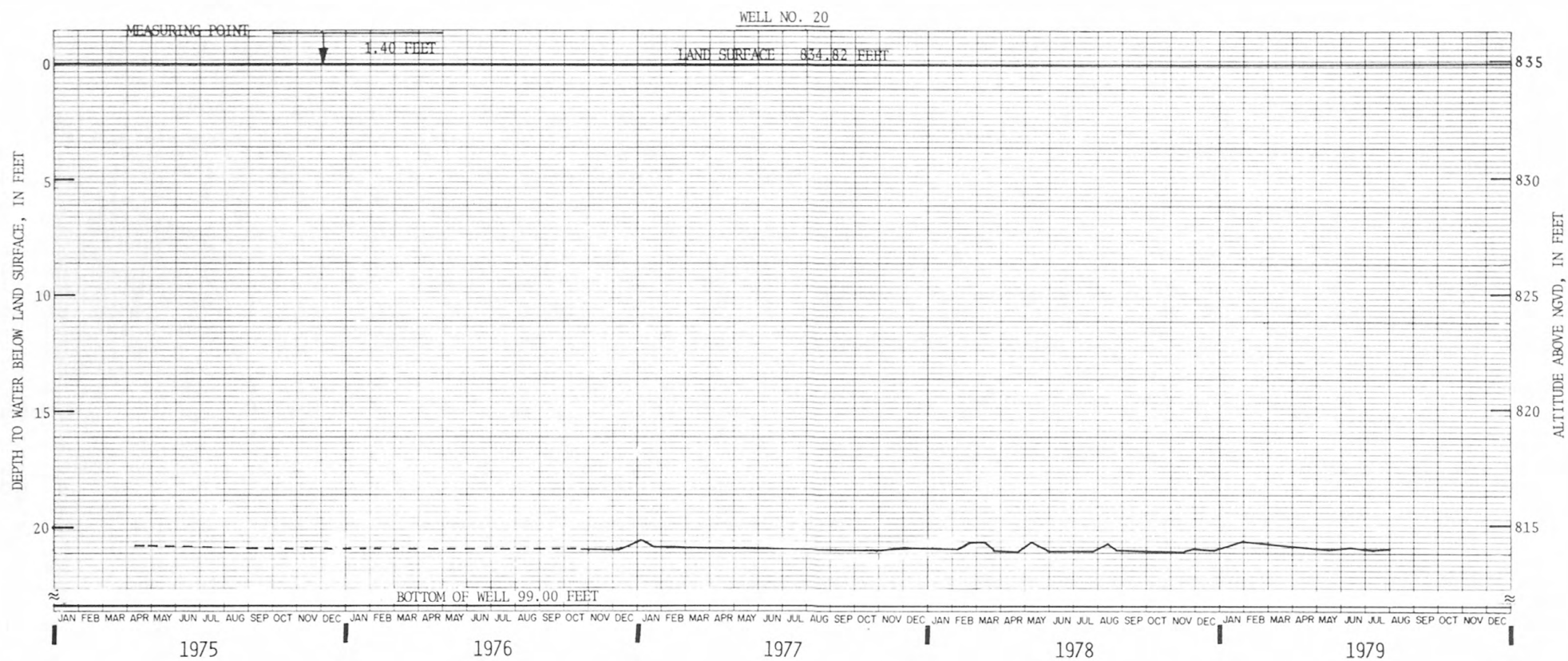


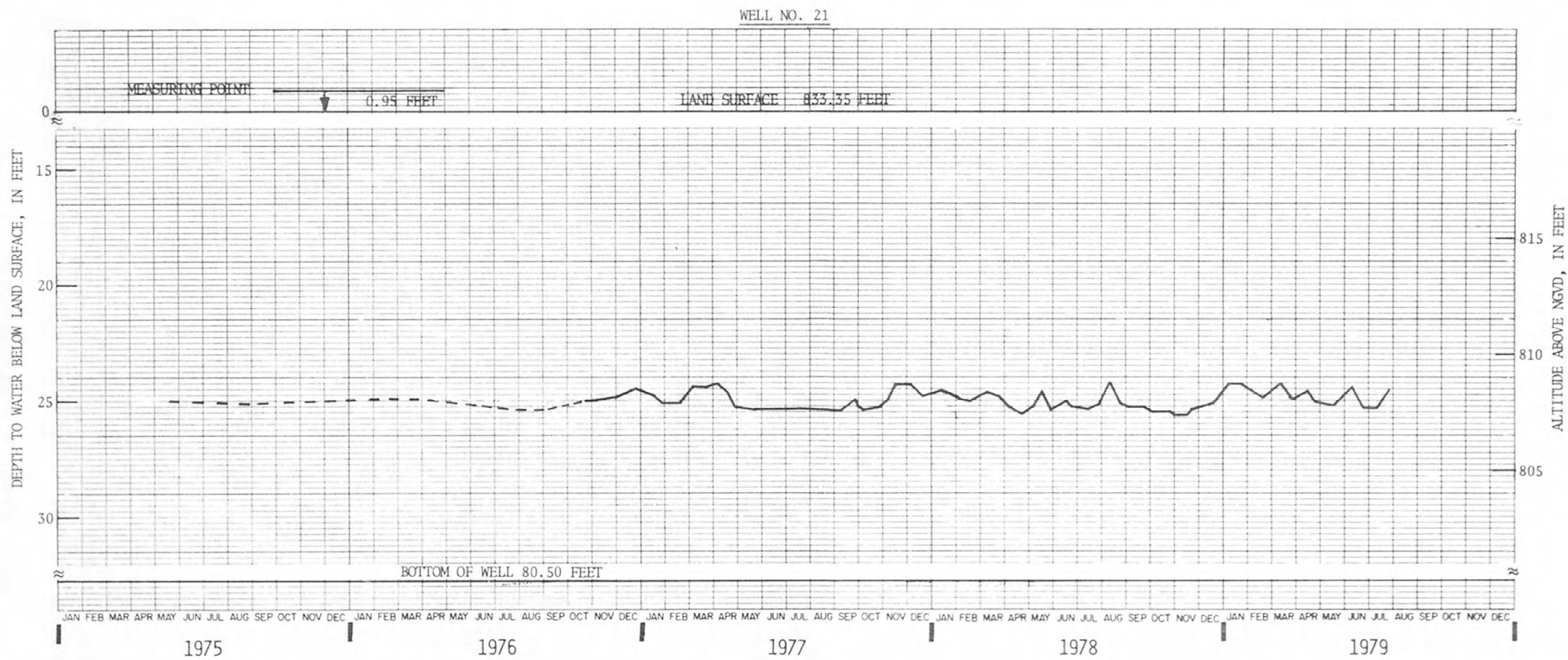


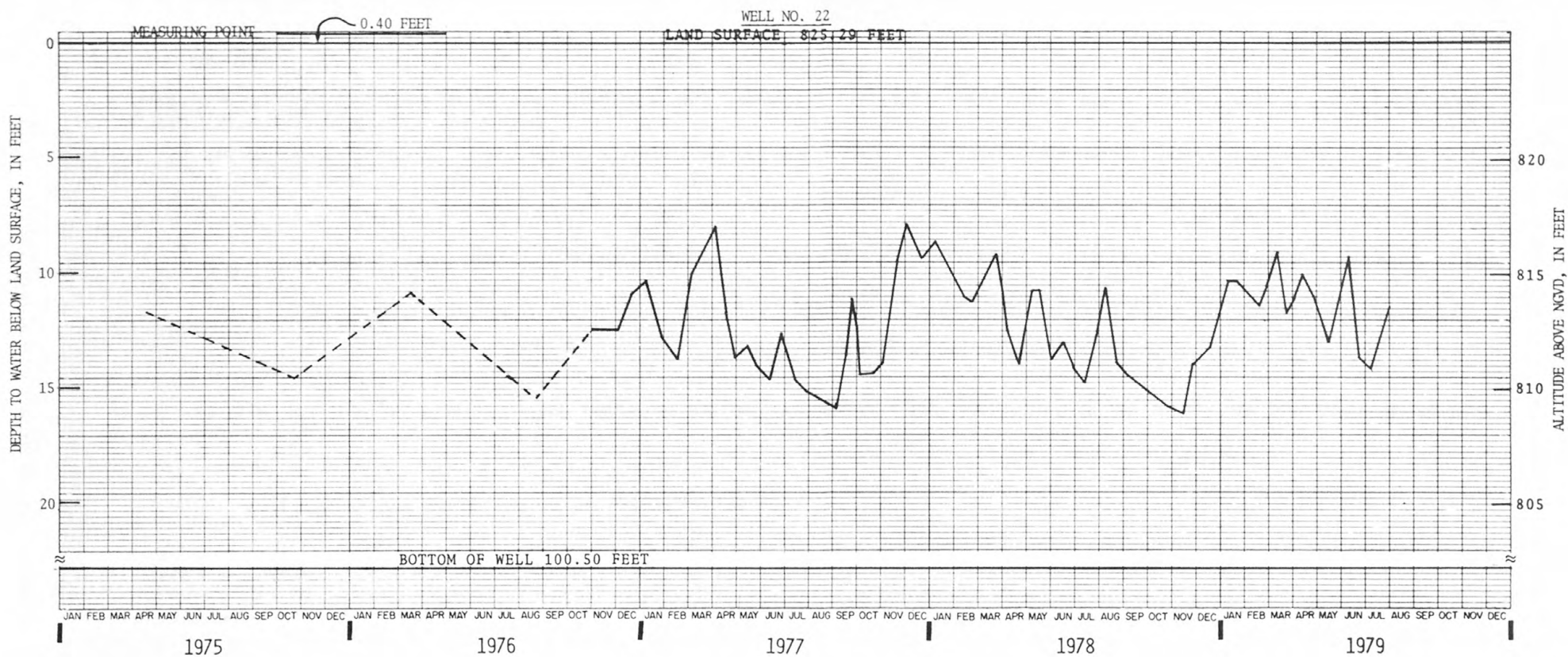








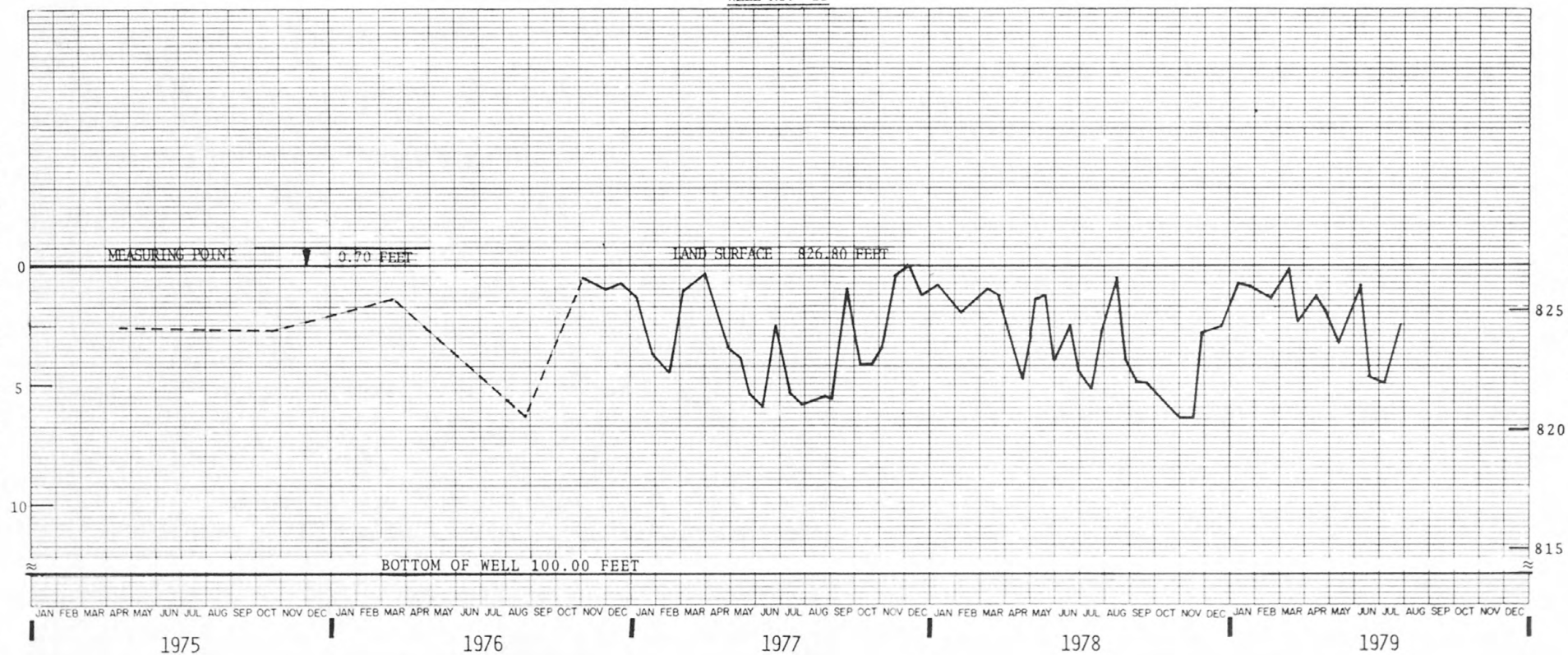


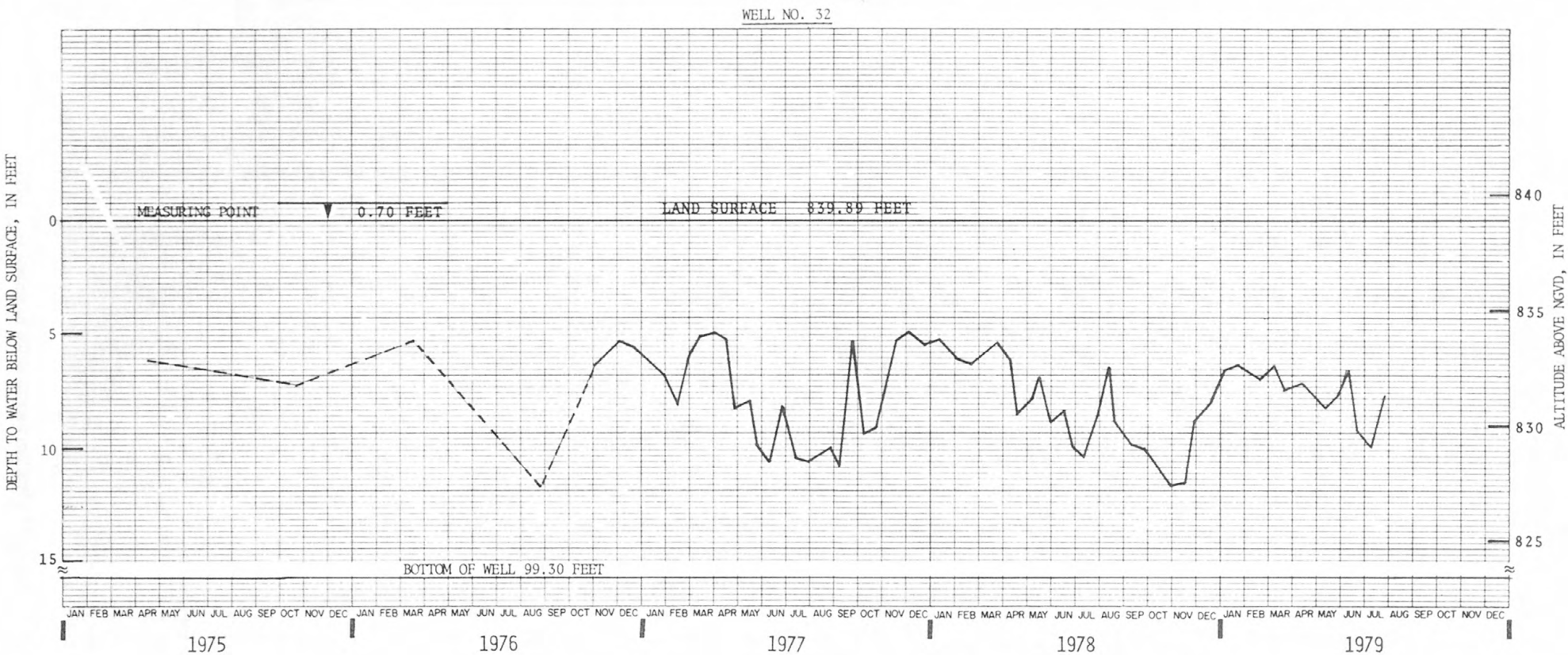


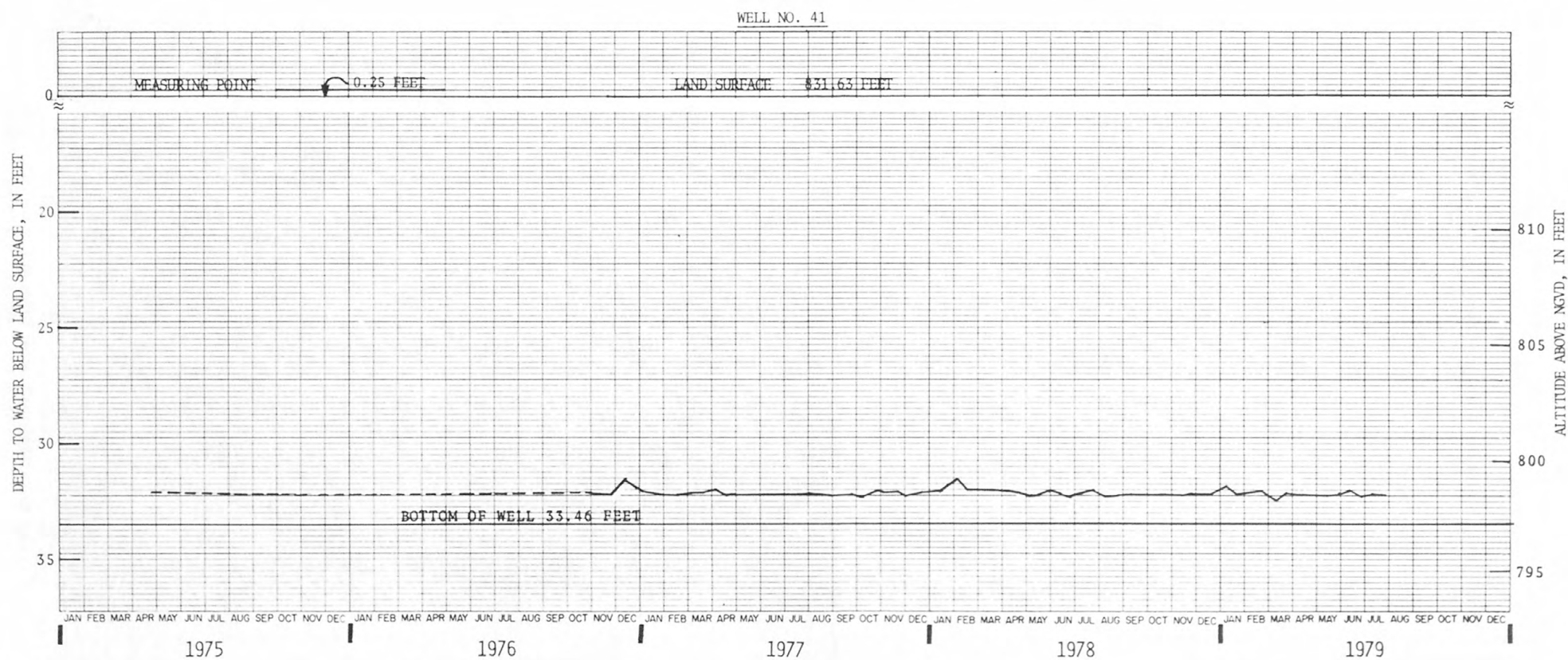


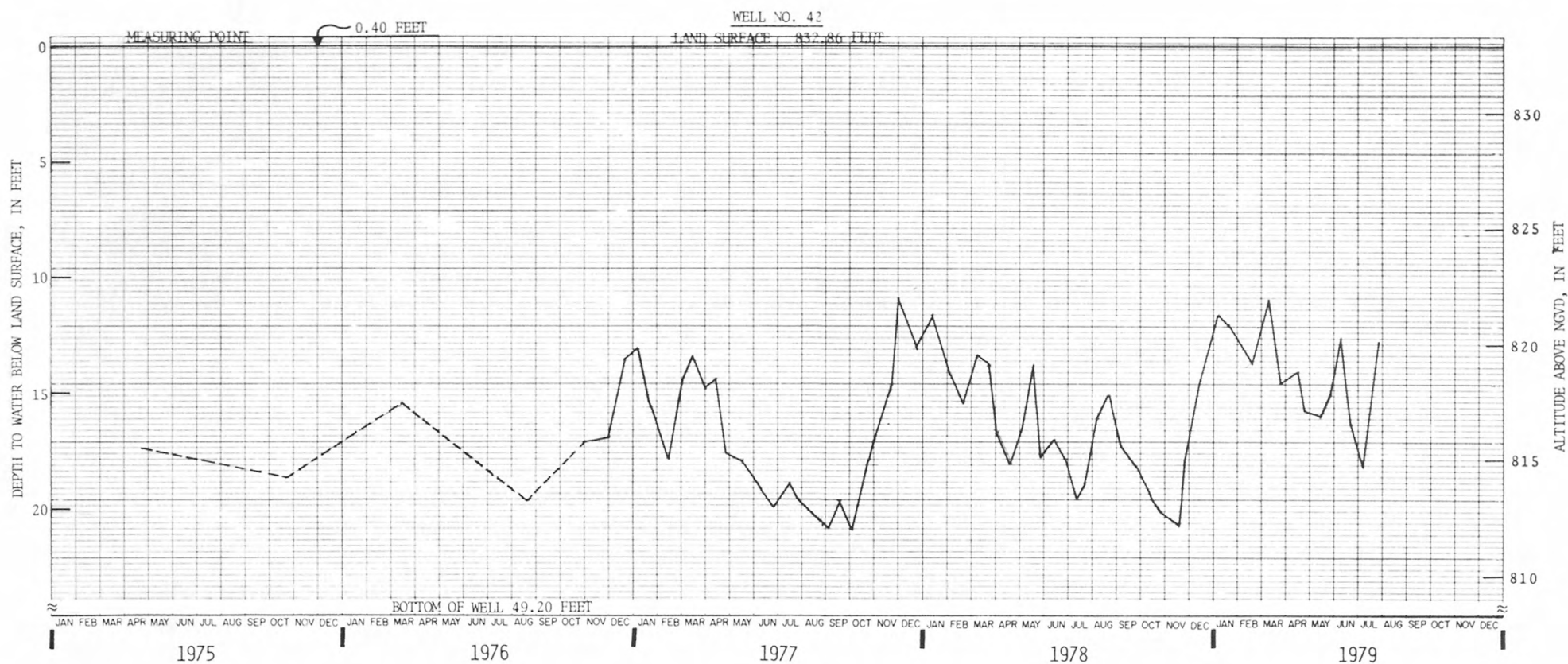
WELL NO. 23

DEPTH TO WATER BELOW LAND SURFACE, IN FEET

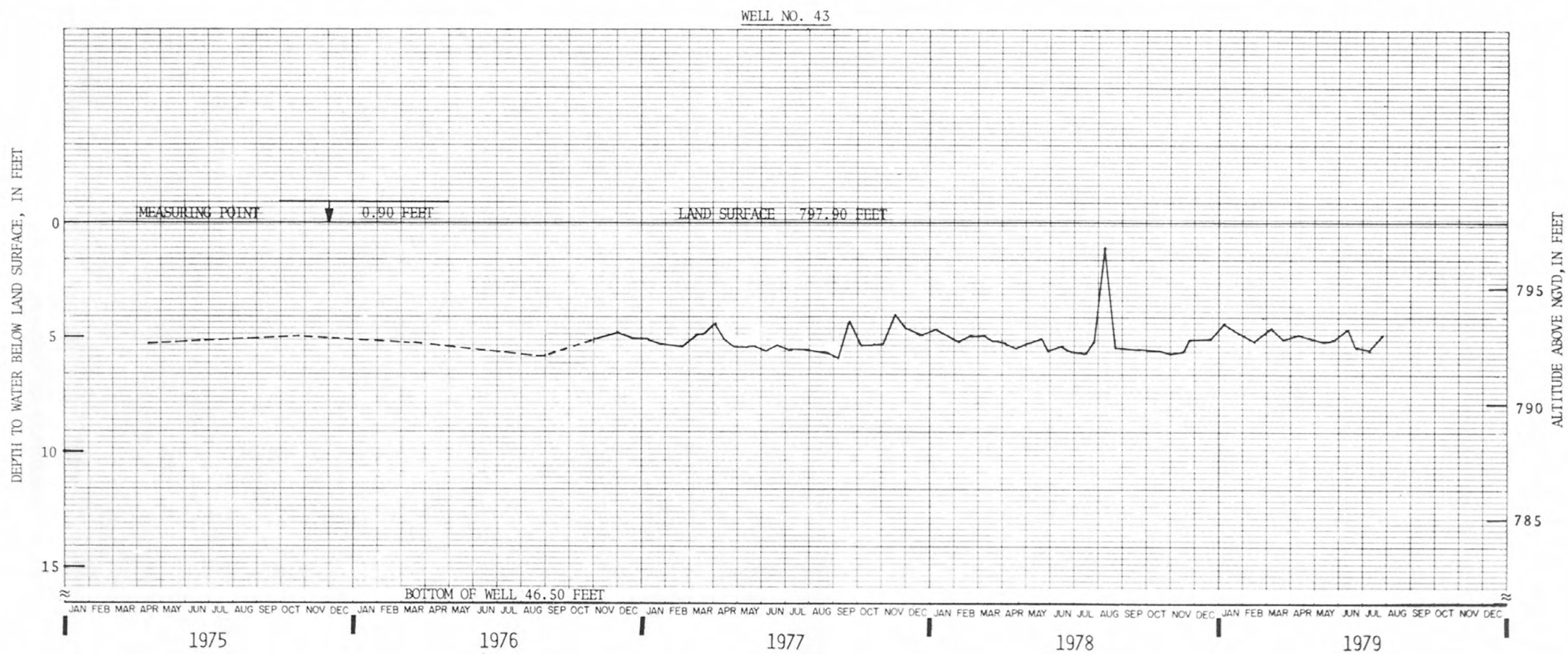


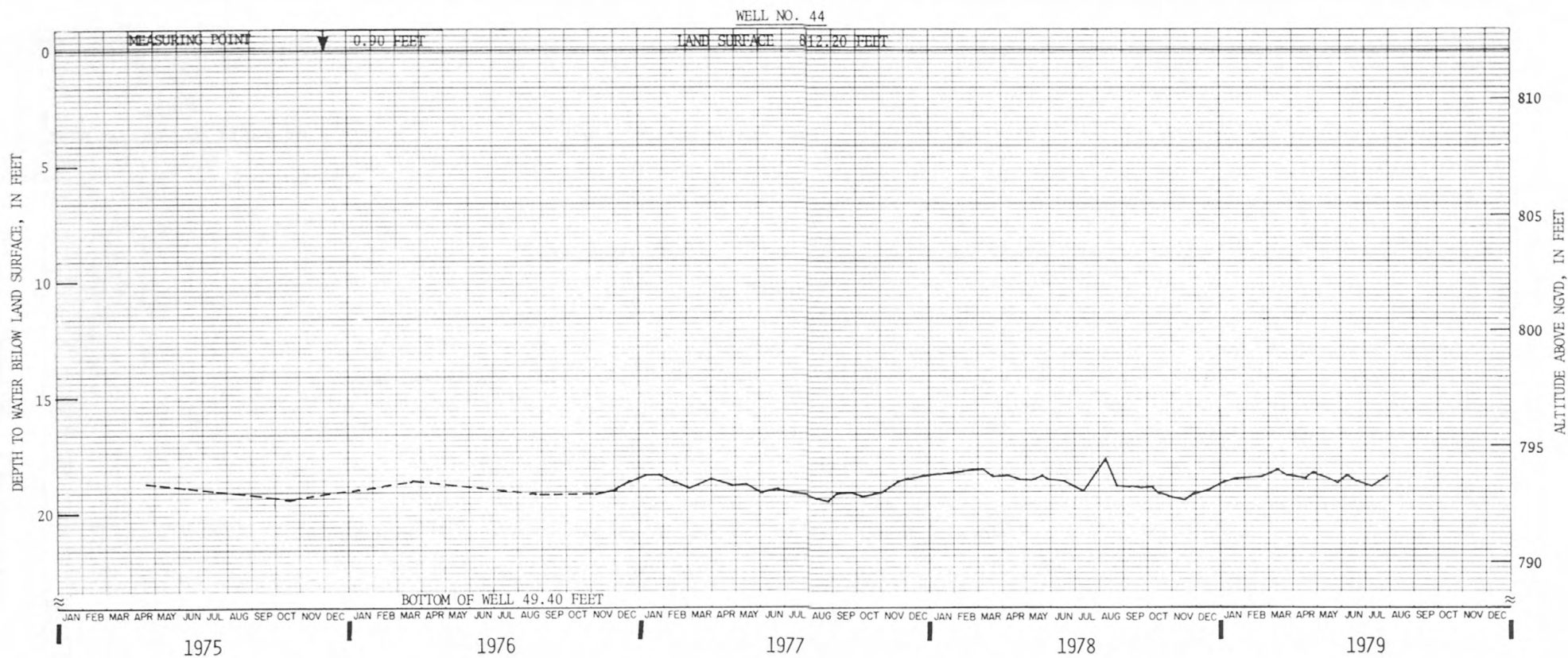




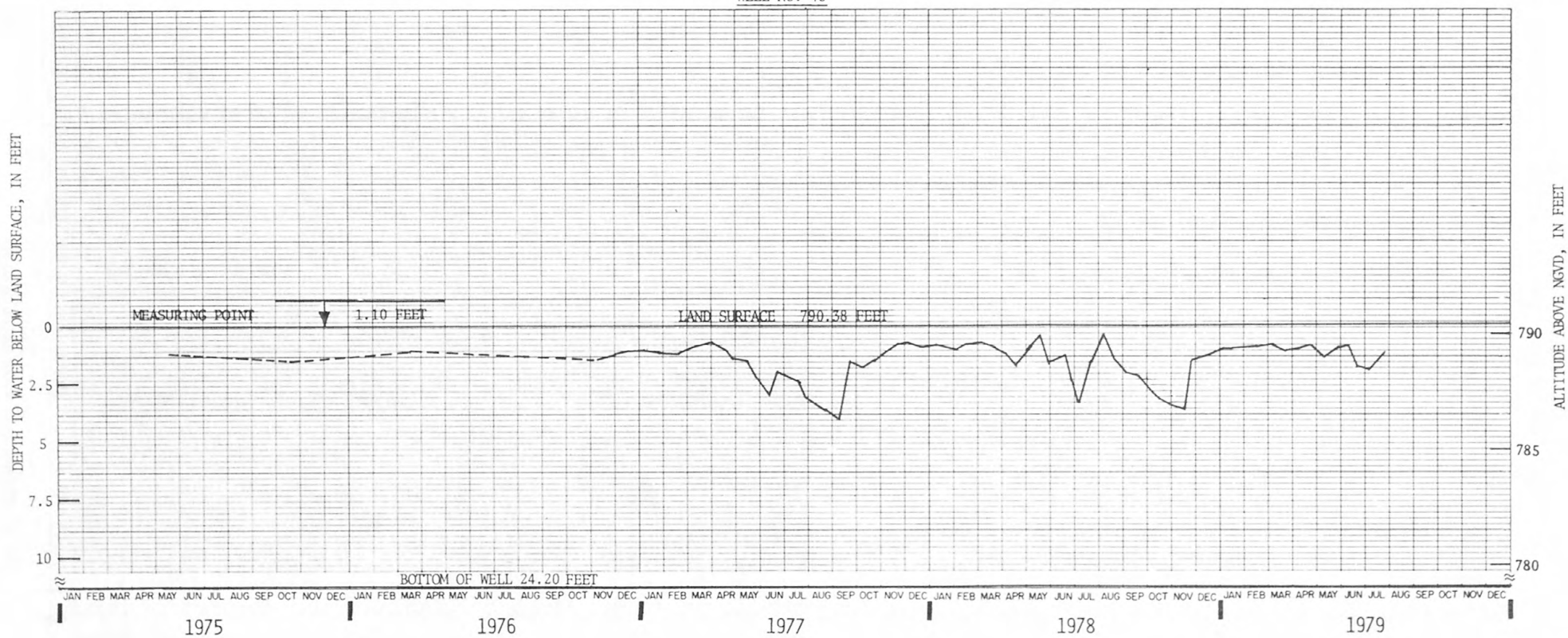


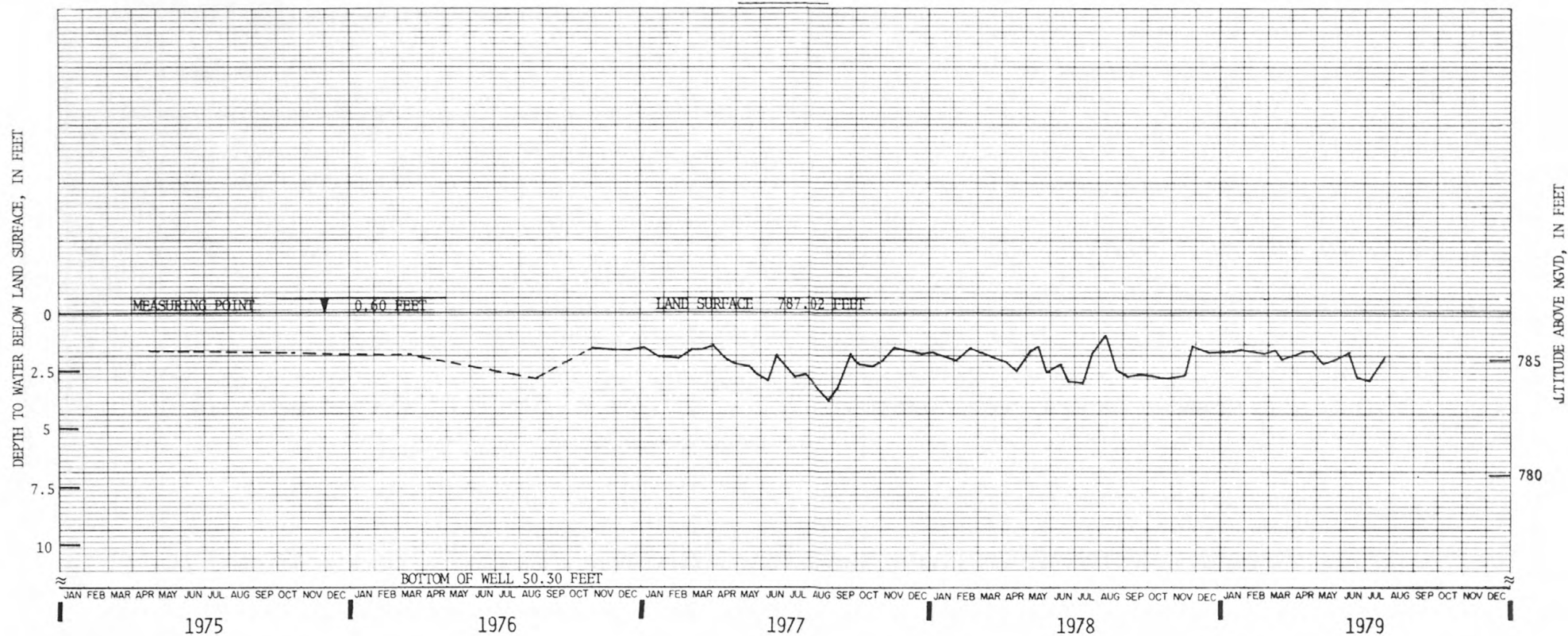


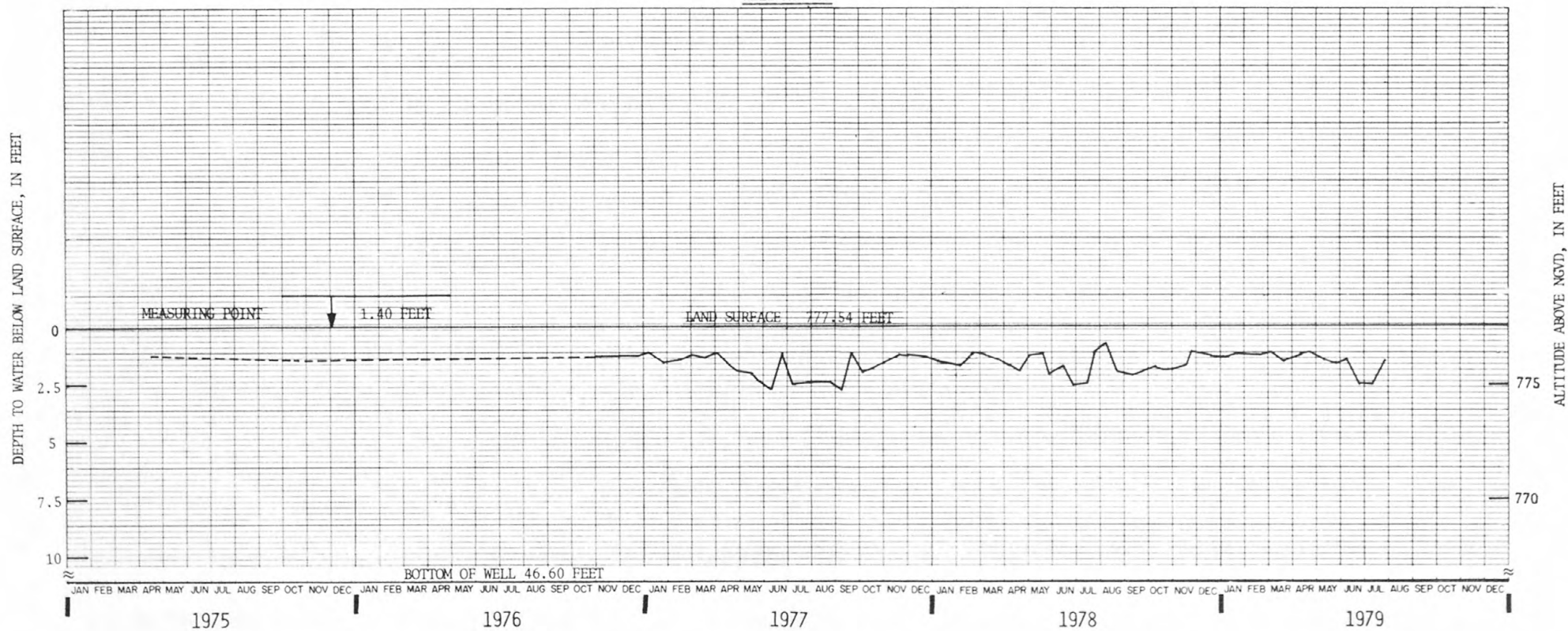




WELL NO. 45

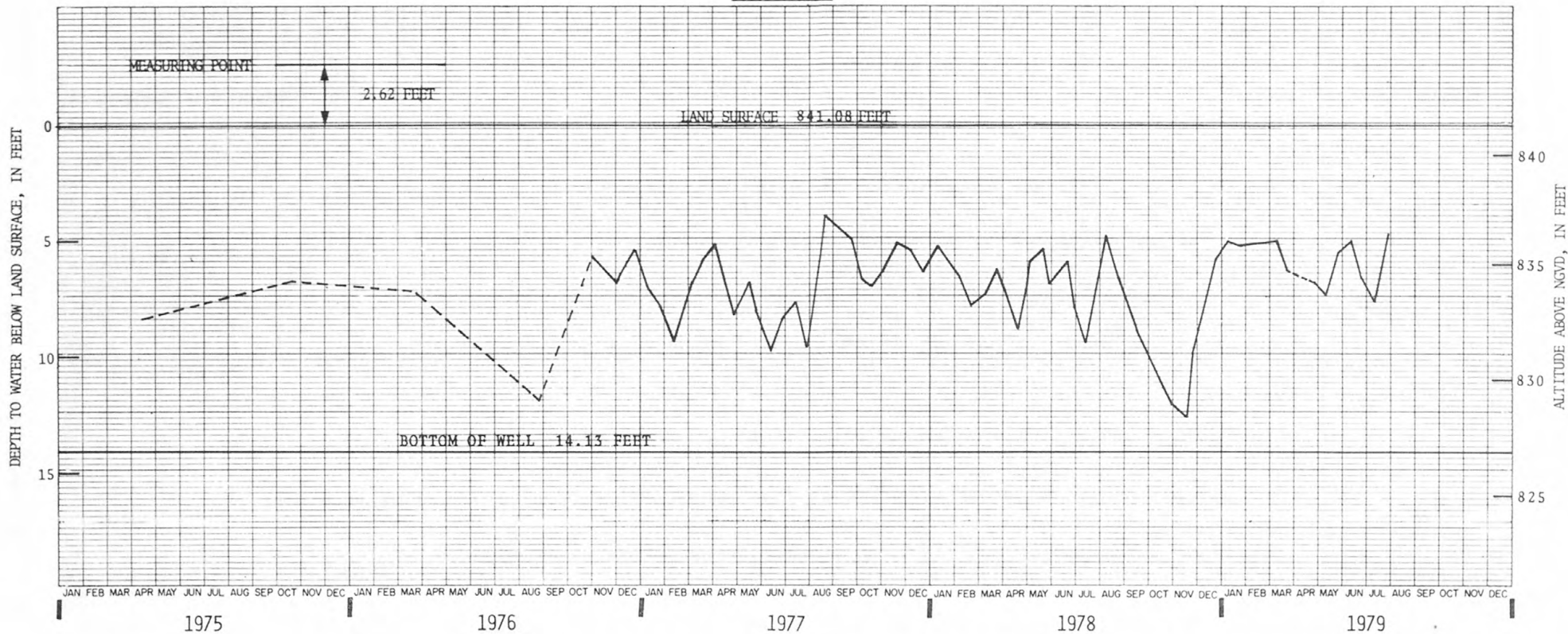




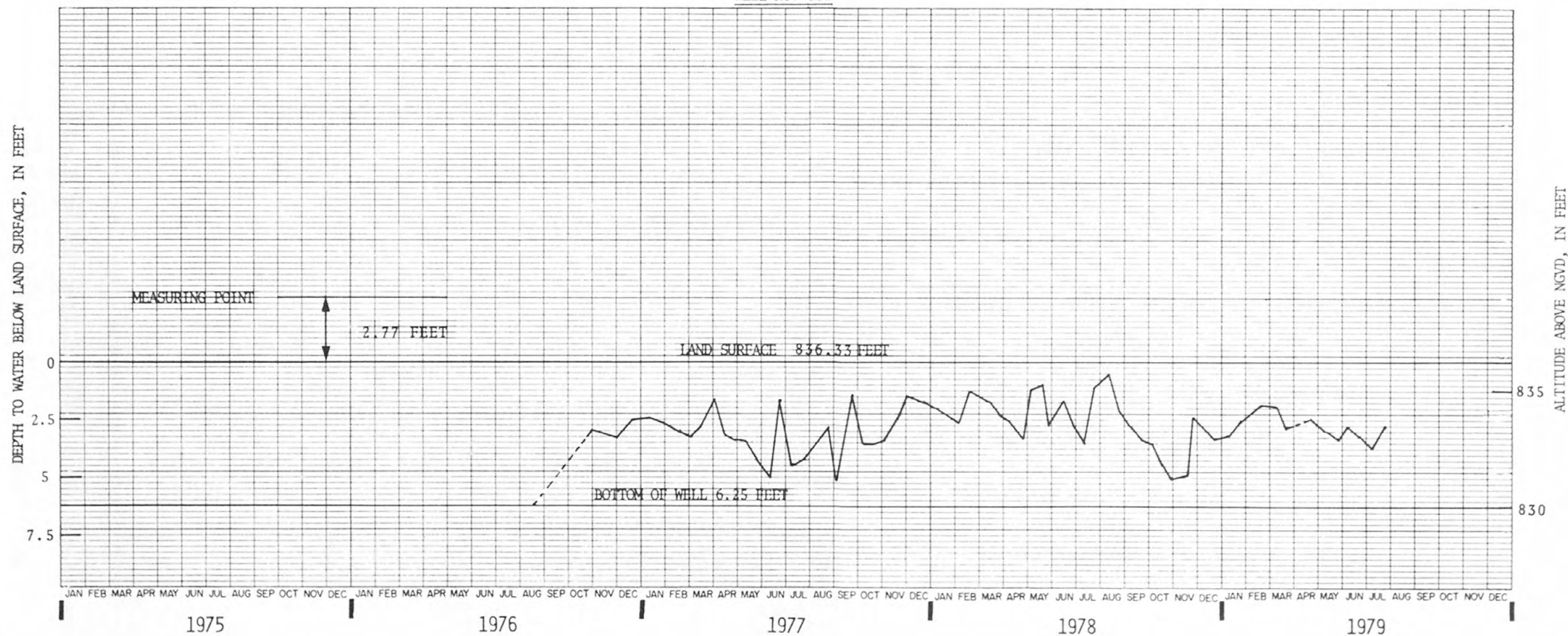




WELL NO. 301



WELL NO. 302



WELL NO. 303

DEPTH TO WATER BELOW LAND SURFACE, IN FEET

MEASURING POINT

2.37 FEET

LAND SURFACE 831.53 FEET

BOTTOM OF WELL 6.16 FEET

ALTITUDE ABOVE NGVD, IN FEET

830

825

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

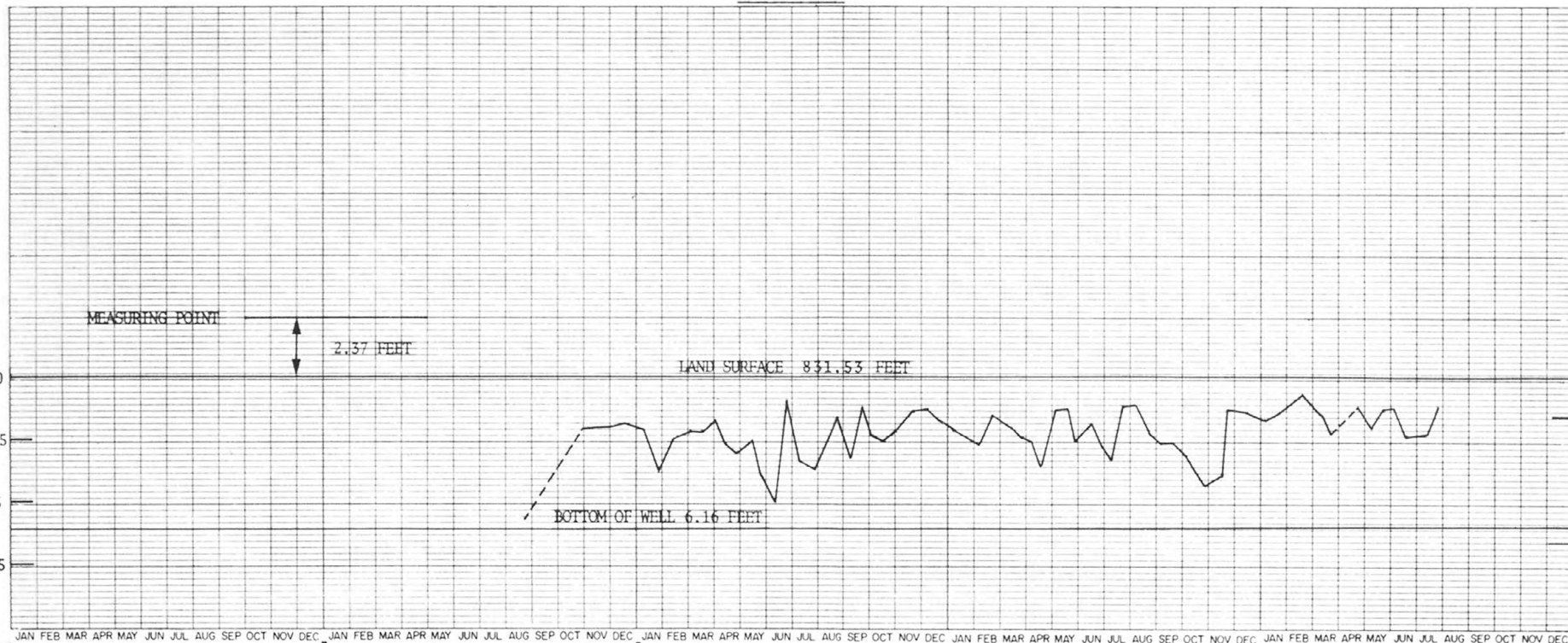
1975

1976

1977

1978

1979



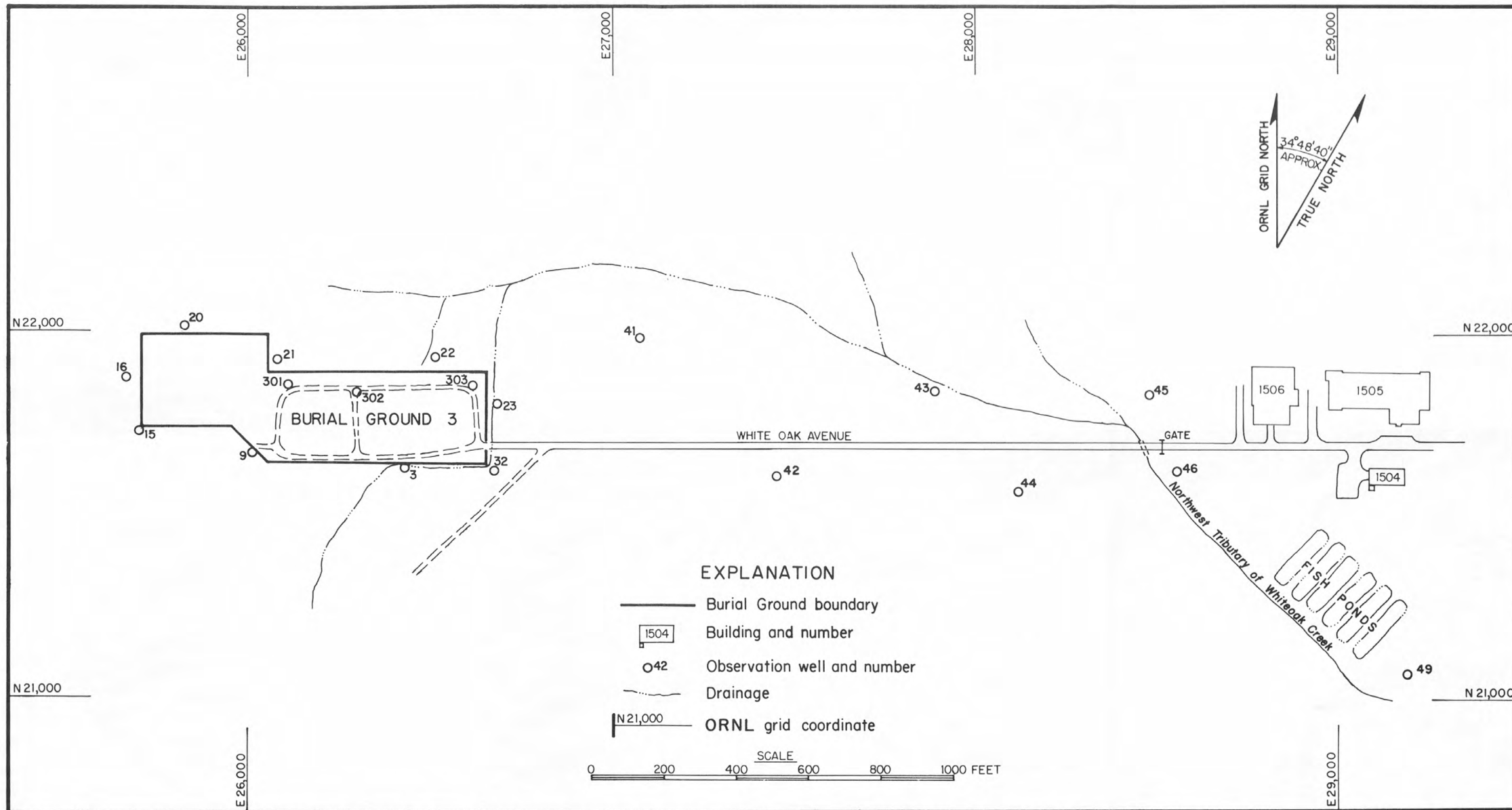


Figure 2.-- Map of Burial Ground 3 and vicinity, showing the locations of observation wells (revised from  
 -35- an unnumbered drawing by Engineering Division, Union Carbide Corp. - Nuclear Division).









