GROUND WATER REPORT NUMBER 2

STATE OF OREGON

CHRIS L. WHEELER
STATE ENGINEER

RECORDS OF WELLS, WATER LEVELS AND CHEMICAL QUALITY OF GROUND WATER IN THE MOLALLA-SALEM SLOPE AREA, NORTHERN WILLAMETTE VALLEY, OREGON

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PREPARED IN COOPERATION WITH
THE UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
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FOREWORD

An investigation of the ground-water resources of the northern Willamette Valley was begun in 1960 as a cooperative program between the Ground Water Branch of the U.S. Geological Survey and the Oregon State Engineer.

The northern Willamette Valley area is one of the fastest growing areas of ground-water use within the State. The purpose of the investigation is to obtain an understanding of the availability, movement, and chemical quality of the ground-water resources of the area. This information is needed to obtain an optimum development of the ground-water resources of the area and to aid in the prevention of problems of overdevelopment and pollution.

The first phase of the program was the collection of well records, water-level records, and chemical-quality data. The records collected in the central part of the area were published in Ground Water Report No. 1, "Records of Wells, Water Levels and Chemical Quality of Ground Water in the French Prairie-Mission Bottom Area, Northern Willamette Valley, Oregon." This report covers the area lying to the east of the area covered by Ground Water Report No. 1. These reports are being prepared to aid in the location and development of the ground-water resources of the area and to serve as a supplement to the forthcoming interpretive reports which will be published by the U.S. Geological Survey.

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Records of Wells, Water Levels, and Chemical Quality of Ground Water in the Molalla-Salem Slope Area, Northern Willamette Valley, Oregon

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By E. R. Hampton

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INTRODUCTION

Purpose of This Report and Relation to Other Studies

The increasing demand for ground water for rural, domestic, public (suburban) development, industrial, and irrigation uses has brought to sharp focus the need for an evaluation of the ground-water resources in the Molalla-Salem slope area. The availability of the ground water in the area is closely controlled by the geology, which is complex at places. Consequently, ground-water development in the Molalla-Salem slope area involves more risk than at some other places in the northern Willamette Valley.

The Molalla-Salem slope area is included in a previous report on the ground-water resources of the Willamette Valley by Piper (1942). In order to bring our knowledge of the ground-water resources up to date, a comprehensive study of the occurrence and availability of the ground water of the Molalla-Salem slope area is under way (1963). This study, which will result in an

interpretive report, is being conducted by personnel of the U.S. Geological Survey, and is jointly financed by the Oregon State Engineer and the Geological Survey.

A major part of any study of ground-water resources is the collection and compilation of data on existing wells. Those data, when integrated with data on the geology and climatology, form the basis for evaluation of the ground-water resources of an area. Pending the mapping and interpretation of geology and its relation to ground water, the best guides for local ground-water development are the records of existing wells and associated data. The purpose of this report is to make those data readily available in advance of the interpretive report.

A similar report, presenting records of wells, water levels, and chemical quality of ground water in the French Prairie area, which is adjacent to and west of the Molalla-Salem slope area, has been published as Ground Water Report No. 1 of the Oregon State Engineer (Price, 1961).

Location and General Features of the Area

The Molalla-Salem slope area lies along the eastern side of the northern Willamette Valley, Oreg., and extends eastward into the foothills of the

Cascade Range. It includes most of the area between lat 44°45' N. to 45°15' N., and long 122°18' W. to 123°W. The boundaries and general features of the area are shown on figure 1.

The nearly level valley plain and gently ascending slopes of the coalesced alluvial fans constitute the western one-third of the area. The eastern two-thirds of the area is characterized by steep-sided valleys, narrow, flat-topped interfluvial ridges, or rounded, rolling hills--features common to the foothills of the northwestern Cascade Range in Oregon.

Occurrence and Availability of Ground Water

Most of the high-yield wells in the Molalla-Salem slope area are located on or adjacent to the valley plain and obtain water from alluvial (sand and gravel) aquifers that underlie the plain, or that underlie the alluvial fans descending from the foothill slopes to the valley. A few wells in that part of the area obtain large quantities of water from discontinuous bodies of basalt that are exposed in the foothills and that, at places, dip beneath the alluvial fill of the valley. Older rocks, consisting of marine sandstone and shale and volcanic rocks of early Tertiary age, are tapped by a few wells and yield moderate to small quantities of water, which locally is too saline for most uses (table 3).

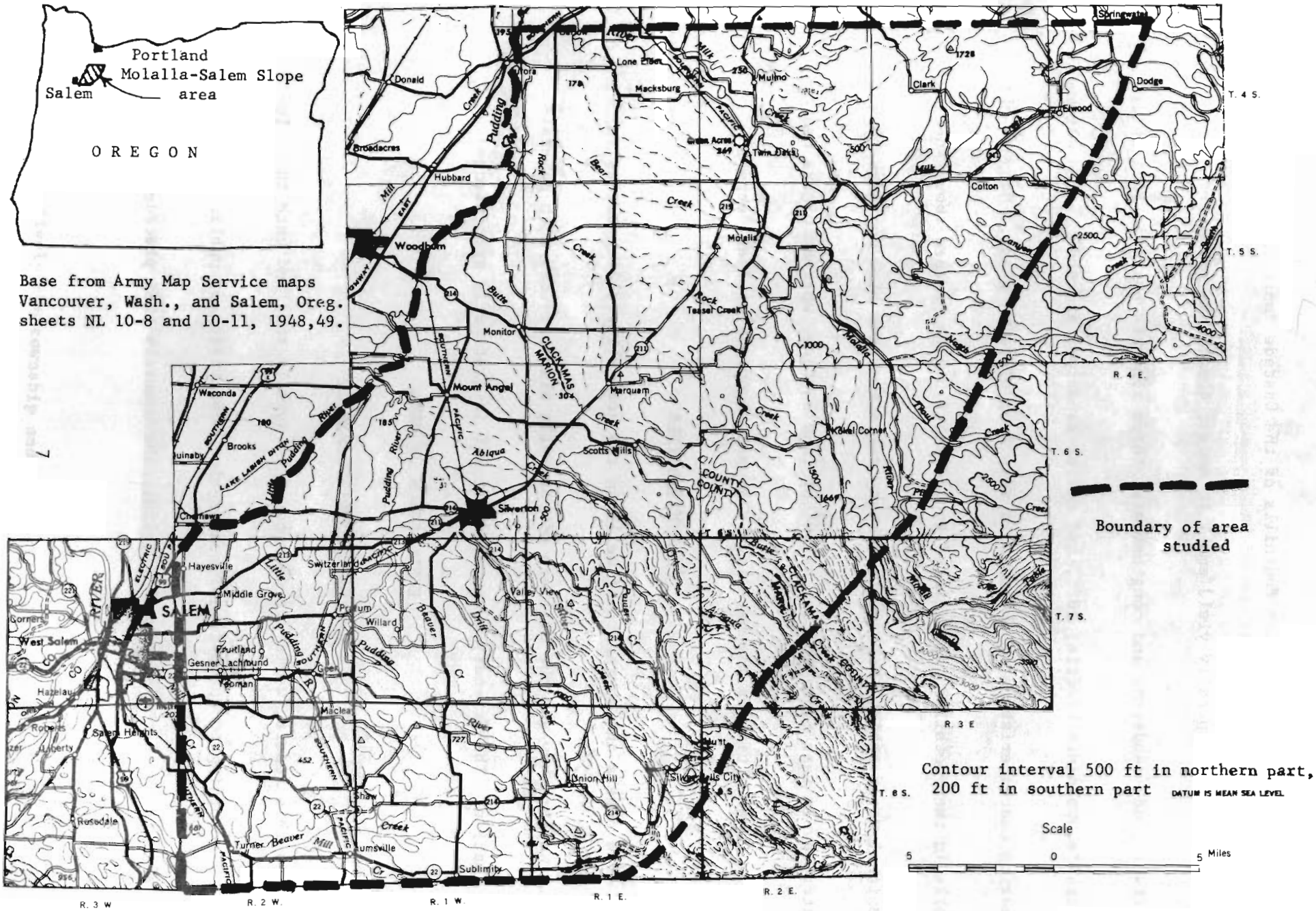


Figure 1.--Map showing boundaries and general features of the Molalla-Salem slope area, Oregon.

The wells located in the foothills of the Cascade Range tap a variety of rock units that generally yield small to modest quantities of water. These units include sandstone and conglomerate, three separate basaltic lava units, andesite, volcanic breccia, tuff, and marine sandstone and shale. The water-bearing characteristics of these units vary from place to place. Many of the wells in the foothills tap isolated ground-water bodies perched above the regional water table. Consequently, many wells situated high on ridges have water levels less than 100 feet below the land surface, whereas others nearby and at lower altitudes may have levels several hundreds of feet deeper.

Acknowledgments

The owners and operators of wells in the area allowed free access to their wells; they and the drillers of the wells also provided much general information. The friendly cooperation of all is gratefully acknowledged.

EXPLANATION OF DATA

Well-Numbering System

In this report, wells are designated by symbols that indicate their location according to the official rectangular subdivision of public lands. For example, in the symbol for well 5/1-15H1, the numerals that precede the hyphen

indicate respectively the township and range (T. 5 S., R. 1 E.) south and east of the Willamette base line and meridian. Townships west of the meridian are indicated by a "W" after the numeral. The number after the hyphen indicates the section (sec. 15), and the letter indicates the 40-acre subdivision of that section (fig. 2). The final digit is the serial number of that particular well. Thus, well 5/1-15H1 is in the SE¼NE¼ sec. 15, T. 5 S., R. 1 E., and was the first well in that tract to be listed. It is identified on the map (figs. 3 and 4) by the letter and serial number that follow the section number--that is, H1.

Records of Wells

Table 1 contains records of 142 irrigation wells, 271 domestic wells, 20 public-supply wells, 7 industrial wells, 2 stock wells, 1 observation well, and 8 unused wells. The locations of these wells are shown on figures 3 and 4, maps of the Molalla-Salem slope area. Many of the records in the table were selected as representative for areas from which many other well records are available; the additional records are on file at the offices of the Oregon State Engineer, Salem, and of the U.S. Geological Survey, Portland, Oreg.

In the use column of the table, only the major uses of the well water are shown. Some irrigation wells are used also for domestic and stock supplies,

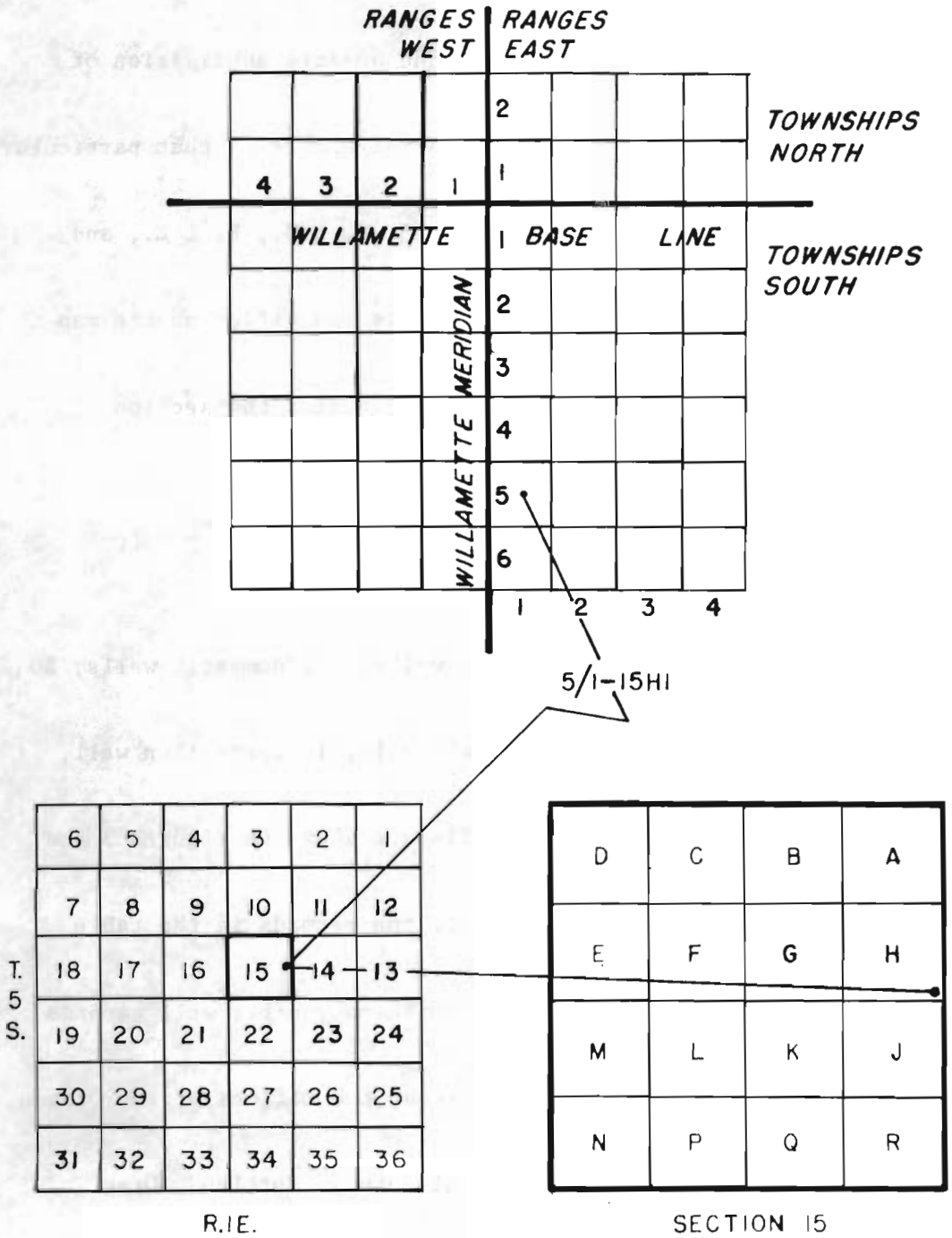


Figure 2.—Diagram showing well-numbering system.

and some of the wells classified as domestic also furnish stock supplies. All wells classified as unused were being maintained when visited, unless otherwise noted in the remarks column of the table. Public-supply wells include those supplying nonirrigation water for parks and schools, municipal-supply wells, and private wells supplying group housing.

Most of the temperatures recorded in the remarks column were reported by the well drillers and presumably were measured when the wells were completed or tested. Additional temperature measurements were made at some wells when water samples were collected and are listed in table 3 (chemical analyses).

The records of nearly all the wells listed in this report were obtained from well drillers' or owners' reports that were submitted to the Oregon State Engineer. The writer visited the wells to check their locations and to gather auxiliary data.

Drillers' Logs of Wells

Table 2 contains logs of 423 wells in the Molalla-Salem slope area. Most were obtained from well drillers' reports, and some from owners' well-registration forms submitted to the State Engineer. Descriptions of materials penetrated during construction of the wells may vary somewhat, depending on the terminology of the person compiling the log. For example, compacted clay might

be called "clay," "shale," or "hardpan." Similarly, compacted gravel and clay may be called "dirty gravel," "conglomerate," "cemented gravel," "rock and clay," or (rarely) "rock." These logs have been edited for consistency of presentation, but were not otherwise changed; however, for the purpose of clarity, the writer's interpretations have been added in parentheses after some of the drillers' designations.

Chemical Analyses of Ground Water

Nineteen analyses of water from wells, and one analysis of water from a spring are included in table 3. Nineteen of the water samples were analyzed for most constituents usually reported in water analyses; one was analyzed for only a few major constituents. Nineteen of the analyses were by the U.S. Geological Survey, and the other by the Pittsburgh Testing Laboratory, Portland, Oreg.

Water-Level Fluctuations

Water-level fluctuations in four wells in the Molalla-Salem slope area are shown by hydrographs in figures 5 and 6. The hydrograph of well 6/1-7M1 (fig. 5) shows that in the 25 years (1938-62) during which levels were measured periodically, the maximum measured yearly fluctuation of the water table was about 16 feet, and the average yearly fluctuation was about 10 feet.

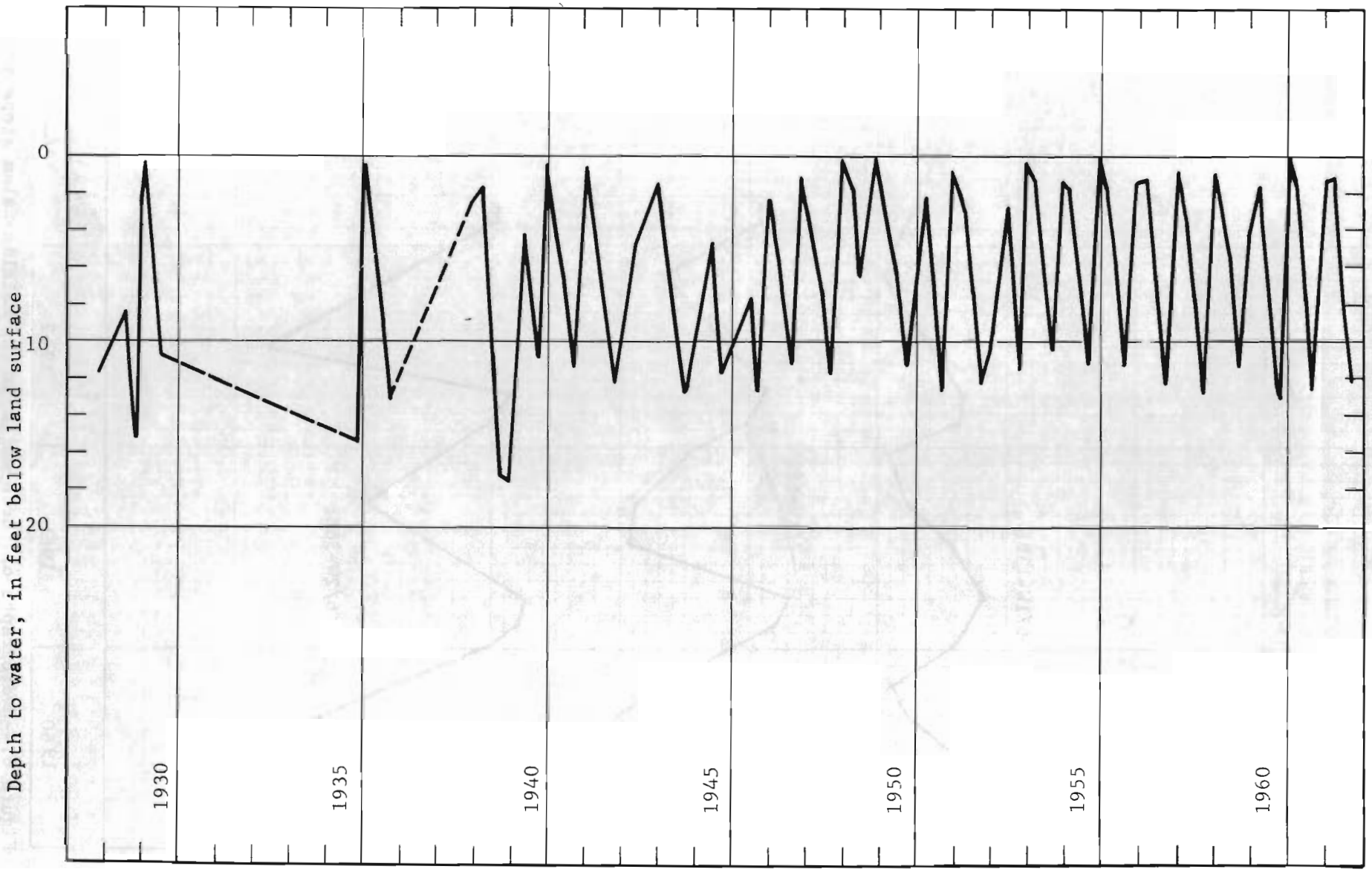


Figure 5.--Hydrograph of well 6/1-7M1 in the Molalla-Salem slope area for the period 1928-62.

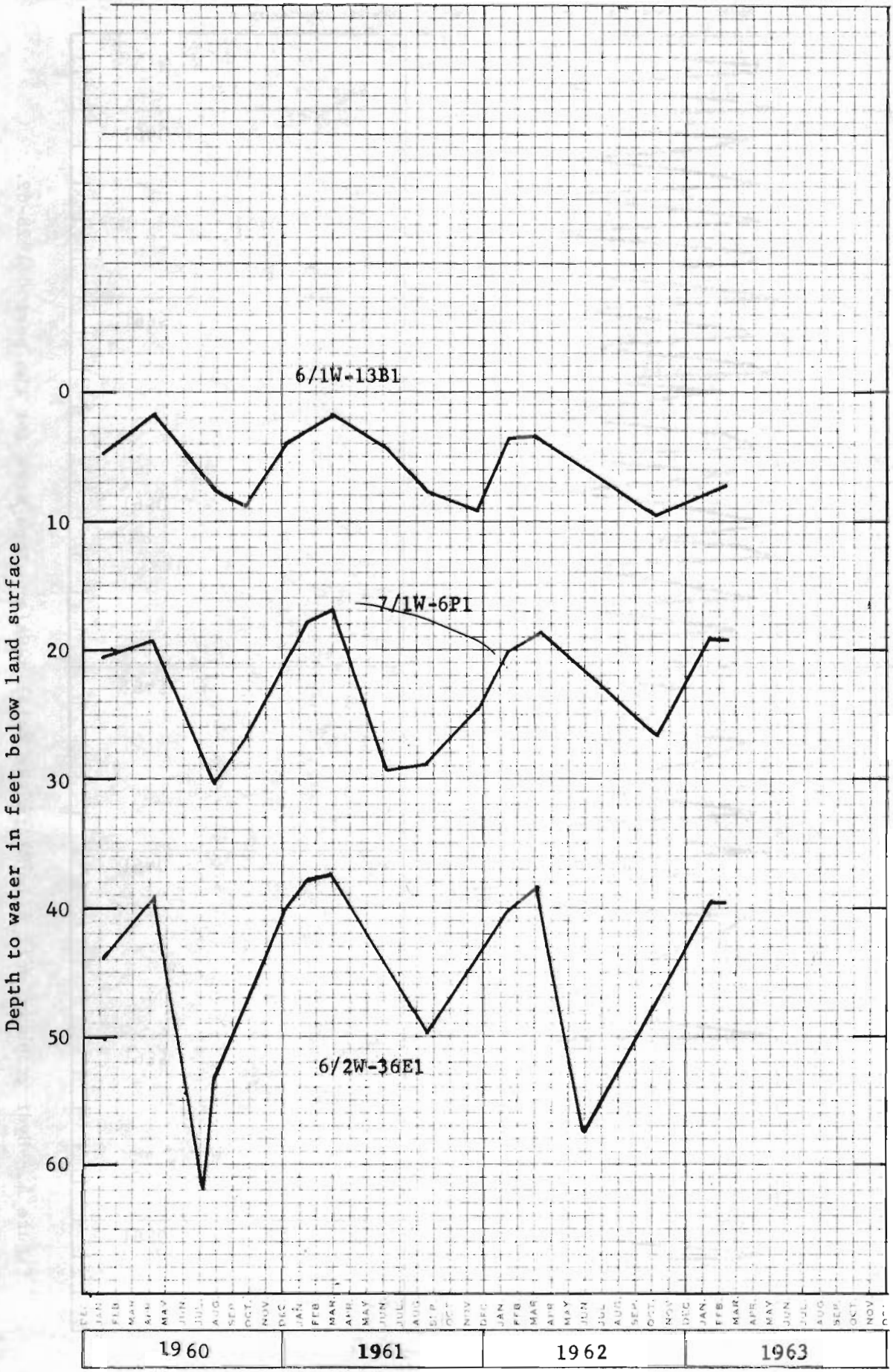


Figure 6.--Hydrographs of three wells in the Molalla-Salem slope area during the period 1960-62.

The hydrographs in figure 6 show water levels that were measured in three wells during the period February 1960-April 1963. Fluctuations in those wells, as in well 6/1-7M1, indicate that the water reaches its highest levels in midwinter, and lowest levels in summar and fall.

REFERENCES

Piper, A. M., 1942, Ground-water resources of the Willamette Valley, Oregon: U.S. Geol. Survey Water-Supply Paper 890, 194 p., 10 pls., 3 figs.

Price, Don, 1961, Records of wells, water levels, and chemical quality of ground water in the French Prairie-Mission Bottom area, northern Willamette Valley, Oregon: Oregon Ground Water Rept. No. 1, 314 p., 10 figs.

Table 1.--Records of representative wells in the Molalla-Salem slope area

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

Type of well: Dg, dug; Dr, drilled.

Finish: B, open bottom (no perforations); G, gravel packed; P, casing perforated. Depth interval of gravel pack and perforations given in feet below land surface at well.

Altitude: Altitude of land surface at well, in feet above mean sea level, interpolated from topographic maps.

Water level: Depths to water given in feet and decimal fractions are measured; those given in whole feet are reported by well owner or driller. F, flowing well whose static water level is not known.

Type of pump: C, centrifugal; Cy, cylinder; J, jet; N, none; S, submersible turbine; T, turbine.

Well performance: Yield, in gallons per minute (gpm), and drawdown, in feet below nondischarging water level, reported by owner, operator, driller, or pump company. Bailed yields are indicated by "b"; flowing yields are indicated by "f."

Use: D, domestic; Ind, industrial; Irr, irrigation; N, none; O, observation; PS, public supply; S, stock.

Acres irrigated: Approximate number of acres irrigated or planned for irrigation reported by owner; may vary from year to year.

Remarks: Ca, chemical analysis in table 3; H, hydrograph included in this report; L, driller's log of well in table 2; Temp, temperature of water in ° Fahrenheit. Remarks on adequacy, dependability, general quality, and materials penetrated are reported by owners, tenants, drillers, or others.

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 1 W.																			
36J1	School Dist. 91	Dr	1959	316	6	312	B	--	--	--	160	10	9- 2-59	S, 3	20	98	PS	--	L, temp 55.
36R1	Gust Rosenblatt	Dr	1956	132	6	132	P, 126-129	123	4	Sand and gravel	170	60	10- 6-56	T, 5	160	56	D, Irr	20	Ca, L, temp 53.
T. 4 S., R. 1 E.																			
5M1	City of Barlow	Dr	1955	72	10	60	B	60	12	Gravel and sand	100	24	10-12-55	T	150	50	PS	--	Drilled to 127 ft; backfilled with gravel to 72 ft. L.
7A1	Frank Wroble	Dr	1960	65	10	65	B	63	--	Sand, black	100	5	7-29-60	T, 10	120	20	Irr	--	L.
7J1	Isador Bany	Dr	1956	150	10-6	150	G, 131-150; P, 90-115	82 130	43 9	Sand and gravel Sand	160	50	4- 1-56	--	200	66	Irr	40	L.
7K1	Joe Hershberger	Dr	1960	74	10	68	B	68	6	Sand, black, and gravel	110	20	9-21-60	--	225	30	Irr	--	L, temp 52.

Table 1.--Records of representative wells in the Molalla-Salem slope area --Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 1 E.--Continued																			
7L1	Victor Hamauska	Dr	1958	65	10	65	P, 40-41, 43-44, 60-63	39 58	5 7	Sand and gravel Gravel, red sand	100	F	7- 3-58	--	f, 9 195	27	Irr	--	L.
9H1	Albert Livedalen	Dr	1956	100	6	99	P, 96-99	95	3.5	Sand and gravel	150	40	8-17-56	--	110	46	D	--	L, temp 52.
10K1	F. E. Merz	Dr	1957	20	6	20	B	12	8	Gravel	130	10	8-26-57	--	b, 30	5	D	--	L, temp 56.
12F1	Leonard Burdett	Dr	1961	300	6	288	P, 38-43, 65-72	43 285	3 8	Gravel, pea-size Sand, medium-size	160	6	4-12-61	S, 3	100	10	D,Irr	15	Drilled to 330 ft; backfilled to 300 ft. Ca, L, temp 54.
15A1	J. C. Neumann	Dr	1957	88	6	88	B	87	1	Gravel	210	70	8- 7-57	--	b, 30	--	D	--	L.
15P1	Lloyd Hepler	Dr	1957	122	6	122	P, 116-120	105	15	Sand, coarser at bottom	185	12	4-30-57	--	83	43	D	--	L.
16H1	A. J. Krzmarzick	Dr	1960	127	8-6	127	P, 74-84	107	20	Sand	170	29	9-13-60	--	140	56	D	--	L, temp 52.
17R1	K. L. Eilert	Dr	1960	110	6	90	B	90	20	Sandstone	160	11	3- 3-60	--	40	60	D	--	L, temp 53.
18C1	Robert Fromm	Dr	1956	154	8-6	124	P, 82-90	84	3.5	Gravel and sand	160	64	10- -56	T, 30	320	10	Irr	--	L, temp 56.
20C1	Robert May	Dr	1960	235	10	190	P, 62-75	200	35	Sand and gravel, thin strips	170	35 31.16	1-30-60 6-12-62	T, 30	310	114	Irr	--	L, H.
21M1	Ivan Pulley	Dr	1956	123	6	123	P, 87-91, 106-110	106	4	Gravel, pea-size	175	8	8- -56	--	110	68	D,Irr	--	L, temp 53.
22B1	J. A. Ritter	Dr	1960	100	6	81	B	85	5	Sand, dark-brown	212	40	12-13-60	J, 2	b, 20	10	D	--	L.
22N1	Ben Gettman	Dr	1951	300	8	221	P, 75-80, 135-140, 160-215	--	--	--	195	40.03	6-12-62	T, 7½	--	--	Irr	30	L.
23D1	Harold Jensen	Dr	1956	117	6-5	117	P, 90-117	112	5	Gravel, thin beds between clay	223	41	4- -56	J, 3	b, 36	32	D	--	L.
25C1	Albert Ronfeld	Dr	1957	51	6	51	B	50	1	Gravel	230	8	6-13-57	J, 1	b, 20	24	D	--	L, temp 52.
26A1	H. A. Herkamp	Dr	1961	63	6	63	B	45	16	do.	230	7	6- 5-61	S, 3/4	--	--	D	--	L.
28L1	C. C. Backsen	Dr	1962	171	10	157	P, 116-125	115 171	7 2	Sand and gravel do.	189	28.79	6-12-62	T, 30	310	77	Irr	--	Drilled to 225 ft; backfilled to 171 ft. L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 1 E.--Continued																			
28K1	Titus Ramer	Dr	1956	134	8	134	P, 118-125	115	9	Gravel	195	38	1956	T, 7½	105	56	Irr	--	L, temp 52.
29J1	Lyle McEwen	Dr	1959	128	6	128	B	128	--	do.	180	34	9-18-59	--	b, 40	28	D	--	L.
31G1	K. K. Kenagy	Dr	1958	178	6	--	B	175	3	Gravel and sand, thin streaks	160	--	--	S, 1	b, 15	--	D	--	Old well deepened from 102 ft. L.
31R1	M. J. Oswalt	Dr	1958	95	6	90	B	91	4	do.	179	8	5-28-58	--	b, 30	10	D	--	L.
34R1	Walter Norton	Dr	1960	133	6	130	B	130	3	Sand and gravel	240	25	4-15-60	J, 1	b, 30	50	D	--	L.
35E1	Albert Willbroad	Dr	1962	200	8	200	P, 100-110, 115-123, 138-155, 170-196	84 115 138 165 187	26 8 13 6 9	Gravel, cemented do. do. do. Sand and gravel	235	30	3-26-62	T	133	80	D, Irr	--	L.
36J1	Delbert Dworschak	Dr	1959	47	6	46	B	43	4	Gravel	270	16	8-20-59	--	b, 45	10	D	--	L, temp 54.
T. 4 S., R. 2 E.																			
5Q1	C. T. Foster	Dr	1961	141	6-5	141	P, 75-122	115	7	Sand	570	60	1-1-61	S, 3/4	b, 10	60	D	--	Ca, L, temp 55.
8G1	Larry Baughman	Dr	1962	437	6-5	437	P, 395-405, 418-430	222 365 397 420	4 5 6 5	Sand, medium Sand and pumice Pumice and sand Sand, medium	420	188	3-26-62	--	b, 30	65	D	--	L, temp 58.
8Q1	Marlin Burley	Dr	1959	70	6	69	B	60	10	Sand and gravel	395	27	7- 2-59	J, 3/4	b, 10	23	D	--	L, temp 52.
9K1	H. S. Ross	Dr	1959	135	6	131	B	130	5	Sand and fine gravel	580	80	1-22-59	S, 1	12	20	D	--	Do.
11N1	Alfred Rasmussen	Dr	1960	127	6	42.5	B	41	86	Basalt	400	51	6-22-60	J, 1	b, 6	70	D	--	Do.
13E1	C. H. White	Dr	1958	195	6-5	195	P, 150-190	85 93	5 37	Basalt, weathered do.	740	58 48.4	8-28-58 6-13-62	-- S, 1	b, 18	125	D	--	L, temp 51.
15M1	D. L. Belshe	Dr	1959	250	6	236	B	238	7	Sand	420	165	6- 3-59	S, 1	b, 12	42	D	--	L.
16H1	W. M. Grimm	Dr	1959	70	6	58	B	65	5	Sand, dark	230	20	6-27-59	J, ½	b, 20	20	D	--	L.

Table 1.--Records of representative wells in the Mollala-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 2 E.--Continued																			
16H2	L. A. Cochran	Dr	1961	160	6	140	B	158	2	Sand, medium	260	F	12-11-61	--	f, 3½ b, 20	55 55	D	--	L.
17H1	J. A. Ellison	Dr	1960	250	6	238	B	239	8	Sandstone and sand	223	15	8-13-60	J, 3	35	35	D, Ind	--	L, temp 54.
17J1	Mulino Grade School	Dr	1960	283	6-5	283	P, 240-245, 255-260, 271-278	219 241	4 4	Sand, black do.	237	5	7- 7-60	S, 3	b, 60	60	PS	--	Do.
17J2	T. C. Reed	Dr	1956	86	6	86	B	79	7	Gravel and sand	242	45	9-13-56	--	b, 30	15	D	--	Do.
18D1	G. Thornton	Dr	1955	153	6-5	150	P, 120-140	150	3	Sand, with gravel	205	47	9- -55	--	b, 36	43	D	--	L.
18G1	F. R. Williams	Dr	1956	232	6	101	P, 85-91	79	12	Sand	230	40	7-13-56	--	38	44	D	--	L, temp 52.
19N1	Peter Wetten	Dr	1957	180	6	180	P, 120-140, 145-150	145 179	5 1+	Sand and gravel do.	235	24	9-21-57	S, 3	120	65	D	--	L, temp 54.
20R1	J. B. Pedro	Dr	1961	196	6	162	B	166 185	10 4	Sand do.	270	50	10-11-57	--	b, 30	35	D	--	Do.
21Q1	Joe Fisher Park	Dr	1960	176	6	155	B	162	5	do.	230	F	1-12-60	J, 3/4	b, 45	75	D, PS	--	L, temp 52.
22A1	George Jenkins	Dr	1960	68	6	55	B	55	13	Basalt	540	30	8-14-60	J, ½	b, 15	20	D	--	L.
22L1	W. G. Deardorff	Dr	1962	250	6	234	B	235	13	Sand, some gravel	500	220	5-22-62	S, 2	45	5	D	--	L, temp 52.
22M1	R. P. Tolleson	Dr	1959	150	6	30	B	130	20	Sand and gravel streaks in clay	500	83	1- 2-59	J, 2	b, 18	50	D	--	L.
26F1	C. A. Caseday	Dr	1956	75	6	53	B	57	11	Sand and gravel	330	43	3-28-56	--	b, 30	12	D	--	L, temp 50.
27E1	L. Poulsen	Dr	1957	75	6	56	B	65	6	Sand	255	14	8-14-57	J, ½	b, 36	30	D	--	Do.
28F1	Richard Knudson	Dr	1959	168	6	151.5	B	157	5	Sand, black	285	15	8-28-59	S, 1	b, 25	80	D	--	L, temp 52.
28H1	Donald Brown	Dr	1958	108	6	37	B	36 53	6 3	do. do.	270	22	7-17-58	--	b, 45	28	D	--	L, temp 50.
29K1	Clyde Hepler	Dr	1959	101	6	100	B	90	10	Gravel	255	2	2- 4-59	J, 1	b, 25	80	D	--	L, temp 54.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 2 E.--Continued																			
30E1	John Damm	Dr	1959	84	6	69	B	75	9	Sand	252	30	10-19-59	J, 3/4	b, 40	35	D	--	L, temp 52.
30P1	John Krupicka	Dr	1958	118	6	106	B	111	7	Gravel	260	29	9-11-58	--	b, 30	10	D	--	L.
31D1	Iola M. Walch	Dr	1958	51	6	50	B	50	1	do.	260	11	12-27-58	--	b, 22	20	D	--	L, temp 52.
32J1	Mickey McMoran	Dr	1960	78	6	73	B	76	2	Sand and gravel	285	12	2- 3-60	--	b, 20	45	D	--	Do.
33D1	S. M. Callahan	Dr	1956	98	6	98	B	85	13	Gravel	265	12	8-30-56	--	b, 15	60	D	--	Do.
34G1	Ivan Lebold	Dr	1961	141	5	141	P, 95-140	111	30	Gravel, cemented	400	95	9- 9-61	--	b, 7	25	D	--	Do.
35C1	A. E. Griggs	Dr	1957	180	6-5½	180	B	172 178	4 2	Sandstone do.	287	F	11- 8-57	--	b, 20	160	D	--	L, temp 54.
35H1	A. J. Meisner	Dr	1961	83	6	78.5	B	70	13	Gravel, medium to coarse	360	37	8-17-61	J, 1	b, 15	30	D	--	L, temp 52.
36H1	C. R. Rice	Dr	--	265	6	245	B	--	--	--	820	--	--	--	--	--	N	--	L, incomplete in 1961.
36L1	George Lord	Dr	1958	195	6	181	B	--	--	--	510	150	12- 8-58	S, 1	b, 7	30	D	--	L, temp 54.
T. 4 S., R. 3 E.																			
3M1	Preston Erickson	Dr	1961	73	6	70	B	45	28	Basalt, decomposed	1,350	28	9- 7-61	S, 3/4	b, 30	20	D	--	L.
4Q1	R. B. Marshall	Dr	1955	387	6	50	B	--	--	--	1,340	--	--	--	--	--	N	--	L, well dry.
4R1	R. J. Wollslair	Dr	1962	110	6	104	B	100	10	Basalt	1,360	50	1-29-62	S, ½	b, 13	40	D	--	L, temp 50.
7J1	Fred Wiegele	Dr	1958	113	6	30	B	78	35	Basalt, porous	820	52	8-11-58	--	b, 40	30	D	--	Ca, L, temp 54.
8M1	Don DeBoer	Dr	1961	96	6	46	B			--	880	20	11-16-61	--	b, 15	20	D	--	L.
12R1	Gay Moehnke	Dr	1953	150	6	70(?)	B	70	80	Basalt, porous	1,020	47	1953	--	--	--	D,S	--	--
14H1	Stanley Mitchell	Dr	1961	205	6	128	B	205	7	Gravel	1,085	105	3- 5-61	--	b, 15	45	D	--	L.
16N1	Clarence Rowland	Dr	1961	81	6	19	B	62	5	Rock, soft	920	10	7- 8-61	--	30	30	D	--	L, temp 50.
20D1	Charles Marshal	Dr	1960	81	6	70.5	B	41	40	Lava, decomposed	890	24 23.59	6- 8-60 6-15-62	--	b, 35	5	D	--	L, temp 52.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 3 E.--Continued																			
21D1	J. T. Low	Dr	1961	141	6-5	141	B	--	--	--	960	28	7-28-60	--	b, 15	90	D	--	L, temp 52.
23Q1	O. W. Lindahl	Dr	1958	258	6-4	258	P, 238-256	235	23	Sandstone and conglomerate	1,040	150	11- -58	S, 1½	b, 10	60	D	--	Do.
25N1	LeRoy Gardner	Dr	1960	75	6	41	B	70	5	Sandstone	845	F	12-23-60	--	f, 3, b, 20	10	D	--	L.
27D1	Clarence Courtney	Dr	1962	80	8	47	B	47	33	Basalt, gray	910	37	1-18-62	--	--	--	D	--	L, temp 50.
28D1	W. L. Rodgers	Dr	1960	166	6-5½	165	P, 105-145	105	10	Sand and gravel	890	70	11-26-60	S, 3	40	55	D,Irr	--	L, temp 52.
29M1	L. G. Marshall	Dr	1958	150	6	109	P	--	--	--	850	45	1-24-58	--	--	--	D	--	L, temp 50.
30B1	John Schrader	Dr	1962	101	6-5	101	P, 82-99	75	24	Rock, decomposed	850	54	4-12-62	--	40	30	D	--	L, temp 52.
31B1	Lewis Timm	Dr	1961	160	6	68	B	155	5	Sand and gravel, with clay	880	40	10-12-61	--	b, 10	100	D	--	L.
32F1	James Fones	Dr	1957	127	6	115	B	120	3	Sand	700	27	9- 6-57	S, 1	b, 20	75	D	--	L, temp 50.
35D1	John Chelson	Dr	1957	87	6	47	B	75 80	5 7	Gravel and sand Rock, porous, and shale	730	20	6-24-57	J, 1/3	b, 27	15	D	--	L, temp 52.
35G1	W. E. Job	Dr	1960	240	6	42	B	240	1±	Gravel(?)	850	+2	7-15-60	J, 3/4	15	150	D	--	L.
36D1	L. Black	Dr	1961	78	6	65	B	74	2	Sand	840	9	9- 8-61	--	b, 20	10	D	--	L.
T. 4 S., R. 4 E.																			
4M1	R. F. Gillette	Dr	1960	115	6	51	B	95	20	Basalt, weathered	1,120	60	5- 2-60	--	b, 11	45	D	--	L, temp 52.
7K1	Antone Palumbo	Dr	1956	117	6	72	P, 55-70	55	52	Basalt, gray, porous	1,000	56	7- 6-56	J, 3/4	--	--	D	--	L.
16J1	C. L. Palmater	Dr	1959	190	6	112	B	176	14	Basalt, gray	1,220	77	6-27-59	Cy, 1	b, 22	110	D	--	L, temp 52.
18C1	Clackamas County	Dr	1960	60	6	53	B	50	10	Sand and sandstone	670	10	7-20-60	J, 1/2	b, 20	20	D	--	Do.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 4 S., R. 4 E.--Continued																			
20Q1	Sam Block	Dr	1958	190	6	79	B	78	112	Basalt, hard and soft	1,210	120	9-11-58	--	b, 5	50	D	--	L, temp 50.
22B1	H. O. Widman	Dr	1959	165	6	55	B	90	26	Basalt, honeycomb	1,360	60	7-25-59	S, 3/4	b, 15	100	D	--	L, temp 52.
30G1	C. H. Wilcken	Dr	1959	47	6	11	B	35	12	Breccia(?)	1,100	7 6.64	7-15-59 6-18-62	C, 1/2	b, 30	15	D	--	L.
T. 5 S., R. 1 W.																			
1F1	W. M. Kostrikan	Dr	1957	160	6	143	P, 58-65, 78-84	56	9	Gravel, cemented	180	34	3-16-57	T, 3	83	82	D,Irr	--	L, temp 53.
1H1	Frank Lais	Dr	1956	135	6	135	P, 123-133	117	17	Sand and gravel	175	39	4- -56	--	125	87	Irr	--	L, temp 57.
10Q1	Mr. Jack	Dr	1953	204	8	140	--	--	--	--	150	--	--	T, 5	--	--	Irr	--	L.
14H1	Paul Berkert	Dr	1961	121	8	120	P, 113-119	112.5	6.5	Gravel	195	36	8-17-61	--	500	69	D	--	L.
14J1	R. O. Bliven	Dr	1951	112	8	102	B	60 112	13 ?	do. do.	195	28	3- -51	--	180	40	Irr	--	L.
15B1	Butsch Bros.	Dr	1951	145	10	145	P, 77-90, 123-145	113	32	do.	152	24	--	--	430	104	Irr	--	L.
16C1	Yacov Konovolov	Dr	1956	134	8	134	--	125	9	Sand and gravel	165	23 24.28	4-24-56 6-19-62	T, 3	393	32	Irr	--	L, temp 56.
16D1	D. A. Dryden	Dr	1955	119	8	119	P, 106-118	101	17	Gravel and sand	172	30	9-24-55	T, 7½	200	55	Irr	--	L.
16R1	C. H. Pantle	Dr	1955	105	8	97	P, 79-95	73	22	Sand and gravel	151	--	--	--	145	46	Irr	--	L.
21H1	Irvin Halter	Dr	1960	92	6	92	B	72	20	Gravel	155	19	5-11-60	--	35	75	D	--	L.
22D1	Alfred Aicher	Dr	--	--	8	--	--	--	--	--	--	--	--	T, 7½	--	--	Irr	--	--
23A1	A. H. Douthit	Dr	1956	140	6	140	P, 67-88, 100-175	67 100	21 26	Gravel, cemented Gravel and sand	185	34	8- 1-56	--	145	82	Irr	--	L, temp 53.
24G1	H. W. Schroeder	Dr	1961	132	8	102	B	102	3	Sand, black	190	34	9- 4-61	--	b, 40	50	D,Irr	--	L, temp 54.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s): Depth to top (feet)	Water-bearing zone(s): Thickness (feet)	Water-bearing zone(s): Character of material	Altitude (feet)	Water level: Feet below datum	Water level: Date	Type of pump and hp	Well performance: Yield (gpm)	Well performance: Drawdown (feet)	Use	Acres irrigated	Remarks
T. 5 S., R. 1 W.--Continued																			
25N1	A. J. Hilger	Dr	1957	85	8	85	P, 50-51, 69-80	50 69	1 14	Sand and gravel do.	197	38	5- 6-57	T, 10	200	70	Irr	--	L, temp 57.
25P1	G. P. Fischer	Dr	1956	92	8	83	P, 54-56, 73-83	70	12	Gravel and sand	210	38	8-16-56	--	190	42	Irr	--	L, temp 54.
25R1	S. D. A. Church	Dr	1961	110	4	104	B	104	6	Sand, black	178	+1.5	3- 3-61	--	12	40	D	--	L.
27D1	Gordon Sealy	Dr	1953	134	8	134?	P, (?)	52 71	19 9	Gravel, brown Sand and gravel	175	12 21.36	1953 6-20-62	T, 20	300	--	Irr	--	L.
27H1	LaVerne Norton	Dr	1959	123	6	117	B	105	18	do.	185	40	7-25-59	J, 3	170	22	Irr	--	L.
27N1	Ralph Stenger	Dr	--	--	--	--	--	--	--	--	195	--	--	T, 15	--	--	Irr	53	--
28F1	P. J. Weinacht	Dr	1953	157	10	94	B	94	27	Gravel	169	40	9- 7-53	T, 15	180	50	Irr	180	L.
28K1	Alfred Juve	Dr	1956	142	8	109	P, 68-107	66	42	Gravel, partly cemented	175	12	3- 5-56	T, 10	100	70	Irr	--	L, temp 56.
28K2	E. S. Minton	Dr	1956	116	8	106	P, 47-95	70	35	Gravel, brown	175	39	6-15-56	--	70	60	Irr	--	Do.
28Q1	L. W. Zach	Dr	1955	177	8	163	P, 64-108	64 72	2 36	Gravel Gravel, cemented	175	12 15.22	4- -55 6-19-62	T, 15	240	55	Irr	35	L, pumps sand.
33C1	Robert Fessler	Dr	1961	96	6	96	B	95	1	Gravel	172	55	7- 7-61	S, 1	b, 30	21	D	--	L.
34K1	Mount Angel Meat Co.	Dr	1956	405	6	349	B	343	52	Basalt	170	F	1-31-56	T, 10	70	106	Ind, D	--	L, temp 52.
34M1	George Rothenfluch	Dr	1956	306	6	264	B	264	42	Basalt, crevice at bottom	170	54	3-14-56	T, 2	90	25	D	--	L.
36R1	R. M. Stuckart	Dr	1954	500	10	380	B	373	127	Basalt	220	42.90	2- 8-60	T, 20	300	103	Irr	49	L.
T. 5 S., R. 1 E.																			
1R1	Richard Williams	Dr	1960	73	8	73	B	45	28	Gravel, some clay streaks	281	23	5- 3-60	S, 2	b, 40	12	D,Irr	--	L, temp 52.
2D1	Don Helmig	Dr	1957	77	6	77	B	68	9	Gravel	245	18 20.10	7- -57 6-20-62	J, 3/4	b, 35	35	D	--	Do.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 5 S., R. 1 E.--Continued																			
4E1	A. E. Morton	Dr	1955	134	6	134	P, 75-80, 116-119, 125-129	75 116 124	5 3 5	Sand and gravel do. do.	175	34	9-7-55	S, 3	150	52	D,Irr	--	L, temp 53.
4R1	J. A. Hanks	Dr	--	--	--	--	--	--	--	--	210	23.32	2-10-60	T, 40	--	--	Irr	--	--
5M1	D. H. Yoder	Dr	1957	130	12	115	P, 59-60, 90-91	59 86 98	2 12 5	Sand and gravel Sand, coarse, gravel Gravel, small	185	29.5	7-23-57	T, 15	350	90	Irr	--	L.
6R1	Henry Landwing	Dr	1958	96	6	89	B	90	6	Sand and gravel	184	33	2-28-58	--	b, 45	22	D	--	L, temp 54.
9H1	Tom Dybvad	Dr	1957	61	6	50	B	56	2	Gravel and sand	212	9	5-21-57	--	b, 45	26	D	--	L, temp 52.
11C1	Henry Kyllo	Dr	1957	520	8	520	P, 55-60, 80-128, 508-518	80 508	48 8½	Gravel, cemented Sand, black	260	52	4-20-57	T	450	74	D,Ind	--	L, temp 53.
12M1	Melvin Bjerkan	Dr	1961	148	6-5	148	P, 134-145	96 138	2 7	Sand and gravel Sand, brown	275	35	3-27-61	S, 1	b, 50	35	D	--	L, temp 52.
13R1	Bob Johnson	Dr	1959	159	6	159	P, 65, 86-92, 118-122, 146-148	87 117 146	5 4 3	Sand and gravel do. do.	263	63	12-19-59	S, 3	40	75	D,Irr	--	Do.
14C1	Carl Budeau	Dr	1956	40	6	31	B	37	9	Gravel, large	272	19	1956	J, 3/4	b, 8	8	D	--	L.
15H1	Einer Loe	Dr	1960	135	6	103	B	--	--	--	260	54 72.00	7- 9-60 6-20-62	-- S, 1	b, 16	0	D	--	L.
18F1	Warren Bremer	Dr	1960	435	8	426	P, 67-95	90 425	6 10	Gravel and sand Sandstone	165		12-14-60	T, 10	130	110	Irr	--	L, temp 56; flows 5 gpm.
18M1	Martin Albert	Dr	1956	162	8	154	P, 68-70, 94-153	68 96	2 10	Gravel, loose Gravel	196	23	5-23-56	--	225	90	D,Irr	--	L.
19Q1	M. L. White	Dr	1959	234	8	235	P, 40-143, 153-174, 200-230	77 90	2 1	Sand and gravel do.	220	20 20.75	1-30-59 6-20-62	T, 15	300	58	Irr	--	L.
21D1	D. E. Johnson	Dr	1951	88	6	88	P, 81-88	78	9	Gravel, small	181	38	7-15-51	--	60	9	D	--	L, temp 53
22R1	Clifford Wrolstad	Dr	1961	281	6	281	B	225	56	Basalt, weathered	180	28	8-15-61	--	50	102	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 5 S., R. 1 E.--Continued																			
23Q1	Donald Fleckenstein	Dr	1957	210	6	149	B	128	82	Basalt, hard and soft	185	18	8-10-57	S, 1	15	150	D	--	L, temp 52.
24C1	S. R. Lais	Dr	1957	195	6	190	B	190	5	Sand and gravel	250	35	4-20-57	--	b, 15	40	D	--	L.
25F1	Louis Piuser	Dr	1940	207	6	65	B	--	--	Basalt	310	147	9-10-58	--	b, 5	42	D	--	--
25G1	Rudolph Schnack	Dr	1962	350	8	33	B	325	15	Basalt, honeycomb	330	156	4-19-62	T, 30	350	6	D,Irr	--	Ca, L, temp 59.
28R1	Melvin Satrum	Dr	1961	195	12	148	P, 143-148	190	5	Basalt(?), gray	223	55	7-20-61	S, 5	110	90	D,Irr	--	L.
29P1	Elmer Thompson	Dr	1948	144	6	--	--	--	--	Sand and gravel	245	--	--	T, 7½	96	72	D,Irr	30	--
29R1	Rolland Nickelson	Dr	1956	125	6	48	B	--	--	--	210	22	5-17-56	--	b, 30	14	D	--	L, temp 55.
30C1	George Bond	Dr	1961	301	6	301	P, 32-297	40	12	Gravel and sand, muddy	210	34	11-17-61	--	200	200	Irr	30	L.
								57	12	Gravel, cemented									
								149	1	Sand, gray									
								240	2	do.									
30H1	Elmer Thompson	Dr	1962	79	8	79	P, 50-52	50	5	Conglomerate	230	22	4-30-62	--	35	52	D	--	L.
30Q1	O. W. Hendrickson	Dr	1959	115	6	113	B	40	6	Sand, muddy	205	17	4-29-59	J, 1	b, 18	65	D	--	L.
								113	1	Sand, gray									
31G1	Chris Ramburg	Dr	1957	125	6	120	B	99	3	do.	205	34	8- 9-57	--	b, 14	72	D	--	L, temp 52.
								120	5	Sandstone streaks between clay									
33A1	Melvin Satrum	Dr	1957	428	8	259	B	--	--	--	260	135	6-31-57	--	b, 10	135	N	--	Drilled to 567 ft, cemented to 428 ft to seal out salt water. L, temp 54.
33A2	do.	Dr	1957	376	8	232	P, 83-95	--	--	--	244	40	3- -57	--	b, 9	192	D	--	Drilled to 456 ft, cemented to 376 ft to seal out salt water. Ca, L.
34A1	Frank Kintz	Dr	1961	187	6	130	B	136	51	Basalt, hard	210	52	6-24-61	J, 1/2	b, 20	118	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s): Depth to top (feet)	Water-bearing zone(s): Thickness (feet)	Water-bearing zone(s): Character of material	Altitude (feet)	Water level: Feet below datum	Water level: Date	Type of pump and hp	Well performance: Yield (gpm)	Well performance: Drawdown (feet)	Use	Acres irrigated	Remarks
T. 5 S., R. 1 E.--Continued																			
35E1	Arnold Otter	Dr	1961	160	6	45	B	80	25	Sandstone	220	45	7-11-61	--	b, 6	9	D	--	L.
T. 5 S., R. 2 E.																			
1R1	Delbert Fischer	Dr	1959	120	6	108	B	120	1	Sand, black	405	20	8-28-57	--	b, 20	50	D	--	L.
2F1	R. C. Holman	Dr	--	140	6	--	--	--	--	--	360	--	--	Cy, 3/4	--	--	S	--	--
3P1	J. T. Low	Dr	1959	145	8	122	P, 42-50	42	8	Gravel	335	12	8- 6-59	S, 7½	b, 50	22	Ind	--	L, temp 52.
4F1	R. R. Bryant	Dr	1959	105	6	99	B	100	5	Sand and gravel	310	10	8-14-59	--	90	75	D	--	Do.
5P1	L. L. Burghardt	Dr	1956	125	6	100	P, 78-98	78	20	Gravel, some clay	324	11	12-26-56	--	70	65	D	--	L.
7J1	J. H. Snively	Dr	1960	142	6-5	142	P, 110-136	105 134	12 4	Sand and gravel Sand, coarse, black	326	18	9-12-60	S, 3	60	6	D	--	Ca, L, temp 52.
8P1	Harold Atkinson	Dr	1959	217	6	85	B	--	--	--	360	23 22.36	6-27-59 6-22-62	J, 1½	b, 30	23	D	--	L, temp 54.
10R1	K. L. Hoffman	Dr	1956	47	6	47	B	42	5	Gravel and sand	341	19	9- -56	--	b, 30	Little	D	--	L.
12B1	V. L. Gurley	Dr	1960	39	6	39	P, 12, 18, 24, 30	29	10	Sand and gravel	545	7	11- 2-60	S, 3/4	37	12	D	--	L.
14D1	Clackamas County	Dr	1961	85	6	45	B	70	15	"Lava" (volcanic breccia?)	360	5 8.41	2-22-61 2-21-62	J, 3/4	40	50	PS	--	L, temp 53. Supplies park facilities.
16P1	Genevieve Stutz	Dr	1956	95	6	67	B	65	7	Gravel	475	25	12- 7-55	--	14	35	D	--	L, temp 54.
16Q1	L. J. Ricksgers	Dr	1958	100	8	99	P, 30-90	38	3	Sand and gravel	475	28 27.91	6-23-58 6-22-62	J, 3/4	2	60	D	--	Drilled to 168 ft; backfilled to 100 ft. L, temp 52.
17H1	Gordon Hungate	Dr	1956	53	6	40	B	42	11	Gravel, some clay	420	20½	8-27-56	--	b, 15	7½	D	--	L.
18B1	Lyle Orem	Dr	1959	233	6-5	225	B	215	12	do.	410	186	9- 5-59	S, 2	22	6	D	--	L, temp 56.
18B2	James Jolley	Dr	1959	252	6-5	252	B	245	7	do.	435	192	6-10-59	S, 2	22	4	D	--	L, temp 58.
20P1	J. J. Baumgarten	Dr	1957	58	6	40	B	26	32	Basalt	410	24	1957	--	b, 27	15	D	--	L.
21P1	H. C. Reed	Dr	1960	68	6	60	P, 17-18, 21-22	17	5	Sand, clay, gravel	530	10 17.14	7-28-60 6-22-62	J, 3/4	b, 15	40	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 5 S., R. 2 E.--Continued																			
23L1	G. S. Durant	Dr	1961	70	6	48	B	48	2	Sand and gravel	435	6 8.32	11-21-61 6-21-62	J, 3/4	--	--	D	--	L.
25G1	Kelton Neal	Dr	1958	230	6	206	B	211	5	Sandstone	750	85	10-27-58	S, 1	b, 13	115	D	--	L, temp 54.
26B1	William Hester	Dr	1962	70	6	59	B	70	(?)	Sand	450	3	3-29-62	--	b, 25	25	D	--	L.
27Q1	Charles Biggins	Dr	1957	352	6-4-2	352	P, 335-352	318	34	Basalt	855	80	1957	--	--	--	D	--	L.
28C1	W. J. Shafer	Dr	1958	286	6	87	B	87	199	Basalt(?)	525	245	4- 2-58	S, 2	b, 15	5	D	--	L, temp 56.
29C1	H. A. Fredrikson	Dr	1961	578	6	225	B	--	--	--	430	--	--	--	--	--	D	--	L. Driller's report incomplete 1961.
30E1	J. M. Trullinger	Dr	1961	300	6	64	B	--	--	Basalt(?)	370	175	2- 1-61	--	b, 5	100	D,S	--	L, temp 54.
31M1	Jack Stow	Dr	1956	98	6	37	B	91	7	Lava, porous	610	31.10	6-21-62	S, 1½	b, 40	10	D	--	L.
36G1	L. A. Meier	Dr	1961	67	6-5	67	P, 48-65	55	12	Sandstone	490	30	1-23-61	--	b, 45	35	D	--	L, temp 50.
T. 5 S., R. 3 E.																			
2D1	J. M. Anderson	Dr	1961	300	6	260	B	285	15	Rock, brown	870	10	7-16-60	J, ½	20	100	D	--	L, temp 54.
2G1	H. W. Nyquist	Dr	1956	373	6	293	B	345	28	Sandstone	990	82	5- 7-56	--	22	33	D	--	Do.
4D1	C. P. Webster	Dr	1959	80	6	40	B	76	4	Sand streaks in clay	585	39	7-22-59	J, 1	b, 20	20	D	--	L.
4Q1	F. B. Clark	Dr	1958	148	6	96	B	95	53	Sandstone	840	50	4-26-58	--	b, 18	75	D	--	L.
5B1	B. W. Hood	Dr	1959	133	8	71	B	26	107	Basalt(?)	500	11	5-15-59	S, 3	90	20	D,Irr	--	L, temp 52.
5L1	L. V. Beck	Dr	1958	188	6	160	B	182	6	Sand, gray	650	90	5-26-58	S, 1	30	12	D	--	Do.
6L1	E. W. Morin	Dr	1957	65	6	46	B	52	3	Sand and gravel streaks in shale	385	10	7- 3-57	J, 1/3	10	--	D	--	Do.
7A1	Delbert Karney	Dr	1955	99½	8	73	B	61	38½	Basalt	590	48	9-15-55	--	22	43	D	--	L, temp 58.
8B1	Harold Harper	Dr	1961	80	6	23	B	58	15	Basalt, soft streaks	710	32 29.95	9-25-61 6-26-62	J, 3/4	12	26	D	--	L, temp 52.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 5 S., R. 3 E.--Continued																			
9F1	Dorothy Rosenquist	Dr	1960	146	6	63	B	63	83	Basalt	810	70	8- 5-60	S, ½	b, 15	25	D	--	L.
9H1	Dale Rittenhouse	Dr	1961	132	6	93	B	53	79	Rock, hard and soft	880	22	3- 1-61	--	b, 14	88	D	--	L.
10F1	John Linhart	Dr	1958	99	6	85	B	86	13	do.	900	21	8-26-58	J, ½	2	60	D	--	L, temp 50.
10J1	Arvid Shoberg	Dr	1960	65	6	63½	B	63	2	Basalt	1,080	9	6- 8-60	S, 1	40	30	D	--	Do.
19Q1	Hubert Goodwin	Dr	1960	156	6	55½	B	51 119	59 33	Sandstone do.	1,050	45 39.70	9-20-60 6-26-62	S, 1/3	b, 3	85	D	--	Do.
20G1	A. E. Szekely	Dr	1959	78	6	34½	B	74	2	Rock, porous	1,170	55	11-23-59	S, 3/4	b, 22	10	D	--	Do.
20H1	J. O. Martin	Dr	1956	350	6	167	P, 70-165	--	--	--	1,200	120	6-18-56	--	b, 6	180	D	--	L, temp 54.
30C1	Anthony Dow	Dr	1960	91	8	13½	B	45	46	Basalt	1,010	35 41.52	10-21-60 6-26-62	S, 1	b, 20	35	D	--	L, temp 48.
T. 6 S., R. 1 W.																			
1G1	James Butsch	Dr	1961	435	10	370	G to 200, P to 340	369 432	56 3	do. Sand and gravel	230	30	4- 4-61	T, 60	535	110	Irr	--	L.
1K1	Butsch Bros.	Dr	1957	120	6	120	P	106	11	do.	230	26	11- 5-57	J, 1	36	59	D	--	L, temp 53.
1N1	Walter Duda	Dr	1953	251	8	180	B	196	55	Basalt	220	59	1953	T, 3	275	--	Irr	40	L.
2Q1	do.	Dr	1948	243	8	193	B	--	--	Basalt(?)	193	5	1948	T, 7½	225	--	Irr	80	L.
2Q2	do.	Dr	1959	258	6	194	B	191	67	Basalt	212	61	8-11-59	T, 20	200	79	D,Irr	--	--
3M1	Lawrence Zeis	Dr	1958	62	6	62	B	60	2	Gravel	192	24	7-24-58	--	b, 35	11	D	--	L.
3N1	City of Mount Angel	Dr	1962	295	16-10	--	--	--	--	--	168	+1	1-19-62	--	b, 50	60	N	--	Well abandoned and filled. L.
4B1	Art Schwab	Dr	1946	--	6	--	--	--	--	--	205	--	--	--	150	--	Irr	100	--
4K1	Pete Bielmeier	Dr	1958	162	6	135	B	137	½	Sand	170	24	7-31-58	S	30	91	D	--	Well filled to 133 ft with 2-in. gravel.
7G1	J. F. Manning	Dr	1956	142	8	142	P, 133-141	129	13	Sand and gravel	180	45	9- -56	J, 5	470	55	Irr	--	L, temp 55.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s): Depth to top (feet)	Water-bearing zone(s): Thickness (feet)	Water-bearing zone(s): Character of material	Altitude (feet)	Water level: Feet below datum	Water level: Date	Type of pump and hp	Well performance: Yield (gpm)	Well performance: Drawdown (feet)	Use	Acres irrigated	Remarks
T. 6 S., R. 1 W.--Continued																			
8P1	David Scharer	Dr	1961	94	6	94	B	88	6	Gravel	182	48	9-12-61	S, 3/4	b, 18	18	D	--	L, temp 52.
9E2	J. A. Ascherl	Dr	1958	107	6	105	B	75	32	Gravel and sand	160	40	8-11-58	--	b, 25	0	D	--	L.
9F1	C. J. Ebner	Dr	1961	100	8	100	P, 46-97	51	49	do.	145	4.97	7- 5-62	T, 20	700	37	Irr	--	L, temp 55.
10C1	City of Mount Angel	Dr	1962	631	12 10	297 631	P, 601-629	600	31	Basalt	178	8	5- 7-62	T, 60	650	204	PS	--	Ca, L, temp 62.5.
10F1	do.	Dr	1956	535	10-8	461	B	461	31	Basalt, broken	175	F	9-26-56	T, 40	350	260	PS	--	L, temp 62.
10L1	Mount Angel Men's College	Dr	1938	172	12	172	P, 45-53, 83-103, 120-128, 133-145, 152-167	32 83 115 151	21 21 34 21	Boulders and gravel Gravel and sand Gravel, loose Gravel	175	41	1938	T	280	--	PS	--	L.
10L2	Mount Angel Women's College	Dr	1939	183	8	166	P, 46-55, 78-95, 126-166	34 78 142	21 32 28	do. do. do.	173	--	--	T, 15	300	--	Irr	43.5	L.
11A1	C. Duda	Dr	1953	306	8-6	200±	--	200	106	Basalt	230	--	--	T, 10	150	--	Irr	130	Temp 58.
11D1	Eymard Berning	Dr	1959	158	6	150(?)	B	149	1	Sand and gravel	208	50 48.80	11-14-59 7- 5-62	J, 1½	15	35	D	--	L.
13B1	W. E. Fessler	Dr	1938	115	6	--	B	--	--	Gravel	262	4.30	2- 8-60	T, 5	--	--	D,S, Ind	--	H.
13J1	Oscar Loe	Dr	1951	182	12	--	--	--	--	"Rock, brown"	285	--	--	T, 5	25	--	Irr	115	--
14P1	Frank Aman	Dr	1956	556	10-8	494	P, 40-168, 420-436	491	65	Basalt	206	5½	1956	T, 40	210	170	Irr	--	L, temp 56.
16A1	Poepping Bros.	Dr	1959	91	6	91	B	87	4	Sand and gravel	182	40	6- 2-59	J, 3/4	b, 36	8	D	--	L.
16B1	John Beyer, Jr.	Dr	1961	109	6	109	B	107	2	Gravel	182	50 50.44	9-16-61 7- 5-62	J, 3/4	b, 36	20	D, Irr	--	L.
16P1	Lester Harpole	Dr	1956	92	6	92	B	91	1	do.	180	30	1956	J, 3	b, 35	20	Irr	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 1 W.--Continued																			
18D1	James Hollin	Dr	1959	161	8	161	P	130	31	Gravel, some loose	195	37 48.58	6-27-59 7- 5-62	T, 20	500	70	D, Irr	--	L, temp 55.
19R1	R. W. Fiske	Dr	1960	101	8	101	B	81	20	Gravel	180	30 27.10	8-30-60 6-29-62	S, 5	55	50	D, Irr	--	L, temp 56.
20J1	Wallace Satern	Dr	1956	97	6	97	B	96	1	Sand and gravel	185	34	6- -56	--	b, 35	8	D	--	L.
21L1	Alfred Fisher	Dr	1956	104	8	104	P, 84-102	74	17	Gravel, cemented, and loose	188	22	2-16-56	T, 5	220	50	D, Irr	--	L, temp 52.
22B1	Ralph Gilles	Dr	1958	118	6	118	B	116	2	Sand and gravel	200	33	6- 4-58	J, 1½	b, 36	32	D	--	L.
22C1	Bernard Schiedler	Dr	1950	240	8	--	--	--	--	--	190	--	--	T, 15	154	64	Irr	52	--
22P1	Howard Schmidt	Dr	1959	75½	6	75	B	73	2½	Sand and gravel	200	--	--	J, 3/4	b, 18	23	D	--	L.
26C1	W. H. Wesemann	Dr	1961	105	6	101	B	95	10	Gravel	230	25	6-22-61	S, 3/4	b, 14	40	D	--	L, temp 52.
27C1	G. E. Engeman	Dr	1959	170	8	119	P, 65-80, 84-100	24 146	98 25	Gravel, cemented do.	200	22	8-27-59	S, 10	165	135	D, Irr	--	Originally drilled to 233 ft. L.
27D1	Robert Roth	Dr	1961	215	10	114	P, 50-108	38	65	Sand and gravel	197	27 19.95	11- 2-61 6-29-62	T, 40	240	78	Irr	--	L.
27R1	F. L. Frick	Dr	1960	129	8	121	P, 75-117	18	111	do.	218	18 30.55	4-20-60 6-29-62	-- S, 1	200	100	D, Irr	--	L.
28D1	Anton Dahl	Dr	1956	92	6	92	B	48	44	Gravel and sand layers	188	30	1956	--	b, 31	50	D	--	L.
28F1	Tony Schultz	Dr	1962	192	12	162½	P, 75-118	48 150	70 8	Cemented sand and gravel Sand, fine-grained	195	31	12-15-61	T, 40	450	57	Irr	--	L.
29H1	Arthur Thordsen	Dr	1958	114	6	115	P, 108-110	72	42	Sand and gravel	184	36 33.35	9-20-58 6-29-62	-- N	b, 43	19	N	--	L.
30E1	LeRoy Beals	Dr	1960	149	8	149	P, 95-142	94	46	Gravel	181	30 39.65	12-12-60 6-29-62	-- T, 25	750	41	Irr	--	L, temp 55.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 1 W.--Continued																			
30F1	Vincent Jacobs	Dr	1957	127	8	127	P	100	27	Sand and gravel	178	19	6-25-57	J, ½	110	83	D	--	L.
31E1	John Siems	Dr	1959	167	10	167	P, 91-167	82	85	Gravel and sand	190	29 40.08	4-22-59 6-28-62	T, 50	500	118	Irr	--	L, temp 56.
31J1	J. G. Morgan	Dr	1961	137	6	137	B	132	5	Sand and gravel	204	50 48.91	7-22-61 6-29-62	S, 3/4	b, 30	60	D	--	L, temp 55.
32A2	H. J. Johnson	Dr	1957	125	8	127	P, 33-53, 60-65, 91-94	31 57	22 9	do. do.	170	13	8-23-57	--	150	77	D, Irr	--	L.
33B1	Tony Desantos	Dr	1957	99	6	99	B	45	54	do.	202	25	4-22-57	J, 1½	b, 20	54	D	--	L.
33J1	Hubert Esser	Dr	1958	105	6	83	B	82	23	Basalt	205	24	8-11-58	--	b, 35	54	D	--	L.
33R1	Oscar Strand	Dr	1957	72	8	61	B	60	12	do.	210	19½	8-15-57	J, ½	b, 60	38	D, Irr	--	L, temp 56.
34L1	Ellis Ball	Dr	1960	104	4	71	B	83 98	1 1	do. do.	220	35	11-26-60	J, ½	b, 40	15	D	--	L.
35G1	E. Yoder	Dr	1957	73	6	26	B	25	48	do.	380	27	6-24-57	J, 1	b, 15	26	D	--	L.
35J1	C. L. Wickham	Dr	1961	343	6-5	343	P, 305-342	--	--	--	515	263	5- 8-61	S, 3	b, 12	--	D	--	L, temp 60.
36K1	Clifford Imel	Dr	1957	200	6	17	B	--	--	--	460	46½	10-18-57	S, 3/4	b, 8	104	D	--	Drilled to 228 ft, cemented to 200 ft because water running out at 208 ft. L.
T. 6 S., R. 2 W.																			
13H1	Maurice Hynes	Dr	1956	204	10	204	P, 134-162, 174-200	131 169	31 29	Gravel do.	188	38	3-17-56	T	500	48	Irr	--	L, temp 58.
13N1	Norbert J. May	Dr	1953	140	8	--	P	--	--	--	175	30	1953	T, 15	400	--	Irr	--	--
14B1	Paul Baughman	Dr	1960	123	8	123	P, 102-122	101	22	Gravel	153	18	8-24-60	T, 5	400	59	D, Irr	--	L, temp 55.
23N1	B. L. Dickman	Dr	1961	175	10	175	P, 100-136, 150-175	90 149	47 26	Gravel and sand Sand and gravel	185	50 52.87	9-25-61 6-28-62	T, 30	500	64	Irr	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 2 W.--Continued																			
24L1	W. F. Leader	Dr	1960	197	10	197	P, 105-195	104	93	Gravel, cemented	204	38 56	3-10-60 6-28-62	T, 15	700	96	D, Irr	--	L, temp 55.
25B1	A. D. Wiesner	Dr	1956	154	8	154	P, 95-152	93	61	Sand and gravel	189	36	3-22-56	T, 15	550	33	Irr	--	L, temp 56.
26E1	A. J. Haslebacher	Dr	1959	173	10	173	P, 94-172	145 151 167	5 5 6	do. do. do.	193	48	3-16-59	T, 20	675	74	Irr	--	L, temp 57.
26K1	Ed Haslebacher	Dr	1955	157	10	157	P, 106-157	104 132	53 8	do. Sand and gravel, loose	195	40	7- -15	T, 25	575	39	Irr	102	L.
26Q1	H. H. Auston	Dr	1962	190	10	190	P, 110-190	160	15	Gravel, loose	191	38	10- 6-61	S, 25	700	47	Irr	--	L.
27H1	Adolph Kittilson	Dr	1955	89	6	89	B	84	5	Sand and gravel	189	47	10- -55	--	b, 26	8	D	--	L.
34A1	Edwin Zubert	Dr	1957	122	6	122	B	121	1	Gravel	185	42	8-24-57	J, 1	b, 42	40	D	--	L.
35G1	Ed Hymes	Dr	1955	147	10	147	P, 94-147	85	62	Gravel and sand	194	--	--	T, 30	450	71	Irr	--	L.
36E1	Maurice Hymes	Dr	1937	105	6	--	P, 89-105	--	--	--	204	43.55	2- 8-60	T, 5	--	--	Irr	--	H.
T. 6 S., R. 1 E.																			
2M1	Chester Lichty	Dr	1960	77	6	54	B	68	1	Basalt	300	+5	1-20-60	--	b, 18	53	D,S	--	Ca, L, temp 56.5.
3Q1	Oscar Kilborn	Dr	1957	65	6	24	B	59	6	Limestone(?)	328	16 15.35	11-11-57 7- 6-62	--	b, 28	35	D	--	L, temp 53.
4C1	Ray Schaefer	Dr	1953	160	6	130(?)	B	130	1	Basalt(?)	277	--	--	T, 7½	100	100	Irr	--	--
4N1	Martin Schneider	Dr	1954	90	6	42	B	30	60	do.	300	30 41.62	7-14-59 7- 6-62	T, 7½	100	--	Irr	--	L.
4Q1	Marquam Methodist Church	Dr	1959	77	6	18	B	15	62	Sandstone, blue	297	30	12-19-59	--	b, 20	15	D, PS	--	L, temp 43.
4Q2	Pierre Smith	Dr	1959	77	8	15	B	66	11	Limestone(?)	295	17.57	3-15-63	J, 1	50	30	D	--	L.
4R1	Ray Webb	Dr	1956	299	6	299	G, P, 40-298	--	--	--	295	43	10-30-56	S, 2	b, 14	239	D	--	L, temp 54.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 1 E.--Continued																			
5B1	Verl Jacobson	Dr	1956	185	6	175	B	179	6	Sandstone	263	45	3-24-56	S, 1	b, 30	60	D	--	Ca, L, temp 58.
5P1	Gerald Sporalski	Dr	1956	92	6	87	B	41 87	9 5	Gravel Basalt	252	6	1956	J, 1	b, 25	61	D	--	L.
6N1	Ernest Westendorff	Dr	1950	100	6	100	--	96	4	Gravel, dirty	241	--	--	T, 5	100	--	Irr, D,S	--	--
7J1	Joe Otter	Dr	1957	141	8	142	P, 62-68, 136-141	64 131	1 10	Gravel Sand and gravel	290	11	7-15-57	S, 5	75	103	D,Irr	--	L.
7M1	Fred Lucht	Dg	1925?	21	36	21	B	--	--	--	260	--	--	Cy	5	--	O	--	H.
8L1	Wayne Weeks	Dr	1958	175	8	124	B	67	100	Lava	300	20	6-28-58	J, 3/4	b, 30	60	D	--	L, temp 54.
9B2	Mrs. Schwartout	Dr	1958	120	6	71	P, 50-52	--	--	--	300	8	2-26-58	--	b, 16	42	D	--	L.
9D1	Albert Barth	Dr	1959	150	8	45	--	136	14	Sandstone	301	70	9-16-59	S, 1½	b, 30	13	D, Irr	--	L, temp 54.
9F1	Henry Asboe	Dr	1950	201	8	16	B	--	--	Basalt	315	--	--	T, 10	200	--	D, Irr	--	--
9M1	Ronald Asboe	Dr	1955	292	6	22	B	--	--	Sandstone	326	60	9-13-55	S, 2	14	150	D	--	L.
10E1	Ross Marquam	Dr	1960	135	6	30	P, 10-20	--	--	Shale(?)	305	4 5.08	5-18-60 7-18-62	T, 2	b, 30	66	Irr	--	L.
13R1	W. K. Creason	Dr	1957	557	6	6	B	--	--	--	980	200 218.85	7- -57 6-27-62	--	4	--	D	--	L.
14N1	J. L. Henjum	Dr	1960	120	6	10	B	116	1	Shale parting	605	33	8-20-60	J, 1	5	77	D	--	L.
15D1	Harvey Kaser	Dr	1960	160	8	19	B	157	1	do.	385	27	9- 9-60	S, 3/4	15	58	S	--	L.
15J1	C. E. Imch	Dr	1959	119	8	19	B	117	2	do.	466	45	5-11-59	J, 3/4	--	--	D	--	L.
18B1	Walter Hersel	Dr	1952	140	6	--	--	--	--	--	285	--	--	J, 3/4	20	9½	D,S, Irr	20	--
19B1	Miller Cemetery Assoc.	Dr	1935	120	6	--	B	50	70	Basalt	390	--	--	J, 1	--	--	Irr	--	L.
19L1	Marie Smith	Dr	1956	76	6	31	B	30	46	do.	315	1	1956	--	7	65	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 1 E.--Continued																			
19P1	Harvey Gehring	Dr	1958	35	6	27(?)	B	27	8	Basalt	290	9	7-18-58	J, 1/4	18	23	D	--	L.
22R1	Jack Rutherford	Dr	1956	133	6	69	P, 25-69	132	1	do.	825	100	6- -56	--	b, 8	26	D	--	Drilled to 136 ft; water drained out, so well cemented to 133 ft. L.
26K1	H. E. Gronn	Dr	1959	159	8	75	B	45	32½	Sandstone	920	66 66.86	3- 3-59 7-19-62	J, 1½	b, 36	6	D,S	--	L.
26Q1	Bill Thompson	Dr	1960	320	8	31	B	--	--	Shale	970	90	6-17-60	S, 1	b, 6	60	D	--	L.
31G1	Oscar Loe	Dr	1950	301	12	52	B	275	21	Rock, soft, black	480	113	8- -50	T	580	147	Irr	--	L.
34M1	Roma Ramsby	Dr	1958	116	6	70	B	68	37	Shale	580	61	12- 5-58	J, 2	b, 36	6	D	--	L.
T. 6 S., R. 2 E.																			
8F1	George Reed	Dr	1958	168	6	45	B	--	--	--	660	45	2-19-58	S, 1	15	80	D	--	L, temp 54.
8N1	H. W. Chance	Dr	1962	455	6	20	B	--	--	--	890	45	10- 7-60	S, 3	30	20	D, Irr	--	L, temp 56.
14B1	Harry Schoenborn	Dr	1955	150	8	43	B	--	--	--	1,498	53	9- 7-55	--	b, 2	94	D	--	L.
16G1	T. G. Mandrones	Dr	--	--	6	--	--	--	--	Sandstone	740	--	--	Cy	--	--	PS	--	Known as Wilhoit Springs. Ca.
16G2	Albert Schoenborn	Dr	1959	61	6	25	B	22 45	12 16	Sandstone do.	750	15 16.23	3-17-59 6-27-62	--	b, 40	25	D	--	L, temp 50.
18Q1	Jude Lehner	Dr	1960	148	6	82	B	86 146	46 2	Basalt do.	960	85	3-28-60	S, 1	20	30	D	--	L, temp 52.
19D1	W. Creason	Dr	--	180	8	--	--	--	--	--	980	--	--	--	10	--	D	--	--
23G1	A. E. Hazelwood	Dr	1956	58	6	45	B	44	13	Andesite, weathered	1,850	6	2- 7-56	--	7	42	D	--	L, temp 52.
35R1	A. R. Shadday	Dr	1957	71	6	48	B	--	--	Basalt(?)	2,190	27.49	6-27-62	--	2	42	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 6 S., R. 3 E.																			
6C1	N. B. Nelson	Dr	1959	92	6	50	B	70	22	Sandstone	550	17	10-27-59	J, 1	13	53	D	--	L, temp 48.
T. 7 S., R. 1 W.																			
1J1	Vera Poulsen	Dr	1957	180	8	57	B	--	--	Shale	765	45	10-26-57	S, 1	b, 2	80	D	--	L.
1N1	Arnold Dankenbring	Dr	1959	96½	6	20	B	53	1	Basalt, creviced	355	25	7- 7-59	J, 3/4	b, 7½	65	D	--	L.
2E1	J. Q. Huddleston	Dr	1955	119	6	22	B	114	2	Basalt, honeycomb	450	80	9-27-55	--	b, 2	39	D	--	L.
2F1	John Becker	Dr	1962	150	6	40	B	65	80	Basalt	475	62	1-12-62	N	b, 3	75	D	--	L, temp 53.
2H1	I. T. Yoder	Dr	1960	200	6	10	B	--	--	Shale	370	13	6- 3-60	S, ½	b, 5	175	D	--	L.
3B1	Felix Wright	Dr	1956	181	6	20	B	180	1	Basalt, creviced	300	146	1956	S, 1	b, 20	5	D	--	L.
3C1	George Cline	Dr	1959	172	6	67	B	150	22	Basalt	300	115	9-22-59	S, 1	b, 18	20	D	--	L, temp 50.
4A1	Alfred Jensen	Dr	1959	133	6	76	B	65	68	do.	230	60	8-18-59	--	b, 24	0	D	--	L.
4E1	Sumner Schorn	Dr	1958	144	6	144	B	139	6½	Gravel, cemented	205	33	9- 1-58	S, ½	b, 18	91	D	--	L.
6P1	A. L. Dettwyler	Dr	1952	119	10	119	P	--	--	Gravel	198	21.34	2- 9-60	T, 25	275	--	Irr	--	H.
6R1	O. E. Steffen	Dr	1960	225	8	138	P, 75-100, 125-135	57 214	46 11	do. Basalt, caving	201	--	--	T, 3	105	135	Irr	--	Ca, L, temp 56.
7C1	Dettwyler & Schmidgall Dairy	Dr	1957	140	10	140	P, 61-68, 74-106	61 73	7 33	Gravel Gravel and sand	205	35	5-14-57	T, 20	400	51	Irr	--	Backfilled to 130 ft. L, temp 56.
8A1	Alfred Kuenzi	Dr	1949	82	6	67	B	67	15	Basalt	200	30	8- 1-60	S, 5	b, 47	35	Irr	--	L.
8A2	S. M. Sandver	Dr	1961	134	6	28	B	--	--	do.	250	62	2- 4-62	S, 1	20	48	D	--	L.
8C1	Phyllis Loe	Dr	1958	79	6	80	B	79	1	Gravel	175	30	3-20-58	--	b, 10	44	D	--	L.
9E2	Arnold Von Flue	Dr	1957	88	6	18	B	86	2	Basalt	225	30	9-27-57	J, 1	b, 24	33	D	--	L.
12N1	R. E. Skaife	Dr	1961	403	8	12	B	269	9	do.	850	205	2- 4-61	S, 3	b, 4	198	D	--	L, temp 50.
13F1	H. T. Small	Dr	1955	129	5	59	B	55	74	Sandstone	875	45	8-26-55	--	b, 15	--	D	--	L.
16B1	Alvin Hollin	Dr	1957	117	6	15	B	110	1	Basalt, creviced	250	25	4-20-57	J, ½	b, 4	85	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 1 W.--Continued																			
16D1	George Kuenzi	Dr	1950±	365	6	--	B	--	--	--	315	--	--	Cy, 1½	8	--	D	--	L.
17Q1	H. M. Kuenzi	Dr	1956	243	6	24	B	206	37	Basalt, honeycomb	360	200	1- 6-56	S, 3	b, 10	0	D	--	L.
19H1	J. H. Thompson	Dr	1957	433	6	22	B	195 200	5 233	Basalt Sandstone	300	100	2-11-57	S, 2	18	100	D	--	L.
19H2	Clyde McCall	Dr	1956	162	6	--	B	110	62	Basalt	295	--	--	S, 2	b, 25	15	D	--	L.
25B1	Wayne Goode	Dr	1960	400	8-6	352	P, 200-240, 320-340	--	--	--	830	90 111.38	2-11-60 7-23-62	--	b, 18	260	D	--	Drilled to 405 ft. L.
27N1	K. G. Johnson	Dr	1960	210	10	29	B	159	19	Basalt, vesicular	610	48	3-10-60	S, 5	55	120	Irr	--	Ca, L, temp 57.
34L1	O. H. Johnson	Dr	1957	200	8	85	P, 25-35	135	15	Sandstone	650	75	8- 3-57	--	b, 25	25	D	--	Ca, L, temp 51.
35L1	J. J. Doerfler	Dr	1958	259	6	35	B	--	--	--	740	17 38	11-19-58 7-23-62	--	b, 5	83	D	--	L, temp 52.
T. 7 S., R. 2 W.																			
3E1	H. V. Carson	Dr	1956	158	8	158	P, 96-123, 139-156	92	66	Gravel and sand	205	50	7-13-56	T, 30	400	43	Irr	--	L.
3G1	Jensen Bros.	Dr	1955	154	12	154	P, 100-151	66	88	do.	195	30	9-16-55	T	500	92	Irr	--	L.
3Q1	L. W. Roth	Dr	1961	138	6	136	B	132	4	Sand, coarse	205	57 59.63	8- 7-61 7-25-62	S, 5	60	73	D, Irr	--	L, temp 55.
4F1	P. W. Woelke	Dr	1957	172	10	165	P, 83-165	68 94	22 71	Sand and gravel Gravel, coarse	180	39	9-27-57	T	500	39	Irr	--	L, temp 56.
5F1	F. O. West	Dr	1957	58	5	58	B	53	5	Sand and gravel	183	24	11-10-57	--	b, 20	8	D	--	Do.
6E1	C. C. Cupp	Dr	1959	83	6	--	B	82	1	Gravel	185	51	8-25-59	--	b, 30	5	D	--	Do.
6N1	Edwin Maerz	Dr	1961	163	10	163	P, 68-112, 137-161	60 132	38 7	Gravel and sand do.	176	39	6- 5-61	--	525	21	PS	--	Hayesville Water Dist. well. L.
7B1	B. A. Stewart	Dr	1960	220	10	220	P, 90-96, 105-187, 191-217	80 105 190	16 82 29	Gravel, cemented do. do.	174	22	9-15-60	T, 20	700	100	PS	--	Ca, L, temp 56.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 2 W.--Continued																			
8G1	D. F. Andal	Dr	1961	103	6	103	B	101	2	Sand, coarse	180	25 35.10	8-28-61 7-25-62	J, 3/4	b, 30	30	D,Irr	--	L, temp 56.
8R1	Ralph Adams, Jr.	Dr	1958	119	8	119	B	118	1+	Gravel, coarse	199	13	3-24-58	T, 5	200	70	D,Irr	--	L, temp 53.
9P1	H. C. Toelle	Dr	1959	137	8	137	P, 1-135	70	67	Gravel and sand	185	10	5- 4-59	T, 2	600	84	D,Irr	--	L, temp 56.
10Q1	Harold Snethen	Dr	1956	76	5	76	B	72	4	Sand and gravel	175	33	7-27-56	J, 1	15	5	D	--	do.
11A1	Ernest Roth	Dr	1956	175	10	175	P, 42-174	84	89	Gravel and sand layers	202	34	5- 7-56	T, 20	475	30	Irr	--	Drilled to 198 ft; backfilled to 175 ft with 2-in. crushed rock. L.
11B1	Daniel Ross	Dr	1960	180	10	180	P, 98-135, 164-180	98 164	37 16	Sand and gravel do.	203	35	4-29-60	T, 40	300	83	Irr	--	L.
11K1	Walter Haverson	Dr	1956	147	8	147	P, 60-146	115 122 125	3 3 22	do. do. Gravel, cemented	200	25	3-25-56	T, 20	250	73	Irr	--	L.
12C1	Henry Roth	Dr	1958	104	6	104	B	103	1+	Sand and gravel	204	27	3- 1-58	J, 3/4	20	20	D	--	L, temp 53.
12E1	Leonard Squier	Dr	1952	125	10	125	P, 72-125	72	53	Gravel, cemented	199	15	1952	T, 20	480	37	Irr,D	--	L.
13L1	Carl Mantie	Dr	1960	97	6	83	B	83	14	Basalt	224	45	4-19-60	--	35	21	D	--	L.
14A1	W. T. Hatteberg	Dr	1959	163	10	163	P, 74-92, 108-127	62	88	Gravel and sand layers	210	30	4- 9-59	T, 20	210	82	Irr	--	L, temp 55.
14C3	R. W. Fiske	Dr	1957	136	8	136	P, 80-134	65	71	Gravel and sand	210	45	8-27-57	T, 5	165	56	D,Irr	--	L, temp 56.
14J1	Ernest Roth	Dr	1962	160	10	155½	P, 54-61, 71-127, 150-153	50 71	11½ 56	Conglomerate do.	210	33	4-16-62	T, 25	220	100	Irr	--	L, temp 55.
15D1	J. C. Koch	Dr	1961	85	6	85	B	--	--	--	180	37	8- 4-61	--	b, 10	15	D	--	L.
16A1	V. VanCleve	Dr	1953	144	8	144	P, 65, 140-144	--	--	--	180	20	1953	T, 10	220	--	Irr	--	L.
16B1	Richard Klophenstein	Dr	1959	123	8	123	P, 85-122	54	69	Gravel and sand layers	185	21	12- 8-59	Cy, 3/4	400	42	D	--	L.
17K1	Alton Roth	Dr	1961	168	10	168	P, 87-113, 130-139, 150-165	79 120 147	33 19 21	Gravel Gravel and sand Gravel, cemented	190	19	4-15-61	T, 40	800	36	Irr	--	L, temp 55.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 2 W.--Continued																			
18L1	L. G. Wittenberg	Dr	1956	201	10	200	P, 93-106,114-196	48 90 112	3 19 89	Gravel Gravel, cemented Gravel and sand	195	6	3-11-56	T, 20	550	76	PS	--	Lombard Water Co. L.
19A1	E. F. Real	Dr	1956	53	4	53	B	52	1	Gravel	205	16	1956	--	25	10	D	--	L, temp 58.
19M1	E. J. Fischer and C. V. Kent	Dr	1956	156	6	151	P, 122-151	138	23	Gravel and clay	201	21	4- 2-56	T, 7½	100	126	D, PS	--	L, temp 56.
19M2	E. J. Fischer	Dr	1960	169	8	169	P, 120-126, 151-168	53 120 151	17 5 18	Sand and gravel do. do.	205	15	3-15-60	T, 15	200	103	D, PS	--	L, temp 52.
19P1	Cushing Bros.	Dr	1956	131	8	131	P, 83-128	39 58 82	15 12 49	Gravel, cemented do. Gravel, some sand	210	7.5	4-2-56	T, 5	500	92½	D, PS	--	L, temp 56.
20R1	A. W. Meyer	Dr	1958	163	10	163	P, 69-163	68	95	Gravel, cemented	200	35	11-24-58	T, 15	175	80	Irr	--	Do.
21B1	Albert Gerig	Dr	1960	91	8	91	B	66½ 83	3 8	Gravel, loose Sand and gravel	185	26 27.80	7-20-60 7-26-62	T, 7½	110	59	Irr	--	L.
21K1	Robert Fordyce	Dr	1961	87	8	87	P, 64-86	64	23	Gravel and sand	200	38	7-20-61	T, 7½	300	26	Irr	--	L.
22E1	H. L. Hilke	Dr	1957	84	6	84	B	84	(?)	Sand and gravel	203	45	7-13-57	--	--	--	D	--	L, temp 57.
25R1	Ivan Eberly	Dr	1960	146	6	23	B	84	18	Basalt	275	49	4-23-60	--	b, 20	79	D	--	L.
26G1	Cornelius Bateson	Dr	1955	208	8	84	P, 50-65, 74, 78-84	60 73 77 84	6 2 7 124	Gravel, cemented do. do. Basalt	220	38	12-29-55	T, 7½	135	112	Irr	--	L.
26M1	B. F. Cushing	Dr	1961	97	6	65	B	44	53	do.	200	30	7-26-61	J, 2	b, 10	60	D	--	L, temp 55.
27A1	John Shamberger	Dr	1962	151	8	129	P, 44-100, 112-123	39 114	61 8	Gravel, cemented do.	200	30 31.25	6- 9-62 8-10-62	T, 25	225	97	Irr	--	Do.
27C1	John Wienaz	Dr	1960	140	8	140	P, 63-140	60 68	8 72	do. Sand and gravel	220	49	10- 6-60	S, 7½	250	88	Irr	--	L, temp 54.
27D1	Percy Pearson	Dr	1956	95	6	95	B	89	6	do.	220	32	2-30-56	J, 1	b, 25	13	D	--	L, temp 57.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 2 W.--Continued																			
27E1	Peter Mattson	Dr	1958	130	10	125	P, 75-124	89 109 115	6 3 10	Gravel and sand Sand and gravel Gravel	220	50	7-3-58	--	275	76	Irr	--	L, temp 56.
27P1	Elmer Bolz	Dr	1952	112	8	--	P	--	--	--	225	--	--	T, 10	180	--	Irr	--	--
28D1	W. E. Vladyka	Dr	1959	150	8	149	P, 74-149	48 138	78 12	Sand and gravel do.	215	44	9- 5-59	J, 3	270	53	D, Irr	--	L.
28Q1	Northwest Natural Gas Co.	Dr	1960	250	10	153	--	--	--	--	220	33.94	8-10-62	--	--	--	N	--	Ground for pipeline. L.
29L1	West Foods Co.	Dr	1959	200	12	198	P, ?	65	82	Gravel, cemented	215	30	8- 8-59	T	575	100	Ind	--	Ca, L, temp 56.
29R1	H. A. Wilson	Dr	1956	120	10	110	P, 52-60, 86-108	50 86	10 24	Gravel Sand and gravel	205	43	8-14-56	T	250	42	Irr	--	L, temp 56.
30N1	Erickson's Super Markets	Dr	1959	68	6	68	P, 35-40, 61-66	61	5	do.	210	12	1-25-59	J, 3	b, 40	8	Ind	--	L, temp 58.
31L1	W. P. Catron	Dr	1955	76	6	76	B	74	2	do.	215	18	11-29-55	--	18	22	D	--	L, temp 54.
32C1	R. D. McGhee	Dr	1960	65	6	65	B	60	5	Gravel, cemented	210	8	5-19-60	J, ½	b, 20	35	D	--	L, temp 55.
32L1	Herman Vogel	Dr	1955	112	8	112	P, 90-112	61	51	Sand, gravel, some clay	218	20	10- 6-55	--	50	60	D	--	L.
34J1	H. L. Brickeen	Dr	1962	64½	6	64½	P, 44-62	61	3½	Basalt, decomposed	535	15	6-13-62	--	b, 40	19	D,Irr	--	L.
34L1	C. J. Moiseve	Dr	1962	203	6	84½	B	78	8	Lava, medium-hard	300	18	5-10-62	--	b, 5	176	D	--	L, temp 57.
T. 7 S., R. 1 E.																			
11K1	M. G. Tycer	Dr	1960	126	8	47	B	46	44	Sandstone	700	37	5- 2-60	--	b, 6	88	D	--	Ca, L, temp 47.
27R1	R. L. Greer	Dr	1957	60	6	30½	B	41	19	Tuff	1,540	26	7-30-57	--	30	14	D	--	L.
T. 7 S., R. 2 E.																			
8Q1	Martin Huesser	Dr	1959	82	6	30	B	48	34	Basalt	1,875	36	8-17-59	--	b, 16	39	D	--	L.
16M2	Gordon McKay	Dr	1959	138	8	29	B	--	--	do.	1,980	100	9-17-59	--	b, ½	Total	D	--	Well cemented from 27-48 ft to prevent caving. L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 7 S., R. 2 E.--Continued																			
16P1	W. H. Rossow	Dr	1960	54	10	24	B	24	30	Basalt	1,970	18	11- 7-60	--	b, 15	32	D	--	L.
21A1	D. R. Dorgan	Dr	1960	205	6	53	B	--	--	--	2,030	--	--	--	--	--	N	--	Reported dry. L.
21A2	do.	Dr	1960	258	6	42	B	40	218	Lava, soft	2,012	42	11- 4-60	J, 1	b, 10	0	D	--	L, temp 56.
T. 8 S., R. 1 W.																			
4H1	W. F. Parks	Dr	1960	196	8	94	B	--	--	Basalt, weathered(?)	610	76	8-15-62	--	31	120	D	--	L.
4H2	Henrietta Coleman	Dr	1956	205	8	176	B	--	--	--	605	75	5-16-56	--	b, 15	50	D	--	L, temp 50.
6K1	L. E. Brandt	Dr	1955	114	6	43	P, 25-38	65 113	1 1	Rock, gray Rock, black	575	20	11-30-55	--	10	79	D	--	L.
11C1	Eric Fisher	Dr	1957	308	8	206	B	51	145	Sandstone	830	60	1957	S, 2	10	200	D	--	L, temp 50.
18C1	John Miller	Dr	1961	158	6	131	B	128	30	Basalt	500	68 67.95	9-25-61 8-15-62	S, 1½	20	32	D	--	L.
20H1	Cress Cullison	Dr	1958	77	6	11	B	--	--	--	405	27	12-12-58	J, 3/4	13	20	D	--	L.
26Q1	E. Miotke	Dr	1951	385	12-8	100	B	--	--	Basalt	578	--	--	T, 26	600	--	Irr,D	--	--
27B1	Herman Schmid	Dr	1958	102	6	46	B	57 100	1 1+	Basalt, gray Basalt, creviced	500	58	8-23-58	J, 1½	b, 32	2	D	--	L.
27Q1	W. C. McCollister	Dr	1953	200	6	--	B	--	--	Basalt	525	90	1956	T, 10	90	3	D,Irr	22.92	--
28G1	Josephine Gerpacher	Dr	1960	178	6	122	B	122	56	do.	475	112	4- 7-60	S, 5	90	48	D,Irr	--	L, temp 54.
30J1	Francis Hendricks	Dr	1960	270	8	117	B	116	154	do.	425	67 70.51	5-18-60 8-14-62	S, 25	220	82	D,Irr	--	L.
32D1	D. J. Elbert	Dr	1956	187	10	59	B	50	10	Sand and gravel	390	5	8-26-56	--	b, 55	30	Irr	--	L, temp 51.
33E1	G. R. Duncan	Dr	1962	213	6	78	B	--	--	--	320	82 85.42	6-19-62 8-14-62	--	b, 24	68	D	--	L.
34A1	Eugene Buttler	Dr	1961	260	6	--	B	--	--	Basalt	555	93	7-25-61	S, 7½	25	2	D,Irr	--	--
34C1	R. M. Stuckart	Dr	1958	210	10	48	B	161	49	do.	525	52	10-24-58	S, 10	400	30	D,Irr	--	L.
34K1	Town of Sublimity	Dr	1952	300	--	--	--	--	--	--	500	--	--	T, 15	--	--	PS	--	--

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 1 W.--Continued																			
34L1	Town of Sublimity	Dr	1960	317	10	191	B	182	135	Basalt	530	68	10-21-60	S, 20	300	122	PS	--	Ca, L, temp 55.
35B1	Edward Miotke	Dr	1960	193½	6	20±	B	--	--	do.	575	13	11-22-60	J, 1	60	37	D	--	L.
35C1	Richard Schumacher	Dr	1959	285	8	40	B	115	145	Basalt(?)	560	85	5-19-59	T, 30	350	110	Irr	--	L.
36G1	Ralph Tate	Dr	1958	344	6	87	B	319	5	Sandstone	750	280	5- 1-58	--	15	45	D	--	L, temp 57.
T. 8 S., R. 2 W.																			
1P1	Waldo Hills Farm	Dr	1961	262	8	31	B	27	235	Basalt	450	27	9-20-61	J, 1	180	158	Irr	--	L.
2B1	Darrel Franklin	Dr	1960	87	6	35	B	34	53	do.	375	6	10- 7-60	J, 1	30	50	D	--	L.
3H1	James Cooper	Dr	1961	169	6	73	B	--	--	--	425	35	6-22-61	J, 1	21	113	D	--	L.
3J1	Fred Doolin	Dr	1961	60	6	60	P, 45-60	45	15	Basalt	465	20	9- 1-61	J, 1	39	5	D	--	L.
3M1	Harold Leevers	Dr	1961	230	8	80	B	202	10	Volcanic cinders	460	68	10- 3-58	--	30	124	N	--	L, temp 57.
4B1	Philip Senkovich	Dr	1960	114	6	84	B	84	30	Basalt, weathered	245	38	9-21-60	J, 3/4	20	40	D	--	L.
5H1	J. L. Stanley	Dr	1960	80	8	80	P, 40-42, 49-74	36 48	5 27	Sand and gravel do.	235	19	8- 9-60	T, 5	55	8	Irr	--	L.
6D1	City of Salem	Dr	1962	166	8	164	P, 55-115	55 95	15 20	do. do.	215	8	5-29-62	T, 10	100	100	PS	--	L.
6G1	L. Shrake	Dr	1957	59	6	59	B	57	2	do.	232	24	12-23-57	J, 1	b, 30	12	D	--	L.
7D1	Harry Wendland	Dr	1961	69	6	67	B	67	2	Basalt, decomposed	219	1	3- 2-61	J, 3/4	60	9	D	--	L.
8J1	H. R. Miller	Dr	1960	168	8	56	B	55	113	Basalt	460	50	3-17-60	S, 2	b, 17	45	D	--	L.
9Q1	H. B. VanSanten	Dr	1960	165	6	99	B	88	77	do.	615	89	9-26-60	--	b, 15	56	D	--	L, temp 55.
10G1	C. J. Dallman	Dr	1955	65	6	65	G, P, 13-65	--	--	--	460	10	9- 1-55	T, 5	b, 70	45	D,Irr	--	L.
10P1	D. R. McFarlane	Dr	1959	175	6	59	B	53	122	Tuff(?)	550	32	6-13-59	S, 5	b, 12	63	D	--	L, temp 58.
11A1	Lloyd M. Hill, Inc.	Dr	1960-62	129	8	37	B	110	4	Basalt, "broken"	420	+1	8- 1-62	T, 15	500	60	Irr	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 2 W.--Continued																			
11G1	Richard Hill	Dr	1960	94	8	53	B	48	46	Basalt, fractured	430	14	9-23-60	J, 1	b, 40	62	D	--	L.
11P1	Rieck Bros.	Dr	1961	258	8	198	P, 60-75, 82-104, 137-145, 156-199	44	101	Basalt	480	3	11-25-61	T, 15	b, 75	57	Irr	--	L.
11P2	do.	Dr	1962	245	12-10	75	P, 40-50, 60-65	230	10	Basalt, fractured	485	25	7-21-62	--	1,000	44	Irr	--	L.
13A1	Vernon Jette	Dr	1959	131	6	64	P, 47-61	40	91	do.	490	23 24.37	7-14-59 9- 6-62	J, 3/4	b, 35	15	D	--	L.
13M1	Thornton Coffey	Dr	1961	223	6	140	P, 55-60, 67-72	45 93	27 128	Tuff(?) Basalt	523	45	9-15-61	J, 1	b, 18	140	D	--	L.
13N1	Mike Klophenstein	Dr	1959	162	6	28	B	138	8	Basalt, vesicular	540	138	7-28-59	S, 1	b, 15	9	D	--	L.
14K1	Arthur Baker	Dr	1957	180	6	100	B	99	81	Basalt	580	40	1957	--	b, 15	100	D	--	L, temp 55.
14L1	Edward Oul	Dr	1960	103	6	79	B	28 77	32 26	Rock, tan Basalt, weathered	520	13	5-14-60	J, ½	b, 13	77	D	--	L.
15N1	J. B. Smith	Dr	1958	270	6	--	--	--	--	--	420	--	--	S,3/4	--	--	D	--	Yields little water. L.
16J1	Don Huddleston	Dr	1959	210	6	20	B	37	3	Sandstone(?)	425	11½	9-18-59	J, 3/4	b, 2	185	D	--	L.
16N1	A. A. Olsen	Dr	1962	179	6	55	B	--	--	Basalt	500	93	5-19-62	--	b, 7	74	D	--	L.
17K1	Marion Mulkey	Dr	1959	70	6	17	B	17	53	do.	385	5	9-28-59	J, ½	b, 8	40	D	--	L.
19D1	J. K. Cloyd	Dr	1959	119	6	22	B	7	112	do.	340	79	10-23-59	--	b, 15	20	D	--	Fissures at 82 and 116 ft. L, temp 56.
21C1	R. E. Waldorf	Dr	1958	90	6	33	P, 25-33	73	17	Basalt(?)	525	70	9- 1-58	--	b, 15	15	D	--	L, temp 56.
23C1	Orville Busby	Dr	1959	74	6	12	B	30 63	33 11	Basalt Sandstone	475	30	12-14-59	J, 3/4	b, 15	17	D	--	L.
24A1	Ann Macklin	Dr	1960	85	6	22	B	44	31	Basalt	425	39½ 43.98	6-20-60 9-11-62	S, 2	b, 40	1	D	--	L.
25H1	C. L. Riley	Dr	1961	69	6	49	P, 40-47	36	11	Clay, gravel, and sand	355	11 8.77	9-19-61 9-13-62	--	b, 25	31	D	--	L.

Table 1.--Records of representative wells in the Molalla-Salem slope area--Continued

Well number	Owner	Type of well	Year completed	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Finish	Water-bearing zone(s)			Altitude (feet)	Water level		Type of pump and hp	Well performance		Use	Acres irrigated	Remarks
								Depth to top (feet)	Thickness (feet)	Character of material		Feet below datum	Date		Yield (gpm)	Drawdown (feet)			
T. 8 S., R. 2 W.--Continued																			
25Q1	C. D. Striplin	Dr	1955	82	8	53	P, 21-41	17 52 80	26 3 2	Gravel, cemented do. Sand and gravel	350	5 5.39	9-29-55 9-11-62	J, 5	100	5	D	--	L, temp 55.
25R1	City of Aumsville	Dr	1958	100	8	99	P, 40-70, 83-97	--	--	do.	364	11	6-21-58	T, 15	135	78	PS	--	L, temp 55.
28A1	D. L. Norlin	Dr	1958	205	6	45	B	160	45	Sandstone	400	53	9-20-58	S, 1	b, 10	55	D	--	Ca, L, temp 56.
28F1	Harold Taylor	Dr	1957	161	6	60	B	--	--	Basalt	450	90	7- 3-57	S, 2	b, 18	30	D	--	L, temp 52.
28Q1	E. P. Poitras	Dr	1957	33	6	33	B	12	21	Gravel and boulders	290	12	12-11-57	J, 3/4	b, 16	8	D	--	L.
29G1	Perry Baker	Dr	1960	48	6	47	B	40	8	Sand, "packed"	276	14	10-20-60	J, 1	b, 18	14	D	--	L, temp 57.
29M1	N. H. Bliss	Dr	1957	117	6	62	B	112	5	"Shale"	310	24	9-27-57	J, 1	b, 10	63	D	--	L, temp 58.
30K1	V. F. Tipton	Dr	1961	123	6	40	B	--	--	--	390	45	6-17-61	J, 1	b, 11	70	D	--	L.
33K1	Anna Etzel	Dr	1957	100	12	101	P, 5-99	8	92	Sand and gravel layers	302	1½ 2.98	6-5-57 9-16-62	T, 30	500	64	Irr	--	L.
35L1	R. L. Beach	Dr	1956	21	6	21	P, 18-21	14	7	Sand and gravel	335	5	5-18-56	--	b, 30	4	D	--	L, temp 55.
36J1	R. L. Killinger	Dr	1961	83	6	83	B	49 81	5 2	Gravel, coarse sand Sand, "packed)	360	5	7-28-61	J, 3/4	b, 30	35	D	--	Well deepened and upper aquifer cased off because of bad taste. L, temp 59.
36R1	do.	Dr	1960	50	6	50	B	48	2	Sand, coarse	362	6 7.00	6-13-60 9-13-62	J, 3/4	b, 20	24	D	--	L, temp 59.
T. 8 S., R. 3 W.																			
25J1	Herman Fitzner	Dr	1959	110	6	33	B	80	30	Basalt	410	82	8-12-59	J, 1	b, 20	5	D	--	L.

Table 2.--Drillers' logs of representative wells

4/1W-36J1. School District 91. Altitude 160 ft. Drilled by J. A. Sneed & Sons, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, sandy, yellow	40	42
Clay, sandy, blue	37	79
Gravel, cemented	2	81
Gravel, water-bearing	1	82
Gravel, cemented	4	86
Gravel, sandy	7	93
Clay, sandy, blue	11	104
Clay, blue	2	106
Clay, green	14	120
Clay, sticky, blue	6	126
Clay, sandy, blue	16	142
Sand, fine-grained	2	144
Clay, sticky, blue	36	180
Clay, sandy, blue	8	188
Clay, sticky, blue	4	192
Sand, fine-grained	20	212
Clay, sticky, blue	60	272
Shale, soft, blue	35	307
Shale, firm, blue	5	312
Shale, blue	4	316

Casing: 6-in. to 312 ft.

4/1W-36R1. Gust Rosenblatt. Altitude 170 ft. Drilled by John W. Beck, 1956

Soil	5	5
Silt, light-brown	50	55
Silt, blue	15	70
Clay and sand, blue	11	81
Gravel, cemented	2	83
Silt, dark-brown, and black sand	26	109
Sand, black	14	123
Sand and gravel	4	127
Clay	5	132

Casing: 6-in. to 132 ft; perforated 126-129 ft.

4/1-5M1. City of Barlow. Altitude 100 ft. Drilled by J. T. Miller, 1955

Soil	3	3
Gravel, cemented	16	19
Clay, blue	2	21
Gravel, cemented	3	24
Gravel, water-bearing	2	26
Gravel, cemented, water-bearing	20	46
Gravel, water-bearing	1	47
Clay, gray	1	48

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, red, water-bearing	9	57
Gravel, "tight," some water	3	60
Sand, "hard," and gravel	12	72
Clay, gray	14	86
Gravel, "tight"	4	90
Clay, "broken," gray and blue	37	127

Casing: 10-in. to 60 ft.

4/1-7A1. Frank Wroble. Altitude 100 ft. Drilled by Skyles Drilling Co., 1960

Soil, black	5	5
"Hardpan"	3	8
Sand	3	11
Gravel, large	4	15
Clay	3	18
Gravel, pea-sized	2	20
Clay, brown	8	28
Sand, brown	27	55
Sandstone, brown	5	60
Shale, blue-black	2	62
Sand, "heavy" (coarse?), black	3	65

Casing: 10-in. to 65 ft.

4/1-7J1. Isador Bany. Altitude 160 ft. Drilled by Steinman Bros., 1956

Sand and clay, brown	38	38
Silt and sand, blue	27	65
Clay and gravel	3	68
Gravel and sand, no water	2	70
Clay and loosely cemented gravel	12	82
Sand and gravel, loosely cemented, water-bearing, and clay	33	115
Clay, silty, blue	15	130
Sand and gravel, coarse	2	132
Sand, water-bearing	7	139
Sand and clay-green	6	145
Clay, green	5	150

Casing: 10-in. to 131 ft; perforated 90-115 ft; 6-in. perforated liner 127-150 ft; gravel packed.

4/1-7K1. Joe Hershberger. Altitude 110 ft. Drilled by John T. Miller, 1960

Soil	7	7
"Beaver dam"	9	16
Sand	13	29
Gravel, cemented	37	66

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, blue	2	68
Sand, black, and gravel	6	74
Casing: 10-in. to 68 ft; perforated 52-56, 61 ft.		

4/1-7L1. Victor Hamauska. Altitude 100 ft. Drilled by J. T. Miller, 1958

Soil	3	3
Clay, blue	23	26
Gravel, cemented	5	31
Sand, red	8	39
Gravel, water-bearing	2	41
Sand and small gravel	2	43
Gravel, water-bearing	1	44
Gravel, cemented	14	58
Gravel, some red sand	7	65
Casing: 10-in. to 65 ft; perforated 40-41, 43-44, 60-63 ft.		

4/1-9H1. Albert Livedalen. Altitude 150 ft. Drilled by John W. Beck, 1956

Soil and sand	12	12
Gravel, cemented	13	25
Clay, brown	8	33
Gravel, cemented	37	70
Sand	25	95
Sand and gravel	3½	98½
Clay, blue	1½	100
Casing: 6-in. to 99 ft; perforated 96-99 ft.		

4/1-10K1. F. E. Merz. Altitude 130 ft. Drilled by E. O. Beier, 1957

Soil	1	1
Gravel, "hard-packed" (cemented?)	11	12
Gravel, loose	7	19
Gravel, "hard-packed" (cemented?)	1	20
Casing: 6-in. to 20 ft.		

4/1-12F1. Leonard Burdett. Altitude 160 ft. Drilled by Tolleson Drilling Co., 1961

Soil	3	3
Sand, brown, and clay	14	17
"Conglomerate"	6	23
Clay, blue	11	34
Sand, fine, water-bearing	9	43
Gravel, pea-size	3	46
Clay, blue	20	66

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium-grained, water-bearing	4	70
Clay, blue	215	285
Sand, medium-grained, dark	8	293
Clay, blue	27	320
Sand, fine, and clay	5	325
Clay, blue	5	330

Casing: 6-in. to 288 ft; perforated 38-43, 65-72 ft.

4/1-15A1. J. C. Neumann. Altitude 210 ft. Drilled by John T. Miller, 1957

Soil	3	3
Clay, sandy	17	20
Sand	20	40
Sand, coarse, and clay	35	75
Gravel and clay	5	80
Sand, coarse	7	87
Gravel, water-bearing	1	88

Casing: 6-in. to 88 ft.

4/1-15P1. Lloyd Hepler. Altitude 185 ft. Drilled by John W. Beck, 1957

Soil	6	6
Silt, brown	26	32
Gravel, cemented	5	37
Sand and silt, brown	9	46
Silt, dark-blue	8	54
Silt, brown	24	78
Sand, fine, black, and silt	5	83
Sand, light-brown	3	86
Sandstone, brown	3	89
Silt, brown	3	92
Clay and silt, blue	4	96
Sand, black	5	101
Clay and silt, brown	4	105
Sand, coarser near bottom, black	15	120
Clay, blue	2	122

Casing: 6-in. to 122 ft; perforated 116-120 ft.

4/1-16H1. A. J. Krzmarzick. Altitude 170 ft. Drilled by John T. Miller, 1960

Soil	3	3
Sand	38	41
Rock, black	23	64
Gravel, cemented	30	94
Clay, blue	13	107
Sand, "broken," and clay	20	127

Casing: 8-in. to 97 ft, 6-in. to 127 ft; perforated 74-84 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/1-17R1. K. L. Eilert. Altitude 160 ft. Drilled by John W. Beck, 1960

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, dark-brown	11	14
Silt and sand, light-brown	23	37
Silt, blue	7	44
Gravel, cemented	20	64
Clay, dark-green	12	76
Clay, dark-blue	14	90
Sandstone	20	110

Casing: 6-in. to 90 ft.

4/1-18C1. Robert Fromm. Altitude 160 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	3	3
Sand and silt	67	70
Sand and gravel, water-bearing	½	70½
Gravel, cemented	7½	78
Clay, yellow and blue	6	84
Sand, fine, "packed"	3	87
Gravel and sand, water-bearing	½	87½
Wood, decomposed	3½	91
Clay, yellow	5½	96½
Sand, "mucky," fine, red	22½	119
Clay, yellow	1	120
Shale, blue	34	154

Casing: 8-in. to 124 ft; perforated 82-90 ft.

4/1-20C1. Robert May. Altitude 170 ft. Drilled by Irving Sears, 1960

Soil	3	3
Clay, yellow	7	10
Clay, sandy, yellow	14	24
Sand, gray	29	53
Shale, soft, blue	7	60
Shale, sticky, some grit, blue	2	62
Gravel, cemented	5	67
Shale, blue, thin streaks of sand	8	75
Shale, sandy, blue	60	135
Shale, sandy, black	45	180
Shale, sticky, blue	20	200
Shale, sandy, black, and thin layers of sand and gravel	35	235

Casing: 10-in. to 190 ft; perforated 62-75 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/1-21M1. Ivan Pulley. Altitude 175 ft. Drilled by John W. Beck, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Silt and clay	20	23
Gravel, cemented	15	38
Clay, blue and green	53	91
Sand	15	106
Gravel, pea-size	4	110
Silt, sand, and wood	12	122
Clay, white	1	123

Casing: 6-in. to 123 ft; perforated 87-91, 106-110 ft.

4/1-22B1. J. A. Ritter. Altitude 212 ft. Drilled by Tolleson Drilling Co., 1960

Soil	2	2
Clay, brown	38	40
Clay, blue	10	50
Clay, brown	30	80
Clay, black	5	85
Sand, dark-brown	5	90
Clay, black	10	100

Casing: 6-in. to 81 ft.

4/1-22N1. Ben Gettman. Altitude 195 ft. Drilled by John W. Beck, 1951

Silt	20	20
Gravel, cemented	70	90
Clay, blue, and sand	45	135
Sand, fine	20	155
Clay, blue	19	174
Sand, coarse	16	190
Clay and fine sand, blue	7	197
Clay, gray, and sand; streak of small gravel at 210 ft	30	227
Clay	73	300

Casing: 8-in. to 221 ft; perforated 75-80, 135-140, 160-215 ft.

4/1-23D1. Harold Jensen. Altitude 223 ft. Drilled by Steinman Bros., 1956

Clay, yellow	18	18
Sand, "mucky," brown	4	22
Clay, blue	3	25
Gravel, cemented, no water	14	39
Clay, silty, yellow	8	47
Gravel, "no water"	1	48
Clay, brown	9	57
Gravel, cemented	14	71

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, yellow	14	85
Clay, gray	8	93
Clay, sandy, yellow	12	105
Clay, "hardpan," brown	7	112
Clay, brown, with gravel layers	5	117

Casing: 6-in. to 94 ft, 5-in. from 90-117 ft; perforated 94-117 ft.

4/1-25C1. Albert Ronfeld. Altitude 230 ft. Drilled by C. G. Westerberg, 1957

Soil	3	3
Clay, brown	3	6
Clay and sand, brown	18	24
Clay, soft, blue	9	33
Shale, hard, blue	2	35
Gravel and clay	15	50
Gravel, water-bearing	1	51

Casing: 6-in. to 51 ft.

4/1-26A1. H. A. Herkamp. Altitude 230 ft. Drilled by C. G. Westerberg, 1961

Soil	2	2
Clay, tan	7	9
Clay, soft, tan	10	19
Clay, soft, with mica, blue	15	34
Clay, blue, and coarse gravel	11	45
Gravel, coarse-sized	12	57
Gravel, medium-sized	6	63

Casing: 6-in. to 63 ft.

4/1-28K1. Titus Ramer. Altitude 195 ft. Drilled by C. G. Westerberg, 1956

Soil	2	2
Clay, brown	18	20
Clay and sand, brown	10	30
Sand, coarse, brown	3	33
Sand and gravel	2	35
Clay, brown	2	37
Sand, gravel, and clay	18	55
Clay, brown	8	63
Sand and gravel	5	68
Clay, brown	2	70
Shale, blue	7	77
Sand, brown	10	87
Sand and pea-size gravel	5	92
Shale, blue	15	107

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, and clay	3	110
Sand, fine, black	5	115
Sand and pea-size gravel	1	116
Sand and gravel, coarse	8	124
Shale, blue	9	133

Casing: 8-in. to 133 ft; perforated 118-125 ft.

4/1-28L1. C. C. Backsen. Altitude 189 ft. Drilled by Willamette Drilling Co., 1962

Soil	2	2
Clay, gray	2	4
Silt, sandy, brown	26	30
Shale, sandy, brown	2	32
Shale, sticky, blue	13	45
Shale, sandy, brown	35	80
Sand and shale, grayish-black	35	115
Sand and small gravel, black	7	122
Shale, sandy, black	8	130
Shale, soft, sticky, blue	20	150
Shale, hard, sticky, blue	21	171
Sand and gravel, black	2	173
Shale, gray	11	184
Shale, hard, blue	41	225

Casing: 10-in. to 157 ft; perforated 116-125 ft.

4/1-29J1. Lyle McEwen. Altitude 180 ft. Drilled by John W. Beck, 1959

Soil and clay, brown	14	14
Silt, brown, and sand	14	28
Silt, blue	36	64
Clay, blue	20	84
Silt, dark-blue	8	92
Sand, fine	18	110
Sand, fine, and gravel	14	124
Clay, gray	4	128
Gravel, pea-size, water-bearing	?	

Casing: 6-in. to 128 ft.

4/1-31G1. K. K. Kenagy. Altitude 160 ft. Drilled by H. A. Fredrikson, 1958

Old well, no record	102	102
Sand, black	53	155
Clay, blue	15	170
Clay, blue, and some gravel	5	175
Clay, brown, gravel and sand	3	178

Casing: 6-in., depth not known.

Table 2.--Drillers' logs of representative wells--Continued

4/1-31R1. M. J. Oswalt. Altitude 179 ft. Drilled by H. A. Fredrikson, 1958

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay, brown	27	28
Clay, blue	57	85
Clay, brown, some gravel	5	90
Sand, brown	1	91
Clay, brown; gravel and sand	4	95

Casing: 6-in. to 90 ft.

4/1-34R1. Walter Norton. Altitude 240 ft. Drilled by Tolleson Drilling Co., 1960

Old well, no record	84	84
Sand, gravel, clay, brown	29	113
Clay, blue, sand and gravel	20	133

Casing: 6-in. to 130 ft.

4/1-35E1. Albert Willbroad. Altitude 235 ft. Drilled by John W. Beck, 1962

Soil	6	6
Silt, brown	18	24
Clay, brown	4	28
Gravel, small, cemented	45	73
Clay, blue	11	84
Gravel, cemented, blue	14	98
Gravel, cemented, brown	12	110
Clay, reddish-brown	5	115
Gravel, cemented	8	123
Clay, brown	15	138
Gravel, cemented	13	151
Clay, blue	14	165
Gravel, cemented	6	171
Clay, light-blue	9	180
Clay, dark-blue	7	187
Sand and gravel, water-bearing	9	196
Clay, blue	4	200

Casing: 8-in. to 200 ft; perforated 100-110, 115-123, 138-155, 170-196 ft.

4/1-36J1. Delbert Dworschak. Altitude 270 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, brown	6	8
Clay and silt, soft	8	16
Gravel	2	18
Clay, blue	3	21

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, blue, and gravel	5	26
Gravel, cemented, and clay	17	43
Gravel	4	47

Casing: 6-in. to 46 ft.

4/2-5Q1. C. T. Foster. Altitude 570 ft. Drilled by C. G. Westerberg, 1961

Soil	2	2
Clay, red	6	8
Clay and boulders	27	35
Clay, tan	8	43
Boulders	9	52
Clay and streaks of porous rock	16	68
Basalt	15	83
Clay, gray	27	110
Clay, sandy	5	115
Sand	7	122
Clay, tan	6	128
Clay, blue	13	191

Casing: 6-in. to 72 ft, 5-in. 69-141 ft; perforated 75-122 ft.

4/2-8G1. Larry Baughman. Altitude 420 ft. Drilled by C. G. Westerberg, 1962

Soil brown	2	2
Clay, sticky, tan	9	11
Clay, sandy, brown	6	17
Boulders	11	28
Clay, dark-green	8	36
Gravel, coarse	2	38
Clay, tan	8	46
Clay, blue	30	76
Sand and gravel, dry	10	86
Clay, blue	12	98
Sand, medium, dry	3	101
Clay, blue, with mica	33	134
Clay, blue	88	222
Sand, medium, water-bearing	4	226
Clay, blue and gray, and mica	139	365
Sand, black, and pumice, water-bearing	5	370
Clay, gray, and mica	8	378
Clay, hard, gray	19	397
Pumice, sand, gray	6	403
Clay, gray	17	420
Sand, medium, gray	5	425
Clay, hard, blue	12	437

Casing: 6-in. to 387 ft, 5-in. 384-437 ft; perforated 395-405, 418-430 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-8Q1. Marlin Burley. Altitude 395 ft. Drilled by C. G. Westerberg, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay, brown	9	10
Clay, sandy, brown	32	42
Clay, brown	3	45
Sand, brown	15	60
Sand and gravel, brown	10	70

Casing: 6-in. to 69 ft.

4/2-9K1. H. S. Ross. Altitude 580 ft. Drilled by William J. Stennett, 1959

Soil	2	2
Clay, red, with large boulders	29	31
Clay, yellow	15	46
Clay, sandy	12	58
Rock, soft lava	18	76
Sandstone, brown	38	114
Sandstone, hard	16	130
Sand, brown, and fine gravel, water-bearing	5	135

Casing: 6-in. to 131 ft.

4/2-11N1. Alfred Rasmussen. Altitude 400 ft. Drilled by C. G. Westerberg, 1960

Soil	1	1
Clay, sticky, gray	13	14
Clay, blue	11	25
Clay, sandy, brown	16	41
Rock, soft	2	43
Basalt	30	73
Basalt, porous	3	76
Basalt, hard	39	115
Basalt, soft, water-bearing	8	123
Basalt, hard	4	127

Casing: 6-in. to 42½ ft.

4/2-13E1. C. H. White. Altitude 740 ft. Drilled by Steinman Bros., 1958

Clay, sticky, red	21	21
Clay, sandy, brown	46	67
Rock, gray	18	85
Rock, decomposed	5	90
Rock, hard, gray	3	93
Rock, decomposed, yellow	37	130
Shale, brown	17	147

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, gray	33	180
Clay, blue	15	195

Casing: 6-in. to 62 ft, 5-in. 60-195 ft; perforated 150-190 ft.

4/2-15M1. D. L. Belshe. Altitude 420 ft. Drilled by William J. Stennett, 1959

Soil	4	4
Sand and cemented gravel	132	136
Shale, blue	2	138
Sand, gravelly	38	176
Shale, blue	14	190
Shale, gray	20	210
Shale, blue	28	238
Sand	7	245
Shale, blue	5	250

Casing: 6-in. to 236 ft.

4/2-16H1. W. M. Grimm. Altitude 230 ft. Drilled by Tolleson Drilling Co., 1959

Clay, light-brown	27	27
Clay, blue	38	65
Sand, fine, dark	5	70

Casing: 6-in. to 58 ft.

4/2-16H2. L. A. Cochran. Altitude 260 ft. Drilled by Tolleson Drilling Co., 1961

Soil	1	1
Clay, brown	35	36
Clay, blue	67	103
Sand, fine, and mica	7	110
Clay, blue	48	158
Sand, medium	2	160
Clay, blue	5	165

Casing: 6-in. to 140 ft.

4/2-17H1. J. A. Ellison. Altitude 223 ft. Drilled by C. G. Westerberg, 1960

Soil	2	2
Clay, tan	18	20
Rock, cobble	4	24
Clay, gray	4	28
Clay or shale, blue	40	68

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, soft, black (wood and mica)	3	71
Sand and gravel	4	75
Clay, blue	35	110
Shale, crumbly, blue	5	115
Shale, hard	6	121
Clay, soft, gray	8	129
Shale, gray	47	176
Sand, fine, and mica	7	183
Shale, gray	16	199
Shale, gray, and some mica	34	233
Shale, hard, gray	3	236
Sandstone	3	239
Sandstone, water-bearing	4	243
Sand, black	4	247
Shale, gray	3	250

Casing: 6-in. to 238 ft.

4/2-17J1. Mulino Grade School. Altitude 237 ft. Drilled by C. G. Westerberg, 1960

Soil	2	2
Clay, tan	17	19
Gravel, cobble	4	23
Clay, blue	23	46
Gravel, fine, and clay	9	55
Sand and gravel, wood	8	63
Clay, blue	22	85
Shale, soft	5	90
Shale, hard	15	105
Shale, gray	45	150
Sand, fine, and mica	5	155
Shale, blue	38	193
Clay, soft, gray, and mica	15	208
Shale, hard	11	219
Sand, black, water-bearing	4	223
Shale, gray, and mica	12	235
Shale, blue	6	241
Sand, black	4	245
Shale, green	10	255
"Pumice"	3	258
Shale, gray	12	270
Clay, sandy	5	275
Sand, black	4	279
Shale, hard	4	283

Casing: 6-in. to 235 ft, 5-in. 233-283 ft; perforated 240-245, 255-261, 271-278 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-17J2. T. C. Reed. Altitude 242 ft. Drilled by William J. Stennett, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	6	6
Clay, red	8	14
Shale, blue	2	16
Shale, blue, with gravel and boulders	8	24
Clay, blue	46	70
Sand, water-bearing	3	73
Clay, blue, with wood particles	6	79
Gravel, fine, pea-size, and sand	7	86

Casing: 6-in. to 86 ft.

4/2-18D1. G. Thornton. Altitude 205 ft. Drilled by Steinman Bros., 1955

Old well, no record	62	62
Sand, packed	6	68
Clay, silty, blue	7	75
Clay, silty, sandy, gray	22	97
Shale, blue	7	104
Clay, sandy, blue	6	110
Silt, gray	6	116
Silt, sand, gray	6	122
Clay, sand, blue	6	128
Shale, blue	19	147
Shale, dark-green	3	150
Sand, small gravel, water-bearing	3	153

Casing: 6-in. to 116 ft, 5-in. 110-150 ft; perforated 120-140 ft.

4/2-18G1. F. R. Williams. Altitude 230 ft. Drilled by John W. Beck, 1956

Soil	6	6
Silt and clay, yellow	19	25
Clay, blue	6	31
Gravel, cemented	8	39
Clay, yellow	8	47
Clay and silt, blue	12	59
Silt, gray	20	79
Sand, fine	3	82
Sand, packed	9	91
Clay, brown	15	106
Clay, light-blue	99	205
Clay, dark-blue, "broken-hard"(?)	27	232

Casing: 6-in. to 101 ft; perforated 85-91 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-19N1. Peter Wetten. Altitude 235 ft. Drilled by John W. Beck, 1957

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay and silt, brown	19	21
Gravel, cemented, with blue clay binder	11	32
Gravel, cemented, with brown clay binder	103	135
Clay, blue	10	145
Sand and gravel, with brown clay binder	5	150
Clay, light-blue	15	165
Clay, dark-blue	5	170
Silt, dark-blue	9	179
Sand and fine gravel	1	180

Casing: 6-in. to 180 ft; perforated 120-140, 145-150 ft.

4/2-20R1. J. B. Pedro. Altitude 270 ft. Drilled by C. G. Westerberg, 1957

Soil	2	2
Clay, brown	6	8
Cobble rock	20	28
Clay, brown	3	31
Gravel	2	33
Clay, blue	67	100
Clay, blue, with mica and wood	10	110
Clay, blue	15	125
Clay, blue, with sand and wood	7	132
Clay, blue	34	166
Clay and sand, water-bearing	10	176
Clay, blue	9	185
Sand, black	4	189
Clay, blue	5	196

Casing: 6-in. to 162 ft.

4/2-21Q1. Joe Fisher Park. Altitude 230 ft. Drilled by C. G. Westerberg, 1960

Soil	1	1
Clay	3	4
Cobbles and clay	8	12
Clay	13	25
Clay, sandy	5	30
Sand and gravel	5	35
Clay, blue	53	88
Clay, sandy	2	90
Sand	2	92
Clay, gray	53	145
Clay with mica, soft	4	149
Shale, gray	11	160
Clay, sandy	2	162

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand and shale	5	167
Shale, hard	9	176
Casing: 6-in. to 155 ft.		

4/2-22A1. George Jenkins. Altitude 540 ft. Drilled by Tolleson Drilling Co., 1960

Clay, brown	20	20
Boulders and clay	35	55
Rock, solid	13	68
Casing: 6-in. to 55 ft.		

4/2-22L1. W. G. Deardorff. Altitude 500 ft. Drilled by C. G. Westerberg, 1962

Old well	90	90
Gravel, medium	7	97
Clay, tan	11	108
Sand, brown, and fine gravel	3	111
Clay, tan	29	140
Sand, brown, with mica	5	145
Clay, tan	25	170
Sand, coarse, brown	7	177
Clay, tan	17	194
Clay, sandy, tan	10	204
Clay, tan	14	218
Clay, sandy, tan	6	224
Clay, tan	8	232
Clay, sandy	3	235
Sand, coarse, brown, with some fine gravel and pumice	13	248
Clay, blue	2	250
Casing: 6-in. to 234 ft.		

4/2-22M1. R. P. Tolleson. Altitude 500 ft. Drilled by R. P. Tolleson, 1959

Clay, light-brown	40	40
Clay, dark-blue	45	85
Clay, dark-blue, and fine sand	5	90
Clay, blue	40	130
Clay, light-brown, bits of wood, some sand and pebbles	20	150
Casing: 6-in. to 30 ft.		

Table 2.--Drillers' logs of representative wells--Continued

4/2-26F1. C. A. Caseday. Altitude 330 ft. Drilled by C. G. Westerberg, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, soft, gray	23	25
Clay, sandy, brown	9	34
Clay, blue	21	55
Clay, blue, and sand	2	57
Sand, coarse, black, and fine gravel	11	68
Clay, blue	7	75

Casing: 6-in. to 53 ft.

4/2-27E1. L. Poulsen. Altitude 255 ft. Drilled by C. G. Westerberg, 1957

Soil	2	2
Clay, brown	10	12
Cobbles	1	13
Clay, brown	2	15
Cobbles	4	19
Shale, blue	6	25
Sand and shale	4	29
Shale, blue	6	35
Shale, hard, blue	23	58
Shale, sandy	2	60
Sand and clay	2	62
Clay, sand, and wood, black	3	65
Sand, black	3	68
Sand, black, and wood	3	71
Clay and sand, blue	4	75

Casing: 6-in. to 56 ft.

4/2-28F1. Richard Knudson. Altitude 285 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, brown	3	5
Cobbles and clay	15	20
Gravel and clay	8	28
Clay, yellow	14	42
Clay, blue	103	145
Clay, sandy, and wood	2	147
Clay, blue	8	155
Clay, sandy	2	157
Sand, black	5	162
Clay, blue	6	168

Casing: 6-in. to 151½ ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-28H1. Donald Brown. Altitude 270 ft. Drilled by C. G. Westerberg, 1958

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	15	17
Clay, blue	19	36
Sand, black	6	42
Clay, blue	11	53
Sand (sandstone?), black	3	56
Clay, sticky, blue	19	75
Clay, soft, blue, water-bearing	7	82
Clay, blue	26	108

Casing: 6-in. to 37 ft.

4/2-29K1. Clyde Hepler. Altitude 255 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay and gravel	2	4
Gravel, cobbles, and clay	25	29
Gravel and clay	14	43
Gravel, water-bearing	1	44
Gravel and clay	23	67
Clay, brown	6	73
Gravel	10	83
Clay, blue	1	84
Clay, blue, and gravel	6	90
Gravel	10	100
Clay, blue	5	105

Casing: 6-in. to 100 ft.

4/2-30E1. John Damm. Altitude 252 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, tan	8	10
Clay, soft	13	23
Clay, blue	2	25
Gravel	25	50
Clay and gravel	14	64
Clay, gray-blue	9	73
Clay, sandy, brown	2	75
Sand, brown	9	84

Casing: 6-in. to 69 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-30P1. John Krupicka. Altitude 260 ft. Drilled by H. A. Fredrikson, 1958

Materials	Thickness (feet)	Depth (feet)
Soil and clay	26	26
Clay and boulders	65	91
Clay, brown	15	106
Clay, blue	5	111
Gravel	7	118

Casing: 6-in. to 106 ft.

4/2-31D1. Iola M. Walch. Altitude 260 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay, brown	6	8
Clay and silt, brown	9	17
Gravel and clay	2	19
Clay, blue	3	21
Gravel, cemented	29	50
Gravel	1	51

Casing: 6-in. to 50 ft.

4/2-32J1. Mickey McMoran. Altitude 285 ft. Drilled by C. G. Westerberg, 1960

Soil	1	1
Clay	6	7
Cobble gravel	18	25
Gravel, cemented	45	70
Clay, brown and tan	6	76
Sand and gravel	2	78

Casing: 6-in. to 73 ft.

4/2-33D1. S. M. Callahan. Altitude 265 ft. Drilled by C. G. Westerberg, 1956

Soil	2	2
Clay, brown	4	6
Gravel, cobble	16	22
Gravel, coarse	2	24
Gravel, cobble	26	50
Gravel and clay	28	78
Clay	7	85
Gravel	13	98

Casing: 6-in. to 98 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-33D1. S. M. Callahan. Altitude 265 ft. Drilled by C. G. Westerberg, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	4	6
Gravel, cobble	16	22
Gravel, coarse	2	24
Gravel, cobble	26	50
Gravel and clay	28	78
Clay	7	85
Gravel	13	98

Casing: 6-in. to 98 ft.

4/2-34G1. Ivan Lebold. Altitude 400 ft. Drilled by C. G. Westerberg, 1961

Soil	1	1
Clay, tan	13	14
Gravel, medium, and clay	7	21
Clay, hard, tan	32	53
Sandstone	19	72
Clay, brown	7	79
Sandstone, hard	23	102
Shale, blue	9	111
Gravel, medium, cemented	30	141

Casing: 5-in. to 141 ft; perforated 95-140 ft.

4/2-35C1. A. E. Griggs. Altitude 287 ft. Drilled by C. G. Westerberg, 1957

Old well	13	13
Clay, blue	7	20
Sand, black	2	22
Clay, blue	6	28
Clay, purple, with wood	12	40
Shale, blue	30	70
Wood	2	72
Shale, hard, blue	19	91
Clay, sand, and gravel	4	95
Clay and gravel	5	100
Clay and shale, blue	16	116
Wood and clay	4	120
Shale	5	125
Shale and wood, caving, water-bearing	5	130
Shale, hard, and sandstone, water-bearing	25	155
Sandstone and shale, water-bearing	12	167
Shale, hard, and sandstone, water-bearing	7	174
Conglomerate and sandstone, some shale	4	178
Sandstone	2	180

Casing: 6-in. to 137 ft, 5½-in. 137-180 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/2-35H1. A. J. Meisner. Altitude 360 ft. Drilled by C. G. Westerberg, 1961

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay	5	6
Clay, sandy	7	13
Gravel, coarse	8	21
Clay, brown	3	24
Clay, blue	2	26
Clay, brown	14	40
Sand, brown	2	42
Clay, blue	26	68
Clay, sandy, blue	2	70
Gravel, medium	6	76
Gravel, coarse	7	83

Casing: 6-in. to 78½ ft.

4/2-36H1. C. R. Rice. Altitude 820 ft. Drilled by Tolleson Drilling Co., 1961

Soil	1	1
Clay, brown	6	7
Clay and boulders, brown	58	65
Clay, brown	31	96
Clay, blue	49	145
Clay, brown	30	175
Sandstone and clay, brown	5	180
Clay, brown	7	187
Sandstone and clay, brown	8	195
Clay and medium sand, brown	20	215
Clay and fine to medium sand, blue	50	265

Casing: 6-in. to 245 ft.

4/2-36L1. George Lord. Altitude 510 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay, brown	6	8
Clay, sandy, brown	18	26
Clay, brown	14	40
Clay, sandy	40	80
Clay, blue	4	84
Clay, brown, and sand	46	130
Clay, blue	20	150
Gravel and clay, blue	18	168
Clay, blue	15	183
Shale, blue	3	186
Clay, blue	9	195

Casing: 6-in. to 181 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/3-3M1. Preston Erickson. Altitude 1,350 ft. Drilled by Skyles Drilling & Supply, 1961

Materials	Thickness (feet)	Depth (feet)
Basalt boulders and red clay	45	45
Basalt, decomposed	28	73

Casing: 6-in. to 70 ft.

4/3-4Q1. R. B. Marshall. Altitude 1,340 ft. Drilled by Skyles Drilling & Supply, 1955

Soil	2	2
Clay, yellow, and basalt boulders	46	48
Basalt, red	7	55
Clay, sandy, gray	10	65
Clay, sandy, red	14	79
Basalt, red	3	82
Basalt, porous, red	3	85
Basalt	302	387

Casing: 6-in. to 50 ft.

4/3-4R1. R. J. Wollslair. Altitude 1,360 ft. Drilled by C. G. Westerberg, 1962

Soil, brown	2	2
Clay, red	24	26
Boulders, medium-hard	9	35
Clay, brown	6	41
Clay, soft, gray	24	65
Clay, brown	3	68
Boulders, medium-hard	15	83
Clay, brown	3	86
Clay, purple to black	4	90
Rock, porous	10	100
Rock, medium-hard	6	106
Rock, with some clay streaks	3	109
Basalt, hard	1	110

Casing: 6-in. to 104 ft.

4/3-7J1. Fred Wiegele. Altitude 820 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay, brown	18	20
Boulders and clay	5	25
Boulders and soft rock	22	47
Basalt	23	70
"Clay," hard, red	8	78
Rock, porous, soft	7	85
Sandstone	10	95

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, hard	13	108
Rock, porous, soft	2	110
Basalt	3	113
Casing: 6-in. to 30 ft.		

4/3-8M1. Don DeBoer. Altitude 880 ft. Drilled by Tolleson Drilling Co., 1961

Soil	2	2
Clay, brown	29	31
Boulders and clay	15	46
Rock, solid, blue	12	58
Clay, brown	27	85
"Claystone"	2	87
"Clay," coarser, brittle, water-bearing	9	96
Casing: 6-in. to 46 ft.		

4/3-14H1. Stanley Mitchell. Altitude 1,085 ft. Drilled by Barron & Strayer, 1961

Soil	5	5
Clay and boulders	20	25
Boulders	20	45
Rock, hard, black	80	125
Rock, soft	80	205
Gravel, water-bearing	7	212
Casing: 6-in. to 128 ft.		

4/3-16N1. Clarence Rowland. Altitude 920 ft. Drilled by C. G. Westerberg, 1961

Soil	2	2
Clay, red	3	5
Rock, decomposed	2	7
Boulders and clay	8	15
Rock, lava	38	53
Clay, red	9	62
Rock, soft, water-bearing	5	67
Rock, porous, gray	14	81
Casing: 6-in. to 19 ft.		

4/3-20D1. Charles Marshal. Altitude 890 ft. Drilled by William J. Stennett, 1960

Soil	6	6
Clay, red	9	15

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
"Sandstone," black and yellow, with boulders	26	41
Lava, decomposed	40	81

Casing: 6-in. to 71 ft.

4/3-21D1. J. T. Low. Altitude 960 ft. Drilled by C. G. Westerberg, 1960

Soil	2	2
Clay, red	14	16
Rock, cobble-size	4	20
Rock, decomposed, red, and clay	14	34
Rock, porous, decomposed, red	1	35
Clay, red	19	54
Clay, sandy, brown	6	60
Clay, brown	2	62
Rock, broken	18	80
Rock, basalt	18	98
Clay, brown	3	101
Clay, red	4	105
Rock, decomposed	4	109
Clay, gray	4	113
Rock, soft	7	120
Clay, soft	7	127
Rock, decomposed, soft	14	141

Casing: 6-in. to 81 ft, 5-in. 95-141 ft.

4/3-23Q1. O. W. Lindahl. Altitude 1,040 ft. Drilled by William J. Stennett, 1958

Soil	4	4
Clay, red	10	14
Lava, decomposed, with "huge" boulders	32	46
Lava, gray	14	60
Clay, red	18	78
Rock, soft	19	97
Clay, red	19	116
Rock, hard, red	26	142
Clay, red	16	158
Lava, hard, gray	17	175
Rock, soft, red	17	192
Rock, hard, gray	43	235
Sandstone	14	249
Gravel, cemented	9	258

Casing: 6-in. to 51 ft, 4-in. to 258 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/3-25N1. LeRoy Gardner. Altitude 845 ft. Drilled by Tolleson Drilling Co., 1960

Materials	Thickness (feet)	Depth (feet)
Clay, brown	16	16
Clay, blue	8	22
Rock, porous, blue	8	30
Clay, hard, brown	28	58
Clay, blue	12	70
"Sandstone," dark-gray	5	75

Casing: 6-in. to 41 ft.

4/3-27D1. Clarence Courtney. Altitude 910 ft. Drilled by Steinman Bros., 1962

Old dug well	40	40
"Brown clay conglomerate"	7	47
Rock, soft, gray	33	80

Casing: 8-in. to 47 ft.

4/3-28D1. W. L. Rodgers. Altitude 890 ft. Drilled by C. G. Westerberg, 1960

Soil	1	1
Clay, hard, red	17	18
Clay, soft, red	53	71
Rock, soft	2	73
Rock, porpous	2	75
Clay, tan	15	90
Clay, gray-blue	4	94
Clay and gravel	11	105
Sand and gravel, brown	10	115
Clay and sand, tan	11	126
Clay, tan	32	158
Clay, blue	8	166

Casing: 6-in. to 106 ft, 5-in. 105-165 ft; perforated 105-145 ft.

4/3-29M1. L. G. Marshall. Altitude 850 ft. Drilled by Steinman Bros., 1958

Clay, granular, red to yellow	40	40
Boulders and clay	37	77
Clay, sandy, brown	23	100
Clay, brown, with streaks of black sand	15	115
Clay, gray	11	126
Clay, sandy, brown	5	131
Clay, gray	19	150

Casing: 6-in. to 109 ft.

Table 2.--Drillers' logs of representative wells--Continued

4/3-30B1. John Schrader. Altitude 850 ft. Drilled by C. G. Westerberg, 1962

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, sticky, red	23	25
Clay, soft, brownish-red	30	55
Clay, sandy, brown	20	75
Rock, decomposed	24	99
Rock, gray	2	101

Casing: 6-in. to 81 ft, 5-in. 80-101 ft; perforated 82-99 ft.

4/3-31B1. Lewis Timm. Altitude 880 ft. Drilled by Tolleson Drilling Co., 1961

Soil	1	1
Clay, red-brown	46	47
"Rocks"	4	51
Clay, brown	11	62
Rock, solid, brown	47	109
Rock, solid, blue	46	155
Sand and gravel, medium, and brown clay	5	160

Casing: 6-in. to 68 ft.

4/3-32F1. James Fones. Altitude 700 ft. Drilled by C. G. Westerberg, 1957

Soil and clay	4	4
Gravel, cobble, and clay	2	6
Clay, brown	19	25
Clay, sandy	5	30
Silt, soft, and brown sand	17	47
Silt and blue clay	3	50
Clay, sandy, blue	3	53
Shale, blue	22	75
Shale, hard, blue, with streaks of wood	33	108
Shale, hard	4	112
Shale, softer, blue	6	118
Shale, sandy	2	120
Sand	3	123
Basalt	4	127

Casing: 6-in. to 115 ft.

4/3-35D1. John Chelson. Altitude 730 ft. Drilled by C. G. Westerberg, 1957

Soil	2	2
Clay	2	4
Clay, brown, and cobble rock	18	22
Shale, blue, with rock layers	23	45

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, hard, and rock	30	75
Shale, brown, and rock; some gravel and sand	5	80
Rock, porous, and shale	7	87
Casing: 6-in. to 47 ft.		

4/3-35G1. W. E. Job. Altitude 850 ft. Drilled by Tolleson Drilling Co., 1960

Soil	2	2
Clay, tan	28	30
Clay, white, and wood	10	40
Clay, brown	200	240
"Mud" gravel, water-bearing	1±	241
Casing: 6-in. to 42 ft.		

4/3-36D1. L. Black. Altitude 840 ft. Drilled by Tolleson Drilling Co., 1961

Clay and rock, brown	10	10
Clay, brown	22	32
Clay, blue, and rotten wood	42	74
Sand, medium	2	76
Clay, brown	2	78
Casing: 6-in. to 65 ft.		

4/4-4M1. R. F. Gillette. Altitude 1,120 ft. Drilled by O. E. Jannsen Drilling Co., 1960

Soil	1	1
Clay, red	8	9
Lava, weathered	51	60
Clay, hard, red-brown	30	90
Clay, brown (weathered lava?)	5	95
Lava, weathered, dark-red	20	115
Casing: 6-in. to 51 ft.		

4/4-7K1. Antone Palumbo. Altitude 1,000 ft. Drilled by Steinman Bros., 1956

Soil and coarse gravel	5	5
Clay, yellow and red	40	45
Basalt, vesicular, weathered	10	55
Basalt, vesicular, gray; contains white specks; water-bearing	28	83
Rock, weathered, buff	24	107

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, loosely cemented, non-water-bearing	6	113
Clay, yellow	4	117

Casing: 6-in. to 72 ft; perforated 55-70 ft.

4/4-16J1. C. L. Palmater. Altitude 1,220 ft. Drilled by Steinman Bros., 1959

Clay, sandy, red	15	15
Clay, yellow	12	27
Clay, sticky, red	8	35
Clay, sticky, yellow	10	45
Clay, bluish-gray	22	67
Clay and decomposed rock	39	106
Rock, gray and pink	34	140
Rock, gray	8	148
Rock, gray and pink	6	154
Rock, gray	22	176
Rock, gray, with yellow seams, water-bearing	14	190

Casing: 6-in. to 112 ft.

4/4-18C1. Clackamas County. Altitude 670 ft. Drilled by William J. Stennett, 1960

Soil	3	3
Gravel, coarse	11	14
Clay, blue	2	16
Soapstone, blue	16	32
Sand, water-bearing	1	33
Soapstone	17	50
Sand, water-bearing	3	53
Sandstone	7	60

Casing: 6-in. to 53 ft.

4/4-20Q1. Sam Block. Altitude 1,210 ft. Drilled by C. G. Westerberg, 1958

Soil	1	1
Clay, hard, brown	7	8
Clay and silt, soft	25	33
Clay and boulders	7	40
Clay, sandy	10	50
Clay, sand, and fine gravel	10	60
Rock, decomposed, and clay	7	67
Rock, lava, porous	5	72
Clay	6	78
Rock, soft	2	80
Rock, lava, red	6	86
Rock, lava, hard	18	104
Rock, soft	4	108

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, lava	22	130
Rock, soft	8	138
Rock, lava	4	142
Rock, hard	8	150
Clay	3	153
Rock, lava	12	165
Rock, lava, hard	7	172
Clay, brown	10	182
Rock, lava	5	187
Basalt, gray, hard	3	190

Casing: 6-in. to 79 ft.

4/4-22B1. H. O. Widman. Altitude 1,360 ft. Drilled by Steinman Bros., 1959

Clay, red	15	15
"Hardpan," yellow	25	40
Rock, soft, gray	50	90
Rock, honeycomb, with gray clay seams	26	116
Rock, hard, gray	5	121
Rock, soft, gray, with white and brown specks	44	165

Casing: 6-in. to 55 ft.

4/4-30G1. C. H. Wilcken. Altitude 1,100 ft. Drilled by Tolleson Drilling Co., 1959

Soil	2	2
Clay, light-brown	4	6
Clay, dark-gray	3	9
Rock, soft	26	35
Soapstone, broken, water-bearing	12	47

Casing: 6-in. to 11 ft.

5/1W-1F1. W. M. Kostrikan. Altitude 180 ft. Drilled by John W. Beck, 1957

Soil	14	14
Silt, brown	18	32
Clay, blue	16	48
Clay, brown	8	56
Clay and gravel, cemented, brown	9	65
Clay, blue	9	74
Clay, sandy, brown	2	76
Sand, brown	8	84
Clay, light-blue to dark-blue	40	124
Silt, dark-blue	8	132
Sand, fine, black	10	142
Clay, blue	14	156

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, dark, with pebbles of pumice	1	157
Clay, blue	3	160

Casing: 6-in. to 143 ft; perforated 58-65, 78-84 ft.

5/1W-1H1. Frank Lais. Altitude 175 ft. Drilled by John W. Beck, 1956

Soil	10	10
Silt, water-bearing	10	20
Clay, blue	29	49
Silt, wood	4	53
Clay, blue, green, and brown	32	85
Clay and sand mixed	9	94
Clay, dark	6	100
Sand, fine	11	111
Sand, medium, dark	6	117
Sand and gravel	17	134
Clay, green	2	136

Casing: 6-in. to 135 ft; perforated 123-133 ft.

5/1W-10Q1. Mr. Jack. Altitude 150 ft. Drilled by Harty Bros., 1953

Soil, yellow	34	34
Quicksand, yellow	46	80
Gravel, cemented, yellow	11	91
Gravel and sand, decomposed	11	102
Sand, blue, and wood	9	111
Gravel, cemented, blue	11	122
Gravel, cemented, hard	18	140
Clay, blue	64	204

Casing: 8-in. to 140 ft.

5/1W-14H1. Paul Berkert. Altitude 195 ft. Drilled by John T. Miller, 1961

Soil	2	2
Clay, brown	16	18
Gravel	2	20
Clay, sandy, brown	42	62
Sand	3	65
Gravel and boulders, cemented	8	73
Sand, water-bearing	13	86
Sand and gravel, "broken"	9	95
Clay, sandy, gray	17½	112½
Gravel	6½	119
Clay, sandy	2	121

Casing: 8-in. to 120 ft; perforated 113-119 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1W-14J1. R. O. Bliven. Altitude 195 ft. Drilled by John W. Beck, 1951

Materials	Thickness (feet)	Depth (feet)
Silt	22	22
"Hardpan," light-blue	6	28
Clay, blue	20	48
Gravel, cemented	12	60
Gravel, loose	13	73
Clay, blue	29	112
Gravel, water-bearing	?	

Casing: 8-in. to 102 ft.

5/1W-15B1. Butsch Bros. Altitude 152 ft. Drilled 1951

Soil and brown silt	73	73
Sand and gravel	17	90
Clay, blue	15	105
Sand	8	113
Gravel, coarse	32	145

Casing: 10-in. to 145 ft; perforated 77-90, 123-145 ft.

5/1W-16C1. Yacov Konovolov. Altitude 165 ft. Drilled by Willamette Drilling Co., 1956

Soil	2	2
Clay, yellow	27	29
Silt and clay, yellow	6	35
Clay, blue	30	65
Sand, brown, and small gravel, water-bearing	5	70
Clay, blue	34	104
Sand and gravel, cemented, very little water	21	125
Sand and gravel, black, water-bearing	9	134

Casing: 8-in. to 134 ft.

5/1W-16D1. D. A. Dryden. Altitude 172 ft. Drilled by John W. Beck, 1955

Soil and brown silt	19	19
Silt, gray, water-bearing	60	79
Sand, fine, dark	2	81
Clay, dark-brown	2	83
Sand, brown	14	97
Clay, blue	2	99
Sandstone, soft	2	101
Gravel, very little sand, water-bearing	17	118
Clay, blue	1	119

Casing: 8-in. to 119 ft; perforated 106-118 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1W-16R1. C. H. Pantle. Altitude 151 ft. Drilled by Irving Sears, 1955

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, yellow	22	25
Sand, silt, and gravel	35	60
Shale, blue	13	73
Sand and gravel, black, water-bearing	22	95
Shale, black	10	105

Casing: 8-in. to 97 ft; perforated 79-95 ft.

5/1W-21H1. Irvin Halter. Altitude 155 ft. Drilled by John T. Miller, 1960

Soil	3	3
Clay, sandy, gray	42	45
Clay, sandy, blue	20	65
Sand, black	7	72
Gravel, water-bearing	20	92

Casing: 6-in. to 92 ft.

5/1W-23A1. A. H. Douthit. Altitude 185 ft. Drilled by John W. Beck, 1956

Silt, brown	30	30
Silt, brown and blue	37	67
Gravel, cemented	21	88
Clay and silt mixed	10	98
Silt, dark-brown	2	100
Gravel, cemented	20	120
Sand and gravel	6	126
Silt, dark-brown	13	139
Clay, blue	1	140

Casing: 6-in. to 140 ft; perforated 67-88, 100-125 ft.

5/1W-24G1. H. W. Schroeder. Altitude 190 ft. Drilled by C. G. Westerberg, 1961

Soil	1	1
Clay, brown	19	20
Clay, blue	12	32
Clay, brown	4	36
Clay, sandy, brown	2	38
Sand, medium-size gravel, and clay	13	51
Clay, tan	12	63
Clay, gray-blue	4	67
Clay, black	1	68
Sand, medium-size, brown, water-bearing	4	72
Clay, tan	4	76
Gravel, medium-size, and clay	3	79
Clay, tan	2	81
Clay, blue	6	87

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, sandy, blue	15	102
Sand, black	3	105
Clay, blue	15	120
Clay, green	8	128
Clay, sandy, soft	2	130
Clay, blue	2	132

Casing: 8-in. to 102 ft.

5/1W-25N1. A. J. Hilger. Altitude 197 ft. Drilled by Max Wymore, 1957

Soil	3	3
Clay, brown	9	12
Clay, sandy, brown	4	16
Clay, gray	12	28
Clay, blue, and some gravel	15	43
Clay, yellow	7	50
Sand, brown, and gravel	1	51
Gravel and clay, brown	11	62
Sand, black, and gravel	2	64
Sand, black	5	69
Sand and gravel	14	83
Clay, blue	2	85

Casing: 8-in. to 85 ft; perforated 50-51, 69-80 ft.

5/1W-25P1. G. P. Fischer. Altitude 210 ft. Drilled by Orville Wymore, 1956

Soil	3	3
Clay, yellow	15	18
Shale, gray	9	27
Shale, yellow	11	38
Gravel and clay, water-bearing	18	56
Sand, yellow, and clay	4	60
Clay, blue	10	70
Gravel and coarse sand, water-bearing	5	75
Gravel, medium-size, and sand	7	82
Shale, blue	10	92

Casing: 8-in. to 92 ft; perforated 54-56, 73-83 ft.

5/1W-25R1. S. D. A. Church. Altitude 178 ft. Drilled by Willamette Drilling Co., 1961

Soil	2	2
Clay, yellow	5	7
Gravel, dry	13	20
Clay, brown, and silt	40	60
Shale, light-gray	17	77
Sand, "soupy," black, water-bearing	3	80
Clay, blue	16	96

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, black	3	99
Clay, blue	5	104
Sand, black, water-bearing	6	110
Casing: 4-in. to 104 ft.		

5/1W-27D1. Gordon Sealy. Altitude 175 ft. Drilled by John W. Beck, 1953

Loam, sandy	4	4
Silt, brown	19	23
Silt, blue	22	45
Sand, brown	7	52
Gravel, brown	19	71
Sand and gravel, blue	9	80
Clay, blue	22	102
Gravel with clay	32	134
Casing: 8-in. to 134? ft; perforated?		

5/1W-27H1. LaVerne Norton. Altitude 185 ft. Drilled 1959

Soil and sand	23	23
Sand, gray	27	50
Sand and clay	9	59
Sand and gravel	16	75
Sand and clay	23	98
Sand	7	105
Sand and gravel	5	110
Gravel and "hardpan"	5	115
Sand and gravel	8	123
Casing: 6-in. to 117 ft.		

5/1W-28F1. P. J. Weinacht. Altitude 169 ft. Drilled by Roy Perkins, 1953

Soil and fine yellow silt	39	39
Sand, fine, gray, and blue shale	25	64
Sand and shale	6	70
Gravel and shale	4	74
Gravel and sand, loose	1	75
Gravel and shale, tight	2	77
Shale, hard, brown	11	88
Shale, blue, water-bearing	6	94
Gravel and shale, hard, water-bearing	33	127
Shale, hard, blue	30	157
Casing: 10-in. to 94 ft.		

Table 2.--Drillers' logs of representative wells--Continued

5/1W-28K1. Alfred Juve. Altitude 175 ft. Drilled by Roy Perkins, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, silty, brown	37	40
Clay, sandy, blue	22	62
Sand, silty, fine	4	66
Gravel, partly cemented, water-bearing	42	108
Clay, soft, blue	34	142

Casing: 8-in. to 109 ft; perforated 68-107 ft.

5/1W-28K2. E. S. Minton. Altitude 175 ft. Drilled by Willamette Drilling Co., 1956

Soil	3	3
Clay, brown	15	18
Silt, brown	10	28
Clay, blue	11	39
Clay and gravel, blue	8	47
Sand and gravel, tight, brown	23	70
Gravel, brown, water-bearing	35	105
Clay, blue	11	116

Casing: 8-in. to 106 ft; perforated 47-95 ft.

5/1W-28Q1. L. W. Zach. Altitude 175 ft. Drilled by J. A. Sneed & Sons, 1955

Soil	3	3
Silt, yellow	33	36
Silt, blue	28	64
Gravel, heavy, and black sand, water-bearing	2	66
Shale, blue	3	69
Shale, brown	3	72
Gravel, cemented	36	108
Clay, blue	23	131
Shale, water-bearing	3	134
Clay, blue	19	153
Clay, brown	3	156
Clay, sticky, blue	21	177

Casing: 8-in. to 163 ft; perforated 64-108 ft.

5/1W-33C1. Robert Fessler. Altitude 172 ft. Drilled by R. Stadeli & Sons, 1961

Soil	3	3
Clay, brown	19	22
Clay, sandy, brown	28	50
Sand, fine, brown	15	65
Conglomerate, medium-size, brown	30	95
Gravel, loose, water-bearing	1	96

Casing: 6-in. to 96 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1W-34K1. Mount Angel Meat Co. Altitude 170 ft. Drilled by John W. Beck, 1955

Materials	Thickness (feet)	Depth (feet)
Old well, no record	60	60
Gravel, cemented	4	64
Clay, blue	89	153
Sand, fine, black	1	154
Clay, dark-yellow	8	162
Clay, light-blue	26	188
Silt and fine sand, water-bearing	8	196
Clay, blue	40	236
Clay, yellow	9	245
Clay, blue	13	258
Clay, red	37	295
Clay, white	5	300
Clay, yellow	5	305
Clay, red	38	343
Basalt, weathered	7	350
Basalt	50	400
Lava, brown, water-bearing	5	405

Casing: 6-in. 60-349 ft.

5/1W-34M1. George Rothenfluch. Altitude 170 ft. Drilled by John T. Miller, 1956

Soil	2	2
Sand	22	24
Clay, gray	20	44
Gravel, cemented	10	54
Gravel	7	61
Clay, sandy	34	95
Clay, blue	14	109
Sand	3	112
Clay, blue	5	117
Sand	9	126
Clay, sandy, gray	42	168
Clay, sandy, blue	8	176
Clay, blue	17	193
Clay, sandy, blue	48	241
Clay, sticky, gray	23	264
Rock, black, crevice with water	42	306

Casing: 6-in. to 264 ft.

5/1W-36R1. R. M. Stuckart. Altitude 220 ft. Drilled by R. Stadeli & Sons, 1954

Rock with brown and blue clay	105	105
Silt, sandy	10	115
Silt, sandy, and blue clay	190	305
Gravel, cemented, very hard	11	316
"Slate," brown	57	373
Rock, soft to hard	127	500

Casing: 10-in. to 380 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1-1R1. Richard Williams. Altitude 281 ft. Drilled by C. G. Westerberg, 1960

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay	10	12
Clay and gravel	3	15
Cobbles and clay	13	28
Gravel, cemented	17	45
Gravel, with some clay streaks	28	73

Casing: 8-in. to 73 ft.

5/1-2D1. Don Helmig. Altitude 245 ft. Drilled by C. G. Westerberg, 1957

Soil	2	2
Clay, brown	8	10
Sand, silty, soft	4	14
Clay, soft, blue	11	25
Shale, blue	5	30
Gravel	3	33
Clay, brown	2	35
Gravel, cemented	16	51
Clay, brown	2	53
Gravel, cemented	4	57
Clay	6	63
Gravel and clay	5	68
Gravel	9	77

Casing: 6-in. to 77 ft.

5/1-4E1. A. E. Morton. Altitude 175 ft. Drilled by John W. Beck, 1955

Soil and brown clay	23	23
Clay, blue	11	34
Gravel, cemented	12	46
Clay, blue	29	75
Sand and gravel	5	80
Clay, blue	36	116
Sand and gravel	3	119
Clay, blue	5	124
Sand and gravel	5	129
Clay, blue-green	5	134

Casing: 6-in. to 134 ft; perforated 75-80, 116-119, 125-129 ft.

5/1-5M1. D. H. Yoder. Altitude 185 ft. Drilled by J. T. Miller, 1957

Soil	15	15
Clay, blue	3	18
Sand, water-bearing	5	23
Clay, blue	2	25

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, black, water-bearing	3	28
Clay, yellow	22	50
Sand, red, water-bearing	9	59
Sand, red, and small gravel	2	61
Clay, blue	25	86
Sand, red, coarse, and small gravel	12	98
Gravel, small, and coarse sand	5	103
Clay, gray	3	106
Clay, blue	14	120
Sand, "broken," black, and blue clay streaks	10	130
Casing: 12-in. to 115 ft; perforated 59-60, 90-91 ft.		
5/1-6R1. Henry Landwing. Altitude 184 ft. Drilled by C. G. Westerberg, 1958		
Soil	2	2
Clay, brown	6	8
Silt and clay	11	19
Clay, sandy	3	22
Clay, brown	5	27
Clay, blue	6	33
Sand, black, and blue clay	6	39
Clay, brown	5	44
Clay, sandy	2	46
Clay, sandy, fine	14	60
Clay, brown	30	90
Sand and gravel, brown	6	96
Casing: 6-in. to 89 ft.		
5/1-9H1. Tom Dybvad. Altitude 212 ft. Drilled by C. G. Westerberg, 1957		
Soil	2	2
Clay, brown	8	10
Clay with fine sand	14	24
Clay, soft, blue	9	33
Shale and gravel, blue	7	40
Clay, brown, and gravel	2	42
Gravel and sand	1	43
Gravel and clay	2	45
Gravel	2	47
Clay and gravel, brown	3	50
Clay and sand	3	53
Sand and gravel with clay	3	56
Gravel and brown sand	2	58
Gravel, sand, and clay	3	61
Casing: 6-in. to 50 ft.		

Table 2.--Drillers' logs of representative wells--Continued

5/1-11C1. Henry Kyllo. Altitude 260 ft. Drilled by John W. Beck, 1957

Materials	Thickness (feet)	Depth (feet)
Silt and clay mixed	20	20
Gravel, cemented	17	37
Clay, light-brown	8	45
Gravel, imbedded in light-brown clay	10	55
Sand and gravel with clay binder	3	58
Gravel imbedded in brown clay	18	76
Clay, brown	4	80
Gravel, cemented	48	128
Clay, brown	8	136
Sand, fine, brown	1	137
Gravel imbedded in clay	4	140
Clay, blue	18	158
Shale, "broken," blue	3	161
Gravel imbedded in blue shale	3	164
Clay, light-blue	10	174
Clay, light-brown	26	200
Clay, dark-blue	15	215
Clay, dark-blue, some sand and gravel	5	220
Clay, blue	35	255
Silt, dark-brown	5	260
Sand, fine, black	4	264
Clay, dark-brown	11	275
Clay, blue	30	305
Sand, very fine	1	306
Clay, blue	90	396
Clay, blue, with pea-size gravel	7	403
Clay, blue, with brown streaks	95	498
Sand, fine, black	8	506
Sand and pea-size gravel imbedded in clay	1	507
Sand, black	7	514
Sand, loose, black	2½	516½
Clay, gray	1½	518
Clay, blue	2	520

Casing: 8-in. to 520 ft; perforated 55-60, 80-128, 508-518 ft.

5/1-12M1. Melvin Bjerkan. Altitude 275 ft. Drilled by C. G. Westerberg, 1961

Soil	1	1
Clay	13	14
Cobbles	14	28
Gravel, cemented	28	56
Clay and gravel	2	58
Gravel, cemented	17	75
Clay and gravel	13	88
Clay, gray	8	96
Sand and gravel, water-bearing	2	98
Clay, tan	13	111

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, red	5	116
Clay, sandy, green	3	119
Clay, blue	15	134
Sand and clay, brown	4	138
Sand, brown	7	145
Clay, sandy	3	148

Casing: 6-in. to 119 ft, 5-in. 118-148 ft; perforated 134-145 ft.

5/1-13R1. Bob Johnson. Altitude 263 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, brown	2	4
Clay, sandy, hard	8	12
Clay, brown	26	38
Shale, blue	42	80
Clay, black	6	86
Clay, sandy	1	87
Sand and gravel, fine	5	92
Clay, blue	8	110
Clay, black	7	117
Sand, black, and gravel	4	121
Clay, blue	23	144
Clay, sandy	2	146
Sand and gravel, fine	3	149
Clay, blue	10	159

Casing: 6-in. to 159 ft; perforated 65, 86-92, 118-122, 146-148 ft.

5/1-14C1. Carl Budeau. Altitude 272 ft. Drilled by L. H. Owen, 1956

Clay, sticky	14	14
Cobbles and clay	23	37
Gravel	3	40

Casing: 6-in. to 31 ft.

5/1-15H1. Einer Loe. Altitude 260 ft. Drilled by Tolleson Drilling Co., 1960

Soil	2	2
Sand and gravel	33	35
Clay, yellow	65	100
Clay and sand, black	28	128
Clay and gravel, tan	7	135

Casing: 6-in. to 103 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1-18F1. Warren Bremer. Altitude 165 ft. Drilled by John W. Beck, 1957, 1960

Materials	Thickness (feet)	Depth (feet)
Soil and silt	7	7
Silt, brown and blue	24	31
Clay, blue	6	37
Sand, brown, and clay mixed	2	39
Sand, brown, with clay and gravel	11	50
Clay, blue	2	52
Sand, brown	4	56
Sand and gravel, dark, water-bearing	11	67
Clay, light-blue	8	75
Silt, dark	8	83
Shale, dark, soft	4	87
Sand, black	6	93
Clay, light-blue	3	96
Clay, blue	44	140
Clay, gray	100	240
Clay, green	20	260
Clay, dark-blue	20	280
Sand, fine, water-bearing	10	290
Clay, light-blue	30	320
Clay, dark-blue, with brown streaks	90	410
Clay, light-blue	10	420
Silt, black	5	425
Sandstone, fine, soft	10	435

Casing: 8-in. to 426 ft; perforated 67-95 ft.

5/1-18M1. Martin Albert. Altitude 196 ft. Drilled by R. Stadeli & Sons, 1956

Soil, brown	3	3
Loam, brown	15	18
Clay, grayish-blue, water-bearing	22	40
Quicksand, gray, water-bearing	3	43
Sand, muddy, and clay with small streaks of light-brown gravel	25	68
Gravel, loose, gray and blue, water-bearing	2	70
Sand with thin layers of dirty light-brown gravel	3	73
Clay, soft, light-brown	5	78
Clay, with sandy texture, gray	11	89
Sand, black	1	90
Sand, muddy, and bluish-gray gravel, water-bearing	6	96
Gravel, cemented, gray, water-bearing	10	106
Clay, sandy, bluish-green	4	110
Sand, muddy, and bluish-gray gravel, water-bearing	6	116
Clay, blue, with some gravel, water-bearing	14	130
Clay, tan	12	142
Shale, crumbling, gray, water-bearing	11	153
Shale, crumbling, gray	9	162

Casing: 8-in. to 154 ft; perforated 68-70, 94-153 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1-19Q1. M. L. White. Altitude 220 ft. Drilled by R. Stadeli & Sons, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	16	18
Clay, blue	10	28
Clay, sandy, brown	7	35
Sand, muddy, caving, brown, water-bearing	5	40
Gravel, cemented, muddy, brown, water-bearing	23	63
Sand and gravel, muddy, grayish-brown	2	65
Sand, soft, gray, water-bearing	12	77
Sand and gravel, gray, water-bearing	2	79
Clay, sandy, bluish-green	11	90
Sand and pea-size gravel, water-bearing	1	91
Clay, sandy, bluish-green	9	100
Clay, light-brown	15	115
Clay, bluish-gray	13	128
Shale, grayish-brown, water-bearing	28	156
Clay, sandy, brown, water-bearing	4	160
Clay, brown, water-bearing	25	185
Silt, packed, brown	10	195
Clay and fine sand, gray	13	208
Shale, firm, greenish-gray, water-bearing	26	234

Casing: 8-in. to 235 ft; perforated 40-143, 153-174, 200-230 ft.

5/1-21D1. D. E. Johnson. Altitude 181 ft. Drilled by John W. Beck, 1951

Soil	3	3
Silt, brown	71	74
Sand, brown	4	78
Gravel, small, brown	9	87
Clay, blue	1	88

Casing: 6-in. to 88 ft; perforated 81-88 ft.

5/1-22R1. Clifford Wrolstad. Altitude 180 ft. Drilled by J. T. Miller, 1961

Old well, no record	225	225
Clay, volcanic ash	9	234
Shale, hard, tight, black	19	253
Shale, sandy, black, water-bearing	9	262
Shale, hard, black	14	276
Shale, sandy, black, seams, water-bearing	5	281

Casing: 6-in. 225-281 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1-23Q1. Donald Fleckenstein. Altitude 185 ft. Drilled by C. G. Westerberg, 1957

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay, brown	11	12
Clay, soft, brown	18	30
Clay, soft, blue	20	50
Sand and fine gravel	3	53
Clay, soft, blue	9	62
Shale, blue and gray	29	91
Clay, brown	11	102
Clay, blue	26	128
Rock, decomposed, and brown clay	16	144
Rock, decomposed	3	147
Rock, lava	5	152
Rock, decomposed, and shale	7	159
Rock, lava, hard	22	181
Rock, soft	6	187
Rock, hard	4	191
Rock, soft, and shale	5	196
Shale, black	5	201
Shale, blue	7	208
Shale, water-bearing	2	210
Basalt	?	

Casing: 6-in. to 149 ft.

5/1-24C1. S. R. Lais. Altitude 250 ft. Drilled by H. A. Fredrikson, 1957

Soil	1	1
Clay and sandstone, brown	34	35
Clay, blue	155	190
Sand and coarse gravel	5	195

Casing: 6-in. to 190 ft.

5/1-25G1. Rudolph Schnack. Altitude 330 ft. Drilled by William J. Stennett, 1962

Clay and boulders	26	26
Basalt, gray, hard	25	51
Basalt, soft, brown	4	55
Basalt, hard, gray	45	100
Rock, brown	10	110
Basalt, hard, gray	32	142
Shale, brown	18	160
Basalt, hard, gray	165	325
Lava, honeycomb, water-bearing	15	340
Basalt, hard, gray	10	350

Casing: 8-in. to 33 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/1-28R1. Melvin Satrum. Altitude 223 ft. Drilled by J. T. Miller, 1961

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, sandy, yellow	17	20
Clay, brown	10	30
Clay, white	2	32
Clay, brown	15	47
Clay, white	2	49
Clay and "shell," broken, brown	91	140
Shale, broken, and rock, water-bearing	6	148
Rock, red	4	152
Rock, black	6	158
Clay, broken, gray	12	170
Rock, hard, black	1	171
Shale, hard, gray	15	186
Shale, sandy, gray, and boulders, water-bearing	9	195

Casing: 12-in. to 10 ft, 8-in. to 148 ft; perforated 143-148 ft.

5/1-29R1. Rolland Nickelson. Altitude 210 ft. Drilled by E. O. Beier, 1952

Soil	2	2
Clay, yellow	20	22
Sand, muddy, water-bearing	8	30
Clay, yellow	18	48
Shale, yellow, water-bearing	12	60
Clay, blue	65	125

Casing: 6-in. to 48 ft.

5/1-30C1. George Bond. Altitude 210 ft. Drilled by R. Stadeli & Sons, 1961

Soil, brown	2	2
Clay, brown	13	15
Clay, blue	15	30
Clay, brown, some gravel, water-bearing	10	40
Gravel and sand, muddy, brown, water-bearing	12	52
Clay, brown, sandy	5	57
Conglomerate, medium, brown, water-bearing	12	69
Clay, brown	14	83
Clay, sticky, blue	7	90
Clay, sandy, grayish-green	35	125
Clay, sandy, grayish-brown	24	149
Sand, gray, water-bearing	1	150
Clay, sandy, gray, water-bearing	27	177
Clay, sandy, crumbly, bluish-gray	53	230
Clay, sandy, grayish-brown	10	240
Sand, packed, gray, water-bearing	2	242
Claystone, sandy, crumbly, bluish-gray	23	265
Clay, gray	34	299
Sand, muddy, gray	3	302
Clay, very sticky, gray	75	377

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Claystone, firm, dark-gray, water-bearing	3	380
Clay, very sticky, chocolate-brown	22	402
Clay, sticky, grayish-brown	11	413
Clay, sticky, gray	2	415
Clay, sticky, brown	3	418
Clay, sticky, gray	2	420
Clay, gritty, chocolate-brown	3	423
Clay, sandy, gray	36	459
Sand, "soupy," gray, water-bearing (static water level raised to 75 ft)	5	464
Clay, very sticky, gray	16	480
Clay, sandy, crumbly, dark-gray, water-bearing (salt water)	4	484

Casing: 6-in. to 301 ft; perforated 32-297 ft.

5/1-30H1. Elmer Thompson. Altitude 230 ft. Drilled by J. T. Miller, 1962

Soil	3	3
Clay, brown	11	14
Clay, yellow	36	50
Conglomerate, water-bearing	5	55
Clay, "broken," and streaks of gravel	20	75
Sand and gravel, fine, water-bearing	4	79

Casing: 10-in. to 10 ft, 6-in. to 79 ft; perforated 50-52 and 74 ft.

5/1-30Q1. O. W. Hendrickson. Altitude 205 ft. Drilled by R. Stadeli & Sons, 1959

Soil, brown	10	10
Clay, sandy, brown	5	15
Clay, sandy, blue	21	36
Gravel, cemented, gray	4	40
Sand, muddy, gray	6	46
Clay, sandy, greenish-gray	8	54
Clay, sandy, blue	22	76
Clay, chocolate-brown	6	82
Clay, sandy, brown	18	100
Clay, sandy, gray	13	113
Sand, gray, water-bearing	1	114
Clay, sandy, blue-gray	1	115

Casing: 6-in. to 113 ft.

5/1-31G1. Chris Ramburg. Altitude 205 ft. Drilled by John W. Beck, 1957

Soil	6	6
Clay, brown	12	18
Clay and silt, blue, water-bearing	14	32
Gravel, cemented, with blue clay binder	14	46

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, brown	9	55
Clay, reddish-brown	13	68
Clay, dark-red	15	83
Silt, gray	4	87
Silt, dark-blue	6	93
Silt and sand, gray	2	95
Silt, dark	4	99
Sand, gray	3	102
Clay, hard, grayish-blue	12	114
Clay, dark-blue	6	120
Clay layers, soft, blue, with sandstone between	5	125

Casing: 6-in. to 120 ft.

5/1-33A1. Melvin Satrum. Altitude 260 ft. Drilled by William J. Stennett, 1957

Soil	15	15
Clay with gravel	20	35
Clay, red	30	65
Clay, blue	33	98
Clay, yellow	16	114
Clay, blue	2	116
Shale, brown	19	135
Clay, blue	33	168
Rock, crumbly, blue	14	182
Lava, decomposed, green	333	515
Rock, hard, brown	33	548
Rock, hard, green, water-bearing (salt water)	19	567

Casing: 8-in. to 259 ft.

5/1-33A2. Melvin Satrum. Altitude 244 ft. Drilled by R. Stadeli & Sons, 1957

Soil, brown	3	3
Clay loam, light-brown	14	17
Clay, hard, brown	3	20
Clay, brown	10	30
Clay, gritty, brown	14	44
Clay, hard, dark-brown	21	65
Clay, light-brown	5	70
Clay, blue	4	74
Clay, red	9	83
Clay, red, water-bearing	8	95
Clay, blue	3	98
Clay, light-yellow	13	111
Clay, red	17	128
Shale, crumbly, light-green	6	134
Shale, crumbly, red	10	144
Shale, crumbly, light-brown	9	153

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, light-green	4	157
Shale, hard, grayish-green	3	160
Shale, bluish-gray	32	192
Shale, firm, brown	5	197
Shale, bluish-gray, mixed with small rocks	6	203
Shale, brown, with small rocks	11	214
Shale, bluish-gray, and small rocks	12	226
Basalt, dark-gray	131	357
Basalt, dark-gray, with seams	1	358
Basalt, hard, dark-gray	17	375
Rock, medium-hard, dark-gray	12	387
Shale, hard, bluish-gray	21	408
Shale, soft, bluish-gray	4	412
Shale, hard, bluish-gray	18	430
Rock, medium-hard, dark-gray	6	436
Rock, medium-hard, dark-gray, salt water	2	438
Rock, medium-hard, dark-gray	18	456
Casing: 8-in. to 232 ft; perforated 83-97 ft.		
5/1-34A1. Frank Kintz. Altitude 210 ft. Drilled by R. Stadeli & Sons, 1961		
Soil, reddish-brown	2	2
Clay, brown	22	24
Claystone, soft, brown	21	45
Claystone, soft, gray	25	70
Claystone, soft, brown	43	113
Claystone, soft, gray	23	136
Rock, medium-hard, bluish-gray	18	154
Rock, hard, bluish-gray, water-bearing	33	187
Casing: 6-in. to 130 ft.		
5/1-35E1. Arnold Otter. Altitude 220 ft. Drilled by R. Stadeli & Sons, 1961		
Unrecorded	80	80
Sandstone	8	88
Sandstone, gray, with wood	2	90
Sandstone, soft, gray	15	105
Claystone, brown	6	111
Claystone, medium-hard, gray	22	133
Claystone, medium-hard, lavendar	7	140
Claystone, soft, gray	1	141
Claystone, hard, gray	9	150
Claystone, medium-hard, gray	10	160
Casing: 6-in. to 45 ft.		

Table 2.--Drillers' logs of representative wells--Continued

5/2-1R1. Delbert Fischer. Altitude 405 ft. Drilled by Tolleson Drilling Co., 1959

Materials	Thickness (feet)	Depth (feet)
Soil, brown	5	5
Conglomerate and sand	20	25
Clay, hard, blue	95	120
Sand, black, water-bearing	1	121

Casing: 6-in. to 107 ft.

5/2-3P1. J. T. Low. Altitude 335 ft. Drilled by C. G. Westerberg, 1959

Soil	1	1
Gravel, cobble-size	37	38
Boulders	2	40
Gravel and rock(?)	8	48
Clay and rock	2	50
Gravel, cobble-size	3	53
Clay, blue	72	125
Gravel and clay	5	130
Gravel	10	140
Clay, blue	5	145

Casing: 8-in. to 122 ft; perforated 42-50 ft.

5/2-4F1. R. R. Bryant. Altitude 310 ft. Drilled by John W. Beck, 1959

Soil	11	11
Gravel, cemented	79	90
Clay, light-brown	10	100
Sand and gravel	5	105

Casing: 6-in. to 99 ft.

5/2-5P1. L. L. Burghardt. Altitude 324 ft. Drilled by John W. Beck, 1956

Soil	6	6
Gravel, cemented, and boulders	28	34
Clay, heavy, in gravel	4	38
Gravel, cemented, and boulders	33	71
Clay, brown	7	78
Gravel and some brown clay	20	98
Clay, dark-blue	10	108
Clay, dark-red	10	118
Clay, light-blue	7	125

Casing: 6-in. to 100 ft; perforated 78-98 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/2-7J1. J. H. Snively. Altitude 326 ft. Drilled by C. G. Westerberg, 1960

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay, tan	4	5
Gravel, cobble	39	44
Gravel and clay	12	56
Clay, brown	10	66
Clay, sandy	4	70
Clay, brown	6	76
Clay, blue	8	84
Clay, sandy	2	86
Sand and fine gravel, brown	2	88
Shale, hard	17	105
Sand and gravel, coarse	12	117
Clay, blackish-blue	4	121
Sand, brown	6	127
Clay, gray	7	134
Sand, coarse, black	4	138
Clay, blue	4	142

Casing: 6-in. to 95 ft, 5-in. 95-142 ft; perforated 110-136 ft.

5/2-8P1. Harold Atkinson. Altitude 360 ft. Drilled by Tolleson Drilling Co., 1959

Gravel and clay	15	15
Clay, brown	20	35
Clay, dark-gray, and sand	30	65
Sand, silty, yellow, caving, water-bearing	5	70
Clay, dark-blue	20	90
Sand and clay, some water	5	95
Clay, blue	85	180
Clay, sandy, some wood	5	185
Clay, blue	32	217

Casing: 6-in. to 85 ft.

5/2-10R1. K. L. Hoffman. Altitude 341 ft. Drilled by H. A. Fredrikson, 1956

Sand	4	4
Sand and boulders	16	20
Clay, blue	22	42
Gravel, pea-size, and coarse sand	5	47

Casing: 6-in. to 47 ft.

5/2-12B1. V. L. Gurley. Altitude 545 ft. Drilled by Tolleson Drilling Co., 1960

Soil	2	2
Clay, brown	2	4

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, gravel, and clay, brown	20	24
Clay, gray	5	29
Sand and gravel, water-bearing	10	39

Casing: 6-in. to 39 ft; perforated at 12, 18, 24, 30 ft.

5/2-14D1. Clackamas County. Altitude 360 ft. Drilled by William J. Stennett, 1961

Gravel, boulders, and sand	18	18
Clay, blue	16	34
Lava(?), decomposed, blue	26	60
Lava and soapstone	10	70
Lava	15	85

Casing: 6-in. to 45 ft.

5/2-16P1. Genevieve Stutz. Altitude 475 ft. Drilled by C. G. Westerberg, 1956

Soil and clay	4	4
Rock with clay	12	16
Clay and coarse sand	9	25
Sand, coarse, water-bearing	3	28
Clay, brown	37	65
Gravel, water-bearing	7	72
Shale, blue	23	95

Casing: 6-in. to 67 ft.

5/2-16Q1. L. J. Ricksgers. Altitude 475 ft. Drilled by C. G. Westerberg, 1958

Soil	1	1
Clay and cobble-size gravel	4	5
Clay, gray	8	13
Clay and cobble-size gravel	6	19
Clay, soft, brown	15	34
Clay, sandy	4	38
Sand and some gravel, water-bearing	3	41
Clay, blue	10	51
Clay and sand, brown	2	53
Clay and gravel, blue	10	63
Clay, soft, gray and blue	88	151
Shale, hard, dark-blue	12	163
Clay, soft, bluish-gray	5	168

Casing: 8-in. to 99 ft; perforated 30-90 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/2-17H1. Gordon Hungate. Altitude 420 ft. Drilled by LaVerne Owen, 1956

Materials	Thickness (feet)	Depth (feet)
Clay, brown, and small boulders	15	15
Clay, reddish-brown	19	34
Sandstone, soft, brown and black	2	36
Sand "rocks," soft, brown and black	6	42
Clay mixed with pea-size gravel, reddish	11	53

Casing: 6-in. to 40 ft.

5/2-18B1. Lyle Orem. Altitude 410 ft. Drilled by C. G. Westerberg, 1959

Soil	1	1
Gravel, cobble-size	2	3
Clay, brown	3	6
Silt and clay	24	30
Clay, tan	20	50
Clay, sandy, brown	20	70
Clay, tan	25	95
Clay, blue, or shale	110	205
Clay, blackish-blue	7	212
Clay, sandy, and wood	3	215
Sand and some gravel	12	227
Clay, blue	6	233

Casing: 6-in. to 204 ft, 5-in. 200-225 ft.

5/2-18B2. James Jolley. Altitude 435 ft. Drilled by C. G. Westerberg, 1959

Soil	1	1
Gravel, cobble-size, and brown clay	14	15
Clay, brown	10	25
Clay, sandy, brown	21	46
Clay, gray	2	48
Clay, sandy, brown	20	68
Clay, gray	5	73
Clay, sandy, soft	3	76
Clay, yellow	26	102
Clay and shale, blue	104	206
Clay, blackish-blue	16	222
Clay, sandy	4	226
Sand, clay, and gravel	7	233
Sand, black	5	238
Sand and gravel	5	243
Clay, blackish-purple, and wood	2	245
Sand and gravel	7	252

Casing: 6-in. to 213 ft, 5-in. 211-252 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/2-20P1. J. J. Baumgarten. Altitude 410 ft. Drilled by R. Stadeli & Sons, 1957

Materials	Thickness (feet)	Depth (feet)
Soil, brown	2	2
Silt and boulders, brown	13	15
Shale, blue	6	21
Boulders and clay, brown	5	26
Rock, medium-hard, blue	11	37
Rock, medium-hard, blue, water-bearing	1	38
Rock, very hard, black, water-bearing	20	58

Casing: 6-in. to 40 ft.

5/2-21P1. H. C. Reed. Altitude 530 ft. Drilled by Tolleson Drilling Co., 1960

Soil	1	1
Gravel	2	3
Clay, brown	14	17
Sand, clay, and gravel	5	22
Clay, brown	46	68

Casing: 6-in. to 60 ft; perforated 17-18, 21-22 ft.

5/2-23L1. G. S. Durant. Altitude 435 ft. Drilled by Tolleson Drilling Co., 1961

Soil, sandy	3	3
Gravel, medium sand, and brown clay	33	36
Clay, brown	12	48
Sand and gravel, water-bearing	2	50
Clay, blue	20	70

Casing: 6-in. to 48 ft.

5/2-25G1. Kelton Neal. Altitude 750 ft. Drilled by C. G. Westerberg, 1958

Soil and cobbles	1	1
Clay and cobbles	5	6
Clay, yellow	4	10
Clay, brown	31	41
Gravel	3	44
Shale, hard, blue	41	85
Shale, "rock and sand rock"	10	95
Shale, hard, blue, and clay	35	130
Shale, very hard, blue	4	134
Shale, hard, blue	4	138
Clay, blue	14	152
Clay and wood, blackish-blue	5	157
Clay, blue	5	162
Shale, hard	3	165
Clay, blue	41	206

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, hard	5	211
Sandstone, water-bearing	5	216
Shale, very hard, blue	14	230
Casing: 6-in. to 206 ft.		

5/2-26B1. William Hester. Altitude 450 ft. Drilled by Tolleson Drilling Co., 1962

Soil	2	2
Sand, gravel, boulders, and clay	37	39
Clay, tan	31	70
Sand, water-bearing	?	
Casing: 6-in. to 59 ft.		

5/2-27Q1. Charles Biggins. Altitude 855 ft. Drilled by J. T. Miller, 1957

Soil	2	2
Clay and boulders	25	27
Rock and boulders	108	135
Clay, gray, hard	75	210
Rock, soft	2	212
Clay, soft	3	215
Clay, gray	3	218
Rock	7	225
Clay, "broken," various colors	93	318
Rock	34	352
Casing: 6-in. to 215 ft, 4-in. to 220 ft, 2-in. 147-332 ft.		

5/2-28C1. W. J. Shafer. Altitude 525 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay, brown	6	8
Gravel, cemented	12	20
Shale, blue	5	25
Clay, brown	15	40
Clay, gray	25	65
Clay, brown	5	70
Sandstone, shale	6	76
Shale, blue	11	87
Basalt	13	100
Shale	5	105
Rock, sandy	2	107
Basalt	31	138
Rock, sandy, and shale	4	142
Basalt	78	220
Shale	8	228
Rock, soft, black	17	245
Basalt	15	260

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, soft, and shale	6	266
Shale	14	272
Rock	14	286

Casing: 6-in. to 87 ft.

5/2-29C1. H. A. Fredrikson. Altitude 430 ft. Drilled by Tolleson Drilling Co., 1961

Soil	1	1
Rock, lava, "broken"	3	4
Rock, lava, black	61	65
Clay, blue	5	70
Clay, brown	28	98
Rock, lava, solid, black	102	200
Claystone, shattered	15	215
Rock, soft to hard, brown	165	380
Rock, lava, hard, black	55	435
Clay, hard, blue	143	578

Casing: 6-in. to 5 ft, 5-in. to 225 ft.

5/2-30E1. J. M. Trullinger. Altitude 370 ft. Drilled by William J. Stennett, 1961

Soil	4	4
Rock, hard, gray	36	40
Shale, blue	24	64
Rock, hard, black	122	186
Soapstone	7	193
Clay or soft rock, brown	4	197
Rock, medium, green and white	13	210
Rock, hard, black, water-bearing	90	300

Casing: 6-in. to 6 ft.

5/2-31M1. Jack Stow. Altitude 610 ft. Drilled by William J. Stennett, 1956

Clay and fine gravel	16	16
Sandstone	22	38
Rock, medium-hard, gray	40	78
Rock, soft, green, contains "quartz"	13	91
Rock, porous, contains "quartz," hard spots, water-bearing	7	98

Casing: 6-in. to 37 ft.

5/2-36G1. L. A. Meier. Altitude 490 ft. Drilled by Steinman Bros., 1961

Boulders	14	14
Conglomerate, brown and yellow	23	37

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Conglomerate, blue	8	45
Conglomerate, brown	10	55
Sandstone, soft, gray	12	67

Casing: 6-in. to 38 ft, 5-in. 37-67 ft; perforated 48-65 ft.

5/3-2D1. J. M. Anderson. Altitude 870 ft. Drilled by William J. Stennett, 1960

Soil and light clay	35	35
Lava, decomposed	30	65
Clay, blue	25	90
Lava, decomposed	39	129
Basalt, hard, black	2	131
Lava, decomposed	15	146
Lava, soft, gray and blue	54	200
Shale, red	15	215
Clay, red	15	230
Soapstone, blue	12	242
Rock, "broken," brown	20	262
Lava, hard, green	10	272
Rock, medium-hard, brown	13	285
Rock, brown, water-bearing	15	300

Casing: 6-in. to 260 ft.

5/3-2G1. H. W. Nyquist. Altitude 990 ft. Drilled by C. G. Westerberg, 1956

Soil	2	2
Clay, brown	8	10
Boulder	3	13
Clay, purple	7	20
Clay, blue	15	35
Clay, brown	7	42
Clay, gray	8	50
Clay, brown	15	65
Clay, red	45	110
Clay, brown	30	140
Clay, red	18	158
Clay, brown	9	167
Clay, red	48	215
Clay, brown	13	228
Clay, red	9	237
Clay, brown, with some sand	3	240
Soapstone, brown	23	263
Soapstone, brownish-yellow	22	285
Clay, gray	8	293
Sandstone, with soft and hard streaks	17	310
Sandstone, with soft and very hard streaks	36	346
Sandstone	27	373

Casing: 6-in. to 293 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/3-4D1. C. P. Webster. Altitude 585 ft. Drilled by Tolleson Drilling Co., 1959

Materials	Thickness (feet)	Depth (feet)
Clay, light-brown	20	20
Clay, gray, and scattered gravel	20	40
Rock, hard, black, and some clay	36	76
Clay, dark-gray, with sand, water-bearing	4	80

Casing: 6-in. to 40 ft.

5/3-4Q1. F. B. Clark. Altitude 840 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay, silty, hard, brown	13	15
Clay, soft, brown	35	50
Rock, soft	5	55
Clay and decomposed rock	15	70
Rock, decomposed	5	75
Clay, brown	5	80
Clay and gravel	2	82
Clay	8	90
Rock, soft	5	95
Sandstone	53	148

Casing: 6-in. to 95 ft.

5/3-5B1. B. W. Hood. Altitude 500 ft. Drilled by C. G. Westerberg, 1959

Soil	1	1
Cobbles and clay	13	14
Clay, blue	12	26
Rock, basalt	15	41
Shale, hard, blue	4	45
Rock, basalt	18	63
Rock, "broken"	7	70
Rock	17	87
Rock, soft	3	90
Clay, blue	1	91
Shale, hard	1	92
Rock, soft	4	96
Shale	2	98
Rock	4	102
Basalt, hard	3	105
Basalt	18	123
Rock, hard, "broken"	10	133

Casing: 8-in. to 70 ft.

5/3-5L1. L. V. Beck. Altitude 650 ft. Drilled by C. G. Westerberg, 1958

Soil	2	2
Clay and boulders	17	19

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, with hard streaks, and boulders	14	33
Clay, blue, with wood	37	70
Clay, light-blue	20	90
Clay, sandy, water-bearing	3	93
Sand	12	105
Clay, blue	35	140
Clay, sandy	5	145
Clay, dark-blue	18	163
Shale mixed with gravel, water-bearing	9	172
Gravel, wood, and clay	2	174
Shale, sandy, hard, blue	4	178
Shale and sand, gray, water-bearing	4	182
Sand, gray	6	188

Casing: 6-in. to 160 ft.

5/3-6L1. E. W. Morin. Altitude 385 ft. Drilled by C. G. Westerberg, 1957

Soil	2	2
Cobbles	6	8
Shale, blue	36	44
Rock, lava	8	52
Shale, sand, and gravel	3	55
Shale, blue	10	65

Casing: 6-in. to 46 ft.

5/3-7A1. Delbert Karney. Altitude 590 ft. Drilled by J. A. Sneed & Sons, 1955

Soil	2	2
Clay, yellow	13	15
Boulders	3	18
Clay, yellow	12	30
Shale, blue	29	59
Sandstone, firm, white	2	61
Basalt, water-bearing	2	63
Basalt, firm	3	66
Basalt, water-bearing	5	71
Basalt, firm	6	77
Basalt, water-bearing	3	80
Basalt, firm	2	82
Basalt, water-bearing	2	84
Basalt, firm	6	90
Basalt, water-bearing	4	94
Gravel, coarse-size, water-bearing	½	94½
Basalt, solid	5	99½

Casing: 8-in. to 73 ft.

Table 2.--Drillers' logs of representative wells--Continued

5/3-8B1. Harold Harper. Altitude 710 ft. Drilled by C. G. Westerberg, 1961

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Clay	1	2
Clay and boulders	11	13
Rock, gray	45	58
Rock, gray, with soft streaks	15	73
Rock, gray	7	80

Casing: 6-in. to 23 ft.

5/3-9F1. Dorothy Rosenquist. Altitude 810 ft. Drilled by Tolleson Drilling Co., 1960

Soil	2	2
Clay, brown	61	63
Rock, solid, dark-gray	83	146

Casing: 6-in. to 63 ft.

5/3-9H1. Dale Rittenhouse. Altitude 880 ft. Drilled by C. G. Westerberg, 1961

Soil	3	3
Clay, red	18	20
Clay, soft, red	22	42
Clay, gray	6	48
Shale, gray	5	53
Shale, gray, and decomposed rock	17	70
Rock	2	72
Shale, gray	5	77
Rock	7	84
Shale	3	87
Rock, basalt	7	94
Rock, soft	7	101
Clay, red	4	105
Rock "sand"	10	115
Basalt	17	132

Casing: 6-in. to 93 ft.

5/3-10F1. John Linhart. Altitude 900 ft. Drilled by C. G. Westerberg, 1958

Soil	1	1
Clay, hard, gray	4	5
Clay, hard, sticky, red	14	19
Clay, soft, bluish-gray	29	48
Boulders	4	52
Clay, blue	8	60
Clay, gray	8	68
Clay, hard, yellow	8	76
Clay, gray and yellow	10	86
Basalt, streaks of soft and hard	13	99

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, hard and soft	11	110
Casing: 6-in. to 85 ft.		

5/3-10J1. Arvid Shoberg. Altitude 1,080 ft. Drilled by C. G. Westerberg, 1960

Soil	2	2
Clay	2	4
Boulders	3	7
Clay and cobbles	13	20
Boulders	3	23
Clay, brown	12	35
Boulders and rock	11	46
Clay, brown	4	50
Clay with soft rock streaks	10	60
Rock, decomposed, soft	3	63
Rock, basalt	2	65
Casing: 6-in. to 63 ft.		

5/3-19Q1. Hubert Goodwin. Altitude 1,050 ft. Drilled by C. G. Westerberg, 1960

Soil	2	2
Clay, red	4	6
Clay, hard, and decomposed rock	27	33
Sandstone	8	41
Shale, hard	10	51
Sandstone, hard and soft layers	59	110
Clay and rock	9	119
Sandstone	33	152
Rock, "broken"	4	156
Casing: 6-in. to 55 ft.		

5/3-20G1. A. E. Szekely. Altitude 1,170 ft. Drilled by C. G. Westerberg, 1959

Soil	1	1
Boulders and clay	14	15
Rock, decomposed	6	21
Rock, soft	12	33
Rock, lava formation	21	54
Rock, porous	2	56
Rock, soft (sandstone)	4	60
Rock, harder	14	74
Rock, porous	2	76
Basalt	2	78
Casing: 6-in. to 34½ ft.		

Table 2.--Drillers' logs of representative wells--Continued

5/3-20H1. J. O. Martin. Altitude 1,200 ft. Drilled by C. G. Westerberg, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Rock, soft, with boulders	34	36
Clay	3	39
Rock, decomposed	16	55
Basalt	5	60
Sandstone	5	65
Clay	7	72
Sandstone	2	74
Clay, brown	3	77
Shale, purple	13	90
Soapstone	15	105
Sandstone and soapstone	20	125
Clay, brown	4	129
Sandstone	11	140
Clay, bluish-purple	17	157
Basalt	103	260
Soapstone, hard	33	293
Sandstone	3	296
Soapstone, hard	7	303
Clay, blue, or shale	13	316
Rock, with small streak of gravel	24	340
Shale, blue	10	350

Casing: 6-in. to 167 ft.

5/3-30C1. Anthony Dow. Altitude 1,010 ft. Drilled by C. G. Westerberg, 1960

Soil	1	1
Clay and cobbles	4	5
Rock, soft	3	8
Basalt, hard	37	45
Basalt, hard and soft streaks	46	91

Casing: 8-in. to 13½ ft.

6/1W-1G1. James Butsch. Altitude 230 ft. Drilled by John W. Beck, 1961

Soil	3	3
Clay, brown	19	22
Gravel, medium-size, cemented	20	42
Clay, blue	36	78
Sand, medium-grained, water-bearing	10	88
Clay, light-blue	31	119
Clay, dark-blue	4	123
Sand, medium-grained, water-bearing	8	131
Clay, blue	56	187
Silt, dark	16	203
Basalt	11	214
Clay, dark-brown	56	270

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, dark	19	289
Basalt	15	304
Clay, light-brown	59	363
Silt, dark	6	369
Basalt	13	382
Clay, sticky, black	9	391
Basalt, "broken"	34	425
Silt and sand, reddish-brown	7	432
Sand, coarse-grained, and fine gravel	3	435

Casing: 10-in. to 370 ft; perforated 32-112, 127-293, 298-340 ft.

6/1W-1K1. Butsch Bros. Altitude 230 ft. Drilled by John W. Beck, 1957

Soil	3	3
Silt, brown	18	21
Silt, blue	4	25
Gravel, cemented	9	34
Clay, gray	2	36
Silt, dark-blue	10	46
Clay, brown, and sand	9	55
Silt, blue	13	68
Silt, greenish-blue	13	81
Clay, dark, and silt	14	95
Clay, green	7	102
Silt, dark	4	106
Sand and gravel	11	117
Clay, dark-brown	3	120

Casing: 6-in. to 120 ft; perforated 108-117 ft.

6/1W-1N1. Walter Duda. Altitude 220 ft. Drilled by B. Ballweber, 1953

Soil and shale, yellow	30	30
Gravel, cemented	5	35
Shale, brown	7	42
Sand and gravel	2	44
Shale, brown	2	46
Gravel, cemented	5	51
Shale, blue	26	77
Sand and gravel	2	79
Shale, blue	5	84
Shale, brown	11	95
Shale, blue	9	104
Shale, brown	7	111
Shale, blue	9	120
Shale, brown	58	178
Shale, hard, blue, gray, brown	18	196
Rock, basalt	55	251

Casing: 8-in. to 180 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/1W-2Q1. Walter Duda. Altitude 212 ft. Drilled by R. Stadeli & Sons, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	1	1
Loam, brown	7	8
Clay, brown	7	15
Clay, sandy, brown	15	30
Clay, sandy, and gravel	2	32
Clay, sandy, brown	13	45
Clay, gritty, blue	28	73
Clay, gritty, light-brown	11	84
Clay, sandy, dark-brown	6	90
Clay, sandy, greenish-gray	30	120
Clay, sandy, gray	8	128
Clay, silty, grayish-brown	12	140
Clay, sticky, light-gray	15	155
Clay, sticky, brown	15	170
Clay, sticky, mixed colors	10	180
Clay, sandy, mixed colors	11	191
Rock, soft, brown	2	193
Rock, hard, gray-green	3	196
Rock, medium-hard, gray	6	202
Rock, medium-hard, gray, crevice, water-bearing	1	203
Rock, medium-hard, gray	2	205
Rock, hard, gray	2	207
Rock, soft, gray	1	208
Rock, hard, gray, crevice	1	209
Rock, hard, gray	2	211
Rock, medium-hard, gray	14	225
Shale, medium-hard, gray	2	227
Rock, medium-hard, gray	11	238
Rock, medium-hard, crevice, gray, water-bearing	1	239
Rock, hard, dark-gray	2	241
Rock, medium-hard, dark-gray	13	254
Rock, hard, crevice, dark-gray, water-bearing	1	255
Rock, hard, dark-gray	3	258

Casing: 6-in. to 194 ft.

6/1W-3M1. Lawrence Zeis. Altitude 192 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	3	3
Silt, brown	7	10
Clay, brown	20	30
Gravel, cemented, gray	27	57
Sand and gravel, gray	3	60
Gravel, bluish-gray, water-bearing	2	62

Casing: 6-in. to 62 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/1W-3N1. City of Mount Angel. Altitude 168 ft. Drilled by R. J. Strasser Drilling Co., 1962

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Silt and clay	19	21
Clay, blue	9	30
Silt, sandy, brown	15	45
Gravel and clay, water-bearing	11	56
Sand, gravel, and clay	16	72
Gravel, cemented	31	103
Gravel and silt, water-bearing	14	117
Clay, blue	97	214
Shale, brown	81	295

Abandoned and filled.

6/1W-4K1. Pete Bielmeier. Altitude 170 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	2	2
Silt, brown	8	10
Clay, brown	16	26
Clay, sandy, blue	10	36
Silt, brown, with some gravel	4	40
Gravel, cemented, medium-hard	19	59
Sand, silty, and brown, gravel, water-bearing	1	60
Clay, sandy, reddish-brown	13	73
Clay, sticky, blue	25	98
Clay, sandy, blue	13	111
Clay, sandy, bluish-gray, water-bearing	1	112
Clay, sandy, bluish-gray	11	123
Clay, sandy, bluish-gray, water-bearing	1	124
Clay, sandy, gray	4	128
Clay, sticky, grayish-green	9	137
Sand, packed, gray, water-bearing	½	137½
Clay, sticky, light-brown	24½	162

Casing: 6-in. to 135 ft.

6/1W-7G1. J. F. Manning. Altitude 180 ft. Drilled by Irving Sears, 1956

Soil	4	4
Clay, silty and sandy, yellow	52	56
Clay, blue	22	78
Sand, black, water-bearing	11	89
Clay, brown	6	95
Sand, gray and black	10	105
Sand, brown	8	113
Clay, blue	7	120
Sand, black, water-bearing	9	129
Sand, black, and gravel, water-bearing	13	142
Clay, blue	?	

Casing: 8-in. to 142 ft; perforated 133-141 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/1W-8P1. David Scharer. Altitude 182 ft. Drilled by Willamette Drilling Co., 1961

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Silt, brown	41	43
Clay, sticky, gray	15	58
Clay, sandy, blue	13	71
Sand, black, with clay	16	87
Clay, sticky, blue	1	88
Gravel, loose, black	6	94

Casing: 6-in. to 94 ft.

6/1W-9E2. J. A. Ascherl. Altitude 160 ft. Drilled by H. A. Fredrikson, 1958

Soil and brown clay	30	30
Sand, fine	15	45
Clay, blue, and rock	30	75
Gravel, fine, and sand	32	107

Casing: 6-in. to 105 ft.

6/1W-9F1. C. J. Ebner. Altitude 145 ft. Drilled by J. A. Sneed & Sons, 1961

Soil	2	2
Clay, yellow	5	7
Gravel, cemented, and boulders	44	51
Gravel, coarse	1½	52½
Gravel, cemented, and boulders	14½	67
Gravel and sand, 1-in.-diameter	1	68
Gravel, cemented, and boulders	26	94
Gravel, loose, 3-in.-diameter, water-bearing	1	95
Conglomerate, 3-in.-diameter	5	100

Casing: 8-in. to 100 ft; perforated 46 to 97 ft.

6/1W-10C1. City of Mount Angel. Altitude 178 ft. Drilled by R. J. Strasser Drilling Co., 1962

Clay, brown	3	3
Clay, blue	9	12
Clay and gravel, brown	43	55
Clay, brown and blue	214	269
Conglomerate	27	296
Rock, hard, brown	28	324
"Conglomerate" (weathered basalt?)	7	331
Rock, brown, some "broken"	37	368
Rock, black	17	385
Rock, "broken," caving	13	398
Rock, black	16	414
"Conglomerate" (weathered basalt?)	7	421

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, medium-hard, gray	28	449
Rock, hard, gray	47	496
Rock, soft, black	27	523
Rock, medium-hard, black	37	560
Rock, soft, brown	26	586
Rock, brown	25	611
Rock, porous, water-bearing	8	619
Rock, "broken," yellow-brown	12	631

Casing: 12-in. to 296 ft, 10-in. 290-631 ft; perforated 601-629 ft.

6/1W-10F1. City of Mount Angel. Altitude 175 ft. Drilled by Arrow Drilling & Supplies, 1956

Soil	3	3
Clay, yellow	24	27
Clay, blue	5	32
Gravel, cemented	17	49
Clay, blue, and gravel	16	65
Clay, brown	5	70
Gravel, cemented	9	79
Clay and gravel, blue	21	100
Clay, brown, and gravel	10	110
Shale	5	115
Clay, blue	20	135
Clay, blue, and gravel	10	145
Shale, blue	10	155
Gravel, water-bearing	2	157
Clay and gravel, "mixed"	90	247
Clay, mixed colors	58	305
Clay and rock	95	400
Clay, gray	50	450
Rock, lava	11	461
Rock, basalt, "broken"	74	535

Casing: 10-in. to 325 ft, 8-in. 0-508 ft; perforated 475-492 ft.

6/1W-10L1. Mount Angel Men's College. Altitude 175 ft. Drilled by R. J. Strasser Drilling Co., 1938

Soil	4	4
Clay, yellow	20	24
Clay, blue	8	32
Boulders and gravel	21	53
Clay, yellow	7	60
Clay, sandy, and grit	13	73
Clay, dark-brown	7	80
Gravel, cemented	3	83
Gravel and sand	6	89
Gravel, harder	15	104
Clay	11	115

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, some loose	34	149
Clay	2	151
Gravel	21	172

Casing: 12-in. to 172 ft; perforated 45-47, 48-53, 83-88, 91-103, 120-128, 133-145, 152-167 ft.

6/1W-10L2. Mount Angel Women's College. Altitude 173 ft. Drilled by Byron Ballweber, 1939

Clay	34	34
Gravel	21	55
Clay	11	66
Gravel	1	67
Clay	11	78
Gravel	32	110
Clay	10	120
Gravel	20	140
Clay	2	142
Gravel	28	170
Not reported (clay?)	13	183

Casing: 8-in. to 166 ft; perforated 46-55, 78-95, 126-166 ft.

6/1W-11D1. Eymard Berning. Altitude 208 ft. Drilled by R. Stadeli & Sons, 1959

Soil, brown	2	2
Silt, brown	6	8
Clay, brown	12	20
Clay, sandy, brown	15	35
Clay, gritty, brown	25	60
Clay, gritty, green	15	75
Clay, sticky, gray, mixed with some gravel	30	105
Clay, gritty, bluish-green	23	128
Clay, gritty, grayish-brown	17	145
Clay, gritty, grayish-green	4	149
Sand, gray, mixed with small pea-size gravel, water-bearing	1	150
Clay, gritty, grayish-brown	8	158

Casing: 6-in. to 150 ft?

6/1W-14P1. Frank Aman. Altitude 206 ft. Drilled by John W. Beck, 1956

Soil	4	4
Gravel, cemented, with clay streaks	164	168
Clay, yellow	7	175
Clay, red	9	184
Clay, blue and yellow	76	260
Clay, dark-brown	8	268

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, yellow and blue mixed	27	295
Clay and silt mixed, dark-brown	10	305
Clay, blue and yellow mixed	20	325
Clay, light-blue	23	348
Clay, brown and yellow mixed	6	354
Clay, light-blue	2	356
Clay, white	16	372
Clay, brown	11	383
Clay, blue and yellow mixed	7	390
Clay, brown and yellow mixed	10	400
Lava, brown	16	416
Basalt, weathered, red and yellow	10	426
Clay, yellow and white	8	434
Basalt, "broken," with white clay binder	6	440
Basalt, solid	17	457
Lava, brown	17	474
Clay, blue	2	476
Clay, light-blue	11	487
Basalt, "broken"	4	491
Basalt, solid	44	535
Lava	21	556

Casing: 10-in. to 436 ft, 8-in. 414-494 ft; perforated 40-168, 420-436 ft.

6/1W-16A1. Poepping Bros. Altitude 182 ft. Drilled by R. Stadeli & Sons, 1959

Soil	1	1
Loam, brown	9	10
Clay, brown	10	20
Clay, brown, and fine sand	15	35
Clay, sandy, grayish-blue	9	44
Gravel, cemented, gray	20	64
Clay, sandy, blue	17½	81½
Sand and gravel, black, water-bearing	½	82
Gravel, cemented, dark-gray	5	87
Sand and gravel, black, water-bearing	4	91

Casing: 6-in. to 91 ft.

6/1W-16B1. John Beyer, Jr. Altitude 182 ft. Drilled by R. Stadeli & Sons, 1961

Soil, brown	2	2
Clay, brown	19	21
Clay, blue	27	48
Conglomerate, brown	11	59
Clay, blue	4	63
Conglomerate, gray	11	74
Clay, sandy, blue	13	87
Sand, fine, black	10	97

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Conglomerate, gray	10	107
Gravel, loose, bluish-gray, water-bearing	2	109
Casing: 6-in. to 109 ft.		

6/1W-16P1. Lester Harpole. Altitude 180 ft. Drilled by R. Stadeli & Sons, 1956

Soil, brown	20	20
Sand, silty, soft, brown	4	24
Clay, sandy, blue-gray	23	47
"Hardpan," greenish-gray	10	57
Sand, silty, greenish-gray, and some black gravel	21	78
"Hardpan," grayish-green	13	91
Gravel, loose, water-bearing	1	92
Casing: 6-in. to 92 ft.		

6/1W-18D1. James Hollin. Altitude 195 ft. Drilled by J. A. Sneed & Sons, 1959

Soil	2	2
Clay, sandy, yellow	24	26
Clay, sandy, blue	30	56
Clay, sticky, blue	9	65
Sand, silty, water-bearing	9	74
Clay, sticky, yellow	26	100
Sand, silty, yellow	2	102
Sand, medium, brown	25	127
Sand and gravel, silty	3	130
Gravel, cemented	30½	160½
Gravel, 3-in.-diameter, water-bearing	½	161
Gravel, cemented	?	
Casing: 8-in. to 161 ft; perforated.		

6/1W-19R1. R. W. Fiske. Altitude 180 ft. Drilled by J. A. Sneed & Sons, 1960

Silt	3	3
Clay, yellow	18	21
Clay, sandy, blue	44	65
Sand, silty	13	78
Gravel, cemented	3	81
Gravel, 1-in.-diameter, water-bearing	½	81½
Gravel, cemented	9	90½
Gravel, water-bearing	9½	100
Gravel, 2-in.-diameter, water-bearing	1	101
Casing: 8-in. to 101 ft.		

Table 2.--Drillers' logs of representative wells--Continued

6/1W-20J1. Wallace Satern. Altitude 185 ft. Drilled by R. Stadeli & Sons, 1956

Materials	Thickness (feet)	Depth (feet)
Soil, brown	3	3
Loam, brown	22	25
Sand, "quick," gray	10	35
Clay, sandy, bluish-gray	21	56
Gravel, cemented, gray and black	22	78
Clay, sandy, bluish-gray	7	85
Gravel, cemented	11	96
Sand and gravel, loose, grayish-blue, water-bearing	1	97

Casing: 6-in. to 97 ft.

6/1W-21L1. Alfred Fisher. Altitude 188 ft. Drilled by John W. Beck, 1956

Clay, yellow, and brown silt	43	43
Gravel, cemented	11	54
Clay, blue	16	70
Silt	4	74
Gravel, cemented	9	83
Gravel, loose	8	91
Gravel, with clay binder	13	104

Casing: 8-in. to 104 ft; perforated 84-102 ft.

6/1W-22B1. Ralph Gilles. Altitude 200 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	4	4
Clay, brown	16	20
Clay, blue	6	26
Clay, blue, with cobblestones	7	33
Gravel, hard, gray	10	43
Gravel, medium-hard, gray	7	50
Gravel, hard, gray	23	73
Clay, blue, mixed with some medium-hard gravel	8	81
Gravel, hard, gray	3	84
Gravel, medium-hard, gray, water-bearing	4	88
Gravel, cemented, hard, gray	17	105
Gravel, cemented, hard, gray, water-bearing	2	107
Gravel, cemented, hard, gray	9	116
Sand and gravel, bluish-black, water-bearing	2	118

Casing: 6-in. to 118 ft.

6/1W-22P1. Howard Schmidt. Altitude 200 ft. Drilled by R. Stadeli & Sons, 1959

Soil, brown	3	3
Clay, brown	9	12
Sand, caving, silty, brown	14	26

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, blue	2	28
Gravel, cemented, with streaks of gray cobbles	13	41
Gravel, cemented, gray	15	56
Clay, sandy, gray-green	1	57
Gravel, cemented, gray	16	73
Sand and gravel, loose, dark-blue, water-bearing	2½	75½

Casing: 6-in. to 75 ft.

6/1W-26C1. W. H. Wesemann. Altitude 230 ft. Drilled by William J. Stennett, 1961

Soil and clay	11	11
Sand and gravel, cemented	72	83
Clay, red and blue	12	95
Gravel, water-bearing	10	105

Casing: 6-in. to 101 ft.

6/1W-27C1. G. E. Engeman. Altitude 200 ft. Drilled by William J. Stennett, 1959

Soil	3	3
Clay, sandy, yellow	13	16
Gravel, large-size	8	24
Gravel, cemented	88	112
Clay, blue	10	122
Sandstone with some pea-size gravel, not loose	24	146
Gravel, cemented	25	171
Sandstone	41	212
Soapstone, white	21	233

Casing: 8-in. to 119 ft; perforated 65-80, 84-100 ft.

6/1W-27D1. Robert Roth. Altitude 197 ft. Drilled by R. Stadeli & Sons, 1961

Soil	1½	1½
Clay, brown	13½	15
Clay and small boulders, brown	11	26
Clay, blue	12	38
Conglomerate, medium, gray	37	75
Sand and gravel, gray	3	78
Conglomerate, medium, loose, gray	15	93
Sand and gravel, loose, bluish-gray	2	95
Gravel, coarse, loose, gray	6	101
Conglomerate, gray	2	103
Clay, gray	2	105
Conglomerate, gray	10	115
Clay, gray	59	174

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, packed, gray	2	176
Clay, gray	39	215
Casing: 10-in. to 114 ft; perforated 50-108 ft.		

6/1W-27R1. F. L. Frick. Altitude 218 ft. Drilled by William J. Stennett, 1960

Soil	7	7
"Rocks"	1	8
Sand and gravel, cemented	10	18
Sand and gravel, "compact"	63	81
"Rock" ledge	4	85
Sand and gravel, cemented	17	102
Sand, tight, with gravel	18	120
Sand and gravel, cemented	9	129
Casing: 8-in. to 121 ft; perforated 75-117 ft.		

6/1W-28D1. Anton Dahl. Altitude 188 ft. Drilled by R. Stadeli & Sons, 1956

Soil	21	21
Clay, sandy, blue, and some small gravel	27	48
Gravel, cobble-size	3	51
Gravel, cemented	23	74
Sand, gray, water-bearing	2	76
Gravel, cemented	11	87
Sand and gravel, water-bearing	5	92
Casing: 6-in. to 92 ft.		

6/1W-28F1. Tony Schultz. Altitude 195 ft. Drilled by William J. Stennett, 1962

Soil	25	25
Clay, blue	13	38
Boulders, large, and gravel	10	48
Sand, cemented, and gravel	70	118
Clay, blue	32	150
Sand, fine, water-bearing	8	158
Clay, blue, with small streaks of sand	34	192
Casing: 12-in. to 162½ ft; perforated 75-118 ft.		

6/1W-29H1. Arthur Thordsen. Altitude 184 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	2	2
Clay, sandy, brown	18	20
Clay, blue	32	52
Gravel, cemented, gray	16	68

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, soft, gray	4	72
Gravel, cemented, gray	28	100
Sand, gray	2	102
Sand and gravel, gray, water-bearing	6	108
Sand and gravel, firm, dark-gray, water-bearing	6	114

Casing: 6-in. to 115 ft; perforated 108-110 ft.

6/1W-30E1. LeRoy Beals. Altitude 181 ft. Drilled by J. A. Sneed & Sons, 1960

Soil	2	2
Clay, yellow	16	18
Clay, sandy, blue	30	48
Clay, sticky, blue	10	58
Clay, sandy, blue	7	65
Sand, fine	7	72
Gravel, cemented	5½	77½
Clay, sandy, blue	7	84½
Gravel, cemented	9½	94
Gravel, water-bearing	1	95
Gravel, cemented	5	100
Gravel, 2-in.-diameter, water-bearing	2	102
Gravel, cemented	38	140
Clay, yellow	2	142
Gravel, cemented	7	149

Casing: 8-in. to 149 ft; perforated 95-142 ft.

6/1W-30F1. Vincent Jacobs. Altitude 178 ft. Drilled by R. Stadeli & Sons, 1957

Soil	4	4
Silt, brown	6	10
Sand, fine, gray	18	28
Sand, fine, gray, water-bearing	2	30
Sand, gray	16	46
Clay, blue	16	62
Sand, packed, firm, black	9	71
"Hardpan," gray	29	100
Sand and gravel, gray, water-bearing	27	127

Casing: 8-in. to 127 ft; perforated.

6/1W-31E1. John Siems. Altitude 190 ft. Drilled by J. A. Sneed & Sons, 1959

Soil	3	3
Clay, yellow	28	31
Clay, blue	14	45
Sand, silty, brown	25	70
Clay, yellow	4	74

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, blue	6	80
Sand, fine	2	82
Gravel, 3-in.-diameter, cemented	5	87
Sand and gravel, water-bearing	1	88
Gravel, cemented	15	103
Gravel, water-bearing	½	103½
Gravel, cemented, water-bearing	63½	167
Clay, yellow	10	177
Shale, sandy, blue	7	184

Casing: 10-in. to 170 ft; perforated 91-167 ft, cemented back to 167 ft.

6/1W-31J1. J. G. Morgan. Altitude 204 ft. Drilled by William J. Stennett, 1961

Soil and sandy clay	62	62
Clay, red	10	72
Clay, blue	14	86
Sand, cemented, with some gravel	46	132
Sand and gravel, loose	5	137

Casing: 6-in. to 137 ft.

6/1W-32A2. H. J. Johnson. Altitude 170 ft. Drilled by R. Stadeli & Sons, 1957

Soil, reddish-brown	2	2
Soil and cobbles, reddish-brown	8	10
Gravel, cemented, gray	7	17
Sand, silty, and gravel, gray-brown	3	20
Clay, sandy, with some gravel, yellowish-brown	4	24
Sand, soft, gray	7	31
Sand and gravel, bluish-gray, water-bearing	1	32
Sand and gravel, gray	8	40
Sand and gravel, gray, water-bearing	2	42
Sand, silty, and gravel, gray	4	46
Sand and gravel, gray, water-bearing	7	53
Sand, gray, with brown silt	2	55
Sand and gravel, with light-brown silt, water-bearing	2	57
Sand and gravel, brown, water-bearing	9	66
Sand, silty, and brown gravel	3	69
Sand, silty, with small amount of brown gravel	2	71
"Hardpan," gray	7	78
Sand, silty, gray	2	80
Sand, silty, and blue-gray gravel	4	84
Clay, sandy, bluish-gray	5	89
"Hardpan," bluish-gray	2	91
Clay, sandy, bluish-gray	4	95
Clay, sandy, with streaks of coarse gray sand, water-bearing	9	104

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, sticky, bluish-gray	24	128
Clay, gritty, bluish-gray, with some sand and gravel, water-bearing	3	131
Shale, brown	11	142
Clay, gritty, brown, water-bearing	43	185

Casing: 8-in. to 127 ft; perforated 33-53, 60-65, 91-94 ft.

6/1W-33B1. Tony Desantos. Altitude 202 ft. Drilled by R. Stadeli & Sons, 1957

Soil, brown	3	3
Silt, brown	22	25
Sand, fine, caving, water-bearing	5	30
Clay, sandy, bluish-gray	15	45
Gravel, cemented, gray	35	80
Sand with some gravel, gray	5	85
Gravel, cemented, gray	5	90
Sand and gravel, gray, water-bearing	7	97
Gravel, loose, bluish-gray, water-bearing	2	99

Casing: 6-in. to 99 ft.

6/1W-33J1. Hubert Esser. Altitude 205 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	2	2
Clay and silt	17	19
Cobblestones and clay, grayish-brown	3	22
Gravel, cemented, gray	43	65
Clay, brown	2	67
Gravel, cemented, brown, water-bearing	3	70
Clay, sandy, reddish-brown	4	74
Sand and gravel, silty, reddish-brown	5	79
Sandstone, brown	3	82
Rock, medium-hard, dark-gray	8	90
Rock, very hard, dark-blue, water-bearing	15	105

Casing: 6-in. to 83 ft.

6/1W-33R1. Oscar Strand. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1957

Soil	2	2
Clay, yellow	22	24
Gravel, cemented, yellow	2	26
Gravel, cemented, blue	4	30
Clay, sandy, blue	7	37
Gravel, cemented, blue	10	47
Clay, gray	5	52

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, cemented, yellow	8	60
Basalt	12	72
Casing: 8-in. to 61 ft.		

6/1W-34L1. Ellis Ball. Altitude 220 ft. Drilled by R. Stadeli & Sons, 1960

Old well, no record	64	64
Rock, very hard, black	6	70
Rock, hard, black	5	75
Rock, medium-hard, black	2	77
Rock, very hard, black, water-bearing	27	104
Casing: 4-in. to 71 ft.		

6/1W-35G1. E. Yoder. Altitude 380 ft. Drilled by R. Stadeli & Sons, 1957

Soil, reddish-brown	3	3
Soil and boulders, reddish-brown	22	25
Rock, hard, gray and black	15	40
Rock, medium-hard, gray	6	46
Shale, yellow, red, and light-gray	7	53
Rock, lava, brown	6	59
Rock, softer, brown	4	63
Rock, medium-hard, dark	5	68
Shale, red and yellow	5	73
Casing: 6-in. to 26 ft.		

6/1W-35J1. C. L. Wickham. Altitude 515 ft. Drilled by William J. Stennett, 1961

Soil and clay	10	10
Sand, gravel, and boulders	10	19
Basalt	6	25
Basalt, hard, gray, with seams	24	59
Clay, blue-green	20	79
Rock, soft, black	31	110
Basalt, gray	30	140
Rock, soft, black	5	145
Shale and clay	32	177
Basalt, extra-hard, gray	123	300
Shale and clay, coarse sand streaks, water-bearing	43	343
Casing: 6-in. to 36 ft, 5-in. 298-343 ft; perforated 305-342 ft.		

Table 2.--Drillers' logs of representative wells--Continued

6/1W-36K1. Clifford Imel. Altitude 460 ft. Drilled by R. Stadeli & Sons, 1957

Materials	Thickness (feet)	Depth (feet)
Soil, reddish-brown	4	4
Soapstone, light-brown	12	16
Shale, blue	164	180
Shale, hard, gray	48	228

Casing: 6-in. to 17 ft.

6/2W-13H1. Maurice Hynes. Altitude 188 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	1	1
Clay, yellow	18	19
Clay, sandy, blue	19	38
Clay, sticky, blue	8	46
Sand, silty, yellow	30	76
Clay, sandy, yellow	31	107
Sand, silty, blue	14	121
Gravel, cemented	3	124
Sand, cemented	5	129
Sand, water-bearing	2½	131½
Gravel, cemented	2	133½
Gravel, cemented, water-bearing	9	142½
Gravel, 2-in.-diameter, water-bearing	½	143
Sand and gravel, cemented	4	147
Clay, yellow	2	149
Gravel, cemented	13	162
Clay, yellow	2	164
Sand, fine, brown, water-bearing	5	169
Gravel, cemented, water-bearing	29	198
Clay, yellow	3	201
Gravel, cemented, water-bearing	3	204

Casing: 10-in. to 204 ft; perforated 134-162, 174-200 ft.

6/2W-14B1. Paul Baughman. Altitude 153 ft. Drilled by J. A. Sneed & Sons, 1960

Soil	2	2
Clay, yellow	16	18
Silt, yellow	27	45
Sand, silty	8	53
Gravel, 2-in.-diameter, water-bearing	1	54
Gravel, cemented	2	56
Clay, yellow	4	60
Clay, blue	17	77
Sand, fine	24	101
Gravel, cemented	8	109
Gravel, 2-in.-diameter, water-bearing	1	110
Gravel, cemented	3	113

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, 2-in.-diameter, water-bearing	1	114
Gravel, cemented	9	123

Casing: 8-in. to 123 ft; perforated 54-57, 110-122 ft.

6/2W-23N1. B. L. Dickman. Altitude 185 ft. Drilled by Willamette Drilling Co., 1961

Soil	3	3
Silt, brown	47	50
Silt, green	5	55
Clay, gray, and wood and small gravel	21	76
Clay, gray	9	85
Silt, black, and pea-size gravel	5	90
Gravel, cemented	16	106
Sand and gravel	31	137
Sand, black	6	143
Sand, black, and gravel	6	149
Sand, brown, and gravel	13	162
Sand, black, and gravel	8	170
Sand, black, and gravel, water-bearing	5	175

Casing: 10-in. to 175 ft; perforated 100-136, 150-175 ft.

6/2W-24L1. W. F. Leader. Altitude 204 ft. Drilled by J. A. Sneed & Sons, 1960

Soil	1½	1½
Clay, blue	1½	3
Clay, yellow	13	16
Clay, sandy, blue	25	41
Clay, sticky, blue	19	60
Clay, sticky, yellow	6	66
Clay, sandy, yellow	14	80
Sand, fine, brown	16	96
Gravel, sandy, "mucky"	8	104
Gravel, cemented, water-bearing	93	197

Casing: 10-in. to 197 ft; perforated 105-195 ft.

6/2W-25B1. A. D. Wiesner. Altitude 189 ft. Drilled by Max Wymore, 1956

Soil	3	3
Clay, sandy, brown	25	28
Clay, sandy, blue	44	72
Sand, brown	21	93
Sand and gravel, brown, water-bearing	61	154

Casing: 8-in. to 154 ft; perforated 95-152 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/2W-26E1. A. J. Haslebacher. Altitude 193 ft. Drilled by Irving Sears, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, yellow	12	15
Sand and silt, yellow	17	32
Clay, sandy, soft, blue	30	62
Clay, hard, sticky, blue	18	80
Clay, sandy, gray	12	92
Sand, black, and gravel	3	95
Gravel, cemented (thin layers of sand between clay-packed gravel)	50	145
Sand and gravel, loose	5	150
Sand, gravel, and hard clay	1	151
Sand and gravel, loose	5	156
Sand and gravel (thin layers between layers of hard clay)	11	167
Sand and gravel, loose	6	173

Casing: 10-in. to 173 ft; perforated 94-172 ft.

6/2W-26K1. Ed Haslebacher. Altitude 195 ft. Drilled by R. Stadeli & Sons, 1955

Soil	4	4
Silt, brown	31	35
Clay, blue, water-bearing	1	36
Clay, blue	31	67
Clay, brown, and sand	25	92
Gravel, cemented, gray, water-bearing	2	94
Sand, brown	10	104
Gravel, cemented, gray, water-bearing	13	117
Gravel, sandy, gray, water-bearing	2	119
Sand and gravel, gray	3	122
Gravel, cemented, gray	35	157

Casing: 10-in. to 157 ft; perforated 106-117, 119-157 ft.

6/2W-26Q1. H. H. Austin. Altitude 191 ft. Drilled by William J. Stennett, 1961

Silt, brown	35	35
Clay, blue	20	55
Clay, light-brown	15	70
Clay, sandy	18	88
Gravel	7	95
Clay, blue	8	103
Gravel, cemented	22	125
Sand, coarse	7	132
Sand and gravel, loose	8	140
Gravel, cemented	20	160

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, loose	15	175
Sand, water-bearing	15	190

Casing: 10-in. to 190 ft; perforated 110-190 ft.

6/2W-27H1. Adolph Kittilson. Altitude 189 ft. Drilled by Harry A. Robinson, 1955

Soil and yellow clay	18	18
Sand and clay, blue	32	50
Sand, black	34	84
Sand and gravel, brown	5	89

Casing: 6-in. to 89 ft.

6/2W-34A1. Edwin Zubert. Altitude 185 ft. Drilled by R. Stadeli & Sons, 1957

Soil, brown	3	3
Silt, brown	22	25
Clay, sandy, blue	10	35
Silt, sandy, dark-gray	50	85
Clay, sandy, brown	4	89
Gravel, cemented, gray, water-bearing	18	107
Gravel, cemented, gray	14	121
Gravel, gray, water-bearing	1	122

Casing: 6-in. to 122 ft.

6/2W-35G1. Ed Hymes. Altitude 194 ft. Drilled by R. Stadeli & Sons, 1955

Soil	35	35
Clay, blue	15	50
Clay, sandy, blue	27	75
Clay, sandy, brown	10	85
Gravel and sand, red, water-bearing	11	96
Gravel and sand, water-bearing	6	102
Gravel, coarse, water-bearing	5	107
Gravel, cemented	13	120
Gravel, silty	8	128
Gravel, cemented	4	132
Gravel, small, water-bearing	4	136
Gravel, coarse, silty	8	144
Gravel, cobble-size, water-bearing	3	147
Gravel, cemented	?	

Casing: 10-in. to 147 ft; perforated 94-147 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/1-2M1. Chester Lichty. Altitude 300 ft. Drilled by R. Stadeli & Sons, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, brown	7	10
Shale, medium-hard, blue, water-bearing	45	55
Shale, hard, gray	3	58
Rock, medium-hard, gray	10	68
Rock, dark-gray, water-bearing	1	69
Rock, hard, dark-gray	8	77

Casing: 6-in. to 54 ft.

6/1-3Q1. Oscar Kilborn. Altitude 328 ft. Drilled by John W. Beck, 1957

Soil and red clay	11	11
Clay, brown	4	15
Rock, blue	16	31
Rock, "broken"	5	36
Rock, blue	23	59
Rock, blue, hard and soft layers	6	65

Casing: 6-in. to 24 ft.

6/1-4N1. Martin Schneider, Jr. Altitude 300 ft. Drilled by John W. Beck, 1954

Soil	2	2
Clay	28	30
Rock, solid	60	90

Casing: 6-in. to 42 ft.

6/1-4Q1. Marquam Methodist Church. Altitude 297 ft. Drilled by William J. Stennett, 1959

Soil	3	3
Gravel, cemented	12	15
Rock, soft, blue; looks like sandstone	62	77

Casing: 6-in. to 18 ft.

6/1-4Q2. Pierre Smith. Altitude 295 ft. Drilled by R. Stadeli & Sons, 1959

Soil, brown	½	½
Silt, brown	1	1½
Clay, blue	2½	4
Clay, grayish-brown, and cobbles	5	9
Clay, gray	4	13
Shale, medium-hard, brown	2	15

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, hard, blue	51	66
Shale, hard, light-gray	11	77

Casing: 8-in. to 15 ft.

6/1-4R1. Ray Webb. Altitude 295 ft. Drilled by John W. Beck, 1956

Old well, no record	73	73
Shale rock, blue	101	174
Shale, dark-brown	½	174½
Shale, solid, blue	3½	178
Shale, "broken"	6	184
Shale, solid, blue	18	202
Shale, "broken"	10	212
Shale, solid, blue	20	232
Shale, solid, brown	13	245
Shale, solid, blue	21	266
Shale, "broken"	14	280
Shale, solid, blue	12	292
Shale, "broken"	7	299

Casing: 6-in. to 299 ft; perforated 40-298 ft.

6/1-5B1. Verl Jacobson. Altitude 263 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	2	2
Clay, yellow	18	20
Gravel, cemented	12	32
Clay, yellow	26	58
Clay, gray	57	115
Shale, sandy, gray	38	153
Sand, very fine	½	153½
Clay, light-green	4½	158
Clay, gray	17	175
Basalt "caprock"	4	179
Sandstone, firm, gray	6	185

Casing: 6-in. to 175 ft.

6/1-5P1. Gerald Sporalski. Altitude 252 ft. Drilled by R. Stadeli & Sons, 1956

Soil	6	6
Soil and cobbles	2	8
Clay, brown	2	10
Clay, brown, and cobbles	11	21
Clay, gray	20	41
Gravel, loose, water-bearing	1	42
Gravel, gray, cemented	8	50
Clay, green and tan	25	75

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, brown	12	87
Rock, black, water-bearing	5	92
Casing: 6-in. to 87 ft.		

6/1-7J1. Joe Otter. Altitude 290 ft. Drilled by R. Stadeli & Sons, 1957

Soil, brown	3	3
Silt, brown	9	12
Cobbles and clay, brown	22	34
Gravel, cemented, gray	30	64
Gravel, cemented, gray, water-bearing	1	65
Gravel, cemented, gray	11	76
Sand, packed, with small amount of gray clay	55	131
Sand and gravel, gray, water-bearing	10	141
Casing: 8-in. to 142 ft; perforated 62-68, 136-141 ft.		

6/1-8L1. Wayne Weeks. Altitude 300 ft. Drilled by William J. Stennett, 1958

Soil	6	6
Gravel, cemented	61	67
Lava, soft, decomposed	68	135
Rock, hard	32	167
Clay, yellow	8	175
Casing: 8-in. to 124 ft.		

6/1-9B2. Mrs. Schwartout. Altitude 300 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	2	2
Clay, light-brown	15	17
Shale, light-blue	14	31
Shale, brown	1	32
Shale, light-blue	33	65
Shale, soft, blue	2	67
Shale, medium-hard, bluish-gray	13	80
Shale, hard, bluish-gray	40	120
Casing: 6-in. to 71 ft; perforated 50-52 ft.		

6/1-9D1. Albert Barth. Altitude 301 ft. Drilled by William J. Stennett, 1959

Soil	3	3
Gravel	25	28
Shale rock, blue	68	96
Sandstone, hard	3	99
Shale rock, blue	37	136
Sandstone, hard	14	150
Casing: 8-in. to 45 ft.		

Table 2.--Drillers' logs of representative wells--Continued

6/1-9M1. Ronald Asboe. Altitude 325 ft. Drilled by William J. Stennett, 1955

Materials	Thickness (feet)	Depth (feet)
Soil and gravel	14	14
Shale, blue and gray	160	174
Sandstone	17	191
Shale	11	202
Sandstone, green	5	207
Shale	8	215
Sandstone	12	227
Sandstone, blue	13	240
Rock	2	242
Sandstone, blue and green	50	292

Casing: 6-in. to 22 ft.

6/1-10E1. Ross Marquam. Altitude 305 ft. Drilled by R. Stadeli & Sons, 1960

Soil, brown	3	3
Soil and "broken" rock, brown, water-bearing	7	10
Clay, light-brown	12	22
Shale, medium-hard, water-bearing	38	60
Shale, hard, bluish-gray, water-bearing	75	135

Casing: 6-in. to 30 ft; perforated 10-20 ft.

6/1-13R1. W. K. Creason. Altitude 980 ft. Drilled by J. T. Miller, 1957

Soil	3	3
Rock, volcanic	137	140
Shale, gray, and fossils	90	230
Rock, volcanic, water-bearing	10	240
"Conglomerate"	280	520
Rock, volcanic, "broken," and sand, water-bearing	37	557

Casing: 6-in. to 6 ft.

6/1-14N1. J. L. Henjum. Altitude 605 ft. Drilled by R. Stadeli & Sons, 1960

Soil, red	1	1
Soapstone, white	6	7
Shale, hard, gray, water-bearing	81	88
Shale, medium-hard, gray	12	100
Shale, hard, gray, water-bearing	20	120

Casing: 6-in. to 10 ft.

6/1-15D1. Harvey Kaser. Altitude 385 ft. Drilled by R. Stadeli & Sons, 1960

Soil, reddish-brown	2	2
Soil and boulders, brown	4	6
Soapstone, brown	10	16

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, medium-hard, blue	9	25
Shale, medium-hard, gray	55	80
Shale, hard, gray	16	96
Shale, firm, light-gray	5	101
Shale, hard, gray	9	110
Shale, medium-hard, gray, water-bearing	50	160
Casing: 8-in. to 19 ft.		

6/1-15J1. C. R. Emch. Altitude 466 ft. Drilled by R. Stadeli & Sons, 1959

Soil, reddish-brown	2	2
Soil and soft rocks, red	5	7
Shale, brown	2	9
Shale, hard, blue	108	117
Shale, medium-hard, blue, water-bearing	2	119
Casing: 8-in. to 19 ft.		

6/1-19B1. Miller Cemetery Assoc. Altitude 390 ft. Drilled by R. Stadeli & Sons, 1935

Soil	50	50
Rock, hard	8	58
Rock, soft	7	65
Basalt	55	120
Casing: 6-in. to ? ft.		

6/1-19L1. Marie Smith. Altitude 315 ft. Drilled by R. Stadeli & Sons, 1956

Soil	7	7
Soil and boulders	3	10
Cobbles, cemented, gray	20	30
Rock, hard, dark-gray	44	74
Rock, black, water-bearing	2	76
Casing: 6-in. to 31 ft.		

6/1-19P1. Harvey Gehring. Altitude 290 ft. Drilled by R. Stadeli & Sons, 1958

Silt, river-laid, and cobbles, brown	3	3
Sand and cobbles, with small amount of gray silt	9	12
Gravel, cemented, gray	12	24
Gravel, cemented, gray, water-bearing	1	25
Gravel, cemented, gray	2	27
Rock, medium-hard, black, water-bearing	8	35
Casing: 6-in. to 27? ft.		

Table 2.--Drillers' logs of representative wells--Continued

6/1-22R1. Jack Rutherford. Altitude 825 ft. Drilled by R. Stadeli & Sons, 1956

Materials	Thickness (feet)	Depth (feet)
Soil, reddish-brown	3	3
Clay, gritty, light-brown	19	22
Silt and small boulders, reddish-brown	9	31
Clay, brown, water-bearing	1	32
Clay, brown, mixed with some broken rocks that fall in	16	48
Shale, light-gray	4	52
Shale, tan	3	55
Shale, very sticky, light-gray	13	68
Rock, medium-hard, black	14	82
Rock, hard, black	50	132
Rock, hard, black, water-bearing	1	133
Rock, hard, black, with crevices	3	136

Casing: 6-in. to 69 ft; perforated 25-69 ft.

6/1-26K1. H. E. Gronn. Altitude 920 ft. Drilled by R. Stadeli & Sons, 1959

Soil, reddish-brown	2	2
Sandstone and rocks, reddish-brown	10	12
Sandstone, medium-hard, light-brown	28	40
Sandstone, soft, gray	5	45
Sandstone, medium-hard, gray	32	77
Sandstone, soft, gray	½	77½
Shale, sandy, medium-hard, gray	60½	138
Shale, sandy, medium-hard, bluish-gray	15	153
Shale, hard, bluish-green	6	159

Casing: 8-in. to 75 ft.

6/1-26Q1. Bill Thompson. Altitude 970 ft. Drilled by R. Stadeli & Sons, 1960

Soil, reddish-brown	1½	1½
Sandstone, medium-hard, brown, water-bearing	38½	40
Shale, medium-hard, gray, water-bearing	15	55
Shale, medium-hard, gray	46	101
Shale, hard, gray	34	135
Shale, very hard, gray	15	150
Shale, hard, gray	132	282
Shale, soft, gray	5	287
Shale, medium-hard, gray	33	320

Casing: 8-in. to 31 ft.

6/1-31G1. Oscar Loe. Altitude 480 ft. Drilled by Harty Bros., 1950

Boulders	52	52
Shale, hard, blue	65	117

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, hard, gray	11	128
Shale, hard, blue	113	241
Shale, green, "quartz-bearing"	32	273
Shale, brown	2	275
Rock, soft, black	21	296
Shale, hard, "quartz-bearing"	5	301
Casing: 12-in. to 52 ft.		

6/1-34M1. Roma Ramsby. Altitude 580 ft. Drilled by R. Stadeli & Sons, 1958

Soil	2	2
Clay and silt, reddish-brown	18	20
Soapstone, light-brown	12	32
Shale, hard, gray, water-bearing	32	64
Shale, hard, crumbling, gray	4	68
Shale, very hard, greenish-gray	14	82
Shale, medium-hard, gray, water-bearing	3	85
Shale, hard, gray, water-bearing	20	105
Shale, very hard, greenish-gray, water-bearing	11	116
Casing: 6-in. to 70 ft.		

6/2-8F1. George Reed. Altitude 660 ft. Drilled by C. G. Westerberg, 1958

Soil	1	1
Clay, brown	15	16
Rock, decomposed	4	20
Shale, blue, and soft tuff rock	26	46
Rock, blue	22	68
Shale, hard (some rock)	7	75
Rock, soft, "broken"	15	90
Rock, soft, blue	70	160
Rock, basalt	8	168
Casing: 6-in. to 45 ft.		

6/2-8N1. H. W. Chance. Altitude 890 ft. Drilled by William J. Stennett, 1960

Soil	2	2
Sandstone, yellow	12	14
Sandstone, blue	111	125
Sandstone, coarse-grained, or volcanic breccia	100	225
Sandstone(?), pink, water-bearing	80	305
Sandstone, blue-green, water-bearing	100	405
Sandstone, very hard, blue-green, water-bearing	50	455
Casing: 6-in. to 20 ft.		

Table 2.--Drillers' logs of representative wells--Continued

6/2-14B1. Harry Schoenborn. Altitude 1,498 ft. Drilled by R. Stadeli & Sons, 1955

Materials	Thickness (feet)	Depth (feet)
Soil	4	4
Shale, tan	33	37
Tuff, white, water-bearing	34	71
Sandstone, brown	6	77
Shale, gray	16	93
Shale, reddish-brown, water-bearing	7	100
Shale, gray	13	113
Shale, brown	37	150

Casing: 8-in. to 43 ft.

6/2-16G2. Albert Schoenborn. Altitude 750 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, brown	8	10
Clay, soft, some water	2	12
Clay, sticky, brown	10	22
Sandstone	12	34
Shale, hard, blue	11	45
Sandstone	16	61

Casing: 6-in. to 25 ft.

6/2-18Q1. Jude Lehner. Altitude 960 ft. Drilled by C. G. Westerberg, 1960

Rock, "broken," and boulders	15	15
Rock	14	29
Clay, blue	6	35
Clay, light-gray	20	55
Clay, blue	22	77
Shale and rock, hard	5	82
Shale	4	86
Basalt	46	132
Shale, blue	3	135
Clay, brown	11	146
Basalt	2	148

Casing: 6-in. to 82 ft.

6/2-23G1. A. E. Hazelwood. Altitude 1,850 ft. Drilled by C. G. Westerberg, 1956

Soil	2	2
Clay, brown	42	44
Rock, "rotten," gray	13	57
Rock, hard	1	58

Casing: 6-in. to 45 ft.

Table 2.--Drillers' logs of representative wells--Continued

6/2-35R1. A. R. Shadday. Altitude 2,190 ft. Drilled by William J. Stennett, 1957

Materials	Thickness (feet)	Depth (feet)
Soil, clay, and rock	36	36
Basalt, hard	35	71

Casing: 6-in. to 48 ft.

6/3-6C1. N. B. Nelson. Altitude 550 ft. Drilled by C. G. Westerberg, 1959

Soil	2	2
Clay, "broken"	4	6
Gravel, cobble-size	4	10
Shale, hard	16	26
Gravel and clay, brown	2	28
Shale, blue, hard	22	50
Sandstone and shale	20	70
Sandstone, hard	22	92

Casing: 6-in. to 50 ft.

7/1W-1J1. Vera Poulsen. Altitude 765 ft. Drilled by R. Stadeli & Sons, 1957

Soil, reddish-brown	1	1
Clay and broken brown rock	4	5
Rock, extremely hard, dark-blue	9	14
Clay and boulders, brown	2	16
Rock, porous, "rotten," mixed with light-brown clay	19	35
Clay and some small soft rocks, reddish-brown	10	45
Boulder	2	47
Shale, brown, with boulders	14	61
Shale, brown, water-bearing	1	62
Shale, brown, with some boulders	19	81
Shale, light-gray, water-bearing	1	82
Clay, light-gray	10	92
Shale, brown	43	135
Shale, bluish-green	5	140
Shale, hard, gray	40	180

Casing: 8-in. to 57 ft.

7/1W-1N1. Arnold Dankenbring. Altitude 355 ft. Drilled by R. Stadeli & Sons, 1959

Soil, reddish-brown	1	1
Rocks and clay, reddish-brown	9	10
Boulders and clay, brown	3	13
Rock, hard, dark-gray	12	25
Rock, medium-hard, brown	5	30
Rock, hard, black	23	53
Rock, hard, crevice, black, water-bearing	1	54
Rock, hard, black	3	57

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, medium-hard, gray, water-bearing	13	70
Shale, hard, gray, water-bearing	26½	96½
Casing: 6-in. to 20 ft.		

7/1W-2E1. J. Q. Huddleston. Altitude 450 ft. Drilled by William J. Stennett, 1955

Soil and clay	18	18
Basalt, hard	29	47
Rock, "honeycombed"	5	52
Basalt	28	80
Sandstone, gray	5	85
Basalt	29	114
Rock, "honeycombed"	2	116
Basalt	3	119
Casing: 6-in. to 22 ft.		

7/1W-2F1. John Becker. Altitude 475 ft. Drilled by William J. Stennett, 1962

Soil	5	5
Clay, sandy, and boulders	33	38
Basalt, medium-hard, gray	21	59
Basalt, softer, brown, with clay seams	6	65
Basalt, hard, gray, with seams	25	90
Rock, softer, brown	5	95
Rock, very hard, gray	11	106
Rock, softer, gray	39	145
Rock, extra-hard, gray	5	150
Casing: 6-in. to 40 ft.		

7/1W-2H1. I. T. Yoder. Altitude 370 ft. Drilled by R. Stadeli & Sons, 1960

Soil, brown	2	2
Clay and rocks, brown	8	10
Shale, hard, blue	54	64
Shale, medium-hard, light-blue	11	75
Shale, hard, grayish-blue	2	79
Shale, medium-hard, grayish-blue	46	123
Shale, hard, grayish-blue	2	125
Shale, medium-hard, grayish-blue	20	145
Shale, medium-hard, light-gray	25	170
Shale, medium-hard, brown	30	200
Casing: 6-in. to 10 ft.		

Table 2.--Drillers' logs of representative wells--Continued

7/1W-3B1. Felix Wright. Altitude 300 ft. Drilled by R. Stadeli & Sons, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay and boulders, reddish-brown	12	15
Rock, hard, gray	21	36
Shale, bluish-gray, water-bearing	11	47
Rock, hard, black	7	54
Shale, blue and gray	7	61
Rock, hard, dark-gray	7	68
Shale, gray	8	76
Rock, hard, crevice, gray	88	164
Rock, hard and soft, gray and black	16	180
Rock, creviced, dark-gray, water-bearing	1	181

Casing: 6-in. to 20 ft.

7/1W-3C1. George Cline. Altitude 300 ft. Drilled by William J. Stennett, 1959

Sand and sandy clay	35	35
Lava, soft, brown	29	64
Basalt, hard, greenish-gray	21	85
Rock, softer, brown	27	112
Basalt, gray	38	150
Basalt, gray, with seams	22	172

Casing: 6-in. to 67 ft.

7/1W-4A1. Alfred Jensen. Altitude 230 ft. Drilled by William J. Stennett, 1959

Soil	10	10
Clay, sandy	30	40
Sandstone, blue	10	50
Rock, "rotten"	10	60
Clay, blue-white	6	65
Rock, brown	5	70
Basalt, gray	30	100
Rock, soft, red	7	107
Basalt, gray, with seams	26	133

Casing: 6-in. to 76 ft.

7/1W-4E1. Sumner Schorn. Altitude 205 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	3	3
Clay, sticky, brown	7	10
Clay, sandy, brown	15	25
Clay, blue	5	30
Clay, brown	10	40
Clay, reddish-brown	6	46

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, gritty, light-brown	19	65
Clay, brown	30	95
Clay, gray	5	100
Clay, brown	23	123
Gravel, medium-hard, cemented, brown	9	132
Clay, soft, brown	6	138
Gravel, hard, cemented, brown	1	139
Gravel, medium-hard, cemented, brown, water-bearing	5	144

Casing: 6-in. to 144 ft.

7/1W-6R1. O. E. Steffen. Altitude 201 ft. Drilled by William J. Stennett, 1958

Soil	8	8
Clay, sticky, yellow	12	20
Clay, sandy	18	38
Clay, sandy, with pea-size gravel	7	45
Sand and gravel, cemented	13	58
Gravel, coarse, cemented	22	80
Gravel, loose	4	84
Gravel, cemented	20	104
Shale, blue, with some large gravel	30	134
Sand, coarse-grained	2	136
Lava, hard, gray	3	139
Rock, softer, blue-gray	38	177
Rock, hard	37	214
Rock, hard, gray, caving	11	225

Casing: 8-in. to 138 ft; perforated 75-100, 125-135 ft; deepened to 225 ft in 1960.

7/1W-7C1. Dettwyler & Schmidgall Dairy. Altitude 205 ft. Drilled by J. A. Sneed & Sons, 1957

Soil	2	2
Clay, yellow	22	24
Clay, blue	16	40
Sand, heaving, yellow	15	55
Gravel, cemented	6	61
Gravel and sand, water-bearing	1	62
Gravel, cemented	6	68
Clay, yellow	5	73
Gravel, cemented, 2-in.-diameter, yellow	25	98
Gravel, cemented, 2-in.-diameter, blue	7½	105½
Gravel and sand, water-bearing	½	106
Gravel, cemented, blue	1	107
Clay, blue	4	111
Gravel, cemented, 4-in.-diameter	3	114
Sand, water-bearing	1	115
Sand, heaving, gray	12	127

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, gray	10	137
Sand, heaving	3	140
Casing: 10-in. to 140½ ft.		

7/1W-8A1. Alfred Kuenzi. Altitude 200 ft. Drilled by R. Stadeli & Sons, 1949

Soil, brown	3	3
Clay, brown	33	36
Rock, soft, brown	31	67
Rock, hard, gray	15	82
Casing: 6-in. to 67 ft.		

7/1W-8A2. S. M. Sandver. Altitude 250 ft. Drilled by R. Stadeli & Sons, 1961

Soil, brown	2	2
Clay, brown, and rock	25	27
Rock, hard, black	3	30
Rock, very hard, black; water 3 gpm at 30 ft	11	41
Rock, hard, black	8	49
Claystone, medium-hard, brown	9½	58½
Rock, hard, black	3½	62
Rock, medium-hard, dark-gray	20	82
Claystone, soft, black; water 2 gpm at 84 ft	2	84
Rock, medium-hard, dark-gray	16	100
Rock, hard, gray	10	110
Rock, very hard, gray	6	116
Rock, hard, gray; water at 120 ft	4	120
Rock, hard, gray; some water at 132 ft	14	134
Casing: 6-in. to 28 ft.		

7/1W-8C1. Phyllis Loe. Altitude 175 ft. Drilled by R. Stadeli & Sons, 1958

Soil, brown	3	3
Clay, light-brown	23	26
Gravel, brown, cemented	3	29
Clay, brown	13	42
Clay, brown, sandy	6	48
Gravel, hard, cemented, brown	21	69
Gravel, cemented, mixed with streaks of clay	10	79
Gravel, bluish-gray, water-bearing	1	80
Clay, mixed with some gravel	4	84
Casing: 6-in. to 80 ft.		

Table 2.--Drillers' logs of representative wells--Continued

7/1W-9E2. Arnold VonFlue. Altitude 225 ft. Drilled by R. Stadeli & Sons, 1957

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	14	16
Boulders and brown clay	4	20
Lava rock, medium-hard, porous, gray	4	24
Rock, hard, gray	41	65
Rock, medium-hard, gray	5	70
Rock, soft, with wood	1	71
Rock, medium-hard, gray	6	77
Rock, soft, gray	1	78
Rock, medium-hard, gray	8	86
Rock, hard, gray, water-bearing	2	88

Casing: 6-in. to 18 ft.

7/1W-12N1. R. E. Skaife. Altitude 850 ft. Drilled by William J. Stennett, 1961

Soil	8	8
Basalt, hard, gray	112	120
Basalt, hard, gray, with seams	10	130
Basalt, hard, gray	9	139
Basalt, soft, green	16	155
Basalt, hard, gray	52	207
Basalt, soft, green	15	222
Basalt, hard, gray	26	248
Basalt, soft, with brown streaks, seams	21	269
Basalt, soft, black, seams, water-bearing	9	278
Basalt, gray, hard	31	309
Basalt, very hard, gray	46	355
Basalt, hard, gray	48	403

Casing: 8-in. to 12 ft.

7/1W-13F1. H. T. Small. Altitude 875 ft. Drilled by William J. Stennett, 1955

Clay, red	15	15
Clay and sand, reddish	32	47
Clay	8	55
Sandstone, blue-gray	74	129

Casing: 5-in. to 59 ft.

7/1W-16B1. Alvin Hollin. Altitude 250 ft. Drilled by R. Stadeli & Sons, 1957

Soil, red	2	2
Clay and boulders, reddish-brown	13	15
Rock, gray, water-bearing	5	20

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, hard, gray	50	70
Rock, hard, gray, with crevices	1	71
Rock, very hard, gray	46	117
Casing: 6-in. to 15 ft.		

7/1W-16D1. George Kuenzi. Altitude 315 ft. Drilled by R. Stadeli & Sons, 1950±

Soil	5	5
Boulders	13	18
Shale, tuff, sandstone, etc.	347	365
Casing: 6-in. to unknown depth.		

7/1W-17Q1. H. M. Kuenzi. Altitude 360 ft. Drilled by William J. Stennett, 1956

Soil, red, and boulders (weathered basalt?)	8	8
Basalt, very hard	48	56
Rock, softer, blue	62	118
Rock, very hard, gray	88	206
Rock, hard, vesicular	37	243
Casing: 6-in. to 24 ft.		

7/1W-19H1. J. H. Thompson. Altitude 300 ft. Drilled by William J. Stennett, 1957

Soil, red, and boulders	10	10
Basalt, decomposed	8	18
Basalt, hard, gray	27	45
Basalt, weathered	3	48
Basalt, hard, gray	40	88
Shale, hard, green	7	95
Basalt, medium-hard	37	132
Basalt, hard, crevices, gray	23	155
Rock, soft, black	4	159
Basalt, hard, gray	36	195
Rock, pink, "honeycombed"	5	200
Sandstone, hard, gray, seam with some water	78	278
Sandstone, hard, gray	30	308
Sandstone, gray, with many small pebbles, cemented	57	365
Sandstone, hard, gray	23	388
Sandstone, pebbly	7	395
Sandstone, pebbly, alternating with gray sandstone every 3 ft	38	433
Casing: 6-in. to 22 ft.		

Table 2.--Drillers' logs of representative wells--Continued

7/1W-19H2. Clyde McCall. Altitude 295 ft. Drilled by West Well Drilling, 1956

Materials	Thickness (feet)	Depth (feet)
Old well, no record	51	51
Basalt, gray, hard	54	105
Shale, chalky, green, with rotten wood	5	110
Rock, softer, black, some crevices	30	140
Basalt, hard, black, water-bearing	22	162

Casing: 6-in. to unknown depth.

7/1W-25B1. Wayne Goode. Altitude 830 ft. Drilled by William J. Stennett, 1960

Soil	3	3
Clay, red	57	60
Clay, sandy	60	120
Sandstone	8	128
Shale, blue	224	352
Shale, hard	48	400

Casing: 8-in. to 130 ft, 6-in. 122-352 ft; perforated 200-240, 320-340 ft.

7/1W-27N1. K. G. Johnson. Altitude 610 ft. Drilled by William J. Stennett, 1960

Soil	3	3
Clay, red	12	15
Rocks, small, and clay	8	23
Lava, soft	5	28
Basalt, hard	24	52
Rock, creviced	19	71
Basalt, hard	30	101
Basalt, creviced	6	107
Basalt, hard, gray	52	159
Rock, "honeycombed"	19	178
Clay, blue	7	185
Sandstone, gray	19	204
Rock, white, with quartz	6	210

Casing: 10-in. to 29 ft.

7/1W-34L1. O. H. Johnson. Altitude 650 ft. Drilled by J. L. Klundt, 1957

Boulders	15	15
Clay, red	35	50
Clay, blue	30	80
Soapstone	34	114
Rock, blue	21	135
Sandstone	15	150
Sandstone and shale	50	200

Casing: 8-in. to 85 ft; perforated 25-35 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/1W-35L1. J. J. Doerfler. Altitude 740 ft. Drilled by J. L. Klundt, 1958

Materials	Thickness (feet)	Depth (feet)
Clay, red	19	19
Shale, blue, and hard rock	49	68
Soapstone, blue	67	135
Shale, blue, hard	47	182
Shale, blue, and soapstone	28	250
Shale, blue	9	259

Casing: 6-in. to 35 ft.

7/2W-3E1. H. V. Carson. Altitude 205 ft. Drilled by R. Stadeli & Sons, 1956

Soil, brown	4	4
Silt, brown	11	15
Silt, sandy, brown, water-bearing	13	28
Clay, blue	27	55
Clay, sandy, brown	10	65
Sand, clayey, brown	17	82
Sand and clay, hard, brown	9	91
Clay, sandy, brown	1	92
Gravel, cemented, gray	2	94
Sand and gravel, loose, water-bearing	1	95
Gravel, cemented, gray, water-bearing	30	125
Sand, muddy, and grayish-brown gravel	3	128
Gravel, cemented, loose, gray, water-bearing	16	144
Gravel, loose, bluish-gray, water-bearing	1	145
Sand and gravel, loose, with some clay, water-bearing	13	158

Casing: 8-in. to 158 ft; perforated 96-123, 139-156 ft.

7/2W-3G1. Jensen Bros. Altitude 195 ft. Drilled by R. Stadeli & Sons, 1955

Soil	4	4
Silt, brown	11	15
Sand, caving, brown, water-bearing	25	40
Sand, partly cemented, brown	10	50
Clay, blue	8	58
Clay, brown	8	66
Gravel, cemented, gray, water-bearing	27	93
Sand and gravel, gray, water-bearing	7	100
Gravel, cemented, gray, water-bearing	17	117
Sand and gravel, gray, water-bearing	2	119
Gravel, cemented, gray, water-bearing	9	128
Sand and gravel, gray, water-bearing	2	130
Gravel, cemented, gray, water-bearing	11	141
Sand and gravel, gray, water-bearing	2	143
Gravel, cemented, gray, water-bearing	11	154

Casing: 12-in. to 154 ft; perforated 100-151 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-3Q1. L. W. Roth. Altitude 205 ft. Drilled by William J. Stennett, 1961

Materials	Thickness (feet)	Depth (feet)
Soil	6	6
Clay, sandy	74	80
Gravel, cemented	11	91
Sand, cemented	41	132
Sand, coarse, loose	4	136
Sand, cemented	2	138

Casing: 6-in. to 136 ft.

7/2W-4F1. P. W. Woelke. Altitude 180 ft. Drilled by Orville Wymore, 1957

Soil	3	3
Clay, yellow	31	34
Silt, yellow	13	47
Clay, blue	11	58
Sand, packed, yellow	8	66
Clay, yellow, and gravel	2	68
Sand, brown, and gravel	12	80
Sand, gravel, and clay	10	90
Clay, yellow	4	94
Gravel, coarse, with clay streaks	71	165
Clay and gravel	7	172

Casing: 10-in. to 165 ft; perforated 83-165 ft.

7/2W-5F1. F. O. West. Altitude 183 ft. Drilled by Orville Wymore, 1957

Soil	3	3
Clay, silty, yellow	15	18
Clay, sandy, blue	16	34
Clay, blue	19	53
Sand and gravel, black	5	58

Casing: 5-in. to 58 ft.

7/2W-6E1. C. C. Cupp. Altitude 185 ft. Drilled by J. A. Sneed & Sons, 1959

Soil	2	2
Clay, sandy, yellow	56	58
Sand, fine	3	61
Gravel, cemented	15	76
Sand, medium-grained	6	82
Gravel, medium-sized, water-bearing	1	83

Casing: 6-in. to 83? ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-6N1. Edwin Maerz. Altitude 176 ft. Drilled by West Well Drilling, 1961

Materials	Thickness (feet)	Depth (feet)
Clay, sandy, brown	40	40
Sand, coarse, brown, and some clay or silt	10	50
Gravel, small, loose, and brown sand	10	60
Gravel, unconsolidated, coarse, and brown sand and some silt	38	98
Gravel and sand, coarse, partly cemented with tan clay	18	116
Clay, blue, becoming sandy at bottom of strata	16	132
Gravel and sand, coarse, very loose, black	7	139
Sand and gravel, black, partly cemented with blue clay gradually changing to tan clay and brown sand with gravel near bottom	24	163

Casing: 10-in. to 163 ft; perforated 68-112, 137-161 ft.

7/2W-7B1. B. A. Stewart. Altitude 174 ft. Drilled by J. A. Sneed & Sons, 1960

Soil	2	2
Clay, sandy, yellow	26	28
Clay, sandy, blue	10	38
Sand, silty	2	40
Gravel, cemented	9	49
Clay, blue	4	53
Gravel, cemented	7	60
Clay, yellow	7	67
Gravel, cemented	8	75
Clay, blue	5	80
Gravel, cemented	12	92
Gravel, 1-in.-diameter, water-bearing	1	93
Gravel, cemented	3	96
Clay, yellow	9	105
Gravel, cemented	45	150
Gravel, 1-in.-diameter, water-bearing	½	150½
Gravel, cemented	36½	187
Clay, gray	3	190
Gravel, cemented	29	219
Sand, red, and gravel	1	220

Casing: 10-in. to 220 ft; perforated 90-96, 105-187, 191-217 ft.

7/2W-8G1. D. F. Andal. Altitude 180 ft. Drilled by Duffield Bros., 1961

Clay, sandy	5	5
Clay, silty, tan	41	46
Clay, blue	19	65
Gravel in clay, tight	36	101
Sand, coarse, black	2	103

Casing: 6-in. to 103 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-8R1. Ralph Adams, Jr. Altitude 199 ft. Drilled by J. A. Sneed & Sons, 1958

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, yellow	25	28
Clay, sandy, blue	25	53
Gravel to 4-in. diameter, cemented	20	73
Clay, sandy, blue	7	80
Gravel to 4-in. diameter, cemented	14	94
Sand and gravel, water contains iron	3	97
Sand, medium-grained	1½	98½
Clay, sandy, yellow	4½	103
Gravel to 2-in. diameter, cemented	15	118
Gravel to 3-in. diameter, water-bearing	1	119

Casing: 8-in. to 119 ft.

7/2W-9P1. H. C. Toelle. Altitude 185 ft. Drilled by J. A. Sneed & Sons, 1961

Soil	2	2
Clay, yellow	21	23
Clay, blue	32	55
Clay, sticky, yellow	8	63
Clay, sandy, yellow	6	69
Sand, fine, water-bearing	½	69½
Gravel, cemented	10	79½
Sand and 3/4-in.-diameter gravel, water-bearing	½	80
Gravel, cemented, water-bearing	22	102
Sand and 1-in.-diameter gravel, water-bearing	1	103
Gravel, cemented	31	134
Gravel, 3-in.-diameter, water-bearing	1	135
Gravel, cemented	2	137

Casing: 8-in. to 137 ft; perforated 1-135 ft.

7/2W-10Q1. Harold Snethen. Altitude 175 ft. Drilled by Orville Wymore, 1956

Soil	2	2
Clay, yellow	29	31
Clay, blue	31	62
Clay, sandy, blue	10	72
Sand and gravel, brown, water-bearing	4	76

Casing: 5-in. to 76 ft.

7/2W-11A1. Ernest Roth. Altitude 202 ft. Drilled by R. Stadeli & Sons, 1956

Soil, dark-brown	4	4
Silt, sandy, brown	13	17
Sand, caving, brown, water-bearing	8	25
Clay, blue	5	30

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, sandy, firm, brown, water-bearing	35	65
Clay, sandy, brown	2	67
Sand, silty, with thin streaks of brown gravel, water-bearing	5	72
Clay, sandy, bluish-gray	12	84
Gravel, loose, bluish-black, water-bearing	1	85
Sand, coarse, dark-gray	3	88
Gravel, cemented, greenish-gray, water-bearing	20	108
Sand, grayish-brown	4	112
Gravel, cemented, gray, water-bearing	5	117
Sand, gray	2	119
Sand and gravel, water-bearing	2	121
Gravel, cemented, gray, water-bearing	2	123
Sand and gravel, bluish-gray, water-bearing	4	127
Gravel, loose, water-bearing	1	128
Sand and gravel, bluish-gray, water-bearing	8	136
Sand and gravel mixed with streaks of cemented bluish-gray gravel, water-bearing	18	154
Gravel, cemented, light-brown, water-bearing	19	173
Clay, sandy, and thin streaks of bluish-gray gravel	25	198

Casing: 10-in. to 175 ft; perforated 42-174 ft. Backfilled from 198 ft to 175 ft with 2-in.-diameter crushed gravel.

7/2W-11B1. Daniel Ross. Altitude 203 ft. Drilled by Willamette Drilling Co., 1960

Soil	4	4
Clay, yellow	12	16
Shale, sandy, brown	18	34
Shale, gritty, gray	29	63
Shale, sandy, brown	25	88
Shale, sandy, brown, with scattered gravel	10	98
Sand and gravel, brown	37	135
Shale, sandy, brown, with scattered gravel	29	164
Sand and gravel, brown	16	180

Casing: 10-in. to 180 ft; perforated 98-135, 164-180 ft.

7/2W-11K1. Walter Haverson. Altitude 200 ft. Drilled by R. Stadeli & Sons, 1956

Soil, dark-brown	4	4
Silt, brown, water-bearing	16	20
Sand, heaving, light-brown, water-bearing	10	30
Clay, blue	8	38
Clay, sandy, brownish-pink	19	57
Sand, silty, and brown gravel, water-bearing	48	105
Sand, firm, brown	1	106
Sand, silty, and firm brown gravel from pea-size to 4-in. diameter, water-bearing	4	110

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, cemented, hard, brown, water-bearing	5	115
Sand, loose, and bluish-gray gravel, water-bearing	3	118
Gravel, cemented, hard, brown, water-bearing	4	122
Sand and gravel, loose, blackish-gray, water-bearing	3	125
Sand, silty, and brown gravel, water-bearing	6	131
Gravel, cemented, hard, brown, water-bearing	5	136
Clay, gray	½	136½
Gravel, cemented, hard, brown, water-bearing	4½	141
Sand and gravel, blue-gray, water-bearing	3	144
Gravel, cemented, hard, brown, water-bearing	3	147

Casing: 8-in. to 147 ft; perforated 60-146 ft.

7/2W-12C1. Henry Roth. Altitude 204 ft. Drilled by J. A. Sneed & Sons, 1958

Soil	3	3
Clay, yellow	25	28
Clay, blue	20	48
Clay, brown	29	77
Gravel, cemented	26	103
Sand and gravel, cemented	1	104

Casing: 6-in. to 104 ft.

7/2W-12E1. Leonard Squier. Altitude 199 ft. Drilled by J. A. Sneed & Sons, 1952

Soil and clay	72	72
Gravel, cemented	51	123
Gravel, water-bearing	2	125

Casing: 10-in. to 125 ft.

7/2W-13L1. Carl Mantie. Altitude 224 ft. Drilled by R. Stadeli & Sons, 1960

Soil, brown	6	6
Clay, brown	29	35
Clay, grayish-brown	18	53
Gravel, cemented, medium-hard	21	74
Clay, sandy, bluish-gray	6	80
Gravel, cemented, medium-hard, gray	2½	82½
Rock, hard, black	3½	86
Rock, soft, brown, water-bearing	10	96
Rock, hard, brown	1	97

Casing: 6-in. to 83 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-14A1. W. T. Hatteberg. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1959

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, yellow	21	23
Clay, sandy, blue	10	33
Clay, sticky, blue	10	43
Sand, silty, brown	5	48
Clay, yellow	3	51
Clay, blue	11	62
Gravel, 3-in.-diameter, cemented	14	76
Gravel, water-bearing	½	76½
Gravel, cemented	17	93½
Sand, medium, water-bearing	2	95½
Gravel, cemented	34	129½
Clay, sandy, yellow	3½	133
Clay, sticky, yellow	8	141
Shale, blue	22	163

Casing: 10-in. to 163 ft; perforated 74-92, 108-127 ft.

7/2W-14C3. R. W. Fiske. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1957

Soil	4	4
Clay, yellow	26	30
Clay, blue	10	40
Sand, silty, blue	10	50
Clay, yellow	15	65
Gravel, 4-in.-diameter, cemented	5	70
Gravel, cemented, water-bearing	22	92
Sand and 3-in.-diameter gravel, water-bearing	1	93
Gravel, cemented, water-bearing	43	136

Casing: 8-in. to 136 ft; perforated 80-134 ft.

7/2W-14J1. Ernest Roth. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1962

Soil	3	3
Clay, soft, yellow	32	35
Clay, sticky, yellow	7	42
Sand, fine-grained, yellow	8	50
Conglomerate, 3-in.-diameter	11½	61½
Clay, yellow	9½	71
Conglomerate, 4-in.-diameter	56	127
Claystone, firm, blue	7	134
Clay, sticky, brown	20	154
Claystone, hard	1	155
Basalt	5	160

Casing: 10-in. to 155½ ft; perforated 54-61, 71-127, 150-153 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-15D1. J. C. Koch. Altitude 180 ft. Drilled by George H. Robinson, 1961

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	48	50
Sand and gravel with brown clay	35	85

Casing: 6-in. to 85 ft.

7/2W-16A1. V. VanCleve. Altitude 180 ft. Drilled by Harty Bros., 1953

Soil and clay	60	60
Gravel and sand	8	68
Gravel, cemented	62	130
Gravel and sand	14	144

Casing: 8-in. to 144 ft; perforated 65, 140-144 ft.

7/2W-16B1. Richard Klophenstein. Altitude 185 ft. Drilled by R. Stadeli & Sons, 1959

Soil, brown	1	1
Silt, brown	3	4
Clay, silty, soft, brown	46	50
Clay, silty, soft, blue	4	54
Gravel, cemented, medium-hard, gray	4	58
Sand and gravel, medium-hard, dark-gray, water-bearing	8	66
Gravel, cemented, soft, gray	8	74
Sand, grayish-brown, and pieces of wood	4	78
Gravel and sand, bluish-gray, water-bearing	9	87
Gravel, cemented, hard, gray	6	93
Sand and gravel, dark-gray, water-bearing	2	95
Clay, soft, with some gray gravel	1	96
Gravel, cemented, hard, gray	16	112
Sand and gravel, medium-hard, bluish-gray, water-bearing	2	114
Gravel, cemented, hard, gray	3	117
Clay, soft, grayish-brown	2	119
Gravel, cemented, hard, gray	1	120
Gravel and sand, bluish-gray, water-bearing	3	123

Casing: 8-in. to 123 ft; perforated 85-122 ft.

7/2W-17K1. Alton Roth. Altitude 190 ft. Drilled by J. A. Sneed & Sons, 1961

Soil	2	2
Clay, yellow	22	24
Clay, sandy, blue	11	35
Clay, sticky, blue	25	60
Clay, yellow	8	68
Clay, blue	7	75
Vegetation, decomposed, and fine sand	4	79

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Conglomerate, pebbles 1½-in. diameter	8	87
Gravel, 1½-in.-diameter, water-bearing	1	88
Conglomerate; pebbles 2-in. diameter	10	98
Gravel, 1-in.-diameter, water-bearing	1	99
Conglomerate; pebbles 3-in. diameter	13	112
Clay, blue	1	113
Sand and clay	7	120
Conglomerate	15½	135½
Clay, yellow	½	136
Gravel and sand, water-bearing	3	139
Sand, silty	8	147
Conglomerate, water-bearing	21	168

Casing: 10-in. to 168 ft; perforated 87-113, 130-139, 150-165 ft.

7/2W-18L1. L. G. Wittenberg. Altitude 195 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	2	2
Clay, yellow	9	11
Silt, blue	29	40
Clay, blue	5	45
Gravel, cemented	3	48
Gravel, water-bearing	1	49
Gravel, cemented	2	51
Clay, blue	2	53
Clay, brown	29	82
Sand, silty, yellow	8	90
Gravel, cemented, water-bearing	19	109
Clay, sandy, brown	3	112
Gravel, cemented	4	116
Sand and gravel, water-bearing	½	116½
Gravel, cemented, water-bearing	84½	201

Casing: 10-in. to 200 ft; perforated 93-106, 114-196 ft.

7/2W-19A1. E. F. Real. Altitude 205 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	3	3
Clay, blue and yellow	44	47
Gravel, cemented	5	52
Gravel, water-bearing	1	53

Casing: 4-in. to 53 ft.

7/2W-19M1. E. J. Fischer and C. V. Kent. Altitude 201 ft. Drilled by Willamette Drilling Co., 1956

Old well, no record	51	51
Gravel, cemented, hard	6	57
Sand, water-bearing	3	60

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, yellow, and gravel	78	138
Gravel, small, and clay, water-bearing	23	161

Casing: 6-in. to 151 ft; perforated 122-151 ft.

7/2W-19M2. E. J. Fischer. Altitude 205 ft. Drilled by Willamette Drilling Co., 1960

Soil	2	2
Clay, yellow	28	30
Clay, blue	23	53
Sand, black, and gravel	17	70
Clay, blue	12	82
Clay, yellow, and gravel, tight	38	120
Sand, brown, and gravel, water-bearing	5	125
Clay, brown, and boulders	26	151
Sand, loose, brown, and gravel	18	169

Casing: 8-in. to 169 ft; perforated 120-126, 151-168 ft.

7/2W-19P1. Cushing Bros. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1956

Soil	2	2
Clay, yellow	18	20
Clay, blue	19	39
Gravel, cemented	6	45
Gravel, water-bearing, sulfurous	1	46
Gravel, cemented	8	54
Clay, blue	3½	57½
Gravel, cemented	12½	70
Clay, sticky, yellow	11½	81½
Gravel, cemented	1½	83
Gravel and sand, water-bearing	13	96
Gravel, cemented	34	130
Gravel, water-bearing	½	130½
Gravel, cemented	½	131

Casing: 8-in. to 131 ft; perforated 83-128 ft.

7/2W-20R1. A. W. Meyer. Altitude 200 ft. Drilled by Max Wymore, 1958

Soil	3	3
Clay, brown	9	12
Clay, sandy, brown	33	45
Clay, brown	15	60
Sand, brown	6	66
Clay, brown, and gravel	2	68
Gravel, mostly tight and hard	95	163

Casing: 10-in. to 163 ft; perforated 69-163 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-21B1. Albert Gerig. Altitude 185 ft. Drilled by Robinson Drilling & Supply, 1960

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Clay, brown	36	38
Clay, blue	8	46
Sand	2	48
Gravel with clay	17½	65½
Sand	1	66½
Gravel, loose	3	69½
Sand and gravel, tight, with clay	13½	83
Sand and gravel, loose	8	91

Casing: 8-in. to 91 ft.

7/2W-21K1. Robert Fordyce. Altitude 200 ft. Drilled by Willamette Drilling Co., 1961

Soil	3	3
Clay, brown	12	15
Silt, sandy, brown	6	21
Shale, sandy, blue	21	42
Shale, sandy, gray	4	46
Shale, brown	8	54
Gravel, cemented, hard, and clay	10	64
Gravel, hard, tight	6	70
Shale and gravel, tight	2	72
Sand, brown	5	77
Gravel, tight, water-bearing	10	87

Casing: 8-in. to 87 ft; perforated 64-86 ft.

7/2W-22E1. H. L. Hilke. Altitude 203 ft. Drilled by Irving Sears, 1957

Soil	4	4
Clay, yellow	16	20
Clay, sandy, yellow	15	35
Clay, blue	10	45
Sand, brown	5	50
Clay, brown	15	65
Gravel, hard, cemented	19	84
Sand and gravel, water-bearing	?	

Casing: 6-in. to 84 ft.

7/2W-25R1. Ivan Eberly. Altitude 275 ft. Drilled by Robinson Drilling & Supply, 1960

Soil and clay, red, with rock fragments	5	5
Basalt, decomposed, grading into fresh	12½	27½
Basalt, fresh or hard	54	81½
Clay, red	2	83½

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, decomposed	18½	102
Basalt, fresh and hard	44	146

Casing: 6-in. to 23 ft.

7/2W-26G1. Cornelius Bateson. Altitude 220 ft. Drilled by R. Stadeli & Sons, 1955

Soil, brown	3	3
Clay, brown, water-bearing	17	20
Clay, bluish-gray	11	31
Clay, sandy, light greenish-brown	16	47
"Hardpan," reddish-brown silt, sand, and gravel, water-bearing	13	60
Gravel, cemented, tan, water-bearing	60	66
Clay, sandy, brown	7	73
Gravel, cemented, dark-brown, water-bearing	2	75
Sand, packed, grayish-blue	2	77
Gravel, cemented, gray, water-bearing	7	84
Rock, gray	51	135
Rock, crevices, gray, water-bearing	1	136
Rock, hard, gray	6	142
Rock, gray	23	165
Rock, hard, bluish-gray	5	170
Rock, hard, crevices, bluish-gray, water-bearing	2	172
Rock, hard, dark bluish-gray	26	198
Rock, hard, crevices, dark bluish-gray, water-bearing	2	200
Rock, hard and seamy, black	8	208

Casing: 8-in. to 84 ft; perforated 50-65, 74, 78-84 ft.

7/2W-26M1. B. F. Cushing. Altitude 200 ft. Drilled by J. A. Sneed & Sons, 1961

Soil	2	2
Clay, yellow	16	18
Basalt, weathered	26	44
Basalt, diced	20	64
Basalt, solid	29	93
Basalt, diced	2	95
Basalt, solid	2	97

Casing: 6-in. to 65 ft.

7/2W-27A1. John Shamberger. Altitude 200 ft. Drilled by J. A. Sneed & Sons, 1962

Soil	2	2
Clay, yellow	27	29
Clay, blue	10	39

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Conglomerate; pebbles 4-in. diameter	61	100
Clay, tan	3	103
Clay, blue	11	114
Conglomerate; pebbles 4-in. diameter	8	122
Clay, sandy, yellow	3	125
Clay, red	12	137
Basalt, weathered	14	151
Basalt, solid	?	

Casing: 8-in. to 129 ft; perforated 44-100, 112-123 ft.

7/2W-27C1. John Wienaz. Altitude 220 ft. Drilled by Willamette Drilling Co., 1960

Soil	4	4
Clay, yellow	8	12
Silt, sandy, brown	13	25
Shale, blue	15	40
Shale, sandy, gray	15	55
Shale, sandy, brown	5	60
Gravel, cemented	8	68
Sand and gravel, brown	22	90
Sand and gravel, cemented	2	92
Sand and gravel, brown	10	102
Sand and gravel, cemented, hard and tight	38	140

Casing: 8-in. to 140 ft; perforated 63-140 ft.

7/2W-27D1. Percy Pearson. Altitude 220 ft. Drilled by Orville Wymore, 1956

Soil	3	3
Clay, yellow	58	61
Clay and gravel, hard	28	89
Sand and gravel, water-bearing	6	95

Casing: 6-in. to 95 ft.

7/2W-27E1. Peter Mattson. Altitude 220 ft. Drilled by Orville Wymore, 1958

Soil	3	3
Clay, yellow	21	24
Clay, blue, with gravel	9	33
Clay, blue	25	58
Sand, silty, and gravel	4	62
Gravel, large, and clay	27	89
Gravel and some sand	6	95
Gravel and clay	14	109
Sand and gravel	3	112
Gravel and clay	3	115
Gravel, tight	10	125
Boulders	14	139

Casing: 10-in. to 125 ft; perforated 75-124 ft.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-28D1. W. E. Vladyka. Altitude 215 ft. Drilled by Robinson Drilling & Supply, 1959

Materials	Thickness (feet)	Depth (feet)
Soil and clay	28½	28½
Gravel with clay	3	31½
Clay	5½	37
Sand and clay	10½	47½
Sand and gravel	78½	126
Cobbles, large, with clay	12	138
Sand and gravel	12	150

Casing: 8-in. to 149 ft; perforated 74-149 ft.

7/2W-28Q1. Northwest Natural Gas Co. Altitude 220 ft. Drilled by A. M. Jannsen Drilling Co., 1960

Clay, brown	15	15
Clay, gray	30	45
Clay, hard, gray, and cobbles	5	50
Wood and gray sand, water-bearing	7	57
Cobbles	18	75
Cobbles and clay, gray	7	82
Gravel, cemented	11	93
Gravel, hard, cemented	17	110
Clay, brown and yellow	30	140
Clay, sandy, and some hard brown rock	12	152
Conglomerate, rocky, hard (weathered basalt?)	10	162
Rock, hard	1	163
Conglomerate	59	222
Rock, with some clay	10	232
Rock and clay, brown	18	250

Casing: 10-in. to 153 ft.

7/2W-29L1. West Foods Co. Altitude 215 ft. Drilled by Willamette Drilling Co., 1959

Soil	4	4
Clay, yellow	18	22
Shale, blue	18	40
Gravel and sand	17	57
Shale, soft, yellow	8	65
Gravel, cemented	82	147
Shale, brown	35	182
Shale, hard, gritty, brown, with thin strips of fine gravel	25	207
Rock, hard	?	

Casing: 12-in. to 198 ft; perforated.

Table 2.--Drillers' logs of representative wells--Continued

7/2W-29R1. H. A. Wilson. Altitude 205 ft. Drilled by Max Wymore, 1956

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, brown	25	28
Clay, brown, and gravel	12	40
Clay, sandy, and gravel	10	50
Gravel	10	60
Clay, brown	10	70
Clay, blue	16	86
Sand and gravel, water-bearing	10	96
Gravel	14	110
Clay and gravel, tight	10	120

Casing: 10-in. to 110 ft; perforated 52-60, 86-108 ft.

7/2W-30N1. Erickson's Super Markets. Altitude 210 ft. Drilled by Duffield Bros., 1959

Old well, no record	40	40
Sand and gravel	3	43
Gravel, cemented	18	61
Sand and gravel	7	68

Casing: 6-in. to 68 ft; perforated 35-40, 61-66 ft.

7/2W-31L1. W. P. Catron. Altitude 215 ft. Drilled by Irving Sears, 1955

Soil	4	4
Clay, sticky	16	20
Silt and clay, yellow	14	34
Sand and gravel, black, water-bearing	11	45
Clay and sand, gray	12	57
Sand, tight, brown	10	67
Sand and small gravel, tight, brown	4	71
Sand, brown	3	74
Sand and gravel, brown, water-bearing	2	76

Casing: 6-in. to 76 ft.

7/2W-32C1. R. D. McGhee. Altitude 210 ft. Drilled by J. A. Sneed & Sons, 1960

Soil	2	2
Clay, yellow	21	23
Clay, sandy, blue	10	33
Sand, fine-grained, black	4	37
Gravel, cemented	8	45
Gravel, water-bearing, sulfurous	1	46
Gravel, cemented	6	52
Gravel, water-bearing, sulfurous	1	53
Sand, cemented	7	60

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, cemented	4	64
Gravel, 1-in.-diameter, water-bearing	1	65
Casing: 6-in. to 65 ft.		

7/2W-32L1. Herman Vogel. Altitude 218 ft. Drilled by Marion E. West, 1955

Clay, tan	29	29
Gravel, cemented, and blue clay	10	39
Sand and gravel, loose, black	3	42
Sand and gravel with yellow clay	17	59
Clay, yellow	2	61
Sand, gravel, and yellow clay, partially consolidated	51	112
Casing: 8-in. to 112 ft; perforated 90-112 ft.		

7/2W-34J1. H. L. Brickeen. Altitude 535 ft. Drilled by H. R. Miller, 1962

Clay, red	6	6
Boulders, large	9	15
Claystone, red	11	26
Boulders, medium, and red clay	11	37
Claystone, brown	24	61
Basalt, decomposed	3½	64½
Casing: 6-in. to 64½ ft; perforated 44-62 ft.		

7/2W-34L1. C. J. Moiseve. Altitude 300 ft. Drilled by Duffield Bros., 1962

Soil	4	4
Clay, hard, brown	36	40
Basalt, hard, black	14	54
Ash, volcanic, soft, yellow	19	73
Ash, volcanic, soft, gray	5	78
Basalt, medium-hard, water-bearing	8	86
Claystone, hard, dark-gray, with sandy streaks, water-bearing	26	112
Claystone, hard, light-gray	91	203
Casing: 6-in. to 84½ ft.		

7/1-11K1. M. G. Tycer. Altitude 700 ft. Drilled by R. Stadeli & Sons, 1960

Soil, reddish-brown	1	1
Clay and boulders, reddish-brown	24	25
Shale, soft, lavendar	16	41
Shale and boulders, gray	5	46
Sandstone, medium-hard, abrasive, gray	44	90
Shale, hard, light-gray, water-bearing	36	126
Casing: 8-in. to 47 ft.		

Table 2.--Drillers' logs of representative wells--Continued

7/1-27R1. R. L. Greer. Altitude 1,540 ft. Drilled by Duffield Bros., 1957

Materials	Thickness (feet)	Depth (feet)
Basalt, shattered, and clay	6	6
Basalt, decomposed	35	41
Ash, volcanic, brown	19	60

Casing: 6-in. to 30½ ft.

7/2-8Q1. Martin Huesser. Altitude 1,875 ft. Drilled by R. Stadeli & Sons, 1959

Soil, red	2	2
Clay, red	5	7
Sandstone, soft, light-brown	8	15
Sandstone, medium-hard, light-brown, water-bearing	33	48
Rock, soft, gray	2	50
Rock, medium-hard, brown and gray	11	61
Rock, soft, gray	3	64
Rock, medium-hard, dark-gray	12	76
Rock, medium-hard, dark-gray, water-bearing	1	77
Rock, hard, raveling, black	5	82

Casing: 6-in. to 30 ft.

7/2-16M2. Gordon McKay. Altitude 1,980 ft. Drilled by R. Stadeli & Sons, 1959

Soil, red	1	1
Rock, soft, and clay, reddish-brown	6	7
Clay and broken rocks, brown	11	18
Rock, decayed, brown, mixed with some harder rocks	10	28
Rock, hard, gray	8	36
Rock, very hard, dark-gray	8	44
Rock, medium-hard, gray	28	72
Rock, hard, dark-gray	6	78
Rock, soft streak	½	78½
Rock, medium-hard, gray	8½	87
Rock, soft streak	½	87½
Rock, hard, dark-gray	8½	96
Rock, medium-hard, dark-gray	19	115
Rock, hard, dark-gray	12	127
Rock, medium-hard, crevice	5	132
Rock, hard, gray	6	138

Casing: 8-in. to 29 ft.

7/2-16P1. W. H. Rossow. Altitude 1,970 ft. Drilled by Willamette Drilling Co., 1960

Soil	3	3
Clay, brown	21	24
Shale, brown	1	25

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, hard	29	54
Casing: 10-in. to 24 ft.		

7/2-21A1. D. R. Dorgan. Altitude 2,030 ft. Drilled by William J. Stennett, 1960

Clay, red	35	35
Sandstone, blue	40	75
Basalt, extremely hard, gray	130	205
Casing: 6-in. to 53 ft.		

7/2-21A2. D. R. Dorgan. Altitude 2,012 ft. Drilled by William J. Stennett, 1960

Soil	3	3
Boulders, large	18	21
Clay, sandy	19	40
Rock, lava, soft	26	66
Lava, soft, with seams	16	82
Lava, soft, with larger seams	33	115
Lava, soft	70	185
Rock, soft, brown	35	220
Rock, soft, gray	38	258
Casing: 6-in. to 42 ft.		

8/1W-4H1. W. F. Parks. Altitude 610 ft. Drilled by William J. Stennett, 1960

Soil	3	3
Boulders, sandstone, and yellow clay	32	35
Clay with lava imbedded	20	55
Soapstone, gray	5	60
Shale rock, light-gray	93	153
Rock, hard	3	156
Shale rock, gray	40	196
Casing: 8-in. to 94 ft.		

8/1W-4H2. Henrietta Coleman. Altitude 605 ft. Drilled by J. L. Klundt, 1956

Clay, red	5	5
Sandstone, gray and blue	40	45
Rock, soft, brown	7	52
Rock, soft, gray	18	70
Shale, gray and brown	25	95
Clay, yellow	50	145
Shale, soft, blue	15	160
Shale, blue	45	205
Casing: 8-in. to 176 ft.		

Table 2.--Drillers' logs of representative wells--Continued

8/1W-6K1. L. E. Brandt. Altitude 575 ft. Drilled by L. E. Brandt, 1955

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Silt, red	4	7
Sandstone, red	5	12
Sandstone, tan, water-bearing	27	39
"Rock," gray, water-bearing	65	104
"Rock," coarse, black, water-bearing	10	114

Casing: 6-in. to 43 ft; perforated 25-38 ft.

8/1W-11C1. Eric Fisher. Altitude 830 ft. Drilled by William J. Stennett, 1957

Soil	6	6
Clay, sandy, yellow	18	24
Clay, yellow	34	58
Sand and yellow clay, cemented	87	145
Sandstone, yellow	51	196
Shale, hard, blue	112	308

Casing: 8-in. to 206 ft.

8/1W-18C1. John Miller. Altitude 500 ft. Drilled by H. R. Miller, 1961

Soil	1	1
Basalt, decomposed, red	127	128
Basalt, partly decomposed	30	158

Casing: 6-in. to 131 ft.

8/1W-20H1. Cress Cullison. Altitude 405 ft. Drilled by E. C. Smith, 1958

Soil, red	2	2
Rock, shaly	48	50
Clay and rock	27	77

Casing: 6-in. to 11 ft.

8/1W-27B1. Herman Schmid. Altitude 500 ft. Drilled by R. Stadeli & Sons, 1958

Soil, reddish-brown	2	2
Rock, seamy, gray and black	34	36
Rock, soft, gray and brown	10	46
Rock, medium-hard, gray	11	57
Rock, medium-hard, seamy, water-bearing	1	58
Rock, hard, gray	7	65
Rock, medium-hard, black, water-bearing	37	102

Casing: 6-in. to 46 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/1W-28G1. Josephine Gerpacher. Altitude 475 ft. Drilled by Robinson Drilling & Supply, 1960

Materials	Thickness (feet)	Depth (feet)
Clay, red, and soil	3	3
Tuff, decomposed, yellow	22	25
Tuffstone, gray	40	65
Tuff, brown to black, with wood fragments	10	75
Tuff, light-gray	25	100
Gravel, cemented in a green matrix	10	110
Gravel, cemented, with dark-green matrix	5	115
Gravel, cemented, with black matrix	7	122
Basalt	43	165
Clay, red-brown (weathered basalt?)	5	170
Basalt, vesicular, graduating to solid basalt	8	178

Casing: 6-in. to 122 ft.

8/1W-30J1. Francis Hendricks. Altitude 425 ft. Drilled by Robinson Drilling & Supply, 1960

Soil	2	2
Clay, yellow	20	22
Gravel	1½	23½
Ash, volcanic, weathered	31½	55
Ash, volcanic, carboniferous	11	66
Andesitic basalt, fresh	12	78
Ash, volcanic green	25	103
Ash, volcanic, carboniferous	13	116
Andesitic basalt, fresh	20	136
Clay, red	1	137
Basalt, vesicular, gray	33	170
Basalt, fresh, gray	74	244
Basalt, vesicular, gray	26	270

Casing: 8-in. to 117 ft.

8/1W-32D1. D. J. Elbert. Altitude 390 ft. Drilled by J. L. Klundt, 1956

Soil	3	3
Sand and gravel	17	20
Sand and gravel, cemented	15	35
Sand and gravel in clay, cemented	15	50
Sand and gravel	10	60
Shale, blue	13	73
Clay or shale, red	17	90
Shale, blue	40	130
Clay, yellow	3	133
Clay, blue and gray	32	165
Clay, red	15	180
Clay, gray	5	185
Rock, hard, gray	2	187

Casing: 10-in. to 59 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/1W-33E1. G. R. Duncan. Altitude 320 ft. Drilled by Robinson Drilling & Supply, 1962

Materials	Thickness (feet)	Depth (feet)
Soil and clay	6	6
Gravel, with clay	34	40
Clay, red grading to yellow	25	65
Clay, cream-color	10	75
Tuffstone	15	90
Basalt or andesite, hard	10	100
Tuff, dark-gray	50	150
Tuff, white	35	185
Tuff, blue-black	13	198
Basalt, fresh	15	213

Casing: 6-in. to 78 ft.

8/1W-34C1. R. M. Stuckart. Altitude 525 ft. Drilled by R. Stadeli & Sons, 1958

Soil, reddish-brown	2	2
Soil and clay, light-brown	6	8
Soapstone, gray	5	13
Soapstone, soft, reddish-brown	8	21
Soapstone, medium-hard, light-brown, mixed with some sand and gravel	9	30
Soapstone, hard, light-brown	8	38
Silt, caving, mixed with wood and bark, grayish-brown	9	47
Shale, hard, gray, water-bearing	58	105
Shale, a little softer, brown	2	107
Sandstone, firm, gray	11	118
Tuffstone, gray	12	130
Tuffstone, light-gray	6	136
Shale, medium-hard, gray	19	155
Shale, hard, green	6	161
Rock, soft, black	4	165
Rock, medium-hard, dark-gray	9	174
Rock, hard, gray	6	180
Rock, very hard, gray	22	202
Rock, medium-hard, dark-gray	7	209
Rock, soft, black, water-bearing	1	210

Casing: 10-in. to 48 ft.

8/1W-34L1. Town of Sublimity. Altitude 530 ft. Drilled by R. Stadeli & Sons, 1960

Soil, brown	3	3
Clay, brown	27	30
Clay, gray	40	70
Clay, reddish-brown	6	76
Clay, light-gray	4	80
Shale, sticky, grayish-green	9	89

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, medium-hard, grayish-blue	56	145
Rock, medium-hard, gray, mixed with quartz and silica	3	148
Rock, medium-hard, gray, with quartz, silica, and decayed wood	21	169
Shale, sandy, soft, sticky, light-gray	3	172
Shale, firm, gray	2	174
Shale, soft, sticky, gray	8	182
Rock, hard, black	8	190
Rock, very hard, dark-gray	15	205
Rock, very hard, black	10	215
Rock, medium-hard, black	3	218
Shale, soft, gray	4	222
Rock, medium-hard, black, porous, water-bearing	29	251
Rock, hard, black	14	265
Shale, medium-hard, gray	10	275
Rock, very hard, dark-gray	37	312
Rock, very hard, black	5	317

Casing: 10-in. to 191 ft.

8/1W-35B1. Edward Miotke. Altitude 575 ft. Drilled by Robinson Drilling & Supply, 1960

Old well	61½	61½
Rock, soft (porous, seamy basalt)	23½	85
Rock, medium-hard, gray	16	101
Ash, volcanic	15	116
Basalt, hard, seamy, black; occasional layers of broken vesicular rock	77½	193½

Casing: 6-in. to unknown depth.

8/1W-35C1. Richard Schumacher. Altitude 560 ft. Drilled by Robinson Drilling & Supply, 1959

Soil	3	3
Clay, red and yellow	14	17
Rock, fresh, gray	82½	99½
Ash, volcanic, soft	15	114½
Rock, fresh, shattered and caving, gray	8	122½
Rock, fresh, gray	115½	238
Clay, red	1	239
Rock, vesicular, gray	21	260
Basalt, fresh	15	285

Casing: 8-in. to 40 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/1W-36G1. Ralph Tate. Altitude 750 ft. Drilled by Irving Sears, 1957

Materials	Thickness (feet)	Depth (feet)
Soil	3	3
Clay, red	20	23
Clay, brown	12	35
Clay, yellow	40	75
Shale, hard, gray and blue	10	85
Tuff, white	5	90
Tuff, gray	17	107
Shale, black	9	116
Basalt, black	101	217
Shale, blue	5	222
Rock, hard, gray	10	232
Rock	20	252
Rock, seamy, with sand pockets	18	270
Rock, with some seams	49	319
Sandstone, water-bearing	5	324
Sandstone	20	344

Casing: 6-in. to 87 ft.

8/2W-1P1. Waldo Hills Farm. Altitude 450 ft. Drilled by H. R. Miller, 1961

Claystone, red	27	27
Basalt, fresh	48	75
Basalt, weathered	31	106
Basalt, fresh	12	118
Basalt, weathered	33	151
Basalt, fresh	75	226
Basalt, weathered	20	246
Basalt, fresh	6	252
Claystone, brown	5	257
Basalt, fresh	5	262

Casing: 8-in. to 31 ft.

8/2W-2B1. Darrel Franklin. Altitude 375 ft. Drilled by Robinson Drilling & Supply, 1960

Soil	1	1
Rock, decomposed, with large boulders	11	12
Basalt boulders, large	22	34
Basalt, fresh, with small decomposed seams	53	87

Casing: 6-in. to 35 ft; perforated 45-60 ft.

8/2W-3H1. James Cooper. Altitude 425 ft. Drilled by H. R. Miller, 1961

Claystone, red	6	6
Claystone, yellow	66	72
Claystone, blue	97	169

Casing: 6-in. to 73 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-3J1. Fred Doolin. Altitude 465 ft. Drilled by Robinson Drilling & Supply, 1961

Materials	Thickness (feet)	Depth (feet)
Clay, red	5	5
Basalt or andesite, weathered	40	45
Basalt or andesite, soft, grading into hard	15	60

Casing: 6-in. to 60 ft; perforated 45-60 ft.

8/2W-3M1. Harold Leevers. Altitude 460 ft. Drilled by Duffield Bros., 1958

Clay and boulders	18	18
Clay, red	49	67
Clay, yellow to tan	13	80
Basalt, black	79	159
Ash, volcanic	4	163
Basalt, black	39	202
Ash or cinders	10	212
Shale, hard, gray	8	220
Shale, soft, blue	10	230

Casing: 8-in. to 80 ft.

8/2W-4B1. Philip Senkovich. Altitude 245 ft. Drilled by Robinson Drilling & Supply, 1960

Soil and clay, tan	18	18
Clay, yellow	16	34
Gravel, cemented	5	39
Clay, blue	11	50
Clay, black	16	66
Clay, sandy, brown	14	80
Sand and gravel, cemented, with brown clay, water-bearing	4	84
Basalt, varying hardness, color shading from gray to brown and black, water-bearing	30	114

Casing: 6-in. to 84 ft.

8/2W-5H1. J. L. Stanley. Altitude 235 ft. Drilled by Robinson Drilling & Supply, 1960

Clay, tan	21	21
Clay, blue	5	26
Sand and gravel, cemented, with blue clay	10	36
Sand and gravel, loose, coarse	5	41
Sandstone, brown	3	44
Sand and gravel, cemented, with tan clay	4	48
Sand and gravel, loose, brown, with some clay	27	75
Gravel and sand, coarse, cemented with tan clay	5	80

Casing: 8-in. to 80 ft; perforated 40-42, 49-74 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-6D1. City of Salem. Altitude 215 ft. Drilled by H. R. Miller, 1962

Materials	Thickness (feet)	Depth (feet)
Sand and gravel, with soil	1	1
Sand and gravel, brown, with clay	48	49
Clay, orange, with sand and gravel	5½	54½
Sand and gravel, brown, with some clay, water-bearing	15½	70
Clay, orange, with some sand and gravel	25	95
Sand and gravel, brown, with some clay, water-bearing	20	115
Clay, yellow to orange, with some gravel	25	140
Basalt, orange to red, decomposed	26	166

Casing: 8-in. to 164 ft; perforated 55-115 ft.

8/2W-6G1. L. Shrake. Altitude 232 ft. Drilled by H. R. Miller, 1957

Clay, gray	27	27
Clay, hard, brown, and gravel	30	57
Sand and gravel	2	59

Casing: 6-in. to 59 ft.

8/2W-7D1. H. T. Wendland. Altitude 219 ft. Drilled by George H. Robinson, 1961

Soil and gravel	1	1
Clay, brown, with sand and gravel	21	22
Sand and gravel, clean	3	25
Clay, orange, with very tight sand and gravel	13	38
Clay, light-brown, graduating into decomposed basalt	31	69

Casing: 6-in. to 67 ft.

8/2W-8J1. H. R. Miller. Altitude 460 ft. Drilled by H. R. Miller, 1960

Shale, red	55	55
Basalt, solid	113	168

Casing: 8-in. to 56 ft.

8/2W-9Q1. H. B. VanSanten. Altitude 615 ft. Drilled by Duffield Bros., 1960

Clay	3	3
Clay, red	29	32
Clay, tan	22	54
Ash, volcanic, water-bearing	34	88
Basalt, fractured, black	11	99
Basalt, black	66	165

Casing: 6-in. to 99 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-10G1. C. J. Dallman. Altitude 460 ft. Drilled by R. Stadeli & Sons, 1955

Materials	Thickness (feet)	Depth (feet)
Soil, red	8	8
Shale, red	16	24
Shale, brown, water-bearing	1	25
Shale, brown	39	64
Shale, brown, water-bearing	1	65

Casing: 6-in. to 65 ft; perforated 13-65 ft.

8/2W-10P1. D. R. McFarlane. Altitude 550 ft. Drilled by Duffield Bros., 1959

Clay	4	4
Clay, red	21	25
Clay, yellow	21	46
Clay, light-cream or white	7	53
Shale, hard, gray	52	105
Shale, granular, hard gray	50	155
Shale, soft, gray	20	175

Casing: 6-in. to 59 ft.

8/2W-11A1. Lloyd M. Hill, Inc. Altitude 420 ft. Drilled by H. R. Miller, 1960

Shale, yellow	21	21
Shale, brown	12	33
Shale, black	4	37
Shale, brown	18	55
Sandstone	7	62
Basalt	22	84
Claystone, red	6	90
Basalt	20	110
Basalt, "broken"	4	114
Basalt	15	129

Casing: 8-in. to 37 ft.

8/2W-11G1. Richard Hill. Altitude 430 ft. Drilled by Robinson Drilling & Supply, 1960

Shale, red	41	41
Shale, blue	7	48
Basalt, weathered	20	68
Shale, hard, blue	15	83
Basalt, fresh	11	94

Casing: 8-in. to 53 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-11P1. Rieck Bros. Altitude 480 ft. Drilled by Harry A. Robinson, 1961

Materials	Thickness (feet)	Depth (feet)
Clay, yellow	8	8
Clay, red	12	20
Basalt, weathered	22	42
Basalt boulder	2	44
Basalt, soft, weathered	18	62
Basalt, hard	13	75
Basalt, soft	6	81
Basalt, hard	19	100
Basalt, vesicular, hard	4	104
Basalt, hard	41	145
Clay, blue	6	151
Clay, yellow-green	69	220
Clay, green	18	238
Clay, gray	20	258

Casing: 8-in. to 198 ft; perforated 60-75, 82-104, 137-145, 156-199 ft.

8/2W-11P2. Rieck Bros. Altitude 485 ft. Drilled by Barron & Strayer, 1962

Soil	3	3
Clay, yellow	22	25
Clay and gravel	25	50
Clay, yellow	15	65
"Hardpan" and rock	10	75
Rock, hard, black	20	95
Shale, blue-black	10	105
Basalt boulders, blue	32	137
Basalt, hard, black	13	150
Basalt, soft, black	14	164
Basalt, hard, black	16	180
Basalt, platy, broken, gray	17	197
Basalt, firm, black	8	205
Basalt, hard, black	40	245

Casing: 12-in. to 75 ft; perforated 40-50, 60-65 ft.

8/2W-13A1. Vernon Jette. Altitude 490 ft. Drilled by R. Stadeli & Sons, 1959

Soil, reddish-brown	1	1
Soil, red	5	6
Clay, gritty, reddish-brown, water-bearing	30	36
Sandstone, soft, light-brown	4	40
Rock, soft, decayed, black, brown, and green, water-bearing	20	60
Rock, medium-hard, brown	3	63
Rock, soft, decayed, light-brown, water-bearing	22	85
Rock, medium-hard, brown and black	5	90
Rock, soft, black, water-bearing	1	91
Rock, medium-hard, black	12	103

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Rock, very hard, black	3	106
Rock, hard, black	8	114
Rock, medium-hard, black	11	125
Rock, medium-hard, crevice, black, water-bearing	1	126
Rock, hard, black	5	131
Casing: 6-in. to 64 ft; perforated 47-61 ft.		

8/2W-13M1. Thornton Coffey. Altitude 523 ft. Drilled by West Well Drilling, 1961

Rock, decomposed, red	22	22
Rock, granular, decomposed, tan	23	45
Rock, soft, decomposed, orange, containing large boulders, water-bearing	27	72
Clay, tan	21	93
Rock, firm, weathered, dark-tan to brown	39	132
Basalt, quite hard, partly weathered, water-bearing	2	134
Rock, softer, weathered, dark-brown	6	140
Basalt, hard, gray, with few weathered layers	30	170
Basalt, hard, black	8	178
Basalt, diced	4	182
Basalt, hard, black	16	198
Basalt, diced, gray	23	221
Casing: 6-in. to 140 ft; perforated 55-60, 67-72 ft.		

8/2W-13N1. Mike Klophenstein. Altitude 540 ft. Drilled by R. Stadeli & Sons, 1959

Soil, red	5	5
Clay, red	15	20
Sandstone, soft, light-brown	7	27
Rock, hard, brown and black	3	30
Rock, soft, brown	½	30½
Rock, very hard, brown and black	41½	72
Rock, very hard, dark-gray	8	80
Rock, medium-hard, dark-gray	3	83
Rock, hard, dark-gray	2	85
Rock, soft, gray	2	87
Rock, medium-hard, gray	32	119
Rock, soft, gray	5	124
Rock, medium-hard, gray	5	129
Rock, soft, gray	½	129½
Rock, medium-hard, gray	4½	134
Rock, soft, vesicular, water-bearing	12	146
Rock, hard, black	16	162
Casing: 6-in. to 28 ft.		

Table 2.--Drillers' logs of representative wells--Continued

8/2W-14K1. Arthur Baker. Altitude 580 ft. Drilled by West Well Drilling, 1957

Materials	Thickness (feet)	Depth (feet)
Soil and clay, dark-red	22	22
Rock, decomposed, tan	26	48
Basalt boulders	2	50
Rock, decomposed	19	69
Basalt boulders, large	5	74
Rock, broken	9	83
Shale, carboniferous, black	4	87
Shale, bright-blue	3	90
Tuff, light-gray	9	99
Rock, hard, black	2	101
Basalt, vesicular, with thin layers of gray shale or tuff	19	120
Basalt, hard, layers of gray and black	42	162
Rock, medium-hard, seamy, black	18	180

Casing: 6-in. to 100 ft.

8/2W-14L1. Edward Oul. Altitude 520 ft. Drilled by Robinson Drilling & Supply, 1960

Rock, soft, decomposed, red	28	28
Rock, firm, decomposed, tan	32	60
Rock, weathered, dark gray-green	17	77
Basalt, weathered, water-bearing	17	94
Basalt and black shale, mixed	9	103

Casing: 6-in. to 79 ft.

8/2W-15N1. J. B. Smith. Altitude 420 ft. Drilled by J. A. Sneed & Sons, 1957

Soil	2	2
Clay, yellow	4	6
Ash, volcanic	3	9
Basalt, diced	15	24
Slate rock, gray	66	90
Shale, very firm, blue	2	92

Casing: ?

8/2W-16J1. Don Huddleston. Altitude 425 ft. Drilled by Robinson Drilling & Supply, 1959

Soil	3	3
Andesite, weathered, with two small boulders	14	17
Sandstone, weathered, and gray fine-grained sandstone	2	19
Shale, sandy	191	210

Casing: 6-in. to 20 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-16N1. A. A. Olsen. Altitude 500 ft. Drilled by Duffield Bros., 1962

Materials	Thickness (feet)	Depth (feet)
Clay, soil	3	3
Clay, red	6	9
Rock, boulders	6	15
Clay, brown	32	47
Rock, decomposed lava	5	52
Basalt, hard, black	21	73
Clay (volcanic ash?), white	1	74
Clay (ash?), granular, gray	8	82
Carboniferous material, soft, waxlike, black, water-bearing	10	92
Basalt, hard, black	87	179

Casing: 6-in. to 55 ft.

8/2W-17K1. Marion Mulkey. Altitude 385 ft. Drilled by H. R. Miller, 1959

Clay, blue	17	17
Basalt, solid, black	53	70

Casing: 6-in. to 17 ft.

8/2W-19D1. J. K. Cloyd. Altitude 340 ft. Drilled by Duffield Bros., 1959

Clay, soil	1	1
Rock, bouldery	6	7
Basalt, hard, black	112	119

Casing: 6-in. to 22 ft.

8/2W-21C1. R. E. Waldorf. Altitude 525 ft. Drilled by Irving Sears, 1958

Soil, red	4	4
Clay, brown	11	15
Clay, light-tan	9	24
Clay, sticky, blue	5	29
Rock (big boulder)	12	50
Shale, brown	12	62
Shale, gray	11	73
Shale, hard, gray, and boulders, water-bearing	17	90

Casing: 6-in. to 33 ft; perforated 25-33 ft.

8/2W-23C1. Orville Busby. Altitude 475 ft. Drilled by H. R. Miller, 1959

Soil, red	2	2
Basalt, black	61	63
Sandstone, gray	11	74

Casing: 6-in. to 12 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-24A1. Ann Macklin. Altitude 425 ft. Drilled by Robinson Drilling & Supply, 1960

Materials	Thickness (feet)	Depth (feet)
Soil, red	2	2
Andesite boulders, large	4	6
Andesite, decomposed	3	9
Andesite, semifresh	9	18
Andesite, fresh	16	34
Clay, red	10	44
Basalt, fresh, with crevices	9	53
Rock, soft, gray	5	58
Basalt, fresh	17	75
Sandstone	10	85

Casing: 6-in. to 22 ft.

8/2W-25H1. C. L. Riley. Altitude 355 ft. Drilled by H. R. Miller, 1961

Soil	2	2
Gravel, coarse, and clay	17	19
Gravel, medium, and clay	13	32
Clay, brown	4	36
Clay, brown, medium gravel and coarse sand	11	47
Clay, blue	12	59
Clay, blue, and fine sand	10	69

Casing: 6-in. to 49 ft; perforated 40-47 ft.

8/2W-25Q1. C. D. Striplin. Altitude 350 ft. Drilled by J. A. Sneed & Sons, 1955

Gravel, cemented	17	17
Gravel, water-bearing	½	17½
Gravel, cemented	25½	43
Clay, yellow	9	52
Gravel, cemented	3	55
Clay, yellow	25	80
Sand and gravel, water-bearing	2	82

Casing: 8-in. to 53 ft; perforated 21-41 ft.

8/2W-25R1. City of Aumsville. Altitude 364 ft. Drilled by Harry A. Robinson, 1958

Soil and silt	4	4
Sand and gravel with clay pressed into it	66	70
Pumice ash, decomposed	12	82
Sand and gravel with yellow clay pressed into it	16	98
Gravel and yellow clay	2	100

Casing: 8-in. to 99 ft; perforated 40-70, 83-97 ft.

Table 2.--Drillers' logs of representative wells--Continued

8/2W-28A1. D. L. Norlin. Altitude 400 ft. Drilled by Irving Sears, 1958

Materials	Thickness (feet)	Depth (feet)
Soil, red	3	3
Clay and boulders, brown	5	8
Clay and boulders, blue	27	35
Shale, hard	108	143
Shale, hard, gray	17	160
Sandstone	45	205

Casing: 6-in. to 45 ft.

8/2W-28F1. Harold Taylor. Altitude 450 ft. Drilled by J. L. Klundt, 1957

Soil, brown	12	12
Clay, red, with boulders	15	27
Clay, blue	19	46
Clay, gray	7	53
Rock, solid, brown	6	59
Rock, hard, blue	14	73
Rock, solid, blue	7	80
Rock, hard, blue	23	103
Basalt, blue	18	121
Basalt, softer, blue	9	130
Basalt, hard	5	135
Basalt, black	15	150
Basalt, softer, black	11	161

Casing: 6-in. to 60 ft.

8/2W-28Q1. E. P. Poitras. Altitude 290 ft. Drilled by Max Wymore, 1957

Soil	1	1
Gravel, coarse	22	23
Boulders	10	33

Casing: 6-in. to 33 ft.

8/2W-29G1. Perry Baker. Altitude 276 ft. Drilled by Duffield Bros., 1960

Clay, gravel	28	28
Boulders	7	35
Sand, cemented	5	40
Sand, hard-packed	8	48

Casing: 6-in. to 47 ft.

8/2W-29M1. N. H. Bliss. Altitude 310 ft. Drilled by Duffield Bros., 1957

Clay	5	5
Shale, brown	51	56
Basalt, badly decomposed	22	78
Shale, hard, blue	34	112

Table 2.--Drillers' logs of representative wells--Continued

Materials	Thickness (feet)	Depth (feet)
Shale and some wood particles	5	117
Casing: 6-in. to 62 ft.		

8/2W-30K1. V. F. Tipton. Altitude 390 ft. Drilled by H. R. Miller, 1961

Claystone, red	23	23
Claystone, dark-brown	6	29
Claystone, light-brown	6	35
Claystone, yellow	4	39
Claystone, blue	35	74
Claystone, gray	49	123
Casing: 6-in. to 40 ft.		

8/2W-33K1. Anna Etzel. Altitude 302 ft. Drilled by R. Stadeli & Sons, 1957

Soil, black, with gravel	3	3
Soil, sand, and gravel, gray	5	8
Cobblestones and sand, gray, water-bearing	19	27
Sand and gravel, gray	18	45
Gravel, gray, water-bearing	2	47
Gravel, cemented, loose, reddish-brown	8	55
Gravel, gray, water-bearing	2	57
Sand and gravel, gray	14	71
Gravel, gray, water-bearing	2	73
Sand and gravel, with small amount of clay	9	82
Gravel, gray, water-bearing	3	85
Sand and gravel, gray	10	95
Clay, medium-brown	2	97
Sand and gravel, gray, water-bearing	3	100
Casing: 12-in. to 101 ft; perforated 5-99 ft.		

8/2W-35L1. R. L. Beach. Altitude 335 ft. Drilled by Irving Sears, 1956

Soil	3	3
Gravel, cemented	11	14
Sand and gravel, water-bearing	7	21
Casing: 6-in. to 21 ft; perforated 18-21 ft.		

8/2W-36J1. R. L. Killinger. Altitude 360 ft. Drilled by Duffield Bros., 1961

Old well, no record	49	49
Gravel and coarse sand	5	54
Gravel and sand, cemented	27	81
Sand, fine, packed, brown	2	83
Casing: 6-in. to 83 ft.		

Table 2.--Drillers' logs of representative wells--Continued

8/2W-36R1. R. L. Killinger. Altitude 362 ft. Drilled by Duffield Bros., 1960

Materials	Thickness (feet)	Depth (feet)
Gravel and clay	14	14
Gravel, cemented	19	33
Sand and clay, hard-packed	15	48
Sand, coarse, packed	2	50

Casing: 6-in. to 50 ft.

8/3W-25J1. Herman Fitzner. Altitude 410 ft. Drilled by H. R. Miller, 1959

Soil, red	15	15
Shale, red	18	33
Basalt, black	77	110

Casing: 6-in. to 33 ft.

Table 3.--Chemical analyses of ground water from the Molalla-Salem slope area

Number	Depth of water-bearing zone(s) (feet)	Date of collection	Temperature (°F)	Parts per million: Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Phosphate (PO_4)	Boron (B)	Dissolved solids: Calculated	Dissolved solids: Residue on evaporation at 180°C	Hardness: As $CaCO_3$	Hardness: Noncarbonate	Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Laboratory 1/
4/1W-36R1	126-129	6-6-62	55	42	2.2	31	10	7.6	2.5	164	0	1.2	2.8	0.1	0.2	1.5	0.00	180	--	120	0	0.3	260	7.5	USGS
4/1-12F1	285-293	6-11-62	57	48	.50	20	9.0	25	2.4	166	0	.0	6.5	.0	.2	1.2	.02	195	193	87	0	1.2	273	7.3	Do
4/2-5Q1	115-122	6-11-62	55	25	1.2	4.0	3.0	5.1	.4	40	0	.0	2.0	.0	.1	.01	.03	61	62	22	0	.5	72	6.5	Do
4/3-7J1	113	6-6-62	54	29	.01	7.0	3.5	4.0	.4	47	0	.8	1.0	.0	.9	.05	.00	70	--	32	0	.3	84	6.6	Do
5/1-25G1	325-340	7-26-62	60	43	1.1	30	7.5	33	4.0	130	0	5.2	50	.3	.0	.11	.11	238	--	106	0	1.4	376	7.8	Do
5/1-33A2	436-438	2-14-57	--	12	.01	2,310	0.0	1,410	3.2	13	0	18	6,190	.0	--	--	--	9,950	--	5,760	5,750	8.1	16,700	7.1	Do
5/2-7J1	105-138	6-6-62	52	43	.30	11	6.4	8.1	.8	83	0	1.6	2.2	.3	0.1	.24	.00	115	--	54	0	.5	139	7.3	Do
6/1W-10C1	600-631	5-7-62	62	65	.03	28	1.9	20	3.5	106	0	3.0	24	.4	.0	.22	.02	198	--	78	0	1	257	7.4	Do
6/1-2M1	54-77	6-6-62	56	22	.04	15	.8	32	.6	125	0	1.8	4.2	.2	.0	.06	.08	139	--	41	0	2.2	206	7.8	Do
6/1-5B1	179-184	6-6-62	58	21	.06	41	.2	103	1.0	72	0	24	172	.2	.2	.03	.46	398	--	104	44	4.4	743	7.5	Do
6/2-16G1	--	2-9-62	--	28	26	404	124	1,200	24	--	--	7.6	2,750	--	0.1	--	--	6,280	--	1,170	--	13	--	6.1	PTL
7/1W-5M1s 3/	--	7-20-62	57	--	--	--	--	--	--	112	0	--	--	--	--	--	.94	--	--	292	200	--	2,100	7.3	USGS
7/1W-6R1	120-225	7-20-62	56	54	.64	99	11	282	14	110	0	15	585	.7	1.6	.03	.89	1,120	--	292	202	7.2	2,030	7.4	Do
7/1W-27N1	159-178	6-7-62	58	26	.66	6.5	2.0	4.0	1.4	28	0	1.0	2.5	.0	9.0	.40	.00	67	--	24	1	.3	74	6.8	Do
7/1W-34L1	135-150	6-7-62	51	10	.17	6.5	2.6	3.2	.6	13	0	.8	5.2	.0	25	.01	.06	61	--	27	16	.3	87	5.9	Do
7/2W-7B1	80-220	6-7-62	56	43	.19	31	11	8.1	2.2	164	0	.8	3.5	.2	.2	1.3	.01	182	--	124	0	.3	262	7.5	Do
7/2W-29L1	65-147	6-5-62	56	40	.79	19	9.5	7.0	1.8	123	0	.8	2.8	.4	.0	.61	.00	144	--	86	0	.3	196	7.6	Do
7/1-11K1	46-90	6-7-62	47	28	4.2 2/	21	7.2	30	3.2	171	0	8.2	2.0	.2	.0	.35	.13	189	--	82	0	1.4	280	7.1	Do

See footnotes at end of table.

Table 3.--Chemical analyses of ground water from the Molalla-Salem slope area--Continued

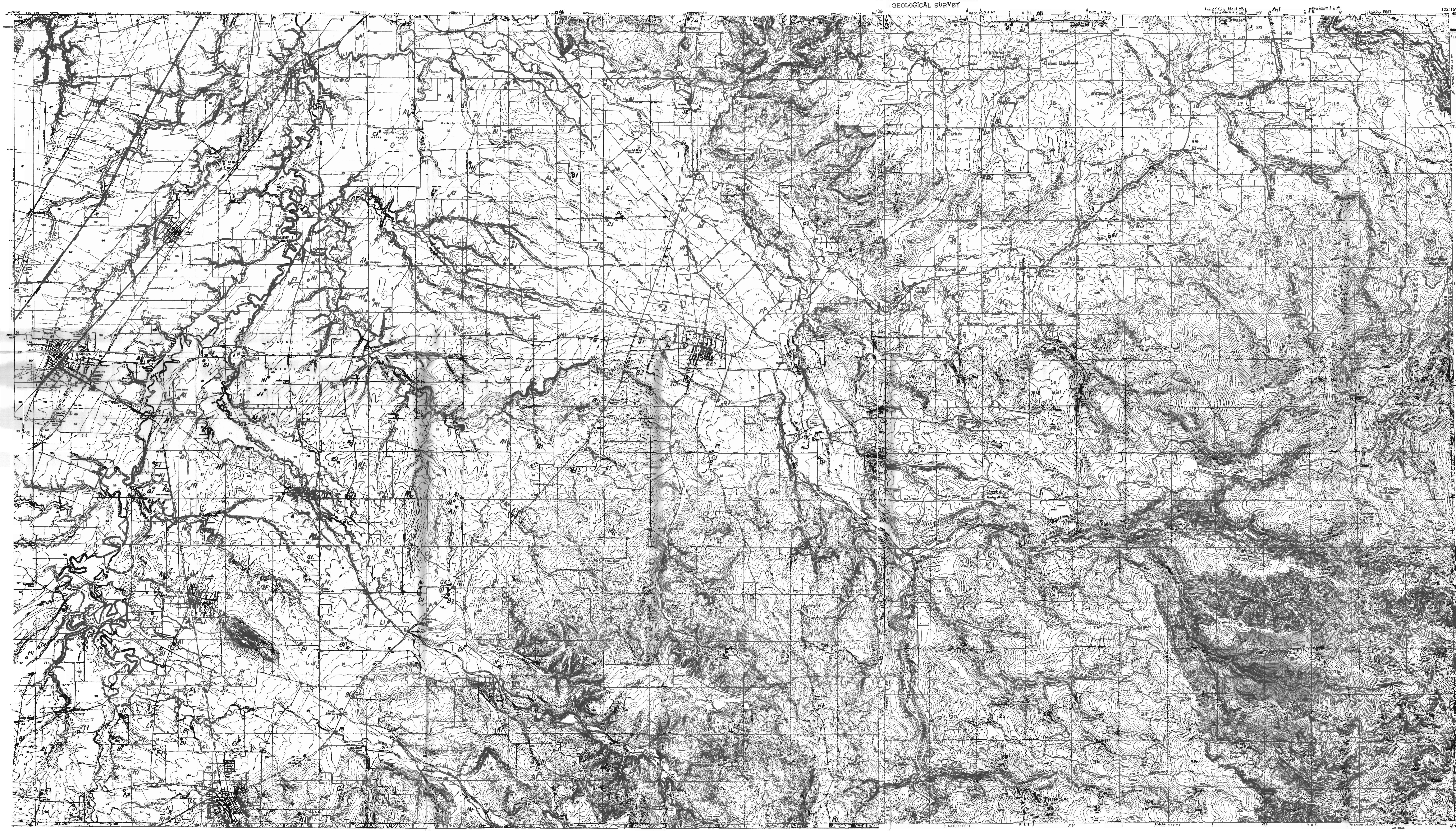
Number	Depth of water-bearing zone(s) (feet)	Date of collection	Temperature (°F)	Parts per million																		Sodium adsorption ratio (SAR)	Specific conductance (micromhos at 25°C)	pH	Laboratory 1/
																			Dissolved solids		Hardness				
				Silica (SiO_2)	Iron (Fe)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Phosphate (PO_4)	Boron (B)	Calculated	Residue on evaporation at 180°C	As $CaCO_3$	Noncarbonate				
8/1W-34L1	182-317	6-5-62	56	41	1.1	10	4.4	14	1.6	80	0	4.2	3.5	.4	.0	.45	.04	120	--	43	0	.9	143	7.8	USGS
8/2W-28A1	160-205	6-8-62	57	44	.07	12	1.5	44	.6	126	0	23	3.8	.1	.0	.10	.00	191	--	36	0	3.2	253	7.5	Do

1/ PTL, Pittsburgh Testing Laboratory; USGS, U. S. Geological Survey.

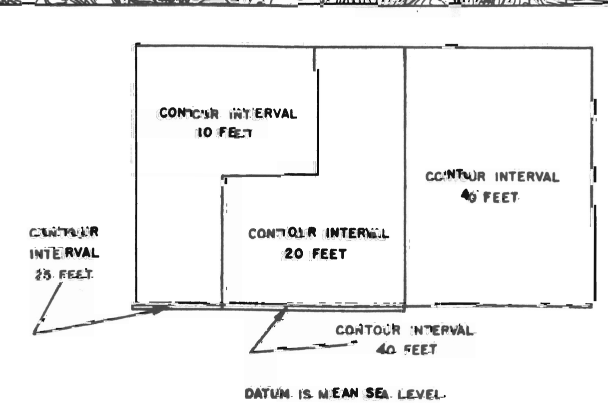
2/ Includes 1.1 ppm manganese.

3/ Small s indicates spring.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Base from Geological Survey
Colton, Lyons, Molalla, Scotts
Mill, Silverton, Stayton, Wilhoit,
and Yoder quadrangles



EXPLANATION

$_{o}$RI
Well

Numbering system described in text

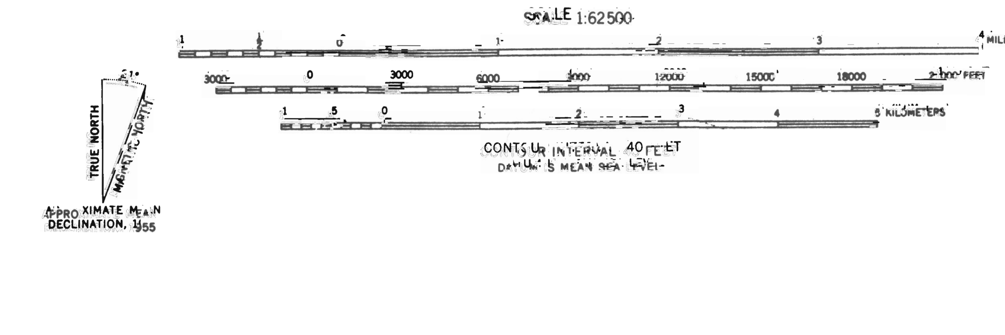


Figure 3.—Map of the northern part of the Molalla–Salem Slope area showing locations of representative wells.

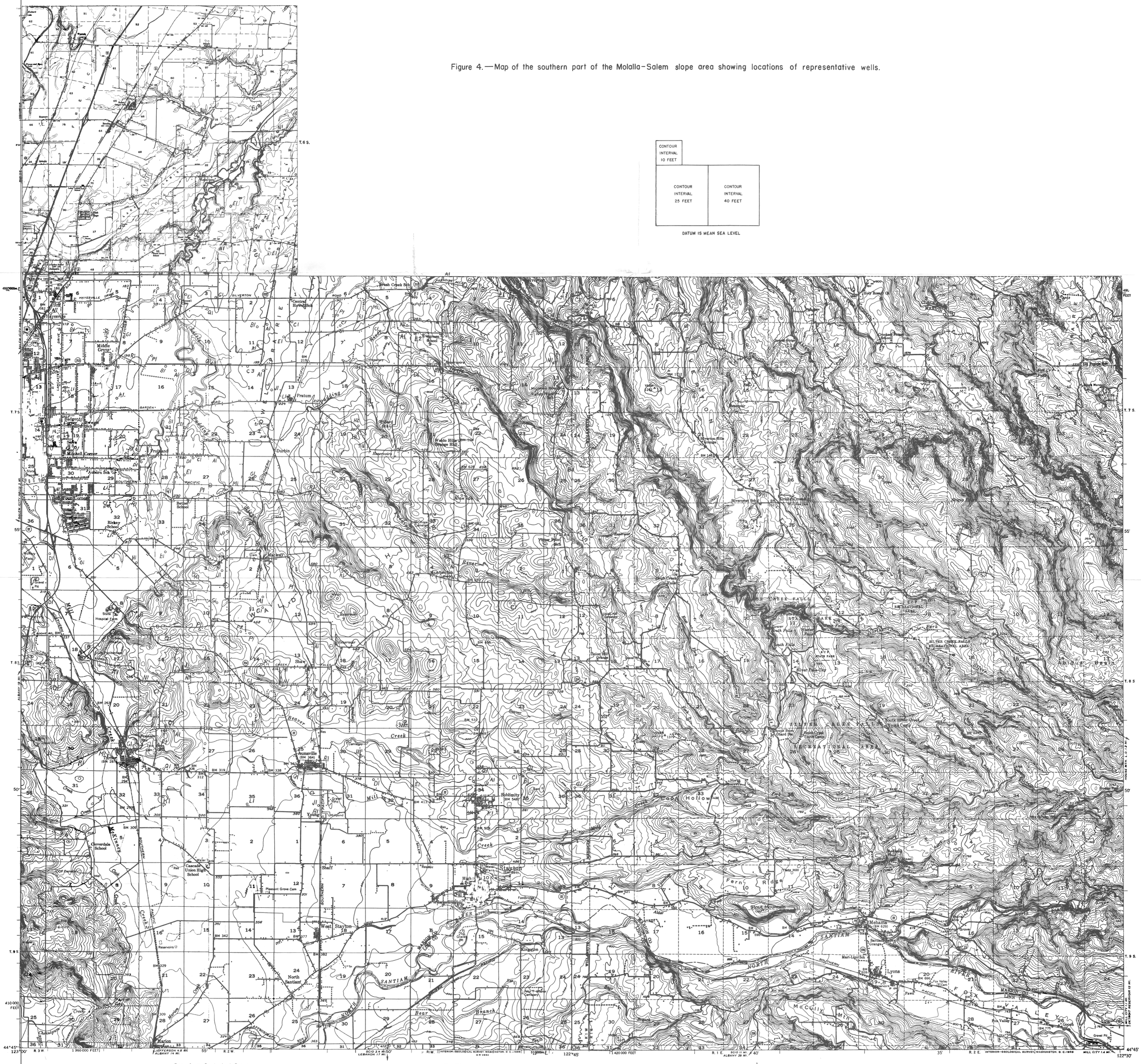



Figure 4.—Map of the southern part of the Molalla-Salem slope area showing locations of representative wells.