STATE OF WASHINGTON
Albert D. Rosellini, Governor

DEPARTMENT OF CONSERVATION
Earl Coe, Director

DIVISION OF WATER RESOURCES
Murray G. Walker, Supervisor

Water Supply Bulletin No. 10

Geology and Ground-Water Resources of Thurston County, Washington

Volume I

By

Eugene F. Wallace and Dee Molenaar

Prepared in cooperation with
UNITED STATES GEOLOGICAL SURVEY
GROUND-WATER BRANCH
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Price $1.50, Division of Water Resources, Olympia, Wn.

FOREWORD

The first concerted effort by the State of Washington to inventory its ground water resources was begun in 1945 after the legislature had passed the State Ground Water Code which brought drilling of wells and appropriation of ground water under the general administrative procedures applicable to surface waters. At the start, the Division of Hydraulics, now Division of Water Resources, entered into a cooperative agreement with the Ground Water Branch of the U. S. Geological Survey. Under the agreement, the State and the Federal Government would provide funds on a 50-50 matching basis; the funds to be used by the Geological Survey for geo-hydrologic studies of certain areas selected jointly by the Division of Water Resources and the Geological Survey.

As the geologic mapping and basic data collection program was expanded, emphasis of relying entirely upon Geological Survey personnel was changed to include use of Division of Water Resources staff geologists in the overall geo-hydrologic mapping program.

"Geology and Ground Water Resources of Thurston County", Volume I is the first county-wide ground water report prepared entirely by State personnel. We, of the Division of Water Resources, were pleased with the results of the Thurston County report which also received favorable acceptance by our cooperator, the U. S. Geological Survey.

It is felt that the matching service program should be a continuing part of our cooperative program with the Geological Survey. Such a program will permit a more efficient assignment of cooperative work and reduce the overall cost of the ground water inventory to both the State and the Federal Governments and will permit more thorough training of State personnel in the increasingly complicated field of water resource management. It is hoped that the matching service program can be increased commensurate with future acceleration of our ground water program.

Volume I of the Geology and Ground Water Resources of Thurston County was prepared to assist city and county planners, Soil Conservation Service personnel, farmers and other individuals and agencies with the orderly and complete development of the county's ground water resources and to serve as a reference for all agencies or individuals interested in the geology of the Puget Sound Basin. Volume 2, scheduled for release in 1962, will contain a thorough description of the geology of Thurston County and its effect upon the hydrology.

Everything possible has been done to assure the completeness and accuracy of the data presented herein.

-Robert H. Russell
Assistant Supervisor
Division of Water Resources

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GEOLOGY AND GROUND-WATER RESOURCES OF THURSTON COUNTY, WASHINGTON

VOL. I

By

Eugene F. Wallace and Dee Molenaar

INTRODUCTION

Purpose and Scope of the Investigation

This investigation was made by the Division of Water Resources of the Washington State Department of Conservation as part of a continuing program for the collection and interpretation of basic data concerning the ground-water supply of the State of Washington. It was made in cooperation with the Ground Water Branch of the U. S. Geological Survey for the purpose of providing an inventory to aid in the development and administration of the ground-water resources. The investigation was started in November, 1957. Field work was conducted by the writers during parts of 1958, 1959 and 1960.

The basic data in this volume pertaining to Thurston County are released at this time so that they may be used by those concerned with the development and use of ground water. A second volume describing the geology and hydrology of the area is scheduled for future release.

The investigation was made under the general direction of Murray G. Walker, Supervisor, Division of Water Resources and P. E. LaMoreaux, Chief, Ground Water Branch, U. S. Geological Survey and under the direct supervision of Robert H. Russell, Assistant Supervisor, Division of Water Resources and A. A. Garrett, District Engineer of the Ground Water Branch of the Geological Survey.

Ground-water conditions in two areas within Thurston County have been studied by the U. S. Geological Survey. In 1947,/ Schlax reported on a portion of southwestern Thurston County and in 1951, Mundorff and others (1955) described conditions in the Yelm area. The basic well data included with these reports are reproduced here. However, to avoid a duplication of the earlier effort, field work in these two areas was held to a minimum. Although all important wells drilled since completion of the older reports were inventoried, those that were in existence during the period of the earlier studies were only spot-checked.

Location of wells were originally plotted directly on topographic maps (scale 1:62,500) in the field and later were transposed to a base map of the entire county.

/See page 20 for list of references.

Location and Extent of the Area

Thurston County is in western Washington at the southern end of Puget Sound (pl. 1). The total area of the county is approximately 717 square miles, which lies within Tps. 15 to 20 N. and Rs. 4 W. to 3 E. of the Willamette base line and meridian.

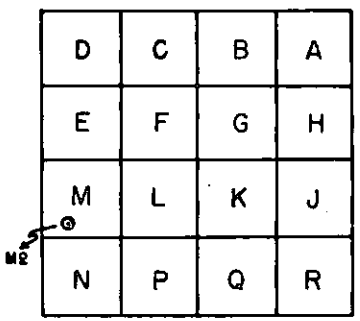
The county is bounded on the east by the Nisqually River, which separates it from Pierce County. Many narrow inlets of Puget Sound form most of the irregular northern boundary, and the short straight part of this boundary at the northwest corner of the county joins Mason County. The county is adjoined on the west by Grays Harbor County and on the south by Lewis County.

Olympia, the county seat and State Capitol, is in the north-central part of Thurston County. It is the largest city in the county; in 1960 it had a population of 18,057. Olympia is 30 miles southwest of Tacoma, 60 miles southwest of Seattle and 120 miles north of Portland, Oregon.

Although this investigation is intended to include the entire county, most of the field work was done in the lowland portions since most of the upland areas are undeveloped and very little data are available for them.

Well-Numbering System

In this report wells are designated by symbols that indicate their location according to the official rectangular public-land survey. For example, in the symbol 18/1-5M2, the part preceding the hyphen indicates successively the township and range (T. 18N., R. 1E.) north and east of the Willamette base line and meridian. Because the State lies almost entirely within the northeast quadrant of the Willamette base line and meridian, the letters indicating the directions, north and east, are omitted, but the letter "W" is included when the range lies west of the Willamette meridian. The first number following the hyphen indicates the section (sec. 5), and the letter (M) indicates the 40-acre subdivision of the section, as shown in the accompanying diagram.



The last number is the serial number of the well in the particular 40-acre tract. Thus, well 18/1-5M2 is in the NW¼,SW¼, Sec. 5, T. 18N., R. 1E., and is the second well in the tract to be listed.

Acknowledgments

The field work for this report was facilitated by the outstanding cooperation of the many well owners, tenants and well drillers who supplied information and allowed access to the wells. Personnel of the Ground Water Branch of the U. S. Geological Survey have been very helpful in providing procedural suggestions and other valuable information. The assistance of all is greatfully acknowledged.

The writers owe a personal debt of gratitude to M. B. Patterson, who has given freely of his time and extensive knowledge of the ground-water conditions in Thurston County.

GEOGRAPHY

Thurston County lies within the Puget Trough section of the Pacific Border physiographic province (Fenneman, 1931, p. 442-447). The Puget Trough is a long northward trending lowland between the Cascade Mountains on the east and the Coast Range on the west, and it extends from the central part of western Oregon into Canada. Except for numerous scattered "islands" of older consolidated rocks, the entire basin has been partly filled with unconsolidated fluvial and glacial materials of Pleistocene age.

Surface Features

Thurston County is predominantly a drift-covered glacial plain rimmed on the western, southern and southeastern sides by low-lying, maturely dissected hills underlain by deposits of Tertiary age.

The surface features are largely a product of glaciation by an ice sheet moving from the north during Pleistocene time. The surface has had a rather complex development which will be fully discussed in Volume II of this report. The Tertiary, or pre-Pleistocene, hills served an important role in determining the route taken by the advancing ice sheet as it moved southward; additionally, in the southern part of the county, these hills served as an important barrier against which the ice mass terminated in many places. Elsewhere, the terminus of the glacier cannot readily be determined because of the contiguity of the true glacial drift with the pro-glacial outwash materials. The physiographic map (pl. 1) provides a generalized sketch of the principal topographic features throughout the county.

Drainage

Thurston County is drained by five major streams, in addition to several small streams which flow directly into Puget Sound. The five major streams are described below in order from east to west. Of the five, the most easterly two flow into Puget Sound; waters of the other three are discharged into the Pacific Ocean.

The Nisqually River, which is the most easterly of the five major streams,

bounds the county on the east and is fed by glaciers on the south flank of Mount Rainier. It flows in a northwesterly direction into Puget Sound at a point about ten miles northeast of Olympia. The Deschutes River, rising in the hills of Tertiary rock southeast of Yelm, roughly parallels and is five to ten miles southwest of the Nisqually River, flows into Puget Sound at Olympia. The Skookumchuck River, which heads in the Bald Hills of Thurston and Lewis Counties, drains most of the Tertiary hills in the southcentral portion of the county south of the Deschutes drainage area. After its entrance into the county, the Skookumchuck flows along a circuitous route westerly to Bucoda and then turns sharply to flow southwesterly to its confluence with the Chehalis River just west of Centralia in Lewis County.

The Chehalis River flows northwesterly from Centralia and crosses the southwestern corner of Thurston County where it drains the Michigan Hills area and received water from Prairie Creek and Scatter Creek. The Chehalis discharges into the Pacific Ocean at Grays Harbor.

The Black River, like the Skookumchuck, is also tributary to the Chehalis River. The Black River drains a large portion of the easternmost Black Hills and much of the prairie area east of the river. The fall of the Black River is not great enough for effective drainage, and consequently marshy areas occur through most of its course. Its confluence with the Chehalis is about one and a half miles southeast of Oakville in Grays Harbor County.

Altitude

In altitude Thurston County ranges from sea level along Puget Sound to 2,984 feet near the southern boundary of the county. However, the glaciated region rarely exceeds 600 to 700 feet in altitude and most of the prairie areas range from 100 to 500 feet.

Geologic Setting

Throughout the Tertiary period the Puget Sound region was characterized by many changes in base level. The land and water areas were constantly shifting and deposition of sediments occurred alternately in fresh, brackish, and salt water.

During early Tertiary time, lava flows originating both from fissures in the region and from volcanic cones in the surrounding area were commonplace, and accumulated to great thicknesses. At least in the southern Puget Sound region, a relatively quiet period followed the period of major volcanic activity. During the period of relative quiet, thousands of feet of sedimentary materials were deposited. However, there was still considerable shifting of sea level and some volcanic activity, as indicated by continental and marine sediments with interbedded lava flows in some localities.

During late Miocene time these formations were deformed into large northwest-trending folds, which produced the ancestral Cascade Mountains. Erosion reduced these considerably during early to middle Pliocene time. Then, near the close of the Tertiary period, deformation again occurred, producing a large north-

trending arch that forms the present Cascade Mountains. The Puget Trough and the Olympic Mountains are also believed to have been brought into existence at that time (Sceva, 1957, p. 27). Contemporaneous with, and following, the late Tertiary deformation, streams cutting downward into the uplifted mountains deposited coarse gravels, which extended from the mountains to the lowlands. The deposition of these gravels extended well into the Pleistocene epoch.

During Pleistocene time, the climate had become progressively colder and the northern ice fields and mountain glaciers increased in size and extended to lower altitudes. Ultimately, the glaciers covered most of the Puget Trough north of Tenino in Thurston County. The last major glaciation which took place in Vashon time, is responsible for most of the present day topography of Thurston County and adjacent areas. It is also of prime importance in an evaluation of ground water in this area.

However, it should be mentioned that the glaciation of Vashon age apparently was not the only major glaciation in the Pleistocene epoch. Previous workers have suggested that there were from two to four glaciations with definite erosional and (or) depositional intervals between them. Willis (1898) described deposits of two Pleistocene glaciations and one interglacial interval in the Puget Sound lowland. One or more additional Pleistocene stages have been recognized by other workers, but their relationship to Willis' sequence has been uncertain. However, in the latest mapping of a part of the Tacoma 30-minute quadrangle in the southeastern part of the Puget Sound lowland, which includes sections designated by Willis as typical of certain formations, Crandell and others (1958) have indicated that the Pleistocene deposits record at least four glaciations separated by nonglacial intervals. Because of the variance in opinion regarding the number of glaciations and terminology, and the question of occurrence of the various glacial deposits in Thurston County--except for the Vashon glaciation--it is thought best to omit a discussion of glacial history here. A full discussion will be presented in Volume II after the geology of the entire county has been mapped.

Since the last recession of the Vashon glacier, the area has been subjected to a period of deposition and erosion resulting in Recent partial filling of the Pleistocene valleys and seaways and cutting of the post-Pleistocene valleys and canyons.

ROCK UNITS AND THEIR WATER-BEARING CHARACTER

The rocks of Thurston County are separated into two groups which differ markedly in age, lithology, and in general water-bearing character. In the following sections, a generalized discussion of the various rocks is presented.

Consolidated Rocks of Tertiary Age

The oldest rocks known in the county are of Tertiary age. These rocks are chiefly marine and non-marine siltstone, claystone, and sandstone interbedded with rocks of volcanic origin. The Tertiary sedimentary rocks are for the most part moderately hard and compact. Locally, however, the siltstone and claystone

are rather soft and are very susceptible to sliding and slumping. These rocks generally have a low permeability and consequently are very poor aquifers. At places where the materials have been deeply weathered, dug wells usually supply enough water for household use.

Relatively few attempts have been made to drill wells into the Tertiary rocks for the following reasons: 1. In those upland areas where Tertiary materials are near the land surface, there has been little need for water; dense vegetal cover and roughness of terrain has precluded residential development. 2. The small yields obtained from Tertiary rocks in general, together with reports of poor water quality have discouraged large-scale development.

With further exploration, moderate supplies might be obtained from the Tertiary sandstone or fractured zones in the volcanic rocks. However, as of 1960, the writers have no knowledge of any wells of large yield drilled into these materials in Thurston County. A few shallow domestic wells are reported to bottom in materials of Tertiary age in the area adjacent to McIntosh Lake on its north side. However, no well logs or records of perforated interval are available for any of them and for that reason the extent to which rocks of Tertiary age contribute to the yield of these wells is unknown. On the basis of available evidence, it appears that rocks of Tertiary age are relatively unimportant as aquifers.

Rocks of Pleistocene Age

Logan Hill Formation

According to Mundorff and others (1955, p. 6), the earliest deposits of Pleistocene age known in Thurston County are considered to be a part of the Logan Hill formation in Lewis County. This formation crops out chiefly as rusty, cemented gravel which is greatly decayed and stained. The gravel particles are so soft they can be cut with a pocket knife.

The formation, as it has been observed in Thurston County, is relatively impermeable and unimportant as an aquifer. The lateral extent of this formation in Thurston County will be ascertained by geologic mapping. In Lewis County, the lower portion of the Logan Hill formation yields a moderate amount of ground water, although it is usually somewhat high in iron content. There, however, wells have been developed only where the formation is as much as 100 to 150 feet thick; it is not thought to be that thick in southern Thurston County. No wells are known to obtain water from this unit in the county.

Pre-Vashon Glacially Derived Deposits

As mentioned previously, the history of the Pleistocene deposition from Logan Hill time to Vashon time is somewhat in doubt, but at least in the Yelm area, there is evidence of pre-Vashon glacial deposits. There, Mundorff and others (1955, p. 7) describe these materials as compact sand, gravel, and till, and occasional lenses of clay. A greater degree of induration, more intensive weathering and a different lithology distinguish these strata from the overlying Vashon drift. They attribute deposition of these materials to mountain glaciers

and infer that the strata may be several hundred feet thick. Very few, if any, wells have penetrated these deposits.

There is considerable clay throughout at least the upper portion of this unit resulting largely from alteration and weathering, and this feature has resulted in low porosity and permeability. Thus, the upper portions of these strata do not readily yield water and they also impede percolation of water to the deeper and possibly more permeable zones. The water table almost everywhere is above the top of the pre-Vashon glacial deposits in the Yelm area. At depth in these deposits, alteration and cementation have been less, so that moderate to large supplies may be obtained from them. However, at many places the shallower aquifers above the pre-Vashon deposits yield abundant supplies of water; so there has been no need for extensive development of the pre-Vashon aquifers.

In other sections of the county, there are undoubtedly other pre-Vashon glacially derived materials; Bretz (1913, p. 29) described a decomposed and stained drift of much greater age, overlain by Vashon till, exposed in railroad cuts between Rocky Prairie and Little Rock, in the southcentral part of the county (pl. 1). In northern Thurston County the materials are finer grained, for the most part, and contain more clay-size particles intermixed with the sand and gravel. Blue clay, which is very similar to that described as Admiralty (Bretz, 1913), crops out along some of the wave-cut bluffs in the northern part of the county. No attempt was made in this volume to designate names or stratigraphic positions of these sediments. It is pointed out that numerous deep wells in the northern portion of the county, especially along the beaches, yield excellent supplies of water under artesian pressure. The major aquifers tapped by these wells generally are fine grained and in many cases probably are pre-Vashon in age.

Vashon Drift

Most of the surface deposits in Thurston County consist of sand, gravel, and till of the latest glaciation. The materials are relatively fresh and unaltered. In addition to their fresh appearance, an outstanding and distinctive feature is the presence of a considerable quantity of pebbles, cobbles, and boulders that have a composition that is either uncommon or entirely foreign to the surrounding area. These deposits were named the Vashon drift by Willis (1898, p. 126) and are shown on the geologic map of the Tacoma Quadrangle published by Willis and Smith (1899). They were shown by Bretz (1913, p. 61-80) to mantle much of the Puget Sound lowland from the Canadian border to Centralia.

The Vashon drift was deposited both by the ice and as outwash from a great tongue of ice extending southward from ice fields in Canada and northern Washington. The tongue may have been fed partially by glaciers both to the east and to the west of Puget Sound.

Advance outwash. --As the ice moved southward, large quantities of sand and gravel were deposited by meltwater at the front and sides of the ice mass. These deposits consist typically of poorly-sorted to moderately well-sorted, well-rounded gravel in a sandy matrix, interbedded with lenses of sand. The materials have a fresh, unweathered appearance and are generally moderately to very permeable. In the Yelm area advance outwash has been observed unconformably overlying the pre-Vashon deposits, and it is usually overlain by either till or reces-

sional outwash.

The advance outwash, which is composed predominantly of permeable sand and gravel, is one of the most productive aquifers in the county.

Till. -- Till, deposited directly by the ice, covers more of the Puget Sound lowland than does any other unit. At most places, the till is readily recognizable because of its characteristic appearance. Unweathered, it is a grey to light-bluish-grey concrete-like mixture of clay, silt, sand, pebbles, cobbles and boulders. Typically, silt predominates, and the spacing of pebbles and cobbles is similar to that of raisins in raisin bread. The whole aspect is one of toughness and compactness. The till is subglacial and was deposited as a sheet at the base of the ice, and when deposited it formed a mantle covering the pre-ice surface.

Although the till is of low permeability and restricts or greatly impedes the downward percolation of water, small supplies of perched ground water can sometimes be obtained from it under favorable conditions. Water is yielded mostly from cracks or permeable sandy streaks and zones within the till. Wells tapping permeable zones in till cannot generally be relied on to provide large supplies. Under normal conditions water levels in such wells will be very low by early fall and will remain low until the perched zones are recharged by winter rains.

The most successful wells that develop water from till are large-diameter dug wells that afford a large infiltration area and a large storage volume. Till is not an important aquifer in Thurston County because of the limiting factors cited above; it does, however, supply many individuals with water for domestic use.

Recessional outwash. -- The sand and gravel that were deposited by glacial meltwater streams during the recession of the glacier to the north are referred to as recessional outwash deposits. At a few places, where water was ponded by irregularities of topography or by blocking of the drainage with ice, sand and silt were deposited. Except for these silt and sand deposits, the recessional outwash materials generally were laid down rapidly by swift, overloaded streams. Hence, the degree of sorting is variable and stratification is fair at best and great lateral variation is commonplace. Beds commonly are very lenticular; they pinch out within short distances.

Although poorly sorted, the outwash is moderately permeable. Consequently, where favorably situated, moderate to large supplies of water can be withdrawn from these materials. For example, in an area where the recessional outwash has filled a depression that is underlain by till, conditions are favorable for ground-water development. The recessional outwash is a productive aquifer in Thurston County, but owing to its stratigraphic position relative to the other units, it is susceptible to contamination in areas of extensive development. Also, in many areas the recessional outwash lies above the regional water table, a feature which further limits its utilization as an aquifer.

EXPLANATION OF DATA

The data collected in the Thurston County area are presented chiefly in tabular form on the pages that follow. They were collected not only during this investigation but also during the two earlier investigations already cited.

Location of Wells

The locations of all wells for which data are available are shown on plate 2. The township and range are given on each page, and only the portion of the well number that indicates the 40-acre tract and the serial number of the well within that particular 40-acre tract is shown along the left side of the line entries.

Records of Wells

Table 1 contains records of most of the municipal, irrigation, and institutional wells and a representative sampling of domestic and community supply wells. Although most of the records tabulated were gathered in 1958 and 1959, records from the two reports previously mentioned are included as well. Those extracted from the Preliminary Report on Ground Water Resources of the Central Chehalis Valley, Washington by Schlax (1947) are preceded by a single asterisk (*), and those taken from the report Ground Water in the Yelm Area, Thurston and Pierce Counties, Washington by Mundorff and others (1955) are preceded by a double asterisk (**).

Altitudes of land surface at wells were obtained primarily by interpolation from topographic maps so that the degree of accuracy necessarily varies with the contour interval that was available on the various quadrangle sheets. Most altitudes probably are accurate to 50 percent of the contour interval.

Most of the information in Table 1 is based upon reported data obtained from the owners, drillers, or users of the wells. For some wells, such as those with water rights, written records were available; but for the majority of the domestic wells, the information obtained was recorded from people's memory and is subject to error. Water-level measurements expressed in feet and decimal fractions of feet were made either by a member of the staff of the Division of Water Resources or Ground Water Branch of the U. S. Geological Survey.

The written records of water levels submitted by drillers have been placed in the reported class, not because of inaccuracy, but because they are many times approximated to the nearest foot; and even when accurately measured to the nearest tenth (0.1) of a foot, the measuring point is not generally indicated. Consequently, the exact distance of the water level below land surface cannot be ascertained. All measurements recorded to the nearest whole foot were reported by owner, tenant, or driller.

The column in the tabulation headed "Remarks" gives the reader additional information which might be helpful in evaluating a specific area for general availability and quality of water. Much of this information is reported; consequently, it should be evaluated on a relative basis. For example, the remark that the water from a given well is "rusty" or has a "high iron content" does not necessarily mean that the iron content is above the normal limitation of 0.3 parts per million, but only that the water might stain fixtures to some extent or may be harder than the owner has been used to.

Many of the pumping rates listed in the "Remarks" column would be inconclusive for exacting studies of certain areas, but they do provide a rough estimate of the yield one can expect from wells in a given area.

The data from the two previous studies have been retabulated to conform as

closely as possible to the general form of the complete report without undue alterations. In cases where the data were doubtful, they were omitted from this report.

Hydrographs

Hydrographs showing water-level fluctuation in 12 selected observation wells are presented in figures 1 to 3. Figures 1 and 2 include 2-year records for 10 wells, and figure 3 presents a 10-year record for each of 2 wells that have been measured as part of a state-wide network of observation wells.

Numerous water-level records are available in the files of the Division of Water Resources in Olympia. A list of wells from which these records were obtained and the duration of the measuring period is presented in the following table.

Well Number	Period of Record	Number of Measurements
16/1W-9B1	2/27/58 to 10/2/58	8
16/2W-7H1	2/14/58 to 10/2/58	8
18/1E-8K1	11/19/57 to 7/1/58	6
18/1E-17E2	11/20/57 to 5/7/58	3
18/1W-20R4	4/10/58 to 8/11/58	5
18/1W-21B2	4/9/58 to 7/1/58	4
18/1W-22A2	3/4/58 to 6/3/58	3
18/1W-26B2	2/24/58 to 7/1/58	5
18/1W-28Q2	3/18/58 to 10/1/58	7
18/1W-32D1	4/3/58 to 8/11/58	5
18/1W-35C1	2/25/58 to 6/3/58	4
18/1W-36F1	2/24/58 to 5/7/58	3
18/2W-13J1	6/25/58 to 5/27/59	12
18/2W-25A1	6/19/58 to 10/1/58	4
19/1W-5H1	7/3/58 to 7/1/59	12
19/1W-28B1	7/3/58 to 7/1/59	13
19/2W-16J2	7/8/58 to 11/2/59	17
19/3W-25M1	7/11/58 to 1/7/59	7
19/3W-25N1	7/11/58 to 1/7/59	7
19/3W-27L1	7/11/58 to 1/7/59	7

In addition to the wells listed above partial records for 11 wells in T. 17N., R. 2 E. were published in the report on the Yelm area by Mundorff and others (1955). Also, as part of the state-wide network of observation wells, miscellaneous measurements of levels in five wells have been published in Water Supply Papers of the U. S. Geological Survey. A description of these wells, with references, is presented below.

1.) 15/3W-13D1. L. W. Johnson (formerly J. T. Hagerty). Records available: 1947-50. Water-Supply Papers 1100, 1130, 1160 and 1169.

2.) 16/2E-17D1. Roy C. Hansen. Records available: 1951-55. Water-Supply Papers 1269, 1325 and 1408.
3.) 16/2W-29E1. Ed Poore (formerly U. S. Army). Records available: 1947-53. Water-Supply Papers 1100, 1130, 1160, 1169, 1195, 1225 and 1269.
4.) 16/3W-29N1. Chas. F. Norrie. Records available: 1947-54. Water-Supply Papers 1100, 1130, 1160, 1169, 1195, 1225, 1269 and 1325.
5.) 17/1E-14A1. W. R. Simcox. Records available: 1951-55. Water-Supply Papers 1269, 1325 and 1408.

In conclusion, it is pointed out that water-level measurements for the 10 wells whose hydrographs are shown in figures 1 and 2 will be continued until completion of Volume II of this report. In that volume the fluctuation of water levels throughout the county will be discussed in detail.

Chemical Analyses of Water From Wells

Chemical analyses of ground water samples collected during this and earlier investigations are presented in tables 2, 2A, 2B, and 2C.

Table 2 presents analyses of water samples taken during the summer of 1958 by a representative of the Division of Industrial Research, Washington State University, and by a member of the Division of Water Resources. Analyses for dissolved oxygen, carbon dioxide, pH, electrical conductivity, and total hardness were made in the field as soon as the water samples were taken. The samples were then taken to the Division's Chemistry Laboratory at Pullman, Wash., where complete chemical analyses were performed. These data were published in the Washington State Institute of Technology, Bulletin 235, Supplement A, entitled Water Resources of the State of Washington, (Adams, 1960). In preparing the material for presentation in table 2, no significant changes have been made other than some conversions which were necessitated in order to standardize these data with those presented in the other tables.

Table 2A presents analyses of water samples by the Quality of Water Branch of the U. S. Geological Survey and the writer during late 1959 and 1960 as part of a state-wide program on quality of water. Temperatures of the samples were taken at the time they were collected.

Table 2B presents partial chemical analyses of water samples collected and analyzed by the Division of Water Resources. The depth of the well has been included in this tabulation.

Table 2C presents partial chemical analyses of water samples made available through the two existing reports previously cited. These samples were analyzed by the Ground Water Branch of the U. S. Geological Survey.

Materials Penetrated by Representative Wells

Well logs in table 3 are based on records obtained from drillers or owners of the wells. A major portion of these records were made at the time of drilling,

but some of the records were reported from memory. The records were edited for consistency of presentation but were not changed otherwise.

The description of some materials encountered varies considerably with the background of the driller or owner of the well. For example, tight gravel and clay may be termed "cemented gravel," "hardpan," or in some cases even "bedrock"; compacted sand may be "sandstone" or "sand"; cobbles and boulders sometimes are referred to as "rock". Also, "blue clay" variously indicates blue, blue-gray, or gray claystone, silt, siltstone, shale or clay. Any fine-grained sand that is saturated is referred to by some persons as "quicksand" regardless of whether or not it is "quick".

Tentative stratigraphic designations have been indicated on many of the well logs. Those well numbers preceded by an asterisk are from Schlax (1947) and those preceded by two asterisks are from Mundorff and others (1955). The designations there included are assumed to be correct. The remaining designations were attached by the writer to those logs where the data warranted it. These are strictly interpretive and are subject to change when the geology of the entire county has been mapped.

Volume II of this report will include a tabulation of data for a network of key wells throughout the county with stratigraphic designations for the materials encountered.

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Table 1. -- Records of Wells.

Explanation:

Well number: See p. 2 for description of well-numbering system. Numbers preceded by asterisk indicate records from Schlax and others (1947); those preceded by two asterisks indicate records from Mundorff and others (1955).

Owner or tenant: Also includes owner's well number if known.

Altitude: Altitude of land surface in feet interpolated from topographic maps. Degree of accuracy varies with contour interval available on individual maps as indicated in explanation on Plate 1. Most altitudes probably are accurate to 50 percent of the contour interval.

Type of well: B, Bored; Dn, Driven; Dr, Drilled; Dg, Dug.

Depth to water below land surface: Water-level measurements expressed in feet and decimal fractions of feet were made by the Division of Water Resources or by the Geological Survey. Measurements recorded to nearest whole foot were reported by owner, tenant, or driller; the dates of such measurements often are not known. A flowing well whose static head is known has "+" preceding the water level indicating static head in feet above land-surface datum. A flowing well whose static head is not known is indicated by "Flows".

Type of Pump: C, centrifugal; H, handpump; J, jet; N, none; P, piston; S, submersible; T, turbine.

Use: D, domestic; Ind, industrial; Irr, irrigation; N, not used; PS, public supply; S, stock.

Remarks: A, chemical analysis in table 2; A1, chemical analysis in table 2A; A2, partial chemical analysis in table 2B; A3, partial chemical analysis in table 2C; ac, acres; Cert, indicates data from affidavit of use, but not from well record; dd, drawdown; ft, foot or feet; gph, gallons per hour; gpm, gallons per minute; hr(s), hour(s); L, log in table 3; Obs, observation well for which hydrograph is presented in Figures 1, 2, or 3; Temp, temperature in degrees fahrenheit; W/L, water-level.

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 15 N., R. 1 W.						
*4N1	Charles Yantis	268	Dg	9	30	9	Gravel, sand, and clay	4.8	5/16/47	--	----	D	Yields small perennial supply of water.
*5E1	Mary Lischka	275	Dg	22	24	11	Alluvium	11.1	5/16/47	J	----	D,S	
5M1	C. R. Whited	275	Dr	72	12	72	Sand and gravel	17	2/14/59	T	20	Irr.	Pumped 4 hr. at 345 gpm, dd 25 ft; L.
6A1	P. D. Northcraft	275	Dr	45	8	45	Gravel	-----	---------	T	5	Irr.	Water at 24 ft; supply inadequate in 1958; L.A1.
6B1	Wesley Snider	270	Dg	23	30	----	Sand and gravel	22	Fall	C	1/2	D	Water level is low water. A2.
6B2	W. A. Byers	265	Dg	13	30	13	----------	-----	---------	C	1/4	D	Water level varies from 1 ft to 11 ft.

6C1	E. C. Cobb	270	Dg	26	48	-----	Sand & gravel	10.38	11/25/59	C	1/4	D	Water level is low in summer.
6C2	Frank Hughes	265	Dg	20	30	20	----------	------	----------	C	1/4	D	Water level ranges in depth from 7 to 15 ft below land surface.
6D1	W. A. Coughlin	275	Dg	36	42	-----	Sand & gravel	------	----------	J	1/2	D	Water level ranges in depth from 14 to 35 ft below land surface.
6F1	Kenneth Mize	258	Dr	57	6	57	Gravel	30	----------	J	1/2	D	A2.
7E1	City of Bucoda	250	Dr	60	12	-----	Gravel	32	----------			PS	A1.
*7M1	City of Bucoda	250	Dr	127	12	107	Sand & Gravel	------	----------	--	--	N	Well number reported as 15/2W-12J1 in Schlax (1947). Well abandoned. L.
8H1	T. L. Pendras	285	Dg	34	18	-----	----------	24.70	4/28/58	J	1/4	D	Has gone dry, supply usually adequate.
8H2	T. L. Pendras	285	Dg	38	36	-----	----------	28.48	4/22/58	J	1/2	D	Supply adequate. A2.
8H3	D. S. Milliern	285	Dg	36	24	-----	----------	27.09	4/22/58	H	--	D	Water level very low in dry years.
9D1	N. H. Kelley	280	Dr	110	6	-----	----------	72	1957	S	--	D	Can be pumped dry. A2.
9D2	Walter Benedict	285	Dr	30	6	-----	----------	17	----------	--	--	D	Supply adequate.
9H1	Glen Johnson	290	Dr	45	6	-----	----------	------	----------	J	3/4	D	Supply adequate for two homes.
9J1	Frank Tessler	300	Dr	42	6	-----	----------	------	----------	J	1/3	D	Supply adequate.
9J2	W. H. Richardson	300	Dr	52	6	52	----------	34	----------	H	--	D	A2.
9J3	Robert Sherwood	300	Dr	53	4½	53	----------	------	----------	J	1	D	Supply adequate.
9L1	A. E. Richardson	285	Dg	46	30	-----	Sand &gravel	40	----------	J	1/4	D	------Do-------
10K1	J. L. Smith	300	Dg	46	12	-----	----------	20	----------	J	1/2	D	
10M1	Marion Drapalski	300	Dg	48	6	48	----------	20.50	2/13/58	J	1/2	D	------Do------- Obs. A2.
10M2	O. Franness	300	Dr	38	4	-----	----------	21.83	4/18/58	J	1/4	D	Went dry, Fall of 1949.
11N1	Amy Harris	300	Dr	45	4	-----	----------	25.94	4/18/58	C	1/4	D	A2.
11N2	Jim Smith	305	Dr	37	6	-----	----------	------	----------	--	--	D	Supply adequate.
							T. 15 N., R. 2 W.						
5D1	Dewey Alderman	205	Dr	54	6	54	----------	30	----------	J	1/2	D	Quality poor in periods of low water.
5E1	H. J. Smith	205	Dr	62	6	62	Sand & gravel	27	April, 1959	T	5	Irr.	Pumped 4 hrs at 110 gpm, dd 5 ft; Irr. 10 ac; L. A1.
6D1	Hobert Crank	197	Dr	80	6	80	----------	25	----------	J	1/2	D	Supply adequate.
*6G1	Maud Moore	204	Dr	50	5	-----	Gravel	28.7	5/6/47	--		D	
6G2	Walter Pope	203	Dg	42	8	-----	Sand & gravel	30	----------	T	1½	D,Irr.	Pumps 30 gpm, Irr. 1.5 ac.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T.15 N., R. 2 W. -- Continued													
6J1	H. J. Smith	210	Dr	69	8	69	Sand & gravel	20	1/22/51	T	5	D,Irr.	Pumped 1 hr at 60 gpm, dd 5 ft; Pumps 105 gpm, Irr 25 acres. L.
6N1	C. C. Lynn	195	Dr	47	6	47	Gravel	38	Fall, '58	T	3	D	38 ft, lowest water level. Had 62 ft well, iron content objectionable.
6N2	A. L. Brewer	196	Dg	41	6	41	Gravel	36	Fall	J	1/2		Supply adequate.
6P1	H. C. Teeter	195	Dr	51	6	51	----------	20	7/8/50	T	5	Irr.	Pumped 80 gpm, dd 25 ft; Irr. 22 acres. Has domestic well, 4"x60ft; W/L 27 ft. A2.
10J1	G. A. Mitchell	295	Dg	30	48	----	----------	26	----------	N		D	Supply adequate; Clay to sandstone at bottom. A2.
11J1	Ella Morsbach	260	Dg	12	30	12	----------	5 to 10	Annual	C	1/4	D	Water level very low. A2.
12L1	Glen Lennox	270	Dr	59	6	----	Sand & gravel	-------	----------	J	1½	D	Supply adequate.
12M1	Edward Morsbach	260	Dr	60	4	----	Sand & gravel	35.8	11/25/59	J	1/2	D	Supply adequate. A2.
12M2	Millie Graves	280	Dr	120	6	120	Sand	-------	----------	P	1	D	Hit water at 84, 90 and 120 ft. Relatively small supply. Some iron in water.
14B1	Jack Martien	245	Dg	15	30	15	----------	12	----------	J	1/3	D	Supply adequate.
14C1	Jack Pollman	240	Dg	14	24	14	----------	4.2	11/25/59	C	1/4	D	
15P1	Earl Rousseau	217	Dr	55	5	55	Gravel	35	----------	T	5	D,Irr.	Yields 100 gpm; Irr. 10 ac.
15Q1	Cliff O'Connor	240	Dr	45	6	45	Gravel	-------	----------	--	---	D	Water level near bottom; quality poor.

15Q2	Frank Zaleski	218	Dr	30	6	30	Gravel	4.0	12/1/59	C	1/2	D	
15R1	R. L. Dickey and Frank Middle-busher	220	Dr	50	6	50	Gravel	10.5	2/2/59	J	1½	D,Irr	Pumped 4 hrs at 37 gpm dd 20 ft; Irr 20 ac. L. A1.
15R2	R. Massingham	220	Dr	-----	6	-----	----------	10.6	12/1/59	J	1	D	Supply adequate, quality of water is very good.
19M1	Al McMahon	225	Dr	84	4	-----	----------	49	Summer	J	3/4	D	Poor well, high mineral content. A2.
*19N1	George Sheatsley	200	Dr	62	10	62	Gravel	8	1947	T	--	N	Was used in coal mines; too hard for domestic. A3.
19N2	C. W. Towner	195	Dr	43	6	43	Gravel	31	---------	J	1/4	D	Supply adequate, some iron in water.
21H1	Gus Maki	220	Dr	60	6	60	----------	30	---------	J	1/2	D	
21M1	William Kludt	215	Dr	92	6	92	----------	Flows	12/1/59	C	1/2	D	Flow very small. A2.
22E1	John O'Connor	215	Dr	32	6	32	----------	16	---------	J	1/4	D	Supply adequate, some rust.
22F1	Cecil Bannse	215	Dr	26	6	-----	----------	------	---------	--	---	D	Water has poor taste.
22N1	Frank Townsend	210	Dr	41	6	41	Gravel	12	May, '47	J	1½	D,Irr.	Irr 2 ac; Pumped 4 hrs at 40 gpm, dd 24 ft. L. A2.
							T. 15 N., R. 3 W.						
*1A1	O. O. Orning	194	Dg	37	48	37	Gravel	22.7	5/6/47	J	---	D	A3.
1K1	W. S. Proctor	193	Dr	65	8	65	Gravel	22	5/25/54	T	5	D,Irr.	Pumped 4 hr at 100 gpm, dd 10 ft; Irr 20 ac. L.
1R1	Andrew Fineide	192	Dr	46	8	46	----------	------	---------	T	3	D,Irr.	Irr 9 ac; Cert 60 gpm.
*2A1	O. L. Maynard	194	Dr	-----	-----	-----	Gravel	23.2	5/5/47	H	--	D	
*2D1	J. F. Pape	171	Dg	17	6	17	Gravel	15.3	4/25/47	H	--	D	Well back-filled around light casing. A3.
2H1	Elmer Phelps	184	Dr	59	6	59	Gravel	28	June, '51	T	3	D,Irr	Irr 3 ac; pumps 50 gpm.
2M1	G. G. Athanas	171	Dg	40	72	40	Gravel	30	---------	H	--	D	Was used for Irr of 15 ac, 100 gpm.
2P1	Peter Vivoda	173	Dr	60	6½	60	Sand & gravel	------	---------	T	5	D,Irr	Cert 120 gpm. Perforated from 40 to 60 ft. L.
2Q1	Norman Brown	173	Dg	37	30	37	Gravel	16.8	3/5/59	C	5	D,Irr	Pumped 10 hr at 90 gpm, dd 3 ft. Irr 10 ac. Water level 32 ft 10/1/51.
*2Q1	Norman Brown							24.0	4/25/47			D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 15 N., R. 3 W. -- Continued						
*3D1	Unknown	162	Dg	-----	12	----	Gravel	17.6	5/7/47	--	---	D	
*3L1	M. G. Long	165	Dr	63	6	63	Gravel	26	March, '45	--	---	D,Irr	Cert 75 gpm, 14 ac. A3.
*3M1	R. A. Meridith	165	Dr	52	6	52	Gravel	28	Nov., '46	J	---	D,Irr	Hardpan at 12 ft and 40 ft. A3.
3P1	Leslie Keltmeier	165	Dr	60	8	60	Gravel	-------	----------	T	5	D,Irr	Irr 10 ac; perforated from 45 to 60 ft.
4C1	Louis Johnson	158	Dr	55	8	55	Sand & gravel	16	6/2/52	T	7½	D,Irr	Pumped 4 hr at 150 gpm, dd 14 ft. Perforated from 40 to 55 ft. Irr 22 ac. L. A2.
4D1	Clarence Betts	156	Dr	63	8	63	Gravel	16.1	3/6/59	T	5	D,Irr	Pumped 4 hr at 500 gpm, dd 0.5 ft. Irr 35 ac. L.
4G1	Robert Stewart	150	Dr	50	6	50	Sand & gravel	15.6	12/16/59	--	---	Irr	Cert 8 ac, 75 gpm.
4K1	Chas. Eckard	154	Dr	60	8	60	Gravel	20	June, '51	T	5	D,Irr	Pumped 4 hr at 150 gpm, dd 2 ft. Perforated from 50 to 60 ft. Irr 10 ac. L.
4L1	G. H. Ayers	150	Dr	52	6	-----	----------	8	3/6/59	C	2½	D,Irr	Pumps 45 gpm, Irr 8 ac.
4P1	F. B. White (formerly *Parrish)	148	Dr	56	6	56	----------	16.1 28	5/2/47 6/15/51	T	3	D,Irr	Pumped 70 gpm, dd 6 ft. Irr 10 acres.
4Q1	E. Waltenberg	150	Dr	51	6	51	Gravel	28	9/11/49	T	5	D,Irr	Cert 14 ac, 100 gpm. L.
4Q2	E. Waltenberg	150	Dr	60	8	60	Sand & gravel	10.8	5/10/58	T	15	Irr	Irr 60 ac. Perforated from 26 to 31 ft and 45 to 55 ft. Pumped 4 hr at 400 gpm, dd 55 ft. L.

5B1	Melvin Paulsen	155	Dr	85	8 to 6	85	Gravel	35	12/9/44	T	15	Irr	Pumps fine sediment. L. A1.
5B2	Melvin Paulsen	155	Dr	61	7	61	----------	16	Fall, '59	J	½	D	Water of much better quality than from well. 5B1, A2.
*5C1	Allen Beebe	146	Dr	61	7	61	Sand & gravel	30.4	5/2/47	--	---	D	Well 0.1 mile East hit blue clay at 70 ft. A3.
5D1	G. E. Novak	155	Dr	74	6	74	Sand & gravel	-----	--------	T	3	D,Irr	Cert 7 ac, 100 gpm.
*5J1	Walter Gustafson	240	Dg	4	48	4	Soil, clay	1.2	5/2/47	--	---	D	A3.
5M1	George Fagerness	139	Dr	55	6	55	Sand & gravel	31	5/31/55	T	5	Irr	Pumped 60 gpm with no appreciable dd. Irr 18 ac. L.
5P1	Hugh Tripp	142	Dr	61	6	61	Sand & gravel	10	Oct., '53	T	7½	Irr	Pumped 95 gpm. Irr 15 ac. Perforated from 45 to 58 ft.
*5Q1	G. L. Green	151	Dr	57	6	57	Gravel	24.9	5/2/47	J	---	D,S	Temp 53°F. A3.
5Q2	W. J. Bowers	143	Dr	45	6	45	----------	33	Oct., '52	T	5	D,Irr	Pumped 100 gpm, dd 7 ft. Cert 15 ac, 150 gpm.
*6A1	William Matson	130	Dr	63	6	63	Gravel	38	Jan., '42	--	---	D,PS	A3.
*6H1	Kenneth Arnold	138	Dr	48	5	48	Gravel	29.2	5/15/47	J	1/2	D	
6K1	G. Steelhammer	120	Dr	31	6	31	Sand & gravel	3	6/6/49	C	5	Irr	Pumped 4 hrs at 100 gpm, dd 10 ft. Cert 25 ac, 120 gpm. L.
6K2	G. Steelhammer	115	Dr	35	8	35	Sand & gravel	10	Dec., 52	C	5	Irr	Pumped 4 hr at 100 gpm, dd 6 ft. Cert 25 ac, 120 gpm.
6N1	A. Johnson	110	Dr	32	6	32	Gravel	10	--------	J	3	D,Irr	Pumped 3 hr at 45 gpm, dd 5 ft. Irr 10 ac. L.
6P1	A. M Baybarz	115	Dr	47	8	47	Sand & gravel	8 9.4	3/23/50 3/5/59	N	--	Irr	Pumped 4 hrs at 125 gpm, dd 5 ft. Has Irr 12 ac. Perforated from 30 to 47 ft. L.
*8D1	F. C. Fosnacht	136	Dr	47	6	47	Sand & gravel	24.5	5/3/47	N	---	N	
8G1	Chas. R. Frye	120	Dr	29	8	29	Gravel	12	9/6/47	T	5	Irr	Cert 10 ac, 50 gpm. L.
*9D1	W. F. Brewer	146	Dr	65	6	65	Sand & gravel	21.7	5/3/47	--	---	D	A2, 3.
9D2	W. F. Brewer	140	Dr	54	8	54	Gravel	17	5/16/55	T	7½	Irr	Pumped 8 hr at 130 gpm, dd 4 ft. Pumps 150 gpm. L.
9J1	T. E. Bartlett	150	Dr	63	6	63	Gravel	30	Aug., '49	T	5	D,Irr	Pumped 4 hr at 100 gpm, dd 32 ft. Irr 15.5 ac. L.
10A1	Clair Tischer	168	Dr	59	8	59	Sand & gravel	10.5	1/25/51	T	5	D,Irr	Pumped 0.5 hr at 175 gpm, dd 7.3 ft. Irr 20 ac. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 15 N., R. 3 W. -- Continued						
10A2	L. Rossmaier	168	Dr	52	6	52	Gravel	21.3	3/4/59	J	3	D,Irr	Pumped 4 hr at 36 gpm; dd 2 ft. Irr 10 ac. L. A2.
*10B1	Unknown	161	Dr	-----	6	-----	Gravel	22.2	5/5/47	--	---	N	
*10D1	A. W. George	160	Dr	39	6	-----	Gravel	24.2	5/5/47	--	---	D	
10E1	B. F. Hammond	158	Dr	65	12	65	Gravel	22.8	11/24/50	T	---	Irr	Pumped 4 hr at 560 gpm, dd 24 ft. Irr 93 ac.
10N1	E. T. Lawrence	150	Dr	58	6	58	Gravel	30	July, '51	T	5	Irr	Pumped 4 hrs at 100 gpm. Irr 15 ac.
*10P1	A. Finan	147	Dr	61	6	61	Gravel	30.1	5/1/47	J	1	D	
11B1	N. Blankenship	170	Dr	53	36 to 8	53	Gravel	15.8	2/26/59	J	1	D,Irr	Well dug 33 ft and drilled 20 ft. Cert 10 ac, 95 gpm. Lowest water level, 31 ft.
*11F1	Chas. King	170	Dr	52	6	52	Gravel	24.4	4/25/47	J	2	D,Irr	Pump 50 gpm. Has irr 10 ac in past. A3.
11H1	R. O. Simpson	168	Dr	54	6	54	----------	30	May, '46	T	---	D,S,Irr	Cert 7 ac, 50 gpm.
11H2	Mrs. E. M. Rich	172	Dr	46	8	46	Sand & gravel	27	----------	J	2	D,Irr	Bailed 4 hr at 60 gpm, dd 2 ft. Irr 20 ac. Perforated from 30 to 46 ft. L.
11K1	E. B. Keesee	168	Dg	40	48	-----	----------	28	----------	T,J	---	D,Irr	Cert 15 ac, 350 gpm.
*11K3	F. G. Payette	167	Dr	48	6	48	Gravel	21.5	5/5/47	--	---	D	Water level has been as low as 34 ft. L.
11L1	Stanley Waltrip	165	Dr	58	8	58	Gravel	22	5/4/54	T	5	Irr	Pumped 4 hr at 100 gpm, dd 0.3 ft. Irr 20 ac. Perforated from 49 to 55 ft. L.

*11M1	Unknown	165	Dr	180	-------	------	----------	--------	----------	--	---	-----	Sandy gravel to 40 ft, shale to bottom.
11M2	Laurance Garske	164	Dr	60	6	------	Gravel	27	----------	--	---	Irr	Pumped 4 hr at 85 gpm, dd 18 ft. Irr 17 ac. L.
11M3	W. V. Knight	165	Dr	52	6	52	Sand & gravel	32	----------	--	---	Irr	Pumps 170 gpm, 13 ac. L. A2.
*11N1	T. M. Heinman	161	Dr	52	6	52	Sand & gravel	33	April, '47	--	---	D	Temp 50° F.
11P1	Stanley Waltrip	162	Dr	56	6	56	Sand & gravel	--------	----------	--	---	Irr	Cert 20 ac, 100 gpm.
11P2	E. B. Delaney	162	Dr	42	6	------	----------	20	----------	T	5	D,Irr	Pumped 4 hr at 100 gpm, dd 5 ft.
12B1	J. Salzer	190	Dr	48	8	48	Gravel	16	4/16/58	T	5	Irr	Pumped 4 hr at 300 gpm, dd 5 ft. Irr 17 ac. Perforated bottom 12 ft. L.
12B2	E. H. Prang	190	Dr	43	6	43	----------	20	June, '50	T	3	Irr	Pumped 4 hr at 66 gpm, dd 7 ft. Cert 15 ac, 50 gpm.
12B3	J. W. Lynn	190	Dr	51	6	------	----------	28	4/6/54	T	3	D,Irr	Pumped 4 hr at 40 gpm, dd 6 ft. Irr 8 ac. A2.
12B4	F. M. Salzer	190	Dr	53	8	53	Gravel	30	4/9/56	T	5	Irr	Pumped 4 hr at 90 gpm, dd 5 ft. Irr 9 ac. Perforated. L.
12D1	J. F. McLeod	175	Dr	51	8	51	Gravel	31 17.0	June, '50 2/6/59	N	---	Irr	Pumped 40 hr at 150 gpm, dd 10 ft. Recovery in 10 minutes. Has irr 9 ac. L.
12F1	Clara Lentz	185	Dr	53	6	53	Sand & gravel	25	1957	T	5	Irr	Pumps 80 to 85 gpm. Irr 10.6 ac. Bottom 6 or 7 ft perforated. L.
*13D1	L. W. Johnson	171	Dr	52	6	------	Gravel	21.0	1/13/47	J	---	D,Irr	Supplies service station, 3 houses.
13M1	Herman Myers	160	Dg	23	36	------	----------	5.1	2/4/59	N	---	N	
13M2	Charles Basom	160	Dr	54	6	54	Sand & gravel	21.0	4/25/51	T	3	Irr	Pumped 4 hr at 100 gpm, dd 3 ft. Irr 10 ac.
*14C1	State Training School	150	Dr	74	10	74	Sand & gravel	30.5	10/12/49	T	---	PS	Pumped 225 gpm, dd 4.5 ft. Trace of iron. L.
14C2	State Training School	150	Dr	80	8	------	Sand & gravel	30	----------	T	---	PS	A1.
*14K1	T. A. Williams	155	Dg	30	10	23	Gravel	24.6	5/1/47			D	
*16N1	R. F. Reins	410	Dr	215	6	135	Sandstone	60	1946	--	---	D	Yield 10 gpm. Temp 51° F; Seashells found in sandstone. A3.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 15 N., R. 3 W. -- Continued						
23C1	C. J. Williamson	142	Dr	55	6	55	Sand & gravel	20	August, '51	J	5	Irr	Cert 12.5 ac, 105 gpm.
*23G1	Ray Noel	156	Dr	38	4	-----	Gravel	18.9	5/1/47	J	---	D	A3.
23Q1	E. M. Sorenson	140	Dr	30	6	30	Gravel	10-15	---------	C	5	Irr	Pumped over 4 hr at 150 gpm, dd 2 ft. Irr 50 ac. Perforated from 20 to 30 ft. L.
23R1	E. M. Sorenson	140	Dr	30	6	-----	----------	1	2/4/59	N		Irr	Cert 50 ac, 150 gpm.
24C1	R. G. Hollinger	160	Dn	40	2	40	----------	17	1949	J	1½	D,Irr	Pumped 4 hr at 20 gpm, dd 3 ft. Perforated from 37 to 40 ft. Supplies 5 cabins, store and service station. Irr 3 ac.
*24E1	C. J. Numsen	156	Dr	49	6	-----	Gravel	23.8	5/1/47	--	---	----	Water below hardpan. A3.
24E2	J. O. Jeffries	160	Dr	51	6	51	----------	23.1	2/4/59	J	2	D	Pumped 30 gpm, dd 4 ft.
24L1	H. C. Kunselman	158	Dr	45	6	45	Sand & gravel	13	1950	C	3	D,Irr	Pumped 4 hr at 40 gpm, dd 3 ft. Irr 4½ ac. L.
*24Q1	R. H. Shaffer	160	Dr	57	6	57	Sand & gravel	20.5	5/1/47	T	3	Irr	Irr 10 ac.
24Q2	C. A. Smith	162	Dr	46	6	46	Gravel	22	Sept., '50	T	5	Irr	Irr 15 ac.
							T. 15 N., R. 4 W.						
1C1	Fred Rousseau	105	Dr	25-30	10	-----	----------	18	June, '45	T	7½	Irr	Has irr 25 ac, yield 375 gpm.
*1H1	Lennart Lund	110	Dr	40	6	40	----------	15.4	5/15/47	H	---	D,S	A3.
*1N1	N. C. Johnson	103	Dn	21	1¼	21	Alluvium	13.4	5/15/47	H		D	

2B1	E. J. McDougall	100	Dr	39	6	39	Gravel	14	----------	--	---	Irr	Has irr 16 ac. L.
*2M1	Frank Pete	105	Dg	29	42	-----	Alluvium	24.8	5/15/47	H	---	D	
11M1	Oregon, Wash., R.R. & Nav. Co.	100	Dg	20	72	20	----------	8	1944	--	---	----	Pumped 4 hr at 150 gpm, dd 4 ft.
12C1	Evert Sundquist	105	Dg	13	30	13	Sand & gravel	6	August, '49	--	---	Irr	Has irr 15 ac, 120 gpm.
12F1	Evert Sundquist	106	Dr	25	6	25	Gravel	7	7/21/49	--	---	Irr	Perforated from 17 to 24 ft. L.
							T. 16 N., R. 1 E.						
**1D1	Paul Fry	380	Dr	72	6	-----	Gravel, pea	20	----------	J	1/2	D	Drilled through "hardpan". Bailer test 17 gpm.
**1Q1	T. T. Dalan	415	Dg	27	------	-----	Till	16.5	6/15/50		1/2	D	Dug through "hardpan".
**2G1	J. Zeller	400	Dr	104	6	-----	----------	-------	----------	J	3/4	D,S	Hard water, iron.
**2H1	E. Neeley	400	Dr	118-127	6	------	----------	60	----------	P	1	D,S	Soft water.
**2M1	--Lukons	435	Dr	155	6	-----	----------	-------	----------	P	--	D,S	---Do----
**2Q1	Harry Livingston	410	Dr	110	6	-----	----------	-------	----------	J	3/4	D	---Do----
**2R1	H. Neeley	410	Dr	108	6	-----	----------	-------	----------	J	3/4	D	Drilled through "hardpan" and boulders.
**3F1	M. Fagan	430	Dg	35	36	-----	----------	-------	----------	H	---	D	"Hardpan" near surface.
**4E1	(Vacant house)	487	Dg	11	48	-----	----------	6.3	6/21/50	H	---	S	Well at edge of perched swampy area.
**4J1	R. W. Gehrke	450	Dr	195	6	-----	----------	115	----------	P	3/4	D,S	Drilled through "hardpan" and blue clay.
**4L1	J. D. Clark	465	Dg	12	50	-----	----------	2.4	6/20/50	C	1/4	D	Well in perched swampy area.
**5D1	E. Gifford	505	--	90	4	-----	----------	-------	----------	P	---	D	
**5K1	A. Swenson	510	Dg	130	48x72	-----	----------	127	----------	P	1	D,S	Soft water.
**5L1	G. Heupel	505	Dg	125	48	-----	----------	-------	----------	J	1	D	----Do----
**5Q1	L. Kristofferson	490	Dr	110	6	-----	Sand	100(?)	----------	J	3/4	D	Water at 87 ft in sand. A3.
**5Q2	L. Kristofferson	490	Dr	212	4	-----	Gravel, pea	200	----------	P	1	D	Bailer test 2¼ gpm. Gravel at bottom.
**6J1	Leon Barnhouse	500	Dr	216	6	216	----------	202	3/10/51	P	1	D	Pumped 19 gpm, no dd. L.
**6P1	--McGiven	455	Dr	180	6	-----	----------	-------	----------	J	1	D	Well is 100 yards from edge of 40 ft scarp.
**7E1	C. B. Frost	425	Dg	66	24-10	152	Sand	59.0	6/21/50	J	3/4	D	Drilled to 152 ft. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 1 E. -- Continued						
**7G1	W. W. Reid	440	Dr	125	6	80	Sand & gravel	-------	---------	J	1/2	D	Perforated at 57 ft.
**7G2	R. Owens	450	Dr	69	6	-----	Gravel	-------	---------	J	1	D	Soft water.
**7P1	--Tanner	430	Dr	105	6	105	----------	-------	---------	J	---	D,S	Pump jet at 35 ft.
**7R1	F. Stansky	435	Dr	167	6	-----	----------	-------	---------	J	1	D	Bailer test 13 gpm.
**8C1	J. Longnecker	480	Dg	86	10	-----	Sand & gravel	69	---------	P	1/2	D,Irr	Soft water.
**8D1	N. Bullpitt	485	Dr	180	6	-----	----------	-------	---------	J	1	D,S	----Do----
**8D2	J. Christiansen	485	Dg	82	48	-----	----------	68.6	6/21/50	P	3/4	D	----Do----
**8R1	Arnald Englund	405	Dg	22	36	-----	Sand	17	---------	--	1/4	D	Well in depression 100 ft southwest of house.
**9A1	J. M. Kearns	425	Dr	120	6	-----	Gravel	95	---------	P	3/4	D	Soft water.
**9F1	Town of Rainier, well 1	428	Dr	120	6	120	----------	100	---------	J	5	PS	Pumps 29 gpm. A.
**9F2	Town of Rainier, well 2	428	Dg-Dr	120	6	120	----------	115	12/13/51	--	5	PS	Pumped 48 hr at 50 gpm, dd 1 2/3 ft. Peerless Hi-Lift pump. A.
**9M1	Dr. B. L. Phillips	425	Dr	117	6	-----	Gravel	107	1944	J	---	D	Pumps 10 to 15 gpm.
**11B1	O. Englund	408	Dg	106	22	106	Gravel	58.5	6/15/50	P	1	D	L.
**12B1	W. Price	415	Dg	42	30	-----	----------	10.4	6/15/50	J	1/2	D	Soft water.
**12F1	--Clausen	440	Dr	100	6	-----	----------	--------	---------	--	---	-----	
**12K1	James Metrakes	435	Dg	56	60	-----	----------	30.4	6/16/50	J	1/2	D,S(?)	

12K2	James Metrakes	435	Dr	175	10	172	Gravel	44	3/19/53	--	7½	Irr	Pumped 4 hr at 135 gpm, dd 76 ft. Perforated from 62 to 68, 118 to 123 and 143 to 147 ft. Irr 40 ac. L.
**12P1	--Peoples	425	Dr	127	6	-----	----------	--------	----------	P	1	D,S	Soft water.
**13A1	W. C. Gifford	445	Dr	35	6	-----	Gravel	29	----------	J	1/2	D,S	"Hardpan" nearly to bottom.
**13E1	Charles Pettit	450	Dr	93	6	-----	Gravel	30	----------	P	3	D	"Hardpan" to bottom.
**13G1	--Vandervier	470	Dr	100	6	-----	----------	--------	----------	--	---	D	
**13G2	Earl Nelson	443	Dr	54	12	54	Gravel	--------	----------	--	---	-----	Pumped 65 (?) gpm. L.
**13H1	D. Martin	445	Dr	103	6	-----	----------	--------	----------	P	1	D,S	Hard water.
**13J1	A. B. Smith	455	Dr	85	8	-----	----------	--------	----------	J	3/4	D	Soft water.
**13K1	--Vandervier	465	Dr	80	6	-----	----------	--------	----------	J	1/2	D,S	----Do----
**13R1	J. H. Hodge	455	Dg	47	36	-----	----------	38.3	6/14/50	N	---	S	"Hardpan", 6 ft; gravel and boulders at bottom.
**14E1	A. L. Wall	455	Dr	102	6	-----	Gravel	81	----------	H	---	D	Well goes dry in winter. Roaring sounds when dry.
**14F1	W. J. Lazelle	460	Dr	110	7	-----	Gravel	71.0	6/16/50	P	1½	D,S	Soft water.
**14M1	C. Colman	450	Dr	124	6	124	Sand and pea gravel	82.5	8/21/50	--	---	D	Bailer test 16 gpm, dd 12 ft. L.
**16L1	R. Reichel	480	Dr	149	6	-----	----------	-------	----------	P	3/4	D	Hard water.
**16L2	R. C. Stewart	480	Dr	159	6	-----	Gravel	-------	----------	P.	1	D	----Do----
16Q1	K. L. Gibson	450	Dr	225	12	90	----------	103	8/15/52	T	5	D,Irr	Pumped 4 hr at 42 gpm, dd 50 ft. Irr 20 ac. L.
**17K1	R. Pettit	350	Dr	27	6	-----	----------	--------	----------	--	---	D	Soft water
**21J1	T. Bullpitt	445	Dr	130	6	-----	Gravel	-------	----------	P	---	D,S	Sand and gravel upper 106 ft. soft water.
**21J2	H. Middleton	445	Dr	98	6	-----	Gravel	92	----------	J	1/2	D,S	Soft water.
**22F1	A. C. Smyth, formerly M. W. Martin	452	Dr	98	6	-----	----------	82.7	6/23/50	P	1/2	D,S	Bailer test 25 gpm. 90 ft dug, 9 ft dr.
**22P1	W. Goodwin	431	Dg	80	30	-----	----------	75.2 71.8	6/23/50 1/5/60	P	3/4	D,S	Hard water.
**23C1	W. Seeley	465	Dr	120	6	-----	Gravel, pea	90	---------	J	1½	D,S	Bailer test 36 gpm.
**23D1	F. Porter	470	Dg	31	24	-----	----------	-------	---------	--	---	D	Soft water.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 1 E. -- Continued						
**23E1	R. A. Walls	465	Dg	35	-----	35	Till	32.3	6/26/50	J	1/2	D	Well goes dry in late summer.
**23M1	T. L. Jenson	430	Dr	105	6	-----	Till	-------	---------	P	1/4	D	Soft water.
**26M1	E. Horsfall	450	Dr	150	6	150	Gravel	10	---------	J	3/4	S,Irr	Perforated at 50 ft. Hard water, high iron content.
26R1	L. P. Afflerbaugh	480	Dr	89	6	85	Gravel	66	8/15/53	T	5	D,Irr	Pumped 8 hr at 70 gpm, dd 10 ft. Irr 23 ac. L.
**27H1	Weyerhaeuser Timber Co.	420	Dr	190	12-8	190	Gravel & sand	57	---------	--	---	PS	Some water in gravel between 70 and 80 ft. Perforated from 170 to 190 ft. L.
							T. 16 N., R. 2 E.						
**1L1	Centralia Power Co.	340	Dn	16	1½	-----	----------	-------	---------	H	---	D	Well on bank of canal.
2B1	Charles McKown	430	Dr	151	10	151	Gravel	24	3/9/55	--	---	Irr	Pumped 4 hr at 90 gpm, dd 95 ft; perforated from 45 to 56 ft and 138 to 145 ft. Irr 20 ac. L.
2G1	A. D. Blackler	450	Dr	225	8	225	----------	89	December	S	5	Irr	Pumped 4 hr at 75 gpm, dd 32 ft, Irr 38 ac. L.
**2K1	A. D. Blackler	450	Dg	18	36x60	------	----------	8.4	6/9/50	C	1/2	D	Considerable perched water in the area.

**2M1	G. Longmire	446	Dg	23	48	-----	Gravel	11.6	6/9/50	J	1/2	D	Dug through "hardpan". Hard water.
**3E1	B. E. Rieke	455	Dn	60	4 - 2	60	----------	--------	----------	P	1/2	D,S	Casing 4-inch to 30 ft.
**4A1	C. H. Johnston	380	Dg	42	28	42	----------	32.8	5/25/50	J	1/2	D	Creek 80 ft south, 5 ft below level of well cap.
**4A2	C. H. Johnston	380	Dr	158	8	158	----------	40	6/16/50	T	5	Irr	Bailed ½ hr at 45 gpm, no dd; perforated. Irr 20 ac. L.
**4F1	Else Bonnie	450	Dg	34	48	-----	Till	23.8	6/16/50	J	1/2	D	Well goes dry in early Fall.
5A1	J. L. Mosman	382	Dg	19	120	-----	Fine gravel	14	August, '54	C	3	Irr	Pumped 10 hr at 160 gpm, dd 4 ft. Irr 34 ac. L.
5C1	J. & A. McMon-igle	380	Dr	146	8	146	Gravel	5	----------	--	---	Irr	Pumped 220 gpm, dd 109 ft. Well deepened from 81 ft in 1953. L.
**5J1	H. Rochester	440	Dg	28	36	-----	----------	14	----------	J	1/4	D	"Hardpan" to bottom.
5M1	Woodrow N. Blair	380	Dr	154	12	154	Clay, gravel, sand	F	10/2/52	--	---	Irr	Tested 345 gpm, dd 142 ft. Perforated. L.
5Q1	Stanley Dunagan **Listed as 5R1	430	Dr	181	12	181	Sand & gravel	37 30.7	---------- 2/6/52	--	---	Irr	Pumped 4 hr at 150 gpm, dd 66 ft. Irr 30 ac. L.
**6A1	Minnie Lane	420	Dg	38	48	-----	----------	22.9	5/26/50	P	1	D	Goes dry in fall after a dry summer.
**6B1	A. J. Barrett	405	Dg	41	48	-----	Gravel & sand	10.5	5/29/50	J	1/2	D	A3.
**6D1	C. Cullens	400	Dr	48	6	-----	----------	14.8	----------	P	1/4	D,S	Soft water.
**6F1	N. Windsor	405	Dg	55	60	-----	Till	8	----------	P	1	D,S	All "hardpan" except sand from 37 to 47 ft.
**7A1	E. W. Edwards	409	Dr	63	6	63	Gravel	14.6	6/9/50	J	1	D	Bailer test 16 gpm.
**7Q1	R. W. Shattuck	450	Dr	287	10	287	Gravel & sand	42	----------	--	---	Irr	Pumped 4 hr at 248 gpm, dd 73 ft; perforated (see L.). Irr 26 ac. L.
**7R1	R. Judd	452	Dg	15	36	-----	----------	12.5	6/9/50	N	--	----	Dry 9/28/50.
**8C1	W. A. Needles	440	Dr	57	6	57	----------	28.1	6/9/50	J	1/2	D	Water occasionally flows from casing in late winter. A3.
**8E1	R. Judd	440	Dr	46	6	-----	----------	16.3	6/9/50	P	1	D	Soft water.
**8N1	--Capen	465	Dr	80	6	-----	Gravel, sandy	40	---------	J	1/2	D	Hard water.
**9G1	R. H. Smith	465	Dg	17	48	-----	Till	7.2	6/9/50	P	1/4	D	Easily pumped dry.
**9K1	J. A. Green	455	Dg	21	48	-----	----------	4.4	6/9/50	P	1/4	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 2 E. -- Continued						
**9L1	Gana Hayes	458	Dg	20	36	-----	Till	9.8	6/9/50	J	--	D	Hard water. Temp 48° F.
**9L2	J. Bonney	460	Dg	18	48	-----	Gravel	10.1	6/9/50	J	1/4	D	"Hardpan" to bottom. Soft water. Temp 47° F.
**9L3	R. McLucas	455	Dg	14	30	-----	Sand	4.9	6/9/50	H	--	D	Soft water. Temp 47° F.
**10C1	Harvey Thompson	468	Dg	30	48	-----	----------	5.6	6/9/50	J	1/2	D	A3.
10D1	D. R. Warwick	465	Dr	210	10-8	210	Sand & gravel	41	5/8/56	--	---	Irr	Pumped 250 gpm, dd 139 ft. Irr 46 ac. L.
**10E1	--Dotson	465	Dr	30	6	-----	----------	6	June, '49	J	1/4	D, S	Iron in water.
**14M1	F. Kelley	490	Dg	40	48	-----	----------	--------	----------	--	---	D,S	Well dry in 1948.
**15J1	J. F. Peterson	480	Dg	21	36	-----	----------	6.4	6/12/50	H	---	D	Dug through cemented gravel.
**16G1	L. L. Lawton	486	Dg	39	48	-----	Till	22.7	6/14/50	P	3/4	D	Soft water.
**17D1	R. C. Hansen	465	Dg	55	48	-----	----------	21.1	5/8/51	J	3/4	D	----Do----
**17F1	R. C. Hansen	465	Dg,Dr	50	-----	-----	----------	24.0	5/8/51	--	---	Irr	Used 30 gpm continuously during 1947 irrigation season.
**17L1	E. Dame	460	Dg	45	48	-----	Gravel, pea and sand	26	----------	P	---	D,Ind	Test pumped at 50 gpm. L.
**17M1	G. Summers	462	Dr	39	6	39	----------	17.6	6/14/50	J	1/2	D	Well dry in fall of 1949.
**18A1	D. Edmunds	450	Dg	34	36	-----	----------	3.4	6/15/50	J	1/2	D	Soft water.
**18C1	--Shultz	435	Dg	57	36	-----	Till	15	----------	J	1/2	D	Top 6 ft soil, remainder "hardpan".
**18H1	T. J. Boudreau	445	Dg	31	60	31	Till	8.6	6/14/50	P	---	D	Water has flowed from casing in winter. L.
**18M1	R. Stewart	455	Dg	44	36	44	----------	31.4	6/14/50	P	1/2	D	"Hardpan" predominates.

**18N1	R. D. Summers	455	Dr	55	6	-----	----------	37.3	6/14/50	P	3/4	D	Soft water.
**20G1	--Edwards	450	Dg	20	-----	-----	Sand	14	----------	--	---	D	Well is 50 yards from lake.
**20M1	M. Stewart	470	Dg	40	48	-----	----------	37.0	6/14/50	J	1/2	D	Soft water.
**22D1	Reta Watson	495	Dg	43	12	-----	----------	25.1	6/13/50	P	4	Irr	Goes dry in October. Water has foul taste and odor.
**22Q1	G. W. Lee	537	Dr	48	6	-----	----------	25.5 29.1	6/13/50 1/5/60	J	1/2	D	Soft water.
**25C1	M. McVittie	500	Dg	20	48	20	----------	17.1	6/12/50	H	---	D	Springs and perched water approximately 100 yards from well.
**25L1	J. McLaughlin	570	Dr	76	6	-----	----------	-------	----------	J	1/4	D,S	Pump can operate for only 15 minute periods.
**26J1	G. D. Ruttledge	515	Dg	12	36	-----	----------	6.6	6/12/50	--	3/4	D	Drawdown 3 to 4 ft; refills rapidly.
**26L1	L. Johnson	500	Dg	9	30	-----	----------	4.3	6/12/50	N	---	D	Iron in water.
**27A1	C. Warner	540	Dg	54	48	-----	Till	45.6	6/13/50	J	3/4	D	Well was pumped dry in 5½ hr, 6/12/50.
**27B1	G. L. Warner	537	Dr	100	6	-----	----------	80	----------	J	---	D,S	Soft water.
**27Q1	D. A. Jensen	490	Dg	16	-----	-----	----------	-------	----------	--	1/4	D	Iron stain on clothes. A3.
**29H1	I. T. Beck	450	Dr	312	8	-----	----------	15	----------	T	1	D	Perforated at 50 ft.
**30A1	N. J. Smith	460	Dg	12	36	-----	Sand	8	----------	--	---	D	Soft water.
**34D1	Cougar Mt. Camp	470	Dr	362	6	-----	----------	-------	----------	--	---	-----	Hard water, foul to taste.
**36A1	George Bergman	515	Dg	15	-----	-----	Gravel	10	----------	--	---	D	Soft water.
							T. 16 N., R. 3 E.						
**19H1	W. Van Den Elzen	380	Dg	27	36	-----	----------	22	----------	H	---	D,S	Soft water.
31G1	Weyerhaeuser Timber Co.	520	Dr	37	6	37	Gravel	6	----------	H	---	D	Pumped 15 minutes at 20 gpm, dd 4 ft. Supply for public park. Temp 43°F. L.
							T. 16 N., R. 1 W.						
3D1	Mrs. D. E. Burke	260	Dr	30	4	-----	----------	15	----------	--	1/4	D	Water reportedly tastes good, soft.
3M1	David Marshall	280	Dg	11	30	-----	----------	2-9	----------	H	---	D	Water level fluctuates from 2 to 9 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 1 W. -- Continued						
3M2	David Marshall	275	Dr	7	48	-----	----------	0.2	2/5/58	N	---	N	
4B1	J. E. Dunscomb	265	Dr	32	6	32	----------	13.4	2/5/58	J	1/2	D	Water reportedly tastes good, soft. "Hardpan" at 25 ft. A2.
5C1	R. H. Chilson	250	Dr	45	4	-----	----------	20	----------	J	1/4	D	Water reportedly tastes good, soft. A2.
7N1	Herbert Ash	295	Dr	22	6	22	----------	13.5	1958	J	1/2	D	A2.
7P1	A. Baldassin	290	Dg	10	36-24	-----	----------	14.0	9/25/58	C	1/2	D	Well located in basement, 5 ft below land surface.
7P2	E. A. Harris	325	Dg	18	30	-----	Gravel & sand	16	1957	J	1/2	D	Sometimes has foul taste.
9B1	Ed Foister	325	Dg	55	48x48	-----	----------	34.4	2/7/58	J	1/2	D	Measured depth only 40 ft. Taste varies with time of year.
14Q1	H. B. Baxter	380	Dr	140	6	11	----------	30	----------	J	---	D	Supply adequate. Some 35- to 40-foot artesians near shore. Penetrates Tertiary materials. A2.
16G1	Lee Mull	375	Dg	20	36	-----	----------	17	----------	P	1/3	D	Supply inadequate in late Fall.
16K1	Robert Bush	350	Dg	20	-----	-----	----------	--------	----------	--	---	D	Two springs west and downslope.
16L1	P. A. Thompson	350	Dr	88	8	-----	Sand	12	----------	J	1/2	N	Hard water. Several springs in area. L. A2.
17E1	William Kelly	390	Dr	71	6	-----	----------	25(?)	2/7/58	J	1	D	Water level measurement in doubt. A2.
18E1	Don Aarde	290	Dg	5	72x72	-----	----------	3.5	9/25/58	C	1/2	D	Supply inadequate. Spring type, flows in winter. A2.

18J1	L. V. Crane	325	Dr	53	6	-----	----------	16.1	2/7/58	J	1/2	D	Supply adequate.
19F1	W. G. Scheel	280	Dr	42	6	42	Gravel & sand	6	8/1/47	T	3	D,Irr	Pumped 4 hr at 50 gpm, dd 6 ft. Perforated bottom 10 ft. Irr 20 ac. Well overflows in winter. L.
*19G1	City of Tenino	267	Dg	42	120	-----	Coarse gravel	7.4	5/16/47	N	---	N	Well is gravel packed. Obs.
19M1	City of Tenino	262	Dg	25	72x72	-----	----------	10.6	7/10/58	T	10-15	PS	Approximately 400 services. Water quality reportedly poor during rainy season. A.
19M2	Roy Etter	280	Dr	21	8	21	Gravel	6	Dec., '50	C	1/4	D,Irr	Pumped 4 hr at 50 gpm, dd 1 ft. Bottoms on sandstone. L.
19N1	C. E. Wilcox	255	Dr	33	6	-----	Sand & gravel	--------	----------	--	---	N	L.
20B1	F. E. S. Miller	270	Dr	47	8	47	Gravel, sand	6 5.1	12/2/49 3/3/59	N	---	Irr	Pumped 4 hr at 80 gpm, dd 4 ft; perforated from 37 to 47 ft. Has Irr 20 ac. L.
20B2	John Wherrett	270	Dr	31	8	31	Gravel	7	2/15/55	C	6	D,Irr	Pumped 4 hr at 115 gpm, dd 1 ft. Has Irr 20 ac.
21C1	Stanley Rajchel	325	Dr	70	8	-----	----------	--------	----------	J	1	D	Supplies two houses. Much iron stain around pump.
21C2	Vincent Noski	325	Dr	68	8	-----	----------	--------	----------	J	1½	D	Quality of water is good, no iron.
21D1	O. F. Miller	300	Dr	46	8	-----	----------	--------	----------	--	1/2	D	Hard water.
21D2	Claude Miller	295	Dg-Dr	41	6	-----	Pea gravel	24	1947	J	1/3	D,S	Supplies 5 to 12 head of stock. Rather hard and water grows "moss" when allowed to set. A2.
21D3	Joe Mayer	295	Dg	40	36	-----	Gravel	15	----------	J	1/2	D	Water moderately hard.
23N1	Unknown	410	Dg	19	36	-----	----------	9.6	2/26/58	N	---	N	
23P1	H. A. Murphy	405	Dg	14	36	-----	Gravel	2.8	2/26/58	H	---	D	Water reportedly tastes good, soft. Soil and silt for 13 ft. A2.
28A1	Mrs. Virgil Johnson	450	Dg	16	24	-----	----------	8	----------	C	1/2	D,S	All attempts to drill in this immediate area have encountered a black "quicksand".
28A2	John Herman	460	Dg	22	-----	-----	----------	-------	----------	--	1/2	D	Supply inadequate. Penetrated "quicksand" at bottom.
*31D1	Claude Wonselter	276	Dg	25	18	-----	----------	19.6	5/16/47	N	---	D	Temp 49° F. A3.
31G1	Herb Worden	270	Dr	53	8	53	Sand & gravel	10	----------	C	7½	Irr	Perforated from 36 to 51 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 1 W. -- Continued						
31L1	E. L. Fleming	265	Dr	56	8	56	Gravel	42	9/30/49	J	2	D,Irr	Pumped 4 hr at 50 gpm, dd 2 ft. Irr 8 ac. L.
31L2	E. L. Fleming	265	Dg	36	6	36	----------	18.0	3/25/59	N	---	N	Well backfilled around 6-inch casing.
							T. 16 N., R. 2 W.						
2D1	William Haase	205	Dr	35	6	-----	----------	12	---------	--	---	D	Supplies Deep Lake Park.
2E1	Albert McIntosh	200	Dr	23	6	-----	----------	7	---------	J	1/2	D	Supply adequate.
2R1	Pacific Powder Co.	225	Dr	35	12	-----	----------	18	---------	T	5	Ind	Drilled to 310 ft, yielded salt water.
3A1	Albert McIntosh	200	Dn	20	2	-----	----------	-------	---------	C	1	D	Supply very good.
4L1	Elizabeth Whipple	210	Dr	35	6	-----	----------	-------	---------	J	1/2	D	Several driven wells in area.
4M1	J. S. Martin	200	Dr	65	8	-----	----------	10.0	10/1/58	N	---	N	Sand for about 35 ft, then clay. Measured depth, 44.5 ft.
4P1	C. C. Clumb	205	Dn	28	1¼	28	----------	14	August, '58	C	1/4	D	Supply adequate.
4P2	Carl Sullivan	205	Dn	23	1¼	23	Sand & gravel	17	----------	C	1/4	D	Supply adequate for limited domestic use only.
4P4	Clay Herndon	200	Dr	36	6	-----	----------	-------	---------	J	1/2	D	
6R1	Leslie Mounts	190	Dg	12	36	-----	----------	1	---------	C	1	D	Supply adequate, but quality is poor. Within 40 ft of creek. "Bedrock" very near surface at house.
7H1	Sig Olson	185	Dr	31	12	-----	----------	4.2	2/14/58	C	25	Irr	Pumps 600 gpm. A2.

7K1	Ida Erskine	240	Dg	29	48	-----	----------	24.0	1/27/59	--	1/4	D	Supply has been adequate for years. A2.
7R1	Orpha Loomis	220	Dg	5	48x48	-----	----------	0.5	1/27/59	N	---	D	Water level very low in summer. Located in old stream channel.
8A1	G. A. Vaughn	220	Dg	16	30	-----	----------	12.7	10/1/58	C	1/3	D	Has been pumped dry.
8E1	Sig Olson	195	Dr	35	6	-----	----------	13.9	2/14/58	J	---	D	Supply adequate. Water level drops to about 20 ft in summer.
9C1	M. R. Hacker	180	Dg	26	6	-----	Sand & gravel	22.0	10/2/58	C	1.5	D	Supply adequate. Well backfilled around 6-inch casing. L. A2.
9G1	Ivan Gunstone	180	Dg	12	6	-----	Gravel	10	----------	C	1/2	D	Supply adequate.
9J1	George Marble	260	Dg	26	54x54	-----	Till	19.3	9/30/58	--	---	D	Supply adequate. Till through entire depth.
9P1	P. M. Murphy	270	Dg	32	-----	-----	Gravel	-------	----------	--	---	----	Well used primarily for storage of spring water. Had two drilled wells, 80 and 170 ft; Blue shale at 35 ft. L.
9Q1	Jonas Howe	220	Dg	6	36	-----	----------	3.1	9/30/58	C	3/4	D	Penetrated thin layer of "hardpan". Located on slope.
10A1	William Risse	235	Dn	15	2½	-----	----------	-------	---------	C	1/2	D	Supply adequate.
10H1	Anne Bush	230	Dg	18	-----	-----	----------	9.0	9/26/58	H	---	D	Measured depth 12 ft. Well caved badly.
10J1	William Risse	230	Dg	18	36x36	-----	----------	Dry	9/26/58	N	---	N	Well abandoned.
10K1	J. M. Porter, Jr.	275	Dr	70	6	70	----------	54.2	9/26/58	J	1/2	D	Supply adequate. A2.
10K2	J. M. Porter	240	Dr	51	6	51	----------	29.7	9/26/58	J	1/2	D	Supply adequate.
11D1	Henry Risse	230	Dg	15	12	-----	Gravel	10.9	9/26/58	C	1	D	Well has been used for 50 or 60 years.
11Q1	Frank Danzer	275	Dr	93	6	-----	----------	65	---------	J	---	D	Water reportedly tastes good. Supply adequate.
13B1	Simon Wit	325	Dg	22	48x48	-----	----------	18.6	9/25/58	--	1/2	D,S	Supply adequate for limited use. A2.
13F1	Ernest Ostrom	330	Dg	31	48x48	-----	----------	17.5	9/25/58	H	---	N	Water reportedly tastes poor. Not in use at present.
13K1	James Garling-house	385	Dg	21	36x48	-----	----------	17.4	9/25/58	H	---	D	Supply adequate.
14B1	J. V. Anderson	290	Dg	31	-----	-----	----------	-------	---------	--	1	D	Supply inadequate, has gone dry.
14C1	J. V. Anderson	275	Dr	90	6	-----	----------	80	---------	T	3	D,S	Supply adequate.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 16 N., R. 2 W. -- Continued						
14N1	A. W. Ream	275	Dg	19	36	-----	----------	------	---------	--	---	D	Well goes dry in August, replenished by spring source.
14P1	W. L. Wright	280	Dg	28	48x48	-----	----------	20.8	10/15/58	J	1/4	D	Supply adequate in late summer for household use only.
15A1	Georgia Tanner	255	Dg(?)	43	------	-----	----------	40.2	9/25/58	J	1/2	D	Supply adequate.
15B1	Robert O'dell	250	Dg	21	48x48	-----	----------	19.6	10/15/58	--	1/4	D	Supply inadequate. Hardpan to gravel.
15B2	Ray Lukenbill	250	Dr	59	6	-----	----------	27	---------	J	1	D	
17C1	Art Swenson	275	Dg	40	6	-----	----------	23.2	10/14/58	J	1/2	D,S	Well backfilled around 6-inch casing.
17H1	Tom Evans	350	Dr	325	8	-----	----------	25.6	10/1/58	N	---	N	Shale penetrated at about 10 ft. Supply inadequate.
17L1	J. E. Dayton	305	Dg	19	48x48	-----	----------	10.0	10/8/58	N	---	N	Appears to have penetrated pre-Vashon.
17N1	J. E. Dayton	305	Dg	28	48x48	-----	----------	4.9	10/8/58	N	---	N	----------Do----------
19K1	Ray Erickson	250	Dg-Dr	85	6	-----	----------	------	---------	J	1/2	D	Had fair supply of water in dug portion of well. Sandstone at 35 feet.
19K2	Ray Erickson	250	Dg	28	48x48	-----	----------	------	---------	--	---	D	Supply inadequate. Dug to sandstone.
19Q1	Lee Sorrell	220	Dr	54	6	-----	----------	24	---------	S	1/2	D	Supply adequate.
20B1	--Anderson	260	Dg	19	18	-----	----------	13.1	10/15/58	H	---	N	Well abandoned.

20L1	Emil Krause	240	Dg	10	30	-----	----------	------	---------	C	3/4	D,S	
20Q1	Melvin Waterman	240	Dr	65	6	-----	----------	33	---------	T	5	D,Irr	Irr 12 ac. Well has pumped 100 gpm.
21A1	W. O. Harris	245	Dr	85	6	-----	----------	------	---------	P	1/4	D	
21J1	W. E. Pratt	245	Dr	93	6	-----	----------	68	---------	--	1/2	D	Supply adequate. A2.
*21P1	Sherman Dempsey	235	Dr	85	6	84	Sand & gravel	35.8	1/16/47	T	3	D,Irr	Pumped at 50 gpm, dd 6 ft. Cert for 35 gpm, Irr 3 ac. L.
21R1	M. D. Kelsey	240	Dg	17	48x48	-----	----------	16.5	10/16/58	--	---	D	Supply inadequate, foul taste when water low. Hardpan at bottom.
*25A1	Time Oil Company	270	Dr	-----	6	-----	----------	20.6	5/16/47	P	---	D	Supply for service station.
25E1	S. J. Agnew	275	Dr	86	10	86	Sand & gravel	27.4	4/2/59	S	---	Irr	Cert for 200 gpm and Irr of 25 ac. Perforated from 63 to 80 ft. L. A2.
25G1	S. J. Agnew	278	Dr	84	6	84	Gravel	23.7	4/2/59	S	---	Irr	Pumped 4 hr at 33 gpm, dd 10 ft. Irr 5 ac. Perforated from 41 to 50 ft. L.
27K1	R. M. Clark	255	Dg	12	72	-----	Gravel	7	October, '53	C	2	Irr	Pumped 6 hr at 85 gpm, dd negligible. Irr 12 ac.
27M1	R. M. Clark	245	Dg	19	72	-----	Gravel	------	---------	--	---	-----	Water level fluctuates from near top to bottom.
27Q1	Mrs. N. A. Finley	240	Dr	33	8	33	Gravel	9.3	4/2/59	T	3	Irr	Cert for 110 gpm and 11 ac. L.
*27R1	Amos Owens	250	Dr	78	-----	-----	Gravel	------	---------	T	---	D	Hardness 50, chloride 5 ppm. Supplies cafe and cabins. Iron in water.
*27R2	Mrs. Tom Sullivan	253	Dr	54	4	-----	----------	30.4	5/16/47	J	---	D	
28B1	R. W. Sorrell	240	Dg-Dr	57	6	-----	----------	------	--------	J	3/4	D	Supply adequate.
28C1	J. Dempsey	235	Dg-Dr	55	6	-----	----------	------	--------	H		D	Was originally dug 20 ft.
*28H1	D. H. Clark	237	Dg-Dr	176(?)	48	-----	----------	21.9	5/16/47	P	---	D,Irr	
29D1	Ed Poore	215	Dr	51	8	-----	Sandy gravel	8.6	4/3/59	N	---	N	Formerly U. S. Army well.
*29E1	Ed Poore	208	Dr	60	8	60	Sandy gravel	22.7	5/5/47	--	---	D	Formerly U. S. Army well.
29M1	Ed Poore	215	Dr	27	8	-----	----------	17.1	4/3/59	N	---	N	Formerly U. S. Army well.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 16 N., R. 2 W. -- Continued													
29P1	Robert Thomsen	210	Dg	18	-----	-----	Gravel	10	7/22/58	C	10	Irr	Pumped 6 hr at 225 gpm, dd 1 ft. Irr 28 ac. Excavated pond 30 by 90 ft.
*30A1	Ed Poore	218	Dr	57	8	57	Sandy gravel	30.3 26.5	5/5/47 4/3/59	N	---	N	Formerly U. S. Army well.
30C1	M. E. Coffin	210	Dr	56	8	56	Gravel	15	4/23/52	--	---	Irr	Pumped 1 hr at 65 gpm, dd negligible. Perforated from 32 to 54 ft. Irr 20 ac. L.
*30K1	Ed Poore	215	Dr	57	8	57	Sandy gravel	23.3 19.8	5/5/47 4/3/59	N	---	N	Formerly U. S. Army well.
*30Q1	George Davies	210	Dr	46	6	46	----------	22.4 29	5/5/47 8/11/55	J	5	D,Irr	Pumped 6 hr at 85 gpm, dd 3 ft. Irr 10 ac.
31A1	R. F. Mittge	210	Dr	50	8	-----	----------	28 20.7	9/12/52 6/1/59	--	7½	Irr	Bailed 50 gpm, dd 3 ft. Has irrigated 32 ac. L.
31H1	Gerhard Newman	210	Dg-Dr	45	6	45	Gravel & sand	26	12/10/52	T	3	D,Irr	Pumped 4 hr at 75 gpm, dd 3 ft. Has Irr 20 ac. Well was dug 25 ft.
*31K1	Unknown	201	Dg(?	30	-----	-----	----------	19.7	5/6/47	--	---	D	
31K2	H. E. Haskin	210	Dr	66	6	66	Sand & gravel	25	5/22/50	--	2½	Irr	Pumped 4 hr at 100 gpm, dd 2 ft. Perforated from 50 to 62 ft. Irr 10 ac. L.

31K3	Ben Leitner	210	Dr	80	6	80	Sand & gravel	18	--------	--	---	Irr	Cert for 55 gpm, 10 ac. Perforated from 35 to 50 ft. Deepened from 50 ft to 80 ft. L.
31L1	H. B. Maze	210	Dr	66	8	66	Sand & gravel	25	5/22/50	--	9	Irr	Pumped 4 hr at 150 gpm, dd 2 ft. Perforated from 50 to 62 ft. Irr 19 ac. L.
31Q1	E. F. Parkhurst	200	Dr	72	8	72	Sand & gravel	------	--------	T	10	Irr	Perforated from 49 to 69 ft. Irr 30 ac.
31R2	C. Ernst	213	Dr	60	6	-----	----------	32.2	12/3/59	J	1/2	D	Supply adequate. A2.
32B1	S. A. Agnew	215	Dr	83	12	83	Sand & gravel	38	11/28/56	--	---	Irr	Pumped 4 hr at 750 gpm, dd 18 ft. Perforated from 63.75 to 76.75 ft. L.
32F1	Robert Thomsen	205	Dr	80	8	-----	Sand & gravel	28	9/17/52	T	7½	Irr	Pumped for 12 hr at 120 gpm, dd 1 ft. Perforated from 30 to 40 ft. Irr 30 ac. L.
32N1	E. G. Miller	210	Dg-Dr	61	6	61	Gravel	28	10/27/46	--	---	-----	Bailed 15 gpm, dd 5 ft. Perforated 3 to 6 ft from bottom.
*32Q1	A. Woodfield	225	Dr	48	5	-----	----------	------	--------	J	---	D	
33A1	F. O. Schimkola	225	Dr	80	6	80	----------	22	--------	T	3	Irr	Pumped 40 gpm, dd 1 ft. Irr 7 ac.
33E1	S. J. Agnew	215	Dr	85	12	85	Sand & gravel	25	1/6/51	--	---	Irr	Pumped 370 gpm, dd 13 ft. Perforated from 45 to 55 ft and 30 to 37 ft. L.
*35H1	F. A. Colvin	255	Dg	40	30	-----	----------	27.2	5/16/47	--	---	D	
							T. 16 N., R. 3 W.						
2C1	Welks Dairy	132	Dr	48	6	-----	----------	15	--------	T	15	D,S	Supplies dairy.
2C2	Welks Dairy	135	Dr	114	12	-----	----------	10	--------	T	15	S,Irr	Supplies dairy. Much "hardpan" encountered.
*2K1	R. E. Dooley	141	Dg	27	-----	-----	Gravel	15.4	4/25/47	--	---	D	
*2M1	Peter Dalebout	135	Dn	20	2	20	Alluvium	10.0	5/6/47	N	---	N	
*2Q1	Dale Rutledge	122	Dg	19	12	-----	Alluvium	14.2	5/6/47	--	---	D	A3.
*9B1	Unknown	213	Dr	27	3	-----	----------	25.1	5/6/47	N	---	N	Perched water (?).
12C1	Mrs. Howard Martinson	180	Dr	75	6	-----	----------	16.0	3/24/59	J	1	D	Supply adequate. A2.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 16 N., R. 3 W. -- Continued													
12D1	R. C. Crisman	175	Dr	110	8	------	Gravel	64	----------	T	7	Irr	Pumped 4 hr at 150 gpm, dd 15 ft. Perforated from 90 to 107 feet. Irr 25 ac. L.
12R1	O. R. Leaming	250	Dg	30	48x48	N	----------	3.0	1/29/59	--	1/4	D	Supply inadequate, goes dry. Water reportedly has poor taste.
*15N1	G. B. Stribling	144	Dr	56	3	------	Glacial	46.2	5/6/47	N	---	----	
*16L1	C. R. Palmer	142	Dr	98	24-20	98	Gravel	42.7 65 41.0	5/7/47 March, '47 3/24/59	N	---	Irr,N	Pumped 1,000 gpm, dd 1 ft. Perforated from 65 to 98 ft. L. A1.
*16N1	Ray Rutledge	121	Dr	38	6	------	Glacial	16.7	5/7/47	--	---	D	
*16P1	R. R. Walters	118	Dr	37	6	------	----------	20.0	5/7/47	--	---	D	Dry hole penetrated 72 ft of basalt; surface water standing in hole.
*19Q1	J. C. Rhodes	130	Dr	72	------	N	----------	8.1	5/15/47	N	---	N	
*20M1	H. C. Johnston	140	Dr	213	6	80	Basalt, porous	8	5/5/47	--	---	S	Perforated from 56 to 58 feet. L. A3.
*20M2	H. C. Johnston	160	Dg	4	48	N	Soil	1.5	5/15/47	N	---	N	A3.
*21L1	Unknown	114	Dg	21	8	------	Glacial	17.2	5/7/47	--	---	N	
29M1	R. C. Hameline	135	Dr	64	6	------	----------	40	---------	--	---	Irr	Pumped 4 hr at 120 gpm, dd 1 ft.
*29N1	C. F. Norrie	138	Dr	58	6	------	Glacial	38.6	5/3/47	N	---	N	
30B1	R. R. Kerwood	125	Dr	168	6	7	----------	12.5	1958	J	1/2	D	L.
*31A1	H. W. Guiles	142	Dr	63	5	------	Glacial	3.0	5/3/47	--	---	----	

31A2	H. W. Guiles	142	Dr	82	8	81	Gravel, sand	44	1956	--	---	Irr	Perforated from 67 to 70 ft. Irr 70 ac. L.
31J1	F. A. Fosnacht	130	Dr	65	6	65	----------	30 33.4	--------- 3/24/59	J	2	D,Irr	Pumped 4 hr at 45 gpm, dd 10 ft. Has Irr 7 ac. A2.
*31K1	M. Garthe	134	Dr	61	12	-----	Gravel	37.2	5/2/47	--	---	----	
*31L1	E. A. Henderson	120	Dg	38	36	-----	Gravel	31.0	1/11/47	--	---	D	A3.
*32J1	Unknown	147	Dg	45	48	-----	Glacial	39.9	5/3/47	N	---	N	
*32M1	C. B. Hafner	141	Dr	74	-----	-----	Glacial	37.5	5/3/47	N	---	N	
32Q1	Lloyd Canaday	149	Dr	99	8	99	Gravel	35	4/12/53	--	---	D,Irr	Pumped 4 hr at 200 gpm, dd 2.3 ft. Perforated from 45 to 59 ft and from 64 to 67 ft. Irr 20 ac. L.
*33B1	Wesley Newby	169	Dr	85	4	-----	Glacial	55.0	5/3/47	--	---	D	
33G1	E. H. Prang	162	Dr	74	8	74	Gravel	32	8/15/57	T	10	Irr	Perforated from 55 to 70 ft.
*33G2	H. N. Stewart	162	Dr	70	6	-----	Sand & gravel	47.1	5/3/47	--	---	D	
*33Q1	M. Parkinson	162	Dg	37	36	-----	Glacial	23.8	5/3/47	--	---	D	
33R1	J. C. Dahl	162	Dr	76	8	76	Sand & gravel	12	3/5/50	--	---	Irr	Pumped 300 gpm, dd 4 ft. Perforated from 56 to 73 ft. Irr 40 ac. L.
*34K1	Carl Decker	183	Dr	63	7	-----	Glacial	26.1	5/6/47	--	---	D	
34M1	D. P. Garrett	170	Dr	55	6	55	Gravel	------	---------	--	---	D	L.
*36L1	Effie Mills	193	Dg	24	42	-----	Glacial	13.9	5/5/47	--	---	D	
36P1	M. J. Slaymaker	189	Dr	52	6	-----	----------	28	---------	--	---	Irr	Has irr 5 ac.
							T. 16 N., R. 4 W.						
*26H1	Northern Pacific R. R.	118	Dr	60	8	-----	Glacial	23.7	5/15/47	N	---	N	
35A1	C. M. Bell	105	Dr	42	6	-----	Gravel	12	1945	T	7½	Irr	Cert for 35 ac, 150 gpm. L.
*35J1	P. G. Nylund	109	Dr	42	10	-----	Glacial	12.9	5/15/47	N	---	N	
							T. 17 N., R. 1 E.						
6F1	W. V. Cory, Sr.	155	Dr	150	6	-----	----------	------	---------	J	3/4	D	Water reportedly tastes good, but may be high in Iron.
6F2	D. B. Martin	85	Dr	60	6	-----	----------	------	---------	J	1/4	D	Iron content high.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 E. -- Continued						
6M1	C. R. Miller	190	Dr	108	6	103	Sand	56	11/25/59	P	1	D	Bailed 9 gpm, dd 20 ft. Old well 365 ft in sand.
6Q1	B. A. Stolz	205	Dr	183	6	-----	----------	------	---------	P	1/2	D,S	Iron content high.
7B1	Kay Harbert	200	Dr	90	6	-----	----------	26.3	10/23/57	N	---	N	Obs.
7B2	Kay Harbert	200	Dr	45	6	-----	----------	27.2	10/23/57	N	---	N	
7B3	Kay Harbert	195	Dg	25	36	-----	----------	19.6	2/24/58	--	1	D	
7J1	Lloyd Lewis	193	Dn	18	1½	18	Sand	17	---------	C	1/3	D,S	Drilled entirely in sand.
7M1	O. D. Drewry	240	Dr	167	6	-----	----------	------	---------	J	1/2	D	Supply adequate.
7P1	K. J. Stuart	230	Dn	17	-----	-----	----------	------	---------	C	1/2	D	
7Q1	J. W. Spencer	205	Dg	19	36-20	-----	Sand, gravel	13.4	10/23/57	P	1	D,S	
8L1	J. Schoepfer	245	--	42	-----	-----	----------	14	---------	J	1	D,S	Used for dairy purposes.
8M1	W. W. Raymond	205	Dg	16	24	-----	Gravel	11.3	10/24/57	J	1	D	Clay on top, bottoms in gravel.
8N1	M. E. Varner	200	Dg	17	2½	-----	----------	13.9	10/23/57	P	---	D	Well backfilled around tile casing.
**13D1	E. Livernash	335	Dr	100	4	-----	----------	------	---------	--	---	D	Unable to measure depth. Soft water.
**13D2	Edward Percival	330	Dr	158	8	158	Gravel, sandy, clayey	78	April, '51	T	5	D,Irr	Pumped 1 hr at 50 gpm, dd 10 ft. Perforated from 60 to 66 ft; 76 to 88 ft; 92 to 94 ft. L.
**13D3	A. H. Weeks	335	Dr	118	6	118	----------	89.2	11/19/51	--	---	----	
**13E1	Milo Schneider	334	Dr	93	6	93	----------	63.5 80.5	6/2/50 1/5/60	J	3/4	D	A3.
**13E2	H. M. Erickson	335	Dr	80	6	-----	----------	------	---------	J	3/4	D	Soft water.

**13F1	C. S. Massey	345	Dr	100	6-5	-----	----------	70	---------	J	3/4	D	Soft water.
**13F2	A. Tafoya	340	Dg	61	29x34	-----	----------	59.9	11/19/51	N	---	N	
**13M1	L. Parker and E. A. Dinwiddie	338	Dg-Dr	98	6	98	----------	43	---------	J	1/2	D	Bailed ½ hr at 13 gpm, dd 20 ft. Supplies five families and store.
**13N1	A. Clarambeau	337	Dg-Dr	101	6	101	----------	54.6 41.8	9/11/51 1/5/60	J	1	D,S	A3. (Sample taken when well was 52.5 ft deep.) Bailed 10 gpm.
**13P1	W. C. Ettinger	345	Dr	92	4	92	----------	54.7	11/26/51	J	1/4	D,S	
**14A1	W. R. Simcox	320	Dr	110	4	-----	----------	87	6/2/50	J	1	D	A3.
**14A2	R. W. Shattuck	317	Dr	95	6	95	----------	29.5	6/2/50	P	1/2	D,S	Soft water.
**14J1	Irrigation District	325	Dr	95	6	95	----------	41.5	6/2/50	N	---	N	
**14J2	Dept. of Agriculture	322	Dr	62	6	-----	----------	48.3	6/6/50	N	---	N	
**14J3	L. Raab	335	Dr	106	6	106	----------	72.8	11/20/51	J	1	D	Bailed 8 gpm. Much fine sand came in bottom.
**14N1	L. A. Crimmins	375	Dr	133	6	-----	Sand & gravel	115	---------	--	---	----	Bailer test 16 gpm, report no dd. L.
18A1	T. J. Dunagan	207	Dr	89	6	85	Sand	10.7	1949	J	3/4	D,S	Tested 30 gpm, dd 60 ft. Six-foot screen on bottom. "Sand" all the way.
18D1	Murray Ball	230	Dr	41	6	41	Sand	------	---------	J	1	D,S	Yields 19½ gpm. L.
**23A1	Bruno Burnetti	340	Dr	51	6	-----	Sand & gravel	19.1	3/26/52	J	---	D	Bailer test 16 gpm, dd 22 ft.
**23A2	H. Willuweit	345	Dr	55	6	55	----------	28.1	6/1/50	P	3	D	A3.
**24A1	R. W. Dyckeman	349	Dg	33	48	-----	----------	24.4	6/2/50	J	1/3	D	Dug through gravel, "hardpan" and cemented gravel. Soft water.
**24B1	C. R. Lewis	347	Dr	99	12	99	Gravel	34	4/28/51	T	7½	Irr	Pumped 2 hr at 165 gpm, dd 6 ft. Perforated from 85 to 93 ft. Has Irr 20 ac. L.
**24C1	R. C. Shear	345	Dg	40	36	40	----------	34.3	6/2/50	J	1/2	D	Soft water.
**24E1	C. Hansen	340	Dg	27	60	27	----------	------	---------	--	---	D	Has been dry.
**24F1	F. L. Beggs	343	Dg	32	6	-----	----------	26.2	6/1/50	--	1/2	D	Soft water.
**24G1	F. W. Nobel	343	Dg	38	6	38	----------	27.3	6/1/50	J	1/2	D	----Do----
**24G2	Carl Iverson	345	Dg-Dr	97	6	97	----------	41.2	11/26/51	J	1/2	D	Soft water before deepening well from 39 to 97 ft.
**24G3	Robert Hutches	335	Dr	43	6	-----	----------	32.3	11/18/51	H	---	N	
**24H1	--MacAuley	341	Dg	30	8	-----	----------	23.3	6/2/50	--	1/4	D	Soft water.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 E. -- Continued						
**24K1	W. J. Brugger	350	Dg	30	6	30	----------	23	6/1/50	C	1/2	D	Soft water.
**24L1	Warren Simmons	345	Dr	275	12	263	Sand & gravel	13.6	2/26/53	--	---	----	Pumped 4 hr at 360 gpm, dd 5.26 ft. Perforations, see log. L.
**25A1	L. M. Detton	356	Dg	22	30	-----	----------	13.2	5/31/50	J	1/4	D	Iron in water.
**25A2	T. Windsor	345	Dn	28	3	28	Gravel, pea	16.0	6/1/50	--	1/4	D	Well dug to 24 ft. Casing driven to 28 ft.
**25A3	S. C. Maybee	356	Dg	29	6	-----	----------	18.8	6/1/50	J	1/2	D	
**25B1	-- Philby	350	Dg	9	48	-----	----------	7.2	6/1/50	J	1/2	D	Well 20 yards east of large perched swamp.
**25E1	-- Nordburg	355	Dr	30	6	-----	----------	21	---------	J	1/4	D	Soft water.
**25F1	J. J. McKay	380	Dr	76	6	73	----------	-------	---------	--	---	----	Soft water. Bottom 5 ft of well excellent source of water. No noticeable dd when bailed.
**25J1	Ray Sias	350	Dg	8	72	9	Gravel	3	5/31/50	C	7	Irr	Pumped 83 gpm, dd 0.8 ft. Has irr 10 ac.
**25N1	-- Lenholm	415	Dr	125	6	-----	----------	-------	----------	J	---	D,S	Soft water.
**26H1	G. E. McKenzie	350	Dg	36	36	-----	Gravel	14	---------	J	1/2	D	Considerable perched water in area.
**33G1	J. W. Fillman	485	Dr	220	4	-----	Gravel, pea; & sand	208	---------	P	1	D	Soft water.
**34F1	C. Roetter	450	Dr	180	6	-----	Gravel, pea	-------	---------	P	1	D,S	A3.
**34L1	E. B. Bauldwin	441	Dg	30	60	-----	Sand	21.9	6/20/50	--	---	D	Soft water.

34L2	W. H. Hensley	440	Dr	285	10	285	Sand & gravel	150	11/28/55	--	---	Irr	Pumped for 4 hr at 220 to 280 gpm, dd 5.2 ft. Perforated from 159 to 284 ft. Irr 40 ac. L.
**34R1	P. S. Dutton	425	Dg	22	48	-----	Till	14.8	6/20/50	--	1/2	D	"Hardpan" to bottom.
**35A1	--Bowen	355	Dg	18	30	-----	----------	3.6	6/19/50	--	1/2	D	Soft water.
**35F1	H. J. Muller	413	Dr	81	6	-----	Gravel	52.3	6/20/50	J	3/4	D,S	A3. Baller test 15 gpm.
**35F2	H. J. Muller	412	Dr	70	6	-----	----------	45.2	6/20/50	J	3/4	D,S	Well goes dry late in fall.
**35K1	E. Broughton	400	Dg	31	24	-----	----------	17.0	6/19/50	J	---	D	Soft water.
**35L1	F. C. Koeppen	405	Dg	24	48	-----	----------	10.7	6/19/50	P	1/2	D	----Do----
**35L2	F. C. Koeppen	405	Dr	95	4	-----	----------	87	---------	N	---	N	Supply inadequate.
**35P1	--Koeppen	410	Dr	140	6	-----	----------	-------	---------	P	1	D,S	Iron in water.
							T. 17 N., R. 2 E.						
**17E1	C. Hutches	330	Dg	35	8	-----	----------	32	---------	J	1/2	D,S	Soft water. Has been dry.
**17P1	R. V. Booth	340	Dr	73	6	73	----------	32.3	6/7/50	J	1/2	D	Perforated at 3 levels.
**18L1	P. H. Gorman	325	Dr	58	6	-----	----------	18.5 15.5	1/2/52 1/5/60	--	1/4	D	Well deepened from 27 ft in 1951. A3.
**18N1	F. A. Scharman	325	Dr	71	6	71	Gravel	30.4	---------	--	---	D	Bailing test: dd 15 ft after 3 min at 24 gpm. L.
**18P1	E. T. Combes	330	Dg	25	12	-----	----------	19.3	6/6/50	--	1/4	D,Irr	Soft water. Deepened to 41 ft.
**18Q1	John Domick	332	Dr	37	6	-----	----------	27.7	11/20/51	H	---	N	
**18R1	F. W. Peterson	343	Dg	29	22	29	----------	24.9	5/15/51	H	---	N	About 25 ft from Yelm ditch flume.
**18R2	Unknown	330	Dr	31	6	-----	----------	16.8	3/27/52	H	---	N	About 10 ft above Centralia Power Canal.
**19A1	--Rochester	332	Dg	20	30	-----	----------	15.5	6/6/50	H	---	D	Goes dry in late summer.
**19C1	Bessie McBride	335	Dg	25	6	-----	----------	18.9	6/6/50	C	1/4	D	Soft water.
**19D1	C. H. Massey	335	Dg	22	48	22	----------	17.6	6/6/50	C	1/2	D	A3.
**19F1	F. Cummings	338	Dg	21	10	-----	----------	17.1	11/24/51	J	1/4	D,Irr	Well 100 ft southeast of house.
**19G1	E. Dunham	340	Dg	26	6	26	----------	18.9	6/7/50	P	1/4	D	Pumped 7 gpm all day, no noticeable change in water level.
**19G2	L. O. Cochrane	339	Dg	13	-----	-----	Gravel	12	6/8/50	C	5	Irr	Sump dug by a bulldozer. Use six to eight sprinklers.
**19G3	L. O. Cochrane	345	Dg	29	8	29	----------	20.0	6/8/50	--	---	D	A3.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 E. -- Continued						
**19H1	A. Hewitson	350	Dr	42	6	-----	Gravel, pea	32.2	11/24/51	J	1/2	D,S	L.
**19H2	G. Bruns	353	Dr	35	6	35	Sand, black	20.4	6/7/50	--	1/2	D	A3.
**19H3	A. Hewitson	350	Dr	177	8-6	177	Sand & gravel	19	Feb., '53	T	5	D,Irr	Perforations, see log. Irr 11.5 ac. Well deepened in 1953 from 63 ft. L.
**19J1	G. Paradis	348	Dg	29	10	29	----------	18.7	6/7/50	P	1/4	D	Supply adequate. A3.
**19J2	D. A. Dey	348	Dg	30	6	-----	Sand, black	20.1	6/7/50	P	1/4	D	Soft water.
**19J3	J. M. Hales	350	Dg	34	48x72	-----	----------	18.3	6/8/50	J	1/2	D	----Do----. L.
**19J4	F. M. Bradley	340	Dr	51	6	51	----------	15.3	6/8/50	J	1/2	D,S	----Do----. No "hardpan".
**19J5	J. M. Hales	350	Dr	87	10	87	----------	24.3	9/25/51	T	3	D,Irr	L.
**19K1	D. A. Dey	335	Dg-Dr	14	60	N	----------	9.3	10/5/51	N	---	N	Originally 97-ft well, casing pulled.
19K2	George Paradis	348	Dr	105	8	105	Sand, gravel	29.9	10/23/51	T	3	D,Irr	Well listed as J6 in Yelm Report. Pumps 35 gpm, Irr 6 ac. Hardpan encountered at 20 ft.
**19L1	Enumclaw Creamery	340	Dr	135	10	112	Gravel & sand	17 7.2	12/5/44 3/27/52	T	15	Ind	Pumped 4 hr at 265 gpm, dd 1.5 ft. Perforated from 19 to 24 ft and 50 to 62 ft. L.
**19M1	Town of Yelm	350	Dg	34	42	34	Sand & gravel	29	12/1/36	--	---	----	
**19M2	Town of Yelm	350	Dr	97	8	97	----------	26	Sept., '46	--	---	PS	Yield of 240 gpm with 8 ft dd. Obs.

**19M3	Yelm School District 2	350	Dr	101	10	101	Gravel	40	---------	T	7½	Irr	Yield, 60 gpm. Irr 4 ac. Perforations, see log. L.
**19N1	Town of Yelm	350	Dr	63	12	63	Gravel & sand	25.5 27.2	9/14/50 10/18/50	T	15	PS	Pumped 4 hr at 540 gpm, dd 0.16 ft. Screen from 50 to 60 ft. L. A and A1.
19N2	Town of Yelm	350	Dr	61	12	52	Sand & gravel	25.0	1/18/59	N	---	PS	Pumped 1,250 gpm, dd 5.20 ft. Screen from 52 to 61 ft. L.
**19Q1	Guy Johnston	350	Dr	33	6	-----	Gravel	24.0	10/12/51	J	1/2	D	Supply adequate.
19R1	H. W. Lee	350	Dg	20	60	-----	----------	15	October, '52	C	5	Irr	Pumped 24 hr at 50 gpm, dd 4.5 ft. Irr 15.5 ac.
19R2	Lyle Robison	350	Dg	14	48	-----	Gravel	10	7/1/53	C	5	Irr	Pumped 120 gpm, dd 2 in. Has irr 24 ac.
**20B1	J. A. Childers	356	Dr	48	6	-----	----------	30.7	7/7/50	N	---	N	
**20C1	E. R. Shranklen	348	Dr	36	6	-----	Gravel, fine and sand	-------	---------	J	1/2	D	Pumped several hours without noticeable change in water level.
**20C2	F. Klingenberg	330	Dg-Dr	90	6	90	----------	10	---------	J	1	D	Originally dug 23 ft. Tested at 10 gpm.
**20D1	Dewey Hutton	341	Dg	27	30	-----	----------	24.3	6/7/50	C	1/4	D,Irr	Soft water.
**20E1	Eva Hovis	353	Dg	34	18	-----	----------	25.9	6/7/50	J	1/2	D	----Do----
**20E2	C. Hewitson	345	Dr	61	12-10	61	Gravel	23	October, '51	T	5	D,Irr	Has irr 20 ac. Tested at 100 gpm, dd 10 ft.
**20F1	G. Echtle	355	Dg	32	6	-----	----------	28.3	6/7/50	J	---	D,S	Deepened to 80 ft July, 1951; bailed 10 gpm. A3.
**20J1	Unknown	353	Dg	35	42	-----	----------	30.2	3/27/52	N	---	N	
**20K1	A. Landon	360	Dr	53	6	-----	----------	32.0	6/8/50	J	1/2	D,Irr	A3.
**20L1	C. R. Keep	351	Dr	37	6	-----	----------	22.6	6/8/50	J	1/2	D	Soft water.
**20M1	C. F. Russell	355	Dr	43	6-4	-----	Gravel, pea	27	---------	J	1/4	D	"Hardpan" 31 to 43 ft, underlain by pea gravel.
20N2	Lyle Robison	350	Dg	9	48x48	-----	Gravel	7	9/15/50	C	9	Irr	Pumped 280 gpm, dd 0.5 ft.
**20P1	G. Van Wey	340	Dg	18	16	18	----------	12.0	6/8/50	--	1/4	D	Soft water. Temp 49.5° F.
**20R1	J. Lenard	360	Dg	44	12	44	----------	34.0	6/8/50	J	1/2	D	Well sometimes goes dry.
**28E1	H. S. Moyer	350	Dg	37	24	-----	Gravel, sandy	25	---------	J	1/2	D	No water until "hardpan" dug through.
**28L2	W. N. Goodwin	325	Dg	11	36	-----	----------	3.9	5/24/50	--	---	D	Well on bank of power canal.
**28M1	C. Bruhn	360	Dr	34	6	30	----------	21.3	5/24/50	--	---	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 E. -- Continued						
**28N1	G. P. Tice	370	Dr	81	6	81	----------	32.2	5/24/50	J	1	D,S	
**28P1	R. G. Allison, Sr.	365	Dg	35	36	35	----------	30.6	5/24/50	J	3/4	D	Soft water.
**29A1	R. M. Crutchfield	358	Dr	81	6	-----	----------	29.6	6/8/50	J	3/4	D	A3.
**29A2	J. G. Story	355	Dr	53	6	-----	----------	37.1	6/8/50	J	1/2	D	Bailer test 25 gpm.
**29C1	F. R. King	329	Dr	70	6	70	----------	12.4	6/8/50	J	1/4	D	Soft water.
**29D1	Lester Wilson	340	Dg	27	6	27	----------	19.2	6/8/50	P	1/4	D	----Do----
**29D2	J. Glaser	337	Dg	20	30	-----	----------	15.4	6/8/50	P	1/4	D	Iron in water.
**29E1	Arthur Justman	348	Dg	25	4-2	26	----------	15.6	5/24/50	--	---	D,S	Supply adequate. Backfilled around two casings.
**29E2	Bob Jolley	355	Dg	28	27	28	----------	21.8	5/24/50	--	1/4	D	
**29E3	Arthur Justman	346	Dr	119	10	119	"Rocks", coarse	14 14.4	3/7/52 3/27/52	--	---	Irr	Pumped 5½ hr at 150 gpm, dd 34 ft. "Recovered" in 2 min. See log for perforations. Irr 23.8 ac. L.
**29F1	C. F. Norman	355	Dg	29	30	30	----------	21.3	3/27/52	--	---	----	
**29F2	M. K. Thomas	355	Dg	55	8	55	----------	29.8	11/12/51	J	1	D	Deepened to 98 ft in 1953. Maximum yield 8 gpm. L.
**29F3	J. T. Sparks	358	Dr	34	6	34	Gravel	22.6	5/24/50	J	1	D,Irr	Deepened to 78 ft in August, 1951. Perforated from 32 to 37 ft. L.
**29G1	Harry Bell	352	Dg	20	25	-----	----------	17.6	5/24/50	--	1/4	D	Went dry on 6/11/51.
**29G2	W. A. Wright, Jr.	350	Dg	26	8	26	----------	16.6	5/24/50	J	1/3	D	
**29G3	O. J. Horsefield	355	Dr	50	6	50	Sand, gray	21.5	5/24/50	J	3/4	D,S	Test 85 gpm.

**29K1	C. C. Thompson	350	Dg	19	10	-----	Gravel	13.8	5/24/50	H	---	D	
**29L1	N. H. Sherman	355	Dg-Dr	57	6	57	----------	16.3	5/24/50	--	1/4	D	Bailer test. Little dd.
**29L3	W. G. Mosman	345	Dg	27	48x60	27	----------	17.6	5/25/50	--	---	D	Caved in October, 1951. A3.
**29L4	Gilbert Roehr	350	Dr	52	10	66	Gravel	28	9/23/50	T	5	Irr	Pumped 1 hr at 500 gpm, dd 3 ft. Well drilled 66 ft, filled back to 52 ft. Perforated from 30 to 42 ft. Irr 10 ac. L.
**29M1	John Wright (Smith)	354	Dr	44	6	-----	----------	24.5	5/24/50	J	1/2	D	Iron stain.
**29N1	Frank Vogt (Gordon)	355	Dr	50	8	50	Gravel	18	5/22/50	T	7½	Irr	Pumped 60 gpm, dd 27 ft. Irr 10 ac. L.
**29N2	Frank Vogt	358	Dr	81	12	81	----------	13.7	5/8/51	T	7½	Irr	
**29P1	J. A. Peugh	355	Dg-Dr	87	6	87	----------	27.5	11/26/51	T	1/2	D	Water harder than when well was only 28 ft deep.
**29P2	J. A. Peugh	355	Dr	57	12	57	Gravel	13	2/21/51	--	---	Irr	Pumped 1 hr at 100 gpm, dd 1 ft. Perforations, see log. Irr 15 ac. L.
**29P3	R. H. Clark	353	Dr	99	12	99	Gravel	9.5	6/5/56	--	---	Irr	Pumped 4 hr at 100 gpm, dd 77 ft. Perforations, see log. Irr 35 ac. L.
**29Q1	W. B. Benefield	350	Dg-Dr	55	8	55	----------	14.2 18	5/20/51 July, '51	T	5	Irr	Water level is for adjacent 22 ft well. Has irr 15 ac. L.
**30B1	C. W. Hughes	350	Dg	25	30	-----	----------	21.8	6/8/50	J	1/2	Irr	Pumped 13 gpm 4 hr.
**30B2	C. W. Hughes	350	Dg	40	30	-----	----------	19.8	6/8/50	J	1/2	D	Soft water.
**30D1	J. Raab	360	Dg	36	30	-----	----------	30	---------	J	1/2	D	At one time well supplied six houses.
**30D2	A. Fry	345	Dr	45	6	-----	----------	14	5/31/50	J	1/4	D	Soft water.
**30D3	Edward Smith	350	Dg	20	8	20	----------	15	5/31/50	P	1/4	D	Soft water.
**30E1	J. A. Kelley	369	Dg	38	27	-----	----------	32.6	5/31/50	J	1/4	D	A3.
**30F1	A. C. Flick	353	Dg	21	48	21	----------	19.0	5/31/50	P	1/4	D	Soft water.
**30F2	E. O. Wooten	353	Dr	72	6	72	Gravel, pea; & sand	18.6	5/31/50	J	1/2	D	Casing perforated 68-72 ft. Yield 10 gpm. A3.
**30G3	W. W. Kirkendall	355	Dg	21	8	21	----------	18.1	5/29/50	J	1/2	D	Soft water.
**30G4	A. Meridith	350	Dg	29	30	-----	----------	14.6	5/31/50	J	1/3	D	----Do----
**30J1	Bill McNett	355	Dr	27	6	27	Gravel	18.6	5/24/50	P	---	D	
**30K1	R. Harrington	360	Dg	24	30	24	----------	22.2	5/29/50	J	1/2	D	Soft water.

Table 1. -- Records of wells, -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 E. -- Continued						
**30K2	K. R. Butler	365	Dr	40	6	40	----------	27.6	5/29/50	H	---	D	Soft water.
**30K3	H. S. Jones	352	Dg	22	24	-----	----------	20.0	5/29/50	P	---	D	----Do----
**30M1	J. A. Conner	382	Dr	30	6	-----	----------	19.7	5/31/50	J	1/2	D	----Do----
**30P1	Elmer Johnson	365	Dg	16	24	16	----------	8.2	5/29/50	H	---	D,S	----Do----. Bottom 6 ft blue "hardpan".
**31A1	R. Games	418	Dr	90	6	-----	----------	28.6	5/29/50	J	1	D	Soft water.
**31H1	Eva Pullman (Stancel)	415	Dr	83	6	83	----------	32.6	5/26/50	J	1	D	
**31H2	R. F. Galent	400	Dg	60	60x60	-----	----------	30	---------	J	---	D	----Do----
**32A1	Dinah Arnold	360	Dg	21	48	21	----------	20.6	5/25/50	H	---	D	No water in late summer.
**32N1	W. T. McMonagle	380	Dr	47	6	47	Gravel, pea	16.3	5/26/50	J	1/2	D,S	Soft water.
**32Q1	T. M. Sheldon	365	Dg-Dn	26	18-2	26	----------	17.2	---------	J	1/2	D	Dug 22 ft, sand point driven 4 ft.
**32Q2	T. M. Sheldon	365	Dr	254	12-8	254	Gravel & sand	8	6/28/52	--	---	D,Irr	Pumped 4 hr at 600 gpm, dd 61 ft. Perforations, see log. Irr 55 ac. L.
**32R1	C. A. Prince	375	Dg	25	48	-----	Gravel	19.2	5/26/50	J	1/2	D,S	A3.
**32R2	W. Mosman	380	Dg	24	36	25	----------	20.5	5/26/50	--	1/4	D	Soft water.
**33A1	E. Games	370	Dg	19	48	19	Gravel	14.2	5/24/50	--	---	D	Encountered slightly cemented gravel.
**33B1	M. McKim	370	Dg	21	36	21	----------	17.2	5/24/50	J	---	D	Has been dry.
**33B2	A. C. Gilman	370	Dr	72	6	72	Sand	16.8	3/25/52	P	1/4	D	Unable to bail down.

**33D1	E. R. Lowery	370	Dg	19	30	19	----------	12.7	5/25/50	P	---	S	Soft water.
**33D2	R. J. Vroman	370	Dr	82	6	-----	----------	14.2	5/25/50	J	1/2	D	Water contains sediment.
**33E1	G. Reeves	373	Dg-Dn	24	24-2	24	----------	17.9	5/24/50	C	1/4	D	Occasional oil film. Well deepened with sand point. Chloride 8 ppm.
**33K1	D. C. Jewell	380	Dg	18	16	18	----------	20.5	5/26/50	P	1/3	D	Hard water.
**33K2	D. C. Jewell	380	Dr	105	10	105	Gravel	19.8 22 24.0	2/28/51 4/14/51 1/5/60	T	5	D,Irr	Pumped 4 hr at 80 gpm, dd 79 ft. Perforations, see log. L.
**33P1	Louis Peterson	360	Dr	105	8	105	Gravel, coarse	15.0 14	2/26/52 2/16/52	--	---	Irr	Pumped 4 hr at 200 gpm, dd not noticeable. Perforations, see log. Irr 28 ac. L.
**33R1	D. C. Jewell	390	Dr	150	12	150	----------	38 40.4	4/11/51 5/8/51	T	---	Irr	Pumped 4 hr at 90 gpm, dd 103 ft. Perforated from 42 to 106 ft. L.
**34B1	R. Mantik	325	Dr	44	6	-----	----------	13.6	5/25/50	P	---	D	Soft water.
**34F1	Roland Weder	345	Dg	42	24	42	----------	33.8	5/25/50	J	1/3	D	
**34G1	K. E. Brodan	349	Dg	45	30	-----	Gravel, pea	38.3	5/25/50	P	1/3	D	No dd after 5 hr pumping at 10 gpm.
**34H1	E. A. Long	325	Dg	22	48	22	Gravel	12.5	5/26/50	P	1/4	D	Soft water.
**34K1	Dan Cook	340	Dr	39	6	-----	----------	23.4	5/25/50	J	---	D	Owner reports water leaves lime deposits in teakettle.
**34K2	O. McGlather	353	Dg	48	12	48	Gravel & sand	42.0	5/26/50	J	1/2	D	Soft water.
**34M1	Noah Graybill	370	Dg	24	24	-----	----------	18.6	5/26/50	P	3/4	D	Goes dry in early fall.
**34M2	Noah Graybill	370	Dg	23	48	23	----------	16.6	5/26/50	H	---	S	---------Do--------
**35L1	Jack Richardson	338	Dr	78	6	78	Sand	9.8	5/25/50	J	1	D	Tested 25 gpm. Casing perforated bottom 10 ft.
**35L2	L. W. Peterson	330	Dr	77	6	77	----------	1.4	5/25/50	J	1/2	D	Well flows part of year.
							T. 17 N., R. 1 W.						
1A1	George Goss	200	Dr	160	6	-----	----------	------	---------	P	1/2	D	Quality of water is good.
1B1	H. J. Elliott	205	Dr	204	6	-----	----------	154	---------	S	1/2	D	Supply adequate.
1B2	A. O. Pherson	205	Dr	197	6	-----	----------	160	---------	J	---	D	Pumps 700 gph. Supplies two homes.
1C2	C. O. Dotson	205	Dr	150	6	-----	----------	------	---------	P	3/4	D	Well has been deepened twice. Supply adequate.
1D1	F. T. Smith	205	Dr	82	6	82	----------	57.3	11/8/57	J	1/2	D	Quality of water is good. A2.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 W. -- Continued						
1H1	C. M. Okerstrom	225	Dr	236	8	236	Sand & gravel	116	3/6/52	T	15	D,Irr	Pumped 160 gpm, dd 30 ft. Perforated from 142 to 232 ft. Has irr 38 ac. L.
1J1	Gilbert Vermeersch	215	Dr	120	6	-----	----------	87.0	10/24/57	P	3/4	D	Supply adequate.
1J2	Mrs. P. Ingram	215	Dr	150	6	-----	----------	80	1949	--	2	D	Supplies four homes. Encountered first water at 60 ft.
1M1	Phil Layne	210	Dr	67	3	67	----------	51	1955	P	3/4	D	Quality of water is good.
2A1	R. T. Peters	202	Dr	80	8	------	----------	-------	----------	P	1/2	D	Supply adequate.
2A2	C. P. Bennett	205	Dg	68	------	------	----------	16(?)	1950	P	---	D	
2B1	H. K. Totten	170	Dr	31	6	31	----------	14.3	11/8/57	P	1/2	D	Well gets low, but has been adequate for domestic use.
2B2	W. Davidek	170	Dr	38	6	38	----------	-------	---------	J	1/2	D	Encountered water at 34 ft, drilled to 78 ft, fine sand, so pulled casing back. Poor taste.
2D1	H. Ellertsen	185	Dr	46	6	46	----------	32	April, '56	J	1/2	D	Supply adequate. A2.
2E2	M. E. Powell	190	Dr	66	6	66	----------	51	1955	J	---	D	Supply adequate.
								46.3	10/29/57				
2F2	Max Huston	165	Dn	16	2	16	Sand	8.5	1957	C	1	D	------Do------
2G1	A. O. Comings	165	Dn	20	1½	20	----------	-------	---------	P	1/3	D	Iron in water.
2L1	Fred Royles	200	Dr	60	6	60	----------	-------	---------	J	1	D	
2Q1	W. F. Porsch	209	Dr	85	6	85	----------	45	1955	J	1	D	Supplies three homes. Encountered first water at 60 ft.

2Q2	A. G. Kelley	205	Dr	85	3	85	----------	30	1957	P	3/4	D	Supplies four homes. Sand most of the way.
2R1	H. A. Mahurin	203	Dr	65	12	65	----------	43.3	10/24/57	J	1	D,S	Supply adequate.
2R2	H. A. Mahurin	203	Dr	158	10	158	Sand & gravel	35	2/22/56	T	7½	Irr	Test pumped at 150 and 165 gpm. Recovery in 15 minutes. Perforations, see log. Irr 32 ac. L.
2R3	Horace Fuller	205	Dr	54	12	------	----------	49.4	10/24/57	J	1½	D	Supply adequate.
3A1	K. E. Housel	195	Dr	59	6	59	----------	43	1949	J	1/2	D	Tested 20 gpm, dd 3 ft.
3A4	Walter Rowe	200	Dr	62	8	62	Sand & gravel	32	---------	--	---	Irr	L.
3E1	Walter Rowe	200	Dr	68	24	68	Sand & gravel	32 21.2	August, '47 11/8/57	T	20	Irr	Pumped 1,000 gpm. Perforations, see log. L.
3J1	D. R. Greenwood	205	Dr	54	6	54	----------	17	1957	J	1	D,S	Supply adequate for household and turkey farm.
3Q1	G. M. Stewart	205	Dr	126	10	126	Sand & gravel	28 32.8	5/16/55 10/30/57	T	15	Irr	Pumped 3 hr at 400 gpm, dd 47.5 ft. Perforations, see log. Irr 100 ac. L.
4A1	A. W. Englehart	200	Dr	74	6	74	----------	39	1945	J	1½	D	Supplies two homes.
4B1	J. H. Spencer (Rowe)	205	Dr	243	24-10	185	Sand & gravel	25	August, '46	T	100	Irr	Pumped 800 gpm, dd 25 ft. Perforated from 100 to 160 ft. L.
4C1	J. H. Spencer (Rowe)	205	Dr	72	24-16	72	Gravel	25	April, '46	T	50	Irr	Pumped 600 gpm, dd 25 ft. Perforated from 32 to 72 ft. L.
4D1	F. E. Wilder (Rowe)	205	Dr	84	24-14	84	Gravel	25	June, '46	T	75	Irr	Pumped 900 gpm, dd 5 ft. Perforated from 44 to 84 ft. L.
4H1	L. J. Wyckoff	190	Dg-Dn	27	30-2	27	----------	18.6	10/30/57	H	---	D	A2.
4H2	L. J. Wyckoff	190	Dr	60	6	60	----------	15	1948	J	1/2	D	Supply adequate. A2.
4H3	L. J. Wyckoff	190	Dr	30	6	30	Gravel	17	1/15/58	--	---	D	Tested 20 gpm. No apparent dd. L.
4L1	Walter Rowe	195	Dr	87	24-20	87	Sand & gravel	20 21.6	Dec., '46 10/30/57	N	---	Irr	Pumped 750 gpm, dd 25 ft. Perforated from 30 to 86 ft. L.
5J1	Walter Rowe	205	Dr	130	24-10	130	Gravel	27 26.6	October, '46 11/8/57	T	25	Irr	Pumped 300 gpm, dd 28 ft. Perforations, see log. L.
5J2	Unknown	205	Dr	45?	------	-----	----------	-------	---------	J	3	D	Supplies 7 homes.
6A1	Al Zahn	195	Dg	26	30-8	-----	----------	24.2	11/12/57	C	1/3	D	Supply adequate.
6B1	Anton Christman	195	Dg	35	6	-----	----------	30	1957	J	---	D	------Do------
6C1	E. A. Ohman	195	Dr	54	6	54	Sand & gravel	24	12/1/53	J	1	D	Tested 1,100 gph, dd 6 ft. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 W. -- Continued						
6C3	Elmer Lowe	195	Dr	100	4	100	----------	30	---------	J	1	D	L.
6K2	Leslie Longworthy	186	Dg	19	36-24	-----	Gravel	17.1	11/13/57	P	1/4	D	Supply adequate.
6K4	Bob Kremer	190	Dr	37	6	37	----------	26	1957	--	1/2	D	Apparently high iron content.
6L1	R. E. Robbins	190	Dr	80	8	-----	----------	36.6	11/13/57	J	1	D,S	Soft water, supply adequate. A2.
6P1	E. & F. Frohlich	195	Dr	70	4	-----	----------	-------	---------	--	1/3	D	Relatively poor supply. A2.
6P2	Fred Frohlich	195	Dr	106	8	106	Gravel	46	6/5/58	--	---	D,Irr	Perforated from 72 to 103 ft. Temp 46° F.
6Q1	C. A. Stewart	195	Dn	18	1	18	----------	-------	---------	P	1/6	D	Supply adequate.
7A3	W. O. Tindall	195	Dr	33	6	33	----------	12	1956	J	1½	D	Suppiles two homes.
7A4	S. C. Anthony	200	Dn	40	1¼	40	----------	-------	---------	--	1/4	D	Supply adequate.
7B1	L. R. Richards	205	Dr	106	6	106	----------	38	1954	J	1	D	------Do------
7B3	F. Jamison	210	Dr	105	6	105	----------	55	March, '55	J	1	D	------Do------. A2.
7C1	A. B. Bratton	205	Dr	49	6	49	----------	31	1951	J	1/2	D	Soft water.
7G1	R. C. Dean, Sr.	210	Dg-Dn	38	42x42	38	Gravel	-------	---------	H	---	D	Well originally dug 30 ft. Water level fluctuates between 17 and 30 ft.
7J2	Arthur Boucher	210	Dr	66	6	66	Sand & gravel	36	---------	P	1/2	D	High iron content. A2.
7K1	F. W. Whidden	205	Dr	126	6	126	Gravel	43		J	3/4	D	Supply adequate.
								53.3	1/7/58				
7Q2	W. S. Hunt	205	Dr	75	3	75	----------	53	1957	P	1/2	D,S	------Do------
7R1	L. M. Alkire	210	Dr	129	10-8	129	Sand	50	6/8/53	N	---	N	Pumped 2½ hr at 75 gpm, dd 68 ft. Perforated from 98 to 129 ft. Pumps sand. Drilled to 320 ft, pulled back. L.

7R2	L. M. Alkire	210	Dr	146	8	146	Sand & gravel	45	3/13/58	T	7½	Irr	Pumped 4 hr at 60 gpm, dd 55 ft. Perforations, see log. Irr 25 ac. L.
8C1	R. A. Cunning	215	Dr	45	6	45	----------	34	1952	J	1/2	D	Supply adequate.
8D1	George Panzer	210	Dr	45	6	45	----------	33	1951	J	---	D	Supply adequate. Mostly sand.
8D2	A. J. Bennett	210	Dr	128	6	128	----------	29	1957	J	1	D	Well can be pumped dry in relatively short time.
8E1	Ed Young	195	Dr	41	6	41	Gravel	29	Nov., '57	J	1/2	D	Bailed 1,800 to 2,000 gph.
8G1	L. L. Layton	220	Dr	68	5	-----	----------	-------	---------	J	1	D	Supply adequate, soft water.
8H2	Ray Dean, Jr.	220	Dg	70	36	40	Sand & gravel	65	---------	P	---	D	Dug through 40 ft of "hardpan".
8L1	Levi Zillyette	205	Dr	55	------	-----	----------	30	---------	P	1/2	D	Supply adequate.
8P1	J. S. Fink	210	Dg	44	24-8	44	----------	-------	---------	J	1/4	D,S	Bottom 36 ft, "hardpan".
8P2	R. L. Morlan	210	Dr	99	5	99	Gravel	42	1957	J	3	D	Supplies eight homes. "Hardpan" from 8 to 97½ ft.
8Q1	E. E. Cheadle	215	Dg-Dr	73	6	-----	----------	-------	---------	J	1	D	Supply adequate for one home only. Originally dug 28 ft in "hardpan".
8R2	R. K. Mullenix	215	Dr	78	4	78	----------	33	---------	J	1/3	D	"Hardpan" nearly all the way.
8R3	E. R. Graham	220	Dr	67	6	67	----------	-------	---------	J	1	D,S	Supplies one home and 25 head of stock.
9G1	I. T. Harvey	210	Dn	18	1½	18	----------	-------	---------	C	1/2	D	Pumps 10 gpm.
9J1	Alvin Lormor	210	Dn	20	1½	20	----------	-------	---------	--	1	D	Supply adequate.
10N1	R. Rounsley	225	Dg	25	48	-----	----------	20 19.0	1957 10/31/57	P	1/4	D	
11G1	O. C. McLaughlin	200	Dr	60	6	60	Gravel	44	6/19/52	J	1	D	Bailed 1,900 gph, dd 1 ft. L.
11G2	Kenneth Navin	200	Dr	65	6	65	Gravel	32.5	5/19/52	J	1	D	Bailed 700 gph, dd 17 ft. L.
11H1	George Forrer	230	Dr	54	6	54	----------	-------	---------	J	1/2	D	Supply adequate.
11H2	Frank Adams	235	Dr	63	6	-----	----------	-------	---------	P	1	D	------Do------
11K1	W. H. Shogren	235	Dr	36	6	-----	----------	-------	---------	P	---	D,S	Supplies one home, 17 head of stock. Poor taste (iron).
12A1	R. W. Runyan	230	Dr	130	6	130	----------	-------	---------	P	3/4	D,S	Supply adequate.
12A2	R. L. Martin	235	Dr	104	4	-----	----------	64	1954	J	3/4	D,S	Supplies one home and up to 30 head of stock.
12H2	H. M. Drewry	240	Dr	68	3	68	----------	62	---------	J	1/2	D	
12J1	H. C. Bolender	255	Dr	95	3	-----	----------	-------	---------	P	3/4	D,S	Supplies one home and up to 50 head of stock.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 W. -- Continued						
12L1	Mrs. L. D. Floyd	295	Dr	116	6	116	----------	100	1947	P	2½	D	Bailed 400 gph, dd 3 ft.
13A1	V. J. Tobin	220	Dn	20	2	20	----------	11	August, '57	C	3	D	
14A1	T. A. Tifft	215	Dr	30	6	30	Gravel	15	---------	J	3/4	D	Supply adequate.
14Q1	W. F. Hattrick	245	Dr	36	4	36	----------	13 9.6	1957 10/28/57	J	---	D	------Do------. A2.
15B1	Clarence Nelson	255	Dr	64	6	-----	----------	-------	---------	J	1/2	D,S	
15F1	James Frederick-son	257	Dg	R55 49	30	55	----------	46.2	10/31/57	J	1/2	D	------Do------. A2. Obs.
15L1	C. W. Collins	225	Dn	20	1¼	20	----------	-------	---------	P	1/6	D,S	Supplies one home and up to 10 head of stock.
15M1	Emil Peterson	220	Dg	13	30	-----	----------	2.7	1/27/58	P	---	D	Hard water.
15R1	A. E. Walden	220	Dr	19	5	19	----------	8	---------	C	1/4	D	Supply adequate.
15R2	Ralph Nedrow	220	Dr	20	5½	20	----------	-------	---------	C	1/3	D	
16A1	James Frederick-son	210	Dg	12	30	-----	----------	7.2	10/31/57	N	---	N	
16E1	George Kendall	230	Dr	86	6	86	----------	51	1957	J	1½	D	Supply adequate. L.
16E2	----------	235	Dg	31	2	31	Gravel, pea	26	1957	J	1/2	D	Supply adequate.
16H1	James Frederick-son	215	Dg	12	42x42	12	----------	11.0	10/31/57	N	---	N	
16J1	Loren Davenport	225	Dr	45	6	45	----------	-------	---------	J	1/2	D,S	------Do------
16K1	Orville Glover	215	Dr	65	6	-----	----------	59 (?)	Jan., '58	J	1/2	D	
16M1	L. M. Haley	224	Dg	31	------	-----	----------	22.2	1/28/58	J	1/3	D	Has been adequate in past.

16P1	Ralph Parr	205	Dn	18	1½	18	----------	6	1957	C	1/2	D	Supply adequate.
16P2	Ralph Parr	205	Dg	12	------	-----	----------	6	---------	N	---	N	
17B1	R. E. Robey	220	Dg	34	30	-----	----------	28.9	1/27/58	J	---	D	A2.
17B2	W. J. Hodson	220	Dr	53	6	53	----------	27	1951	J	1/2	D	Supplies two homes.
17C1	Lawrence Copelan	220	Dr	66	3	-----	----------	26	1957	J	1/2	D	Supply adequate.
17C2	Roy McLucas	215	Dg?	27	36-6	-----	----------	18.6	1/27/58	--	---	D	Supply inadequate during periods of low water. Obs.
17D1	D. L. Green	215	Dr	155	6	-----	----------	60	1948	J	1/2	D	"Hardpan" at least from 6 to 26 ft.
17D2	Charles Townsend	220	Dr	67	6	-----	----------	31	1957	J	3/4	D	Supplies two homes.
17D3	B. G. Parker	215	Dr	185	6	185	----------	30	---------	J	3/4	D	Supply adequate. Encountered first water at 90 ft.
17E1	K. LaHaie	210	Dg	45	36	45	----------	36.5	1/27/58	P	3/4	D,S	Supplies two homes and 30 head of stock.
17F1	John Gonzales	205	Dg	27	24	-----	----------	23.8	1/28/58	P	1/4	D	Supply adequate.
17G1	Stanley Mahlun	205	Dr	43	6	43	----------	23	---------	J	1/3	D	
17J1	Ed McAferty	220	Dr	63	6	-----	----------	-------	---------	--	---	----	Supply adequate, soft water.
17L1	Mrs. Morris Braley	210	Dg-Dr	38	6	38	----------	24.7	1/28/58	J	1/2	D	Supply adequate.
17M1	Martin Swensson	210	Dg-Dr	53	6	53	----------	39	---------	P	1/2	D	Originally had 43 ft dug well; was inadequate at times.
17N1	Charles Kulp	205	Dr	65	3	65	----------	30	---------	J	---	D	Supply adequate.
18A1	J. H. Raymond	210	Dr	65	4	-----	----------	20	---------	P	---	D	Well was originally 170 ft in sand, filled with sand. Was blown at 65 ft level.
18B1	Bernard Griffin	210	Dr	90	6	-----	----------	-------	---------	J	1/2	D	
18H1	D. C. Jones	205	Dr	187	5	-----	Gravel	50	---------	J	1	D	Mostly sand down to 180 ft.
19C1	C. A. Moulton	200	Dr	64	6	64	Gravel	39.2	4/24/58	J	1	D	Supply adequate, soft water.
19D1	T. R. Grover	200	Dr	90	6	-----	----------	-------	---------	J	1	D	Supplies three houses and cabins.
19D2	T. R. Grover	200	Dr	85	4	85	----------	50 37.2	--------- 4/24/58	N	---	N	
19F1	Donald Jackowich	215	Dr	50	6	-----	----------	37.4	4/24/58	J	1/4	D	Supplies two homes.
19F2	C. M. Osborne	210	Dr	55	6	55	----------	35	---------	J	1	D	Supply adequate.
19F3	Mrs. Mary Cummins	205	Dg-Dr	29	4	29	----------	-------	---------	J	---	D	Supplies two homes.
19G1	R. C. Parent	200	Dr	89	------	-----	----------	79	---------	--	---	D	Supply adequate.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 1 W. -- Continued						
19H1	Mary Brux	200	Dg	14	------	-----	----------	3.5	1/30/58	C	1/2	D	Supply adequate. On flood plain.
19K1	Peter Stodolka	215	Dr	76	6	76	Gravel, pea	50	1948	J	1	D	Supplies two homes. Bailed 700 gph, dd 1 ft.
19M1	Joan Wagner	365	Dg	25	36	25	----------	-------	---------	J	---	D,S	Great fluctuation in water level throughout year. Inadequate at times. (Perched).
20C1	F. K. Warren	195	Dg	7	24	-----	----------	4.2	1/29/58	C	1/2	D	Six ft from Spurgeon Creek.
21R1	J. E. McClure	300	Dg	20	24	-----	----------	-------	---------	H	---	D	Supplies two houses.
28C1	E. J. Watkins	255	Dr	52	6	52	----------	Flow	1/30/58	--	---	D	Supply adequate.
28G1	Bushman Lake Resort	320	Dr	R90 82	6	-----	----------	5.6	1/30/58	H	---	D,S	Supply adequate. Located on bench above Bushman Lake. A2.
29P1	J. & R. Nelson	195	Dg	9	36	-----	----------	6.9	2/5/58	--	2	D,S	Supplies two homes.
30B1	W. J. Bark	220	Dr	99	6	99	----------	36	1948	J	---	D	Dd 6 ft at a 100 gpm.
30C1	Paul Link	225	Dn	26	3	26	----------	14.7	1/31/58	C	1/2	D,S	A2.
30F1	William LaPorte	255	Dr	60	6	-----	----------	40	---------	J	---	D	Supplies two homes. This may bottom in sandstone. Well has been blasted. Water is of poor quality.
30N1	A. E. Seaunier	260	Dr	95	4	-----	Sand & gravel	60	1950	P	3/4	D	Supplies three houses.
32A1	A. A. Hull	250	Dr	50	------	-----	----------	-------	---------	J	1/2	D	Supply adequate.
32A2	--Adair	250	Dr	68	6	-----	----------	32	---------	J	---	D	Water has high iron content.

32B1	Ray Wicklund	265	Dr	73	3	-----	----------	60	---------	P	3/4	D	Supplies two homes; supply adequate, but no surplus.
32G1	R. L. Nichols	238	Dr	20	6	-----	----------	7.0	2/6/58	J	1/3	D	Some iron. Water level in well is about 5 ft below lake level. A2.
32G3	C. A. Littke	255	Dg	42	30	42	----------	33.4	2/6/58	J	1/2	D	Supplies two homes.
32J1	James Imler	246	Dr	28	6	28	----------	22	---------	J	1/2	D	Supply adequate.
32J3	M. C. Nuggent	240	Dg	13	18	-----	----------	2.2	2/4/58	C	1/3	D	
32J5	W. E. Lovell	248	Dg	22	18	-----	----------	16.6	2/5/58	P	1/4	D	Supply adequate.
32K1	W. J. Fash, Jr.	238	Dg	6	18	6	----------	2.4	2/4/58	P	1/2	D	Not used for drinking water.
32K3	L. O. Burlingame	242	Dg	10	8	-----	----------	5.4	2/4/58	--	1/4	D	Has supplied 3 homes.
32P1	M. H. Zobist	260	Dr	32	6	-----	----------	24	---------	J	1/2	D	Limited supply. Encountered "hardpan" at shallow depth.
32Q1	Joe Felts	270	Dr	98	6	-----	----------	58	---------	J	3/4	D	Excellent well.
32Q2	Carl McClellan	265	Dg	34	20	-----	----------	27.2	2/4/58	J	1/4	D	Some iron, water level low in late fall.
32Q3	----------	259	Dr	R70	6	-----	----------	21.0	2/4/58	J	1/3	D	
33B1	O. C. Buckley	245	Dg	24	8-6	-----	----------	12	---------	J	---	D	
33B2	D. T. Wiard	247	Dg	12	60	12	Sand & gravel	10	1952	--	3	D,Irr	Pumped 4 hr at 80 gpm, dd 1.5 ft. Has irr 11.5 ac.
33C1	C. M. Sharp	240	Dr	37	6	37	----------	12.0	2/5/58	J	1/2	D	Gas smell, water has high iron content. Obs. Very poor quality. A and A2.
33E1	W. Z. Davis	245	Dr	R85 37	3	-----	----------	23.9	2/6/58	--	1	D,S	Water has high iron content.
33G1	R. E. Wells	245	Dr	30	6	30	----------	8	---------	C	---	D	Eight ft is reported to be an average water level. L.
33K1	Milton Wolfe	250	Dg	7	60x60	N	----------	3.9	2/5/58	--	1/4	----	
33Q1	--Remple	250	Dg	13	36	-----	----------	9.5	2/5/58	N	---	N	
33R1	E. L. Stafford	255	Dg	14	------	-----	----------	-------	---------	--	---	----	Supply adequate.
34J1	J. F. Deering	320	Dr	30	6	31	----------	24.7	1/30/58	N	---	N	Encountered sandstone at about 35 ft. Well has never been pumped, but capacity is thought to be low.
							T. 17 N., R. 2 W.						
1D1	I. E. Waters	145	Dg	6	36	6	----------	3	---------	C	1½	D,S	Supply adequate.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 17 N., R. 2 W. -- Continued													
1E1	H. E. Naumann	145	Dr-Dn	62	8-2	62	----------	22	---------	P	1/4	D	Supply adequate.
1K1	C. O. Drewry	165	Dr	103	6	93	Sand	75	---------	J	3	D	Sand all the way. Ten-foot screen on bottom.
1L1	R. E. Phillips	145	Dn	23	1½	23	----------	17	---------	J	1/4	D	
1M1	Jim Nipper	160	Dg	16	36	16	Sand	8	---------	J	1/4	D	Sand all the way. Water level is average for year.
1M2	G. M. Bates	160	Dn	40	2	40	----------	29	---------	--	1/4	D	
1M3	Cosmer Zammito	150	Dr	39	6	39	Sand	11	1958	J	1/2	D	Drilled mostly through sand.
1N1	L. E. Brown	165	Dr	172	10	-----	----------	44.7	5/21/58	J	1/4	D	Supply adequate.
2E2	O. E. Rushing	184	Dr	50	5	-----	----------	20.2	5/22/58	J	1/2	D	------Do------
2G1	Thomas Jones	155	Dr	105	6	105	Sand	45	---------	J	1	D	Supplies three houses. Encountered water at 45 ft, sand all the way.
2G2	H. L. Meek	150	Dr	90	6	-----	----------	22	---------	J	1/2	D	Supplies two homes. Very adequate.
2L1	A. L. Carpenter	185	Dn	42	1½	42	Gravel	20	---------	--	1/4	D	Water level is average for year.
2P1	Mrs. Clifford Newton	180	Dg-Dn	30	2	30	----------	14.0	5/16/58	C	1/4	D	Originally dug 20 ft.
2P2	N. Hatcher	185	Dr	100	4	-----	----------	-------	---------	J	1/2	D	Supply adequate. Encountered water at 60 ft.
2Q1	R. D. Ames	185	Dr	53	4	-----	----------	26.3	5/15/58	J	1/2	D	Water fairly hard. A2.
2Q5	A. M. Joy	180	Dr	112	6	-----	----------	40	---------	S	---	D	Supply adequate.

2R3	P. Sandbakken	165	Dr	150	6	-----	----------	30	---------	J	1	D	Supply adequate.
3J1	Edward Klamn	190	Dr	45	6	-----	----------	8 15.2	August, '59 3/14/60	P	---	D	------Do------
3K1	Cecil Steiner	189	Dn	40	3	40	----------	14	---------	C	1/4	D	------Do------
3N1	A. J. West	188	Dn	32	2	-----	----------	14	---------	--	---	D	
3Q1	Ronald Spriggs	191	Dn	28	2	-----	----------	-------	---------	C	---	D	
3Q2	Orville Behrbaum	192	Dr	62	6	-----	----------	8.7	July	J	2	D	------Do------
3R1	Peter Clausen	192	Dn	35	2	-----	----------	-------	---------	C	---	D	Supplies two homes.
4C2	Norman Reed	160	Dn	25	1¼	25	----------	22	---------	--	1/4	D	Water has high iron content. A2.
4C4	Swan Munson	160	Dn	15	2¼	15	----------	-------	---------	--	1/4	D	Water has high iron content.
4D1	Francis Dean	158	Dr	80	6	80	----------	15	---------	P	1	D	Quality of water is good.
4E1	Jim Bird	160	Dn	25	2	25	Sand	10	---------	--	1/3	D	Supply adequate.
4E3	Fred Hamann	155	Dr	64	5	64	Sand	14	---------	J	1/2	D	Supply adequate. Sand all the way.
4E4	E. W. Halvorson	150	Dg	13	36	12	----------	5.5	1/28/59	--	1/3	D	Well located only a few ft above seeps which form headwaters of unnamed stream.
4E6	B. A. Grunen-felder	158	Dg	17	36	16	----------	11.0	1/28/59	--	1/4	D	Quality of water is good.
4J1	R. D. McClintic	190	Dr	78	6	-----	Sand	24	---------	J	1/2	D	Bailed 30 gpm, dd 16 ft.
4K2	W. M. Oakes	180	Dr	46	4	46	Sand	17	---------	C	1/4	D	Supply adequate. Nearly all sand. Many sandpoints in area.
4K3	J. A. Harrison	185	Dr	48	6	48	----------	28	---------	J	1	D	
4M1	Leroy McGuire	180	Dr	49	6	49	Gravel	14.5	1954	C	1/2	D	Bailed 30 gpm, dd 4 ft. L.
4M3	C. R. Ahern	180	Dg-Dn	35	2	35	Sand	------	---------	C	1	D	Dug 8 ft, then driven.
4N1	Tom Orcutt	180	Dr	40	6	40	----------	9	1946	C	1/4	D	Bailed 20 gpm.
4N3	A. L. Simon	185	Dn	25	1½	25	Sand	------	---------	C	1/2	D	Supply adequate.
4Q3	--Melville	190	Dr	28	6	28	----------	10	1958	C	1/4	D	
4Q5	Martin Wicklund, Jr.	190	Dn	25	2	25	Sand	------	---------	--	1/4	D	Several driven wells in area.
5B1	Lars Wick	165	Dn	20	1½	20	Sand	12	---------	C	1/4	D	Sand all the way.
5G1	--Willis	160	Dn	18	1¼	18	Sand	12	---------	--	1/4	D	Supply adequate.
5G2	H. H. Simpson	160	Dn	20	2	2	----------	16	1956	C	1/2	D	
5G3	Herman Davis	165	Dn	21	2½	21	Sand	16	---------	C	1/4	D	Sand all the way.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 W. -- Continued						
5L1	Ethel Graham	160	Dn	35	2	35	----------	-------	---------	C	---	D	Supply adequate.
5R1	E. Armstrong	180	Dr	35	6	35	----------	-------	---------	J	1/4	D	
6A2	David Cox	140	Dg	12	48	3	----------	7.5	7/10/59	C	1/3	D	"Hardpan" encountered at 3 ft; bottoms in sand.
6A3	David Cox	150	Dg	24	36	-----	----------	15.7	7/10/59	C	1/2	D	"Hardpan" encountered at 6 ft. Yield not excessive.
6F1	B. Van Leyen	135	Dr	150	6	-----	Gravel	-------	---------	C	1/4	D	"Quicksand" to 126 ft. Water level near land surface.
6G1	L. A. Hetland	140	Dr	87	6	87	----------	22.0	7/9/59	J	3/4	D	Supplies two homes.
6H1	Black Lake Bible Camp	135	Dr	40	8	40	----------	11	---------	--	---	D	Pumps 1,000 gph.
6H2	--Lindebloom	140	Dr	52	6	52	----------	15	---------	N	---	N	Considerable "hardpan".
6H3	Ray Graham	137	Dr	31	6	31	----------	8.2	7/9/59	H	---	D	Used for summer home. "Hardpan" throughout most of depth.
6J1	Camp Kennydale Girl Scout Camp	140	Dr	44	6	37	Sand & gravel	12	Dec., '56	--	3/4	D	Bailed 20 gpm, dd 15 ft. Bottom 6 ft screened. L. A2.
7A1	A. C. Prankard	145	Dg	25	36	-----	----------	5.0	7/9/59	C	1/2	D	Supply adequate.
7H1	G. E. Newman	145	Dn	6	1½	6	----------	4	---------	C	1/4	D	Supply adequate. "Hardpan" reported to be within 4 ft of surface. Swamp area to west.
8D1	V. L. Halstead	152	Dn	28	2	28	----------	26	---------	C	1/2	D	Seven-foot pit dug in sand. "Hardpan" was found at 16 ft.

8D2	Carl Gilmore	155	Dg	5	48x48	-----	----------	2.0	7/9/59	P	1/3	D	Possible high iron content. Sand on bottom.
8H1	Centralia Fruit Farms	195	Dr	79	12	79	Sand & gravel	10	1/13/54	T	40	Irr	Pumped 4 hr at 600 gpm, dd 54 ft. Perforated from 42 to 44 ft and from 54 to 75 ft. L.
8H2	Centralia Fruit Farms	195	Dr	228	8	228	Sand & gravel	7.8	3/25/59	T	25	Irr	Pumped 4 hr at 340 gpm, dd 40 ft. Perforations, see log. L.
8R1	Terrance Weedon	185	Dr	46	6	46	----------	16.3	9/22/58	C	1/3	D	Supply adequate.
8R3	Theodore Elliott	185	Dn	20	1¼	20	Sand	-------	---------	C	1/3	D	Nothing hard encountered in "driving".
8R4	L. R. Sorrell	189	Dr	41	6	-----	----------	17.5	9/23/58	N	---	N	
8R5	L. R. Sorrell	189	Dr	47	6	47	Sand, gravel, clay	13	July, '56	J	1/2	D	Bailed 57 gpm, dd 14 ft. L.
9A1	C. W. Robinson	190	Dg	30	24	-----	Sand, gravel	-------	---------	--	1/2	D	Well was originally 36 in diameter, but "quicksand" filled in.
9B2	Frank Abbott	190	Dr	45	8	45	Gravel	14.5	4/9/55	J	5	Irr	Pumped 2 hr at 115 gpm, dd 10.5 ft. Perforated from 39 to 44 ft. Irr 9 ac. L.
9E2	P. C. Parr	190	Dr	30	6	-----	Sand (?)	-------	---------	--	---	D	Supplies two homes.
9F1	Troy Saeger	190	Dr	54	6	54	----------	-------	---------	J	1/2	D	Hard water.
9F3	A. G. Adams	190	Dr	54	6	54	Sand & gravel	16 17.2	8/18/55 9/24/58	C	3	Irr	Pumped 6 hr at 90 gpm, dd 11.5 ft. Irr 11.5 ac. L.
9H1	Arnold Strong	190	Dn	23	2	23	----------	13	---------	C	---	D	
9H2	Sydney Strong	188	Dn	20	2	20	Sand, gravel	10	---------	P	1/4	D	Several thin hard layers encountered in "driving". All wells "driven" in immediate area.
9M1	L. T. Eylenfeldt	189	Dr	45	6	45	----------	15.7	9/23/58	J	1/2	D	Supply adequate.
9M3	----------	189	Dr	42	6	42	----------	15.0	9/23/58	J	1	D, Irr	Two layers of "hardpan" penetrated. First layer about 5 ft below surface.
9P1	G. L. Dodds	190	Dr	23	6	23	----------	7.9	6/5/58	J	1/4	D	Some iron content.
9R1	Bill Bowles	190	Dn	22	2	22	----------	16	---------	P	3/4	D	Sand on top.
11A1	R. F. Reinke	175	Dr	87	6	76	Sand, gravel	37	5/20/51	J	3	D, Irr	Pumped 4 hr at 50 gpm, dd none apparent. Well screen from 76 to 87 ft. Irr 10 ac. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 W. -- Continued						
11A2	Henry McVittie	165	Dn, B	65	6-1¼	-----	Sand	32	----------	P	1/4	D	Augered part way and driven the rest. Some iron content.
11A3	L. M. Fauver	170	Dr	56	5	46	Sand	35	1957	J	1/2	D	Some iron content. Ten-foot screen.
11C2	R. J. Cysewski	185	Dg-Dr	49	6	44	Sand	9.8	4/8/51	J	1	D	Dug 8 ft. Supplies two homes. Many driven wells in area. Six-foot screen. Bailed 900 gph, dd 18 ft.
11F1	City of Olympia Airport	195	Dr	180	6	-----	----------	-------	----------	T	7½	D	Supplies needs of airport.
11F2	City of Olympia Airport	195	Dr	67	8	-----	----------	12.6	5/16/58	N	---	N	Standby well.
11G5	W. G. Jones	195	Dr	60	6	-----	----------	17	----------	--	---	D	Many driven wells in area.
11G7	Carl Bennett	195	Dn	27	1¼	-----	----------	19	----------	--	---	D	Supply adequate.
11H1	Centralia Fruit Farms	205	Dr	192	10	192	Gravel	65	4/6/46	T	35	Irr	Pumped 256 gpm, dd 70 ft. Perforated from 75 to 82 ft and from 150 to 160 ft. Irr 75 ac. L.
11K1	----------	200	Dr	109	8	-----	----------	13	----------	--	---	----	Supply adequate.
12C1	Mrs. H. C. Shank (Trail's End Ranch)	185	Dr	90	6	90	Sand	56	1953	S	3	D	Supplies 10 cabins and lodge. L.
12E1	Mrs. H. C. Shank (Trail's End Ranch)	205	Dr	137	6	137	----------	-------	----------	S	1	D	Supplies 3 houses.

12L1	E. S. Walker	200	Dr	91	6	91	Gravel	65	7/15/42	J	---	D,S	Great thickness of sand before penetrating "hardpan" and gravel.
12N2	J. Hofert Co.	205	Dr	304	12	304	Sand & gravel	67	9/5/57	--	---	Irr	Pumped 7 hr at 230 gpm, dd 82 ft. Perforated from 260 to 280 ft. L.
13D1	A. M. Eymer	190	Dr	57	5	-----	----------	26.5	5/8/58	J	1/2	D	Soil and sand for first 30 ft.
13D6	Francis Goetz	190	Dn	29	------	-----	Sand	-------	---------	--	---	D	"Hardpan" at 20 ft, overlain by sand.
13D7	H. J. Keppert, Sr	190	Dr	65	6	65	----------	27	---------	--	---	D,Irr	Pumped 33 gpm; dd 8 ft.
13F1	C. S. Lesh	195	Dr	62	6	62	----------	22	1953	J	1	D	Supply adequate.
13J1	C. F. Ockfen	187	Dr	65	6	54	Sand	-------	---------	J	1/3	D,S	Hit first water at 38 ft. Drilled deeper than 45 ft, but pulled back because of too much sand.
13K2	Lloyd Bulliett	195	Dr	51	6	51	----------	30	4/22/57	J	1/2	D	Supply adequate.
13L1	F. F. Brigham	200	Dg-Dr	53	3½	53	----------	38	1957	J	---	D	Supply adequate. Originally dug 33 ft.
13L2	Byron Brigham	200	Dr	50	6	50	----------	38	---------	--	---	D	Supplies two homes. Casing had to be held back at 45 ft.
13Q1	James O'Brien	212	Dr	76	3	76	----------	50	1957	P	1/2	D,Irr	
13R1	A. E. Young	225	Dr	88	6	88	Sand & gravel	40	9/24/54	J	---	D	Supplies two homes. Bailed 20 gpm, dd 17 ft. L.
13R5	A. S. Jensen	215	Dr	57	4	-----	----------	36	---------	J	1/3	D	Water level fluctuates 7 ft during year.
14H1	Helen Mulder	202	Dr	48	3	48	----------	36	---------	P	1/2	D	Supply adequate.
14M1	M. H. McPhee	198	Dr	39	6	39	Gravel	14 16.6	Sept., '57 5/14/58	C	1	D	------Do------
14N2	L. R. Armstrong	200	Dr	51	10	51	Gravel	14	4/12/55	N	---	D;Irr	Not used at present. Pumped 4 hr at 95 gpm, dd 45 ft. Perforated from 40 to 48 ft. L.
14M4	R. F. Szolas	198	Dr	35	5	-----	Gravel	17	May, '47	--	---	Irr	Has irr 5 ac. L.
14N1	Walter Saeger	198	Dg	27	30	-----	Sand	13.5	5/14/58	--	---	Irr	Has irr 10 ac. L.
14N2	C. A. Parker	198	Dr	60	8	60	Gravel	10	12/19/48	J	1/2	D,Irr	Pumped 120 gpm, dd 10 ft. Perforated from 30 to 58 ft. Has irr 22 ac. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 17 N., R. 2 W. -- Continued													
15B1	Hugh Mitchell	190	Dg	27	------	27	----------	11.2	5/26/58	H	---	D	Water contains some iron.
15C1	T. B. Balch	190	Dg	25	36	-----	----------	16.4	5/26/58	H	---	D	
15D1	Otto Kohse	190	Dr	25	6	25	----------	9.7	5/26/58	J	---	D	Supply adequate. Soft water.
15F1	L. A. Wuerth	198	Dr	43	6	43	----------	22.6	5/16/58	J	1/2	D	Supply adequate. Water is medium hard.
15H1	Clyde Bush	195	Dr	47	4	47	----------	20	---------	J	1/2	D	Water level pertains to summer months.
15J1	Tilden Voekel	195	Dr	26	4	26	----------	11.7	5/22/58	J	1/4	D	
15J2	Tom Philpott	195	Dr	22	4	22	----------	11.2	5/15/58	C	1/4	D	Supply adequate.
15L2	W. R. Taylor	198	Dr	30	8	-----	----------	15.4	5/16/58	--	---	D	------Do------
15L3	W. R. Taylor	198	Dg	-----	60x60	-----	----------	19.4	5/16/58	--	---	----	
15M1	J. R. DeBruyne	195	Dr	40	3	40	----------	17.7	5/20/58	C	1/2	D	
15N1	Conrad Schelle-	190	Dr	68	8	68	----------	20.4	9/22/58	J	1/4	D	Supplies 3 houses and mill. Water level outside casing in dug portion is about 9 ft.
15N2	Basil Mulford	195	Dg	13	48x48	-----	Gravel	10.0	9/19/58	C	1/2	D	Supply not very large.
15P1	Henri Schlottman	198	Dr	82	8	67	Gravel	17	Sept., '52	T	5	Irr	Pumped 4 hr at 126 gpm, dd 42 ft. Perforated from 45 to 66 ft. Irr 20 ac. L. Al.
15P2	Henri Schlottman	198	Dr	28	10	-----	----------	10.0 13.1	3/28/58 6/2/58	--	1	D	Supply adequate.

16M1	Jack Blomberg	195	Dg	18	48x48	-----	----------	-------	---------	H	---	D	Supply inadequate. Owner is deepening. "Hardpan" at 16 ft.
16N1	C. M. Clark	195	Dg	21	36	-----	Gravel, pea	16	Sept., '58	C	1/4	D	Supply adequate.
16P2	Ted Cox	195	Dr	33	6	-----	----------	8	---------	C	1/2	D	
16R1	A. P. Thomas	195	Dr	34	8	29	Sand & gravel	9	July, '52	T	7½	Irr	Pumped 4 hr at 140 gpm, dd 12 ft. Six-foot screen from 28 to 34 ft. Irr 20 ac. L. A1.
17B1	D. E. Kohse	185	Dr	41	4	41	----------	12.5	9/22/58	C	1/4	D,S	Supplies two homes.
17F1	Jack Gilliam	185	Dg	17	18	-----	----------	13.5	9/22/58	C	1/4	D	--------Do--------. A2.
17L1	Margaret Barton	182	Dn	18	1½	18	----------	11	---------	C	1/4	D	Supply adequate.
17N1	Ed Didelot	180	Dg	16	3	-----	----------	-------	---------	--	---	D	Well apparently backfilled around small casing.
17R1	L. A. Bretthauer	185	Dr	33	6	33	Gravel	18.2	9/18/58	J	1/2	D,Irr	Tested at 75 gpm with no appreciable dd. L.
18G1	Charles Curtarelli	170	Dr	90	4	-----	----------	22	---------	J	1/2	D	
18H1	John Seed	175	Dr	23	6	23	----------	4.2	1/26/59	P	1/4	D	Supply adequate.
18H2	E. Bickers	175	Dg-Dr	48	6	48	----------	7	---------	P	1/4	D,S	------Do------
18K1	Charles Curtarelli	170	Dr	45	8	45	----------	14	July, '54	T	5	Irr	Pumped 4 hr at 135 gpm, dd 8 ft. Perforated from 32 to 44 ft. Irr 12 ac. L.
18K2	Charles Curtarelli	170	Dg	22	------	-----	Gravel	8	---------	--	---	D	Supply inadequate for other than minimum domestic use.
18R1	Merle Shoop	180	Dg	10	36	-----	----------	7.0	9/22/58	--	---	D	Supply adequate.
19G1	E. O. Bay	162	Dg	9	48	-----	Sand & gravel	7.0	9/17/58	C	1/4	D	------Do------
19G2	Leslie Lemmon	161	Dg	9	14	-----	----------	7	---------	C	1/4	D	
19G3	William Bay	161	Dg	10	------	-----	----------	7.0	9/17/58	C	1/4	D	
19K1	Keith Holmes	160	Dr	44	6	44	Gravel	13 13.4	9/10/55 9/17/58	P	---	D	Bailed 38 gpm, dd 10 ft. L. A2.
19L1	H. R. Housman	162	Dr	37	4	-----	----------	9.4	9/17/58	P	1/4	D	Supply adequate.
19L2	Larry Moore	160	Dr	47	6	-----	----------	-------	---------	J	1/3	D	Supply inadequate during summer.
20B1	G. N. Bivins	185	Dg	16	36	-----	----------	12	6/28/44	--	3	Irr	Pumped 9 hr at 135 gpm, dd 1 ft.
20B2	W. J. Hazard	185	Dr	60	6-5	60	Sand & gravel	14.2 14.3	9/15/56 9/18/58	--	2½	Irr	Bailed 57 gpm, dd 2 ft. Has irr 8 ac. L.
20B3	Andrew Kortegard	185	Dg	18	12	-----	----------	-------	---------	P	1/4	D	Supply inadequate, dry on 9/8/58.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 W. -- Continued						
20G1	State Dept. of Natural Resources	185	Dr	80	12-10	80	Sand & gravel	13	---------	T	25	Irr	Pumped 7 hr at 620 gpm, dd 7 ft. Perforated from 48 to 80 ft. Irr 33 ac. L. A2.
20H1	State Dept. of Natural Resources	185	Dr	70	12-10	70	Sand & gravel	8.4	5/15/56	T	20	Irr	Pumped 6 hr at 495 gpm, dd 8 ft. Perforated from 39.5 to 69.5 ft. Irr 40 ac. L.
21B1	Merle Goble	195	Dn	21	2	21	----------	15	1958	--	1/4	D	"Hardpan" at bottom.
22B1	E. C. Lemmon	198	Dr	55	6	55	Sand & gravel	17	9/15/55	J	---	D	Bailed 17 gpm, dd 18 ft.
22B2	Vera Matthews	195	Dr	50	6	-----	----------	------	---------	J	1/2	D	
22B3	A. H. Crader	195	Dg	19	42	-----	Gravel	8.4	5/26/58	J	---	D	Supply adequate. Soft water. "Hardpan" at 10 ft.
22F2	Inez Haynes	195	Dn	17	2	17	----------	12	---------	--	---	D	Supplies two homes.
22J1	Harry Patterson	205	Dr	48	6	48	Gravel	18	9/16/51	T	2	Irr	Perforated from 38 to 47 ft. Has irr 5 ac. L.
22J2	Joe Oderman	195	Dr	70	6	65	Sand	12	5/1/56	C	3	Irr	Pumped 4 hr at 60 gpm, dd 48 ft. Perforated from 65 to 70 ft. Has irr 10 ac. L.
22K1	Ray Parish	200	Dr	27	6	27	----------	13	---------	J	1	D	Supply adequate.
22M1	Frank Large	195	Dn	16	1½	16	----------	10	---------	C	1/2	D	Water contains some iron.
22N1	Stephenson - Armstrong	205	Dr	22	6	22	----------	4	---------	J	1	D	Supplies two homes.
22R1	John Randall	195	Dr	23	6	23	----------	11.4	5/26/58	J	1/2	D	"Hardpan" layer at 14 ft.

22R2	H. F. Wiseman	200	Dr	30	6	30	----------	11	---------	C	2½	D	Yield, 95 gpm.
22R3	Ole & Carl Jensen	195	Dg	16	30	-----	----------	10.4	5/27/58	--	---	D	Supply adequate.
22R4	Ole & Carl Jensen	195	Dg	16	30	-----	Sand & gravel	11.0	5/27/58	C	10	Irr	Pumped 220 gpm, dd 5 ft.
23C1	W. Dillon	200	Dg	18	18	-----	Sand	11.3	5/14/58	J	---	D,S	Penetrated thin layer of "hardpan".
23D1	J. J. Brand (Yockers)	197	Dg	26	36	-----	Gravel	18	3/1/51	--	1/2	D,Irr	Pumped 6 hr at 35 gpm, dd 4 ft. L.
23G1	J. H. Scott	205	Dg	28	6	-----	----------	12	---------	C	1/3	D	Water contains some iron. Springs on hill to north.
23G2	G. N. Haines	208	Dg	22	8	-----	Sand & gravel	16	5/13/58	J	1/2	D,S	Supply adequate in normal years.
23M1	Stanley Bergh	195	Dr	30	8	30	----------	11.8	5/14/58	C	---	D,S	Supplies two homes.
23Q2	Lucile Besse	203	Dr	22	------	-----	----------	-------	---------	J	---	D	
24A1	A. E. Young	240	Dg	12	36	-----	----------	5	---------	--	---	D	Supply adequate for one home.
24C1	Ned Cochran	250	Dr	44	6	44	Sand & gravel	1.2	4/16/58	C	10	D,Irr	Tested at 100 gpm, dd 7 ft. Hit "hard" rock at 50 ft.
25N1	Robert Wallace	220	Dg	10	48	-----	----------	3.2	6/4/58	C	---	D	Water has high iron content and poor taste. A2.
25P1	Curt Farr	225	Dr	25	6	25	----------	10.4	6/4/58	J	---	D	Quality of water is good.
26D1	D. R. Johnson	195	Dr	30	8	-----	----------	7.3	5/27/58	J	---	D	Water contains some iron.
27B1	Ole & Carl Jensen	192	Dg	13	30	-----	Sand & gravel	8.8	5/27/58	C	3	Irr	Pumped 80 gpm, dd 4 ft.
27E1	John Rixe	200	Dg	15	------	-----	----------	4.6	6/4/58	C	1/2	D	
27H1	O. V. Koehler	197	Dr	60	5	-----	----------	33.6	5/27/58	J	1/3	D	Supply barely adequate, slow recharge.
27N1	C. H. Allred	200	Dn	20	2	20	----------	-------	----------	--	---	D	Water contains some iron.
28A1	Calvin Chapman	195	Dn	18	2	18	----------	1	----------	C	1/4	D	Water has high iron content.
28G1	J. R. Whisler	190	Dg-Dr	31	6	31	----------	13.8	6/5/58	P	1/2	D	Water contains iron, poor taste. A2.
28H1	J. G. Spoerhase	190	Dr	20	6	20	----------	10.1	6/5/58	C	.1	D,S	Poor taste.
28K1	Mel Tibbitts	190	Dg	12	48	-----	----------	6	---------	--	---	D	Inadequate in fall. Thin layer of "hardpan" encountered in attempt to dig new well. Lower water has very poor taste.
29L1	E. W. Countryman	180	Dr	21	18-12	21	Sand & gravel	6	5/7/52	C	10	Irr	Pumped 4 hr at 200 gpm, dd 12 ft. Perforated bottom 6 ft. L.
30D1	Roy Morrow	155	Dr	27	6	27	Gravel & sand	10 10.3	9/20/58 9/24/58	N	---	D	Bailed 900 gph, dd 10 ft. Sand and gravel from 17 ft to 27 ft, some clay.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 2 W.						
30E1	Milov Fuller	165	Dg	17	30	-----	Gravel, pea	11.0	9/16/58	C	1/4	D	"Hardpan" layer 9 ft thick from 7½ to 16½ ft.
30J1	Viggo Hansen	180	Dg	16	36	-----	----------	8	----------	C	1	D,S	Water contains some iron. Supplies turkey ranch.
30M1	Louis Weiks	168	Dr	100	6	91	----------	20	5/3/51	J	1	D	Bailed 39 gpm, dd 15 ft. Ten-foot screen on bottom.
30P1	Viggo Hansen	174	Dg	11	36	-----	----------	9.7	7/22/58	C	3/4	D	Quality of water is poor.
31A1	A. V. Frederick-son	185	Dg	10	36	-----	----------	7.0	7/22/58	P	1/4	D	
31C1	Viggo Hansen	178	Dg	16	36	-----	----------	8	---------	C	3/4	D	Water contains some iron.
32B1	--Harvey	187	Dr	27	8	-----	----------	6.6	6/5/58	P	1/4	D	Poor taste.
32C1	Reinhold Newman	185	Dr	26	18	-----	----------	3.5	6/6/58	T	15	Irr	Tested at 225 gpm. Has irr 40 ac. L. A2.
32D1	Theodore Hedges	181	Dr	32	18	-----	Sand & gravel	1	12/8/51	--	2½	Irr	Pumped 2 hr at 350 gpm, dd 10 ft. Irr 39 ac. L.
33C1	E. G. Collins	190	Dg	12	------	-----	----------	8.0	6/5/58	C	1/3	D	Water contains some iron.
33D1	C. E. Littlejohn	190	Dr	86	6	-----	----------	12	---------	J	1/2	D	Poor taste. Deep drilling did not improve water quality.
33D2	C. E. Littlejohn	190	Dn	30	2	30	----------	12	---------	N	---	N	Supply adequate, but quality is poor.
33M1	Cecil Littlejohn	195	Dr	65	8	65	----------	10	---------	J	---	D	Supply adequate.
34B1	Tom Ismay	200	Dg	21	18	-----	Gravel	13.0	5/27/58	N	---	D	Water has high iron content.

34J1	State Parks Committee (Millersylvania)	220	Dr	185 38	6	-----	----------	17.6	10/2/58	N	---	N	Abandoned. Well reported 185 ft deep. Tape enters only 38 ft.
34R1	State Parks Committee (Millersylvania)	200	Dg	18	36	-----	----------	9.0	9/26/58	C	5	D	Supply inadequate for high summer demand in park.
35L1	Vinton Pitman	205	Dr	37	6	37	----------	6.6	6/5/58	J	---	D	Supply adequate.
36C1	----------	220	Dr	50	6	-----	----------	40	---------	J	---	D	Supply inadequate, hit "bedrock".
							T. 17 N., R. 3 W.						
1F1	L. H. Brown	215	Dr	80	6	-----	----------	65	---------	J	---	D	Supply adequate.
1G1	S. H. Ritter	210	Dr	42	4	-----	----------	------	---------	J	1/2	D	Supply adequate, except for fall of 1957.
1H2	Paul Huber	200	Dg	26	48	-----	----------	24	---------	--	---	D	Supply inadequate at times.
1L1	R. L. Venable	211	Dr	60	4	-----	----------	43.0	1/20/59	J	1/2	D	Supply adequate. A2.
1P1	E. C. Lovely	220	Dr	85	4	-----	----------	-------	---------	J	1/2	D	Supplies two homes.
1R2	Vernon Kirkpatrick	200	Dr	-----	4	-----	----------	57.6	1/20/58	J	1/2	D	
11A1	Rinholt Rossow	245	Dg-Dr	96	6	-----	----------	80	---------	--	---	D	Dug 54 ft. "Hardpan" encountered.
11A2	L. L. Sheldon	250	Dr	117	6	-----	----------	------	---------	J	1	D	Supply adequate.
11L1	Lawrence Meyer	180	Dr	186	6	-----	----------	60	---------	J	2½	D	Supply inadequate. Yields about 5 gpm. Perforated between 20 and 30 ft. "Bedrock" below 30 ft.
11N1	Lawrence Meyer	240	Dg	9	36	-----	----------	1.1	1/14/59	--	---	D	Supply inadequate. Hit "bedrock" at 9 ft.
12A1	H. C. Campbell	200	Dg-Dr	72	6	-----	----------	52	---------	J	---	D	L.
12B1	H. M Reynolds	203	Dr	93	6	93	Gravel	78	7/27/53	--	---	D	Bailed 18 gpm, dd 3 ft. L. A2.
14A1	--Forbes	135	Dg	10	48x48	-----	Sand	4	---------	--	1½	D	Located very close to Dempsey Creek.
14F2	H. L. Plumb	155	Dr	63	6	-----	----------	15	---------	N	---	N	
14R1	F. L. Thompson	185	Dg	50	30	-----	----------	40	---------	--	---	D,S	Well originally dug 32 ft.
22R1	S. C. Hicks	195	Dr	84	6	-----	----------	25	---------	J	1	D	Supply adequate.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 17 N., R. 3 W. -- Continued						
23H1	G. H. Kirkham	195	Dg	62	30-18	-----	----------	23.1	6/20/60	J	1/2	D	Supply adequate. Water cascading into well at about 25 ft level on 1/13/58. L. A2.
23Q1	--Van Bishler	195	Dg	21	48x48	-----	----------	20.5	1/13/58	H	---	N	"Hardpan" for at least 15 ft, board cribbing below. Supply inadequate.
23R1	C. E. Kinney	173	Dr	68	6	68	Sand, pea gravel	25.0 32	1/9/59	N	---	N	Had 19 ft dug well, but it caved in. L.
24E1	Wayne Musgrove	195	Dr	73	6	73	----------	50.9	1/13/59	J	1	D	Supply adequate. "Hardpan" at surface near house.
25A1	Earle Haley	150	Dr	80	6	-----	----------	8	1955	J	1/2	D	Had 16 ft sandpoint, supply adequate but poor quality.
25J1	W. L. Clark	165	Dg	21	36	-----	Gravel	12	---------	C	1	D	
25P1	J. W. Sutmiller	145	Dr	66	6	66	Gravel	12	Oct., '52	--	---	D,S	Supply adequate. Bailed 10 gpm, dd 37 ft. L. A1.
25R1	E. L. Tucker	170	Dg	16	36x36	-----	----------	13	---------	C	1/4	D	Supply adequate. Water is of good quality.
25R2	J. E. Baker	175	Dg	11	36	11	----------	9.1	9/17/58	C	1/4	D	
25R3	Charles Phelps	177	Dg	14	48-36	-----	----------	11.4	9/16/58	C	1/4	D	Supply adequate.
26C1	R. W. Swim	210	Dg	50	36	-----	----------	32.7	1/12/59	N	---	N	
35C1	Hazel Burkhart	140	Dr	52	6	-----	----------	0.2	1/19/59	--	---	D,S	Bailed 30 gpm, no apparent dd. A2.

35E1	W. A. White	145	Dr	43	6	43	Gravel, sand	17	1952	--	---	D,S	Originally had 20 ft dug well that was inadequate. Bailed 30 gpm, dd 6 ft. A1. L.
35F2	M. Rutledge	142	Dg	20	24	-----	----------	9.3	1/19/59	--	1/2	D,S	Supply adequate. A2.
35G1	E. N. Truby	138	Dn	21	1½	21	Gravel, pea	12	--------	C	1/4	D,S	
35J1	Harold Bade	135	Dn	15	1¼	-----	----------	------	--------	--	---	D,S	Could not drive past 15 ft. Possibly bottoms on hardpan.
35L1	Welks Dairy	140	Dr	72	8	-----	Gravel	13	6/1/53	C	5	Irr	Well originally 51 ft deep. Pumped 4 hr at 108 gpm, dd 2 ft. Deepened in 1958, increased yield to 700 gpm. L.
36B1	Unoccupied	175	Dn	18	1¼	18	----------	3.6	1/26/59	N	---	N	
36G1	V. R. Ebersole	175	Dg	16	36	-----	----------	12	--------	C	1/4	D	Supply adequate. Water is of good quality.
36N1	Lloyd Jones	160	Dg	12	48	-----	Gravel	5.0	1/26/59	--	---	D	Deepened well in 1958 to increase summer supply.
36N2	Albert Hall	165	Dg	9	60x60	-----	----------	3.4	1/26/59	C	1/3	D	Well goes dry in summer. Reportedly bottoms on hardpan. A2.
36N4	G. E. Noffsinger	170	Dg	8	36	-----	----------	1.5	1/26/59	P	1/4	D	Has tested at 30 gpm.
							T. 18 N., R. 1 E.						
5M1	Bruce Pickering (Brown)	10	Dr	183	10	-----	----------	Flows	11/13/57	--	---	D,S Irr	Measured depth 183 ft. Reported depths range from 200 to 900 ft. Flow of 360 gpm. Serves dairy. A and A2.
6Q1	Brown Farms, Inc.	10	Dn	165	2	-----	Sand	Flows	11/13/57	--	---	S	Flow of 5 gpm.
7B1	G. McMann	12	Dr	124	8	-----	----------	------	--------	C	1½	D	
7E1	W. O'Brien	230	Dr	223	6	-----	----------	204	--------	S	1	D	"Fine water". Several springs in general area. A2.
7H1	West Coast Lumbermen's Assn.	10	Dr	120	6	120	----------	+ 1	--------	--	1/2	D	Supplies greenhouse.
8B2	L. M. Kover	12	Dn	55	2	-----	----------	11	--------	P	1/2	D	Water of good quality, "iron in deeper water".

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 18 N., R. 1 E. -- Continued													
8C1	W. Koenig	10	Dn	75	-----	-----	----------	Flows	11/14/57	--	---	----	Measured flow of 3 gpm.
8C2	W. H. Wallace	10	Dn	120	2½	120	----------	0.8	11/15/57	--	1/3	D	Supplies two homes. Slight iron content.
8D1	G. D. Martin	10	Dn	15	2	15	----------	6	---------	P	1/4	D	
8D2	Gordon McMann	10	Dr	118	8	118	----------	0	---------	T	1	D	Supplies four homes. High iron content.
8D3	West Coast Lumbermen's Assn.	10	Dr	112	8	101	Sand & gravel	1.2	9/29/50	--	50	Irr	Pumped 45 minutes at 810 gpm, dd 6.8 ft. Screened bottom 10 ft. L.
8D4	West Coast Lumbermen's Assn.	5	Dr	110	8	-----	----------	0.9	11/13/57	C	20	D,Irr	Very high iron content. A and A2. Obs.
8D5	G. Schilter	10	Dn	113	2	113	----------	Flows	11/14/57	--	---	----	
8F2	L. G. Dahl	18	Dr	100	3	-----	----------	6.6	11/14/57	C	1	D,S	Water has some iron content.
8G1	Homer Nelson	20	Dr	75	6	-----	----------	8.0	11/14/57	--	---	D	Tested at 25 gpm. No appreciable dd after pumping 3 hr.
8G3	I. E. Walrod	20	Dr	60	6	-----	----------	6	---------	C	1/3	D	
8J1	A. R. Golson	12	Dn	96	2	-----	----------	10	---------	C	1/3	D	Originally had objectionable sulfur and iron, good quality water now.
8K1	Anthony Kiechle (Miller)	13	Dr	78	8	78	Sand & gravel	10.2 9.4	3/16/53 11/19/57	T	---	D,S Irr	Pumped one week at 125 gpm, dd 2 ft. Some iron. L.

8R1	Gardner Estate	18	Dr	106	8	-----	----------	8	---------	C	10	Irr	Pumped 132 gpm, dd 4 ft. Some iron content.
16L1	S. W. Staatz	35	Dr	48	8	-----	Gravel	9.0	11/19/57	C	15	Irr	Pumped 4 hr at 150 gpm, dd 12 ft. Perforated from 41 to 48 ft. L.
17C2	J. M. Webb	14	Dn	115	2	-----	----------	Flows	---------	J	1/2	D	"No Iron".
17C5	O. A. Peterson	14	Dn	128	2	-----	----------	7	---------	J	1/2	D	Some iron. Penetrated "hardpan" strata from 84 to 104 ft.
17C8	Holroyd Co.	25	Dg	16	------	-----	----------	10.0	11/20/57	C	50	Ind	Used for gravel washing. Infiltration type well; 25x25 ft. A2.
17D2	Ted LaChance	15	Dn	110	2	-----	----------	------	---------	P	1/4	D	Water level reported close to surface. Some mineral content.
17E2	E. Deck, Jr.	22	Dr	109	6	109	----------	2.9	11/20/57	C	1/2	D,S	A2.
17G1	E. A. Edstrom	20	Dg	20	24	-----	"Quicksand"	8	---------	C	1/4	D	"No Iron". Clay and sand upper 8 ft.
18A1	E. Deck, Jr.	20	Dr	120	8	120	Sand & gravel	Flows	11/14/57	--	---	D,S Irr	Was flowing approximately 250 gpm on 2/17/53. Perforated from 112 to 117 ft. A2. L.
19E1	Paul Nicholaus	175	Dr	156	6	156	----------	------	---------	C	1½	D	
19J1	Fred Loftin	60	Dr	68	6	-----	----------	------	---------	T	1/2	D	Water is of good quality. Several springs in general area.
19P1	Hugh Holland	140	Dr	114	6	-----	----------	------	---------	J	---	D	
20A1	Andy Norwood	200	Dr	300	6	-----	----------	------	---------	T	---	D,S	
20L1	Jess Thompson	125	Dr	132	6	127	Sand & gravel	110	1945	S	3	D,S	Supplies seven homes. Bronze screen bottom 5 ft. No "hardpan" encountered. A2. L.
20R1	Ida Iyall	225	Dr	86	4	-----	----------	10	---------	P	3/4	D,S	A2.
29N1	J. L. Vigus	130	Dr	128	6	-----	----------	------	---------	P	1	D	"Poor water", stains everything.
30M1	Nisqually Hog Ranch	190	Dr	170	6	-----	----------	------	---------	T	3	D,S	
31A1	C. F. O'Brien	100	Dr	85	6	85	----------	71.5	1950	T	3/4	D,S	Water is of good quality. Bailed 1,200 gph, dd 1 ft.
31E1	S. A. Grove	225	Dr	175	6	175	Gravel, sand, clay	150	1954	P	1	D	Bailed 19 gpm, dd 5 ft. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 E. -- Continued						
31G1	E. V. Williams	133	Dr	76	4	-----	Gravel	66.2	1/17/58	J	1/2	D	Quality of water is good, slight iron content. Six ft of "hard-pan" above gravel near bottom of well. A.
31J1	R. D. Calvert	100	Dr	60	6	60	----------	-------	---------	J	1/2	D	
32C1	W. H. Shogron	90	Dr	79	4	-----	----------	-------	---------	J	1/2	D	Quality of water is good.
32D1	E. L. Thornton	120	Dr	108	------	-----	----------	-------	---------	J	---	D	High mineral content.
32D3	Don Hook	100	Dr	97	6	-----	----------	64	---------	T	1½	D	"Iron water" at 82 ft, good water at 97 ft.
32H1	Robert Gallup	250	Dr	189	6	189	----------	171.0	10/23/57	P	1/2	D,S	
**32M1	L. K. Pomeroy	152	Dr	112	6	112	Gravel & sand	84.9	11/1/51	J	---	D	Bailed ½ hr at 15 gpm, no dd. L.
							T. 18 N., R. 1 W.						
2P1	Bruno Betti	220	Dr	238	6	-----	Sand	150	---------	P	1	D	Supplies five homes. L.
2P2	Bruno Betti	220	Dr	183	6	-----	Sand & gravel	150	---------	T	5	D	Supplies five homes. A2. L.
3N1	John Nelson	75	Dr	80	6	75	Sand	22 18.2	1953 1/19/59	J	---	D,S	Some iron content. Bailed 10 gpm, dd 18 ft. Bottom 6 ft, screened. L.
4R1	Richard Moes	75	Dg-Dr	37	6	37	----------	20	---------	--	---	D,S	Dug 30 ft, drilled 7 ft.
5B1	Harry Longmire	115	Dg	26	48	-----	Sand, coarse	21.0	1/26/59	J	---	----	L.

5C1	D. Horne	130	Dg	50+	36	-----	----------	38.2	1/26/59	J	---	D	
5D1	Henry Long	150	Dr	63	6	-----	----------	51	---------	J	---	D	
5E1	Tom Green	150	Dr	37	6	-----	----------	23.5	---------	J	---	D	Water has high iron content.
5F1	G. Powell	135	Dg	49	48	-----	----------	41.5	1/26/59	--	---	D	
5F2	N. R. Betts	135	Dg	50	36	-----	----------	40.6	1/26/59	--	---	D	
5L1	E. M. Skavdal	130	Dg	15	48	-----	----------	8.6	1/26/59	J	---	D	
5M1	M. Grimm	150	Dr	56	6	-----	----------	5.0	1/27/59	--	---	D	
5N1	Don Acheson	150	Dg	19	36	-----	----------	2.5	1/27/59	J	---	D	
5P1	G. C. Dawley	140	Dr	60	6	-----	Sand, gravel	3	June, '56	J	---	D	L.
5Q1	--Lawrence	125	Dg	18	48	-----	----------	9.0	1/26/59	J	---	D	
5R1	--Morehous	75	Dr	311	6	-----	----------	50		J	---	D	Note variance between reported water level and that measured.
								7.9	1/20/59				
5R2	B. A. Michaelis	75	Dr	58	6	53	Sand, clay	10	July, '56	--	---	D,S	Bailed 15 gpm, dd 23 ft. Bottom 5 ft screened. L.
6A1	C. Sylvester	155	Dr	87	6	-----	----------	55	---------	J	---	D	
6A2	C. McLaughlin	150	Dr	71	6	71	----------	29.7	1951	P	---	D	Bailed 13 gpm, dd 21 ft.
6B3	F. M. Parse	160	Dg	43	12	-----	----------	30.8	5/19/59	J	---	D	Water has high iron content.
6E1	Bert Kaler	150	Dr	76	6	-----	----------	17.6	5/19/59	J	---	D	
6G1	E. J. Stretz	150	Dr	48	6	-----	----------	11.0	5/20/59	J	---	D	
6H1	Al Zittel	150	Dr	87	6	60	----------	11	1950	J	---	D	Bailed 16 gpm, dd 17 ft. Peat and wood near bottom.
6H2	N. Sylvester	160	Dg	27	48	-----	----------	6.7	5/20/59	--	---	D	Quality of water is very good. No "rust".
6J1	C. E. Howard	160	Dg	29	72	-----	----------	21.0	5/20/59	J	---	D	
6J2	Richard Johnson	157	Dg	26	48	-----	----------	16.8	5/20/59	J	---	D	
6M1	H. Bridges	150	Dr	80	6	-----	----------	11.4	5/19/59	J	---	D	
6N1	A. J. Horne	160	Dg	18	36	-----	----------	5.0	2/26/59	J	---	D	Water contains some iron.
6P2	G. E. Roberts	150	Dg	35	36	-----	----------	30.9	5/20/59	J	---	D	
6Q2	F. L. Thompson	140	Dr	30	6	-----	----------	6	---------	J	---	D	Water level probably varies with creek level.
6Q3	Lee Kegley	150	Dr	47	3	-----	----------	35.5	5/20/59	J	---	D,S	
6R1	--Burdick	160	Dg	15	48	-----	----------	7.7	2/4/59	J	---	D	
6R2	D. Spjut	160	Dr	68	6	-----	----------	28	May, '55	--	---	D	
7A3	R. E. Koontz	160	Dg	20	48	-----	----------	9.1	2/4/59	J	---	D	
7A4	M. Allen	160	Dr	66	6	-----	Gravel	20.8	1951	--	---	D	Bailed 20 gpm, dd 29 ft. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
7A5	Jack Martin	170	Dr	63	6	------	----------	30	1953	J	---	D	Bailed 20 gpm, dd 10 ft.
7B1	Ray Bridenback	165	Dr	50	6	------	----------	30.4	2/4/59	--	---	D	
7D1	C. VanAllen	160	Dg-Dr	69	6	69	Gravel	50.5	1951	J	---	D	Dug 47 ft, drilled to 69 ft in gravel. Bailed 20 gpm. dd 8 ft.
7D2	J. E. Jones	165	Dg	34	36	------	----------	28.8	2/6/59	J	---	D	
7D5	--Austin	175	Dr	70	4	------	----------	35.3	3/25/59	J	---	D	
7E1	Glen Thompson	175	Dr	72	6	------	----------	33.6	3/25/59	J	---	D	
7E2	J. Royal	185	Dr	55	4	------	----------	43.0	3/25/59	J	---	D	
7F1	L. Cheeseman	185	Dr	73	3	------	----------	46	5/10/58	P	---	D	
7H1	Mike LeMay	187	Dr	82	6	82	Sand, gravel	44.8	1950	J	---	D	Bailed 10 gpm, dd 21 ft. L.
7H2	Capitol Feed Co.	200	Dr	107	6	95	Sand, clay	54	1952	J	---	D	Bailed 19 gpm, dd 33 ft. L.
7H3	D. J. Baker	185	Dg	72	48	------	----------	45.3	2/4/59	--	---	D	
7J1	W. D. Crosley	200	Dr	100	6	99	----------	45	----------	J	---	D	
7J2	J. Dolan	205	Dr	92	6	------	----------	50	1948	J	---	D	
7K1	H. E. Terwilleger	140	Dg	26	24	------	----------	10.7	3/26/59	--	---	D	
7K2	R. D. Rice	150	---	80	------	------	----------	19.6	3/26/59	S	---	D,S	
7L1	Dan Turner	175	Dr	190	3	------	----------	61.5	3/26/59	J	---	D,S	
7L2	J. S. Tuggle	175	Dr	69	------	------	----------	49.0	3/26/59	J	---	D	
7L3	Elmo Boone	145	Dg	30	24	------	----------	18.2	3/27/59	--	---	D	Supplies three homes.
7M1	P. B. Carey	175	Dr	156	6	155	Gravel	75	1952	J	---	D	Bailed 14 gpm, dd 20 ft. L.
7N1	--Johnson	180	Dr	82	6	------	----------	19.7	3/26/59	--	---	----	

7N2	Don Hodges	180	Dr	42	4	-----	----------	10.0	3/26/59	J	---	D	
7P1	R. M. Harris	175	Dg	52	------	-----	----------	45.4	3/26/59	J	---	D	
7R1	C. Ward	190	Dg	40	------	-----	Gravel, sand	27.3	1/28/59	H	---	D	"Hardpan" at 40 ft.
8C1	J. W. Seymour	150	Dg	35?	36	-----	----------	4.4	1/26/59	J	---	D	"Hardpan" near surface.
8D1	B. Golko	155	Dg	12	36	-----	----------	6.0	1/27/59	--	---	D	
8G1	I. J. Kinney	190	Dg	32	------	-----	Gravel	20.0	1/26/59	J	---	D,S	"Hardpan" from 4 to 8 ft.
8H2	W. R. Johnson	140	Dg	34	36	-----	----------	13.0	1/21/59	S	---	D	
8J1	R. J. Clark	160	Dr	95	6	-----	----------	------	---------	--	---	----	"Dry".
8J2	H. Severance	150	Dg	35	36	-----	----------	19.5	1/21/59	--	---	D,S	
8J4	C. Bostetter	150	Dr	30	4	-----	----------	9.1	1/21/59	--	---	D	
8K2	H. C. Guyett	195	Dr	62	6	-----	Gravel, pea	16.1	1/26/59	--	---	D	L.
8L2	C. D. Vannoy	200	Dr	54	6	-----	----------	32.6	1/26/59	--	---	D	
8M1	Oscar Krogstad	205	Dg	46	36	-----	----------	25.8	1/28/59	J	---	D	
8M2	D. Hopkins	200	Dg	50	------	-----	----------	25.3	1/28/59	J	---	D	
8N1	R. C. T. Howdeshell	200	Dg	-----	------	-----	----------	28.9	1/28/59	J	---	D	Supplies two homes.
8N2	Leta Anderson	200	Dr	80	4	-----	----------	26.0	1/28/59	J	---	D	
8Q1	C. E. Callahan	200	Dr	51	6	51	Gravel, sand	18.5 6.6	Nov., '55 1/26/59	J	---	D	Bailed 15 gpm, dd 18 ft. L.
8R1	R. B. Hoyt	175	Dr	57	------	-----	----------	31.3	1/20/59	J	---	D	
8R2	--Dishaw	150	Dr	32	6	-----	----------	8.4	1/20/59	C	---	D	"Hardpan" at 20 ft.
9A1	H. A. Verme	75	Dr	62	6	-----	----------	15.5	1/19/58	J	---	D,S	Numerous sandpoints driven in area of creek.
9F1	Lyle Peasley	100	Dr	40	6	-----	----------	25	---------	J	---	D	
9L1	O. Hedgepath	140	Dr	95	6	-----	----------	55	1/20/59	P	---	D	
9L2	Tom Peoples	140	Dr	104	6	104	Gravel, sand	52	1953	J	---	D	Bailed 20 gpm, dd 27 ft. L.
9M2	R. McLaughlin	140	Dr	175	6	172	Sand, clay	51	1956	--	---	D	Bailed 30 gpm, dd 95 ft. L.
9M3	K. R. Thompson	140	Dg-Dr	120	6	-----	----------	53.4	1/20/59	J	---	D	Dug 70 ft.
9N1	Alvin Huber	135	Dr	103	6	86	Sand, gravel	47	6/1/57	T	5	D,Irr	Pumped 120 gpm, dd 33 ft. Bottom 20 ft screened. Irr 23 ac. L.
9Q1	Hoffer Jensen	110	Dr	72	6	68	Sand, clay	41	1955	--	---	D	Bailed 38 gpm, dd 5 ft. Primarily sand and clay; bottom 6 ft screened.
9R2	C. L. Carr	110	Dr	70	6	65	----------	43.5	1947	--	---	D	Bottom screened.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
10C1	--Rosson	80	Dg	14	24	-----	----------	5.5	1/19/59	--	---	D,S	
10L1	Olympia Sand and Gravel Co.	205	Dr	96	12	96	----------	-------	---------	N	---	N	Well not completed. L.
10Q1	E. C. Merkle	200	Dr	80	6	-----	----------	42	1948	P	3/4	D	Very "rusty".
10R2	Thompson Place (P.U.D. #1)	200	Dr	171	8	161	Sand & gravel	133.4	3/20/58	T	5	PS	Good water, but has iron. Bottom 10 ft, #20 screen. L.
10R3	Thompson Place (P.U.D. #1)	200	Dr	178	6	168	----------	120	9/6/51	T	5	PS	Good water; but has iron. Bottom 12 ft, #25 screen. A. L.
11J1	State Dept. of Natural Resources	220	Dr	284	8-6	284	----------	193	March, '53	T	5	Irr	Casing, 8-in to 252 ft.
11N1	R. J. Schelper	205	Dr	53	------	-----	----------	20.6	1/30/58	J	2	D	Supplies five homes.
11P4	R. J. Hamlin	205	Dr	69	6	69	Gravel	40	---------	J	---	D,S	Supplies three homes. L.
11Q1	Veek's Trailer Park	205	Dr	202	------	-----	----------	67	---------	S	1	D	Quality of water is very good.
11Q5	Elliott's Motel	205	Dr	202	6	202	----------	170 140	1947 July, '57	P	3	D	Bailed 1,300 gph, dd 5 ft.
11Q6	Jerry's Grocery	205	Dr	65	6	-----	----------	44.7	2/4/58	J	1/2	D	A. Obs.
11R2	Bunce Equipment Company	210	Dr	78	6	-----	----------	66	---------	J	1/3	----	Used very little.
12J1	H. R. Dale	220	Dr	145	6	-----	----------	125	1946	P	1	D	Supplies service station.
12K1	Totem Bar-B-Q	230	Dr	123	6	-----	----------	112	---------	J	2	D	Supplies restaurant and service station.

12L3	J. J. Buller	240	Dr	165	6	-----	----------	-------	---------	J	1½	D	
12R1	Alvi Duterrow	230	Dr	100	6	-----	----------	86	---------	T	3	D	Supplies five homes.
13C1	A. L. Sprout	210	Dg	16	30	-----	----------	9.7	1/28/58	C	1/4	D	
13C2	B. M. McDermitt	205	Dg	21	24	-----	----------	6.9	3/6/58	J	1/4	D	
13F1	Boyd Owen	200	Dg	16	48x48	16	----------	8.2	3/6/58	C	1/2	D	
13M1	R. M. Metcalfe	225	Dg	80	24-36	-----	----------	49.3	---------	P	---	S,Irr	"Hardpan" from 50 to almost 80 ft. A2.
14D1	George Paige	205	Dr	68	48	68	----------	64.0	1/30/58	J	1	D	Supplies eight homes.
14D3	A. L. Schincke	205	Dg	28	12	-----	----------	24.2	4/7/58	--	---	D	Lots of "hardpan", goes dry in late fall.
14H2	Olympia Mushroom Farms, Inc.	213	Dr	60	6	64	Gravel	36.0	3/6/58	N	---	N	Well abandoned; formerly Ind. A2.
14H3	Olympia Mushroom Farms, Inc.	213	Dr	200	6	-----	Gravel	36.8	3/6/58	--	5	N	Formerly Ind. Perforated from 55 to 70 ft. Obs.
14H4	Olympia Mushroom Farms, Inc.	213	Dr	260	8-6	260	Sand & gravel	198.0 199	10/15/58 1/19/56	T	30	Ind	Pumped 4 hr at 210 gpm, dd 0.5 ft. Perforated from 240 to 260 ft. L.
14H5	Olympia Mushroom Farms, Inc.	213	Dr	64	8	-----	Gravel	44	6/1/46	T	10	Ind	Tested at 35 gpm, dd 10 ft (1946). Deepened in 1954 to 121 ft. A2.
14J1	R. M. Metcalfe	220	Dr	54	3	-----	Gravel	52.0	10/15/58	P	1/2	----	No "hardpan" encountered. A2.
14L1	W. Triebel	225	Dr	58	6	-----	----------	38	Fall, '35	P	1/2	D	Supply inadequate in fall.
14M2	Richard Hart	225	Dg-Dr	93	4	93	Gravel	57.5	1949	J	---	D	Bailed 25 gpm, dd 10 ft. L.
14M4	F. W. Gates	210	Dr	60	6	-----	----------	23.7	4/7/58	J	3/4	D	
14M5	Oliver Lee	210	Dg	50	40-6	-----	----------	43.4	4/7/58	P	1/2	D	"Hardpan" 6 ft from bottom.
14P1	Chester Martin	225	Dr	87	4	-----	----------	60.0	3/4/58	J	1/2	D	
15B1	Lee's Steak House	180	Dr	68	6	-----	----------	30	---------	J	1/2	D	Supplies restaurant and trailer court.
15B3	Olympia Cheese Co.	190	Dr	75	6	-----	----------	64	1945	J	1½	D,Ind	Cheese factory. Quality of water very good.
15C3	Ralph Carr	175	Dr	72	6	-----	----------	69	1947	J	1/2	D	Water contains some iron.
15E1	Robert Bellamy	170	Dr	100	8	-----	----------	70	---------	J	1	D	Supplies two homes.
15E2	Glen Bailey	110	Dg-Dr	65	3	-----	----------	34.2	7/2/58	J	---	D	Dug 5 ft.
15G1	H. Hollingsworth	175	Dr	49	8	-----	----------	4	---------	J	---	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
15G2	Frank Weatherbie	175	Dg-Dr	44	6	-----	----------	15.3	4/7/58	--	1/3	D	
15H1	PUD #1 of Thurston County	170	Dr	186	12	167	----------	135.1	2/6/57	--	---	PS	Supplies Thompson Place and vicinity. Pump test and L. A1.
15L3	W. F. Ray	170	Dr	70	3	-----	----------	35	---------	--	---	D	L.
15P2	J. T. Long	165	Dr	65	6	-----	----------	21.4	4/8/58	J	---	N	"Rusty", smells like decayed vegetation.
15P3	E. McKinney	170	Dr	301	3	-----	----------	40	---------	P	---	D	
15Q1	J. E. McGill	185	Dg	50	36x36	-----	----------	40.0	4/7/58	P	---	D	
15Q3	James Canfield	185	Dg	31	36	-----	----------	31.5	4/7/58	P	1/2	----	
15Q6	Ray Lichtenwalter	180	Dr	150	6	-----	----------	124.0	4/7/58	J	1½	D	Supplies one home and motel.
15Q7	J. A. Sistrom	180	Dr	52	6	-----	----------	27.0	4/7/58	J	1½	D	Supplies two homes.
15R3	Nellie Cole	190	Dr	43	6	-----	----------	26	---------	J	1/4	D,S	
16Q1	Walter Hope	180	Dg-Dr	80	18-6	80	----------	43 19.4	Nov., '57 4/9/58	J	---	D	Dug 26 ft.
16Q3	Herman Reinhardt	180	Dg-Dr	137	8	122	Gravel, sand, some clay	-------	---------	T	5	D,Irr	Screened from 122 to 137 ft. Cert for 75 gpm, irr 7 ac. L.
16R1	Thurston County Water Dist. #1	180	Dr	134	6	134	----------	38	3/12/56	T	5	PS	Pumps 90 gpm.
17B1	North Thurston High School	200	Dr	117	------	-----	----------	57	Sept., '55	--	---	----	

17E1	L. M. Wallmark	180	Dg	28	6	-----	----------	23.5	6/26/58	--	---	D	Backfilled.
17E2	J. Trowbridge	200	Dg-Dr	40	6	-----	----------	31.0	1/28/59	--	---	D	
17F1	E. S. Davidson	190	Dg	22	48	-----	----------	12.8	6/26/58	--	---	D	
17F2	Sylvan Motel	190	Dg	21	36	-----	----------	13.4	6/26/58	J	---	D	Supplies motel.
17G1	Wolfenbarger - Rhoades	200	Dg-Dr	76	6	76	Gravel	33.5	1952	J	---	D	Bailed 346 gph, dd 27 ft. L.
17H2	J. H. Thietie	190	Dg-Dr	64?	4	-----	----------	62.9	6/26/58	J	---	D	Measured depth possibly in error; may be deeper.
17H3	R. C. Adams	190	Dr	125	6	-----	----------	68.9	7/2/58	J	---	D	Supplies motel.
17H4	E. Littie	180	Dr	-----	4	-----	----------	72.6	7/2/58	J	---	D	
17J1	W. E. Robbins	190	Dr	74	6	-----	----------	30.4	4/11/58	J	1	D	Lots of "hardpan" in area.
17K3	L. Tvaroha	200	Dg	24	24	-----	----------	14.0	4/11/58	C	---	D	Supplies two homes.
17L1	Raymond Sares	200	Dg	24	36	-----	----------	15.1	4/11/58	P	---	D	
17L2	Robert Benson	200	Dg	28	48	-----	----------	14.8	4/15/58	J	1/2	D	--------Do--------
17L4	M. I. Mann	200	Dr	40	6	-----	----------	9.6	4/15/58	J	1/4	D	
17M2	E. F. McCleary	180	Dg	29	36	-----	----------	24.5	6/25/58	P	---	D	
17N1	Harold Lormor	200	Dr	46	6	-----	----------	17.8	4/16/58	J	---	D	
17P1	L. Long	200	Dg	14	48	-----	----------	11.1	4/15/58	J	---	D	
17P2	Burk Christie	200	Dg	18	48	-----	----------	13.0	4/15/58	J	---	D	
17P4	E. H. Levee	210	Dg	25	30	-----	----------	13.0	4/15/58	C	---	D	
17Q1	Unknown	200	Dr	46	4	-----	----------	22.0	4/11/58	J	---	D	
17Q2	L. L. Walters	200	Dg	27	36	-----	----------	16.3	4/11/58	J	---	D	Appears to be "hardpan" all the way.
17Q3	O. Kjer	200	Dg-Dr	100	6	-----	----------	17.3	4/11/58	P	---	D	Dug 27 ft.
18C1	L. M. Robertson	185	Dr	76	6	76	Gravel	54	1952	J	---	D	Bailed 26 gpm, dd 5 ft. L.
18C3	L. F. Query	175	Dg	46	6	-----	----------	36.5	3/26/59	--	---	D	Mostly "hardpan".
18D1	W. Hellan	175	Dr	59	4	-----	----------	21.3	3/26/59	J	---	D	
18D2	Mervin Shay	175	Dr	129	------	-----	----------	20	3/26/59	--	---	D,S	Water level estimated.
18D3	A. Gliddon	190	Dg	48	48	-----	----------	40.2	3/26/59	J	---	D	
18E1	--Leaming	162	Dr	19	------	-----	Sand	2.0	3/26/59	--	---	D	Located about 2 ft above creek.
18F1	D. Lemieux	140	Dg	53	4	-----	----------	34.7	5/19/59	J	---	D	
18H1	Gordon Craig	197	Dr	88	6	-----	----------	23.1	1/28/59	J	---	D	
18H2	L. Ensign	200	Dr	99	6	-----	----------	68 56	9/24/46 March, '50	--	---	D	Bailed 500 gph, dd 19 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 18 N., R. 1 W. -- Continued													
18J4	Albert Spees	180	Dr	60	3	-----	----------	46.2	6/26/58	N	---	N	Abandoned.
18K1	Dorothy Punderson	145	Dr	36	6	-----	----------	14.7	6/26/58	J	---	D	Used for kennel.
18L1	E. H. Levee	153	Dr	106	3	-----	----------	1.6	6/25/58	--	---	----	Abandoned.
18L2	Clarence Hannah	200	Dr	45	6	------	----------	15.2	6/25/58	P	---	D	
18M1	William LeBourhis	145	Dr	42	6	-----	----------	6.1	6/25/58	J	---	D	Supplies two homes.
18M3	H. H. Dehart	175	Dr	27	6	-----	----------	21.4	6/25/58	--	---	D	
18P1	Garnet Wilder	160	Dn	48	1	48	----------	11.0	6/25/58	N	---	N	Abandoned.
18P2	--Phillips	175	Dr	60	------	-----	----------	20.2	6/25/58	J	---	D	
18Q1	W. J. Burkhart	175	Dr	76	6	72	Gravel, sand	16	1957	J	5	D	Bailed 38 gpm, dd 18 ft. L.
18R1	Clyde Arnold	200	Dg-Dr	90	6	-----	----------	22.2	4/16/58	J	---	D, Irr	Dug 51 ft. "Hardpan" from 4 ft. Supplies two homes.
18R4	Gordon Christiansen	210	Dg	31	5	-----	----------	12.4	4/16/58	J	---	D	
19A2	John Beigh	200	Dr	74	4	-----	----------	14.1	4/16/58	J	1/2	D	"Hardpan" at 10 ft.
19A3	John Beigh	200	Dr	78	6	-----	----------	19.1	4/16/58	N	---	N	
19C1	D. Miller	152	Dr	160	3	-----	----------	4.3	6/23/58	--	---	D	
19D1	F. H. Schamehorn	185	Dr	80	6	-----	----------	27	---------	J	---	D	
19D2	J. R. Kiely	175	Dr	93	6	-----	----------	12	---------	--	---	D, S, Irr	
19D4	A. M. Ferguson	160	Dr	147	6	-----	----------	9	---------	J	---	D	
19E1	Roy Hotop	175	Dr	170	6	-----	----------	20.3	6/19/58	J	---	D	
19F1	J. L. Arney	175	Dr	175	4	-----	----------	13.2	6/20/58	--	---	D	

19G1	R. B. Osborne	175	Dr	47	6	-----	----------	10	---------	J	---	D	Supply adequate, water at 10 ft.
19H1	Don Donnelly	200	Dr	45	6	-----	----------	9.5	4/10/58	J	1/2	D	Pumped 13 gpm, dd 30 ft.
19H3	R. C. Donnelly	210	Dr	79	6	-----	----------	28.4	4/16/58	J	---	D	Supplies two homes.
19K1	Darrell Jones	200	Dr	56	3	-----	----------	30.5	6/17/58	J	1	D	
19K2	Darrell Jones	200	Dr	97	8	87	Gravel, sand	25	---------	T	7½	D,Irr	Irr 12 ac. Screened bottom 10 ft. L.
19K3	T. H. Beck	180	Dr	42	6	-----	----------	15.4	6/20/58	J	---	D	
19L1	Ted Ferris	200	Dr	40	3	-----	----------	22.6	6/19/58	P	---	D	
19L2	G. Jenkins	175	Dr	77	4	-----	----------	8.0	6/20/58	J	---	D,S	
19M3	E. E. Bauer	200	Dr	68	6	-----	----------	42.6	6/19/58	J	---	D	
19M4	H. L. Holmes	185	Dg-Dn	52	2	-----	----------	39.6	6/19/58	N	---	N	Abandoned.
19M5	Jim Reed	195	Dr	133	3	133	Gravel	38	1941	P	3/4	D	Pumps 11½ gpm. L.
19N1	L. B. Smith	200	Dr	242	6	-----	----------	59	1945	J	---	D	
19P3	William Hall	200	Dr	142	6	-----	----------	27.2	6/19/58	J	---	D	Supplies three homes.
20A1	J. D. Nottagy	200	Dg	27	48	-----	----------	8.7	4/15/58	--	---	D	--------Do---------
20A2	C. W. Bittman	200	Dg	20	36	-----	Sand & clay	7	10/3/51	C	2	Irr	Irr 8 ac. All sand and clay, some "quick".
20C1	G. B. Smith	200	Dr	45	4	-----	----------	9.8	4/10/58	J	---	D	
20C2	J. Firkins	200	Dr	35	6	-----	----------	8.2	4/10/58	J	---	D	"Hardpan" layer, 4 or 5 ft thick encountered at 24 ft.
20C3	L. B. Wells	200	Dr	98	6	-----	----------	10	---------	J	1½	D	Upper two aquifers sealed off.
20E1	Lester Ball	200	Dg	21	24	-----	----------	11.8	4/10/58	J	---	D	
20F1	Mt. View Water Dist. #1	200	Dr	96	6	-----	----------	15.6	4/10/58	J	2	PS	Supplies five homes.
20F2	P. W. Shoblom	200	Dr	47	4	-----	----------	11.7	4/10/58	J	1/2	D	
20F3	J. P. Williams	200	Dr	28	4	-----	----------	11.0	4/10/58	C	---	D	
20H1	Oscar Anderson	200	Dg	28	36	-----	----------	16.0	4/9/58	J	---	D	
20J1	Leo Harrington	210	Dr	86	3	-----	----------	36	---------	P	1/3	D	
20J3	R. L. Jeffries	210	Dg-Dr	35	8	-----	----------	16.8	4/10/58	--	---	D	
20K1	Mt. View Golf Course	215	Dr	85	12	85	Gravel	19.2	4/24/51	--	---	Irr	Pumped 4 hr at 260 gpm, dd 49.7 ft. Perforated from 60 to 82 ft. Irr 10 ac. L.
20K2	Mt. View Golf Course	215	Dr	60	6	-----	----------	21.3	4/10/58	N	---	N	Abandoned.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
20K3	O. F. Michael	205	Dr	49	6	-----	----------	18.6	4/10/58	P	---	D	
20L1	J. P. Eslick	210	Dg	30	36	-----	----------	17.5	4/10/58	J	1/2	D	
20Q1	Huntamer Water Service, Inc. #4	200	Dr	163	8	160	Sand, gravel	31	9/3/58	T	20	PS	Due to sand, pumping held to 100 gpm. Serves Lacey. L. A.
20R2	C. R. Pease	210	Dg	30	36	-----	----------	19.6	4/3/58	J	1/3	D	
20R4	Leo Harrington	210	Dr	86	6	-----	----------	24.3	4/10/58	N	---	D	Abandoned. Could only measure depth as 31 ft.
21A1	L. E. Cunningham	180	Dr	75	6	-----	----------	49.2	4/8/58	J	2	D	
21B1	Regina Mechler	185	Dg	23	36	-----	----------	13.6	4/9/58	P	1/4	D	Also supplies church.
21B2	Art Wells	180	Dg	23	48	-----	----------	18.2	4/9/58	P	---	D	
21B3	Frank Russell	180	Dg	16	36	-----	----------	10.0	4/9/58	--	---	----	Abandoned, "hardpan" at bottom.
21B4	Thurston County Water Dist. #2	180	Dr	130	10	100	Sand, gravel	62.5	8/27/58	T	30	PS	Supplies community of Lacey Villas. Pumped 4 hr at 575 gpm, dd 11.8 ft. Perforated from 100 to 120 ft. L.
21B5	Thurston County Fire Dist. #3	180	Dr	107	8	97	Sand, gravel	60	2/24/53	T	5	D	Pumped 4 hr at 50 gpm, dd 20 ft. Screened from 92 to 107 ft. L.
21D1	L. C. Huntamer	195	Dg	22	36x36	-----	Gravel, pea	13.8	4/9/58	C	7½	PS	Tested for 5½ hr at 200 gpm, dd 0.2 ft. L.
21D2	L. C. Huntamer	190	Dr	38	8	33	Gravel, sand	9.6	4/9/58	T	10	PS	Pumped 4 hr at 350 gpm, dd 27 ft. Screened bottom 5 ft. L.

21D3	L. C. Huntamer	190	Dr	153	10	139	Gravel, sand	60	Dec., '53	T	15	PS	Screened from 139 to 153 ft. L. A.
21D6	Chet Metsgar	190	Dr	14	12	-----	----------	8.1	4/11/58	J	3/4	D	
21D7	Unknown	190	Dr	43	6	-----	----------	24.8	4/11/58	J	---	D	
21F2	E. M. Radcliff	185	Dg	12	-----	-----	----------	6.7	4/9/58	--	---	----	
21H1	A. G. Homann	160	Dr	195	10	183	----------	10	---------	T	20	Irr	Screened from 182 to 195 ft. Has Irr 40 ac. L.
21M3	W. A. Naismith	210	Dr	65	4	-----	----------	22.8	4/9/58	P	---	N	Abandoned.
21P1	Huntamer Water Service, Inc.	210	Dr	119	8	109	Gravel, sand	85	7/14/59	T	15	PS	Pumped for 4 hr at 300 gpm, dd 5 ft. Screened bottom 10 ft. L.
22A1	James Monk	180	Dr	43	6	-----	----------	39.8	3/4/58	J	---	D	
22A2	Otto Freimuth	180	Dr	139	6	-----	----------	30.7	3/4/58	J	1/2	D	Could measure only 65 ft as depth.
22A3	Sam Petty	175	Dg	29	36x36	-----	----------	24.0	3/5/58	J	1/3	D	
22D1	Lacey Grade School	155	Dr	364	8	120	----------	30.3	4/8/58	J	5	PS	
22G2	Norman Janke	170	Dg	21	48	-----	----------	9.5	3/14/58	--	---	D,S	
22H2	O. M. Haddock	155	Dg	8	36	-----	----------	3.1	3/14/58	--	1/2	D	Water level very close to lake level.
22N3	Gordon Willie	185	Dr	97	6	85	Sand, fine	26.5	---------	J	1	D	Supplies four homes. Bailed 37 gpm, dd 8 ft.
22P2	A. E. Eastman	180	Dr	-----	3	-----	----------	25.2	3/14/58	J	1	D	Water level very close to lake level.
22P3	D. F. Reynolds	175	Dg	13	36	-----	----------	13.8	3/13/58	J	1/3	D	Top of well about 8 ft below land surface.
22Q1	Maynard Rice	190	Dr	196	6	-----	----------	46	---------	J	1	D	
22R2	E. W. Eggerstedt	170	Dn	22	2	-----	----------	16	---------	C	1/4	D	Quality of water is very good.
22R5	Roy Johnson	155	Dr	21	6	-----	----------	2.2	3/14/58	N	---	N	Abandoned.
23B1	Cecil O'Neal	200	Dr	150	6	-----	----------	------	----------	N	---	N	Originally dug 20 ft, then drilled to 150 ft. "Sand all the way".
23E1	H. N. Cunningham	175	Dg-Dr	45	6	-----	----------	24.6	3/5/58	J	1/2	D	Quality of water is good.
23E3	Ada Rank	190	Dr	43	6	-----	----------	27.9	3/5/58	J	2	PS	Supplies several homes. A2.
23F1	Charles Kulp	190	Dr	42	4	-----	----------	30.0	3/5/58	J	1/2	D	
23J1	F. J. Sholtz	190	Dr	68	6	-----	----------	37	1954	J	1/2	D	"No rust", soft water.
24B1	Evergreen Ballroom	230	Dr	85	8-6	-----	----------	50.0	1/15/58	T	3/4	D	
24E1	R. S. Travis	235	Dr	82	5	-----	----------	------	---------	J	1	D,S	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
24M1	Ray Griese	190	Dg	16	36-16	-----	----------	11	---------	P	1/2	D	
25L1	N. M. Draper	175	Dr	59	10	46	Sand, gravel, clay	25 19.4	1952 2/24/58	T	7½	D,S, Irr	Screened from 46 ft to bottom. L.
25P1	Ruben Blaskowsky	165	Dg	12	66	-----	Gravel, coarse	6.5	Oct., '51	C	7½	Irr	Pumped 5 hr at 140 gpm, dd 2.5 ft. Has Irr 20 ac. L.
26A1	W. E. Dexter	200	Dr	89	6	89	Gravel, sand	64	1953	J	1/2	D,S	Balled 5 gpm, dd 16 ft. L.
26B1	R. V. Van Schoick	190	Dr	65	6	-----	----------	46.2	2/24/58	J	1/2	D	
26B2	N. H. Nelson	195	Dr	82	6	-----	----------	57.6	2/24/58	J	1/2	D	A2.
26C1	H. E. Mathwig	170	Dr	84	6	-----	----------	22	---------	J	1/2	D	"Hardpan" below 30 ft; below "hardpan" very "rusty" water; above, good water. A2.
26D1	L. O. Knox	160	Dg	7	6	-----	----------	6.5	3/5/58	P	1/2	D	Water level same altitude as lake level.
26D2	E. W. Holmes	180	Dn	30	2	30	----------	23	---------	C	1/4	D	Well on island; most wells on island are sandpoints.
26E1	Long Lake Villas	165	Dg	14	36	-----	----------	8.6	2/26/58	C	1/2	PS	Three wells serve seven homes. A2
26F1	United Brotherhood of Carpenters	200	Dr	91	6	86	Sand, gravel	63.5	10/9/52	T	5	Irr	Tested 4½ hr at 70 gpm, dd 6 ft. Screened from 85 to 91 ft. L.
26K1	Charles Cain	180	Dr	50	-----	-----	----------	25	---------	J	1	D	"Ochre" around taps. A2.

26N1	Huntamer Water Service, Inc.	175	Dr	85	8	75	Gravel	33.5	3/11/57	T	5	PS	Tested 4 hr at 50 gpm, dd 36 ft. Well reportedly has been deepened to 160 ft. L.
26Q1	C. F. Murphy	170	Dg	25	24x24	25	----------	17.0	3/5/58	C	---	D	Quality of water is good, deeper water is "rusty".
26R1	R. E. Anderson	175	B	43	6	-----	----------	18.6	3/5/58	J	1	D	"Ochre" on fixtures. A2.
26R2	August Anvik	215	Dr	72	6	-----	----------	26	May, '50	J	1/2	D	No "rust", good water.
27H2	Harry Yeoman	180	Dr-Dn	60	3	-----	----------	27.1	3/14/58	C	1/2	D	
27B1	W. R. Andrews	170	Dn	25	6	-----	Gravel	9	---------	P	1/4	D	"Sand all the way", bottoms in gravel.
27C2	Leo Neuschwander	175	Dr	48	6	-----	----------	15.8	3/13/58	--	---	D	
27E1	I. L. Himelberger	182	Dr	30	6	-----	----------	27.4	3/18/58	N	---	N	Well originally drilled to 96 ft. Abandoned because of "ochre" water.
27F1	Floyd Davis	165	Dg	20	36	-----	----------	7.8	3/13/58	J	1/2	D	
27G1	Dr. G. A. Stansfield	162	Dg	12	24	-----	----------	4.5	3/13/58	J	1/2	D	Water level very near lake level.
27H1	Grant Doty	165	Dg	12	24	-----	----------	9.3	3/13/58	C	1/4	D	
27J3	W. R. Williams	195	Dr	57	6	-----	----------	32.5	7/24/52	J	1/2	D,S	
27L1	Norman Neitzel	162	Dr	35	6	-----	----------	5.1	3/13/58	J	1	D	Water level very near lake level.
27M1	J. M. Britten	162	Dg	10	18	-----	----------	2.9	3/18/58	--	3/4	D,Irr	
27N1	Rudy Minch	160	Dg	-----	18	-----	----------	4.0	3/18/58	J	1/2	D,S	
28A1	H. Wanschers	175	Dg	24	-----	-----	----------	18	---------	P	1/3	D	Supplies two homes. "Iron". Water level very near lake level.
28B4	J. M. Brewington	200	Dr	78	6	78	Gravel, sand	40	1957	J	1	D	Bailed 19 gpm, dd 3 ft. L.
28D1	J. K. Pulliam	215	Dr	76	6	76	Gravel	48	1951	J	---	D	Bailed 624 gph, dd 13 ft. L.
28G1	J. E. Dewey	200	Dg	40	48	-----	----------	33.7	3/18/58	J	1/3	D	Some "hardpan".
28H1	I. L. Himelberger	182	Dr	52	6	-----	----------	18	---------	J	3	D	Supplies one home and campground.
28P1	Ervin Jackson	225	Dr	121	10	121	Sand, gravel	54	May, '51	T	20	Irr	Tested at 160 gpm, dd 7 ft. Perforations, see log. Has irr 20 ac. L.
28Q2	J. C. Bennett	220	Dr	126	6	-----	----------	56.2	3/18/58	P	3/4	D,S	Well measured only 86 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
28Q3	B. C. Craney	220	Dr	84	------	-----	----------	44	---------	J	1	D	Quality of water is good, no "rust".
28Q4	Ray Schafer	220	Dr	65	6	-----	----------	49.4	3/18/58	J	2	D	
29A1	George White	210	Dr	42	6	42	Gravel	17	1949	J	1	D,S	Bailed 10 gpm, dd 3 ft. Top 36 ft. sand.
29H1	A. Rackham	225	Dr	80	------	-----	----------	-------	---------	P	---	D,S	
29M1	John Morris	200	Dr	123	6	121	Gravel, sand, clay	49.5 53.2	March, '57 4/4/58	J	1	D	Bailed 10 gpm, dd 63 ft. Perforated from 107 to 117 ft. L.
29Q1	Frank Schilter	210	Dr	77	10	-----	----------	26.9	4/3/58	J	2	D,S	
29R1	John Britton	225	Dr	52	6	-----	----------	37	August,'48	J	1	D	
29R2	Claude Dayton	225	Dg-Dr	54	24-30	-----	----------	40.8	4/3/58	J	1/2	D	
30B1	Ernest Gaugler	245	Dg-Dr	91	3	91	----------	56	---------	P	---	D	
30B2	Stanley Megiveron	275	Dr	108	6	105	Gravel, sand, clay	78	1952	J	---	D	Bailed 10 gpm, dd 17.5 ft. L.
30E1	E. E. Thomas	225	Dr	100	6	-----	----------	85	---------	J	---	D	
30E2	E. R. Fox	200	Dg	35	48x48	-----	----------	18.3	6/17/54	--	---	D	
30E3	Art Isaacson	200	Dg	16	24	-----	----------	8.2	6/18/58	J	---	D	"Hardpan" at 8 ft.
30F1	T. R. Marshall	200	Dg	19	6	-----	----------	14.0	6/17/58	J	---	D	
30G1	Kieth Bell	250	Dr	237	10	237	Gravel	111	1/28/57	--	---	D,Irr	Tested 6½ hr at 156 gpm, dd 24 ft. Perforated from 185 to 200 ft. Has irr 30 ac. L.

30L1	Glen Longinaker	250	Dg	36	48	-----	----------	32.5	6/17/58	J	---	D		
30M1	D. B. Merryman	200	Dg	16	36	-----	----------	8.5	6/18/58	J	---	D		
30N1	County Road Dept.	203	Dr	224	8	224	----------	80	1947	--	---	----	Pumped 80 gpm, dd 20 ft. Perforated from 213 to 223 ft.	
30R1	Harlan Beardsley	205	Dr	63	6	-----	----------	53.0	4/3/58	J	1/4	D		
30R2	Minnie Freelund	215	Dg-Dr	100	6	-----	----------	69.8	4/4/58	J	1	D	"Hardpan" from 3 ft to bottom of dug well. Dug 80 ft, drilled 20 ft.	
30R3	Alec Boles	200	Dr	55	6	-----	----------	49.0	4/4/58	J	---	D	Considerable "hardpan" below 3 ft.	
31A1	T. J. Tuttle	200	Dr	72	3	-----	----------	60	Jan., '58	J	1/2	D		
31D1	Clarence Schlosser	180	Dr	86	5	-----	----------	52.6	6/18/58	J	1	D		
31E1	A. Littoral	198	Dr	100	6	-----	----------	68.0	6/18/58	J	---	D,S		
31E2	Phoebe Charles	195	Dr	82	3	-----	----------	65	---------	P	---	D,S		
31F2	C. H. Morris	200	Dr	325	10	325	Sand, gravel, mud	85	---------	N	---	N	L.	
31H1	W. E. Weatherbie	190	Dg-Dn	29	-----	-----	----------	21	---------	P	---	D	Dug 12 ft.	
31K1	Jess Canady	190	Dr	48	6	-----	----------	26	---------	J	---	D,S		
31K2	Philip Evans	200	Dr	71	8	71	Gravel	25.8 22	6/17/58	J	---	D,Irr	Bailed 60 gpm, dd 8 ft. Water level measured while pump was running. Has irr 16 ac. L.	
31M1	Col. C. W. Reece	195	Dr	63	3	-----	----------	44	Oct., '57	P	---	D		
31M3	Peggy Whittie	198	Dr	68	6	-----	----------	50	---------	J	---	D		
31N1	E. W. Ashburn	198	Dr	135	8	135	Gravel	50	7/14/50	T	7½	D,Irr	Tested at 150 gpm, dd 17 ft. Perforated from 80 ft to bottom. L.	
31N2	E. W. Ashburn	190	Dr	130	10	130	Gravel	12	3/7/53	--	---	Irr	Pumped 4 hr at 285 gpm, dd 33 ft. Perforations, see log. L.	
31P1	R. M. Crawford	180	Dr	65	6	-----	----------	35	---------	--	1/2	D	Quality of water is good.	
31Q1	John Sandberg	195	Dg	28	48	-----	----------	26.6	11/12/57	J	---	D		
31Q2	H. L. James	195	Dr	49	8	49	Sand, gravel	34	---------	--	---	Irr	Bailed 54 gpm, dd not appreciable. L.	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 1 W. -- Continued						
31R1	Joseph Strobl	202	Dr	101	6	100	Gravel, sand	29.1	1952	J	1	D	Bailed 20 gpm, dd 57.2 ft. L.
32B1	E. T. Williams	220	Dr	78	6	-----	----------	68	----------	H	---	D	
32D1	C. D. Fuller	200	Dr	47	6	-----	----------	10.6	4/3/58	P	1/3	D,S	
32J1	R. H. Wohleb	200	Dr	176	6-5	176	Sand, gravel	34	6/20/56	C	5	Irr	Bailed 57 gpm, dd 7 ft. Perforated from 142 to 176 ft. Irr 20 ac. L.
32L1	Jerry Hutson	210	Dr	55	6	-----	----------	41.0	4/3/58	P	1/3	D	"Ochre" and rust.
32N1	Floyd Wilson	198	Dr	56	4	-----	----------	22.4	11/12/57	P	1/2	D	Water is of good quality but hard.
32P1	L. W. Young	200	Dr	55	10	55	Sand, gravel	25	5/2/58	--	---	Irr	Bailed 50 gpm, dd not appreciable. L.
33B1	C. Shrewsbury	210	Dr	118	8-6	118	Sand, gravel	40	4/2/59	T	7½	Irr	Pumped 4 hr at 115 gpm, dd 32.8 ft. Perforated from 96 ft to bottom. Irr 15 ac. L.
33B2	G. K. Jorgenson	210	Dr	70	6	-----	----------	43.3	3/19/58	J	1	D,S	
33B3	Volle Crowe	210	Dr	76	3	-----	----------	44	1957	J	1/2	D,S	Quality of water is very good.
33E1	G. & W. Lenhart	210	Dr	54	6	-----	----------	33.7	3/19/58	P	1/2	D,S	Supplies chicken ranch.
33F2	Leonard Haslip	210	Dr	53	6	-----	----------	34	1954	J	1/2	D	Water is of good quality.
33G1	G. H. Southwick	200	Dr	44	3	-----	----------	41.6	3/19/58	--	---	N	
33G2	Ervin Jackson	198	Dr	102	8	85	----------	33	4/30/59	T	5	Irr	Tested 4 hr at 120 gpm. L.
33J1	G. & W. Lenhart	190	Dg-Dn	38	24	-----	----------	19.0	3/19/58	--	1	D,S	Dug 28 ft.
33K1	P. E. Smith	190	Dg	25	24	-----	----------	21.2	3/19/58	--	1/3	D,S	

33R1	W. Lenhart & H. Driver	205	Dr	61	8	61	Sand, gravel	32	1/23/59	N	---	Irr	Perforated near bottom. Last ft plugged with cement. L.
34D2	Evelyn Price	160	Dg	15	36	-----	----------	9.0	3/19/58	H	---	D	
34F1	Clem Clark	200	Dr	55	6	-----	----------	52	---------	J	3/4	D	
34F2	F. S. Bowen	200	Dr	61	6	-----	----------	35	1/30/47	T	3	Irr	"Hardpan" at bottom.
34H2	H. A. Süess	170	Dg	15	18	-----	----------	10.8	2/26/58	J	1/2	D	
34M2	Clem Clark	200	Dr	76	10	62	Sand	36.5	2/19/53	--	---	Irr	Irr 35 ac. Yield of 300 gpm. L.
34N1	Howard Mayes	200	Dr	58	6	-----	----------	28	---------	J	1/4	D,S	
34R2	A. J. McClelland	167	Dg	16	18	-----	----------	12.6	2/26/58	C	1/2	D	Softer than lake water.
35A1	L. E. Wilson	162	Dg	10	18	-----	----------	7.3	3/6/58	C	1/2	D	Supplies a summer home.
35A2	A. J. Clark	175	Dr	32	6	-----	----------	23	---------	J	1	D	Tested "pure".
35A3	R. T. Olson	175	Dr	37	6	-----	----------	23	---------	J	1/2	D	
35C1	H. A. Afflerbaugh	175	Dg	26	-----	-----	----------	22.6	2/25/58	P	1/2	D	Quality of water is good.
35G1	W. H. Riedl	175	Dg	8	24	-----	----------	4	---------	P	1/2	D,S	"Hardpan" bottom. Near swampy area.
35L1	E. B. Bjerke	177	Dr	60	4	-----	----------	-------	---------	J	1/4	D	"Some iron". A2.
36E1	Sid Bayne	200	Dr	150	6	-----	----------	-------	---------	P	1½	D	"No water at 143 ft".
36F1	R. Blaskowsky	180	Dr	37	8	-----	----------	33.0	2/24/58	C	1/3	D,S	A2.
36G1	Earl Kendall	210	Dr	165	6	-----	----------	156	---------	S	1	D	
36H1	P. A. Nystrom	200	Dr	186	6	-----	Gravel	177	---------	P	1	D	
36L1	Everett Stehr	220	Dr	90	6	-----	----------	------	---------	P	1/2	D	
36M1	G. Wallerstedt	200	Dr	85	-----	------	----------	------	---------	P	3/4	D	
							T. 18 N., R. 2 W.						
1A1	Frank Turner	147	Dr	43	3	-----	----------	15.8	5/19/59	J	---	D	Supplies store.
1A2	C. Cochran	150	Dr	38	6	-----	----------	4.7	5/21/59	--	---	D	
1B1	D. Flegal	155	Dg	52	6	52	----------	2.0	5/20/59	J	---	D	
1B2	D. Buresh	155	Dr	54	6	-----	----------	2.0	5/20/59	J	1	D	Supplies two homes, "no rust".
1B3	--Young	150	Dg	13	36	-----	----------	3.6	5/21/59	--	---	D	
1D1	W. E. Campbell	150	Dg	20	36	-----	----------	4.9	5/21/59	--	---	D	"Hardpan" observed 3 ft down.
1D2	P. Cutshall	150	Dr	83	6	-----	----------	34.8	5/21/59	J	---	D	Dug well had SWL 7.5 ft.
1D3	G. H. Anderson	127	Dg	30	4	-----	----------	7.9	5/21/59	--	---	D	
1D4	L. T. Ludwig	100	Dr	95	6	-----	----------	17.4	5/21/59	J	---	D	
1E2	C. E. Johnson	110	Dr	65	4	-----	----------	6.9	5/21/59	--	---	D	
1E4	E. J. Cooper	115	Dr	54	6	-----	----------	7.7	5/22/59	J	---	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
1E5	C. E. Ames	125	Dr	65	6	-----	----------	9.9	5/22/59	N	---	N	Abandoned.
1F2	--Siegrist	160	Dg	20	48	-----	----------	5.6	5/22/59	J	---	D	All sand, "hardpan" at bottom.
1F3	R. Peterson	155	Dg-Dr	56	6	56	Gravel, clay, sand	16 10.9	Oct., '58 5/22/59	J	---	D	Bailed dry at 4 gpm. L. A2.
1G1	L. Jackett	160	Dg	14	36	-----	----------	4.7	5/20/59	--	---	D	
1H1	H. Fisher	160	Dg	9	36	-----	----------	3.4	5/20/59	--	---	D	
1H2	J. W. Anderson	155	Dg	15	36	-----	----------	3.0	5/20/59	--	---	D	
1J1	L. M. Berger	150	Dr	88	6	88	Sand	14.9	5/19/59	J	3	D,Irr	Bailed 40 gpm, dd 10 ft. L.
1J2	C. A. Main	150	Dr	40	6	-----	----------	6.4	5/19/59	J	---	D	
1K1	C. Ware	160	Dr	72	6	-----	----------	12	Aug., '58	J	---	D	"Hardpan" at 45 ft.
1Q1	--Padgett	170	Dg	18	36	-----	Sand	4.0	3/17/59	--	---	D	
1Q2	Ed Bye	175	Dr	62	6	-----	----------	13.8	5/20/59	J	---	D	
1R2	C. Koch	170	Dg	10	24	-----	----------	0.9	5/20/59	P	---	D	
1R3	A. W. Huber	175	Dr	87	-----	-----	----------	12	5/20/59	J	---	D	
1R4	C. C. Phillips	165	Dg	40	36	-----	----------	4.2	5/20/59	J	---	D	
2A1	S. Van Torne	110	Dg	32	36	-----	----------	17.4	5/21/59	--	---	D	
2A2	W. L. Jennings	85	Dr	53	6	-----	----------	9	---------	--	---	D	"Hardpan" at 51 ft. Water at 23, 40, and 53 ft.
2B1	Wesley White	112	Dg	18	-----	-----	----------	7.2	5/25/59	--	---	D	Only about 2 ft of water in October. "Hardpan" from 4 ft to bottom.
2B2	Ethel Dalton	105	Dg	21	48	-----	----------	5.7	5/25/59	--	---	D	
2B3	Floyd Charles	110	Dg	17	48	-----	----------	6.3	5/26/59	J	---	D	

2B4	L. H. Berning	125	Dg	33	-----	-----	----------	12.7	5/26/59	--	---	D	
2C1	-- Parr (?)	90	Dr	114	6	-----	----------	96.4	5/25/59	P	---	Irr	
2C2	William Conser	90	Dg	29	36	-----	----------	19.8	5/26/59	P	---	D	
2C3	R. Shutt	5½	Dr	28	4	-----	----------	Flows	----------	--	---	D	Flows at high tide.
2C4	--Stacey	100	Dr	120	6	-----	----------	95.2	5/26/59	--	---	D	
2C6	R. S. Maxwell	62	Dr	92	6	-----	----------	62.9	5/26/59	--	---	D	
2E2	Calvin Lockwood	5½	Dr	200	12	-----	----------	Flows	----------	--	---	D	Flows slightly at high tide.
2F1	Calvin Lockwood	80	Dg	11	60	-----	----------	4.5	5/25/59	N	---	N	Abandoned.
2G1	V. Ferrero	110	Dg	35	42	-----	----------	20	5/25/59	--	---	D	
2H1	L. R. Goolsbey	112	Dr	67	4	-----	----------	24.8	5/21/59	J	---	D	
2H2	Earl Bolender Grocery	112	Dr	114	6	-----	----------	20 (?)	5/21/59	--	---	D	Water level estimated.
2H3	Eric Erickson	90	Dr	52	4	-----	----------	17.2	5/21/59	J	---	D	
2J1	W. W. Wuerth	150	Dg	21	24	-----	----------	4.9	5/22/59	J	---	D,S	
2R1	G. V. Koehler	167	Dg	23	36	-----	----------	9.3	3/16/59	--	---	D	
2R2	John Garowski	150	Dg	25	-----	-----	----------	9.7	5/22/59	--	---	D	Drilled well, 76 ft deep, had water level of 21.7 ft.
3M2	Eric Sommer	140	Dg	27	36	-----	----------	3.8	9/28/59	C	1/4	D	Supply adequate.
3M4	Ruth Pritchard	130	Dr	85	6	-----	----------	49.4	9/28/59	J	1/2	D	Water has high iron content.
3N1	Neil Peters	165	Dg	60	48x48	-----	----------	54	----------	--	---	D	
3N2	W. M. Akehurst	160	Dg	15	36	-----	----------	13.5	9/25/59	C	1/4	D	
3N5	W. E. Day	155	Dg	12	30	-----	----------	6.9	9/28/59	C	1/4	D	Some iron; owner uses softener.
3P1	Walt Wilson	75	Dr	38	6	-----	----------	29	----------	J	1/2	D	"Hardpan" at 3 ft. Water at 29 ft (100 gph), water at 38 ft (500 gph).
3P2	W. G. Johnston	145	Dr	70	6	-----	----------	52.8	9/29/59	J	1/2	D	
4G2	V. O. Rogers	145	Dg	15	24	-----	----------	10.2	8/28/59	--	---	D	Supply inadequate.
4H1	H. C. Higgins	18	Dr	387	3	-----	Sand	Flows	7/5/60	P	3	D	Flows 30 gpm. Supplies seven homes. A2.
4H2	Mildred Lemon	140	Dr	136	6	121	Sand	55	6/17/58	S	---	D	Bailed 1,500 gph, maximum dd. Water has "oily" smell. L.
4J1	A. C. Newman	155	Dg	15	24	-----	----------	11.7	9/2/59	C	1/4	D	Can pump dry.
4J3	Jack Keefer	125	Dg	13	36	-----	----------	11	---------	C	---	D	Supply inadequate.
4J5	A. L. Parks	145	Dr	117	6	-----	----------	54.0	9/28/59	J	1	D	Some iron. Pumped for about 10 minutes at 8-10 gpm, dd 16 ft. A2.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
4J6	Orville Mallgren	155	Dr	65	6	-----	----------	31.8	9/29/59	J	1/3	D	Water has high iron content.
4J7	W. E. Sullivan	155	Dr	41	6	-----	----------	34.6	9/28/59	N	---	----	Supply apparently inadequate.
4K1	E. W. Warren	130	Dr	76	6	-----	----------	4.5	9/24/59	J	1	D	
4L1	Joe Brooks	165	Dg	25	36	-----	----------	21.6	9/24/59	C	1/2	D	Supply generally adequate, but has gone dry.
4M1	Clara Leaming	145	Dg	14	30	-----	----------	11.7	9/24/59	C	1/4	D	Supply adequate for only limited use.
4P1	Gene Brooks	175	Dg	10	36	-----	----------	5.8	9/24/59	C	1/4	D	Supply adequate.
4Q1	A. B. Sivertson	175	Dg	9	36	-----	----------	4.5	9/24/59	C	---	D	
4Q2	Joe Perrott	170	Dr	38	6	-----	Gravel	10	----------	J	1/2	D	Encountered some "blue clay" near surface.
4R3	L. D. Wamer	145	Dr	46	6	-----	----------	7.2	9/28/59	J	1/2	D	
5B1	C. C. Denny	165	Dr	84	6	-----	----------	70	1941	J	1/2	D	Supply adequate. A2.
5C1	L. R. Shaver	145	Dr	45	6	45	Gravel & sand	23	May, '56	J	1/2	D	Sand, clay, gravel to 43 ft. Bailed 30 gpm, dd 4 ft.
5C2	Robert Prosch	140	Dr	50	6	-----	----------	21	June, '56	J	---	D	
5D1	Melvin Marsh	170	Dr	64	4	-----	----------	-------	---------	J	1/2	D	Supply adequate.
5J1	J. Holzmeister	147	Dg	9	36	-----	----------	5.2	8/6/59	C	1/2	D	Supply adequate for limited domestic use.
5J2	L. Heffington	147	Dg	18	36	-----	----------	11.8	8/6/59	C	1/2	D	Water contains some iron.
5J4	L. D. Preston	145	Dr	70	6	66	----------	21	Oct., '54	J	1/2	D	Bailed 800 gph, dd 16 ft. L.
5Q1	Aaron Lee	145	Dg	12	36x36	-----	----------	6.1	8/6/59	--	---	D	Quality of water is poor, contaminated.

6R1	F. R. Stockton	180	Dr	73	8	73	Gravel	56	1952	J	1	D	Bailed 26 gpm, dd 3 ft. L.
7A1	Lee Brennan	170	Dg-Dr	50	8	-----	----------	21.0	7/15/55	J	2	D	Bailed 50 gpm, dd 10 ft. L.
7A2	D. L. Swearingen	170	Dg-Dr	56	8	-----	----------	20.6	7/27/59	N	---	----	Quality of water is poor.
7A3	D. L. Swearingen	175	Dr	70	6	-----	----------	29.0	7/27/59	J	2	D	Supply adequate.
7A4	William Swanson	180	Dr	87	8	-----	----------	52.1	7/28/59	J	2	D	Quality of water is good. Bottoms in "blue clay". Lots of "hardpan".
7H1	--Vandeventer	175	Dg-Dr	78	6	-----	Gravel, pea	45.2	7/27/59	J	1	D	"Hardpan" from 3 ft to 43 ft.
7H2	E. E. Anderson	170	Dr	40	3	-----	----------	13	---------	H	---	D	"Broke through hardpan at 40 ft". Quality of water is bad.
7J2	L. D. Craven	145	Dr	103	6	97	Gravel	83	April, '58	S	3/4	D	Bailed 25 gpm, dd 5 ft. Bottoms in blue clay. L. A2.
7K1	Duane Cordiner	155	Dg	21	60x60	-----	----------	11.4	7/22/59	C	1/2	D	
7K2	M. R. Hildebrand	165	Dg	25	36	-----	----------	18.5	7/22/59	N	---	N	
7K3	W. E. Seeley	170	Dr	106	6	-----	----------	92	1958	S	1/2	D	Encountered water at 100 ft.
7L1	V. H. Clark	130	Dr	80	6	80	Gravel & sand	57	6/4/59	J	1	D	Bailed 20 gpm, dd 3 ft. L.
7N1	A. F. Osborne	12½	Dn	27	3	-----	----------	F	7/16/59	C	3	D,S	Flowing 3-4 gpm. Some peat in area.
7P2	Don Roy	155	Dg	19	30	------	----------	11.0	7/22/59	C	1/3	D	
7R1	L. D. Ziegler	178	Dr	125	8	120	Sand & gravel	80 77.8	8/8/51 7/10/58	J	5	Irr	Tested for 8 hr at 30 gpm, dd about 20 ft. Screened from 120 to 125 ft. L. Obs.
7R2	Les Gregory	155	Dr	91	6	-----	----------	72	---------	J	1/2	D	Supply adequate.
8E1	Arnold Sather	180	Dg	32	5	-----	----------	21.3	7/27/59	J	1	D	Topsoil underlain by "hardpan".
8G1	T. Pedersen	148	Dr	207	6	-----	Sand	50	1957	J	---	D	Water has high mineral content; mostly blue clay after 20 ft.
8M1	S. J. Lundberg	150	Dr	125	4	-----	----------	62	---------	--	---	D	Water has high mineral content; "hardpan" at 20 ft.
8M2	Horace James	155	Dr	95	6	93	Sand & gravel	74	Sept., '56	J	1	D	Bailed 20 gpm, dd 3 ft. L.
8P1	W. D. Thompson	160	Dr	128	4	-----	----------	88	---------	P	1	D	Well originally drilled to 140 ft, casing was pulled back and "blown" at 128 ft.
8P3	E. N. Clark	150	Dg-Dr	57	30	-----	----------	44.9	8/6/59	J	1/4	D	Quality of water is good.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
8P5	H. McLane	145	Dr	68	6	-----	----------	35.7	8/6/59	J	1	D	Water has some iron.
8Q1	C. R. Daugherty	145	Dr	66	6	66	Gravel & sand	40.4	Aug., '51	J	3/4	D	Bailed 1,240 gph, dd 5 ft. L.
8Q3	Guy McLeod	145	Dr	74	6	-----	----------	61	---------	J	1	D	"Hardpan" from 6 to 64 ft.
8Q5	Levi Nelson	170	Dr	70	3	-----	Sand & gravel	55	1958	P	3/4	D	Water level for winter.
8R2	K. D. Simmons	165	Dr	77	6	-----	----------	-------	---------	J	1	D	
8R3	O. B. Ferguson (E. B. King)	155	Dr	91	6	90	Gravel	68.5	Sept., '52	--	---	D	Bailed 1,040 gph, dd 6 ft. L.
9A1	Estella Clow	180	Dr	91	3	-----	----------	85+	9/25/59	J	1	D	Dry at 85 ft. Tape "hung up" on jet.
9E1	Elmer Strand	290	Dr	144	6	144	Gravel, clay	131	Sept., '58	S	1	D	Bailed 13 gpm, dd 3 ft. L.
9F2	Jess Wells	205	Dr	136	6	-----	----------	-------	---------	P	1/2	D	Supplies two homes.
9J1	L. Q. Kimbler	195	Dg	34	36	-----	----------	19.4	9/23/59	P	1/4	D	
9N1	Grant Corbett	180	Dg	24	72	-----	----------	17.6	9/22/59	C	1/3	D	Supply adequate.
9N2	--Nichols	200	Dg	29	32	-----	----------	7	---------	C	1/2	D,S	Water level fluctuates from land surface to 14 ft.
9P2	Alvin Camus	170	Dr	93	6	93	Gravel	74	Oct., '57	P	3/4	D	Bailed 17 gpm, dd 2 ft. L.
9P3	A. J. Owens	185	Dg	10	18	-----	----------	8.5	9/23/59	C	1/4	D	Supply inadequate.
9P4	Charles Evanoff	205	Dr	120	6	-----	----------	95	---------	--	1	D	
9Q1	J. H. Jordan	205	Dr	112	6	-----	----------	100	---------	S	1/2	D	Supply adequate.
9R1	C. H. Gustin	210	Dr	132	6	-----	----------	-------	---------	S	1/2	D	
10D1	Ole Hilden	210	Dg	17	-----	-----	----------	-------	---------	C	---	D	Supply inadequate. Drilled 83 ft without hitting water in summer of 1958.

10D2	C. W. Mallgren	210	Dg	19	36	10	----------	14	---------	C	1/4	D	Can be pumped dry.
10F1	W. C. White	180	Dr	97	6	-----	----------	83.2	Dec., '58	P	1	D	Supply adequate.
11H1	Ira Smith	155	Dg	-----	48	-----	----------	4.3	3/17/59	J	---	D	
11J1	A. Klocke	165	Dg	26	36	-----	----------	13.2	3/16/59	--	---	D	------Do------
12A1	W. Moser	157	Dg	14	42	-----	----------	1.0	2/26/59	--	---	D	
12A2	C. E. Lloyd	160	Dr	62	4	-----	----------	7.7	2/6/59	J	---	D	Supplies duplex.
12B1	A. Loeffelbein	175	Dr	76	6	-----	----------	9.2	3/16/59	J	---	D	
12B2	P. Pease	175	Dr	-----	6	-----	----------	6.7	3/17/59	J	---	D	
12F1	C. A. Sulenes	175	Dg	30	36	-----	----------	3.4	3/16/59	--	---	D	
12G1	E. Peterson	175	Dr	47	6	-----	----------	4.0	3/17/59	--	---	D	
12G2	R. E. Thompson	175	Dr	40	6	40	Gravel & sand	11	Dec., '54	--	---	D	Bailed 20 gpm, dd 3 ft. Sand and clay to 36 ft.
12G3	Christy Barrett	165	Dr	67	3	-----	----------	3.0	3/17/59	J	---	D	"Rust".
12K3	E. Swearingen	175	Dg	30	36	-----	----------	10.1	3/17/59	J	---	D	
12Q2	Ola Keyes	175	Dr	57	6	-----	----------	12	---------	J	---	D	
13A1	Myron Smith	160	Dr	36	4	-----	----------	2.6	3/26/59	J	---	D	
13A2	C. E. Mattern	160	Dr	42	6	40	Gravel	5	Aug., '49	--	---	D	Bailed 10 gpm, dd 2.5 ft; bailed 20 gpm, dd 18 ft. L.
13A3	----------	155	Dr	41	4	-----	----------	6.3	3/26/59	--	---	D	
13H1	E. W. Rolle	200	Dg	42	48	-----	Gravel (38-42)	25	---------	--	---	D	"Hardpan" from 13 to 38 ft.
13J1	Fir Grove Motel	195	Dr	159	3	-----	----------	100.4	6/25/58	--	---	----	Abandoned.
13R1	George Eklund	150	Dr	25	3	-----	----------	3.0	6/25/58	C	1/2	D	
13R3	C. B. Beck	185	Dr	38	4	-----	----------	22	----------	--	---	D	
14E1	Olympia Shingle Co.	10+	Dr	305	6	290	Sand, coarse	Flows	---------	--	---	Ind	Flowing 21 gpm on 3/2/51. Screened from 290 to 305 ft. L.
14E2	Olympia Canning Co. (Sea-Mart)	10+	Dr	250	3	250	----------	Flows	---------	--	---	Ind	Flowing 30 gpm, 1946.
14L1	Oregon-Washington R. R. and Nav. Co.	10+	Dr	196	3	196	----------	Flows	---------	--	---	Ind	Flow of 7 gpm, 10/7/45.
14M1	Olympia Lodge #186, B.P.O.E.	6	Dr	63	6	58	Sand, gravel	2	2/17/58	S	7½	D	Tested 4 hr at 85 gpm, dd 11 ft. Screened from 57 to 63 ft. Temp 52° F. L.
14N1	Northern Pacific Railway Co.	10+	Dr	180	3	180	Sand, fine	Flows	---------	--	---	Ind	Flow varies with tide. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
15M1	Earl Thede	190	Dr	118	4	-----	----------	102	---------	J	1/2	D	Supplies service station.
16J1	Don Spoon	195	Dr	120	6	-----	----------	------	---------	S	1	Ind	Supplies 4 business buildings.
17C1	Frank Cheadle	170	Dr	89	6	87	Sand & gravel	57	1957	--	---	D	Bailed 1,140 gph, dd 3 ft. L.
17C2	Corabelle Slacka	175	Dr	139	6	139	Gravel, sand	86	---------	S	1	D	Bailed 19 gpm, maximum yield. L.
17D1	Dorothy Osborne	180	Dr	140	6	-----	----------	100.0	7/21/59	J	1	D	Supplies two homes. A2.
17D2	K. L. Dorland	180	Dr	127	6	-----	----------	------	---------	S	1/2	D	Supply adequate.
17D4	G. Putscher	180	Dr	103	4	-----	----------	90.2	---------	P	---	D	
17E1	B. J. Shannon	165	Dr	140	4	-----	----------	105	---------	P	---	D	Originally drilled 99 ft, then had to deepen.
17E2	Nelson Cleaners	160	Dr	109	6	-----	----------	-------	---------	P	1	D	Quality of water is good, but some "rust".
17F1	Mark Adams	175	Dr	103	3	-----	----------	-------	---------	P	3/4	D	
17F2	G. F. Arnold	180	Dr	192	3	-----	----------	70	---------	P	---	D	Encountered lots of "quicksand".
17G1	Fred Rietdord	180	Dr	85	6	-----	----------	-------	---------	J	1	D	Supplies two homes.
17H1	W. G. Darnall	180	Dr	107	6	-----	----------	93	---------	J	1	D	
17J1	A. Kirshbaum	165	Dg	15	48x48	-----	"Hardpan"	3.2	4/5/60	C	---	D	
17J2	Jack Sliva	170	Dr	94	6	94	Sand & gravel	76.4	1949	J	1/2	D	Bailed 10 gpm, dd 1 ft. L.
17L1	J. M. Plumb	177	Dr	110	6	-----	----------	-------	---------	J	---	D	
17L2	A. W. Norman	180	Dr	99	6	99	----------	77	April, '46	J	3/4	D,Irr	Bailed 1 hr at 20 gpm, dd 4 ft. Irr 6 ac.
17M1	Grant Dissette	155	Dr	121	6	121	Sand & gravel	99	Nov., '53	J	1	D	Bailed 700 gph, dd 10 ft. L.

17Q1	Albert Meyer	160	Dr	100	6	-----	----------	73	July, '50	J	1/2	D	
17Q2	Verne Fahlstrom	170	Dr	128	6	-----	Sand, Hard	60	Feb., '57	J	2	D	Supplies trailer court. L.
17Q3	Dale Looker	178	Dr	100	6	-----	----------	71.2	4/4/60	J	---	D	
17R1	D. A. Kirschbaum	177	Dr	96	4	-----	----------	75.7	4/5/60	J	1/2	D	
18A1	Morris Payne	175	Dr	119	6	-----	----------	99	---------	S	---	D	
18B1	R. S. Shoemaker	175	Dr	115	6	-----	----------	-------	---------	S	1/2	D	Quality of water is good; no stain.
18B2	Unknown	155	Dr	93	5	-----	----------	-------	---------	N	---	----	Dry at 75 ft, tape stops. Abandoned.
18F1	R. L. Eagan	75	Dr	75	6	74	Gravel	50	March, '59	S	1/2	D	Bailed 17 gpm, dd 16 ft. L.
18G1	S. P. Klontz	150	Dg	28	60x60	-----	----------	13.2	7/21/59	C	1/3	D	Water has high mineral content.
18G3	Leroy Hoage	145	Dr	96	6	-----	----------	84	---------	S	---	D	Supply adequate.
18H1	Penrod Construction Co., Inc.	160	Dr	-----	6	-----	----------	92.4	7/21/59	J	1½	D	Supplies shop, slight iron content in water.
18H3	L. V. Morton	175	Dg	26	------	-----	----------	16.2	7/21/59	J	1/4	D	Slight iron content in water.
18H4	W. A. Payton	175	Dg	28	------	-----	----------	18.0	7/21/59	J	1/2	D	Lots of "hardpan".
18K1	McLane School Dist. #329	175	Dr	180	6	-----	----------	80	---------	--	3	PS	Supplies school.
19C1	R. L. Sturdivant	70	Dg	16	30	-----	----------	10.6	7/17/59	C	1/4	D	
19C2	George Ulery	75	Dg	16	------	-----	----------	-------	---------	C	1/2	D	Objectionable mineral content.
19M1	R. J. Ramsauer	15	Dg	9	36	-----	----------	4.8	7/17/59	C	1/2	D	Supplies two houses. Bottoms in clay.
20F1	R. E. Lathrop	200	Dg	12	30x30	-----	----------	2.1	4/4/60	C	1/2	D	
20G1	J. C. Welker	240	Dg	14	48x48	-----	----------	8	---------	C	1/4	D	
21B1	--Bosteder	185	Dr	152	3	-----	Gravel	94	---------	--	1	D	Supplies eight homes.
21B2	Olympia Oil and Wood	145	Dr	245	8	245	Sand, gravel, clay	25	July, '58	T	7½	Ind	Bailed 60 gpm, dd 25 ft. L.
21N1	O. J. Backman	150	Dr	84	4	-----	----------	3.2	Fall, '49	C	1/2	D	"Hardpan" at 50 ft; blue mud and "quicksand" above.
21P1	I. W. Prather	145	Dg	20	38x38	-----	----------	16	---------	C	1/4	D	Reported water level is for lowest water period.
22F1	H. Kline	180	Dr	124	6	-----	----------	109	---------	S	---	D	
23	City of Olympia	The city has numerous drilled wells in Sections 23, 24 and 25. These are all abandoned and (or) not in use as of 1960. However, in the event that information is required for city wells in this area, general information may be obtained at the offices of the Division of Water Resources.											
24H1	Earl Foote	175	Dr	129	6	-----	----------	23	---------	J		D	"Rusty".
24H2	G. Webley	165	Dg	11	24	-----	----------	5.8	6/23/58	N	---	N	Abandoned.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
24H3	Lee Marcum	175	Dr	60	3	-----	----------	26.2	6/23/58	J	---	D	
24H4	Walter Marcum	175	Dr	92	4	-----	----------	19.0	6/23/58	--	---	D	
24J1	Smith's Greenhouse	195	Dr	168	3	-----	----------	20 (?)	---------	P	---	D,Irr	
25A1	H. G. Carlson	200	Dg	40	36	-----	----------	32.2	6/19/58	--	---	D	
25A2	R. J. Fox	200	Dr	100	3	-----	----------	40	---------	--	---	D	
25F1	E. W. Baker	170	Dn	30	2	30	----------	16	---------	--	1½	D,Irr	Tested at 30 gpm, dd 6 ft.
25H1	R. Schaap	200	Dr	203	8	-----	----------	78	---------	J	---	D	
25H3	Mark Hannigan	200	Dr	160	6	-----	----------	68.5	6/19/58	J	---	D	A2.
25J1	Wilbur Hatch	205	Dg	50	36	-----	"Hardpan"	46	6/18/58	J	---	D	"Hardpan" from 10 ft to bottom.
25Q2	R. L. Gildow	140	Dn	21	2	-----	----------	16	---------	C	1/4	D	
26L1	Olympia Lodge No. 1, F.&A.M.	105	Dr	158	10	152	----------	10.2	10/5/54	--	---	Irr	Tested 4 hr at 235 gpm, dd 105 ft. Irr 21 ac. Screened. L. A2.
29P1	R. D. Gunstone	135	Dg	27	24	-----	----------	12.1	7/13/59	C	1/4	D	
29P2	C. R. Inman	135	Dg	25	6	-----	Sand	20	---------	C	1/2	D	Storage basin bricked in an bottom.
30D1	A. N. Moss	60	Dg	13	36	-----	Clay	-------	---------	--	---	D	Water level varies from top to bottom (bedrock). Supply inadequate.
31A1	E. M. Goldsby	140	Dr	96	6	59	Clay, sand	7	March, '58	--	1/4	D	Bailed 2½ gpm, dd 33 ft. Open hole provides 180-gallon storage. L.

31B1	S. W. Meyer	140	Dr	35	6	-----	----------	4	---------	J	1/4	D	
31J1	Mary Freeman	140	Dg	10	24	-----	----------	6	---------	--	---	D	Supply adequate for house use.
31J2	Maxine Gildner	140	Dg	9	48x48	-----	----------	5.2	7/10/59	C	1/3	D	Supply inadequate.
31P1	Fred Gideon	165	Dr	44	6	44	Gravel & sand	19	Sept., '53	J	---	D	Bailed 500 gph, dd 9 ft. L.
31Q1	John Grunenfelder	155	Dr	128	6	128	Gravel, sand, clay	15	August, '58	S	---	PS	Supplies park and cabins. Bailed 1,440 gph, dd 25 ft. Perforated from 45 to 75 ft. L.
31R1	J. A. Dunaway	145	Dg	17	------	-----	----------	-------	---------	--	---	D	Bottoms in "hardpan".
32A1	K. M. Bailey	165	Dg	17	------	-----	----------	10	---------	C	1/4	D	
32A3	Joe Bikadi	180	Dr	40	4	-----	----------	15	---------	J	---	D	
32A5	R. D. Teague	185	Dr	55	6	55	Gravel, sand, clay	20	Dec., '58	J	1/2	D	Bailed 20 gpm, dd 20 ft. L.
32B1	H. W. Pohlman	170	Dr	40	6	-----	----------	28	---------	J	1/2	D	
32D1	C. E. Lindstrom	140	Dr	93	8	-----	Gravel	8.2	4/4/60	J	1	D	
32E1	A. C. Miller	140	Dg	16	48	-----	----------	8.2	7/13/59	C	1	D	
32E2	M. M. Mordhorst	135	Dg	16	36	-----	----------	1.2	7/13/59	C	1/2	D	
32E4	G. J. Normoyle	140	Dr	89	6	89	Sand, gravel	7	Feb., '59	C	1/2	D	Some sulfur in water. L.
32E5	J. L. Mills	140	Dr	72	6	-----	----------	2	April, '59	J	1	D	Tastes somewhat flat.
32F1	Dean Gross	145	Dg	20	36	10	----------	16	---------	C	1/2	D	"Hardpan" in lower half.
32F3	George McIver	155	Dg	26	48x48	-----	----------	22	---------	--	1	D	Supply adequate.
32G1	Charles Welsh	155	Dr	80	6	-----	----------	10	---------	C	1/4	D	Very good well.
32J1	Bonneville Power Administration	180	Dr	65	20-10	65	Sand, coarse & fine gravel	20	1950	T	7½	Ind	Pumped 120 gpm, dd 14 ft. L. Additional log of 246 ft test hole included.
32M1	A. C. Miller	145	Dr	88	6	88	Gravel, pea, & sand	16	April, '58	S	1½	D	Supplies trailer court. Bailed 63 gpm, dd 3 ft. L.
32R1	George Ayres	160	Dg	14	18	-----	Sand	1.2	4/27/60	C	1/3	D	
33A1	D. M. Belknap	155	Dr	35	6	-----	----------	-------	---------	--	---	D	Supply adequate.
33A2	T. W. Pearson	155	Dr	53	6	-----	----------	-------	---------	--	1/2	D	------Do------
33B1	G. H. Shattuck	175	Dg	15	36	-----	----------	-------	---------	--	---	D	Water level fluctuates between 5 and 12 ft.
33B2	L. S. Bert	150	Dg	20	------	-----	----------	12	---------	--	---	D	
33L1	Ed Deschamps	165	Dr	65	6	-----	----------	-------	---------	P	1/2	D	Supply inadequate.
33N1	Jerry Aarts	165	Dn	20	1¼	20	Sand	3	---------	C	1/4	D	
33P1	L. A. Boucher	160	Dg	12	36	-----	----------	5.0	1/28/59	N	---	D	
33R1	Jack Reynolds	155	Dr	90	8	-----	Sand	20	---------	J	---	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 2 W. -- Continued						
34C1	R. D. Strange	155	Dn	25	1½	25	Sand	-------	---------	C	1/2	D	Majority of wells in immediate area are driven sandpoints.
34L1	Robert Sanders	160	Dn	22	1½	-----	----------	-------	---------	C	1/4	D.	All driven sandpoints in immediate area.
34N1	Olympia Memorial Gardens, Inc.	165	Dr	38	6	33	Sand, gravel	10	4/13/56	--	---	D,Irr	Pumped 4 hr at 50 gpm, dd 23 ft. Bottom 5 ft screened. L.
34P1	Roy Dorning	180	Dg	16	36	-----	----------	12	---------	C	1/4	D	
35M1	Town of Tumwater #1		Dr	90	12	-----	----------	8	May, '46	--	---	PS	Tested at 220 gpm, dd 40 ft.
35M2	Town of Tumwater #2		Dr	92	12	92	Sand & gravel	8	Dec., '47	--	---	PS	Tested at 350 gpm, dd 30 ft. Perforated from 80 to 92 ft. L.
35M3	Town of Tumwater #3		Dr	96	12	96	Sand & gravel	8	August, '47	--	---	PS	Tested at 250 gpm, dd 53 ft. Perforated from 84 to 96 ft. L.
35M4	Town of Tumwater #4		Dr	90	20-10	90	Gravel & sand	8	---------	--	---	PS	Tested at 1,180 gpm, dd 51 ft. Perforated from 60 to 90 ft. L. A.
36A1	Jack Madsack	175	Dr	80	6	-----	----------	40.0	6/18/58	J	1	D,S	
36J1	E. W. Ashburn	200	Dr	141	10	141	Gravel & sand	61.6	3/13/56	--	7½	PS	Tested 4 hr at 700 gpm, dd 3.4 ft. Perforated from 71 to 83 ft and from 122 to 144 ft. L.
36J2	F. B. Baker	195	Dr	118	6	-----	----------	66.7	6/18/58	J	1½	D	

T. 18 N., R. 3 W.

1C1	J. W. McKnight	5+	Dr	50	3	50	Gravel, very fine	Flows	6/24/59	C	1/4	D	Mostly sand". Small flow which varies with tide. A2.
1D1	Grant Valentine	10±	Dg	12	24	-----	----------	7.0	7/1/59	C	1/4	D	Water level fluctuates with tide.
1D2	L. C. Voight	10	Dr	65	6	59	Gravel, sand	Flows	9/24/46	--	---	D	Well flows 30 gpm at high tide. Bottom 5 ft screened. L.
2B1	R. M. Hansen	205	Dr	120	6	-----	----------	-------	----------	J	1½	D	Supplies mink farm. Had 105 ft well, but supply was inadequate.
2B2	Ervin Lawrence	170	Dr	98	6	-----	----------	-------	----------	S	3/4	D	
2B3	Griffin School Dist. #324	173	Dr	120	6	-----	----------	-------	----------	S	1	PS	Supplies school; about 200 pupils.
2B4	Earl Williams	160	Dr	90	6	-----	----------	-------	----------	J	1	D	Supplies cafe, tavern, service stations, cabins and two houses.
2C1	Ralph Baker	165	Dr	80	6	-----	----------	-------	----------	J	1	D	Supplies two homes.
2G1	--Barrick	165	Dr	94	5	-----	----------	78	----------	S	1/2	D	--------Do--------
2G3	Madrona Beach Water Assn.	110	Dr	146	6	139	Gravel, sand, clay	109	3/17/59	T	3	PS	Tested 4 hr at 45 gpm, dd 20 ft. Perforated from 75 ft to 135 ft. L.
2H2	L. W. Sexton	6	Dr	71	8	71	Gravel & sand	5.5	5/16/55	--	5	PS	Supplies seven homes. L. A2.
2H3	Eugene Beck	10	Dr	45	2	45	----------	8	----------	C	1/4	D	Part of 4 well interconnected system.
2J1	W. T. Robertson	35	Dr	55	6	-----	----------	-------	----------	J	---	D	Supplies two homes.
3J1	F. G. Calvin	160	Dg	8	6	8	----------	4.1	7/1/59	--	---	D	Water level correlates very closely to creek.
4R1	Henry Wynne	250	Dr	100	6	-----	----------	-------	----------	N	---	N	"Dry". Lots of clay.
7L1	Floyd Japhet	500±	Dg	17	48x48	-----	----------	15	----------	C	1/2	D	Supply adequate for domestic use.
11P1	Mark Faulds	275	Dg	17	24	-----	----------	7.5	4/5/60	C	1/4	D	
12P1	Ed Hillberg, Jr.	35	Dg	10	48x48	-----	----------	1.9	4/5/60	C	1/4	D	Supplies two homes, water level very low in summer.
12P2	George Kanda	15	Dg	30	30	-----	----------	1.5	4/5/60	C	1/4	D	Contaminated for drinking water.
13K1	M. L. Mook	45	Dr	85	6	75	Sand	29	----------	J	1	D	Bottom 10 ft screened. A2.
13K2	R. G. Duval	42	Dr	54	4	-----	----------	38	----------	J	1/2	D	Supplies two homes.
16P1	A. J. Philippi	480	Dg	12	42	-----	Sand, grey	3.5	----------	J	1/2	D	A2.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
T. 18 N., R. 3 W. -- Continued													
18B1	--Johnston	490	Dg	12	36	-----	----------	8	---------	--	1/4	D	Supply inadequate.
22H1	Bob Stockton	380	Dg	18	24	-----	----------	8	7/15/59	C	1/4	D	Supply adequate for limited use only.
22H2	Roy Smith	320	Dr	198	6	-----	----------	+0.5	---------	J	---	D	Supply adequate.
22P1	L. M. King	380	Dg	12	48x48	-----	----------	-------	---------	C	1/4	D	Goes dry in July.
23B1	M. Forestadhagen	230	Dg	9	36	-----	----------	-------	---------	--	---	D	Supplies dairy.
23E1	J. B. Chastain	325	Dg	15	36x36	-----	----------	-------	---------	C	1/2	D	Supply inadequate in summer.
23H1	R. E. Hiddleson	240	Dr	66	6	-----	----------	44	---------	--	1	D	Supply adequate.
23H2	R. E. Grimes	245	Dr	36	6	-----	----------	8	---------	C	3/4	D	------Do------
23H3	C. N. Canning	205	Dg	20	48x48	-----	Sand & gravel	5.5	7/16/59	C	1/4	D	Water level low in fall.
23K1	John Havens	225	Dr	30	6	-----	----------	-------	---------	C	1/2	D	Supply adequate.
23L1	C. L. Johnson	285	Dg	9	60x60	-----	----------	6.6	7/16/59	N	---	N	
24H1	H. H. Hilting	15	Dr	207	10	207	Gravel, sand	Flows	---------	--	---	Irr	Tested 4 hr at 300 gpm, dd 17 ft. Flowing 40 gpm, 1/30/53. Irr 53 ac. L. A2.
24J1	W. L. Frank	15	Dg	25	36	-----	----------	15	---------	C	1/2	D	Water level low, but never goes dry.
24L1	Clarence Weeks, Jr.	125	Dr	94	6	-----	----------	-------	---------	J	1	D	
24N1	O. H. Moon	155	Dr	36	4	-----	----------	33	---------	H	---	D	Well has 3 ft of water at lowest point.
24N2	D. C. Shaffer	205	Dr	58	6	-----	----------	-------	---------	J	1	D	Cement gravel all the way.
24R1	K. R. Venable	20	Dg	40	8-6	40	----------	10.2	7/15/59	C	1/3	D	Pumps some sand.

24R2	J. E. Hansen	15	Dg	22	2	22	----------	5	---------	C	1/2	D	Water level fluctuates from 0.5 to 5 ft. Supplies two homes.
25A1	Walter Austin	25	Dr	131	6	131	Gravel, coarse sand	Flows	7/15/59	J	1	D,Irr	Flows continuously about ½ gpm. Bailed 13 gpm, dd 19 ft. L. A2.
25Q1	Ray Coleman	70	Dg	12	------	-----	Sand	-------	---------	C	1/4	D	Well located between McLane Creek and small tributary.
25R1	C. O. Brown	130	Dr	180	6	-----	----------	-------	---------	J	1	D	
25R2	W. R. Morgan	120	Dr	77	6	-----	----------	35	---------	J	3/4	D	Supply good, but some mineral.
25R3	J. W. Choap	115	Dr	43	6	-----	----------	36	---------	J	1/2	D	Supply inadequate in fall.
							T. 18 N., R. 4 W.						
9F1	Ernest Cooper	400	Dg	10	18	-----	----------	4	---------	C	1/2	D	Water level fluctuates from 1 to 6 ft.
9K2	Ron Mosier	370	Dg	35	48x48	-----	----------	12	---------	H	---	D	
9K3	C. M. White	380	Dg	31	30	-----	----------	19.4	7/7/59	J	1/2	D	Supply adequate.
9L1	W. F. Scott	375	Dr	68	6	-----	----------	20	---------	J	1	D	
9M1	Walter Bourgalt	360	Dr	36	8	36	Gravel	12 5.4	1/17/49 2/10/58	T	5	Irr	Tested at 200 gpm, dd 5 ft. Perforated from 23 to 35 ft. Irr 25 ac. L.
11K1	Carl Marvin	365	Dg	20	48x48	-----	----------	13.0	7/7/59	C	1/4	D	Open hole, appears to be basaltic soil and angular gravel. (Reddish). A2.
13A1	L. L. Irvin	500±	Dr	9	8	9	----------	-------	---------	H	---	D	Can pump about 35 gallons at a time. Many seep wells in area.
13H1	T. J. McBride	495	Dr	42	6	-----	----------	7	---------	J	1/2	D	Supplies resort. A2.
13H2	W. H. Cramer	490	Dr	42	6	-----	----------	8	---------	H	---	D	
13K1	Summit Lake Community Club	480	Dr	31	6	-----	----------	17.9	7/8/59	H	---	----	
14A1	John McClure	385	Dg	16	48x48	-----	----------	12.0	7/7/59	C	1/4	D	Supply has been adequate except for summer of 1958 when water level got very low and objectionable to drink.
14B1	Ohmi Acres (Shankel)	390±	Dg-Dr	50	6	-----	----------	26	---------	J	---	D	Dug 28 ft, drilled 22 ft. "Hardpan" from 11 to 15 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 18 N., R. 4 W. -- Continued						
24A1	Bert Shincke	480	Dr	20	6	-----	----------	-------	----------	C	1½	D	Supply adequate. A2.
							T. 19 N., R. 1 E.						
30E1	Nat'l. Fish & Oyster Co.	5+	Dr	34	6	34	----------	Flows	Nov., '46	J	1½	D,Ind	Bailed at 40 gpm, dd 20 ft. A2.
30M1	C. P. Foreman	55	Dr	73	6	72	Gravel & sand	40	Oct., '54	J	1	D	Bailed 20 gpm, dd 12 ft. L.
30M2	L. Weimar	80	Dr	90	------	-----	----------	55	----------	J	1	D	
31C1	A. L. Parlette	200	Dr	51	6	-----	----------	-------	----------	J	1	D	Supplies two homes.
31C2	Leo Schonenbach	160	Dg	10	------	-----	Sand, loose	1	1/28/58	J	1/4	D	
31D1	Lee Giles	180	Dr	34	6	-----	----------	-------	----------	J	1/2	D,S	
31D2	P. T. Brosje	160	Dg	25	------	-----	----------	2	1/28/58	P	1/2	D	Not used at time of examination.
31E1	Ole Grindvold	210	Dg-Dr	54	6	54	Gravel, little clay	22.8	Feb., '51	J	1/2	D	Dug 30 ft. Bailed 20 gpm, dd 10 ft.
31H1	Brown Farms, Inc.	2+	Dn	165	2	165	----------	Flows	----------	--	---	S	Flows about 5 gpm. A2.
32L1	Brown Farms, Inc.	2+	Dn	165	2	165	----------	Flows	----------	--	---	S	Flows about 5 gpm, coarse black sand most of the depth.
							T. 19 N., R. 1 W.						
4D1	M. A. McBride	150	Dr	48	6	-----	----------	36.5	9/15/58	J	---	D	Pumps about 10 gpm. A2.

4F2	C. B. Gallea	105	Dr	116	6	-----	----------	94.3	9/15/58	S	---	D	Supplies two homes.
4G1	H. W. Wingate	55	Dr	90	6	-----	----------	69	July, '56	--	---	D	Aquifer at 72 ft.
4H2	A. M. Buell	10+	Dr	60	6	60	Sand, gravel	46	8/16/54	--	---	D	Bailed 18 gpm, dd 5 ft. L.
4J2	Axel Wakkures	50	Dr	67	6	66	Gravel	56	10/12/57	--	---	D	Bailed 18 gpm, dd 4 ft. L.
4L1	Dr. R. C. Brown	150	Dr	160	5	-----	Gravel	130	---------	J	---	D,S	Tape stopped at 122 ft. "Hard-pan" and packed gravel to 60 ft.
4N1	Pete Carrier	160	Dr	80	6	-----	----------	30	---------	--	---	D,S	
5H1	S. E. Shumway	60	Dr	99	6	95	Sand	57.5	7/3/58	J	1/3	D	Bailed 18 gpm, dd 22 ft. Pumped 5 gpm, dd 5 ft. A. L.
5H2	A. E. Zittel	60	Dr	94	5½	-----	----------	72	6/17/55	--	---	D	L.
5H3	S. E. Allbin	60	Dr	88	6	87	Sand, gravel	64	6/22/51	--	---	D	Bailed 20 gpm, dd 11 ft. L.
5J1	O. G. Buttons	8+	Dr	337	5	-----	----------	Flows	---------	--	---	D	
5J2	W. S. Walter	40	Dr	93	11½	75	Clay, gravel	35	---------	--	---	D	Bailed 4 gpm, dd 31 ft. L.
5M1	Joe O'Leary, Jr.	40	Dr	90	6	-----	----------	-------	---------	--	1/2	D	Owner uses water softener.
5M2	Andy Packwood	40	Dr	50	6	-----	----------	-------	---------	--	---	D	Made numerous attempts for deeper water, but it all had too much salt.
5N1	Loren Tucker	55	Dr	48	6	-----	----------	-------	---------	J	1	D	Quality of water is good.
5N2	E. D. Brabrook	40	Dg-Dn	50	------	-----	----------	43.2	10/19/59	P	1/2	D	Supply adequate for limited use.
5R1	Robert Gates	25	Dr	42	4	-----	----------	25.9	9/15/58	--	---	D	
5R3	F. R. Burton	50	Dr	90	6	-----	----------	21.0	9/16/58	J	---	D	
6G1	B. H. Tabor	80	Dr	89	6	-----	----------	48.0	10/26/59	N	---	D	Well fills up with sand. Thin aquifer at 49 ft.
6H1	John Ward	35	Dr	144	6	-----	----------	27	---------	J	2	D	Neighbors' wells have too much iron.
6J1	Leo V. Smith	35	Dr	108	6	108	Clay & sand	51 96.5	April, '53 10/19/59	J	1	D	Quality of water is good, but hard. "White encrusting". Bailed 30 gph, dd maximum. Drilled 150 ft. L.
6J2	E. C. Johnson	20	Dr	48	6	-----	----------	30	---------	J	---	D	Supply inadequate.
6J3	Dr. Bernard Bucove	35	Dg	11	40	-----	----------	6.7	10/19/58	C	1/2	D	Supply adequate.
6J5	N. H. Daugherty	25	Dg	15	36	-----	----------	-------	---------	C	1/4	D	Water level near land surface.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 1 W. -- Continued						
6K2	J. R. Mitchell	40	Dg	10	48	-----	----------	7	---------	C	1/2	----	Well unfinished on 10/26/59. Water coming in too fast to work in blue clay.
6M1	V. H. Fisk	65	Dr	86	6	-----	----------	60	---------	J	3/4	D	Water tastes flat or salty. Influenced by tide.
6M2	James Rushforth, et al.	65	Dr	84	6	-----	----------	-------	---------	--	---	D	Water tastes flat or salty. A2.
7L1	C. R. Esterly	125	Dg	86	40	-----	----------	76	10/15/59	J	1	D	"Lots of clay - bottoms in old soil zone?"
7N1	L. W. Wright	120	Dr	133	6	-----	----------	-------	---------	S	1	D	Quality of water is good.
7P1	George Esterly	125	Dr	132	6	-----	----------	115.9	7/3/58	S	1	D,S	"Hardpan" layer 20 ft above water zone.
8A1	Henry Budinich	85	Dg	17	48x48	10	----------	14.4	9/16/58	--	---	D	"Hardpan" from 10 ft.
8A2	Henry Budinich	7+	Dg	11	36	-----	----------	7.0	9/16/58	--	---	D	
8E1	S. W. Staatz	50	Dg	18	36	-----	----------	5	---------	--	1/2	D	Supply adequate.
8H1	Ossie Tranum	45	Dr	80	6	80	Sand	42	9/19/58	--	---	D	Bailed 19 gpm, dd 3 ft. L.
9C1	Ed Roy	150	Dr	102	6	-----	----------	-------	---------	--	---	D	
9D1	A. W. Huber	165	Dr	120	6	116	Sand, clay, gravel	40	2/2/51	--	---	D,Irr	Screened from 116 to 120 ft. Has irr 7 ac. L.
9F1	R. S. Jensen	200	Dg, B	33	------	-----	----------	17.2	9/16/58	--	---	D	In well 75 ft west, top 13 ft is clay.
9F2	Cecil Jones	200	Dg-Dr	19	12	-----	----------	15.8	9/16/58	--	---	D	A2.

9Q1	Ralph Zink	160	Dr	54	6	54	Gravel	30	10/28/52	J	---	D	Bailed 18 gpm, dd 9 ft. L.
9R1	A. E. Hemphill	140	Dg	23	36	-----	Gravel	21.2	9/17/58	--	---	D	
9R2	H. W. Steiger	150	Dr	65	6	-----	----------	35	---------	J	---	D	
10C1	J. R. Clark	55	Dr	75	3	-----	----------	59.1	9/17/58	J	---	D	
10C2	M. J. Reed	65	Dr	80	6	-----	----------	65	---------	J	---	D	Roadcut 100 ft west shows "hardpan" from sea level to 50 ft and soft shale or clay to 65 ft.
10E1	M. V. Johnson	85	Dg	35	36	-----	----------	24.8	9/17/58	--	---	D	
10F3	Ziegler-Huovilla-Stribling	65	Dr	-----	6	-----	----------	66.2	9/17/58	J	---	PS	Community domestic.
10L2	Don Bennett	25	Dr	85	6	85	----------	30	7/28/47	J	---	PS	Bailed 12 gpm, dd 5 ft. Supplies six homes.
10M1	T. J. Smith	125	Dg	20	36	-----	----------	19.0	9/17/58	P	---	D	
10M2	H. N. Hendry	100	Dg	20	36	-----	----------	17.0	9/17/58	S	---	D	
15B1	R. E. Rockwell	85	Dg	10	------	-----	----------	2.4	9/17/58	--	---	D	Developed along spring zone. Blue clay, over "hardpan".
15B2	Norman Taylor	85	Dg	9	96x96	-----	----------	3.5	9/17/58	--	---	D	----------Do----------
15G2	Gil Collins	100	Dr	40	6	-----	----------	35.0	9/17/58	--	---	D	
15K2	Kathryn Allard	75	Dr	147	6	141	Sand	82	July, '55	--	---	D	Bailed 540 gph, dd 45 ft. Bottom screened. L.
15Q1	Maxfield Miller	65	Dg	45	36	-----	----------	39.8	9/18/58	--	---	D	
15Q2	J. D. Kintner	65	Dr	70	------	-----	Sand	55	---------	--	---	D	
16D1	Les Salzer	160	Dr	60	6	-----	----------	48.0	9/22/58	J	---	D	
16E1	F. T. Bardsley	170	Dr	84	6	-----	----------	65	---------	--	---	D	"Hardpan" all the way to water-bearing zone.
16M1	William Canfield	135	Dr	60	6	-----	----------	38.8	9/22/58	J	---	D	A2.
16N1	T. E. Kelley	150	Dg	23	36	23	----------	20.5	9/22/58	J	---	----	
16P1	J. L. Guerin	145	Dg	21	36	-----	----------	18.0	9/22/58	--	---	D,S	
17A2	Karl Christiansen	40	Dr	130	6	128	Gravel	40	---------	--	---	D	"Hardpan" to 125 ft, then gravel.
17M1	Weyerhaeuser Company	12+	Dr	1,000	12-6	-----	Gravel, small	Flows	---------	--	2	D	Supplies two houses. Artesian. L.
17R1	J. D. Grein	32+	Dg	34	36	-----	----------	30.5	9/22/58	J	---	D	Several sea level wells in immediate area.
17R2	H. E. Robinson	10+	Dr	130	------	-----	----------	8.6	9/22/58	--	---	D,S	
18D1	P. J. Dorlan	110	Dr	128	6	128	Gravel & sand	110	Jan., '55	S	---	D	Bailed 1,000 gph, dd 3 ft. L.
18M1	Owen Larsen	95	Dg	40	48x48	-----	----------	34	---------	J	1/2	D	Penetrated "hardpan". A2.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 1 W. -- Continued						
19B1	L. O. Myers	50	Dr	85	6	-----	----------	-------	---------	J	---	D	Slight iron content in water. Mostly clay and sand. Bottom 8 ft screened.
19D1	Joe Gisler	95	Dr	80	5	-----	----------	30	---------	P	1/3	D	Quality of water is good.
19H1	Floyd Eastman	120	Dr	138	3	-----	----------	-------	---------	J	1	D	Water has some iron content, bad smell. Iron precipitates when water is heated.
19K1	Peter Ineichen	90	Dr	60	6	-----	----------	-------	---------	J	1/2	D	Water contains some iron.
19L1	O. D. Bellis	90	Dr	76	5	-----	----------	33.0	10/13/59	J	1/2	D	Water contains iron, uses filter and softener.
19P2	Earl Byre	125	Dr	76	6	-----	----------	-------	---------	J	1	D	
19R1	J. C. Stark	130	Dr	78	3	-----	----------	55	1958	P	---	D	Lots of iron content in water.
20E1	E. A. Taylor	120	Dr	97	6	-----	Sand	70	---------	P	---	D	Some iron in water.
20N2	Harold Salzer	125	Dr	90	3	-----	----------	70	1954	P	---	D	-------Do-------
20P1	J. H. Chaffee	110	Dr	135	6	135	Gravel	113	Nov., '52	S	1/2	D	Bailed 1,040 gph, dd 6 ft. L.
20P2	Roy Lebsack	95	Dr	97	6	-----	----------	91.3	10/1/59	J	1	D	Supplies two houses.
20Q1	Murray Wright	95	Dr	116	6	116	Gravel & sand	96	March, '54	J	1½	D	Bailed 1,500 gph, dd 5 ft. L.
20R3	R. R. Long	10±	Dr	68	6	-----	----------	11.4	9/23/58	--	---	D	Two other sea level wells in immediate area.
21C1	R. Bishop	160	Dg	21	------	-----	Gravel	17.6	9/22/58	--	---	D	"Hardpan" from 1½ ft to bottom; bottoms in gravel.
21C2	E. W. Gilbery	150	Dg	18	36	-----	----------	17.4	9/23/58	J	---	D	

21E1	Ted Peabody	135	Dg	21	36	-----	----------	18.2	9/23/58	J	---	D	
21E2	H. O. Gilmore	140	Dg	18	36	-----	----------	-------	----------	--	---	D	Has gone dry. Supply inadequate.
21F1	C. R. Ikerd	120	Dr	79	6	-----	----------	-------	----------	--	---	D	Pumps 10 gpm.
21H1	L. M. Wright	140	Dr	112	6	107	Sand, little clay	80	April, '52	J	---	D	Bailed 26 gpm, dd 10 ft. L.
21L1	W. D. Parse	92+	Dr	60	4	-----	----------	15	----------	P	---	D	Water level questionable.
21N1	Fred Flahaut	125	Dr	218	6	-----	----------	50	----------	--	---	D	Supplies two homes. "Hard water".
22E1	D. L. Bickle	135	Dr	125	6	-----	Sand	-------	----------	J	---	D, Irr	Supply adequate. "Hardpan" to 82 ft, then sand to 125 ft.
22K1	H. E. Patterson	165	Dr	150	6	-----	Sand	114	June, '47	P	---	D	Excellent well. L.
23D1	F. G. Kerns	10+	Dg	16	36	-----	----------	6	----------	J	---	D	
23F1	W. J. Butler	2-5	Dr	180?	4	-----	----------	F	2/5/58	--	---	D	Flowing 2 gpm. Supplies three homes. Incrustation inside pipe. Several springs in area. A2.
25M1	Atlas Powder Co.	220	Dr	119	3	-----	----------	-------	----------	P	1	D	
26D1	C. E. Hill	180	Dr	101	6	101	----------	60	1946	P	10	D	Soft water. Bailed 500 gph, dd 20 ft.
28A1	Del Farr	85	Dg	30	36	-----	----------	29.4	9/24/58	--	---	D, S	
28B1	Del Farr	125	Dg	70	48	-----	Sand, hard	66.9	7/3/58	J	---	D	"Hardpan" and hard sand from 5 ft to bottom. A.
28C1	W. R. Hansen	165	Dr	133	6	128	Sand	112 110.5	Nov., '52 9/23/58	S	---	D	Bailed 10 gpm, dd 3 ft. Bottom screened. L.
28D2	C. E. Thurston	42±	Dg	22	36	-----	----------	17.5	9/24/58	J	---	D	
28D3	Lloyd Leckenby	35	Dg	6	36	-----	----------	5	9/24/58	J	---	D	In spring area.
28F1	Fred Pittman	117	Dr	107	6	-----	----------	72	----------	J	---	D, S	"Hardpan" to 25 ft, then sand.
28F2	John Saylor	110	Dr	92	6	-----	----------	63.8	9/24/58	J	---	D	Supplies two homes.
28F3	H. R. Stevens	110	Dr	95	------	-----	----------	60	----------	J	---	D	Aquifers at 60 and 90 ft.
28L1	H. Hanson	100	Dg-Dr	69	6	-----	----------	29	Oct., '55	J	---	D, S	Dug 30 ft. A2.
28N1	Ronald Farrar	20	Dg	40	36	-----	----------	20	9/24/58	J	---	D	
29A1	--Maynard	12	Dr	225	2½	-----	----------	Flows	----------	C	1/2	D	Flowing, influenced by tide.
29C1	R. O. Fallor	120	Dr	62	6	-----	----------	-------	----------	J	1/2	D	Originally had 22 ft dug well. Top 20 ft clay; old vegetation at 40 ft; gas at 50 ft. Bottoms in pea gravel.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 1 W. -- Continued						
29E1	C. M. Chisholm	125	Dr	57	3	-----	----------	------	---------	J	1/2	D	Dry at 42.5 ft, tape hung up. Some iron in water.
29E2	M. B. Castle	125	Dr	120	6	-----	----------	------	---------	J	1	D	Supply adequate.
29F1	J. W. Southwick	120	Dr	55	6	-----	----------	30	---------	J	---	D	
29F2	J. A. Dewey	120	Dr	69	6	-----	----------	29	---------	J	1/2	D	Quality of water is good.
29L1	L. M. Henderson	125	Dr	64	6	-----	Sand, gravel	45.0	10/2/59	J	1/2	D	Encountered water at 52 ft, but was in sand so they went deeper until gravel was encountered.
29L2	Richard Darby	125	Dr	52	6	-----	----------	45	---------	S	1	D	Supply adequate. Good exposures of till across road from this well.
29M1	Donald Orcutt	125	Dr	80	6	-----	----------	------	---------	J	1/2	D	
30A1	C. O. Akehurst (Hockhalter)	140	Dr	86	6	80	Sand	60.1 60	7/3/58	J	---	D	Tested at 48 gpm, dd 20 ft. Screened from 80 to 85½ ft. L.
30A2	Mabel Kron	125	Dr	90	6	-----	----------	40	---------	J	1	D	Water contains some iron. A2.
30B1	Joe Schilter	125	Dr	95	6	-----	----------	54.5	10/2/59	J	1½	D	
30H1	Leonard Elder	125	Dr	90	6	-----	----------	50	---------	J	1/2	D	Supplies two homes.
30H2	George Stohl	125	Dr	91	6	86	Sand & gravel	36	June, '59	J	1	D	Bailed 50 gpm, dd 7 ft; 18 gpm, dd 1 ft. L.
30J1	Harry Gallvan	125	Dr	67	6	67	Gravel	24	8/15/52	--	---	----	Tested for 2 hr at 33 gpm, dd 15 ft. L.

30K1	Henry Flaherty	100	Dr	118	6	-----	----------	-------	----------	J	1	D	Water contains slight iron.
30P1	William Seibold	120	Dr	99	6	95	Sand & clay	5	July, '56	J	---	D	Bailed 400 gph, dd 80 ft. Bottom screened.
30P2	H. Halverson	120	Dg	18	30x30	-----	----------	4.1	10/13/59	C	1/2	D	Supply adequate.
30P3	Robert Marchel	110	Dg	30	36	-----	----------	10.0	10/13/59	C	1	D	Supply adequate for household.
30Q1	Leroy West	120	Dg	25	36	-----	----------	15.9	10/13/59	C	1/4	D	----------Do----------
30Q2	R. H. Severance	125	Dr	58	6	52	Sand	23	May, '59	--	---	D	Bailed 30 gpm, dd 5 ft. L.
30R1	Robert Talbot	120	Dr	50	6	-----	----------	32	----------	J	1/2	D	Supply adequate.
31A1	T. F. Cole	128	Dr	104	6	-----	----------	38.6	10/5/59	J	1/2	D	Slight iron content in water. No blue clay; encountered log at 80 or 90 ft.
31A2	H. W. Johnson	130	Dr	102	6	-----	----------	43	----------	--	---	D	Encountered some logs at 80 or 90 ft.
31A3	Arthur Hansen	128	Dr	95	6	95	Gravel & sand	41	Oct., '52	J	1	D	Bailed 20 gpm, dd 2 ft. L.
31B2	R. E. Anderson	126	Dr	76	6	-----	----------	-------	----------	J	1	D	Slight iron content in water.
31C1	Roy Sellards	110	Dg	8	40	-----	----------	5.5	10/9/59	C	1/4	D	Supply adequate for house only.
31E1	H. D. Wright	130	Dr	58	6	57	Gravel & sand	27	Sept., '57	J	1/2	D	Bailed 300 gph, dd 23 ft. Drilled 64 ft into sand and pulled back. L.
31E2	Glen Munger	130	Dg	25	60x60	-----	----------	20.9	10/14/59	C	1/2	D	"Hardpan" near bottom.
31G1	Gilbert Hulse	152	Dg-Dr	96	6	96	----------	38.2	5/23/58	J	1/2	D,S	Pumped 20 minutes at 6½ gpm, 4 ft.
31H1	G. S. Clark	145	Dr	82	6	-----	----------	45	----------	J	2	D	Tested at 20 gpm, dd 8 ft. Slight iron content in water.
31H2	A. W. Huber	145	Dr	90	6-5	90	----------	47	3/10/59	T	5	Irr	Bailed 48 gpm, dd 5 ft. Five-inch perforated casing from 79 to 89 ft. Irr 10 ac.
31J2	Eric Holmstrom	155	Dg-Dr	70	6	-----	----------	45	----------	J	---	D	Dug 47 ft, drilled 23 ft. Quality of water is good.
31K1	Dennis Lane	150	Dr	73	6	-----	----------	35	----------	J	1/2	D	
31K3	J. M. Benson	155	Dr	70	4	-----	----------	43.4	10/9/59	J	---	D	Water has high iron content.
31L1	D. B. Glandon	145	Dr	79	6	-----	Gravel	22.3	10/9/59	J	1/3	D	----------Do---------- Silt or very fine sand to bottom, then gravel.
31L2	W. Hungerford	155	Dg	38	36	-----	Sand	30.9	10/9/59	N	---	N	Sand inflow too great.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 1 W. -- Continued						
31M1	W. E. Swanson	140	Dg	28	48x48	-----	----------	23	10/14/59	C	1/2	D	Supply inadequate. Water level fluctuates considerably throughout year.
31M2	J. I. Bister	130	Dr	56	6	-----	----------	24.5	10/14/59	J	1/2	D	Quality of water is very good. No iron.
31N1	G. A. Frederickson	130	Dr	33	6	-----	----------	1.4	5/19/59	--	---	D	
31N2	H. E. Oakes	145	Dr	61	6	-----	----------	24.9	10/14/59	J	1	D	Water contains some iron. Also has 19-foot well with water level of 17 ft. A2.
31P1	Al Richardson	125	Dr	67	4	-----	----------	20.4	5/19/59	J	---	D	
31P2	Evelyn Warren	130	Dg-Dr	98?	------	-----	----------	18.9	5/19/59	J	---	D	"Rusty".
32C3	----------	150	Dg	26	48x48	-----	----------	21.4	10/1/59	C	1/4	D	Supply adequate for house use only.
32D2	J. W. Carlson	130	Dr	97	6	-----	----------	40	Nov., '44	P	1/2	D	In 122 ft drilled well about 85 ft east of present well, mud and logs were encountered at about 100 ft.
32F2	W. F. Heym	135	Dr	50	6	-----	----------	34.7	10/1/59	J	1/4	D	Went dry in February, 1959.
32F3	Mel Brodland	135	Dr	115	6	109	Sand	43	March, '56	J	1	D	This well was originally 40 ft, then 72 ft, and then 115 ft. Deepening was necessitated in an effort to improve quality of water.

32G2	M. W. Ross	125	Dr	50	6	-----	----------	-------	----------	J	1	D	Slight iron content in water. Originally drilled 150 ft, but casing pulled back.
32H2	G. O. Duby	50	Dg	26	36	-----	----------	7.2	1/27/59	--	---	D,S	
32J2	J. T. Corcoran	80	Dg	42	48	-----	----------	15.0	1/27/59	--	---	D	
32K1	South Bay Grange	150	Dr	67	6	-----	----------	57.0	1/27/59	S	---	D	
32K2	W. B. Taylor	145	Dr	68	6	-----	----------	50	---------	--	---	D	
32L1	D. F. Bennett	150	Dr	76	6	-----	----------	36	---------	--	---	D,S	
32N1	O. Nelson	150	Dr	65	6	-----	----------	50	---------	--	---	D,S	"Hardpan" from 50 to 65 ft.
32N2	Wallace Llen	150	Dr	63	6	63	Gravel & sand	45	7/17/58	J	---	D	Bailed 17 gpm, dd 1 ft. L.
32P1	E. A. Patterson	145	Dr	68	6	68	Sand, clay, gravel	53	Jan., '59	--	---	D	Bailed 22 gpm, dd 4 ft. L.
32P2	H. K. Pemberton	150	Dg	66	36	-----	----------	45.7	1/27/59	J	---	D	
32Q1	H. L. Longmire	135	Dr	75	8	75	Gravel; sand	50	5/17/54	T	5	D,Irr	Pumped 6 hr at 100 gpm, dd 4 ft. Perforated from 63 to 73 ft. Irr 10 ac. L.
33D1	Bennie Music	25	Dr	-----	6	-----	----------	22.8	9/24/58	J	---	D	Supplies two homes.
33D2	George Stabler	22	Dr	108	------	-----	----------	20.8	9/24/58	--	---	D	
33E1	E. M. Lohrer	5+	Dr	150	3	-----	----------	F	9/24/58	--	---	D	Flows 5 to 6 gpm at high tide.
33J1	Glen Whittaker	165	Dr	110?	6	-----	----------	82.3	10/15/58	J	---	D	Supplies two homes.
33K1	Bert Henry	150	Dr	100	6	95	Sand	68	June, '57	J	1	D	Bottom 5 ft screened. L.
33L1	Glen Prall	100	Dg	13	18	13	----------	5.6	2/11/58	J	1	D	Adequate supply.
33L2	L. F. Harris	100	Dg	12	18	12	----------	5.0	2/11/58	C	1/3	D	
33R2	W. L. Whittaker	145	Dr	137	3	-----	----------	67.7	10/14/58	J	---	D,S	Supplies two houses.
34J1	D. C. Yarborough	280	Dr	42	3	-----	----------	26	---------	P	1/4	D	
34M1	O. Olberg	150	Dr	105	4	-----	----------	65	---------	J	---	D	
34N1	Art Schaal	175	Dg	65	6	-----	----------	-------	---------	--	---	D	"Dry".
34N2	F. K. Loper	175	Dr	98	4	-----	----------	67.0	10/14/58	J	---	D	
							T. 19 N., R. 2 W.						
1Q1	R. T. Watson	80	Dr	118	6	-----	Sand (?)	-------	---------	--	---	D	Has well screen.
3D1	Dr. F. R. Van Gilder	150	Dg	15	72x72	-----	----------	1	---------	C	1/4	D	Well overflows about 9 months of year. "Hardpan" strata (7 ft) encountered.
3E1	M. F. Prehm	130	Dg	6	108	-----	----------	0	6/2/59	--	---	D,S	Water level at land surface. Till at surface.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 2 W. -- Continued						
3F1	W. A. Riggen	30	Dr	116	6	110	Sand & gravel	29	---------	J	1/2	D	Water tastes flat; hard. Varies with tide. Bailed 20 gpm, dd 18 ft. L.
4F1	N. D. Pringle	110	Dg	17	48x48	-----	----------	6.2	6/2/59	C	1/4	D	Summer domestic supply.
4F2	J. F. Rose	105	Dg	14	48x48	-----	----------	5	---------	C	1/4	D	
4F3	V. D. Crawford	115	Dr	156	6	156	Sand, some gravel	110	9/10/59	J	1	D	Tested for 8 hr at 20 gpm, dd 20 ft. Perforated from 150 to 154 ft. L.
7L1	LeRoy Patterson	10±	Dr	52	6	-----	----------	10	---------	--	1½	D	Water level remains stable.
7L2	Jack Rawding	10±	Dr	120	6	-----	----------	10.6	6/11/59	J	1	D	Bailed 2,500 gph, dd 22 ft.
8F1	H. B. Dunkelberger	6±	Dr	128	3	-----	----------	12	---------	C	1	D,S	Thin "hardpan" layer near surface.
8J1	John Riedel	110	Dg	49	48x48	4	Sand	42.4	6/5/59	--	3/4	D	Well is affected when several low tides succeed one another. L.
8M1	W. H. Trager	10±	Dr	80	6	-----	----------	Flows	---------	C	1/4	D	This well flows at times, apparently influenced by the tide.
8N1	M. P. Hanson	180	Dr	111	5	-----	----------	90	---------	S	---	D	
8N2	Fred Hepp	175	Dr	140	6	-----	----------	90	---------	S	---	D	
9A1	T. F. Schmidt	110	Dr	189	6	180	Sand, gravel	118	9/11/57	T	5	Irr,D	Tested 4 hr at 50 gpm, dd 7 ft. Screened from 179 to 188.5 ft. L.
9D1	Unknown	125	Dg	16	48x48	-----	----------	9.4	6/3/59	C	1/4	N	

9F1	Darrell Powell	50	Dr	93	6	-----	----------	43	---------	J	1½	D	Supply adequate.
9L1	Verner Brandt	50	Dr	65	8	-----	----------	35	---------	J	2	D	Water contains some iron.
9L3	A. P. Bissell	25	Dg-Dr	45	6	-----	----------	15.7	6/5/59	J	1/2	D	Dug 35 ft, drilled 10 ft. "Lots of iron in water".
9L5	L. S. Morrill	15	Dr	37	6	-----	----------	19	---------	J	1/3	D	
9M1	V. L. Skellenger	105	Dr	110	6	-----	----------	------	---------	--	1	D	Let 95 ft of tape out without hitting water; may have "hung up".
9R1	Coopers Point Water Co., Inc.	10	Dr	360	8	348	Gravel, clay, sand	Flows	---------	--	---	PS	Supplies Cooper Point community. L. A1.
9R2	------Do------	10	Dr	460	4	330	Sand	-------	---------	N	---	N	Well abandoned.
11Q1	J. W. Graler	60	Dr	319	6	312	Sand, little gravel	65	Oct., '48	--	---	D	Supply adequate. Bottom 7 ft screened. Bailed 550 gph, dd 23 ft.
11R1	Joseph Dvorak	85	Dr	524	6	524	Gravel & sand	87	Aug., '57	J	1	D	Bailed 1,100 gph, dd 1 ft. L.
12B1	Bruce Campbell	100	Dr	108	4	-----	----------	95.2	7/3/58	P	---	D	A.
12C1	Leslie Craney	12	Dg	25	36	-----	----------	-------	---------	--	---	D	Spring-type; drainage tiles set to replenish well.
12F1	R. J. Humphrey	35±	Dr	80	6	-----	----------	-------	---------	--	1/2	D	Water has high iron content.
12L1	Burrus, Kruse, Ayer	125	Dr	513	6	497	Sand, gravel	71.5	8/18/53	S	3	D,Irr	Supplies three homes, irrigates 8 ac. L.
12M1	Dr. Jerry O'Leary	70	Dr	590	4	-----	----------	-------	---------	P	1	D	Water is somewhat hard.
12N1	Loren Bunce	90	Dg	18	36	-----	----------	10	---------	C	1/2	D	
13A1	J. D. Paulsen	105	Dg	31	48x48	-----	----------	27.8	10/15/59	--	1/2	D	Supply adequate.
13E1	Boston Harbor School Dist. 302	130	Dr	89	6	-----	----------	63	---------	J	1	PS	School has approximately 120 students.
13J1	Jim Shriner	85	Dr	30	6	-----	----------	-------	---------	J	1/2	D	Quality good in summer, poor in winter.
13J2	E. J. Blake	95	Dg	32	4	-----	----------	24	---------	J	1/3	D	Supply adequate, but can be pumped dry.
13N1	Andy Mathis	150	Dr	93	6	90	Sand, fine	68	March, '59	S	---	D	Bailed 20 gpm, dd 7 ft. Bottom screened. L.
13N2	J. P. Stockton	155	Dg	12	48x48	-----	----------	11.5	10/28/59	N	---	D	Supply inadequate. "Hardpan".
13R1	Bob Ledgerwood	95	Dg	57	48x48	-----	----------	38.7	10/27/59	J	1	D	Water has some iron content.
14H1	Martin Ames	145	Dr	100	6	93	Sand, entire depth	73	1957	J	---	D	Bailed 15 gpm, dd 9.5 ft. Bottom screened.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 2 W. -- Continued						
14H2	C. H. Houseman	130	Dr	70	6	-----	----------	60	---------	--	---	D	
14L1	George Burfoot	105	Dg	30	36	-----	----------	26	---------	J	---	D	
14N1	Ralph Conner	75	Dr	89	6	89	Sand & gravel	69	11/3/58	--	1	D	Bailed 15 gpm, dd 9.5 ft. L.
14Q1	R. L. Shaw	110	Dr	61	6	-----	----------	4	---------	--	---	D	
14Q2	J. A. Smazik	150	Dg	16	48x48	4	Sand	9	---------	C	1/4	D	Water level varies from 7 to 13 ft.
14R1	Emrey Stone	160	Dr	133	6	128	Sand, fine	84	1951	J	1½	D	Bailed 29 gpm, dd 43 ft. Bottom screened. L.
14R2	D. C. Michael	155	Dr	104	6	-----	----------	-------	---------	J	3	D	
15M1	L. A. Muessel	40	Dg	35	36	-----	----------	21	---------	C	1	D	
15N1	Clearwell Water Co.	80	Dr	117	6	112	Gravel, sand	96	---------	J	5	PS	Bailed 18 gpm, dd 2 ft. Screened from 111 to 117 ft. L.
15N2	Bruce Matthews	50	Dn	17	6	-----	----------	15	---------	C	1/4	D	Supply adequate for limited use.
16A1	Huckleberry Road Water Company	10	Dr	552	6	552	Sand	Flows	---------	--	5	PS	A2.
16J1	Cornelius Reckers	125	Dr	152	6	152	Gravel & sand	132	Sept., '55	S	---	D	Bailed 18 gpm, dd 3 ft. L. A.
16J2	J. M. Finley	130	Dg	10	36	-----	----------	6.9	7/8/58	J	---	D	A.
16J3	D. A. Ruchty	50	Dg	36	30x42	-----	----------	33	---------	--	1/2	D	Very little variation in water level.
16K1	James McAllister	15	Dr	325	2	-----	----------	Flows	---------	P	1	D	
16Q1	H. W. Humphres	35	Dr	48	6	48	----------	32	July, '57	J	---	D	Bailed 4 gpm, dd 11 ft.
16Q2	D. L. Montgomery	135	Dr	171	6	171	Gravel	145	May, '52	S	---	D	Bailed 936 gph, dd 10 ft. L. A2.
17D1	E. R. Anderson	95	Dg-Dn	32	3	-----	----------	-------	---------	C	1/4	D	Dug to 12 ft.

17E1	T. E. Robbins	110	Dg	27	48x48	-----	----------	15.1	6/10/59	N	---	D	Goes dry in winter.
18A1	L. H. Marsh	95	Dg	22	48x48	-----	----------	21	---------	C	1/4	D	Water level fluctuates between 10 and 21 ft.
18K1	Lola Scott	115	Dg	26	36x36	N	----------	22.4	6/10/59	N	---	D	Supply inadequate in fall.
18K2	A. E. Robbins	130	Dr	166	6	159	Sand & gravel	106	1951	J	1	D	Bailed 10 gpm, dd 21 ft. Bottom screened. L.
18N1	Grant Gilmore	130	Dg	16	60x60	6	----------	------	---------	C	3/4	D	Water level varies from 0 to 10 ft. "Hardpan" at 6 ft.
18N3	Philip Peterson	135	Dg	18	60x60	6	----------	13.2	6/11/59	C	1/4	D	"Hardpan" at 6 ft. A2.
18P1	A. P. Urbon	130	Dr	127	6	-----	----------	------	---------	--	3/4	D	Supply adequate.
19D1	G. E. Robbins	125	Dg	26	36	-----	----------	19.0	6/11/59	C	1/4	D	Goes dry in summer.
19K1	J. L. Kelly	120	Dg	20	36	-----	----------	13.2	6/18/59	C	1/2	D	Has gone dry in summer.
19P1	Charles Lloyd	135	Dg	30	48x48	6	----------	27	---------	H	---	D	Supply inadequate. "Hardpan" at 6 ft.
20E1	K. H. Frohboes	85	Dr	138	8	-----	----------	20 (?)	---------	J	1	D	
21C1	St. Martin's College	40	Dg	10	40	-----	----------	3.5	8/20/59	C	1/2	D	Supply inadequate.
21E1	R. M. Murray	85	Dr	306	6	306	Gravel & sand	75	---------	--	---	D	Had to deepen twice due to salt water intrusion. L.
21L1	F. E. Reisner	50	Dr	84	6	-----	----------	------	---------	J	2	D	Quality of water is good, some iron.
21L2	Frank Mathews	20	Dr	82	6	77	Gravel, sand	3.8	April, '59	J	1	D	Bailed 50 gpm, dd 3 ft. Bottom screened. L. A2.
21Q1	A. L. Secreto	40	Dg	15	48x48	-----	Sand & gravel	9	---------	J	1/2	D	Supply adequate.
21Q2	R. L. Bush	45	Dg	40	40	-----	Sand	37	---------	J	1/2	D	Has been pumped dry.
21Q3	Raymond Brower	60	Dr	275	6	-----	----------	------	---------	J	1	D	
21R1	C. E. Day	130	Dr	153	4	-----	----------	133	---------	P	1	D	Supplies two homes.
22D1	R. E. Fitzgerald	80	Dr	90	6	-----	----------	------	---------	J	3/4	D	Tape hung up at 73 ft, still dry.
22E1	W. B. Webster	45	Dr	54	6	54	Gravel & sand	35	June, '57	J	1	D	Bailed 18 gpm, dd 1 ft. L.
22M1	J. Bohle	115	Dr	133	4	-----	----------	------	---------	P	1	----	
22M2	V. V. Lidle	45	Dg	12	48x48	-----	----------	6.6	8/19/59	C	1/2	D	
22M3	Athens Beach Water Company	80	Dr	87	6	-----	----------	63	---------	J	5	D	Supplies six homes.
22M4	H. S. Hammond	65	Dr	100	6	-----	Sand	71.9	8/19/59	J	1½	D	Has well screen. Supplies two homes.
22M5	W. C. Dillaway	55	Dr	66	6	66	Sand & gravel	52	April, '57	J	3	D	Bailed 17 gpm, dd 1 ft. L.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 2 W. -- Continued						
22N1	Joe Loring	45	Dr	65	6	-----	----------	46.8	8/10/59	J	---	D	Supplies three houses.
22N2	M. R. Parkhurst	65	Dr	65	6	-----	----------	50	---------	J	1	D	Supplies two houses.
22N4	R. G. Hall	80	Dr	102	6	102	Gravel	86	April, '50	S	---	D	Supplies four homes. Bailed 20 gpm, dd 2 ft. L.
22N5	C. H. Lorimer	40	Dg	40	24	-----	----------	36.8	8/19/59	J	1	D	Supply inadequate in fall.
23A1	Bryce Hepfer	145	Dr	96	6	95	Sand, fine	78	---------	S	---	D	Bottom screened. A2.
23C1	H. A. Varner	80	Dr	100	6	-----	----------	74.4	11/4/59	J	3/4	D	Water level influenced by tide.
23Q1	Olympia Canning Co.	15	Dr	385	6	373	Sand	Flows	---------	--	---	D,S	Flow influenced by tide. L.
24A1	W. R. Hubbard	125	Dr	119	4	-----	----------	------	---------	J	1/2	D	Owner uses softener. Lots of iron.
24G1	T. C. Williams	130	Dr	127	8	139	----------	61.0	10/27/59	N	---	N	Well unfinished. Apparently has backfilled with sand. L.
24G2	T. C. Williams	120	Dr	96	3	-----	----------	------	---------	--	---	D	Water quality is good.
24L1	C. M. Lloyd	130	Dg	20	36	-----	----------	------	---------	C	---	D	Supply inadequate, high iron content.
24N1	J. W. Miller	125	Dr	67	6	-----	Sand	40	---------	J	1/2	D	Bottom screened.
24N2	I. Z. McLean	130	Dr	55	6	-----	----------	------	---------	J	1	D	"Hardpan" to 50 ft, then blue clay predominant.
24P2	George Elhardt	125	Dr	75	6	-----	----------	43	---------	J	1/2	D	Supplies two houses.
24P3	Eddie Elhardt	125	Dr	63	6	-----	----------	40	---------	J	1/2	D	Supply adequate.
24R1	Daniel Knittle	90	Dr	106	6	-----	----------	------	---------	J	1	D	Water at 70 ft.

25A1	G. E. Cummings	95	Dr	125	6	120	Sand, brown	40	Sept., '53	S	1/2	D	Bailed 800 gph, dd 60 ft. L.
25C1	Clarence Farnsworth	100	Dg	30	48x48	-----	----------	27.2	11/5/59	J	1/2	D	
25C3	A. E. McEvers	100	Dr	128	6	-----	----------	------	---------	J	3/4	D	
25C5	Dan Dohring	125	Dr	57	6	-----	Sand & gravel	36.9	11/5/59	J	1/2	D	Blue clay from 56 to 90 ft.
25D1	C. P. Seward	90	Dr	123	6	118	Sand & clay	89	Sept., '58	J	1	D	Bailed 20 gpm, dd 12 ft. L.
25E1	Henry Bausch	130	Dr	80	6	-----	----------	60	---------	J	1	D	Supplies two houses.
25H1	Joseph Smazik, Jr.	105	Dg-Dr	48	6	-----	----------	27.5	10/14/59	J	1/2	D	Slight iron content.
25H2	----------	108	Dr	72	6	-----	----------	33.8	10/14/59	N	---	N	
25M1	William Martz	155	Dg	33	36x48	6	----------	22.5	6/2/60	--	---	D	"Hardpan" below 6 ft.
25M2	Gull Harbor Mercantile	130	Dr	68	6	-----	----------	51.5	6/6/60	J	---	D	Pump running.
26B1	Marguerite Cushman	20	Dr	115	6	95	Sand, coarse blue	1-7	1/15/52	--	---	D, Irr	Tested at 150 gpm, dd 12 ft. Bottom screened. L.
26H1	A. N. Chitty	120	Dr	190	3	-----	----------	------	---------	--	---	D	
26K1	Nell Haycox	95	Dr	138	6	-----	----------	------	---------	S	1/2	D	
26K2	C. A. Brown	80	Dr	173	3	-----	----------	------	---------	--	1½	D	Supply adequate.
26Q1	Maritime Administration	15	Dr	-----	3	-----	----------	Flows	6/2/60	C	1	D	Very good flow.
26Q2	John Robinson	105	Dg	25	48	-----	----------	19	6/2/60	C	1/2	D	Supply adequate.
26R1	C. F. Dryden	105	Dr	145	6	-----	----------	140	---------	S	1/2	D	Quality of water is good, no "rust".
26R2	William Cahill	115	Dr	137	6	-----	----------	118	---------	J	1	D	
27D1	William Guffey	10	Dr	153	6	140	Sand	Flows	Sept., '58	--	---	----	Bottom screened. Water level fluctuates from flowing at high tide to 11 ft at low tide. L.
27E1	Robert Tenney	50	Dr	60	6	-----	----------	10	---------	J	1	D	Supplies three homes. High iron content in water.
27E3	S. Goldenberg	15	Dr	60	6	-----	----------	7	---------	C	---	D	Water contains some iron.
28B1	Enar Shoblom	50	Dg	30	30	-----	----------	26	---------	--	---	D	Supply adequate.
28H1	S. Goldenberg	30	Dr	340	6	330	----------	33	1948	J	1	D	
28J1	Fred Dunn	5±	Dr	213	2½	213	Sand, fine	Flows	---------	--	---	D	Supplies eight homes. Quality of water is very good. Flows about 2,000 gph at high tide. Blue clay from 7 to 213 ft.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 2 W. -- Continued						
28K1	George Bowman	125	Dg	27	48x48	-----	----------	21.4	8/7/59	C	1/4	D	Supply adequate for minimum household use only.
28L1	W. K. Dennis	40	Dr	120	6	-----	----------	-------	---------	J	1	D	Quality of water is poor.
28N2	Don Fraser	28	Dr	75	6	-----	----------	-------	---------	J	1	D	Quality of water is good.
28N3	Carl Schoenrock	75	Dr	165	6	-----	----------	75	---------	S	1/2	D	
28N4	D. B. Baker	60	Dr	119	6	-----	----------	-------	---------	J	1	D	
28R1	C. J. Frank	15	Dr	60	3	-----	----------	Flows	8/7/59	--	---	D	Flows approximately 2 gpm when tide is out.
29B1	E. S. LaBreck	25	Dr	46	6	-----	----------	35	---------	J	3/4	D	
29B2	C. L. Blackmer	25	Dr	44	6	44	Gravel	33	---------	J	1/2	D	Bailed 10 gpm, dd 6 ft. L.
29D1	W. E. Crayne	110	Dg	16	8	-----	Gravel	11.2	6/18/59	C	1/4	D	Water level very low in fall.
30C1	E. H. Tobin	130	Dg-Dr	85	6	-----	----------	73	---------	J	1	D	Supply not adequate in winter. "Hardpan" to almost 50 ft.
30F1	G. S. Cox	70	Dr	130	6	-----	----------	38	---------	J	2	D	Pumps 1,300 gph.
30J1	John Wagner	50	Dr	-----	------	-----	----------	-------	---------	J	1/2	D	
30K2	T. C. Steele	20	Dg	26	48x48	-----	----------	19	---------	J	1/2	D	Water level does not fluctuate throughout year.
30L1	J. A. LaCasse	10	Dr	72	4	-----	Gravel	7	---------	C	1/3	D	Water level varies slightly with tide.
30L2	H. M. Stumer	20	Dg	16	48x48	-----	----------	10.9	6/18/59	C	1/4	D	
30L3	Douglas Keyes	25	Dn	91	2	-----	----------	-------	---------	--	1/4	D	Sand all the way to layer of "hardpan" near bottom. Water level within 10 ft of surface.

31M1	Watson Hovis	35	Dr	86	6	-----	----------	-------	---------	J	1/2	D	Supply adequate.
31M2	P. A. Whitaker	60	Dg	9	30	-----	----------	5.2	6/25/59	N	---	D	
31N1	W. A. Stacey	30±	Dg	50	72	-----	----------	35	---------	--	1½	D	Supply adequate.
31R1	----------	25	Dr	47	6	-----	----------	10.8	7/28/59	C	1/2	D	
31R2	J. A. Roe, Jr.	25	Dg	6	24	-----	----------	0.5	7/28/59	--	---	D	Spring area.
32A1	Carl Eckberg	160	Dr	52	6	-----	----------	20	---------	J	1	D	
32A2	D. N. Womack	130	Dr	84	6	-----	----------	-------	---------	J	1	D	
32A3	L. K. Merril	50	Dr	93	6	-----	----------	-------	---------	J	1	D	Has supplied two homes.
32B1	C. E. McArthur	10	Dr	62	6	-----	----------	Flows	---------	C	1/2	D	Some sulfur taste.
32B4	L. T. Webster	11	Dr	75	6	65	----------	Flows	---------	P	1/2	D	Capped artesian, adequate. Bottom screened.
32F1	W. N. Estes	50	Dr	51	6	-----	----------	11	---------	J	3/4	D	Some mineral content.
32F2	Frank Walbridge	30	Dr	60	6	-----	----------	7	---------	C	1	D	
32F3	J. B. King	25	Dr	66	6	-----	----------	-------	---------	--	---	D	Supplies two homes.
32H1	J. Craigen	170	Dg	18	1½	-----	----------	17.5	7/30/59	H	---	D	Supply inadequate.
32H2	Howard Hannah	170	Dr	79	6	-----	----------	22.0	7/30/59	C	1/2	D	A2.
32J1	Grover McAllister	165	Dg	23	------	-----	----------	14.4	7/30/59	C	1/4	D	A2.
32J2	R. C. Radecke	160	Dr	103	4	-----	----------	-------	---------	P	1/2	D	
32M1	E. L. Stevens	35	Dr	42	6	-----	----------	16.6	7/28/59	J	1/4	D	
32M2	C. Greenstreet	40	Dr	44	6	-----	----------	9.8	7/28/59	C	1/2	D	Supply adequate.
33C2	Erhard Rauser	145	Dr	81	4	-----	----------	54.0	8/7/59	J	1/2	D	Water has high iron content.
33F1	J. Luce	125	Dg	14	30	-----	----------	10	---------	C	1/4	D	Water contains some iron.
33H2	Don Strandness	75	Dr	165	6	-----	----------	142	---------	S	1	D	Supplies two homes. Bottom screened.
33K1	B. M. Griggs	160	Dr	125	6	6-4	----------	118	---------	J	---	D	Pumps very fine sand.
33K2	Roy Graham	155	Dr	129	6	-----	----------	-------	---------	S	1/2	D	
33K3	Don Waggoner	155	Dr	90	6	-----	----------	-------	---------	J	3/4	D	
33K5	W. J. Breuer	140	Dr	150	4	-----	----------	-------	---------	P	1	D	Supplies two homes.
33L1	G. R. Searles	155	Dr	110	6	108	Clay & gravel	90	August, '58	S	3/4	D	Bailed 10 gpm, dd 5 ft. L.
33L2	Leo Steere	155	Dr	152	6	-----	----------	-------	---------	J	---	D	Supplies two homes.
33L3	R. J. Hanson	145	Dr	115	6	-----	----------	80±	7/31/59	J	1	D	
33M1	N. Schaeffer	130	Dr	67	6	-----	----------	-------	---------	J	1/2	D	
33M2	R. R. Moss	135	Dr	101	8	93	Gravel, sand	83	2/23/59	--	---	PS	Tested 4 hr at 125 gpm, dd 4.2 ft. Bottom screened. L.
33N1	Edgar Pust	145	Dr	78	3	-----	----------	40	---------	P	---	D	
33P1	A. J. Burke	145	Dr	78	6	-----	----------	-------	---------	J	1	D	Supply adequate.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 2 W. -- Continued						
33Q1	Butler's Cove Water Co.	10	Dr	355	8	333	Gravel, sand	Flows	---------	--	---	PS	Will flow 200gpm. L.
35A1	V. H. Cuyler	110	Dr	140	6	-----	----------	75	---------	--	---	D	
35A2	Raymond Vant	127	Dg	38	72	8	"Hardpan"	25.4	6/6/60	P	1/2	D	Water level is low in fall.
35B1	A. H. Bernhardt	110	Dr	173	6	-----	----------	-------	---------	--	---	D	
35G1	H. Christenson	120	Dg	25	------	-----	----------	17.0	5/28/59	--	---	D	
35G2	V. Lesh	120	Dr	160	6	-----	----------	114.6	5/28/59	--	---	D	
35G3	R. C. McDuffie	130	Dg	31	48	-----	----------	18.6	5/28/59	--	---	D	
35J1	J. J. Burfiend	110	Dg	28	72	-----	----------	21.7	6/6/60	--	---	D	A2.
35K1	Donald Samuelson	125	Dg	27	36	-----	----------	11.8	5/28/59	J	---	D	
35K3	Max Guiberson	115	Dg	30	36	-----	----------	9.4	5/28/59	--	---	D	
35L1	George Haskett	115	Dr	30	6	-----	----------	13.7	5/28/59	J	---	D	
35L2	J. W. Hayes	60	Dg	34	36	-----	----------	23.9	5/25/59	--	---	D	
35P2	W. S. Hanna, Jr.	120	Dr	132	4	-----	----------	114	---------	--	---	D	Supplies two houses.
35Q1	E. Oldendorff	135	Dg	39	48	-----	----------	24.5	7/3/58	J	---	D	A. Obs.
35R1	W. C. Wright	125	Dg	34	36	-----	----------	21.0	5/21/59	J	---	D	Owner uses chlorinator.
36A1	R. Mason	135	Dr	56	6	-----	----------	-------	---------	J	---	D	
36C1	Lee Cathers	155	Dr	54	6	-----	----------	-------	---------	J	1/4	D	
36H1	Jess Raymond	135	Dr	72	6	-----	----------	-------	---------	J	---	D	Quality of water is good.
36M1	J. B. Morton	150	Dg	15	60	-----	----------	8.2	5/21/59	N	---	N	
36N1	Fred Brock	150	Dr	56	6	-----	----------	31.3	5/21/59	J	---	D,S	Supplies two homes.
36P1	Claude Ames	155	Dr	19	4	-----	----------	14.3	5/21/59	J	---	D	Well may be deeper, tape stopped at 19 ft.

36P2	Alfred Radburn	155	Dr	120	6	-----	----------	-------	---------	J	---	D	
36P3	E. C. Stofer	150	Dr	40	4	-----	----------	5.7	5/21/59	J	---	D	
36Q1	Lilly Ames	150	Dg-Dr	60	6	-----	----------	3.8	5/21/59	J	---	D	Dug 20 ft.
36R1	R. Moffitt	150	Dr	38	6	-----	----------	5	5/21/59	--	---	D	
							T. 19 N., R. 3 W.						
13K1	Justin Taylor	10+	Dr	86	6	-----	Gravel, fine	4.5	---------	C	3/4	D	Flows at very high tides. L.
13Q1	H. H. Houston	25	Dr	122	8	113	Sand, gravel, clay	17.4	---------	--	---	Irr,D	Bottom 9 ft screened. Water level varies with tide. L.
24C1	Melvin Dobson	95	Dr	120	6	115	Sand	95	3/27/60	--	---	----	Bottom 5 ft screened. L.
24D1	Bill Alley	95	Dr	99	6	-----	----------	-------	---------	P	1	D	Supply adequate.
24D2	Lawrence Popple	10	Dr	28	6	-----	----------	-------	---------	C	1	D	Water slightly salty at very high tides.
24E1	Herb Thayer	110	Dg	35	36	-----	----------	4.5	6/11/59	H	---	D	Several marsh areas on property.
24F1	Mary Johns	115	Dr	80?	6	-----	----------	-------	---------	P	1	D	Supplies two homes.
24G1	Robert Miller	120	Dg-Dr	64	6	-----	----------	23	---------	--	---	D	Dug 25 ft, drilled 39 ft.
24K1	Henry Hagara	120	Dg	24	48x48	6	----------	13.1	6/12/59	C	1/3	D	"Hardpan" from 6 ft to bottom. Supply inadequate. A2.
24L2	F. A. Meeds	100	Dg-Dn	11	1¼	-----	Sand	10	---------	C	1	D	Well dug in sand until water was encountered, then sandpoint.
24N1	W. F. Durward	110	Dg	15	60x60	5	----------	4.4	6/15/59	C	1	D	Bottom 10 ft, "hardpan".
24P1	A. C. Moore	120	Dg	18	48x48	1	Gravel	4.5	6/12/59	N	---	N	All yellow clay with little gravel at bottom. Supply was inadequate for domestic use.
24Q1	O. K. Miller	85	Dg	29	36	-----	----------	10.5	6/12/59	C	1/4	D	Clay on top with 6 in layer of "hardpan" at 11 ft.
25B1	Charlie Bohm	85	Dg	14	48x48	-----	Sand & gravel	-------	---------	H	---	D	Water level fluctuates between 4 and 13 ft.
25D1	R. A. Skillman	100	Dr	106	6	-----	----------	88	Sept., '55	J	1	D	Water is slightly hard. A2.
25D2	Jack Ketchum	125	Dg	11	48x48	-----	----------	5.1	6/15/59	C	1/4	D	Water level gets very low, "hardpan" at 3 ft.
25E1	Charles Whitt	125	Dr	30	6	30	----------	20.2	6/15/59	C	1/2	D	Supply adequate. A2.
25F1	M. A. Blackwood	120	Dr	122	6	-----	----------	-------	---------	J	1	D	

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 3 W. -- Continued						
25L1	Bert Moore	165	Dr	126	6	-----	Sand, gravel	115	---------	J	---	D	Mostly sand and fine gravel.
25M1	L. Edgington	120	Dg	16	48x48	-----	Sand	8.3	6/16/59	--	---	D	Supplies three families and milk-house. Somewhat inadequate in fall.
25M2	Eberhardt Blue-berry Nursery	120	Dr	92	6	-----	----------	62.2	7/11/58	T	---	D,Irr	Pumping at time of water-level measurement.
25N1	Eberhardt Blue-berry Nursery	120	Dr	155	10	-----	----------	112.6	7/11/58	T	---	Irr	
25Q1	Merton Cooper	170	Dr	114	6	-----	----------	96	---------	J	1½	D	Supply adequate.
26E1	R. E. Klontz	50	Dr	62	6	-----	----------	19.0	6/17/59	J	1½	D	Supplies three homes.
26H1	Floyd Savidge	125	Dg	16	3	-----	----------	6.6	6/16/59	--	---	N	Well originally dug, then back-filled.
26N1	Paul Thale	115	Dr	128	6	-----	----------	-------	---------	J	1	D	Supply adequate.
27F1	Ellison Bros.	15±	Dr	65	6	-----	----------	5	---------	J	1/2	Ind	Water level fluctuates between 2 and 8 ft; dependent on tide.
27K1	V. H. Butts	35	Dg-Dr	70	6	-----	----------	30	---------	J	1	D	Top 40 ft dug with 24 ft "hard-pan", then white sand, then black sand.
27L1	R. Berg (J. C. Long)	60	Dr	103	8	103	Gravel	28 27.9	12/22/52 6/16/59	T	5	D,Irr	Pumped 4 hr at 200 gpm, dd 64 ft. Perforated from 85 to 100 ft. Has irr 15 ac. L.

27P1	P. D. Thale	85	Dr	42	6	-----	----------	4.5	6/25/59	H	---	S	Can be pumped down rather easily, but recharge is good.
28H1	L. J. Allen	140	Dg	42	8	42	----------	34.5	6/16/59	N	---	N	Well dug, then backfilled around 8-inch tile. A2.
28K1	Ferdinand Huber	120	Dr	135	8	75	----------	112	---------	J	3/4	D	Some sulfur taste. Water at 21, 63 and 112 ft.
28L1	H. G. McCool	40	Dr	70	6	-----	----------	13	---------	J	1	D	
33F1	Mae Drape	60	Dr	68	8	-----	----------	-------	---------	--	1/2	D,S	Encountered considerable blue clay.
34B1	Ed Fitzgerald	80	Dr	53	6	53	----------	+ 1.0	6/25/59	J	1	D	Well reportedly flows during summer and drops a ft or two in the winter.
34J1	P. D. Thale	160	Dr	42	6	-----	----------	-------	---------	J	1	D,S	
34J2	P. D. Thale	160	Dr	129	10	-----	----------	88	---------	--	---	----	Pumped 2 hr at 550 gpm, dd 21 ft. Slight sulfur smell. Water at 42, 57, and 108 ft.
34J3	C. H. Franks	150	Dr	187	4	-----	----------	125	---------	P	---	D,S	Aquifers at 18, 65 and 180 ft.
34M1	G. V. Thale	70	Dr	47	6	-----	----------	+ 1.0	6/25/59	J	1	D	Drilled two other wells, 60 and 90 ft without getting enough water for irrigation.
34R1	Albert Kerns	155	Dg	17	36	-----	----------	11	---------	--	1/2	D	Thin layer of "hardpan" at 12 ft.
34R2	Carl W. Utter	150	Dr	47	6	-----	----------	18	---------	J	1/2	D	Supply adequate.
35A1	L. E. Broyles	112	Dr	127	3	-----	Sand	40	---------	P	1/2	D,S	Bottom 12 ft has filled with sand. Sustained yield of 3 gpm.
35E1	Ben Gager	165	Dg-Dr	63	5	63	----------	41	---------	J	1/3	D	Dug 48 ft, but sanded up too much so owner drilled deeper.
35G1	S. D. Floch	170	Dr	91	6	-----	----------	21	---------	J	1	D	Water contains some iron. A2.
35G2	S. D. Floch	170	Dg	76	48x48	10	Sand, gravel	61.0	6/16/59	N	---	----	Supply was inadequate in summers. L.
35H1	R. L. Wright	155	Dr	84	5	-----	----------	72.5	6/16/59	J	1	D	
35J1	F. T. Parsons	165	Dg	10	48x48	-----	----------	4.1	6/23/59	C	---	D	Supply inadequate.
35K1	A. J. Kelley	165	Dr	100	4	-----	----------	-------	---------	--	3/4	D	Supply adequate.
35K2	J. A. Foster	175	Dr	103	6	-----	----------	73	---------	J	1	D	Quality of water good, but some iron.
35L1	G. Cronkright	160	Dg	80	------	-----	----------	59.0	6/16/59	J	1/2	D,S	Supply adequate.
35N1	Albert Whitney	155	Dr	53	6	-----	----------	30	July, '45	J	1	D	
35N3	Denver Casey	190	Dr	60	6	-----	----------	17.6	7/1/59	J	1	D	
35P1	Fred Martin	155	Dr	65	3	-----	----------	-------	---------	J	1	D	Quality of water is good.

Table 1. -- Records of wells. -- Continued

Well No.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Character of water-bearing material	Water level: Below land surface (feet)	Water level: Date	Pump: Type	Pump: Horsepower	Use of water	Remarks
							T. 19 N., R. 3 W. -- Continued						
35Q1	R. M. Hansen	195	Dr	95	6	-----	----------	-------	---------	S	1/2	D	
35R1	Prosperity Grange	165	Dr	100	6	-----	----------	80	1959	P	3/4	D	Mostly "hardpan" until water-bearing gravel encountered.
36A1	B. B. Beardslee	180	Dg	19	48x48	-----	"Hardpan"	4.4	6/17/59	C	1/4	D	"Hardpan" to bottom. Supply inadequate unless year is unusually wet.
36A2	C. H. Morris (Nielson)	180	Dr	132	6	132	Gravel	121	Nov., '46	J	2	D	Pumps 11 gpm. L.
36B1	C. A. Wake	165	Dg	12	36	-----	----------	3.2	6/17/59	C	1/4	D	Water level is low in late summer.
36B2	C. A. Wake	160	Dg	19	60x60	4	"Hardpan"	7.2	6/17/59	C	1/4	D	"Hardpan" to bottom. Water level is low in late summer.
36C1	Jake Ingleman	155	Dg-Dr	93	6	-----	----------	-------	---------	P	1/4	D	Supply adequate.
36E1	H. L. Van Deusen	165	Dr	115	6	-----	----------	85	1957	J	1	D	
36E2	--Keyes	170	Dg	16	36	-----	----------	3.5	6/17/59	--	---	D	------Do------
36F1	Unknown	170	Dg	22	48x48	-----	----------	14.0	6/17/59	H	---	D	Not used at present.
36M1	A. W. Wing	155	Dg	47	36	39	Gravel, pea	42.0	6/17/59	C	1/2	D	"Hardpan" to 41 ft. Water level is very low in October. A2.
36N1	Clarence Jordan	160	Dr	147	3	-----	----------	-------	---------	P	3/4	D	Supplies two homes, mink farm.
36P1	W. A. Koch	125	Dr	142	------	-----	----------	117	---------	T	3	D	
36P2	Harold Spargur	40	Dr	66	6	63	----------	50	---------	J	3/4	D	
36Q1	L. K. Couch	10±	Dr	36	6	-----	----------	Flows	---------	C	1/4	D	Flows 17 gpm at high tide. Eight-foot standpipe reportedly stops flow.

36Q2	Albert Taylor	10+	Dg	40	6	-----	----------	Flows	---------	C	1/4	D	Supplies two homes, well capped.
36R1	E. H. Robinson	25	Dr	90	6	-----	----------	80	---------	J	1	D	Information questionable.
36R2	E. Eldred	30	Dr	46	6	-----	----------	14	---------	--	1½	D	No tidal effect.
							T. 20 N., R. 1 W.						
33L2	Dr. R. C. Brown	5	Dr	500	5	485	----------	Flows	---------	--	---	D	Flows at high tide. Balled 100 gpm, dd 40 ft. L.
							T. 20 N., R. 2 W.						
28P1	Steamboat Islanders, Inc.	10	Dr	425	6	419	Sand, gravel	Flows	---------	C	3	PS	Flows about 5 gpm. Bottom screened. L. A2.
33G1	L. G. Hinton	75	Dg	8	96x96	-----	----------	2.5	6/2/59	--	---	D	Supplies store, house, picnic grounds.
33L1	A. D. Gaffney	55	Dr	107	6	-----	Sand	63.2	6/2/59	J	1½	D	A2.
34N1	W. E. Dietz	160	Dg	14	36	-----	----------	6.5	6/3/59	J	3/4	D	Two thin layers of "hardpan" encountered.
34P1	Howard Johnson	35	Dr	100	6	-----	----------	29.8	6/3/59	--	2	D	

Table 2. - Chemical analyses of water from wells. (Analyses made by Washington State Institute of Technology.)

Results in parts per million except as indicated.

Well Location	Owner or Tenant	Date of Collection	Oxygen (O_2)	Silica (SiO_2)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)
16/1E-9F1	Rainier Well #1	7/10/58	12.1	43	11.2	3.6	5.7	1.6	59.8	1.9
16/1E-9F2	Rainier Well #2	7/10/58	12.5	44	13.4	2.9	5.3	0.3	59.8	1.9
16/1W-19M1	Tenino Well (raw)	7/10/58	1.3	20	6.8	4.6	6.9	0.8	45.8	7.2
	Tenino Well (treated)	7/10/58	1.3	12	9.4	2.9	6.9	0.4	46.4	7.2
17/2E-19N1	Yelm (raw)	7/9/58	11.8	22	5.6	7.4	4.8	0.8	42.7	5.3
	Yelm (treated)	7/9/58	11.6	22	8.0	5.8	4.8	0.4	55.0	5.3
17/1W-33C1	C. M. Sharp	7/9/58	0	31	13.0	5.2	8.3	0.4	97.8	1.4
18/1E-5M1	Brown Farm	7/7/58	0.4	53	16.4	2.1	14.7	2.0	103.7	5.3
18/1E-8D4	W. B. Greeley Nursery	7/7/58	0.1	49	18.6	3.3	11.7	2.0	106.8	4.8
18/1E-31G1	E. V. Williams	7/7/58	2.6	23	14.0	0.6	5.3	1.6	56.7	4.3
18/1W-11Q6	Jerry's Grocery	7/7/58	11.8	12	17.8	0.9	5.5	0.4	51.8	9.1
18/1W-20Q1	Huntamer Well #4	6/27/58	6.2	34	9.2	3.3	5.5	1.6	43.3	10.1
18/1W-21D3	Huntamer Well #2	6/27/58	13.1	28	---	2.1	6.2	0.8	52.5	8.2
18/2W-35M	Tumwater City Wells	6/26/58	7.5	25	9.2	1.1	4.1	1.2	42.7	5.8
19/1W-5H1	S. E. Shumway	7/8/58	0	45	24.0	12.5	11.7	1.6	152.5	11.5
19/1W-28B1	D. W. Farr	7/8/58	10.4	31	30.3	3.3	9.7	2.3	128.7	5.8
19/2W-12B1	B. A. Cam	7/8/58	12.4	23	29.8	5.8	29.4	2.3	118.3	7.7
19/2W-16J1	C. Reckers	7/8/58	14.7	28	4.4	8.1	7.1	0.8	69.0	9.1
19/2W-16J2	J. M. Finley	7/8/58	---	19	20.6	4.9	5.7	1.2	109.8	7.7
19/2W-35Q1	E. Oldendorff	7/8/58	6.0	24	8.0	6.9	7.8	0.8	60.4	13.9

Chloride (Cl)	Total Solids	Hardness as $CaCO_3$	Trace Elements Parts per Billion										Equivalents per Million		Electrical Conductivity (Micromhos at 25°C)	pH
			Aluminum (Al)	Barium (Ba)	Chromium (Cr)	Copper (Cu)	Iron (Fe)	Manganese (Mn)	Nickel (Ni)	Strontium (Sr)	Titanium (Ti)	Vanadium (V)	Total Anions	Total Cations		
5.3	98.4	44.5	10	9	T	8	T	2	8	44	T	T	1.17	1.15	108	6.9
8.2	91.2	46.2	28	9	T	34	800	4	7	42	T	T	1.26	1.16	108	6.9
8.2	86.0	36.0	16	0.7	1	6	17	9	70	50	T	1	1.13	1.04	106	6.4
9.2	83.6	36.0	45	2	T	5	65	3	20	46	T	--	1.17	1.02	107	6.4
7.1	100.4	44.5	130	40	2	12	200	9	60	50	3	T	1.01	1.12	94	7.0
8.9	84.0	44.5	160	85	2	15	150	8	26	85	2	T	1.28	1.10	94	6.8
10.0	148.4	53.1	22	6	T	11	75	75	38	90	T	--	1.91	1.44	149	6.7
1.8	117.6	49.6	38	3	1	9	65	65	250	60	2	T	1.86	1.68	164	6.9
1.8	122.8	59.9	42	2	0.5	4	12	2	100	150	2	--	1.90	1.76	168	7.5
1.8	78.4	37.7	60	8	2	3	55	2	40	40	2	T	1.07	1.02	101	6.8
5.3	83.2	47.9	42	42	0.8	3	42	2	60	120	T	--	1.20	1.21	134	7.1
2.8	76.0	36.0	100	8	2	8	60	2	22	30	7	8	1.00	1.01	---	---
5.7	102.8	---	90	4	3	9	110	2	10	120	9	T	1.19	---	---	---
1.1	132.4	27.4	75	4	5	13	80	13	1300	55	3	T	0.85	0.76	85	7.5
8.2	169.6	113.0	42	3	2	8	85	17	26	17	T	--	2.97	2.81	265	7.0
2.8	130.8	89.0	140	3	10	12	80	5	65	65	3	16	2.31	2.26	205	7.3
37.6	175.6	99.3	15	4	T	12	18	4	26	105	T	--	3.16	3.31	327	7.4
7.5	82.8	44.5	50	8	2	9	42	2	50	75	T	T	1.53	1.22	123	7.5
2.8	90.8	71.9	140	5	2	13	75	8	65	110	2	--	2.04	1.71	161	7.5
11.0	108.0	47.9	6	6	T	11	55	2	50	85	2	T	1.59	1.33	158	7.3

Table 2A. Chemical analyses of water from wells. (Analyses made by Water Resources Division, Quality of Water Branch, U. S. Geological Survey.)

Well Location	Owner or Tenant	Date of Collection	Parts per million															Electrical Conductivity (micromhos at 25° C)	pH	Temperature ° F
			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)	Dissolved Solids	Hardness as $CaCO_3$			
15/1W-6A1	P. D. Northcraft	5/31/60	23	.08	7.5	1.6	4.3	.3	29	0	3.0	1.8	.1	8.7	.08	66	25	75	6.8	51
15/1W-7E1	Town of Bucoda	5/24/60	18	.08	5.5	2.1	5.1	.9	24	0	7.8	3.2	.0	3.7	.08	67	22	77	6.1	49
15/2W-5E1	H. J. Smith	5/31/60	25	1.9	9.0	2.3	6.3	.9	34	0	5.2	4.8	.1	6.1	.05	84	32	99	6.9	51
15/2W-15R1	R. L. Dickey	5/31/60	28	.07	10	2.8	7.4	.9	46	0	4.4	3.2	.1	7.6	.11	86	36	112	6.8	51
15/3W-5B1	M. Paulson	6/21/60	31	2.2	7.5	4.4	11	3.1	49	0	12	8.2	.1	.4	.02	105	37	136	7.1	55
15/3W-14C2	State Training School	11/12/59	27	.06	9.5	1.9	4.7	1.0	40	0	4.2	3.8	.0	2.5	.11	76	31	94	6.9	50.5
16/3W-16L1	Centralia Fruit Farm	5/31/60	22	.14	6.5	1.4	4.0	.4	34	0	3.2	1.8	.1	.6	.02	56	22	66	6.7	52
17/2E-19N1	City of Yelm	11/12/59	23	.25	9.0	2.9	4.6	1.0	38	0	4.4	3.8	.0	5.0	.11	75	34	101	6.7	50
17/2W-15P1	H. Schlottman	6/21/60	17	.02	7.0	2.2	3.9	1.4	25	0	6.0	4.0	.0	7.1	.03	57	26	81	7.1	52
17/2W-16R1	A. P. Thomas	5/31/60	19	.09	5.0	.6	3.2	.4	19	0	1.0	2.2	.0	3.4	.02	43	15	51	6.3	52
17/3W-25P1	J. W. Sutmiller	5/31/60	23	1.4	7.0	1.6	4.6	.8	37	0	1.2	3.0	.1	.5	.12	60	24	73	6.7	50
17/3W-35E1	W. A. White	5/31/60	25	.06	6.0	2.2	3.5	.4	34	0	.6	2.0	.1	1.0	.04	57	24	67	6.9	53
18/1W-15H1	PUD #1, Thurston County	11/13/59	45	.02	12	4.6	5.5	1.7	72	0	1.3	2.8	.1	.3	1.0	104	49	126	7.3	52
19/2W-9R1	Cooper's Point	11/12/59	46	.62	14	2.9	20	1.9	92	0	.3	10	.1	.8	2.2	143	47	192	7.2	52

Table 2B -- Partial chemical analyses of water from wells.
(Analyses by Division of Water Resources)

Well Number	Date of Analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)	Electrical Conductivity (Micromhos at 77°F)
15/1W-6B1	6/20/60	23	6	22	37	89
15/1W-6F1	6/20/60	57	6	16	39	82
15/1W-8H2	6/20/60	38	6	17	41	73
15/1W-9D1	6/20/60	110	10	95	149	255
15/1W-9J2	6/20/60	52	5	22	39	88
15/1W-10M1	6/20/60	48	1	18	41	78
15/1W-11N1	6/20/60	45	7	21	37	88
15/2W-6P1	6/20/60	51	8	33	45	128
15/2W-10J1	6/20/60	30	9	30	39	115
15/2W-11J1	6/20/60	12	10	10	11	95
15/2W-12M1	6/20/60	60	6	74	152	243
15/2W-19M1	6/20/60	84	7	67	135	237
15/2W-21M1	6/20/60	92	6	77	155	282
15/2W-22N1	6/20/60	41	6	19	34	100
15/3W-4C1	6/20/60	55	5	18	33	74
15/3W-5B2	6/20/60	61	9	53	66	180
15/3W-9D1	6/20/60	65	6	23	40	99
15/3W-10A2	6/20/60	52	6	21	42	88
15/3W-11M3	6/20/60	52	6	21	40	83
15/3W-12B3	6/20/60	51	7	31	42	115
16/1W-4B1	6/20/60	32	5	13	33	76
16/1W-5C1	6/20/60	45	5	33	56	116
16/1W-7N1	6/20/60	22	4	11	22	55
16/1W-14Q1	6/20/60	140	16	10	135	309
16/1W-16L1	6/20/60	88	8	33	56	130
16/1W-17E1	6/20/60	71	6	63	96	199
16/1W-18E1	6/20/60	5	6	34	43	104
16/1W-21D2	6/20/60	41	7	31	66	137
16/1W-23P1	6/20/60	14	7	42	60	141
16/2W-7H1	6/27/60	31	5	5	24	53
16/2W-7K1	6/27/60	29	7	100	181	268
16/2W-9C1	6/30/60	26	4	9	25	48
16/2W-10K1	6/30/60	70	6	18	49	89
16/2W-13B1	6/27/60	22	8	34	43	130
16/2W-21J1	6/30/60	93	6	31	59	106
16/2W-25E1	6/30/60	86	5	25	47	90
16/2W-31R2	6/30/60	60	6	17	41	79
16/3W-12C1	6/30/60	75	5	34	71	109
16/3W-31J1	6/30/60	65	6	19	46	112

Table 2B -- Partial chemical analyses of water from wells. -- Continued
(Analyses by Division of Water Resources)

Well Number	Date of Analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)	Electrical Conductivity (Micromhos at 77°F)
17/1W-1D1	2/27/58	82	7	34	45	110
17/1W-2D1	2/27/58	46	8	38	41	115
17/1W-4H1	2/27/58	27	4	26	46	88
17/1W-4H2	2/27/58	60	5	49	41	101
17/1W-6L1	2/27/58	80	7	21	32	75
17/1W-6P1	6/27/60	70	5	27	83	122
17/1W-6P2	6/27/60	106	5	40	83	121
17/1W-7B3	2/27/58	105	10	47	35	117
17/1W-7J2	2/27/58	66	11	32	34	100
17/1W-14Q1	2/27/58	36	9	31	69	96
17/1W-15F1	2/27/58	49	5	21	20	66
17/1W-17B1	2/27/58	34	8	22	29	74
17/1W-28G1	6/27/60	81	9	54	72	162
17/1W-30C1	6/27/60	26	15	34	38	138
17/1W-32G1	6/27/60	20	4	8	25	52
17/1W-33C1	2/27/58	37	11	63	91	161
17/2W-2Q1	6/27/60	53	4	27	70	108
17/2W-4C2	6/27/60	25	5	13	40	78
17/2W-6J1	6/27/60	44	5	14	45	69
17/2W-17F1	6/27/60	16	6	13	24	48
17/2W-19K1	6/27/60	44	5	38	69	110
17/2W-20G1	6/27/60	80	5	11	33	62
17/2W-25N1	6/27/60	10	6	9	24	60
17/2W-28G1	6/27/60	31	5	23	56	97
17/2W-32C1	6/27/60	26	9	27	28	148
17/3W-1L1	6/30/60	60	5	32	52	81
17/3W-12B1	6/30/60	93	6	24	49	83
17/3W-23H1	6/30/60	62	5	6	24	45
17/3W-35C1	6/30/60	52	5	19	44	70
17/3W-35F2	6/30/60	19	8	10	19	79
17/3W-36N2	6/30/60	9	9	25	38	145
18/1E-5M1	3/6/58	183	6	48	103	160
18/1E-7E1	7/7/60	223	4	31	53	93
18/1E-8D4	3/7/58	110	6	54	106	154
18/1E-17C8	7/7/60	16	5	36	64	119
18/1E-17E2	3/7/58	109	19	58	110	200
18/1E-18A1	3/7/58	120	19	49	81	138
18/1E-20L1	7/7/60	132	7	60	68	154
18/1E-20R1	3/7/58	86	6	35	64	117

Table 2B -- Partial chemical analyses of water from wells. -- Continued
(Analyses by Division of Water Resources)

Well Number	Date of Analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)	Electrical Conductivity (Micromhos at 77° F)
18/1W-2P2	3/7/58	183	14	45	51	125
18/1W-13M1	3/6/58	80	5	29	43	97
18/1W-14H5	3/7/58	64	6	45	71	130
18/1W-14J1	3/6/58	54	8	29	40	92
18/1W-23E3	3/6/58	43	8	35	40	120
18/1W-26B2	2/24/58	82	4	19	29	65
18/1W-26C1	3/5/58	84	6	44	86	130
18/1W-26E1	2/26/58	14	3	13	15	37
18/1W-26K1	3/5/58	50	6	37	62	105
18/1W-26R1	3/5/58	43	6	41	85	130
18/1W-35L1	2/26/58	60	4	26	43	104
18/1W-36F1	2/26/58	37	11	79	79	196
18/2W-1F3	6/24/60	55	7	36	66	109
18/2W-4H1	7/4/60	387	4	66	110	180
18/2W-4J5	6/27/60	117	10	30	38	112
18/2W-5B1	6/24/60	84	7	18	48	75
18/2W-7J2	6/24/60	103	6	22	56	88
18/2W-17D1	6/24/60	140	7	26	59	100
18/2W-25H3	6/28/60	160	4	16	42	81
18/2W-26L1	6/24/60	158	6	48	87	145
18/3W-1C1	6/30/60	50	6	44	75	113
18/3W-2H2	6/30/60	71	7	42	66	116
18/3W-13K1	6/30/60	85	6	34	61	97
18/3W-16P1	6/30/60	12	6	16	39	71
18/3W-24H1	6/30/60	207	155	182	66	618
18/3W-25A1	6/30/60	131	159	235	84	649
18/4W-11K1	6/28/60	20	5	29	51	98
18/4W-13H1	6/28/60	42	6	57	97	147
18/4W-24A1	6/28/60	20	6	38	64	107
19/1E-30E1	7/6/60	34	5	36	61	109
19/1E-31H1	7/6/60	165	4	57	120	191
19/1W-4D1	7/1/60	48	7	81	123	207
19/1W-6M2	7/1/60	84	1795	795	144	6420
19/1W-9F2	7/1/60	19	8	45	61	134
19/1W-16M1	7/1/60	60	6	34	53	103
19/1W-18M1	7/1/60	40	10	142	181	310
19/1W-23F1	3/6/58	180	6	40	122	176
19/1W-28L1	7/1/60	69	5	56	88	149
19/1W-30A2	7/1/60	90	6	57	88	153
19/1W-31N2	7/1/60	61	5	59	90	152

Table 2B -- Partial chemical analyses of water from wells. -- Continued
(Analyses by Division of Water Resources)

Well Number	Date of Analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)	Electrical Conductivity (Micromhos at 77°F)
19/2W-16A1	7/6/60	552	17	55	116	216
19/2W-16Q2	7/5/60	171	6	42	64	113
19/2W-18N3	7/6/60	18	8	23	28	98
19/2W-21L2	7/6/60	82	77	91	78	395
19/2W-23A1	7/5/60	96	6	34	52	105
19/2W-32H2	7/5/60	79	6	21	28	82
19/2W-32J1	7/5/60	23	6	14	18	72
19/2W-35J1	7/5/60	28	15	67	77	207
19/3W-24K1	7/6/60	24	4	30	51	90
19/3W-25D1	7/6/60	106	6	48	72	124
19/3W-25E1	7/6/60	30	4	14	27	52
19/3W-28H1	7/6/60	42	7	34	40	94
19/3W-35G1	7/6/60	91	6	36	50	89
19/3W-36M1	7/6/60	46	7	45	55	124
20/2W-28P1	7/6/60	425	2	95	168	253
20/2W-33L1	7/6/60	107	677	532	178	2467

Table 2C -- Partial chemical analyses of water from wells.
(Data taken as indicated by asterisks from previous reports designated below.)

Well No.	Hardness (ppm)	Chloride (ppm)	Well No.	Hardness (ppm)	Chloride (ppm)
*15/2W-19N1	265	7	*16/3W-2Q1	45	6
			*16/3W-20M1	45	11
*15/3W-1A1	30	4	*16/3W-20M2	55	9
*15/3W-2D1	30	4	*16/3W-31L1	55	6
*15/3W-3L1	40	4			
*15/3W-3M1	40	4	**17/1E-13E1	--	9
*15/3W-5C1	55	6	**17/1E-13N1	--	8
*15/3W-5J1	30	5	**17/1E-14A1	--	9
*15/3W-5Q1	35	4	**17/1E-23A2	--	15
*15/3W-6A1	40	4	**17/1E-34F1	70	8
*15/3W-9D1	30	6	**17/1E-35F1	90	15
*15/3W-11F1	30	5			
*15/3W-16N1	20	5	**17/2E-18L1	36	6
*15/3W-23G1	40	6	**17/2E-19D1	44	6
*15/3W-24E1	50	9	**17/2E-19G3	26	5
			**17/2E-19H2	52	9
*15/4W-1H1	40	7	**17/2E-19J1	28	8
			**17/2E-20F1	28	19
**16/1E-5Q1	84	10	**17/2E-20K1	24	9
			**17/2E-29A1	36	7
**16/2E-8C1	48	7	**17/2E-29L3	--	8
**16/2E-6B1		9	**17/2E-30E1	--	9
**16/2E-10C1	72	11	**17/2E-30F2	--	7
**16/2E-27Q1	44	11	**17/2E-32R1	--	7
*16/1W-31D1	40	23			

*Taken from "Preliminary Report on Ground Water Resources of the Central Chehalis Valley, Washington."

**Taken from "Ground Water in the Yelm Area, Thurston and Pierce Counties, Washington."

Table 3 -- Materials penetrated by representative wells.

Materials	Thickness (feet)	Depth (feet)
Well 15/1W-5M1		
Clarence R. Whited. About 1 mile southeast of State Highway 1N on Skookumchuck Road. Altitude about 275 feet. Drilled by C. D. Roberts, 1959.		
Soil	2	2
Vashon drift:		
Recessional outwash:		
Boulders	7	9
Gravel, fine, and sand	13	22
Sand; water-bearing	2	24
Till:		
Gravel, cemented, and sand	7	31
Advance outwash:		
Gravel, fine, and sand; water-bearing	21	52
Sand, very little gravel; water-bearing	11	63
Gravel and sand; water-bearing	6	69
Clay, blue	3	72
Casing, 12-inch to 72 ft; perforated 32 to 52 ft and 64 to 69 ft. SWL[a] 17 ft. Pumped 4 hrs at 345 gpm, dd 25 ft.		
Well 15/1W-6A1		
Philip D. Northcraft. About 0.65 mile east of State Highway 1N on Skookumchuck Road at intersection with Northcraft Road. Altitude about 275 feet. Drilled by A. E. Seaunier, 1950.		
Vashon drift:		
Recessional outwash:		
Sand, fine	22	22
Hardpan	2	24
Gravel and water	8	32
Till:		
Hardpan (glacial till)	7	39
Advance outwash:		
Sand, coarse	3	42
Gravel; water-bearing	3	45
Casing, 8-inch to 45 ft; perforated 24 to 32 ft.		

a/ Static water level

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well *15/1W-7M1[a]		
City of Bucoda. In Bucoda. Altitude about 250 feet. Drilled by N. C. Jannsen Drilling Company.		
Glacial outwash of Vashon age:		
Sand and small gravel	1	1
Boulder	1	2
Hardpan and boulders	15	17
Gravel and boulders, cemented	11	28
Gravel, cemented	7	35
Sand and gravel, some water	9	44
Sand	11	55
Gravel and boulders, cemented	11	66
Gravel and boulders, cemented, and sandy clay	8	74
Sand, coarse, and some gravel; water-bearing	11	85
Sand and some gravel; water-bearing	15	100
Unclassified:		
Shale, blue	27	127
Casing, 12-inch to 107 ft; perforated 67 to 107 ft.		
Well 15/2W-5E1		
Harvey J. Smith. About 0.45 mile southwest of old U. S. Highway 99 and Township Road Intersection. Altitude about 205 feet. Drilled by C. D. Roberts, 1952.		
Vashon drift:		
Recessional outwash:		
Gravel, loose	3	3
Boulders and gravel	20	23
Sand, fine - shows a little water	7	30
Till (?):		
Sand, packed, and gravel	17	47
Advance outwash (?):		
Sand, coarse, and gravel; water-bearing	15	62
Casing, 6-inch to 62 ft; perforated 47 to 57 ft. SWL 27 ft. Pumped 4 hrs at 110 gpm, dd 5 ft.		
Well 15/2W-6J1		
Harvey J. Smith. About 0.8 mile southwest of old U. S. Highway 99 and Township Road Intersection. Altitude about 210 feet. Drilled by L. B. Richardson, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil and gravel	3	3
Clay and gravel	6	9
Till:		
Hardpan	16	25
Advance outwash:		
Sand, fine, some coarse, gravel and clay	6	31
Sand, coarse, gravel and clay	16	47

a/Asterisk in front of well number indicates log from Schlax (1947)

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/2W-6J1 -- Continued		
Vashon drift -- Continued		
Advance outwash -- Continued		
Hardpan (glacial till)	8	55
Sand, coarse, clay and gravel	9	64
Sand, coarse, and loose gravel	5	69

Casing, 8-inch to 69 ft; perforated 35 to 62 ft. SWL 20 ft. Pumped 1 hr at 60 gpm, dd 5 ft.

Well 15/2W-15R1

R. L. Dickey and Frank Middlebusher. About 2.8 miles southwest of Bucoda on State Highway 1N. Altitude about 220 feet. Drilled by A. E. Seaunier.

Vashon drift:		
Recessional outwash:		
Boulders and black loam	16	16
Sand	2	18
Till:		
Hardpan	8	26
Advance outwash:		
Sand	6	32
Boulders	6	38
Hardpan (glacial till [?])	4	42
Gravel and water	2	44
Hardpan (glacial till [?])	5	49
Gravel and water	1	50

Casing, 6-inch to 50 ft. SWL 15 ft. Pumped 4 hrs at 37 gpm, dd 20 ft.

Well 15/2W-22N1

Frank Townsend. About 0.10 mile northeast of State Highway 1N intersection with county line. Altitude about 210 feet. Drilled by A. E. Seaunier, 1947.

Vashon drift:		
Recessional outwash:		
Loam, black	6	6
Clay, red, and rock	14	20
Sand, red, and water	4	24
Till:		
Hardpan	15	39
Advance outwash:		
Gravel	2	41

Casing, 6-inch to 41 ft. SWL 12 ft. Pumped 4 hrs at 40 gpm, dd 24 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-1K1		
William S. Proctor. About 0.5 mile south of Township Road on Apple Avenue. Altitude about 193 feet. Drilled by O. A. Keto, 1954.		
Vashon drift, undifferentiated:		
Soil	10	10
Sand and some gravel	35	45
Gravel, washed	3	48
Sand and some gravel	5	53
Gravel, washed, and sand	2	55
Sand and some gravel	7	62
Gravel, good, washed, and some sand	3	65
Casing, 8-inch to 65 ft; no perforations. SWL 22 ft. Pumped 4 hrs at 100 gpm, dd 10 ft.		
Well 15/3W-2P1		
Peter Vivoda. About 1.1 miles southeast of Township Road intersection on Sargent Road. Altitude about 173 feet. Drilled in 1928.		
Vashon drift:		
Recessional outwash:		
Sand and gravel	15	15
Till (?):		
Clay	15	30
Advance outwash (?):		
Sand and gravel	30	60
Casing, 6¼-inch to 60 ft; perforated 40 to 60 ft.		
Well 15/3W-4C1		
Louis Johnson. About 1.1 miles east of Rochester on Township Road. Altitude about 158 feet. Drilled by C. D. Roberts, 1952.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Topsoil and gravel, mixed	8	10
Gravel and small boulders	15	25
Till:		
Gravel, cemented, and sand	15	40
Advance outwash:		
Gravel and sand; water-bearing	15	55
Casing, 8-inch to 55 ft; perforated 40 to 55 ft. SWL 16 ft. Pumped 4 hrs at 150 gpm, dd 14 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-4D1		
Clarence A. Betts. About 0.1 mile southeast of Shamblin Road intersection on State Highway 9. Altitude about 156 feet. Drilled by Chas. King, 1954.		
Vashon drift, undifferentiated:		
Surface	9	9
Sand, dirty, and gravel	20	29
Gravel, dirty, some sand	19	48
Gravel, water-bearing	15	63
Casing, 8-inch to 63 ft. Pumped 4 hrs at 500 gpm, dd 0.5 ft.		
Test Well - C. A. Betts		
Clarence A. Betts. About 450 feet south of well 4D1. Altitude about 158 feet. Drilled by Chas. King, 1954.		
Surface	4	4
Tertiary:		
Clay	20	24
Clay, blue	12	36
Casing, none. Abandoned because of blue clay too close to surface.		
Well 15/3W-4K1		
Chas. Eckard. About 1.9 miles northwest of James Road intersection on State Highway 9. Altitude about 154 feet. Drilled by O. Erdman, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil	5	5
Gravel	15	20
Sand	10	30
Till:		
Hardpan	10	40
Advance outwash:		
Gravel	20	60
Casing, 8-inch to 60 ft; perforated 50 to 60 ft. SWL 20 ft. Pumped 4 hrs at 150 gpm, dd 2 ft.		
Well 15/3W-4Q1		
Elmer Waltenberg. About 1.6 miles southeast of Rochester on Jamestown Cut-off Road. Altitude about 150 feet. Drilled by Chas. King, 1949.		
Vashon drift, undifferentiated:		
Soil	2	2
Sand, yellow and brown, and gravel	26	28
Sand, yellow and gray	16	44
Gravel, water-bearing	3	47
Gravel with some sand	4	51
Casing, 6-inch to 50 ft; no perforations; opening about 1 ft from bottom of casing. SWL 28 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-4Q2		
Elmer Waltenberg. About 1.6 miles southeast of Rochester on Jamestown Cut-off Road. Altitude about 150 feet. Drilled by C. D. Roberts, 1958.		
Vashon drift:		
Recessional outwash:		
Topsoil	5	5
Till:		
Sand and gravel, cemented, and boulders	20	25
Advance outwash:		
Gravel and sand; water-bearing	6	31
Gravel and sand, cemented	4	35
Sand, very little gravel	7	42
Gravel and sand; water-bearing	15	57
Gravel, coarse	3	60
Casing, 8-inch to 60 ft; perforated 26 to 31 ft and 45 to 55 ft. SWL 10.75 ft. Pumped 4 hrs at 400 gpm, dd 5 ft.		
Well 15/3W-5B1		
Melvin Paulson. About 0.5 mile east of Rochester on south side of State Highway 9. Altitude about 155 feet. Drilled by Chas. King, 1944.		
Vashon drift, undifferentiated:		
Soil	10	10
Sand	58	68
Gravel	2	70
Mud gravel	15	85
Casing, 8-inch to 70 ft; 6-inch from 70 to 85 ft; perforated 70 to 85 ft. SWL 35 ft.		
Well 15/3W-5M1		
George Fagerness. About 0.7 mile south of Rochester. Altitude about 139 feet. Drilled by C. D. Roberts, 1951.		
Vashon drift:		
Recessional outwash:		
Loam, sandy	6	6
Till (?):		
Gravel, cemented, and sand and boulders	14	20
Gravel and sand, cemented	15	35
Advance outwash:		
Gravel and sand; water-bearing	6	41
Gravel and sand, very coarse; water-bearing	14	55
Casing, 6-inch to 55 ft; perforated interval not known. SWL 31 ft. Pumped 60 gpm, with no appreciable dd.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-6K1		
George Steelhammer. About 0.5 mile south of Rochester on Soderlund Road. Altitude about 120 feet. Drilled by C. D. Roberts, 1949.		
Vashon drift:		
Recessional outwash (?):		
Clay	3	3
Clay and gravel	7	10
Till:		
Gravel and sand, cemented	10	20
Advance outwash:		
Gravel and sand; water-bearing	11	31
Casing, 6-inch to 31 ft; no perforations. SWL 3 ft. Pumped 4 hrs at 100 gpm, dd 10 ft.		
Well 15/3W-6N1		
A. Johnson. About 1 mile south and 0.8 mile west of Rochester. Altitude about 110 feet. Drilled by Chas. King.		
Vashon drift:		
Recessional outwash (?):		
Surface	4	4
Gravel and sand	4	8
Sand, dirty, and gravel	20	28
Gravel, clean, little sand	4	32
Casing, 6-inch to 32 ft. Pumped 3 hrs at 45 gpm, dd 5 ft.		
Well 15/3W-6P1		
A. M. Baybarz. About 0.15 mile north of James Road and about 1 mile southwest of Rochester. Altitude about 115 feet. Drilled by Erdman, 1950.		
Vashon drift, undifferentiated:		
Clay	10	10
Sand and gravel	37	47
Casing, 8-inch to 47 ft. Perforated 30 to 47 ft. SWL 8 ft. Pumped 4 hrs at 125 gpm, dd 5 ft.		
Well 15/3W-8G1		
Chas. R. Frye. About 0.3 mile south of James Road. Altitude about 120 feet. Drilled by T. J. Pollman, 1947.		
Vashon drift:		
Recessional outwash (?):		
Clay	6	6
Till:		
Hardpan (clay and gravel)	7	13
Advance outwash:		
Boulders	2	15
Gravel and sand	6	21

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-8G1 -- Continued		
Vashon drift -- Continued		
Advance outwash -- Continued		
Sand and gravel; water-bearing	6	27
Gravel	2	29

Casing, 8-inch to 29 ft; no perforations. Cert for 50 gpm. SWL 12 ft.

Well 15/3W-9D2

Wilbert F. Brewer. About 0.24 mile south of Scatter Creek crossing on James Road. Altitude about 140 feet. Drilled by E. C. King, 1955.

Vashon drift, undifferentiated:		
Topsoil	2	2
Sand, gravel and small boulders; water-bearing below 17 feet	52	54

Casing, 8-inch to 54 ft. SWL 17 ft. Pumped 8 hrs at 130 gpm, dd 4 ft. Cert for 150 gpm.

Well 15/3W-9J1

Ted E. Bartlett. About 2.5 miles southeast of Rochester. Altitude about 150 feet. Drilled by Chas. King, 1949.

Vashon drift, undifferentiated:		
Topsoil	3	3
Sand, dirty, and gravel	21	24
Sand clay	30	54
Gravel sand	6	60
Gravel	3	63

Casing, 6-inch to 63 ft. SWL 30 ft. Pumped for 8 hrs at 100 gpm, dd 32 ft.

Well 15/3W-10A1

Clair Tischer. About 1.5 miles northwest of Grand Mound. Altitude about 168 feet. Drilled by L. B. Richardson, 1951.

Vashon drift:		
Recessional outwash:		
Dirt, black, and gravel	3	3
Till (?):		
Clay and boulders	12	15
Advance outwash (?):		
Sand, coarse, gravel and clay (may be till)	15	30
Sand, coarse, and gravel	9	39
Sand and gravel, mixed	6	45
Sand, coarse, clay and gravel	7	52
Sand, coarse and fine, clay with some gravel	2	54
Sand, mixed	2	56
Sand, coarse, and loose gravel	3	59

Casing, 8-inch to 59 ft; perforated 30 to 50 ft. SWL 10.5 ft. Pumped 0.5 hr at 175 gpm, dd 7.3 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-10A2		
Ludwig Rossmaier. About 1.5 miles northwest of Grand Mound. Altitude about 168 feet. Drilled by owner, 1948.		
Vashon drift, undifferentiated:		
Gravel and small rock	16	16
Sand strata	2	18
Gravel and small rock	20	38
Sand	1	39
Gravel with sand	13	52
Casing, 6-inch to 52 ft; no perforations. SWL 35.5 ft. Pumped 4 hrs at 36 gpm, dd 2 ft.		
Well 15/3W-11H2		
Mrs. Elton M. Rich. About 0.5 mile north of Grand Mound. Altitude about 172 feet. Drilled by C. D. Roberts, 1952.		
Vashon drift:		
Recessional outwash:		
Pit (probably topsoil and gravel)	6	6
Till:		
Gravel, packed	21	27
Advance outwash:		
Sand, water-bearing	3	30
Gravel and sand; water-bearing	16	46
Casing, 8-inch to 46 ft; perforated 30 to 40 ft. SWL 27 ft. Bailed 4 hrs at 60 gpm, dd 2 ft.		
Well *15/3W-11K3		
F. G. Payette. About 0.35 mile west of intersection Sargent Road and old U. S. Highway 99. Altitude about 167 feet. Drilled by Dempsey, 1944.		
Vashon drift, undifferentiated:		
Dug well, no record	30	30
Gravel, loose	4	34
Clay, yellow, and gravel	6	40
Sand and gravel; water-bearing	8	48
Casing, 6-inch. SWL 21.5 ft to 34 ft. Bailed 10 gpm.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-11L1		
Stanley Waltrip. About 0.75 mile northwest of Grand Mound. Altitude about 165 feet. Drilled by Chas. King, 1954.		
Vashon drift:		
Recessional outwash:		
Topsoil	3	3
Till (?):		
Sand gravel and some clay	27	30
Advance outwash:		
Sand	4	34
Gravel	24	58
Casing, 8-inch to 57½ ft; perforated 49 to 55 ft. SWL 22 ft. Pumped 4 hrs at 100 gpm, dd 0.33 ft.		
Well 15/3W-11M2		
Laurance Garske. About 1.2 miles northwest of Grand Mound. Altitude about 164 feet. Drilled by Chas. King, 1950.		
Vashon drift, undifferentiated:		
Topsoil	3	3
Sand, dirty, and gravel	53	56
Gravel	4	60
Casing, 6-inch to 60 ft. SWL 27 ft. Pumped 4 hrs at 85 gpm, dd 18 ft.		
Well 15/3W-11M3		
William V. Knight. About 1.2 miles northwest of Grand Mound. Altitude about 165 feet. Drilled by Chas. King.		
Vashon drift, undifferentiated:		
Topsoil	2	2
Gravel and sand	30	32
Sand, dirty, and some gravel	16	48
Gravel and sand	4	52
Casing, 6-inch to 52 ft. SWL 32 ft.		
Well 15/3W-12B1		
John Salzer. About 0.35 mile northeast of freeway on south side of old U. S. Highway 99. Altitude about 190 feet. Drilled by O. E. Erdman, 1948.		
Vashon drift:		
Till:		
Gravel hardpan	38	38
Advance outwash:		
Gravel, water-bearing	10	48
Casing, 8-inch to 48 ft; perforated 12 ft on bottom. SWL 16 ft. Pumped 4 hrs at 300 gpm, dd 5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/3W-12B4		
Florence M. Salzer. About 1.5 miles northeast of Grand Mound. Altitude about 190 feet. Drilled by C. D. Roberts, 1955.		
Vashon drift:		
Recessional outwash:		
Topsoil	3	3
Gravel and boulders	3	6
Sand-gravel, mixed	5	11
Gravel and boulders	9	20
Till:		
Gravel, cemented	18	38
Advance outwash:		
Gravel and sand, fine; water-bearing	12	50
Gravel, coarse, water-bearing	3	53
Casing, 8-inch to 53 ft; perforated interval not known. SWL 30 ft. Pumped 4 hrs at 90 gpm, dd 5 ft.		
Well 15/3W-12D1		
J. F. McLeod (formerly L. G. Goodknight). About 0.5 mile north of Grand Mound on Meridian Street. Altitude about 175 feet. Drilled by W. W. Sides, 1949.		
Vashon drift, undifferentiated:		
Sand soil	2	2
Sand and gravel (may be till?)	38	40
Sand, fine, and clay	2	42
Gravel, coarse	9	51
Casing, 8-inch to 51 ft; perforations, no information. SWL 31 ft. Pumped 40 hrs at 150 gpm, dd 10 ft. Recovery 10 minutes.		
Well 15/3W-12F1		
Clara Lentz. About 0.22 mile east of freeway and south of old Pacific Highway. Altitude about 185 feet. Drilled by Chas. King, 1945.		
Vashon drift:		
Recessional outwash:		
Surface	2	2
Till:		
Hardpan of cement gravel and sand	36	38
Advance outwash:		
Sand	10	48
Gravel	5	53
Casing, 6-inch to 53 ft; bottom 6 or 7 ft perforated. Pumps 80-85 gpm. Pumps sand when water level is low. SWL 25 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well *15/3W-14C1		
State of Washington. At Grand Mound State Training School for Girls. Altitude about 150 feet. Drilled by O. E. Erdman, 1941.		
Vashon drift, undifferentiated:		
Topsoil	2	2
Till:		
Hardpan, hard-packed gravel	43	45
Advance outwash:		
Gravel, fine and sand (water)	12	57
Gravel and sand (water)	17	74
Casing, 10-inch to 74 ft; perforated 62 to 74 ft. SWL 30.5 ft. Pumped 225 gpm, dd 4.5 ft. Pumped 310 gpm, dd 6.5 ft.		
Well 15/3W-23Q1		
E. M. Sorenson. About 0.10 mile north of county line. Altitude about 140 feet.		
Vashon drift, undifferentiated:		
Soil	1	1
Sand	5	6
Gravel	24	30
Casing, 6-inch to 30 ft; perforated 20 to 30 ft. Reported summer water level 10 to 15 ft. (Was under water on 2/4/59). Pumped over 4 hrs at 150 gpm, dd 2 ft.		
Well 15/3W-24L1		
H. C. Kunselman. About 0.3 mile north of county line on west side of Pacific Highway. Altitude about 158 feet. Drilled by C. D. Roberts, 1950.		
Vashon drift:		
Recessional outwash:		
Sand and gravel	19	19
Till:		
Gravel and sand, cemented	16	35
Advance outwash:		
Sand	5	40
Gravel and coarse sand; water-bearing	5	45
Casing, 6-inch to 45 ft. SWL 13 ft. Pumped 4 hrs at 40 gpm, dd 3 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 15/4W-2B1		
E. J. McDougall. About 2.5 miles west of Rochester. Altitude about 100 feet. Drilled by Chas. King, 1948.		
Vashon drift, undifferentiated:		
Surface (alluvium)	2	2
Sand, gravel and clay	32	34
Gravel and some sand	5	39
Casing, 6-inch st to 39 ft. SWL 14 ft.		
Well 15/4-12F1		
Evert Sundquist. About 0.25 mile west of Helsing Junction. Altitude about 106 feet. Drilled by C. D. Roberts, 1949.		
Vashon drift:		
Recessional outwash or alluvium:		
Silt, sand	8	8
Till (?):		
Gravel and boulders, cemented	9	17
Advance outwash:		
Gravel, water-bearing	7	24
Casing, 6-inch to 24 ft; perforated 17 to 24 ft. SWL 7 ft. Pumped 4 hrs at 60 gpm, dd 7 ft.		
Well **16/1-6J1[/]		
Leon Barnhouse. About 1.8 miles northwest of Rainier, on Rainier-Olympia Road. Altitude about 500 feet. Drilled by Richardson Well Drilling Co., 1950.		
Vashon drift:		
Recessional outwash:		
Old well 96 ft deep, caved to 87 ft	96	96
Clay, sandy	29	125
Till:		
Hardpan	10	135
Gravel and clay	6	141
Pre-Vashon (?) deposits:		
Hardpan	74	215
Sand, coarse, and gravel	1	216
Casing, 6-inch to 216 ft. Pumped 19 gpm, no dd.		

[/] Two asterisks in front of well number indicate log from Mundorff and others (1955)

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **16/1-7E1		
C. B. Frost. About 2.5 miles west of Rainier. Altitude about 425 feet. Drilling by J. P. Davidson.		
Vashon drift:		
Recessional outwash:		
Gravel	50	50
Clay	2	52
Sand	15	67
Gravel and sand; water-bearing	18	85
Till:		
Hardpan	27	112
Advance outwash:		
Sand and gravel; water-bearing	40	152
Clay, blue	At ?	152
Casing, 24-inch tile to 66 ft; 10-inch to 152 ft.		
Well **16/1-11B1		
O. Englund. About 3.7 miles southwest of Yelm. Altitude about 408 feet. Dug by H. Livingston.		
Vashon drift:		
Till:		
Soil	6	6
Hardpan	20	26
Pre-Vashon deposits:		
Sand, yellow	1	27
Gravel and clay, yellow	50	77
Gravel, cemented	26	103
Gravel, fine to medium	2	105
Well 16/1 - 12K2		
James Metrakes. About 3 miles west of Rainier. Altitude about 435 feet. Drilled by A. P. Graf, 1953.		
Vashon drift:		
Recessional outwash (?):		
Topsoil	3	3
Boulders	10	13
Till:		
Gravel, cemented	28	41
Sand and gravel; some water-bearing	2	43
Hardpan	8	51
Advance outwash and pre-Vashon deposits, undifferentiated:		
Sand and gravel and boulders	7	58
Clay and gravel	4	62
Sand and gravel; water-bearing	6	68
Clay, gravel, some boulders	47	115
Gravel, cemented	3	118
Gravel, water-bearing	7	125

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/1-12K2 -- Continued		
Vashon drift - Continued		
Advance outwash and pre-Vashon deposits, undifferentiated - Continued		
Gravel, cemented	18	143
Sand and gravel; water-bearing	4	147
Gravel, cemented	28	175

Casing, 10-inch to 172 ft; perforated 62 to 68, 118 to 123, and 143 to 147 ft. SWL 44 ft. Pumped 4 hrs at 135 gpm, dd 76 ft.

Well **16/1-13G2

Earl Nelson. About 4.8 miles south of Yelm. Altitude about 443 feet. Drilled by A. P. Graf, 1951.

Topsoil and peat	4	4
Vashon drift:		
Till:		
Clay, blue and gravel	41	45
Advance outwash:		
Gravel, water-bearing	9	54

Casing, 12-inch to 54 ft; perforated 44 to 54 ft.

Well **16/1-14M1

C. Colman. About 2 miles southeast of Rainier. Altitude about 450 feet. Drilled by E. J. Webber.

Vashon drift:		
Recessional outwash:		
Boulders, sand, and gravel	8	8
Till:		
Boulders, and hardpan	52	60
Outwash, undifferentiated:		
Boulders, coarse gravel	25	85
Sand and gravel; water-bearing	15	100
Till (?):		
Hardpan, no water	2	102
Outwash, undifferentiated:		
Sand, fine to coarse, with some gravel; water-bearing	22	124

Casing, 6-inch to 123 ft. Bailed 16 gpm, dd 12 ft.

Well 16/1-16Q1

Kenneth L. Gibson. About 1.5 miles south of Rainier. Altitude about 450 feet. Drilled by Richard B. DeRemer, 1952.

Topsoil	6	6
Hardpan	14	20
Clay and gravel	18	38
Gravel, cemented	37	75
Sand, cemented	6	81
Hardpan	9	90

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/1-16Q1 -- Continued		
Rock, brown, rotten	52	142
Rock, black	35	177
Rock, red	5	182
Hardpan	38	220
Rock, red	5	225

Casing, 12 inch to 90 ft; no perforations. SWL 103 ft. Pumped 4 hrs at 42 gpm, dd 50 ft.

Well 16/1-26R1

Loren P. Afflerbaugh. About 1 mile southeast of Vail. Altitude about 480 feet. Drilled by G. M. Patterson, 1953.

Clay and gravel	10	10
Clay, sand and gravel	12	22
Gravel, cemented	55	77
Clay, gravel, sand (shale)	12	89

Casing, 6-inch to 85 ft. Pumped 8 hrs at 70 gpm, dd 10 ft.

Well **16/1-27H1

Weyerhaeuser Timber Company at Vail. Altitude about 420 feet. Drilled by N. C. Jannsen, 1927(?).

Boulders, large	11	11
Gravel, cemented	3	14
Gravel and boulders	21	35
Gravel	10	45
Gravel and sand	5	50
Sand and gravel	10	60
Gravel and sand, with some water	10	70
Boulder and gravel	4	74
Gravel, some clay	6	80
Gravel and boulder with a little clay	5	85
Gravel and sand	10	95
Sand and boulders	7	102
Boulders, large	5	107
Sand rock (sand and boulder?)	4	111
Sand and boulders	3	114
Clay and "hardpan"	18	132
Sand and some gravel	21	153
Sand and boulders	2	155
Sand and gravel	18	173
Gravel, water-bearing	5	178
Sand, with a boulder	7	185
Gravel, water-bearing	2	187
Sand, with some gravel; water-bearing	1	188

Casing, 12-inch to 57 ft; 8-inch to 190 ft; perforated 170 to 190 ft. Measured depth of well 190 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2-2B1		
Charles McKown. About 5.5 miles southeast of Yelm. Altitude about 430 feet. Drilled by Pioneer Drillers, 1955.		
Vashon drift:		
Till:		
Topsoil	4	4
Hardpan	34	38
Advance outwash:		
Sand, gray	6	44
Gravel, water-bearing	7	51
Pre-Vashon deposits(?):		
Gravel, clay bound	11	62
Gravel, cemented, with some large stones	21	83
Gravel, clay bound	29	112
Clay, blue	28	140
Gravel, water-bearing	6	146
Clay, blue	5	151
Casing, 10-inch to 151 ft; perforated 45 to 56 ft and 138 to 145 ft. SWL 24 ft. Pumped 4 hrs at 90 gpm, dd 95 ft.		
Well 16/2-2G1		
A. D. Blackler. About 2.8 miles northeast of Vail. Altitude about 450 feet. Drilled by G. M. Patterson, 1951.		
Vashon drift:		
Till (?):		
Gravel and boulders, cemented	46	46
Pre-Vashon deposits (?):		
Gravel, clay and sand	24	70
Gravel, sand and clay	10	80
Clay, brown	11	91
Clay, gray	9	100
Clay, gravel, and boulders	125	225
Casing, 8-inch to 225 ft; no perforations. SWL 89 ft. Pumped 4 hrs at 75 gpm, dd 32 ft.		
Well **16/2-4A2		
Charles Johnston. About 3.4 miles southeast of Yelm on Bald Hill Road, about 200 feet southwest of road. Altitude about 380 feet. Drilled by Richardson Well Drilling Co., 1951.		
Vashon drift:		
Recessional outwash:		
Gravel and black dirt	3	3
Clay, yellow, coarse sand, and gravel	21	24
Till:		
Hardpan	7	31
Clay, yellow, and gravel	14	45
Hardpan	13	58

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **16/2-4A2 -- Continued		
Vashon drift - Continued		
Advance outwash:		
Clay, gravel, some sand	4	62
Sand and clay, some gravel	4	66
Sand, coarse, and gravel	10	76
Pre-Vashon deposits:		
Hardpan	5	81
Clay, sand and gravel	13	94
Sand, a little gravel	2	96
Hardpan	11	107
Sand, some coarse gravel	3	110
Hardpan	6	116
Sand	2	118
Hardpan	2	120
Sand, clay, and gravel	15	135
Clay, gray, and gravel	14	149
Sand, fine to coarse (water rose in hole)	5	154
Clay, gravel, and sand	4	158

Casing, 8-inch to 158 ft; perforated 44 to 60 ft, 69 to 92 ft, 99 to 105 ft, 113 to 118 ft, and 142 to 149 ft.

Well 16/2-5A1

James L. Mosman. About 2.7 miles southeast of Yelm. Altitude about 382 feet. Dug in August, 1954.

Vashon drift, undifferentiated:		
Topsoil	1	1
Gravel and rock	13	14
Gravel, fine, and sand	5	19

Well diameter, 10 feet. SWL 14 ft. Pumped 10 hrs at 160 gpm, dd 4 ft.

Well **16/2-5C1

J. and A. McMonigle. About 2.5 miles southeast of Yelm and 0.8 mile east of Norris Road. Altitude about 380 feet. Drilled by A. P. Graf, 1951.

Vashon drift:		
Outwash, undifferentiated:		
Topsoil	2	2
Sand, brown	15	17
Sand and gravel	47	64
Gravel, water-bearing	16	80
Pre-Vashon deposits:		
Clay, brown	1	81

Casing, 12-inch to 81 ft; perforated 64 to 80 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2-5M1		
Woodrow N. Blair. About 3.3 miles southeast of Yelm. Altitude about 380 feet. Drilled by L. B. Richardson, 1952.		
Peat	7	7
Clay, blue, and gravel	6	13
Clay, yellow, and gravel, boulders	11	24
Clay, sandy yellow	13	37
Hardpan	18	55
Clay, sand and gravel	10	65
Sand and gravel, loose; water-bearing (tested 75 gpm)	5	70
Sand, clay and gravel	31	101
Gravel, clay, streaks of sand; water-bearing (tested 113 gpm, dd 82 ft)	5	106
Clay, sand and gravel	34	140
Clay, gravel, streaks of sand; water-bearing (test bailed 100 gpm, dd 10 ft)	12	152
Clay, blue, and gravel	2	154
Casing, 12-inch to 154 ft; perforated 60 to 70 and 110 to 149 ft. Flowing 2 gpm, October 24, 1952. Tested 345 gpm, dd 142 ft.		
Well **16/2-5Q1		
Stan Dunagan. About 3.5 miles south-southeast of Yelm, and about 0.2 mile southeast of Smith Road. Altitude about 450 feet. Drilled by A. P. Graf, 1951.		
Old well, no log	39	39
Gravel, coarse, some water	7	46
Pre-Vashon deposits:		
Sand, brown	12	58
Boulders and gravel	7	65
Sand, brown, and gravel, some water	9	74
Sand, brown	20	94
Sand, volcanic, some water	4	98
Gravel, hard-packed	14	112
Sand and gravel, some water	32	144
Clay, gravel, and sand, in thin layers	33	177
Casing, 12-inch to 177 ft; perforated 40 to 56 ft, 67 to 78 ft, 88 to 98 ft, 112 to 134 ft, and 144 to 177 ft.		
Well **16/2-7Q1		
R. W. Shattuck. About 4.5 miles south of Yelm. Altitude about 450 feet. Drilled by A. P. Graf, 1953.		
Vashon drift:		
Till:		
Topsoil	2	2
Boulders and gravel	9	11
Advance outwash:		
Sand and gravel	11	22
Gravel, some water	4	26

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **16/2-7Q1 -- Continued		
Pre-Vashon deposits:		
Clay and gravel, some water	65	91
Gravel and sand	10	101
Hardpan	64	165
Gravel, loose, and sand	24	189
Hardpan	1	190
Gravel, loose, and sand; water-bearing	8	198
Sand, black, some water	2	200
Sand and gravel, hard-packed	78	278
Gravel, some water	9	287

Casing, 10-inch to 287 ft; perforated 48 to 50 ft, 85 to 89 ft, 160 to 162 ft, 176 to 184 ft, 190 to 198 ft, and 277 to 283 ft.

Well 16/2-10D1

Donald R. Warwick. About 4.5 miles southeast of Yelm. Altitude about 465 feet. Drilled by Richardson, 1956.

Vashon drift:		
Till:		
Topsoil	5	5
Hardpan, boulders	19	24
Pre-Vashon deposits (?):		
Clay, sand, and blue gravel	33	57
Clay, sand, and yellow gravel	9	66
Hardpan	15	81
Boulders	4	85
Hardpan	42	127
Clay, yellow	2	129
Clay, sand and gravel	4	133
Sand and gravel (70 gpm, dd 55 feet)	1	134
Sand, gravel and clay	22	156
Hardpan	26	182
Clay, sand and gravel	19	201
Hardpan, sand, gravel; water-bearing	9	210

Casing, 10-inch to 174 ft; 8-inch from 174 to 210 ft. SWL 41 ft. Pumped 250 gpm, dd 139 ft.

Well **16/2-17L1

E. Dame. About 5 miles south of Yelm. Altitude about 460 feet.

Vashon drift:		
Till:		
Soil	6	6
Gravel, cemented	18	24
Boulders and white clay	21	45
Advance outwash:		
Gravel, pea size, and black sand	?	45

Dug well. Wood curbing, 48-inch square.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **16/2-18H1		
T. J. Boudreau. About 5 miles south of Yelm. Altitude about 445 feet.		
Vashon drift:		
Till:		
Hardpan	4	4
Gravel	4	8
Hardpan	23	31
Dug well.		
Well 16/3-31G1		
Weyerhaeuser Timber Company. At north end of Clear Lake. Altitude about 520 feet. Drilled by C. D. Roberts, 1959.		
Vashon drift:		
Recessional outwash (?):		
Gravel, small, and boulders	8	8
Sand, red	5	13
Sand, loose, and gravel	17	30
Gravel, water-bearing	7	37
Casing, 6-inch to 37 ft. SWL 6 ft. Pumped 15 min at 20 gpm, dd 4 ft.		
Well 16/1W-16L1		
P. A. Thompson. About 2 miles northeast of Tenino. Altitude about 350 feet. Drilled by A. E. Seaunier.		
Sand	11	11
Hardpan	12	23
Sand	65	88
Clay, blue		
Casing, 8-inch.		
16/1W-19F1		
Walter G. Scheel. On North side of Tenino. Altitude about 280 feet.		
Loam and rocks	7	7
Clay	14	21
Sand and clay; water-bearing	4	25
Hardpan clay shale	13	38
Gravel and sand; water-bearing	4	42
Casing, 6-inch to 42 ft; perforated 32 to 42 ft. SWL 6 ft. Pumped 4 hrs at 50 gpm, dd 6 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/1W-19M2		
Roy Etter. On west side of Tenino. Altitude about 280 feet. Drilled by A. E. Seaunier, 1950.		
Vashon drift:		
Recessional outwash (?):		
Gravel-boulders	14	14
Gravel, tight, small	4	18
Gravel, water-bearing	3	21
Casing, 8-inch to 21 ft. SWL 6 ft. Pumped 4 hrs at 50 gpm, dd 1 ft.		
Well 16/1W-19N1		
Chester E. Wilcox. At southwest side of Tenino. Altitude about 255 feet. Drilled by King, 1956.		
Vashon drift:		
Recessional outwash:		
Soil	2	2
Sand and gravel	31	33
Casing, 6-inch to 33 ft.		
Well 16/1W-20B1		
Floyd E. S. Miller. About 1 mile east of Tenino. Altitude about 270 feet. Drilled by Erdman, 1949.		
Vashon drift:		
Recessional outwash:		
Topsoil	7	7
Gravel and sand, hard-packed	20	27
Gravel, sand; water-bearing	20	47
Casing, 8-inch to 47 ft; perforated 37 to 47 ft. SWL 6 ft. Pumped 4 hrs at 80 gpm, dd 4 ft.		
Well 16/1W-31L1		
E. L. Fleming. About 1.5 miles north of Bucoda. Altitude about 265 feet. Drilled by A. E. Seaunier, 1949.		
Vashon drift:		
Recessional outwash:		
Topsoil and gravel	5	5
Boulders	17	22
Till:		
Hardpan	28	50
Advance outwash:		
Gravel, water-bearing	6	56
Casing, 8-inch to 56 ft; no perforations. SWL 42 ft. Pumped 4 hrs at 50 gpm, dd 2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2W-9C1		
M. R. Hacker. About 0.2 mile south of Maytown. Altitude about 180 feet. Dug.		
Vashon drift, undifferentiated:		
Clay and boulders	18	18
Sand and gravel	8	26
Casing, 6-inch, has been backfilled.		
Well 16/2W-9P1		
P. M. Murphy. About 0.9 mile south of Maytown on Reeder Road. Altitude about 270 feet. Dug well.		
Vashon drift:		
Till:		
Topsoil	4	4
Hardpan	22	26
Advance outwash:		
Gravel seam (water at 26 feet)	6	32
Casing, none.		
Well 16/2W-21P1		
Sherman Dempsey. About 3.1 miles south of Maytown on Goddard Road. Altitude about 235 feet. Drilled by Erdman, 1941.		
Vashon drift:		
Recessional outwash:		
Soil, black	2	2
Gravel	14	16
Till:		
Hardpan gravel	6	22
Sand and clay	22	44
Gravel hardpan	14	58
Advance outwash:		
Sand, gravel; water-bearing	27	85
Casing, 6-inch to 84 ft. SWL 39 ft. Pumped at 50 gpm, dd 6 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2W-25E1		
S. J. Agnew. About 1.5 miles southwest of Tenino on old U. S. 99. Altitude about 275 feet. Drilled by C. D. Roberts, 1956.		
Vashon drift:		
Recessional outwash:		
Boulders	10	10
Undifferentiated:		
Gravel and boulders, cemented	20	30
Gravel, cemented	8	38
Gravel and sand (a little water)	14	52
Gravel and sand, cemented	11	63
Gravel and sand; water-bearing	17	80
Gravel and sand, cemented	6	86
Casing, 10-inch to 86 ft; perforated 63 to 80 ft.		
Well 16/2W-25G1		
S. J. Agnew. About 1 mile southwest of Tenino on old U. S. 99. Altitude about 278 feet. Drilled by A. E. Seaunier.		
Vashon drift:		
Recessional outwash:		
Boulders	20	20
Till:		
Hardpan	23	43
Advance outwash:		
Gravel, water-bearing	17	60
Pre-Vashon deposits:		
Shale stone	5	65
Clay, red, volcanic	14	79
Shale stone	5	84
Casing, 6-inch to 84 ft; perforated 41 to 50 ft. SWL 20 ft. Pumped 4 hrs at 33 gpm, dd 10 ft.		
Well 16/2W-27Q1		
Mrs. Nellie A. Finley. About 3.2 miles southwest of Tenino on old U. S. 99. Altitude about 240 feet. Drilled by A. E. Seaunier, 1950.		
Vashon drift:		
Recessional outwash:		
Boulders	16	16
Till:		
Hardpan	14	30
Advance outwash:		
Gravel, loose; water-bearing	3	33
Casing, 8-inch to 33 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2W-30C1		
M. E. Coffin. About 6.1 miles west of Tenino. Altitude about 210 feet. Drilled by A. P. Graf, 1952.		
Vashon drift:		
Recessional outwash:		
Topsoil	1	1
Gravel and boulders	4	5
Till (?):		
Gravel, cemented	6	11
Boulders	8	19
Gravel (some water, about 5 gpm)	4	23
Gravel, cemented	9	32
Advance outwash:		
Gravel, coarse; water-bearing	24	56
Casing, 8-inch to 56 ft; perforated 32 to 54 ft. SWL 15 ft. Pumped 1 hr at 65 gpm, dd negligible.		
Well 16/2W-31A1		
Ray F. Mittge. About 5.8 miles southwest of Tenino. Altitude about 210 feet. Drilled, 1952.		
Vashon drift, undifferentiated:		
Topsoil	4	4
Gravel, clay, boulders	14	18
Gravel and clay	11	29
Clay, sand and gravel	11	40
Gravel and clay, hard and dry	10	50
Casing, 8-inch. SWL 28 ft. Bailed 50 gpm, dd 3 ft.		
Well 16/2W-31K2		
Henry E. Haskin. About 6 miles southwest of Tenino. Altitude about 210 feet. Drilled by Erdman.		
Vashon drift, undifferentiated:		
Topsoil	10	10
Gravel	20	30
Sand and gravel	36	66
Casing, 6-inch to 66 ft; perforated 50 to 62 ft. SWL 25 ft. Pumped 4 hrs at 100 gpm, dd 2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/2W-32F1		
Robert Thomsen. About 5.5 miles southwest of Tenino. Altitude about 205 feet. Drilled by Richardson, 1952.		
Vashon drift, undifferentiated:		
Topsoil	6	6
Clay, gravel and boulders	13	19
Gravel and clay	12	31
Gravel, sand and clay; water-bearing	17	48
Clay, dirty, and gravel	10	58
Sand and some gravel; water-bearing	3	61
Sand, gravel and clay	17	78
Sand, coarse and fine, gravel; water-bearing	2	80
Casing, 8-inch; perforated 30 to 40 ft. SWL 28 ft. Pumped for 12 hrs at 120 gpm, dd 1 ft.		
Well 16/2W-33E1		
S. J. Agnew. About 5 miles southwest of Tenino. Altitude about 215 feet. Drilled by Richardson, 1951.		
Vashon drift:		
Recessional outwash:		
Soil, black, and large gravel	3	3
Clay and boulders	17	20
Till (?):		
Hardpan	12	32
Advance outwash:		
Gravel, coarse, sand and clay	8	40
Sand, coarse, loose gravel	3	43
Sand, coarse, gravel and clay	15	58
Sand and gravel, mixed	4	62
Sand, coarse, and gravel, showing clay	8	70
Sand, coarse, and gravel	3	73
Sand and gravel, streaks of clay	2	75
Clay and gravel	10	85
Casing, 12-inch to 85 ft; perforated 30 to 37 and 45 to 55 ft. SWL 25 ft. Pumped 370 gpm, dd 13 ft.		
Well 16/3W-12D1		
Rodney C. Crisman. About 0.7 mile southeast of Little Rock. Altitude about 175 feet. Drilled by Bedell, 1955.		
Topsoil	2	2
Gravel, sand and clay	16	18
Gravel, clay; some water	15	33
Clay, some water	12	45
Gravel, water-bearing, 3-4 gpm	3	48
Sand and clay; some water	4	52
Peat bog - wet	8	60

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/3W-12D1 -- Continued		
Sand, glacial, and clay	10	70
Peat, dry	6	76
Sand, silty, tight, glacial	6	82
Gravel, cemented; some water	8	90
Gravel, water-bearing	20	110

Casing, 8-inch to 110 ft; perforated 90 to 107 ft. SWL 64 ft. Pumped 4 hrs at 150 gpm, dd 15 ft.

Well 16/3W-16L1

Cecil R. Palmer. About 0.2 mile north of Mima. Altitude about 142 feet. Drilled by N. C. Jannsen, 1947.

Sandy subsoil	23	23
Gravel and clay	12	35
Sand, gravel and clay	21	56
Gravel, coarse; water-bearing	42	98

Casing, 24-inch to 65 ft; 20-inch from 65 to 98 ft; perforated 65 to 98 ft. SWL 65 ft. Pumped 1,000 gpm, dd 1 ft.

Well *16/3W-20M1

H. C. Johnston. About 2.6 miles east-northeast of Gate. Altitude about 140 feet. Drilled by C. D. Roberts, 1947.

Topsoil, clay	3	3
Tertiary:		
Rock	2	5
Clay and gravel	7	12
Rock	46	58
Mud, blue	13	71
Rock	64	135
Shale (mud)	2	137
Rock	63	200
Sand, fine	13	213

Casing, 6-inch to 80 ft; perforated 56 to 58 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/3W-30B1		
Richard R. Kerwood. About 1.8 miles northeast of Gate. Altitude about 125 feet. Drilled by King, 1958.		
Clay and boulders	7	7
Pre-Vashon:		
Hard rock, crevices; water-bearing at 165 feet only		
Casing, 6-inch to 7.5 ft.		
Well 16/3W-31A2		
H. W. Guiles. About 0.7 mile north of Rochester. Altitude about 142 feet. Drilled by M. B. Patterson, 1956.		
Vashon drift, undifferentiated:		
Sand	7	7
Gravel, clay	33	40
Gravel, clay, boulders	23	63
Gravel, sand, clay	2	65
Gravel, sand	9	74
Sand, gravel, clay	3	77
Gravel, sand	5	82
Casing, 8-inch to 81 ft; perforated 67 to 70 ft.		
Well 16/3W-32Q1		
Lloyd Canaday. On east side of Rochester. Altitude about 149 feet. Drilled by R. B. DeRemer, 1953.		
Vashon drift, undifferentiated:		
Topsoil	3	3
Sand and gravel	5	8
Sand and gravel, cemented	38	46
Gravel, water-bearing	5	51
Sand and gravel, hard-packed	9	60
Sand, water-bearing	3	63
Sand and gravel, cemented	4	67
Clay, blue, and rock	4	71
Clay, brown, and sand	6	77
Gravel, water-bearing (high iron content)	7	84
Gravel, cemented	15	99
Casing, 8-inch to 99 ft; perforated 45 to 59 ft and 64 to 67 ft. SWL 35 ft. Pumped 4 hrs at 200 gpm, dd 2.3 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 16/3W-33R1		
John C. Dahl. About 1.8 miles east of Rochester. Altitude about 162 feet. Drilled by Erdman, 1950.		
Vashon drift:		
Recessional outwash:		
Topsoil	5	5
Gravel	30	35
Till:		
Hardpan	20	55
Advance outwash:		
Sand and gravel	21	76
Casing, 8-inch to 76 ft; perforated 56 to 73 ft. SWL 12 ft. Pumped 300 gpm, dd 4 ft.		
Well 16/3W-34M1		
David P. Garrett. About 2 miles north-northeast of Rochester. Altitude about 170 feet. Drilled by King, 1949.		
Topsoil	2	2
Sand, dirty, and gravel, mixed; water at 30 feet	51	53
Gravel, clean, little sand, good water	2	55
Casing, 6-inch to 55 ft; no perforations.		
Well 16/4W-35A1		
C. M. Bell. About 0.6 mile south of Gate. Altitude about 105 feet. Drilled by King, 1945.		
Vashon drift:		
Recessional outwash:		
Mud and clay	11	11
Sand and gravel	20	31
Sand	4	35
Gravel	7	42
Casing, 6-inch.		
Well **17/1-13D2		
Ed Percival. About 2.0 miles northwest of Yelm, about 400 feet northeast of highway to Olympia. Altitude about 330 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Dirt, black, and gravel	3	3
Boulders, clay, and gravel	9	12
Till:		
Hardpan	47	59
Sand	2	61
Hardpan	3	64

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/1-13D2 -- Continued		
Vashon drift -- Continued		
Advance outwash:		
Clay, coarse sand, and gravel	2	66
Pre-Vashon deposits:		
Hardpan	8	74
Clay, yellow, sand, and gravel (7 feet of water)	7	81
Gravel and clay (water shut off at 87 feet)	6	87
Clay, brown, and gravel	7	94
Hardpan	30	124
Clay, blue and brown	4	128
Hardpan	30	158

Casing, 8-inch to 158 ft; perforated 60 to 66 ft, 76 to 88 ft, and 92 to 94 ft. SWL 78 ft. Pumped 1 hr at 50 gpm, dd 10 ft.

Well **17/1-14N1

L. A. Crimmins. About 1.3 miles northwest of Yelm. Altitude about 370 feet. Drilled by E. J. Webber, 1950.

Glacial drift, undifferentiated:		
Gravel, cemented (?)	88	88
Sand	4	92
Gravel	41	133
Sand and gravel	2	135

Casing, 6-inch.

Well 17/1-18D1

Murray Ball. About 1.8 miles south of Lake St. Clair. Altitude about 230 feet. Drilled by Patterson, 1953.

Dug well	21	21
Sand	5	26
Sand and clay	6	32
Sand and gravel	4	36
Sand and clay	3	39
Sand and small amount of clay	2	41

Casing, 6-inch from 42 inches to 41 ft. Bailed 760 gph, dd 5 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/1-24B1		
Lewis Poultry Farm. About 1.0 mile northwest of Yelm, 0.2 mile north of Olympia Highway. Altitude about 347 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Gravel and black dirt	3	3
Boulders and clay	5	8
Till:		
Hardpan	27	35
Advance outwash:		
Sand, coarse, and loose gravel	7	42
Clay, sandy, and gravel	4	46
Sand, fine, gravel with clay	4	50
Pre-Vashon deposits:		
Clay, yellowish, and fine sand	19	69
Sand and blue clay	6	75
Hardpan (cemented gravel?) and boulders, water shut off	18	93
Sand and gravel, some clay; water-bearing	2	95
Hardpan (cemented gravel?) and boulders	4	99
Casing, 12-inch to 99 ft; perforated 35 to 42 ft, and 85 to 93 ft.		
Well **17/1-24L1		
Warren Simmons. About 1 mile west of Yelm. Altitude about 345 feet. Drilled by A. P. Graf, 1953.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Boulders and gravel	9	11
Till:		
Sand and gravel, claybound	11	22
Advance outwash:		
Sand and gravel, water-bearing	4	26
Gravel, cemented, with a few boulders	38	64
Sand and gravel; water-bearing	3	67
Pre-Vashon deposits:		
Sand and gravel, claybound	27	94
Sand and gravel; water-bearing	7	101
Hardpan with a few boulders, very hard, clayey (till?)	28	129
Gravel, cemented	36	165
Gravel and sand, loose	14	179
Gravel, cemented	5	184
Clay and gravel, some boulders	14	198
Sand, fine, black, about 20 percent gravel	13	211
Sand and gravel	15	226
Clay and sand	14	240
Gravel, cemented	13	253
Gravel and black sand	4	257
Gravel, cemented	18	275
Casing, 12-inch to 263 ft; perforated 22 to 26, 64 to 68, 95 to 101, 201 to 211, and 253 to 257 ft. SWL 12.58 ft. Pumped 4 hrs at 360 gpm, dd 5.26 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1-34L2		
William M. Hensley. About 3.3 miles southwest of Yelm. Altitude about 440 feet. Drilled by Pete Sylte, 1955.		
Topsoil	3	3
Gravel, cemented	112	115
Sand and gravel, dry	7	122
Gravel, cemented	23	145
Gravel, dry	7	152
Sand and gravel, muddy; water-bearing	6	158
Gravel and sand; water-bearing	2	160
Gravel, cemented	8	168
Gravel, good flow of water	3	171
Gravel, cemented	4	175
Sand, gravel and clay; water-bearing	9	184
Gravel, cemented	51	235
Gravel and sand, hard-packed	20	255
Gravel and clay, cemented, some water	23	278
Gravel, cemented, no water	7	285
Casing, 10-inch to 285 ft; perforated 159 to 284 ft. SWL 150 ft. Pumped 4 hrs at 220 to 280 gpm, dd 5.2 ft.		
Well **17/2-18N1		
Frank A. Scharmann. About 1 mile north of Yelm. Altitude about 325 feet. Drilled by E. J. Webber.		
Vashon drift:		
Till:		
Till	15	15
Advance outwash:		
Gravel and water	5	20
Gravel and clay	30	50
Gravel, medium to coarse, and clay	20	70
Pre-Vashon deposits:		
Gravel, hard	1	71
Casing, 6-inch to 71 ft.		
Well **17/2-19H1		
A. Hewitson. About 0.5 mile northeast of Yelm. Altitude about 350 feet. Drilled 1946.		
Vashon drift:		
Recessional outwash:		
Gravel and boulders	25	25
Sand, fine, black	5	30
Gravel, coarse	8	38
Till:		
Hardpan	3	41
Advance outwash:		
Gravel, pea, black	1	42
Casing, 6-inch.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-19H3		
A. Hewitson. About 0.5 mile northeast of Yelm. Altitude about 350 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Dirt, black, and gravel	2	2
Gravel, boulders, and clay	5	7
Till:		
Hardpan	13	20
Advance outwash:		
Sand, coarse, and loose gravel, showing some clay; 7 feet of water at 30 feet	9	29
Pre-Vashon deposits:		
Hardpan	18	47
Clay, yellow, and gravel (water shut off)	15	62
Sand, coarse, and gravel	1	63
Hardpan	52	115
Clay, sand and gravel	9	124
Sand, fine, black, some gravel	2	126
Hardpan, clay, yellow, sand and gravel	13	139
Hardpan	8	147
Sand, fine, black, some gravel	5	152
Hardpan	6	158
Sand, fine, streaked with clay	4	162
Sand, some gravel, clay	8	170
Gravel, some sand and clay	7	177

Casing, 8-inch to 78 ft; 6-inch from 78 to 177 ft; perforated 50 to 60 ft, 60 to 62 ft, 100 to 101 ft, 102 to 104 ft, and 106 to 108 ft.

Well **17/2-19J3		
J. M. Hales. About 0.5 mile northeast of Yelm. Altitude about 350 feet.		
Vashon drift:		
Recessional outwash:		
Soil	1	1
Gravel, some sand	19	20
Till:		
Hardpan	13	33
(Well bottomed on large boulder)		

Dug well.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-19J5		
J. M. Hales. About 0.5 mile east of Yelm. Altitude about 350 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Gravel and black dirt	3	3
Clay, yellow, and gravel	6	9
Till:		
Hardpan	18	27
Pre-Vashon deposits:		
Clay, yellow, and gravel	4	31
Hardpan (cemented gravel?)	7	38
Clay, yellow, and gravel	3	41
Hardpan (cemented gravel?)	20	61
Sand, gravel, and clay	1	62
Hardpan (cemented gravel?)	11	73
(?)	14	87
Casing, 10-inch to 87 ft; perforated 30 to 68 ft.		
Well **17/2-19L1		
Enumclaw Co-Op Creamery Company at Yelm. Altitude about 340 feet. Drilled by J. L. Bell, 1944.		
Vashon drift:		
Recessional outwash:		
Gravel and clay	15	15
Till:		
Hardpan	2	17
Advance outwash:		
Sand and gravel, loose; water-bearing	3	20
Gravel, hard, cemented	33	53
Sand and gravel, rock (boulder?); water-bearing	3	56
Pre-Vashon deposits:		
Gravel, cemented	44	100
Hardpan, brown	35	135
Casing, 10-inch to 112 ft; perforated 19 to 24 ft and 50 to 62 ft. SWL 17 ft. Pumped 4 hrs at 265 gpm, dd 1.5 ft.		
Well 17/2-19M3		
Yelm School District No. 2 at Yelm. Altitude about 350 feet. Drilled by Tacoma Pump and Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil	4	4
Boulders	16	20
Till (?):		
Hardpan	9	29
Boulders	2	31
Hardpan, streaks of hard-packed gravel	20	51

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2-19M3 -- Continued		
Vashon drift -- Continued		
Advance outwash (?):		
Sand and gravel, clean; water-bearing	10	61
Pre-Vashon deposits (?):		
Gravel, hard-packed; water-bearing	10	71
Hardpan	6	77
Gravel, hard-packed; water-bearing	7	84
Hardpan	9	93
Gravel, hard-packed; water-bearing	8	101

Casing, 10-inch to 101 ft. Perforated 55 to 61 ft, 77 to 84 ft and 93 to 99 ft. Reported yield 60 gpm.

Well **17/2-19N1

Town of Yelm. Near elevated water tank. Altitude about 350 feet. Drilled by Richardson Well Drilling Company, 1950.

Vashon drift:		
Recessional outwash:		
Soil	3	3
Boulders and clay	8	11
Till:		
Hardpan, gray	20	31
Advance outwash:		
Gravel and clay, yellow	4	35
Gravel (to 5- or 6-inch)	27	62
Pre-Vashon deposits:		
Hardpan, gravel and yellow clay	1	63

Casing, 12-inch to 52 ft, screen from 50 to 60 ft. SWL 25.5 ft. Pumped 4 hrs at 550 gpm, dd 0.16 ft.

Well 17/2-19N2

Town of Yelm. Near elevated water tank, 27 feet from N1. Altitude about 350 feet. Drilled by L. B. Richardson, 1958.

Vashon drift:		
Recessional outwash:		
Gravel and sand	4	4
Gravel and clay	6	10
Till:		
Hardpan, blue	13	23
Advance outwash:		
Clay, sand and gravel	7	30
Sand and gravel, blue	6	36
Clay, sand and gravel	2	38
Sand and gravel, loose from 53 feet	23	61
Pre-Vashon deposits (?):		
Hardpan	1	62

Casing, 12-inch to 52 ft. Iron screen from 52 to 61 ft. SWL 25.0 ft. Pumped 1,250 gpm, dd 5.2 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-29E3		
Arthur Justman. On Washington State Highway 5-H, about 0.2 mile east of intersection with Bald Hill Road, which is about 1 mile southeast of Yelm. Altitude about 346 feet. Drilled by A. P. Graf, 1952.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Boulders and gravel	22	24
Gravel, water-bearing (est. yield 30 gpm)	7	31
Till:		
Gravel, cemented	2	33
Clay, brown, and gravel	15	48
Pre-Vashon deposits:		
Clay and gravel	34	82
Gravel, some water, (est. yield 10 gpm)	12	94
Clay, brown, and gravel	18	112
Gravel, water-bearing	5	117
Clay, blue, and small stones	2	119
Casing, 10-inch to 119 ft; perforated 22 to 36 ft, 42 to 58 ft, and 78 to 117 ft. SWL 14 ft. Pumped 5½ hrs at 150 gpm, dd 34 ft.		
Well **17/2-29F2		
Marion K. Thomas. Washington State Highway 5-H, 1.45 miles east of Yelm center. Altitude about 355 feet. Drilled by Richardson Well Drilling Company, 1950.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Till:		
Hardpan	48	50
Advance outwash:		
Gravel; water-bearing	5	55
Casing, 8-inch to 55 ft.		
Well **17/2-29F3		
J. T. Sparks. Between Yelm and McKenna, about 0.4 mile east of intersection of Bald Hill Road and Washington State Highway 5-H. Altitude about 358 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil, gravelly	3	3
Hardpan, boulders, gravel, and sand with zone of clean gravel at 9 feet	29	32
Gravel, pea; water-bearing	4	36
Till:		
Clay, bouldery, hard	21	57
Pre-Vashon deposits:		
Hardpan, becoming gravelly toward bottom with a little water	21	78
Casing, 6-inch to 78 ft; perforated 32 to 37 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-29L4		
Gilbert Roehr. About 500 feet southwest of Bald Hill Road, about 1.7 miles southeast of Yelm. Altitude about 350 feet. Drilled by Richardson Well Drilling Company, 1950.		
Vashon drift:		
Recessional outwash:		
Topsoil and boulders	3	3
Clay and gravel	5	8
Till:		
Hardpan	20	28
Advance outwash:		
Gravel, loose, with some sand (7 feet of water at 30 feet)	2	30
Clay and gravel	2	32
Gravel, loose; water-bearing	10	42
Clay and sand, with some pebbles	11	53
Sand, fine, heaving	13	66
(Well plugged from 53 to 66 feet with boulders and clay)		

Casing, 10-inch to 66 ft; perforated 30 to 42 ft (10 holes per ft, ¼-inch by 2-inch). SWL 28 ft. Pumped 1 hr at 500 gpm, dd 3 ft.

Well **17/2-29N1		
Frank Vogt. About 1.3 miles southeast of Yelm, on Norris Road. Altitude about 355 feet. Drilled O. E. Erdman, 1950.		
Vashon drift:		
Recessional outwash:		
Topsoil	10	10
Gravel and boulders	20	30
Till:		
Gravel and sand, hard-packed	15	45
Advance outwash:		
Gravel	5	50

Casing, 8-inch to 50 ft; perforated 16 to 50 ft. SWL 18 ft. Pumped 60 gpm, dd 27 ft.

Well **17/2-29P2		
J. A. Peugh. About 1.75 miles southeast of Yelm on Bald Hill Road. Altitude about 355 feet. Drilled by Richardson Well Drilling Company, 1950.		
Vashon drift:		
Recessional outwash:		
Gravel and black dirt	3	3
Clay and gravel	8	11
Till:		
Hardpan	3	14
Advance outwash:		
Sand, coarse, gravel, and clay	15	29
Sand, fine, some coarse sand	5	34
Sand, coarse, and loose gravel	4	38
Sand, coarse, some gravel	4	42
Sand, gravel, and clay	2	44
Sand, coarse, and coarse loose gravel	2	46

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-29P2 -- Continued		
Pre-Vashon deposits:		
Hardpan (cemented gravel?)	9	55
Water shut off		
Clay and gravel	2	57

Casing, 12-inch to 57 ft; perforated 25 to 27 ft and 38 to 53 ft, 18 holes per round. SWL 13 ft. Pumped 1 hr at 100 gpm, dd 1 ft.

Well 17/2-29P3

Roy H. Clark. About 1.5 miles southeast of Yelm. Altitude about 353 feet. Drilled by Tacoma Pump and Well Drilling Company, 1956.

Vashon drift:		
Recessional outwash:		
Sandy loam topsoil	3	3
Gravel	3	6
Sand and gravel, some rock	3	9
Gravel and boulders	4	13
Sand, gravel and clay	5	18
Till, Advance outwash and Pre-Vashon, undifferentiated:		
Gravel, fairly loose, some clay; water-bearing	2	20
Gravel and clay, harder packed, some water	16	36
Hardpan	5	41
Gravel, clay and water	7	48
Hardpan	3	51
Gravel, fairly loose, water-bearing	4	55
Gravel, drier, more silt	4	59
Clay, gravel and sand	5	64
Sand, fine to coarse gravel, clay, more water	6	70
Sand, fine to coarse gravel, clay, drier	3	73
Sand and gravel, some clay, tested 50 gpm (bailer)	1	74
Sand and gravel, more clay, less water	6	80
Sand, coarse to fine, with clay	8	88
Sand, coarse to fine, with clay, some rock, dry	9	97
Gravel, coarse, some clay; water-bearing	2	99

Casing, 12-inch to 99 ft; perforated 18 to 20 ft, 41 to 48 ft, 51 to 55 ft, 64 to 70 ft and 72 to 75 ft. SWL 9.5 ft. Pumped 4 hrs at 100 gpm, dd 77 ft.

Well **17/2-29Q1

W. B. Benefield. About 400 feet southwest of Bald Hill Road, about 1.9 miles southeast of Yelm. Altitude about 350 feet. Drilled by Richardson Well Drilling Company, 1951.

Old dug well	23	23
Vashon drift:		
Advance outwash:		
Sand, coarse, clay, and gravel	17+	40
Sand, coarse, and fairly loose gravel	3	43
Pre-Vashon deposits:		
Hardpan, water shut off	3	46
Clay and gravel	9	55

Casing, 8-inch to 55 ft; perforated 24 to 44 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-32Q2		
T. M. Sheldon. About 2.5 miles southeast of Yelm. Altitude about 365 feet. Drilled by A. P. Graf, 1952.		
Vashon drift:		
Recessional outwash and till, undifferentiated:		
Topsoil	2	2
Gravel and clay, some water	36	38
Advance outwash:		
Gravel, sand, and boulders	15	53
Pre-Vashon deposits:		
Gravel and boulders	19	72
Boulders	4	76
Gravel and sand	14	90
Gravel	2	92
Clay, blue, and gravel	53	145
Gravel	5	150
Clay and gravel	82	232
Sand, black, some water	2	234
Gravel, water-bearing	15	249
Clay and gravel	5	254
Casing, 12-inch to 93 ft, 8-inch from 87 to 254 ft; perforated 13 to 18, 38 to 74, 80 to 90, 145 to 152, and 238 to 251 ft. SWL 8 ft. Pumped 4 hrs at 600 gpm, dd 61 ft.		
Well **17/2-33K2		
D. C. Jewell. About 3.25 miles southeast of Yelm on Bald Hill Road. Altitude about 380 feet. Drilled by A. P. Graf, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Boulders and coarse gravel	19	21
Gravel and sand, some water	3	24
Till:		
Gravel, hard-packed	24	48
Advance outwash:		
Gravel, loose, and sand, some water	4	52
Pre-Vashon deposits:		
Gravel, cemented	20	72
Gravel, loose, some water	6	78
Gravel, cemented	14	92
Gravel, loose, some water	10	102
Gravel, cemented	3	105
Casing, 10-inch to 105 ft; perforated 24 to 28 ft, 44 to 56 ft, 72 to 78 ft, and 92 to 102 ft. SWL 22 ft. Pumped 4 hrs at 80 gpm, dd 79 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well **17/2-33P1		
Louis Peterson. About 3.0 miles southeast of Yelm. About 0.5 mile east and 0.4 mile south of crossing of Yelm Irrigation Ditch and Smith Road. Altitude about 360 feet. Drilled by A. P. Graf, 1952.		
Vashon drift:		
Recessional outwash:		
Soil	2	2
Gravel, sand, and some boulders	28	30
Gravel, fine; water-bearing	4	34
Till:		
Gravel and rock, with brown clay binder	22	56
Advance outwash:		
Gravel, coarse; water-bearing	5	61
Gravel, hard-packed	11	72
Gravel, coarse; water-bearing	2	74
Pre-Vashon deposits:		
Clay, brown, and gravel	17	91
Gravel, some water	4	95
Clay, brown, and gravel	10	105
Casing, 8-inch to 105 ft; perforated 30 to 97 ft. SWL 14 ft. Pumped 4 hrs at 200 gpm, dd not noticeable.		
Well **17/2-33R1		
D. C. Jewell. About 3.5 miles southeast of Yelm on Bald Hill Road. Altitude about 390 feet. Drilled by A. P. Graf, 1951.		
Vashon drift:		
Recessional outwash:		
Topsoil	2	2
Boulders and coarse gravel	36	38
Gravel and sand, some water	9	47
Till:		
Gravel and sandy clay	7	54
Gravel, hard-packed	15	69
Advance outwash (?):		
Gravel and sand	9	78
Pre-Vashon deposits:		
Gravel, hard-packed	12	90
Gravel and sand	5	95
Gravel, hard-packed	13	108
Gravel and sand	4	112
Gravel and clay	16	128
Gravel, hard-packed	18	146
Sand and gravel	4	150
Clay, brown, and broken rock (boulders?)	20	170
Casing, 12-inch to 150 ft; perforated 42 to 146 ft. SWL 38 ft. Pumped 4 hrs at 90 gpm, dd 103 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-1H1		
Clinton M. Okerstrom. About 0.5 mile southwest of Lake St. Clair. Altitude about 225 feet. Drilled by L. B. Richardson, 1952.		
Topsoil	5	5
Hardpan and boulders	26	31
Clay, yellow, sand and gravel	7	38
Sand, dry	7	45
Clay, sandy	5	50
Clay, yellow, sand	20	70
Hardpan	26	96
Clay, brown, sand and gravel	5	101
Clay, yellow, and sand	8	109
Hardpan	6	115
Clay, yellow, sand and gravel	2	117
Hardpan	9	126
Sand, coarse, and gravel (water raised 12 feet)	2	128
Hardpan	15	143
Gravel, loose, and coarse sand	2	145
Hardpan	29	174
Clay, yellow, and gravel	6	180
Hardpan	12	192
Sand, fine, and gravel (water)	1	193
Hardpan	19	212
Sand	1	213
Sand and gravel (water)	3	216
Hardpan	6	222
Sand and gravel (water)	1	223
Hardpan	13	236

Casing, 10-inch to 236 ft; perforated 142 to 232 ft. SWL 116.5 ft. Pumped 160 gpm, dd 30 ft.

Well 17/1W-2R2

Howard A. Mahurin. About 0.5 mile southeast of Patterson Lake. Altitude about 203 feet. Drilled by Pete Sylte, 1956.

Topsoil, sandy	4	4
Gravel, dry, packed	10	14
Gravel, cemented	29	43
Gravel, packed, sand and clay; small flow of water	3	46
Gravel and clay	8	54
Gravel, small; fair flow of water	4	58
Gravel and clay, cemented	9	67
Sand, gravel, some water	3	70
Gravel, cemented	16	86
Gravel and sand; fair flow	5	91
Sand, fine	18	109
Sand, quick	30	139
Sand, fine water	12	151
Sand and gravel; water-bearing	7	158

Casing, 10-inch to 158 ft; perforated 43 to 47 ft, 54 to 58 ft, 66 to 70 ft, 86 to 91 ft and 153 to 157 ft. SWL 35 ft. Tested at 150 and 165 gpm.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-3A4		
Walter Rowe. About 600 feet west of Patterson Lake. Altitude about 201 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift:		
Gravel with clay	15	15
Gravel, loose	17	32
Sand and gravel with water	30	62
Casing, 8-inch to 62 ft; perforated 42 to 62 ft. SWL 32 ft. Pumped about 75 gpm with an estimated dd of 20 ft.		
Well 17/1W-3E1		
Walter Rowe. About 0.8 mile southwest of Patterson Lake along railroad track. Altitude about 200 feet. Drilled by N. C. Jannsen, 1947.		
Vashon drift:		
Recessional outwash:		
Sandy loam	12	12
Sand and gravel	6	18
Gravel, washed	10	28
Gravel and sand	38	66
Till:		
Hardpan	2	68
Casing, 24-inch to 25 ft; 20-inch from 0 to 68 ft; perforated 25 to 60 ft. Pumped at 1,000 gpm.		
Well 17/1W-3Q1		
George M. Stewart. About 0.65 mile southwest of Patterson Lake. Altitude about 205 feet. Drilled by A. P. Graf, 1955.		
Vashon drift:		
Recessional outwash:		
Topsoil	3	3
Clay, sandy	15	18
Gravel and clay	14	32
Gravel, water-bearing	3	35
Till (?):		
Gravel, cemented	6	41
Advance outwash:		
Gravel, coarse, and loose sand	7	48
Gravel, water-bearing	3	51
Pre-Vashon (?) deposits, undifferentiated:		
Gravelly clay	9	60
Gravel, water-bearing	8	68
Sand and gravel	11	79
Clay, blue and sand	3	82
Gravel, cemented	26	108
Sand, loose, and gravel, some water	18	126
Casing, 10-inch to 127 ft; perforated 60 to 68 ft, 76 to 81 ft and 119 to 124 ft. Cement plug at 114 ft. SWL 28 ft. Pumped 3 hrs at 400 gpm, dd 47.5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-4B1		
J. H. Spencer. About 1.2 miles west of south end of Patterson Lake. Altitude about 205 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift:		
Recessional outwash:		
Soil, black sandy	5	5
Sand	5	10
Till (?):		
Clay, hard, with sand	6	16
Clay with gravel	13	29
Advance outwash (?):		
Gravel, water	3	32
Sand	4	36
Gravel, large	4	40
Pre-Vashon (?) deposits, undifferentiated:		
Clay with gravel	2	42
Gravel, large	15	57
Gravel, hard-packed	19	76
Gravel, sand	25	101
Sand	9	110
Gravel, sand with water	3	113
Clay and gravel	8	121
Gravel	9	130
Sand, coarse	29	159
Hardpan with large rocks	4	163
Gravel, cemented	7	170
Gravel, cemented with large rocks	8	178
Hardpan	17	195
Clay, brown, with gravel	30	225
Clay, blue, with gravel	18	243
Casing, 24-inch to 30 ft; 14-inch to 76 ft; 10-inch from 57 to 185 ft; perforated 100 to 160 ft. SWL 25 ft. Pumped 800 gpm, dd 25 ft.		
Well 17/1W-4C1		
J. H. Spencer. About 1,320 feet west of 4B1. Altitude about 205 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift:		
Recessional outwash:		
Soil, black sandy	3	3
Sand	2	5
Till (?):		
Clay, sandy	16	21
Gravel	5	26
Gravel with clay	6	32
Advance outwash (?):		
Gravel, large loose, with sand and water	10	42
Sand, coarse, and water	16	58
Gravel with water	4	62
Pre-Vashon (?) deposits, undifferentiated:		
Gravel, hard-packed, some water	10	72
Casing, 24-inch to 30 ft; 16-inch to 72 ft; perforated 32 to 72 ft. SWL 25 ft. Pumped 600 gpm, dd 25 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-4D1		
F. E. Wilder. About 1,320 feet west of 4C1. Altitude about 205 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift:		
Recessional outwash:		
Topsoil	4	4
Clay, sandy	6	10
Sand, loose	15	25
Undifferentiated:		
Gravel with clay and water	3	28
Gravel with water	48	76
Gravel with clay and water	8	84
Casing, 24-inch to 34 ft; 14-inch from 34 to 84 ft; perforated 44 to 84 ft. SWL 25 ft. Pumped 900 gpm, dd 5 ft.		
Well 17/1W-4H3		
L. J. Wyckoff. About 1.3 miles southwest of Patterson Lake. Altitude about 190 feet. Drilled by Patterson, 1958.		
Sand, loam, gravel	19	19
Hardpan, cemented gravel	9	28
Gravel	3	31
Hardpan		
Casing, 6-inch to 31 ft. SWL 17 ft. Tested at 1,200 gph, no apparent dd.		
Well 17/1W-4L1		
Walter Rowe. About 0.3 mile south of 4B1. Altitude about 195 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift, undifferentiated:		
Topsoil	4	4
Sand	10	14
Gravel with clay	13	27
Sand, water, and gravel	12	39
Rocks, large, gravel, sand and water	10	49
Gravel and water	10	59
Hardpan	6	65
Sand, water, and gravel	17	82
Quicksand in clay	5	87
Casing, 24-inch to 32 ft; 20-inch to 87 ft; perforated 30 to 86 ft. SWL 20 ft. Pumped 750 gpm, dd 25 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-5J1		
Walter Rowe. About 4.5 miles southeast of Tumwater. Altitude about 205 feet. Drilled by N. C. Jannsen, 1946.		
Vashon drift:		
Recessional outwash:		
Topsoil	5	5
Sand	14	19
Gravel	16	35
Till:		
Hardpan	10	45
Advance outwash:		
Gravel with water	37	82
Pre-Vashon (?) deposits, undifferentiated:		
Gravel with clay	10	92
Gravel, sand and water	36	128
Gravel with clay	2	130
Casing, 24-inch to 28 ft; 14-inch to 78 ft; 10-inch from 65 to 130 ft; perforated 28 to 75 ft and 85 to 128 ft. SWL 27 ft. Pumped 300 gpm, dd 28 ft.		
Well 17/1W-6C1		
E. A. Ohman. About 2.2 miles north of East Olympia. Altitude about 195 feet. Drilled by Patterson, 1953.		
Loam, sandy	2	2
Gravel, sand	23	25
Sand and gravel	5	30
Sand	20	50
Sand and gravel	5	55
Sand and clay		
Casing, 6-inch to 50 ft. SWL 24 ft. Bailed 1,100 gph, dd 6 ft.		
Well 17/1W-6C3		
Elmer Lowe. About 3.5 miles west of Patterson Lake on East Olympia Road. Altitude about 195 feet. Drilled by Seaunier, 1950.		
Vashon drift:		
Till:		
Hardpan	15	15
Advance outwash:		
Sand	75	90
Gravel	10	100
Casing, 6-inch to 100 ft; perforations, no information. Log from owner's memory.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-6P2		
Fred Frohlich. About 1.6 miles north of East Olympia. Altitude about 195 feet. Drilled by Patterson Drilling Company, 1958.		
Vashon drift, undifferentiated:		
Sand	21	21
Gravel, cemented	46	67
Gravel, sand	3	70
Gravel, cemented	5	75
Gravel, sand	10	85
Gravel, cemented	5	90
Gravel, sand	2	92
Gravel, cemented	4	96
Gravel	7	103
Gravel, cemented	3	106
Casing, 8-inch to 106 ft; perforated 72 to 103 ft. SWL 47 ft. Bailed 18 gpm, dd 0.5 ft.		
Well 17/1W-7R1		
L. M. Alkire. About 0.4 mile west of East Olympia. Altitude about 210 feet. Drilled by Patterson Drilling Company, 1953.		
Clay, soil and rocks	4	4
Gravel, clay, boulders and sand	54	58
Gravel, cemented, and boulders	10	68
Gravel, clay and sand	60	128
Sand, clay and gravel	1	129
Sand and silt	191	320
Casing, 10-inch to 99 ft; 8-inch from 98 to 129 ft; perforated 98 to 129 ft. SWL 50 ft. Pumped 2½ hrs at 75 gpm, dd 68 ft. Pumped too much sand.		
Well 17/1W-7R2		
L. M. Alkire. About 120 feet north of 7R1. Altitude about 210 feet. Drilled by C. D. Roberts, 1958.		
Topsoil	3	3
Clay	4	7
Gravel and boulders	8	15
Gravel, loose, and sand	34	49
Gravel and sand; water-bearing	18	67
Sand, brown	4	71
Sand, coarse, and some gravel	5	76
Gravel, very coarse, and sand, water-bearing	7	83
Gravel, cemented, and sand	7	90
Gravel and sand; water-bearing	23	113
Sand, cemented	13	126
Sand, little coarse gravel; water-bearing	6	132
Sand, fine, little gravel	14	146
Casing, 8-inch to 146 ft; perforated 78 to 83 ft and 92 to 113 ft. SWL 45 ft. Pumped 4 hrs at 60 gpm, dd 55 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-11G1		
O. C. McLaughlin. About 0.65 mile south of Patterson Lake. Altitude about 200 feet. Drilled by Patterson, 1952.		
Gravel, cemented	30	30
Sand, clay and gravel	3	33
Gravel, cemented	16	49
Gravel, some water	2	51
Gravel, cemented	3	54
Gravel, water-bearing	6	60
Casing, 6-inch to 60 ft. SWL 44 ft. Bailed 1,900 gph, dd 1 ft.		
Well 17/1W-11G2		
Kenneth Navin. About 0.2 mile east of 11G1. Altitude about 200 feet. Drilled by Patterson, 1952.		
Sand and clay	6	6
Gravel, cemented	9	15
Clay	2	17
Gravel, cemented	11	28
Clay and sand	4	32
Gravel, water-bearing	2	34
Gravel, cemented	22	56
Gravel, water-bearing	8	64
Casing, 6-inch to 64 ft. SWL 32.5 ft. Bailed 700 gph, dd 17 ft.		
Well 17/1W-16E1		
George Kendall. About 0.8 mile southeast of East Olympia. Altitude about 230 feet. Drilled in 1957.		
Vashon drift:		
Recessional outwash:		
Soil and sand	20	20
Gravel	2	22
Till:		
Hardpan	64	86
Casing, 6-inch to 86 ft; perforations, no information. Log reported by owner.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/1W-33G1		
Richard E. Wells. About 0.4 mile east of Offutt Lake. Altitude about 245 feet. Drilled by Seaunier.		
Vashon drift:		
Recessional outwash:		
Gravel, river laid (?)	11	11
Till (?):		
Hardpan	30	41
Gravel, very thin layer		
Hardpan	13	54
Undifferentiated:		
Clay, blue	18	72
Casing, 6-inch. After hitting blue clay, unsuccessful attempts were made to pull casing, then a blast was set off at 32 ft and drilling stopped.		
Well 17/2W-4M1		
Leroy McGuire. About 1.3 miles east of Black Lake. Altitude about 180 feet. Drilled by Patterson, 1952.		
Dug	4	4
Sand and clay	36	40
Sand and gravel	3	43
Gravel and sand	3	46
Gravel	3	49
Casing, 6-inch to 49 ft. SWL 14.5 ft. Bailed 30 gpm, dd 4 ft.		
Well 17/2W-6J1		
Camp Kennydale Girl Scout Camp. On east shore of Black Lake. Drilled by Patterson, 1956.		
Clay and sand	18	18
Sand and clay	18	36
Sand and gravel	8	44
Sand and clay	6	50
Casing, 6-inch to 37 ft. Six-ft screen set to 44 ft. SWL 12 ft. Bailed 20 gpm, dd 15 ft.		
Well 17/2W-8H1		
Centralia Fruit Farms. About 1.2 miles east of south end of Black Lake. Altitude about 195 feet. Drilled by Richardson Well Drilling Company, 1954.		
Topsoil and sand	3	3
Sand, black, and soil	7	10
Clay, yellow, and sand	28	38
Sand, coarse, and gravel, some water	7	45
Hardpan, drilled through log at 46 feet	2	47
Sand, fine, and yellow clay	4	51
Sand, coarse, and gravel, some water	2	53
Hardpan	14	67

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-8H1 -- Continued		
Sand, coarse, and gravel	3	70
Gravel and clay	2	72
Sand, coarse, and gravel	4	76
Gravel, loose, and clay	3	79

Casing, 12-inch to 79 ft; perforated 42 to 44 ft and 54 to 75 ft. SWL 10 ft. Test pumped well to maximum of 596 gpm, dd 54 ft; at 503 gpm, dd 48 ft. Recovery in 52 seconds.

Well 17/2W-8H2

Centralia Fruit Farms. About 600 feet north of 8H1. Altitude about 195 feet. Drilled by Richardson Well Drilling Company, 1953.

Sand and clay	12	12
Clay, sand, and gravel	12	24
Hardpan (seepage)	11	35
Sand, coarse and loose, and gravel (14 ft of water at 35 ft)	3	38
Hardpan	8	46
Sand and gravel with streaks of clay (Bailed and pulled in bottom at 48 ft. Tested 20 gpm at 54 ft.)	9	55
Sand, coarse, and gravel, water (Bailed 60 gpm, dd 12 ft at 59 ft. SWL 16 ft.)	4	59
Hardpan	12	71
Sand, coarse, loose, and gravel, water (Bailed 60 gpm, dd 4 ft at 72½ ft. Set 60 ft column and maximum 180 gpm. Bottom pulled in.)	2	73
Hardpan	7	80
Clay, yellow, sand and gravel	8	88
Sand, fine	5	93
Sand, fine, gravel and clay	5	98
Sand, fine, clay and a little gravel	12	110
Clay, sand and gravel	3	113
Hardpan	26	139
Gravel, large, sand streaked with clay	4	143
Gravel, clay and sand	4	147
Clay, yellow	3	150
Clay, sandy yellow, with gravel	30	180
Clay, sticky brown clay with a little gravel	2	182
Clay, blue	16	198
Clay, sticky brown, some blue clay remaining	7	205
Clay, sticky, blue	11	216
Clay, brown and blue, streaks of fine sand	12	228
Clay, blue, very fine sand		

Casing, 8-inch to 228 ft; perforated 35 to 55 ft and 57 to 75 ft. SWL 12 ft. Pumped 4 hrs at 350 gpm, dd 40 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-8R4		
L. R. Sorrell. About 1.3 miles southeast of Black Lake. Altitude about 189 feet. Drilled by Patterson, 1956.		
Topsoil	5	5
Gravel, clay and sand (hard)	35	40
Gravel, sand and clay	7	47
Casing, 6-inch to 47 ft. SWL 13 ft. Bailed 57 gpm, dd 14 ft.		
Well 17/2W-9B2		
Frank Abbott. At south city limits of Tumwater on road to Little Rock. Altitude about 190 feet. Drilled by A. P. Graf, 1955.		
Vashon drift, undifferentiated:		
Topsoil	2	2
Sand, brown	31	33
Gravel, water-bearing	5	38
Gravel and clay	6	44
Sand	1	45
Casing, 8-inch to 45 ft; perforated 39 to 44 ft. SWL 14.5 ft. Pumped 2 hrs at 115 gpm, dd 10.5 ft. Perforating below primary aquifer (33 to 38 ft) was necessitated by upper sand sifting through coarse gravel.		
Well 17/2W-9F3		
Arthur G. Adams. About 6 miles southwest of Olympia on Little Rock - Tumwater Road. Altitude about 190 feet. Drilled by Patterson, 1955.		
Vashon drift, undifferentiated:		
Pit	10	10
Clay and sand	5	15
Sand and clay	14	29
Gravel and sand	2	31
Gravel, clay and sand	13	44
Gravel and sand	2	46
Gravel, clay and sand	2	48
Clay and sand	1	49
Sand and gravel	1	50
Gravel	2	52
Gravel and sand	2	54
Casing 6-inch from 8 to 54 ft. SWL 16 ft. Pumped 6 hrs at 90 gpm, dd 11.5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-11A1		
Robert F. Reinke. About 0.3 mile southwest of Munn Lake. Altitude about 175 feet. Drilled by Patterson, 1951.		
Topsoil	5	5
Sand, clay	34	39
Sand, water	3	42
Sand, clay	30	72
Sand, coarse	9	81
Sand, gravel; water-bearing	6	87
Casing, 6-inch to 76 ft. Screen 76 to 87 ft. SWL 37 ft. Pumped 4 hrs at 50 gpm, no apparent dd.		
Well 17/2W-11H1		
Centralia Fruit Farms. About 0.55 mile southwest of Munn Lake on Maple Bowl Road. Altitude about 205 feet. Drilled by Martz, 1946.		
Vashon drift:		
Recessional outwash and undifferentiated deposits:		
Sand	60	60
Gravel and sand; water-bearing	25	85
Clay and quicksand	65	150
Gravel and sand; water-bearing	10	160
Till (?):		
Hardpan	30	190
Advance outwash:		
Gravel	2	192
Casing, 10-inch to 192 ft; perforated 75 to 82 ft and 150 to 160 ft. SWL 65 ft. Pumped 256 gpm, dd 70 ft.		
Well 17/2W-12C1		
Mrs. Helen C. Shank. At Trail's End Ranch south of Munn Lake. Altitude about 185 feet. Drilled by Patterson, 1953.		
Sand and gravel	55	55
Gravel and sand; water-bearing	17	72
Gravel, sand, and red silt	7	79
Sand and gravel	4	83
Sand	9	92
Casing, 6-inch to 88 ft. No. 14 everdur screen 88 to 92 ft. SWL 56 ft. Bailed 24 gpm, dd 15 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-12N2		
J. Hofert Company. About 4 miles south of Olympia. Altitude about 205 feet. Drilled by Patterson, 1957.		
Sand	30	30
Gravel, sand and clay	35	65
Sand and clay	28	93
Gravel, sand; water-bearing	7	100
Sand, clay	156	256
Sand, gravel	26	282
Clay	3	285
Sand, clay, little gravel	18	303
Casing, 12-inch to 304 ft; perforated 260 to 280 ft. SWL 67 ft. Pumped 7 hrs at 230 gpm, dd 82 ft.		
Well 17/2W-13R1		
Alvie E. Young. About 2.3 miles southeast of Olympia Airport. Altitude about 225 feet. Drilled by Patterson, 1954.		
Gravel	22	22
Gravel, cemented	20	42
Gravel, clay and sand	10	52
Clay, sand and gravel	10	62
Sand and clay	11	73
Sand and pea gravel	1	74
Sand and clay	8	82
Sand and gravel; water-bearing	1	83
Sand and clay	1	84
Gravel and sand	4	88
Casing, 6-inch to 88 ft. SWL 40 ft. Bailed 20 gpm, dd 17 ft.		
Well 17/2W-14M2		
L. R. Armstrong. About 1.3 miles southwest of Olympia Airport. Altitude about 200 feet. Drilled by A. P. Graf, 1955.		
Topsoil	2	2
Sand	12	14
Clay with gravel	4	18
Gravel, water-bearing (not much water)	3	21
Clay, gravelly	21	42
Gravel, water-bearing	6	48
Clay with gravel	3	51
Casing, 10-inch to 51 ft; perforated 40 to 48 ft. SWL 14 ft. Pumped 4 hrs at 95 gpm, dd 45 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-14M4		
Rudolph F. Szolas. About 1.3 miles southwest of Olympia Airport. Altitude about 198 feet. Drilled by A. E. Seaunier, 1947.		
Sand	14	14
Hardpan	18	32
Gravel, water-bearing	3	35
Casing, 5-inch to 35 ft.		
Well 17/2W-14N1		
Walter Saeger. About 1.8 miles southwest of Olympia Airport. Altitude about 198 feet. Dug well.		
Loam and sand	14	14
Quicksand	13	27
Gravel and cement rock	1	28
Casing, 30-inch.		
Well 17/2W-14N2		
Chester A. Parker. About 1.8 miles southwest of Olympia Airport. Altitude about 198 feet. Drilled by W. C. Day, 1948.		
Sand, dry	15	15
Sand and water	10	25
Hardpan, dry	5	30
Gravel, water-bearing	30	60
Casing, 8-inch to 60 ft. Perforated 30 to 58 ft. SWL 10 ft. Pumped 120 gpm, dd 10 ft.		
Well 17/2W-15P1		
Henri Schlottman. About 5 miles southwest of Olympia. Altitude about 198 feet. Drilled by A. E. Seaunier, 1952.		
Not recorded	17	17
Hardpan	29	46
Gravel, water-bearing	21	67
Gravel, water-bearing	2	69
Hardpan	8	77
Sand	3	80
Shale	2	82
Casing, 8-inch to 67 ft; 6-inch to 70 ft; perforated 45 to 66 ft. SWL 17 ft. Pumped for 4 hrs at 126 gpm, dd 42 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-16R1		
Aubrey P. Thomas. About 2.3 miles southwest of Olympia Airport. Altitude about 195 feet. Drilled by Davidson, 1951.		
Gravel, loose	14	14
Hardpan	7	21
Gravel, water-bearing	2	23
Sand, loose, and gravel	11	34
Hardpan		
Casing, 8-inch to 28 ft; screen 28 to 34 ft. SWL 9 ft. Pumped 4 hrs at 140 gpm, dd 12 ft.		
Well 17/2W-17R1		
Lloyd A. Bretthauer. About 3.3 miles southwest of Olympia Airport. Altitude about 185 feet. Drilled by Seaunier, 1956.		
Loam, sandy	6	6
Hardpan	26	32
Gravel	1	33
Casing, 6-inch to 33 ft. Tested at 75 gpm.		
Well 17/2W-18K1		
Charles Curtarelli. About 1.1 miles south of Black Lake. Altitude about 170 feet. Drilled by Seaunier, 1953.		
Topsoil	10	10
Sand and gravel	4	14
Hardpan	6	20
Gravel, water-bearing	25	45
Casing, 8-inch to 45 ft; perforated 32 to 44 ft. SWL 14 ft. Pumped 4 hrs at 135 gpm, dd 8 ft.		
Well 17/2W-19K1		
Keith Homes. About 2 miles south of Black Lake on Little Rock Road. Altitude about 160 feet. Drilled by Patterson, 1955.		
Clay, brown, and gravel	6	6
Gravel, cemented	8	14
Sand	6	20
Clay, blue, and gravel	4	24
Gravel, sand and clay	2	26
Gravel and clay	16	42
Gravel	2	44
Casing, 6-inch to 44 ft. SWL 13 ft. Bailed 38 gpm, dd 10 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-20B2		
W. J. Hazard. About 2 miles southeast of Black Lake. Altitude about 185 feet. Drilled by M. B. Patterson, 1956.		
No record	17	17
Gravel, clay	5	22
Gravel, cemented	10	32
Gravel, sand and clay	13	45
Sand	5	50
Gravel, sand and clay	5	55
Gravel, sand	4	59
Gravel, heavy, sand	1	60
Casing, 6-inch to 38 ft; 5-inch 37 to 60 ft; perforated 38 to 60 ft. SWL 14.2 ft. Bailed 57 gpm, dd 1 ft.		
Well 17/2W-20G1		
State Department of Natural Resources. About 7 miles southwest of Olympia. Altitude about 185 feet. Drilled by M. B. Patterson, 1957.		
Sand	32	32
Gravel	3	35
Sand, gravel, clay	5	40
Gravel	10	50
Sand	2	52
Sand, gravel	8	60
Clay, gravel	5	65
Gravel, sand	5	70
Gravel, clay	10	80
Casing, 12-inch to 48 ft; 10-inch 48 to 80 ft; perforated 48 to 80 ft. SWL 13 ft. Pumped for 7 hrs at 620 gpm, dd 7 ft.		
Well 17/2W-20H1		
State Department of Natural Resources. About 0.3 mile east of Well 20H2. Altitude about 185 feet. Drilled by M. B. Patterson, 1956.		
Sand	21	21
Clay, sand, gravel	16	37
Gravel, sand, clay	12	49
Gravel, sand	16	65
Gravel, sand, clay	3	68
Clay, yellow	2	70
Casing, 12-inch to 41 ft; 10-inch 39 to 69 ft; perforated 40 to 70 ft. SWL 8.4 ft. Pumped 6 hrs at 495 gpm, dd 8 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-22J1		
Harry and June Patterson. About 0.2 mile west of South Union. Altitude about 205 feet. Drilled by A. C. Seaunier, 1951.		
Sand	27	27
Hardpan	9	36
Gravel and water	5	41
Gravel, tight, some water	3	44
Gravel, loose, water-bearing	4	48
Casing, 6-inch to 48 ft; perforated 38 to 47 ft.		
Well 17/2W-22J2		
Joe Oderman. At South Union. Altitude about 195 feet. Drilled by Mykol, 1956.		
Soil	3	3
Hardpan	48	51
Sand and gravel	3	54
Sand	16	70
Casing, 6-inch to 65 ft; perforated 65 to 70 ft. SWL 12 ft. Pumped 4 hrs at 60 gpm, dd 48 ft.		
Well 17/2W-23D1		
John J. Brand. About 0.6 mile north of South Union. Altitude about 197 feet. Dug well.		
Sand	6	6
Clay	4	10
Gravel	1	11
Sand	14	25
Gravel	1	26
Casing, 36-inch. SWL 18 ft. Pumped 6 hrs at 35 gpm, dd 4 ft.		
Well 17/2W-29L1		
Eldon W. Countryman. About 3 miles southwest of South Union. Altitude about 180 feet. Drilled by L. B. Richardson, 1952.		
Clay, sandy brown	5	5
Clay, sandy, and gravel	2	7
Clay, sandy brown	8	15
Clay, sand, gravel	6	21
Casing, 18-inch to 15 ft; 12-inch perforated liner 15 to 21 ft. Bottom 6 ft gravel packed. SWL 6 ft. Pumped 4 hrs at 200 gpm, dd 12 ft.		

Table 3 -- Materials penetrated by representative wells. --Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/2W-32C1		
Reinhold Newman. About 3.1 miles southwest of South Union. Altitude about 185 feet. Drilled by L. B. Richardson, 1951.		
Topsoil	2	2
Clay, sandy yellow	10	12
Sand, gravel and some clay	10	22
Sand, gravel	4	26
Clay		
Casing, 18-inch to 15 ft. Eight inch everdur screen 15 to 26 ft, gravel packed. Tested at 225 gpm.		
Well 17/2W-32D1		
Theodore Hedges. About 2.1 miles northwest of Maytown. Altitude about 181 feet. Drilled by L. B. Richardson, 1951.		
Clay, sandy	7	7
Gravel	3	10
Clay, sandy	2	12
Clay, sand and gravel	3	15
Sand and water	8	23
Sand and gravel; water-bearing	9	32
Casing, 18-inch to 22 ft; 12-inch perforated 22 to 32 ft, gravel packed. SWL 1 ft. Pumped 2 hrs at 350 gpm, dd 10 ft.		
Well 17/3W-12A1		
H. C. Campbell. About 0.5 mile west of Black Lake. Altitude about 200 feet. Drilled by Martz. Portion dug.		
Sand and gravel	8	8
Hardpan	8	16
Sand and fine gravel (stood up)	25	41
Drilled portion	31	72
Casing, 6-inch.		
Well 17/3W-12B1		
H. M. Reynolds. About 0.5 mile west of Black Lake. Altitude about 200 feet. Drilled by Patterson, 1953.		
Topsoil and gravel	6	6
Gravel, cement	82	88
Sand and gravel (hard)	2	90
Sand	1	91
Gravel	1	92
Casing, 6-inch to 92 ft. SWL 78 ft. Bailed 18 gpm, dd 3 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/3W-23H1		
G. H. Kirkham. About 3.3 miles north of Little Rock. Altitude about 195 feet. Dug well.		
Sand and gravel	25	25
Hardpan	4	29
Sand and gravel	38	67
Casing, 30-inch to 25 ft; 18-inch from 25 to 67 ft.		
Well 17/3W-23R1		
Carl E. Kinney. About 2.8 miles north of Little Rock. Altitude about 173 feet. Drilled by Patterson, 1958.		
Topsoil	4	4
Gravel, cemented	21	25
Clay	10	35
Gravel, cemented	8	43
Sand, water-bearing	1	44
Gravel, cemented	11	55
Sand and pea gravel; yield 6 gpm	1	56
Gravel, cemented	9	65
Gravel, sand	3	68
Casing, 6-inch to 68 ft. SWL 32 ft. Bailed 10 gpm.		
Well 17/3W-25P1		
Jess W. Sutmiller. About 1.9 miles northeast of Little Rock. Altitude about 145 feet. Drilled by Patterson, 1952.		
Gravel, clay, sand	20	20
Gravel, cemented	3	23
Sand, gravel, clay	2	25
Gravel, clay	12	37
Gravel, cemented	16	53
Gravel, clay	11	64
Gravel	2	66
Casing, 6-inch to 66 ft. SWL 12 ft. Bailed 10 gpm, dd 37 ft.		
Well 17/3W-35E1		
W. A. White. About 1.3 miles northwest of Little Rock. Altitude about 145 feet. Drilled by Patterson, 1952.		
Gravel, sand, clay	17	17
Gravel, cemented	23	40
Gravel, sand	3	43
Casing, 6-inch to 43 ft. SWL 17 ft. Bailed 30 gpm, dd 6 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 17/3W-35L1		
Weiks Dairy. About 0.8 mile north of Little Rock. Altitude about 140 feet. Drilled by Patterson, 1953.		
Topsoil	5	5
Gravel and clay	5	10
Gravel	10	20
Gravel and clay	30	50
Gravel	1	51
Deepened	21	72
Casing 8-inch. SWL 13 ft. Pumped 4 hrs at 108 gpm, dd 2 ft. Deepening increased yield to 700 gpm.		
Well 18/1-8D3		
West Coast Lumbermen's Association. About 0.65 mile southwest of Nisqually River Bridge. Altitude about 10 feet. Drilled by L. R. Gaudio, 1950.		
Clay	10	10
Clay, sandy with pieces of pumice up to ½-inch	77	87
Sand, fine, black	8	95
Gravel, ½-inch to 4-inch in size	9	104
Sand, coarse and gravel	8	112
Casing, 8-inch to 101 ft; 10-ft iron screen 101 to 110 ft. SWL 1.2 ft. Pumped 45 minutes at 810 gpm, dd 6.8 ft.		
Well 18/1-8K1		
Pendleton Miller and Anton Kiechle. About 0.5 mile north of Nisqually. Altitude about 13 feet. Drilled by A. P. Graf, 1953.		
Topsoil	2	2
Sand	29	31
Sand, some gravel	14	45
Sand, blue	21	66
Gravel with some sand; water-bearing	8	74
Clay, sandy	4	78
Casing, 8-inch to 78 ft; perforated 64 to 72 ft. SWL 10.2 ft. Pumped for one week at 125 gpm, dd 2 ft.		
Well 18/1-16L1		
S. W. Staatz. About 1 mile southeast of Nisqually. Altitude about 35 feet. Drilled by R. E. Charlion, 1953.		
Sand and clay	40	40
Gravel	8	48
Casing, 8-inch to 48 ft; perforated 41 to 48 ft. SWL 6 ft. Pumped 4 hrs at 150 gpm, dd 12 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1-18A1		
E. Deck, Jr. About 1.1 miles southwest of Nisqually. Altitude about 20 feet. Drilled by A. P. Graf, 1953.		
Sand and sea mud	99	99
Sand, mud and gravel	12	111
Sand, coarse, and gravel; water-bearing	9	120
Casing, 8-inch to 120 ft; perforated 112 to 117 ft. Flow measured at 250 gpm.		
Well 18/1-20L1		
Jess Thompson. About 0.5 mile east of McAllister Springs. Altitude about 125 feet. Drilled by Mykol, 1945.		
Sand	25	25
Gravel	78	103
Sand (2 ft of water)	9	112
Sand, gravel; water-bearing	20	132
Casing, 6-inch to 127 ft; bronze screen 127 to 132 ft.		
Well 18/1-31E1		
S. A. Grove. About 0.5 mile west of Lake St. Clair. Altitude about 225 feet. Drilled by Patterson, 1954.		
Gravel, boulders	16	16
Sand, boulders	24	40
Sand, gravel, clay	50	90
Sand, clay, gravel	37	127
Gravel, cemented	12	139
Gravel, sand, clay	1	140
Gravel, cemented	15	155
Gravel, sand, clay	20	175
Casing, 6-inch to 175 ft. SWL 150 ft. Bailed 1,140 gph, dd 5 ft.		
Well **18/1-32M1		
L. K. Pomeroy. Lake St. Clair, at neck of peninsula jutting northward from south shore. Altitude about 152 feet. Drilled by Richardson Well Drilling Company, 1951.		
Vashon drift:		
Recessional outwash:		
Gravel and sand, with some boulders	80	80
Alternately hard and soft, similar to hardpan	5	85
Sand, black	5	90
Gravel and coarser sand	22	112
Till (?):		
Hard at bottom		112+
Casing, 6-inch to 112 ft. Memory log.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-2P1		
Bruno Betti. About 3 miles southeast of South Bay. Altitude about 220 feet. Drilled by Tacoma Pump and Drilling, 1949.		
Gravel, pea	22	22
Hardpan	87	109
Sand	51	160
Clay, blue	3	163
Sand, fine	75	238
Casing, 6-inch.		
Well 18/1W-2P2		
Bruno Betti. About 0.15 mile northwest of Well 2P1 on county road. Altitude about 220 feet. Drilled by Patterson, 1954.		
Topsoil, gravel	40	40
Hardpan	110	150
Sand, gravel	15	165
Gravel, coarse	8	173
Sand	5	178
Gravel, pea, sand and gravel	5	183
Casing, 6-inch.		
Well 18/1W-3N1		
John Nelson. About 1.7 miles southeast of South Bay. Altitude about 75 feet. Drilled by Patterson, 1953.		
Dug	28	28
Sand, brown	18	46
Sand and clay, blue	2	48
Sand, fine	8	56
Sand	7	63
Clay	2	65
Sand, fine	5	70
Sand, blue	15	85
Casing, 6-inch to 75 ft. Screen 79 to 85 ft. SWL 22 ft. Bailed 10 gpm, dd 18 ft.		
Well 18/1W-5B1		
Harry Longmire. About 0.4 mile south of South Bay. Altitude about 115 feet. Dug well.		
Soil and clay	6	6
Hardpan	14	20
Sand, coarse; water-bearing	6	26
Well, 48-inch diameter.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet
Well 18/1W-5P1		
G. C. Dawley. About 1.2 miles south of South Bay. Altitude about 140 feet. Drilled by Mykol, 1956.		
Soil	5	5
Hardpan	2	7
Gravel, sand	12	19
Clay, blue	3	22
Sand and gravel	38	60
Casing, 6-inch. Water at 25 and 59 ft.		
Well 18/1W-5R2		
B. A. Michaelis. About 1.3 miles south of South Bay. Altitude about 75 feet. Drilled by Patterson, 1956.		
Dug	17	17
Sand, clay	6	23
Sand, gravel	3	26
Sand, fine to coarse	18	44
Sand	13	57
Sand, clay	1	58
Casing, 6-inch to 53 ft. Screen 53 to 58 ft. SWL 10 ft. Bailed 15 gpm, dd 23 ft.		
Well 18/1W-7A4.		
M. Allen. About 1.7 miles southwest of South Bay. Altitude about 160 feet. Drilled by Patterson, 1951.		
Sand	26	26
Sand, gravel	4	30
Gravel, cemented	20	50
Clay, gravel, sand	2	52
Sand, gravel	11	63
Gravel	3	66
Casing, 6-inch. SWL 20.8 ft. Bailed 20 gpm, dd 29 ft.		
Well 18/1W-7H1		
Mike LeMay. About 1.9 miles southwest of South Bay. Altitude about 187 feet. Drilled by Patterson, 1950.		
Not recorded	44	44
Gravel, cemented	35	79
Sand and gravel	3	82
Casing, 6-inch to 82 ft. SWL 44.8 ft. Bailed 10 gpm, dd 21 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-7H2		
Capitol Feed Company. About 2.1 miles southwest of South Bay. Altitude about 200 feet. Drilled by Patterson, 1952.		
Topsoil	3	3
Clay, sand, gravel	6	9
Gravel, clay	12	21
Sand, clay, gravel	12	33
Gravel, clay	9	42
Gravel, cemented	15	57
Gravel, clay	9	66
Gravel, cemented	29	95
Sand, clay	45	140
Casing, 6-inch to 95 ft. Casing pulled back. SWL 54 ft. Bailed 19 gpm, dd 33 ft.		
Well 18/1W-7M1		
Paul B. Carey. About 1.5 miles northeast of Olympia. Altitude about 175 feet. Drilled by Patterson, 1952.		
Clay and sand	10	10
Sand and clay	17	27
Gravel, cemented	13	40
Sand, gravel, clay	9	49
Gravel, cemented	6	55
Clay, sand	33	88
Sand, clay	22	110
Clay, sand	23	133
Clay	8	141
Sand and clay	9	150
Sand	4	154
Gravel	2	156
Casing, 6-inch to 155 ft. SWL 75 ft. Bailed 14 gpm, dd 20 ft.		
Well 18/1W-8K2		
H. C. Guyett. About 0.7 mile north of Freeway. Altitude about 195 feet. Drilled by Patterson.		
Soil	6	6
Hardpan	48	54
Gravel, pea; water-bearing	8	62
Casing, 6-inch.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-8Q1		
C. E. Callahan. About 2.5 miles east of Olympia. Altitude about 200 feet. Drilled by Patterson, 1955.		
Gravel	16	16
Gravel, cemented	14	30
Gravel, sand, clay	7	37
Gravel, pea; water-bearing	4	41
Gravel, sand	10	51
Casing, 6-inch to 50 ft. SWL 18.5 ft. Bailed 15 gpm, dd 18 ft.		
Well 18/1W-9L2		
Tom Peoples. About 2.3 miles southerly from South Bay. Altitude about 140 feet. Drilled by Patterson, 1953.		
Dug	54	54
Sand and clay	23	77
Clay, blue	9	86
Clay, blue, and gravel	15	101
Gravel and sand	3	104
Casing, 6-inch to 104 ft. SWL 52 ft. Bailed 20 gpm, dd 27 ft.		
Well 18/1W-9M2		
R. McLaughlin. About 2.3 miles southerly from South Bay. Altitude about 140 feet. Drilled by Patterson, 1956.		
Sand, clay, gravel	45	45
Sand, clay	30	75
Clay, sand	10	85
Clay, blue	12	97
Clay, gravel, sand	41	138
Clay, sand	22	160
Clay, sand, gravel	5	165
Sand, clay, gravel	4	169
Sand and clay	6	175
Casing, 6-inch to 172 ft. Screen 169 to 175 ft. SWL 51 ft. Bailed 30 gpm, dd 95 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-9N1		
Alvin Huber. About 4 miles east of Olympia. Altitude about 135 feet. Drilled by Patterson, 1957.		
Clay	10	10
Sand, clay	16	26
Sand, clay, and gravel	20	46
Sand	6	52
Sand, clay, and gravel	4	56
Clay, blue	20	76
Gravel, sand	2	78
Sand, gravel	25	103
Casing, 6-inch to 85 ft; 15 ft No. 25 slot screen 84 to 99 ft and 5 ft No. 20 slot screen 99 to 104 ft. SWL 47 ft. Pumped 120 gpm, dd 33 ft.		
Well 18/1W-10L1		
Olympia Sand and Gravel Company. About 1 mile northeast of Lacey. Altitude about 205 feet. Drilled by Patterson, 1958.		
Clay	6	6
Gravel, clay	28	34
Gravel	4	38
Gravel, clay	4	42
Gravel	8	50
Sand, black	27	77
Clay, blue	19	96
Casing, 12-inch to 96 ft. Well not finished.		
Well 18/1W-10R2		
Thurston County P.U.D. 1. Thompson Place. Altitude about 200 feet. Drilled by Patterson, 1950.		
Topsoil and gravel	5	5
Gravel, cemented	62	67
Gravel and clay	15	82
Sand and gravel	8	90
Clay	14	104
Sand, gravel and clay	11	115
Soil (gas)	23	138
Clay	12	150
Sand and gravel; water-bearing	21	171
Casing, 8-inch to 161 ft; No. 20 screen from 161 to 171 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-10R3		
Thurston County P.U.D. 1. Thompson Place. Altitude about 200 feet. Drilled by Patterson, 1951.		
Gravel	7	7
Gravel, cemented	30	37
Clay and sand	18	55
Gravel, sand and clay	13	68
Gravel, sand and clay	22	90
Clay, brown, sand and gravel; gas (93 to 100 ft)	73	163
Sand and clay (brown)	5	168
Sand and clay (blue)	10	178
Casing, 6-inch to 167 ft; No. 25 screen from 165 to 177 ft.		
Well 18/1W-11P4		
Robert J. Hamlin. About 5 miles east of Olympia. Altitude about 205 feet. Drilled by A. E. Seaunier, 1954.		
Gravel, rock and topsoil	10	10
Hardpan	43	53
Gravel, water-bearing	8	61
Hardpan	3	64
Gravel, water-bearing	4	68
Casing, 6-inch to 68 ft.		
Well 18/1W-14H4		
Olympia Mushroom Farms, Inc. About 2.5 miles east of old Highway 99. Altitude about 213 feet. Drilled by Patterson, 1956.		
Topsoil	1	1
Gravel, clay and sand	24	25
Gravel, sand and clay	20	45
Gravel, cemented	10	55
Gravel, clay and sand	9	64
Sand and gravel	10	74
Gravel and clay	8	82
Gravel, sand and clay	24	106
Clay	44	150
Clay, sand and gravel	40	190
Gravel, sand and gravel	15	205
Gravel and sand	55	260
Gravel, sand and clay	?	?
Casing, 8-inch to 240 ft; 6-inch perforated from 240 to 260 ft. SWL 199 ft. Pumped 4 hrs at 210 gpm, dd 0.5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-14M2		
Richard Hart. About 0.5 mile west of Mushroom Corner. Altitude about 225 feet.		
Dug	43	43
Gravel, cemented	50	93
Gravel	3	96
Casing, 4-inch to 92 ft. SWL 57.5 ft. Bailed 25 gpm, dd 10 ft.		
Well 18/1W-15H1		
P.U.D. 1 of Thurston County. At Thompson Place, south side of Freeway. Altitude about 170 feet. Drilled by L. R. Gaudio, 1957.		
Topsoil	3	3
Hardpan	37	40
Sand, dirty, and gravel (small amount of water)	4	44
Sand, fine, some gravel	5	49
Clay, sandy	41	90
Sand, fine, some gravel	32	122
Clay	26	148
Hardpan	8	156
Sand and gravel	6	162
Hardpan	4	166
Sand and gravel (clay on some of gravel)	11	177
Hardpan	9	186
Casing, 12-inch to 167 ft. Screen 167 to 177 ft. SWL 135.1 ft. Pumped 100 gpm, dd 10 ft. Pumped 150 gpm, dd 15 ft. Pumped 225 gpm, dd 24 ft.		
Well 18/1W-15L3		
W. F. Ray. About 1.2 miles west of Mushroom Corner. Altitude about 175 feet. Drilled by Fred Martz.		
Soil	7	7
Hardpan	3	10
Sand, blue	30	40
Clay, rotten, black	30	70
Casing, 3-inch.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-16Q3		
Herman Reinhardt. About 0.5 mile north of Lacey. Altitude about 180 feet. Drilled by Patterson, 1955.		
Dug well	37	37
Gravel, sand and clay	10	47
Gravel, cemented	3	50
Gravel, clay and sand	20	70
Sand, clay and gravel	46	116
Gravel, clay and sand	21	137
Casing, 8-inch to 122 ft; screen 122 to 137 ft.		
Well 18/1W-17G1		
Wolfenbarger-Rhoades. About 2.5 miles east of Olympia. Altitude about 200 feet. Drilled by Patterson, 1952.		
No record	35	35
Gravel, cemented, with boulders	9	44
Gravel, cemented	16	60
Gravel	16	76
Casing, 6-inch to 75 ft. SWL 33.5 ft. Bailed 346 gph, dd 27 ft.		
Well 18/1W-18C1		
L. M. Robertson. About 1 mile northeast of Olympia. Altitude about 185 feet. Drilled by Patterson, 1952.		
Clay, sand	4	4
Sand, clay	11	15
Sand	15	30
Sand, coarse, and gravel	7	37
Sand	5	42
Sand, clay	16	58
Gravel, cemented	7	65
Gravel	11	76
Casing, 6-inch to 76 ft. SWL 54 ft. Bailed 26 gpm, dd 5 ft.		
Well 18/1W-18Q1		
W. J. Burkhart. About 1 mile west of Lacey. Altitude about 175 feet. Drilled by Patterson, 1957.		
Clay, sand	18	18
Sand, clay, gravel	17	35
Sand	17	52
Sand, gravel	6	58
Gravel, clay, sand	11	69
Gravel, sand	7	76
Casing, 6-inch to 72 ft. Screen 70 to 76 ft. SWL 16 ft. Bailed 38 gpm, dd 18 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-19K2		
Darrell W. Jones. About 3 miles east of Olympia. Altitude about 200 feet. Drilled by Patterson, 1953.		
Topsoil	4	4
Gravel, sand	11	15
Clay, gravel	15	30
Sand, gravel	20	50
Gravel, sand	47	97
Casing, 8-inch to 87 ft. Screen 87 to 97 ft.		
Well 18/1W-19M5		
Eugene James Reed. About 3 miles southeast of Olympia. Altitude about 195 feet. Drilled.		
Soil	4	4
Quicksand	120	124
Gravel	9	133
Casing, 3-inch to 133 ft.		
Well 18/1W-20K1		
Mt. View Golf Course. About 1.5 miles southwest of Lacey. Altitude about 215 feet. Drilled by A. P. Graf, 1951.		
Topsoil	4	4
Sand, brown	17	21
Gravel	2	23
Clay with gravel	35	58
Gravel, water-bearing	23	81
Clay, sandy	4	85
Casing, 12-inch to 85 ft; perforated 60 to 82 ft. SWL 19.2 ft. Pumped 4 hrs at 260 gpm, dd 49.7 ft.		
Well 18/1W-20Q1		
Huntamer Water Service, Inc. About 4 miles east and south of Olympia. Altitude about 200 feet. Drilled by H. F. Mykol, 1958.		
Sand, dry	17	17
Sand and gravel, dry	8	25
Sand	4	29
Gravel, cemented	5	34
Sand and gravel	9	43
Gravel, cemented	8	51
Sand, clay and gravel	2	53
Sand and gravel	3	56
Gravel, cemented	3	59
Gravel, seepage	4	63
Sand and gravel, seepage	14	77
Sand, packed and clay	5	82

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-20Q1 -- Continued		
Gravel, water-bearing, SWL 32 ft	2	84
Sand, packed, gravel and clay	11	95
Clay and gravel	2	97
Gravel and sand; water-bearing, SWL 31 ft	4	101
Sand, packed	7	108
Peat	12	120
Sand and gravel	2	122
Clay	4	126
Sand, clay and gravel	21	147
Sand, gravel; water-bearing	5	152
Sand, yellow, seepage	11	163

Casing, 8-inch to 160 ft; perforated 82 to 84 ft; 97 to 101 ft; and 147 to 153 ft. Cement plug 157 to 160 ft.

Well 18/1W-21B4

Thurston County Water District 2. About 4 miles east of Olympia. Altitude about 120 feet. Drilled by Patterson, 1958.

Loam, sandy	4	4
Sand, clay, gravel	43	47
Sand, gravel, clay	13	60
Clay, gravel, sand	6	66
Gravel, sand	2	68
Sand, clay, gravel	10	78
Gravel, sand	16	94
Gravel, sand, clay	4	98
Gravel, sand	15	113
Gravel, sand, clay	2	115
Gravel, sand	3	118
Gravel, sand, clay	2	120
Sand, clay, very little gravel	10	130

Casing, 10-inch to 100 ft; 8-inch, perforated 100 to 120 ft. SWL 64.5 ft. Pumped 4 hrs at 575 gpm, dd 11.8 ft.

Well 18/1W-21B5

Thurston County Fire District 3. At Lacey. Altitude about 180 feet. Drilled by Mykol, 1953.

Sand, silt, gravel and small rock	58	58
Hardpan or cemented gravel	12	70
Clay, blue	5	75
Sand, gravel, clay, and silt; water-bearing	15	90
Sand, gravel and water	17	107

Casing, 8-inch to 97 ft. Screen 97 to 107 ft. SWL 60 ft. Pumped 4 hrs at 50 gpm, dd 20 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-21D1		
L. C. Huntamer. Near Lacey. Altitude about 195 feet. Dug well.		
Soil	3	3
Sand, fine	2	5
Gravel, coarse	6	11
Sand, fine, clayey	4	15
Clay, bluish yellow	5	20
Gravel, pea	2	22
Casing, 36-inch. SWL 12.6 ft. Tested for 5.5 hrs at 200 gpm, dd 0.2 ft.		
Well 18/1W-21D2		
L. C. Huntamer. Near Lacey. Altitude about 190 feet. Drilled by H. F. Mykol, 1956.		
Clay, sandy	23	23
Gravel, packed	6	29
Clay	3	32
Gravel, coarse sand; water-bearing	6	38
Casing, 8-inch to 33 ft. Screen, No. 30 slot, 33 to 38 ft. SWL 8 ft. Pumped 4 hrs at 350 gpm, dd 27 ft.		
Well 18/1W-21D3		
L. C. Huntamer. Near Lacey. Altitude about 190 feet. Drilled by H. F. Mykol, 1953.		
Sand, dry	18	18
Sand, water-bearing	15	33
Clay and gravel	2	35
Gravel	1	36
Hardpan	8	44
Sand, clay and gravel; wet	16	60
Gravel, coarse; water-bearing	7	67
Clay, soupy, fine sand and gravel	25	92
Gravel, fine, coarse gravel and coarse sand	14	106
Sand, fine	23	129
Clay, blue, and gravel	6	135
Clay, brown, and gravel	4	139
Gravel, coarse sand; water-bearing	14	153
Casing, 10-inch to 139 ft. Screen 139 to 153 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-21H1		
A. G. Homann. About 0.5 mile south of Lacey. Altitude about 160 feet. Drilled by Patterson, 1955.		
Sand and clay	20	20
Gravel, sand and clay	2	22
Sand and clay	98	120
Sand, gravel and clay	6	126
Clay, sand and gravel	10	136
Gravel, clay and sand	19	155
Clay, sand and gravel	15	170
Sand, clay and gravel	15	185
Clay, sand and gravel	10	195
Casing, 10-inch to 182 ft. Screen 182 to 195 ft. (No. 60 slot Johnson screen).		
Well 18/1W-21P1		
Huntamer Water Service, Inc. About 1 mile southwest of Lacey. Altitude about 210 feet. Drilled by H. F. Mykol, 1959.		
Topsoil	4	4
Gravel, cemented	4	8
Sand	14	22
Gravel, packed	13	35
Hardpan, seamy	13	48
Sand, coarse, dry	19	67
Sand, dry, and gravel	8	75
Sand, dry	13	88
Sand, fine, and clay	10	98
Sand, water-bearing	4	102
Gravel, sand; water-bearing	14	116
Gravel, coarse sand; water-bearing	3	119
Casing, 8-inch to 109 ft. Screen 109 to 119 ft. SWL 85 ft. Pumped 4 hrs at 300 gpm, dd 5 ft.		
Well 18/1W-22N3		
Gordon Willie. On northwest side of Hicks Lake. Altitude about 185 feet. Drilled by Patterson, 1950.		
Sand	48	48
Clay, blue	3	51
Sand, fine	9	60
Sand	17	77
Sand, water-bearing	17	94
Sand, fine	9	103
Casing, 6-inch to 85 ft. Screen 85 to 96 ft. SWL 26.5 ft. Bailed 37 gpm, dd 8 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-25L1		
N. M. Draper. About 0.5 mile east of Long Lake. Altitude about 175 feet. Drilled by Patterson, 1952.		
Dug well	26	26
Gravel	4	30
Gravel, clay and sand	13	43
Sand, gravel and clay	16	59
Casing, 10-inch to 45 ft. Screen 46 to 59 ft.		
Well 18/1W-26A1		
Warren E. Dexter. About 0.5 mile east of Long Lake. Altitude about 200 feet. Drilled by Patterson, 1953.		
Sand	50	50
Gravel, cemented	3	53
Gravel, sand	22	75
Gravel, cemented	3	78
Gravel	5	83
Gravel, cemented, sand	2	85
Gravel and sand	4	89
Casing, 6-inch to 89 ft. SWL 64 ft. Bailed 5 gpm, dd 16 ft.		
Well 18/1W-26F1		
United Brotherhood of Carpenters. East side of Long Lake. Altitude about 200 feet. Drilled by Patterson, 1952.		
Sand	39	39
Sand and gravel	34	73
Sand and gravel; water-bearing	17	90
Sand	1	91
Casing, 6-inch to 86 ft. Screen 86 to 91 ft. SWL 63.5 ft. Pumped 4½ hrs at 70 gpm, dd 6 ft.		
Well 18/1W-26N1		
Huntamer's Water Service, Inc. At south end of Long Lake. Altitude about 175 feet. Drilled by Mykol, 1957.		
Gravel and sand	42	42
Hardpan	16	58
Gravel, sand; water-bearing	3	61
Hardpan	12	73
Sand, water-bearing	5	78
Sand, packed, and clay	2	80
Gravel, water-bearing	5	85
Casing, 8-inch to 80 ft. Screen 80 to 85 ft. SWL 33.5 ft. Tested 4 hrs at 50 gpm, dd 36 ft. (Well reportedly has been deepened to 160 ft.)		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-28B4		
J. M. Brewington. About 0.3 mile west of Hicks Lake. Altitude about 200 feet. Drilled by Patterson, 1957.		
Topsoil	5	5
Sand, clay	13	18
Sand, clay, gravel	8	26
Clay, sand, gravel	19	45
Sand	20	65
Clay, brown	1	66
Sand and gravel	5	71
Gravel and sand	7	78
Casing, 6-inch to 78 ft. SWL 40 ft. Bailed 19 gpm, dd 3 ft.		
Well 18/1W-28D1		
J. K. Pulliam. About 0.35 mile east of Chambers Lake. Altitude about 215 feet. Drilled by Patterson, 1951.		
Clay, sand	3	3
Gravel, coarse	27	30
Gravel	30	60
Gravel, cemented	10	70
Gravel and rocks	6	76
Casing, 6-inch to 75 ft. SWL 48 ft. Bailed 624 gph, dd 13 ft.		
Well 18/1W-28P1		
Ervin A. Jackson. About 0.65 mile northwest of Southwick Lake. Altitude about 225 feet. Drilled by Richardson, 1951.		
Clay, yellow, and gravel	8	8
Hardpan	9	17
Clay, yellow, sand and gravel	10	27
Hardpan	4	31
Clay, sand and gravel	34	65
Sand, fine, and gravel	6	71
Sand, fine, and less gravel	2	73
Clay, yellow, sand and gravel	5	78
Sand, fine and coarse, and gravel	5	83
Sand, fine	2	85
Sand, fine and coarse, and gravel (heaving)	20	105
Clay, coarse sand, and gravel	4	109
Clay, blue, and gravel	3	112
Sand and gravel, pieces of wood	6	118
Sand, coarse, and gravel	3	121
Casing, 10-inch to 121 ft; perforated 60 to 63 ft, 70 to 75 ft, 82 to 89 ft, 90 to 110 ft and 115 to 118 ft. SWL 54 ft. Tested at 160 gpm, dd 7 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-29M1		
John Morris. About 0.2 mile south of Chambers Lake. Altitude about 200 feet. Drilled by Patterson, 1957.		
Topsoil	1	1
Clay, sand	29	30
Sand, clay	4	34
Clay, blue, and sand	33	67
Gravel and clay	2	69
Gravel, cemented	39	108
Gravel, sand, clay	10	118
Casing, 6-inch to 121 ft; perforated 107 to 117 ft. SWL 49.5 ft. Bailed 20 gpm, dd 63 ft.		
Well 18/1W-30B2		
Stanley Megireron. About 0.5 mile west of Chambers Lake. Altitude about 275 feet. Drilled by Patterson, 1952.		
Topsoil	2	2
Gravel, cemented	33	35
Gravel, sand, clay	30	65
Sand, gravel, clay	3	68
Sand, clay, gravel	11	79
Gravel, sand, clay	29	108
Casing, 6-inch to 104 ft. SWL 78 ft. Bailed 10 gpm, dd 17.5 ft.		
Well 18/1W-30F1		
Kieth Bell. About 0.6 mile west of Chambers Lake. Altitude about 250 feet. Drilled by Tacoma Pump and Well Drilling Company, 1957.		
Topsoil	1	1
Gravel, dry	48	49
Sand, dry	20	69
Sand, fine; water-bearing	28	97
Sand and gravel, cemented	6	103
Gravel, cemented	7	110
Clay, sandy	13	123
Sand, fine, some gravel	11	134
Clay, sandy	3	137
Sand, fine	42	179
Clay	3	182
Gravel, cemented	21	203
Clay, sandy, dry	31	234
Gravel, coarse; water-bearing	3	237
Casing, 10-inch to 237 ft; perforated 185 to 200 ft. SWL 111 ft. Tested 6½ hrs at 156 gpm, dd 24 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-31F2		
C. H. Morris. About 0.5 mile east of Hewitt Lake. Altitude about 200 feet. Drilled by Sylte, 1957.		
Sand topsoil	5	5
Sand, fine	20	25
Sand, dry, and gravel	20	45
Gravel, cemented	16	61
Gravel, water-bearing	2	63
Gravel, cemented	6	69
Sand, muddy, blue (heaving)	16	85
Hardpan	20	105
Sand, clay	10	115
Sand, fine brown	7	122
Gravel, cemented	2	124
Sand, water	1	125
Gravel, cemented	41	166
Clay, blue	37	203
Clay, sandy	12	215
(Swamp gas 208 to 213 ft)		
Sand, very fine; water-bearing	16	231
Peat and clay	2	233
Sand, very fine; water-bearing	2	235
Sand, hard-packed,muddy	10	245
Sand, heave	5	250
Sand, very fine; water-bearing	2	252
Sand, heave	11	263
Sand, fine; water-bearing	2	265
Silt, dry	1	266
Quicksand	15	281
Sand, fine; water-bearing	1	282
Silt, peat and sand	3	285
Clay and sand	21	306
Sand, fine; water-bearing	7	313
Sand, muddy and some pea gravel; water-bearing	12	325

Casing, 10-inch. Well has not been used, may have too many fine-grained sediments.

Well 18/1W-31K2

Philip H. Evans. About 0.9 mile east of Hewitt Lake. Altitude about 200 feet. Drilled by A. P. Graf, 1951.

Topsoil	2	2
Sand, brown, and clay	26	28
Sand, brown, and gravel	37	65
Gravel, water-bearing	6	71

Casing, 8-inch to 71 ft. SWL 22 ft. Bailed 60 gpm, dd 8 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-31N1		
Edward W. Ashburn. About 0.35 mile east of Hewitt Lake. Altitude about 198 feet. Drilled by Day, 1950.		
Sand and clay seams	80	80
Gravel, cemented	15	95
Sand and gravel; water-bearing	35	130
Gravel, water-bearing	5	135
Casing, 8-inch to 135 ft; perforated 85 to 135 ft. SWL 50 ft. Tested at 150 gpm, dd 17 ft.		
Well 18/1W-31N2		
Edward W. Ashburn. About 0.2 mile south of 31N1. Altitude about 190 feet. Drilled by A. P. Graf, 1953.		
Topsoil	2	2
Sand, brown	28	30
Sand and 10% gravel; water-bearing	4	34
Gravel and sand	18	52
Gravel, coarse, and sand	10	62
Gravel, water-bearing	6	68
Sand	5	73
Clay	8	81
Hardpan	9	90
Gravel and layers of clay	11	101
Gravel, clay; water-bearing	25	126
Gravel, very coarse; water-bearing	3	129
Clay and gravel	1	130
Casing, 10-inch to 130 ft; perforated 63 to 68 ft, 77 to 84 ft, 90 to 126 ft, and 126 to 129 ft. SWL 12 ft. Pumped 4 hrs at 285 gpm, dd 33 ft.		
Well 18/1W-31Q2		
H. L. James. About 2.4 miles northeast of East Olympia. Altitude about 195 feet. Drilled by A. P. Graf, 1953.		
Topsoil	2	2
Sand, brown	41	43
Sand, coarse, and gravel; water-bearing	6	49
Casing, 8-inch to 49 ft.		
Well 18/1W-31R1		
Joseph Strobl. About 1 mile southeasterly from Hewitt Lake. Altitude about 202 feet. Drilled by Patterson, 1952.		
Sand	8	8
Gravel, sand, clay	32	40
Sand	20	60
Sand, blue	38	98
Gravel, sand	4	102
Casing, 6-inch to 99 ft. SWL 29.1 ft. Bailed 20 gpm, dd 57.2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-32J1		
Robert H. Wohleb. About 0.9 mile west of Southwick Lake. Altitude about 200 feet. Drilled by Patterson, 1956.		
Gravel, cemented, sand	40	40
Sand, gravel, clay	23	63
Sand, gravel, hard clay	2	65
Sand, gravel, clay	5	70
Sand	30	100
Sand, fine to coarse	10	110
Sand, clay	5	115
Sand, gravel	13	128
Sand, gravel, some clay	48	176
Casing, 6-inch 25 to 142 ft; 5-inch 138 to 176 ft; perforated 142 to 176 ft. SWL 34 ft. Bailed 57 gpm, dd 7 ft.		
Well 18/1W-32P1		
Lewis W. Young. About 2.1 miles north of East Olympia. Altitude about 200 feet. Drilled by Pete Sylte, 1958.		
Sandy topsoil	5	5
Gravel, cemented	13	18
Gravel, packed, dry	12	30
Sand, fine, muddy; small flow of water	6	36
Gravel and sand, good flow of water	8	44
Sand, fine, brown	11	55
(Fine blue sand at bottom of well)		
Casing, 10-inch to 55 ft; perforated 38 to 44 ft. SWL 25 ft. Bailed 50 gpm, no appreciable dd.		
Well 18/1W-33B1		
Charles Shrewsbury. About 0.2 mile north of Southwick Lake. Altitude about 210 feet. Drilled by Patterson, 1959.		
Sandy loam, black	5	5
Silt, sand, brown	30	35
Gravel, sand	15	50
Sand	8	58
Gravel, sand	2	60
Clay, gravel, sand	6	66
Sand, gravel	9	75
Clay, sand, gravel	24	99
Sand	2	101
Sand, gravel	6	107
Gravel, sand	1	108
Sand, gravel	10	118
Casing, 8-inch to 98 ft; 6-inch 96 to 118 ft; perforated 96 to 118 ft. SWL 40 ft. Pumped 4 hrs at 115 gpm, dd 32.8 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/1W-33G2		
Ervin Jackson. About 0.15 mile west of Southwick Lake. Altitude about 198 feet. Drilled by Kincy Hardware, 1959.		
Sand, black	30	30
Sand, yellow	15	45
Gravel, dry	3	48
Quicksand, water-bearing	10	58
Sand, gravel, dry	12	70
Gravel, water-bearing	5	75
Gravel, cemented	10	85
Sand, gravel	17	102
Casing, 8-inch to 85 ft; 6-inch, perforated 85 to 102 ft.		
Well 18/1W-33R1		
William Lenhart and Hilda Driver. About 2.5 miles northeast of East Olympia. Altitude about 205 feet. Drilled by H. F. Mykol, 1959.		
Sand	17	17
Gravel, packed	11	28
Gravel and soupy sand	9	37
Sand, water-bearing	12	49
Gravel, sand; water-bearing	11	60
Gravel, packed	1	61
Casing, 8-inch to 61 ft. Cement plug 60 to 61 ft.		
Well 18/1W-34M2		
Clem C. Clarke. At southeast end of Southwick Lake. Altitude about 200 feet. Drilled by Patterson, 1953.		
Sand	8	8
Sand, gravel with clay	39	47
Gravel, water-bearing	3	50
Gravel, sand and clay	3	53
Clay, gravel and sand	3	56
Gravel and clay	6	62
Gravel and sand	7	69
Sand, water-bearing	7	76
Casing, 10-inch to 62 ft. Screen 62 to 76 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-1F3		
Richardson Peterson. About 2.5 miles southwest of South Bay. Altitude about 155 feet. Drilled by Patterson, 1958.		
Dug well	11	11
Gravel and clay	27	38
Gravel, clay and sand	6	44
Sand, gravel and clay (50 percent sand)	3	47
Gravel, clay and sand; yield 3 gpm	10	57
Gravel and clay, hard	6	63
Clay and gravel	4	67
Sand, fine, and silt	1	68
Clay, brown, and sand	11	79
Casing, 6-inch to 55 ft. Originally drilled 79 ft, pulled casing back to 55 ft. SWL 16 ft. Bailed dry at 4 gpm.		
Well 18/2W-1J1		
Lorne Berger. About 3 miles northeast of Olympia. Altitude about 150 feet. Drilled by Patterson, 1957.		
Sandy loam	5	5
Sand, clay	24	29
Gravel, blue clay, sand	11	40
Clay, sand, gravel	25	65
Sand, gravel, clay	17	82
Sand, black	6	88
Casing, 6-inch to 88 ft. SWL 10 ft. Bailed 40 gpm, dd 10 ft.		
Well 18/2W-4H2		
Mildred Lemon. About 2.7 miles northwest of Olympia. Altitude about 135 feet. Drilled by Patterson, 1958.		
Sand, clay, gravel	22	22
Sand, clay	102	124
Sand, water-bearing	11	135
Gravel and blue clay at bottom		
Casing, 6-inch to 121 ft. Screen 121 to 135 ft. SWL 55 ft. Bailed dry at 25 gpm. Water quality poor.		
Well 18/2W-5J4		
L. D. Preston. About 3 miles northwest of Olympia. Altitude about 145 feet. Drilled by Patterson, 1954,		
Dug well	30	30
Clay, blue, and sand	3	33
Sand and clay	22	55
Gravel and sand	16	71
Gravel, sand and clay	1	72
Sand and gravel	3	75
Casing, 6-inch to 66 ft. Screen 66 to 71 ft. SWL 16 ft. Bailed 800 gph, dd 16 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-6R1		
F. R. Stockton. About 3.7 miles northwest of Olympia. Altitude about 180 feet. Drilled by Patterson, 1952.		
Dug well	20	20
Gravel and sand	3	23
Clay, gravel and sand	8	31
Sand and clay	1	32
Gravel, cemented	27	59
Gravel and clay	6	65
Clay and sand	3	68
Gravel	5	73
Casing, 6-inch to 73 ft. SWL 56 ft. Bailed 26 gpm, dd 3 ft.		
Well 18/2W-7A1		
Lee Brennan. About 3.5 miles northwest of Olympia. Altitude about 170 feet. Drilled by L. B. Richardson, 1955.		
Dug well	30	30
Hardpan and boulders	10	40
Clay and gravel	6	46
Sand, large gravel	4	50
Casing, 6-inch. SWL 21 ft. Bailed 50 gpm, dd 10 ft.		
Well 18/2W-7J2		
Lawrence D. Craven. About 3.5 miles west northwest of Olympia. Altitude about 145 feet. Drilled by Patterson, 1958.		
Topsoil and clay	15	15
Sand, gravel, hard clay	75	90
Sand	6	96
Gravel	2	98
Clay, blue	5	103
Casing, 6-inch to 97 ft. SWL 83 ft. Bailed 25 gpm, dd 5 ft.		
Well 18/2W-7L1		
V. H. Clark. About 3.5 miles west northwest of Olympia. Altitude about 130 feet. Drilled by Patterson, 1959.		
Dug	15	15
Gravel and hard clay	13	28
Gravel, clay and sand	9	37
Gravel, clay	25	62
Gravel, clay, sand	6	68
Gravel and sand; water-bearing	12	80
Casing, 6-inch to 80 ft. SWL 57 ft. Bailed 20 gpm, dd 3 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-7R1		
L. D. Ziegler. About 3.5 miles west of Olympia. Altitude about 178 feet. Drilled by J. P. Davidson, 1951.		
Topsoil	4	4
Sand and gravel	31	35
Hardpan with layers of sand and gravel	51	86
Sand, water-bearing	16	102
Hardpan	7	109
Sand, water-bearing	9	118
Sand, coarse, and gravel	7	125
Casing, 8-inch to 120 ft. Screen 120 to 125 ft. SWL 80 ft. Tested for 8 hrs at 30 gpm, dd about 20 ft.		
Well 18/2W-8M2		
Horace James. About 3.3 miles west northwest of Olympia. Altitude about 155 feet. Drilled by Patterson, 1956.		
Clay and sand	15	15
Clay and gravel	7	22
Gravel, sand and clay	3	25
Gravel, cemented	10	35
Clay, sand and gravel	29	64
Gravel, cemented	19	83
Gravel and sand	10	93
Sand and gravel	2	95
Casing, 6-inch to 93 ft. SWL 74 ft. Bailed 20 gpm, dd 3 ft.		
Well 18/2W-8Q1		
C. R. Daugherty. About 3 miles west of Olympia on Kaiser Road. Altitude about 145 feet. Drilled by Patterson, 1951.		
Sand and clay	4	4
Gravel, cemented	35	39
Gravel and clay	10	49
Gravel, water-bearing	3	52
Gravel, cemented	7	59
Gravel and sand	6	65
Casing, 6-inch to 66 ft. SWL 40.4 ft. Bailed 1,240 gph, dd 5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-8R3		
O. B. Ferguson, formerly E. B. King. About 2.4 miles west of Olympia. Altitude about 155 feet. Drilled by Patterson, 1952.		
Sand and clay	5	5
Gravel, cemented	44	49
Sand, gravel and clay	3	52
Gravel, cemented	18	70
Gravel	2	72
Gravel, cemented	3	75
Gravel, sand and clay	2	77
Gravel	14	91
Casing, 6-inch to 90 ft. SWL 68.5 ft. Bailed 1,040 gph, dd 6 ft.		
Well 18/2W-9E1		
Elmer Strand, formerly Elliott. About 2.3 miles northwest of Olympia. Altitude about 290 feet. Drilled by Patterson, 1958.		
Gravel, cemented	6	6
Clay and gravel	6	12
Clay, blue	76	88
Gravel, cemented	47	135
Gravel and clay	9	144
Casing, 6-inch to 144 ft. SWL 131 ft. Bailed 13 gpm, dd 3 ft.		
Well 18/2W-9P2		
Alvin Camus. About 2.1 miles northwest of Olympia on Walnut Road. Altitude about 170 feet. Drilled by Patterson, 1957.		
Clay, gravel	25	25
Sand, clay and gravel	25	50
Gravel, cemented	15	65
Gravel, clay	25	90
Gravel	3	93
Casing, 6-inch to 93 ft. SWL 74 ft. Bailed 17 gpm, dd 2 ft.		
Well 18/2W-13A2		
C. E. Mattern. On east side of Olympia. Altitude about 160 feet. Drilled by Patterson, 1949.		
Clay and sand	26	26
Gravel, cemented	13	39
Gravel	3	42
Casing, 6-inch to 41 ft. SWL 5 ft. Bailed 10 gpm, dd 2.5 ft; bailed 20 gpm, dd 18 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-14E1		
Olympia Shingle Company in Olympia. Altitude about 10 feet. Drilled by Patterson, 1950.		
Sand	18	18
Gravel	4	22
Sand	12	34
Clay, sandy	121	155
Sand, fine	130	285
Sand, coarse; water-bearing	20	305
Casing, 6-inch to 290 ft. Screen 290 to 305 ft. Flowing 25 gpm, 3/2/51.		
Well 18/2W-14M1		
Olympia Lodge 186, B.P.O.E. In Olympia. Altitude about 6 feet. Drilled by Patterson, 1958.		
Gravel and brown clay	1	1
Sand, gray silt, gravel and shells	4	5
Sand, gray silt and some shells	17	22
Gray silt, sand and some gravel	20	42
Silt, gray, gravel and sand	5	47
Clay and gravel	3	50
Sand and some gravel	6	56
Sand, fine, to coarse gravel	4	60
Sand and some gravel	5	65
Clay, blue, and silt	23	88
Casing, 6-inch to 58 ft. Screen 57 to 63 ft. SWL 2 ft. Tested 4 hrs at 85 gpm, dd 11 ft.		
Well 18/2W-14N1		
Northern Pacific Railway Company. In Olympia. Altitude about 10 feet. Drilled, 1930.		
Clay, sandy	20	20
Sand, fine	20	40
Sand, clay	2	42
Sand, fine, quick	118	160
Sand, fine compacted, with trace of clay	20	180
Casing, 3-inch to 180 ft. Flowing well.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-17C1		
Frank Cheadle. About 2.7 miles west of Olympia on Kaiser Road. Altitude about 170 feet. Drilled by Patterson, 1957.		
Topsoil	6	6
Gravel, cemented	14	20
Sand and clay	16	36
Clay, gravel and sand	14	50
Gravel and clay	10	60
Sand and gravel	1	61
Gravel and clay	4	65
Gravel, sand, clay	13	78
Gravel and sand	3	81
Sand and gravel	8	89
Casing, 6-inch to 87 ft. SWL 57 ft. Bailed 1,140 gph, dd 3 ft.		
Well 18/2W-17C2		
Corabelle Slacka. About 2.7 miles west of Olympia. Altitude about 175 feet. Drilled by Patterson.		
Sand, clay	11	11
Gravel, clay	27	38
Gravel, clay, sand	58	96
Gravel, sand, clay	6	102
Sand, clay	14	116
Sand, gravel, clay	12	128
Sand, gravel	8	136
Gravel, sand	3	139
Clay, sand	3	142
Casing, 6-inch to 139 ft. SWL 86 ft.		
Well 18/2W-17J2		
Jack Silva. About 2.1 miles west of Olympia. Altitude about 170 feet. Drilled by Patterson, 1949.		
Dug well	19	19
Gravel, cemented	70	89
Sand and gravel	6	95
Casing, 6-inch to 94 ft. SWL 76.4 ft. Bailed 10 gpm, dd 1 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-17M1		
Grant Dissette. About 3 miles west of Olympia. Altitude about 155 feet. Drilled by Patterson, 1953.		
Clay and sand	3	3
Clay, sand and gravel	12	15
Clay and sand	16	31
Gravel	2	33
Sand and clay	19	52
Gravel, cement	28	80
Clay, yellow	2	82
Clay, blue	3	85
Clay, yellow	2	87
Gravel, cement	6	93
Gravel and sand	4	97
Gravel	3	100
Sand, clay and gravel	5	105
Sand and gravel	17	122
Casing, 6-inch to 121 ft. SWL 99 ft. Bailed 700 gph, dd 10 ft.		
Well 18/2W-17Q1		
Verne Fuhlstrom. About 2 miles west of Olympia. Altitude about 170 feet. Drilled by Keto.		
Gravel and boulders	12	12
Gravel, hard cement	58	70
Sand and gravel	16	86
Gravel, sand	23	109
Sand, hard	19	128
(Water showing 70 to 128 feet)		
Casing, 6-inch.		
Well 18/2W-18F1		
R. L. Eagan. About 3.5 miles west of Olympia. Altitude about 75 feet. Drilled by Patterson, 1959.		
Gravel, fill	6	6
Clay, gravel (hard)	39	45
Clay, gravel (soft)	25	70
Gravel, water-bearing	5	75
Casing, 6-inch to 73 ft. SWL 50 ft. Bailed 17 gpm, dd 16 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-21B2		
Olympia Oil and Wood. About 1.6 miles west of Olympia. Altitude about 145 feet. Drilled by Patterson, 1959.		
Gravel, cemented, and boulders	28	28
Clay	7	35
Sand, gravel, clay; little water	21	56
Clay, blue	19	75
Gravel, cemented	5	80
Clay	5	85
Gravel	2	87
Gravel, cemented	5	92
Sand and gravel	3	95
Gravel and clay	15	110
Gravel	6	116
Clay, blue	9	125
Sand	70	195
Clay, sand, gravel	22	217
Sand and gravel	10	227
Clay, green, and gravel	4	231
Clay and gravel	14	245
Casing, 8-inch to 245 ft; perforated 95 to 118 ft, and 220 to 245 ft. SWL 25 ft. Bailed 60 gpm, dd 25 ft.		
Well 18/2W-26L1		
Olympia Lodge No. 1,F.&A.M. Located east of Tumwater Square. Altitude about 176 feet. Drilled by Patterson, 1954.		
Sand, brown, and clay	36	36
Sand, blue, and clay	18	54
Clay, sand and gravel	60	114
Sand, gravel and clay	18	132
Gravel, sand and clay	8	140
Sand, fine, and clay	8	148
Sand, fine, gravel and clay	4	152
Clay, gravel and sand	3	155
Basalt, gravel and clay	1	156
Basalt	2	158
Casing, 10-inch to 152 ft. Screen 152 to 158 ft. SWL 10.2 ft. Tested at 235 gpm, dd 105 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-31A1		
Eva M. Goldsby. Located on west side of Black Lake. Altitude about 140 feet. Drilled by Patterson, 1958.		
Topsoil	3	3
Clay and sand	13	16
Gravel and clay	19	35
Boulders, gravel and clay	11	46
Clay, brown and gravel	5	51
Clay, yellow and brown	5	56
Clay, yellow	40	96
Basalt		
Casing, 6-inch to 59 ft; perforated 25 to 35 ft. SWL 7 ft. Bailed 2.5 gpm, dd 33 ft. Open hole provides 180 gallon storage.		
Well 18/2W-31P1		
Fred Gideon. Located on west side of Black Lake. Altitude about 165 feet. Drilled by Patterson, 1953.		
Sand and gravel	22	22
Sand and clay	3	25
Sand and gravel	15	40
Gravel and sand	5	45
Casing, 6-inch to 44 ft. SWL 19 ft. Bailed 500 gph, dd 9 ft.		
Well 18/2W-31Q1		
John Grunenfelder. Located on west side of Black Lake. Altitude about 155 feet. Drilled by Patterson, 1958.		
Dug	23	23
Sand and clay	4	27
Gravel and clay (hard)	13	40
Clay, blue, and gravel	3	43
Gravel, sand and clay; yields 300 gph	1	44
Gravel and sand	6	50
Gravel, sand and clay; yields 150 gph	5	55
Gravel, sand and clay; yields 180 gph	3	58
Gravel, sand and clay; yields 900 gph	17	75
Gravel and clay	35	110
Clay, sand and silt	8	118
Gravel and clay	10	128
Casing, 6-inch to 128 ft; perforated 45 to 75 ft. SWL 15 ft. Bailed 24 gpm, dd 25 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-32A5		
R. D. Teague. About 0.7 mile east of Black Lake. Altitude about 185 feet. Drilled by Patterson, 1958.		
Topsoil, black	3	3
Clay and sand	7	10
Gravel, clay and sand	15	25
Sand, some gravel	8	33
Sand and clay	3	36
Gravel and clay; yields 5 gpm	9	45
Gravel and clay	3	48
Gravel, sand and clay	7	55
Casing, 6-inch to 55 ft. SWL 20 ft. Bailed 20 gpm, dd 20 ft.		
Well 18/2W-32E4		
George J. Normoyle. Located on east side of Black Lake. Altitude about 140 feet. Drilled by Kincy Hardware, 1959.		
Topsoil	3	3
Hardpan	67	70
Clay, water-bearing	18	88
Sand, brown, and coarse gravel	1	89
Casing, 6-inch to 89 ft. SWL 7 ft.		
Well 18/2W-32J1		
Bonneville Power Administration. About 0.8 mile east of Black Lake. Altitude about 180 feet. Drilled by Jannsen, 1950.		
Clay and fine sand	23	23
Sand, medium-fine	19	42
Sand, coarse	4	46
Sand, medium and fine	4	50
Gravel, medium	10	60
Sand, coarse and fine gravel	5	65
Casing, 20-inch to 46 ft; 10-inch to 65 ft. SWL 20 ft. Pumped 120 gpm, dd 14 ft.		
Bonneville Power Administration - test drilling		
Clay and fine sand	23	23
Sand, medium-fine	19	42
Sand, coarse	4	46
Sand, medium and fine	4	50
Gravel, fine	10	60
Sand, coarse and fine gravel	6	66
Mud and sand	15	81
Mud and boulders	39	120
Shale, red	8	128
Rock, black	17	145
Shale, dark	55	200
Shale and hard rock	46	246

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-32M1		
A. C. Miller. On east side of Black Lake. Altitude about 145 feet. Drilled by Patterson, 1958.		
Clay, gravel and sand	13	13
Gravel and clay	14	27
Gravel and sand; at 29 ft, yields 20 gpm	5	32
Gravel and clay	11	43
Gravel and clay; yields 5 gpm	7	50
Gravel and clay	4	54
Gravel and clay; yields 5 gpm	12	66
Sand	3	69
Gravel and clay; at 71 ft, yields 21 gpm	7	76
Sand	2	78
Sand and pea gravel	6	84
Pea gravel and sand	5	89
Casing, 6-inch to 88 ft. SWL 16 ft. Bailed 63 gpm, dd 3 ft.		
Well 18/2W-34N1		
Olympia Memorial Gardens. About 0.5 mile west of Tumwater. Altitude about 165 feet. Drilled by H. F. Mykol, 1956.		
Topsoil and sand	2	2
Sand	8	10
Sand, water-bearing	22	32
Sand, gravel; water-bearing	6	38
Casing, 6-inch to 33 ft. Screen 33 to 38 ft. SWL 10 ft. Tested 4 hrs at 50 gpm, dd 23 ft.		
Well 18/2W-35M1		
Town of Tumwater. At South Tumwater. Altitude about 94 feet. Drilled by N. C. Jannsen, 1949.		
Topsoil	2	2
Sand and large gravel	3	5
Clay, blue	10	15
Sand	6	21
Sand and gravel	20	41
Hardpan	18	59
Gravel, large, and sand; water-bearing	30	89
Hardpan	1	90
Casing, 20-inch to 10-inch to 90 ft; perforated 60 to 90 ft. SWL 8 ft. Tested 1,180 gpm, dd 51 ft.		
Well 18/2W-35M2		
Town of Tumwater. Altitude about 105 feet. Drilled in 1938.		
Sand and gravel	6	6
Hardpan	4	10
Sand and gravel	82	92
(Water-bearing formation encountered at 70 feet; well bottoms in hard formation.)		
Casing, 12-inch to 92 ft; perforated 80 to 92 ft. SWL 8 ft. Tested at 350 gpm, dd 30 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/2W-35M3		
Town of Tumwater. Altitude about 105 feet. Drilled in 1944.		
Sand and gravel	6	6
Hardpan	4	10
Sand and gravel	86	96
(Water-bearing formation encountered at 70 feet, but no hard formation at bottom.)		
Casing, 12-inch to 96 ft; perforated 84 to 96 ft. SWL 8 ft. Tested at 250 gpm, dd 53 ft.		
Well 18/2W-35M4		
Town of Tumwater. Altitude about 105 feet. Drilled by N. C. Jannsen.		
Topsoil	2	2
Sand and large gravel	3	5
Clay, blue	10	15
Sand	6	21
Sand and gravel	20	41
Hardpan	18	59
Gravel, large, and sand; water-bearing	30	89
Hardpan	1	90
Casing, 20-inch to 56 ft; 10-inch to 90 ft. Perforated 60 to 90 ft. SWL 8 ft. Tested at 1,180 gpm, dd 51 ft.		
Well 18/2W-36J1		
Edward W. Ashburn. About 2.5 miles southwest of Tumwater. Altitude about 200 feet. Drilled by Sylte, 1956.		
Sand	19	19
Gravel, cemented, and sand	6	25
Sand, dry, and gravel	47	72
Gravel, good flow of water	11	83
Gravel, cemented	20	103
Gravel and clay	6	109
Gravel, cemented	13	122
Sand, gravel and clay, small flow of water	5	127
Gravel and sand, fair flow of water	14	141
Casing, 10-inch to 141 ft; perforated 71 to 83, and 122 to 144 ft. SWL 61.6 ft. Tested 4 hrs at 700 gpm, dd 3.4 ft.		
Well 18/3W-1D2		
Reve D. Phillips and L. C. Voight. About 0.5 mile east of Griffin School. Altitude about 10 feet. Drilled by Patterson, 1946.		
Gravel, light, cemented, and clay	59	59
Gravel and some sand; water-bearing	6	65
Casing, 6-inch to 59 ft. Screen 60 to 65 ft. Well flows 30 gpm, at high tide.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/3W-2G3		
Madrona Beach Water Association. About 0.5 mile south of Griffin School. Altitude about 110 feet. Drilled by Patterson, 1959.		
Clay, sand, gravel	25	25
Clay, sand	5	30
Clay, sand, gravel	18	48
Sand, clay	16	64
Clay, gravel, sand	14	78
Clay	5	83
Sand, gravel, clay	32	115
Sand, cemented, gravel	5	120
Gravel, sand	2	122
Clay, blue	11	133
Gravel	1	134
Clay, blue	3	137
Basalt	9	146
Casing, 6-inch to 139 ft; perforated 75 to 135 ft. SWL 109 ft. Tested 4 hrs at 45 gpm, dd 20 ft.		
Well 18/3W-2H2		
Lionel W. Sexton. About 0.3 mile east of Griffin School. Altitude about 6 feet. Drilled by Patterson, 1955.		
Gravel, clay and sand	19	19
Gravel and sand	4	23
Sand and clay	27	50
Sand, coarse	11	61
Gravel and sand	1	62
Sand and gravel	1	63
Gravel and sand	8	71
Casing, 8-inch to 71 ft.		
Well 18/3W-24H1		
Haydn H. Hilling. About 4.3 miles west of Olympia. Altitude about 15 feet. Drilled by A. P. Graf, 1953.		
Clay	7	7
Hardpan	11	18
Clay, blue, fine sandy	28	46
Sand, fine, some water	6	52
Clay, blue	127	179
Gravel, some clay	2	181
Gravel and sand; water-bearing	22	203
Hardpan	2	205
Gravel and sand; water-bearing	2	207
Hardpan		
Casing, 10-inch to 207 ft; perforated 180 to 202 ft. Flowing well 16 to 40 gpm. Tested 4 hrs at 300 gpm, dd 17 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 18/3W-25A1		
Walter Austin. About 4.5 miles southwest of Olympia. Altitude about 25 feet. Drilled by Patterson.		
Clay, sand	4	4
Clay, yellow	16	20
Clay, blue	35	55
Clay, fine sand	63	118
Clay, medium sand	8	126
Gravel, coarse sand	5	131
Casing, 6-inch to 131 ft. Flowing well. Bailed 13 gpm, dd 19 ft.		
Well 18/4W-9M1		
Walter Bourgalt. About 0.10 mile east of Grays Harbor - Thurston County Line. Altitude about 360 feet. Drilled by O. E. Erdman, 1949.		
Clay and gravel	15	15
Gravel, water-bearing	21	36
Casing, 8-inch to 36 ft; perforated 23 to 35 ft. SWL 12 ft. Tested at 200 gpm, dd 5 ft.		
Well 19/1-30M1		
C. P. Foreman. About 2.9 miles north of Freeway. Altitude about 55 feet. Drilled by Patterson, 1954.		
Clay and gravel	34	34
Clay and sand	17	51
Clay	19	70
Gravel and sand	3	73
Casing, 6-inch to 72 ft. SWL 40 ft. Bailed 20 gpm, dd 12 ft.		
Well 19/1W-4H2		
A. M. Buell. About 0.2 mile east of Baird Cove. Altitude about 10 feet. Drilled by Patterson, 1954.		
Clay, brown	4	4
Clay, boulders, brown	4	8
Clay, brown, gravel	17	25
Gravel, brown clay	20	45
Sand, brown clay, gravel	3	48
Sand, gravel, brown clay	6	54
Gravel, sand, brown clay	3	57
Brown clay, sand, gravel	1	58
Gravel, sand	1	59
Casing, 6-inch to 59 ft. SWL 46 ft. Bailed 18 gpm, dd 5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-4J2		
Axel Wakkures. About 0.2 mile southeast of H2. Altitude about 50 feet. Drilled by Patterson, 1957.		
Sand and gravel	8	8
Gravel and clay	8	16
Gravel, cemented, hardpan	31	47
Gravel, clay	13	60
Sand	5	65
Gravel	1	66
Casing, 6-inch.		
Well 19/1W-5H1		
Stuart E. Shumway. About 1 mile southwest of Johnson Point. Altitude about 60 feet. Drilled by Patterson, 1949.		
Sand and clay	26	26
Gravel, cemented, hardpan	9	35
Sand, clay, and gravel	55	90
Sand	9	99
Casing, 6-inch to 95 ft. Screen 95 to 99 ft. SWL 57.5 ft. Pumped 5 gpm, dd 5 ft.		
Well 19/1W-5H2		
A. E. Zittel. North of H1. Altitude about 60 feet. Drilled by Patterson, 1955.		
Clay	32	32
Gravel, cemented, hardpan	31	63
Gravel, blue clay	19	82
Clay, blue, gravel	3	85
Gravel, clay	3	88
Sand, blue, gravel	5	93
Casing, 5¼-inch.		
Well 19/1W-5H3		
S. E. Ailbin. North of Well H2. Altitude about 60 feet. Drilled by Patterson, 1951.		
Clay	12	12
Gravel, cemented, hardpan	10	22
Sand, gravel, clay	51	73
Clay, blue	6	79
Sand, gravel, clay	3	82
Sand, gravel; water-bearing	6	88
Casing, 6-inch to 87 ft. SWL 64 ft. Bailed 20 gpm, dd 11 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)

Well 19/1W-5J2

W. S. Walter. About 1.3 miles southwest of Johnson Point. Altitude about 40 feet. Drilled by Patterson.

Clay, gravel	15	15
Gravel, clay	15	30
Gravel, clay, sand	16	46
Gravel, cemented	4	50
Sand, clay, gravel	16	66
Clay, blue, gravel	8	74
Sand, blue clay, gravel; water-bearing	7	81
Clay, blue, gravel	5	86
Sand, blue clay, gravel	1	87
Clay, blue	6	93

Casing, 11½-inch to 75 ft. SWL 35 ft. Bailed 4 gpm, dd 31 ft.

Well 19/1W-6J1

Leo V. Smith. Located near Dickenson Point. Altitude about 35 feet. Drilled by Patterson, 1953.

Clay, brown	9	9
Gravel and clay	21	30
Clay, blue	35	65
Clay, blue, and sand	5	70
Clay, blue	40	110
Clay, blue, and sand	5	115
Sand and blue clay	12	127
Clay, blue	23	150

Casing, 6-inch to 108 ft. SWL 51 ft. Bailed dry at 0.5 gpm. Drilled 150 feet. Driller put down 728 ft hole about 100 ft NW of this well, but never penetrated the blue clay.

Well 19/1W-8H1

Ossie Tranum. About 2 miles south of Johnson Point. Altitude about 45 feet. Drilled by Patterson, 1958.

Clay, brown, gravel, sand	35	35
Gravel, cemented, hardpan	20	55
Clay, brown, with gravel (water at 63 ft)	8	63
Sand, fine to medium	5	68
Sand, coarser, gravel	7	75
Sand and gravel	3	78
Sand and less gravel	1	79

Casing, 6-inch to 79 ft. SWL 42 ft. Bailed 19 gpm, dd 3 ft. (Driller reports yield could be increased considerably if screen were inserted from 68 to 78 ft.)

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-9D1		
Alvin W. Huber. About 1.8 miles south of Johnson Point. Altitude about 165 feet. Drilled by Patterson, 1951.		
Topsoil	2	2
Gravel, cemented	18	20
Gravel, sand and clay	7	27
Sand, gravel and clay	8	35
Sand, fine	9	44
Clay, blue	71	115
Sand, clay and gravel	5	120
Casing, 6-inch to 116 ft. Screen 116 to 120 ft.		
Well 19/1W-9Q1		
Ralph Zink. About 2.3 miles southeast of Johnson Point. Altitude about 160 feet. Drilled by Patterson, 1952.		
No record	34	34
Gravel, cemented	2	36
Clay, sand	7	43
Gravel, cemented	8	51
Gravel	3	54
Casing, 6-inch to 54 ft. SWL 30 ft. Bailed 18 gpm, dd 9 ft.		
Well 19/1W-15K2		
Kathryn Allard. About 3.5 miles south of Johnson Point. Altitude about 75 feet.		
Topsoil	1	1
Clay and sand	12	13
Clay, gravel and sand	13	26
Sand and brown clay	51	77
Clay, brown, and sand	22	99
Sand and clay	11	110
Sand	3	113
Clay, brown, and sand	25	138
Sand	9	147
Casing, 6-inch to 141 ft. Screen 141 to 147 ft. SWL 82 ft. Bailed 9 gpm, dd 45 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-17M1		
Weyerhaeuser Company. About 3.1 miles north of South Bay on Woodward Bay. Altitude about 12 feet feet. Drilled by N. C. Jannsen, 1928.		
Sand	28	28
Sand and gravel	17	45
Shale (clay or silt), blue, some gravel	50	95
Sand, running	5	100
Shale, blue, sticky	25	125
Shale, black and blue	15	140
Gravel	3	143
Clay and shale (silt?)	7	150
Clay, shale (silt?); gravel, hard	2	152
Shale (silt?), gray	13	165
Shale (silt?), gray with streaks of sand	35	200
Shale (silt or clay), very hard	10	210
Shale (silt or clay) and gravel	6	216
Sandstone (sand), hard	4	220
Shale (silt?), hard, small pebbles	5	225
Shale (silt?) and sandstone	5	230
Sand, black	37	267
Quicksand	5	272
Sand, some clay	23	295
Clay	9	304
Clay, little sand	4	308
Clay, gray	12	320
Clay, some sand	12	332
Clay, gray	179	511
Sand	10	521
Clay or shale, gray	124	645
Clay, gray, shot with gravel	20	665
Shale (clay)	10	675
Clay, gray, shot with gravel	20	695
Shale (clay)	17	712
Shale (clay) and tuff (?)	7	719
Clay, gray, shot with gravel	9	728
Shale (clay) and tuff(?)	11	739
Shale (clay), gray	68	807
Sand and clay, mostly clay	63	870
Sand, light, running	55	925
Sand and clay	25	950
Sand, running	31	981
Sand, running, with gravel	4	985
Sand, running	5	990
Gravel, small	10	1,000

Casing, 12-inch to 182 ft; 8-inch to 735 ft; 6-inch to 995 ft. Flowing artesian.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-18D1		
P. J. Dorian. About 1.8 miles south of Dickenson Point. Altitude about 110 feet. Drilled by Patterson, 1955.		
Topsoil	1	1
Clay, brown, sand and gravel	10	11
Clay, blue	52	63
Clay, blue, sand and gravel	15	78
Clay, blue, and sand	4	82
Clay, brown, and gravel	14	96
Clay, brown, sand and gravel	18	114
Gravel, cemented	3	117
Gravel and sand	11	128
Casing, 6-inch to 128 ft. SWL 110 ft. Bailed 1,000 gph, dd 3 ft.		
Well 19/1W-20P1		
J. H. Chaffee. About 1.7 miles north of South Bay. Altitude about 110 feet. Drilled by Patterson, 1952.		
No record	40	40
Gravel, cemented	12	52
Clay	19	71
Sand and clay	6	77
Clay, hard	13	90
Sand, clay and peat	3	93
Gravel, cemented	2	95
Sand and clay	5	100
Gravel, cemented	18	118
Gravel, sand and clay	5	123
Gravel	11	134
Casing, 6-inch to 135 ft. SWL 113 ft. Bailed 1,040 gph, dd 6 ft.		
Well 19/1W-20Q1		
Murray Wright. About 1.7 miles north of South Bay. Altitude about 95 feet. Drilled by Patterson, 1954.		
Clay, brown, and sand	15	15
Sand and clay	10	25
Sand and gravel	3	28
Clay, brown, and gravel	12	40
Clay, blue, and sand	13	53
Sand and clay	22	75
Gravel, cemented	5	80
Sand, gravel and clay	25	105
Gravel and sand	11	116
Casing, 6-inch to 116 ft. SWL 96 ft. Bailed 25 gpm, dd 5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-21H1		
L. M. Wright. About 2 miles north of South Bay. Altitude about 140 feet. Drilled by Patterson, 1952.		
Clay and sand	4	4
Gravel, cemented	39	43
Gravel and clay	10	53
Sand and clay	34	87
Clay	13	100
Sand, little clay	12	112
Casing, 6-inch to 107 ft. Screen 107 to 112 ft. SWL 80 ft. Bailed 26 gpm, dd 10 ft.		
Well 19/1W-22K1		
H. E. Patterson. About 4.3 miles southeast of Johnson Point. Altitude about 150 feet. Drilled by Patterson, 1947.		
Sand, gravel, topsoil	4	4
Cement, blue, hardpan	90	94
Sand	56	150
Casing, 6-inch.		
Well 19/1W-28C1		
Walter R. Hansen. About 1.5 miles north of South Bay. Altitude about 165 feet. Drilled by Patterson, 1952.		
Topsoil	5	5
Gravel, cemented	72	77
Sand and clay	35	112
Sand	21	133
Casing, 6-inch to 128 ft. Screen 128 to 133 ft. SWL 112 ft. Bailed 10 gpm, dd 3 ft.		
Well 19/1W-30A1		
C. O. Akehurst, formerly Hockhalter. About 6.5 miles northeast of Olympia. Altitude about 140 feet. Drilled by J. P. Davidson, 1946.		
Topsoil, some gravel	12	12
Hardpan and clay, intermittent layers	28	40
Clay, blue, some sand, mixed with clay	15	55
Hardpan and clay, layers	8	63
Sand, water-bearing, small amount	23	86
Casing, 6-inch to 80 ft. Screen 80 to 85 ft. SWL 60 ft. Tested at 48 gpm, dd 20 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-30H2		
George Stohl. About 1.5 miles north of South Bay. Altitude about 125 feet. Drilled by Patterson, 1959.		
Clay, brown, and sand	27	27
Clay, blue, sand and silt	28	55
Sand	5	60
Sand, fine, and silt	10	70
Sand	12	82
Sand grading to gravel	9	91
Sand		
Casing, 6-inch to 86 ft. Screen 86 to 91 ft. SWL 36 ft. Bailed 50 gpm, dd 7 ft; 18 gpm, dd 1 ft.		
Well 19/1W-30J1		
Harry Galivan. About 1 mile northwest of South Bay. Altitude about 125 feet. Drilled in 1952.		
Topsoil	10	10
Gravel, cemented	54	64
Gravel, river	3	67
Casing, 6-inch to 67 ft.		
Well 19/1W-30Q2		
R. H. Severance. About 1 mile northwest of South Bay. Altitude about 125 feet. Drilled by Patterson, 1959.		
Clay and sand	22	22
Sand and clay	19	41
Sand and gravel, too much sand; at 40 ft yields 30 gpm	4	45
Sand (active)	14	59
Sand, fine (active--pulled back)	2	61
Casing, 6-inch to 52 ft. Screen 52 to 58 ft. SWL 23 ft. Bailed 30 gpm, dd 5 ft.		
Well 19/1W-31A3		
Arthur Hansen. About 0.6 mile northwest of South Bay on Shincke Road. Altitude about 128 feet. Drilled by Patterson, 1952.		
Sand and brown clay	42	42
Clay, blue	48	90
Gravel and sand	5	95
Casing, 6-inch to 95 ft. SWL 41 ft. Bailed 20 gpm, dd 2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-31E1		
H. D. Wright. About 1.5 miles west of South Bay on Libby Road. Altitude about 130 feet. Drilled by Patterson, 1957.		
No record	29	29
Gravel, cemented	10	39
Sand, gravel and clay; yields 3½ gpm at 44 ft	7	46
Sand	2	48
Gravel and clay	7	55
Gravel and sand	3	58
Sand	6	64
Casing, 6-inch to 57 ft. SWL 27 ft. Bailed 5 gpm, dd 23 ft.		
Well 19/1W-32N2		
Wallace Lien. About 0.3 mile southwest of South Bay. Altitude about 150 feet. Drilled by Patterson, 1958.		
Gravel and clay	25	25
Clay, gravel and sand	22	47
Gravel, water-bearing	3	50
Clay, gravelly	7	57
Gravel and sand	6	63
Casing, 6-inch to 63 ft. SWL 45 ft. Bailed 17 gpm, dd 1 ft.		
Well 19/1W-32P1		
E. A. Patterson. Located at South Bay. Altitude about 145 feet. Drilled by Patterson, 1959.		
Clay	14	14
Gravel, cemented	42	56
Sand and gravel	5	61
Sand, clay and gravel	7	68
Casing, 6-inch to 68 ft. SWL 53 ft. Bailed 22 gpm, dd 4 ft.		
Well 19/1W-32Q1		
Harry L. Longmire. About 0.2 mile south of South Bay. Altitude about 135 feet. Drilled by G. M. Patterson, 1954.		
Silt and sandy loam	28	28
Clay, blue and sand	2	30
Gravel, cemented	30	60
Gravel, sand and clay	10	70
Gravel, sand	6	76
Sand	4	80
Casing, 8-inch to 75 ft; perforated 63 to 73 ft. SWL 50 ft. Pumped 6 hrs at 100 gpm, dd 4 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/1W-33K1		
Bert Henry. About 1 mile east of South Bay. Altitude about 150 feet. Drilled by H. F. Mykol, 1957.		
Clay	6	6
Hardpan	26	32
Sand	68	100
Casing, 6-inch to 95 ft. Screen 95 to 100 ft.		
Well 19/2W-3F1		
Warren S. Riggen. About 1.7 miles southeast of Steamboat Island. Altitude about 30 feet. Drilled by Patterson.		
Clay, blue	95	95
Sand and gravel	21	116
Casing, 6-inch to 110 ft. SWL 29 ft. Bailed 20 gpm, dd 18 ft.		
Well 19/2W-4F3		
Vincent D. Crawford. About 1.4 miles south of Steamboat Island. Altitude about 115 feet. Drilled by Evergreen Drilling Company, 1959.		
Clay, blue	36	36
Gravel	6	42
Sand, clay, blue	52	94
Hardpan	20	114
Clay, blue	28	142
Sand and some gravel; water-bearing	14	156
Casing, 6-inch to 156 ft; perforated 150 to 154 ft. SWL 110 ft. Tested for 8 hrs at 20 gpm, dd 20 ft.		
Well 19/2W-8J1		
John Riedel. About 0.7 mile west of Sanderson Harbor. Altitude about 110 feet. Dug well.		
Topsoil, and sand and gravel	4	4
Hardpan	44	48
Sand	1	49
Casing, 48-inch (square) to 4 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-9A1		
Theodore F. Schmidt. About 0.4 mile northeast of Sanderson Harbor. Altitude about 110 feet. Drilled by Patterson, 1957.		
Clay	6	6
Sand, clay and gravel	14	20
Sand and clay	29	49
Sand, gravel and clay	7	56
Sand and clay	13	69
Clay, sand and gravel	11	80
Clay and sand	35	115
Sand, gravel and clay	17	132
Gravel and sand	14	146
Sand, gravel, clay	7	153
Sand, blue	10	163
Sand, brown, gravel, clay	3	166
Sand, blue, gravel	24	190
Casing, 6-inch to 180 ft. Screen 179 to 188 ft. SWL 118 ft. Tested 4 hrs at 50 gpm, dd 7 ft.		
Well 19/2W-9R1		
Coopers Point Water Company, Inc. About 0.25 mile south of Cooper Point. Altitude about 10 feet. Drilled by Patterson, 1955.		
Clay and gravel	15	15
Gravel, clay and sand	12	27
Clay and gravel	3	30
Sand and gravel	35	65
Sand, clay and gravel	85	150
Clay, blue and sand	10	160
Clay, brown, and sand	20	180
Clay, blue, and sand	30	210
Gravel, blue clay and sand	10	220
Clay, blue, and sand	36	256
Sand and gravel	5	261
Clay, blue, gravel and sand	13	274
Sand and blue clay	5	279
Sand and gravel	7	286
Clay, blue and sand	13	299
Clay, blue	11	310
Clay, blue and sand	5	315
Clay, blue	6	321
Clay, blue, and sand	4	325
Clay, green	15	340
Clay, blue, and sand	9	349
Sand, blue clay and gravel	5	354
Gravel, clay and sand	6	360
(Clay and sand at 360 ft)		
Casing, 8-inch to 348 ft. Screen 345 to 360 ft. Flowing well.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-9R2		
Coopers Point Water Company, Inc. Old 4-inch well, about 5 feet distant from well 9R1. Not used.		
Gravel, cemented	30	30
Sand and gravel; water-bearing (salt)	30	60
Clay, blue	270	330
Sand, water-bearing, with thin strata of clay about every 10 feet	130	460
Casing, 4-inch to 330 ft.		
Well 19/2W-11R1		
Joseph Dvorak. Located on east side of Zangle Cove. Altitude about 85 feet. Drilled by Patterson, 1957.		
Clay, brown	6	6
Gravel, brown clay and sand	5	11
Clay, brown	19	30
Clay, brown, and sand	45	75
Clay, blue,and sand	5	80
Clay, blue	20	100
Clay, blue, and silt	15	115
Clay, blue	90	205
Clay, blue,and silt	10	215
Clay, blue	58	273
Clay, blue, and silt	12	285
Clay, blue	105	390
Clay, blue,and sand	15	405
Clay, blue	22	427
Clay, blue,and sand	8	435
Clay, blue	50	485
Clay, hard blue,with sand seams	20	505
Clay, blue	19	524
Gravel and sand		
Casing, 6-inch to 524 ft. SWL 87 ft. Bailed 1,100 gph, dd 1 ft.		
Well 19/2W-12L1		
L. D. Burrus, H. R. Kruse and Ed Ayer. About 1.1 mile northeast of Boston Harbor. Altitude about 125 feet. Drilled by Patterson, 1953.		
Soil, sand and gravel, clayey	27	27
Clay, blue	471	498
Sand and gravel	15	513
Casing, 6-inch to 497 ft. Screen 497 to 513 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-13N1		
Andy Mathis. About 1 mile southeast of Boston Harbor. Altitude about 150 feet. Drilled by Patterson, 1959.		
Clay and sand	10	10
Sand, gravel and clay	58	68
Sand, fine	26	94
Casing, 6-inch to 90 ft. Screen 90 to 94 ft. SWL 68 ft. Bailed 20 gpm, dd 7 ft.		
Well 19/2W-14N1		
Ralph Conner. About 0.5 mile south of Boston Harbor. Altitude about 75 feet. Drilled by Patterson, 1958.		
Clay, brown	22	22
Clay, blue, and gravel	7	29
Clay, brown, and sand	13	42
Clay, gravel and sand	11	53
Gravel and clay	23	76
Gravel, sand and clay; yield 2 gpm	10	86
Gravel and sand	3	89
Casing, 6-inch to 89 ft. SWL 69 ft. Bailed 15 gpm, dd 3 ft.		
Well 19/2W-14R1		
Emrey Stone. About 1 mile southeast of Boston Harbor. Altitude about 160 feet. Drilled by Patterson, 1951.		
Gravel, clay and sand	48	48
Sand, clay and gravel	2	50
Gravel, clay and sand	30	80
Clay and fine sand	43	123
Sand, fine	10	133
Casing, 6-inch, set to 128 feet. Screen 128 to 133 ft. SWL 84 ft. Bailed 29 gpm, dd 43 ft.		
Well 19/2W-15N1		
Clearwell Water Company. About 1.3 miles south of Cooper Point. Altitude about 80 feet. Drilled by Patterson, 1955.		
Clay, brown, gravel	25	25
Clay, gravel, sand	24	49
Clay, blue, and sand	13	62
Sand, fine, silt	17	79
Clay, gravel	6	85
Clay, gravel, sand	13	98
Clay, gravel	3	101
Gravel, sand	4	105
Gravel, sand, clay	3	108
Gravel, sand	9	117
Casing, 6-inch to 112 ft. Screen 111 to 117 ft. Bailed 18 gpm, dd 2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-16J1		
Cornelius Reckers. About 1 mile south of Cooper Point. Altitude about 125 feet. Drilled by Patterson, 1955.		
Clay	31	31
Sand, blue, and gravel	28	59
Sand, brown, and gravel	2	61
Gravel, cemented	35	96
Clay and sand	2	98
Gravel, cemented	42	140
Gravel and sand	12	152
Casing, 6-inch to 152 ft. SWL 132 ft. Bailed 18 gpm, dd 3 ft.		
Well 19/2W-16Q2		
D. L. Montgomery. About 1.1 miles south of Cooper Point. Altitude about 135 feet. Drilled by Patterson, 1952.		
Clay and sand	2	2
Clay	13	15
Sand and clay	2	17
Clay	41	58
Gravel, cemented	40	98
Sand and clay	2	100
Gravel, cemented	8	108
Clay	6	114
Gravel, cemented	33	147
Clay and gravel	11	158
Gravel, cemented	11	169
Gravel	2	171
Casing, 6-inch to 172 ft. SWL 145 ft. Bailed 936 gph, dd 10 ft.		
Well 19/2W-18K2		
A. E. Robbins. About 4.2 miles southwest of Steamboat Island. Altitude about 130 feet. Drilled by Patterson, 1951.		
Dug	35	35
Gravel and clay	17	52
Sand and clay	8	60
Silt	48	108
Sand, clay and gravel	2	110
Clay, gravel and sand (hard)	30	140
Clay and gravel	12	152
Sand and gravel	14	166
Casing, 6-inch to 159 ft. Screen 159 to 166 ft. SWL 106 ft. Bailed 10 gpm, dd 21 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-21E1		
R. M. Murray. About 2 miles south of Cooper Point. Altitude about 85 feet. Drilled by Patterson.		
Clay and sand	20	20
Sand and clay	20	40
Clay and gravel	10	50
Clay and sand	15	65
Clay, yellow	10	75
Clay and sand	7	82
Gravel	3	85
Clay, yellow	10	95
Sand, water-bearing	8	103
Sand and clay	7	110
Sand and gravel	8	118
Clay and sand	7	125
Sand and gravel	5	130
Gravel and sand	23	153
Clay and gravel (water-bearing gravel at 155 ft, stopped drilling, water turned salty)		
Gravel and clay	8	163
Gravel	3	166
Sand	39	205
Gravel and sand	11	216
Clay, blue	24	240
Clay and sand	5	245
Clay, blue	51	296
Gravel and sand	11	307
Casing, 6-inch to 306 ft. SWL 75 ft. No pump test, gravel and sand aquifer very active.		
Well 19/2W-21L2		
Frank Mathews. About 2.1 miles south of Cooper Point. Altitude about 20 feet. Drilled by Patterson, 1959.		
Topsoil, sand and gravel	4	4
Sand, clay and gravel	5	9
Sand, clay	27	36
Clay, blue	7	43
Sand and gravel	2	45
Sand, red, and gravel	25	70
Gravel and fine sand; yields 30 gpm at 74 ft	3	73
Gravel, pea	8	81
Sand	2	83
Casing, 6-inch to 77 ft. Screen 77 to 83 ft. SWL 3.8 ft. Bailed 50 gpm, dd 3 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-22E1		
W. B. Webster. About 1.8 miles south of Cooper Point. Altitude about 45 feet. Drilled by Patterson, 1957.		
Clay, sand and gravel	5	5
Clay and sand	21	26
Gravel and clay	11	37
Gravel and sand	2	39
Gravel, clay and sand	1	40
Gravel and sand	14	54
Casing, 6-inch to 54 ft. SWL 35 ft. Bailed 18 gpm, dd 1 ft.		
Well 19/2W-22M5		
W. C. Dillaway. About 1.9 miles south of Cooper Point. Altitude about 55 feet. Drilled by Patterson, 1957.		
Clay and gravel	18	18
Sand and clay	22	40
Gravel and clay	17	57
Gravel and sand	6	63
Sand and gravel	2	65
Casing, 6-inch to 65 ft. SWL 52 ft. Bailed 17 gpm, dd 1 ft.		
Well 19/2W-22N4		
R. G. Hall. About 2.4 miles south of Cooper Point. Altitude about 80 feet. Drilled by Patterson, 1950.		
Clay	8	8
Sand and gravel, cemented	30	38
Gravel and sand	3	41
Clay, blue	11	52
Sand, gravel and clay	15	67
Clay, blue	6	73
Gravel, cemented	20	93
Gravel	9	102
Casing, 6-inch to 102 ft. SWL 86 ft. Bailed 20 gpm, dd 2 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-23Q1		
Olympia Canning Company. Located at Gull Harbor development. Altitude about 15 feet. Drilled well.		
Hardpan	22	22
Sand, fine	153	175
Sand and fine gravel	9	184
Clay, blue	3	187
Sand, red	7	194
Clay, blue	3	197
Sand and fairly coarse gravel	8	205
Sand	5	210
Clay mixed with sand	22	232
Sand	34	266
Clay, sandy	25	291
Sand and gravel, some very coarse	77	268
Sand, very hard packed	17	385
Sharp sand at 385 feet		
Casing, 6-inch to 373 ft; flowing artesian, influenced by tide.		
Well 19/2W-24G1		
T. C. Williams. About 0.65 mile west of Woodward Bay. Altitude about 130 feet. Drilled by J. P. Davidson.		
Clay	7	7
Hardpan	41	48
Sand and gravel	9	57
Sand, fine, and gravel	13	70
(Water started to show at 70 feet)	16	86
Sand, blue, and silt	30	116
Sand and silt, blue mud	4	120
Clay, sandy, and silt	6	126
Clay, dry sandy	13	139
Casing, 8-inch to 139 ft. Drilled ahead to 151 ft and encountered blue sand and silt, water-bearing.		
Well 19/2W-25A1		
G. E. Cummings. About 2.2 miles northwest of South Bay. Altitude about 95 feet. Drilled by Patterson, 1953.		
Clay	12	12
Sand, gravel and clay	7	19
Gravel, cemented	11	30
Sand and gravel	3	33
Sand, fine	8	41
Sand, gravel	10	51
Clay, blue	10	61

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-25A1 - Continued		
Sand, fine	19	80
Sand and clay	2	82
Clay, blue	25	107
Sand, blue, (hard)	11	118
Sand, brown	7	125

Casing, 6-inch to 125 ft. Probably screened 118 to 125 ft. SWL 40 ft. Bailed 800 gph, dd 60 ft; 300 gph, dd 14 ft.

Well 19/2W-25D1

C. P. Seward. About 2.8 miles northwest of South Bay. Altitude about 90 feet. Drilled by Patterson, 1958.

Clay and sand	3	3
Clay and gravel	26	29
Clay, sand and gravel	11	40
Gravel and clay	10	50
Clay and silt	18	68
Gravel, clay and sand	4	72
Gravel and clay	7	79
Sand, clay and gravel	11	90
Sand, brown, and clay	9	99
Sand, gravel and clay	11	110
Sand and clay	13	123

Casing, 6-inch to 118 ft. Screen 118 to 123 ft. SWL 89 ft. Bailed 20 gpm, dd 12 ft.

Well 19/2W-26B1

Marguerite Cushman. About 4 miles north of Olympia. Altitude about 20 feet. Drilled by Patterson, 1952.

Gravel, beach	10	10
Gravel, sand and clay	20	30
Sand	30	60
Sand, blue	27	87
Sand, coarse blue	29	116

Casing, 6-inch to 95 ft. Screen 93 to 115 ft. SWL 1 to 7 ft. Tested at 150 gpm, dd 12 ft.

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-27D1		
William Guffey. About 2.4 miles south of Cooper Point. Altitude about 10 feet. Drilled by Patterson, 1958.		
Fill dirt	6	6
Gravel and clay	4	10
Sand, gravel and clay	5	15
Gravel and clay	3	18
Clay, blue, and sand	10	28
Sand and gravel	6	34
Clay, blue	48	82
Sand, fine to coarse, little gravel	3	85
Sand, gravel and clay	10	95
Sand	6	101
Sand and blue clay	14	115
Sand, fine to medium	4	119
Sand, fine to coarse	2	121
Clay, blue, and silt	12	133
Sand, fine to coarse, some gravel	17	150
Clay, bluish green	3	153
Casing, 6-inch to 140 ft. Screen 140 to 153 ft. SWL varies from flowing well at high tide to 11 ft below datum.		
Well 19/2W-29B2		
C. L. Blackmer. About 5.2 miles north northwest of Olympia. Altitude about 25 feet. Drilled by Patterson, 1957.		
Clay, brown	10	10
Clay and gravel	9	19
Gravel and clay	11	30
Gravel and sand	1	31
Gravel and clay	6	37
Sand and gravel	3	40
Gravel	4	44
Casing, 6-inch to 44 ft. SWL 33 ft. Bailed 10 gpm, dd 6 ft.		
Well 19/2W-33L1		
Gordon R. Searles. About 4 miles south of Cooper Point. Altitude about 155 feet. Drilled by Patterson, 1958.		
Gravel and clay	18	18
Gravel, cemented	12	30
Gravel, cemented, and boulders	20	50
Clay	20	70
Gravel and clay	20	90
Clay and gravel	29	119
Casing, 6-inch to 108 ft. SWL 90 ft. Bailed 10 gpm, dd 5 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/2W-33M2		
Ronald R. Moss. About 3.5 miles northwest of Olympia. Altitude about 135 feet. Drilled by Patterson, 1959.		
Loam, sandy, gravel	6	6
Gravel, clay	18	24
Sand, gravel, clay	2	26
Gravel, cemented	31	57
Sand, gravel, clay	2	59
Gravel, clay	16	75
Silt, contained peat, wood	1	76
Gravel, clay	11	87
Gravel, sand	10	97
Clay, blue	4	101
Casing, 8-inch to 93 ft; 7-inch perforated pipe 91 to 101 ft. SWL 83 ft. Tested 4 hrs at 125 gpm, dd 4.2 ft.		
Well 19/2W-33Q1		
Butler's Cove Water Company. About 3.5 miles northwest of Olympia. Altitude about 10 feet. Drilled by Patterson, 1947.		
Topsoil and gravel	6	6
Gravel, cemented	53	59
Clay and gravel	5	64
Gravel, cemented	7	71
Clay, sandy	21	92
Clay and gravel	13	105
Clay, sandy	4	109
Sand, water-bearing	15	124
Gravel, water-bearing	3	127
Clay and gravel	3	130
Clay, blue	57	187
Sand and gravel; water-bearing	27	214
Sand, water-bearing	46	260
Clay, sandy	5	265
Sand and gravel; water-bearing	21	286
Clay and gravel	3	289
Sand and gravel; water-bearing	74	363
Casing, 8-inch to 333 ft; 5-inch pipe and screens to 358 ft. Flowing 200 gpm on 7/11/47.		
Well 19/3W-13K1		
Justin Taylor. About 0.9 mile southwest of Gallagher Cove on beach. Altitude about 10 feet. Drilled by Fred Martz.		
Hardpan	18	18
Sand, red	30	48
Sand, blue	30	78
Gravel, fine	8	86
Casing, 6-inch.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/3W-13Q1		
H. H. Houston. About 1.1 miles southwest of Gallagher Cove. Altitude about 25 feet. Drilled by Patterson, 1949.		
Sand and gravel	7	7
Gravel, cemented	8	15
Gravel and clay, soft	2	17
Gravel, cemented	7	24
Gravel and clay	13	37
Gravel and clay; water-bearing, water level 15 feet	10	47
Sand, brown, clay and some gravel	13	60
Sand, blue, clay and small gravel	5	65
Sand, blue, and clay	12	77
Sand, blue, clay and fine gravel	13	90
Gravel, clay and blue sand	3	93
Sand, blue, clay and gravel	8	101
Clay, gravel, gray sand	8	109
Sand, gravel, brown clay; water-bearing	3	112
Sand, gravel and clay, gray; water-bearing	9	121
Clay and gravel, hard	1	122
Casing, 8-inch to 112 ft. Screen 112 to 122 ft.		
Well 19/3W-24C1		
Melvin Dobson. About 3 miles north of Griffin School. Altitude about 95 feet. Drilled by Stan J. Pederson, 1960.		
Clay and stones	5	5
Gravel and brown clay	20	25
Clay, brown, and sand	22	47
Sand, beach	29	76
Clay layer, blue, and sand; yields about 200 gph at 85 ft	9	85
Gravel, concrete	35	120
Sand, brown rusty, casing pulled back and screen installed	17	137
Casing, 6-inch to 115 ft. Screen 115 to 120 ft.		
Well 19/3W-27L1		
R. Berg. About 0.1 mile south of Byrns Cove. Altitude about 60 feet. Drilled by A. P. Graf, 1952.		
Clay, brown	25	25
Clay, blue and gravel	10	35
Gravel, coarse, and rock	2	37
Sand, fine (some water)	16	53
Rock and gravel	2	55
Clay, blue	33	88
Gravel, fine blue; water-bearing	9	97
Gravel, coarse loose	6	103
Casing, 8-inch to 103 ft. Perforated 85 to 100 ft. SWL 28 ft. Pumped 4 hrs at 200 gpm, dd 64 ft.		

Table 3 -- Materials penetrated by representative wells. -- Continued

Materials	Thickness (feet)	Depth (feet)
Well 19/3W-35G2		
S. D. Floch. About 0.75 mile north of Griffin School. Altitude about 170 feet. Dug well.		
Clay	10	10
Hardpan	50	60
Sand, fine hard	10	70
Sand, fine, then gravel	6	76
Casing, 48-inch, set to 10 ft.		
Well 19/3W-36A2		
Clyde H. Morris. About 0.6 mile southwest of Youngs Cove. Altitude about 180 feet. Drilled by L. Nelson, 1946.		
Soil (sandy loam)	4	4
Hardpan	14	18
Clay, blue near bottom	20	38
Hardpan	10	48
Gravel, water-bearing	6	54
Hardpan	30	84
Clay, blue, and hardpan	42	126
Gravel, water-bearing	6	132
Casing, 6-inch to 132 ft.		
Well 20/1W-33L2		
Dr. R. C. Brown. At Johnson Point. Altitude about 5 feet. Drilled in 1940.		
Reported miscellaneous information pertaining to drilling of well:		
Salt water to 380 feet (cedar log hit at 370 feet)		
Brackish water below 380 feet		
Shale from 418 to 432 feet		
Fresh water at 432 feet		
Shale from 464 to 484 feet		
Good artesian flow at 485 feet, with blue sand and odor H_2S		
Casing, 5-inch to 485 ft. Flows at high tide. Bailed 100 gpm, dd 40 ft.		
Well 20/2W-28P1		
Steamboat Islanders, Inc. Located on Steamboat Island. Altitude about 10 feet. Drilled by Patterson, 1958.		
Clay, gravel (hard)	20	20
Sand, gravel (salt-water)	230	250
Clay, silt	165	415
Sand, gravel; water-bearing	10	425
Casing, 6-inch to 419 ft. Probably screened 419 to 425 ft. Flowing well. Tested at 100 gpm, dd 2 ft.		

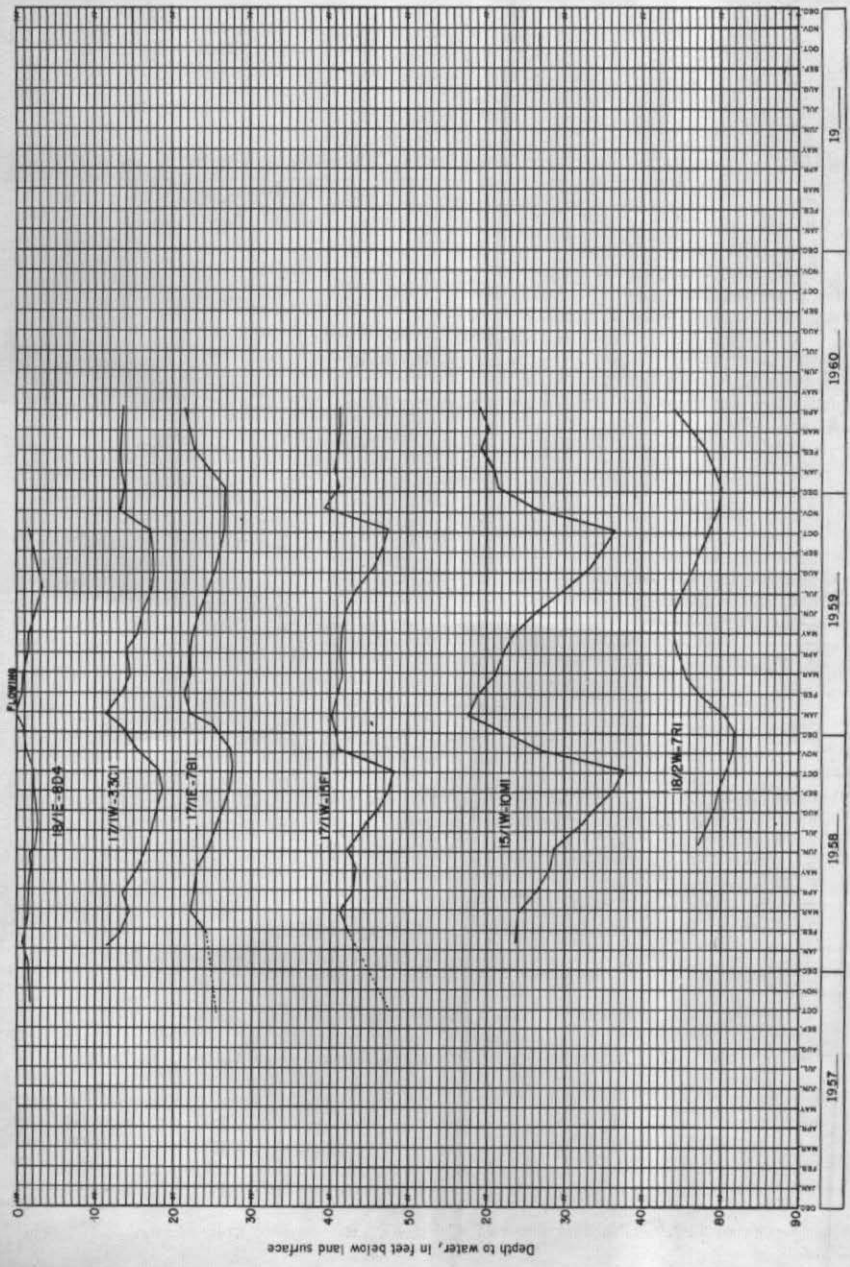

Fig. 1. -- Hydrographs showing fluctuation of water levels in observation wells.

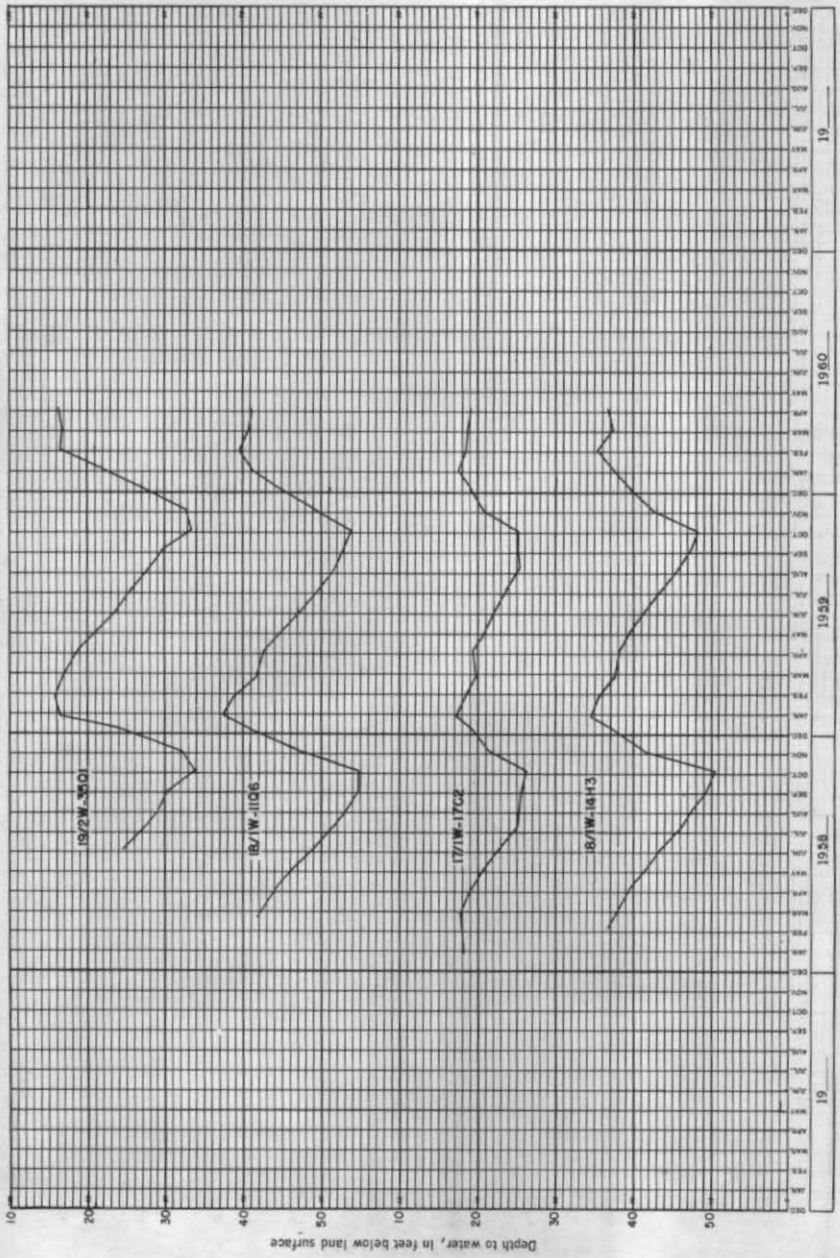

Fig. 2. -- Hydrographs showing fluctuation of water levels in observation wells.

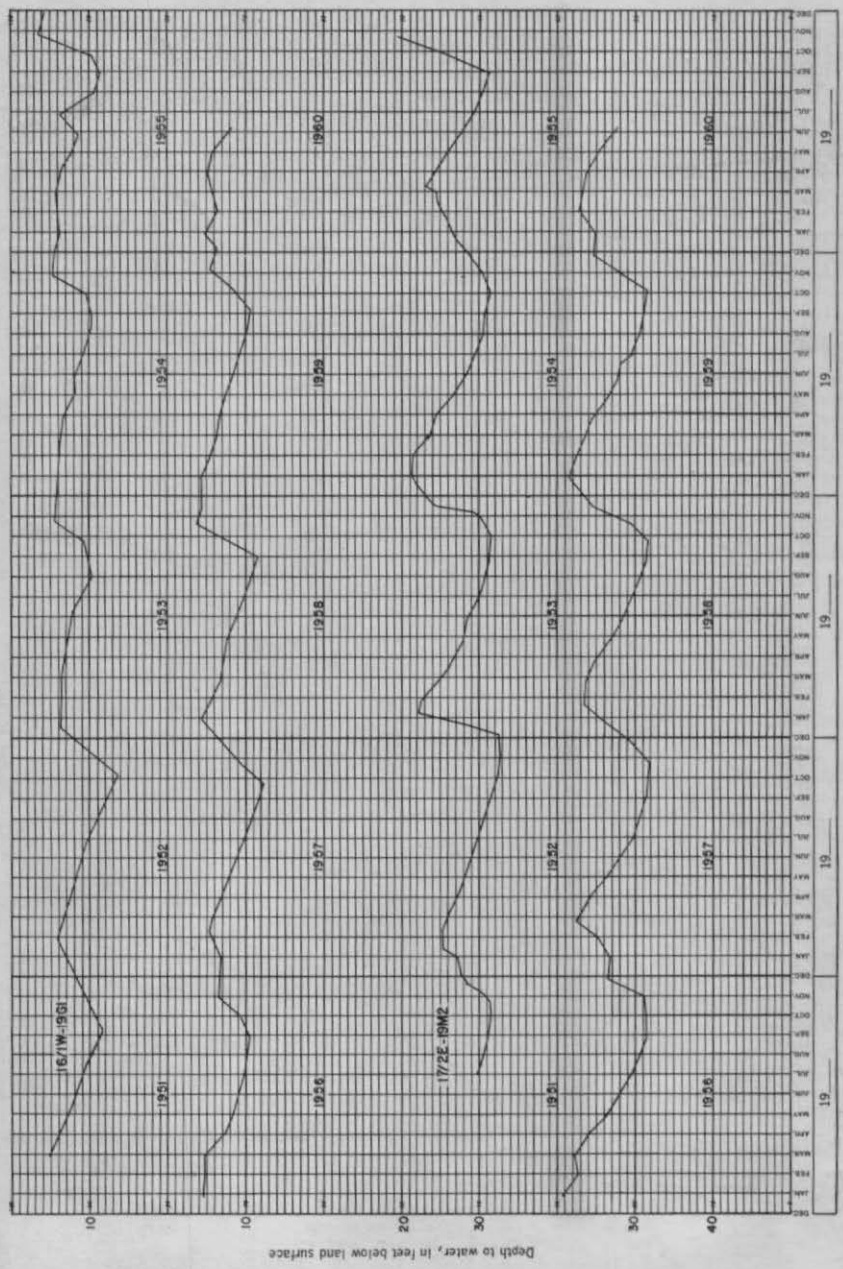

Fig. 3. -- Hydrographs showing fluctuation of water levels in observation wells.