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. 8

Geology and Ground Water Resources of the Columbia Basin Project Area, Washington

Volume I

By

Kenneth L. Walters and Maurice J. Grolier

Prepared in Cooperation with
UNITED STATES GEOLOGICAL SURVEY
GROUND WATER BRANCH
1960

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FOREWORD

Volume I of the "Geology and Ground Water Resources of the Columbia Basin Project Area, Washington" represents the first phase of a program designed to (a) determine the availability and suitability of ground water for municipal supply, farm use and industry within the Columbia Basin Project, (b) delineate areas that might eventually become waterlogged as a result of irrigation, (c) interpret chemical quality and chemical changes of ground water, if any, and (d) evaluate the possibility of pumping ground water for irrigation and/or drainage purposes.

Volume I contains factual data for hundreds of wells drilled within the project boundary and a brief summary of water level changes that have occurred as a result of project irrigation.

Volume II, scheduled for release in 1961, will contain a discussion of the occurrence and movement of ground water; the geology of the Columbia Basin project, with special emphasis on the stratigraphy of the Columbia River basalt, and a thorough analysis of the effects of project irrigation on the regional water table.

The program was started in 1939 as a cooperative effort between the Washington State Division of Water Resources and the U. S. Geological Survey. The program was interrupted during World War II but was re-activated in 1948.

Volume I is not designed to delineate problem areas or recommend a remedial program, but is presented with the thought that it will serve as a valuable reference for farmers, irrigation districts and other agencies actively engaged with the problems associated with the rising water table.

Everything possible has been done to insure the completeness and accuracy of the data presented herein. It is my privilege to submit herewith Volume I of "Geology and Grand Water Resources of the Columbia Basin Project Area, Washington".

-Robert H. Russell
Assistant Supervisor
Division of Water Resources

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GEOLOGY AND GROUND WATER RESOURCES OF THE COLUMBIA BASIN PROJECT AREA, WASHINGTON

VOL. I

By

Kenneth L. Walters and Maurice J. Grolier

EXTENT AND DESCRIPTION OF AREA

The investigation in which the data presented here were collected covers an area of about 3,900 square miles of the semiarid plateau of central Washington, including parts of Grant, Franklin, and Adams Counties. The area includes lands being developed or considered for development under the Bureau of Reclamation's Columbia Basin Irrigation Project, plus an additional 200 square miles northwest of Ephrata which is hydrologically related to, but not a part of, the reclamation project. The area lies north and east of the Columbia River in the reach from Trinidad to the confluence with the Snake River near Pasco. The area extends eastward to approximately the line between Ranges 32 and 33 E. and northward to an irregular boundary passing through Trinidad, Soap Lake, and Wilson Creek.

The area consists of a number of small structural basins and ridges, and it takes on the aspect of a single major basin only when the major structural ridges lying beyond the west and south boundaries of the area are considered. The most prominent topographic feature in the area is the structural ridge known as Saddle Mountains, which rises about 2,000 feet above the adjacent flood plain of Crab Creek. A lower ridge, the Frenchman Hills, lies about 12 miles north of and parallel to the Saddle Mountains. The altitude of the

land surface ranges from more than 2,700 feet in the Saddle Mountains to less than 350 feet near Pasco.

The surface of the area is broken by several major coulees and scabland tracts which represent former glacial drainageways. Only two perennial streams, Rocky Ford and Crab Creeks, now traverse the area; most of the former channels or drainageways are either dry or carry intermittent flow.

Tracts of fixed and semifixed sand dunes occur at several places. Migration of one of these tracts of dunes across the channel of Crab Creek impounded the flow of that creek to form Moses Lake, the largest natural lake in the area.

Precipitation in the area ranges from about 8 inches in the western part to about 10 inches in the east. Locally, this precipitation is great enough to support dry farming of wheat, although generally throughout the area it is adequate only for such native vegetation as sagebrush, bunchgrass, and associated desert flora.

SCOPE AND PURPOSE OF REPORT

The Geological Survey currently is making two ground-water investigations in the general area encompassed by the Columbia Basin Irrigation Project. One, in cooperation with the U. S. Bureau of Reclamation, involves the collection and compilation of basic data for use by that agency in project operation and drainage planning. The other, in cooperation with the Washington State Department of Conservation, Division of Water Resources, involves evaluation of ground-water resources in parts of Grant, Adams, and Franklin Counties and correlation of ground-water occurrence with geologic environment.

This report is intended to serve a twofold purpose. It will supply to the U. S. Bureau of Reclamation, in one volume, data that hitherto have been furnished that agency informally as the data were collected. The data supplied to the U. S. Bureau of Reclamation are applied to the solution of many problems that are inherent in any undertaking of the magnitude of the Columbia Basin Irrigation Project. The use of surface water for irrigation has resulted in a rising water level locally and also in local ponding. The efficient resolution of problems such as these is an integral part of the work of that agency. The report also will supply information to the Washington State Department of Conservation as a basis for answering the many queries concerning the availability of ground water in the areas under investigation. As a result of the greater emphasis on an agricultural economy for these areas, public interest in ground water for domestic and stock use also will increase, and queries regarding the availability of ground water will, of course, increase also.

The project being undertaken in cooperation with the U. S. Bureau of Reclamation is a continuing one, in which hydrologic data will be supplied to that agency as long as the need for the data continues. The Project in cooperation with the State Department of Conservation will lead to a comprehensive report relating the occurrence of ground water more closely to geologic conditions. By delineating the stratigraphic and structural relationships of the basalt sequence, the most important ground-water reservoir, or aquifer, in the area, the report will show which zones in the basalt are water bearing and which are barren to have poor yield. With this knowledge, a more accurate prediction of well yield, ground-water movement, and water-level fluctuation can be made.

Ground-water projects of the U. S. Geological Survey in the State of Washington are under the immediate supervision of A. A. Garrett, District Engineer. Prior to 1957 such projects were under the supervision of M. J. Mundorff, former District Geologist. Large blocks of data appearing in this report were collected over a period of many years by previous investigators. In addition to the data collected and compiled by the authors of the report and those collected by authors of reports listed on page 26, significant amounts of field work were done by B. L. Foxworthy, G. D. Holmberg, and R. L. Washburn of the U. S. Geological Survey.

The Division of Water Resources of the Washington State Department of Conservation is under the leadership of M. G. Walker, Supervisor, and R. H. Russell, Assistant Supervisor.

Liaison with the U. S. Bureau of Reclamation has been chiefly through E. H. Neal, Irrigation Supervisor, and Edwin Nasburg, Chief, Hydrography and Drainage Branch, Columbia Basin Irrigation Project.

PREVIOUS INVESTIGATIONS

The first investigation of the ground-water resources of parts of the area was undertaken by Russell in 1897. Other investigations were made by Smith (1901), Landes (1905), Calkins (1905), Waring (1913), Schwennesen and Meinzer (1918), and Jenkins (1922).[1]

In 1940 the U. S. Geological Survey, in cooperation with the State of Washington Department of Conservation, Division of Water Resources, began a ground-water investigation in the Columbia Basin Project area. Data obtained during the period August 1940 through

[1] See page 26 for list of references cited.

1942 were compiled and assembled by Taylor (1944). Taylor (1948) described the ground-water conditions based on these data and on a field study of the geology.

For planning purposes in regard to the irrigation project, more detailed information was needed, chiefly with reference to the availability of ground water for domestic and municipal supply. For this reason, and because of the large number of wells drilled since completion of the previous well inventory in 1942, the study was reactivated in July 1949, financed jointly by the Geological Survey, the State of Washington, and the Bureau of Reclamation.

As a part of this investigation, all known wells in the area were canvassed, well logs were collected from drillers, water samples were collected for chemical analysis, geologic cross sections were constructed on the basis of well logs, and limited geologic mapping and water-level measurementsin wells of the observation network established in 1940 were continued. The study resulted in a report titled "Progress Report on Ground Water in the Columbia Basin Project, Washington," by Mundorff, Reis, and Strand (1952).

Since 1953 the investigation has consisted almost entirely of the gathering of additional basic ground-water and geologic data, under similar joint financing. Records and logs of many new wells have been collected as they were drilled, and recurrent water-level records have been maintained to determine changes in ground-water levels as irrigation development progressed. Data on yield and drawdown of wells have been collected wherever available. About 85 observation wells were measured monthly or bimonthly, and on several of them semicontinuous water-stage recorders were maintained.

WELL-NUMBERING SYSTEM

Well numbers used by the Geological Survey in the State of Washington are based on and show locations of wells according to the rectangular system for subdivision of public land, indicating township, range, section, and 40-acre tract within the section. For example, in the well number 20/25-14N1, the part preceding the hyphen indicates successively the township and range (T. 20 N., R. 25 E.) north and east of the Willamette base line and meridian. The first number after the hyphen indicates the section (sec. 14) and the letter (N) gives the 40-acre subdivision of the section as shown in the diagram. The last number (1) is the serial number of the well in that particular 40-acre tract.

Thus, the first well recorded in the SW¼SW¼ sec. 14, T. 20 N., R. 25 E., would have the number 20/25-14N1, and the second well would have the number 20/25-14N2.

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

14N1

ACKNOWLEDGMENTS

The field work for this report was facilitated by the helpful cooperation of the many well owners, tenants, and well drillers who supplied information and allowed access to the wells. Personnel of the Department of Conservation and Bureau of Reclamation have been very helpful in supplying maps, well logs, and other valuable information. The assistance of all is gratefully acknowledged.

GEOLOGIC SETTING

The area covered in this report is a part of the extensive Columbia River plateau, which was formed by the extrusion of lava during the Eocene, Miocene, and Pliocene(?) epochs throughout a large part of eastern Washington, eastern Oregon, and western Idaho.

After basalt was extruded, the region was warped into the form of a broad basin, in which several subbasins were formed by locally steeper folding and by faulting. In these subbasins deposits of clay, silt, sand, and gravel accumulated during the Pleistocene, or glacial, epoch.

Also during Pleistocene time, and continuing into Recent time, the area has recieved deposits of silt and sand carried by the wind. These eolian deposits in part are being reworked and shifted by the winds at the present time.

The basalt bedrock and coarse-grained sedimentary deposits in the subbasins constitute the important sources of ground water in the area. The basalt ridges that separate the subbasins also are important to the occurrence of ground water in that they may act as ground-water barriers, retarding the movement of ground water from one subbasin to the other.

ROCK UNITS AND THEIR WATER-BEARING CHARACTERISTICS

Columbia River Basalt

The Columbia River basalt underlies all the area of this study. Older granitic and metamorphic rocks underlying the basalt are exposed in areas bordering the Columbia Basin Project area, and are thought to underlie the basalt under all or much of the area. Nowhere in the area is the total thickness of the basalt known. About 1,800 feet of

basalt is exposed where the Columbia River has eroded a gorge through Saddle Mountains near Beverly, and an oil test hole (well 17/28-19D1) penetrated basalt to a depth of 4,470 feet without reaching the base of the formation. Locally, at least, the Columbia River basalt probably exceeds 10,000 feet in thickness.

The Columbia River basalt is composed of a series of lava flows ranging in thickness from a few feet to more than 100 feet. The lava probably was extruded from numerous fissure-type openings rather than from a relatively small number of craters. The dominant material of the individual flows is dense dark generally fine-grained basalt which often displays prominent vertical jointing. The upper portions of many of the flows are porous and vesicular, having a scoriaceous crust indicative of rapid cooling and movement of the fluid inner portion of the flow after the surface had solidified. Locally pillow lavas occur where flows were extruded into water or upon a damp surface.

At places, individual flows are separated by sedimentary "interbeds" consisting of tuffaceous material, volcanic ash, sand, and clay. The thickness of the interbeds ranges from a few inches to several tens of feet.

The term Columbia River basalt is used in this report to designate all basalt in the area. Thus it includes not only the sequence of flows that is essentially unbroken by sedimentary interbeds, but also includes the upper basalt units that are intercalated with layers of sedimentary materials. In their discussions of the geology of the project area Taylor (1948) and Mundorff and others (1952), used the name Yakima basalt; however, that name is now considered to be a somewhat more restrictive designation than the Columbia River basalt,

and should be applied only in those areas where the basalt sequence definitely can be correlated with the type area in Yakima County. Inasmuch as such correlation has not been accomplished throughout the project area, the more general name Columbia River basalt is here applied.

The permeable zones in the upper portions of some of the flows yield large quantities of water to wells. The dense middle and lower parts of the flows and the occasional sedimentary interbeds usually yield little, if any, water to wells.

Ringold Formation

In much of the area the Columbia River basalt is overlain by sedimentary deposits of Pleistocene age, designated the Ringold formation. These deposits, which occur chiefly in the structural basins, range in thickness from a few feet to more than 600 feet.

The Ringold formation consists primarily of fine sand, silt, and clay. Locally, however, it contains a layer of conglomerate, composed of well-rounded pebbles and cobbles in a matrix of clay and siliceous sand as much as 165 feet thick. Newcomb (1958) considers this conglomerate to be a river-deposited gravel train.

In general, the Ringold formation yields only meager supplies of water, and most of the wells that encounter the Ringold are extended into the underlying Columbia River basalt.

Palouse Formation

Much of the Columbia Basin Project area is mantled by loess, which tentatively is assigned to the Palouse formation, of Pleistocene age (Bryan, 1927). This massive, structureless silt is believed to be

wind-deposited material derived largely from the older Ringold formation. The thickness of the Palouse formation ranges from a few feet in the western part of the area, where only isolated patches remain, to more than 100 feet in the eastern part of the area. The Palouse formation is above the water table nearly everywhere in the area; locally, however, where saturated, it yields small amounts of water to wells.

Glacial Outwash Sand and Gravel

Deposits of predominately basaltic sand and gravel, deposited in part by glacial meltwater, are widely distributed throughout the area. These deposits occur as extensive sheets, terrace deposits, and channel fillings, and locally they attain thicknesses in excess of 100 feet. Where their saturated thickness is considerable, as in the Quincy and Soap Lake areas, glacial outwash deposits yield large quantities of water, and much irrigation water was ottained from wells tapping those materials before the Bureau of Reclamation irrigation project was begun.

Dune Sand

There are two large tracts of sand dunes in the area. One of these is just southwest of Moses Lake and the other is immediately northeast of Pasco. Most of the dunes are fixed or semifixed, but at places the dunes upon which no vegetative cover has been established are gradually migrating to the east or northeast, in the direction of prevailing winds.

The Dunes are composed of well-sorted fine to very fine-grained sand, probably derived largely from materials in adjacent or under-

lying bodies of Ringold formation, but possibly also from sands of the outwash materials.

The dune tract located northeast of Pasco lies above the water table and is therefore unsaturated. The dune sands in the area southwest of Moses Lake are partially saturated and may be capable of yielding sizable quantities of ground water to wells, although to date no attempt has been made to exploit this potential aquifer.

EFFECTS OF IRRIGATION UPON WATER LEVELS

In the Columbia Basin Irrigation Project area application of surface water to large acreages of land started in 1952 when about 21,800 acres were brought under irrigation. In 1953 about 36,800 acres, in 1954 about 40,500 acres, in 1955 about 44,900 acres, in 1956 about 26,900 acres, in 1957 about 26,900 acres and in 1958 about 35,200 acres were irrigated for the first time. The canals serving each of the acreages cited above carried water on a pre-test basis late in the summer of the year preceding the first year of irrigation. In 1948, 232 acres were irrigated by water pumped from the Columbia River near Pasco and in 1950 irrigation with water pumped from the Snake River near Pasco was started. In 1951, about 5,300 acres were irrigated with water pumped from the Columbia and Snake Rivers near Pasco. Pumpage from the Columbia River near Pasco was discontinued in 1954, and the land that had formerly been irrigated by water from that source is now irrigated by water pumped from the Columbia River at Grand Coulee Dam. Additional acreages in the Pasco area were brought under irrigation in 1958 with water pumped from the Snake River.

An intensive program of water-level measurements in the project area was carried out during April to July 1958 to determine the effects of irrigation upon water levels to that date. A comparison of water

levels in wells before irrigation was started with levels in the same wells in 1958, after several years of irrigation, reveals that in some a marked rise in level has occurred. The areas in which water levels in wells generally were within 30 feet or less of the surface as of 1958 are shown in figure A. Although a water-level depth of 30 feet below land surface does not necessarily represent an undesirable condition, this depth was arbitrarily chosen as representing shallow water-table conditions for the purpose of this discussion. In much of the project area where water levels in most wells are within 30 feet of the surface at least locally, there is enough relief that springs or seeps are likely to develop in low places. That is to say, in each of these areas water levels range in depth from 0 to about 30 feet below land surface. In the Columbia Basin Irrigation Project, there are four major areas of tillable land in which water levels have risen to within 30 feet or less of the surface since the onset of irrigation. They are shown on figure A and are discussed below. These four are not all the areas shown on figure A in which water levels in wells are within 30 feet or less of the surface; the other areas, however, because they are either principally of nontillable soils, of naturally shallow water levels bordering bodies of surface water, or with insufficient data on changes of water level in wells to determine whether there have been any effects of application of irrigation water, are not considered to be of major importance and are discussed in less detail.

Winchester-Burke Area

The Winchester-Burke area was brought under surface water irrigation during the years 1952 to 1955. In this area water levels rose abruptly in 1952, after a period of at least several years during

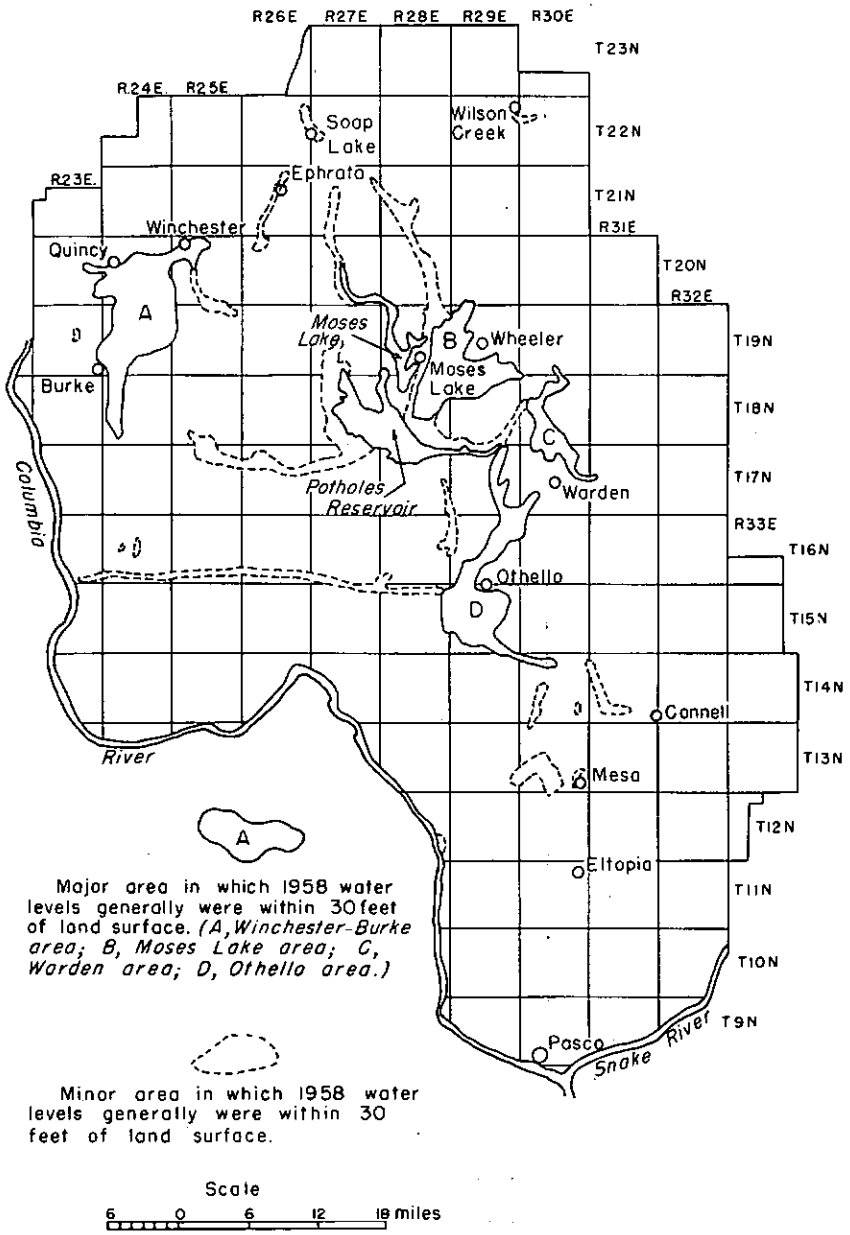

Figure A -- Map showing location of areas in which water levels generally were within 30 feet of land surface in 1958.

which they had remained fairly constant. This rise in water level is clearly illustrated by the hydrograph for well 20/25-7L1 shown on figure 15. Of the 60 wells in the Winchester-Burke area in which water-level measurements have been taken since the early 1950's, all show to some degree a consistent rise in level to 1958. Preirrigation water levels in this area ranged from about 125 feet to more than 300 feet below land surface. In 1958 water levels in a majority of the wells measured were less than 30 feet below land surface.

Of the 60 wells, the changes in water levels over different periods of records for each well varied from a decline of 2 feet in well 20/24-33B1 to a rise of about 295 feet in well 20/23-25E1, representing an average net rise of about 70 feet for each well. This indicated average rise doubtless is considerably less than the true average rise for the whole period beginning with the start of irrigation. The foregoing data would more closely represent the actual field conditions if records for all wells had included the first years of irrigation--many of the 60 wells were measured only during the period 1956-1958, a period during which water levels in many wells became more stable. The average yearly rise in water level in the 60 wells for different segments of the interval 1952 to 1958 was about 17 feet per year. Of the 60 wells, the average yearly rise in water level in 8 for which measurements are available from 1952 to 1956 was about 28 feet whereas the average yearly rise in 41, measured from 1956 to 1958, was only about 5 feet. For the whole period 1952 to 1958 the average yearly rise in water level in 15 wells was about 26 feet.

In 1958 the average depth to water in this area, based on measurements in 59 wells, was about 23 feet below land surface. Water-level measurements have been continued in only 4 wells beyond the date of

collection of the data upon which the above statements are based. Of these, well 20/25-7L1 began flowing late in 1958, the other 3 wells, 18/24-6H1, 19/24-2D1 and 19/24-24M1, have averaged about 1 foot of rise per month since mid-1958. Some ponding of water on the land surface has occurred, indicating that locally--in low places--the water table is at land surface.

In the Winchester-Burke area the basalt bedrock is overlain, for the most part by semi-consolidated fine sand, silt, and clay. These semi-consolidated deposits are overlain by varying thicknesses of unconsolidated sand and gravel. In general, the unconsolidated and semi-consolidated deposits were above the water table before irrigation started, and also during the first few years of irrigation when the rise in water levels occurred only in the basalt bedrock. As the level rose above the top of the basalt, the overlying unconsolidated deposits became saturated. The decreased rate of rise as water levels became within a few tens of feet below land surface probably is due in part to the greater porosity of the unconsolidated deposits than that of the basalt as a whole, and in part to the work of drains and wasteways east of this area--both the land surface and the buried basalt surface slope rather gently east or southeast, toward the lowest part of a depression or basin in Rs. 25 and 26 E. where a wasteway has been constructed.

Similar rises in water level in wells have occurred in a band which more or less encircles the area previously discussed and which ranges in width from about half a mile to more than 2 miles. This area is different from the main area discussed, only in that the preirrigation water levels were somewhat deeper and the 1958 water levels in a majority of the wells were somewhat greater than 30 feet below land surface.

Moses Lake Area

Most of the area immediately east and southeast of the city of Moses Lake was brought under irrigation with surface water in 1952 and 1953. Based on water-level measurements in 14 wells, preirrigation water levels in this area ranged about from 30 to 235 feet below land surface and averaged about 110 feet below land surface. Hydrographs for several wells in the area, 18/28-2L1, 19/28-25L1, and 19/29-34D1, shown respectively on figures 7, 12, and 11, indicate an abrupt rise in water level in 1952 or 1953. In 1958 the average depth to water in 22 wells was about 25 feet below land surface and in the 28 wells for which records are available changes in water levels since 1952 ranged from a rise of more than 200 feet to a decline of more than 5 feet. The average total rise in water levels in the 28 wells was about 50 feet per well; however, as was the case in the area discussed earlier, not all the records cover the same time intervals for all wells. The average yearly rise in water level in the 28 wells for different segments of the interval 1952 to 1958 was about 12 feet. Of the 28 wells, the average yearly rise in water level in 6 for which measurements were available from 1952 to 1956 was about 23 feet. The average yearly rise in water level in 11 wells measured from 1952 to 1958 was about 14 feet. The average yearly rise in 11 wells measured from 1954 through 1958 was less than 1 foot per year.

Water-level measurements in only 4 wells have been continued beyond the date of collection of the data upon which the above statements are based. Levels in these wells have shown only normal seasonal fluctuations, and if they indicate conditions for the entire area it can be assumed that water levels in the area have changed but very little since 1958.

In this area the basalt bedrock is overlain be clay, caliche, sand, and gravel averaging about 40 feet in thickness. The decreased rate of rise in water level since about 1955 may be due in a small part to greater porosity of the material near the surface, but is more likely due to increased westward migration of ground water toward Moses Lake and the Potholes Reservoir.

Along the southeast margin of the area just described, is an area ranging in width from about half a mile to more than 3 miles in which the average depth to water in 1958 was about 65 feet. Although some pronounced rises in water levels have occurred in this marginal area since 1952, the problem of shallow water levels may not develop in most of this area because of fairly well established subsurface drainage into Lind Coulee and Weber Coulee.

Warden Area

The Warden area was brought under irrigation with surface water in 1954 and 1955. The hydrograph for well 18/30-34M1 (fig. 1) shows a rise in water level of about 20 feet in 1954, although for 11 years preceding 1954 the level fluctuated but very little. Although water-level data are available for only a few wells in this area, these data, even though fragmentary, suggest strongly that changes in water levels since irrigation began are similar in magnitude to those in the Moses Lake area. Before irrigation began in this area water levels ranged from less than 50 to about 150 feet in depth below land surface, and averaged about 80 feet below land surface. In 1958 the average depth to water was about 30 feet below land surface, representing an average yearly rise of about 10 feet. Although sufficient data are not available to determine accurately the water-level trend in the most recent

years of irrigation, the hydrograph of well 18/30-34M1 indicates that the water level in that well has not yet stabilized. The highest observed water level in this well in 1959 was about 5 feet higher than in 1958, or about 48 feet below land surface.

In the Warden area the basalt bedrock is overlain by about 30 to 100 feet of unconsolidated deposits. The bedrock surface is a wide trough occupied by Lind Coulee and Weber Coulee; here, practically all lateral migration of ground water is probably to the west.

Othello Area

Irrigation of parts of the Othello Area with surface water was started in 1953, and although available data on deep wells are not sufficient to determine accurately the effects of irrigation on wells tapping basalt, measurements of water levels in a number of shallow wells indicate that in general, water levels in 1958 were less than 30 feet below land surface.

Records are available for 14 wells installed by the Bureau of Reclamation in this area from 1952 to 1955. These wells, called drainage observation wells by the Bureau of Reclamation, are all 50 feet deep and none encountered water when drilled. In 1958, however, water levels in these wells ranged in depth from 10 feet to 43 feet below land surface and averaged about 20 feet below land surface. Of the 14 wells, only one encountered basalt. It penetrated only 10 feet of weathered basalt mixed with clay and caliche. Water levels in several deeper wells in the area that tap basalt were more than 100 feet below land surface in 1958. It is believed, therefore, that the shallow water levels in much of this area represent the surface of a perched or semi-perched ground water body underlain by the more impervious silt and clay overlying the basalt.

Southwest of Othello the basalt surface is in the form of a basin or depression. A body of water, known locally as Lake Linda, has formed in this depression since the advent of irrigation. The area of this lake was about 80 acres in 1954, and swampy conditions have developed for a considerable distance northwest and southeast of Lake Linda.

An area of several square miles in the southeast corner of T. 15 N., R. 29 E. and in the south west corner of T. 15 N., R. 30 E. is geologically similar to the area just discussed; water levels here have risen considerably since irrigation began. For example, well 15/29-26A2 (a 50-foot drainage observation well) was dry when drilled in 1954; in 1959 the water level in this well was about 28 feet below land surface. This area has better subsurface drainage than most of the areas discussed above and water levels probably will not continue to rise as rapidly as they have in the past.

Minor Areas of Shallow Ground Water

Numerous areas in which the water table was near the surface in 1958 are shown in figure A but are not discussed in detail. Some of these areas are small and their presence is indicated by observations of water levels in only one or two wells. For example, in the area a few miles west of Mesa and in the area a few miles west of Connell a rise in water level in the past several years has been detected but evidence of that rise is based on data from only 2 or 3 wells in each area. Other areas of shallow water levels occur adjacent to natural or artificial bodies of surface water, and fluctuations of water level in these areas are in response to changes in levels of these surface water bodies. Examples of such areas are the long narrow area bordering Crab Creek east of Beverly, areas bordering Moses Lake and the streams

tributary to it, an area around Soap Lake, and a small area near Wilson Creek. Although these are natural areas of shallow ground water, their size has, in nearly every case, been increased materially since the advent of irrigation. Examples of areas of shallow ground water bordering artificial bodies of surface water are those near the Potholes Reservoir, and along wasteways west of the Potholes Reservoir and southeast of Winchester.

Ponding of water on the land surface has occurred locally in some areas. Most cases of ponding have occurred in poorly drained nontillable areas such as that in the sand dune tracts west and northwest of the Potholes Reservoir, and in the basalt scabland south of the Potholes Reservoir. However, a small area of ponding has developed on tillable land in Esquatzel Coulee near Mesa subsequent to the termination of collection of the data given in this report. The water that is ponded here probably is, for the most part, ground water that has migrated laterally from the irrigated upland area to the northwest. The hydrograph of well 13/30-26G2 (fig. 5), a well which is now almost entirely surrounded by ponded water, shows a rising water level trend starting in 1954 after a period of 13 years during which the hydrograph shows only seasonal water-level fluctuations. Plate 2 shows that in 1958 water levels in the area about 2 miles west of Mesa were about 25 feet higher than the floor of Esquatzel Coulee at Mesa and the direction of ground-water movement in at least part of the area was toward the coulee. The surface of the coulee floor near Mesa is underlain by as much as 65 feet of silt and silty clay. The impervious nature of this material, in conjunction with the poorly developed surface drainage of the coulee in this

area, doubtless has also played an important part in causing the ponding mentioned above.

Outbreaks of springs along the valley wall of the Columbia River near Ringold (sec. 24, T. 12 N., R. 28 E.) in October 1957 have resulted in damage to a small acreage of low-lying land near the river in that area. The discharge of these springs--several thousand gallons per minute in the aggregate--is somewhat seasonal, the greatest rate of discharge is from May to October. In May 1958, a second group of springs broke out in a small coulee tributary to the Columbia River about one half mile southeast of the springs mentioned above. The flow of these springs also is seasonal. The greatest flow occurs during the irrigation season and almost no flow occurs during late winter and spring.

EXPLANATION OF DATA

Data that have been collected in the Columbia Basin Project Area are presented chiefly in tabular form on the pages that follow. These data were collected not only during this investigation, but also during earlier investigations already cited.

Location of Wells

The location of all wells and test holes for which data are available is shown on plate 1. The type of data available is shown by means of symbols. 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 on plate 1.

Configuration of the Water Table

The general configuration of the water table in the area is shown in plate 2. The information shown on this plate is based largely on water-level measurements made by personnel of the Geological Survey during April to July 1958, in wells tapping basalt or deep gravel aquifers. Some reported water levels, as well as water levels measured at earlier dates, were considered in areas where wells are few. Measurements believed to reflect levels in perched or semiperched water bodies were disregarded. Differences in artesian pressures between shallow and deep basalt aquifers may account for some other locally anomalous water-level measurements. Such local anomalies probably do not materially affect the general configuration of the water table as shown.

Configuration of the Columbia River Basalt Surface

The general configuration of the surface of the Columbia River basalt, and the areas in which basalt is exposed, are shown in plate 3. Contours are based on elevations obtained from all available logs of wells in the project area that encounter basalt, and on Geological Survey topographic maps in areas where basalt is exposed at the surface.

Well Records

Table 1 includes records of all wells for which data are available. Headnotes at the beginning of the table explain the different types of information tabulated and the abbreviations used.

All water levels and dates of measurements are given for wells in which four measurements or less have been made. For wells in which more than four measurements have been made, only selected measurements

are shown. Recurrent water-level measurements, not here presented, for numerous observation wells in the area are on file at the office of the Geological Survey, Ground Water Branch, Tacoma, Wash.

Water levels in wells were measured by the wetted-tape method or by use of an electrical water-sounding device. In some wells equipped with pressure gages, water levels were determined by the submerged air-line method. For those wells that have no access port for measuring the level, the depth to water and the depth of well are based on drillers' or owners' reports.

Locally, a great number of wells have been drilled to approximately the same depth and penetrate the same sequence of materials; in such areas not all wells have been inventoried. Certain parts of Franklin and Adams Counties are now undergoing rapid development and many wells have been constructed after the field canvass was made; the records of these wells are not included in this data report. Also, unless at least one pertinent feature of a well record, such as depth, depth to water, or material penetrated, could be ascertained the well is not tabulated in this report. Records of well known to have been destroyed are included in table 1 if some pertinent data exist.

Locations of wells were determined by pacing or by odometer measurements from known points; elevations of wells were determined from their plotted locations on U. S. Bureau of Reclamation topographic maps at a scale of 1:12,000 and with 2-foot contour intervals.

Data concerning well yields and water-bearing materials were obtained from well owners and drillers or from the records of the State Department of Conservation or the U. S. Bureau of Reclamation.

Hydrographs

Hydrographs showing water-level fluctuation in selected observation wells are presented in figures 1 to 24. Hydrographs have been prepared only for those wells for which reasonably continuous water-level records, covering periods of at least several years, are available. Water-level records from additional short-term or temporary observation wells are on file at the Ground Water Branch office at Tacoma. The wells for which hydrographs are herein presented, and the number of the figure where each appears, are shown in the following index.

Index of wells for which hydrographs are presented in figures 1 to 24

Well number	Figure	Well number	Figure	Well number	Figure
9/29-25D1	1	19/23-34R1	21	19/31-19B1	5
10/29-19Q1	7	19/24-2D1	6	20/23-10D1	15
11/30-11B1	1	19/24-24M1	16	20/23-12J1	8
13/29-24R1	2	19/25-2N2	13	20/23-28J1	17
13/30-26G2	5	19/25-26N1	14	20/24-1H1	18
14/29-1R1	3	19/25-28M1	5	20/25-7L1	15
15/30-2R1	3	19/26-9C1	5	20/25-15Q1	19
16/25-6M1	10	19/26-20A1	5	20/25-21A2	13
16/29-35R1	9	19/26-34D1	5	20/26-18R1	1
17/24-4J1	4	19/27-16N1	5	20/26-22P1	20
17/27-32H1	4	19/27-26A1	12	20/26-26M1	14
17/28-2G1	3	19/27-28C1	14	20/29-10M1	7
17/28-11F1	4	19/28-6C1	14	20/29-28B1	22
17/29-12C1	3	19/28-8H2	14	20/30-6H1	19
17/31-6P1	3	19/28-10D1	8	21/26-3A2	22
18/24-6H1	11	19/28-15L1	16	21/26-10L2	22
18/24-22D1	3	19/28-20A1	8	21/26-12F1	7
18/25-8M1	7	19/28-25L1	12	21/26-21G1	21
18/25-8N1	7	19/28-34N1	10	21/26-32A1	16
18/28-2L1	7	19/29-6A1	10	21/27-4K1	21
18/29-20B1	2	19/29-14J1	9	21/28-2D1	22
18/30-34M1	1	19/29-34D1	11	21/28-8P1	20

Index of wells for which hydrographs are presented in figures 1 to 24-- Con.

Well number	Figure	Well number	Figure	Well number	Figure
21/28-34A1	1	22/27-23R1	23	22/27-34D1	14
21/30-9P1	1	22/27-29H2	20	22/28-6R1	24
22/27-14M1	23	22/27-29P2	23	22/28-26D1	24
22/27-19N2	20	22/27-30P1	24	22/28-33R1	21
				22/30-18M1	24

Logs of Wells

Table 3 contains information on the character and thickness of material penetrated in all wells in the project area for which such data are available. Logs were collected from well drillers, well owners, and Federal Government agencies during earlier investigations as well as during the current study. No stratigraphic designations have been made. The terminology used is that of the driller or other source; the logs have been edited only to the extent necessary to achieve consistency of presentation.

Chemical Analyses of Water from Wells

Chemical analyses of ground-water samples collected during this and earlier investigations are presented in tables 2 and 2A. Table 2 lists analyses of samples of water from wells for which nearly all the important chemical constituents commonly present in ground water were determined. The principal aquifer supplying the well and the agency or firm which collected and analyzed each sample also is indicated. Table 2A presents field analyses of samples for which tests were made for only selected chemical constituents.

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GEOLOGY AND GROUND WATER RESOURCES

OF THE

COLUMBIA BASIN PROJECT AREA, WASHINGTON

VOLUME 1

RECORDS OF WELLS, DRILLERS' LOGS, AND

CHEMICAL ANALYSES OF GROUND WATER

Well: Location shown on plate 1.

Owner or tenant: Also includes well designation or number assigned by owner, tenant, or local agency. USBR, U. S. Bureau of Reclamation; BPA, Bonneville Power Administration.

Altitude: Altitude of land surface in feet interpolated from topographic maps, largely those by the Bureau of Reclamation with a contour interval of 2 feet and a scale of 1:12,000; altitudes in feet and tenths, or in feet, tenths, and hundredths have been obtained by spirit leveling by the Bureau of Reclamation. A, altitude is not given, well is in unmapped area.

Type of well: Dn, driven; Dr, drilled: Du, Dug.

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter (inches)	Depth of casing (feet)	Water bearing-material
T. 8 N., R. 30 E.							
3A1	USBR, drainage observation well	390.1	Dr	65	3	65	Sand
T. 9 N., R. 28 E.							
1H1	Lewis Norling	446	Dr	190	6	180	..
1Q1	Glen Walkley	368	Du	..	36	..	..
12E1	Regalis Metallum Deposita Corp.	362	Dr	75	6	..	Sand, gravel
T. 9 N., R. 29 E.							
4D1	USBR, drainage observation well	525.3	Dr	241.7	3	241.7	Sand
6B1	John M. Mullen	493	Dr	215	6	204	Gravel
11D1	USBR, drainage observation well	479.0	Dr	207	3	207	Gravel, sand
15D1	USBR, drainage observation well	512.2	Dr	183	6	183	Gravel
15N1	USBR, drainage observation well	402.2	Dr	79	6	79	Sand
18D1	Wallace Harris	382	Dr	79	8	..	..
18K1	E. E. Allen	390	Dr	75	6	..	Sand, gravel

of wells

Depth to water below land surface: Reported depths are given in feet; measured depths are given in feet, tenths, and hundredths.

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

Use: D, domestic; De, destroyed; Ind, industrial; Irr, irrigation; N, not used; O, observation; PS, Public Supply; S, stock.

Remarks: C, chemical analysis in table 2 ; Cp, partial chemical analysis in table 2A; dd, drawdown; L, log in table 3 ; Rwl, recurrent water-level measurements discontinued, records unpublished.

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
48	2-21-56	N	O	L.
50.45	5-21-58			
110.40	1950	S, 1½	D, S	Rwl.
151.64	6-10-58			
19.50	11- 7-50	P	D, S	
18.88	6-10-58			
30	1950	C, 1	D	
189.5	8- 9-54	N	O	L.
172.66	5-20-58			
155	1950	..	D	Pumps about 10 gpm. L.
142.5	7-15-54	N	O	L.
138.54	5-20-58			
170.0	4- 3-55	N	O	L.
167.93	5-21-58			
62.5	4-15-55	N	O	L.
61.19	5-21-58			
50.36	11- 7-50	J, 3	D, S	
50	11- 7-50	J, 1	D, S	
40	8- 7-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 9 N., R. 29 E.--Con.							
20B1	Herman E. Chapman	386	Dr	81	..	..	..
20L1	August Schuman	383	Du	45	36	45	..
20Q1	Ivan Merrick	380	Du	25	36	25	..
21A1	Mrs. Martha Eby	405	Du	73	48	73	Gravel
21K1	--Stout	390	Dr	63	6	..	. do .
21K1	C. H. Shepherd	390	Dr	..	6	..	..
21M1	Frank Mocaer	390	Du	28	60	28	Gravel
21N1	N. L. Merkley	380	Du	37	48	..	..
21Q1	Margaret Howard	365	Du	32	36	32	Gravel
22A1	H. E. Epperly	400	Dr	85	6	..	..
22B1	P. Lyon	408	Dr	..	6	..	..
22J1	Fred Carr	390	Du	35	36	35	..
22M1	U. S. Corps of Engineers	355	Dn	..	1¼	..	Gravel
22N1	U. S. Corps of Engineers	362	Dn	31	1¼	31	. do .
22R1	Ruby Johnson	340	Du	43	36	43	..
23B1	H. Holderson	390	Dr	70	6	..	..
23F1	Dale M. Moxson	400	Du	67	36	67	Gravel, sand
23J1	R. O. Harris	385	Du	50	40	48	Gravel
23J2	Robert W. Gove	385	Dr	60	6	60	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
60	11- 7-50	T, 3/4	D	
31	11- 7-50	T, 1	D, S	
20.1 15.54	11- 7-50 12-15-53	T, 3/4	D	Rwl.
64.72 55.45 60.00	10-29-40 11- 5-50 6- 9-58	J, 3/4	D	L.
30	11- 8-50	J, 1½	D, S	
37.9	11- 8-50	..	D	
20 9.15	5-25-48 8- 6-58	C, 3	D, Irr	Pumps about 250 gpm. Cp.
30.60 24.68	11- 7-50 6- 9-58	J	D	
13.1	11- 8-50	J	D, S	L.
60.2	11- 8-50	P	D	
73	11- 8-50	C, ½	D	
25.7	11- 8-50	Bucket	D	
12.43	7- 8-50	N	O	Well measured by Corps of Engineers
21.73 20.90	7- 8-50 6- 9-58	N	O	. . . Do. . .
30.6 24.23	11- 8-50 6- 9-58	J, 3/4	D, S	
58.8	11- 8-50	T, 3/4	D	
59	11- 4-53	C, 7½	D, Irr	L.
42	1948	T, 5	D, Irr	Pumps about 120 gpm.
40.5	9- -57	J, 2	D	Slight dd at 25 gpm. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 9 N., R. 29 E.--Con.							
23N1	P. W. Green	345	Dr	40	..	..	..
23P1	D. Harris	365	Du	28	36	28	Gravel
23Q1	Beryl Arborgast	335	Du	35	36	35	..
24B1	USBR, drainage observation well	400.3	Dr	77	6	77	Sand, gravel
24D1	Jolos Nursery	400	Dr	98	5	..	..
24K1	L. L. Seat	390	Dr	115	8	..	..
24P1	F. Haun	370	Du	45	36	45	..
24R1	Albert A. Austin	340	Dr	154	6	..	..
25C1	USBR, drainage observation well	374.3	Dr	51	6	51	Sand, gravel
25D1	E. T. Lindar	369	Du	45	60	45	Gravel(?)
25D2	Elof E. Olson	370	Du	42	60	42	Sand, gravel
25L1	Henry J. Kahlin	350	Du	29	..	29	. . do . .
25L2	Clarence Wirth	375	Du	28	41	28	. . do . .
25L3	USBR, drainage observation well	347.8	Dr	26	6	26	Gravelly sand
25M1	Ira G. Collins	350	Du	24	42-33	24	Sand
26H1	C. W. Nay	360	Du	25	36	25	..
26H2	Fred Bristow	365	Du	32	42	32	Gravel
26L1	F.C.Kloppenstein	355	Du	50	36	50	Sand, gravel
26M1	J. D. Clancy	355	Du	42	36	42	. . do . .
26M2	H. E. Copeland	355	Du	38	40	38	Gravel
27D1	USBR, drainage observation well	356.1	Dr	40	6	40	Sand

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
26	11- 6-50	T	D	
23.25	10-25-40	P	D	C.
31.6	11- 8-50	T, 3/4	D	
63	4- 6-55	N	O	L.
60.77	5-21-58			
80	11- 8-50	T, 3/4	D, Irr	
64.3	11- 8-50	T, 3/4	D	
61.93	6- 9-58			
39.9	11- 8-50	T, 3/4	D	
60	11- 8-50	T, 3/4	D	
38	4-11-55	N	O	L.
36.18	5-21-58			
35.66	10-29-40	N	N	Hydrograph in fig. 1.
29.04	6- 9-58			
27	7-21-53	C, 3	D, Irr	Pumps 160 gpm. L.
25	3- -33	..	D, Irr	Pumps 200 gpm. L.
17	9- -47	C, 3	D, Irr	Pumps 250 gpm. L.
14	4- 4-55	N	O	L.
11.74	5-21-58			
14	6- 1-47	J, ½	D, Irr	Pumps 15 gpm. L.
22.6	11- 8-50	C, 1	D	
12	10- -49	C, 3	Irr	Pumps 50 gpm. L.
40	10- 1-53	C, 10	Irr	Pumps 280 gpm. L.
..	..	C, 5	D, Irr	Pumps 200 gpm. L.
35.5	3- -46	T, 5	D, Irr	Pumps 125 gpm. L.
19	4-14-55	N	O	L.
15.71	5-21-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 9 N., R. 29 E.--Continued							
27E1	A. E. Stone	350	Du	22	48	22	Gravel
27H1	R. L. Johnson	355	Du	42	24	42	Sand, gravel
28A1	R. R. White	350	Du	..	36	..	..
28D1	Fred Huber	370	Du	33	36	33	..
T. 9 N., R. 30 E.							
2B1	USBR, drainage observation well	508.6	Dr	154.5	3	154.5	Sand, gravel
2Q1	Van W. Douglas	514	Du	110	..	..	Gravel
6D1	USBR, drainage observation well	440.7	Dr	105	3	105	Gravel
7P1	Pasco Airport	409	Du	110	..	110	Sand, gravel
8H1	USBR, drainage observation well	448.8	Dr	171	3	171	Sand
12N1	Unknown	444	Du	101	36	101	..
12P1	USBR, drainage observation well	431.3	Dr	100	3	100	Gravel
14D1	USBR, drainage observation well	496.5	Dr	180	6	180	. do .
16F1	USBR, drainage observation well	405.8	Dr	134	3	134	Gravel, sand
17C1	USBR, drainage observation well	424.9	Dr	97	6	97	Sand, gravel
18B1	Naval Air Station, well 3	416	Dr	1,352	20-10 3/4	1045	Basalt
18H1	Naval Air Station, well 1	410	Dr	1,033	12	194	Sandstone
19F1	Lee Cones	435	Du	80.5	36	80	Gravel
20E1	Northern Pacific Ry.	410	Du	88	72	88	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
18	11-24-53	C, 7½	Irr	Pumps 100 gpm.
39	4- -48	C, 3	Irr	Pumps 350 gpm.
20.5	11- 8-50	C, ½	D, S	
24.72	11- 7-50	T	D	
149.5 148.43	8-31-54 5-20-58	N	O	L.
106	1-24-41			
Dry 100.2	7- 7-54 5-20-58	N	O	L.
90	6- 5-42	C	D	
122.5 108.55	7-22-54 5-20-58	N	O	L.
Dry	11- 3-50	N	..	
97.5 85.53	10-22-54 6-10-58	N	O	L.
163.5 153.9	10-21-54 5-20-58	N	O	L.
75.5 66.08	7-30-54 5-20-58	N	O	L.
82.7 85.34	2-28-56 5-21-58	N	O	L.
110	1943	N	N	Insufficient yield, abandoned. L.
73.5 69.6	8-11-42 6- 9-58	T, 50, 100	PS	L.
77.71 78.07	10-29-40 10-20-42	N	N	Rwl.
77 59.40	5-13-53 6- 9-58	C, 40	Ind	Pumps 400 gpm. Used in ice manufacturing. C.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 9 N., R. 30 E.--Con.							
20F1	Northern Pacific RR, Ice Plant well	420	Dr	1,030	10	203	Basalt
20M1	Inland Hardware Co.	410	Dr	118	8-6	109	Sand, gravel
23N1	USBR, drainage observation well	440.0	Dr	164	3	164	Gravel, sand
24A1	USBR, drainage observation well	500.6	Dr	111	4	111	..
26A1	USBR, drainage observation well	364.1	Dr	68	3	68	Gravel
26D1	USBR, drainage observation well	413.7	Dr	94	6	94	. do .
26K1	USBR, drainage observation well	406.1	Dr	85	6	85	Sand, gravel
26Q1	USBR, drainage observation well	398.1	Dr	81	6	81	Gravel
27K1	BPA, Franklin Substation .	420	Dr	121	10	116	. do .
29K1	USBR, drainage observation well	377.6	Dr	59	6	59	Sand, gravel
35A1	Tidewater Shaver Barge Line	390	Dr	115	10	115	Gravel
T. 9 N., R. 31 E.							
4N1	Ray Sperry	658	Dr	343	6	35	Basalt
6D1	USBR, drainage observation well	458.9	Dr	120	3	120	Gravel
11C1	James W. Rogers	750	Dr	520	6	..	..
12P1	Oscar Rogers	649	Dr	318	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
65	1931	..	De	Formerly used in ice manufacturing. L.
70	4-19-40	T, 7½	D,Ind Irr	Pumps 166 gpm. L.
109.5 99.89	8-14-54 5-20-58	N	O	L.
Dry	9-18-54	N	O	L.
29.41 23.82	10-22-54 5-20-58	N	O	L.
80 73.61	4- 1-55 5-21-58	N	O	L.
69.5 65.96	3-28-55 5-21-58	N	O	L.
71 57.85	3-24-55 5-21-58	N	O	L.
87	7- -51	T, 20	Ind	Pumps 440 gpm. Cp, L.
35 38.10	3- 5-56 5-21-58	N	O	L.
80	12-19-52	T, 20	D,Ind	Dd 21 ft after 4 hours pumping at 500 gpm. L.
320 294.01	10-19-40 6- 8-58	P, 1½	D, S	C, L.
86.4 89.25	10-22-54 6- 8-58	N	O	L.
370	11- 2-50	P, 2	D, S	
197	11- 2-50	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 9 N., R. 32 E.							
6Q1	Lyle W. Neff	731	Dr	440	6	100	Basalt
8B1	. . do . .	475	Dr	200	12	110	. do .
8G1	. . do . .	448	Dr	210	12	120	. do .
T. 10 N., R. 28 E.							
2J1	USBR, Pasco Farm Units	371	Dr	70	8	..	..
24F1	O. C. Gillum	390	Du	32	36	32	..
25H1	J. F. D'Ewart	508	Dr	205	..	200	Gravel
T. 10 N., R. 29 E.							
3A1	USBR, drainage observation well	692.1	Dr	50	1½	50	..
5A1	USBR, drainage observation well	721.6	Dr	50	1½	50	..
8R1	USBR, drainage observation well	620.9	Dr	50	1½	50	..
10C1	E. H. Van Blaricom	687	Dr	397	6	207	Basalt
10D1	USBR, Eltopia exploratory well	686	Dr	618	12-10	340	Sand, gravel interbeds
11N1	USBR, drainage observation well	653.7	Dr	50	1½	50	..
14R1	USBR, drainage observation well	603.1	Dr	50	1½	50	..
19D1	Stewart McKee	496	Dr	215	6	215	Gravel
19Q1	Pasco Heights Water Assoc.	508	Dr	238	10	234	. do .
19R1	A. R. Thurman	508	Dr	208	6	204	. do .
21A1	USBR, drainage observation well	509.9	Dr	50	1½	50	Sand

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
380	10-21-40	P, 3	D,S	
92 85.23	11- 2-50 6- 8-58	N	N	Rwl.
90	8-20-48	T, 55	Irr	Dd 40 ft after pumping 4 hours at 700 gpm. L.
32	11-23-49	..	..	
20	11- 8-50	J, 1½	D, S	
165	11- 1-50	P, 3	D	L.
Dry	7-27-54	N	O	L.
Dry	7-27-54	N	O	L.
Dry	7-28-54	N	O	L.
330	1955	P, 3/4	D, S	L.
331 320.8	12-16-53 6-12-58	S	D	C, L.
Dry	8- 3-54	N	O	L.
Dry	8- 4-54	N	O	L.
150	1954	S, 1½	D	
155.31 156.70	9-26-56 6- 2-58	S, 10	PS	Hydrograph in fig. 7. C, L.
150	10-31-50	J, ½	D	
50	8-31-54	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 10 N., R. 29 E.--Con.							
21N1	USBR, drainage observation well	500.8	Dr	50	1½	50	..
25A1	USBR, drainage observation well	498.0	Dr	135.5	4	130	Gravel
26A1	USBR, drainage observation well	496.3	Dr	76	4	71.9	..
28B1	USBR, drainage observation well	504.4	Dr	172	4	172	Sand
29G1	James Schill	516	Dr	208	6	180	..
31B1	Anne Hyalhmer	512	Dr	210	6	..	Gravel
31R1	USBR, ditch-rider well	500	Dr	313	10-8	234	Basalt
T. 10 N., R. 30 E.							
4E1	USBR, drainage observation well	555.6	Dr	30	3	30	..
5N1	USBR, drainage observation well	553.0	Dr	51	1½	50	..
7J1	John T. Downs	538	Dr	87	6	87	Gravel
8F1	USBR, drainage observation well	538.3	Dr	64	3	64	Sand
8K1	USBR, drainage observation well	567.3	Dr	90	6	85	Silt
8M1	USBR, drainage observation well	527.7	Dr	53	3	53	Basalt
8M2	USBR, drainage observatinn well	546.7	Dr	76	3	76	. do .
18G1	J. L. DeForce	539	Dr	716	10	135	. do .
18Q2	USBR, drainage observation well	500.1	Dr	89.3	3	89	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	7-30-54	N	O	L.
121.7 118.08	3- 2-55 5-20-58	N	O	L.
Dry	10-19-54	N	O	L.
148 151.88	2-11-55 6-12-58	N	O	L.
..	..	J, 1½	D	
150	10-31-50	P, 3/4	D, S, Irr	
162	11-23-49	T, 5	D	Construction well. L.
Dry Dry	9- 3-54 5-20-58	N	O	L.
Dry	8- 5-54	N	O	L.
60.90	9-24-56	J, 1	D, S	
55.5 44.57	8-31-54 5-20-58	N	O	L.
Dry 81.35	3- 9-55 5-20-58	N	O	L.
40.0 16.52	2-24-55 5-20-58	N	O	L.
67.0 35.72	3- 3-55 5-20-58	N	O	L.
182.25 180.28	10-15-40 9-24-56	P	S	L. Rwl.
Dry	8-19-54	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 10 N., R. 30 E.--Con.							
19C1	Andrus & Funk Produce Co.	500	Dr	395	6	..	..
33H1	USBR, drainage observation well	548.1	Dr	156	4	151	Basalt
T. 10 N., R. 31 E.							
5D1	USBR, drainage observation well	559.0	Dr	53.4	3	53	..
17B1	USBR, drainage observation well	583.5	Dr	84	3	84	..
29D1	USBR, drainage observatinn well	493.2	Dr	103	4	103	..
30R1	Old Sheep Camp	476	Du	109	..	..	..
34K1	Lyle W. Neff	795	Dr	600	8	..	Basalt
T. 10 N., R. 32 E.							
11N1	John Klundt	842	Dr	550	6	10	. do .
17R1	D. C. W. Neff	847	Dr	495	6	..	. do .
29R1	. . . do . . .	777	Dr	578	6	..	. do .
T. 11 N., R. 28 E.							
25R1	USBR, drainage observation well	859.3	Dr	50	1½	50	..
T. 11 N., R. 29 E.							
2L1	Harold Shay	927	Dr	459	6	..	Basalt
5D1	USBR, drainage observation well	917.4	Dr	50	1½	50	Silt, clay
5N1	West 15 Domestic Water Co.	915	Dr	804	8-6	645	Sand, gravel
9D1	USBR, drainage observation well	923.2	Dr	50	1½	50	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
141.73 141.15	9-24-56 6- 9-58	J, 5	Ind	
Dry 155.28	2-28-55 5-20-58	N	O	L.
Dry	9- 8-54	N	O	L.
Dry	9- 3-54	N	O	L.
Dry	9-23-54	N	O	L.
104	10-21-40	P, 3	De	Formerly stock well.
470 424.84	11- 2-50 6- 8-58	P, 7½	S	L.
..	..	P, 3	D, S	Basalt at 4 ft.
40	10-23-40	P	D, S	
160	10-23-40	P, 1½	D, S	L.
Dry	7-24-53	N	O	L.
432	10-15-40	P	D, S	L.
Dry 33.09	7-21-53 5-20-58	N	O	L.
570	10-16-57	..	PS	L.
Dry	7-21-53	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 11 N., R. 29 E.							
11D1	USBR, drainage observation well	900.5	Dr	50	1½	50	..
13Q1	Leonard Ferguson	766	Dr	480	6	223	Basalt
14D1	USBR, drainage observation well	911.9	Dr	50	1½	50	..
14R1	USBR, drainage observation well	781.0	Dr	50	1½	50	..
16A1	Sunset Water Association	916	Dr	942	6	375(?)	Basalt
16N1	USBR, drainage observation well	912.2	Dr	50	1½	50	..
17N1	E. T. Churchman	891	Dr	565	6	400	Basalt
19R1	USBR, drainage observation well	875.7	Dr	50	1½	50	..
20N1	White Bluffs Water Assoc.	890	Dr	936	8	612	Basalt
24R1	USBR, drainage observation well	685.9	Dr	50	1½	50	..
25R1	Unknown	660	Dr	..	6	..	Basalt
26D1	USBR, drainage observation well	830.8	Dr	50	1½	50	..
31Q1	Clear Water Water Assoc.	862	Dr	725	8	541	Basalt
T. 11 N., R. 30 E.							
1Q1	USBR, drainage observation well	624.8	Dr	58	4	58	..
4N1	USBR, drainage observation well	728.7	Dr	16	1½	16	Basalt
5B1	Hope Valley Water Assoc.	741	Dr	110	8	19	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	7-22-53	N	O	L.
410	5- -57	S, 2	D, S	
Dry	7-22-53	N	O	L.
Dry	7-24-54	N	O	L.
542	10-16-57	..	PS	Deepened from 811 ft, 8-15-57. L.
Dry	7-24-53	N	O	L.
428.74	6- 9-58	..	S	L.
Dry	7-23-53	N	O	L.
557	1955	..	PS	Dd 182 ft pumping 56 gpm. L.
Dry	7-25-54	N	O	L.
291.18	6-12-58	N	N	
Dry	7-26-54	N	O	L.
525	1956	S, 10	PS	L.
Dry	10-19-54	N	O	L.
Dry 9.68	7- 9-54 6-19-58	N	O	L.
58.05 66.73	10-17-57 6-11-58	J, 3	PS	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 11 N., R. 30 E.							
6N1	USBR, drainage observation well	851.7	Dr	50	1½	50	..
8N1	USBR, drainage observation well	747.3	Dr	50	1½	50	..
9R1	USBR, drainage observation well	721.1	Dr	50	1½	50	..
10G1	Earl Halverson	766	Dr	246	6	14	Basalt
11B1	W. J. Stredwick	584	Du	113	8	113	Gravel
11B2	City of Eltopia	578	Du	118	6	115	. do .
11C1	USBR, Eltopia well	700	Dr	614	12-10	40	Basalt
11G1	Mrs. A.P.Robinson	589	Dr	392	6	..	Basalt
14F1	Norman Thorsen	580	Dr	162	6	..	Gravel
16C1	A. J. Hackney	717	Dr	320	6	..	Basalt
21R1	Norman Thorsen	566	Dr	345	6	30(?)	. do .
24B1	O. P. Hailey	605	Dr	315	6	..	. do .
24D1	USBR, drainage observation well	644.1	Dr	51	3	51	..
30Q1	Harry Frye	680	Dr	316	6	91	Basalt
34L1	Guy Moore	626	Dr	526	6	400	. do .
T. 11 N., R. 31 E.							
1R1	Albert Loney	845	Dr	465	6	..	. do .
11P1	Frank Pierett, Jr.	686	Dr	350	6	..	..
30D1	B. G. Hailey	602	Dr	184	6	180	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	7-17-54	N	O	L.
Dry	7-15-54	N	O	L.
Dry	7-13-54	N	O	L.
48.60	9-19-58	J, 1	D,S	
112.37 111.64	10-14-40 5-12-51	C, 7½	PS	Less than 5 ft dd after 7 hours at 140 gpm. Formerly Northern Pacific Ry. well. Hydrograph in fig. 1.
114	10-14-40	P, 4	PS	L.
355	9-17-55	..	..	Dd 33 ft after pumping 24 hours at 280 gpm. L.
..	..	..	De	Formerly domestic well. L.
155	10-16-40	N	De	Formerly domestic and stock well. L.
141.70	4-17-58	S, 1	D	
60	10-14-40	P, 6	D, S	L.
179.40 236.84	10-17-57 6- 8-58	P	S	L.
Dry	9-11-54	N	O	L.
298.00 305.05	10-17-57 4-15-58	S, 1	D, S	Basalt at 91 ft.
..	..	N	De	Formerly domestic and stock well. L.
430	10-26-50	P, 3	D, S	Cp.
300	10-23-40	P, 3	D, S	
170	10-19-40	P	S	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 11 N., R. 32 E.							
2A1	Frank Pierret	942	Dr	600	6	..	Basalt
3M1	Felix Van Hollebeck	975	Dr	..	6	..	. do .
13C1	A. Van Hollebeck	990	Dr	625	6	32	. do .
20A1	Loren Loeber	810	Dr	156	12	..	..
21D1	. . .do. . .	813	Du	36.5	48	36.5	Basalt(?)
T. 12 N., R. 28 E.							
12H1	L. L. Bailie	616	Dr	450	7	300	Basalt
23R1	USBR, drainage observation well	371.2	Dr	50	1½	50	Sand
24N1	Charles Higley	396	Dr	755	12	..	Basalt
24N2	Unknown	396	Dr	70	4	..	Gravel
24N3	USBR, drainage observation well	377.5	Dr	50	1½	50	Sand
24N4	USBR, drainage observation well	383.2	Dr	50	1½	50	Sand, gravel
24N5	USBR, drainage observation well	386.5	Dr	50	1½	50	. . .do. . .
24N6	USBR, drainage observation well	391.9	Dr	50	1½	50	..
24N7	USBR, drainage observation well	380.1	Dr	55	6	54	Clay, sand, gravel
24N8	USBR, drainage observation well	374.5	Dr	52	6	52	Silt, sand, gravel
24P1	USBR, drainage observation well	394.2	Dr	73	6	73	Sand, gravel
25R1	USBR, drainage observation well	859.8	Dr	50	1½	50	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
575	..	P, 5	D, S	
..	..	P, 3	S	
593	10-23-40	P, 5	D, S	
120.39	9-13-56	P, 3/4	D, S	C.
28.40	10-23-40	P, 3	De	Formerly stock well.
210	1907	P, 3	D, S	C, L
22.0	3-14-55	N	De	L. Rwl.
19 16.04	10-17-40 6-12-58	..	N	L.
39.24	10-17-40	P	..	Used to supply water to drill well 12/28-24N1.
26.0	3-15-55	N	De	L. Rwl.
15.5	3-17-55	N	De	L. Rwl.
28.0	3-19-55	N	De	L. Rwl.
Dry	3-22-55	N	De	L. Rwl.
29	1- 9-56	N	O	L.
22	1-12-56	N	O	L.
32	12-12-55	N	O	L.
Dry	7-20-53	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 12 N., R. 29 E.							
1G1	Ronald V. Heilig	884	Dr	482	6	212	Basalt
1M1	USBR, drainage observation well	733.2	Dr	50.3	1½	50	..
2R1	P. C. Rindero	790	Dr	300	6	155	Basalt
3F1	E. F. Ruggles	851	Dr	401.5	6	20	. do .
3R1	USBR, drainage observation well	740.0	Dr	50.2	1½	50	..
5A1	USBR, drainage observation well	587.3	Dr	13.8	1½	13.8	..
5D1	Jim Reynolds	610	Dr	180	6	157	..
6H1	Joe Roads	604	Dr	225	6	150	Basalt
6K1	Richard Rehfeld	598	Dr	237	6	167	. do .
7B1	--Waldon	580	Dr	242	6	161	. do .
7P1	USBR, drainage observation well	561.6	Dr	11.7	1½	11.7	..
8B1	USBR, drainage observation well	570.6	Dr	50	1½	50	..
11M1	Edwin Danz	710	Dr	212	6	168	Basalt
15A1	USBR, drainage observatinn well	745.9	Dr	50	1½	50	..
15D1	USBR, drainage observation well	717.6	Dr	50.3	1½	50.3	..
16N1	USBR, drainage observation well	671.7	Dr	50.2	1½	50.2	..
22Q1	C. C. Braydon	916	Dr	450	6	425(?)	Basalt
23H1	Bert Riddle	948	Dr	500	6	..	. do .
25D1	USBR, drainage observation well	927.1	Dr	50.5	1½	50.5	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
285	9-10-56	S, 1½	D	L.
344.70	6-10-58			
Dry	8-18-55	N	O	L.
207.94	4-17-58	S, 1	D, S	L.
307.1	10-15-57	S, 1½	D, S	Well was drilled 5 ft deeper in 1957. Cp.
303.85	6-10-58			
Dry	8-20-55	N	O	L.
Dry	8-12-55	N	O	L.
130.04	10-16-57	N	S	L.
118.53	6-10-58			
169.29	10-16-57	P, 1	D	L.
186.25	6-10-58			
210	11- -57	S, 1½	D, S	L.
170	4-17-58	..	..	L.
Dry	8-17-55	N	O	L.
Dry	8-16-55	N	O	L.
177	8- -57	J, 2	D, S	Cp, L.
179.11	8- 4-58			
Dry	8-24-55	N	O	L.
Dry	8-20-55	N	O	L.
Dry	8-23-55	N	O	L.
400	10-17-40	P	S	L.
..	..	P, 3	D, S	L.
Dry	8-21-56	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 12 N., R. 29 E.—Con.							
25J1	Jack Jennings	851	Dr	407	6	..	Basalt
26A1	C. C. Braydon	922	Dr	400	6	..	. do .
26A2	. . .do . . .	922	Dr	1090	6	..	. do .
27A1	USBR, drainage observation well	928.9	Dr	50	1½	50	..
28F1	USBR, experimental well	914	Dr	699	10	455	Basalt
30J1	R. E. Weber	884	Dr	934	6½	550	. do .
30J2	C. C. Braydon	884	Dr	600	6	..	..
32R1	Ringold Water Co	916	Dr	933	8-6	900	Basalt
33D1	USBR, drainage observation well	912.5	Dr	50	1½	50	..
34B1	North 16 Domestic Water Assoc	925	Dr	555	8	390	Basalt
36D1	USBR, drainage observation well	885.0	Dr	50	1½	50	Sand
T. 12 N., R. 30 E.							
1E1	Lester Hailey	675	Dr	110	6	..	Basalt
1M1	USBR, drainage observation well	677.0	Dr	86	3	86	..
3P1	Jesse Cobane	782	Dr	290	6	30	Basalt
4R1	USBR, drainage observation well	762.3	Dr	11	1½	11	..
5B1	USBR, ditchrider's residence	914.4	Dr	457.5	12	146.3	Basalt
8D1	C. C. Braydon	969	Dr	..	..	..	..
10M1	John Hoffman	798	Dr	465	6	..	..

of wells.--Continued

Water level		Type of pump. and hp	Use	Remarks
Depth below land surface (feet)	Date			
297.14 287.95	10-15-57 6-10-58	N	N	
390	10-15-40	P	D, S	
400	10-19-40	N	De	Formerly domestic and stock well. L.
Dry	7-23-54	N	O	L.
493	1- -53	T, 15	PS	Pumps 55 gpm. C, L.
501 501	10- 1-57 6-10-58	P, 3	D, S	Pumps 23 gpm. L.
..	..	N	De	Well was never used.
554	10-16-55	S, 33	PS	L.
Dry	7-17-53	N	O	L.
424	3- -57	S, 5	PS	Cp, L.
Dry 33.83	7-19-54 5-20-58	N	O	L.
80	9- 7-56	J, 2	D, S	
Dry	9-22-54	N	O	L.
161.60	4-17-58	S, 1	D, S	
Dry	7- 7-54	N	O	L.
354.5 236.17	2-14-56 4-22-58	P, 5	D	Pumps 7 gpm. C. L.
..	..	..	De	Formerly domestic and stock well.
350	10-17-40	P, 3	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 12 N., R. 30 E.							
12E1	O. P. Hailey	676	Dr	121	6	120	Gravel
16Q1	John Clark	810	Dr	57	6	11	Basalt
16R1	USBR, drainage observation well	815.2	Dr	10	1½	10	..
18D1	USBR, drainage observation well	962.9	Dr	50.6	1½	50.6	..
23B1	USBR, drainage observation well	638.2	Dr	64	3	64	..
24F1	O. A. Beckwith	735	Dr	405	6	..	Basalt
27M1	Clarence Woodard	801	Dr	58	6	15	. do .
30H1	C. M. Jones	742	Dr	492	6	20	. do .
30R1	USBR, drainage observation well	726.4	Dr	20	1½	20	..
33B1	Don Didier	780	Dr	374	6	20	Basalt
34N1	Bob O'Neil	784	Dr	328	6	13	. do .
35A1	USBR, drainage observation well	618.7	Dr	108	4	100	Sand
T. 12 N., R. 31 E.							
10M1	Mrs.Henry Coordes	1,062	Dr	961	6	118	Basalt
13M1	Ken Ousley	1,128	Dr	860	6	..	. do .
20G1	Frank Stassney	920	Dr	560	6	..	. do .
21R1	Fred Jones	1,010	Dr	735	8	..	. do .
T. 12 N., R. 32 E.							
9F1	Ezra Thompson	1,038	Dr	765	6	..	. do .
18D1	. . . do . . .	1,041	Dr	702	6	..	. do .
22H1	Ludwig Grassl	1,130	Dr	840	6	70	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
101.78 106.08	10-16-57 6-10-58	P	S	Basalt at 120 ft.
33.14	6-19-58	J, 1	D, S	
Dry	7- 8-54	N	O	L.
Dry	8-21-56	N	O	L.
Dry	10-15-54	N	O	L.
350.90 341.04	10-17-57 6- 8-58	P	S	L.
28	8- -57	J, 1	D, S	
195	10-14-40	P	D, S	L.
Dry	7-16-54	N	O	L.
80.53	9-19-58	S, 1½	D, S	
108.89	4-17-58	S, 1	D, S	
102.4 84.83	10- 6-54 5-19-58	N	O	L.
600	6-14-41	P, 5	D, S	
..	..	P, 5	D, S	
..	..	P, 3	D, S	
..	..	P, 3	D, S	
715	6-13-41	P, 3	D, S	
652	6-14-41	P, 3	D, S	
800	10-22-40	P	D, S	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 12 N., R. 32 E.--Con.							
22H2	Charles Hoffman	1,075	Du	91	48	91	..
28B1	Tom Thompson	1,057	Dr	792	8	300	Basalt
30P1	Don Collin	1,085	Dr	770	6	75±	. do .
33H1	Hal Hockett	1,172	Dr	810	8	226	. do .
T. 12 N., R. 33 E.							
3A1	Lagsden & Schaeffer	1,316	Dr	1,000±	6	..	..
T. 13 N., R. 25 E.							
3D1	Gabriel Jaddan	414	Du	41	36	..	Gravel
T. 13 N., R. 27 E.							
14Q1	Unknown	390	Dr	81	5	..	..
14Q2	Unknown	390	Dr	341	8	..	..
T. 13 N., R. 28 E.							
13N1	USBR, Mesa exploratory well	952.5	Dr	1119	12-8	1,029	Basalt
T. 13 N., R. 29 E.							
2E1	L. L. Bailie	730	Du	22	6	..	..
4R1	. . .do. . .	960	Dr	355	6	..	Basalt
8R1	. . .do. . .	1,009	Dr	460	6	..	. do .
10Q1	. . .do. . .	650	Du	..	..	..	..
12M1	Herman Khun	746	Dr	289	6	..	..
20N1	L. L. Bailie	982	Dr	587	6	509	Basalt
22P1	USBR, drainage observation well	621.4	Dr	13	1½	13	..
24R1	Unknown	786	Dr	228	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
79.86 75.53	10-24-40 6- 7-58	P	D, S	
492	9- 6-56	P, 3	D	Basalt at 160 ft. C.
740	10-28-40	P, 5	D, S	
785	9- 6-56	P, 5	D, S	Basalt at 205 ft.
..	..	P, 3	N	
31.41	11- 1-40	P	D, S	
41.03	6- 7-58	..	..	
37.20	6- 7-58	..	..	
475	11- 6-54	..	..	Yield 85 gpm. C, L.
10.85 11.11	8-22-56 5-14-58	C, 16	Irr	Flowing.
305	11- 7-40	P	D, S	
420	11- 7-40	P	D, S	
12	9- -50	..	De	Formerly domestic and stock well.
60.30	11- 3-50	N	N	
490	12-12-40	P	D, S	L.
Dry	8- 5-55	N	O	L.
125.26 16.47	10-18-40 5-14-58	J, 1	N	Hydrograph in fig. 2.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 13 N., R. 29 E.--Con.							
26B1	USBR, ditchrider's residence	738.55	Dr	175	10	27	Basalt
26D1	--Baker	716	Dr	362	6	18(?)	. do .
28B1	L. L. Bailie	579	Dr	540	12	..	Basalt
28P1	. . .do. . .	570	Dr	80	6	..	..
33A1	USBR, drainage observation well	608.2	Dr	39.8	1½	39.8	..
36D1	USBR, drainage observation well	770.8	Dr	50	1½	50	..
36D2	F. H. Callahan	766	Dr	360	6	70	Basalt
T. 13 N., R. 30 E.							
1A1	Herb Camp	1,011	Dr	600	6	..	. do .
11H1	M. M. Poe	947	Dr	350	6	..	. do .
14D1	USBR, drainage observation well	942.5	Dr	10.2	1½	10.2	..
15R1	USBR, drainage observation well	928.2	Dr	15.2	1½	15.2	..
16G1	E. Leslie Crawford	900	Dr	60	6	26	Basalt
20A1	USBR, drainage observation well	877.7	Dr	50	1½	50	..
22P1	Frank Lamb	904	Dr	361	6	18(?)	Basalt
22R1	M. M. Poe	939	Dr	364	6	16	. do .
22R2	USBR, drainage observation well	926.2	Dr	23.1	1½	23.1	. do .
24E1	Unknown	934	Dr	311	6	..	..
24Q1	Ray Bailie	683	Dr	100	10	100	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
138.76 100	11-23-54 5-14-58	T, 3	D	Dd 5 ft after 2½ hours pumping 27 gpm. C, L.
118.28 92.74	8-22-56 5-14-58	J, 1½	D, S	Basalt at 18 ft.
30.34 11.61	9-25-50 5-15-58	..	S	L.
40	9-25-50	..	D, S	
Dry	8-15-55	N	O	L.
Dry	8- 8-55	N	O	L.
110	Spring -57	S, 1½	D	Basalt at 60 ft.
445	1950	P, 5	D, S	
299.15 274.16	9-28-50 6-10-58	P	S	
Dry	8-21-56	N	O	L.
Dry	8-22-56	N	O	L.
38 32.02	9- -57 6- 5-58	J, 1/3	D,S	L.
Dry	7- 9-53	N	O	L.
200	11- 6-40	P	D, S	Basalt at 18 ft.
80	11- 6-40	P	N	L.
Dry 20.17	8-20-56 6-18-58	N	O	L.
297	1902	N	De	Formerly domestic and stock well.
33	9- 9-53	T, 40	Irr	Pumps 1,000 gpm.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 13 N., R. 30 E.--Con.							
25B1	Ray Bailie	680	Dr	60	6	60	Gravel
25C1	. . do . .	680	Dr	200	10	115	Basalt
25D1	. . do . .	678	Dr	127	10	127	Gravel
25M4	City of Mesa	675	Dr	63	12	..	. do .
25N1	M. M. Poe	684	Dr	..	6	..	. do .
25N2	. . do . .	675	Du	74	72	74	. do .
25N3	. . do . .	674	Du	..	..	..	..
26B1	Sam Poe	890	Dr	270	8	45	Basalt
26G1	M. M. Poe	674	Du	30	108	30	Gravel
26G2	. . do . .	674	Du	36.8	72	..	. do .
26G3	. . do . .	675	Dr	40	8	40	. do .
26H1	. . do . .	675	Du, Dr	79	10	..	. do .
26H2	. . do . .	675	Dr	89	10	89	Basalt
26J1	Northern Pacific Railway	676	Du	61	42	61	Gravel
26J2	M. M. Poe	674	Dr	104	10	104	. do .
26J3	City of Mesa	675	Dr	100	12	100	Sand
26R1	. . do . .	672	Dr	120	12	..	.do.
28D1	USBR, drainage observation well	891.9	Dr	50	1½	50	..
28R1	USBR, drainage observatinn well	882.6	Dr	35	1½	35	..
29A1	Block 12 Water Association	888	Dr	540	8-6	305½	Basalt
29C1	Lawrence Robinson	872	Dr	272	6	..	Sand (?)

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40	1951	J, 2	D	
32.32 14.54	9- 9-53 6- 5-58	N	N	Clay to 115 ft.
33	9- 9-53	T, 40	Irr	L.
60	8-20-53	N	De	Never used. L.
..	..	P	D	
..	..	P	De	Formerly domestic and stock well.
..	..	N	De	. . . . . Do . . . . .
212	1955	S, 2	D, S	Pumps 10 gpm.
27.73	11- 6-40	N	De	Formerly domestic well. L.
26.79 12.20	11- 6-40 6- 5-58	P, 3	S	Hydrograph in fig. 5.
33.58	8-11-53	J, 2	D	L.
30	8-10-48	N	De	Formerly irrigation well. Pumped 400 gpm. L.
25	4-15-48	C, 7½	Irr	Dd 3 ft after pumping 4 hours at 600 gpm. L.
37	1- 6-48	T, 3	Ind	Well no longer used. C.
35	9- 3-53	T, 40	Irr	L.
31.08	9-21-53	T. 40	PS	L.
54	8- -53	N	De	Not used, inadequate for public supply. L.
Dry	7- 8-53	N	O	L.
Dry	7-10-53	N	O	L.
132	..	N	..	To be public supply. L.
215.00	8-22-56	P	D, S	Cp.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 13 N., R. 30 E.—Con.							
30A1	Basin Water Association	772	Dr	350	8	..	Basalt
30D1	USBR, drainage observation well	773.8	Dr	20	1½	20	Sand, gravel
30H1	USBR, drainage observation well	856.5	Dr	50	1½	50	Sand
30N1	USBR, drainage observation well	763.9	Dr	13	1½	13	..
31R1	USBR, drainage observation well	956.3	Dr	50.8	1½	50.8	..
32A1	Frank Lamb	899	Dr	435	6	..	Basalt
32A2	USBR, drainage observation well	883.00	Dr	50.2	1½	50.2	..
33A1	Frank Lamb	894	Dr	538	6	340	Basalt
33F1	Don Montierth	884	Dr	210	8	75	. do .
36C1	USBR, Mesa well	757	Dr	340	8	85	. do .
T. 13 N., R. 31 E.							
5N1	Herb Camp	900	Dr	26	6	..	Sand, fine
12M1	Joe E. Haulina	1,017	Dr	371	6	..	Basalt
13A1	Anna Lindsay	1,124	Dr	480	6	..	. do .
14A1	Irvin Loeber	1,060	Dr	435	8	..	..
16L1	Northern Pacific Railway	708	Dr	102	12	..	Gravel
22Q1	William Germain	967	Dr	637	6	600±	Basalt
24R1	Chester McLean	1,174	Dr	537	6	100	. do .
34K1	Darrel Pepiot	1,046	Dr	445	6	90	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
43.14 66.35	11-21-57 5-17-58	J, 5	PS	Original depth 195 ft, deepened in 1957. L.
Dry 2.80 4.84	7-15-53 11-21-57 5-14-58	N	O	L.
Dry 19.98	8-10-55 5-19-58	N	O	L.
Dry	7-16-53	N	O	L.
Dry	8-20-56	N	O	L.
270	8-22-56	P	S	Deepened from 270 ft in 1954.
Dry	8- 9-55	N	O	L.
260	12-12-40	P	De	Basalt at 20 ft. Formerly domestic, stock well.
192	10- 1-57	J, 2	D, S	
190	12-15-50	T, 15	PS	C, L.
11.91 17.98	9-28-50 6- 7-58	P, 2½	S	
331	6-14-41	P	D, S	
..	..	P	N	
70	8- 1-56	P, 5	D, S	
62.4 47.75	9-28-50 6- 6-58	P	S	
437	9-26-50	P, 3	D, S	
477	6-14-41	P	D	Basalt at 100 ft. C.
402.0	9-27-50	S, 5	D, S	Basalt at 90 ft.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 13 N., R. 32 E.							
1J1	Connell Sand & Gravel Co.	765	Dr	220	12	53	Basalt
1L1	USBR, drainage observation well	764.6	Dr	125	4	125	Clay
2B1	Simon Miller	770	Dr	126	14	4	Basalt
2G1	. . .do. . .	780	Dr	126	6	..	. do .
3H1	USBR, drainage observation well	777.7	Dr	71.2	4	66	..
5A1	USBR, drainage observation well	777.6	Dr	72.8	4	67	..
7E1	Joe Havlina	1,080	Dr	425	7	69	Basalt
8D1	H. W. Brummond	1,082	Dr	460	6	..	. do .
8Q1	Tony Hoffman	1,168	Dr	487	6	..	. do .
10A1	H. W. Brummond	1,140	Dr	276	6	..	. do .
10D1	C. A. Loeber	1,096	Dr	425	6	..	. do .
14M1	W. J. Dougherty	1,212	Dr	535	6	57	. do .
21D1	Otto Krug	1,098	Dr	446	6	..	. do .
21N1	. . do . .	1,078	Dr	85±	6	..	. do .
24G1	Bert Henrikson	1,216	Dr	565	6	..	. do .
27N1	Dorsey Elgin	1,155	Dr	323	6	..	. do .
32A1	L. V. Dougherty	1,092	Dr	674	6	..	. do .
35A1	J. M. Freeman	1,220	Dr	1,000	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
73.06	11-20-57	T, 20	Ind	Cp, L.
75	10-29-54	N	O	L.
82.52	9-29-50	T, 50	Irr	Pumps 750 gpm. Cp.
84.25	9-29-50	J, 3	D, S	Pumps 70 gpm.
Dry	11- 3-54	N	O	L.
Dry	11- 8-54	N	O	L.
410	10- 2-50	P	D	
375	10-24-40	P	D, S	
397	10-24-40	P, 1½	D, S	Basalt at 42 ft.
254.06 253.73	2-11-42 6- 8-58	N	N	Rwl.
325	10-24-40	P, 3	D, S	
515	6-11-41	P, 3	..	Basalt at 57 ft. Cp.
320	10-24-40	P	D, S	
85±	10-24-40	..	S	
555	6-11-41	P, 3	D, S	
279.47 236.50	10- 4-50 6- 7-58	N	N	L, Rwl.
630	8-17-56	P, 2	D	Basalt at 14 ft.
..	..	P, 5	..	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 13 N., R. 33 E.							
18J1	W. S. Hunt	1,232	Dr	600	6	..	Basalt
29A1	Mrs. Henrietta Kennedy	1,229	Dr	700	..	..	. do .
36M1	K. Baker	1,325	Dr	..	6	..	..
T. 14 N., R. 23 E.							
2A1	Priest Rapids Development Co.	776	Dr	764	12-10	312	Basalt
12N1	Arne Sunde	737	Du	30+	36	..	..
16A1	Christian Brumbaugh	510	Du	46	60	..	..
22P1	Washington Irr. & Dev. Co.	466	Dn	10	8	10	Gravel
36L1	Merritt-Chapman-Scott	550	Dr	350	20-16	178	Basalt
T. 14 N., R. 24 E.							
24M1	U. S. Corps of Engineers	845	Dr	700	16	700	Sand, gravel
T. 14 N., R. 25 E.							
1D1	US Corps of Engineers, Hanford well 2	660	Dr	938	20-6	891	Basalt
9N1	Columbia Highlands Co.	702	Du	120	48	..	..
21B1	US Corps of Engineers, Hanford well 6	640	Dr	522	24-20	522	Sand, gravel
27Q1	Northern Pacific Ry.	531	Du	65+	48	..	..
28E1	US Corps of Engineers	860	Dr	648	24-20	650	Gravel
31M1	US Government	774	Dr	699	20-16	699	Gravel, sand

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P, 3	N	
551	10- -02	P, 3	D, S	Basalt at 23 ft.
260.10	6- 6-58	P	D, S	
315	4-25-56	..	..	Dd 80 ft at 500 gpm. L.
Dry	11- 7-40	N	N	
39.73 34.53 39.98	10-11-40 8-18-50 6- 9-58	J, 1	D, S	
4	11- 7-40	P	D	
92	10-19-56	T, 40	PS	Dd 88 ft pumping 400 gpm. L.
375.94	6- 9-58	S, 17	N	Dd 2 ft pumping 265 gpm. L.
182 183.02	5-10-52 6- 9-58	T, 20	N	Dd 4 ft pumping 135 gpm. L.
Dry	11- 2-40	N	N	
235 236.00	4-30-53 6- 9-58	S, 15	PS	Yields 250 gpm. L.
Dry	10-31-40	N	N	
479	1957	S	PS	Dd 6 ft; yield 250 gpm. L.
370	3-17-53	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 14 N., R. 26 E.							
2N1	US Government	450	Du	68	36-6	..	Gravel
10A1	US Government	433	Dr	57	5	57	Sand, gravel
10R1	US Government	412	Du	40	36±	40	Gravel
11M1	Norman Lawson	402	Du	28	36-6	28	. do .
31F1	US Government	423	Du	40	48	40	. do .
31L1	US Government	416	Du	36.5	48	36.5	. do .
T. 14 N., R. 27 E.							
24C1	US Corps of Engineers Hanford well 9.	862	Dr	1,396	20-8	1,396	Basalt
T. 14 N., R. 28 E.							
5H1	US Government	824	Dr	550	6	..	Sand
23A1	Big Bend Land Co.	820	Dr	..	6	..	..
29M1	Unknown	745	Dr	415	8	..	..
32G1	US Government	775	Dr	80	..	..	..
T. 14 N., R. 29 E.							
1D1	USBR, drainage observation well	875.8	Dr	50	1½	50	Clay
1R1	Herman Khuns	910	Dr	265	6	..	Basalt
3D1	USBR, drainage observation well	843.0	Dr	50	1½	50	Clay
9A1	US Government	1,275	Dr	860	10	218	Basalt
11B1	USBR, Wahluke Siphon test 1	785	Dr	92	6	89	Sand, gravel
11B2	USBR, Wahluke Siphon test 2	784	Dr	61	6	61	. . .do. . .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
60	10-30-40	P	D, S	
49.60	10-30-40	P	D, S	
32	10-30-40	P	D, S	
25	10-30-40	P	D, S	
38.54	11- 2-40	T	Irr	Pumps 1,000 gpm.
29.51	11- 2-40	P	D, S	
383 358	11-10-53 6- 9-58	T, 20	PS	Dd 13 ft pumping 100 gpm. Cp, L.
530 366	9-16-40 6- 7-58	P, 7½	S	
..	..	P	S	
375.5	10-30-50	P	D, S	
..	..	N	De	Formerly domestic and stock well.
Dry 11.85	8-23-52 5-19-58	N	O	L.
187.1 84.99	11- 3-50 5-14-58	P	S	Hydrograph in fig. 3.
Dry 38.59	8-22-52 6-25-58	N	O	L.
587	9-16-55	T, 40	PS	C, L.
52.08	8-11-53	N	N	L.
47.36	8-11-53	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 14 N., R. 29 E.--Con.							
11C1	USBR, Wahluke Siphon test 3	787	Dr	42.5	6	40	Basalt
14D1	Herman Kuhn	1,112	Dr	111	6	..	Basalt(?)
22E1	Rosco Krier	954	Dr	450	6	..	Basalt
T. 14 N., R. 30 E.							
2J1	Richard Dilling	1,160	Dr	400	6	..	. do .
3E1	USBR, drainage observation well	947.4	Dr	50.5	1½	50	..
3N1	USBR, drainage observation well	930.9	Dr	50	1½	50	..
5R1	USBR, drainage observation well	915.6	Dr	20	1½	20	Basalt
8G1	USBR, Othello Development Farm well	953	Dr	371	10-8	371	. do .
10P1	USBR, Lower Scooteney well	1,016	Dr	433	10-8	30	. do .
20A1	USBR, Scooteney well	984	Dr	717	15-12	157	. do .
22D1	USBR, drainage observation well	1,020.9	Dr	41	1½	26	Gravel
24B1	Oliver Dilling	995	Dr	..	..	..	Basalt
25P1	--Whitted	924	Dr	362	6	..	. do .
27J1	USBR, Scooteney Headworks well	942.2	Dr	381	6	381	. do .
28D1	USBR, drainage observation well	996.3	Dr	50	1½	50	..
28D2	USBR, drainage observation well	993.5	Dr	50	1½	50	Sand
30K1	Lowen Bailey	850	Dr	360	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
35	8- 1-53	N	N	L.
Dry	11- 7-40	N	De	Inadequate for stock well.
410	11- 7-40	P, 1	S	
250	11- 3-50	P	D	Cp.
Dry	8-14-56	N	De	L.
Dry	8-27-52	N	O	L.
Dry 7.66	8-26-52 5-19-58	N	O	L.
225 110	7-31-52 5-19-58	T, 100	..	C, L.
300 175	3-17-52 5-19-58	T, 5	D	C, L.
254	11-15-51	..	..	C, L.
Dry 33.53	8-29-52 5-19-58	N	O	L.
..	..	P	S	
190	8-14-56	J, 5	S	
195 114.54	11- 6-53 5-14-58	S	D	C, L.
Dry	9- 2-52	N	O	L.
Dry 34.38	8-25-55 5-19-58	N	O	L.
250	11-13-40	P, 1½	D,S	Cp.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 14 N. R. 30 E.--Con.							
32B1	USBR, drainage observation well	888.7	Dr	20	1½	20	Basalt
33C1	Herman Kuhn	984	Dr	550	6	..	. do .
T. 14 N., R. 31 E.							
1E1	Bernard Wirth	1,122	Dr	460	6	..	..
4N1	William Krug	1,128	Dr	460	6	70±	Basalt
6E1	Raymond Krug	1,147	Dr	565	6	40	..
7D1	USBR, drainage observation well	1,154.5	Dr	50.5	1½	50	Clay
7R1	Robert Krug	1,143	Dr	630	6	..	Basalt
8R1	Harry Mittel-staedt	1,097	Dr	765	6	..	. do .
10R1	John Finkbeiner	1,132	Dr	481	6	40	Basalt
12Q1	Bessie Meisner	1,114	Dr	550	6	..	. do .
15D1	Anna Mittel-staedt	1,116	Dr	450	6	..	. do .
16N1	USBR, drainage observation well	1,077.7	Dr	50	1½	50	..
18D1	USBR, drainage observation well	1,064.3	Dr	50.4	1½	50.4	..
20M1	Oliver Dilling	1,126	Dr	420	6	90	..
21H1	. . . do . . .	1,122	Dr	365	6	..	Basalt
22J1	Albert Mittel-staedt	1,127	Dr	..	6	..	. do .
22R1	USBR, drainage observation well	1,125.7	Dr	49.9	1½	49.9	..
25R1	Northern Pacific Railway	840	Dr	228	..	..	Gravel, basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry 11.63	9- 3-52 5-19-58	N	O	L.
400	11-12-40	P, 2	D, S	Deepened from about 442 ft, 1950.
..	..	P	D, S	
290	7-18-55	P	D, S	Basalt at 70 ft.
480	1946	P, 2	D, S	
Dry 23.74	8-15-56 6-25-58	N	O	L.
430	1950	P, 1½	D, S	Basalt at 90 ft.
680 207.00	6-10-41 6- 5-58	..	N	Originally 496 ft deep.
310	6-10-41	P, 2	D, S	L.
275.95 278.70	7-31-56 5-14-58	N	N	
..	..	P, 5	D, S	Basalt at 25 ft.
Dry	8-17-56	N	O	L.
Dry	8-17-56	N	O	L.
300	1954	P	D, S	Basalt at 90 ft.
..	..	N	N	
..	..	P	De	Formerly stock well.
Dry	8-16-56	N	O	L.
..	..	S	Ind	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 14 N., R. 31 E.--Con.							
25R2	Northern Pacific Railway	840	Du, Dr	365	96-10	98	Basalt
26H1	Clarence Finkbeiner	1,020	Dr	252	6	..	..
27Q1	Oliver Dilling	1,102	Dr	..	6	..	..
29J1	USBR, drainage observation well	1,121.7	Dr	50.1	1½	50.1	Sand
31A1	USBR, drainage observation well	1,071.9	Dr	30.7	1½	30.7	..
31B1	Andrew Buren	1,052	Dr	450	6	..	..
34D1	USBR, drainage observation well	1,027.6	Dr	17.7	1½	17.7	..
36B1	City of Connell well 2	904	Dr	643	12	3	Basalt
36B2	City of Connell well 1	904	Dr	286	12	3	do
36R1	USBR, drainage observation well	885.6	Dr	39	4	39	..
T. 14 N., R. 32 E.							
2P1	Cyril Hart	1,243	Dr	948	6	..	Basalt
6R1	E. Mittelstaedt	1,126	Dr	510	6	..	do
8C1	M. E. Adams	1,108	Dr	460	6	..	do
8N1	Samuel Meiser	1,106	Dr	475	6	..	do
12M1	R. E. James	1,182	Dr	625	6	..	do
22M1	Francis Havlina	1,113	Dr	400	6	30	do
29N1	Frank Havlina	925	Dr	265	6	20	do
31D1	City of Connell well 3	876	Dr	505	12	33	do
32L1	Buster Bauermeister	828	Dr	730	12-8	37	do

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
145	5-13-53	T, 12	Ind	
..	..	P, 6	D, S	
..	..	P	D, S	
Dry	8-16-56	N	O	L.
12.00	6-18-58			
Dry	8-17-56	N	O	L.
..	..	P	D, S	
Dry	8-16-56	N	O	L.
258	6-11-41	T, 50	PS	Pumps 200 gpm. C, L.
258	6-12-41	S, 15	PS	Pumps 80 gpm. C.
Dry	11-17-54	N	De	L, Rwl.
450	1953	P, 5	D, S	L.
..	..	N	De	Formerly domestic, stock well.
360	6-11-41	P, 2	D, S	
475	6-11-41	P	D, S	
607	11-14-50	P	D, S	
..	..	P	D, S	Pumps 15 gpm.
235	11-22-57	S, 5	D, S	Pumps 70 gpm.
190	1956	T, 40	PS	Dd 82 ft after 3 weeks pumping. at 225 gpm. C, L.
70	1956	T, 50	Irr	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 14 N., R. 32 E.—Con.							
32M1	Buster Bauermeister	832	Dr	152	6	..	..
33R1	J. W. Stine	794	Dr	281	12	51	Basalt
T. 14 N., R. 33 E.							
7D1	C. L. Colley	1,165	Dr	997	6	..	. do .
10P1	James Kelsey	1,425	Dr	..	6	..	..
13A1	W. W. Yeisley	1,325	Dr	..	6	..	..
14D1	Oren Herron	1,425	Dr	..	6	..	..
18B1	Arnold Hudlow	1,329	Dr	542	8	70	Basalt
20R1	Earl Copp	1,407	Dr	..	6	..	..
T. 15 N., R. 23 E.							
3H1	Lester Morrison	534	Dr	84	12	84	Gravel
33R1	Washington Irr. & Develpment Co.	517	Du, Dr	..	6	..	..
34A1	Clifton Hutchings	558	Du	91	36	..	..
T. 15 N., R. 24 E.							
34K1	Unknown	870	Dr	235	6	..	..
T. 15 N., R. 25 E.							
26D1	Brown Bros.	922	Dr	622	6	..	Basalt
T. 15 N., R. 26 E.							
28Q1	US Corps of Engineers, Hanford well 7	770	Dr	892	16-8	892	Basalt, broken

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
140	1955	S, 3	D	
97	6-11-52	T, 75	Irr	Dd 7 ft after pumping 4 hours at 1,372 gpm. Cp, L.
500	6-14-41	P	D, S	
426	1950	N	N	
..	..	P	D, S	
..	..	N	N	
484	4-15-53	S, 5	D, S	Cp, L.
..	..	P	N	
59	1956	T, 30	N	To be public supply. L.
..	..	..	..	Dry at 36 ft, 10-11-40.
Dry	10-11-40	N	N	
Dry	10-30-40	N	N	
445	1948	P, 4	D, S	Pumps 9-10 gpm. L.
317	9- 1-53	S	N	Dd 11.5 ft pumping 100 gpm. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 27 E.							
5R1	Chicago, Milwaukee, St. Paul & Pacific RR	726	Dr	358	10	..	Basalt
32E1	US Corps of Engineers, Hanford well 8	730	Dr	1,123	20-8	1,123	. do .
34L1	Edith Rathbone	694	Dr	147	2	..	..
34L2	US Corps of Engineers, Hanford well 1	697.7	Dr	636	20-12	353	Sand
T. 15 N., R. 28 E.							
1R1	Gordon Hayes	892	Dr	145	6	72	Basalt
2J1	. . .do. . .	770	Dr	71	6	16	. do .
2R1	USBR, drainage observatinn well	899.3	Dr	50	1½	50	..
3N1	USBR, drainage observation well	772.7	Dr	50	1½	50	..
4M1	Lester D. Harris	684	Du	31	36	16	..
5P1	Don Reynolds	703.8	Dr	150	8	37	Basalt
6B1	Unknown	645	Du	15	48	9	. do .
6M1	Michel Clayton	632	Dr	176	6	..	..
6M2	. . . do . . .	623	Dr	356	10	19	Basalt
6R1	USBR, drainage observation well	661.2	Dr	50	1½	..	Sand
8D1	R. E. Fich	692	Dr	246	8-6	150	Basalt
8E1	Chicago, Milwaukee, St. Paul & Pacific RR	855	Dr	415	6	260	Sand, gravel interbed
8G1	Walter Danielson	758	Dr	240	8-6	200	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
158	1908	P	Ind	Pumps 130 gpm. C, L.
262 263	1-29-54 6- 9-58	S	N	Slight dd pumping 80 gpm. L.
Dry 240	10-30-40 6- 9-58	N	N	
271 240	1-20-52 6- 9-58	S	PS	Dd 200 ft pumping 70 gpm. L.
133	1958	J, 3/4	D	
12	1958	J, 3/4	D, S	
Dry	7-16-52	N	O	L.
Dry	7-17-52	N	O	L.
Dry	10-13-50	N	N	
63.10	3-19-58	J, 1	D, S	
11.48	10-12-50	N	N	
20	10- -50	N	N	L.
10	10- -50	T, 30	Irr	Basalt at 19 ft.
Dry 18.07	7-22-52 6-25-58	N	O	L.
90	3-19-58	T, 15	D, S	
240	8- -37	P	Ind	L.
79.40	3-19-58	S, 1	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 28 E.—Con.							
13A1	USBR, drainage observation well	887.1	Dr	50	1½	50	..
15A1	USBR, drainage observation well	1,045.1	Dr	50	1½	50	Clay
15D1	Saddle Mountain Water Assoc.	1,040	Dr	865	15-10	385.6	Basalt
24G1	USBR, lower Saddle Gap well	884	Dr	236	10	225	Sand
24L1	USBR, upper Saddle Gap well	996	Dr	398	6	389	Basalt
24R1	USBR, drainage observation well	868.5	Dr	50	1½	50	..
35P1	USBR, Wahluke well 10	1,151	Dr	840	10	..	Basalt
T. 15 N., R. 29 E.							
1N1	USBR, drainage observation well	1,100.5	Dr	50	1½	50	..
2L1	USBR, drainage observation well	1,099	Dr	8	1½	8	..
2N1	USBR, drainage observation well	1,089.8	Dr	50	1½	50	Sand
3D1	City of Othello	1,091	Dr	693	10	212	Basalt
3D2	USBR, drainage observation well	1,050.8	Dr	10	1½	10	..
3E1	USBR, drainage observation well	1,049.5	Dr	8	1½	8	..
3P1	USBR, drainage observation well	1,043.8	Dr	6.5	1½	6.5	..
4A1	City of Othello	1,050	Dr	560	8	120	Basalt

of wells.--Continued

Water level: Depth below land surface (feet)	Water level: Date	Type of pump and hp	Use	Remarks
Dry	7-28-52	N	O	L.
Dry 42.64	7-26-52 5-19-58	N	O	L.
375	2-13-52	T, 15	PS	C, L.
198	4- 2-52	T, 3	D	Dd 14 ft after pumping 24 hours at 45 gpm. C, L.
342 281.54	1-22-52 11- 6-53	T, 3	D	C, L.
Dry	8-14-52	N	O	L.
444.00 461	4-16-58 7- -56	N	N	C.
Dry	6- 3-54	N	O	L.
Dry	4-23-54	N	De	L, Rwl.
Dry 18.66	6- 2-54 5-19-58	N	O	L.
225	1939	T, 15	PS	C, L. Pumps about 170 gpm.
Dry	4-26-54	N	O	L.
Dry	4-23-54	N	O	L.
Dry	4-26-54	N	O	L.
239.92 250.72 250	11-14-40 10-23-50 1954	T, 75	PS	Basalt at 140 ft. C.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 29 E.—Con.							
4H1	Chicago, Milwaukee, St. Paul & Pacific RR well	1,044	Dr	538	12-10	..	Basalt
4H2	. .do. . well 2	1,048	Dr	540	12-10	..	. do .
5N1	—Heinly	938	Dr	278	6	89	. do .
7R1	USBR, drainage observation well	926.7	Dr	50	1½	50	Silt
8C1	Darrel Thacker	964	Dr	195	6	117	Basalt
8D1	USBR, drainage observation well	931.7	Dr	50	1½	50	Sand
8G1	Newell Anderson	948	Dr	265	6	100	Basalt
8K1	. . . do . . .	960	Dr	480	6	90	. do .
10E1	USBR, drainage observation well	1,051.5	Dr	10	1½	10	..
10N1	USBR, drainage observatinn well	1,050.8	Dr	13	1½	13	..
13F1	Dennis & Donald Woodin	1,100	Dr	500	6	..	..
14A1	USBR, drainage observation well	1,080.4	Dr	50	1½	50	Sand
14H1	N. J. McCoy	1,084	Dr	357	6	198	Basalt
14P1	A. O. Hampton	1,055	Dr	409	8	..	. do .
16A1	Robert E. Cole	1,035	Dr	640	6	..	. do .
16A2	USBR, drainage observation well	1,036.0	Dr	50	1½	50	..
16D1	USBR, drainage observation well	979.2	Dr	50	1½	50	..
17H1	Frans Yorgenson	955	Dr	331	6	..	Basalt, gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
258.5 192.28	10-23-50 12-11-57	T, 25	Ind	C.
..	..	T, 25	Ind	Dd 55 ft pumping 90 gpm.
..	..	S, 1	D	L.
Dry 17.82	7-31-55 5-19-58	N	O	L.
136.64	8- 8-58	J, 3	D, S	L.
Dry 28.52	7-15-52 5-19-58	N	O	L.
..	..	J, 5	D, S	Cp, L.
180	1957	J, 5	D	Cp.
Dry	4-26-54	N	O	L.
Dry	4-26-54	N	O	L.
300	..	T, 5	D, S	
Dry 28.63	5-28-54 5-19-58	N	O	L.
270	4-17-58	J, 5	D, S	
..	..	P	D, S	
241.25 238.73 251.65	2-14-51 11- 6-53 7-20-56	T, 5	D, S	Deepened in 1956, pumps 55 gpm. Rwl.
Dry	5-25-54	N	O	L.
Dry	8- 6-52	N	O	L.
..	..	S	D,S	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 29 E.--Con.							
17N1	USBR, drainage observation well	936.7	Dr	50	1½	50	Gravel
18B1	Fairview Domestic Water Assoc.	919	Dr	495	8	137	Basalt
19R1	Orville Cofland	871	Dr	..	6	..	. do .
20E1	Julia Urghart	905	Dr	276	6	..	..
20R1	USBR, drainage observation well	905.9	Dr	50	1½	50	Gravel
21M1	Ralph Parks	940	Dr	220	6	143	Basalt
22A1	USBR, drainage observation well	1,035.3	Dr	50	1½	50	Silt, clay
24D1	James Erickson	1,062	Du	28	48	..	..
24P1	--Griffith	1,052	Dr	..	6	160	Basalt
26A1	John Para	1,043	Dr	588	6	..	. do .
26A2	USBR, drainage observation well	1,042.3	Dr	50	1½	50	..
26C1	Brick Patterson	1,030	Dr	257	6	150	Basalt
27E1	Paddock, Betterly & James	959	Dr	400	8	180	. do .
27N1	USBR, drainage observation well	878.4	Dr	50	1½	50	Clay
27Q1	USBR, drainage observation well	957.1	Dr	65	1½	65	Sand
27R1	South Othello Water Assoc.	962	Dr	550	10-8	102	Basalt
29A1	John Aberle	888	Dr	210	6	100	. do .
30B1	Herman Kuhn	860	Dr	332	6	..	. do .
34A1	. . . do . . .	892	Dr	148	7	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry 42.98	8-13-52 5-19-58	N	O	L.
180	3-29-54	"	PS	L.
"	"	T, 3	D	
80	10- -50	P, 2	S	
Dry 22.56	8-19-52 5-19-58	N	O	L.
125	3-21-58	J, 2	D, S	
Dry 22.55	5-26-54 6-25-58	N	O	L.
24	4- -58	J, 1½	D	
"	"	N	D, S	Basalt at 240 ft.
313.79	10-20-50	P, 3	S	Incomplete log.
Dry 46.74	5-31-54 5-13-58	N	O	L.
189.74	4-17-58	S, 1½	D, S	
235 190.21	7-22-52 7-19-55	S, 7½	D, S	Pumps 45 gpm. L.
Dry 15.52	8-21-52 5-19-58	N	O	L.
64	8- 3-55	N	O	Dry at 58 ft 5-13-58 L.
237 131.03 130.65	5- 2-52 12-13-57 5-13-58	T, 5	PS	C, L.
197	3-21-58	S, 3/4	D, S	
154.83 99.21	11-14-40 11- 6-53	P, ½	D, S	Rwl.
Dry	11-15-40	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 29 E.--Con.							
35G1	Robert Burton	899	Dr	340	6	..	Basalt
36Q1	C. E. Beebe	900	Dr	80	6	45	. do .
T. 15 N., R. 30 E.							
2B1	Herbert Michel	1,218	Dr	300+	6	..	..
2R1	Bernice Matthews	1,251	Dr	226	6	..	Basalt(?)
8D1	Clifford Michel	1,142	Dr	480	6	..	..
9D1	J. J. Eschelman	1,158	Dr	95	6	..	..
10P1	Tom Booker, Jr.	1,227	Dr	518	6	160	Basalt
12Q1	Mrs.A.M.Rayburn	1,243	Dr	..	6	..	..
14D1	USBR, drainage observation well	1,217.3	Dr	50	1½	50	..
21E1	USBR, drainage observation well	1,129.2	Dr	50	1½	50	..
22K1	Mrs. S. M. Porch	1,184	Dr	458	6	153	Basalt.
23A1	Glenna Kleinbach	1,171	Dr	415	6	..	. do .
23H1	. . . .do. . . .	1,195	Dr	850	12	53	. do .
26A1	USBR, drainage observation well	1,217.5	Dr	50	1½	50	..
26J1	Medford Fox	1,220	Dr	550	6	..	Basalt
27D1	USBR, drainage observation well	1,185.1	Dr	50	1½	50	..
27N1	USBR, drainage observation well	1,178.0	Dr	50.3	1½	50.3	..
28J1	T. R. Booker	1,178	Dr	480	6	60	Basalt
30D1	USBR, drainage observation well	1,033.2	Dr	50	1½	50	..
30P1	Lester J. Cockrum	1,046	Dr	415	6	150	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
175	4- -58	P 1	D, S	
45	4- -58	J, 3/4	D	
..	..	P	N	Formerly domestic well.
216.3 144.03	11- 2-50 5-15-58	N	N	Hydrograph in fig. 3.
..	..	P	S	
Dry	11- 6-50	N	N	
478	1949	P	D	L.
143.80	9-18-58	P	N	Formerly domestic and stock well.
Dry	6- 7-54	N	O	L.
Dry	8-14-56	N	O	L.
400	4- -58	S, 3	D, S	
100 40	1950 1956	P	D, S	C.
407 294.80	10- 9-56 5-15-58	N	N	Dd 78 ft pumping 20 gpm. L.
Dry	6- 7-54	N	O	L.
387.0	11- 2-50	P	N	Well buried in sand.
Dry	8-14-56	N	O	L.
Dry	8-13-56	N	O	L.
400	11- 1-50	P	D, S	L.
Dry	6- 1-54	N	O	L.
263	4- -58	S	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 30 E.--Con.							
32E1	Lloyd Ottem	1,031	Dr	400	2	..	Basalt
32Q1	Stewart Bennett	1,040	Dr	390	6	..	. do .
35R1	USBR, drainage observation well	1,1712	Dr	50.3	1½	50.3	..
36A1	USBR, Block 47 housing well	1,202.5	Dr	492	12	156.5	Basalt
T. 15 N., R. 31 E.							
2A1	John Beyha	1,408	Dr	520	6	..	. do .
2D1	Bert Grieb	1,339	Dr	430	6	..	. do .
4C1	Don Damon	1,285	Dr	500±	12	..	. do .
4D1	. .do. .	1,302	Dr	275	6	..	. do .
8R1	A. E. Dickinson	1,267	Dr	350	6	..	. do .
13J1	Charles W. Grieb	1,292	Dr	425	6	..	. do .
14C1	P. J. Lyle	1,276	Dr	370	7	98	. do .
19C1	James Johnson	1,204	Dr	260	6	..	. do .
20P1	William Krug	1,237	Dr	390	6	..	. do .
22A1	Norman Wirth	1,279	Dr	375	6	92	. do .
27A1	Walter Johnson	1,254	Dr	460	6	..	. do .
30M1	Medford Fox	1,216	Dr	460	6	..	. do .
32H1	E. W. Kuntz	1,139	Dr	400	6	28	. do .
34J1	Harry Mittel-staedt	1,190	Dr	547	6	..	. do .
34M1	W. C. Dettman	1,162	Dr	530	6	40	. do .
36F1	Bert Grieb	1,162	Dr	545	6	16	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	D, S	
..	..	P, 3	D, S	
Dry	8-15-56	N	O	L.
425 390	2- 8-56 6- 7-58	P, 5	D	C, L.
..	..	..	N	Dry at 426 ft, 10-13-50.
325.00 250.00	11-13-50 6- 7-58	P	N	Basalt at 50 ft. Rwl.
280 280	11- -50 1958	T, 150	Irr	Irrigates 800 acres per year. Dd 30 ft pumping 1,000 gpm. L.
240	1958	P, 3	D, S	
..	..	S, 1½	D, S	
325	1-25-41	P	D, S	Basalt at 75 ft.
..	..	P	D, S	Basalt at 98 ft.
222.0 131.38	11-13-50 6- 7-58	N	N	
230	6-10-41	P	D, S	
196.8	3-14-58	P	D, S	
430	6-10-41	P	D, S	
440	6-10-41	P	D, S	Basalt at 100 ft.
80	3-19-58	P	D, S	
293	10- -02	P	S	L.
210	3-19-58	P, 2	D, S	
325	3-19-58	S, 2	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 15 N., R. 32 E.							
1J1	Delbert Pence	1,366	Dr	353	12	19	Basalt
4B1	Don Damon	1,205	Dr	240	6	..	..
6R1	John Kissler	1,382	Dr	700	6	..	Basalt
8C1	Clara Mezger	1,260	Dr	290	6	..	. do .
10A1	Don Damon	1,332	Dr	300	6	..	..
20C1	City of Hatton	1,126	Dr	300	6	..	Basalt
22A1	Harold Johnson	1,156	Dr	142	6	..	. do .
27B1	. . . do . . .	1,176	Dr	300	6	..	..
34D1	Cyril Hart	1,240	Dr	300+	6	..	..
T. 15 N., R. 33 E.							
5C1	Unknown	1,425	Dr	..	6	..	..
7C1	Delbert Pence	1,260	Dr	100	6	..	..
26R1	Ernest Kilsey	1,410	Dr	..	6	..	Basalt
28C1	N. J. Williams	1,425	Dr	..	6	..	..
29C1	Herman F. Klindworth	1,375	Dr	..	6	..	..
30C1	J. H. Stine	1,274	Dr	..	6	..	..
32J1	L. A. Woody	1,432	Dr	1,069	6	18	Basalt
T. 16 N., R. 23 E.							
27E1	Unknown	520	Du	10	36	..	..
34C1	Chicago, Milwaukee, St. Paul, & Pacific RR	550	Du	85	64	..	Gravel
34C2	Beverly Cafe	540	Du	81	36	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
195	3-28-55	T, 15	D, S Irr	Dd 150 ft pumping 160 gpm. Cp, L.
200	7-22-53	T, 7½	D	Pumps 10 gpm.
382.74	6- 7-58	N	N	
271.0 268.20	11-14-50 6- 7-58	N	N	
150.1 289	11-14-50 6- 7-58	T, 10	D, S Irr	
225	3-11-58	S, 5	PS	Basalt at 37 ft.
104.20	3-17-58	P	N	
250	11-14-50	P	D, S	
250	11-14-50	P	D, S	
..	..	P	D, S	
80	11-21-50	P	D, S	
..	..	P	S	
..	..	P	D, S	
..	..	P	D, S	
..	..	P	D, S	
1,000	..	P, 9	D, S	
Dry	10-26-43	..	..	
63.55	8-18-50	T, 5	PS	C.
75 53.58	8-28-50 6- 9-58	T, 5	PS	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 23 E.							
34F1	J. J. Mastuson	535	Du,Dr	110	5	110	Sand
34F2	Henry Bise	570	Dr	141	8	141	Sand, gravel
34L1	Unknown	540	Dr	100	..	..	..
T. 16 N., R. 24 E.							
2J1	L. E. Brooks	1,213	Dr	440	8	5	..
10M1	C. E. Bradbury	1,156	Dr	127	6	..	..
20B1	Mary Steele	1,050	Du	14	48	14	Basalt
32E1	Unknown	524	Dr	155	8	..	..
36K1	State of Washington	519	Du	11	60	11	..
T. 16 N., R. 25 E.							
1Q1	Royal City Development Co.	1,030	Dr	907	12-8	43	Basalt
6M1	USBR, test well	1,221.0	Dr	852	12½	170	. do .
25N1	Lawrence Boeh	545	Du	27	120	27	Sand
25N2	. . .do. . .	545	Du	25	5	24	Gravel
25N3	. . .do. . .	535	Du	18	96	18	. do .
26N1	Nathan Lewis	550	Du	40	48	40	. do .
26Q1	V. Schram	540	Du	16	120	16	. do .
26R1	. .do. .	549	Du	28	42	28	. do .
26R2	. .do. .	550	..	..	..	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
73.30 66.78	9-30-43 8-21-50	P, 2	D	
95	9- -56	T, 3	PS	L.
..	..	..	..	
Dry	4-27-42	N	N	
15 19.89 19.31	9- 3-40 8-23-50 6- 9-58	N	N	L.
7.69 8.34 8.10	5-16-42 8-23-50 6- 9-58	N	N	
19.53	6- 9-58	N	D	
6.64	8-22-50	N	N	
530 530	5- 3-56 4- -58	T, 75	PS	Dd 7 ft pumping 500 gpm. L.
722.20 606.15	11- 1-49 6- 6-58	N	O	Hydrograph in fig. 10. C, L.
26.60 26.43	9-30-43 8-22-50	..	D	
24	9-30-43	P	D	
9 12.68	9- -43 6- 3-58	C, 20	Irr	Dd 8 ft pumping 1,700 gpm.
..	..	T, 5	Irr	Dd 10 ft pumping 450 gpm.
10	9- -43	C, 7½	Irr	Pumps 525 gpm. C.
27.46	9-30-43	P	D	
..	..	J, ½	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 25 E.							
26R3	V. Schram	540	Du	16	..	..	Gravel
28R1	Lawrence Boeh	530	Du	19	42	19	. do .
32L1	James Johnson	535	Du	12.5	..	..	..
34A1	W. B. Underhill	564	Du, Dr	45	48-6	..	Gravel
34A2	C. W. Bovee	575	Du	58	54	..	. do .
34A3	. . . .do. . .	585	Du	55	48	..	. do .
34C1	. . .do. . .	540	Du	24	48	..	. do .
34C2	. . .do. . .	575	Du	60	54	..	. do .
35D1	Chicago, Milwaukee, St. Paul & Pacific RR	560	Dr	67	6	..	. do .
35D2	School Dist. 77	580	Du	53	..	..	. do .
T. 16 N., R. 26 E.							
3N1	USBR, drainage observation well	984.1	Dr	50	1½	50	Sand
6H1	Unknown	990	Dr	..	6	..	..
8D1	William Benjamin	974	Dr	385	6	..	..
10R1	Frank Farrell	872	Du	36	42	..	Basalt
11A1	USBR, drainage observation well	1,000.1	Dr	50	1½	50	Sand
24D1	Margaret Ihde	795	Dr	..	6	..	..
26A1	Florence Chadbourne	758	Dr	165	7	..	Basalt
26R1	A. V. Rasoy	566	Du	36	60	..	..
27N1	F. G. Chadbourne	544	Du	24	60	..	Gravel
28 1	. . . do . . .	570	Du	39	48	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
9.98	8-22-50	C, 7½	Irr	Dd 6 ft pumping 625 gpm.
12.57	8-22-50	P	S	
11.95	8-22-50	N	N	
45	5-24-48	T, 4	D,Irr	Dd ½-foot after pumping 4 hours at 100 gpm. L.
46	1943	T, 10	D,Irr	
50.42	8-22-50	T, 7½	Irr	
18.99 16.11	9-22-50 6- 3-58	T, 10	Irr	
52.5 53.89	9-30-43 9-22-50	P, 5	D,Irr	L.
41.28 39.57	9- 3-40 8-22-50	J, ½	D	L.
..	..	P	D	
Dry 31.67	9-10-55 5-13-58	N	O	L.
262.17	5-13-58	P	N	
290	5-13-58	S, 2	D, S	
30.24	5-21-42	N	N	Basalt at 2 ft.
Dry 27.35	9- 9-55 5-13-58	N	O	L.
..	..	P	S	
157.02 157.94	5-20-42 8-25-50	P	S	
24	7-13-53	C, 15	Irr	Dd 3 ft pumping 1,100 gpm.
12.39	8-28-50	C, 20	D,Irr	Pumps 1,200 gpm.
33.57	6- 3-58	T, 7½	Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 26 E.--Con.							
28Q1	F. G. Chadbourne	549	Du	24	66	..	..
29E1	J. W. Stewart	555	Du	19	48	19	Gravel
30G1	. . . do . . .	544	Du	20	60	..	. do .
30H1	. . . do . . .	544	Du	16	..	..	. do .
34H1	A. V. Rasor	549	Du	25	72	12	. do .
36D1	. . do . .	562	Du	40	60	..	. do .
T. 16 N., R. 27 E.							
3R1	USBR, drainage observation well	1,112.9	Dr	50	1½	50	Silt
4C1	S. Brown	1,130	Dr	354	6	..	..
4H1	Manford Toskey	1,104	Dr	350	6	..	..
4J1	Clarence Johnson	1,092	Dr	..	6	..	..
4N1	C. E. Noyes	1,091	Dr	417	6	..	Basalt
5D1	C. Wiltse	1,133	Dr	105	6	28	Silt
5R1	USBR, drainage observation well	1,092.8	Dr	50	1½	50	..
6E1	E. Isaacson	1,092	Dr	608	6	..	..
6M1	Mrs. Walch	1,065	Dr	..	6	..	..
10K1	Tony Zubirarita	1,081	Dr	396	6	..	..
18L1	—Parsons	845	Dr	250	6	..	Basalt
35P1	T. A. Russell	620	Dr	150	9	3	. do .
T. 16 N., R. 28 E.							
5A1	Glenn Eppich	1,077	Dr	378	6	80	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
11	5-10-46	C, 20	D,Irr	Dd 8 ft after pumping 4 hours at 1,300 gpm.
8	7-27-54	C, 15	Irr	Dd 6 ft pumping 1,200 gpm.
10.49	6- 3-58			
5	5- 1-48	C, 10	Irr	Dd 2 ft after pumping 4 hours at 950 gpm.
6	8-28-50	C, 15	Irr	C.
13.60	9-18-58	C, 15	Irr	Soil to 10 ft, gravel to 25 ft. Dd 11 ft pumping 1,000 gpm.
25	7-13-53	C, 15	Irr	Dd 3 ft after pumping 4 hours at 1,100 gpm. L.
Dry	8-31-55	N	O	L.
38.70	5-13-58			
305.31	7-23-42	P	D, S	
314.14	8-25-50			
133	5-10-58			
262.59	5-12-58	N	De	
286.22	5-15-58	N	De	
317	9- -57	S, 2	D	Basalt at 170 ft.
21.15	5-10-58	J, ½	D	
Dry	8-30-55	N	O	L.
..	..	N	..	
..	..	P	D, S	
..	..	S, 3	D	
145	Fall -57	P, 3/4	D	L.
18.05	7-21-42	P, 3	D, S	
278	3-20-58	J, 5	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 28 E.--Con.							
5D1	Joe Jensen	1,060	Dr	..	6	..	..
6A1	USBR, drainage observation well	1,074.7	Dr	39	1½	39	..
6C1	L. G. Hjelm	1,062	Dr	365	6	..	Basalt
6N1	Paul Edwards	924	Dr	700	..	..	. do .
7D1	USBR, drainage observation well	960.4	Dr	24	1½	24	..
7R1	USBR, drainage observation well	916.8	Dr	38	1½	38	..
8N1	Ralph Barton	924	Dr	423	8	..	Basalt
8P1	--May	925	Dr	304	7	..	. do .
16F1	P. P. Herman	705	Dr	65	6	..	..
18K1	Unknown.	902	Dr	..	6	..	..
20F1	Ethel A. Carlile	740	Du	14	48	..	Gravel
20H1	--Simison	705	Dr	89	6	..	Basalt
35Q1	Gordon Hayes	760	Dr	99	6	..	. do .
T. 16 N., R. 29 E.							
1A1	W. D. Taylor	1,184	Dr	311	6	..	. do .
1D1	USBR, drainage observation well	1,090.5	Dr	35	1½	35	..
2D1	Mr. Winces	1,129	Dr	..	..	..	..
2H1	Daniel Burkholz	1,108	Dr	300	6	..	Basalt
3N1	P. P. Herman	959	Du	13	30	..	Gravel
6E1	John Para	841	Du	16	72	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	..	D, S	
Dry	9- 7-55	N	O	L.
159.9	3-20-58	S, 2	D	
278.18	3-20-58	N	N	
Dry	9- 1-55	N	O	L.
Dry	9- 2-55	N	O	L.
129.58	7-21-42	N	N	
172.88	7-21-42	P, 1½	D, S	C.
..	..	..	D, S	
..	..	N	N	
11.96	7-21-42	N	De	Formerly domestic and stock well.
30	7-21-42	P	D, S	
80	1952	S, 1	S	Well flooded since spring 1957. Under 3 feet of water, 4-15-58.
267.59	7-18-42	S, 1½	D, S	
Dry	5-14-54	N	O	L.
72.06	4-15-58	S, 1	D	
210	7-17-42	P	S	
8.27	10-12-50	P	S	Well flooded by Lake Campbell, 5/12/58.
9.31 13.47 5.82	7-17-42 10-12-50 5-12-58	C, 7½	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 29 E.--Con.							
6M1	John Para	848	Du	35	48	..	..
6M2	. . do . .	840	Du	12	60	..	Gravel
6P1	Edward Garrett	839	Du	16.5	36	15	. do .
7C1	P. P. Herman	833.8	Du	18	48	15	. do .
10D1	Phil Hermann	980	Du	14	48	..	..
10J1	P. P. Herman	1,092	Dr	415	6	59.5	Basalt
11H1	Golden Kent	1,166	Dr	385	6	285	. do .
12A1	USBR, drainage observation well	1,178.9	Dr	50	1½	50	Caliche, silt
12D1	L. Schank	1,175	Dr	120	6	95	Basalt
12R1	New Land Co.	1,180	Dr	..	6	..	. do .
13A1	USBR, drainage observation well	1,179.1	Dr	50	1½	50	Silt
13C1	G. & J. Rawlins	1,164	Dr	285	6	..	Basalt
13D1	USBR, drainage observation well	1,162.4	Dr	50	1½	50	Silt
21F1	John Para	924	Dr	152	10	10	Basalt
22H1	Howard Grover	1,131	Dr	500	6	300	. do .
22J1	Mrs. Vehrs	1,128	Dr	425	6	..	. do .
23N1	USBR, drainage observation well	1,129.1	Dr	50	1½	50	Sand
24R1	—Muhle	1,161	Dr	280	6	345	Basalt
25C1	William J. Beus	1,149	Dr	480	..	..	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
30.16	11-15-49	T, 15	Irr	Dd 4 ft pumping 750 gpm. C.
29.73	5-12-58			
8	1945	C, 7½	Irr	Dd 2 ft pumping 750 gpm.
12.62	7-16-42	S,	D, S	C.
17.24	10-12-50	C, 20		
11.91	3-11-58			
11.45	5-12-58			
17.25	10-11-50	C, 15	Irr	
11.89	5-12-58			
12.00	7-17-42	P	S	Well flooded by Lake Campbell, 5-12-58.
257.94	7-18-42	N	N	Rwl.
258.27	4-14-52			
169.24	3-20-58	S, 5	D, S	
Dry	7-30-55	N	O	L.
11.17	5-27-58			
77.77	4-15-58	S, 1	D, S	
199.95	5-12-58	P	N	
Dry	5-11-54	N	O	L.
10.78	5-27-58			
..	..	T, 5	S	
Dry	5-10-54	N	O	L.
13.69	5-27-58			
74.25	3-20-58	S, 5	D, S	
255	3-20-58	P, 2	D	
175	4-15-58	S	D	
Dry	5-21-54	N	O	L.
10.00	5-27-58			
207.81	5-13-58	S	D, S	
..	..	S, 5	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 29 E.--Con.							
26A1	USBR, drainage observation well	1,142.6	Dr	50	1½	50	Silt
27B1	P. P. Herman	1,122	Dr	440	6	..	Basalt
32A1	Harry Harder	917	Dr	140	10	..	. do .
33A1	USBR, drainage observation well	1,071.4	Dr	50	1½	50	..
34E1	USBR, drainage observation well	1,076.1	Dr	20.8	1½	20.8	..
34F1	USBR, drainage observation well	1,102.8	Dr	20.7	1½	20.7	..
34H1	USBR, drainage observation well	1,117.1	Dr	29.5	1½	29.5	..
34N1	USBR, drainage observation well	1,079.4	Dr	25	1½	25	..
34N2	USBR, drainage observation well	1,051.5	Dr	9.5	1½	9.5	..
34Q1	USBR, drainage observation well	1,104.4	Dr	7	1½	7	..
34R1	City of Othello	1,117	Dr	901	..	..	Basalt
35N1	USBR, drainage observation well	1,115.5	Dr	50	1½	50	Silt
35P1	USBR, drainage observation well	1,104.4	Dr	7	1½	7	..
35R1	Kathryn Tate	1,117	Dr	314½	6	..	Basalt
36D1	USBR, drainage observation well	1,127.2	Dr	50	1½	50	..
36N1	USBR, drainage observation well	1,117.3	Dr	50	1½	50	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry 48.29	5- 8-54 5-27-58	N	O	L.
260.05	3-11-58	P	N	
60	4-15-58	T, 15	D, S, Irr	
Dry	5-22-54	N	O	L.
Dry	4-26-54	N	O	L.
Dry	4-26-54	N	O	L.
Dry	4-20-54	N	O	L.
Dry	4-22-54	N	O	L.
Dry	4-26-54	N	O	L.
Dry	4-23-54	N	O	L.
278	4- -57	T, 150	PS	Dd 26 ft after pumping 28 days at 1,125 gpm.
Dry 34.79 39.73	5-17-54 5-27-53 5- 2-58	N	O	L.
Dry	4-19-54	N	O	L.
309.35 275.15 270.74	12-27-40 12-19-50 5-12-58	P, 3	D, S	Hydrograph in fig. 9.
Dry	5- 7-54	N	O	L.
Dry	5-17-54	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 29 E.--Con.							
36N2	R. C. Palmer	1,120	Dr	321	6	196	..
36R1	Oshino Bros.	1,142	Dr	407	6	170	..
T. 16 N., R. 30 E.							
1B1	John Kisler	1,401	Dr	400	6	..	..
2P1	Clarence Kisler	1,391	Dr	590	6	..	..
4D1	Isaac Lazelle	1,292	Dr	..	6	..	Basalt
8K1	J. A. Peters	1,213	Dr	400	6	..	. do .
9N1	USBR, drainage observation well	1,223.6	Dr	50	1½	50	Silt
9P1	Nathan Petrie	1,258	Dr	377	6	..	Basalt
12R1	H. H. Yager	1,396	Dr	325	6	..	. do .
17J1	Bertha Roloff	1,201	Dr	325	6	..	. do .
18A1	USBR, domestic well	1,190.2	Dr	391.7	10	53.5	. do .
19E1	Ida Michel	1,160	Dr	..	..	..	Basalt
21N1	USBR, drainage observation well	1,186.9	Dr	50	1½	50	Sand
22F1	Everett Michel	1,280	Dr	382	6	..	Basalt
26A1	G. W. Kliphardt	1,359	Dr	500	8	..	. do .
28Q1	Northern Pacific Ry.	1,191	Dr	500	10-8	47	. do .
29C1	Clarence Wilson	1,076	Dr	700	8	119	. do .
33C1	Jacob Finkbeiner	1,180	Dr	485	6	..	. do .
34N1	USBR, drainage observation well	1,158.7	Dr	50	1½	50	..

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
297.36	4-15-58	S, 1½	D, S	
255.55	5-12-58	N	N	L.
330	1949	P	D	
..	..	N	N	
218.11	10-20-50	N	N	
183.05	5-12-58			
..	..	P	N	
Dry	6- 9-54	N	O	L.
39.87	6-24-58			
..	..	P	D, S	
..	..	C, 2	D, S	
285	11- 7-50	J, 5	D, S	
100	5-12-58			
242.6	6-23-55	J, 3	D	Dd 2 ft after pumping 31 gpm for 1 hour.
138	6-24-58			C, L.
189.90	5-12-58	P	N	
Dry	6- 8-54	N	O	L.
44.72	6-24-58			
271.5	11- 6-50	P, 2	D, S	
205.1	5-14-58			
350	1955±	P, 2	D	
350	5-15-42	S	Ind	
196.24	3-14-58	S, 7½	D, S	
197.60	5-12-58			
385	6-12-41	P, 1	D, S	
Dry	6- 4-54	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 30 E.							
35Q1	USBR, Kansas Prairie No. 1	1,236	Dr	..	10	..	Basalt
T. 16 N., R. 31 E.							
1A1	Jack Damon	1,412	Dr	380	6	35±	..
1A2	. . do . .	1,410	Dr	633	10	28	Basalt
2B1	. . do . .	1,404	Dr	340	6	..	. do .
16B1	State of Washington	1,425	Dr	405	6	..	. do .
19H1	Don Damon	1,284	Dr	553	12	..	. do .
20J1	A.E. Dickinson	1,408	Dr	80	6	..	..
24A1	Betty Thurber	1,556	Dr	..	..	..	..
25R1	Henry Phillips	1,444	Dr	700	6	..	Basalt
27N1	Harry Mittel-staedt	1,314	Dr	..	..	..	..
28Q1	Don Damon	1,338	Dr	..	6	..	..
29N1	. .do. .	1,349	Dr	360	6	..	Basalt
31R1	Norman Wirth	1,308	Dr	..	6	..	..
35J1	Don Damon	1,450	Dr	901	16	66	Basalt
35R1	. . do . .	1,420	Dr	350	6	..	. do .
T. 16 N., R. 32 E.							
3B1	Mildred Phillips	1,632	Dr	280	6?	..	. do .
8A1	Don Damon	1,575	Dr	350	6	..	..
8B1	Unknown	1,574	Dr	420+	6	..	..
11N1	Charles Shedd	1,350	Dr	300	6	..	Basalt
19R1	Robert Phillips	1,464	Dr	440	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
45.56	5-14-58	J, 2	D	C.
280	11-21-50	P	N	Formerly domestic well.
280	11-21-50	T, 60	D, S, Irr	Pumps 350 gpm. L.
..	..	N	..	Dry and plugged at 240 ft.
368.46 376.25	11-21-50 5-14-58	P	N	Rwl.
228.53 215	11-21-50 8- -52	T, 150	Irr	Dd 30 ft pumping 1,000 gpm. L.
Dry	11-21-50	N	N	
..	..	P	N	Formerly domestic and stock well.
Dry at 502.8	5-14-58	P	N	. . . . . Do . . . . .
..	..	P	D	
..	..	N	N	
300	7-22-53	P	D	Pumps 10 gpm.
256.60	5-14-58	P, 1	D	
374	5-14-58	S, 200	Irr	Pumps 1,100 gpm. L.
300	7-22-53	..	N	Formerly domestic and irrigation well.
..	..	P, 1	D, S	L.
..	..	..	D, Irr	Pumps 10 gpm.
..	..	P	N	
250 271.25	10- -02 6- 7-58	P, 1	D, S	Basalt at 40 ft.
..	..	P, 1	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 16 N., R. 32 E.—Con.							
22A1	Hugh Phillips	1,407	Dr	350	6	220	..
23R1	William Phillips	1,499	Dr	..	..	..	Basalt
24D1	D. E. Phillips	1,481	Dr	400	6	..	..
33P1	City of Cunningham	1,205	Dr	255	6	..	Basalt
T. 16 N., R. 33 E.							
19R1	R. H. Phillips	1,525	Dr	..	6	..	..
26C1	H. E. Gritman	1,435	Dr	155	6	..	..
T. 17 N., R. 23 E.							
7A1	US Corps of Engineers, Vantage well 1	520	Dr	127	..	..	..
7G1	. .do., Vantage well 2	508	Dr	99	..	..	..
7G2	. .do., Vantage well 3	505	Dr	149	..	..	..
T. 17 N., R. 24 E.							
1D1	Ray Kunkal	1,172	Dr	214	6	97	Basalt
2F1	A. W. Giard	1,202	Dr	250	8	..	. do .
2J1	Ernie Weber	1,210	Dr	136	8	128	Sand
2K1	USBR, formerly Oscar Nelson	1,212	Dr	250	6	..	..
2P1	R. H. Simmons	1,240	Du, Dr	327	36-10	..	..
2R1	James Wade	1,222	Dr	167	6	..	Sand
3A1	USBR, drainage observation well	1,187.3	Dr	50	1½	50	..
4D1	T. B. DeShazer	1,269	Dr	209	6	..	..

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	D, S	
..	..	P	N	
..	..	P	D, S	
150	10- -02	P	PS	
..	..	P	D	
134.88	3-14-58	P, 1	D, S	
..	..	N	N	L.
..	..	N	N	L.
..	..	N	N	L.
50	4- 1-58	S, 3/4	D	
120	1912	P, 6	D, S Irr	Cp.
70.75 60.90	7-11-56 4-28-58	J, 1	D	Dd 4.4 ft after pumping 5 minutes at 8 gpm.
140.35	8-23-49	N	De	Formerly domestic and stock well. L.
95.93	7-11-56	N	N	Well caved 4-28-58. L.
142.26 142.90 96.00 76.00	5-19-42 8-23-49 7-11-56 4-28-58	N	N	
Dry	9-28-54	N	O	L.
193	7-11-56	J, 2	D, S	Cp.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 24 E.—Con.							
4J1	William Sund	1,267	Dr	320	6	22	Basalt
10A1	John Bepple	1,350	Dr	350	10-8	93	do.
12C1	James Sund	1,236	Dr	180	10	..	Gravel
23H1	J. C. McKenzie	1,238	Dr	2280	6	800	..
24E1	H. M. Perry	1,238	Dr	800	6	..	Basalt
30N1	A. J. Adams	982	Du	74	48	..	..
34B1	Unknown	1,078	Du	80	36	..	..
T. 17 N., R. 25 E.							
4E1	--Watkins	1,158	Du	72.5	42	15	..
6E1	Robert Watkins	1,172	Du	91	48	..	..
6H1	Calvin Roeder	1,169	Dr	97.5	6	..	..
6N1	Carl Larson	1,202	Du	129	48	..	Sand
6N2	Robert Watkins	1,210	Dr	165	6	165	.do.
6Q1	Grave Sinclair	1,197	Dr	123	6	..	..
8B1	John Shearer	1,223	Dr	104	10	..	..
10D1	W. D. Sinclair	1,166	Dr	160	6	..	Basalt
11E1	USBR, Frenchman Hills Tunnel Well	1,154	Dr	285	8	233	do.
23K1	USBR, Exploration well	1,226.8	Dr	957	12	80	do.

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
220	7-29-49	P, 3	D	Hydrograph in fig. 4. C, L.
158.46	7-11-56			
142.42	4-28-58			
275.66	9-28-49			
180	7-11-56	S, 1½	D	L.
156	1943	N	N	Well deepened from original depth of 113± ft.
740	1916			
731	1916	N	N	L.
Dry	5-16-42	N	N	
Dry	5-25-42	N	N	
47.52	6-12-56	N	N	
28.80	4-29-58			
68.10	7-11-56	N	N	
52.22	4-28-58			
87.61	5-19-42	N	N	
61.15	7-11-56			
45.54	4-30-58			
128.84	5-19-42	N	De	Formerly domestic and stock well. Rwl.
126.90	8-11-49			
96	6- -56	S, 3/4	D	Pumps 8 gpm.
..	..	P	S	
Dry	9-28-49	N	De	
75	5-19-42	P, 3	D, S	
108.10	11-15-51	..	D	L.
43.60	5-14-58			
627	2- 8-57	..	..	Dd 37 ft after pumping 132 gpm for 5½ hours. C. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 25 E.--Con.							
26R1	Loeta Robinson	1,074	Du	94	36	..	Basalt
27Q1	USBR, formerly G.W. Jamieson	1,130	Dr	400	..	..	..
T. 17 N., R. 26 E.							
17D1	Knut Halstenson	1,126	Dr	48	8	12	..
22K1	Carrie Bjerke	1,277	Dr	314	6	40	Basalt
22L1	Unknown	1,277	Dr	340	6	..	..
25N1	USBR, drainage observation well	1,167.4	Dr	50	1½	50	Silt and sand
27N1	USBR, drainage observation well	1,095.7	Dr	50	1½	50	..
28Q1	Oscar Abramson	1,127	Dr	404	6	60	Basalt
28R1	James Harris	1,115	Dr	386	6	..	..
30D1	K. C. Tolman	1,173	Dr	280	6	..	..
32D1	USBR, drainage observation well	1,054.9	Dr	50	1½	50	..
34B1	W. M. Parsons	1,078	Du	..	36	..	..
34D1	James P. Needham	1,085	Dr	200	8	..	..
34D2	Frank Comstock	1,085	Dr	161	6	..	..
34R1	Guy Willard	998	Dr	279	6	..	Basalt
36Q1	Henry Neifer	1,086	Dr	265	6	80	. do .
36Q2	Hall & Taylor	1,123	Dr	300	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	9-24-40	N	N	
..	..	N	N	L.
40	11- -45	P	D, S	
242.50	10- 3-49	P	S	
241.17	5-10-58	..	..	
Dry 13.39	9- 8-55 5-14-58	N	O	L.
Dry	9-10-55	N	O	L.
280	1916	P	D	C.
257	Fall -56	J, 3	..	
198.70	6- 2-58	N	N	L.
Dry	9-12-55	N	O	L.
..	..	N	N	
150.7 146.18 136.84	9-24-40 10- 3-49 5-14-58	N	N	L, Rwl.
155.54 155.25 135.89	9-24-40 10- 3-49 5-14-58	N	N	Rwl.
253	..	S, 1	D	
215	6- -54	S, 1½	D	
275	..	T, 3	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 27 E.							
4A1	USBR, drainage observation well	1,090.9	Dr	60	1½	60	Silt
8P1	Charles Robbins	1,105	Du	41	120	..	Gravel
8R1	. . . do . . .	1,104	Du	35	36	..	..
10M1	Floyd Harris	1,099	Du	40	24	..	..
10M2	. . . do . . .	1,104	Dr	50	8	..	..
10N1	W. G. Harris	1,110	Du	46.5	48	..	..
10N2	. . . do . . .	1,110	Dr	80	6	..	Sand
13A1	Unknown	1,097	Dr	122	8	..	Basalt
14C1	Christopher Lawty	1,123	Dr	95	2	..	..
18D1	USBR, drainage observation well	1,110.2	Dr	46	1½	46	Sand
18R1	C. G. Trimble	1,196	Du	89	36	..	..
22A1	Royal Rauter	1,262	Dr	240	5½	43	..
22D1	. . . do . . .	1,215	Dr	160	6	..	..
24G1	--Kapp	1,490	Dr	480	8	..	..
31D1	USBR, watermaster's well	1,169.5	Dr	810	18	148	Basalt
32H1	Gus Christienson	1,175	Dr	341	5	..	Basalt(?)

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
48.50 27.98	7-12-55 6-27-58	N	O	L.
35.97 37.50	5- 5-42 10-19-49	P	D, S	L.
..	..	P	De	Formerly supplied schoolhouse.
..	..	P	D, S	C.
42 38	10- -49 Fall -57	P	S	
40.98	5- 5-42	P	De	Formerly domestic and stock well.
..	..	P	D, S	
69.95	5- 5-58	N	D, S	New well, 5-5-58.
84.07 84.00 80.52	5- 5-42 8- 4-54 5- 9-58	N	N	
31.5 14.87	7-18-55 6-27-58	N	O	L.
Dry	5- 5-42	N	N	
209.88 234.92 208	5- 5-42 8- 4-54 5- 8-58	N	N	
152.40	5- 8-58	T, 25	D, S	
450	5- 5-42	N	N	
200.15	2-13-51	T, 15	PS	C, L.
289.81 288.02 227.83	5-25-42 8- 4-49 2-26-58	N	N	Hydrograph in fig. 4.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 28 E.							
2G1	USBR, drainage observation well	1,070	Dr	..	2	..	Sand(?)
4G1	George Drumheller	964	Dn	8	2	..	Gravel
4N1	. . . do . . .	979	Du	8	36	..	Sand
11F1	USBR, test hole	1,050	Dr	168	2	..	Basalt
12D1	USBR, gatetender's well	1,068.85	Dr	270	8	48	. do .
16E1	Don Speirs	1,048	Dr	93	6	11	..
19D1	Peoples Oil & Gas Co.	1,443	Dr	4,570	11	..	Basalt
31L1	A. D. Lewallen	1,139	Dr	230	6	72	. do .
T. 17 N., R. 29 E.							
2A1	Jacob Haisch	1,168	Dr	196	6	25	..
2C1	Irving Stern	1,132	Dr	172	6	..	..
10Q1	Clarence Wahl	1,020	Dr	246	10	..	Basalt
11D1	USBR, drainage observation well	1,109.4	Dr	50	1½	50	Sand
12A1	Jacob Haisch	1,226	Dr	317	6	..	Basalt
12C1	Norman Gard	1,212	Dr	315	7	..	Basalt(?)
12G1	USBR, drainage observation well	1,238.6	Dr	45	1½	44.5	Basalt
13G1	David Nelson	1,281	Dr	380	6	..	. do .
14A1	USBR, drainage observation well	1,246.4	Dr	20	1½	20	..
23A1	Gustav Wahl	1,170	Du	16	48	12	Gravel

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
99.87	3-16-50	N	O	Hydrograph in fig. 3.
42.32	1-24-55			
..	..	P	De	Formerly domestic well.
3.45	5- 1-42	P	De	. . . . .Do. . . . .
97.85	7-19-58	N	O	Hydrograph in fig. 4.
157	3-30-51	T, 5	D	C, L.
74	5- 5-58			
42.33	8- 3-54	J, 1	D	Cp, L.
358.40	5-10-58	N	N	Oil test hole. L.
127.10	9-18-58	J, 5	D, S	L.
151.55	7-15-42	N	N	
88.50	5- 9-58			
137.83	9-28-40	P	S	
80	5-22-42	P, 5	D, S	
Dry	6-28-54	N	O	L.
26.75	5-27-58			
..	..	P	D, S	
206.99	7-15-42	P	S	Hydrograph in fig. 3.
208.30	9-16-49			
101	5- 8-58			
41	7-29-55	N	O	L.
40.35	5-27-58			
166.30	5- 9-58	J, 3	D, S	
Dry	6-29-54	N	O	L.
12.94	7-18-42	P, 3	S	
8.34	9-16-49			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 29 E.--Con.							
24A1	Emil Gutschmidt	1,353	Dr	475	4	..	..
24N1	USBR, drainage observation well	1,236.0	Dr	21	1½	21	..
24R1	USBR, drainage observation well	1,284.8	Dr	38	1½	38	Caliche
25E1	--Richens	1,261	Dr	315	6	50	Basalt
31C1	Unknown	874	Du	28.5	36	26	Gravel
T. 17 N., R. 30 E.							
1A1	USBR, drainage observation well	1,192.9	Dr	50	1½	50	. do .
1A2	USBR, drainage observation well	1,192.3	Dr	18	1½	15	..
1D1	W. J. Hargraves	1,188	Dr	1,500	6	..	..
2C1	USBR, drainage observation well	1,141.0	Dr	30	1½	30	Sand
2Q1	Earl Terwilleger	1,179	Dr	81	6	..	Basalt
2Q2	Clarence Kissler	1,179	Dr	255	12	..	. do .
3A1	Emerson Hough	1,191	Dr	138	6	138	..
4M1	Royal Rauter	1,231	Dr	..	6	..	..
5D1	USBR, drainage observation well	1,206.3	Dr	50	1½	50	Sand
6M1	Clarence Kissler	1,235	Dr	259	8	..	..
8A1	Reuben Jeske	1,268	Dr	280	6	..	..
9N1	City of Warden	1,238	Dr	319	12	80	Basalt
10D1	USBR, drainage observation well	1,232.9	Dr	50	1½	50	Sand

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	D	Cp.
Dry	6-30-54	N	O	L.
Dry 34.42	6-30-54 5-27-58	N	O	L.
218.90	5- 9-58	J, 5	D	
28.16	7-17-42	N	De	Formerly stock well.
27 23.88	7-28-55 5-23-58	N	O	L.
Dry	6-25-53	N	O	L.
..	..	J, 1	D	
17 16.19	8-10-56 5- 8-58	N	O	L.
67.7	10-14-49	P	D	
58	12- 5-50	..	Irr	Dd 88 ft after pumping 2½ hours at 1,550 gpm. L.
90 67.50	June -55 5- 8-58	J, 1½	D	
..	..	P, 3/4	D, S	
Dry 12.82	6-15-54 6-11-58	N	O	L.
212.45 119.19	9-28-40 5- 8-58	T, 3	D,Irr	
226.00 226.46 109.26	7-20-42 10-14-49 5- 8-58	P	D	
71.46 75.94	8-20-57 5- 9-58	N	N	Dd 133 ft pumping 1,000 gpm. L.
Dry 22.06	6-10-54 5-27-58	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 30 E.--Con.							
10H1	Ted Jeske	1,255	Dr	255	8	80	Basalt
10N1	Chicago, Milwaukee, St. Paul & Pacific RR	1,279	Dr	499	10	..	..
10P1	City of Warden	1,280	Dr	685	10	..	Basalt
12H1	Donald Smith	1,253	Dr	350	8	44	. do .
12P1	Schoonen & Connors	1,217	Dr	96.5	6	..	..
13A1	USBR, drainage observation well	1,234	Dr	14	1½	14	..
13A2	USBR, drainage observation well	1,234.1	Dr	50	1½	50	Basalt
13C1	--Taylor	1,214	Dr	136	6	80	..
14R1	Emil Suka	1,339	Dr	400	..	..	..
15C1	City of Warden	1,288	Dr	366	6	..	Basalt
15F1	. . . do . . .	1,353	Dr	900	10	60	. do .
16J1	Unknown	1,343	Dr	400	6	..	. do .
17D1	Finlay Imbert	1,261	Dr	430	6	70	. do .
18A1	USBR, drainage observation well	1,250.9	Dr	50	1½	50	Sand
19A1	A. Jesky	1,263	Dr	287.5	7	..	..
19Q1	Dan Burkholtz	1,190	Du	16.5	72	..	Gravel
22C1	Al Jesky	1,310	Dr	400	12	..	Basalt
24N1	Ed Laib	1,355	Dr	300	6	..	..

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
80 78.32	2-26-58 5- 8-58	N	..	Well not completed, 5-8-58, may be drilled to greater depth. L.
228	1947	-, 5	PS, Ind	Dd 47 ft pumping 30 gpm. C.
167.87	9- 3-53	..	PS	Dd 188 ft pumping 420 gpm. L.
129	5-15-53	T, 40	D,Irr	Dd 206 ft after pumping 4 hours at 214 gpm. L.
Dry 68.02 69.08	7-20-42 8-17-55 5- 8-58	P	N	
Dry	6- -53	N	O	L.
35 36.43	7-19-55 5-23-58	N	O	L.
90	2- -54	J, ½	D	
..	..	P, 3	D	
200 130.46	10- -49 5- 8-58	T	PS	
237 237.53 205.39	7- -50 8-25-50 5- 8-58	T, 20	PS	
275	8-17-50	T, 10		
219.96	9- 3-53	J, 15	D, S	Deepened from 280 ft in 1953.
Dry 47.41	7- 1-54 7-23-58	N	O	L.
187.27 160.08	7-15-42 8-17-50	P	N	
130.00 87.74	8-17-55 5- 8-58	P	N	
10.68	10-12-50	P	S	
..	..	S	..	
200	1954	P, 1½	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 30 E.--Con.							
24R1	Ed Laib	1,375	Dr	400	6	..	..
26C1	Albert Widmer	1,402	Dr	400	6	..	Basalt
26K1	. . .do. . .	1,270	Dr	320	6	..	. dc .
32A1	Claude Campbell	1,293	Dr	534	6	..	. do .
32D1	Ulysses Widman	1,206	Dr	328	6	..	. do .
32H1	Claude Campbell	1,305	Dr	552	8	49	. do .
33C1	Oscar Rauter	1,314	Dr	500	6	25	..
34B1	Fred Radich	1,291	Dr	282	6	30	Basalt
34C1	Lee Radich	1,285	Dr	263	6	263	. do .
36G1	John Kissler	1,343	Dr	330	6	..	. do .
T. 17 N., R. 31 E.							
2R1	R. H. Phillips	1,290	Dr	185	6	..	..
4R1	. . . do . . .	1,383	Dr	275	6	..	..
6P1	Unknown	1,217	Dr	129	6	..	Basalt
6R1	USBR, drainage observation well	1,213.0	Dr	44	1½	44	Silt
8F1	Jurjen Huizinga	1,217	Dr	161	6	..	..
8R1	USBR, Lind Coulee wasteway well	1,249.1	Dr	155	8	62	Basalt
10H1	R. H. Phillips	1,262	Dr	240	6	..	..
13N1	N. J. Knottingham	1,215	Dr	60	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	D	
280.61 279.39	8-18-55 5- 9-58	P	N	
100	..	P	D, S	
300	8-17-50	P, 3/4	D	
..	..	P, 1	D, S	
430	9-30-52	S, 15	D,Irr	Dd 8 ft after pumping 6 hours at 100 gpm. L.
300	8-17-50	P, 1	..	
198.98	8-17-50	J, 5	D, S	Cp.
183.52 175.97 164.17	8-17-50 8-18-55 5- 9-58	S, 3	D	Cp.
247.40	11- 6-50	P	D, S	
156.20 142.73	11-14-50 5- 9-58	P	N	
359.85 229.06	11-14-50 1-25-57	N	N	Rwl.
100.59 72.87 52.50	7-20-42 5-25-54 5-10-58	S	D, S	Hydrograph in fig. 3.
Dry 27.70	6-26-53 5-23-58	N	O	L.
95.42 93.95	7-20-42 11-14-50	P	D, S	
62 58.00	12-11-53 5- 8-58	..	D	Dd 35 ft after pumping 24 hours at 20 gpm. C, L.
120	11-14-50	P	D	
47.6	11-17-50	C, 1½	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 31 E.--Con.							
14F1	N. J. Knotting-ham	1,194	Dr	..	6	..	..
15G1	Henry Phillips	1,261	Dr	253	10-8	40	Basalt
16A1	Knottingham Bros.	1,186	Du	..	6	..	..
17J1	J. R. Damon	1,220	Dr	150	6	..	..
18P1	W. S. Knotting-ham	1,187	Dr	84	6	..	..
27H1	Henry Phillips	1,528	Dr	450	6	..	..
30C1	C. W. Haugen	1,342	Dr	337	6	20	Basalt
32A1	Henry Phillips	1,360	Dr	345	6	..	..
34C1	Erma Wells	1,410	Dr	315	6	..	..
T. 17 N., R. 32 E.							
3R1	Julius Franz	1,645	Dr	335	6	..	..
6B1	John Kulm	1,423	Dr	424	6	..	..
6P1	. . do . .	1,345	Dr	230	6	..	..
17Q1	Mrs. Carl Kron	1,278	Dr	200	6	..	..
19E1	Unknown	1,260	Dr	258	6	..	Basalt
20M1	R. H. Phillips	1,244	Du	46	30	..	..
22A1	David Phillips	1,615	Dr	600+	6	..	..
24A1	John Kulm	1,565	Dr	280	6	..	..
24A2	Edward Kulm	1,565	Dr	579	8	70	Basalt
25K1	Milwaukee Land Co.	1,274	Du	17	48	17	..
28R1	R. H. Phillips	1,260	Du	45	48 by 96	..	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	D, S	
140	3-18-58	T, 15	S,Irr	
26.55	11-17-50	N	N	
..	..	N	N	Formerly domestic and stock well.
66.90 19.70	7-20-42 5- 9-58	P	S	Formerly listed as 18Q1.
..	..	P	D, S	
277 247	11- 8-50 2- -57	P, 1	D, S	C.
..	..	P, ½	D	
249.99	11-21-50	P	S	
289.30	11-14-50	N	N	
325	11-15-50	P, 1½	D	C.
220.20 198.87	11-14-50 5-12-58	P, 1	D	
..	..	P	D	
106.77	6- 7-58	N	N	
30.60 35.33	11-17-50 5-13-58	T, S, 1	D, S Ind	
..	..	P, 1	D, S	
270	11-16-50	P	D	
500	2- 3-53	T, 20	D,Irr	Little dd pumping 120 gpm. L.
8.00	11-16-50	P	S	
37	11-17-50	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 17 N., R. 32 E.--Con.							
28R2	R. H. Phillips	1,258	Dr	385	12-10	70	..
29N1	. . . do . . .	1,568	Dr	400	..	..	..
35E1	School	1,266	Dr	135	6	..	..
T. 18 N., R. 23 E.							
1B1	John Flickenstein	1,242	Dr	272	5	40	Basalt
1C1	Frank Schmutz	1,246	Dr	185	6	15	. do .
3H1	Jerry Escore	1,299	Dr	240	6	..	. do .
3M1	. . .do. . .	1,336	Dr	560	8	120	. do .
4J1	Martina Escore	1,336	Dr	375	6	..	. do .
6A1	Unknown	1,405	Dr	221	8	..	..
12C1	Edwin Drake	1,242	Dr	540	12	..	..
12C2	. . .do. . .	1,242	Dr	275	6	20	Basalt
14B1	Martina Escore	1,242	Dr	542	8	273	. do .
25J1	. . .do. . .	1,250	Dr	320	8	..	. do .
28A1	Ed Englund	1,178	Du	36	..	..	..
36H1	Donald Davison	1,302	Dr	670	16	237	Basalt
T. 18 N., R. 24 E.							
1R1	Dean Attley	1,199	Dr	150	6	..	..
2A1	Frank Ray	1,204	Dr	137	6	30	..
2P1	Charles Walsh	1,210	Dr	168	6	..	Sand

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
68.40	11-17-50	N	N	Formerly irrigation well. Dd 200 ft pumping 215 gpm.
..	..	N	N	
..	..	P	S	
242	9- -16	P	De	Formerly domestic well.
166 60.00	8-16-49 4-26-58	P, 7½	D	Pumps 30 gpm. Cp.
210	9- -16	P	N	Formerly domestic and stock well.
252	5- -56	S, 2½	D	
..	..	P	D	
122.20	4-25-58	N	N	
227.40 200.78 180.00	8-17-49 6-27-56 4-26-58	N	N	
82.50 63.04	6-27-56 4-26-58	P	N	L.
186.97	6-27-56	T, 40	S,Irr	Dd 160 ft pumping 350 gpm. Cp.
236.05	11-29-41	P	S	
33	1956	J	D	
295	1950	T, 100	P, S Irr	C, L.
77.83	4-25-58	J, 1½	D	
129.98 130.35	3-14-41 8-22-49	N	N	Formerly domestic and stock well. Partially filled with sand.
..	..	..	De	Formerly domestic well. Sand to 160 ft, Basalt to 168 ft.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 24 E.--Con.							
2R1	Marie Nadon	1,206	Dr	154	6	..	Sand
3D1	Kenneth Hobson	1,232	Dr	225	13	..	..
4D1	USBR, drainage observation well	1,202.4	Dr	50	1½	50	Gravel
4G1	Leonard Longmire	1,211	Dr	185	6	70	Basalt
6H1	USBR, Burke O & M well	1,224.3	Dr	330	10-8	330	Sand(?) interbed
6H2	C. E. Brown	1,222	Dr	188	12	..	Basalt
6J1	E. J. Webley	1,224	Dr	290	6	32	..
6M1	Evelyn Weaver	1,236	Dr	258	6	..	..
7D1	State of Washington	1,234	Dr	277	6	..	Basalt
8D1	T. J. Hausen	1,230	Dr	350	6	..	. do .
8N1	USBR, drainage observation well	1,214.3	Dr	50	1½	50	Gravel and caliche
12B1	E. J. Hutton	1,202	Dr	130	..	..	..
16D1	USBR, drainage observation well	1,209	Dr	44	1½	44	..
17P1	D. A. Marcusen	1,204	Dr	140	6	67	..
18A1	Hugh Ottley	1,214	Dr	280	8	..	Basalt
18J1	G. E. Ellexson	1,210	Dr	152	6	..	. do .
19A1	USBR, drainage observation well	1,209	Dr	25	1½	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	N	De	Formerly domestic well. Sand to 150 ft, Basalt to 154 ft.
84 50.13	7- -55 4-27-58	S, 1½	D	
Dry 15.53	9-22-54 5-16-58	N	O	L.
131.98 67.18	3-15-41 7- 3-56	N	N	
188 195 45.30	7-31-54 8- 4-54 4-28-58	S	D	Hydrograph in fig. 11. C, L.
27.46	8-27-58	T, 15	PS	Will supply water for city of George.
166	8- 1-49	N	N	L.
212.22 50.88	11-29-41 4-26-58	N	N	
180 38.89	4- 5-39 8-27-58	N	N	Formerly supplied service station.
206.98 60	11-29-41 1956	P, 1	D	
Dry 14.84	9-24-54 5-16-58	N	O	L.
..	..	N	De	Formerly domestic well.
24.38	4-29-58	N	N	
58	3- -55	J, 1½	D	Cp.
22.97 16.25	7- 3-56 4-26-58	J, 3	D	
126 52	9- -16 1955	J, 1	D	
14.27	4-26-58	N	O	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 24 E.--Con.							
20A1	USBR, drainage observation well	1,200.7	Dr	50	1½	50	Caliche
20B1	Don Huntsman	1,202	Dr	97	6	..	..
20E1	Lee Books	1,206	Dr	142	8	14	Basalt
20N1	John Bepple	1,210	Dr	150	6	10	. do .
20R1	J. D. Lowman	1,199	Dr	160	..	..	..
22D1	J. G. Zacher	1,201	Dr	193	6	..	Basalt
22D2	USBR, drainage observation well	1,200.9	Dr	50	1½	50	..
22J1	Fred Elk	1,198	Du	32	48	..	..
23A1	USBR, drainage observation well	1,189.9	Dr	105	1½	105	Silt
24D1	Jon Wylys	1,186	Du	110	48	..	Basalt
24N1	Fred Elk	1,190	Du	110	48	..	..
26L1	Charles Andrews	1,168	Du	160	36	..	..
28D1	Lloyd Detz	1,199	Dr	163	6	100	..
29D1	USBR, drainage observation well	1,210.8	Dr	29	1½	29	Basalt
30H1	Julia Parker	1,220	Dr	74	6	..	. do .
30J1	C. W. Hughes	1,225	Dr	163	6	20	..
32B1	Gustav Zacher	1,220	Dr	173	6	..	Basalt
32D1	R. V. Kline	1,239	Dr	220	6	30	. do .
32N1	Glen Woodward	1,311	Dr	..	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	9-25-54	N	O	L.
19.50	4-26-58			
27.51	7- 2-56	J, 1½	D	
16.90	7- 2-56	J, 2	D	
9.35	4-26-58			
134	8-23-49	P, 3	D, S	
29.43	6-29-56	N	N	Formerly domestic and stock well.
112	9- -16	P, 3½	S	Hydrograph in fig. 3. L.
123.8	8-18-49			
67.29	7- 2-56			
58.37	4-26-58			
Dry	9-26-54	N	O	L.
..	..	..	De	
Dry	6-24-55	N	O	L.
92.94	4-29-58			
109	9- -16	N	N	Formerly domestic and stock well.
109	9- -16	N	De	
100	9- -16	N	N	
40	1955	J, 1½	D	
Dry	9-30-54	N	O	L.
11.31	4-26-58			
30.73	6-29-56	N	N	
148	8-24-49	T, 7½	D, S	Cp.
50	6-29-56			
142.40	8-18-49	P, 1½	S	
160.96	5-16-42	N	N	L.
70.00	6-29-56			
56.84	4-26-58			
..	..	N	De	Formerly stock well.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 24 E.--Con.							
32N2	Glen Woodward	1,320	Dr	425	8	143	Basalt
33D1	USBR, drainage observation well	1,207.4	Dr	30	1½	30	. do .
33H1	W. H. Cook	1,197	Dr	70	8	50	Basalt,sand
33Q1	... .do. . .	1,239	Dr	168	8	60	Basalt
33R1	. . .do. . .	1,210	Dr	60	8	50	Gravel, sand
34A1	USBR, drainage observation well	1,171.7	Dr	35	1½	35	Basalt
34B1	Cornelius Qually	1,187	Dr	160	6	..	. do .
34M1	Walter Nielson	1,198	Dr	180	6	20	. do .
35M1	B. R. Boren	1,185	Dr	90	6	..	..
T. 18 N., R. 25 E.							
4A1	Unknown	1,196	Dr	126	6	..	..
4Q1	Unknown	1,188	Dr	112	6	50	..
6D1	W. Phillips	1,189	Dr	130	6	10	..
6P1	Julia Clerin	1,166	Dr	98	..	..	..
8B1	Unknown	1,165	Dr	134	6	60	..
8M1	James Chamness	1,178	Du	112	36	..	Sand
8N1	Unknown	1,174	Du,Dr	323	36-6	..	.do.
10D1	USBR, drainage observation well	1,152.6	Dr	82	1½	82	Sand,caliche
18H1	Unknown	1,162	Du	87	42	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
317	8-18-51	T, 60	D, S, Irr	Cp, L.
Dry	9-29-54	N	O	L.
6.76	5-16-58			
55	1955	J, ½	D	L.
117.72	9-29-54	N	N	L.
91.07	6-28-56			
71.68	4-26-58			
52	1955	J, 3	D, S	Cp, L.
Dry	9-27-54	N	O	L.
33.68	5-16-58			
100	9- -16	P	N	Formerly stock well.
34.85	4-26-58			
100	8- 1-49	T, 20	D,Irr	Pumps 300 gpm. Cp.
76.25	6-29-56	J, 1	D	
59.30	4-26-58			
100	9- -16	P	S	C.
..	..	N	De	
..	..	N	N	
86	9- -16	N	De	
100	9- -16	N	De	C.
92.80	5-25-42	P	S	Hydrograph in fig. 7.
91.24	7-12-56			
83.67	4-28-58			
91.88	5-25-42	P	D, S	. .Do. .
76.67	4-28-58			
71	6-28-55	N	O	L.
69.29	4-29-58			
82	9- -16	N	N	
84.5	9-26-49			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 25 E.--Con.							
20F1	Unknown	1,160	Du	82	36	..	Basalt
20Q1	Unknown	1,168	Du,Dr	254	42-6	110	. do .
22M1	R. J. Baily	..	Dr	123	..	..	Sand
22N1	USBR, drainage observation well	1,154.4	Dr	84.5	1½	84.5	Sand,caliche
26B1	Unknown	1,150±	Du,Dr	148	42-6	..	..
26M1	Unknown	1,145±	Du,Dr	162	42-8	..	Sand
28A1	Fred Whitener	1,140	Du	70	..	..	..
28L1	Unknown	1,150±	Dr	75±	5	..	..
30R1	W. C. Black	1,150	Du	85	..	..	..
32H1	A. L. Wilson	1,140	Du	75	..	..	..
T. 18 N., R. 26 E.							
2J1	Unknown	1,145±	Dr	100	6	..	..
2N1	M. P. Angelo	1,165	Dr	109	8	..	..
4A1	Unknown	1,173	Dr	103	6	..	..
4E1	Unknown	1,152	Dr	100	..	..	..
4J1	Unknown	1,180±	Dr	120	6	..	..
6J1	Paul Lauzier	1,145±	Du,Dr	65	48-6	50	Basalt
10A1	Unknown	1,165±	Dr	103.5	5	65	..
10J1	Unknown	1,150±	Dr	88.5	5	60	..
10N1	USBR, drainage observation well	1,127.2	Dr	67	1½	67	Caliche
12D1	Unknown	1,150±	Dr	93	6	..	Sand
12Q1	Unknown	1,182	Dr.	125	8	90	.do.

of wells.--Continued

Water level: Depth below land surface (feet)	Water level: Date	Type of pump and hp	Use	Remarks
78	9- -16	N	N	
86	9- -16	..	De	
63	9- -16	N	De	Altitude unknown due to shifting sand. L.
75 69.27	6-20-55 4-28-58	N	O	L.
64	9- -16	..	..	
62	9- -16	..	De	
60	9- -16	T, 7½	D, S	
70	9- -16	..	De	
77	9- -16	..	De	
60	9- -16	P, 3½	D, S	
85	10- -16	N	De	
93	10- -16	N	De	
96 96.25	10- -16 9-21-49	N	N	
74	9- -16	N	N	
110	10- -16	N	N	
50	9- -16	..	..	L.
92.5	10- -16	N	N	
75	10- -16	N	N	
49 49.98	7- 1-55 4-30-58	N	O	L.
63 72.26	10- -16 6- 4-58	P, 2	S	
110.9 110.53	10-11-49 6- 4-58	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 26 E.—Con.							
14A1	Unknown	1,130±	Du,Dr	100	42-10	..	..
14D1	Unknown	1,130±	Dr	54.5	5	..	..
18F1	Mrs. R. E. Davie	1,140	Du,Dr	211	48- 8	185	Sand
20N1	Unknown	1,135±	Dr	100	6	..	..
21N1	Unknown	1,137	Du	53	36	..	..
22D1	Unknown	1,130±	Dr	70	5	..	..
22M1	Unknown	1,130±	Dr	..	..	..	..
30C1	F. W. Iverson	1,150±	Du,Dr	112	..	..	..
34N1	USBR, drainage observation well	1,129	Dr	65	1½	64.5	Sand
T. 18 N., R. 27 E.							
3N1	Unknown	1,040±	Du	10.8	54	..	Gravel
4E1	Unknown	1,085±	Du	56.5	..	..	..
4H1	USBR, drainage observation well	1,048.2	Dr	11	1½	11	Sand
4J2	USBR, drainage observation well	1,051.6	Dr	25	1½	25	Gravel
4M1	Unknown	1,070±	Du	59.5	48	..	..
4R1	Unknown	1,050±	Du	18	48	..	Gravel
4R2	Unknown	1,040±	Du	20	72	..	. do .
6K1	Unknown	1,180±	Du	141.3	48	..	..
8L1	Unknown	1,105±	Du	62.5	48	..	..
10B1	H. W. Ziebarth	1,050±	Du	22	60	..	..
18D1	Unknown	1,175	Dr	118	8	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	..	..	
54	10- -16	N	N	
61.8	9-10-16	N	N	L.
61.96	10- 7-54			
61.99	6- 4-58			
..	..	..	..	
51.39	10- 7-54	P	N	
52.00	6- 4-58			
54	1916	N	N	
58.47	8-27-40	N	N	
..	..	..	..	L.
47	7-18-55	N	O	L.
44.96	4-30-58			
2.8	10- 8-16	N	De	
53.5	10- -16	..	De	
Dry	7-18-55	N	O	L.
8.45	4-13-55	N	O	L.
54.5	10- 8-16	N	De	
14	10- -16	N	De	C.
18	10- -16	N	De	Formerly irrigation well.
138.8	10- 8-16	N	N	
57.0	10- 7-16	N	N	
19	10- -16	N	N	
106.80	9-13-49	N	N	Rwl.
107.46	10- 7-54			
113.59	6- 4-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 28 E.							
2D1	Paul Landis	1,138	Dr	..	6	..	Gravel(?)
2E1	. . .do. . .	1,142	Dr	465	10-8	41	Basalt
2L1	F. M. Hurley	1,128	Dr	183.5	6	..	. do .
2N1	Paul Landis	1,139	Dr	120	8	..	. do .
3A1	K. Goodrich	1,142	Dr	126	10-8	125	Gravel (interbed)
4D1	—Johnson	1,058	Dr	180	6	..	..
4D2	J. M. Barnett	1,067	Dr	190	6	70	Basalt
4D3	Clarence Blazer	1,077	Dr	115	6	..	. do .
4D4	James Wilson	1,074	Dr	103	8	..	. do .
5A1	Maurice Johnson	1,076	Du	34.5	36	..	Gravel
6A1	Unknown	1,040	Du	8.7	..	..	Sand
6E1	Unknown	1,045±	Du	14.6	48	..	..
23R1	USBR, drainage observation well	1,146.2	Dr	50	1½	50	..
24G1	H. L. Schwab	1,139	Dr	225	6	..	..
24G2	. . .do. . .	1,138	Dr	546	8	..	Basalt
24K1	Philip Roth	1,142	Dr	453	12	453	. do .
24N1	. . .do. . .	1,150	Dr	590	20-18	198	. do .
26F1	Frank Elder, Jr.	1,110	Dr	801	12- 8	357	. do .
26J1	—Stevens	1,154	Dr	160	6	160(?)	. do .
26N1	R. T. Gibbons	1,055	Du	82	48	..	..
34H1	Eugene Pfeffer	1,080	Du,Dr	164	6	..	Basalt
34R1	USBR, Potholes campsite well	1,105	Dr	268	8	153	. do .

of Wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
25.00	5- 5-58	J, 3/4	D	
62	12- 2-53	T, 50	Ifr	Dd 210 ft after pumping 2½ hours at 350 gpm,L.
138.84 9.34	4-12-42 6- 6-58	N	O	Hydrograph in fig. 7.
41.60	5- 5-58	T, 50	Irr	L.
96	9-13-49	T, 5	D,Ind	L.
11.74	9-12-49	N	N	
32	9- 1-53	T, 5	PS	Dd 58 ft after pumping 4 hours at 65 gpm. L.
29	4- 1-54	J, ½	D	L.
..	..	J, ½	D	L.
24.66	9-13-49	J, ½	De	
8.5	10- -16	N	De	
12.6	10-15-16	N	De	
Dry	6-18-52	N	O	L.
175 62.36	9- -40 5- 5-58	N	N	Cp.
157	1951	T, 40	D,Irr	L.
143	3- -52	T, 60	Irr	Pumps 2,000 gpm. L.
183	11-11-48	T,150	Irr	Pumps about 1,200 gpm. Cp, L.
139	1945	T,100	Irr	Pumps 2,000 gpm. Cp, L.
..	..	J, 3	D	L.
76	7- 9-42	N	De	
106.10 29.00	9-26-40 5- 5-58	T, 7½	Irr	Cp.
106	1947	T, 15	PS	C, L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 28 E.--Con.							
35D1	USBR, drainage observation well	1,055.0	Dr	50	1½	50	Gravel
35N1	USBR, drainage observation well	1,068	Dr	102	2	..	..
35R1	USBR, drainage observation well	1,080	Dr	50	6	50	Gravel
36D1	USBR, ditch-rider's well	1,133	Dr	218	8-6	193	Basalt
T. 18 N., R. 29 E.							
1A1	C. B. Farms, no.1	1,271	Dr	518	12	72	do
1A2	do do, no.4	1,274	Dr	510	10	69	do
1B1	Menan Starch Co.	1,243	Dr	542	8	40	do
1F1	C. B. Farms, no.2	1,266	Dr	604	15	63	do
1L1	do do, no.3	1,260	Dr	585	15	36.8	do
2A1	J. E. Reeves	1,255	Dr	270	6	270	do
2A2	USBR, drainage observation well	1,232.4	Dr	30	1½	30	..
3C1	Plainview Water Assoc.	1,225	Dr	303	8	33	Basalt
4E1	Finlay MacDonald	1,172	Dr	227	7	..	..
4R1	USBR, drainage observation well	1,181.6	Dr	50	1½	50	Clay
5J1	Richard Atkin	1,186	Du	67	48	..	..
5N1	USBR, drainage observation well	1,164.8	Dr	50	1½	50	Basalt
6H1	Finlay MacDonald	1,170	Dr	225	6	30	do

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	6-20-52	N	O	L.
14.10	5- 5-58			
46.97	6-22-54	N	O	Rwl.
25.90	5- 5-58			
Dry	6-24-52	N	O	L.
37.97	4-23-58			
95.98	8-16-55	N	N	C, L.
81.30	5- 5-58			
218	7-31-50	T, 125	Irr	
235	11-20-50	T, 60	Irr	L.
104	7- 7-55	..	Ind	Dd 86 ft pumping 465 gpm. L.
216	1950	T, 200	Irr	L.
211.23	11-20-50	T, 200	Irr	Dd 5 ft.after pumping 40 minutes at 990
160	5- 8-58			gpm.
165	12-20-52	S	D	L.
80.61	5- 8-58			
Dry	7-14-55	N	O	L.
68.06	4-21-54	T, 10	PS	L.
54.88	8-30-54			
40.60	5- 8-58			
8.20	8-30-54	N	N	
4.17	7-28-55			
7.18	5- 8-58			
Dry	7- 2-52	N	O	L.
15.99	5-23-58			
Dry	9-17-49	N	N	
Dry	6- 4-52	N	O	L.
10.70	5-23-58			
115	9-13-40	T, 7½	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 29 E.--Con.							
6P1	Ed Lehnert	1,156	Dr	69	6	14	Basalt
6R1	United Produce Co.	1,164	Dr	525	8	32	. do .
7R1	Earl N. Davey	1,169	Dr	521	12-10	120	. do .
8B1	Robert Pendleton	1,180	Dr	230	6	60	..
8H1	J. A. Garneau	1,164	Dr	212	6	90	Basalt
8P1	Victor Water Assoc.	1,165	Dr	190	6	43	. do .
8Q1	Eleanor Assoc.	1,164	Dr	172	6	..	..
9H1	Hamilton Produce Co.	1,167	Dr	119	8	57.5	Basalt
9N1	Thurm Baker	1,158	Dr	167	6	97	. do .
9N2	USBR, drainage observation well	1,158.3	Dr	50	1½	50	Sand, clay
10R1	John Denoo	1,190±	Dr	240	6	..	Basalt
11A1	M. Goodrich	1,251	Dr	300	6	..	..
11A2	Goodrich Community well	1,251	Dr	550	12	18	Basalt
11E1	Unit 91 Water Assoc.	1,220	Dr	250	6	30	. do .
12D1	USBR, drainage observation well	1,253.1	Dr	50	1½	50	Sand
13B1	Jack Yarrangton	1,200	Dr	271	8	32	Basalt
13K1	Howard Meader	1,171	Dr	140	6	107	. do .
13Q1	Unknown	1,147	Dr	66	6	..	..
14N1	Glenn Baldwin	1,139	Dr	80	6	..	..
14R1	J. D. Peters	1,169	Dr	240	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
5.51	9- 9-58	T, 1	D, S	L.
206	8- 8-51	T, 30	Ind	Dd 86 ft pumping 220 gpm. L.
180	9-17-49	T, 75	Irr	Dd 5 ft after pumping 20 hours at 400 gpm. Cp, L.
146	8- 4-49	T, 7½	D,Irr	Cp.
157	9- -52	T, 3	D	Dd 20 ft after pumping 1 hr at 72 gpm.
80 8.58	7-28-53 5- 8-58	T, 5	PS	L.
123.54	9-13-40	N	N	
15 16	7- 6-55 5- 8-58	T, 5	Ind	Pumps 100 gpm. L.
3.66 7.24	9-20-57 5- 8-58	J, 1½	D	L.
Dry 9.52	6- 9-52 5-23-58	N	O	L.
142.06	9- 9-53	J, 3	D	
188.75	12-16-46	N	De	Formerly domestic and stock well.
260	- -51	T, 7½	PS	Pumps about 800 gpm.
222	2-18-53	S	PS	L.
Dry 48.90	7- 4-52 6-17-58	N	O	L.
215	9-17-49	P	D,Irr	
33.68	9- 9-58	J, 1	D	Pumps 30 gpm. L.
Dry	12-16-41	N	N	
..	..	T, 3	D	
180	12-16-41	T, 5	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N. R. 29 E.—Con.							
15B1	Jess Perez	1,155	Dr	176	8	55	Basalt
16B1	Mrs.C.B.Johnson	1,165	Dr	82.5	6	..	..
16R1	USBR, drainage observation well	1,163.2	Dr	50	1½	50	..
17P1	USBR, ditch-rider's well	1,170	Dr	342	14-8	93	Basalt
17Q1	Leon Child	1,174	Dr	..	6	..	..
18R1	A.B. Anderson	1,168	Dr	280	6	88	Basalt
19C1	---Knapp	1,120	Dr	174	8	23	. do .
19D1	USBR, drainage observation well	1,120.0	Dr	50	1½	50	Sand
20B1	Unknown	1,179	Dr	219	6	..	Basalt
20D1	USBR, drainage observatinn well	1,169.1	Dr	50	1½	50	..
21D1	--Sesby	1,176	Dr	194	6	98	Basalt
22B1	Norman Williams	1,155	Dr	268	6	35	. do .
22D1	Percy Driggs	1,162	Dr	250	8	..	. do .
24D1	USBR, drainage observation well	1,158.9	Dr	50	1½	50	..
29M1	Melvin Schwab	1,140	Dr	220	6	..	Basalt
30E1	Isabel Ralph	1,128	Dr	163	6	..	. do .
31D1	USBR, drainage observation well	1,132.9	Dr	50	1½	50	..
32B1	Eva Guffin	1,147	Dr	198	6	..	..
32C1	. . do . .	1,147	Dr	190	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
46.75	7-29-55	J, 2	D	L.
33.02	5- 8-58			
Dry	9-13-40	N	De	Formerly domestic and stock well.
Dry	6-11-52	N	O	L.
190	1-15-52	T, 5	D	C, L.
89.00	5-23-58			
93.19	7-27-55	J, 1	D	
190.45	3-21-41	P	De	Formerly stock well. L.
162	8-16-50	T, 3	D	
Dry	6-17-52	N	O	L.
44.23	5-23-58			
203.57	9-13-40	P	N	Hydrograph in fig. 2.
210.79	9-17-49			
85.20	5- 8-58			
Dry	6- 6-52	N	O	L.
166	5- 9-53	J, 3	D	L.
145	6-16-53	J, 3	D	L.
193.48	12-21-50	S, 1½	D	Rel.
67.34	9-15-54			
70.00	7-27-55			
Dry	6-14-52	N	O	L.
180	12- 9-53	T, 5	D, Irr	L.
72.40	9- 9-58	J, 2	D	L.
Dry	6-26-52	N	O	L.
182.28	9-13-40	N	N	
..	..	N	De	Formerly domestic well.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 29 E.—Con.							
32C2	Columbia Farms	1,144	Dr	170	6	..	Basalt
32D1	USBR, drainage observation well	1,113.4	Dr	50	1½	50	..
33C1	Columbia Farms	1,120	Dr	286	12	174	Basalt
33H1	. . . .do. . . .	1,138	Dr	210	12	132	. do .
34C1	Unknown	1,134	Dr	160	4	..	Clay(?)
35R1	USBR, drainage observation well	1,167.7	Dr	50	1½	50	..
36A1	USBR, drainage observation well	1,165.4	Dr	50	1½	50	..
T. 18 N., R. 30 E.							
2C1	Albert Knudson	1,150	Dr	100	6	..	..
2D1	Ruby Barham	1,150	Dr	59.5	6	..	..
3A1	Unknown	1,140	Du	35	48	..	..
3A2	J.A. Texteling	1,140	Dr	266	10-8	240	Basalt
3C1	--Cox	1,148	Dr	186(?)	8	..	. do .
3D1	E. L. Woods	1,172	Dr	135	6	..	Sand (interbed)
3D2	. . . .do. . .	1,155	Dr	240	6	75	..
3N1	USBR, drainage observation well	1,129.8	Dr	50	1½	50	Clay
4P1	W. H. Chamez	1,142	Dr	140.5	6	..	..
6P1	Emma Hintz	1,212	Dr	176	6	40	Basalt
7A1	USBR, drainage observation well	1,224.8	Dr	50	1½	50	Clay
8C1	Unknown	1,225	Dr	228	8	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 5	D, S	
Dry	6-30-52	N	O	L.
115	6-15-54	T, 125	Irr	L.
102	7- -54	T, 150	Irr	Dd 2 ft at 1,425 gpm. L.
106.64	8-26-54	N	N	L.
Dry	6-18-54	N	O	L.
Dry	7-16-54	N	O	L.
59.44	8-15-50	T, 3	D, Ind	
Dry	5- 6-42	N	De	Formerly domestic and stock well.
Dry	5- 6-42	N	De	
105	10-12-51	T, 25	Ind	Dd 74 ft after pumping 2¼ hours at 185 gpm. L.
38.65	5- 6-58	T, 30	N	Pumps 800 gpm.
83.65 43.90	8-25-50 5- 6-58	J, 1	D	Rwl.
75	11-16-50	J, 1	D,S	
Dry 22.46	7-10-52 5-23-58	N	O	L.
70.5	1948	P, 4	D,S	Cp.
..	..	J, 3	D, S	L.
Dry 39.35	7-10-52 5-23-58	N	O	L.
177.09 99.63 89.50	5- 5-42 10-22-54 5- 6-58	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 30 E.--Con.							
10M1	James A. Unruh	1,138	Dr	227.5	6	..	..
11G1	Jacob Rennick	1,268	Dr	433	10	20	Basalt
12Q1	Unknown	1,317	Dr	375	6	..	..
13N1	Mode Sneed	1,216	Dr	239	6	..	..
13N2	USBR, drainage observation well	1,221.8	Dr	50	1½	50	..
14F1	Thelie Holm	1,220	Dr	170	6	..	..
15N1	USBR, drainage observation well	1,202.0	Dr	50	1½	50	..
15R1	Unknown	1,207	Dr	190	5.5	90	Basalt
16H1	George Baxter	1,183	Dr	176	6	140	Basalt,sand
16R1	USBR, ditch-rider's well	1,206.3	Dr	185	6	113.5	Basalt
17K1	Walter Melrose	1,153	Dr	150	8-7	135	Gravel,clay
17R1	USBR, drainage observation well	1,181	Dr	50	1½	50	..
20N1	USBR, drainage observation well	1,130.7	Dr	50	1½	50	Gravel
21H1	Lavence Allison	1,212	Dr	171	8	32	..
22R1	USBR, drainage observation well	1,217.8	Dr	50	1½	50	..
24R1	Mack Jones	1,246	Dr	154	7	..	..
30C1	Unknown	1,134	Du	58	48	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
72.98	12-18-41	J, 1	D, S	
36.96	5- 6-58			
190	5-22-42	T, 25	D, S	Redrilled 1951. Cp, L.
238.2	8- 4-50			
268	11- 2-51			
112.30	5- 6-58	P	N	
112.48	5-22-42	N	N	
116.20	8- 4-50			
48.30	5- 6-58			
Dry	6-23-53	N	O	L.
159.19	5-22-42	J, 1	D, S	
Dry	6-19-53	N	O	L.
..	..	N	N	
..	..	J, 3	D	
144	11-18-53	J, 3	D, S	Dd 14 ft after pumping 8½ hours at 130 gpm.
64.70	5- 6-58			C, L.
94	8-24-53	P, 3	D	L.
65.93	5- 6-58			
Dry	6-23-53	N	O	L.
Dry	6-17-54	N	O	L.
33.90	5- 6-58			
146	8- 4-50	P	D	
Dry	6-24-53	N	O	L.
143.97	5-22-42	N	De	
142.59	8-16-50			
Dry	12-18-41	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 30 E.--Con.							
32J1	R. P. Oldham	1,165	Du	83	48	..	..
32M1	Jay Bowen	1,196	Dr	222	6	95	Basalt
33A1	W. Bowen	1,152	Dr	150	8	86	. do .
34D1	USBR, drainage observation well	1,128.9	Dr	43	1½	43	Sand
34M1	Andrew Cruden	1,174	Dr	147	6½	..	Basalt
35A1	USBR, drainage observation well	1,202.8	Dr	50	1½	50	..
35L1	John Fox	1,137	Dr	100	6	..	Basalt
35N1	USBR, drainage observation well	1,181.9	Dr	50	1½	50	..
36R1	John Fox	1,214	Dr	138½	6	..	..
T. 18 N., R. 31 E.							
1R1	Northern Pacific Ry.	1,239	Dr	496	10	..	Basalt
2E1	Ella Borsig	1,214	Du	41	48	5	Gravel
2H1	C. E. Hagen	1,220	Dr	405	12-8	57	Basalt
3E1	Willian Schnurbusch	1,200	Du	32	36	..	..
4G1	Jake Kasele	1,190	Dr	293	12	81	Basalt
4H1	J. A. Flanigan	1,194	Du	25	48	..	Gravel
5A1	Metha Weber	1,187	Du	33.5	36	20	. do .
5A2	. . do . .	1,184	Du	30	36	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	12-18-41	N	N	
52.78	5- 6-58			
150	11- 5-53	P, 7½	D	
84	1-18-51	P	D	L.
Dry	6-14-54	N	O	L.
16.71	5-27-58			
103.32	2-12-42	J, 1	D, S	Hydrograph in fig. 1. Cp.
61.30	5- 6-58			
Dry	6-25-53	N	O	L.
80	5-22-42	P	N	
48.27	8-16-50			
7.85	5- 6-58			
Dry	6-11-54	N	O	L.
95.57	5-22-42	J, 1½	D, S	
105.10	6-29-42	P	Ind	
39.28	5-27-42	P	D, S	L.
30.80	11-14-50			
34	5-27-53	T, 75	Irr	L.
41.07	3-12-58			
62.20	5-10-58			
Dry	6-29-42	N	N	
48	5-31-57	T, 75	Irr	Dd 90 ft pumping 1,000 gpm. L.
20	5-19-39	P	D, S	
31.12	5-26-42	P	S	
30.20	11-14-50			
28	5-27-42	P	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 31 E.--Con.							
5A3	Jacob A. Weber	1,183	Dr	201	10	79	Basalt
5M1	Frederick Arlt	1,177	Du	31	36	..	Gravel
6F1	Bill Hattori	1,167	Dr	254	15	47	Basalt
6H1	Herman Schultz	1,166	Du	32	36	..	..
6H2	Paul Lyman	1,172	Dr	370	12	16	Basalt
10N1	Unknown	1,292	Dr	192.5	7	..	..
12N1	Unknown	1,458	Dr	378	7	..	..
13P1	Peter Franz	1,471	Dr	420	6	20	Basalt
13R1	Leonard Franz	1,450	Dr	510	6	..	. do .
13R2	Robert Franz	1,462	Dr	613	12	46	. do .
20D1	Fred Schnur-busch	1,256	Dr	150	6	20	. do .
21A1	John Fox	1,330	Dr	260	6	20	. do .
23A1	Walter Franz	1,436	Dr	355	6	315	..
25N1	C. H. Claudius	1,422	Dr	460	6	20	..
26G1	Peter Franz	1,487	Dr	372	7	..	Basalt
29R1	Unknown	1,412	Dr	359	6	20±	. do .
32P1	J. C. Dwyer	1,322	Dr	..	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
55	11- 4-52	T, 60	Irr	Dd 113 ft pumping 620 gpm. L.
27.07 30.40 Dry at 30 ft	5-26-42 11-14-50 5-10-58	P, 1	D, S	
27	4-31-51	T, 75	Irr	Dd 31 ft after pumping 5 2/3 hours at 1,014 gpm. L.
22.29	5-26-42	P	De	Formerly stock well.
33 41.49	7-31-50 5-10-58	T, 50	Irr	Dd 105 ft after pumping 4 hours at 1,050 gpm.
147.22 152.50 142.32	5-26-42 11-14-50 5-10-58	P	N	
324.1 324.25 307.90	6-18-42 11-14-50 5-10-58	P	N	
..	..	P	..	
..	..	P	D, S	
334 313	10-28-53 1955	..	..	Dd 116 ft pumping 360 gpm. L.
115 78.95	5-22-42 5-10-58	P	S	Basalt at 20 ft.
160	5-26-42	P, 1½	D, S	Basalt at 20 ft.
305	9-28-48	T, 3	D, Irr	Pumps 110 gpm. C, L.
..	..	P	D, S	
358.0 338.5	11-15-50 5-10-58	P	D, S	
298.88	5-26-42	N	N	
..	..	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 18 N., R. 32 E.							
6A1	Victor Franz	1,320	Dr	410	8	27	Basalt
13H1	Kasper Farms	1,494	Dr	301	6	..	. do .
16C1	Frank Dyck	1,425	Dr	200	6	..	..
20K1	Edward Steffen	1,445	Dr	348	6	..	Basalt
21A1	Julius Franz	1,467	Dr	..	..	..	..
21D1	. . .do. . .	1,470	Dr	383	6	..	..
23K1	C. C. Hagen	1,650	Dr	482	6	..	Basalt
24K1	G. Heil	1,700±	Dr	500	8	..	. do .
29H1	Mrs. Julius Franz	1,452	Dr	413	6	..	. do .
29H2	. . . .do. . . .	1,454	Dr	468	8	40	. do .
31H1	Robert Franz	1,515	Dr	..	6	..	..
32J1	Mrs. Julius Franz	1,433	Dr	396	6	..	Basalt
34M1	C. E. Grove	1,504	Dr	450+	6	..	..
T. 19 N., R. 23 E.							
2P1	Richard Pierce	1,293.	Dr	51	6	..	..
3A1	USBR, drainage observation well	1,324.0	Dr	50	1½	50	..
3M1	John Chaffee	1,386	Dr	662	10	..	Basalt
4A1	Bob Rice	1,385	Dr	510	8	150	. do .
4C1	J. A. Weber	1,416	Dr	521	6	100	. do .
4K1	Lo-We Water Assoc.	1,410	Dr	520	10	65	. do .
5A1	D. E. Weber	1,454	Dr	476	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
76	1950	T, 50	Irr	Dd 204 ft after pumping 4 hours at 300 gpm. L.
246.4 235.0+	11-13-50 5-13-58	P	N	
75+	11-15-50	P	D	
308.99	6-18-42	P	D, S	Plugged at 191 ft.
..	..	P	N	
325.45	11-15-50	N	N	Plugged at 259 ft.
440	1949	P, 2	D	Deepened from 300 ft, 1949.
240	1949	P	D, S	
..	..	P	N	
315	1950	T, 40	D, S Irr	Pumps 40 gpm. L.
..	..	N	N	
356	11-15-50	P	D, S	
220.5	11-16-50	N	N	
43.76	4-25-58	J, 3/4	D	
Dry	5-14-53	N	O	L.
120	4-25-58	P, 3	PS	
268 134.15	1953 4-25-58	P, 2	D, S	
496	1955	T, 5	D, S	
480	3- -55	T, 10	PS	Basalt at 65 ft.
410 387	9- 6-49 1951	P, 5	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 23 E.--Con.							
5A2	USBR, drainage observation well	1,440	Dr	50	1½	50	..
8D1	Unknown	1,000±	Du	13	60	..	..
10J1	John Weber	1,195	Du	31	48	..	Gravel
11D1	USBR, drainage observation well	1,294.8	Dr	24	1½	24	..
11M1	John Weber	1,160±	Du	..	48	..	..
12A1	USBR, ditch-rider's well	1,270.7	Dr	153	6	110	Basalt
12R1	E. L. Harwood	1,250	Dr	135	6	..	do
23D1	Unknown	1,175±	Du	10	48	..	do
24P1	Douglas McIntyre	1,214	Du	57	..	..	..
25H1	Emma Oliver	1,208	Dr	165	10	..	..
26H1	Unknown	1,248	Du, Dr	500±	36-10	..	..
26R1	USBR, drainage observation well	1,243	Dr	50	1½	..	..
28P1	C. D. Haywood	1,390	Dr	670	6	..	Basalt
34R1	John Kuder	1,302	Dr	243	..	..	do
T. 19 N., R. 24 E.							
2D1	M. Stepon	1,228	Dr	200	6	20	do
2M1	R. M. Johnson	1,226	Dr	169	6	45	do
2Q1	C. S. Elder	1,222	Dr	157	6	..	..
3B1	Obey Skidmore	1,235	Dr	186	6	54	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	5-14-53	N	O	L.
11.80	4-16-42	N	De	Formerly stock well.
14.79 14.50	6-26-56 4-25-58	N	N	
Dry	5-19-53	N	O	L.
3.50	9- 6-49	P	S	
55 36.90	10-29-53 5-15-58	T, 1½	D, S	Dd 43 ft after pumping 20 hours at 16 gpm. C, L.
42.90	4-25-58	J, 1	D	
8	1916	P	S	
..	..	N	De	
28.46 20.85	6-26-56 4-25-58	N	N	
56.90	4-26-58	N	N	
Dry	4-25-58	N	O	
..	..	..	De	Very low yield. L.
222.4 222.5 203.57	8-16-49 6-26-56 4-25-58	P	N	Formerly stock well. Hydrograph in fig. 21.
144.57 150.94 15.75	8-27-40 8-25-49 2-16-58	P	N	Hydrograph in fig. 6.
16.81 12.37	6-12-56 4-24-58	J, 1	D	
72	3-14-41	N	De	Formerly domestic and stock well.
..	..	T, 5	D	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 24 E—Con.							
3C1	K. C. Ward	1,236	Dr	60	6	60	Basalt
3G1	Carl Ball	1,233	Dr	205	..	..	. do .
3Q1	USBR, drainage observation well	1,232.3	Dr	50	1½	50	Gravel
4A1	Mrs.Ronald Mickel	1,236	Dr	66	6	55	..
4D1	M. Stepon	1,242	Dr	187	6	..	Basalt
4N1	USBR, drainage observation well	1,239.4	Dr	50	1½	50	..
5B1	W. C. Grigg	1,248	Dr	355	8	35	Basalt
5N1	USBR, drainage observation well	1,256.6	Dr	50	1½	50	..
5N2	USBR, drainage observation well	1,260.0	Dr	50	1½	50	Sand
6A1	—Stevens	1,262	Dr	280	5	38	Basalt
7J1	Howard Hyer	1,256	Dr	502	10	85	. do .
7N1	Paul Allen	1,248	Dr	59	6	59	..
8A1	Donald McAndie	1,248	Dr	195	5	..	Basalt
8H1	Sydney Phillips	1,248	Dr	105	6	..	. do .
8M1	Florence Coats	1,251	Dr	102	6	85	. do .
9N1	Phil Carsten	1,244	Dr	148	8	..	. do .
10F1	Charles Nave	1,235	Dr	200	5	..	. do .
10Q1	Earl Holloway	1,231	Dr	190	6	60	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
21.00	5-20-55	J, 1	D	Basalt at 60 ft. Cp.
9.42	6-12-56			
11.68	4-24-58			
..	..	J, 2	D	
31.8	6- 7-55	N	O	L.
15.19	4-24-58			
30	1956	J, 1	D	Basalt at 55 ft. Cp.
154.35	3-19-41	J, 2	D	
30	1955			
Dry	5-22-53	N	O	L.
21.08	4-24-58			
30.7	8- -55	J, 1	D, S	Cp, L.
Dry	5- -51	N	De	L, Rwl.
42.7	6-10-56	N	O	L.
34.22	4-24-58			
165	1916	S, 2	D	Basalt at 38 ft.
170.72	7-19-38	T, 60	D	C, L, Rwl.
171.57	10-28-47			
47	1- -55	J, 1½	D	
187	1939	J, 3/4	D	
32.77	6-12-56			
31.75	6-13-56	J, 1	D	
30.74	4-24-58			
40	1955	J, 1	D	
30.3	6-13-56			
30.18	4-24-58			
33.05	6-13-56	J, 3	D	
29.63	4-24-58			
155	1916	T, 3	D	Basalt at 50 ft.
30.35	6-13-56	J, 1½	D	
19.80	4-24-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 24 E.--Con.							
11A1	Majorie Fenske	1,218	Dr	80	60	60	Basalt
11D1	Donald Millbrandt	1,226	Dr	143	6	47	do
11M1	Leo Healy	1,224	Dr	191	8	60	do
11N1	USBR, drainage observation well	1,222.8	Dr	50	1½	50	..
12A1	H.A. Terwilliger	1,216	Dr	187	6	70	Basalt
12D1	USBR, drainage observation well	1,210.4	Dr	49.5	1½	49.5	Sand
12N1	Karen Johnson	1,218	Dr	173	6	..	..
12R1	Harvey Smith	1,214	Dr	189	6	..	Basalt
14D1	Earl Holloway	1,222	Dr	153	5	..	..
14N1	Alvin Lyman	1,224	Dr	166	5	..	Basalt
15A1	Chester Ashby	1,226	Dr	135	6	..	do
15L1	Tom Hirai	1,228	Dr	196	6	83	do
16A1	Dell Reed	1,236	Dr	128	6	76	do
16B1	Emery Wiser	1,236	Dr	105	6	76	do
17A1	N. S. Haines	1,242	Dr	97	6	85	do
17N1	USBR, drainage observation well	1,234.7	Dr	50	1½	50	..
17P1	Harold Lutz	1,232	Dr	85	6	75	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 1	D	Basalt at 47 ft. Cp.
..	..	J, 1	D	Basalt at 47 ft.
146 31.61 14.78	8- 1-49 6-13-56 4-24-58	T, 10	D	Cp, L.
Dry	6-16-53	N	O	L.
..	..	J, 3	D	L.
30 16.12	10- -55 4-24-58	N	O	L.
138.64 140.65 49.60	3-19-41 8-25-49 6-13-56	N	De	Formerly stock well.
133.0	1916	N	N	
139	1916	N	De	
140.8 143.97 100	9- -16 8-26-49 1956	N	N	
..	..	J, 1	D	
38.72 26.10	6-13-56 4-24-58	J, 2½	D	Basalt at 83 ft. Cp.
26.85 20.04	6-13-56 4-24-58	J, 1	D	Basalt at 76 ft.
27.55 21.47	6-13-56 4-24-58	J, 1	D	. . .Do. . .
32.05 27.40	6-13-56 4-24-58	J, 1	D	Basalt at 85 ft.
Dry	6- 5-53	N	O	L.
26.65 25.22	6-14-56 4-25-58	J, 3/4	D	Basalt at 73 ft.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 24 E.--Con.							
18P1	Henry Blanchard	1,222	Dr	135	6	..	Basalt
19A1	A. W. Bauer	1,234	Dr	112	6	80	. do .
19J1	A. L. Sward	1,222	Dr	161	6	80	. do .
20R1	George Johnson	1,231	Dr	88	6	47	. do .
21A1	USBR, drainage observation well	1,225.6	Dr	50	1½	50	..
21F1	W. E. Jones	1,227	Dr	165	5	..	Basalt
21M1	. . .do. . .	1,228	Dr	185	6	38	. do .
22D1	E. L. Barrows	1,228	Dr	90	6	84	Gravel(?)
22J1	Joe Massey	1,228	Dr	175	6	..	Basalt
22N1	Luther Easley	1,230	Dr	185	6	..	. do .
22R1	USBR, drainage observation well	1,222	Dr	47.5	1½	..	..
23A1	USBR, drainage observation well	1,212.4	Dr	50	1½	50	..
23N1	USBR, drainage observation well	1,224.7	Dr	50	1½	50	..
24D1	Marion Carr	1,214	Dr	192	5	..	Basalt
24M1	G. W. Saager	1,216	Dr	175	5	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 1	D	
51	1955	J, 1	D	
31.82	6-14-56			
45	1955	J, 1	D	
26.27	6-14-56			
20.01	4-24-58			
50	1955	J, 3/4	D	
45.73	6-14-55			
31.35	4-24-58			
Dry	6- 8-53	N	O	L.
29.68	4-25-58			
145	1916	P	S	
147.90	9- 2-49			
43.30	6-14-56			
29.29	4-25-58			
..	..	J, 1	D	
56.05	6-20-56	J, 1	D	Basalt at 84 ft.
49.50	4-26-58			
147.51	3-14-41	J, 1	D	
148.80	8-26-49			
81	1955	J, 1	D	
32.85	4-25-58	N	O	
Dry	6-10-53	N	O	L.
25.45	4-25-58			
Dry	9-14-54	N	O	L.
134.37	3-14-41	J, 2	D	
135.74	8-25-49			
126	3-14-41	N	N	Hydrograph in fig. 16.
136.80	8-26-49			
82.74	6-15-56			
31.09	4-25-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 24 E.--Con.							
24M2	Allen Kehl	1,216	Dr	225	6	133	Basalt
25F1	Kenneth Erickson	1,210	Dr	100	6	100	Gravel (?)
26B1	P. F. Dills	1,220	Dr	220	5	..	Basalt
26J1	Fred Whitener	1,218	Dr	150	5	..	. do .
26R1	USBR, drainage observation well	1,217.0	Dr	50	1½	50	Caliche
28D1	USBR, drainage observation well	1,229.0	Dr	50	1½	50	..
28N1	G. W. Murphy	1,225	Dr	210	6	85	Basalt
28N2	. . .do. . .	1,224	Dr	190	12	..	. do .
29A1	Otheal Scott	1,230	Dr	82	6	72	. do .
29D1	E. Kruse	1,219	Dr	71	6	67	Sand
29N1	T. G. Gibby	1,210	Dr	67	6	67	.do.
29N2	USBR, drainage observation well	1,209.4	Dr	50	1½	50	..
30C1	Jack Rumsey	1,216	Dr	149	6	50	Basalt
30R1	William Stingley	1,208	Dr	145	6	30	. do .
31A1	E.W. Mesenbring	1,207	Dr	112	6	85	. do .
32M1	Edith Leonard	1,204	Dr	135	5	..	..
34B1	John Healy	1,225	Dr	..	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
76.10	6-15-56	J, 1½	D	L.
..	..	J, 1	D	
138	1916	P	D, S	Basalt at 100 ft.
135	3-14-41			
130	1916	J	D	Basalt at 60 ft.
130	1949			
89.90	6-15-56			
Dry	9-21-54	N	O	L.
40.21	1-24-58			
Dry	9-18-54	N	O	L.
30.92	4-24-58			
130	8- 1-47	T, 15	D, Irr	Pumps 50 gpm. C, L.
34.20	4-25-58			
26.80	8-27-58	N	N	L.
45.23	6-14-56	J, 1	D	L.
30.11	4-24-58			
34.25	6-14-56	J, 1	D	L.
26.00	4-25-58			
25	1955	J, 1	D	
Dry	6-17-53	N	O	L.
32	1954	J, 1	D	Basalt at 49 ft.
25.72	6-14-56			
19.74	4-25-58			
124	1916	N	De	Formerly domestic and stock well. L.
40	1954	J, 1½	D	
25.65	6-20-56			
17.93	4-25-58			
121.92	3-15-41	N	N	
123.00	9-19-49			
66.82	6-20-56	N	De	Formerly domestic well.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 24 E.--Con.							
34D1	USBR, drainage observation well	1,226.6	Dr	50	1½	50	Gravel
34Q1	Luther Lee	1,224	Dr	215	6	..	Basalt
34R1	USBR, drainage observation well	1,219.8	Dr	50	1½	50	Sand
35E1	Layton Christen	1,224	Dr	200.5	6	140	Basalt
36G1	Leon Booker	1,208	Dr	..	6	..	..
36K1	Carl Cordes	1,206	Dr	164	6	..	..
T. 19 N., R. 25 E.							
1N1	USBR, drainage observation well	1,178.0	Dr	50	1½	50	Sand
2L1	Donald Albee	1,160	Dr	103	6	52	..
2L2	. . .do. . .	1,182	Dr	215	6	185	Gravel
2M1	Andrew Wegner	1,167	Dr	100	6	46	Sand
2N1	Matt Dishaw	1,157	Dr	100	10	..	.do.
2N2	Andrew Wegner	1,157	Du, Dr	184	48-10	..	Gravel
2Q1	Joseph Dishaw	1,180	Dr	133	8	130	Sand
3E1	Grave Bolick	1,167	Dr	115	6	95	..
3K1	L. Megenity	1,176	Dr	85	6	85	Sandstone
3N1	E. D. Bolick	1,210	Dr	172	6	150	Sand
4A1	Charles Buege	1,167	Dr	..	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	9-20-54	N	O	L.
33.71	5-16-58			
145.75	9-19-49	P, 1	D, S	Well deepened in 1954. Cp.
78	1954			
Dry	9-22-54	N	O	L.
36.29	4-25-58			
105.00	6-15-56	J, 1½	D	
60.17	4-25-58			
..	..	J, 1	D	
112	6- -49	P, 3	..	Cp.
Dry	6- -51	N	O	L.
29.40	4-29-58			
30	9-15-53	N	De	
14.68	7-19-56			
80	1950	T, 10	D, Irr	
89	1916	J, 1	D	L.
87.24	9-22-49			
17.06	7-18-56			
60	1916	P	D, S	C.
76.45	9-22-49	T	Irr	Hydrograph in fig. 13. Cp, L.
12.79	7-18-56			
12.64	4-29-58			
106.5	10- 5-16	N	De	
80	1953	J, 1½	D, S	
35	1955	J, 3/4	D, S	
27.19	7-18-56			
25.94	4-29-58			
142	1952	T, 3	D	L.
74.90	7-17-56			
17.16	7-18-56	N	N	
16.35	4-29-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 25 E.--Con.							
6B1	Richard Blackburn	1,222	Dr	200	6	..	..
6M1	. . . .do. . . .	1,205	Dr	200	6	..	..
6M2	Skone, Connors, and Craven	1,198	Du	20	..	..	Gravel, sand
6R1	USBR, drainage observation well	1,214.8	Dr	50	1½	50	..
8N1	Paul Lauzier	1,214	Dr	212	6	..	..
9C1	Morel Ranches Inc.	1,220	Dr	180	6	180	Basalt
10A1	Paul Lauzier	1,155	Dr	160	8	..	Sand
10B1	H. Brisco	1,154	Dr	96	3	..	..
10B2	. . do . .	1,158	Dr	110	6	110	..
10D1	USBR, drainage observation well	1,212.4	Dr	50	1½	50	..
13H1	Harry Sloan	1,216	Dr	168	6	150	Sand(?)
14K1	Paul Lauzier	1,182	Dr	..	..	..	..
15A1	USBR, drainage observation well	1,192.7	Dr	50	1½	50	Sand
18D1	D. W. Snyder	1,201	Dr	194	6	20	Basalt
18M1	C. O. Anderson	1,198	Dr	178	6	..	..
22B1	Annie Wagner	1,200	Dr	..	5	..	..
24C1	Noah Thayer	1,151	Dr	72.5	5	..	..
24P1	William Fletcher	1,147	Dr	..	6	..	..
26N1	Unknown	1,184	Dr	112	6	..	Sand(?)

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
140	1916	N	N	
33.32 18.35	7-16-56 4-28-58	N	N	
10	9-15-58	C, 15	Irr	Infiltration trench. L.
Dry	10- -55	N	O	L.
142 99.35	1916 4-29-58	P	S	
93.40	9-15-58	J, 3	D, S	L.
60	1916	S, 3	D, S Irr	Pumps 50 gpm. C, L.
73.7	10- 5-16	N	De	
30	1955	J, 1	D	
Dry	6- -51	N	O	L.
111.87	4-29-58	J, 2	D, S	
..	..	N	De	Formerly domestic and stock well.
Dry 42.57	6- -51 5-15-58	N	O	L.
114	1916	N	De	Formerly domestic and stock well. L.
120	1916	N	De	
..	..	N	De	
71.10	3-14-41	N	De	
70.0	10- 6-16	N	De	
104.08 104.18 98.30	3-14-41 9-28-49 4-28-58	N	N	Hydrograph in fig. 14.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 25 E.--Con.							
28M1	N. L. Ronberg	1,194	Dr	117	8	..	Sand(?).
34A1	William Ragless	1,188	Dr	113	6	..	..
T. 19 N., R. 26 E.							
1R1	USBR, O & M housing well	1,257.3	Dr	459	10	398	Basalt
2N1	Esiahas Dailey	1,250	Dr	212	6	..	..
2R1	USBR, drainage observatinn well	1,255.7	Dr	50	1½	50	..
4D1	Carol Barney	1,210	Dr	200	5	..	..
4K1	Mrs.Frances Schirmer	1,244	Dr	185	6	175	Sand
4Q1	USBR, O & M housing well	1,242.4	Dr	436	10	418	Basalt
5A1	Herbert Schroeder	1,238	Dr	119	6	..	..
5D1	O. J. Vincent	1,200	Dr	130	6	82	Shale(?)
6A1	H. R. McMullin	1,201	Dr	164	6	100	Gravel
6D1	Ira Bautell	1,196	Dr	150	8	..	..
6L1	Dr. Silverberg	1,202	Dr	150	5	..	..
7A1	USBR, drainage observation well	1,237.2	Dr	50	1½	50	..
8G1	Clarence Scudder	1,237	Dr	200	8	97	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
113.56 112.85 110.60	9-28-49 7-17-56 4-29-58	N	N	Hydrograph in fig. 5.
105.0	9- 8-16	N	De	
200 205	4-30-56 9-19-58	P, 3	D	C, L.
192	7-15-42	N	N	
Dry	4- 6-56	N	O	L.
154.0	9-26-16	N	De	
175	1916	N	N	L.
181.37 155.00	12-19-55 5-15-58	..	..	Dd 40 ft pumping 28 gpm. C, L.
Dry Dry 117.84	3-12-41 9-13-49 4-22-58	N	N	
107	8-10-53	J, 1	D	Cp, L.
118.0 118.48 118.50 90	9-19-16 8-28-40 12-18-51 1957	J, 1½	D, S	Well deepened from 135 ft, 1951. Rwl.
..	..	P, 3	N	
119.15 65.58	9-20-49 4-24-58	N	N	
Dry	4-21-56	N	O	L.
145 156.67 145.50	1916 9-16-49 4-24-58	J, 3	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 26 E.--Con.							
9C1	Big Bend Land Co.	1,242	Dr	429	8	..	Basalt
9R1	USBR, drainage observation well	1,234.6	Dr	50	1½	50	..
10N1	I. E. Birman	1,236	Dr	191	8	..	..
11J1	A. E. Lund	1,254	Dr	705	12	400	Basalt
12B1	Josie Bilousek	1,252	Dr	235	..	..	..
13D1	Ida Oberg	1,244	Dr	192	5	100	Gravel
13D2	Dr. Whitlow	1,244	Dr	212	5	141	Sand
13N1	Fred Borner	1,234	Dr	415	6	..	Basalt
14R1	USBR, drainage observation well	1,229.8	Dr	50	1½	50	..
16C1	Paul Lauzier	1,224	Dr	172	10	100	..
16D1	. . .do. . .	1,236	Dr	210	10	..	"Sandstone"
18M1	Lettie Schultz	1,200	Dr	100	6	..	..
18Q1	L. C. Lauzier	1,188	Dr	126	6	..	..
18R1	USBR, drainage observation well	1,177.8	Dr	50	1½	50	..
20A1	—Law	1,225	Dr	150	6	..	Sand(?)
20D1	U.S. Bureau of Reclamation	1,180	Dr	100	6	65	Sand
20N1	Stella Wulf	1,190	Dr	60	5	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
183.67 149.92	9-20-49 6-11-58	N	N	Hydrograph in fig. 5.
Dry	4-17-56	N	O	L.
162.0	10-21-16	N	De	
197.60 182.84	9-16-49 4-24-58	T, 60	D, S Irr	L.
170	1916	N	De	
170	1916	N	De	Formerly domestic and stock well.
170 172.18	4- 9-54 4-24-58	N	N	L.
212.55	9-16-49	T, 40	D, S Irr	
Dry	4-13-56	N	O	L.
Dry	1916	N	De	
160	1916	N	N	Dry at 145 ft, 4-24-58. L.
..	..	..	De	
108.16 108.80 93.31	8-28-40 9-16-49 4-24-58	N	N	Rwl.
Dry	4- 6-56	N	O	L.
145 148.37 145.18	1916 8-28-40 4-24-58	N	N	Hydrograph in fig. 5.
90	1916	N	De	Formerly domestic and stock well. L.
Dry Dry Dry	3-12-41 9-20-49 4-25-58	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 26 E. --Con.							
20Q1	Unknown	1,170	Dr	100	6	60	..
21A1	Carl Olson	1,224	Dr	155	6	..	..
24A1	V. E. Richards	1,232	Dr	221	8	125	..
26P1	BPA, Potholes substation well	1,225	Dr	260	12-8	260	Sand
28A1	Ella Caswell	1,190	Dr	..	..	..	..
28A2	USBR, drainage observation well	1,166.7	Dr	50	1½	50	..
28D1	Edward Allen	1,166	Dr	65	6	..	..
28J1	Glenn Helmer	1,162	Dr	99	6	..	..
29N1	Paul Names	1,194	Dr	205	8	..	Sandstone
29N2	. . do . .	1,184	Dr	197	10	73	. .do. .
30A1	Ida Foltz	1,193	Dr	121	6	..	..
30B1	. .do. .	1,192	Dr	..	6	..	..
30D1	Irving Stern	1,164	Dr	111	6	..	..
30K1	Unknown	1,190	Dr	122	6	..	..
30M1	J. M. Miller	1,140	Dr	65	6	..	..
32B1	--Bowman	1,176	Dr	92	5	..	..
34D1	L. Bordwell	1,168	Dr	96	6	65	Sand(?)
34R1	--Kimball	1,148	Dr	83	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
90	1916	N	De	Formerly domestic and stock well.
147.0 147.06 147.38	9-11-16 8-28-40 8-26-53	N	N	Rwl.
170	1916	N	De	Formerly domestic and stock well.
..	..	T, 5	D	Pumps about 28 gpm.
128.32	6- 4-58	N	N	
Dry	4-12-56	N	O	L.
Dry Dry Dry	3-12-41 9-21-49 4-25-58	N	N	
75	1916	N	N	
117	9-13-39	N	N	L.
109.5 106.0	10-16-39 9-21-49	P, 3	D, S	L.
111.0	10- 5-16	N	De	
113.0	10- 5-16	N	N	
98	10- 5-16	..	De	Formerly irrigation well.
109.90 109.94 87.73	4- 9-42 9-21-49 4-25-58	N	N	Rwl.
..	..	P, 3	..	
Dry	9-11-16	N	N	
92.30 94.08 95.69	8-27-40 9-21-49 6- 5-58	N	N	Hydrograph in fig. 5.
67	1916	N	De	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.							
1J1	Frank Stoode	1,072	Dr	263	12-8	124.5	..
1P1	Herb Myers	1,125	Du	94.7	48	..	Gravel
1R1	Frank Myers	1,124	Du	100	48	100	Gravel, sand
2N1	USBR, drainage observation well	1,114.4	Dr	90	6	90	Gravel
4F1	Michael Schwickerath	1,110	Du	60	48	60	. do .
4G1	James DePue	1,125	Du	83.5	48	..	..
4K1	Norman Kaegele	1,123	Dr	224	8	224	Basalt
4L1	C.S. Speolstra	1,125	Dr	207	12	152	. do .
4M1	Glenn Dittman	1,128	Dr	200	..	..	..
4M2	. . .do. . .	1,128	Dr	83	8	..	Sand
4M3	. . .do. . .	1,126	Dr	378	10	200	Basalt
6P1	Mary Staggs	1,222	Dr	175	8	..	Sand
6P2	T. J. Cook	1,196	Dr	155	8	..	..
6Q1	. . do . .	1,196	Dr	159.5	8	..	..
7A1	Frank Salvino	1,182	Dr	570	12	230	Basalt
7A2	USBR, drainage observation well	1,182.2	Dr	51.5	1½	51.5	Gravel
7J1	Frank Salvino	1,166	Dr	256	12	206	Basalt
7J2	. . .do. . .	1,160	Dr	140	8	140	Gravel
7K1	. . .do. . .	1,165	Dr	242	12	200	Basalt
8A1	Oscar Etzcorn	1,091	Du	36.5	36	10	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40	11-17-53	T, 40	Irr	Dd 92 ft after pumping 4½ hours at 900 gpm. L.
92.29 84.85	7-28-53 5- 1-58	T, 30	Irr	Dd 4 ft after pumping 4 hours at 800 gpm.
93.60 85.57	7-30-49 5- 1-58	T, 40	D,Irr	Pumps 900 gpm. Cp.
75.99 73.71	10-10-56 5- 9-58	N	O	L.
58.5	10-10-16	N	N	
79.7	10-10-16	N	N	
86	7-27-53	T, 30	D,Irr	Well deepened from 67½ ft, 1953.
79	2- -52	T, 30	D,Irr	Slight dd after pumping 3 hours at 500 gpm. L.
70	3- -45	N	De	Formerly irrigation well.
..	..	N	De	Formerly domestic and stock well.
80	1958	T, 30	D, S Irr	Dd 271 ft pumping 750 gpm. L.
155.5	10-20-16	N	De	
125	1916	N	N	
128.49 128.46 127.54	12-17-41 7-29-49 2- 3-51	N	De	Formerly irrigation well. Rwl.
120 143.66	9- 1-53 9-16-58	N	N	Basalt at 180 ft. Formerly irrigation well. Dd 110 ft pumping 1,000 gpm. Cp. L.
Dry 50.01	7-26-56 5- 9-58	N	O	L.
140	8- 1-49	T, 100	Irr	L.
110	9- 1-53	S	D	
140	9- 1-53	T, 100	Irr	Dd 12 ft after pumping 4 hours at 1,450 gpm. L.
30.60 34.90	9- 6-39 12-11-41	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.--Con.							
8C1	Clyde Stokes	1,150	Du,Dr	210	8	100	"Soapstone"
8R1	Camilla Patterson	1,105	Du,Dr	165	48-8	..	Basalt
9P1	USBR, drainage observation well	1,087.2	Dr	64	1½	62	Silt
10D1	Howard Tiersoll	1,130	Du	100	48	..	Gravel
10G1	Marie Bailey	1,148	Du	123	48	..	. do .
10N1	E. F. Graves	1,158	Du	130.6	48	..	. do .
12A1	Joe Koniski	1,124	Du,Dr	205	12	199	Basalt
12F1	J. E. Stevens	1,120	Du	92.5	48	..	Gravel
12H1	Charles Rabe	1,116	Du	88.1	48	..	..
12L1	N. L. Richens	1,116	Du	90	42	..	Gravel
12P1	. . .do. . .	1,102	Du	85	48	..	. do .
12P2	USBR, drainage observation well	1,103.1	Dr	75	1½	75	. do .
12Q1	S. T. Fairbanks	1,110	Du	90	42	90	. do .
13B1	Clarence Wahl	1,110	Du	85	32	85	..
13C1	. . .do. . .	1,103	Dr	96	16	96	Gravel
13E1	G. Lybbert	1,106	Du	85	14	96	. do .
13F1	Unknown	1,084	Du	75	44	..	Sand, gravel
13H1	Clinton Cordell	1,126	Dr	106	12	106	Gravel
13L1	J. N. Lybbert	1,100	Du	87	48-8	82	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
60	1916	T, 20	Irr	L, Rwl.
67.06	12-17-41			
72.77	8-26-44			
47.0	10-20-16	N	De	
60.55	8-31-56	N	O	L.
46.91	5- 2-58			
98.0	10-10-16	N	De	Formerly domestic and stock well.
117.0	10-10-16	N	De	. . . . . .Do. . . . .
127.8	10-10-16	N	De	. . . . . .Do. . . . .
95	7-30-49	T, 40	D, Irr	L.
..	..	T, 30	Irr	
86.0	10-10-16	N	De	Formerly domestic and stock well.
79.59	8- 1-49	T, 30	Irr	
80.70	8- 1-45	T, 40	Irr	Pumps 1,000 gpm.
64.46	9-25-56	N	O	L.
62.84	5- 1-58			
..	..	J, 3 T, 20	D, S, Irr	Dd 2 ft after pumping 12 hours at 500 gpm.
81	5- -45	T, 30	D,	
66.13	8- 2-49		Irr	
68.7	7- -52	T, 30	D, Irr	
76.45	3-15-49	T, 30	Irr	Well redrilled 1958.
70	5- 6-58			
71.0	10-10-16	N	De	Formerly irrigation well.
95.40	7-29-53	N	N	Dd 3 ft after pumping 4 hours at 825 gpm.L.
82	8- 3-49	T, 25	Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.--Con.							
13N1	Clinton Cordell	1,104	Du	83	..	..	Gravel
13R1	Margaret O'Sullivan	1,078	Du	50	48	..	. do .
14A1	School Dist.	1,106	Dr	85	6	..	. do .
14E1	USBR, drainage observation well	1,141.8	Dr	115	1½	115	. do .
14H1	Emmett Ford	1,104	Du	72.6	42	72.6	..
14R1	Unknown	1,093	Du	66.3	48	..	Gravel
14R2	USBR, drainage observation well	1,090.6	Dr	70	1½	70	Sand, gravel
15J1	H. T. Mast	1,144	Dr	300	10	139	Basalt
15Q1	Leo Ehr	1,148	Dr	275	12	150	. do .
15R1	H. T. Mast	1,142	Du,Dr	239	36-12	149	. do .
16C1	Robert Snyder	1,098	Du,Dr	165	54-10	..	..
16D1	Martin Moore	1,096	Du,Dr	161	12-8	..	..
16D2	. . .do. . .	1,092	Dr	205	12	205	Basalt
16E1	Clyde Stokes	1,107	Dr	170	12	165	..
16M1	S. H. Kinney	1,100	Du,Dr	166	72	..	..
16N1	M. R. Steele	1,094	Du	74	84	74	Gravel
16N2	John Dills	1,100	Dr	76	6	..	..
16P1	—Goodwin	1,092	Dr	84	10	84	Gravel
16P2	USBR, drainage observation well	1,081.1	Dr	55	1½	55	Sand,gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	T, 25	Irr	
48.5	10-11-16	N	De	Formerly domestic well.
Dry	10-11-16	N	De	
103.53 101.98	9-29-56 5- 6-58	N	O	L.
Dry	7-30-53	N	N	
63.7 50.88	10-11-16 5- 9-58	N	De	Formerly domestic and stock well.
52.45 50.79	8- 9-56 5- 6-58	N	O	L.
105	5-17-51	N	N	Formerly irrigation well. Dd 30 ft after pumping 2 hours at 450 gpm. L.
116	7-29-53	J, 5	D, S	L.
90	2- -49	S, 1½	D	L.
44.12	12-17-41	N	N	
70	9- 3-45	T, 10	Irr	
90 52.29	1949 5- 6-58	T, 40	Irr	L.
..	..	T, 40	Irr	L.
54.85 53.97	7- 7-42 8- 2-49	P	D, S	
67.60 69.85 56.19	7- 7-42 9- 3-45 5- 6-58	T, 30	Irr	Hydrograph in fig. 5.
70.63	7-31-53	J, 1½	D	
69	5- -49	T, 15	Irr	Slight dd pumping 450 gpm.
42.51 40.28	9-17-56 5- 6-58	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.--Con.							
16Q1	W. L. Mead	1,071	Dr	63	12	60	Gravel
17B1	R. B. Boyd	1,122	Dr	208	12	180	Basalt
17J1	H. W. Graham	1,113	Dr	227	14	150	Gravel
17L1	D. W. Stillwell	1,121	Dr	211	10	100	..
17M1	Fred Schwartz	1,139	Du, Dr	236	48-10	..	..
17M2	--Pittman	1,140	Dr	230	12	..	..
17Q1	Hiram Mischler	1,101	Du	63	48	63	Gravel
17R1	H. W. Grahm	1,101	Du	85	12	..	. do .
17R2	. . .do. . .	1,099	Dr	75	6	75	. do .
18R1	Al Pederson	1,135	Du	97	42	..	Basalt
18R2	. . .do. . .	1,136	Dr	250	12	210	. do .
18R3	USBR, drainage observation well	1,135.3	Dr	110	1½	110	Sand
19H1	S. W. Wilkins	1,133	Dr	230	10	..	Basalt
19R1	Harry Yamamotto	1,122	Dr	225	12	160	. do .
20A1	K. Shibayama	1,102	Du	82	48	..	..
20C1	Russell Wilbur	1,110	Du, Dr	200	72-6	..	..
20E1	Dick Jones	1,116	Dr	233	12-6	..	Basalt
20F1	John Harold	1,077	Du, Dr	210	8	..	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40	7-30-53	T, 30	D,Irr	Slight dd after pumping 8 hours at 1,000 gpm. L.
65.84 79.48	2-20-56 5- 2-58	T, 50	Irr	
56	8- -49	T, 40	Irr	Basalt at 150 ft. L.
73.66	7- 7-42	T, 30	Irr	C.
75 100	1916 7- -45	T, 25	Irr	
135	1953	J, 1	D	
51.20 50.34 50.15	7- 7-42 8- 2-49 5- 2-58	P	D	Rwl
78	1916	T, 15	Irr	
60	7-31-53	J, 1½	D	
80.4	9-12-16	N	De	Formerly domestic and stock well.
125	8-28-53	T, 60	D, Irr	Dd 7 ft after pumping 3 months at 1,600 gpm. L.
39.49 44.94	9-15-56 5- 2-58	N	O	L.
83.73 96	7- 8-42 8- 8-49	T, 20	Irr	
127.06 72.04	8-28-53 5- 2-58	T, 75	Irr	Basalt at 160 ft.
74 74.09 66.71	9-12-16 8- 8-49 5- 7-58	T, 12	Irr	
32	1916	T, 20	Irr	
68.55	7- 8-42	T, 15	Irr	
39.37 25.88	8- 8-49 5- 7-58	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.—Con.							
20H1	K. Shibayama	1,093	Du	75	60	..	Gravel
20P1	Harry Yamamoto	1,070	Du	70	8	..	. do .
20P2	. . . do . . .	1,073	Du	54	48	..	. do .
20R1	Unknown	1,059	Du	35	48	32	. do .
21C1	A. D. Gabbert	1,093	Du	70	42	..	. do .
21F1	. . . do . . .	1,048	Du	29.6	72	..	. do .
21K1	Glenn Butter-field	1,097	Du	77.5	34	..	. do .
21M1	A. D. Gabbert	1,070	Du	24.5	60	..	. do .
21M2	. . . do . . .	1,073	Dr	55	10	55	. do .
22E1	Oscar Etzcorn	1,135	Du	61	48	..	Sand
23Q1	R. W. Goodwin	1,116	Du, Dr	105	48-7	..	Gravel
23R1	Sylvia Heft	1,105	Du	77.5	42	..	. do .
24B1	Harold Fisher	1,099	Du	77	36	77	. do .
24D1	Charles Carroll	1,090	Du	75	42	..	..
24H1	Clinton Cordell	1,075	Du	55	48	..	..
24J1	Blaine Lublin	1,067	Du	45	36	38	Gravel
24K1	Leo Williams	1,050	Du	27	72	27	. do .
24P1	Frank Hanson	1,050	Du,Dn	29	12	29	. do .
24P2	. . . do . . .	1,060	Du	33.7	96	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
73.08	9- 3-45	T, 20	Irr.	
68.35	8- 8-49			
56.37	5- 7-58			
..	..	T, 15	De	Formerly domestic and irrigation well.
47.62	7- 8-42	T, 15	Irr	
32.88	8-27-40	T, 30	Irr	
32.40	9- 3-45			
19.81	5- 7-58			
65	1- -45	..	D	C.
25.77	9- 2-45	N	N	
21.91	8- 3-49			
8.92	5- 6-58			
69.45	7-30-53	T, 15	D,Irr	
58.86	5- 6-58			
20.8	10-19-16	N	De	Formerly irrigation well.
32	8- -49	T, 15	Irr	
57	1916	N	De	Formerly domestic and stock well.
90.50	8- 5-49	T, 20	Irr	L.
79.17	5- 6-58			
73.2	9-12-16	..	Irr	C, L.
68.81	7-30-53	T, 25	D, S	Pumps 1,050 gpm.
62.14	5- 6-58			
63.32	7-29-53	T, 25	D, Irr	Dd 3 ft after pumping 24 hours at 1,250 gpm.
52.09	9- 1-45	T, 15	Irr	Dd 2 ft after pumping 4 hours at 1,000 gpm.
36.32	5- 6-58			
40.30	9- 1-45	T, 10	Irr	
24.79	9- 2-45	C, 10	Irr	C.
19.30	8- 4-49			
10.46	5- 9-58			
27	1916	N	De	Formerly domestic well.
28.2	10-16-16	C	Irr	
28.07	12-11-41			
25.84	8- 4-49			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.--Con.							
24P3	W. E. Miller	1,050	Du	22.5	48	..	Gravel
24P4	. . do . .	1,055	Du	30.5	48	28	. do .
24Q1	J. Baird	1,058	Du	33	48	..	. do .
24R1	Frank Bell	1,067	Du	43.5	36	..	. do .
25A1	O. L. Moulton	1,056	Du	29.5	48	..	. do .
25A2	. . . do . . .	1,056	Du	26	48	..	. do .
25A3	. . . do . . .	1,056	Du	34	48	..	. do .
25A4	. . . do . . .	1,066	Du	43	48	42	. do .
25C1	Gordon Dutcher	1,050	Du	74	48	..	. do .
25C2	. . . do . . .	1,090	Du	63.5	24	..	. do .
25C3	. . . do . . .	1,062	Du	40.6	48	..	. do .
25D1	Brown Miller	1,068	Du	47	36	..	. do .
25D2	Allen Deane	1,070	Du	42.8	60	43	. do .
25E1	--Gerber	1,034	Du	12	36	..	Sand,gravel
25E2	C. A. Kelly	1,055	Dr	50	10	50	Gravel
25F1	J. G. Shragg	1,064	Du	40	6	40	. do .
25F2	Rita Power	1,048	Du	22	..	..	. do .
26A1	Harry Picking	1,073	Du	52	6	..	. do .
26B1	William Goodwin	1,108	Dr	237	8	85	Basalt
26C1	F. P. Hansen	1,108	Du, Dr	225	48-8	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
19.3	10-16-16	N	De	Formerly irrigation well.
26.94	7-11-42	C, ¼	D, S	
31.88	9- 2-45	C, 7½	D, S	
36.56 40.14	7- 2-42 9- 1-45	T, 10	Irr	
27.5	10-16-16	N	De	Formerly domestic well. L.
22	1916	N	De	Formerly irrigation well.
26.77 24.72	12-11-41 8- 4-49	C, 7½	Irr	C.
35.97	8- 4-47	T, 10	Irr	Pumps 625 gpm.
19	1916	N	De	Formerly irrigation well.
61.77 Dry	7-11-42 9- 1-45	C, ¼	D	
38.23	9- 2-45	C, 7½	..	
45.25 32.14	9- 1-45 5- 7-58	C, 7½	Irr	
..	..	N	N	
3.57	8- 4-49	N	N	Well covered by lake, 1958.
..	..	T, 10	D, Irr	
32	1949	T, 5	D, S Irr	
19	1949	..	D	
40.52 32.50	8- 5-49 5- 7-58	C, 7½	Irr	Hydrograph in fig. 12.
70.3 77.94	10- 9-16 12-11-41	T, 20	Irr	Dd 17 ft after pumping 4 hours at 600 gpm. L.
80.38	12-11-41	T, 10	Irr	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.--Con.							
26F1	Claire Hanson	1,080	Du,Dr	160	36-12	160	Gravel
26J1	Unknown	1,082	Du	39	48	..	..
26M1	Unknown	1,075	Du	50	48	..	..
26Q1	USBR, drainage observation well	1,069.8	Dr	45	1½	45	Gravel
27C1	—Vance	1,082	Du,Dr	65	60	..	. do .
27D1	R. L. McGinniss	1,086	Du	61	48	..	. do .
27M1	Unknown	1,084	Du	56	42	56	. do .
28A1	USBR, drainage observation well	1,085.3	Dr	63	1½	63	Sand
28B1	Sam Andrews	1,104	Dr	90	12	..	Gravel
28C1	F. Koba	1,104	Du,Dr	100	10	..	. do .
28C2	R. J. Gossman	1,104	Du	47	48	..	Gravel
28J1	Unknown	1,100	Du	72.5	48	..	. do .
28M1	Unknown	1,102	Du	76	48	..	. do .
29A1	--Yamamoto	1,101	Du,Dr	100	16	100	. do .
29H1	. . do . .	1,100	Du,Dr	88	15	..	. do .
29P1	USBR, drainage observation well	1,063.4	Dr	41	1½	41	. do .
30A1	Harry B. Snead	1,120	Du	848	48	..	Sand
30D1	Gern J. Claus	1,221	Du,Dr	190	60-5	..	.do.
34E1	USBR, drainage observation well	1,062.4	Dr	35.5	6	35.5	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	T, 20	Irr	
34.5	10-11-16	N	De	Formerly domestic and stock well.
45.0	10- 9-16	N	De	. . . . . Do . . . . .
31.53	10-10-56	N	O	L.
30.03	5- 7-58			
61.7	10- 9-16	T, 10	Irr	
61.37	9- 2-45			
42.50	5- 7-58			
..	..	N	N	
58.56	12-11-41	N	N	
45.20	8-21-57			
43.70	5- 7-58			
46.52	8- 8-56	N	O	L.
45.59	5- 7-58			
..	..	T, 30	D, Irr	L.
77.50	8- 6-49	T, 30	Irr	Hydrograph in fig. 14.
64.40	5- 7-58			
39	10-11-16	N	De	Formerly domestic well.
68.7	10- 9-16	N	De	Formerly domestic and stock well.
72.5	10-19-16	N	N	
71.60	12-11-41			
78	1949	T, 40	Irr	L.
72	1- -48	T, 25	D, Irr	L.
24.52	10-22-56	N	O	L.
23.67	5- 7-58			
84.4	10-19-16	N	N	
164.56	8- 8-49	N	N	
156.95	5- 7-58			
18.17	10-16-56	N	O	L.
24.71	5- 9-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 27 E.—Con.							
34F1	Unknown	1,065	Du	41.3	48	..	Gravel
34G1	Unknown	1,070	Du	43	48	..	. do .
34K1	Unknown	1,060	Du	18	48	..	..
T. 19 N., R. 28 E.							
1C1	D. E. Swanson	1,095	Dr	57	8	..	Basalt
1H1	Kenneth Marvin	1,219	Dr	248	6	125	. do .
1N1	USBR, drainage observation well	1,079.9	Dr	25	1½	25	. do .
1Q1	Ed Greave	1,087	Du	8	48	8	Gravel
1R1	USBR, drainage observation well	1,210.6	Dr	50	1½	50	..
2E1	J. L. Hansen	1,125	Dr	92	6	92	Gravel
2J1	Frank Lees	1,082	Du	36	60	..	. do .
2J2	Unknown	1,085	Du,Dr	179	60-12	..	Basalt
3A1	Marion Chamberlain	1,125	Dr	90	60	..	..
3P1	L. E. Rudburg	1,114	Dr	125	8	..	..
3R1	R. Ribail	1,123	Dr	80	..	80	..
5R1	Mark Carter	1,094	Dr	47	6	47	Gravel
6B1	Unknown	1,067	Du	32.5	36	..	. do .
6B2	Mary Schiffner	1,075	Dr	40	12	..	..
6C1	D. Richardson	1,078	Du	38	48	..	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40.3	10- 9-16	N	N	
42.0	10- 9-16	N	N	
15.0	10- 9-16	N	N	
14.05 22.08	4-21-55 5- 1-58	J, 1½	D	L.
123.55 111.01	5- 3-57 5- 1-58	J, 3	D	Basalt at 125 ft. Cp.
Dry 21.96	7- -51 5-22-58	N	O	L.
2.16 2.79 3.54	6-25-42 8- 9-49 5- 1-58	P	S	
Dry	7- 6-55	N	O	L.
..	..	J, 1	D	L.
27.0	10-13-16	N	De	Formerly domestic well.
26.53 16.31	8-26-45 5- 3-56	T, 15	D, Irr	
53.05 55.53	5- 4-56 5- 1-58	J, 1½	D, S Irr	
57.83	5- 1-58	T, 10	Irr	
50	1956	J, ½	D, S	
39	1954	T, 10	PS	L.
25.4 25.42	10-11-16 7-11-42	N	De	Formerly domestic and stock well.
33.48	7-28-53	T, 10	Irr	
34.5 34.00 35.29	10-11-16 4-13-42 5- 5-58	C	D, Irr	Hydrograph in fig. 14.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
6C2	D. Richardson	1,082	Dr	78	12	60	Gravel
6C3	. . . do . . .	1,082	Dr	82	10	..	. do .
6F1	Mary Schiffner	1,077	Du	40	..	..	. do .
6G1	H. Tokunaga	1,076	Du	40	..	..	. do .
6M1	Ray Pierzina	1,070	Du	36	72	..	. do .
6M2	. . .do . . .	1,075	Du	..	48	..	. do .
6M3	Frank Strode	1,080	Dr	58	6	58	. do .
6M4	. . .do. . .	1,082	Dr	260	12	180	Basalt
6P1	. . .do. . .	1,080	Du	44	36	..	Gravel
6P2	Mary Schiffner	1,075	Du	39	48	39	Sand,gravel
6Q1	H. Tokunaga	1,075	Du	37	36	37	Gravel
7C1	Bennie Pfaff	1,073	Du	39	48	31	..
7E1	Clarence Wahl	1,122	Dr	208	12	160	Gravel,basalt
7F1	. . . do . . .	1,070	Dr	42	6	42	Sand
7L1	. . . do . . .	1,049	Du	10.5	24	10.5	Gravel
8A1	Unknown	1,080	Du	44.9	48	..	. do..
8C1	John Hopkins	1,085±	Du	..	..	..	. do .
8F1	E. B. Spry	1,080±	Du	25	48	..	. do .
8F2	J.K.McGlauglin	1,080±	Du	..	..	..	. do .
8G1	W. R. Garrison	1,084	Du	47	48	37	. do .
8H1	Gust Wedenmeyer	1,090	Du	53	48	..	. do .
8H2	. . .do. . .	1,090	Du	47	10	47	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	N	N	
38	5- 1-50	N	N	L.
..	..	T, 10	Irr	Cp.
35	8- -49	T, 10	Irr	
32.78	7-11-42	N	De	
36.28	8-22-49	C, 5	Irr	
48	2- -50	J, 1	D, S	
31	1- -50	T, 30	Irr	
37.85	7-11-42	P	D, S	
38.56 34.80	8-22-49 7-28-53	T, 10	D, Irr	Dd 5 ft after pumping 4 hours at 800 gpm. L.
35.06 36.36	7-11-42 8-31-45	T, 10	Irr	L.
30.66	7-28-53	J	D	
89	1951	T, 50	Irr	Basalt at 155 ft.
32	1947	J, 2	D, S	
7.0 72.9	10-11-16 7-11-42	C, ½	D, S	
43.0	10-17-16	N	De	Formerly domestic and stock well.
..	..	- 1/3	D	
..	..	- ½	D, Irr	
..	..	T, 3/4	D	
37.00 37.80	12-10-41 8-17-49	C, 12	Irr	
48.3	10-17-16	N	De	Formerly irrigation well.
45.50 45.55	8-10-49 4-30-58	T, 15	D, Irr	Hydrograph in fig. 14.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
8H3	Verne Hale	1,086	Du	..	..	..	Gravel
8J1	R. Ottman	1,090	Du	50	48	..	. do .
8K1	Unknown	1,084	Du	45	48	..	. do .
8P1	George Knapp	1,080	Du	37	42	..	..
8P2	. . .do. . .	1,076	Dr	47	6	..	Gravel
8Q1	. . .do. . .	1,076	Du	33	44	..	. do .
9G1	G. A. Loudenback	1,178	Dr	215	10	..	Sandstone
9J1	Buell Throop	1,159	Dr	185	10	185	Gravel
9L1	G. A. Loudenback	1,179	Dr	338	12	200	..
9M1	Scott Brown	1,098	Dr	..	6	..	Gravel
9N1	W. E. Strode	1,077	Du	37	48	37	Gravel,sand
9P1	Liebert & Brooks	1,177	Dr	143	6	143	Gravel
10A1	Claire Shong	1,123	Dr	..	8	..	..
10A2	Mike Fitzgerald	1,119	Dr	..	6	..	Gravel
10A3	U. E. Brandon	1,120	Dr	78	6	78	. do .
10A4	Ruth Lutskas	1,122	Dr	85	8	..	. do .
10A5	Bryan & Brown	1,122	Dr	84	8	84	. do .
10A6	Emma Jennings	1,116	Dr	77	6	77	. do .
10A7	John Fulton	1,123	Dr	86	6	80	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	C	D, Irr	
43.5 43.00 44.12	1916 12-10-41 8-10-49	C, 15	D, Irr	
38 38.30	12-10-41 8-30-45	C, 15	Irr	
36.57 34.22	8-29-45 8-17-49	N	N	
32	8-15-49	J, 3/4	D	
31.74	8-29-45	T, 5	Irr	
121.3	7-26-49	N	N	Well abandoned because of insufficient yield for irrigation. L.
..	..	C, 75	D	Supplies motel.
134.3 142	8-10-49 1951	T, 20	PS	Serves 42 homes. Dd 70 ft pumping 460 gpm.L.
60.0 62.44	5-17-56 4-30-58	3	D	
30.6 30.65	5-18-56 4-30-58	T, 15 J, 1	D, Irr	
125	1954	S, 35	PS	Supplies 20 homes.
..	..	T, 7½	D	
72.3 12.42	5- 7-56 5- 5-58	J, 1½	D	
70.7	5- 7-56	J, 3/4	D	L.
..	..	C, 1	D	
73	3- -56	T, 5	D	Supplies trailer court.
67.5	5- 9-56	J, 1	D	
..	..	J, 3	D	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
10B1	R. Quinn	1,110	Dr	119	8	102	Gravel
10B2	D. H. Watson	1,114	Dr	124	6	..	. do .
10B3	P. O. Radke	1,112	Dr	83	6	83	Gravel,sand
10B4	Gwendolyn Scudder	1,110	Dr	92	6	92	Gravel
10C1	Lester Wilcox	1,105	Dr	93	8	93	. do .
10D1	C. C. Burnham	1,114	Du,Dr	102	42-6	..	. do .
10E1	Joseph Reddy	1,110	Dr	80.5	6	..	. do .
10F1	H. R. Morton	1,112	Du	76	48	..	. do .
10F2	Joe O'Neil	1,107	Dr	..	8	..	..
10F3	Leikin & Still-well	1,107	Dr	80	6	80	Gravel
10G1	Unknown	1,117	Du	72	72	..	. do .
10G2	L. H. Coffel	1,117	Du, Dr	78	10	78	. do .
10G3	J.P.Friedbauer	1,116	Dr	88	6	..	. do .
10G4	C. R. Alexander	1,116	Dr	85	6	85	. do .
10H1	L. S. Perrow	1,112	Dr	84	6	..	. do .
10H2	Broadmoor Park	1,108	Dr	70	8	70	. do .
10H3	Richard Harper	1,120	Dr	82	6	..	. do . (?)
10J1	L. E. Rudberg	1,112	Dr	75	10	..	Gravel
10L1	Floyd Renn	1,107	Du	63	10	63	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 1	D	Basalt at 114 ft.
51.6	5- 7-56	J, 2	D	
53.25	5- -56	J, 1	D	
16	..	J, 3/4	D	
..	..	T, 3	..	
59.93 48.34 51.05	8-10-49 8-27-53 6- 6-58	T, 15	..	Hydrograph in fig. 8.
73	8-10-49	T, 15	D, Irr	Cp, L.
65.5 64.71 66.32 63.75	10-14-16 6-30-42 8-28-45 5- 2-58	T, 7½ J, 1	D, Irr	C
..	..	J, 3	PS	
54.47	9-29-53	J, 1	D	
69	1916	N	De	Formerly irrigation well.
69.70 69.33	5- 8-56 5- 2-58	T, 5	D, Irr	
70.9	5- 8-56	J, 1/3	D	
64	1954	J, 3	D, Irr	
66	1945	T, 5	Irr	
59	5- -53	T, 5	PS Irr	
..	..	T, 3	D	
68.75	8-26-45	T, 5	Irr	
60	1951	T, 7½	D, Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
10L2	M. Clay	1,110	Dr	96	6	96	Gravel
10L3	A. Ray Groff	1,111	Dr	109	6	89	Sand,gravel
10L4	Hazel Butler	1,107	Dr	82	8	82	Gravel
10L5	Abraham Schaber	1,107	Dr	75	6	75	. do .
10M1	L. B. French	1,106	Du	66.6	46	..	. do .
10M2	P. W. Gregg	1,109	Dr	82	6	..	..
10N1	F.B.Baughman	1,104	Dr	59.5	8	..	..
10N2	. . .do. . .	1,109	Du	70	8	64	Gravel
10P1	Unknown	1,115	Du	83	48	..	..
10R1	Earl Black	1,082	Du	38	36-18	38	Gravel
10R2	. . do . .	1,088	Du	42	..	6	. do .
10R3	. . do . .	1,101	Dr	68	10	68	. do .
11A1	R. W. Smith	1,081	Dr	181	12	..	Basalt
11C1	J. H. Nuckolls	1,098	Dr	66	6	66	Gravel
11G1	Marion Relyea	1,071	Dr	31	10	31	. do .
11G2	Clark Madison	1,078	Du, Dr	..	12	..	Basalt
11J1	Luther Gales	1,077	Du, Dr	207	14	..	. do .
11K1	C.E.Dougherty	1,075	Du, Dr	34	..	..	Gravel
11K2	A. E. Childes	1,076	Du	32	30	32	. do .
11K3	Lloyd Jackson	1,074	Dr	35	6	35	. do .
11L1	John Kuepers	1,074	Du	32	36	32	. do .
11M1	A. W. Cordell	1,097	Du	57.6	44	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
67.6	5-16-56	J, 1	D	
63.1 63.41	5-16-56 5- 2-58	J, 1	D	L.
61.4	5-17-56	J, 5	D	Well was drilled to 115 ft, backfilled to 82 ft. L.
..	..	C, 1½	D	L.
64.36	8-28-45	T, 10	Irr	
..	..	J, 1	D	
58.28	6-30-42	T, 10	Irr	
63.16	8-16-42	T, 15	Irr	
73.0	10-14-16	N	De	Formerly domestic and stock well.
36.4	5-11-56	J, 5	PS	
36	1955	J, 1½	PS	
..	..	J, 5	PS	
56.20 12.06	8-26-45 5- 1-58	T, 20	Irr	
..	..	J, 1	D	
21.5	5-10-56	J, 1½	D	
12.91	5- 4-56	T, 40	S,Irr	
17	1945	T, 15	D,Irr	L.
28	8- -49	C, 3	D,Irr	
28.95 29.67	5-10-56 5- 1-58	C, 5	D,Irr	
..	..	J, 1½	D	
26.35 27.02	5-10-56 5- 1-58	N	N	
54.75	8-26-45	T, 15	Irr	Pumps about 100 gpm.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
11N1	John Kuepers	1,084	Du, Dr	140	6	..	Gravel
11N2	. . .do. . .	1,086	Du	46	44	..	. do .
11N3	Matheny & Dickey	1,086	Dr	40	8	40	. do .
11P1	John Kuepers	1,076	Du	..	..	..	. do .
11P2	Minnie Schmauder	1,074	Du	33.7	36	33	. do .
11P3	Dale Colwell	1,074	Du	30	..	..	. do .
11P4	Jim Cornutt	1,076	Dr	41	8	..	. do .
11P5	Edward Thoren	1,077	Dr	35	6	35	. do .
11R1	O. H. Osborn	1,070	Du, Dr	23	..	..	. do .
11R2	. . . do . . .	1,070	Du	20	..	..	. do .
11R3	C. F. Simons	1,077	Du	25	3	..	. do .
11R5	Frank Hinkhouse	1,068	Dr	27	6	..	Basalt
11R6	C. F. Simons	1,074	Dr	175	10	21	. do .
11R7	Homer Osborn	1,070	Dr	115	6	21	. do .
12B1	Leah C. Berth-oldi	1,092	Du	27	4	13	. do .
12C1	Unknown	1,078±	Du	15.3	48	..	Gravel
12E1	C. V. Sazer	1,076	Dr	197	10	197	..
12K1	Skyline Acres	1,192	Dr	329	8	80	Basalt
12K2	C.C. Weatherbee	1,198	Dr	114	6	92	Clay
12M1	Julius Surmann	1,068	Dr	..	6	..	..
13R1	U. S. Bureau of Reclamation	1,201	Dr	568	20	40	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
36.2	5- 9-56	J, ½	D	Dug 40 ft, drilled 100 ft.
37.70	5- 9-56	N	O	Well caved 1958.
39	1956	J, 3	PS	
28.99	8-15-49	T, 15	Irr	
28.85	5- 9-56	15	D,Irr	
..	..	N	De	Formerly domestic and irrigation well.
30	9-19-53	J, 1	D,Irr	Basalt at 41 ft.
30.30	5-10-56	J, 1/3	D	
..	..	C, ½	N	
..	..	C, ½	D	
..	..	J, 1½	D,Irr	
4.61	5- 3-56	S, ½	D	
Flows 4.41	5- 4-56 5- 1-58	C, 7½	D	L.
Flows	4-21-55	C, 3	D	
23 23.68 7.95	1916 6-25-42 5- 1-58	N	N	L.
10.6	10-13-16	N	De	Formerly domestic and stock well.
42	12-12-50	T, 15	D, S Irr	Dd 66 ft after pumping 2¼ hours at 560 gpm.
94	10-29-53	T, 20	D,PS	L.
69.12	5- 4-56	J, ½	D	L.
14.32 11.97 11.21	12- 8-41 9- 6-45 4- 4-51	N	De	Formerly domestic well. Rwl.
145	5-16-47	T, 100	D,Irr	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
14A1	Peck, Goodhue, Hall	1,084	Dr	135	6	..	Basalt
14A2	Burrel H. Crisp	1,078	Du,Dr	107	6	10	. do .
14A3	Roy Sheppard	1,080	Dr	80	6	42	..
14A4	Julius Surmann	1,074	Dr	130	6	..	Basalt
14C1	P. Penhallurick	1,074	Du	33	36	..	Gravel
14E1	Richard Penhall-urick	1,090	Du	51.5	36	40	. do .
14E2	. . . .do. . . .	1,067	Dr	90	6	..	Basalt
14F1	. . . .do. . . .	1,058	Du	16	36	4	. do .
14F2	. . . .do. . . .	1,059	Dr	46	..	..	. do .
14G1	. . . .do. . . .	1,072	Dr	42	6	..	..
14H1	. . . .do. . . .	1,084	Du,Dr	80	48-8	70	Basalt
14H2	E. R. Gjertson	1,076	Dr	43	6	40	Sand
14H3	Henry Farmer	1,082	Dr	112	6	7	..
14J1	Lauren Lambert	1,104	Dr	185	6	..	Basalt
14K1	United Concrete Pipe Corp.	1,057	Dr	47	8	21	. do .
14L1	Percy Penhall-urick	1,051	Du	6.6	..	..	Gravel
14M1	Armco Drainage Co.	1,070	Dr	32	8	32	. do .
14N1	J. A. Price	1,063	Du	22.7	48	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
4.58	5- 7-58	C, 1½	D, S	Well formerly flowed. Basalt at 4 ft.
6.50	5- 4-56	J, 3	PS	L.
33.48	8-30-49	J, 1	D	
9.73	4-22-55			
38.19	8-30-49	..	..	
28.35	6-30-42	C, 5	Irr	
26.45	5-11-56			
27.24	5- 1-58			
44.35	6-30-42	C, 11	D, S Irr	
23	6-30-42	P	D	
11.09	6-25-42	N	De	Formerly domestic well. Basalt at 4 ft.
16	1949	N	De	Formerly domestic well.
25.66	6-25-42	J, ½	D	
26.40	8-29-49			
35	1949	T, 3	Irr	
10.04	5- 4-56			
9.51	5- 1-58			
29	8- -49	C, ½	D	
36.59	8-29-49	J, 5	PS	L.
13.79	5- 4-56			
60.8	8-29-49	J, 2	..	L.
12.5	5- 3-51	T, 15	Ind	L.
4.8	1916	N	De	Formerly domestic well.
26	1949	T, 5	Ind	
17.61	8-30-49	J, 3/4	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
15A1	H. H. Shaffer	1,091	Du	51	13	..	Gravel
15A2	Guy Harris	1,085	Dr	52	6	..	. do .
15A3	Elmore Bros.	1,083	Dr	50	8	50	..
15E1	—Hubers	1,092	Du	55	48	..	Gravel
15G1	Unknown	1,112	Du	65	48	62	. do .
15G2	George Schumaker	1,112	Du	71	24	..	..
15H1	John Kohler	1,091	Du	39	48	..	Gravel
15H2	John Lee	1,092	Du	49.5	60	48	. do .
15J1	Mattson & Reisner	1,086	Du	45	36	..	. do .
15L1	. . . .do. . . .	1,106	Du	63	48	55	. do .
15M1	J.E.Harrington	1,112	Du	69	5	..	. do .
15M2	Paxson's Court	1,099	Du	62	..	..	. do .
15P1	Mattson&Reisner	1,094	Du	..	6	..	. do .
15Q1	City of Moses Lake, well 3	1,070	Dr	909	16	132	Basalt
16B1	County Fair Grounds	1,168	Dr	135.5	8	..	Gravel
16D1	Arvid Kistengren	1,074	Du	22	36	20	. do .
16D2	Henry Hart	1,076	Du	28.5	48	25	. do .
16D3	Arvid Kistengren	1,076	Du	31	60	27	. do .
16D4	. . . .do. . . .	1,079	Du	33	..	..	. do .
16D5	. . . .do. . . .	1,068	Dr	31	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
42	1953	J, 1	D, Irr	Dd 4 ft after pumping 4 hours at 400 gpm.
45.41	5- 5-58	T 7½		
42.69	9-11-53	J, 1½	D	L.
34.30	5-11-56	J, 1	D	
47	8- -49	C, 5	D, Irr	
64.1	3-20-39	N	De	Formerly irrigation well.
66.84	8-28-45	T, 25	Irr	
67.08	8-26-49			
36.0	10-14-16	N	De	Formerly domestic well.
46.15	6-30-42	C, 15	Irr	
47.34	8-29-45			
42	8- -49	T, 15	D, Irr	
59.49	3- -41	T, 20	Irr	Hydrograph in fig. 16.
59.91	6-20-57			
60.40	5-15-58			
65.58	6-11-45	T, 5	D, Irr	
..	..	C	D, Irr	Cp.
45.64	8-26-49	C	Irr	
25	1951	T, 125	PS	Dd 92 ft pumping 1,400 gpm. C, L.
34.79	6-20-57			
60	8- -48	T, 10	D, S	
20.30	7- 1-42	N	De	Formerly domestic and stock well.
25.57	7- 1-42	C, 7½	Irr	
29.27	8-29-45			
27.74	7- 1-42	C, 7½	Irr	
27.64	8-17-49			
32.40	8-17-49	..	Irr	
..	..	J, 3	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
16F1	Cascade Park	1,055	Dr	31	6	31	..
16K1	Ben Peterson	1,151	Dr	208	8	205	Gravel
16N1	H. A. Durr	1,076	Du	33	60	..	. do .
16N2	Alex Barklow	1,075	Du	33	36	30	. do .
16N3	. . . dc . . .	1,050	Du	5	10	5	. do .
16P1	T. N. Knutzen	1,050±	Du	14	..	..	Sand
16P2	. . . do . . .	1,050±	Du	9	84	9	.do.
17B1	Mattson & Reisner	1,068	Du	24	44	..	.do.
17C1	Verlyn Cole	1,077	Du	35	4	..	Gravel
17E1	Frank Konishi	1,056	Dr	15	2	15	. do .
17E2	. . .do. . .	1,054	Du	17	60	17	. do .
17F1	W. C. Fowler	1,053	Du	13.5	120	13	. do .
17H1	William Hjaltalic	1,067	Dr	60	6	60	. do .
17Q1	O.K. Linville	1,048	Du	7	12	7	. do .
17R1	Robert Washburn	1,054	Du	..	..	..	. do .
18E1	H. L. Benson	1,092	Du	66	48	..	. do .
18F1	Melvin Jorgenson	1,060	Du	65	44	65	. do .
18K1	Leo Bieren	1,040	Dr	26	8	..	. do .
18N1	R. S. Cobia	1,084	Du	63	48	..	. do .
18P1	Roy Durrett	1,088	Du	65	36	60	. do .
18P2	Preston Phelps	1,075	Du	51	48	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
9.63 10.74	7-27-53 4-30-58	..	..	
106.0	4-22-55	J, 3	D	L.
30	1916	N	De	Formerly domestic and stock well.
29.21 29.66	7- 1-42 8-18-49	C	Irr	
4.20	8-18-49	C, 15	Irr	
6	1916	P	D	
5.5	1916	C, 7	D,Irr	
22.40	8-29-45	T, 15	Irr	
..	..	C, 10	D,Irr	
10	7- 1-42	P	S	
12.43 11.24	7- 1-42 5- 5-58	J, 3/4	D, S	
3.94 4.95	7- 1-42 8-30-45	C, 30	Irr	
55	1953	J, 3/4	D	L.
4.65	7- 1-42	P	S	
8.57	8-30-45	T, 10	Irr	
57.89	8-23-49	C, 10	Irr	
58.66	7-27-53	J, 3	D	
21.39	7-27-53	J, 1	D	
53.52	8-23-49	C, 10	Irr	
61.38 57.45	8-31-45 8-23-49	C, 10	Irr	
48.45	8-31-45	J, ½	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
18Q1	--Shields	1,040	Du	14.5	60	..	Gravel
19B1	E. N. Galloway	1,074	Du	51	48	..	. do .
19D1	. . .do. . .	1,077	Du	56	48	..	. do .
19G1	E. A. Pearson	1,067	Du	40	48	..	. do .
19J1	E. A. Rudloff	1,065	Du	..	..	..	. do .
19J2	George Wood	1,060	Dr	48	6	48	Sand
19J3	Lawton Johns	1,060	Dr	49	6	49	.do.
19K1	Robert Pain & Payne	1,060	Dr	116	8	112.5	Gravel
19M1	J. J. Zirker	1,074	Du	50	48	..	. do .
19N1	. . .do. . .	1,060	Du	47	48	43	. do .
19N2	Ray Trask, Jr.	1,056	Du	34	48	27	. do .
19N3	D. Rayhill	1,071	Du	70	60	70	. do .
19R1	E. A. Rudloff	1,059	Du	36	6	36	. do .
20A1	J. Van Stewart	1,080	Du	41	48	38	. do .
20B1	Charles Tichacek	1,080±	Du	50	..	..	. do .
20C1	Unknown	1,062	Du, Dn	22	48-2	..	Gravel,sand
20R1	Mountain View Tracts, Inc.	1,060	Dr	50	8	50	Gravel
21D1	W. L. Clink	1,076	Du	35	36	35	Gravel,sand
21D2	. . do . .	1,069	Du	26	48	24	. . .do. . .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
13.0	10-16-16	N	De	Formerly irrigation well.
42.78 40.44	7-10-42 3-14-49	C, 1/3	D, S	Rwl.
41.02	5- 5-58	T, 10	Irr	
38	1916	C	D	
..	..	..	D	
32	7-27-53	J, ½	D	
33.62	7-27-53	..	..	
27.80	8-20-53	..	..	Dd 30 ft after pumping 1 hour at 10 gpm. Cp, L.
46.74 41.75 42.96	8-31-45 8-25-49 7-15-54	T, 20	Irr	
28.54 25.62	7-15-54 5- 5-58	T, 3	Irr	
27.05 26.72	11-12-41 7-15-54	T, 3	D, Irr	
60	7- 1-46	C, 5	Irr	L.
20	8- -49	..	D	
37.95 39.27	7- 1-42 5- 5-58	T, 20	Irr	Hydrograph in fig. 8.
30	1916	..	D	
15	7- -42	P, ½	D, S	
23.90	9- 1-53	T, 10	D	Dd 0.1 ft after pumping 2 hours at 650 gpm. L.
31	7- -42	C	Irr	
22.32 22.74	7- 1-42 8-19-49	C, 15	Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
21M1	D. P. Fuller	1,070	Du	29	48	27	Gravel
21P1	J. A. Bond	1,055	Du	8	6	8	. do .
21R1	A. R. Neal	1,066	Du, Dr	27	6	27	. do .
22A1	Unknown	1,074	Du	28	48	25	. do .
22B1	City of Moses Lake, well 1	1,075.5	Dr	544	12	50	Basalt
22B2	City of Moses Lake, well 2	1,072	Dr	763	16	143	. do .
22F1	Sam Driggs	1,076	Du	33	36	..	Gravel
22F2	Unknown	1,072	Du	29	42	29	. do .
22G1	F. W. Lees	1,070	Du	29	48	19	. do .
22G2	Unknown	1,077	Du	37	48	32	. do .
22G3	Mattson&Reisner	1,077	Du	32.5	48	..	. do .
22H1	Simeon McDonald	1,062	Du	18	6	..	. do .
22H2	. . . .do. . . .	1,074	Du	37	48	..	. do .
22H3	Unknown	1,070	Du	35	48	30	. do .
22K1	Gus Dickens	1,074	Du, Dr	160	36-8	29	Basalt
22K2	. . .do. . .	1,069	Du	27	48	..	Gravel
22K3	. . .do. . .	1,078	Du, Dr	136	36-10	34	Basalt
22L1	Unknown	1,078	Du	38	48	30	Gravel
22L2	Unknown	1,075	Du	32	48	..	. do .
22L3	Mildred Elliot	1,073	Dr	31	8	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	T, 10	Irr	Dd.25 ft after pumping 24 hours at 1,350 gpm.
5.90	7- 1-42	P	D	
23	8- -49	C, ½	D	
27.89	6-26-42	N	N	
17	7- 1-42	T, 20	PS	C, L.
30	1946	T, 75	PS	C, L.
30.55 31.18 29.19	7- 8-42 9- 5-45 11-29-50	N	De	Formerly irrigation well. Rwl.
27.53	9- 5-45	N	De	Formerly domestic well.
25.24 25.33	6-20-42 8-22-49	N	N	Rwl.
31.72 33.30	7- 8-42 9- 5-45	C	Irr	C.
31.72	9- 5-45	C, 7½	Irr	
28.22	6-26-42	N	De	Formerly irrigation well.
30.77 31.03	6-26-42 9- 5-45	N	De	
29.48	6-26-42	N	De	Formerly irrigation well.
31	6-26-42	P	D	
23.28 23.93	6-26-42 9- 5-45	C, 25	Irr	
34.48	6-26-42	N	De	Formerly irrigation well. L.
32.47	6-26-42	C	Irr	
28.64	7- 9-42	N	De	Formerly irrigation well.
26.33	9- 1-49	C, 7½	D, Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
22M1	Evertru Concrete Products	1,063	Du	22	48	..	Gravel
22M2	Frank Moulton	1,056	Du	15	36	..	. do .
22N1	E. Crawford	1,061	Dr	40	6	..	. do .
22N2	H. T. Mast	1,062	Dr	90	..	..	..
22N3	T. G. Gibby	1,058	Du	35	4	..	Gravel
22N4	Dorner-Wise Inc.	1,057	Dr	74	6	74	Basalt
22P1	T. Omori	1,077	Du, Dr	150	36-8	28	. do .
22P2	Elmer Hansen	1,058	Dr	100	8	48	. do .
22Q1	Roy Haun	1,078	Du, Dr	150	36-10	25	. do .
22Q2	City of Moses Lake	1,067	Du	18	36	..	Gravel
23D3	Unknown	1,057	Du	16	48	12	. do .
23D4	Edward Penhallurick	1,060	Du	19.4	48	..	. do .
23D5	John Hockstatter	1,063	Du	18	54	..	. do .
23D6	Ottis Moyer	1,060	Du	26	6	..	. do .
23D7	M. R. Burris	1,056	Du	14	48	..	. do .
23D8	City of Moses Lake, well 7	1,064	Dr	948	24	680	Basalt
23F1	Edward Hull	1,058	Du, Dr	100	96	26	. do .
23J1	City of Moses Lake, well 5	1,177	Dr	950	24	..	. do .
23M1	H. Carlson	1,052	Du	10	36	3	. do .
23M2	. . .do. . .	1,054	Du	13.6	36	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
17.72 17.70	8-30-49 5- 7-58	J, 1½	Ind	
..	..	C, 3	Irr	
..	..	P, ½	D	
30	1949	J, 3	Ind	
30	1949	C, 3/4	D	
10.50	8-11-54	J, 1½	D, Ind	
28	6-26-42	C, 25	Irr	
11.35	8-11-54	J, 2	D, Ind	Cp, L.
31.70 34.07	6-26-42 9- 5-45	C, 25	Irr	
..	..	..	..	At sewage disposal plant.
12.10	6-25-42	..	D	
15.63	8-30-49	C	D	
17.32	8-30-49	N	De	Formerly domestic well.
14.63 16.49	4-22-55 4-30-58	J, ½	D	Cp.
11.81	8-30-49	N	De	Formerly irrigation well.
25.26	6-20-57	..	PS	Well flowed until tested. C, L.
10.20	6-20-42	C, 25	D, S	Formerly Moses Lake city well. Basalt at 26 ft.
91.45	9-19-56	..	..	
7.42	6-20-42	N	De	Formerly domestic and stock well.
11.60	8-30-49	P, ½	Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
23N1	Miles N. Gilberts	1,062	Dr	68	..	..	..
23Q1	Howard Curtis	1,168	Dr	175	12	..	..
24D1	John McDowell	1,176	Dr	177	6	59	Basalt
24D2	USBR, drainage observation well	1,154.3	Dr	50	1½	50	Clay, sand
24H1	Forbes Driggs	1,200	Dr	345	12	126	Basalt
24L1	James A.Crawford	1,196	Dr	131	6	90	. do .
24P1	Otto Pepper et al	1,191	Dr	440	8	96	. do .
24P2	. . . do . . .	1,196	Dr	159	8	70	. do .
24Q1	Roy McGrath	1,202	Dr	260	12	98	. do .
24R1	J. C. Koeppen	1,200	Dr	240	6	..	. do .
25A1	Keizo Shigeno	1,200	Dr	266	8	63	. do .
25C1	Bill Hattori	1,196	Dr	293	12	110	. do .
25E1	. . .do. . .	1,172	Dr	270	6	..	. do .
25L1	. . .do. . .	1,191	Dr	500	12	..	. do .
26A1	Chief Moses Jr. High School	1,172	Dr	159	8	93	. do .
26B1	Donald Ewald	1,167	Dr	167	6	40	. do .
26C1	Don McDonald	1,165	Dr	144	6	50	. do .
26C2	John McDonald	1,162	Dr	424	8	60	. do .
26C3	--Harden	1,156	Dr	140	8	33	. do .
26D1	John McDonald	1,059	Du	25	48	10	. do .
26D2	Percy Driggs	1,122	Dr	500	12	78	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
17.42	8-30-49	J ¼	D	
90	1949	J, 3	D, Irr	
142	1949	P, 3	D, Irr	L.
Dry 20.51	6- -51 5-22-58	N	O	L.
140	9- 6-49	T, 100	Ind	Dd 88 ft pumping 1,050 gpm. L.
90	1954	J, 1	D, S	L.
150	9- -49	T, 40	Irr	Cp, L.
..	..	T, 5	D	L.
150	1950	T, 75	D, Irr	Dd 67 ft after pumping 4 hours at 735 gpm. L.
144	3- -48	T, 40	Irr	L.
49.33	9-12-58	J, 2	D	Old well deepened and reamed from 115 ft. L.
174.0	9- 6-49	T, 100	Irr	Dd 90 ft after pumping 4 hours at 1,100 gpm. L.
150	1949	J, 3	D	
167.6 50.00	9- 6-49 5- 7-58	N	N	Hydrograph in fig. 12. L.
60	1956	T, 15	PS	L.
130	1949	P	D	
115	4- -42	P	D, S	
115.46	4-14-42	T, 1½	D	Basalt at 60 ft.
..	..	T, 2	N	Formerly domestic well. L.
13.28	4-14-42	N	De	Formerly domestic and irrigation well.
78	1- -53	N	N	Dd 106 ft pumping 200 gpm. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
26J1	Sam Driggs	1,164	Dr	995	12	..	Basalt
26M1	George Rawlins	1,154	Dr	186	6	140	Basalt, sand
27C1	Ed Kramer	1,059	Du, Dr	100	48	12	Basalt
27C2	Sam Cole	1,059	Du, Dr	103	48	15	. do .
27C3	Chicago, Milwaukee St. Paul and Pacific RR	1,056	Dr	127	12	67	. do .
27D1	Homer Jones	1,060	Dr	93	6	54	. do .
27D2	Mrs. Mildred Elliott	1,060	Dr	42	6	7	Gravel
27E1	Robert White	1,059	Du, Dr	101	48	..	Basalt
27E2	Amel Tichacek	1,059	Du, Dr	76.5	8	..	..
27M1	Martin Johnson	1,061	Du, Dr	91	48	21	Basalt
27M2	E. H. Corley	1,054	Du	13.5	36	..	..
28A2	A. A. Abbs	1,068	Dr	112.5	6	..	Basalt
28H1	J. R. Allen	1,071	Du	33	48	..	Sand
28H2	Oscar Dike	1,071	Dr	97	8	97	Basalt
28H3	Lewis Townsend	1,070	Dr	87	6	87	. do .
28J1	Sam Driggs	1,062	Du, Dr	95	72-6	15	. do .
28J2	Capistrano Park Water System	1,072	Dr	73	10	53	. do .
28J3	. . . do . . .	1,072	Dr	250	12	128	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
143.02	9- 6-49	J, 1½	Irr	L.
..	..	J, 3	D, S	L.
16	7- -42	C, 5	Irr	L.
4.02 15.94	7- 9-42 9- 4-45	C, 5	Irr	
..	..	T, 10	D, Ind	L.
18.22	4-22-55	T, 2½	D, Irr	L.
..	..	N	De	Formerly domestic well. L.
17.50 14.15	7- 8-42 5- 7-58	C, 5	Irr	Dd 2½ ft after pumping 12 hours at 250 gpm.
..	..	T, 3	D	
16 12.86	7- -42 9- 4-45	C, 5	D, Irr	C, L.
3.30 5.39	7- 8-42 9- 4-45	P, ½	D, S	
25.00 20.84	9- 8-49 5- 2-58	C, 3/4	D	
26.80 17.87 20.27	10-18-16 7- 8-42 9- 4-45	P	D	Formerly listed as 28A1
24	1949	T, 7½	D, Ind	
23	1954	J, 3	D	Yield about 50 gpm. L.
16	7- 8-42	C, 5	Irr	
14	9- -49	J, 3	PS	L.
25.39 18.90	8-12-54 5- 5-58	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
28K1	Schneirla Bros.	1,073	Du, Dr	100	48-6	..	Basalt
28K2	. . . .do. . . .	1,070	Du	..	60	..	..
28K3	Peninsula Elementary School	1,073	Dr	160	8	..	Basalt
28K4	City of Moses Lake, well 4	1,073	Dr	1000	12	752	. do .
28P1	P. Larimer	1,079	Dr	96	6	96	. do .
28Q1	C. H. Storms	1,080	Dr	110	6	54	. do .
28R1	Guy Giersdorf	1,066	Dr	180	6	..	. do .
28R2	Unknown	1,067	Du	5.5	12	5.5	Gravel
28R3	Tenaglia Packing Plant	1,067	Dr	35	..	..	..
28R4	M. Shepard	1,056	Du, Dr	..	8	..	..
28R5	Henry Becker	1,062	Du	13	3½	13	..
29N1	Basin Development Co.	1,048	Dr	149	8	76	Basalt
29P1	--Prichard	1,060	Dn	25	1½	25	Gravel
29Q1	State Park	1,060	Dr	190	8	..	Basalt
30A1	Thomas Hansen	1,060	Dr	142	8	..	..
30A2	Howard Michaelis	1,058	Dr	..	6	..	..
30B1	Thomas Hansen	1,066	Du	42	54	..	Gravel
30B2	A. H. Gilman	1,066	Du	42	8	..	..
30C1	R. G. Hansen	1,060	Du	38	42	..	Gravel
30C2	. . .do. . .	1,061	Du	37	42	..	. do .
30D1	R. M. Bird	1,048	Du	25	36	..	..
30D2	A.J.Vande Velde	1,056	Du	28	48	24	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
30.48	9- 4-45	..	D	C, L.
11.85	9- 8-49	N	De	Formerly irrigation well.
30	1950	T, 5	Irr	
29.08	7-23-53	T, 75	PS	Dd 33 ft after pumping 24 hours at 1,530 gpm. L.
26.44 34.05	8-31-53 4-30-58	J, 3/4	D	Basalt at 60 ft.
..	..	J, 1	D	Dd 5 ft pumping 100 gpm. L.
..	..	P, 3/4	D	
4.90	7- 8-42	P	D	
..	..	J, 1/3	D	
10.32	9- 8-49	N	N	
12.5	9- 8-49	N	N	
1	3- 2-47	T, 20	PS	Dd 10 ft after pumping 4 hours at 600 gpm. L.
..	..	C, ½	D	
14	1949	T, 15	Irr	
15	..	C, 20	Irr	
..	..	J, ½	D	
40	1949	P	D	L.
38	1916	..	..	
34.50	12-11-41	..	De	Formerly irrigation well.
26.18	3-14-49	N	N	
22.0	10-16-16	N	De	Formerly domestic and stock well.
24.45	8-25-49	C, 5	D, Irr	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
30D3	A.J.Vande Velde	1,060	Du	35	48	35	Sand,gravel
30P1	USBR, drainage observation well	1,062.3	Dr	35	1½	35	Sand,gravel
32C1	Basin Development Co.	1,048	Dr	187	10	..	Basalt
32R1	Unknown	1,068	Dr	45	6	..	Gravel
33A2	Tanaglia Packing Plant	1,056	Dr	200+	..	..	..
33B1	Leo Ehrs	1,071	Dr	35	6	..	Gravel
33B2	C. W. Northover	1,078	Du	30	..	..	. do .
33B3	—Hocksteter	1,076	Du	20	48	..	..
33C1	Dills Bros.	1,082	Du, Dr	200	36-10	..	Basalt
33C2	. . do . .	1,084	Du, Dr	90	6	..	..
33D1	B. E. Butler	1,073	Dr	55	6	53	Gravel,sand
33D2	Rudd & Vanderpool	1,077	Dr	55	6	55	Sand,gravel
33E1	M. E. Myers	1,082	Dr	43	6	..	Gravel
33E2	Omer Turcotte	1,079	Dr	45	6	..	..
33F1	Ray Taylor	1,080	Dr	208	12	..	Basalt
33F2	Carl Benson	1,085	Du, Dr	92	36-6	11	..
33L1	H. G. Cox	1,073	Du, Dr	45	48-8	..	..
33L2	Bart Yogan	1,085	Dr	110	6	80	Sand
33M1	L. L. Foster	1,070	Dr	58	6	12	.do.

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
31 30.30	7- -41 8-25-49	C, 7½	D, Irr	
19.47 22.57	10-15-56 5- 9-58	N	O	L.
0.72	3-14-49	T, 20	PS	
22.36	9- 1-53	N	N	
..	..	J, 1/3	S, Ind	
30	1949	J, 5	D	L.
..	..	P, ½	D	
..	..	P	D	
37.60 37.40 37.85	7- 9-42 9- 4-45 4-30-58	C	D, S Irr	
..	..	P, ½	D	
28	1946	J, ½	D	
..	..	J, 3/4	D	
..	..	J, 1/4	D	
20.63 27.75	8-31-53 5- 5-58	J, ½	D	
..	..	T, 7½	D, Irr	
..	..	J, 3/4	D	
16.56 15.37	9- 4-45 9-13-49	J, ½	D	
25	9- -52	J, 3/4	D	
20	1946	J, ½	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 28 E.--Con.							
33M2	H. P. Killinger	1,072	Dr	65	6	..	Clay
33M3	Lyman McCandless	1,075	Du	36	48	..	Sand
33N1	Unknown	1,071	Du	32	36	25	.do.
33N2	William Gay	1,074	Dn	12	6	12	.do.
33N3	William Hill	1,071	Dr	45	6	33	..
33N4	J. P. Kinnard	1,071	Dr	71	6	63	Gravel
33P1	--Lamp	1,079	Dr, Du	..	6	..	. do .
33P2	S. A. Starks	1,085	Dr	115	6	74	Basalt
34A1	B. N. Young	1,156	Dr	170	6	..	. do .
34F1	Unknown	1,056	Dr	..	3	..	..
34J1	Virgil Morgan	1,155	Dr	155	8	127	..
34K1	. . .do. . .	1,146	Dr	197	8	..	Basalt
34N1	Unknown	1,127	Dr	128	8	..	. do .
35A1	USBR, drainage observation well	1,169.1	Dr	50	1½	50	..
35D1	Welch & Kandre	1,157	Dr	148	6	97	Basalt
35Q1	Emilio Valdez	1,136	Dr	85	6	49	. do .
36B1	R. G. Kittleson	1,193	Dr	535	8	127	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
30	7- -52	J, ½	D	
16.46	9- 1-53	J, 3/4	D	Cp.
25.68 21.27	7- 9-42 9-12-49	P	D	
12.56	7- 9-42	P	D	Cp.
..	..	P, ½	D	
33	9- 3-53	J, ½	D	
..	..	P	D	
39.39 38.61	8-31-53 4-30-58	J, 2	D	Cp, L.
85	1942	P, 3	D, S	
17.66 11.87	9-12-49 5- 7-58	N	N	
..	..	..	S, Irr	L.
101.20 55.14	4-14-42 5- 7-58	J, 1½	D	
70.79 55.82	10-31-49 5- 2-58	N	N	Hydrograph in fig. 10. L.
Dry	7- -51	N	O	L.
94.93	9-12-58	N	N	L.
7.82	9-13-58	J, 2	D	L.
158	9- 9-49	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 29 E.--Con.							
1C1	Henry Ottmar	1,285	Du, Dr	264	12	24	Basalt
1D1	Unknown	1,227	Dr	60	6	20	. do .
2A1	J. J. Phillips	1,230	Du	72.5	6	..	Gravel
2C1	Unknown	1,228	Dr	75	5	..	..
4H1	Ed Buchmann	1,315	Dr	257	6	20	Basalt
5A1	--Hillebrant	1,232	Dr	153	6	50	. do .
5G1	Fred M. Reid	1,208	Dr	180	6	11	. do .
5M1	Clark Jenkins	1,184	Dr	135	6	..	. do .
5N1	George Zielke	1,209	Dr	241	6	22	. do .
5N2	USBR, drainage observation well	1,206.8	Dr	50	1½	50	. do .
5Q1	Ray Smith	1,226	Dr	70	6	30	. do .
6A1	Mrs. Clark Jenkins	1,190	Du, Dr	150	48-6	50	. do .
6A2	Emanuel Jingling	1,222	Dr	92	6	89	Sand
6A3	. . . do . . .	1,220	Dr	199	6	141	Basalt
6B1	Walter Schneirla	1,186	Dr	100	6	..	..
6L1	Robert J. Ruff	1,192	Dr	133	6	..	Basalt
6P1	Ed Jingling	1,212	Dr	210	6	..	. do .
7D1	C. C. Brown	1,203	Dr	102	6	70	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
93	1949	N	N	
50.93	4-11-42	P	S	
50.71	11- 8-49			
54.30	3-21-39	N	N	Rwl.
49.70	9- 1-51			
56.6	9-21-49	N	De	Formerly stock well.
79.2	7-23-55	T, 3	D	
115	12- -41	S	D, S	Basalt at about 50 ft.
14.78	7-20-55			
23.01	5- 6-58			
80	12- -41	P	D, S	
4.27	7-20-55			
7.94	5- 6-58			
100	1942	P	S	
171	1951	J, 2	D, S	
Dry	6- -51	N	O	L.
28.01	5-22-58			
36.41	7-21-55	J, ½	D	L.
43.60	5- 6-58			
47.56	4-14-42	J, 3/4	D, S	Basalt at about 100 ft. Hydrograph
41.21	12-22-50			in fig. 10.
18.60	6- 5-58			
70	1949	N	De	Formerly domestic and stock well.
73	4- 1-54	J, 3	D, S	L.
54.90	4-14-42	N	De	Formerly irrigation and stock well.
79.15	4-14-42	J, 1	Irr	Rwl.
65.60	9-20-49			
140	4- -42	J, 3	D, S	
60.98	7-20-55	J, 2	D	L.
59.38	5- 6-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 29 E.--Con.							
8F1	Frank Zimmerman	1,254	Dr	483	8	9.5	Basalt
8J1	L. E. Tipton	1,238	Dr	220.5	6	..	..
8P1	Loyd Goehri	1,220	Dr	101	5	72	Basalt
9D1	Greenview Water Association	1,270	Dr	302	6	17	. do .
9H1	W. T. McClure	1,300	Dr	637	10	52	. do .
9L1	Glenn Mor	1,261	Dr	85	8	18	. do .
9R1	Ralph Enzler	1,274	Dr	433	6	..	. do .
10B1	Unknown	1,310	Dr	300	6	..	. do . (?)
10R1	Theodore Jingling	1,339	Dr	300	6	..	. do .
11R1	Gus Olander	1,356	Dr	380	8	..	. do .
12E1	Lewis Moulster	1,396	Dr	300	6	..	. do .
14A1	Gus Schmidt	1,341	Dr	400	6	..	. do .
14J1	Delmer Olander	1,357	Dr	368	12	..	Basalt
16E1	Wheeler Water Association	1,228	Dr	288	6	24	. do .
16R1	Northern Pacific Ry.	1,275	Dr	410	10	58	. do .
17R1	Dewey Davisson	1,222	Dr	271	6	..	. do .
18A1	B. B. Flynn	1,190	Dr	205	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
208.95	11-20-50	..	..	L.
80.73	7-21-55			
169.60	12-15-41	N	N	
33.76	7-21-55			
34.35	5- 6-58			
46	9- -54	J, 1½	D	L.
130	10- -52	S, 2	D	Dd 65 ft after pumping 4½ hours at 26 gpm.
251	7- -50	T, 100	D, Irr	Dd 14 ft after pumping 5 hours at 575 gpm. Cp.
50	5- -53	J, 1	D	Basalt at 18 ft. Cp.
28.22	7-23-55	T, 5	D	Deepened from 350 ft, 1949.
34.58	5- 6-58			
88.55	7-23-55	P	S	
98.86	5- 6-58			
210	5- -42	T, 1½	..	
230	1949	P	D, S	
..	..	P	S	
233.08	7-26-50	S	D, S	
200.60	7-22-55			
233.58	12-21-50	S, 3	D	Hydrograph in fig. 10. Cp.
184.14	7-22-55			
183.43	5- 7-58			
55	7- -53	T, 5	PS	L.
25.74	5- 7-58			
200	5- -42	P	Ind	
27.37	10- 9-53	S, ½	D	L.
36.54	7-21-55	S, 2	D	
33.96	5- 7-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 29 E.--Con.							
18R1	USBR, drainage observation well	1,172.6	Dr	44	1½	44	..
18R2	USBR, drainage observation well	1,173.2	Dr	37	1½	37	Gravel
19B1	Victor Sieler	1,190	Dr	157	6	48	Basalt
19D1	Lottie Driggs	1,194	Dr	220	8	45	. do .
20A1	Naome Cherry	1,220	Dr	200	7	..	..
20G1	U & I Sugar Co., well 1	1,211	Dr	1,030	20	79	Basalt
20K1	U & I Sugar Co., well 2	1,199	Dr	728	16	76	. do .
20K2	U & I Sugar Co., culinary well	1,204	Dr	362	10	..	..
20N1	U & I Sugar Co., well 3	1,172	Dr	912	18	694	Basalt
21A1	USBR, drainage observation well	1,283.7	Dr	29	1½	29	..
22C1	USBR, ditch-rider's well	1,269	Dr	352	8	37.3	Basalt
22E1	William Raugust	1,294	Dr	585	12	585	Sand, basalt
22R1	Eugene Harwood	1,282	Dr	560	12-10	49	Basalt
23N1	Unknown	1,294	Dr	368	8	..	. do .
26C1	Albert Nelson	1,327	Dr	360	6	..	..
26R1	Fred Radach	1,309	Dr	396	6	..	Basalt
27N1	USBR, drainage observation well	1,252.2	Dr	35.5	1½	35.5	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	6- -51	N	O	L.
22.5 11.82	7-13-55 5- 7-58	N	O	L.
110	12-15-41	T, 25	D, S	C.
100 59.14	1952 7-26-55	S, 1	D	
..	..	N	De	Formerly domestic and stock well.
118.5 232.58	9-16-53 5- 7-58	T, 150	Ind, Irr	L.
136.23	7-21-55	T, 150	Ind, Irr	L.
50.49	7-21-55	T, 15	D	
107	9-14-55	T	Ind	L.
Dry	6- -51	N	O	L.
216 170.00	12- 1-51 5- 7-58	T, 5	D	C, L.
60	1953	T, 100	Irr	Dd 87.7 ft after pumping 2 hours at 970 gpm. L.
191	5-17-55	T, 125	Irr	Yield about 1,300 gpm. L.
232.67 242.58 23.64 27.51	7-12-42 9-19-49 10-19-54 5- 7-58	N	N	
250 200	1942 1949	P, 3/4	D, S	
235 70.84	12-16-41 11-25-54	N	N	L, Rwl.
Dry 26.41	6- -51 5-22-58	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 29 E.--Con.							
28B1	P. Schiller	1,243	Dr	52	6	28	Basalt
28J1	G. E. Giles	1,235	Dr	250	6	30	. do .
28J5	USBR, drainage observation well	1,231.2	Dr	258	12	40	. do .
28Q1	Frank Hull	1,230	Dr	190	6	..	. do .
29A1	U & I Sugar Co., Feed lot well	1,188	Dr	486	10	206	. do .
30E1	F. K. Saunders	1,178	Dr	197	10	..	. do .
30M1	Wesley Kerving	1,162	Dr	186	8	22	. do .
32D1	USBR, drainage observation well	1,180	Dr	10.5	1½	10.5	..
32R1	J.L. Sturdevant	1,176	Dr	32	6	..	..
32R2	USBR, drainage observation well	1,174.9	Dr	30.5	6	27	Basalt
34D1	George During	1,254	Dr	250	6	30	. do .
34D2	Ray Radach	1,256	Dr	285	8	..	. do .
36C1	A. Schmidt	1,275	Dr	500	6	..	. do .
36E1	A. Meske	1,286	Dr	206	6	..	. do .
36J1	Fred Schmidt	1,270	Dr	313	6	..	. do .
36M1	Walter Peters	1,276	Dr	201	6	20	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
24	7-25-55	J, ½	D, S	
10 6.04	7- -53 7-25-55	J, ½	D	L.
32 39.20	11-20-54 5- 7-58	N	O	L.
15.27 10.45 19.38	4-21-54 7-25-55 5- 7-58	N	N	
103 130	8- -56 5- 7-58	T, 15	S	L.
100 141.0 50.95	1941 9-28-49 7-26-55	S, 10	D, S	
130	1949	J, 2	D, Irr	
Dry	6- -51	N	O	L.
30	1949	T, 7½	D, S	Cp.
9.08 11.88	8-13-56 5- 8-58	N	O	L.
170 31.44	1941 5- 7-58	P, 3	D, S	Basalt at 30 ft. Hydrograph in fig. 11.
28.96 33.40	6-10-55 5- 7-58	S, 5	D	C.
18.08 23.18	7-25-55 5- 8-58	J, ¼	D	
25	1953	P, ½	D	
138.70 124.42	4- 4-39 8-15-42	P, 1½	D, S	Rwl.
20	1953	T, 5	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 30 E.—Con.							
1E1	City of Ruff	1,365	Dr	282	8	..	Basalt
1E2	Chicago, Milwaukee St. Paul & Pacific RR	1,344	Dr	140	8	..	. do .
1M1	Fred Shell	1,356	Dr	275	6	..	. do .
2G1	John Kagele	1,310	Dr	115	6	7	. do .
2H1	Henry Hoefner	1,315	Dr	72.5	6	..	. do .
4H1	Frank Hinkhouse	1,449	Dr	294	6	..	. do .
6H1	W. R. Lee	1,350	Dr	217	6	..	. do .
6M1	Henry Ottmar	1,268	Dr	128½	6	..	. do .
7P1	. . .do. . .	1,390	Dr	325	6	15	. do .
8A1	Loyd Finner	1,257	Dr	52	6	..	..
10P1	Henry L. Eichelberger	1,394	Dr	262?	6	..	Basalt
11B1	Susan N. Wiley	1,340	Dr	113	6	..	..
12A1	John Pfaff	1,360	Dr	78	6	13	Basalt
13C1	Al Wagner	1,468	Dr	200	..	..	. do .
14M1	Jacob Oster	1,402	Dr	216	6	20	. do .
15E1	Unknown	1,438	Dr	315	7	20	. do .
16H1	Frank Hinkhouse	1,438	Dr	317	6	20	. do .
17E1	Fred Schmidt	1,423	Dr	380	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
120	1950	P, 3	PS	
78.70	5- 9-58			
60	1950	T, 50	Ind	C.
..	..	..	D	
17	1942	P	D, S	
24.72	5-21-42	P	N	
139.03	5-21-42	P	N	
147.75	7-26-50			
133.40	5- 7-58			
183.40	5-13-42	N	N	
189.11	10-26-50			
89.79	5-12-42	N	N	
103.69	5- 7-58			
290	1942	P	D, S	Basalt at 15 ft.
37.14	5-13-42	J, 1	D, S	
249	7-27-50	P	N	
81.17	5-21-42	J	D, S	
46	7-13-42	P	D, S	Basalt at 13 ft. Cp.
..	..	P, 2	D, S	
200	1942	P	D, S	
270.45	5- 6-42	P, 2	D, S	Basalt at 20 ft.
275	1942	P	D, S	. . . Do . . .
273.77	7-27-50			
281.94	5- 7-58			
..	..	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 30 E.--Con.							
18G1	Mary Koch	1,408	Dr	274	6	..	Basalt
19J1	Page Weston	1,419	Dr	500	6	..	. do .
20D1	P. J. Troutman	1,435	Dr	350	6	..	. do .
20D2	B.W.Gutschmidt	1,438	Dr	500	10	..	. do .
20Q1	J. F. Ziegler	1,365	Dr	228	6	..	. do .
22A1	Matie Wetherill	1,426	Dr	218	6	20	. do .
23A1	Joseph E. Nelson	1,280	Dr	70	6	..	. do .
23K1	Unknown	1,255	Dr	33	6	..	..
27N1	Unknown	1,210	Dr	104	7	..	..
28D1	Ted Jeske	1,392	Dr	350	12	..	Basalt
28D2	. .do. .	1,392	Dr	360	8	10	. do .
28M1	. .do. .	1,376	Dr	565	10	..	. do .
28P1	Stanton Hyer	1,267	Dr	72.5	6	..	..
30L1	George Gies	1,341	Dr	675	10	..	Basalt
31K1	John Getzinger	1,318	Dr	352	6	..	. do .
32N1	USBR, Weber wasteway well	1,278	Dr	351	8	37	. do .
34N1	USBR, drainage observation well	1,161.9	Dr	50	1½	50	Silt
35K1	Lester Allen	1,170	Dr	360	12	20	Basalt

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
242.47	7-12-42	P	N	
244.74	7-26-50			
254.69	5- 7-58			
272.24	7-26-50	P	N	
270.80	5- 7-58			
300	1942	P	D, S	
250	1953	T, 20	D, Irr	
105.81	5-21-42	N	N	
208.62	7-27-50			
210.50	5- 7-58			
203.15	5- 6-42	P	N	
202.89	7-27-50			
203.05	5- 7-58			
52.28	4-13-42	P	N	
51.15	5- 7-58			
31.1	3-22-39	N	N	
Dry	5-11-42	N	N	
238.39	7-28-50	T, 10	Irr	Reamed to 12 inches. Irrigates 60 acres.
239.00	5- 7-58			
230	1950	S, 5	D, S	
228.58	7-28-50	N	N	To be used for irrigation. L.
Dry	5-12-42	N	N	
200	1942	T, 100	Irr	Reamed and deepened in 1949. L.
292.28	10-28-49			
250	1942	J, 5	D, S	
288.21	7-27-50			
233	1-25-51	T, 5	D	C, L.
127.70	5- 7-58			
Dry	6-18-53	N	O	L.
29.05	5-23-58			
26.80	11-17-49	T, 75	Irr	Dd 5 ft pumping 1,000 gpm. Cp, L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 30 E.—Con.							
36H1	A. F. Knutzen	1,178	Dr	209	12	..	Basalt
36M1	.. . do . . .	1,180	Dr	260	12	36	..
T. 19 N., R. 31 E.							
2C1	George and Amelia Hilzer	1,402	Du	16.5	48	16.5	Gravel
2F1	Amelia Hilzer	1,395	Du	10.5	48	8	. do .
2N1	George Hilzer	1,370	Dr	92.5	6	..	Basalt
4D1	J. J. Phillips	1,534	Dr	262	6	..	. do .
5M1	Robert Shill	1,496	Dr	205	6	..	. do .
6A1	J. J. Phillips	1,520	Dr	225	6	..	. do .
7B1	Unknown	1,415	Dr	132	6	25	. do .
7N1	W. L. Nelson	1,490	Dr	331.5	6	..	. do .
8A1	Unknown	1,526	Dr	280	6	..	. do .
12A1	Carl Melcher	1,610	Dr	180	6	..	..
13P1	Bennie Ptatt	1,535	Dr	240	6	..	Basalt
14A1	John Kagele	1,440	Dr	160	6	..	..
15N1	Unknown	1,278	Du	18	36	..	Gravel
16H1	John Kagele, Jr	1,414	Dr	565	12	11	Basalt
16R1	John Kagele	1,290	Dr	105	10	20	. do .
18D1	Henry Schell	1,460	Dr	225	6	..	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
90	1950	T, 40	Irr	Cp.
45	6- 3-49	T, 75	Irr	Dd 80 ft after pumping 3 hours at 820 gpm.
13.18	6-23-42	P	D	
12.90	11- 9-50			
11.66	5-12-58			
8.23	6-23-42	N	De	Well never used.
72.65	6-23-42	P, 1	S	
72.15	11- 9-50			
71.66	5-12-58			
229.78	7-13-42	P	N	
229.9	11- 8-50			
229.50	5-12-58			
190.42	7-13-42	P	D, S	
188.50	11- 9-50			
189.78	5-13-58			
..	..	P, 3	D, S	
90	7-13-42	P	D, S	Basalt at 25 feet.
109.25	5-13-58			
199.35	7-13-42	N	N	
223	1945	P	D, S	
..	..	P	D, S	
..	..	P	D, S	
127.20	11- 9-50	P, ½	D, S	
12.90	6-22-42	P	N	
15.65	11- 9-50			
240	7-19-54	T, 125	Irr	Dd 12 ft pumping 930 gpm. L.
35	7-27-50	..	..	L.
32.65	11- 9-50			
..	..	P	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 31 E.—Con.							
19B1	Barbara Dormaier	1,454	Dr	218	6	..	Basalt
19C1	Henry Hoefner, Jr.	1,431	Dr	218	6	..	. do .
21R1	John Kagele, Jr.	1,330	Dr	1,000	12-8	26	. do .
22D1	. . . .do. . . .	1,269	Du	25	48	20	Gravel
24C1	Charles Goode	1,540	Dr	240	6	..	Basalt
24N1	R. Insinger	1,355	Dr	57	6	2	. do .
26D1	Ferdinand Kosanke	1,514	Dr	378	6	..	. do .
26R1	Leo Dyck	1,284	Dr	187	6	..	. do .
28J1	John Kagele	1,370	Dr	284	6	..	. do .
31K1	Jacob Weber	1,174	Du	46	36	..	Gravel
35J1	Leonard Franz	1,240	Dr	46	8	..	. do .
T. 19 N., R. 32 E.							
4J1	Jacob Greenwalt, Jr.	1,600±	Dr	97	..	65	. do .
16M1	Everett Doss	1,394	Dr	101	8	24	Basalt
18A1	Jacob Gering	1,510	Dr	170	6	10	. do .
19J1	Fannie Schrag	1,324	Du	15	48	..	. do .
19N1	J.A.Franz & Sons	1,290	Dr	411	12	33	. do .
20Q1	Unknown	1,390	Du	12	48	..	. do .
26Q1	Adolph Graber	1,650	Dr	..	..	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
184.38 184.25 184.45	8-26-40 11- 9-50 5-12-58	N	N	Hydrograph in fig. 5.
209.48 209.50	6- 1-42 11- 9-50	N	De	Formerly domestic and stock well.
169.05 181.95	11- 9-50 9-11-58	T, 100	D, Irr	
20	6-22-42	P	D, S	
..	..	P	D, S	
53.33 53.90	6-22-42 11- 9-50	N	De	Formerly domestic and stock well.
305 362	11-10-50 1958	P, 1½	D, S	C.
90.24 67.30	5-27-42 11-10-50	J, 3	D, S	Well redrilled 1956
214.10	6-22-42	N	De	Formerly domestic and stock well.
43.34	6-18-42	N	De	Well never used.
18.02 22.38	11-10-50 5-13-58	N	N	
60	11-13-50	T, 7½	Irr	L.
3.27	9-11-58	J, ¼	D, Irr	L.
130	6-22-42	P	D,S	Basalt at 8 ft.
..	..	P	D,S	
20 52.6 6.54 2.53	9-25-53 9-11-58 5-27-42 11-30-50	T, 50 P	S, Irr S	Dd 237 ft pumping 800 gpm. L.
175	11-13-50	P		

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 19 N., R. 32 E.--Con.							
28D1	Leon Gering	1,445	Du	19	24	..	Gravel
29A1	Carrie Schrag	1,453	Dr	150	6	..	..
30D1	Unknown	1,305	Dr	28	6	..	Basalt
30R1	Henry Gering	1,522	Dr	6	6	130	. do .
31C1	. . .do. . .	1,469	Dr	520	12	20	. do .
33J1	R. A. Gering	1,555	Dr	130	6	..	..
33N1	Daniel Krehbiel	1,500	Dr	103	6	..	..
T. 20 N., R. 23 E.							
1P1	Gottlieb Schorzman Estate	1,352	Dr	293	5	..	..
1Q1	E.G.Williams,Jr.	1,358	Dr	505	10	505	Basalt
2Q1	Sam Ryman	1,355	Dr	360	6	..	. do .
9Q1	W. H. Babcock	1,428	Dr	302	8	61	. do .
10D1	Paul Schulz	1,382	Dr	330	10	..	. do .
10N1	USBR, Babcock operator well	1,354.0	Dr	351	10	44	. do .
11H1	Clarence Shorzman	1,335	Dr	660	..	..	. do .
11H2	Clarence Schorzman	1,335	Dr	1,000	8	50	. do .
11R1	USBR, drainage observation wel	1,321.0	Dr	..	1½	..	..
12A1	Golden Valley Water Assoc.	1,336	Dr	370	12	60	Sand,basalt

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
16.20 16.72	11-13-50 5-10-58	N	N	
50	11-13-50	P	D, S	
20.00	5-27-42	P	D	
114	6- 9-55	P	D, S	
81 320	11- 8-58 9-11-58	T, 50	Irr	Dd 238 ft pumping 260 gpm. L.
Dry	11-13-50	P	N	
88.95 88.89	6-29-42 5-10-58	P	N	
257	1916	N	De	Formerly domestic well.
90 91.78	1956 4-28-58	T, 50	D	Well deepened from 304 ft. Cp, L.
356.84 86.65	9- 9-49 4-23-58	P, 2	D	Well deepened from 337 ft in 1946.
141 127.70	6-22-56 4-23-58	S, 2	PS	L.
216.75 117.65	10-28-53 4-23-58	P	N	Well plugged back from 530 ft. Hydrograph in fig. 15.
208 129.02	8-28-53 4-23-58	S, 2	D	C, L.
203 115.75 110.00	11-12-55 6-11-56 4-23-58	P	N	
730	1952	J, 5	D	L.
48.98	4-23-58	N	O	
205	1954	T, 75	PS	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 23 E.--Con.							
12J1	E. Schultz	1,324	Dr	391	8	50	Basalt
12R1	USBR, drainage observatinn well	1,312	Dr	51	1½	..	..
13A1	Johnson & Martin	1,311	Dr	400	10	30	Basalt
13A2	E. W. McDevitt	1,310	Dr	130	8	48	. do .
13D1	S.E. Flanagan	1,310	Dr	450	8	100	. do .
13N1	USBR, drainage observation well	1,280	Dr	39	1½	39	Gravel
14G1	Earle E. Harris	1,300	Dr	122	6	24	Basalt
16A1	USBR, drainage observatinn well	1,391.7	Dr	50	1½	50	..
16H1	R. Schorzman	1,394	Dr	321	6	260	Basalt
18C1	Smith Bros.	820	Dr	400	6	84	. do .
18K1	William Varner	900±	Dr	121	4	..	Gravel
19C1	Dave Roddy	600	Du	72	36	72	. do .
19E1	Mona Sumner	560±	Du	46	44	46	. do .
19E2	. . .do. . .	560	Du	36	44	36	. do .
19E3	William Kaysen	560±	Du	37	44	37	. do .
19F1	Dave Roddy	560±	Du	36	71	..	. do .
21A1	W. A. Darwood	1,375	Dr	435	6	240	Basalt
21K1	W. & F. Verd	1,358	Du,Dr	360+	48	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
293 241.53 85.55 60.62	8-18-32 10-28-53 6-11-56 4-23-58	S, ½	D, S	Hydrograph in fig. 8, partial log.
42.78	4-23-58	N	O	L.
..	..	T, 40	Irr	
38.24	8-28-58	T, 3	D	
66.20 49.65	6-22-56 4-23-58	S, 4	D, S	
16.77	4-24-58	N	O	
34.46 27.69	6-22-56 4-23-58	J, 1	D	Basalt at 24 ft.
Dry	5-12-53	N	O	L.
272.02	10-28-53	P	D	L.
220	1950	S, 3	D	Cp.
105	1954	N	N	
52	1945	T, 15	D, Irr	L.
37.18	8-28-58	N	N	
29.41	8-28-58	C, 3	D, Irr	L.
..	..	..	De	
60.8	8-28-58	C, 15	D, Irr	L.
137.17 109.68	6-22-56 4-23-58	J, 1½	D	
..	..	P, 2	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 23 E.--Con.							
22D1	USBR, drainage observation well	1,365.4	Dr	50	1½	50	..
22H1	Ed Schempp	1,315	Dr	342	6	..	Basalt
22M1	A.W. Blanchett	1,338	Dr	336	6	..	. do .
22M2	. . . . .do. . . .	1,338	Dr	420	8	64	. do .
23C1	Gottlieb Rau	1,328	Dr	450	..	..	. do .
23J1	Conrad Weber	1,296	Dr	447	8	360	. do .
23M1	Elmer Gerken	1,310	Dr	590	16-8	..	. do .
24H1	Conrad Weber	1,298	Dr	75	6	70	Sand, gravel
24P1	Ben Kissler	1,273	Dr	47	6	42	Gravel(?)
24Q1	Fred L. Martin	1,276	Dr	51	6	51	. do .
25A1	Henry Weber	1,272	Dr	52	6	43	. do .
25E1	. . .do. . .	1,300	Dr	480	8	83	Basalt
25R1	Milton Boman	1,294	Dr	102	6	85	. do .
26C1	Ed Hank	1,300	Dr	437	6	..	. do .
26J1	George Omlin	1,302	Dr	76	6	..	..
26Q1	A. L. Anderson	1,298	Dr	60	6	50	Basalt
27A1	Henry Weber	1,307	Dr	277	5	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	5-13-53	N	O	L.
..	..	P, 2	D	
321.36	9- 7-49	N	N	
121.90	6-25-56			
76.98	4-23-58			
240	1952	T, 5	D	L.
350	1949	J, 1	D	
90	1956			
63.78	4-24-58			
111.57	6-22-56	T, 5	D	Basalt at 146 ft. Deepened from 360 ft, 1940. Cp.
71.85	4-24-58			
326.53	9- 7-49	P, 7½	D	L.
43.20	6-23-56	J, 1/3	D	L.
45.47	4-24-58			
13.20	6-23-56	J, 1	D	Basalt at 42 ft.
21.85	4-24-58			
25	1954	J, 1	D	Basalt at 50 ft.
27	1954	J, 1	D	
353	1944	T, 1½	D, Irr	Cp, L.
84.8	7-23-53			
57.65	1954			
..	..	J, 1	D, S	
288	1916	T, 3	D, S	Basalt at 46 ft.
322	1949			
92	1954			
46.05	6-23-56	J, 1	D	
40.74	4-24-58			
47	3- -56	J, 3/4	D	L.
240	1916	T, 5	D	Cp.
210	1944			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 23 E.--Con.							
27A2	USBR, drainage observation well	1,304.5	Dr	43	1½	43	..
27R1	George Roduner	1,330	Dr	278	..	..	Basalt
28J1	George Weber	1,380	Dr	446	..	..	. do .
34D1	USBR, drainage observation well	1,362.7	Dr	50	1½	50	..
34J1	John Weber	1,334	Dr	405	6	..	Basalt
35A1	H. C. Weber	1,290	Dr	414	6	25	. do .
35A2	USBR, drainage observation well	1,286.0	Dr	50	1½	50	..
35N1	Melvin Hardt	1,332	Dr	312	6	75	Basalt
36A1	V. D. Mason	1,285	Dr	232	6	77	. do .
36C1	C. G. Veden	1,288	Dr	85	6	..	..
36R1	Unknown	1,275	Dr	200	6	..	Basalt
T. 20 N., R. 24 E.							
1C1	Dean Cenell	1,430	Dr	264	8	52	. do .
1H1	Minerva Smith	1,380	Dr	400	10	46	. do .
1J1	Breen L. Caldwell	1,338	Dr	206	6	71	. do .
1N1	USBR, drainage observation well	1,305.1	Dr	42	1½	42	..
2N1	Tom Heightley	1,318	Dr	402	8	48	Basalt
2R1	Kenneth Matson	1,311	Dr	167	6	80	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	6-10-55	N	O	L.
..	..	P	D	Cp.
229.35 117.10	9- 7-49 4-24-58	T, 5	D, S	Well deepened 1948, 1955. Hydrograph in fig. 17. Cp.
Dry	5-13-53	N	O	L.
275 117.43 73.14	1917 6-26-56 4-24-58	S, 2	D, S	Basalt at 50 ft. Deepened in 1951, Cp.
219 29.80 20.08	1940 4-24-58 8-29-58	J, 1	D, S	Well deepend in 1933. Partial log.
Dry	5-20-53	N	O	L.
112	1956	S, 1	D	
53 38.19	1954 4-24-58	T, 2	D, S	Basalt at 77 ft. Cp.
26.75	6-26-56	J, 1	D	
31.39 32.60	6-25-56 4-24-58	N	N	Formerly domestic well.
182.50 150.30	6- 7-56 4-22-58	J, 3	D	
128.58	4-22-58	J, 5	D	Hydrograph in fig. 18. Cp, L.
70.90	6- 7-56	J, 1	D	Basalt at 71 ft.
Dry	6- -51	N	O	L.
98	1955	T, 20	D, Irr	Basalt at 48 ft.
112	1955	J, 1	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24E.--Con.							
3H1	Frank Schroeder	1,381	Dr	294	8	23	Basalt
3N1	USBR, drainage observation well	1,305.4	Dr	44.5	1½	44.5	..
3P1	Kenneth Patton	1,304	Dr	137	6	..	..
4L1	J. I. Morrison	1,355	Dr	457	8	..	Basalt
4R1	Sal J. Razey	1,310	Dr	156	8	50	. do .
5N1	Frank Petrak	1,334	Dr	460	6	..	. do .
5N2	. . do . .	1,333	Dr	135	12	..	. do .
6A2	USBR, drainage observation well	1,420.3	Dr	34	1½	34	..
6E1	Wayne Ker	1,376	Dr	420	10	40	Basalt
6R1	Mederie Gwanlock	1,335	Dr	295	8	..	. do .
7A1	Mary Stepon	1,334	Dr	..	5	..	..
7A2	L. S. Bowser	1,338	Dr	303	11	..	Basalt
7A3	USBR, drainage observation well	1,333.3	Dr	50	1½	50	..
7J1	City of Quincy, well 3	1,311	Dr	400	20-15	400	Basalt
7R1	City of Quincy, well 1	1,305	Dr	431	12	80	. do .
7R2	City of Quincy,	1,305	Dr	376	8	30	. do .
7R3	. . . .do. . . .	1,305	Dr	..	8	..	..
8H1	Floyd Oliver, Jr.	1,304	Dr	458	10	..	Basalt
8J1	Auburn Packing Co.	1,296	Dr	266	6	..	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
150.2 116.11	6- 7-56 4-22-58	J, 2	D	
Dry	6- -51	N	O	L.
63.95 41.19	6- 8-56 4-22-58	J, 1	D	
361.67	9- 8-49	..	D	Well deepend in 1923, 1949.
62.20 43.35	6- 8-56 4-22-58	J, 1½	D	Basalt at 50 ft.
330	1948	P, 3	D	Basalt at 40 ft. Well deepend in 1948.
61.35 63.30	6- 8-56 4-22-58	N	N	Reported silica 60-63 ft.
Dry	6- 9-55	N	O	L.
245	1955	S, 2	D	Partial log.
251	1916	N	De	Formerly irrigation well. L.
..	..	N	De	Formerly domestic well.
250.0 94.59 70.66	8-25-13 6-30-56 4-22-58	N	N	L.
Dry	6- -51	N	O	L.
93	11- -55	T, 100	PS	Cp, L.
275 41	10- -39 4-22-58	T, 125	PS	C.
73	1955	N	De	Formerly public-supply well. C.
..	..	N	N	Formerly public-supply well.
57.09 38.05	6-30-56 4-22-58	S, 25	Irr	Reamed and deepened, 1943. L.
130	1949	N	De	Formerly domestic and irrigation well.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24 E.--Con.							
8K1	Albert Dickinson Co.	1,296	Dr	279	6	..	Basalt
8L1	Great Northern Ry.	1,302	Dr	374	10	61	. do .
8L2	. . . .do. . . .	1,302	Dr	401	10	50	. do .
9C1	Cedargreen Corp.	1,316	Dr	390	12	20	. do .
9D1	. . . .do. . . .	1,316	Dr	424	18	125	. do .
9E1	. . . .do. . . .	1,304	Dr	425	..	..	. do .
9E2	. . . .do. . . .	1,296	Dr	345	16	60	. do .
9P1	B, I. Caldwell	1,278	Dr	362	6	..	. do .
10A1	John Blaine	1,307	Dr	157	6	83	. do .
10K1	Earl Gregory	1,271	Dr	420	12	75	. do .
10N1	USBR, drainage observation well	1,272.9	Dr	50	1½	50	..
10P1	Murphy Black	1,267	Dr	238	..	..	Basalt
11Q1	Leonard Jansen	1,259	Dr	240	6	..	. do .
12D1	W. R. Davis	1,294	Dr	256	8	..	. do .
12J1	Dale Barlow	1,260	Dr	270	6	..	. do .
12N1	A. M. Lamb	1,251	Dr	242	6	40	. do .
12N2	USBR, drainage observatinn well	1,254.1	Dr	50	1½	50	. do .
12Q1	Dale Barlow	1,251	Dr	..	8	..	. do .
13B1	A. C. Franz	1,246	Dr	300±	..	..	. do .
14B1	Lydia Sherman	1,257	Dr	230	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
269	9- 8-49	N	N	
25.05	9-28-58			
255±	1949	N	N	L.
248	1929	..	..	L.
261.67	8-31-49	N	N	Well deepend, 1944.
229	8- -14	T, 50	D	C, L.
53.58	4-22-58			
261.59	2- 8-41	T	D	Rwl.
80	1956			
225	1923	T, 80	N	C, L.
243.55	7-19-38	T, 7½	D	Cp.
67	1955	J, 1	D, S	Basalt at 76 ft.
236	1952	T, 50	D, S	
21.24	4-22-58		Irr	
Dry	6- -51	N	O	L.
..	..	..	D	
204.28	3-11-41	N	De	Formerly domestic well. Rwl.
208.70	10-24-51			
126.94	10-10-49	N	N	Formerly domestic well.
67.40	6- 7-56			
35.97	4-22-58			
180	1916	N	N	Basalt at 100 ft.
..	..	S, 4	D	Basalt at 40 ft.
Dry	6- -51	N	O	L.
..	..	S, 2	D, S	
..	..	P	D	
208.35	8-29-49	P	D, S	
49.05	6- 6-56			
23.45	4-22-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24 E.--Con.							
14J1	M. Springsteen	1,245	Du, Dr	245	48-8	30	Basalt
15D1	W. P. Remple	1,269	Dr	237	6	..	. do .
16C1	Robert Gilchrist	1,279	Dr	89	6	72.5	. do .
16C2	Jack Mitchel	1,277	Dr	147	6	60	. do .
16D1	Kenneth Murphy	1,282	Dr	285	6	..	. do .
16H1	Roy Miller	1,266	Dr	176	8	67	. do .
16J1	Harry Roth	1,266	Dr	214	6	..	. do .
16J2	. . do . .	1,264	Dr	81	6	78	Sand
16M1	Frank Purcell	1,273	Dr	280	6	..	Basalt
16N1	USBR, drainage observation well	1,266	Dr	24.8	2	..	..
16P1	J. E. Gardner	1,266	Dr	117	6	94	Basalt
17A1	John Lowe	1,288	Dr	..	6	..	..
17B1	J. S. Pittman	1,294	Dr	217	6	..	Basalt
18A1	Weiler & Martin	1,298	Dr	450	10	..	. do .
18A2	Unknown	1,297	Dr	355	6	..	. do .
18C1	Mrs. John Bodenman	1,306	Dr	370	6	35	. do .
18J1	Walter Nielson	1,284	Dr	324	..	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
153	1916	N	N	L.
50.87	6-30-56			
26.34	4-24-58			
174.96	8-27-40	S	D, S	Rwl.
27.55	6- 6-56			
8.20	4-22-58			
31.50	12-17-53	J, 1	D	
21.30	6- 6-56			
11.85	4-22-58			
30	1955	J, 1	D	Basalt at about 60 ft.
170	1916	J, 1	D	
22.15	6- 6-56			
14.14	4-22-58			
168	1949	T, 3	D	Basalt at 67 ft. Cp.
175.51	3-11-41	N	N	
15	1956	J, 1	D	Basalt at 78 ft.
158.94	3-11-41	N	De	Formerly domestic well
155.10	8-26-49			
13.22	7-20-56			
7.08	4-23-58	N	O	
31	1954	J, 3/4	D	Basalt at 94 ft.
14.82	8-29-58	J, 1	D	
199.65	3-11-41	P	N	Formerly domestic and stock well.
195.44	8-29-49			
21.10	8-29-58			
210	1916	T, 50	D,Irr	L.
230	1916	N	De	Basalt at 30 ft. Formerly domestic well.
270	3-19-41	J, 3	D	
175	3-19-41	P	D	Listed as well 20/24-18R1 by Taylor (1948).

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24 E.--Con.							
18R2	USBR, drainage observation well	1,279.8	Dr	50	1½	50	..
19E1	Dan Kissler	1,296	Dr	85	6	..	..
19H1	H. R. Babcock	1,276	Dr	304	8	..	Basalt
20B1	E. A. Betz	1,269	Dr	314	5	..	. do .
20E1	USBR, drainage observation well	1,273	Dr	23.5	1½	..	..
20R1	Mar-Brah Water Assoc.	1,258	Dr	207	8	84	Basalt
21C1	Leon Price	1,266	Dr	85	6	85	. do .
21H1	USBR, drainage observation well	1,249	Dr	19	1½	..	..
21R1	Guy Scacco	1,244	Dr	210	6	67	Basalt
22D1	USBR, drainage observation well	1,256	Dr	50	1½	50	..
23D1	Rose Allsop	1,244	Dr	217	6	..	Basalt
23D2	USBR, drainage observation well	1,243	Dr	53	1½	..	..
23H1	Dr. R. Anderson	1,234	Dr	247	8	98	Basalt
24D1	USBR, drainage observation well	1,232.4	Dr	50	1½	50	..
24E1	V. Merritt	1,238	Dr	130	6	70	Basalt
24J1	Unknown	1,230	Dr	146	6	..	. do .
24Q1	Everett Thornton	1,226	Dr	119	6	93	. do .
26N1	USBR, drainage observation well	1,213.0	Dr	50	1½	50	..
26D1	USBR, drainage observation well	1,230.8	Dr	50	1½	50	Sand, gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	6- -51	N	O	L.
45.20	5-25-56	J, 1	D	
180.50	8-30-49	T, 7½	D, S	
280	1949	P, 3	D, S	Basalt at 60 ft. Cp.
11.77	4-23-58	N	O	
40	1954	S, 5	D, S	Dd 79 ft after pumping 5 hours at 55 gpm. L.
13.85	6- 5-56	J, 1	D	Basalt at 77 ft.
10.22	4-23-58			
18.91	4-23-58	N	O	
80	1952	S, ½	D, S	Basalt at 65 ft.
Dry	6- -51	N	O	L.
150	1916	N	De	Formerly stock well.
17.55	4-23-58	N	O	
..	4-24-58	T, 3	D, Ind	L.
Dry	6- -51	N	O	L.
56.10	6- 5-56	J, 2	D	
Dry	10-18-44	N	De	Formerly stock well.
66.70	5-24-56	J, 1	D	Basalt at 90 ft.
20.03	4-23-58			
Dry	6- -51	N	O	L.
30.6	6-10-56	N	O	L.
16.13	4-23-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24 E.--Con.							
26J1	Chester Bews	1,228	Dr	255	6	80	Basalt
26M1	Gilbert H. Clay	1,222	Dr	121	6	..	. do .
27B1	Omar Johnson	1,239	Dr	75	6	60	
27G1	--Hoyer	1,228	Dr	65	6	..	..
28D1	USBR, drainage observation well	1,248.2	Dr	50	1½	50	Silt, sand
28K1	Roy Ault	1,248	Dr	105.5	10	72	Basalt
28J1	Bernice Hartley	1,240	Dr	196	6	..	. do .
28R1	H. C. Schindelo	1,238	Dr	92	6	87	
29Q1	L. B. Craig	1,269	Dr	230	6	48	Gravel
29R1	Wesley Hathcox	1,260	Dr	215	6	50	Basalt
30D1	A. B. Bebeau	1,265	Dr	180	6	57	. do .
30F1	L. Engbretson	1,275	Dr	355	6	..	. do .
30L1	Frank Faulkner	1,276	Dr	235	6	..	. do .
31A1	L. R. Fairchild	1,281	Dr	100	6	89	. do .(?)
31B1	H. D. Johnson	1,280	Dr	275	6	..	..
31C1	Dorothy Woodward	1,285	Dr	226	5	38	Basalt
31D1	Wallace Gregg	1,290	Dr	69	6	69	. do .(?)
31H1	Norman Sinclair	1,276	Dr	203	6	80	Basalt
31M1	George Gregg	1,272	Dr	135	6	70	. do .
32B1	Carl Guthrie	1,266	Dr	108	6	60	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
46.15	5-24-56	J, 1 3/4	D, S	Basalt at 77 ft.
Dry	..	N	N	
26.30	5-24-56	J, 1	D	
32.6 10.03	5-24-56 4-23-58	J, 1	D	
20 9.10	6-10-55 4-23-58	N	O	L.
40	1952	J, 1	D	Basalt at 71 ft.
180	1948	P, 1	D	Cp.
12.90 13.97	5-24-56 4-23-58	J, 3/4	D	Basalt at 77 ft.
..	..	P, 3/4	D, S	Basalt reported at 225 ft. Cp.
185.6 80	8-30-49 1953	J, 3	D, S	Cp, Rwl.
40	1953	T, 3	D	L.
200	1916	P	D	
33.60 33.12	5-25-56 4-23-58	J, 1	D	
50	1956	..	D	L.
..	..	N	De	Formerly stock well.
201 57	8-30-49 1957	P, 2	D	Cp.
42.00 42.57	5-21-56 4-23-58	J, 3/4	D, S	Basalt at 69 ft.
37.50	5-22-56	J, 1	D, S	
29	1955	J, 1½	D	Basalt at 70 ft.
80 45	1951 1955	S, 3/4	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 24 E.—Con.							
32D1	Francis Magers	1,278	Dr	77	6	6	Basalt
32D2	USBR, drainage observation well	1,279.3	Dr	34	1½	33.5	. do .
32H1	Pat Warden	1,256	Dr	..	8	..	..
33B1	O. Shorzman	1,246	Dr	71	6	..	Basalt
33R1	C. E. Mashburn	1,239	Dr	200	6	42	. do .
34D1	USBR, drainage observation well	1,234.5	Dr	49	1½	48.5	..
34N1	L. D. Roberts	1,234	Dr	182	6	52	Basalt
35F1	Gerald Mill-brandt	1,218	Dr	195	6	48	. do .
35G1	E.H.Higgenbottom	1,218	Dr	197	6	50	. do .
35P1	E. C. Overman	1,225	Dr	184	6	60	. do .
36M1	Ed Williamson	1,223	Dr	209	6	100±	. do .
T. 20 N., R. 25 E.							
3R1	Edwin Nasburg	1,272	Dr	168	6	42	. do .
4M1	USBR, Quincy pumping plant	1,298	Dr	674	10	66	. do .
4R1	USBR, drainage observation well	1,259.0	Dr	50	1½	50	..
5E1	J. J. Amen	1,350	Dr	405	10	20	Basalt
5N1	G. C. Hoff	1,292	Dr	310	6	20	. do .
5P1	W. L. Norton	1,277	Dr	450	10	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
45.5 46.78	5-22-56 4-23-58	J, 1	D	
Dry	6- -51	N	O	L.
25.10 26.25	5-22-56 4-23-58	S	D	
14.20 16.25	5-23-56 4-23-58	J, 1	D	L.
187	8-25-49	T, 5	D, S	Cp.
Dry	6- -51	N	O	L.
15.10 13.10	5-22-56 4-23-58	J, 1	D, S	
13.20 10.58	5-24-56 4-23-58	J, 1	D	Basalt at 48 ft.
14.55	5-24-56	J, 1	D	
21.95 18.88	5-23-56 4-23-58	J, 1	D	Basalt at 60 ft.
20	1956	J, 2	D, S	Cp.
123.00 80.78	9-16-53 4-28-58	J, 2	D	Cp, L.
248	9- -50	T, 10	D	C, L.
Dry	6- -51	N	O	L.
284.0	8-22-16	N	De	Formerly irrigation well.
225	8-22-16	N	De	Formerly public-supply well. L.
197	8-22-16	P	D	C.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 25 E.--Con.							
5P2	W. L. Norton	1,276	Dr	596	10	40	Basalt
5P3	Harry Sellers	1,275	Dr	225	6	20	. do .
6D1	LaVerne E. Pontsler	1,408	Dr	245	6	60	. do .
6R1	USBR, drainage observation well	1,273	Dr	50	1½	50	..
7J1	Sidney L. Edwards	1,244	Dr	200+	6	..	Basalt
7L1	William Ragless	1,254	Dr	432	14	40	. do .
8D1	Charles A. Faw	1,274	Dr	319	10	200	. do .
8D2	. . . do . . .	1,273	Dr	450	10	..	. do .
8M1	Chris Berger	1,247	Dr	396	14	60	. do .
8M2	Elmer Soule	1,246	Dr	450	8	..	. do .
9P1	R. M. Anderson	1,242	Dr	430	10	150	. do .
10A1	Mell Haygood	1,255	Dr	154	6	44	. do .
10E1	Larry Nielsen	1,202	Dr	92	6	71	. do .
10F1	Harold Carlson	1,254	Dr	134	6	52	Sand(interbed)
10N1	Francis Verling	1,227	Dr	164	6	..	Basalt
11E1	Felix Rae	1,214	Dr	228	10	60	. do .
13Q1	H. K. Vandel	1,240	Dr	278	10	..	Sand
14N1	Claude Britton	1,205	Dr	185	6	90	Basalt
14R1	USBR, drainage observation well	1,239.2	Dr	29	1½	29	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
197	8-22-16	N	N	
221.50	9-18-40			
210	1916	N	De	
165	1953	S, 1½	D	L.
Dry	6- -51	N	O	L.
157.50	9-27-16	N	De	Formerly domestic well.
27.65	4-29-58			
163	8-22-16	N	N	Basalt at 40 ft. Hydrograph in fig. 15.
190.25	9-27-49			
80.41	8-25-54			
32.88	7-15-56			
197	1916	P, 2	D	
225	1921	N	N	Well inadequate. L.
164	1916	N	De	Formerly irrigation well. L.
225	1920	N	De	L.
175.03	3-14-41	S	D	L.
86	1953	J, 1	D, S	L.
74	1953	J, 1½	D	L.
100	1953	J, 1½	D	L.
..	..	J, 3	D	Basalt at 75 ft.
115	1916	J, 3	D	Basalt at 14 ft.
131.94	10- 4-49			
158	1916	J, 3	..	C.
120.11	9-15-53	J, 1½	D	
92.87	9-27-56			
51.62	4-28-58			
Dry	6- -51	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 25 E.--Con.							
15Q1	W. E. Hardy	1,219	Dr	189.9	6	..	Basalt(?)
16J1	Ben Kriete	1,228	Dr	230	6	163	Basalt
16K1	So. Winchester Water Assoc.	1,226	Dr	235	6	133	. do .
17N1	USBR, drainage observation well	1,230.6	Dr	50	1½	50	..
18A1	Glenn Stephens	1,235	Dr	222	6	..	..
18B1	Emil Mobouck	1,235	Dr	242	6	98	Basalt
18C1	Albert D. Jones	1,238	Dr	248	6	..	Basalt
18D1	Harry Sellers	1,242	Dr	265	6	..	. do .
18P1	O.L. Guisinger	1,229	Dr	139	6	..	. do .
18R1	--Kretsler	1,240	Dr	160	6	..	. do .
19D1	N. W. McClure	1,232	Dr	132	6	115	. do .
19E1	Don Harvey and Earl Baldwin	1,230	Dr	271	10	147	Basalt
20A1	W. B. Cox	1,184	Du, Dr	415	48-6	..	. do .
21A1	USBR, Winchester Farm	1,224	Dr	235	8	200	Sand
21A2	USBR, Winchester Farm	1,225.5	Dr	652	12	198	Basalt
21G1	Bureau of Reclamation	1,210	Du,Dr	378	48-8	250	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
149.30 67.57 45.15	9-12-49 7-26-56 4-28-58	N	N	Hydrograph in fig. 19.
124 72.69 46.50	1953 7-26-56 4-28-58	J, 2	D	L.
153	9-19-52	T, 7½	D, S	Yields about 30 gpm. L.
Dry	6- -51	N	O	L.
..	..	J, 2	D	
..	..	S, 1	D	Basalt at 98 ft.
..	..	S, 1	D	L.
185 71.85	1943 6- 5-56	P	D	
62	1956	J, 1	D	
84.73 49.60	7-26-56 4-28-58	J, 1½	D	
112 61.18 32.30	1954 7-26-56 4-28-58	J, 1	D	L.
140 85	1953 1955	J, 1	D	L.
102	9-27-16	N	N	L.
140 154	1916 1949	T, 5	D	C.
161 124.79 50.22 32.23	3- 1-48 7-21-53 7-26-56 4-28-58	N	N	Hydrograph in fig. 13. C, L.
141	1916	N	De	Well deepened 1947. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 25 E.--Con.							
21J1	Paul Alisheo	1,216	Dr	220	6	..	Basalt
22B1	Charles Cooke	1,220	Dr	160	5	..	..
22D1	J. E. Garvin	1,234	Dr	165	6	..	..
22D2	USBR, drainage observation well	1,232.0	Dr	50	1½	50	..
22M1	William Mathis	1,206	Dr	174	6	60	..
24A1	Lee E. Tucker	1,236	Dr	187	6	187	Sand
24C1	H. F. Hansen	1,240	Dr	150	6	..	..
25B1	Paul Williams	1,226	Dr	169	6	130	Sand
25D1	Bill L. Israel	1,220	Dr	180	6	69	Sand
25J1	Paul Reynolds	1,222	Dr	210	8	93	Sandstone
26B2	A. Van Holst	1,216	Dr	225	6	206	..
26D1	Unknown	1,216	Dr	..	8	..	..
26P1	R.M. Anderson	1,215	Dr	170	6	77	Sandstone
26R1	J. W. Sharpe	1,224	Dr	185	6	99	. . do . .
26R2	USBR, drainage observation well	1,215.3	Dr	50	1½	50	Sand
27A1	Victor Sternad	1,218	Dr	150	6	88	Sandstone
28M1	Clyde Allen	1,200	Dr	90	5	..	Sand
28R1	USBR, drainage observation well	1,196.0	Dr	50	1½	50	.do.

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 1½	D	
..	..	..	De	Formerly domestic well.
157.45	3-14-41	J, 1	D	
Dry	6- -51	N	O	L.
95.79	9-15-53	J, 2	D	L.
49.27	7-26-56			
43.52	4-28-58			
98.40	7-27-56	J, 1½	D	L.
81.00	4-28-58			
..	..	N	N	
120	1954	J, 1	D	
90.85	7-25-56			
76.10	4-28-58			
132	1952	J, 1	D	L.
72.93	7-25-56			
55.40	4-28-58			
134	1951	T, 5	D, S	L.
90	1955	J, 2	D	
136	9-30-16	N	De	Formerly domestic and stock well.
70	1954	J, 1	D	L.
59.58	7-25-56			
56.42	4-28-58			
140	1953	S	D	L.
Dry	6- -51	N	O	L.
49.90	5-15-58			
50	1955	J, 1	D	L.
57.80	4-28-58	J, 1	D, S	
Dry	6- -51	N	O	L.
40.43	5-15-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 25 E.--Con.							
29H1	USBR, ditchrider's well	1,225.4	Dr	175	8	169	Sand
32M1	Unknown	1,236	Dr	190	..	..	..
33H1	Unknown	1,175	Dr	91	6	22	"Hardpan"
34C1	Clarence Thostesen	1,203	Dr	165	6	160	..
34F1	Les Courtright	1,199	Dr	135	..	..	..
34Q1	Irving Martin	1,188	Dr	135	6	..	..
35C1	Archie Downs	1,214	Dr	180	4	90	Sand(?)
35E1	Charlie Stone	1,212	Dr	289	6	130	Basalt
36A1	W. J. Amoureux	1,221	Dr	..	6	..	..
36B1	Morrison Flats Water Assoc.	1,212	Dr	250	8	157	Silt, clay
36B2	Don Gronewold	1,215	Dr	207	6	77	Siltstone
36P1	B. E. Anderson	1,222	Dr	..	6	..	..
36R1	J. Powell	1,194	Dr	160	6	107	Sandstone
T. 20 N., R. 26 E.							
6C1	John Schenk	1,268	Dr	148	6	138	..
6M1	Paul Lauzier	1,238	Dr	150	6	..	..
12G1	Tom Drumheller	1,264	Dr	..	8	..	Basalt
13N1	USBR, drainage observation well	1,246.2	Dr	52	1½	51	..
18R1	O. W. Harris	1,248	Du,Dr	200	6	..	Basalt(?)

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
152 84.00	11-25-50 5-15-58	..	D	C, L.
130	1916	N	De	Formerly domestic and stock well
66.10	9-14-41	N	De	
70 49.2 47.00	1955 7-25-56 4-28-58	J, 1	D	
..	..	N	De	Formerly irrigation well.
105 108.52	1941 9-14-49	..	..	
130 150 90	9-28-16 1952 1955	P, 1	D	Well cleaned and recased 1952.
100	1955	J, 1	D	
136	1916	N	De	
127 56.92	1- 9-51 4-28-58	T, 5	PS	C, L.
130	2- -53	J, 1	D	L.
100	1954	J, 1	D	
120 50	1953 1956	J, 2	D	L.
68.70	4-23-58	T, 1½	D, S	
..	..	P, 7	S	
138.00	4-23-58	N	N	
Dry	7-25-56	N	O	L.
161.50 118.58 95.77	3-29-39 8- 6-53 4-23-58	N	N	Hydrograph in fig. 1.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 26 E.—Con.							
18R2	USBR, drainage observation well	1,247.7	Dr	50	1½	50	..
19E1	T. H. Gerlach	1,233	Dr	202	8	..	Basalt
19N1	Unknown	1,272	Du	190.5	48	..	..
20A1	Unknown	1,234	Dr	208	5	100	..
20N1	Unknown	1,236	Du	152	48	..	..
20N2	Unknown	1,238	Dr	159	6	100	..
20R1	Unknown	1,228	Du, Dr	151	48-8	..	..
21A1	USBR, O & M housing well	1,242.0	Dr	416	10	259	Basalt
21R1	USBR, drainage observation well	1,220.6	Dr	52	1½	50	..
22P1	USBR, drainage observation well	1,248	Dr	387	12	204	Basalt
22R1	Unknown	1,245	Dr	182	6	..	..
26D1	Unknown	1,246	Dr	176	5	..	..
26M1	T. J. Drumheller	1,258	Dr	203	6	..	Gravel(?)
26R2	USBR, drainage observation well	1,258.4	Dr	50	1½	50	..
27A1	Mariam E. Amick	1,236	Dr	200	6	..	Gravel
30R1	Unknown	1,231	Dr	..	6	..	..
30R2	USBR, drainage observation well	1,230.7	Dr	50	1½	50	..
31C1	White Trail Water Assoc.	1,228	Dr	185	6	144	Sandstone

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	6- -51	N	O	L.
76.54	4-23-58	T, 5	D, S	
190.0	9-30-16	N	De	Formerly irrigation well.
166	1916	N	N	
151.0	1916	N	De	
155	1916	N	De	Formerly domestic and irrigation well.
146.0 142.90 146.19	9-29-16 8-28-40 4-26-50	N	De	Rwl.
160.25 155.25	3-16-56 5-15-58	P, 5	D	L.
Dry	7-21-56	N	O	L.
164 164.85 155.35	1916 8-28-40 4-22-58	N	N	Hydrograph in fig. 20. L.
165	10-25-16	N	N	
164.0	10-25-16	N	N	Dry at 154 ft, 4-22-58.
176.80 172.00	9-13-49 4-22-58	N	N	Hydrograph in fig. 14.
Dry	4-26-56	N	O	L.
145	1916	N	De	Formerly domestic well. L.
148.0	9-29-16	N	De	Formerly domestic well.
Dry	6- -51	N	O	L.
141	4-20-53	T, 3	PS	Dd 25 ft pumping 50 gpm. Cp, L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 26 E.--Con.							
31R1	Otto Gans	1,205	Dr	155	6	98	Sand
32M1	Guy McMillen	1,215	Dr	160	10	..	..
32N1	Ralph Herron	1,206	Dr	185	6	153	Sandstone
33R1	USBR, drainage observation well	1,246.4	Dr	50	1½	50	..
34B1	Rudolph Lang	1,272	Dr	150	4	..	..
T. 20 N., R. 27 E.							
4P1	Tom Drumheller	1,174	Du	129.5	48	..	Gravel
4P2	J. C. Freeman	1,174	Dr	114	10	..	..
4Q1	Tom Drumheller	1,172	Du	128.5	48	..	Gravel
5P1	. . . .do. . . .	1,064	Du	7	60	..	Sand,gravel
26Q1	W. B. Hill	1,105	Du, Dr	82	30	82	Gravel
28D1	Virgil Perringer	1,120	Du, Dr	170	10	..	Basalt
30K1	Unknown	1,160	Du	93.5	..	..	..
34F1	L. F. McConihe	1,052	Du	10	60	..	Gravel
35B1	--Sterling	1,102	Dr	70	12	..	. do .
35C1	Eugene Hobson	1,102	Du,Dr	..	60	..	..
35C2	. . . do. . .	1,104	Dr	95	12	95	Gravel
35C3	--Stoneman	1,104	Dr	79	10	..	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
107	9-11-53	J, 1	U	Dd 5 ft pumping 20 gpm. L.
55.89	4-23-58			
134.2	9-13-49	N	N	Rwl.
128.80	2-22-53			
112.36	9-10-53	J, 1	D	L.
59.69	4-22-58			
Dry	4-25-56	N	U	L.
178.87	4-22-58	N	N	
128	1916	N	N	
Dry	12-10-41			
Dry	12-10-41	N	N	Formerly listed at 20/27-9C1 by Taylor (1948).
Dry	7-27-49			
127.0	9-13-16	N	N	
Dry	12-10-41			
Dry	7-27-49			
2.04	7-27-49	P	N	Well flooded by pond.
1.48	5- 1-58			
59.20	10-11-49	T, 30	..	L.
64.89	5- 1-58			
55.0	10-25-16	N	N	L.
56.0	3-28-39			
56.26	11- 7-49			
90.0	10-25-16	N	De	Formerly domestic and stock well.
6.05	10-11-49	C, 15	D,	
6.84	5- 1-58		Irr	
55.44	10-11-49	T, 35	Irr	
..	..	N	De	Formerly irrigation well.
32	..	T, 50	Irr	Drilled at site of C1. Dd 22 ft pumping 1,100 gpm. L.
58.49	9-16-58	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 27 E.—Con.							
35F1	Dennie Lesperance	1,080	Dr	45	6	45	Gravel
35F2	Mrs. Margaret Todd	1,082	Dr	52	6	52	. do .
35J1	Phillip Och	1,064	Dr	42	6	42	. do .
35L1	Joe Todd	1,078	Dr	39	6	39	. do .
35L2	. .do. .	1,055	Dr	21	6	21	Sand, gravel
35M1	George Masshart	1,053	Dr	24	6	24	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
33	4- -50	T, 5	D, S	Yields about 200 gpm. L.
34	6- -51	J, 5	D, S	. . . . . Do . . . . .
35	8- -56	J, 1	D	L.
30	4- -53	J, ½	D, S	L.
7.5	9- -58	C, 7½	Irr	Dd 18 ft pumping 180 gpm. L.
7.66	9-16-58	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 28 E.—Con.							
1D1	Unknown	1,275	Du	110	48	..	..
1D2	Charles Isaacson	1,268	Dr	117	6	36	Basalt
1M1	Clifford-Peters Water Assoc.	1,262	Dr	138	6	47	. do .
1N1	East Gloyd Water Users Assoc.	1,267	Dr	125	6	..	..
2J1	L. Hansen	1,262	Dr	80	6	59	Basalt
2N1	C. L. Angvick	1,237	Dr	99	8	66	..
3A1	—Robinson	1,251	Dr	114	6	114	..
3B1	L. L. Foster	1,246	Dr	132	6	60	Basalt
4R1	O. E. Barnhart	1,126	Du	..	48	..	..
9B1	Don E. Sperry	1,108	Dr	50	6	30	..
9D1	Pete Wilson	1,154	Dr	59	6	..	..
9J1	George Neddo	1,134	Dr	50	6	50	Gravel
10D1	Unknown	1,121	Du	125	48	23	..
10Q1	Obe Healea	1,107	Dr	50	6	24	Basalt
11D1	Phil Craig	1,238	Dr	253	8	70	..
11R1	USBR, drainage observation well	1,252.8	Dr	17	1½	17	..
12M1	W. Hansen	1,255	Dr	180	6	48	Basalt
12N1	C. H. Anderson	1,248	Du	75	48	..	..
13B1	Wesly Bly	1,274	Dr	203	8	72	Basalt
13Q1	Howard E. Knopp	1,275	Dr	126	6	72	. do .
15F1	Unknown	1,106	Du,Dr	21½	48-6	16	..

of wells.--Continued

Water level: Depth below land surface (feet)	Water level: Date	Type of pump and hp	Use	Remarks
Dry	7-28-49	N	De	
45	1958	J, 1	D, S	Basalt at 36 ft.
43 50.0	1952 8-13-55	J, 2	D	Basalt at 47 ft. Cp.
55	2-18-53	T, 5	D	L.
55	1958	J, 1	D	L.
70	1954	J, 1½	D	L.
14	1954	J, 1½	D	
59.60	5- 1-58	..	D	
28.32	7-27-49	N	N	
22	2- -55	J, 1	D, S	
53	5- -55	J, ½	D	
..	..	J, ½	D, S	L.
22.78 23.22 17.28	12- 8-41 7-27-49 6- 6-52	N	N	Rwl.
..	..	J, ½	D, S	L.
71.68	3-20-50	T, 3	..	Basalt at 68 ft.
Dry	6- -51	N	O	L.
80.50 57.05	8-13-55 5- 1-58	S, ½	D, S	L.
Dry	12-12-41	N	De	
125	1954	J, 3/4	D	L.
79	5- -53	J, 1½	D	L.
18.40 12.96	12- 8-41 9-20-50	N	De	Formerly domestic and stock well. Rwl.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 28 E.--Con.							
17G1	N. Fiorito	1,155	Dr	212	12-8	89	Basalt
17N1	Unknown	1,225	Du	131	48	..	..
20C1	Unknown	1,191	Du,Dr	228	48-8	..	..
20M1	Unknown	1,190	Du	75	42	..	..
20P1	Unknown	1,182	Dr	104	6	..	..
22R1	Unknown	1,125	Du	43	48	..	..
23M1	V. Search	1,108	Dr	42	6	38	..
25C1	Claud Wilson	1,260	Dr	148	6	148	Gravel
25J1	Robert Reffett	1,245	Dr	129	6	109	Basalt
26C1	Bertha Rogers	1,096	Du	15	48	..	. do .
26E1	Unknown	1,115	Du	45	48	..	..
26E2	Unknown	1,107	Du, Dr	..	48	..	..
26N1	Unknown	1,109	Du	33.5	48	..	..
26N2	Bonneville Power Administration, Larson substation	1,106	Dr	80	12	50	Basalt
26P1	C. J. Hunter	1,114	Dr	173	6	50	..
26Q1	James Van Boven	1,076	Du	6.5	48	..	..
27E1	Moses Lake Flight Center	1,155	Dr	134	24	108	Gravel,sand
32C1	Larson Air Force Base, well 2	1,194.8	Dr	725	20	208	Basalt
32J1	Larson Air Force Base, well 1	1,187.3	Dr	712	18	199	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
64	5- -58	T, 75	Ind	Well drilled at Larson Air Force Base to supply water for construction. L.
Dry	7-27-49	N	N	
107.0	10-24-16	N	De	Formerly irrigation well.
Dry	12-10-41	N	De	
Dry	12-10-41	N	De	Formerly domestic and stock well.
40.0	10-24-16	N	De	. . . . . .Do . . . . .
11	1955	J, 1	D	
114.87 105.60	9-19-53 5- 1-58	J, 1	D	
97.36 100.40	9-19-53 5- 2-58	J, 1½	D	
11.74 9.85 8.84	9- 9-40 7-28-49 8-19-54	N	N	Basalt at 8 ft. Rwl.
37.0	10-24-16	N	De	Formerly domestic well.
30.0	10-24-16	N	De	
28.5	10-24-16	N	De	Formerly domestic well.
20	7- -58	J, 3	D	Yield about 40 gpm. L.
34	1950	J, ½	D	
3.24	9- 9-40	N	De	
74	9- -52	T, 50	Ind	C, L.
144.03 151.19	8-30-45 5-15-58	T, 125	PS	C, L.
108.45 113	3-23-56 5-15-58	T, 100	PS	C, L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 28 E.--Con.							
33E1	Larson Air Force Base, well 3	1,168.83	Dr	791	24	548(?)	Basalt
34J1	Unknown	1,128	Du	52.5	36	52	..
34M1	Mrs.E.G. McGreer	1,153	Dr	101	6	97	Gravel
34N1	Leonard Loyd	1,150	Dr	90	6	85	. do .
35D1	Charles Cornutt	1,116	Dr	52	6	8	. do .
35H1	Bernard Lybbert	1,091	Dr	105	6	21	Basalt
35N1	Bill Fredrickson	1,126	Dr	60	6	44	. do .
36B1	Lenald Davison	1,252	Dr	142	6	133	. do .
36N1	C. N. Jerman	1,091	Dr	114	8	20	. do .
T. 20 N., R. 29 E.							
2N1	Emma Turner	1,359	Dr	143	6	..	. do .
4P1	Ivan E. Cole	1,236	Du	12	96	..	Sand
6H1	George Hochstetter	1,358	Dr	130	6	..	..
10M1	John Dills	1,332	Dr	185	6	..	Basalt(?)
11A1	Ivan E. Cole	1,380	Dr	165	6	..	Basalt
12D1	E. B. Cole	1,409	Dr	180	6	..	..
13B1	John Willging	1,392	Dr	170	6	..	..
14P1	Ruben Ruff	1,336	Dr	110	6	15	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
87.79 101.75	3-23-56 5-15-58	T, 100	PS	C, L.
Dry	1949	N	N	
79	5- 2-58	J, 1	D, S	L.
..	..	J, 1	D, S	L.
30.38 33.45	9-17-54 5- 2-58	J, 3/4	D	
15.55	5- 2-58	J, 1	D, S	L.
46.70	5- 2-58	J, 1	D, S	L.
119.60	5- 2-58	J, 1	D, S	L.
24	1949	J, 1	D,Irr	Basalt at 19 ft. Cp.
124.10 124.24 122.88 Dry	12- 9-41 9-22-49 8- 4-55 5- 1-58	N	N	
8	1949	..	Irr	
..	..	P	N	
95 98.79 99.52	1941 6-14-54 5- 1-58	P, 3	D, S	Hydrograph in fig. 7.
115 131.37 111	1941 8- 4-55 5- 1-58	J, 5	D, S	C.
128.30 127.18	9-23-49 3- 3-51	N	N	Rwl.
88.58 89.18	9-23-49 8- 4-55	N	N	
..	..	J, 1	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 29 E.--Con.							
15H1	Ivan E. Cole	1,360	Dr	110+	6	..	..
18A1	C. F. Cole	1,286	Dr	180	6	14	..
18J1	E. F. Lane	1,279	Dr	81	6	11	Gravel
18N1	E. P. Hamel	1,278	Dr	149	6	52	Basalt
18Q1	Ivan J. Polson	1,272	Dr	153	6	37	. do .
19C1	Vergil Cole	1,276	Dr	168	6	50	..
19R1	Ben Zickler	1,274	Dr	233	6	160	Basalt
20A1	A. Steelman	1,260	Dr	180	6	..	..
20C1	O. R. Fogel	1,282	Dr	117	6	60	..
20D1	Hartvig Rosenburg	1,277	Dr	172	6	14.5	Basalt
20N1	USBR, drainage observatinn well	1,266.5	Dr	37	1½	37	..
22A1	Fred Schmauder	1,331	Dr	125	6	..	..
22F1	Paul F. Dills	1,330	Dr	53	6	..	Basalt
24D1	J. Z. Willging	1,394	Dr	160	6	..	..
26A1	Albert Peters	1,400	Dr	298	6	..	Basalt
26L1	Jacob Schlimmer	1,230	Dr	100	6	..	..
26N1	USBR, drainage observation well	1,229.7	Dr	26.5	1½	26	..
27J1	Albert Peters	1,230	Dr	394	18	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
Dry	9-23-49	N	N	
80	1952	J, 2	D, S	Cp.
70	1953	J, 1	D	L.
92	1952	J, 1½	D, S	L.
75	7- -54	J, 1	D, S	Yield about 15 gpm. L.
90 94.49	1955 5- 2-58	J, 3	D, S Irr	L.
125 100 122.64	3- -54 1955 5- -58	J, 1	D	L.
95	1952	J, 1	D	
92	1954	J, ½	D	
76.19 64.10	8- 3-55 5- 2-58	J, 1	D	L.
Dry	6- -51	N	O	L.
96.47	8-26-40	P, 1	S	Dry at 97 ft, 5-6-58, Rwl.
33.09 31.77 32.06 33.50	5-15-42 9-21-49 8- 4-55 5- 2-58	P, 2	S	
..	..	N	N	
230 220	1942 11- -48	T, 5	D, S	
46.79 46.93 50.7	5-15-42 9-21-49 8-18-55	P	N	Listed as 26P1 by Taylor (1948)
Dry	6- -51	N	O	L.
63.90	6- 3-50	..	Irr	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 29 E.--Con.							
28B1	Jacob Schlimmer	1,309	Dr	289	5	..	Basalt(?)
28C1	USBR, Rocky Coulee well	1,288	Dr	416	8	23.7	Basalt
28P1	Unknown	1,203	Dr	174	6	..	..
29D1	Dale Foster	1,270	Dr	215	6	115	Basalt
29P1	C. J. Steelman	1,278	Dr	62	6	20	. do .
29P2	Kathleen Taft	1,277	Dr	72	6	13	. do .
30A1	A. P. Lewis	1,274	Dr	216	6	110	. do .
30C1	W. P. VanCleave	1,270	Dr	133	6	122	. do .
30P1	L. A. Davidson	1,250	Dr	220	6	30	. do .
32H1	William Groff	1,200	Dr	120	6	..	..
32K1	--McInnis	1,192	Dr	140	6	..	Basalt
32N1	USBR, drainage observation well	1,189.8	Dr	50	1½	50	Sand
34J1	Paul F. Dills	1,230	Dr	93	6	7	Basalt
35D1	Unknown	1,240	Dr	225	6	..	. do .
T. 20 N., R. 30 E.							
2C1	John Erickson	1,585	Dr	191	6	..	..
2J1	. . .do. . .	1,605	Dr	..	6	..	..
3J1	Sam Tschritter	1,521	Dr	171	6	..	Basalt
4C1	Fred Tschritter	1,550	Dr	212	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
155.98	12-12-41	N	N	Hydrograph in fig. 22.
158.16	9-22-49			
124.10	8- 5-55			
129.43	6- 5-58			
195	2- 3-51	..	..	C, L.
193.00	5-22-58			
55.17	12-12-41	N	De	Formerly domestic and stock well.
51.81	9-22-49			
45.46	9-19-53	J, 2	D	L.
118.53	5- 6-58			
..	..	J, 1/3	D, S	Cp, L.
25	8- -54	J, 1	D, S	L.
..	..	J, 5	D, S	L.
110.80	9-19-53	J, 1½	D	L.
73	4-20-53	T, 5	D	
60	1946	J, 1	D, S	
..	..	T, 2	D	Basalt at 100 ft.
38	6- -51	N	O	L.
17.94	5- 7-58			
63	5-15-42	P	D, S	L.
..	..	P	N	
210	5-28-42	J, 3	D, S	
161	1950			
215	1942	N	N	
118.80	7-24-50	P, 1	D, S	
116.14	5- 9-58			
194.84	7-24-50	N	N	
194.72	5-16-51			
194.30	5- 9-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 30 E.--Con.							
5D1	Unknown	1,436	Dr	150	6	..	Basalt
6H1	Albert King	1,402	Dr	84	6	..	. do .
7A1	Allen Heisen-heimer	1,415	Dr	90	6	..	. do .
10B1	Ed Tschritter	1,493	Dr	145	..	..	..
12D1	Unknown	1,545	Dr	179	6	..	..
12P1	Harold Frans	1,590	Dr	..	..	..	Basalt
14C1	Unknown	1,578	Dr	260	6	..	. do .
14R1	Mrs. Herman Rmm	1,650	Dr	400	6	..	. do .
16E1	Unknown	1,545	Dr	282	6	32	. do .
18J1	John Ruff	1,478	Dr	280	6	..	. do .
19D1	John Willging, Jr.	1,462	Dr	314	6	20	. do .
20B1	Unknown	1,501	Dr	201	6	18	. do .
20D1	John Willging, Jr.	1,481	Dr	170	6	16	. do .
20R1	Dan Spies	1,526	Dr	340	6	..	..
21H1	Andrew C. Jants	1,578	Dr	400	6	..	..
22C1	Walter Spies	1,550	Dr	401	6	32	Basalt
23A1	Frans Bros.	1,640	Dr	430	6	..	..
24A1	J. J. Phillips	1,625	Dr	276	7	..	Basalt
26B1	Joe Jants	1,584	Dr	248	6	..	. do .
27J1	. .do. .	1,591	Dr	354	6	20	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
122.60	5- 9-58	P, 3	S	
42.77 40.92 39.40	5-18-42 7-24-50 5- 9-58	P	S	Hydrograph in fig. 19.
55.77	5- 9-58	N	N	
90	1949	J	D	Cp.
148.35	5-28-42	P	N	
..	..	P	D	
205.5 204.6	7-24-50 5- 9-58	P	N	
335	1949	P	D, S	
263.58 262.04 257.25	5-18-42 7-24-50 5- 6-51	N	N	
265	5- -42	P	D, S	
190	5- -42	P	D, S	Basalt at 20 ft. Cp.
175	5- -42	N	N	Basalt at 18 ft.
130 155.70	5- -42 5-19-58	N	N	Basalt at 16 ft.
240	5- -42	P	D, S	
..	..	P	D, S	
274	5- -42	P	D, S	Basalt at 32 ft.
355	5- -42	P	D, S	
222.05 220.68	5-28-42 7-25-50	P	D, S	
230	5- -42	P	N	
164	5- -42	P	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 30 E.--Con.							
27J2	Joe Jantz	1,594	Dr	490	6	35	Basalt
30B1	Lonnie Lobe	1,432	Dr	170	6	..	..
30J1	Fred Schmauder	1,507	Dr	467	6	24	Basalt
30N1	Ray Ruff	1,455	Dr	580	6	..	. do .
31F1	Fred Schmauder	1,480	Dr	410	6	25	. do .
32J1	Erma W. Wells	1,494	Dr	..	6	..	. do .
33A1	John C. Jantz	1,555	Dr	510	6	..	..
33L1	Anna Bareither	1,476	Dr	260	6	12	Basalt
34A1	John Weis	1,548	Dr	280	6	20	. do .
34C1	John C. Jantz	1,568	Dr	280	6	20	. do .
35R1	John Weis	1,340	Dr	117	6	5	. do .
35R2	. .do. .	1,314	Dr	160	8	..	. do .
T. 20 N., R. 31 E.							
4N1	George Iltz	1,610±	Dr	180	6	..	..
4R1	. . .do. . .	1,650±	Dr	140	6	..	..
7A1	Anna Franz	1,580±	Dr	120	8	..	..
9D1	Adam Libsak	1,625±	Dr	158	6	..	..
11C1	H. H. Scheller	1,690±	Dr	165	8	..	..
12D1	. . . do . . .	1,690±	Dr	155	8	..	..
16J1	Homer Jones	1,451	Du	24	36	20	Basalt
16J2	. . .do. . .	1,451	Du	24	36	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
300	1950	P	..	
156.00	5-21-42	S, 1	D, S	
339.30	4-11-42	N	N	Basalt at 24 ft.
341.42	7-25-50			
349.35	5- 9-58			
..	..	S, ½	D, S	
340	5- -42	S, 1½	D, S	
312.30	7-25-50			
..	..	N	N	
..	..	N	N	
200	5- -42	P	D, S	Basalt at 12 ft.
173.00	5- 9-58	P	N	
..	..	P	N	
50	5- -42	P	N	L..
..	..	P	N	
133	11- 8-50	..	..	
10	11- 8-50	P	D, S	
117.13	5-10-58	P	..	
140.30	11- 8-50	P	De	Formerly domestic and stock well.
160	11- 8-50	P	D, S	
135.10	11- 8-50	P	D, S	
132.60	5-10-58			
19.32	6-27-42	P	S	
18.30	11- 8-50			
19.50	6-27-42	P	D, S	
17.54	5-10-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 20 N., R. 31 E.--Con.							
17R1	Ray Weston	1,450±	Dr	60	6	..	Basalt
20H1	. . .do. . .	1,650±	Dr	350	6	..	..
22D1	Walter Haas	1,575±	Dr	214	6	..	Basalt
22M1	Alvina Haas	1,700±	Dr	500	6	..	. do .
28J1	L. J. Bonnoy	1,600±	Dr	222	6	..	Basalt
30A1	A. C. Peterson	1,440	Dr	91	6	5	. do .
31A1	Christine Bischoff	1,448	Dr	215	6	25	. do .
31B1	. . .do. . .	1,435	Dr	400	8	..	. do .
35K1	Mrs. M. Schmidt	1,438	Du	12	36	8	Gravel
36K1	Kenneth Melcher	1,550±	Dr	71	6	..	Basalt
T. 21 N., R. 23 E.							
23H1	William Schorzman	A	Dr	28	8	16	Basalt
26H1	. . .do. . .	A	Dr	310	8-6	149	. do .
T. 21 N., R. 24 E.							
11D1	F. P. Boroff	1,600	Dr	102	6	..	. do .
26B1	. . .do. . .	1,800	Dr	215	6	40	. do .
31L1	Overn Bros.	1,474	Dr	407	6-8	308	. do .
32N1	W. J. Winslow	1,422	Dr	360	5	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40	6-27-42	P, 3	D, S	
340	11- 8-50	N	N	
147.80 142.50 141.34	6-23-42 11- 8-50 5-10-58	P	N	
410	6-23-42	P	D, S	C.
132.30 130.85 129.65	6-23-42 11- 8-50 5-10-58	P	D, S	
68.75	6-27-42	P, 3	D, S	
195	6-27-42	P, 3	D, S	Basalt at 25 ft.
20	10-19-50	J, 1½	D, S	L.
6.87 6.60	6-22-42 11- 9-50	N	N	
59.29 58.70	6-23-42 11- 9-50	P	D, S	
21	6- -53	P, 1½	D, S	
270	7-25-53	T, 100	Irr	L.
..	..	P	S	L.
50	1958	T, 7½	D,Irr	Yield about 130 gpm. L.
268	10-14-52	S, 1½	D, S	L.
..	..	N	De	Formerly domestic well.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 25 E.							
15D1	Sieverkropp Bros	2,370	Dr	76	6	..	Basalt
30G1	F. F. Boruff	1,760	Dr	325	8	40	. do .
31R1	Keith Evens	1,416	Dr	230	6	39	. do .
32P1	Kenneth Gebers	1,428	Dr	248	8	48	. do .
33N1	Piercie Trunnell	1,415±	Dr	197	8	40.5	. do .
35P1	G. C. Maltby	1,396	Dr	312	8	43	. do .
T. 21 N., R. 26 E.							
2B1	John Estes	1,262	Dr	175	8	175	Gravel
2D1	Clara McIntyre	1,271	Du	117	36	30	..
2L1	Herb Meyers	1,279	Dr	175	8	137	Sand,clay
2M1	J. Sharror	1,271	Dr	203	6	203	Gravel
2M2	C. F. Davenport	1,268	Dr	194	8	90	..
3A1	F. E. Robertson	1,284	Dr	280	8	..	Basalt
3A2	Shady Acres,Inc.	1,279	Dr	280	6	..	. do .
3H1	Sivert Anderson	1,283	Dr	200	6	..	..
3K1	. . . do . . .	1,272	Dr	280	8	120	..
3P2	Joe Capek	1,261	Dr	165	6	60	Basalt
3P3	John Anderson	1,267	Dr	145	6	..	..
6K1	Roy Johnson	1,805	Dg	21	..	..	Gravel
7J1	Victor Schempp	1,630	Dr	184	8	40	Basalt
7K1	O. E. Schempp	1,685	Dr	148	8	50	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	P	..	L.
296	1950	T, 30	D	Yield about 270 gpm. L.
176.71	4-28-58	J, 2	D, S	
..	..	J, 3	D, S	
90	1953	S, 1	D	Basalt at 20 ft.
227.74 224.98	9-17-53 4-28-58	T, 3	D, S	L.
160 92.00	6- -52 4-26-58	T, 3	D	
Dry	9-29-49	N	De	
116.46	9-14-53	..	D	L.
95 104.86	1948 8-13-53	J, 1	D	Cp, L.
70	1954	J, 5	D	
140	9- -40	P, 3	Irr	
139.66 84.42	10- 4-49 4-26-58	N	N	Hydrograph in fig. 22.
146.24 141.66 80.44	8-28-40 10- 4-49 4-28-58	P	D, S	Rwl.
115 109.30	1914 10- 4-49	P, 3	Irr	
90	1949	T, 5	D	Cp.
55.19	4-26-58	T, 4	D	
9.55	4-26-58	J, ½	D, S	
47.01	4-26-58	T, 7½	D,Irr	L.
105	1954	J, 3/4	D	Dd 20 ft after pumping 4 hours at 35 gpm. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 26 E.—Con.							
8M1	City of Ephrata, well 3	1,590	Dr	1,000	20	140	Basalt
8N1	City of Ephrata, well 5	1,580	Dr	450	26	78.5	. do .
10A1	Kallas & Maglaras	1,286	Dr	185	6	117	. do .
10C1	Russell Hunt	1,271	Dr	146	6	90	. do .
10D1	John H. Frey	1,278	Dr	242	8	18	..
10G1	Bob Billingsley	1,258	Dr	190	8	190	Basalt
10G2	. . . .do. . . .	1,290	Dr	127	6	..	Gravel
10G3	. . . .do. . . .	1,263	Dr	182	8	..	..
10L1	Myrtle Cherry	1,265	Dr	540	..	..	Basalt
10L2	E. L. Nelson	1,260	Dr	124	8	100	Basalt(?)
10P1	Harry Drittenbas	1,267	Du, Dr	250	36-10	25	..
12F1	Grant County	1,259	Du, Dr	183	12	..	Basalt
15C1	Unknown	1,273	Dr	112	6	..	Gravel
15D1	Grant County	1,284	Dr	365	..	..	Basalt
15E1	Grant County PUD, well 2	1,278	Dr	347	10	347	. do .
15E2	Grant County PUD, southwest well	1,280	Dr	289	12	..	. do .
15F1	Great Northern Ry.	1,272	Dr	500	12-8	216	. do .
16B1	City of Ephrata, well 1	1,345	Dr	252	10	..	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
135	5-30-52	T, 75	PS	C, L.
56	2-26-53	T, 50	PS	C, L.
98 82.34	1953 4-28-58	S	D	
47.42	9-10-58	J, 1	D	L.
125	1933	T, 3	D, S	
91.05 8.12	9-23-40 4-28-58	P	D, S	Basalt at 170 ft.
87.00	8-31-40	P, ½	D	L.
77.35	9-29-49	P, 2	De	Formerly domestic and stock well.
..	..	T, 3	Irr	Basalt at 50 ft.
69.93 65.62 39.31	9-24-40 9-29-49 4-28-58	N	N	Hydrograph in fig. 22.
87.84	9-21-40	T	Irr	
115.70 106.63	10-27-49 4-28-58	N	N	Hydrograph in fig. 7.
..	..	P	D, S	
..	..	T, 5	D	Court House well. L.
95	7- -50	T, 25	Ind	Dd 90 ft after pumping 10 hours at 300 gpm. C, L.
..	..	..	Ind	
85 87.50	1940 7- 7-42	T, 24	Ind	Well deepened 1942. L.
25	1940	T, 25	PS	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 26 E.--Con.							
16B2	Unknown	1,312	Dr	252	9	50	..
16B3	City of Ephrata, well 2	1,345	Dr	260	12	180	Basalt
16B4	Mrs. C.L. Catlow	1,290±	Dr	100	10	20	..
16J1	Ben Harvill	1,278	Dr	92	10	10	Sand, gravel
21E1	City of Ephrata, well 4	1,490	Dr	618	20	275	Basalt
21G1	Ray Behm	1,241	Dr	..	..	..	Sand(?)
21G2	. .do. .	1,241	Dr	..	6	..	..
21H1	. .do. .	1,252	Dr	163	10	94	Sand
22E1	E. P. Calkins	1,251	Dr	133	8	29	.do.
22E2	. . .do. . .	1,265	Dr	295	8	..	..
22G1	City of Ephrata	1,323	Dr	285	10	..	Gravel
22N1	Manuel Berschaver	1,278	Dr	224	6	71	Basalt
23L1	Ephrata Airport	1,260	Dr	425	6	180	. do .
26B1	Elizabeth Fleming	1,273	Du, Dr	100	30-6	81	Gravel
28E1	J. B. McGrath	1,252	Du, Dr	318	8	..	Basalt
28H1	City of Ephrata, sewage plant	1,242	Dr	178	8	153	Sand
28K1	Ralph Abelson	1,230	Dr	580	10	34	Basalt
28K2	. . .do. . .	1,230	Dr	244	10	24	. do .
29F1	Paul Patrick	1,542	Dr	300+	..	..	. do . (?)
31C1	Dr. J. S. Lingenfelter	1,400	Dr	400	..	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
9	1936	..	..	
23.5	3- -41	T, 50	PS	C, L.
29	1953	N	N	
56.19	9-23-40	P	S	
184	12-17-52	..	PS	Dd 29 ft after pumping 4 hours at 1,190 gpm. C, L.
245.55	6-12-58			
57.48	11-10-49	P	Irr	Hydrograph in fig. 21.
33.30	4-16-58			
33.33	4-26-58	J	D	
82.61	9-26-49	J	D	L.
42.83	4-28-58			
70	9- -49	T, 15	D,Irr	
80	9- -49	J, 1	D	Cp, L.
130	1916	N	N	Deepened in 1936. L, Rwl.
138.43	5-10-51			
70	1956	J, 2	D, S	L.
80	1958			
83.77	9-25-40	..	De	L.
..	..	N	De	Formerly domestic and stock well.
168.17	9-18-40	N	De	Basalt at 50 ft.
70	9- -47	T, 3	Ind	L.
37.22	9-14-53	N	N	L.
22.92	4-28-58			
66.70	9-14-53	N	N	L.
64.14	4-28-58			
..	..	J, 1½	D, S	
282	1952	S, 5	D, S	L.
106.15	4-28-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 26 E.—Con.							
32A1	Earl Atkins	1,253	Dr	61	6	..	Basalt
35E1	Tom Drumheller	1,255	Dr	..	6	..	..
T. 21 N., R. 27 E.							
4K1	George Wildman	1,223	Du, Dr	155	36-8	..	Basalt
4L1	Theodore Goodsmith	1,226	Du, Dr	157	36-10	142	Gravel
12H1	Helen Loan	1,170	Du	20	36	..	. do .
12H2	. . do . .	1,172	Du	20	48	..	..
14N1	Unknown	1,229	Du	44	24	36	Gravel
24B1	Unknown	1,204	Du	42	36	..	. do .
33K1	Tom Drumheller	1,070	Du	11	24	..	Sand, gravel
T. 21 N., R. 28 E.							
2B1	Unknown	1,316	Du	12.5	36	..	Basalt
2D1	Charles Hansen	1,322	Du, Dr	..	6	..	. do .
4H1	Mrs. Vern Gill	1,335	Dr	108	10	..	..
4J1	H. A. Hansen	1,334	Dr	168	10	..	..
8P1	Clarence Rosenberg	1,306	Du, Dr	273	6	..	Basalt(?)
8P2	Clarence Rosenberg	1,304	Du	45	48	..	..
9A1	Charles Hansen	1,326	Dr	406	10	18	Basalt
10D1	. . . do . . .	1,330	Dr	270	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
55.47 51.06 17.70	9-20-40 9-26-49 11-30-53	T, 2	D, S	Hydrograph in fig. 16.
200	1949	P, 2	D, S	
129.70 125.96 123.09	4-11-42 9-28-49 4-30-58	T, 5	Irr	Hydrograph in fig. 21.
129.80 126.30	11-25-41 9-28-49	T, 40	D, Irr	
14.3	10-13-49	P	D	
15.87 12.84	10-13-49 4-30-58	P	S	
Dry	10-20-49	N	N	
Dry	10-13-49	P	N	
8.54	7-27-49	..	De	Formerly domestic well.
12.15	11-26-41	N	N	Basalt at 1 ft.
18.25 18.45	10-14-49 4-30-58	N	N	Hydrograph in fig. 22.
80.01 81.50	9-11-53 4-30-58	N	N	
..	..	N	N	
127.86 97.89	10-13-49 4-30-58	N	N	Hydrograph in fig. 20.
..	..	N	N	
44.46 55.45	8-20-53 4-30-58	N	N	Basalt at 16 ft.
..	..	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 28 E.--Con.							
12H1	Unknown	1,267	Du	27	48	24	Gravel
14M1	Chester Whitman	1,308	Dr	75	6	..	..
18E1	Unknown	1,160	Du	11.5	48	8	Basalt
18R1	H. J. Hansen	1,155	Du	12.5	36	12	Gravel
19F1	Christopher Loan	1,162	Dr	93	6	3	Basalt
20A1	Unknown	1,250±	Dr	275	10	..	. do .
20B1	Harry J. Hansen	1,208	Dr	162	10	..	. do .
21A1	R. C. Major	1,286	Dr	93	6	27	. do .
22M1	O. C. Flasted	1,282	Du, Dr	310	42-6	42	..
22R1	USBR, drainage observation well	1,274.6	Dr	14.5	1½	14.5	..
22R2	T. H. Erickson	1,288	Dr	84	6	..	Basalt
23D1	USBR, ditch-rider's well	1,295	Dr	150	8	84.8	. do .
24R1	G. S. Moore	1,294	Dr	105	6	37	. do .
26N1	Ed Castine	1,260	Dr	103	6	..	..
26R1	Ryland Farms Inc	1,269	Dr	134	6	..	Basalt
32K1	Ralph Osborn	1,123	Dr	73	6	..	..
32Q1	Unknown	1,114	Du, Dr	..	12	..	..
34A1	Unknown	1,266	Dr	118	12	..	Basalt
34B1	U.S. Bureau of Reclamation	1,270	Dr	121.5	6	35	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
23.40	3-19-39	C, 20	S,Irr	
22.13	11-26-41			
13.90	4-30-58			
..	..	N	N	
8.20	11-19-41	N	De	Formerly domestic well.
8.40	11-27-41	P	D	
8.10	10-13-49			
5.60	4-30-58			
19	1939	P	D	L.
45	1916	P	..	
48.10	11-27-41	N	N	
48.22	10-13-49			
26.35	4-30-58			
..	..	J, 1	D, S	L.
..	..	N	N	L.
Dry	6-22-55	N	O	L.
..	..	J, 2	N	L.
88	3-17-51	T, 3	D	C, L.
68.00	5-23-58			
24.60	9-17-58	J, ½	D, S	L.
52.46	10- 9-53	J, 1	D, S	
29.40	5- 1-58	J, 2	D, S	L.
10.10	5- 1-58	P	N	
11.71	12- 8-41	P	S	
20.44	10-13-49			
96.32	8-26-40	N	N	Hydrograph in fig. 1.
96.37	10-13-49			
58.49	4-30-58			
65.38	4-30-58	N	N	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 28 E.--Con.							
34C1	Clyde Henderson	1,262	Dr	84	6	..	Basalt
34J1	C. A. Austin	1,264	Dr	117	12	..	. do .
34N1	Unknown	1,202	Du	45.5	48	2	..
34R1	USBR, drainage observation well	1,255.5	Dr	18	1½	18	..
35M1	R. R. Jones	1,262	Dr	163	6	37	Basalt
36P1	Ter-lund-son Water Assoc.	1,280	Dr	120	6	40	. do .
T. 21 N., R. 29 E.							
2R1	Unknown	1,416	Dr	160	6	..	. do .
5Q1	Unknown	1,249	Du	8	24	8	Gravel
12A1	J. P. Schroeder	1,478	Dr	200	8	..	Basalt
12R1	.. . do . . .	1,478	Dr	142	6	..	..
23A1	Chris Larsen	1,424	Dr	400	6	13	Basalt
27A1	Unknown	1,370	Dr	200±	8	..	. do .
30K1	August Meyer	1,290	Dr	100	6	..	. do .
32D1	Unknown	1,298	Dr	..	6	..	. do .
32M1	Irene G. Clement	1,370	Dr	149	6	10	. do .
32P1	Chris Hochstat-ter	1,418	Dr	230	6	10	. do .
36J1	Adam Zickler estate	1,476	Dr	78	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
..	..	J, 1/3	D, S	L.
105.89	12- 1-41	N	N	
108.78	10-13-49			
97.10	5- 1-58			
35.69	12- 8-41	N	S	Withdrawal by bucket and windlass.
35.96	10-13-49			
21.90	5- 1-58			
Dry	6- -51	N	O	L.
68.80	5- 1-58	J, 1	D	L.
25	4-20-53	J, 3	PS	L.
57.90	5- 1-58			
96.33	8-31-50	P	S	
93.88	5- 1-58			
6.82	8-27-58	N	N	
160	1942	N	N	Formerly stock well.
158.0	8-31-50			
152.00	5- 1-58			
Dry	5-14-42	P	N	
202.80	8-28-58	P	S	
126.58	10-15-58	P, 3	S	
96	1941	P	D,S	
139	1941	N	N	
130	1941	P, 3	D,S	Basalt at 10 ft.
186.05	12- 9-41	N	N	
Dry	5-14-42	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 21 N., R. 30 E.							
3E1	Archie Zickler	1,684	Dr	451	12	34	Basalt
5M1	Unknown	1,546	Dr	..	6	..	. do .
6J1	Unknown	1,543	Dr	245	6	..	..
8C1	I. W. Thomsen	1,518	Dr	250	6	..	Basalt
8Q1	Chris Larsen	1,562	Dr	167	6	..	. do .
9P1	John Erickson	1,648	Dr	376	6	..	. do .
12D1	Stanley Beck	1,600±	Dr	810	..	37	. do .
14A1	Unknown	1,500	Du	50	36	..	..
19N1	Unknown	1,315	Du	11	36	11	Gravel
26H1	Harvey Schell	1,660	Dr	180+	6	..	..
26R1	Unknown	1,648	Dr	211	6	31	Basalt
33A1	Fred Tschritter	1,555	Dr	297	6	..	. do .
34C1	Betty Egbert	1,610	Dr	300	6	..	..
36M1	Unknown	1,665	Dr	280	6	..	Basalt
T. 22 N., R. 24 E.							
14C1	Elizabeth Daniel	A	Du	9.7	..	..	..
30M1	J. B. Martin	A	Dr	160	8	..	Basalt, sand
T. 22 N., R. 25 E.							
1D1	H. Horsley	A	Dr	201	6	..	Basalt
3L1	Signe Starr	A	Du	62	40	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
198 205	4- 7-56 5- 1-58	T, 75	Irr	L.
224.5 224.45	12-18-39 7-20-50	P	D	Basalt at 15 ft. Rwl
..	..	P	D, S	
..	..	P	N	
157.49 156.60	7-20-50 5-10-58	P	N	
202.02 201.47 200.90	8-26-40 7-24-50 5-10-58	N	N	Hydrograph in fig. 1.
245	5-10-58	T, 30	Irr	
26.15 27.35	7-21-50 5-10-58	S, ½	D, S	
6.80	8-28-58	P, C, 1	S	
135	1942	P, 1	D, S	
192.10 191.93 191.04	5-28-42 7-24-50 5-10-58	N	N	Basalt at 31 ft.
129.80 215.50	7-21-50 5-10-58	P	S	
216	5-10-58	P	D	
267	1942	P	N	
8.0	11- 2-49	P	D, S	
120	1939	P	D, S	Basalt at 11 ft.
84.95	3-25-43	N	N	
55.10	3-25-43	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 25 E.--Con.							
4Q1	H. H. Higgins	A	Dr	163	8	..	Basalt
6C1	Mayer Bros.	1,600±	Dr	200	10	62	..
9L1	Herb Myer	1,700±	Dr	180	10-8	..	..
9L2	. . do . .	1,720	Dr	123	12	27	..
13J1	V. J. Barbre	2,074	Du	11	72	..	Basalt
13J2	. . .do. . .	2,100	Dr	118	8	75	. do .
13J3	. . .do. . .	2,070	Dr	211	8	76	. do .
16N1	G. E. Stover	A	Dr	43.5	6	..	. do .
20R1	Emil Duus	A	Dr	52	6	..	. do .
28P1	H. W. Padgett	2,200	Du	17.5	60	..	..
28P2	. . .do. . .	2,205	Dr	60	6	11	..
34C1	D. F. Mordhorst	2,230	Dr	300	..	..	..
T. 22 N., R. 26 E.							
1M1	USBR, Soap Lake Protective Works	1,128	Dr	60	6	58	Gravel
1P1	. . .do. . .	1,122.8	Dr	60.5	1½	60.5	Sand, gravel
2A1	. . .do. . .	1,114.1	Dr	53.5	1½	53	Gravel
2H1	. . .do. . .	1,119.5	Dr	65	1½	65	. do .
4C1	O. H. Luddington	2,280	Du	10	..	..	. do .
5B1	State of Washington	2,120±	Dr	74	6	..	Basalt
5C1	Unknown	2,110±	Du	19	72	6	..
6K1	State of Washington	2,100±	Dr	300	6	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
75.05	3-25-43	P	N	
82.75	6-12-58			
25	6- -51		Irr	L.
23.38	6-12-58			
..	..	J, 3	D	
63.58	6-12-58	N	..	
4.73	3-25-43	P, ½	Irr	
9.00	6-12-58			
71	9- -52	S, 5	D,Irr	L.
78	9- -56	T, 7½	S,Irr	L.
20.60	11- 2-49	N	N	
..	..	T	D, S Irr	
4.58	3-25-43	P	D, S	
6	1949	J, ½	N	
..	..	..	..	
43.26	5-18-51	N	O	L.
39.60	1- 3-56			
37.86	5-14-58			
43.4	9-21-53	N	O	L.
27.1	9-11-53	N	O	L.
32.9	9-20-53	N	O	L.
7.92	5-12-58	T, 3	D, S	
62.36	3-25-43	P	N	
61.80	6-12-58			
5.55	9- 1-49	N	N	
280	1943	P	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 26 E.--Con.							
8E1	--Melberg	2,200±	Dr	87	6	..	Basalt
8M1	State of Washington	2,280±	Dr	84	6	..	..
12B1	James A. Molet	1,115	Dr	78	8	7	. do .
12B2	W. J. Hill	1,096	Dr	40	6	40	Gravel
12B3	USBR, Soap Lake Siphon well	1,104	Du	40	..	..	. do .
12B4	--Fabry	1,135	Dr	102	6	41	Basalt
12B5	W. J. Hill	1,084	..	14	..	..	Gravel
12B6	Vern Johnson	1,097	Dr	40	6	40	Basalt
12B7	USBR, Soap Lake Protective Works, well L	1,106.3	Dr	62	13	42	..
12C1	USBR, Soap Lake Protective Works, well D	1,106.8	Dr	49	..	49	..
12C2	W. E. Hill	1,113.6	Dr	187	8	128	Basalt
12F1	Harry Johnson	1,124	Du	17	40	..	..
12F2	W. E. Hill	1,099.9	Dr	43	6	40	Gravel
13M1	USBR, ditch-rider's well	1,373.9	Dr	330	8	11.5	Basalt
13N1	Bill Israel	1,374	Dr	177	8	..	. do .
14R1	Sam Israel	1,334	Dr	275	8	65	. do .
17R1	A. C. Trieber	2,040	Du	3	60	3	Gravel
18M1	Verne Barbre	2,090	Du	3	..	..	. do .
22N1	A. C. Trieber	1,690	Du	14	72	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
85	1943	J, 1½	D, S	
..	..	J	D, S	
71	8- -51	..	..	Basalt at 14 ft. C.
21	1953	..	..	L.
..	..	..	De	C.
52.96	8- 5-53	N	N	L.
..	..	N	N	
19.34	8- 5-53	..	..	L.
36 45.23	12-29-55 5-14-58	T, 10	..	L.
30 29.48	2-25-52 5-14-58	..	..	C, L.
29	1953	..	..	USBR, water supply relocation well. C, L.
8.54	7-20-53	..	..	
19.43	8- 5-53	..	..	
293 219	5-11-51 5-12-58	T, 5	D	C, L.
..	..	..	..	L.
236.92 235.22	8- 4-53 4-16-58	P, 5	D	
1.11	9- 1-49	N	S	
9.45	6-12-58	N	N	
6 8.18	1949 6-12-58	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 26 E.—Con.							
23M1	Westmont Acres, Inc.	1,403.9	Dr	448	10	12	Basalt
24F1	U.S. Bureau of Reclamation	1,124.2	Dr	58	6	..	..
24J1	USBR, Soap Lake Protective Works	1,096.2	Dr	55	2	55	Gravel
24J2	. . . .do. . . .	1,094.5	Dr	57	2	57	. do .
24K1	. . . .do. . . .	1,119.2	Dr	91	2	86	Gravel, sand
24L1	City of Soap Lake, well 3	1,157.1	Dr	435	16	96	Basalt
24P1	USBR, Soap Lake protective works	1,177.0	Dr	124	6	119	Gravel
24P2	. . . .do. . . .	1,180.3	Dr	94	6	89	. do .
24P3	. . . .do. . . .	1,202.1	Dr	118	6	114	. do .
24P4	. . . .do. . . .	1,177.6	Dr	112	12	112	Sand
24P5	. . . .do. . . .	1,177.3	Dr	105	6	105	.do.
24P6	. . . .do. . . .	1,177.2	Dr	109	2	109	.do.
24Q1	. . . .do. . . .	1,153.2	Dr	111	6	106	Gravel
24Q2	. . . .do. . . .	1,144.6	Dr	124	6	119	. do .
24Q3	. . . .do. . . . well F	1,138.0	Dr	112	12	69	. do .
24Q4	. . . .do. . . .	1,141.7	Dr	83	2	83	. do .
24Q5	. . . .do. . . .	1,133.9	Dr	76	2	76	Sand
24Q6	. . . .do. . . .	1,181.8	Dr	123	12	117	Sand, gravel
24Q7	. . . .do. . . .	1,178.0	Dr	95	2	95	Gravel

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
310	4- 1-52	S, 15	PS	C, L.
46.73	3-29-51	N	O	
17.12 23.14	4-15-53 5-14-58	N	O	L.
16.97 20.45	4-11-53 5-14-58	N	O	L.
40.45 45.60	5-12-53 5-14-58	N	O	L.
120	3-29-51	T, 20	PS	C, L.
86.75	11-28-52	..	..	L.
86.7	12- 5-52	..	..	L.
70.0	12- 3-52	..	..	L.
84.69	2- 2-53	..	..	L.
83.77 75.89	12-15-52 5-15-58	..	..	L.
86.67	12- 8-52	N	O	L.
69.21	12- 2-52	..	..	L.
64.42	11-26-52	..	..	L.
59.10	5-12-52	T, 25	..	C, L.
61.16	1-10-53	N	O	L.
53.38	1-13-53	N	O	L.
95	4-24-52	..	..	Dd 8.75 ft after pumping 48 hours at 200 gpm. C, L.
90	12-12-52	N	O	Dry at 85 ft, 5-15-58. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 26 E.--Con.							
24Q8	USBR, Soap Lake Protective Works	1,168.2	Dr	98	2	98	Gravel, sand
24Q9	. . . .do. . . . well H	1,147.57	Dr	118	12	113	. . do . .
24Q10	. . . .do. . . .	1,147.8	Dr	80	2	80	Gravel
24Q11	. . . .do. . . .	1,147.7	Dr	83	..	..	. do .
24Q12	. . . .do. . . .	1,144.9	Dr	119	18	119	. do .
24Q13	. . . .do. . . .	1,141.3	Dr	117	1½	117	. do .
24R1	. . . .do. . . .	1,133.0	Dr	98	6	93	. do .
24R2	. . . .do. . . .	1,128.9	Dr	47	6	42	. do .
24R3	. . . .do. . . .	1,130.5	Dr	82	6	77	Sand
24R4	. . . .do. . . .	1,131.5	Dr	75	2	75	Gravel, sand
25A1	USBR, observation well	1,130.8	Dr	55	6	43	..
25B1	. . . .do. . . .	1,136.3	Dr	67	6	67	..
25B2	. . . .do. . . .	1,146.8	Dr	98	1½	98	..
25C1	. . . .do. . . .	1,176.69	Dr	100	6	95	Sand, gravel
25G1	. . . .do. . . .	1,190.1	Dr	91	6	87	. . do . .
25M1	H. H. Hartman	1,240	Dr	350	12	50	..
25P1	USBR, observation well	1,213.1	Dr	120	6	114	..
26L1	N. E. Woodworth	1,332	Dr	214	6	212	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
84.04	1-27-53	N	O	L.
66.97	3-18-53	T	..	L.
66.82	12-17-52	N	O	L.
67.12 Dry	12-22-52 5-15-58	..	..	L.
72	10-26-56	T, 250	..	L.
62 70.18	9-18-56 5-15-58	N	O	L.
52.50	11-21-52	..	..	L.
Dry	11-17-52	..	..	L.
50.0	12-23-52	..	..	L.
51.01	1-17-53	N	O	C, L.
41.71 41.51 38.75	8-29-50 3-27-51 5-15-58	N	O	Basalt at 33 ft.
59.80	9-21-50	N	O	
69 75.82	9- 8-56 5-15-58	N	O	L.
90.37 89.97 86.32	11- 7-50 3-27-51 5-15-58	N	O	
78.56 65.71	3-27-51 5-15-58	N	O	
80	1949	T, 20	PS	Slight dd after pumping 20 minutes at 800 gpm.
95.91 86.34	3-27-51 5-15-58	..	O	
147.1 117.25	8- 5-53 6-12-58	T, 3	D,Irr	Listed as 26P1 by Taylor (1944), deepened from 202 ft in 1950.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 26 E.--Con.							
26P1	D. Nichols	1,310	Dr	160	6	90	Basalt
26R1	Tak Kahara	1,240	Dr	180	6	..	Gravel
30A1	Unknown	2,030	Du	..	36	..	..
34H1	J. J. Merkel	1,326	Dr	255	8	67	Basalt
35G1	USBR, Soap Lake Dam test hole 5	1,268	Dr	212	2	..	..
36C1	T. L. Campbell	1,226	Dr	146	6	130	Sand, gravel
36E1	H. W. Holiday	1,242	Dr	190	6	..	..
T. 22 N., R. 27 E.							
2C1	Unknown	1,362	Du	64	48	..	Basalt
4N1	L. Schrieber	1,462	Dr	120	..	..	..
4P1	Mabel Anderson	1,438	Dr	72.5	6	..	..
6H1	--Mayberry	1,424	Du	70	3	..	Basalt
6N1	Rheba Bowen	1,300	Du	8	36	8	..
8N1	James Gill	1,420	Dr	..	6	..	..
10B1	Unknown	1,348	Du	25	24	..	..
14M1	J. W. Hodgen	1,286	Dr	266	6	..	Basalt
18H1	Minnie Gibson	1,390	Dr	130	4	..	. do .
18R1	R. H. Reed	1,260	Dr	288	6	..	. do .
19F4	USBR, observation well	1,081.0	Dr	46	3	46	Gravel, sand
19F5	. . . do . . .	1,079.9	Dr	40	3	40	. . do . .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
145	1949	T, 3	D, Ind	
109.38	8- 6-53	P, 1	D	Well deepend from 132 ft, 1952.
83.50	6-12-58			
6.60	6-12-58	N	N	
160	4- -48	J, 7½	D, S	Well deepend in 1948.
..	..	..	O	L.
92	12- 6-52	J, 1½	D	L.
120.8	10- 7-49	P, 1½	PS, Ind	Cp.
60.13	11-18-41	N	De	Rwl.
54.24	10- 7-49			
58.61	1-18-55			
..	..	J, 1	D	
67.17	11-17-41	N	N	
65	1950	P	D	
4.0	4- 7-39	P	..	
7.37	9- 1-49			
91.79	5-14-58	J, 3/4	D, S	
17.0	3-18-39	..	De	
181.92	11-17-41	P	O	Hydrograph in fig. 23.
179.38	10- 7-49			
172.55	4-23-58			
118.76	6-19-50	N	N	
117.86	5-14-58			
109	1941	T	D, S	
0.70	3- 4-54	N	O	L.
0.34	3- 8-54	N	O	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.--Con.							
19F6	USBR, Soap Lake Protective Works well N	1,086.7	Dr	51	12	32	Gravel
19J1	USBR, observation well	1,174.8	Dr	14	1½	14	..
19J2	USBR, observation well	1,179.3	Dr	11	1½	11	..
19L1	USBR, Soap Lake Protective Works	1,083.0	Dr	56	12	56	Sand
19L4	. . . .do. . . .	1,081.7	Dr	45	3	45	Sand, gravel
19N1	City of Soap Lake, well 2	1,118	Dr	466	8	466	Basalt
19N2	City of Soap Lake, well 1	1,117	Dr	275	11	..	. do .
19Q1	USBR, observation well	1,116.4	Dr	26	1½	26	..
20D1	Winston Construction Co.	1,246	Dr	220	6	..	..
21M1	USBR, observation well	1,202	Dr	59	2	..	..
21N1	Unknown	1,220	Dr	130	6	..	..
22G1	J. W. Hodgen	1,200	Dr	176	8	176	Basalt
23K1	. . .do. . .	1,200	Dr	127	5	..	Gravel
23K2	. . .do. . .	1,190	Du	102	48	..	. do .
23Q1	Francis Norman	1,195	Du	114	48	..	Gravel
23Q2	L. M. Shuemaker	1,195	Du, Dr	153	36-6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
7.52 13.04	10- 1-56 5-14-58	T, 75	..	L.
Dry	5-14-58	N	O	
Dry	5-14-58	N	O	
2.52	3- 4-54	..	..	L.
1.39	3- 4-54	..	..	L.
21	1940	T	PS	C, L.
37.03 39.79	7-15-53 5-10-58	N	N	Hydrograph in fig. 20.
Dry	3-27-51	N	O	
185 157 96	1941 1946 1954	T, 15	D	
28.24 27.15	8-29-50 5-14-58	N	O	L.
119.14 76.20 67.55	10-20-49 8-13-53 5-13-58	N	N	
..	..	..	D, S	
95.14 91.83	10-10-49 4-23-58	J, 2	D	
88.50	10-10-49	T, 50	Irr	
88.39	4-23-58	T, 10	D, S	
93.21 86.50	11-19-41 4-23-58	T, 1½	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.--Con.							
23R1	E. W. Short	1,194	Du,Dr	258	48-6	..	Basalt
24F1	William Ness	1,230	Du	60	48	..	. do .
24L1	Unknown	1,235	Dr	40	6	..	. do .
24L2	Unknown	1,245	Dr	..	6	..	..
24L3	E. S. Mills	1,222	Dr	114	6	..	Basalt
24N1	Glen Craig	1,198	Du,Dr	126	36-6	50	Gravel
24N2	. . do . .	1,199	Du	50	36	50	. do .
25D1	--Norton	1,194	Dr	8	..	..	Basalt
26J1	Glen Barbee	1,199	Du,Dr	110	..	..	..
29A1	T. L. Clark	1,223	Dr	185	8	..	..
29B1	M. A. Ebbutt	1,216	Dr	200	12	..	..
29B2	. . do . .	1,219	Du,Dr	200	6	..	..
29E1	E. P. Peterson	1,194	Du	..	48	..	..
29F1	Glen Taylor	1,209	Dr	..	8	..	..
29G1	Alvin Reimund	1,227	Du,Dr	300±	8	..	..
29G2	Dave Lewis	1,229	Dr	..	12	..	..
29G3	George Hazzard	1,227	Du	92.5	48	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
62.29	3-20-41	T, 10	D, Irr	Hydrograph in fig. 23. C, L.
62.05	10-10-49			
59.44	4-23-58			
40.20	3-20-41	N	N	Rwl.
40.19	5- 8-58			
35	1941	P	N	Basalt at 6 ft.
51.92	11-14-49	P	D	
52.15	4-23-58			
52.01	5- 8-58	P, 2	D, Irr	
40.80	11-22-41	J, 1	D	Basalt at 50 ft.
39.44	10-10-49			
41.94	4-23-58			
42.83	11-22-41	N	N	Basalt at 45 ft.
41.86	10-10-49			
42.77	4-23-58			
41.11	11-19-41	N	N	
42.42	10-10-49	J, ½	D	Basalt at 78 ft.
37.92	5- 8-58			
135	..	T, 5	D	
63.14	10-21-49	N	N	
45.23	8-10-53			
124	10-21-49	T, 20	D, Irr	
55.36	8-12-53	T, 10	D	
49.67	5-10-58			
..	..	T, 5	D, S, Irr	
79.67	8-12-53	T, 5	D,Irr	Cp.
47.87	8-12-53	T, 10	D,Irr	
49.07	5-21-54			
49.65	8-12-53	J, 1	D	
60.97	5-10-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.--Con.							
29H1	G. H. Gripentrog	1,234	Dr	555	8	..	..
29H2	. . . .do. . . .	1,229	Dr	185	6	..	Basalt(?)
29H3	E. W. Powers	1,227	Dr	168	6	..	..
29J1	—Nelson	1,236	Dr	200	8	..	Basalt
29J2	Delbert Cook	1,239	Du	199	48	..	..
29L1	USBR, Soap Lake Damsite, test hole 3	1,205.0	Dr	139	3	..	Basalt
29M1	Carl Heinrich	1,168	Dr	122	6	26	. do .
29N1	O. G. Lang	1,178	Du,Dr	145±	36-8	..	. do .
29P1	August Dritten-bass	1,198	Du,Dr	268	8	..	. do .
29P2	U.S. Bureau of Reclamation	1,196	Dr	56	5	..	Gravel (?)
29Q1	Augusta Cock-burn	1,213	Du,Dr	..	..	..	..
29R1	A. L. Tucker	1,228	Du,Dr	200	36-8	92	Basalt
30A1	Unknown	1,168.5	Dr	95	6	..	. do .
30A2	J. Aissa	1,172	Dr	70	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
132.3	10-12-49	T, 7½	D, S	
118.45	8-10-53			
79.21	5- 9-58			
127.18	10-13-49	N	N	Hydrograph in fig. 20.
86.14	8-10-53			
79.21	5-10-58			
125.6	10-21-49	J, 1½	D	
83.05	8-12-53			
77.55	5-10-58			
136.11	8-28-40	J, 1½	D	
136.67	10-12-49			
136.33	10-12-49	J, 1	D	
95	1953			
..	..	N	N	L.
50	3- -52	J, 3	D,Irr	L.
..	..	P	N	
97	1936	T, 10	D,Irr	L.
45.81	8- 6-53	N	N	Hydrograph in fig. 23.
45.59	5-10-58			
70.23	8-10-53	J, 1	D	
65.48	5-12-58			
127.02	11-25-41	N	N	Basalt at 92 ft.
125.60	10-12-49			
69.0	10-21-49	N	N	Basalt at 26 ft.
63.32	3-27-51			
38.24	5-12-58			
65.23	7-18-50	N	N	Basalt at 26 ft.
40.83	3-26-51			
13.17	5-12-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.—Con.							
30E1	Unknown	1,140	Du, Dr	55	36-6	55	..
30M1	USBR, Soap Lake Protective Works well C	1,164.5	Dr	85	14	82	..
30M2	. . . .do. well C-1	1,166.1	Dr	78	6	78	..
30M3	. . . .do. well C-2	1,166.3	Dr	72	6	72	..
30M4	. . . .do. well C-3	1,165	Dr	76	6	76	..
30P1	L. G. Fretwell	1,154	Dr	304	10	105	Basalt
30P2	Earl D. Andrews	1,157	Dr	67	6	67	..
30P3	J. B. Reynolds	1,158	Dr	66	6	54	Sand
30P4	Earl Andrews	1,155	Dr	310	10	..	..
30Q1	Sam Kobata	1,154	Dr	310	6	37	Basalt
31B1	A.L. Hirsburnner	1,152	Du,Dr	310	36-8	40	. do .
31B2	. . . do .	1,152	Du,Dr	..	14	..	..
31B3	USBR, observatinn well	1,149.7	Dr	48	1½	44	Basalt
31C1	Walter Kammerer	1,154	Dr	71	8	65	Gravel
31C2	Howard Ramin	1,153	Dr	101	6	51	. do .
31C3	L. A. Bush	1,158	Dr	71	6	71	Basalt
31D1	C. G. Wing	1,180	Dr	85	6	85	Gravel
31G1	USBR, Soap Lake Protective Works, well B	1,156.7	Dr	95	14	92	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
38.65	11-25-41	J, 1	D	
38.57	10-12-49			
35.04	5-12-58			
51	1-26-52	..	..	L.
51	1-28-52	..	..	
55	1-27-52	..	..	
52	1-26-52	..	..	L.
43.69	5-12-58			
49.14	8-28-40	T, 7½	Irr,	Hydrograph in fig. 24.
48.30	10-12-49		D	
77.90	5-12-58			
41.00	8- 6-53	J, 3/4	D	
45	1951	J, 1½	D	Cp, L.
40	1954	T, 10	Irr	
54	1954	T, 10	D,Irr	L.
48.90	11-25-41	T, 15	D,Irr	
50.47	10-12-49			
31.94	5-13-58			
46.74	10-12-49	T, 10	Irr	
37.38	3-26-51	N	O	L.
32.19	5-12-58			
45	1952	J, 3	D, Irr	L.
37.63	8- 4-53	J, 1	D	Basalt at 57 ft.
40	1954	J, 3	D	L.
63.63	8- 4-53	N	N	L.
38.98	1-22-52	N	N	L.
31.77	5-13-58			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.--Con.							
31G2	USBR, Soap Lake Protective Works well B-1	1,157.7	Dr	78	6	78	Gravel
31G3	. . . .do. . . . Well B-2	1,156.8	Dr	80	6	80	. do .
31G4	U.S. Bureau of Reclamation	1,156.7	Dr	74	6	74	. do .
31G5	USBR, Soap Lake Damsite, test hole 1	1,156.5	Dr	278	3	..	..
31G6	L.W. Crawford	1,153	Dr	100	6	63	Basalt
31M1	USBR, Soap Lake Damsite, test hole 2	1,205.0	Dr	165	3	..	..
31M2	Francis Fritz	1,094	Dr	96	8	94	Gravel, sand
31M3	Al Hosneit	1,096	Dr	104	8	99	Cobbles, boulders
32A1	Myrtle E. Avin	1,231	Du, Dr	248	36-8	90	Basalt
32A2	Minnie Hansen	1,219	Du, Dr	198	36-8	90	. do .
32B1	Clarence Burnham	1,205	Dr	130	6	70	. do .
32C1	Elmer Sand	1,202	Du, Dr	207	8	207	..
32C2	A. J. Sanborn	1,193	Du, Dr	230	10	87	Basalt
32D1	August Dritten-bass	1,179	Du	44	..	..	..
33D1	--Barklay	1,235	Dr	185	8	..	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
40.72	1-22-52	..	..	L.
39.80	1-22-52	N	..	L.
32.68	5-13-58			
60.00	12- 4-51	N	..	L.
33.78	5-13-58			
..	..	..	..	L.
35	7- -52	J, 1½	D, Irr	Basalt at 63 ft.
..	..	N	N	L.
70.08	5-13-58	J, 1	D, Irr	L.
77	1956	J, 1	D	L.
130	1941	J, 1½	D	Basalt at 90 ft.
84.90	8- 7-53			
68.84	5- 9-58			
125	1941	T, 7½	D	. . . Do . . .
110	1946			
120	1951	J	D	
99.49	10-12-49	J, 1½	D	
58.15	8- 7-53			
54.23	5- 9-58			
100	1949	T, 3	D, Irr	Basalt at 87 ft.
34.80	10-12-49	P, ½	S	
29.98	8- 6-53			
30.31	5-12-58			
106.24	10-12-49	T, 10	D, Irr	
89.10	8-10-53			

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 27 E.--Con.							
33E1	Grant Orchards Water Assoc.	1,221	Du, Dr	500	8	..	Basalt
33K1	Irving Toler	1,236	Du, Dr	490	36-10	15	. do .
33M1	Frank Duncan	1,228	Dr	190	6	50	. do .
33N1	D. F. Hayes	1,222	Du, Dr	617	36-6	..	. do .
34D1	Frank Curtis	1,262	Du	175	36	170	Gravel
35J1	T. G. Ralls	1,180	Du, Dr	..	36-8	..	Basalt
36L1	D. F. Morthorst	1,193	Du, Dr	..	36.6	..	. do .
T. 22 N., R. 28 E.							
2C1	D. E. Galager	1,285	Dr	156	6	155	Sand
2E1	C. Middleton	1,261	Du	110	..	..	Gravel
2Q1	Barney Kunse	1,272	Dr	105	8	..	Basalt
3N1	Burt Wessler	1,256	Dr	129	8	..	. do .
3Q1	. . .do. . .	1,267	Dr	114	6	..	Gravel
3R1	Paul Severin	1,254	Dr	111	12	110	. do .
3R2	C. L. McGee	1,260	Dr	110	6	108	. do .
4C1	Mrs.Sandy Pearce	1,392	Dr	145	6	..	Basalt
4R1	Wenatchee-Strafford Orchards	1,264	Dr	109	8	..	Gravel
4R2	USBR, drainage observation well	1,262.1	Dr	50	1½	50	..
5C1	D. M. Lucht	1,366	Dr	303	14	225	Basalt

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
135	1949	J, 2	PS	Formerly irrigation.
104.95	8-10-53			
130.51	8-10-53	P, 5	D, S	
..	..	J, 1½	D	Basalt at 50 ft.
124	11-25-41	J, 1½	D	
106.15	8-10-53			
161.47	11-25-41	N	N	Hydrograph in fig. 14.
156.80	10-10-49			
153.45	5- 9-58			
..	..	T	De	Formerly irrigation well.
26.10	11-27-41	P	D, S	
125	1950	J, 1½	D	
..	..	..	D,Irr	
95	1941	J	D, S	
127	1949			
107.70	9-10-58	N	N	
..	..	..	..	
101.70	3-18-39	T, 25	D,Irr	Redrilled in 1945. Rwl.
95.02	2- 7-41			
100.27	8-29-44			
85	1950	T, 3	D,Irr	Cp.
125	..	J	D, S	
Dry	11-18-41	N	N	
Dry	6- -51	N	O	L.
230	6- -55	T, 75	Irr	Dd 60 ft pumping 635 gpm. L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 28 E.--Con.							
5N1	R. A. Brooks	1,300	Dr	188	8	188	Gravel
5N2	. . .do. . .	1,302	Dr	186	6	186	. do .
6R1	Charles Kennedy	1,282	Du	180	36	..	. do .
6R2	USBR, drainage observation well	1,275.8	Dr	50	1½	50	..
7M1	USBR, Adrian Camp well	1,280	Dr	357	16	164	Basalt
8E1	Ralph Abelson	1,272	Dr	165	8	..	. do .
8E2	. . . do . . .	1,270	Dr	200	8	126	. do .
8H1	A. Simons	1,266	Dr	132	8	130	Sand
8J1	J. A. Simons	1,246	Dr	130	8	..	Sand,gravel
9C1	T. L. Clark	1,302	Dr	..	..	..	..
9D1	. . .do. . .	1,301	Dr	160	8	..	Gravel
9D2	. . .do. . .	1,301	Du	158	60	..	. do .
10A2	Unknown	1,270	Du,Dr	145	48-6	125	Basalt
10A3	Washington Water Power Co.	1,261	Dr	260	8	..	. do .
10B1	Unknown	1,244	Du	40	36	30	. do .
10F1	Paul Severin	1,260	Dr	142	6	..	. do .
11N1	Jack and Fred Timm	1,472	Dr	57	6	..	. do .
15L1	Holger Hansen	1,432	Dr	127	6	..	. do .
22J1	Unknown	1,484	Dr	290	6	..	. do .
24J1	Unknown	1,458	Dr	253	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
162.28	6-22-50	T, 20	Irr	L.
..	..	J, 3	D	
158.65 170.92 161.10	8-28-40 2- 8-50 3-17-54	T, 5	D, S	Hydrograph in fig. 24.
Dry	6- -51	N	O	L.
187 151.06	3- 9-47 6-22-50	T, 40	D	L.
146.5	8- 7-39	N	De	Formerly irrigation well.
140	8-17-54	J, 3	D, S	Dd 20 ft pumping 32 gpm. L.
112.39	6-21-50	J, 1	N	Basalt at 132 ft.
..	..	..	..	
152	1950	T, 125	Irr	
..	..	P, 5	D	
150	1941	T, 125	Irr	Pumps 3,500 gpm.
130	1941	J, 1½	D	
110	6- -49	P	D	Cp.
..	..	N	N	
112	1947	J, 1	D, S	
42.74 41.60 42.18	3-20-41 6-23-54 6-12-58	P	S	
114.88	6-22-54	P, 2	S	
..	..	P, 3	D, S	
72	4- 4-39	N	N	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 28 E.--Con.							
26A1	Unknown	1,395	Dr	110	6	..	Basalt
26D1	Unknown	1,450	Dr	250	6	..	. do .
27C1	Lars Hanson	1,418	Dr	475	16	13	. do. .
30J1	Unknown	1,329	Du	12	36	..	. do .
31H1	Unknown	1,300	Du	18	..	..	..
32L1	Unknown	1,300	Dr	175	6	15	Basalt
33R1	Guy R. Kienholz	1,335	Dr	160	6	67	. do .
34H1	Holger Hansen	1,330	Du,Dr	200	6	..	. do .
34H2	H. R. Hansen	1,339	Dr	283	10	58	. do .
34R1	Burt Wessler	1,338	Dr	300	8	86	. do .
35M1	Lee Hesseltine	1,322	Du	48	48	..	. do .
36H1	Unknown	1,288	Du	32	36	..	. do .
36H2	Unknown	1,288	Dr	..	6	..	. do .
T. 22 N., R. 29 E.							
1Q1	City of Wilson Creek	1,282	Du, Dr	370	48-8	..	..
1Q2	. . .do. . .	1,282	Dr	358	16-12	65	Basalt
2L1	Raphael Ribail	1,277	Dr	85	8	..	..
5D1	E.D. Williamson	1,260	Dr	110	6	..	Basalt
5F1	. . . do . . .	1,264	Dr	270	12	..	. do .

of wells.—Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
90	1950	P	D, S	Cp.
192.52 190.94 190.66	3-20-41 7-20-54 6- 5-58	N	N	Hydrograph in fig. 24.
186.87 209.00	6-24-50 6-23-54	T, 150	Irr	Well deepened in 1953. L.
10.81	11-25-41	N	N	
8	1939	N	N	
125	1950	P	D	
80.88 81.16	7-20-54 6- 5-58	..	D	Basalt at 68 ft. Hydrograph in fig. 21.
70	1940	P	D, S	L.
93.0	6-24-50	T, 25	Irr	L.
134.10	9-10-58	N	N	L.
45	1941	N	N	L.
23.83 25.96	11-28-41 6-24-50	P	S	
36.93	6-12-58	P	S	
51.80 40.14 55.72	3-18-39 7-18-50 4-16-58	T, 10	Irr	
54.24	11-28-55	T, 10	PS	L.
25.79 50.40	6-23-50 5- 1-58	J, 3/4	D, S	
66 57.19	1940 4-30-58	J, 2	D, S	
69.34	4-30-58	T, 25	Irr	L.

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 29 E.--Con.							
5K1	E.D.Williamson	1,266	Dr	108	8	..	Basalt
6F1	Archie Gill	1,288	Dr	96	8	..	. do .
6F2	E.D.Williamson	1,262	Dr	240	8	60	. do .
6G1	H.B.Gillingham	1,248	Du	10	36	7	Gravel
6G2	--Williamson	1,290	Dr	..	6	..	Basalt
7L1	M. Fuesz and Netta Graham	1,620	Dr	165	6	..	. do .
12C1	Great Northern Ry.	1,278	Du	35	..	..	..
12C2	. . .do. . .	1,278	Dr	327	12	45	Basalt
12F1	City of Wilson Creek	1,276	Du	..	..	..	Gravel
12K1	Lester Friend	1,283	Du, Dr	55	8	..	. do .
13A1	Alex Cook	1,277	Du	13	48	..	. do .
13B1	. . .do. . .	1,277	Du	13	30	..	. do .
17B1	Andrew Kappel	1,492	Du	10	48	10	Sand, gravel
17D1	Charles Williamson	1,633	Dr	625	12	12	Basalt
18B1	Andrew Kappel	1,610	Dr	222	6	..	. do .
20F1	Unknown	1,466	Du	26	42	18	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
68.55	5- 1-58	N	N	To be domestic well.
92.08 78.75	11-28-41 ..	T, 5	Irr	
63	9- -58	T, 20	Irr	Dd 25 ft pumping 350 gpm. L.
6.12	11-28-41	N	N	
..	..	P	N	Formerly stock well.
160.41 161.60	5- 1-58	P	N	
2.2	3- -39	N	N	
24	1939	N	N	Dd 66 ft after pumping 4 hours at 230 gpm. L.
8.45	6-23-50	T, 25	Irr	
17	1950	C, 5	D, S Irr	Cp
9.68 10.75	6-23-50 5- 1-58	C, 30 C, 20	Irr	
8.70 9.44	6-23-50 5- 1-58	J, ½	D, Irr	
3	1954	C, 1	S	Dd 3 ft pumping 25 gpm. L.
2.50	11-12-58	..	Irr	Being drilled 11/12/58. L.
210 147.70	1949 6-23-50	P, ½	D, S	Basalt at 10 ft. Cp.
22.92 22.93	11-28-41 6-24-50	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 22 N., R. 30 E.							
8P1	W. R. Sieg	1,286	Du	17	36	..	Gravel
8Q1	O. V. Mangis	1,285	Du	15	36	..	Sand, gravel
9F1	C. F. Mordhorst	1,275	Du	20	48	20	. . .do. . .
13F1	George Starkel	1,340	Dr	228	12	10	Basalt
13H1	Adolph Schell	1,290	Dr	39	8	39	Gravel
14C1	Rodger James	1,300	Dr	145	12-10	22	Basalt
18B1	Ernest Lundquest	1,280	Du	22	48	..	Gravel
18C1	Chris Larsen	1,280	Du	16	60	..	. do .
18M1	. . .do. . .	1,346	Du	20	24	20	. do .
26P1	Unknown	1,720	Dr	228	6	..	Basalt
27N1	B. C. James	1,690	Dr	214	6	..	. do .
28R1	. . .do. . .	1,690	Dr	210	6	..	. do .
29D1	Chris Larson	1,510	Dr	160	6	..	. do .
30A1	. . .do. . .	1,510	Dr	216	6	..	. do .
32E1	Unknown	1,562	Dr	375	6	..	..
33J1	B. C. James	1,610	Dr	172	6	..	Basalt
34N1	Archie Zickler	1,670	Dr	182	6	..	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
16.8 11.17	3-18-39 5-10-58	C, 10	Irr	
12	1954	C, 3	Irr	
6	1949	C, 20	Irr	Dd 1 ft after pumping 4 hours at 400 gpm. L.
10	2- 4-54	T, 30	Irr	L.
25	..	C, 7	Irr	Dd 1½ ft pumping 600 gpm. L.
33	4- 2-51	T, 25	Irr	Dd 9 ft after pumping 4 hours at 720 gpm. L.
14.00	5-10-58	C, 7½	Irr, D, S	
10	1958	C, 25	Irr	
16.13 16.92 16.04	12-11-40 6- 7-50 5-10-58	N	N	Hydrograph in fig. 24.
196.90 195.60	5-14-42 5-10-58	N	N	
200	1950	J, 3	D	
200	1950	P	S	
154.6	7-19-50	N	N	
176	1950	P, 1	S	
..	..	P	D	
110.45 110.50	7-19-50 5-10-58	N	N	
176.98	7-19-50	P	D, S	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 23 N., R. 27 E.							
18R1	Mark Mathewson	1,810	Dr	50	6	..	..
20B1	Morgan Chambers	1,850	Du	45	..	..	..
20C1	T. L. Clark	1,845	Du	40	48	..	..
25A1	L. M. Shumaker	1,625	Du	50	..	..	..
28J1	Arvid Larson	1,470	Dr	90	6	..	Basalt
31R1	Ernest Allen	1,428	Du, Dr	159	48-6	..	. do .
32F1	S. Y. Mayberry	1,475	Dr	160	6	..	..
32G1	Mrs. C.L. Staten	1,468	Dr	80	..	..	..
32J1	H. W. Wood	1,471	Dr	122	6	..	Basalt
33K1	Unknown	1,493	Dr	153	7	..	. do .
36A1	Unknown	1,517	Du	35	..	..	..
36J1	Unknown	1,426	Du	13.5	48	..	Basalt
T. 23 N., R. 28 E.							
8J1	Murry Gill	1,570	Dr	380	2	..	. do .
8N1	Unknown	1,444	Du	..	48	..	..
9F1	Northern Pacific Ry.	1,550	Dr	47	8	..	Basalt
18A1	Unknown	1,590	Du	13	..	..	..
19R1	Burton Gill	1,710	Dr	..	6	..	..

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
27.4	6-19-50	J	D	
25	1950	J	D, S	
25.01 28.28	6-19-50 6-12-58	P	S	
42.43 44.25	6-19-50 6-12-58	P	D	
45.85 45.45	9-25-40 6-12-58	N	N	
80	9-25-40	P, 3	D, S	
160	1950	N	N	
..	..	P	N	
114.79 109.26 115.95	.. 6-19-50 6-12-58	P	S	
128	1940	P, 3	D, S	
30.66 37.87	6-20-50 6-12-58			
12.18 12.70	11-18-41 6-12-58	P	S	Basalt at 8 ft.
334.01 238.55	8-29-50 6-12-58	N	O	
10.00 8.49 8.70	4- 7-39 6- 6-50 6-12-58	N	N	
15.5	8-29-50	N	O	
13.00 8.23	4- 7-39 6- 6-50	N	N	
140	..	P	D	

Table 1.--Records

Well no.	Owner or tenant	Altitude (feet)	Type of well	Depth of well (feet)	Diameter of well (inches)	Depth of casing (feet)	Water-bearing material
T. 23 N., R. 28 E.--Con.							
20Q1	William Simmons	1,750	Du	48	..	..	..
27J1	Orval Pearce	1,520	Dr	315	6	14	Basalt, sand
27R1	Unknown	1,456	Du	45	36	20	..
32G1	Alexander Pearce	1,407	Du, Dr	163	6	..	Basalt
36K1	USBR, Long Lake Gatetender	1,319	Dr	187	8	110	. do .
T. 23 N., R. 29 E.							
9J1	Unknown	1,626	Dr	95	6	..	. do .
10A1	H. H. Higgins	1,656	Du	48	40	..	. do .
14J1	W. P. Stevens	1,596	Dr	664	12	..	. do .
16A1	Samuel Gross	1,617	Dr	88	6	..	. do .
17A1	Clarence S. Rosenberg	1,590	Dr	110	..	..	. do .
23G1	--Rawls	1,650	Dr	500±	10	..	. do .
24H1	Samuel Gross	1,607	Dr	129	6	..	. do .
25N1	Fred Bohnet	1,625	Dr	120	6	..	. do .
34B1	Virgil Stevens	1,696	Dr	1,000	16	30	. do .
35A1	Jack Schroeder	1,600	Dr	233	6	..	. do .
T. 23 N., R. 30 E.							
6N1	Fritz Schwab	1,713	Dr	99	6	..	. do .
28D1	Art Fiess	1,395	Dr	321	12	..	. do .
29F1	. .do. .	1,395	Dr	290	12	117	. do .
32D1	. .do. .	1,370	Dr	300	16	124	. do .
34L1	Alvin Liebing	1,440	Dr	204	10	59	. do .

of wells.--Continued

Water level		Type of pump and hp	Use	Remarks
Depth below land surface (feet)	Date			
28.23	6-12-58	N	N	
304	1948	T, 25	D	L.
35.54 25.14 40.45	11-18-41 6-20-50 6-12-58	P	S	Cp.
..	..	P	S	
45	3-23-51	..	..	C, L.
54.03	3-26-43	P	D, S	Dry at 54 ft, 4-30-58.
35.88 33.74	3-26-43 4-30-58	P	D, S	
212	4- -53	T, 75	Irr	Dd 181 ft after pumping 10 hours at 530 gpm. L.
55.00 48.40	3-26-43 4-30-58	P	N	
53	1948	..	D, S	Basalt at 60 ft.
312	1958	T, 100	Irr	
79.35	3- -43	P	D, S	Dry at 78 ft, 4-30-58.
100	1950	P	D, S	Cp.
..	..	T, 100	Irr	L.
Dry	6-18-50	N	N	
78.80	3-23-43	P	D, S	
..	..	T, 60	Irr	
..	..	T, 60	Irr	Pumps 900 gpm. L.
106	3- -54	T, 75	Irr	Dd 40 ft after pumping 1,400 gpm. L.
121	12- -56	T, 50	Irr	Dd 3 ft after pumping 550 gpm. L.

Table 2.--Chemical analyses of water from wells

Principal aquifer: Bs, basalt; Gr, gravel; Sd, sand.

Agency making analysis: CM, Chicago, Milwaukee, St. Paul & Pacific RR; SWDH, State of Washington Dept. of Health; USBR, U. S. Bureau of

Well number	Principal aquifer	Date of collection	Depth (feet)	Parts per						
				Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
9/29-23P1	Gr	4-28-42	28	26	0.04	..	38	11	16	5.1
9/30-20K1	Gr	1926	88	..	..	..		(26)a/		(11)
9/31-4N1	Bs	4-28-42	343	50	.04	..	21	12	61	15
10/29-10D1	Sd, Gr interbed	9- -53	618	..	..	..	32	18	31	5.5
	. . . do. . . .	12- -53	618	..	..	..	29	14	38	7.8
10/29-19Q1	Gr	9- 4-47	238	..	..	..	19	6.0		(57)
11/32-20A1	Bs	3-13-58	156	37	.25	.02	51	18	31	2.5
12/28-12H1	Bs	4-27-42	450	52	.04	..	8.8	4.6	83	14
12/29-28F1	Bs	1- -53	699	..	..	..	9.4	4.6	46	6.3
	Bs	11- 2-56	699	..	.17	..	9.0	4.5	45	6.6
	Bs	12-27-56	699	..	..	..	13	3.9	48	9.4
12/30-5B1	Bs	3- 6-56	458	..	..	..	31	21	15	3.9
12/32-28B1	Bs	3-13-58	792	70	.03	.0	12	6.1	29	5.8
13/28-13N1	Bs	10- -54	1,119	..	..	..	1.6	.2	78	17
13/29-26B1	Bs	12-10-54	175	..	..	..	35	22	24	5.5
13/30-26J1	Gr	1941	61	29	..	..	37	12		(8.0)
13/30-36C1	Bs	12-29-50	340	..	..	..	25	14	17	7.4
13/31-24R1	Bs	3-13-58	537	42	1.2	.01	22	12	27	6.4
14/29-9A1	Bs	4-23-53	860	57	.05	..	20	12	44	2.5
	Bs	9-29-55	860	55	..	..	20	9.9	44	7.6
	Bs	11- 8-57	860	49	.21	..	21	12	43	8.1
14/30-8G1	Bs	8- -52	371	..	..	..	29	23	23	4.3
14/30-8G1	Bs	3-13-58	371	40	.81	.02	140	106	42	7.8
14/30-10P1	Bs	7- -52	433	..	..	..	26	19	30	5.1
14/30-20A1	Bs	1- -52	717	..	..	..	20	9.4	62	11
	Bs	3-13-58	717	25	.51	.02	74	32	24	7.8
14/30-27J1	Bs	11- -53	381	..	..	..	44	37	19	5.9
14/31-36B1	Bs	6-30-55	643	..	.13	..	19	13	32	3.9
14/31-36B2	Bs	4-28-42	286	45	.04	..	28	17	18	4.6
	Bs	6-30-55	286	..	.03	..	35	20	13	3.9
	Bs	3-13-58	286	38	.05	.0	30	15	11	2.5
14/32-31D1	Bs	6-30-55	505	..	.02	..	23	12	19	5.8

a/ computed as calcium

in the Columbia Basin Project Area, Wash.

L, Lauck's Testing Laboratories, Inc.; NP, Northern Pacific Ry. Co., Reclamation; USGS, U. S. Geological Survey; WSC, Washington State College.

million											
Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Specific conductance, (micromhos at 25°C)	pH	Agency making analysis
190	0	18	1.6	0.3	3.8	..	215	140	326	..	USGS
95	..	16	5.9	..	..	..	105	65	..	..	NP
158	0	86	9.5	.9	.1	..	336	102	480	..	USGS
141	..	86	12	.5	.3	..	352	154	446	8	USBR
171	0	63	12	.8	0	..	298	130	409	7.8	USBR
229	0	1.9	12	..	1.2	..	256	72	397	7.9	USBR
241	0	53	11	.2	.4	.04	331	200	503	7.7	USGS
182	7	59	9.5	1.0	.1	..	328	41	459	..	USGS
116	3	35	11	1.0	.4	..	230	42	282	8.0	USBR
108	0	40	12	4.7	1.2	..	236	41	310	7.4	USBR
104	0	50	11	1.5	..	..	234	48	343	7.7	USBR
156	0	30	21	.7	12	..	278	164	381	7.8	USBR
125	0	15	8.2	.9	.7	.28	215	55	256	8.0	USGS
177	0	20	15	2.0	.2	..	336	5	388	8.6	USBR
135	0	71	..	..	..	..	340	178	458	7.7	USBR
165	..	19	14	..	..	..	206	142	..	..	NP
169	0	18	17	.0	1.4	.04	240	120	311	8.2	USBR
168	0	17	5.2	.5	3.8	.12	217	104	322	7.8	USGS
185	0	26	12	1	.2	.04	266	99	378	8	USGS
186	..	24	11	.9	.9	..	265	91	386	8.1	USGS
187	..	30	13	.9	2	..	271	102	398	8	USGS
180	0	47	27	.6	.4	..	..	167	449	8.0	USBR
294	0	368	128	.3	99	.08	1,180	460	1,570	7.9	USGS
162	8	43	15	1.1	4.3	..	280	143	396	8.5	USBR
223	0	42	14	.5	.0	..	326	89	503	7.9	USBR
156	0	93	66	.4	55	.08	470	315	735	7.7	USGS
168	0	100	42	.6	17	..	448	262	587	7.5	USBR
144	8	18	12	..	..	.02	253	101	..	8.1	WSC
158	0	23	9.5	.4	13	..	242	140	337	..	USGS
146	7	23	20	..	..	.02	300	169	..	7.5	WSC
151	0	14	4.8	.4	14	.10	208	136	308	8.0	USGS
145	4	11	8.1	..	..	.02	220	107	..	7.8	WSC

Table 2.--Chemical analyses of water from wells

Well number	Principal aquifer	Date of collection	Depth (feet)	Parts per							
				Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
15/27-5R1	Bs	1944	358	48	..	..	44	19		(74)
15/28-15D1	Bs	1- -52	865	..	..	..	20	15	33	9.4
15/28-15D1	Bs	2- -52	865	..	..	..	19	13	56	11
15/28-24G1	Sd	4- -52	236	..	..	..	33	14	47	4.3
15/28-24G1	Sd	7- -53	236	..	..	..	31	14	41	4.7
	Sd	11- -57	236	..	.06	..	31	13	41	5.1
15/28-24L1	Bs	2- -52	398	..	..	..	29	22	24	4.7
	Bs	12- -53	398	..	..	..	32	19	30	4.7
15/28-24L1	Bs	9-18-56	398	..	0	..	1.8	0	222	1.6
15/28-35P1	Bs	8-24-56	840	..	..	..	24	15	25	5.9
15/29-3D1	Bs	8- 2-55	693	..	.02	..	4.2	1.8	77	1.3
15/29-4A1	Bs	8- 2-55	560	..	.02	..	2.8	1.2	69	13
15/29-4A1	Bs	4-27-42	560	52	.04	..	3.6	3.5	78	12
15/29-4H1	Bs	1944	560	37	..	..	6	2	99	..
15/29-27R1	Bs	7- -52	550	..	..	..	19	12	40	5.9
15/30-23A1	Bs	3-11-58	500	38	.40	.0	18	8.5	36	9.4
15/30-36A1	Bs	3-13-56	492	..	.04	..	20	16	25	3.1
16/23-34C1	Gr	1944	85	22	..	..	30	7		(14)
16/25-6M1	Bs	11-21-49	852	..	..	..	39	26	44	9
16/25-26Q1	Gr	8-27-51	16	..	..	..	43	73	317	55
16/26-30H1	Gr	8-27-51	16	..	..	..	47	42	264	27
16/28-8P1	Bs	3-11-58	351	36	.14	.01	5.6	3.2	86	26
16/29-6M1	Gr	8-27-51	35	..	..	..	55	28	106	17
16/29-6P1	Gr	8-27-51	17	..	..	..	66	37	121	20
16/30-18A1	Bs	6- -55	392	..	..	..	12	10	67	11
16/30-35Q1	Bs	4-12-57	..	..	..	..	17	17	44	3.9
17/24-4J1	Bs	4-24-57	320	..	.05	..	24	19	13	0
17/25-23K1	Bs	7- -55	957	..	..	..	36	16	74	8.2
	Bs	2- -56	957	..	.02	..	34	19	17	6.6
	Bs	3-18-57	957	..	.05	..	36	18	18	5.5
17/26-28Q1	Bs	4-27-42	404	42	.44	..	32	18	43	13

in the Columbia Basin Project Area, Wash.--Con.

million											
Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Specific conductance, (micromhos at 25°C)	pH	Agency making analysis
293	..	63	29	..	..	..	448	188	..	..	CM
291	0	34	16	0.5	0.7	..	262	112	409	7.4	USBR
198	7	40	16	.8	.9	..	318	101	442	8.1	USBR
237	..	34	7.1	.5	..	..	294	140	433	7.4	USBR
229	..	33	8.2	.6	3.1	..	314	135	444	8.2	USBR
219	..	31	1.2	.6	0	..	308	131	410	8.1	USBR
193	..	47	13	.8	.7	..	292	163	421	8.2	USBR
173	..	64	15	.6	4.7	..	290	158	431	7.7	USBR
176	0	236	68	.7	7.7	..	690	5	1,100	8	USBR
169	..	32	11	.6	1.2	..	268	122	350	8	USBR
170	6	23	16	..	..	.05	294	18	..	8.4	WSC
162	10	23	16	..	..	.05	281	12	9	..	WSC
183	0	28	15	2.6	.1	..	287	23	397	..	USGS
197	..	24	16	..	..	..	301	23	..	..	CM
170	6	25	14	1	3.1	..	252	97	363	8.4	USBR
172	0	22	8.2	.9	1.2	.34	226	80	339	8.1	USGS
175	0	20	9.9	1	1.1	..	278	116	338	8.1	USBR
137	..	11	5	..	..	..	175	104	..	..	CM
124	0	72	7	.1	..	..	378	204	575	7.9	USBR
909	0	245	107	..	..	.04	..	407	2,000	7.6	USBR
842	..	121	55	..	..	.03	..	290	1,560	7.3	USBR
212	0	50	14	1.0	.5	.10	330	27	508	8.1	USGS
456	..	73	241	..	..	.03	..	252	980	7.6	USBR
492	0	106	56	..	..	.22	..	317	1,087	7.6	USBR
197	..	38	23	1	.1	..	332	71	467	7.6	USBR
171	..	34	24	.8	6.2	..	274	112	426	7.6	USBR
137	0	35	14	.7	3.7	..	234	138	354	7.9	USBR
203	..	132	15	.9	..	..	412	156	615	8.2	USBR
168	..	56	13	.5	.8	..	316	163	397	8.3	USBR
163	0	62	13	.5	3.7	..	302	164	426	7.7	USBR
182	0	55	40	.5	.3	..	337	154	514	..	USGS

Table 2.--Chemical analyses of water from wells

Well number	Principal aquifer	Date of collection	Depth (feet)	Parts per						
				Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
17/27-10M1	..	5-20-57	40	..	..	..	31	37	30	2.3
	..	5-10-56	40	..	..	..	29	37	29	2.7
17/27-31D1	Bs	1951	810	..	..	..	35	19	56	16
17/28-12D1	Bs	4-25-51	270	..	..	..	33	19	38	8.2
17/30-10N1	Bs	1944	499	55	.1	..	17	9	31	..
17/31-8R1	Bs	12- -53	155	..	..	..	22	15	21	3.9
17/31-30C1	Bs	3-12-58	337	34	.11	.02	18	8.0	46	17
17/32-6B1	Bs	3-12-58	424	33	.08	.01	16	12	41	12
18/23-36H1	Bs	5- 8-50	670	..	..	..	32	22	30	6.6
18/24-6H1	Sd(?)interbed	1- -55	330	..	..	..	39	25	9.9	2.3
18/25-4A1	..	5-10-56	126	..	..	..	98	47	19	6.3
	..	5-20-57	126	..	..	..	87	48	18	6.3
18/25-8B1	..	9- 8-16	134	72	.1	..	259	155	(6.3)	
18/27-4R1	Gr	10- 8-16	18	40	..	..	47	26	(44)	
18/28-34R1	Bs	7-29-47	268	..	..	..	48	24	(41)	
18/28-36D1	Bs	5-20-57	218	..	..	..	41	27	25	4.3
	Bs	5-10-56	218	..	..	..	38	24	24	3.9
	Bs	2- -52	218	..	..	..	38	24	23	4.7
18/29-17P1	Bs	2- -52	342	..	..	..	18	14	36	11
18/30-16R1	Bs	11- -53	185	..	..	..	22	16	33	2.7
18/31-23A1	Bs	3-12-58	355	30	.11	.0	13	7.2	55	5.0
19/23-12A1	Bs	11- -53	153	..	..	..	27	23	6.4	3.5
19/24-7J1	Bs	5- 1-50	502	44	.07	.0	27	18	32	5.9
19/24-28N1	Bs	5- 1-50	210	55	.03	.0	29	19	12	3.5
19/25-2N1	Sd	4-23-42	100	55	.27	..	27	14	17	1.3
19/25-10A1	Sd	10- 5-16	160	47	..	..	37	18	(2.6)	
19/26-1R1	Bs	9-18-56	459	..	.0	..	18	4.3	33	2.7
19/26-4Q1	Bs	1-31-56	436	..	.01	..	25	6.5	53	2.0
19/27-17L1	..	9-12-16	211	65	..	..	47	19	(8.7)	
19/27-21C1	Gr	10-19-16	70	49	..	..	45	8.9	(53)	
19/27-23R1	Gr	9-12-16	77	39	..	..	47	31	(53)	
19/27-24K1	Gr	5-20-57	72	..	..	..	57	51	92	17

in the Columbia Basin Project Area, Wash.--Con.

million											
Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Specific conductance, (micromhos at 25°C)	pH	Agency making analysis
261	..	54	7.8	..	20	0.02	..	229	515	8.1	USBR
259	..	52	3.5	..	19	..	..	224	532	7.4	USBR
209	0	56	53	.5	0	..	394	165	601	8.2	USBR
210	0	43	25	.7	.1	..	314	160	483	7.9	USBR
165	..	11	10	..	..	..	269	79	..	..	CM
137	..	29	9.2	.6	.5	..	228	117	293	7	USBR
142	0	62	12	.6	.1	.15	269	78	410	8.0	USGS
168	0	44	8.0	.5	.0	.14	247	88	385	8.0	USGS
220	0	43	13	.6	.4	.0	314	170	438	..	USBR
148	0	35	35	.6	12	..	262	200	445	7.8	USBR
202	..	232	14	..	70	..	..	438	914	7.5	USBR
195	..	216	11	..	66	.15	..	414	814	8.0	USBR
540	0	797	14	..	6.0	..	1,750	1,280	..	..	USGS
359	0	9.1	10	..	1.0	..	355	224	..	..	USGS
297	14	14	14	..	11	..	..	218	547	7.9	USBR
181	..	35	17	..	81	..	..	213	508	7.9	USBR
181	..	35	13	..	53	..	..	193	491	7.6	USBR
206	0	33	16	.6	48	..	360	193	508	8.3	USBR
171	0	29	18	.8	9.2	..	274	102	380	8.7	USBR
179	0	30	18	1.3	.2	..	288	121	376	7.5	USBR
177	0	25	12	1.6	.3	.07	249	62	376	8.1	USGS
164	0	30	16	.6	.2	..	280	162	362	8.0	USBR
221	..	27	6.8	.6	.1	.0	270	141	403	8.0	USGS
177	..	15	6.9	.4	9.7	.0	238	150	340	7.9	USGS
170	0	10	2.4	.4	6.7	..	215	125	294	..	USGS
176	0	12	5.0	..	10	..	257	166	..	..	USGS
111	0	42	7.8	.6	.2	..	212	63	314	8	USBR
179	0	24	16	1.9	.4	..	328	89	399	8.3	USBR
212	0	22	9.0	..	6.0	..	296	195	..	..	USGS
258	0	38	9.0	..	1.0	..	339	149	..	..	USGS
390	10	9.1	10	..	1.0	..	426	245	..	..	USGS
574	0	68	23	..	14	.0	..	352	1,010	7.4	USBR

Table 2.--Chemical analyses of water from wells

Well number	Principal aquifer	Date of collection	Depth (feet)	Parts per						
				Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
19/27-24K1	Gr	5-10-56	72	..	..	..	63	41	87	22
19/27-25A3	Gr	4-25-42	34	11	0.04	..	28	27	56	14
19/28-10F1	Gr	10-14-16	76	47	..	..	49	11	(49)	
19/28-15Q1	Bs	8- 2-55	909	..	.02	..	6	2	69	11
19/28-22B1	Bs	8- 2-55	544	..	.02	..	5	2	70	13
19/28-22B2	Bs	8- 2-55	763	..	.02	..	25	14	39	9
19/28-22G2	Gr	7-15-36	37	..	..	..	108	60	259	28
	Gr	9-15-36	37	..	..	..	126	91	280	28
19/28-23D8	Bs	4-21-57	956	73	.1	..	4	.7	(70)	
19/28-27M1	Bs	9-15-36	91	..	..	..	208	136	270	28
19/28-27M1	Bs	7-15-36	91	..	..	..	192	92	234	26
19/28-28K1	Bs	8- 2-55	100	..	0.03	..	8	5	86	15
19/29-19B1	Bs	4-25-42	157	29	.04	..	38	12	8.6	2.8
19/29-22C1	Bs	1- -52	352	..	..	..	36	21	37	8.2
19/29-34D2	Bs	4-29-50	285	53	.03	0.0	32	20	43	6.4
19/30-1E2	Bs	1944	140	41	..	..	45	20	(44)	
19/30-32N1	Bs	4- 4-51	351	..	..	..	16	1.2	79	13
	Bs	8-19-57	351	..	.0	..	42	20	47	0
19/31-26D1	Bs	3-12-58	378	48	.35	.01	40	7.3	30	5.9
20/23-10N1	Bs	9- -53	351	..	..	..	32	19	27	3.9
20/24-7R1	Bs	8- 3-55	431	..	0.01	..	32	10	25	4.3
20/24-7R2	Bs	1-25-39	376	51	1.05	..	34	26	29	4.5
20/24-9D1	Bs	4-22-16	424	44	..	..	32	12	(16)	
20/24-9E2	Bs	4-23-42	345	42	.04	..	37	15	19	3.9
20/25-4M1	Bs	10- 4-50	674	..	..	..	21	12	38	9
20/25-4M1	Bs	9-12-57	674	..	.05	..	50	23	24	2
20/25-5P1	Bs	8-22-16	450	56	..	..	32	12	(12)	
20/25-13Q1	Sd	9-28-16	278	51	.55	..	82	43	(36)	
20/25-21A1	Sd	5-12-47	235	..	..	..	29	13	(20)	
20/25-21A2	Bs	3- 3-48	652	..	..	..	29	15	(23)	
20/25-29H1	Sd	12-29-50	175	..	..	..	24	16	22	3.5
20/25-36B1	Silt, Clay	1951	250	..	..	..	41	21	18	2.3
20/28-27E1	Gr	3-28-58	134	42	.0	.0	42	15	29	7
20/28-32C1	Bs	12- 4-53	725	51	.06	..	24	14	26	7.9
	Bs	7- 3-51	725	56	.01	.23	26	16	17	4.3

in the Columbia Basin Project Area, Wash.--Con.

million											
Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Specific conductance, (micromhos at 25°C)	pH	Agency making analysis
529	..	63	23	..	16	..	..	326	989	7.4	USBR
330	0	30	11	0.7	3.8	..	347	181	583	..	USGS
198	0	81	20	..	0	..	350	168	..	..	USGS
142	12	28	16	..	..	0.06	294	..	..	8.6	WSC
159	9	27	18	..	..	.05	261	..	..	8.4	WSC
199	4	35	17	..	..	.04	300	..	..	8.1	WSC
..	..	..	162	..	2	..	..	516	..	..	WSC
..	..	..	132	..	2	..	..	688	..	..	WSC
171	5	17	16	..	..	..	265	13	..	8.2	..
..	..	..	306	..	1.5	..	..	1,090	..	..	WSC
..	..	..	368	..	1.5	..	..	857	..	..	WSC
187	11	40	28	..	..	.04	360	..	..	8.4	WSC
119	0	25	16	.2	23	..	235	144	330	..	USGS
149	0	82	46	.5	..	..	368	176	572	7.5	USBR
183	..	58	26	.5	16	.0	345	162	508	7.8	USGS
227	0	51	32	..	..	..	394	195	..	..	CM
187	0	50	20	1.1	.0	..	350	45	463	8.1	USBR
137	0	95	56	.5	3.1	..	390	187	551	7.4	USBR
152	0	46	20	.5	2.2	.51	268	130	409	7.8	USGS
182	0	53	15	.4	.7	..	284	158	427	7.8	USBR
153	..	29	17	..	..	..	248	121	..	7.5	WSC
213	0	68	5.5	.0	3.2	..	323	192	..	..	USGS
161	0	18	9	..	.0	..	242	129	..	..	USGS
156	0	37	17	.4	8.4	..	272	154	384	..	USGS
164	0	36	18	.7	.5	.02	318	102	367	7.9	USBR
140	0	90	45	.6	3.7	..	448	219	564	7.6	USBR
151	0	18	8		1	..	227	129	..	..	USGS
415	0	104	7	..	0	..	539	381	..	..	USGS
164	0	16	9	..	1.8	..	240	126	323	7.8	USBR
193	0	22	8.9	..	1.8	..	224	134	356	8	USBR
173	0	16	19	.1	7.5	..	234	126	369	..	USBR
193	0	45	5.7	.5	15	..	320	189	479	7.8	USBR
219	0	34	10	.2	5.4	..	297	147	440	7.7	USGS
164	0	26	8.6	.6	3.6	..	243	117	334	7.9	USGS
160	0	21	7.1	.3	6.0	..	232	131	317	7.5	USGS

Table 2.--Chemical analyses of water from wells

Well number	Principal aquifer	Date of collection	Depth (feet)	Parts per						
				Silica (SiO_2)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)
20/28-32C1	Bs	3- 6-52	725	56	0.06	.0	26	16	18	3.8
	Bs	8-24-55	725	50	.01	.0	29	15	18	3.8
	Bs	6-20-56	725	53	.01	.0	29	18	19	4.3
20/28-32J1	Bs	1943	712	54	.12	..	17	7	43	..
	Bs	8-24-55	710	44	0	.0	17	8.4	34	8.7
20/28-32J1	Bs	12- 4-53	710	46	.05	.0	18	9.3	37	7.9
20/28-33E1	Bs	5-26-55	791	42	.07	.0	16	7.7	35	7.6
	Bs	6-20-56	791	40	.06	.01	16	7.8	37	9.3
20/29-11A1	Bs	4-30-50	165	44	.1	.0	31	12	21	4.5
20/29-28C1	Bs	1951	416	..	..	..	13	6.7	59	13
20/31-22N1	Bs	3-12-58	500	31	2.4	.01	18	12	51	14
21/26-8M1	Bs	7-22-55	1,000	..	.01	..	16	13	22	3
21/26-8N1	Bs	7-22-55	450	..	.01	..	19	12	12	2
21/26-15E1	Bs	4-29-50	347	58	.04	.0	30	15	15	5.3
21/26-16B3	Bs	4-25-42	260	56	.04	..	24	12	15	3.9
21/26-16B3	Bs	7-22-55	260	..	.02	..	17	14	14	5
21/26-21E1	Bs	7-22-55	618	..	.02	..	17	12	12	4
21/28-23D1	Bs	4-25-51	150	..	..	..	31	19	18	5.1
22/26-12B1	Bs	3- 6-56	78	..	..	..	70	31	45	8.6
22/26-12B3	Gr	4-11-52	40	..	..	..	58	32	71	9.4
22/26-12C1	Gr	1-23-53	49	..	..	..	2.2	420	1120	50
22/26-12C2	Bs	1-23-53	187	..	..	..	55	28	323	20
22/26-13M1	Bs	5- -51	330	..	..	..	4.4	1.2	74	5.9
	Bs	9- -53	330	..	..	..	22	5.2	9.7	3.5
22/26-23M1	Bs	1952	448	..	..	..	20	12	15	4.3
22/26-24L1	Bs	7-22-55	435	..	.13	..	15	15	20	4
22/26-24(Q3 &Q9)	Gr	5- -54	..	..	..	..	58	27	158	7.8
22/26-24Q3	Gr	5-30-52	112	..	..	..	47	21	534	39
	Gr	6- -52	112	..	..	..	55	25	600	36
22/26-24Q6	Sd, Gr	6- -52	123	..	..	..	31	11	12	4.7
22/26-24R4	Sd, Gr	1-23-53	75	..	..	..	26	23	198	22
22/27-19M1	Bs	7-22-55	466	..	.01	..	17	12	24	5
22/27-23R1	Bs	4-30-50	258	49	.2	.0	16	8.1	40	7.2
23/28-36E1	Bs	4-25-51	187	..	..	..	33	17	32	4.7

in the Columbia Basin Project Area, Wash.--Con.

million											
Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Boron (B)	Dissolved solids	Hardness as $CaCO_3$	Specific conductance, (micromhos at 25°C)	pH	Agency making analysis
162	0	25	7.9	0.2	9.7	..	235	131	328	8.1	USGS
163	0	15	8	.1	13	..	232	134	349	8	USGS
167	0	26	9.5	.3	15	..	250	146	365	8.1	USGS
136	..	24	13	..	..	..	220	71	..	8.2	L
153	0	24	9	.6	.8	..	222	77	317	8.1	USGS
154	0	27	9.6	.6	.4	..	232	83	316	8.1	USGS
152	0	23	9	.5	.1	..	216	72	312	7.9	USGS
150	0	24	9.2	.6	.1	..	218	72	317	8	USGS
145	0	21	13	.3	20	0.0	238	127	344	8	USGS
167	..	35	22	1	..	..	282	60	401	7.9	USBR
208	0	37	10	.5	.3	.14	274	94	438	7.9	USGS
146	..	12	7	..	..	..	201	..	..	7.9	WSC
133	..	6	7	..	..	..	177	..	..	7.6	WSC
182	0	14	5.8	.3	4.1	.0	237	137	334	7.4	USGS
150	0	11	4.3	.3	1.4	..	197	109	270	..	USGS
147	..	6	7	..	..	.01	206	..	..	..	WSC
129	3	8	7	..	..	.01	195	..	..	8.1	USBR
133	0	31	26	.5	22	..	282	155	399	7.5	USBR
245	0	137	45	.5	.6	..	568	302	792	7.5	USBR
246	..	152	48	..	..	.13	..	276	900	7.7	USBR
936	305	655	385	..	..	..	..	..	4,560	9.4	USBR
566	0	280	147	..	..	..	..	252	1,820	7.7	USBR
3	1	.1	.3	2.6	.0	..	278	16	348	8.7	USBR
92	0	19	2.1	.4	.0	..	152	76	196	8	USBR
224	..	14	8.9	.9	9.9	..	212	99	282	6.8	USBR
156	2	18	7	..	..	.03	251	..	..	7.8	WSC
326	0	219	86	..	5	..	786	256	1,190	7.9	USBR
836	0	313	210	..	..	..	..	204	2,570	8.1	USBR
1,010	0	417	270	1.1	12	..	2,104	240	3,000	7.7	USBR
158	0	10	8.5	.3	2.5	..	260	123	..	7.4	USBR
379	0	211	83	..	..	..	..	159	1,240	7.8	USBR
146	2	18	8	..	..	.01	236	..	..	7.9	WSC
174	0	17	6.1	.9	..	.0	230	73	316	8.1	USGS
221	0	26	14	.5	1.2	..	286	152	427	7.4	USBR

Table 2A.—Partial chemical analyses of water from wells in the Columbia Basin Project area, Wash.

Well number	Date of analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)
9/29-21M1[a]	8- 6-58	28	20	250	282
9/30-27K1[b]	8- 6-58	121	26	165	210
11/31-1R1	10-26-50	465	10	65	..
12/29-3F1	10-15-57	402	12	55	..
12/29-11M1[c]	8- 4-58	212	10	60	173
12/29-34B1[d]	8- 4-58	555	8	50	218
13/30-29C1	9-26-50	272	13	70	..
13/32-1J1[e]	8- 4-58	220	11	105	212
13/32-2B1	9-29-50	126	12	110	..
13/32-14H1	9-29-50	535	14	120	..
14/27-24C1[f]	8- 5-58	1,396	15	15	238
14/30-2J1	11- 3-50	400	15	110	..
14/30-30K1	11- 1-50	360	9	30	..
14/32-33R1[g]	8- 4-58	281	12	80	173
14/33-18B1[h]	8- 4-58	542	5	100	167
15/29-8G1[i]	8- 8-58	265	13	90	200
15/29-8K1[j]	8- 8-58	480	20	45	180
15/32-1J1[k]	8- 8-58	353	11	35	179
17/24-2F1	8-23-49	250	12	150	..
17/24-4D1	8-23-49	209	12	190	..
17/28-16E1	8- 3-54	93	30	..	226
17/29-24A1	9-16-49	475	11	95	..
17/30-34B1	8-17-50	282	5	115	..
17/30-34C1	8-17-50	263	6	110	..
18/23-1C1	8-16-49	185	9	100	..
18/23-14B1	8-11-49	542	8	140	..
18/24-17P1	7- 2-56	140	16	160	140
18/24-30J1	8- 1-49	163	10	195	..
18/24-32N2	6-28-56	425	18	160	159
18/24-33R1	6-28-56	60	26	255	128
18/24-34M1	..	180	14	150	..
18/28-24G1	9-14-49	225	14	190	..
18/28-24N1	9-14-49	590	18	205	..
18/28-26F1	9-14-49	801	21	30	..
18/28-34H1	9-14-49	164	8	170	..

Electrical conductivity (micromhos per cm at 77°F)

a. 638
b. 483
c. 299
d. 303
e. 334
f. 432
g. 326
h. 255
i. 387
j. 399
k. 295

Table 2A.--Partial chemical analyses of water from wells in the Columbia Basin Project area, Wash.--Con.

Well number	Date of analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)
18/29-7R1	9-17-49	521	24	25	..
18/29-8B1	9-17-49	230	10	115	..
18/30-4P1	8-15-50	141	12	125	..
18/30-11G1	8- 4-50	433	26	70	..
18/30-34M1	..	147	10	90	177
19/24-3C1	5-20-55	60	130	240	153
19/24-4A1	5-23-56	66	104	440	275
19/24-5B1	8-25-49	355	10	160	..
19/24-11A1	6-12-56	80	134	340	146
19/24-11M1	6-13-56	191	118	340	195
19/24-15L1	6-13-56	196	16	200	256
19/24-34Q1	..	215	10	170	..
19/24-36K1	9- 2-49	164	16	185	..
19/25-2N2	1955	184	72	220	98
19/26-5D1	9-14-53	130	10	250	..
19/27-1R1	..	100	51	224	..
19/27-7A1	9- 1-53	570	14	105	200
19/28-1H1	4-21-55	248	8	205	122
19/28-6F1	8-22-49	40	24	225	..
19/28-10E1	8-10-49	81	7	100	..
19/28-15M2	8-26-49	62	15	225	..
19/28-19K1	..	116	28	156	256
19/28-22P2	8-11-54	100	128	275	317
19/28-23D6	8-30-49	26	100	250	..
19/28-24P1	9- 6-49	440	22	125	..
19/28-33M3	9- 1-53	36	44	280	..
19/28-33N2	9-12-49	12	220	620	..
19/28-33P2	8-31-53	115	126	470	..
19/29-9H1	7-25-50	637	13	40	..
19/29-9L1	10- 8-53	85	18	155	207
19/29-14J1	..	368	17	120	143
19/29-32R1	9-17-49	32	12	260	..
19/30-12A1	..	78	7	120	..
19/30-35K1	7-28-50	360	13	90	..
19/30-36H1	7-28-50	209	8	110	..
20/23-1Q1	6-10-56	505	16	95	159
20/23-18C1[a]	8-28-58	400	14	120	158
20/23-23J1	1949	445	13	140	..
20/23-25E1	9- 6-49	480	10	132	..
20/23-27A1	9- 7-49	277	10	196	..

[a] Electrical conductivity, 318 micromhos per cm at 77°F

Table 2A.—Partial chemical analyses of water from wells in the Columbia Basin Project area, Wash.—Con.

Well number	Date of analysis	Depth (feet)	Chloride (ppm)	Hardness as $CaCO_3$ (ppm)	Bicarbonate (ppm)
20/23-27R1	9- 6-49	278	8	175	..
20/23-28J1	9- 7-49	446	8	205	..
20/23-34J1	6-26-56	405	10	170	..
20/23-36A1	5-21-56	232	28	190	232
20/24-1H1	6- 7-56	400	22	140	134
20/24-7J1[a]	..	400	..	130	..
20/24-9P1	8-26-49	362	120	120	..
20/24-16H1	8-26-49	176	84	530	..
20/24-20B1	8-26-49	314	11	85	..
20/24-28J1	8-26-49	196	12	150	..
20/24-29Q1	8-30-49	230	5	80	..
20/24-29R1	5-23-56	215	32	165	183
20/24-31C1	8-30-49	226	9	70	..
20/24-33R1	8-25-49	200	8	160	..
20/24-36M1	5-24-56	209	89	245	183
20/25-3R1	8- 5-53	168	..	185	122
20/26-31C1	7- 1-53	185	14	245	..
20/28-1M1	7- 1-53	138	..	120	122
20/28-36N1	7-28-49	114	6	90	..
20/29-18A1	8- 3-55	180	14	120	..
20/29-29P1	8- 3-55	62	12	112	..
20/30-10B1	7-24-50	145	10	130	..
20/30-19D1	7-25-50	314	25	90	..
21/26-2M1	8-13-53	203	112	100	..
21/26-3P2	..	165	9	170	..
21/26-22E2	9-27-49	295	16	155	..
22/26-36E1	10- 7-49	190	10	140	
22/27-29G1	10-21-49	300(?)	23	225	..
22/27-30P3	8- 4-53	66	430	2,370	336
22/28-3R2	6-20-50	110	5	140	..
22/28-10A3	6- -50	260	6	135	..
22/28-26A1	6-24-50	110	12	130	..
22/29-12K1	6-23-50	55	7	140	..
22/29-18B1	11-14-49	222	8	100	..
23/28-27R1	6-20-50	45	4	125	..
23/29-25N1	7-18-50	120	8	130	..

[a] Total dissolved solids, 257 ppm.

Table 3.--Drillers' logs of wells

8/30-3A1. Bureau of Reclamation, Esquatzel Observation Well. About 90 ft S. and 1,250 ft W. of NE corner. Altitude 390.1 ft. Drilled by Stanberry & Son, 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, light brown to gray.	20	20
Sand, medium to coarse, granitic and basaltic, gray to black.	20	40
Sand, fine to coarse, granitic and basaltic.	15	55
Sand and gravel, coarse, granitic and basaltic.	10	65

Casing: 6-inch, perforated 42-62 ft.

9/29-4D1. Bureau of Reclamation, Block 1, Esquatzel Observation Well. About 75.8 ft S. and 1,478 ft W of N¼ corner. Altitude 525.3 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse, rounded, basaltic, few calcite and white quartz grains.	20	20
Sand, medium, calcareous, granitic, slightly micaceous; few basalt grains	40	60
Sand, medium, subangular, calcareous, basaltic, slightly micaceous, gray; few quartz grains.	10	70
Sand, coarse, basaltic, black.	20	90
Sand, medium, calcareous, granitic and basaltic.	30	120
Sand, coarse, with few fine pebbles, calcareous, basaltic, dark gray.	10	130
Gravel, fine, and coarse sand, calcareous, rounded, composed of basalt and quartz.	20	150
Gravel, medium, calcareous, rounded, basaltic.	10	160
Gravel, medium, rounded, basaltic, light tan; sand fine.	17	177
Sand, medium, calcareous, chiefly quartz, with flakes of biotite and muscovite; medium, rounded, granitic and basaltic gravel.	13	190

9/29-4D1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, gray.	10	200
Sand, coarse, calcareous, gray.	10	210
Clay, bluish gray.	10	220
Silt, bluish gray	15	235
Clay, bluish gray, sticky	4	239
"Shale," hard, bluish gray	3	242

Casing: 3-inch, perforated 20-242 ft.

9/29-6B1-John M. Mullen. About 1,100 ft E. and 400 ft S. of N¼ corner. Altitude about 493 ft. Drilled by Noonan, 1950.

Sand.	100	100
Gravel.	60	160
Clay.	8	168
Sand and gravel, heavy, water-bearing.	47	215

Casing: 6-inch.

9/29-11D1. Bureau of Reclamation, Esquatzel Observation Well. About 29 ft S. and 29 ft E. of NW corner. Altitude 479.0 ft. Drilled by Nelson Drilling Co., Pasco.

Sand, fine, calcareous; quartz grains, rounded, varicolored; rounded grains of hornblende and augite; flakes of muscovite and biotite, light tan	40	40
Sand, medium, gray; quartz grains rounded, varicolored; basaltic grains prominent, rounded.	20	60
Sand, medium, gray; basalt minerals rounded, prominent; quartz grains, rounded, varicolored.	10	70
Sand, coarse, gray; basalt grains prominent, rounded; quartz grains, rounded, white.	10	80
Sand, medium, gray; quartz grains rounded, varicolored; basalt grains, rounded to subangular.	20	100
Gravel and sand. Gravel very coarse, rounded, granitic, poorly graded. Sand, containing rounded grains of quartz and basaltic minerals, gray.	5	105

Table 3.—Drillers' logs of wells—Con.

9/29-11D1—Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and sand. Gravel very coarse, rounded, basaltic, dense, aphanitic, poorly graded. Sand, coarse, gray; basaltic grains predominant, rounded.	10	115
Sand and gravel. Sand, coarse, gray with a few fragments of caliche; basalt grains prominent, rounded. Gravel, basaltic, fine with a few rounded granitic pebbles.	15	130
Gravel and sand. Gravel, coarse, granitic, poorly graded, rounded. Sand, coarse, rounded, gray; quartz grains varicolored; basaltic minerals, coarse	15	145
Sand, medium, gray, containing quartz grains, augite, hornblende.	10	155
Gravel and sand. Gravel, basaltic rounded, poorly graded. Sand, gray, with equal proportions of quartz and basalt minerals, also a few flakes of biotite and muscovite.	5	160
Sand, coarse; chiefly quartz grains, rounded, varicolored; some basaltic grains, rounded	3	163
Gravel, well graded, rounded, chiefly granitic; some basaltic pebbles.	2	165
Sand, coarse, gray, clean, subangular, chiefly quartz grains.	10	175
Sand and gravel. Sand, coarse, granitic. Gravel granitic and basaltic, well graded.	5	180
Silt and clay, calcareous, light tan.	15	195
Clay, with a few small grains of basaltic minerals, bluish green	12	207

Casing: 3-inch; perforated 20-207 ft.

9/29-15D1. Bureau of Reclamation. About 16 ft S. and 13 ft E. of NW corner. Altitude 512.2 ft. Drilled by Nelson Well Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to medium, chiefly basaltic, rounded, slightly silty.	70	70
Sand, fine, silty, light gray.	10	80
Sand, medium to coarse, basaltic, dark gray	30	110
Sand, fine, silty, light gray.	10	120
Sand, silty, gravelly, chiefly basaltic.	30	150
Gravel, sandy, pea to cobble, rounded to subrounded, chiefly acidic; quartz, rhyolite, diorite; few pieces of basalt.	33	183

Casing: 6-inch, perforated 138-183 ft.

9/29-15N1. Bureau of Reclamation. Esquatzel Observation Well. About 21 ft N. and 95 ft E. of SW corner. Altitude 402.2 ft. Drilled by Nelson Well Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to coarse, chiefly basaltic calcareous, slightly silty, with pea gravel at lower depth.	40	40
Sand and Gravel. Sand is silty, fine to coarse, granitic and basaltic. Gravel, pea to pebble, granitic, dioritic, basaltic, subrounded.	25	65
Sand and gravel. Sand, medium, uniform, clean, chiefly varicolored quartz grains, muscovite. Gravel, pea to cobble, granitic basaltic, subrounded (driller reported hard sand and gravel).	4	69
Sand, gravelly, medium, clean, micaceous. Gravel, pea, granitic and basaltic.	10	79

Casing: 6-inch, perforated 64-79 ft.

9/29-21A1. Mrs. Martha Eby. About 300 ft W. and 200 ft S. of NE corner. Altitude about 405 ft. Dug by Eby.

Materials	Thickness (feet)	Depth (feet)
Soil.	15	15
Sand, black, coarse . .	30	45
Gravel and sand, maximum diam. 6 inches, water-bearing.	28	73

9/29-21Q1. Margaret Howard. About 550 ft N. and 200 ft E. of S¼ corner. Altitude about 365 ft. Dug.

Soil.	4	4
Sand.	2	6
Gravel, coarse.	26	32

Casing: 36-inch.

9/29-23F1. Dale M. Moxson. About 1800 ft S. and 300 ft. W. of N¼ corner. Altitude about 400 ft. Dug.

Soil.	5	5
Sand, black	40	45
Gravel and sand . . .	22	67

Casing: 36-inch.

9/29-23J2. Robert W. Gove. About 1,540 ft N. and 850 ft W. of SE corner. Altitude about 385 ft. Drilled by Cascade Drilling Co., 1957.

Soil, sandy.	6	6
Sand, some fine gravel	8	14
Gravel, fine and sand, water at 41 ft. . . .	27	41
Gravel, medium, some sand.	10	51
Gravel, fine, pea. . .	1	52
Gravel, medium	8	60

Casing: 6-inch.

9/29-24B1. Bureau of Reclamation. About 35 ft S. and 29 ft E. of N¼ corner. Altitude 400.3 ft. Drilled by Nelson Well Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to medium, uniform, chiefly basaltic	35	35
Sand and gravel. Sand, fine to coarse, subrounded to subangular, granitic and basaltic, with a few calcite grains. Gravel, pea to cobble, tightly cemented, granitic dioritic, ryholitic, basaltic, subrounded.	32	67
Sand, fine to medium, chiefly basaltic, varicolored; micaceous; chiefly quartz with a few pieces of pebble gravel, subrounded	10	77

Casing: 6-inch; perforated 62-77 ft.

9/29-25C1. Bureau of Reclamation. Esquatzel Drainage Obs. Well. About 68 ft S. and 304 ft W. of ¼ corner. Altitude 374.3 ft. Drilled by Nelson Well Drilling Co., 1955.

Sand, silty, fine to medium, light tan.	6	6
Sand, gravelly, silty, clayey, dark gray. (Driller reported hardpan from 6 ft to 41 ft) . .	30	36
Gravel and sand. Gravel, pea to pebble, granitic, porphyritic, basaltic, rounded to subrounded. Sand, medium, chiefly basaltic, with varicolored quartz grains, clean. .	5	41
Sand and gravel. Sand, coarse to fine, silty, chiefly basaltic. Gravel, pea to pebble, subrounded, granitic, dioritic, basaltic.	10	51

Casing: 6-inch, perforated 36-51 ft.

Table 3.--Drillers' logs of wells--Con.

9/29-25D2. Elof E. Olson. About 1,300 ft E. and 100 ft S. of NW corner. Altitude about 370 ft. Drilled, 1936.

Materials	Thickness (feet)	Depth (feet)
Soil.	4	4
Sand and gravel . . .	38	42

Casing: 5 ft.

9/29-25L1. Henry J. Kahlin. About 1 mile W. of Pasco City limits. Altitude about 350 ft.

Soil.	4	4
Sand and gravel . . .	25	29

9/29-25L2. Clarence Wirth. About 300 ft S. and 900 ft W. of center of section. Altitude about 375 ft. Dug by Henry Dilts, 1947.

Topsoil.	4	4
Sand.	24	28

Casing: 41-inch.

9/29-25L3. Bureau of Reclamation Esquatzel Drainage Obs. Well. About 310 ft S. and 1,029 ft W. of C of section. Altitude 347.8 ft. Drilled by Nelson Well Drilling Co., 1955.

Sand and gravel. Sand medium, brown. Gravel, pea to pebble, granitic and basaltic, subrounded	6	6
Sand, gravelly, silty, dark gray.	9	15
Sand and gravel. Sand coarse to medium, clean, granitic and basaltic. Gravel, pea to pebble, granitic, porphyritic, basaltic. . .	11	26

Casing: 6-inch, perforated 11-26 ft.

9/29-25M1. Ira G. and Esther F. Collins. About 90 ft S. and 585 ft E of W¼ corner. Altitude about 350 ft. Dug by owner, 1947.

Soil.	3	3
Sand, fine and coarse gravel with rock. . .	19	22
Sand, fine, water-bearing	2	24

Casing: 42-inch.

9/29-26H2. Fred Bristow. About 1,320 ft S. and 420 ft. W. of NE corner. Altitude about 365 ft. Dug by owner, 1949.

Materials	Thickness (feet)	Depth (feet)
Soil.	2	2
Sand.	15	17
Gravel and boulders . .	15	32

Casing: 42-inch.

9/29-26L1. Fred C. and Myrtle P. Kloppenstein. About 3 miles W. of Pasco. Altitude about 355 ft. Dug by D. W. Chisholm.

Sand, fine.	8	8
Sand, gravel and large boulders.	42	50

Casing: 36-inch.

9/29-26M1. J. David Clancy. About 3 miles W. of Pasco. Altitude about 355 ft. Dug by Henry Dilts, 1946.

Topsoil, sandy	3	3
Sand and gravel	39	42

Casing: 36-inch.

9/29-26M2. H.E. Copeland. About 3 miles W. of Pasco. Altitude about 355 ft. Dug by Henry Dilts, 1946.

No record.	7	7
Gravel, coarse, rock and dirt.	4	11
Gravel, coarse and sand	6	17
Sand, pure.	10	27
Gravel, fine, and sand.	3	30
Gravel, open.	2½	32½
Clay, white and gravel.	1	33½
Gravel and rock, medium and large.	2	35½
Gravel, open, medium and medium-large rocks in water	2½	38

Casing: 40-inch.

9/29-27D1. Bureau of Reclamation. About 554 ft S. and 29 ft E. of NW corner. Altitude 356.1 ft. Drilled by Nelson Well Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, micaceous, brown; contains humus. .	5	5
Sand and gravel. Sand, fine to coarse, silty, calcareous, subangular, granitic and basaltic. Gravel, pea to pebble, cemented, subrounded.	11	16
Clay, calcareous, few fine grains of basaltic sand, light tan.	8	24
Clay, calcareous, slightly sandy, light blue. . . .	10	34
Sand, medium, clean; contains quartz, basalt, and biotite.	4	38
Clay, blue.	2	40

Casing: 6-inch, perforated 25-40 ft.

9/30-2B1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft S. of N¼ corner. Altitude 508.6 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, calcareous, basaltic, with a few rounded quartz grains. .	20	20
Sand and gravel. Sand, medium, basaltic, calcareous. Gravel, fine, basaltic, subrounded.	30	50
Sand, fine, micaceous, calcareous, granitic and basaltic, light tan. . . .	10	60
Sand and gravel. Sand, fine, calcareous, basaltic, with a few quartz grains.		
Gravel, fine, basaltic, subrounded.	20	80
Sand, fine, calcareous, granitic and basaltic, gray to light tan. . . .	20	100
Sand and gravel. Sand, fine, calcareous, gray, chiefly varicolored quartz grains.		
Gravel, fine, subrounded, basaltic.	30	130

9/30-2B1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, light tan, chiefly varicolored quartz; micaceous, with a few pieces of fine basaltic gravel. . . .	10	140
Sand, fine, very calcareous, gray to light tan; containing cemented pebbles of basaltic gravel . .	10	150
Gravel, medium, well graded, basaltic. . .	1	151
Basalt, hard, dense, black	5	156

Casing: 3-inch, perforated 114-134 ft.

9/30-6D1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft S. and 455 ft E. of NW corner. Altitude 440.7 ft. Drilled by Nelson Well Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium grained, granitic, slight calcareous, gray, quartz grains, rounded, muscovite, a few grains of hornblende and augite.	10	10
Silt, gravelly. Silt chiefly quartz grains. Gravel, coarse, basaltic, rounded	10	20
Silt, sandy, slightly calcareous, gray, quartz grains, very fine, transparent to rose, muscovite	4	24
Sand, gravelly, calcareous, dark; gravel is rounded	10	34
Sand, medium, dark gray, numerous quartz grains, micaceous, fragments of basaltic minerals. . . .	7	41
Sand and gravel. Sand medium grained, calcareous quartz grains, transparent and translucent, few large fragments basaltic minerals, few small flakes muscovite. Gravel medium, rounded, basaltic and granitic.	4	45

Table 3.--Drillers' logs of wells--Con.

9/30-6D1--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and sand. Gravel coarse, basaltic, rounded. Sand, fine, calcareous, fragments of caliche, some large basaltic grains, light tan.	20	65
Gravel and sand. Gravel medium, basaltic, rounded, well graded. Sand, fine, basaltic, cemented . .	10	75
Sand, coarse, gray, quartz grained, rounded, large a few rounded basalt grains, caliche fragments . .	9	84
Gravel and sand. Gravel coarse, basaltic; well graded, rounded. Sand, light tan, quartz grains, rounded, white, some basaltic grains.	8	92
Gravel and sand. Gravel medium, granitic, few well polished basalt pebbles. Sand is fine, light tan, quartz grains with a few coarser basaltic grains, cemented.	13	105

Casing: 3-inch, perforated 65-85 ft.

9/30-8H1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft W. of E¼ corner. Altitude 448.8 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, calcareous, gray, varicolored quartz grains; basaltic grains, micaceous.	50	50
Sand, fine to medium, basaltic and granitic, gray	30	80
Sand, coarse, calcareous, gray. Gravel, medium, few in number, subrounded, granitic and basaltic .	10	90
Sand, medium, iron stained, quartzitic, light tan. Gravel, few in number, subrounded, granitic, fine	10	100
Silt, sandy, light tan chiefly varicolored quartz.	10	110

9/30-8H1--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, sandy. Gravel fine, quartzitic and basaltic, subrounded. Sand, angular, fine, granitic and basaltic, light tan.	10	120
Sand, medium, calcareous, chiefly granitic, gray.	2	122
Sand, gravelly. Sand, medium, light tan. Gravel, fine, rounded, basaltic and granitic.	24	146
Sand, coarse, granitic to basaltic with depth, gray	9	155
Sand, coarse very angular, basalt and quartz, gray	5	160
Basalt, black, hard, dense	11	171

Casing: 3-inch, perforated 131-151 ft.

9/30-12P1. Bureau of Reclamation. Esquatzel Obs. Well. About 770 ft W. of S 1/4 corner. Altitude 431.3 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, dark gray; quartz grains subrounded, varicolored; also large, rounded basaltic grains.	10	10
Sand, coarse, chiefly quartz grains, transparent and smoky.	8	18
Sand, fine, gray; quartz grains, varicolored, micaceous.	12	30
Gravel, sandy, fine rounded, basaltic with a few granitic pebbles. Sand, medium, subrounded, granitic and basaltic. . . .	20	50
Sand, fine, micaceous, calcareous, light tan; quartz grains, varicolored. . .	10	60
Gravel, sandy. Gravel, medium, subrounded, granitic and basaltic with fragments of caliche. Sand, medium, calcareous, light gray. .	30	90
Gravel, sandy. Gravel, coarse, granitic, rounded, well graded. Sand, medium, gray, chiefly varicolored quartz.	10	100

Casing: 3-inch, perforated 60-80 ft.

9/30-14D1. Bureau of Reclamation. Esquatzel Obs. Well. About 167 ft S. and 29 ft E. of NW corner. Altitude 496.5 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, micaceous, gray.	10	10
Sand, silty, micaceous, gray.	10	20
Gravel, sandy, gray. Gravel fine, basaltic, rounded. Sand, fine, basaltic . .	10	30
Gravel, fine, granulated, rounded, basaltic . . .	10	40
Sand, fine, granitic and basaltic, gray	10	50
Gravel, sandy, gray. Gravel, fine, basaltic, subrounded, Sand, fine, basaltic,	10	60
Sand, silty, dirty, dark gray.	10	70
Sand, silty. Sand, coarse, basaltic, subrounded, granular, gray.	10	80
Sand, fine, basaltic, gray	10	90
Gravel, silty. Gravel, coarse, poorly graded, basaltic, subrounded. .	2	92
Gravel, silty. Gravel, medium, subrounded, well graded, basaltic. . . .	28	120
Gravel, sandy. Gravel, fine, basaltic subrounded. Sand, fine, dark gray, calcareous, granitic and basaltic .	10	130
Sand, gravelly. Sand, fine, calcareous, granitic and basaltic, dark gray. . .	30	160
Gravel, sandy. Gravel, coarse, well graded, rounded, granitic and basaltic. Sand, medium, subrounded, gray.	4	164
Gravel, sandy. Gravel, medium, rounded, granitic and basaltic. Sand, medium, angular, gray.	16	180

Casing: 3-inch, perforated 140-160 ft.

9/30-16F1. Bureau of Reclamation. Esquatzel Obs. Well. About at center of section. Altitude 405.8 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, fine to medium, rounded, calcareous, gray.	50	50
Sand, coarse, basaltic, gray.	12	62
Gravel, sandy. Gravel, medium, angular, granitic and basaltic, brown. Sand, medium, altered, brown . .	14	76
Gravel and sand. Gravel, coarse, granitic and basaltic, subrounded. Sand, coarse, angular. . . .	2	78
Sand, gravelly. Sand, medium, gray; limonitic weathering.	3	81
Gravel and sand. Gravel, coarse, subrounded, granitic and basaltic, poorly graded. Sand, medium, angular.	19	100
Gravel, sandy. Gravel, fine subrounded, granitic and basaltic, well graded. Sand, medium, angular.	10	110
Clay, gravelly. Clay, calcareous, with cemented pieces of fine gravel, grayish green.	5	115
Sand, medium, calcareous, grayish white; chiefly rounded quartz grains, some limonitic staining	13	128
Clay, greenish gray. . .	6	134

Casing: 3-inch, perforated 94-114 ft.

9/30-17C1. Bureau of Reclamation. Esquatzel Obs. Well. About 1,250 ft S. and 1,750 ft E. of NW corner. Altitude 424.9 ft. Drilled by Don Stanbery & Son, 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to medium, calcareous, light brown to light gray. . .	10	10
Sand, fine to medium, calcareous, light gray .	30	40
Sand, medium to coarse, calcareous, light gray .	36	76

Table 3.--Drillers' logs of wells--Con.

9/30-17C1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand and gravel. Sand, fine to coarse. Gravel pea to nut; minerals are chiefly basaltic.	11	87
Sand and gravel. Sand, fine to coarse. Gravel, pea to nut; minerals are granitic and rhyolitic	10	97

Casing: 6-inch, perforated 82-97 ft.

9/30-18B1. U. S. Government, Naval Air Station. About 700 ft E. and 400 ft S. of N¼. Altitude about 416 ft. Drilled by Durand & Son, 1943.

Gravel, fine.	23	23
Sand, fine.	8	31
Sand, fine with gravel.	22	53
Sand, fine.	17	70
Sand, medium.	5	75
Gravel.	5	80
Sand and gravel, cemented	11	91
Sand, gravel and boulders	25	116
Sand and gravel, loose.	4	120
Sand and gravel, partly cemented.	6	126
Shale, sandy, gray	26	152
Clay, yellow.	8	160
Shale, gray.	15	175
Shale, blue.	7	182
Shale, hard.	3	185
Basalt, black.	15	200
Basalt, gray	38	238
Basalt, black.	42	280
Basalt, broken with gray shale.	21	301
Basalt, creviced.	33	334
Basalt, gray	77	411
Shale, green	19	430
Basalt, gray	126	556
Rock, rotten and blue shale.	13	569
Rock "shell".	4	573
Shale and rock	2	575
Shale, green.	5	580
Basalt, broken, black with shale seams	30	610
Basalt, gray	30	640
Basalt, black.	24	664
Basalt gray.	38	702
Shale, dark.	13	715
Shale, with shells	5	720

9/30-18B1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, gray, broken.	20	740
Basalt, dark, gray.	5	745
Basalt, gray.	60	805
Basalt, broken, sandy	5	810
Shale, green.	10	820
Basalt, gray.	3	823
Shale, green.	22	845
Basalt, gray.	39	884
Basalt, broken.	6	890
Shale, green.	15	905
Basalt, gray.	5	910
Shale, green.	20	930
Basalt, broken.	5	935
Basalt, gray.	2	937
Basalt, gray and green shale	8	945
Basalt, broken, dark.	22	967
Basalt, broken and gray shale.	10	977
Basalt, broken.	14	991
Shale, dark.	4	995
"Shell", hard.	1	996
Basalt, hard, gray.	10	1006
Basalt, dark.	46	1052
Basalt, gray	39	1091
Basalt, black	57	1148
Basalt, gray	156	1304
Shale, green	9	1313
Basalt, broken with gray shale.	4	1317
Shale, gray	7	1324
"Shell", hard	1	1325
Shale, green.	6	1331
"Shell", hard green shale and rock in thin layers	11	1342

Casing: 20-inch

9/30-18H1. U. S. Government. About 1,200 ft W. of E¼ corner. Altitude about 410 feet. Drilled by Durand & Son, 1942.

Sand, gray.	65	65
Gravel, water-bearing, cased off.	6	71
Sand and gravel	10	81
Gravel.	12	93
Gravel and sand, water-bearing, cased off, yielded 35 gpm between 111 and 116 ft.	23	116
Sand.	2	118

9/30-18H1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand and gravel, water-bearing, cased off. . .	22	140
Shale, cream colored . .	28	168
Shale, blue-green. . . .	12	180
Shale, green.	10	190
Shale, gray.	10	200
Shale, green	20	220
Basalt, hard	35	255
Basalt, gray	35	290
Basalt, black and shale, black.	20	310
Basalt, black.	48	358
Basalt.	22	380
Basalt, hard.	2	382
Basalt.	36	418
Basalt, hard.	2	420
Basalt.	55	425
Shale, blue.	20	445
Shale, green	17	462
Basalt.	5	467
Basalt, with green shale	3	470
Basalt.	4	474
Basalt, hard.	3	477
Basalt.	35	512
Basalt, gray	17	529
Basalt.	35	564
Shale, black	14	578
Shale, green.	17	595
Shale, blue.	63	658
Basalt	32	690
Basalt, gray.	153	843
Shale.	7	850
Basalt, gray.	17	867
Shale, caving.	14	881
Basalt.	19	900
Basalt, black.	5	905
Basalt	28	933
Shale, blue.	19	952
Shale.	8	960
Shale, very sticky . . .	5	965
Shale, with rock	5	970
Shale.	8	978
Shale, with rock	7	985
Shale.	15	1000
Shale, dark.	4	1004
Shale, with basalt streaks	27	1031
Sandstone, water-bearing	3	1034
Shale, with rock streaks	9	1043

Casing: 16-inch.

9/30-20F1. Northern Pacific Ry. Ice Plant. About 1,800 ft E. and 200 ft S. of the W¼ corner. Altitude about 420 ft. Drilled by G.C.Hoff, 1925.

Materials	Thickness (feet)	Depth (feet)
Gravel (Dug).	65	65
Gravel, some water, cased off.	135	200
Basalt, black.	50	250
Basalt, gray.	30	280
Basalt, black honeycombed, water-bearing.	2	282
Basalt, blue, no water.	658	940
Sandstone, gray, water in porous zones	90	1030

Casing: 10-inch.

9/30-20M1. Inland Hardware Co. About 800 ft W. and 100 ft S. of the W¼ corner. Altitude about 410 ft. Drilled by Durand & Son, 1950.

Materials	Thickness (feet)	Depth (feet)
Sand, depth not reported		
Water-bearing strata. .		95
Gravel.	3	98
Clay, yellow.	4	102
Clay, blue.	14	116

9/30-23N1. Bureau of Reclamation. Esquatzel Obs. Well. About 870 ft N. and 29 ft E. of SW corner. Altitude 440.0 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, angular, micaceous, gray; contains grains of quartz and basaltic minerals. . . .	10	10
Gravel, sandy. Gravel, fine basaltic, subrounded. Sand, fine, gray; contains angular grains of quartz and basaltic minerals. . .	10	20
Sand, medium to coarse, calcareous, gray; chiefly subrounded grains of quartz and basaltic minerals with grains of calcite. . .	20	40
Gravel, fine angular, basaltic, with a few granitic pebbles and caliche fragments.	10	50

Table 3.--Drillers' logs of wells --Con.

9/30-23N1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, micaceous, gray, chiefly subrounded quartz grains, with a few grains of altered basalt	30	80
Sand, silty. Sand, coarse, calcareous, granitic, and basaltic, rounded. . . .	10	90
Gravel, fine, silty, basaltic.	20	110
Gravel and sand. Gravel, coarse, subrounded, granitic and basaltic, poorly graded. Sand, coarse, micaceous, with subrounded grains of quartz and altered basalt minerals, gray.	3	113
Sand, coarse, gray; contains rounded, varicolored quartz and altered basalt grains	10	123
Gravel, coarse, basaltic, well graded, rounded. . .	10	133
Sand, gravelly. Sand, medium, gray; chiefly quartz grains, subrounded. Gravel, fine, subrounded, granitic and basaltic, well graded	25	158
Clay, blue, sticky. . . .	2	160
Basalt, broken, weathered, gray.	4	164

Casing: 3-inch, perforated 124-144 ft.

9/30-24A1. Bureau of Reclamation, Esquatzel Obs. Well. About 33 ft S. and 56 ft W. of NE corner. Altitude 500.6 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, light gray, quartz and basaltic grains.	20	20
Sand, fine, calcareous, light gray, varicolored quartz and basaltic grains, micaceous.	50	70
Sand, fine to medium with depth, calcareous, gray, a few calcite grains, chiefly quartz grains, slightly calcareous.	30	100
Gravel, medium, basaltic, well graded, dirty, a few granitic pebbles, slightly calcareous	2	102

9/30-24A1--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and sand. Gravel medium, basaltic, well graded, a few granitic pebbles. Sand is coarse, angular, basaltic, a few quartz grains, white and green.	4	106
Basalt, black, hard, dense, slightly weathered. .	5	111

Casing: 4-inch, perforated 71-91 ft.

9/30-26A1. Bureau of Reclamation, Esquatzel Obs. Well. About 139 ft W. of NE corner. Altitude 364.1 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Gravel, sandy. Gravel, fine, subrounded, granitic and basaltic. Sand, fine; contains varicolored quartz and a few basaltic grains. . . .	30	30
Gravel and sand. Gravel, medium, granitic, with a few basalt Pebbles. Sand, fine, light tan; chiefly varicolored quartz grains.	10	40
Gravel, coarse, well graded granitic and basaltic, rounded.	23	63
Gravel, medium, well graded, subrounded, basaltic .	2	65
Basalt, slightly weathered, nonporphyritic, black	3	68

Casing: 3-inch, perforated 28-48 ft.

9/30-26D1. Bureau of Reclamation, Esquatzel Obs. Well. About 2 miles E. of Pasco. Altitude 413.7 ft. Drilled by Nelson Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, uniform; quartz and basalt grains	10	10
Sand, medium to fine, calcareous, chiefly basalt grains(bottom 10 ft is silty).	30	40
Sand and gravel. Sand, fine to coarse, subrounded, calcareous, and basaltic. Gravel, pebble to pea, subrounded, chiefly basaltic	5	45

Table 3.--Drillers' logs of wells--Con.

9/30-26D1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, uniform, rounded; chiefly quartz grains, few pieces of quartz and basaltic gravel	25	70
Sand and gravel. Sand, fine to coarse, silty, granitic and basaltic. Gravel granitic, basaltic, angular cemented.	10	80
Gravel, sandy, pea to cobble.	4	84
Sand, medium	10	94

Casing: 6-inch, perforated 79-94 ft.

9/30-26K1. Bureau of Reclamation, Esquatzel Drainage Obs. Well. About 500 ft S. of center of section. Altitude 406.1 ft. Drilled by Nelson Well Drilling Co., 1955.

Sand, silty, fine, slightly tan, highly calcareous; varicolored quartz and basaltic grains.	10	10
Sand and gravel. Sand, fine to medium, calcareous, granitic and basaltic. Gravel, pea, chiefly basaltic; cemented with silt. . . .	1	11
Sand medium, micaceous, uniform; quartz and basaltic grains.	54	65
Sand and gravel. Sand, medium to coarse, subrounded, calcite, varicolored quartz, basaltic. Gravel, pea to pebble, subrounded, quartzitic and basaltic . . .	14	79
Sand, medium to coarse, clean, micadeous, chiefly quartz and and basalt with a few calcite grains.	6	85

Casing: 6-inch, perforated 70-85 ft.

9/30-26Q1. Bureau of Reclamation, Esquatzel Drainage Obs. Well. About 300 ft NE of NE corner of tank farm. Altitude 398.1 ft. Drilled by Nelson Well Drilling Co., 1955.

9/30-26Q1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, silty, fine, calcareous, subrounded; calcite, quartz and basalt grains	10	10
Sand, medium, subrounded, chiefly basaltic, a few white quartz grains. . .	20	30
Gravel and sand. Gravel, pebble, granitic, basaltic, ryholitic, dioritic. Sand, fine to coarse, angular, with varicolored quartz and basalt grains	20	50
Sand, coarse to fine, chiefly subrounded basalt grains.	10	60
Gravel and sand. Gravel, pebble, subrounded, granitic and basaltic, cemented. Sand, silty, medium, subangular; quartz and basalt grains.	9	69
Gravel, pea to cobble, water-bearing, granitic, basaltic, clean. . . .	2	71
Gravel, pebble to cobble, sandy, basaltic, granitic	10	81

Casing: 6-inch, perforated 66-81 ft.

9/30-27K1. Bonneville Power Adm. About 975 ft S. and 475 ft E. of center of section. Altitude about 420 ft. Drilled 1951.

Sand.	75	75
Sand and gravel	20	95
Sand and gravel (alternate layers contain clay)	14	109
Gravel.	7	116
Gravel and sand, coarse	5	121

Casing: 10-inch.

9/30-29K1, Bureau of Reclamation Esquatzel Obs. Well. About 1402 ft N. and 530 ft E. of S¼ corner. Altitude 377.6 ft. Drilled by Stanbery & Son, 1956.

Sand and gravel.	12	12
Sand, fine to coarse, silty, light gray, with pea gravel.	28	40

9/30-29K1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand and gravel. Sand, fine to coarse, chiefly granitic. Gravel, pea to nut (severely crushed by churn drill.	15	55
Sand, fine to coarse, light colored, chiefly granitic and rhyolitic, slightly clayey.	4	59

Casing: 6-inch, perforated 45-59 ft.

9/30-35A1. Tidewater Shaver Barge Lines. About 1,115 ft S. and 1,170 ft W. of NE corner. Altitude about 390 ft. Drilled 1952.

Soil and fine sand. . .	30	30
Gravel, heavy and some boulders.	50	80
Gravel, clean, water-bearing	35	115

Casing: 10-inch

9/31-4N1. Ray Sperry. About 300 ft N. and 150 ft E. of the SW section corner. Altitude 658 ft. Drilled by Fred Hurd and John Kison.

Silt, sand and gravel. .	35	35
Basalt.	165	200
Clay "putty".	40	240
Basalt, water in crevices at 320 feet.	103	343

9/31-6D1. Bureau of Reclamation, Esquatzel Obs. Well. About 29 ft S. and 29 ft E. of NW corner. Altitude about 458.9 ft. Drilled by Nelson Drilling Co., 1954.

Sand, medium to coarse, granitic and basaltic, rounded, dark gray . .	10	10
Sand, coarse, angular, chiefly basaltic, dark gray	10	20
Gravel, sandy. Gravel, fine to medium, basaltic, subrounded, dirty.	30	50
Gravel, silty. Gravel, fine, basaltic, subrounded, dirty	10	60

9/31-6D1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, gravelly. Silt, fine, calcareous, light tan; quartz and basalt grains. Gravel, fine, basaltic rounded.	10	70
Gravel, sandy. Gravel, fine to coarse, rounded, basaltic. Sand, medium, granitic and basaltic. . . .	20	90
Silt, sandy. Silt, fine, light tan, varicolored quartz grains and a few basaltic grains.	10	100

Casing: 3-inch, perforated 80-100 ft.

9/32-8G1. Lyle W. Neff. About 1,980 ft S. and 100 ft E. of N¼ corner. Altitude 448 ft. Drilled by Durand & Son, 1948.

Shale, dark.	30	30
Sand.	25	55
Gravel.	5	60
Gravel, coarse	15	75
Gravel.	40	115
Sand.	5	120
Basalt, hard	2	122
Basalt.	68	190
Basalt, broken, water-bearing	20	210

Casing: 12-inch.

10/28-25H1. J. F. D'Ewart. About 1,200 ft N. and 1,200 ft W of the E¼ corner. Altitude about 508 ft. Drilled by Smith & Haden, 1948

Sand, fine and silt. . .	14	14
Sand, fine and silt, with cobbles.	8	22
Sand, coarse, black, and gravel.	9	31
Sand, fine, gray, and silt, loose.	6.5	37.5
Sand, very fine, gray-black, and pea gravel.	11.5	49
Sand, fine, black. . . .	5	54
Sand, coarse, black, with small amount of gravel.	10	64
Sand, fine, black. . . .	8	72
Sand, fine, some silt, gray	14	86

Table 3.--Drillers' logs of wells--Con.

10/28-25H1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, gray, small amount of gravel. . . .	4	90
Gravel, coarse, sand, gray	4	94
Gravel, coarse, some silt	6	100
Gravel, with silt, compact	4	104
Gravel, with sand, coarse, black.	5	109
Gravel, fine, with sand, coarse, black.	7	116
Gravel, with silt. . . .	6	122
Gravel, very compact, cemented.	8	130
Gravel, very compact, 2-inch size.	23	153
Gravel, with silt, 2-inch size.	11	164
Gravel, with boulders, 8-inch size, with small amount of yellow clay .	4	168
Gravel, with boulders, 14-inch size.	4.5	172.5
Gravel, with clay, yellow, silty.	5.5	178
Gravel, with silt and sand	11	189
Sand, fine, gray, mica, water-bearing.	4	193
Gravel, coarse, ½ to 4-inch size.	7	200

10/29-3A1. Bureau of Reclamation, Drainage Obs. Well. About 39 ft S. and 60 ft W. of NE corner. Altitude 692.1 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, light tan; quartz grains, rounded, varicolored, muscovite, biotite, hornblende, and augite.	5	5
Sand, medium, calcareous, tan, quartz grains, rounded, varicolored, muscovite and biotite, fragments of hornblende and augite .	5	10
Sand, coarse, tan; quartz grains, rounded, varicolored, slivers of augite and hornblende, muscovite and biotite.	10	20

10/29-3A1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, light tan to gray; quartz grains, rounded, varicolored, hornblende, augite, muscovite, biotite. . .	15	35
Silt and sand, calcareous, light gray to tan; quartz grains, rounded, varicolored, muscovite, biotite, augite, hornblende.	15	50

Casing: 1½-inch, perforated and sand packed 5-50 ft.

10/29-5A1. Bureau of Reclamation, Drainage Obs. Well. About 70 ft S. and 39 ft W. of NE corner. Altitude 721.6 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, calcareous, light tan; quartz grains rounded; varicolored, small crystals of augite, hornblende and muscovite	10	10
Sand, fine, light tan, quartz grains, very fine, varicolored, small crystals of hornblende and augite, micaceous. . . .	5	15
Silt, light tan, quartz grains, very fine, varicolored, small crystals of hornblende and augite	20	50

Casing: 1½-inch, perforated and sand packed 5-50 ft.

10/29-8R1. Bureau of Reclamation, Drainage Obs. well. About 50 ft N. and 39 ft W. of SE corner. Altitude 620.9 ft. Drilled by Bach Drilling Co., 1954

Materials	Thickness (feet)	Depth (feet)
Sand, fine, gray, quartz grains rounded, varicolored, crystal fragments of hornblende and augite.	20	20

Table 3.--Drillers' logs of wells--Con.

10/29-8R1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, calcareous, light tan, quartz grains rounded, varicolored, biotite, muscovite, hornblende, augite.	15	35
Sand and silt, calcareous light gray to light tan, quartz grains, rounded, varicolored, biotite, muscovite, hornblende and augite.	15	50

Casing: 1½-inch, perforated and sand packed 5-50 ft.

10/29-10C1. E. H. Van Blaricom. About 175 ft S. and 800 ft W. of N¼ corner. Altitude about 687 ft. Drilled by Nelson Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand and sandy clay. . .	207	207
Basalt.	190	397

Casing: 6-inch.

10/29-10D1. Bureau of Reclamation, Eltopia Expl. Well. About 355 ft S. and 753 ft E of NW¼ corner. Altitude about 686 ft. Drilled by Kroeger & Fine, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, light brown; mostly light colored minerals.	40	40
Sand, fine, light gray, mostly quartz and feldspar.	20	60
Clay, silty, light brown	25	85
Sand, fine.	5	90
Clay, silty, light brown	10	100
Silt, with clay, micaceous, fine, light brown, mostly light colored minerals	44	144
Clay, light gray.	5	149
Silt, sandy, calcareous, micaceous; layers of cemented fine sand.	8	157
Clay, sandy.	3	160
Clay, sticky, small concretions.	18	178
Clay, light gray.	17	195
Sand and gravel, nearly all rhyolite, porphyry pebbles; wide variety of minerals in sand sizes.	5	200

10/29-10D1--Continued.

Materials	Thickness (feet)	Depth (feet)
Gravel and sand. Gravel composed of both acid and basaltic lavas and quartzite in a variety of colors; sand is mostly quartz grains. Thin beds of silt and fine sand in the gravel. Silt, 221-223 ft	81	281
Clay, blue.	9	290
Basalt, deeply weathered, vesicular, calcite and light green clay in vesicles and joints.	46	336
Basalt, vesicular, broken, porous.	2	338
Basalt, deeply weathered, vesicular; vesicles filled with pale green clay. . .	17	355
Sand, fine; small masses or grains of light green clay. Sand grains are angular, and contain quartz, very weathered gneiss, and very weathered red vesicular basalt with included masses of light gray tuff.	35	390
Basalt, slightly weathered, dense, jointed.	18	408
Sand, fine, small masses or grains of light green and light gray clay. Sand about 70 percent basalt and 30 percent quartz.	20	428
Basalt, vesicular, jointed, moderately weathered; vesicles filled with light green clay.	9	437
Basalt, moderately weathered, dense, jointed.	8	445
Clay and sand, hard	4	449
Basalt, moderately weathered, dense, jointed.	8	457
Sand, fine, rounded, mostly light colored mineral and rock grains with 25 to 40 percent basalt.	8	465
Sand, same as above with light green clay.	14	479
Basalt, dense, slightly weathered, jointed; clay and calcite in joints.	21	500
Basalt, hard, slightly weathered, jointed. . . .	20	520

10/29-10D1—Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, angular, 50 percent quartz and 50 percent basalt.	19	539
Shale, green, indurated . .	2	541
Basalt, deeply weathered, amygdaloidal, high in feldspar; amygdules are green indurated clay with calcite	34	575
Basalt, slightly weathered, slightly vesicular; green indurated clay and calcite in vesicles.	13	588
Sand and gravel, fine, gravel pebbles are basalt. Sand, coarse, angular basalt and quartz with some calcite.	12	600
Sand, fine, pebbles of basalt; sand is basalt and quartz, mostly angular. .	18	618

Casing: 14-, 12-, and 10-inch.

10/29-11N1. Bureau of Reclamation, About 60 ft N. and 29 ft E. of SW corner. Altitude 653.7 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, micaceous, gray, quartz grains, varicolored, a few grains of augite and hornblende. . .	10	10
Sand, medium, gray, quartz, rounded, varicolored, some large grains of basaltic minerals, muscovite and biotite.	5	15
Sand, fine, light yellow, quartz grains, rounded, varicolored, a few grains of hornblende, augite, muscovite and biotite. . . .	15	30
Caliche, sandy, medium, calcareous. Sand is chiefly quartz, varicolored, some fragments of hornblende and augite.	5	35
Sand, medium, calcareous, light brown, quartz grains rounded, also hornblende, augite, muscovite, and biotite	5	40
Sand, fine, light gray, quartz grains, rounded, varicolored, hornblende, augite, muscovite and biotite. . .	10	50

10/29-14R1. Bureau of Reclamation, Drainage Obs. Well. About 29 ft N. and 50 ft. W. of SE corner. Altitude 603.1 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, gray, quartz grains, subrounded, varicolored, muscovite, biotite, a few rounded basaltic grains.	10	10
Sand, medium, gray, subrounded, varicolored, numerous rounded basaltic grains, also muscovite and biotite.	5	15
Sand, silty, light tan, calcareous, quartz grains, fine, varicolored, subrounded, a few grains of caliche, muscovite, biotite and a few large basaltic grains	10	25
Caliche, sandy, light gray sand consists of quartz grains, fine, subrounded, varicolored, a few large basaltic particles, also a few grains of muscovite and biotite.	5	30
Silt, sandy, light tan, quartz grains, varicolored, fine, rounded, a few large basaltic grains.	5	35
Sand, fine gray, numerous quartz grains, varicolored, rounded, a few grains of basaltic minerals, muscovite and biotite	5	40
Caliche, sandy, light gray, quartz grains, varicolored, rounded, few flakes of muscovite and biotite . .	5	45
Sand, fine, light gray, quartz grains, varicolored, rounded, a few large grains of basaltic minerals.	5	50

Casing: 12-inch, perforated and sand packed 5-50 ft.

Table 3.--Drillers' logs of wells--Con.

10/29-19Q1. Bureau of Reclamation. Leased to Pasco Hts. Water Assoc. About 800 ft E. and 500 ft N. of the S¼ corner. Altitude about 508 ft. Drilled by Bureau of Reclamation, 1947.

Materials	Thickness (feet)	Depth (feet)
Soil.	4	4
Sand, black, coarse . . .	30	34
Sand, compact.	25	59
Gravel, some dirt	13	72
Gravel, some dirt and boulders	8	80
Gravel, sand, and dirt. .	20	100
Sand, compact, gravel and dirt	10	110
Sand, layers, compact and loose.	10	120
Sand and dirt.	15	135
Gravel and dirt	10	145
Gravel and clay	3	148
Gravel, loose.	20	168
Gravel, some clay	5	173
Ashes, clay, some gravel.	12	185
Clay, yellow.	12	197
Clay, blue.	8	205
Clay, gray.	5	210
Gravel, clay, water-bearing	2	212
Sand and gravel, loose. .	2	214
Sand and gravel, compact	3	217
Sand, clay, and gravel. .	21	238

Casing: 8-inch.

10/29-21A1. Bureau of Reclamation, Drainage Obs. Well. About 50 ft S. and 29 ft W. of NE corner. Altitude 509.9 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, light gray, quartz grains, rounded, a few basaltic grains; also muscovite and biotite grains.	15	15
Sand, fine, calcareous, gray, varicolored quartz grains, subrounded, few large basaltic grains, muscovite and biotite.	20	35
Sand, medium, gray, granitic, varicolored, subrounded quartz grains, numerous grains of biotite, a few grains of muscovite.	15	50

Casing: 1½-inch, perforated and sand backed 5-50 ft.

10/29-21N1. Bureau of Reclamation, Drainage Obs. Well. About 60 ft N. and 39 ft E. of SW corner. Altitude 500.8 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, gray, large rounded quartz grains, transparent to translucent, numerous basaltic grains, a few grains of muscovite and biotite.	10	10
Sand, uniform, gray, varicolored subrounded quartz grains, dark basaltic grains, large flakes of muscovite.	20	30
Sand, medium, gray, rounded varicolored quartz grains, basaltic grains, micaceous	5	35
Sand, coarse, dark gray, numerous large rounded basaltic grains, a few varicolored quartz grains, some fine gravel particles .	15	50

Casing: 1½-inch, perforated and sand packed 5-50 ft.

10/29-25A1. Bureau of Reclamation, Esquatzel Obs. Well. About 179 ft S. and 388 ft W. of NE corner. Altitude 498.0 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, dark gray, chiefly altered basaltic grains, micaceous.	20	20
Sand, medium to silty with depth, calcareous, basaltic, gray. . . .	20	40
Sand, silty, calcareous, light tan, very fine quartz grains	25	65
Gravel and sand. Gravel is fine, granitic, basaltic, clean. Sand, coarse, subangular, granitic, basaltic, granular. . .	5	70
Sand, silty, clayey, light bluish, very fine grained	10	80
Sand, silty, fine to medium, few coarse grains quartz and basaltic minerals	20	100

Table 3.--Drillers' logs of wells--Con.

10/29-25A1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, silty, fine, light gray, quartz and basalt grains	20	120
Gravel, coarse, silty, well graded, granitic and basaltic	6	126
Gravel and caliche. Gravel fine, basaltic, clean, cemented with caliche and clay	4	130
Basalt, weathered, soft, gray	6	136

Casing: 4-inch, perforated 90-100 ft.

10/29-26A1. Bureau of Reclamation, Esquatzel Obs. Well. About 59 ft S. and 29 ft W of NE corner. Altitude 496.3 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, light gray; caliche grains	10	10
Sand and gravel. Sand, silty, fine, calcareous, gray, limonitic staining. Gravel fine, granite subrounded	5	15
Clay, silty, calcareous, light gray	10	25
Sand, fine to medium with depth, calcareous, micaceous, light tan, granite	30	55
Sand, medium, granitic, limonitic staining	2	57
Sand, medium, granitic, calcareous, limonitic staining	8	65
Clay, gravelly, sandy, calcareous, light green	6	71
Basalt, weathered, gray, secondary calcite crystals	5	76

Casing: 4-inch, perforated 32-52 ft.

10/29-28B1. Bureau of Reclamation. Esquatzel Obs. Well. About 58 ft S. and 24 ft E. of N¼ corner. Altitude 504.4 ft. Drilled by Smith & Sons, 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, granitic and basaltic, dark gray	5.5	5.5
Sand, silty, fine, granitic and basaltic, micaceous, calcareous, light tan	35.5	40

10/29-28B1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium to fine, granitic and basaltic, calcareous, gray	30	70
Sand, medium, basaltic, gray	35	105
Sand, coarse, basaltic, with fragments of caliche, dark gray	30	135
Sand, gravelly; sand, fine, silty, basaltic, dark gray, gravel, pebble, subrounded, basaltic	5	140
Sand, silty, clayey, gray	15	155
Sand, medium, clayey, granitic and basaltic, light tan	17	172

Casing: 4-inch, perforated 20-172

10/29-31R1. Bureau of Reclamation, Ditchrider Well. About 170 ft N. and 200 ft W. of SE corner. Altitude about 500 ft.

Materials	Thickness (feet)	Depth (feet)
Soil	4	4
Sand, coarse, black	30	34
Sand, compact	86	120
Gravel	30	150
Gravel, hardpan	15	165
Gravel	3	168
Gravel, sand and clay	13	181
Sand and clay	30	211
Clay and broken basalt (end of 8-inch casing)	8	219
Basalt, vesicular	14	233
Basalt, dense	8	241
Sandstone	12	253
Basalt, dense	41	294
Lava, red	11	305
Basalt, broken	2	307
Basalt, vesicular	6	313
Basalt, dense	2	315

Casing: 10- to 8-inch

10/30-4E1. Bureau of Reclamation, Esquatzel Obs. Well. About 837 ft N. of W¼ corner. Altitude 555.6 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous, micaceous, gray	10	10
Sand, gravelly, Sand, fine, calcareous, granitic basaltic, Gravel fine.	12	22

10/30-4E1—Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, medium, basaltic, subrounded, well graded	6	28
Basalt, gray, slightly vesicular, slightly weathered	2	30

Casing: 3-inch, perforated 20-30 ft.

10/30-5N1. Bureau of Reclamation, Drainage Obs. Well. About 29 ft N. of SW corner. Altitude 553.0 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, calcareous, gray, fragments of caliche, quartz grains, rounded, varicolored, muscovite, biotite.	5	5
Gravel and sand; gravel, fine, basaltic, rounded, with fragments of caliche; Sand, quartzitic, rounded, calcareous.	15	20
Gravel and sand. Gravel medium, rounded, fragments of caliche; sand, calcareous, dark gray.	15	35
Silt, calcareous, light yellow, biotite, quartz grains, varicolored, fine, a few coarse basaltic fragments.	5	40
Sand, fine to medium with depth, calcareous, yellow, quartz grains, fine, varicolored, a few coarse basaltic grains.	8	48
Sand, fine, gray with tinge of red, grains of caliche, few coarse grains basalt	3	51

10/30-8F1. Bureau of Reclamation, Esquatzel Obs. Well. About 2,000 ft E. of W¼ corner. Altitude 538.3 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, gravelly. Sand is medium, calcareous, dark gray. Gravel, fine subrounded, basaltic.	20	20
Sand, silty, fine; quartz grains, varicolored.	30	50

10/30-8F1—Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, calcareous, chiefly rounded quartz grains, few large basalt grains	10	60
Basalt, slightly weathered, gray.	4	64

Casing: 3-inch, perforated 24-44 ft.

10/30-8K1. Bureau of Reclamation, Esquatzel Obs. Well. About 190 ft S. and 2,987 ft E. of W¼ corner. Altitude 567.3 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, gravel, boulders. Sand is calcareous	10	10
Sand and gravel. Sand, fine to medium, calcareous, basaltic. Gravel, pebble, subtounded, chiefly basaltic.	45	55
Silt, calcareous, gray, fragments of caliche	30	85
Basalt, deeply weathered, soft, caliche in crevices, gray.	3	88
Basalt, weathered, medium hard, nonporphyritic, gray to light brown.	2	90

Casing: 6-inch, perforated 65-85 ft.

10/30-8M1. Bureau of Reclamation, Esquatzel Obs. Well. About 1,000 ft E. of W¼ corner. Altitude 527.7 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Gravel, sandy, silty, basaltic, cobble sized, caliche fragments.	20	20
Gravel, sandy, silty, basaltic, pebble to cobble, few quartz and caliche fragments.	6	26
Clay, silty, calcareous, compact, light yellow	20	46
Basalt, deeply weathered, caliche in crevices near surface, gray to black	7	53

Casing: 3-inch, perforated 20-53 ft.

10/30-8M2. Bureau of Reclamation, Esquatzel Obs. Well. About 3 ft S. of W ¼ corner. Altitude 546.7 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, granitic and basaltic	10	10
Sand and gravel. Sand is silty. Gravel, pebble, subrounded, basaltic	30	40
Sand and gravel. Sand, medium, silty, gray. Gravel, pebble to almost coarse sand, basaltic	5	45
Silty, slighty clayey, calcareous, gray	25	70
Basalt, gray, deeply weathered caliche in crevices	6	76

Casing: 3-inch, perforated 20-76.

10/30-18G1. J. L. DeForce. About 1,500 ft S. and 50 ft E. of the N¼ corner. Altitude about 539 ft. Drilled by N.C. Janssen, 1912.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel	50	50
Clay, white, or "hardpan"	25	75
Gravel, cemented (dug to 135 ft)	60	135
Basalt, hard	45	180
Shale, sandy, water at 185 ft.	25	205
Basalt, black, water at 280 and 342 ft	306	511
Shale	29	540
"Marl", red(basalt, vesicular?)	20	560
Basalt, black	100	660
"Lime", blue (?)	56½	716½

Casing: 10-inch.

10/30-18Q2. Bureau of Reclamation. Esquatzel Obs. Well. About 172 ft N. of S½ corner. Altitude 500.1 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Gravel, fine, basaltic, subrounded, dirty, gray	12	12
Gravel, fine, basaltic, subrounded, clean, black	6	18
Sand, gravelly, limonitic specks, subrounded, light tan	2	20
Sand, silty, sticky, fine, calcareous, light tan	20	40

10/30-18Q2--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, gray with a few pices of small rounded, basaltic gravel	32	72
Gravel, medium to coarse, well graded, basaltic	12	84
Basalt, slightly vesicular, and weathered, gray	5	89

Casing: 3-inch, perforated 20 39 ft.

10/30-33H1. Bureau of Reclamation. Esquatzel Obs. Well. About 297 ft N. and 30 ft W. of E½ corner. Altitude 548.1 ft. Drilled by Smith & Sons.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, granitic and basaltic, calcareous, gray	16	16
Sand, very fine grained, silty, granitic and basaltic, calcareous, micaceous, gray	54	70
Sand, medium, granitic and basaltic, calcareous, gray	10	80
Gravel, hard, compact, granitic and basaltic, no rounding shown, angular, splintery, quartz prominent	5	85
Silt, light tan when wet, gray when dry	4	89
Silt, clayey. light yellow	62	151
Basalt, brown, with caliche in weathered seams	5	156

Casing: 4-inch, perforated 20-151.

10/31-5D1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft S. and 1,292 ft E. of NW corner. Altitude 559.0 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silty, sandy, calcareous, light gray	10	10
Sand, silty. Sand, fine, calcareous, gray, very fine quartz and basalt grains	10	20
Sand, gravelly. Sand, fine, calcareous, a few calcite grains, light yellow to gray, chiefly quartz grains. Gravel, fine, basaltic, subrounded, few caliche fragments	20	40

Table 3.--Drillers' logs of wells--Con.

10/31-5D1—Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, medium, well graded, basaltic, clean, slightly altered	9	49
Basalt, gray, dense, slightly weathered	4	53

Casing: 3-inch, perforated 19-53 ft.

10/31-17B1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft S. of N¼ corner. Altitude 583.5 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium to fine, granular, rounded grains of quartz and basaltic minerals	10	10
Clay, silty, calcareous, light tan when wet, light gray when dry	2	12
Gravel, silty. Gravel, fine to medium subrounded, basaltic. Silt is light gray	60	72
Gravel, medium, well graded, clean, basaltic, subrounded	7	79
Basalt, broken, gray	5	84

Casing: 3-inch, perforated 20-84 ft.

10/31-29D1. Bureau of Reclamation. Esquatzel Obs. Well. About 29 ft S. and 29 ft E. of NW corner. Altitude 493.2 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, calcareous, light gray	20	20
Sand, medium, subrounded, light gray, quartz and basaltic grains	10	30
Sand, medium to coarse, silty, gray, quartz and basalt	20	50
Gravel, silty. Gravel, fine, basaltic, subrounded, a few pieces of caliche. Silt is calcareous, gray	20	70

10/31-29D1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, medium, basaltic, granitic and basaltic, light gray	10	80
Gravel, silty. Gravel is basaltic, medium, subrounded, dark. Silt is calcareous, light gray	17	97
Basalt, porphyritic, gray	6	103

Casing: 4-inch, perforated 20-103 ft.

10/31-34K1. Lyle Neff. About 800 ft S. and 1,800 ft W. of E¼ corner. Altitude about 795 ft. Drilled by Pasco Well Drilling Co. Log from memory by D. M. Bongard.

Materials	Thickness (feet)	Depth (feet)
"Surface" (gravel, etc.)	210	210
Basalt	90	300
Shale	60	360
"Lime" (tuff?) light colored	90	450
"Marl," red	10	460
"Slate" (shale?)	50	510
"Lime" (basalt?, shale?) blue	90	600

10/32-11N1. John Klundt. About 570 ft N. and 240 ft E. of SW¼ corner. Altitude about 842 ft. Drilled by N. C. Jannsen.

Materials	Thickness (feet)	Depth (feet)
Soil	4	4
Basalt	46	50

Casing: 6-inch.

10/32-29R1. D.C.W. Neff. About 400 ft W. and 600 ft N. of SE¼ corner. Altitude about 777 ft. Drilled by Emery Logston. Log by D.C.W. Neff from memory.

Materials	Thickness (feet)	Depth (feet)
Silt.	5	5
Gravel.	50	55
Basalt, water-bearing 570 to 575 ft. . . .	423	478

11/28-25R1. Bureau of Reclamation. About 5 ft W and 29 ft N. of SE corner. Altitude about 859.3 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy	3	3
Clay, silty, calcareous, light gray	17	20
Silt, micaceous, light brown, mostly light colored mineral grains . . .	15	35
Silt, with clay, calcareous, light brown, mostly light colored mineral grains.	10	45
Silt, micaceous, light brown, mostly light colored mineral grains	5	50

Casing: 6-inch, perforated.

11/29-2L1. Harold Shay. About 50 ft S. and 300 ft W of the center ¼ corner. Altitude about 927 ft. Drilled by Fred Hurd, 1909, log from memory.

Clay, white, and sand.	300	300
Basalt, blue, water at 420 ft (failed). . .	132	432
Basalt, gray, water in crevices at 438 to 440	27	459

11/29-5D1. Bureau of Reclamation. About 29 ft E. and 300 ft S. of NW corner. Altitude 917.4 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy; silt is light gray, sand is grains of basalt and caliche. .	10	10
Caliche with included basalt and quartz grains	11	21

11/29-5D1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty; quartz and basalt.	4	25
Caliche with basalt and quartz sand, silt with quartz grains	5	30
Silt with clay, calcareous, mostly quartz grains, light brown	10	40
Clay, silty, light brown	10	50

Casing: 1½-inch, perforated.

11/29-5N1. West 15 Domestic Water Co. About 100 ft N. and 50 ft. E. of SW corner. Altitude about 915 ft. Drilled by V. E. Dilley, 1957.

Topsoil.	18	18
Caliche.	4	22
Clay.	18	40
"Sandrock"	90	130
Sand.	6	136
Clay, brown.	16	152
Clay, gray	21	173
Clay, yellow	13	186
Sand, brown.	61	247
Clay, gray with sand . .	53	300
Clay, brown.	40	340
Clay, black, little gravel	20	360
Clay, gray, sand	15	375
Sand, brown.	25	400
Clay, brown.	12	412
"Sandrock," brown	28	440
"Sandrock," blue.	10	450
Sand and gravel, water at 576 ft.	135	585
Gravel and brown clay. .	5	590
Sand and gravel, water-bearing.	42	632
Clay with gravel	8	640
Basalt, black.	25	665
Basalt, porous, brown. .	15	680
Basalt, black.	55	735
Shale, green.	25	760
Clay, gray.	15	775
Basalt, black.	55	830
Basalt, gray.	30	860
Basalt, black.	76	936
Basalt, black, shale . .	34	970
Basalt, porous, black. .	10	980
Basalt, black.	140	1120

Casing: 8- 6-inch, perforated 576-640 ft.

11/29-9D1. Bureau of Reclamation. About 39 ft E. and 120 ft S. of NW corner. Altitude 923.2 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silted. . .	24	24
Caliche, sand and clay. Sand fine; basalt, quartz, green quartzite, feldspar, and mica.	11	35
Clay, sandy, calcareous, light gray; sand grains are basalt and quartz. . .	10	45
Silt with clay, calcareous, light brown, mostly light colored grains with a little basalt.	5	50

Casing: 1½-inch, perforated.

11/29-11D1. Bureau of Reclamation. About 50 ft E, and 39 ft S. of NW corner. Altitude 900.5 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	3	3
Caliche, with very little silt of basalt and light colored mineral grains	7	10
Silt, calcareous, micaceous, nearly all light colored mineral grains.	30	40
Clay, silty, calcareous, light gray.	10	50

Casing: 1½-inch, perforated.

11/29-14D1. Bureau of Reclamation. About 50 ft E, and 29 ft S. of NW corner. Altitude 911.9 ft. Drilled by Bach Drilling Co., 1953.

Sand, fine.	2	2
Caliche, with very little silt of basalt and light colored mineral grains.	8	10
Silt with clay, fine, light brown.	10	20
Clay, silty, calcareous, light brown.	15	35
Silt, calcareous, micaceous, fine, light brown	15	50

Casing: 1½-inch, perforated.

11/29-14R1. Bureau of Reclamation. Drainage Obs. Well. About 29 ft N., and 60 ft W. of SE corner. Altitude 781.0 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, moscovite prominent, gray to light tan; quartz grains, rounded varicolored, augite, hornblende.	35	35
Sand, medium calcareous, gray to light tan, quartz grains, rounded, varicolored, muscovite grains large, prominent, hornblende and augite.	10	45
Sand, medium, calcareous gray, few grains of caliche, quartz grains, rounded, varicolored, augite and hornblende more pronounced, muscovite, fine. . . .	5	50

Casing: 1½-inch, perforated 5-50 ft.

11/29-16A1. Sunset Domestic Water Assoc. About 600 ft W. and 100 ft S. of NE corner. Altitude about 916 ft. Drilled by Fred Hurd, 1910, to 811 ft, deepened 1957. (Log from driller's memory)

Clay, white; some gravel near base.	375	375
Basalt (small yield at 535 ft, main supply between 800 and 811 ft. . . .	436	811
Basalt.	129	940
Basalt, broken, water .	15	955
Basalt.	5	960

Casing: 6-inch.

Table 3.--Drillers' logs of wells--Con.

11/29-16N1. Bureau of Reclamation. About 39 ft E. and 60 ft N. of SW corner. Altitude 912.2 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous, micaceous, mostly light colored mineral grains with a few basalt and quartz grains near sand size.	25	25
Caliche, hard, fine sand of quartz, mica quartzite and feldspar.	11	36
Caliche, soft, layered, with silty, clay, and fine sand with basalt, mica, quartzite and feldspar	14	50

Casing: 1½-inch, perforated.

11/29-17N1. E. T. Churchman. About 1,300 ft E. and 500 ft N. of SW corner. Altitude about 891 ft. Drilled by Fred Hurd, 1911; log from memory.

Clay, some sand, very hard, caliche near surface.	400	400
Gravel, cemented.	75	475
Basalt, water-bearing 560 to 565 ft.	90	565

Casing: 6¼-inch.

11/29-19R1. Bureau of Reclamation. About 5 ft W. and 29 ft N. of SE corner. Altitute 875.7 ft. Drilled by Bach Drilling Co., 1953.

Clay, silty, calcareous, light gray.	10	10
Caliche, silty clay.	5	15
Silt, micaceous, light brown, mostly light colored mineral grains.	35	50

Casing: 1½-inch, perforated.

11/29-20N1. White Bluffs Water Assoc. About 500 ft E. of SW corner. Altitude about 890 ft. Drilled by George A. Huff, 1955.

Materials	Thickness (feet)	Depth (feet)
Topsoil, sandy.	6	6
Caliche and white sand.	19	25
"Sandrock"	95	120
Clay.	5	125
"Sandrock" and clay	35	160
Clay.	28	188
Sand.	20	208
Clay.	18	226
Clay, sandy	34	260
Sand.	60	320
Clay, sandy	10	330
Sand.	50	380
Clay.	37	417
Gravel.	140	557
Sand and gravel, water.	13	570
Sand.	3	573
Gravel and sand	37	610
Basalt, black.	57	667
Sand.	2	669
Basalt, black	241	910
Basalt, black, with shale, water.	6	916
Basalt, brown, water.	7	923
Basalt, porous, black	5	928
Basalt, black	8	936

Casing: 8-inch, open hole from 612 to 936 ft except the interval 667 to 669 ft which was cemented off.

11/29-24R1. Bureau of Reclamation. Drainage Obs. well. About 29 ft N. and 60 ft W. of SE corner. Altitude 685.9 ft. Drilled by Bach Drilling Co., 1954.

Sand, medium, gray; quartz grains, varicolored.	10	10
Sand, fine, muscovite, gray; numerous rounded quartz grains, varicolored, few grains augite and hornblende.	5	15
Sand, coarse, gray, quartz grains, rounded, varicolored, few grains of hornblende and augite	10	25

11/29-24R1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, coarse, calcareous, gray, fragments of fine, basaltic gravel, rounded; varicolored, hornblende and augite, muscovite. .	5	30
Gravel and caliche, coarse to fine, rounded, large fragments of caliche . .	5	35
Sand, medium, gray, quartz grains, rounded, varicolored, muscovite, augite, hornblende.	10	45
Sand, fine, light gray, quartz grains, rounded, varicolored, augite, hornblende, muscovite, also some rounded basaltic minerals.	5	50

Casing: 1½-inch, perforated 5-50 ft.

11/29-26D1. Bureau of Reclamation. Drainage Obs. Well. About 40 ft S. and 29 ft E. of NW corner. Altitude 830.8 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, dark gray, many grains of augite and hornblende, quartz grains, well rounded.	10	10
Sand, medium, gray, quartz grains, rounded, varicolored, many grains of hornblende and augite.	20	30
Sand, medium, gray, small grains caliche, quartz grains, rounded, varicolored, grains of hornblende, augite, and muscovite.	20	50

Casing: 1½-inch, perforated 5-50 ft.

11/29-31Q1. Clearwater Domestic Water Assoc. About 410 ft E. and 40 ft N. of S¼ corner. Altitude 862 ft. Drilled by Dan Dilley, 1956.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	4	4
Caliche.	2	6
"Sandrock".	90	96
Clay, brown.	39	135
Clay, gray.	35	170
Sand, brown.	30	200
Clay, gray.	15	215
Sand, brown.	75	290
Clay, gray.	20	310
Clay, brown	40	350
Clay, gray.	29	379
Sand, brown.	14	393
Clay, brown.	7	400
Gravel and sand. . . .	135	535
Gravel, sand, water. .	5	540
Basalt, porous, black.	1	541
Basalt, black.	141	592
Basalt, gray.	102	694
Basalt, porous, black, water.	22	716
Basalt, black, firm. .	9	725

Casing: 8-inch.

11/30-1Q1. Bureau of Reclamation. About 25 ft N. and 28 ft E. of S¼ corner. Altitude 624.8 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, granitic and basaltic, very fine, light gray	10	10
Sand, fine to medium with depth, calcareous, granitic and basaltic, light gray.	40	50
Gravel, medium, well graded, basaltic, subrounded.	3	53
Basalt, slightly weathered, gray.	5	58

Casing: 4-inch, perforated 20-58 ft.

Table 3.--Driller's logs of wells --Con.

11/30-4N1. Bureau of Reclamation, Drainage Obs. Well. About 60 ft N. and 29 ft E. of SW corner. Altitude 728.7 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, dark brown, quartz grains, rounded, varicolored, also hornblende and muscovite.	3	3
Silt and sand, light gray, quartz grains, rounded, clear to rose, micaceous	5	8
Gravel and sand. Gravel, fine, rounded, basaltic	2	10
Basalt, sandy, gray.	1	11
Basalt, slightly weathered, dark brown, highly feldspar	5	16

Casing: 1½-inch, perforated 5-16 ft.

11/30-5B1. Hope Valley Water Assoc. About 200 ft E. and 40 ft S. of N¼ corner. Altitude about 741 ft. Drilled by Earl Smith.

Materials	Thickness (feet)	Depth (feet)
Silt and sand.	21	21
Gravel and small boulders	6	27
Basalt, hard to soft	18	45
Basalt, soft.	3	48
Basalt, fractured, hard.	3	51
Basalt, medium to hard	4	55
"Crevice".	1	56
Basalt, hard.	22	78
Basalt, medium hard to soft	25	103
Basalt, soft, honeycombed	3	106
Basalt, hard.	3	109

Casing: 8-inch.

11/30-6N1. Bureau of Reclamation, Drainage Obs. Well. About 39 ft N. and 60 ft E. of SW corner. Altitude 851.7 ft. Drilled by Bach Drilling Co. 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, micaceous, light tan.	5	5
Sand, medium, micaceous, light gray.	5	10
Sand, fine, micaceous, light gray.	10	20
Sand and silt, micaceous, light gray.	10	30
Silt, calcareous, light gray.	5	35

11/30-6N1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt and clay, calcareous, micaceous, light gray.	10	45
Silt and sand, calcareous, light gray.	5	50

Casing: 1½-inch, perforated 5-50 ft.

11/30-8N1. Bureau of Reclamation, Drainage Obs. Well. About 29 ft N. and 5 ft E of SW corner. Altitude 747.3 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, granitic, micaceous, dark gray.	5	5
Silt and clay, sticky, calcareous, light gray.	5	10
Clay, silt, sticky, light gray.	5	15
Silt and sand, light gray	5	20
Sand, fine, granitic, light gray.	5	25
Sand, medium, light granitic, light gray.	5	30
Silt and sand, micaceous, light gray.	5	35
Sand, fine, micaceous, light yellow.	5	40
Silt and clay, sticky, micaceous, light gray	5	45
Silt, light gray.	5	50

Casing: 1½-inch, perforated 5-50 ft.

11/30-9R1. Bureau of Reclamation, Drainage Obs. Well. About 29 ft N. of SE corner. Altitude 721.1 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, dark gray; quartz grains, rounded, varicolored, muscovite, hornblende, augite.	4	4
Sand, fine, gray; well rounded, clear quartz grains, muscovite, fine.	2	6
Gravel, well graded, rounded, gray to black.	5	11
Gravel, slightly weathered, basaltic, dirty, gray	6	17

11/30-9R1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse, dark gray; rounded, quartz grains, basaltic minerals, biotite, muscovite.	10	27
Sand, coarse, small pebbles, rounded, dark gray, muscovite, rounded varicolored quartz grains.	15	42
Silt and sand, fine with fine gravel, rounded; rounded quartz grains. .	5	47
Silt and sand, fine with medium gravel, fragments of caliche, silt is calcareous, a few angular quartz grains.	3	50

Casing: 1½-inch, perforated 5-50 ft.

11/30-11B2. City of Eltopia. About 1,400 ft W. and 500 ft S. of NE corner. Altitude about 578 ft. Log from memory.

Sand, fine with small gravel.	20	20
Clay.	35	55
Gravel 2- to 4-inch, coarse sand.	63	118

Casing: 6-inch.

11/30-11C1. Bureau of Reclamation, Eltopia Well. About 2,000 ft W. of Eltopia. Altitude about 700 ft. Drilled by Bach Drilling Co., 1951.

Silt, sandy, brown. . .	38	38
Basalt, black.	85	123
Basalt, hard, gray . . .	77	200
Basalt, black.	14	214
Basalt, gray.	15	229
Basalt, soft, brown. . .	62	291
Basalt, porous, brown. .	18	309
Basalt, medium hard, black	103	412
Basalt, softer, black. .	25	437
Basalt, with hard streaks, black.	15	452
Basalt, hard.	163	615

Casing: 12- 10- inch.

11/30-11G1. Mrs. Alda P. Robinson. About 1,350 ft S. and 450 ft E. of N¼ corner. Altitude about 589 ft. Drilled by Fred Hurd.

Materials	Thickness (feet)	Depth (feet)
Clay.	18	18
Basalt, with hard and soft zones.	374	392

Casing: 6-inch.

11/30-14F1. Norman Thorsen. About 700 ft N. and 1,400 ft E. of W¼ corner. Altitude about 580 ft. Drilled by Fred Hurd.

Sand and silt.	80	80
Gravel and boulders, very clean.	82	162

Casing: 6-inch.

11/30-21R1. Norman Thorsen. About 80 ft N. and 120 ft W. of SE corner. Altitude about 566 ft. Drilled by Fred Hurd, 1917.

Clay.	30	30
Basalt, water-bearing	315	345

Casing: 6-inch.

11/30-24B1. O. P. Hailey. About 250 ft S. and 1,100 ft E. of N¼ corner. Altitude about 605 ft. Drilled by Fred Hurd.

Gravel, few large boulders	90	90
Basalt, water in crevices in blue basalt from 310-315	225	315

Casing: 6-inch.

11/30-24D1. Bureau of Reclamation. About 60 ft S. and 29 ft E. of NW corner. Altitude 644.1 ft. Drilled by Nelson Drilling Co., 1954.

Sand, fine; angular grains of quartz and basaltic minerals.	10	10
Gravel and sand. Gravel, coarse, well graded, basaltic; subrounded. Sand, medium, calcareous, dark gray, angular quartz and basalt	2	12

11/30-24D1--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and sand. Gravel, fine, basaltic, subrounded. Sand, fine, few coarse, angular basaltic grains.	30	32
Sand, fine, gray, chiefly varicolored quartz.	5	37
Sand and gravel. Sand, fine, quartzitic, gray. Gravel, medium, subrounded, basaltic, well graded.	6	43
Gravel, coarse, subrounded, basaltic, well graded	2	45
Basalt, dense, slightly weathered, gray	6	51

Casing: 3-inch, perforated 20-51 ft.

11/30-34L1. Guy Moore. About 400 ft W. and 500 ft S of the center ¼ corner. Altitude about 626 ft. Drilled by Fred Hurd. Memory log.

Materials	Thickness (feet)	Depth (feet)
Sand	7	7
Gravel	8	15
Basalt	380	395
Basalt, a little water	5	400
Clay, "putty"	40	440
Basalt	70	510
Basalt, very hard, creviced, blue-black, good supply of water	5	515
Basalt	11	526

Casing: 6-inch.

11/31-30D1. B. G. Hailey. About 150 ft E. and 200 ft S. of NW corner. Altitude about 602 ft. Drilled by Fred Hurd, 1912. Memory log.

Materials	Thickness (feet)	Depth (feet)
Silt, light sand	7	7
Gravel and sand	133	140
Clay	20	160
Gravel	10	170
Gravel, water	10	180
Basalt	4	184

12/28-12H1. L. L. Bailey. About 100 ft W. and 150 ft N. of E¼ corner. Altitude about 616 ft. Drilled by Adams in 1907. Memory log.

Materials	Thickness (feet)	Depth (feet)
Soil	10	10
Gravel	20	30
Clay, and sand	267	297
Basalt, water at 230 ft, poor; good supply at 450 ft	153	450

Casing: 7-,6-inch.

12/28-23R1. Bureau of Reclamation. About 0.6 mile north of Old Ringold School. Altitude 371.2 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, clayey, micaceous, calcareous, light gray	8	8
Gravel, sandy, cemented, silty, granitic and basaltic	20	28
Sand, medium to coarse, quartz and basalt, micaceous	22	50

No casing.

12/28-24N1. Charles Higley. About 1,000 ft E. and 1,200 ft. N. of the SW corner. Altitude about 396 ft. Drilled by N. C. Jannsen.

Materials	Thickness (feet)	Depth (feet)
Sand	18	18
Gravel, cemented	67	85
Clay	20	105
Clay and gravel	22	127
Gravel	28	155
Boulders and gravel	6	161
Clay, black	8	169
Clay, blue	9	178
Clay, black	18	196
Sand	9	205
"Rock" (basalt), black	29	234
"Rock" (basalt), black and shale	6	240
Shale	17	257
Basalt, black	151	408
Basalt, blue	63	471
Clay and gravel	16	487
Shale	9	496
Basalt	39	535
Basalt, blue	2	537

12/28-24N1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt	2	539
Shale	10	549
Shale, black	3	552
Shale, blue	12	564
Basalt, blue	103	667
Basalt, porous (water level rose 2 ft)	10	677
Basalt, blue	15	692
Shale, blue	19	711
"Sandstone," gray	9	720
Basalt, blue	35	755

12/28-24N3. Bureau of Reclamation. About 0.6 mile north of old Ringold School. Altitude 377.5 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, micaceous, calcareous, gray	20	20
Sand, fine, silty, calcareous, gray, few pieces of pebble sized gravel	10	30
Silt, clayey, calcareous, light gray	10	40
Sand, fine to coarse; quartz and basaltic grains, subrounded	4	44
Sand and gravel. Sand, fine to coarse, quartzitic, muscovite. Gravel, pebble, granitic and basaltic, subrounded	6	50

No casing.

12/28-24N4. Bureau of Reclamation. About 0.6 mile north of old Ringold School. Altitude 383.2 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, micaceous, calcareous, gray	10	10
Sand, medium, granitic, contains pea sized basaltic gravel	6	16
Sand and gravel. Sand, medium to fine, granitic and basaltic, calcareous, Gravel, pebble, subrounded, granitic and basaltic, fragments of caliche	6	22

12/28-24N4--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, pebble, sandy, granitic and basaltic, small amount of clay	13	35
Silt, clayey, calcareous, light gray	10	45
Sand, medium, chiefly quartz grains, varicolored	5	50

No casing.

12/28-24N5. Bureau of Reclamation. About 0.6 mile north of old Ringold School. Altitude 386.5 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, fine, micaceous, calcareous, gray	6	6
Sand and gravel. Sand is medium, calcareous. Gravel is pea to pebble, chiefly basaltic, with caliche pieces	10	16
Gravel, cemented with sand. Gravel is pea to pebble, chiefly granitic, subrounded. Sand, fine, silty, clayey, calcareous.	10	26
Sand and gravel. Sand, coarse to fine. clayey, granitic, basaltic, angular. Gravel, granitic and basaltic, hard.	16	42
Silt, clayey, calcareous, light gray	6	48
Sand, fine, silty, chiefly white quartz grains, subrounded	2	50

12/28-24N6. Bureau of Reclamation. About 0.6 mile north of old Ringold School. Altitude 391.9 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, uniform, chiefly quartz grains, varicolored, micaceous, calcarerous	8	8
Gravel and sand. Gravel is pebble to cobble, basaltic. Sand is coarse to fine, silty, calcareous, basaltic	8	16
Sand, coarse to fine, with pebble-sized gravel	6	22

Table 3.--Drillers' logs of wells--Con.

12/28-24N6--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, sandy, silty, clayey, Gravel is pebble, granitic, basaltic. Sand, coarse to fine, gray.	28	50

No casing.

12/28-24N7. Bureau of Reclamation. About 96 ft N. and 652 ft E. of SW corner. Altitude 380.1 ft. Drilled by Nelson Well Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, granitic, light colored.	10	10
Sand, silty, little pea gravel.	11	21
Sand and gravel. "Hard drilling," driller's report.	4	25
Sand, fine, pea gravel, clayey, compact.	3	28
Silt, clayey, light gray	10	38
Clay (Driller's report), sample at 45 ft contained sand and gravel.	7	45
Sand and gravel, granitic and basaltic, chiefly pea to coarse gravel, very pervious.	10	55

Casing: 6-inch, perforated 21-28 and 45-54 ft.

12/28-24N8. Bureau of Reclamation. About 129 ft N. and 363 ft E. of SW corner. Altitude 374.5 ft. Drilled by Nelson Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Silt sand, calcareous, chiefly light colored mineral grains.	23	23
Sand and gravel, granitic and basaltic, pervious. Gravel, pea to nut . . .	6	29
Silt, sandy, slightly clayey.	13	42
Sand and gravel. Sand, coarse to fine. Gravel, pea to nut.	10	52

Casing: 6-inch, perforated 22-29 and 42-51 ft.

12/28-24P1. Bureau of Reclamation. About 351 ft N. and 1,384 ft E. of SW corner. Altitude 394.2 ft. Drilled by Nelson Well Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, fine, granitic, micaceous. .	6	6
Sand and gravel. (Reported hard drilling) Granitic and basaltic.	32	38
Sand and gravel, clean granitic and basaltic, clean	2	40
Sand, slightly clayey, granitic and basaltic.	4	44
Gravel, granitic, basaltic, coarse, water.	4	48
Sand, gravel, clay, "hard drilling".	15	63
Gravel, fine to coarse, granitic, basaltic, water	6	69
Gravel, fine to coarse, sandy; clay(?). . . .	4	73

Casing: 6-inch, perforated 44-48 and 63-73 ft.

12/28-25R1. Bureau of Reclamation. About 29 ft W. and 29 ft N. of SE corner. Altitude 859.8 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt and clay, calcareous, light brown; silt grains are mostly quartz with minor mica and dark mineral grains.	10	10
Clay, silty, silt grains are mostly quartz. . .	10	20
Silt and clay, light gray, silt grains are mostly quartz.	5	25
Silt, fine, micaceous, light brown; mostly quartz with a few dark mineral grains	15	40
Silt, sandy micaceous, light brown; mostly quartz with a few dark mineral grains.	10	50

Casing: 1½-inch, perforated.

12/29-1G1. Ronald V. Heilig. About 160 ft N. and 1,220 ft E. of center of section. Altitude about 884 ft. Drilled by Floyd Haden, 1956.

Materials	Thickness (feet)	Depth (feet)
Clay.	190	190
Basalt, porous.	6	196
Basalt, hard.	177	373
Rock, porous, water . .	14	387
Basalt, hard.	95	482

Casing: 6-inch.

12/29-1M1. Bureau of Reclamation. About 100 ft S. and 29 ft E. of W¼ corner. Altitude 733.2 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, silty, light gray, chiefly quartz. .	15	15
Sand, fine, calcareous, light gray, few caliche grains.	10	25
Silt, sandy, clayey, calcareous, dark gray. . .	25	50

Casing: 1½-inch, perforated 4-50 ft.

12/29-2R2. P. C. Rindero. About 250 ft. N. and 400 ft W. of SE corner. Altitude about 790 ft. Drilled by B. L. Price, 1958.

Clay.	155	155
Basalt.	145	300

Casing: 6-inch

12/29-3R1. Bureau of Reclamation. About 455 ft N. and 29 ft W. of SE corner. Altitude 740.0 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, calcareous, micaceous, muscovite, light gray.	10	10
Silty, sandy, calcareous, micaceous, gray.	10	20
Sand, fine, chiefly quartz grains, varicolored, micaceous, muscovite and biotite.	30	50

Casing: 1½-inch, perforated 4-50 ft.

12/29-5A1. Bureau of Reclamation. About 50 ft S. and 29 ft W. of NE corner. Altitude 587.3 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, gray, chiefly quartz grains.	2	2
Gravel and boulders, sandy	5	7
Basalt, soft, brown . . .	3	10
Basalt, medium hard, black	4	14

Casing: 1½-inch, perforated 5-14 ft.

12/29-5D1. Jim Reynolds. About 600 ft S. and 100 ft E. of NW corner. Altitude about 610 ft. Drilled by Stampey, 1957.

Soil, sandy.	60	60
Sand, some soil.	22	82
Clay, gray, trace sand. .	14	96
Clay, brown, trace sand .	32	128
Clay, brown, some gravel.	21	149
Rocks, caliche and clay .	1	150
Caliche.	2	152
Clay, some sand.	2	154
Basalt, black, decomposed, water.	2	156
Basalt, medium hard . . .	3	159
Basalt, hard.	3	162
Basalt, broken.	1	163
Basalt, hard.	6	169
Basalt, medium hard . . .	2	171
Basalt, porous, water . .	8	179
Basalt, medium hard . . .	1	180

Casing: 6-inch.

12/29-6H1. Joe Roads. About 1,660 ft S. and 900 ft W. of NE corner. Altitude about 604 ft. Drilled by Floyd Haden, 1956.

Sand.	160	160
Basalt, crevice at 210 ft	65	225

Casing: 6-inch.

12/29-6K1. Richard Rehfeld. About 300 ft S. and 1000 ft E. of center of section. Altitude about 598 ft. Drilled by L.J.Stampe, 1957.

Soil, sandy.	2	2
Clay, brown.	28	30
Soil, sandy, brown . . .	5	35
Clay, brown.	25	60

12/29-6K1--Continued.

Materials	Thickness (feet)	Depth (feet)
Soil, sandy.	20	80
Clay, gray.	11	91
Clay, brown	74	165
Basalt, broken, clay . .	2	167
Basalt, broken, medium hard, water.	5	172
Basalt, very hard. . . .	11	183
Basalt, medium hard. . .	1	184
Basalt, hard.	3	187
Basalt, very hard. . . .	5	192
Basalt, broken, clay . .	2	194
Basalt, hard.	1	195
Basalt, medium hard. . .	1	196
Basalt, very hard. . . .	20	216
Basalt, medium hard. . .	2	218
Basalt, very hard. . . .	3	221
Basalt, fractured, clay.	2	223
Basalt, decomposed, red clay or ash.	3	226
Basalt, medium hard. . .	2	228
Basalt, decomposed, clay	2	230
Basalt, medium hard. . .	1	231
Basalt, decomposed, trace clay.	2	233
Basalt, hard, fractured.	1	234
Basalt, porous, water. .	3	237

Casing: 6-inch.

12/29-7B1. --Waldon. About 100 ft S. and 480 ft E. of N¼ corner. Altitude about 580 ft. Drilled by Nelson Drilling Co., 1958

Silt and clay.	161	161
Basalt.	81	242

Casing: 6-inch.

12/29-7P1. Bureau of Reclamation. About 19 ft N. and 870 ft W. of S¼ corner. Altitude 561.6 ft. Drilled by Bach Drilling Co., 1955.

Sand, silty, fine, chiefly varicolored quartz grains	4	4
Basalt, soft, brown to black	4	8
Basalt, medium hard, brown to black.	4	12

Casing: 1½-inch, perforated 5-12 ft.

12/29-8B1. Bureau of Reclamation. About 39 ft S. and 1100 ft E. of N¼ corner. Altitude 570.6 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, light gray.	4	4
Gravel, pea to nut, sandy, silty, calcareous. . . .	6	10
Sand, medium, black, uniform, noncalcareous.	7	17
Gravel and boulders. Silty, calcareous.	28	45
Silt, sandy, calcareous, light gray.	5	50

Casing: 1½-inch, perforated 4-50 ft.

12/29-11M1. Edwin Dana. About 2,060 ft N. and 80 ft E. of SW corner. Altitude about 710 ft. Drilled by L. J. Stampey, 1957.

Clay, brown.	80	80
Sand, fine, silty; some clay	8	88
Sand, silty.	7	95
Clay, gray; fine gravel and sand.	7	102
Clay, gray	32	134
Clay, gray, some sand. . .	30	164
Basalt, medium hard, fractured.	6	170
Basalt, decomposed(caving)	2	172
Basalt.	1	173
Basalt, decomposed	4	177
Basalt, medium hard. . . .	2	179
Basalt, decomposed (caving)	5	184
Basalt, medium hard. . . .	4	188
Basalt, rotten, volcanic ash, sluffing badly . . .	12	200
Basalt, rotten, purple clay	1	201
Basalt, rotten, dirty water	1	202
Basalt, porous,less sluffing	5	207
Basalt, hard, little sluffing	3	210
Basalt, medium hard,no sluffing.	2	212

Casing: 6-inch.

12/29-15A1. Bureau of Reclamation. About 29 ft S. and 25 ft W. of NE corner. Altitude 745.9 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, caliche fragments, light gray.	10	10
Gravel and clay, basaltic .	10	20

12/29-15A1—Continued.

Materials	Thickness (feet)	Depth (feet)
Sand, medium, cemented, light tan; quartz grains, muscovite, biotite. . .	30	50

Casing: 1½-inch, perforated 5-50 ft.

12/29-15D1. Bureau of Reclamation. About 29 ft S. and 400 ft E. of NW corner. Altitude 717.6 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, uniform, chiefly varicolored quartz grains, muscovite, biotite	40	40
Sand, fine, silty. . . .	10	50

Casing: 1½-inch, perforated 5-50 ft.

12/29-16N1. Bureau of Reclamation. About 29 ft N. and 250 ft E. of SW corner. Altitude 671.7 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, light gray.	5	5
Gravel, silty, basaltic, pea gravel.	35	40
Sand, fine, silty, chiefly quartz grains. . . .	10	50

Casing: 1½-inch, perforated 5-50 ft.

12/29-22Q1. C.C.Braydon. About 500 ft E. and 300 ft N. of S¼ corner. Altitude about 916 ft. Drilled by Marion Moore.

Materials	Thickness (feet)	Depth (feet)
Sand.	130	130
"Quicksand".	40	170
Clay, blue.	255	425
Basalt.	25	450

12/29-23H1. Bert Riddle. About 670 ft S. and 370 ft W. of NE corner. Altitude about 948 ft. Drilled by Marion Moore.

Materials	Thickness (feet)	Depth (feet)
Clay.	370	370
Basalt.	130	500

Casing: 6-inch.

12/29-25D1. Bureau of Reclamation. About 60 ft E. and 29 ft S. of the NW corner. Altitude 927.1 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, light gray.	20	20
Sand, fine, silty, firm, light gray.	10	30
Silt, sandy, light yellow.	20	50

Casing: 1½-inch, perforated 5-50 ft.

12/29-26A2. C. C. Braydon. About 1,000 ft S. and 100 ft W. of NE corner. Altitude about 922 ft. Drilled by H. Wysong and Fred Hurd.

Materials	Thickness (feet)	Depth (feet)
Sand.	20	20
Clay.	130	150
Sand.	10	160
Shale.	165	325
Rock, porous, harder at bottom (probably basalt)	78	403
Clay.	10	413
Mud.	7	420
Basalt.	53	473
Basalt, blue (water in crevice between 1,060 and 1,090 ft)	617	1090

12/29-27A1. Bureau of Reclamation. 60 ft S. and 29 ft W. of NE corner. Altitude 928.9 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand and caliche. A few rounded quartz grains, few basaltic grains, micaceous.	4	4
Caliche, basalt fragments	4	8
Sand, medium, very calcareous, brown; quartz grains, vari-colored, muscovite, hornblende and augite grains, minute.	22	30
Sand, fine, brown; chiefly rounded quartz grains, varicolored, micaceous, few grains of hornblende and augite.	20	50

Casing: 1½-inch, perforated 5-50 ft.

Table 3.—Drillers' logs of wells--Con.

12/29-28F1. Bureau of Reclamation. About 105 ft N. and 635 ft W. of center of section. Altitude about 914 ft. Drilled by Bach Drilling Co. 1952.

Materials	Thickness (feet)	Depth (feet)
Sand, fine silty.	5	5
Sand, gravel, boulders. Caliche and basalt . . .	9	14
Marl, calcareous, cemented with silt-sized particles of quartz, feldspar, basalt and mica.	76	90
Clay, buff when dry, yellow when wet, silt-size basalt grains.	60	150
Sand, fine, micaceous, calcareous, some clay. . .	6	156
Clay, sandy, fine grains of basalt and mica. . .	44	200
Clay, sandy, brown. . .	20	220
Sand, medium to fine, micaceous with quartz and feldspar grains. . . .	20	240
Sand, medium, micaceous with quartz and feldspar grains.	20	260
Clay.	60	320
Sand, slightly cemented, micaceous, brown; fine basalt and granite fragments.	22	342
Clay, compact, greenish gray.	18	360
Sand, fine, gray; grains are mostly angular quartz with minor amounts of mica, feldspar and basalt . .	40	400
Gravel and sand. Quartzite, granite, and basalt. . .	5	405
Clay, compact, gray; becomes silty at 440 ft	45	450
Basalt, soft, weathered, calcareous, black . . .	30	480
Basalt, soft, weathered, brown. Clay, brown and gray.	19	499
Basalt, moderately hard, fresh, black.	47	546
Basalt dense, broken . .	2	548
Basalt, moderately hard, fresh, black.	42	590

12/29-28F1--Continued.

Materials	Thickness (feet)	Depth (feet)
Clay and basalt. Clay is montronite type, gray, red and brown. Basalt is deeply weathered, vesicular, black. Much calcite. . .	40	630
Basalt, moderately hard, black.	49	679
Basalt, hard, black . . .	20	699

Casing: 10-inch.

12/29-30J1. Bureau of Reclamation. About 400 ft S. and 100 ft W. of E¼ corner. Altitude about 884 ft. Drilled by Fred Hurd.

Clay and sand.	350	350
Gravel, cemented and boulders (small supply of water above basalt, cased off). . . .	199	549
Basalt, water at 915 ft.	385	934

Casing:7-inch.

12/29-32R1. Ringold Domestic Water Co. About 1,200 ft N. of SE corner. Altitude about 916 ft. Drilled by V. E. Dilley.

Topsoil.	4	4
Caliche.	10	14
"Sandrock"	66	80
Clay.	15	95
Sand, heavy	10	105
"Sandrock"	15	120
Clay.	40	160
"Sandrock"	25	185
Clay, brown.	20	205
"Sandrock"	59	264
Clay, blue	6	270
"Sandrock"	21	291
Clay, brown.	5	296
"Sandrock"	54	350
Shale, blue.	19	369
Clay, brown.	16	385
"Sandrock", blue	45	430
Clay, brown.	20	450
"Sandrock.	30	480
Gravel.	4	484
Gravel and sand.	30	514
Clay, pink.	6	520
"Sandrock".	3	523

12/29-32R1--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, brown.	19	542
Basalt, black.	43	585
Basalt, black, porous, water.	8	593
Basalt, black.	29	622
Basalt, gray.	12	634
Basalt, black, porous.	5	639
Basalt, black.	6	645
Basalt, gray	2	647
Basalt, black.	173	820
Basalt, green, little shale.	13	833
Basalt, black	7	840
Basalt, black, with shale	14	854
Basalt, black	3	857
Basalt, black, with shale	17	874
Basalt, black.	38	912
Basalt, black, porous.	8	920
Basalt, black	12	932

Casing: 8-inch.

12/29-33D1. Bureau of Reclamation. About 39 ft E. and 100 ft S. of NW corner. Altitude 912.5 ft. Drilled by Bach Drilling Co., 1953.

Silt.	3	3
Sand and gravel. Gravel is caliche and basalt; sand, basalt and quartz grains	7	10
Silt, sandy; silt, light brown, sand, fine, basalt and quartz grains. . . .	10	20
Clay, silty, light gray .	5	25
Clay, calcareous, light gray.	25	50

Casing: 1½-inch, perforated.

12/29-34B1. North 16 Water Assoc. About 175 ft S. and 1,320 ft E. of N¼ corner. Altitude about 925 ft. Drilled by Earl Smith.

Topsoil.	5	5
Caliche	5	10
Sand, red, packed. . . .	7	17
Clay, yellow, and sand .	14	31
Sand, gray	49	80
Sand, gray, brown, water	5	85
No record	56	141
Sand, gray, gravel at 156 ft.	23	164

12/29-34B1--Continued.

Materials	Thickness (feet)	Depth (feet)
Sand, gray and some clay	8	172
Sand, fine, brown. . . .	5	177
Clay, yellow and sand. .	15	192
Clay, yellow.	12	204
Sand, gray, gravel at 212 ft.	9	213
Gravel, fine, gray sand, yellow clay.	28	241
Clay, hard, yellow . . .	7	248
Clay, yellow, gray sand.	13	261
Clay, yellow	11	272
Clay, medium hard, blue.	43	315
Clay, hard, blue	7	322
Clay, blue, brown. . . .	4	326
Sand, hard, brown; brown clay.	14	340
Clay, blue.	50	390
Basalt, alternating hard and soft layers, water 440-460 ft	140	530
Basalt, with red marl, porous and shaly. . . .	25	555

Casing:8-inch.

12/29-36D1. Bureau of Reclamation. About 40 ft S. and 29 ft E. of NW corner. Altitude 885.0 ft. Drilled by Bach Drilling Co., 1954.

Silt and sand, light gray, granitic.	10	10
Sand, medium, calcareous, gray.	10	20
Sand, medium gray; a few fragments of caliche. .	10	30
Sand, medium, light gray to light yellow, calcareous	15	45
Sand, medium, granitic, light gray to light yellow. .	5	50

Casing: 1½-inch, perforated 5-50 ft.

12/30-1M1. Bureau of Reclamation. About 870 ft S. and 362 ft E. of W¼ corner. Altitude 677.0 ft. Drilled by Nelson Drilling Co., 1954.

Sand, silty, coarse, angular, basaltic.	10	10
Gravel, silty, coarse, sub-rounded, well graded, basaltic; silt, slightly calcareous.	10	20

Table 3.--Drillers' logs of wells--Con.

12/30-1M1--Continued.

Materials	Thickness (feet)	Depth (feet)
Gravel, silty, medium, well graded, basaltic. . . .	20	40
Gravel, silty, fine, basaltic.	10	50
Gravel, coarse, silty. .	10	60
Gravel, silty, fine, basaltic.	10	70
Gravel, medium, clean, basaltic.	10	80
Basalt, hard, dense, gray, slightly weathered. . .	6	86

Casing: 3-inch, perforated 20-86 ft.

12/30-4R1. Bureau of Reclamation. About 29 ft N. and 70 ft W. of SE corner. Altitude 762.3 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, light brown; quartz grains, rounded, muscovite.	5	5
Silt, sandy, brown; quartz grains, rounded; some hornblende and augite. . .	1	6
Basalt, weathered, brown	4	10
Basalt and sand, basalt, weathered, brown; sand, brown; quartz grains rounded	1	11

Casing: 1½-inch, perforated 5-11 ft.

12/30-5B1. Bureau of Reclamation. About 380 ft S. and 1,263 ft E. of N¼ corner. Altitude 914.4 ft. Drilled by Durand & Son, 1955-56.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	9	9
Clay, silty, yellow to light yellow with depth . . .	41	50
Clay, slightly silty, light yellow to bluish gray .	85	135
Clay, firm, sticky, greenish blue.	6	141
Basalt, medium hard, black	11	152
Basalt, medium hard, black to brown	4	156
Basalt, fractured, black to brown.	24	180
Basalt, vesicular, weathered, brown.	4	184
Clay, gray to white. . .	6	190
Basalt, medium hard, brown	15	205

12/30-5B1--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, medium hard, black	15	220
Basalt, very hard, gray.	8	228
Basalt, weathered, brown to red, layers of clay, hard, reddish.	46	274
Basalt, hard to very hard, gray.	27	301
Basalt, broken, gray; clay, white to gray.	52	353
Basalt, medium hard, gray; with minor clay, gray. .	37	390
Basalt, broken, black . .	20	410
Basalt, hard to very hard, black to gray.	48	458

Casing: 12-inch.

12/30-16R1. Bureau of Reclamation. About 50 ft N. and 39 ft W. of SE corner. Altitude 815.2 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, light brown; quartz grains, muscovite. . . .	3	3
Gravel, fine, rounded, dark gray; chiefly basaltic minerals, a few quartz grains and muscovite grains . .	1	4
Gravel, coarse, basaltic, dark; coatings of secondary calcite.	1	5
Basalt, fresh, hard, black	5	10

Casing: 1½-inch, perforated 5-10 ft.

12/30-18D1. Bureau of Reclamation. About 50 ft E. and 29 ft S. of the NW corner. Altitude 962.9 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, dark gray. .	5	5
Caliche, broken.	20	25
Sand, very fine, light yellow, silty at top to fine grained with depth	26	51

Casing: 1½-inch, perforated 6-51 ft.

Table 3.--Drillers' logs of wells--Con.

12/30-23B1. Bureau of Reclamation. About 226 ft S. and 1,089 ft E. of N¼ corner. Altitude 638.2 ft. Drilled by Nelson Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel. Sand is silty, light gray. Gravel, medium, well graded, basaltic.	10	10
Sand and gravel. Sand is coarse, angular, black. Gravel, fine, basaltic, subrounded.	20	30
Gravel, medium, basaltic, well graded, clean.	10	40
Gravel, silty, fine, basaltic, subrounded	10	50
Gravel, medium, basaltic, well graded, clean.	9	59
Basalt, slightly weathered, dense, hard, gray	5	64

Casing: 3-inch, perforated 20-64 ft.

12/30-24F1. O. A. Beckwith. About 1,200 ft W. and 400 ft N. of the center ¼ corner. Altitude about 735 ft. Drilled by Fred Hurd.

Clay and very little gravel	90	90
"Rock"-"Slate".	11	101
"Asphaltum" (turned slush black, wouldn't burn).	1	102
Basalt.	298	400
Basalt, water.	5	405

12/30-30H1. C. M. Jones. About 200 ft N. and 150 ft W. of E¼ corner. Altitude about 742 ft. Drilled by Fred Hurd.

Sand.	20	20
Basalt, some water at 200ft	465	485
Basalt, creviced, blue-black, water.	7	492

Casing: 6-inch.

12/30-30R1. Bureau of Reclamation. 3 ft N. and 29 ft W. of SE corner. Altitude 726.4 ft. Drilled by Bach Drilling CO., 1954.

Sand, medium, granitic, light gray.	5	5
Sand, fine, light gray.	5	10
Basalt, dark brown; feldspar phenocrysts.	2	12
Basalt, slightly weathered, dark brown; few secondary calcite crystals.	8	20

Casing: 1½-inch, perforated 5-20 ft.

12/30-35A1. Bureau of Reclamation. About 173 ft S. and 1,451 ft E. of N¼ corner. Altitude 618.7 ft. Drilled by Nelson Drilling Co., 1954.

Sand and gravel. Sand, coarse, gray, fragments of caliche. Gravel coarse, poorly graded, basaltic, subrounded with calcareous coatings.	10	10
Sand and gravel. Sand, coarse, basaltic, silty, clayey, fragments of caliche. Gravel, fine, basaltic, subrounded	30	40
Sand and gravel Sand, silty, basaltic. Gravel is fine, basaltic, rounded.	20	60
Gravel and sand Gravel is basaltic, cemented, medium, well graded. Sand, medium, silty, gray.	20	80
Gravel, silty, fine, basaltic.	10	90
Sand, gravelly, coarse, angular, very black, with pieces of fine weathered gravel.	13	103
Basalt, hard, dense, slightly weathered, black.	5	108

Casing: 4-inch, perforated 20-100 ft.

12/32-22H1. Ludwig Grassl. About 900 ft W. and 350 ft N. of the E¼ corner. Altitude about 1,130 ft. Drilled by Fred Hurd.

Silt and clay.	70	70
Basalt.	79	149
Basalt, some water.	1	150
Basalt.	682	832
Basalt, creviced, blue, water.	8	840

Casing: 6-inch.

Table 3.—Drillers' logs of wells—Con.

13/28-13N1. Bureau of Reclamation. About 60 ft E. and 70 ft N. of SW corner. Altitude 952.5 ft. Drilled by Durand & Son, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, micaceous, light colored mineral grains; a few grains of basalt	12	12
Clay, soft, yellow. . . .	29	41
Clay, soft, brown	59	100
Clay, gray to light green	40	140
Silt, sandy, mostly quartz	5	145
Clay, yellow.	30	175
Sand, subangular, light yellow, quartzitic . . .	5	180
Clay, yellow.	25	205
Clay, gray.	20	225
Silt, sandy yellow, calcareous, mostly quartz.	20	245
Clay, yellowish gray. . .	30	275
Clay, with grains of silt, bluish gray.	20	295
Clay, silty, light gray .	15	310
Clay, soft, bluish gray .	63	373
Clay, soft, greenish gray	20	393
Clay, soft, light greenish gray.	17	410
Clay, soft, calcareous, green	40	450
Clay, sandy; coarse grains of quartz and basalt. .	20	470
Clay, sandy, greenish gray	15	485
Silt, sandy, mostly quartz, dark gray.	40	525
Silt, fine; clay, calcareous, greenish gray.	20	545
Silt, fine, with clay, calcareous, brownish gray .	13	558
Basalt, broken, vesicular, dark.	4	562
Basalt, broken, deeply weathered, red, vesicular . .	3	565
Basalt, vesicular, deeply weathered, with nontronite, brown.	20	585
Basalt, moderately hard, fresh, dense, dark . . .	21	606
Basalt, medium hard, dense, black.	15	620
Basalt, hard, dense, jointed, black.	35	655
Basalt, slightly weathered, broken.	50	705

13/28-13N1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, micaceous, mostly quartz.	14	719
Basalt, moderately weathered, black; red nontronite.	21	740
Basalt, dense jointed, black.	21	761
Basalt, weathered, gray; gray nontronite. . . .	17	778
Basalt, slightly weathered, gray.	20	798
Basalt, dense, jointed, black.	50	848
Basalt, weathered, gray; nontronite, light green	16	864
Basalt, dense, jointed, black.	20	884
Basalt, hard, dense, jointed.	20	904
Basalt, medium hard, dense, jointed	36	940
Basalt, dense, hard, slightly weathered.	10	950
Basalt, hard, dense, jointed, black	20	970
Basalt, gray; some fine basaltic sand, angular, slightly weathered . .	7	977
Clay, very sticky, dark gray.	13	990
Clay, pieces of cemented sand, light green; sand chiefly light colored quartz, micaceous. . .	20	1010
Silt with clay, quartzitic, very angular; muscovite and biotite present. .	18	1028
Basalt, hard, dense, gray	83	1111
Sand, coarse, gray, chiefly quartzitic, rounded, transparent to translucent; a few pieces of fine gravel, water-bearing.	6	1117
Basalt, hard, dense, black	2	1119

Casing: 12-10-inch.

13/29-20N1. L. L. Bailie. About 150 ft N. and 240 ft E. of SW corner. Altitude about 982 ft. Drilled by Allen and Steck.

Materials	Thickness (feet)	Depth (feet)
Clay and boulders. . . .	520	520
Basalt, black.	67	587

Casing: 6-inch.

13/29-22P1. Bureau of Reclamation. About 39 ft N. and 35 ft W. of S¼ corner. Altitude 621.4 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, silty, with caliche fragments. . .	2	2
Boulders, gravel and sand, fine, calcareous. . . .	5	7
Basalt, medium hard, black	6	13

Casing: 1½-inch, perforated 5-13 ft.

13/29-26B1. Bureau of Reclamation. About 80 ft S. and 45 ft E. of N¼ corner. Altitude 738.55 ft. Drilled by V.E. Dilley, 1954.

Sand and silt, windblown	4	4
Gravel, coarse, basaltic, well graded, subrounded.	15	19
Basalt, scoriaceous, soft, dark brown.	16	35
Basalt, slightly weathered, medium hard, dark gray .	20	55
Basalt, hard, dense, black	30	85
Basalt, soft, deeply weathered, light brown. . . .	10	95
Basalt, medium hard, broken, slightly weathered, dark gray.	10	105
Basalt, jointed, black. .	10	115
Basalt, medium hard, broken, slightly weathered, dark gray.	10	125
Basalt, medium hard, slightly weathered, dark gray . .	30	155
Basalt, open jointed, black, water.	6	161
Basalt, hard, dense, black	14	175

Casing: 10-inch.

13/29-28B1. L.L. Bailie. About 1,040 ft S. and 600 ft E of the N¼ corner. Altitude about 579 ft. Drilled by J. X. Dvorak, 1950.

Materials	Thickness (feet)	Depth (feet)
Gravel, basaltic(dug)	34	34
Basalt.	6	40
Basalt, honeycombed, yellow	25	65
Gravel, pea.	10	75
Clay and gravel, pea. .	10	85
Basalt, broken, black .	13	98
Basalt, hard, black . .	2	100
Basalt, broken,creviced	70	170
Basalt, honeycombed, and shale, blue.	20	190
Basalt, very hard, gray	125	315
Basalt, (presumably). .	225	540

13/29-33A1. Bureau of Reclamation. About 200 ft W. and 29 ft S. of NE corner. Altitude 608.2 ft. Drilled by Bach Drilling Co., 1955.

Gravel and boulders, slightly sandy, basaltic, calcareous.	30	30
Gravel, boulders and broken basalt	5	35
Basalt, hard, black. . .	4	39

Casing: 1½-inch, perforated 4-40 ft.

13/29-36D1. Bureau of Reclamation. About 50 ft S. and 29 ft E. of NW corner. Altitude 770.8 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, calcareous, silty, light gray. . .	10	10
Clay, silty, light gray with yellow streaks. .	10	20
Sand, fine to medium, light gray, chiefly quartzitic, subangular. . .	30	50

Casing: 1½-inch, perforated 5-50 ft.

13/30-14D1. Bureau of Reclamation. About 29 ft E. and 75 ft S. of the NW corner. Altitude 942.5 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty.	4	4
Basalt, hard, black . .	6	10

Casing: 1½-inch, perforated 5-10 ft.

13/30-15R1. Bureau of Reclamation. About 29 ft W. and 75 ft N. of SE corner. Altitude 928.2 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	9	9
Basalt, hard, black. .	6	15

Casing: 1½-inch, perforated 5-15 ft.

13/30-16G1. E. Leslie Crawford. About 45 ft N. and 80 ft E. of center of section. Altitude about 900 ft. Drilled by J. H. Rettig, 1957.

Soil.	3	3
Gravel.	21	24
Basalt, broken. . . .	14	38
Sand, clayey.	22	60

Casing: 6-inch.

13/30-20A1. Bureau of Reclamation. About 29 ft W. and 300 ft S. of NE corner. Altitude 877.7 ft. Drilled by Bach Drilling Co., 1953.

Silt and gravel, silt is fine, light colored mineral grains, gravel is basalt	5	5
Sand and gravel, sand is mostly basalt with some quartz, gravel is basalt	13	18
Clay, light brown. . . .	12	30
Silt, fine, micaceous. .	20	50

Casing: 1½-inch, perforated.

13/30-22R1. M. M. Poe. About 175 ft W. and 200 ft N. of the SE section corner. Altitude about 939 ft. Log by owner from memory.

Soil.	4	4
Gravel.	12	16
Basalt, water at 80 ft .	344	360
Basalt, cavernous, water	4	364

Casing: 6-inch.

13/30-22R2. Bureau of Reclamation. About 1,275 ft W and 39 ft N. of the SE corner. Altitude 926.2 ft. Drilled by Bach Drilling Co., 1956.

Sand, fine to coarse, granitic and basaltic .	4	4

13/30-22R2--Continued.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel, sand, fine to coarse, gray; gravel pea to nut, basaltic.	10	14
Gravel, basaltic . . .	3	17
Basalt, hard, black to brown.	6	23

Casing: 1½-inch, perforated 5-23 ft.

13/30-25D1. Ray Bailie. About 1,100 ft S. and 660 ft E. of NW corner. Altitude about 678 ft. Drilled by F.A. Haden, 1951.

Loam, silty, light brown	26	26
Clay, silty, light gray to blue.	25	51
Gravel, coarse, basaltic, water.	45	96
Clay, blue.	8	104
Gravel, coarse, basaltic, water.	4	108
Clay and coarse gravel	19	127
Gravel, coarse, and sand, water.	15	142

Casing: 10-inch, perforated 70-96, 104-108, and 128-135 ft.

13/30-25M4. City of Mesa. Near north edge of Mesa. Altitude about 675 ft. Drilled by Smith & Haden, 1953.

Silt.	5	5
Sand and yellow clay. .	40	45
Gravel, cemented, small supply of water. . . .	15	60
Basalt, fractured . . .	2	62
Basalt, medium hard . .	1	63

Casing: 12-inch

13/30-26G1. M. M. Poe. About 1,200 ft E and 500 ft N. of the center ¼ corner. Altitude about 674 ft. Dug.

Soil, sand and clay. .	27	27
Gravel, pebble.	3	30

13/30-26G3. M. M. Poe. About 200 ft N. and 1,480 ft W of E¼ corner. Altitude about 675 ft. Drilled by Smith & Haden, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt.	16	16
Gravel and boulders .	24	40
Boulders.	at	40

Casing: 8-inch.

13/30-26H1. M. M. Poe. About 820 ft W. and 300 ft N. of the E¼ corner. Altitude about 675 ft. Drilled by Smith & Haden, 1948.

Soil.	29	29
Clay, white and blue.	31	60
Gravel, some quicksand	19	79

Casing: 10-inch.

13/30-26H2. M. M. Poe. About 700 ft westerly from grain elevator at Mesa. Altitude about 675 ft. Drilled by Smith & Haden, 1948.

Silt, heavy, slightly plastic, light brown or gray	25	25
Clay, silty, dark brown to black.	10	35
Clay, heavy, blue, sandwiching thin strata of sand, water	5	40
Clay, heavy, blue. . . .	25	65
Gravel, sandy, water . .	12	77
Basalt, water 84-86 ft .	10	87
Sand, fine to coarse, water	2+	89+

Casing: 10-inch, perforated 65-77 and 84-86 ft.

13/30-26J2. M. M. Poe. About 350 ft S. and 800 ft W. of E¼ corner. Altitude about 674 ft. Drilled by Smith & Haden, 1952.

Loam, silty, tan to gray	26	26
Clay, silty, dark gray, blue	31	57
Gravel, basaltic, water at 37 ft.	47	104

Casing: 10-inch, perforated 60-100ft

13/30-26J3. City of Mesa. About 625 ft S. and 500 ft W. of E¼ corner. Altitude about 675 ft. Drilled by Smith & Hayden, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt.	30	30
Clay, silty	12	42
Gravel, 1-inch, cemented, in silty clay.	3	45
Gravel, 1-inch, sandy, clean, water.	6	51
Gravel, 1-inch, sandy, water	9	60
Gravel, sandy.	10	70
Gravel, 1-inch, silty, sandy, slightly cemented. . .	5	75
Gravel, sandy, clean, water	20	95
Gravel, ½-inch, sandy .	5	100

Casing: 12-inch.

13/30-26K1. City of Mesa. About 1,200 ft N. and 160 ft S. of SE corner. Altitude about 672 ft. Drilled by Smith & Haden, 1953.

Silt.	5	5
Sand and clay, yellow .	40	45
Gravel, cemented, and clay blue.	20	65
Sand, fine, water . . .	33	98
Basalt, fractured . . .	1	99
Basalt, medium hard . .	21	120

Casing: 12-inch.

13/30-28D1. Bureau of Reclamation. About 19 ft E. and 60 ft S. of NW corner. Altitude 891.9 ft. Drilled by Bach Drilling Co., 1953.

Gravel and silt, calcareous; gravel is basalt; silt is light-colored mineral grains.	5	5
Gravel, calcareous, basalt fragments.	16	21
Gravel and boulders, silty; gravel, mostly basalt, silt is fine, dark gray	9	30
Gravel, fine.	2	32
Clay, light brown . . .	3	35
Clay, silty, light brown	5	40
Silt, fine, light gray .	10	50

Casing: 12-inch, perforated.

13/30-28Q1. Bureau of Reclamation. About 1,000 ft W. and 29 ft N. of SE corner. Altitude 882.6 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Clay, silty, calcareous, light brown	10	10
Clay, a few silt grains, light gray	20	30
Basalt, broken, slightly weathered, calcite and montronite in vesicles	5	35

Casing: 1½-inch, perforated.

13/30-29A1. Block 12 Water Assoc. About 90 ft S. and 78 ft W. of NE corner. Altitude about 888 ft. Drilled by V. E. Dilley.

Soil	1	1
Gravel	42	43
Clay, brown	22	65
Basalt, broken, brown	3	68
Basalt, brown	80	148
Basalt, broken, black, with clay	6	154
Basalt, brown	67	221
Basalt, black, water dropped 25 ft	4	225
Basalt, brown, with clay	20	245
Basalt, brown	15	260
Basalt, brown, with clay	10	275
Sand	12	287
Basalt, brown, with clay	10	297
Basalt, brown, shale, sand	7	304
Basalt, black	100	404
Basalt, porous, black, water	3	407
Basalt, black	43	450
Basalt, porous, black	4	454
Basalt, black	86	540

Casing 6- 8-inch, perforated 181-191.

13/30-30A1. Basin Water Assoc. About 950 ft W. of NE corner. Altitude 772 ft. Drilled to 195 ft by Haden, 1956; to 350 ft by Price, 1957.

Silt	13	13
Gravel, silty	3	16
Gravel, clean, basaltic, water	17	33
Basalt, fairly soft, altered	5	38

13/30-30A1--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, dense, fairly hard	20	58
Basalt, soft, vesicular, water	5	63
Basalt, dense, hard	12	75
Shale, blue, clayey texture	12	87
Basalt, fairly soft	8	95
Basalt, vesicular, water	11	106
Basalt, dense, hard	84	190
Basalt, broken, soft	5	195
No record	155	350

13/30-30D1. Bureau of Reclamation. About 39 ft E. and 60 ft S. of NW corner. Altitude 773.8 ft. Drilled by Bach Drilling Co., 1953.

Sand and gravel, with silt, calcareous, coarse grains are basalt, silt is light-colored mineral grains	12	12
Clay and very weathered basalt, reddish brown	3	15
Basalt, broken, slightly weathered	5	20

Casing: 1½-inch, perforated.

13/30-30H1. Bureau of Reclamation. About 1,050 ft N. and 29 ft W. of E¼ corner. Altitude 856.5 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine; caliche fragments	10	10
Silt, light yellow	10	20
Sand, fine, micaceous	10	30
Silt, clayey, light yellow	10	40
Clay, slightly silty	10	50

Casing: 1½-inch, perforated 5-50 ft.

13/30-30N1. Bureau of Reclamation. About 39 ft E. and 50 ft N. of SW corner. Altitude 763.9 ft. Drilled by Bach Drilling Co., 1953.

Gravel and silt; gravel is basalt; silt, light colored mineral grains	8	8
Basalt, broken; calcite	5	13

Casing: 1½-inch, perforated.

13/30-31R1. Bureau of Reclamation. About 300 ft W. and 84 ft N. of the SE corner. Altitude 956.3 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Silt, clayey, light yellow	5	5
Sand, fine, firm, silty, light yellow	10	15
Sand, very fine to fine, quartz, augite, hornblende and muscovite grains, light yellow	36	51

Casing: 1½-inch, perforated 5-51 ft.

13/30-32A2. Bureau of Reclamation. About 29 ft S. and 575 ft W. of NE corner. Altitude 883.00 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, calcareous, micaceous, light gray, muscovite	6	6
Gravel and boulders, loosely cemented with caliche, basaltic	10	16
Clay, slightly silty, chalky appearance	20	36
Silty, clayey, light yellow	14	50

Casing: 1½-inch, perforated 5-51 ft.

13/30-36C1. Bureau of Reclamation. About 1,270 ft S. and 1,000 ft W. of N¼ corner. Altitude about 757 ft. Drilled by Ralph Cassel, 1950.

Topsoil	1	1
Gravel, coarse, loose	35	36
Boulders	7	43
Gravel, loose	10	53
Gravel, loose, small	25	78
Gravel and boulders	9	87
Basalt, broken	34	121
Gravel, cemented, clayey, well rounded basalt, small size	18	139
Basalt, black	14	153
Basalt, hard, black	22	175
Basalt, black	48	223
Basalt, vesicular	11	234
Basalt, black	106	340

Casing: 8-inch.

13/32-1J1. Connell Sand & Gravel Co. About 100 ft S. and 750 ft W. of E¼ corner.

Altitude about 765 ft. Drilled by H. D. Joy., 1954.

Material	Thickness (feet)	Depth (feet)
Gravel	53	53
Basalt, brown, water	48	101
Basalt, black	75	176
Basalt, soft, gray	19	195
Basalt, gray	16	211
Basalt, soft, gray, water	4	215
Basalt, gray	5	220

Casing: 12-inch.

13/32-1L1. Bureau of Reclamation. About 111 ft S. and 1,456 ft E. of W¼ corner. Altitude 764.6 ft. Drilled by Nelson Drilling Co., 1954.

Silt, sandy, light brown	5	5
Silt, light brown, few clay particles, bluish black	50	55
Clay, sticky, bluish black; few silt particles, light brown	10	65
Clay, sticky, bluish black	55	120
Clay, silty, light tan to bluish black	5	125

Casing: 4-inch, perforated 50-125 ft.

13/32-3H1. Bureau of Reclamation. About 2,164 ft S and 275 ft W. of NE corner. Altitude 777.7 ft. Drilled by Nelson Drilling Co., 1954.

Sand, silty, light brown	10	10
Sand, gravelly, light tan	5	15
Sand and gravel. Sand, coarse, clayey, basaltic. Gravel, fine, basaltic	51	66
Basalt, dark, dense, slightly weathered	5	71

Casing: 4-inch, perforated 50-66 ft.

13/32-5A1. Bureau of Reclamation. About 230 ft S. and 49 ft W. of NE corner. Altitude 777.6 ft. Drilled by Nelson Drilling Co., 1954.

Silt, clayey, light tan	10	10
Sand, coarse, basaltic; fine basaltic gravel	3	13

13/32-5A1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, clayey, light tan	2	15
Sand, medium, clayey, basaltic; fine basaltic gravel	52	67
Basalt, dense, hard, dark, slightly weathered	6	73

Casing: 4-inch, perforated 49-66 ft.

13/32-27N1. Dorsey Elgin. About 200 ft E. and 30 ft N. of the SW corner. Altitude about 1,155 ft.

"Dirt" (silt and fine sand	80	80
Gravel	4	84
Basalt	226	310
Basalt; water	13	323

14/23-2A1. Priest Rapids Development Co., About 320 ft S. and 370 ft W. of NE corner. Altitude about 776 ft. Drilled by Barnett & Barnett, 1956.

Sand and gravel	154	154
Clay	27	181
Gravel	44	225
Gravel, sandy, cemented	84	309
Shale, sandy, water at 318 ft	53	362
Sand and gravel, cemented	60	422
Clay, brown	7	429
Basalt, broken	30	459
Clay, blue	27	486
Sand and gravel, cemented	48	534
Clay and shale	36	570
Basalt, gray; water at 613 ft	133	703
Basalt, hard, gray	5	708
Basalt, soft; water	9	717
Basalt, hard, gray	19	736
Clay, blue	9	745
Basalt, gray, water between clay and rock	4	749
Clay, blue	11	760
Basalt, gray	4	764

Casing: 12- 10-inch.

14/23-36L1. Merritt Chapman & Scott. About 150 ft S. and 850 ft W. of center of section. Altitude about 550 ft. Drilled by Durand & Son, 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, dune	3	3
Gravel, hard, cemented	4	7
Gravel, small boulders	18	25
Gravel, coarse, boulders	5	30
Gravel, coarse, cobbles	19	49
Gravel, hard, cemented	13	62
Gravel, coarse	43	105
Gravel, cemented	9	114
Gravel, coarse, large cobbles	28	142
Basalt	4	146
Basalt, brown; green clay	16	162
Basalt, hard, black	5	167
Basalt, brown; green clay	11	178
Basalt, hard, black	17	195
Clay, blue	2	197
Clay, green	2	199
Basalt, broken, black; green and blue clay seams	23	222
Basalt, hard, black	108	330
Basalt, hard, black; many crevices	17	347
Basalt, hard, black	3	350

Casing: 20-inch, perforated 145-169 ft.

14/24-24M1. Corps of Engineers. About 1,430 ft N. and 630 ft E. of SW corner. Altitude about 845 ft. Drilled by R.J. Strasser Drilling Co., 1953.

Topsoil	4	4
Sand, loose, black	33	37
Sand, loose; gravel, cobbles	13	50
Sand, brown	2	52
Gravel, coarse, boulders	91	143
Clay, sand, gravel	17	160
Sand, brown	9	169
Sand, dune	48	217
Sand, with clay binder	77	294
Sand, gravel	46	340
Clay, gravel, silt, sand	74	414
Sand and gravel; water 430 to 435 ft	44	458
Sand, gravel, clay	54	512
Sand and gravel, very heavy with sand; water	4	516
Sand, clay, and gravel	25	541

Table 3.--Drillers' logs of wells--Con.

14/24-24M1--Continued.

Materials	Thickness (feet)	Depth (feet)
Clay, sandy.	9	550
Sand, brown, clay and gravel.	67	617
Sand, gray, clay, gravel.	28	645
Sand, brown and gray, clay and gravel.	28	673
Sand and gravel; water	2	675
Sand, clay, gravel; water	25	700

Casing: 16-inch.

14/25-1D1. Corps of Engineers. About 900 ft S. and 1,050 ft E. of NW corner. Altitude about 660 ft. Drilled by R.J. Strasser Drilling Co., 1952.

Topsoil.	12	12
Caliche.	9	21
Gravel.	41	62
Clay.	10	72
Clay and shale	15	87
Shale, hard.	8	95
Shale and clay	17	112
Shale, sandy, red.	71	183
Sand, hard layers; water	12	195
Clay, sandy; water	54	249
Caliche.	3	252
Sand and clay.	29	281
Sand.	12	293
Clay, white.	26	319
Clay, brown.	12	331
Sand.	6	337
Shale.	18	355
Basalt	10	365
Basalt, with shale layers	6	371
Basalt, hard, gray	88	459
Basalt, broken.	29	488
Basalt, hard, gray-crevices	137	625
Basalt, broken; water.	5	630
Clay, brown.	5	635
Basalt, clay layer; water	10	645
Clay.	13	658
Basalt, clay.	5	663
Basalt with crevices.	12	675
Basalt.	5	680
Basalt with clay layers	5	685
Basalt.	63	748
Basalt, porous.	5	753
Basalt with clay layers	45	798
Clay.	15	813
Sand and yellow clay.	46	859

14/25-1D1--Continued.

Materials	Thickness (feet)	Depth (feet)
Clay, yellow and sand	21	880
Shale, blue.	9	889
Shale, blue, and sand	6	895
Sand; water.	5	900
Sand with basalt layers	5	905
Basalt.	19	924
Rock, porous, white; water	14	938

14/25-21B1. Corps of Engineers. About 100 ft S. and 200 ft E. of NW corner. Altitude about 640 ft. Drilled by R.J. Strasser Drilling Co., 1953.

Sand, gray.	26	26
Clay, yellow.	1	27
Sand, fine, gray.	50	77
Sand, clay.	70	147
Sand, gray.	6	153
Sand and clay	40	193
Gravel, sand and clay	21	214
Gravel, cemented.	13	227
Sand, clay and gravel	18	245
Gravel, cemented.	15	260
Gravel; water.	8	268
Clay, brown and gray; water.	22	290
Clay, yellow.	10	300
Clay, gray.	10	310
Clay, sand and gravel	33	343
Sand and gravel; water	27	370
Gravel, cemented.	37	407
Clay, yellow.	22	429
Clay, yellow; gravel.	14	443
Clay, yellow.	8	451
Shale, blue.	29	480
Clay, sandy, yellow	6	486
Sand and clay	20	506
Sand, gravel and clay	6	512
Sand and gravel; water	3	515
Gravel, cemented.	5	520
Basalt, decomposed.	2	522

Casing: 24-inch, perforated 270-288, 345-363, 512-518.

14/25-28El. Corps of Engineers. About 650 ft E. and 100 ft N. of W¼ corner. Altitude about 860 ft. Drilled by R.J.Strasser Drilling Co.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse.	16	16
Sand, coarse; gravel.	17	33
Sand.	13	46
Sand, gravel.	5	51
Sand with clay binder	18	69
Sand, packed; gravel.	54	123
Sand with clay binder	19	142
Sand and gravel.	7	149
Sand, dirty, clay binder	57	206
Sand, packed.	9	215
Sand, dirty.	4	219
Sand and gravel	8	227
Sand with clay binder	9	236
Sand, packed.	13	249
Sand, dirty	82	331
Sand and some gravel.	10	341
Sand, fine, brown	13	354
Sand, some large gravel	15	369
Sand and gravel.	27	396
Sand, dirty.	21	417
Sand, some gravel	6	423
Sand with gravel to 6 in.	62	485
Sand and gravel; water	26	511
Gravel with clay binder	27	538
Gravel, cemented.	9	547
Sand and gravel; water.	22	569
Sand, gravel and clay	8	577
Gravel, boulders and clay	16	593
Sand and gravel.	14	607
Gravel, large; sand and silt.	9	616
Gravel, cemented.	7	623
Gravel and clay.	25	648

Casing: 24- 20-inch, perforated 492-503, 550-560, 593-600 ft.

14/25-31M1. Corps of Engineers. About 650 ft S. and 1,100 ft E. of W¼ corner. Altitude about 774 ft. Drilled by R. J. Strasser, 1953.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse, loose, black	37	37
Sand, gravel, cobbles	13	50
Sand, brown.	2	52
Sand, gravelly with some binder.	11	63
Gravel, coarse, boulders	62	125

14/25-31M1--Continued.

Materials	Thickness (feet)	Depth (feet)
Gravel, with some clay	5	130
Clay, sand, and gravel	30	160
Sand, brown.	9	169
Sand, coarse, black.	37	206
Sand, hard sandstone streaks	13	219
Sand, clay binder.	76	295
Sand, basalt gravel.	25	320
Clay, sand, gravel, some talus, cemented.	24	344
Clay, silt, sand and gravel, cemented; boulder at 368'70		414
Sand, clay and gravel; water from 429-440 ft	82	496
Sand, gravel and clay.	16	512
Sand, gravelly; water.	4	516
Sand, clay and gravel.	25	541
Clay, sandy.	9	550
Sand, clay and gravel.	40	590
Sand, brown; clay and gravel.	27	617
Sand, gray; clay and gravel.	28	645
Sand, brown and gray with clay and gravel	27	672
Sand, gravelly; water.	2	674
Gravel, sandy, clay.	4	678
Sand, clay and gravel.	21	699

Casing: 20- 16-inch, perforated 429-437, 512-516, 670-678 ft.

14/27-24C1. Corps of Engineers. About 225 ft W. and 220 ft S. of N¼ corner. Altitude about 862 ft. Drilled by R.J.Strasser Drilling Co. 1953.

Materials	Thickness (feet)	Depth (feet)
Clay, silt, topsoil.	3	3
Caliche.	6	9
Clay, light brown.	174	183
Clay, sandy, brown	22	205
Clay, blue and brown	12	217
Clay, sticky, blue	18	235
Clay, green; scattered shale.	23	258
Clay, blue.	12	270
Clay, sandy	4	274
Clay, blue and shale	4	278
Clay, green and black.	13	291
Clay, blue.	12	303
Clay, gray.	26	329

Table 3.--Drillers' logs of wells--Con.

14/27-24C1. --Continued

Materials	Thickness (feet)	Depth (feet)
Clay, hard, grayish green	7	336
Clay, gray-green shale mixed	9	345
Clay, dense, blue; shale	52	397
Clay, brown	19	416
Clay, blue and brown	22	438
Silt, brown; clay	42	480
Clay, brown and limestone	93	573
Gravel, pea with clay	7	580
Sandstone	9	589
Basalt, hard, gray	12	601
Basalt, soft, red	24	625
Basalt, porous, red and gray	6	631
Basalt, black	17	648
Basalt, gray	49	697
Shale, green, talus rock	4	701
"Hardpan", sand, clay with hard streaks, brown and blue	29	730
Basalt, black	40	770
Basalt, hard, gray	34	804
Basalt, broken, black	6	810
Basalt, extremely hard, gray	26	836
Basalt, broken, gray	5	841
Basalt, black	1	842
Basalt, hard, gray	16	858
Basalt, broken, hard, gray	2	860
Basalt, hard, gray	14	874
Rock, porous, red; clay	9	883
Basalt, porous, black	144	1027
Basalt, black	55	1082
Basalt, hard, black	64	1146
Basalt, hard, gray	19	1165
Clay, blue	26	1191
Basalt, gray	4	1195
Basalt, black	33	1228
Basalt, hard, gray	18	1246
Basalt, porous, black	15	1261
Conglomerate	15	1276
Clay, blue	7	1283
Conglomerate, rotted wood	8	1291
Basalt, black	55	1346
Basalt, hard, black	25	1371
Basalt, porous, black	22	1393
Basalt, black	3	1396

Casing: 20-, 16-, 12-, 10-, 8-inch, perforated 1,370-1,393 ft.

14/29-1D1. Bureau of Reclamation. About 50 ft E. and 29 ft S. of NW¼ corner. Altitude 875.8 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, brown	3	3
Clay, light brown	7	10
Clay, sandy, black	10	20
Clay, soft, brown	20	40
Basalt, weathered, with caliche fragments and clay	10	50

Casing: 1½-inch, perforated 37-52 ft.

14/29-3D1. Bureau of Reclamation. About 43 ft E. and 29 ft S. of NW¼ corner. Altitude 843.0 ft. Drilled by C. H. Stanbery, 1952.

Topsoil	2	2
Sand and clay, soft, brown	18	20
Clay, soft, brown	30	50

14/29-9A1. U. S. Govt. About 500 ft S. and 1,300 ft E. of NE¼ corner. Altitude about 1,275 ft. Drilled by Durand & Son, 1950.

Sand	6	6
Gravel, cemented	24	30
Basalt, broken	27	57
Basalt, badly broken	7	64
Basalt, broken	126	190
Clay and broken rock	8	198
Basalt, broken	22	220
Basalt, hard	5	225
Basalt	15	240

(continued next page)

14/29-9A1—Continued.

Materials	Thickness (feet)	Depth (feet)
Clay, brown.	13	253
Basalt.	106	359
Basalt, broken	36	395
Basalt, gray (hole caving, 10 sacks cement used)	72	467
Basalt, broken.	73	540
Clay.	2	542
Basalt.	3	545
Clay and gravel	2	547
Basalt.	12	559
Basalt, broken	31	590
Clay(?) some water, about 1 gpm water raised 65 ft	7	597
Basalt, hard	13	610
Basalt, hard, gray, crevice	100	710
Basalt, very broken. . .	25	735
Clay and rock.	10	745
Basalt, hard, gray . . .	73	818
Basalt, broken, softer .	27	845
Basalt, loose, gravel and sand crevices; water rose to 542 ft.	15	860

Casing: 16- 12-inch.

14/29-11B1. Bureau of Reclamation. About 170 ft S. and 90 ft E. of N¼ corner. Altitude about 785 ft. Drilled by Smith & Haden, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, mostly quartz; minor amount of mica and basalt	15	15
Clay, plastic when wet, hard when dry, calcareous, light gray.	30	45
Sand, fine; quartz and basalt.	10	55
Clay, plastic when wet, hard when dry, calcareous, black when fresh, blue-gray after exposure to air; strong odor.	25	80
Clay, silty, calcareous, friable, dark gray. . . .	5	85
Basalt, very broken; fine sand, quartz and mica in the sand and silt	7	92

Casing: 6-inch.

14/29-11B2. Bureau of Reclamation. About 290 ft S. and 50 ft E. of N¼ corner. Altitude about 784 ft. Drilled by Smith & Haden, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, mostly quartz; minor mica and basalt. . . .	15	15
Clay, plastic when wet, hard when dry, calcareous, light gray.	20	35
Sand, silty, mostly quartz; minor mica and basalt	10	45
Clay, plastic when wet, hard when dry, calcareous, black when fresh, blue-gray after exposure to air. . . .	11	56
Sand and gravel; sand, coarse, mostly quartz, gravel is dense basalt. . . .	5	61

Casing: 6-inch.

14/29-11C1. Bureau of Reclamation. About 500 ft S. and 25 ft W. of N¼ corner. Altitude about 787 ft. Drilled by Smith & Haden, 1953.

Materials	Thickness (feet)	Depth (feet)
Silty, sandy, calcareous; mostly quartz; minor basalt and mica.	15	15
Clay, plastic when wet, hard when dry, calcareous, light gray.	18	33
Clay, silty, plastic when wet, hard when dry, calcareous, light gray	5	38
Basalt, dense, creviced, black.	5	43

Casing: 6-inch.

14/30-3E1. Bureau of Reclamation. About 39 ft E. and 30 ft N. of the W¼ corner. Altitude 947.4 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Silt, chiefly very fine quartz, yellowish tinge	39	39
Clay, slightly silty, gray to light blue.	12	51

Casing: 1½-inch, perforated 5-50 ft.

Table 3.—Drillers' logs of wells--Con.

14/30-3N1. Bureau of Reclamation. About 100 ft E. and 29 ft N. of SW¼ corner. Altitude 930.93 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	4	4
Clay, silty, tan	26	30
Sand, silty, fine, brown	10	40
Silt, argillaceous, tan	10	50

Casing: 1½-inch, perforated 35-50 ft.

14/30-5R1. Bureau of Reclamation. About 2 ft W. and 29 ft N. of SE corner. Altitude 915.6 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, argillaceous, calcareous, tan	4	4
Sand and gravel, and clay, composed of basalt fragments and calcareous material	6	10
Basalt, weathered, black	10	20

Casing: 1½-inch, perforated 7-22 ft.

14/30-8G1. Bureau of Reclamation. About 650 ft N. and 15 ft E. from center of section. Altitude about 953 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Topsoil	2	2
Gravel and sand, basalt, uncemented	14	16
Basalt, broken, vesicular, slightly weathered	20	36
Basalt, vesicular, weathered, brown, nontronite and calcite in vesicles	20	56
Basalt, dense, broken, black	22	78
Basalt, broken, brown	72	150
Basalt, dense, broken, black	10	160
Basalt, broken, brown	10	170
Basalt, hard, dense	45	215
Basalt, broken, weathered, black	5	220
Basalt, hard, dense, black	15	235
Basalt, broken; water	2	237
Basalt, hard, dense, black	16	253
Basalt, hard, gray	27	280
Basalt, vesicular, slightly weathered, black	20	300
Basalt, hard dense, gray, calcite in joints	17	317
Basalt, vesicular, moderately weathered, black	18	335

14/30-8G1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, dense, weathered, brown	28	363
Sand, fine loose, reddish brown, weathered basalt, nontronite, and quartz	8	371

Casing: 10- 8-inch, perforated 231-251, 271-291 ft.

14/30-10P1. Bureau of Reclamation. About 300 ft N. and 950 ft W. of S¼ corner. Altitude about 1,016 ft. Drilled by F.L.Zimmerman, 1952.

Materials	Thickness (feet)	Depth (feet)
Topsoil	3	3
Basalt, broken, weathered, silty	26	29
Basalt, hard, slightly vesicular, dark gray. (Broken zone at 58 ft.)	46	75
Basalt, broken; hard, slightly vesicular, dark gray	46	121
Basalt, weathered, vesicular, with caliche	8	129
Basalt, soft, very weathered, brown	26	155
Basalt, soft, weathered, gray; broken zone at 165 ft	25	180
Basalt, weathered, soft, dark brown	18	198
Basalt, hard, slightly vesicular, gray; broken zone 229-231 ft, very broken 251-255 ft	62	260
Basalt with nontronite, weathered, soft, dark brown	35	295
Basalt, hard, gray. (Broken zone 313-315 ft)	20	315
Basalt with nontronite, weathered, firm, dark brown	15	330
Basalt, hard, slightly vesicular to 350 ft, black	58	388
Basalt, weathered, vesicular, dark gray	6	394
Basalt, broken	3	397
Basalt, hard, gray	13	410
Basalt, broken, vesicular, weathered, brown, broken zone 425-427	17	427
Basalt, hard	6	433

Casing: 8-inch

14/30-20A1. Bureau of Reclamation. About 70 ft W. and 20 ft S. of NE corner. Altitude about 984 ft. Drilled by F. B. Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Basalt, broken; silt .	43	45
Basalt, broken. . . .	114	159
Basalt, hard (broken zone 192-195 ft).	134	293
Basalt, vesicular, broken, slightly weathered, black; water.	5	298
Basalt, broken	4	392
Basalt, broken, red. .	58	450
Basalt, hard, broken .	20	470
Basalt, hard.	107	577
Basalt, broken	88	665
Basalt, hard.	50	715
Basalt, broken, coarse, black.	2	717

Casing: 15- 12-inch.

14/30-22D1. Bureau of Reclamation. About 516 ft S. and 5 ft E. of NW corner. Altitude 1020.9 ft. Drilled by C. H. Stanbery, 1952.

Sand, silty, brown . .	2	2
Gravel, basalt and caliche fragments.	33	35
Basalt, hard, black. .	6	41

14/30-27J1. Bureau of Reclamation. About 385 ft E. and 35 ft N. of Scooteney Headworks. Altitude 942.2 ft. Drilled by Bach Drilling Co., 1953.

Silt.	1	1
Basalt, broken, fresh .	8	9
Basalt, broken, weathered	12	21
Basalt, fairly fresh, broken.	39	60
Basalt, fresh, hard . .	30	90
Basalt, slightly weathered, black; seams of soft black palagonite. . .	15	105
Basalt, hard, fresh, black	51	156
Tuff, light gray; basalt, deeply weathered, with masses of clay; water.	2	158

14/30-27J1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard; brown clay and calcite in joints and cavities.	12	170
Basalt, hard, black. . .	55	225
Clay, light gray; weathered basalt gravel	15	240
Basalt, with clay. . . .	10	250
Basalt, hard, gray . . .	90	340
Sand, medium, angular grains; 75% quartz, 25% grains	18	358
Clay, brown, severely weathered basalt.	2	360
Basalt, deeply weathered, brown; clay.	2	362
Basalt, weathered, brown to black.	10	372
Basalt, soft, brown; vesicles contain montronite and calcite; water.	8	380
Sand, fine; mostly weathered basalt with some calcite quartz.	1	381

Casing: 12-, 10-, 6-inch.

14/30-28D1. Bureau of Reclamation. About 39 ft E and 5 ft S of NW corner. Altitude 996.3 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, with some small gravel. . .	3	3
Clay, silty, and basalt gravel.	27	30
Sand, argillaceous, brown	10	40
Clay, silty, calcareous, tan.	10	50

Casing: 12-inch, perforated 35-50 ft.

14/30-28D2. Bureau of Reclamation. About 50 ft E. and 29 ft S. of NW corner. Altitude 993.5 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, calcareous, light gray.	4	4
Gravel and boulders, loosely cemented with caliche.	10	14
Caliche and cemented gravel	16	30
Sand, fine, cemented, tan	20	50

Table 3.—Drillers' logs of wells--Con.

14/30-32B1. Bureau of Reclamation. About 60 ft E. and 19 ft S. of N¼ corner. Altitude 888.7 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	3	3
Basalt and clay, black .	10	13
Basalt, hard, black; clay	7	20

Casing: 1½-inch, perforated 5-20 ft.

14/31-7D1. Bureau of Reclamation. About 50 ft E. and 29 ft S. of NW corner. Altitude 1,154.5 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty, calcareous	9	9
Caliche, slightly sandy	5	14
Clay, slightly silty, calcareous, light yellow. .	37	51

Casing: 1½-inch, perforated 6-51 ft.

14/31-10R1. John Finkbeiner. About 200 ft N. and 700 ft W. of SE corner. Altitude about 1,132 ft. Log from owner's memory.

Soil.	8	8
"Hardpan"	32	40
Basalt, water at 350 ft	441	481

Casing: 6-inch.

14/31-16M1. Bureau of Reclamation. About 29 ft E. and 300 ft N. of SW corner. Altitude 1,077.7 ft. Drilled by Bach Drilling Co., 1956

Sand, very fine, silty, calcareous, gray. . . .	10	10
Silt, calcareous, light yellow.	10	20
Clay, light yellow to bluish gray.	20	40
Clay, gray; some gravel	10	50

Casing: 1½-inch, perforated 5-50 ft.

14/31-18D1. Bureau of Reclamation. About 29 ft E. and 1,320 ft S. of the NW corner. Altitude 1,064.3 ft. Drilled by Bach Drilling Co., 1956.

Sand, very fine, silty calcareous.	11	11
Clay, silty, calcareous, light yellow.	39	50

Casing: 1½-inch, perforated 5-50 ft.

14/31-22R1. Bureau of Reclamation. About 39 ft W. and 75 ft N. of the SE corner. Altitude 1,125.7 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty, numerous caliche fragments. . .	10	10
Caliche, sandy.	20	30
Clay, silty, calcareous, light yellow	20	50

Casing: 1½-inch, perforated 5-50 ft.

14/31-25R1. Northern Pacific Ry. About 1,200 ft N. and 1,200 ft W. of the SE section corner. Altitude 840 ft.

Soil.	6	6
Gravel.	180	186
Basalt.	42	228

14/31-29J1. Bureau of Reclamation. About 29 ft W. and 10 ft S. of the E ¼ corner. Altitude 1,121.7 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty, calcareous light gray.	20	20
Silt, calcareous, light gray to light yellow .	20	40
Clay, silty, calcareous, light yellow.	10	50

Casing: 1½-inch, perforated 5-50 ft.

14/31-31A1. Bureau of Reclamation. 550 ft W. and 74 ft S. of the NE corner. Altitude 1,071.9 ft. Drilled by Bach Drilling Co., 1956.

Sand, fine, calcareous. slightly silty, gray .	20	20
Basalt, weathered, contain- caliche and clay in seams	6	26
Basalt, hard, black. .	5	31

Casing: 1½-inch, perforated 5-31 ft.

14/31-34D1. Bureau of Reclamation. 19 ft E. and 1,250 ft S. of the NW corner. Altitude 1,027.6 ft. Drilled by Bach Drilling Co., 1956.

Sand, fine to medium, calcareous, gray. . . .	13	13
Basalt, slightly weathered, black.	5	18

Casing: 1½-inch, perforated 5-18 ft.

14/31-36B1. City of Connell. About 400 ft SE of NE corner. Altitude about 904 ft. Drilled by Durand & Son, 1940.

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
"Shale" rock, (caliche)	6	8
Basalt, solid	15	23
Basalt, broken	22	45
Basalt, hard	17	62
Basalt, hard and soft streaks	7	69
Basalt, soft, dry crevice at bottom	62	131
Basalt, hard	2	133
Basalt, soft	8	141
Basalt, hard	2	143
Basalt, soft	7	150
Basalt, black, hard	26	176
Basalt, very hard, gray	64	240
Basalt, hard, creviced	14	254
Basalt, soft with "mud" streaks	15	269
Basalt, soft	2	271
Basalt, black, hard	3	274
Basalt, gray	1	275
Basalt, black	7	282
Basalt, red and clay	4	286
Basalt, hard, black	33	319
Basalt, porous, water	2	321
Basalt, porous, soft	10	331
Basalt, medium hard, black	4	335
Basalt, black, hard	12	347
Basalt, soft	1	348
Basalt, black, hard, no water	27	375
Basalt, soft	37	412
Basalt, medium hard	8	420
Basalt, hard	37	457
Clay, hard	15	472
Basalt, hard crevices at 476 and 513 ft	138	610
Basalt, soft	20	630
Basalt, honeycombed, water	13	643

Casing: 12-inch.

14/31-36R1. Bureau of Reclamation. About 31 ft N. and 268 ft W. of SE corner. Altitude 885.6 ft. Drilled by Nelson Drilling Co., 1954

Gravel, medium, basaltic	4	4
Gravel, fine, silty, basaltic	11	15
Boulders	7	22
Basalt, deeply weathered	11	33
Basalt, hard, brown	6	39

14/32-2P1. Cyril Hart. About 200 ft N. and 200 ft W. of S¼ corner. Altitude about 1,243 ft. Deepened by Durand & Son.

Materials	Thickness (feet)	Depth (feet)
Old Hole	729	729
Basalt, "honeycombed" black	10	739
Basalt, hard, blue	16	755
Basalt, gray	35	790
Basalt, gray, dark	6	796
Basalt, black	42	838
Basalt, gray	57	895
Basalt, black	18	913
Basalt, red, clear water vein	14	927
Basalt, red	18	945
Basalt, black	3	948

14/32-31D1. City of Connell. About 1,200 ft S. and 600 ft E. of NW corner. Altitude about 876 ft. Drilled by Durand & Son, 1955.

Gravel	33	33
Basalt	14	47
Gravel	1	48
Basalt, hard, gray	71	119
Basalt, broken, clay seams	59	178
Basalt, hard, gray	32	210
Basalt, gray	44	254
Basalt, gray, broken areas	206	460
Basalt, hard, gray	42	502

Casing: 12-inch.

14/32-32L1. Buster Bauermeister. About 1,250 ft S. and 1,620 ft E. of W¼ corner. Altitude about 828 ft. Drilled by Joy Bros., 1954.

Topsoil	34	34
Basalt, gray	143	177
Basalt, black	15	192
Basalt, clay seams	45	237
Basalt, black	66	303
Basalt, hard, gray	97	400
Basalt, broken	21	421
Basalt, black	32	453
Basalt, broken	27	480
Basalt, gray	75	555
Basalt, black	15	570
Basalt, gray	157	727

Casing: 12-inch.

14/32-33R1. J. W. Stine. About 500 ft N. and 1,480 ft E. of S¼ corner. Altitude about 794 ft. Drilled by Joy Bros., 1952.

Materials	Thickness (feet)	Depth (feet)
Soil.	11	11
Gravel.	40	51
Basalt, black	51	102
Basalt, brown, porous, water-bearing.	3	105
Basalt, black.	113	218
Basalt, hard, gray . .	3	221
Basalt, porous, brown, water	4	225
Basalt, black.	27	252
Basalt, porous, brown .	8	260
Basalt, hard, black . .	21	281

Casing: 12-inch.

14/33-18B1. Arnold Hudlow. About 50 ft S. and 2,112 ft W. of NE corner. Altitude 1,329 ft. Drilled by Joy Drilling Co. 1953.

Silt and clay.	59	59
Basalt, broken, black .	11	70
Basalt, black.	61	131
Basalt, gray.	85	216
Basalt, broken, black, with red clay.	57	273
Basalt, gray	13	286
Basalt, broken, black, with red clay.	27	313
Basalt, gray.	148	461
Basalt, black.	35	496
Basalt, hard, gray. . .	42	538
Basalt, porous, black; water.	4	542

Casing: 8-inch.

15/23-3H1. Lester Morrison. In Schawani. Altitude about 534 ft. Drilled by Basin Drilling Co.

Soil.	3	3
Sand.	2	5
Gravel and boulders. .	44	49
Sand; water.	11	60
Sand and gravel. . . .	18	78
Gravel, heavy.	6	84

Casing: 12-inch, perforated 72-83 ft.

15/25-26D1. Brown Bros. About 1,050 ft S. and 250 ft E. of NW corner of sec. Altitude about 922 ft. Drilled, 1947.

Materials	Thickness (feet)	Depth (feet)
Clay.	180	180
"Unreported".	307	487
Sand; water	28	515
Basalt.	107	622

15/26-28Q1. Corps of Engineers. About 315 ft N. and 1,850 ft W. of SE corner of sec. Altitude about 770 ft. Drilled by R.J.Strasser Drilling Co., 1953.

Topsoil.	13	13
Clay and gravel	2	15
Sand, brown.	8	23
Clay, brown and gray. .	78	101
Clay, soft, brown. . .	5	106
Clay, brown; small rock	8	114
Clay, brown.	8	122
Clay, brown; gravel. .	71	193
Clay, gray.	23	216
Clay, brown; sand, caves	34	250
Sand, light gray; clay	26	276
Basalt, broken; clay .	4	280
Basalt, broken, gray .	8	298
Basalt, hard, gray . .	43	341
Basalt, porous, black; clay	19	360
Clay, yellow.	6	366
Basalt, porous, black; clay	7	373
Basalt, porous, brown and black.	24	397
Basalt, hard, gray . .	125	522
Clay, gray; sand and gravel	5	527
Clay, brown to red; gravel	9	536
Sand, brown; clay. . .	16	552
Clay, sticky, brown and red.	6	558
Basalt, broken. . . .	17	575
Basalt, gray.	65	640
Basalt, broken, gray .	20	660
Clay, yellow. Clay is sticky from 665 to 678 ft	50	710
Sand, brown (sandstone?)	34	744
Clay, yellow.	10	754
Clay, yellow and green, with basalt talus. .	16	770
Clay, red; some rock.	4	774
Clay, gray; broken rock	14	788
Basalt, gray.	73	861
Basalt, red, yellow, gray	7	868

15/26-28Q1—Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, broken, gray. .	21	889
Basalt, gray.	3	892
Casing: 20-, 16-, 12-, 10-, 8-inch, perforated 860-870 ft.		

15/27-5R1. C. M. St. P. & P. R.R. About 600 ft W. and 1,200 ft N. of SE sec. corner. Altitude about 726 ft. Drilled in 1908.

Basalt, broken.	120	120
Basalt, black.	8	128
Boulders.	4	132
Basalt, black; water 17-175 and 210-215 ft. .	105	237
Basalt, gray.	13	250
Basalt, black; water 260-260 ft.	34	284
Basalt, brown; water 290-300 ft.	26	310
Basalt, black.	48	358

15/27-32E1. Corps of Engineers. About 2,000 ft S. and 1,050 ft E. of NW corner of sec. Altitude about 730 ft. Drilled by R. J. Strasser Drilling Co., 1954.

Caliche.	23	23
Clay, white; fine gravel	33	56
Clay, gray.	23	79
Clay, brown; scattered gravel.	28	107
Caliche, hard.	38	145
Clay, brown, sandy . .	13	158
Clay, brown; sand and gravel	5	163
Sand, brown, fine. . .	9	172
Clay, brown; basalt. .	5	177
Clay, brown, hardpacked	98	275
Sand and gravel. . . .	2	277
Basalt, porous, black; clay	2	279
Basalt, gray.	41	320
Basalt, gray to black.	6	326
Basalt, black, green particles.	24	350
Basalt, porous	5	355
Basalt, black to gray.	18	373
Basalt, black to gray, hard	4	377
Basalt talus; clay and sand	27	404
Basalt, gray.	47	451
Basalt, softer, dark gray	36	487

15/27-32E1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, gray. . .	50	537
Basalt, gray.	23	560
Basalt, black.	5	565
Clay, gray.	10	575
Sand, coarse; clay; water	5	580
Basalt, gray.	18	598
Basalt, black	45	643
Basalt, gray.	19	662
Basalt, broken, black .	40	702
Basalt, gray.	4	706
Basalt, black.	9	715
Basalt, gray; clay seams 720-725 ft.	50	765
Clay, blue	32	797
Clay, gray, and sand. .	19	816
Clay, sticky, yellow. .	30	846
Basalt, soft, black, with blue clay.	16	862
Basalt, black	14	886
Basalt, broken, black; sand, black.	3	889
Sand, hard-packed, black, or sandstone, black. .	42	921
Basalt, gray.	34	955
Basalt, black	27	982
Basalt, broken, black and brown; water. . . .	16	998
Basalt, hard, black . .	34	1032
Basalt, hard, gray. . .	2	1034
Cinders, red and brown.	4	1038
Basalt, soft, black . .	6	1044
Basalt, hard, black . .	23	1067
Basalt, black and brown	10	1077
Basalt, broken, black .	23	1100
Basalt, hard, black . .	7	1107
Basalt, light brown . .	8	1115
Basalt, hard, gray. . .	8	1123
Casing: 20-, 16-, 12-, 10-, 8-inch, perforated 982-995; 1,034-1,038; 1,067-1,077; 1,107-1,115 ft.		

15/27-34L2. Corps of Engineers. About 1,425 ft N. and 3,600 ft W of SE corner of sec. Altitude 697.7 ft. Drilled by R. J. Strasser Drilling Co., 1952.

Clay, compact, hard, white	109	109
Shale, red brown; clay, blue	99	208
Basalt, brown and gray, hard with clay in seams. . .	61	269
Basalt, dense, black; water	81	350

Table 3.—Drillers' logs of wells —Con.

15/27-34L2—Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, dense, gray to black.	159	509
Basalt, gray to black	95	604
Basalt, gray with soapstone streak; water.	10	614

Casing: 20-, 16-, 12-inch.

15/28-2R1. Bureau of Reclamation. About 30 ft W. and 64 ft N. of SE corner. Altitude 899.3 ft. Drilled by C. H. Stanbery, 1952.

Silt, argillaceous, brown	4	4
Silt, argillaceous, calcareous, buff.	6	10
Clay, silty, yellow.	20	30
Clay, light gray	20	50

Casing: 1½-inch, perforated 35-50 ft.

15/28-3N1. Bureau of Reclamation. About 15 ft E., 192 ft N. of SW corner. Altitude 772.7 ft. Drilled by C. H. Stanbery, 1952.

Silt, argillaceous, brown.	4	4
Clay, silty, brown.	6	10
Clay, with weathered basalt fragments.	10	20
Clay, with silt and sand	10	30
Sand, argillaceous, fine, brown.	20	50

Casing: 1½-inch, perforated 35-50 ft.

15/28-6M1. Michael Clayton. About 650 ft E. and 1,100 ft S. of W¼ corner. Altitude about 632 ft. Drilled by Durand & Son, 1939.

Soil.	9	9
Gravel.	4	13
Basalt, black.	32	45
Basalt, brown.	15	60
Basalt, black.	46	106
Basalt, gray, hard, 5 ft dd by bailing.	25	131
"Sandstone," hard, water	41	172
Basalt, black.	4	176

15/28-6R1. Bureau of Reclamation. About 45 ft W. and 29 ft N. of SE corner. Altitude 661.2 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy and argillaceous, brown.	2	2
Gravel, basaltic	8	10
Clay, silty, gray.	10	20
Sand, silty, brown.	13	33
Clay, sandy, brown.	17	50

Casing: 1½-inch, perforated 35-50 ft.

15/28-8E1. C. M. St. P. & P. R. R. About 200 ft N. and 100 ft E. of the W¼ corner. Altitude about 855 ft. Drilled by N. C. Jannsen.

Clay, brown.	112	112
Shale, hard.	4	116
Shale, blue.	69	185
Clay and gravel; boulders	67	252
Basalt, very hard.	119	371
Sand and grave; water 10gpm	43	414
Basalt.	1	415

Casing: 6-inch.

15/28-13A1. Bureau of Reclamation. About 60 ft W. and 39 ft S. of NE corner. Altitude 887.1 ft. Drilled by C. H. Stanbery, 1952.

Sand, silty, fine; gravel	2	2
Clay, silty, basalt fragments	8	10
Clay, brown.	20	30
Shale, gray.	10	40
Clay, brown to gray.	10	50

Casing: 1½-inch, perforated 35-50 ft.

15/28-15A1. Bureau of Reclamation. About 10 ft W. and 39 ft S. of NE corner. Altitude 1,045.1 ft. Drilled by C. H. Stanbery, 1952.

Silt, sandy, brown.	2	2
Boulders, hard, black; weathered basalt and clay	38	40
Clay; basalt fragments	10	50

Casing: 1½-inch, perforated 35-50 ft.

15/28-15D1. Saddle Mtn. Water Assoc. About 100 ft S. and 50 ft E. of NW corner. Altitude about 1,040 ft. Drilled by F.B.Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Silt	2	2
Gravel and sand, basalt, slightly to moderately weathered; quartz feldspar, calcite	36	38
Caliche; basalt sand	17	55
Clay, sandy, calcareous, stratified, sticky, buff	70	125
Sand, clayey, calcareous	55	180
Sand, fine, micaceous, angular quartz and feldspar	12	192
Sand and clay, brown	15	207
Clay, sandy; sand, mostly quartz and feldspar	98	305
Clay, silty and sand, micaceous, gray, weathered	20	325
Sand, medium, granitic minerals, angular, light gray	15	340
Sand, granitic, angular; greenish-gray clay	35	375
Sand, fine, granitic, contains particles basalt up to ¼ inch diameter	8	383
Basalt, weathered; caliche layers near top of basalt	17	400
Basalt, weathered; dolomite amygdules, zeolites, nontronite, palagonite	95	495
Tuff; basalt fragments	21	516
Basalt, weathered, greenish black	24	540
Basalt, hard	60	600
Basalt, broken, vesicular, weathered; nontronite and palagonite	25	625
Basalt, hard	41	666
Basalt, broken, glassy, vesicular, weathered; dolomite amygdules	36	702
Basalt, hard, fresh	51	753
Basalt and sand; sand, rusty, -basalt, quartz and feldspar grains	12	765
Basalt, vesicular, moderately weathered, broken	5	770
Basalt, very hard, dense, moderately weathered	29	799
Basalt, broken, weathered, clay in vesicles	19	818
Basalt, dense, black; feldspar phenocrysts	21	839
Basalt, hard, fresh	23	862
Basalt, very hard, red; feldspar phenocrysts	3	865

Casing: 15-, 12-inch.

15/28-24G1. Bureau of Reclamation. About 700 ft N. and 1,300 ft E. of center of sec. Altitude about 884 ft. Drilled by Ralph Cassel, 1952.

Materials	Thickness (feet)	Depth (feet)
Clay, yellow	65	65
Clay, sticky, gray	40	105
Clay, moist, light gray	20	125
Clay, sandy, gray	20	145
Sand, silty, coarse, light gray	69	214
Sand, coarse, granitic, light gray; gravelly with depth	20	234
Basalt	3	237

Casing: 10-inch.

15/28-24L1. Bureau of Reclamation. About 1,550 ft N. and 750 ft W. of S¼ corner. Altitude 996 ft. Drilled by F.B. Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Clay, silty, tan	90	90
Clay, silty, light gray	35	125
Clay, indurated, blue	15	140
Clay, silty, dark gray	35	175
Silt, clay binder, gray	20	195
Gravel, silty, basaltic, brown	20	215
Silt, brown	25	240
Gravel, silty, basaltic, brown	10	250
Basalt, broken, vesicular, black; green clay fillo- vesicles and crevices	20	270
Basalt, vesicular, weathered, brown	39	309
Clay, probably nontronite	31	340
Basalt, weathered, gray	10	350
Basalt, hard, gray	15	365
Basalt, vesicular, broken, deeply weathered, clay inclusions	24	389
Basalt, hard, broken	9	398

Casing: 6-inch, perforated 284-287 ft.

15/28-24R1. Bureau of Reclamation. About 20 ft W. and 29 ft N. of SE corner. Altitude 868.5 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Topsoil, soft, brown. .	4	4
Silt and clay, soft, brown	26	30
Clay, soft, yellow. . .	20	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-1N1. Bureau of Reclamation. About 200 ft N. and 74 ft E. of SW corner. Altitude 1,100.5 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse, quartzitic, basaltic, gray; fragments of caliche.	14	14
Caliche, coarse particles of cemented basalt. . . .	3	17
Sand, fine, light brown; few coarse pieces of basalt and quartz.	10	27
Sand, very fine, light brown; quartz grains prominent	5	32
Silt, light yellow; muscovite and a few quartz grains	18	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-2L1. Bureau of Reclamation. About 1,350 E. of W¼ corner. Altitude 1,099 ft. Drilled by G. M. Groves, 1954. (destroyed)

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	4	4
Sand and caliche gravel, fine to medium gravel with cobbles and boulders. .	4	8
Caliche.	—	8

Casing: 1½-inch.

15/29-2N1. Bureau of Reclamation. About 100 ft N. and 29 ft E. of SW corner. Altitude 1,089.8 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, quartzitic, light gray, muscovite .	5	5
Sand and gravel, basaltic, well rounded, light gray; fragments of caliche, slivers of hornblende and augite, quartz, well rounded, muscovite.	12	17

15/29-2N1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine, light gray; quartz, well rounded; slivers of augite and hornblende.	5	22
Sand, fine, quartzitic, gray, with fine, well rounded, cemented gravel; caliche, well rounded; hornblende and augite.	10	32
Silt, quartzitic, light gray, small pieces gravel, rounded, slivers of augite and hornblende.	5	37
Silt, very fine, quartzitic, yellow; muscovite . . .	5	42
Silt, very fine, quartzitic, light yellow; caliche .	8	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-3D1. City of Othello. About 1,400 ft E. and 100 ft S. of the NW corner. Altitude about 1,091 ft. Drilled by G. C. Hoff, 1939, memory log.

Materials	Thickness (feet)	Depth (feet)
Soil.	1	1
"Hardpan"	14	15
Clay.	5	20
"Rock", loose, broken . .	10	30
Sand, white (mica sand?) .	2	32
Clay, white.	180	212
$B_g$salt, black.	28	240
Basalt, gray.	10	250
Basalt, "honeycombed," black; water.	2	252
Basalt, black.	58	310
Basalt, gray.	37	347
Basalt, "honeycombed,"; black; water.	16	363
Basalt, hard, gray. . . .	207	570
Basalt, "honeycombed," black; water.	4	574
Basalt, gray.	39	613
Basalt, soft, black; water	80	693

Casing: 10-inch.

15/29-3D2. Bureau of Reclamation. About 1,275 ft S. and 250 ft E. of NW corner. Altitude 1,050.8 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	3	3
Sand and gravel, predominantly basalt with caliche	6	9
Silt, cemented, or boulder	1	10

Casing: 1½-inch, perforated 3-10 ft.

15/29-3E1. Bureau of Reclamation. About 1,050 ft E. of ¼ corner. Altitude 1,049.5 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	3	3
Sand and gravel; gravel, fine to coarse, cobbles	5	8
Silt, sandy.	2	10

Casing: 1½-inch, perforated 3-10 ft.

15/29-3P1. Bureau of Reclamation. About 1,500 ft E. of SW corner. Altitude 1,043.8 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	3	3
Sand, gravel, small boulders	4	7

Casing: 1½-inch, perforated.

15/29-5N1. --Heinly. About 400 ft N. and 130 ft E. of SW corner. Altitude about 938 ft. Drilled by Radke & Son.

Materials	Thickness (feet)	Depth (feet)
Silt and clay.	140	140
Basalt.	90	230
Basalt, "honeycombed". .	20	250
Basalt.	15	265
Basalt; water	13	278

Casing: 6-inch.

15/29-7R1. Bureau of Reclamation. About 109 ft N. and 10 ft W. of SE corner. Altitude 926.7 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, micaceous .	4	4
Gravel, boulders; sand, fine	6	10
Silt, clayey, light yellow	30	40
Clay, silty, light yellow	10	50

Casing: 1½-inch, perforated 4-50 ft.

15/29-8C1. Darrel Thacker. About 200 ft S. of N½ corner. Altitude about 964 ft. Drilled by Radke & Son.

Materials	Thickness (feet)	Depth (feet)
Silt and clay.	141	141
Basalt, black.	19	160
Basalt, "honeycombed" .	10	170
Basalt.	15	185
Basalt; water	10	195

Casing: 6-inch.

15/29-8D1. Bureau of Reclamation. About 59 ft E. and 20 ft S. of NW corner. Altitude 931.7 ft. Drilled by C. H. Stanbery, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy; cobbles, brown	4	4
Gravel; basalt fragments, with much clay, dark gray	6	10
Sand, gravel, boulders; basalt fragments, with much clay, dark gray.	23	33
Clay, gray-blue	17	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-8G1. Newell Anderson. About 125 ft E. and 3,900 ft N. of S¼ corner. Altitude about 948 ft. Drilled by Radke & Son, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and clay.	100	100
Basalt, hard, gray. . . .	165	265

Casing: 6-inch.

15/29-10E1. Bureau of Reclamation. About 100 ft N. and 1,050 ft E. of W¼ corner. Altitude 1,051.5 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	2	2
Sand, gravel; small boulders	6	8
Silt, cemented; gravel	2	10

Casing: 1½-inch, perforated 3-10 ft.

15/29-10N1. Bureau of Reclamation. About 1,150 ft E. of SW corner. Altitude 1,050.8 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, massive. .	3	3
Sand, gravel; small boulders.	10	13
Silt, cemented, and gravel, or a boulder.	--	13

Casing: 1½-inch, perforated 6-13 ft.

15/29-14A1. Bureau of Reclamation. About 50 ft S. and 74 ft W. of NE corner. Altitude 1,080.4 ft. Drilled by Bach Drilling Co., 1954.

Material	Thickness (feet)	Depth (feet)
Silt, sandy, light brown	3	3
Gravel, fine, basaltic, calcareous, silty, gray	9	12
Sand, coarse, basaltic, calcareous, dark gray. .	5	17
Sand, medium, basaltic, calcareous.	5	22
Caliche and gravel, basaltic, calcareous.	7	29
Sand, silty; clay light yellow.	5	34
Silt; clay, light yellow.	16	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-16A2. Bureau of Reclamation. About 39 ft S. and 100 ft W. of NE corner. Altitude 1,036.0 ft. Drilled by Bach Drilling Co., 1954.

Silt, cemented, dark gray; particles of basalt. .	12	12
Silt, light yellow, with angular basalt grains; clay	5	17
Silt, with clay, light yellow, a few basalt fragments. .	5	22
Clay, with silt, light yellow.	5	27
Clay, light yellow, with limonitic streaks	15	42
Silt with clay, light yellow	8	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-16D1. Bureau of Reclamation. About 15 ft E. and 39 ft S. of NW corner. Altitude 979.2 ft. Drilled by C. H. Stanbery, 1952.

Topsoil, firm, brown. . .	4	4
Boulders and gravel, hard, black.	26	30
Boulders, hard, black . .	10	40
Sand, soft, brown	10	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-17H1. Frans Yorgeson. About 45 ft W. and 75 ft N. of E¼ corner. Altitude about 955 ft. Drilled by Radke & Son.

Materials	Thickness (feet)	Depth (feet)
Soil and clay.	300	300
Basalt.	30	330
Gravel; water.	1	331

Casing: 6-inch.

15/29-17N1. Bureau of Reclamation. About 29 ft N. and 20 ft E. of SW corner. Altitude 936.7 ft. Drilled by C. H. Stanbery, 1952.

Topsoil, soft, brown . .	4	4
Boulders and gravel, hard, black.	42	46
Clay, soft, brown . . .	4	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-18B1. Fairview Domestic Water Assoc. About 200 ft S. and 200 ft E. of N¼ corner. Altitude about 919 ft. Drilled by Kenneth Yarwood, 1954.

Silt.	3	3
Gravel and boulders. . .	38	41
Clay, yellow.	9	50
Clay, blue.	82	132
Basalt, black.	198	330
Basalt, soft, green; water	30	360
Basalt, black.	120	480
Basalt, soft; water. . .	5	485
Basalt, black.	10	495

Casing: 8-inch.

15/29-20R1. Bureau of Reclamation. About 29 ft W. and 45 N. of SE corner. Altitude 905.9 ft. Drilled by C. H. Stanbery, 1952.

Topsoil.	2	2
Boulders and gravel, hard, black.	26	28
Clay, soft, yellow-brown	2	30
Clay, soft, blue. . . .	20	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-22A1. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,035.3 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, light brown; quartz	2	2
Gravel, fine, silty, dark gray	3	5
Silt and clay, calcareous, light yellow; fine basaltic gravel	5	10
Clay, silty, light yellow	5	15
Silt and clay, light yellow; some fine basalt gravel	5	20
Clay and silt, light yellow; some fine basaltic gravel	15	35
Clay, silty, light yellow; silt is mainly quartzitic	5	40
Silt, light brown; fragments of clay	10	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-26A1. John Para. About 200 ft S. and 200 ft W. of the NE section corner. Altitude about 1,043 ft. Drilled by Durand & Son.

Old hole	75	75
Sand "bridge in hole"	20	95
Clay "bridge in hole"	40	135
Old hole	308	443
Basalt, hard, black	20	463
Basalt, hard, gray	87	550
"Rock" red (basalt) water at 561 ft.	38	588

15/29-26A2. Bureau of Reclamation. About 29 ft S. and 150 ft W. of NE corner. Altitude 1,042.3 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, quartzitic, dark gray, some basaltic minerals, micaceous	3	3
Sand, silty, gray, some quartz and basalt minerals	10	13
Silt, with clay, micaceous, light yellow	10	23

15/29-26A2.--Continued.

Materials	Thickness (feet)	Depth (feet)
Clay, silty, light yellow, calcareous; muscovite	10	33
Clay, calcareous, light yellow, with dark brown streaks of sand	5	38
Silt, light yellow; very small pieces of basaltic gravel	5	43
Silt, calcareous, sandy, light gray; small pieces of basaltic gravel	7	50

Casing: 1½-inch, perforated 5-50 ft.

15/29-27E1. Paddock, Betterley and James. About 1,000 ft E. and 1,650 ft S. of NW corner. Altitude about 959 ft. Drilled by Joy Bros., 1952.

Topsoil	2	2
Gravel and boulders	35	37
Boulders	8	45
Clay, gray	8	53
Clay, blue	23	76
Clay, yellow	9	85
Caliche, brown	5	90
Clay, yellow	10	100
Clay and brown caliche, some rock	30	130
Clay	5	135
Basalt	7	142
Basalt, broken and clay	15	157
Basalt, broken	25	182
Basalt, firm; water at 182 ft, 25 ft of water in hole	5	187
Basalt, firm, black, hole caving	14	201
Basalt, hard	10	211
Basalt	3	214
Basalt, hard	8	222
Clay; broken basalt	5	232
Basalt, firm	38	270
Basalt, broken, red	20	290
Basalt, broken	3	293
Basalt, hard	74	367
Basalt, broken	22	389
Basalt, hard	11	400

Casing: 8-inch.

Table 3.--Drillers' logs of wells--Con.

15/29-27N1. Bureau of Reclamation. About 39 ft E. and 60 ft N. of SW corner. Altitude 878.4 ft. Drilled by C. H. Stanbery, 1952.

Material	Thickness (feet)	Depth (feet)
Topsoil, firm, brown. .	1	1
Cobbles and boulders, hard, black.	19	20
Clay, soft, brown . . .	30	50

Casing: 1½-inch, perforated 35-50 ft.

15/29-27Q1. Bureau of Reclamation. About 1,571 ft W. and 530 ft N. of SE corner. Altitude 957.1 ft. Drilled by Bach Drilling Co., 1955.

Gravel and boulders, basaltic.	20	20
Gravel, pea to cobble, basaltic.	40	60
Sand, fine, compact, "hardpan", yellowish.	7	67

Casing: 1½-inch, perforated 7-67 ft.

15/29-27R1. S. Othello Water Assoc. About 400 ft N. and 1,150 ft W. of SE corner. Altitude about 962 ft. Drilled by F.L.Zimmerman, 1952.

Silt, sandy, dark brown	5	5
Gravel and boulders, basaltic	17	22
Gravel, cemented, basaltic	7	29
Gravel, basaltic. . . .	36	65
Clay, silty, light gray	20	85
Clay, silty, indurated, light brown.	5	90
Basalt, vesicular, black	45	135
Basalt, weathered, vesicular, brownish gray .	15	150
Basalt, slightly weathered, vesicular, brown. . .	25	175
Basalt, weathered, gray	11	186
Basalt, hard, gray . .	34	220
Basalt, broken.	2	222
Basalt, hard, gray. . .	18	240
Basalt, vesicular, dark gray.	5	245
Basalt, weathered, nontronite, gray	54	299
Basalt, weathered, gray	44	343
Basalt, very hard. . . .	7	350
Basalt, vesicular, weathered, dark gray. . . .	40	390

15/29-27R1--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, broken.	3	393
Basalt, hard.	3	396
Basalt, vesicular, slightly weathered, firm, gray..	43	439
Basalt, hard, gray. . .	22	461
Clay, indurated, dark gray, with basalt fragments.	11	472
Basalt, hard to very hard, dense, gray.	78	550

Casing: 10-, 8-inch.

15/30-10P1. Tom R. Booker, Jr. About 300 ft W. and 200 ft N. of the S¼ corner. Altitude about 1,227 ft. Drilled by Smith and Haden, 1949.

Silt.	6	6
Silt, white.	84	90
Clay, yellow.	70	160
Basalt.	140	300
Pumice.	5+	305
Basalt.	200	505
Basalt, creviced; water	5	510
Basalt.	8	518

Casing: 6-inch.

15/30-14D1. Bureau of Reclamation. About 60 ft S. and 29 ft E. of NW corner. Altitude 1,217.3 ft. Drilled by Bach Drilling Co., 1954.

Sand fine, dark brown; well rounded quartz .	5	5
Silt, sandy, dark gray, micaceous, moscovite, hornblende, augite, caliche, quartz. . . .	5	10
Silt, sandy, light gray, calcareous; caliche; well rounded quartz .	10	20
Sand and caliche, light gray; hornblende, augite, rounded quartz. . . .	15	35
Sand, fine, dark gray, calcareous; caliche, muscovite, well rounded quartz, hornblende, augite	5	40
Sand, medium, light brown; well rounded quartz grains, muscovite	10	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-21E1. Bureau of Reclamation. About 29 ft E. and 400 ft N. of the W¼ corner. Altitude 1,129.2 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Caliche, silty, soft; very fine quartz, muscovite and basalt grains.	20	20
Clay, calcareous, light gray to light yellow.	30	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-23H1. Glenna H. Kleinbach. About 900 ft W. and 2,534 ft S. of NE corner. Altitude about 1,195 ft. Drilled by John Barnett, 1956.

Topsoil.	51	51
Basalt, hard, broken	59	110
Basalt, hard, gray.	35	145
Clay, blue.	25	170
Basalt and clay	20	190
Basalt, black.	5	195
Basalt, red; clay.	40	235
Basalt, red.	5	240
Basalt, broken, gray	55	295
Clay and gravel.	15	310
Basalt, broken, black.	23	333
Clay, blue; basalt	15	348
Basalt, black.	50	398
Basalt and clay.	10	408
Basalt, hard, gray	6	414
Basalt, porous, black; water.	83	497
Basalt, black.	145	642
Basalt, porous, black; water.	28	670
Basalt, black	47	717
Basalt, broken, black.	19	736
Basalt, black.	12	748
Clay, blue.	15	763
Basalt, black;blue clay	22	785
Basalt, black.	30	815
Basalt, hard, gray	19	834
Basalt, black.	16	850

Casing: 12-inch.

15/30-26A1. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,217.5 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, light gray; well rounded quartz	5	5
Sand, silty, light gray; quartz grains prominent	20	25
Caliche, silty, light gray; quartz grains prominent	15	40
Caliche, silty, light yellow; quartz grains prominent.	10	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-27D1. Bureau of Reclamation. About 39 ft E. and 110 ft S. of the NW corner. Altitude 1,185.1 ft. Drilled by Bach Drilling Co., 1956.

Silt, calcareous, light gray.	10	10
Caliche, with fine sand	20	30
Sand, very fine, calcareous; calcite and quartz	20	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-27N1. Bureau of Reclamation. About 39 ft E. and 50 ft N. of the SW corner. Altitude 1,178.0 ft. Drilled by Bach Drilling Co., 1956.

Sand, fine, calcareous, light gray.	30	30
Sand, fine.	20	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-28J1. T. R. Booker. About 200 ft S. and 150 ft W. of E¼ corner. Altitude about 1,178 ft. Started by Bartell, finished by Gifford.

Sand and clay.	60	60
Basalt, "honeycombed" (supply failed)	280	340
Basalt.	130	470
Basalt, cavernous.	10	480

Casing: 6-inch.

15/30-30D1. Bureau of Reclamation. About 29 ft S. and 100 ft E. of NW corner. Altitude 1,033.2 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, light gray; calcite and a few basalt grains.	5	5
Silt and clay, light yellow	5	10
Clay, silty, light yellow	5	15
Silt, fine, light gray; chiefly quartz, muscovite	30	45
Sand, fine, light gray; chiefly quartz, muscovite	5	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-35R1. Bureau of Reclamation. About 100 ft W. and 39 ft N. of the SE corner. Altitude 1,171.2 ft. Drilled by Bach Drilling Co., 1956.

Silt, sandy.	16	16
Caliche, massive; few basalt and quartz grains	26	42
Silt, sandy, light yellow	8	50

Casing: 1½-inch, perforated 5-50 ft.

15/30-36A1. Bureau of Reclamation. About 120 ft S. and 620 ft W. of NE corner. Altitude 1,202.5 ft. Drilled by Durand & Son, 1956.

Sand, silty, calcareous, light gray.	5	5
Sand, fine, silty, calcareous, light gray; chiefly quartz and calcite.	30	35
Sand, fine, slightly clayey, light gray; caliche pieces	10	45
Sand, fine, uniform, light gray to light yellow.	20	65
Silt, slightly sandy, yellow	19	84
Clay, slightly silty, light yellow, calcareous.	60	144
Clay, sticky, light gray	9	153
Basalt, slightly weathered, black.	2	155
Basalt, medium hard, black	40	195
Basalt, broken, brown; clay seams, brown.	56	251
Basalt, hard to very hard, black to gray.	65	316
Basalt, broken, light brown; brown clay.	7	323

15/30-36A1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, brown.	7	330
Basalt, very hard, gray.	43	373
Basalt, vesicular, brown; little gray clay.	11	384
Basalt, broken, brown to black.	23	407
Basalt, hard, gray	6	413
Basalt, broken, brown, iron-stained.	2	415
Basalt, hard to very hard, brown to black.	39	454
Basalt, broken, brown; small amount of clay.	16	470
Basalt, medium hard, black to brown.	22	492

Casing: 15-, 12-inch.

15/31-4C1. Don Damon. About 850 ft S. and 1,050 ft W. of N¼ corner. Altitude about 1,285 ft. Drilled by Davison, 1949.

Soil, sandy.	50	50
Basalt, soft, red.	15	65
Basalt, hard to medium hard, blue.	73	138
Basalt, soft, brown.	7	145
Basalt, red.	33	178
Basalt, hard, blue	13	191
Basalt, red.	46	237
Basalt, hard, blue	41	278
Sand, black.	6	284
Basalt, hard.	11	295
Sand, black.	3	298
Basalt, hard.	4	302
Sand.	8	310
Basalt.	11	321
Sand.	7	328
Basalt, hard, blue	11	339
Sand, brown.	12	351
Basalt, hard, black.	17	368
Sand, black.	7	375
Basalt, hard, blue	39	414
Sand, black.	13	427
Basalt, hard, blue	31	458
Sand, black.	45	503

Casing: 12-inch.

15/31-34J1. Harry Mittlestaedt. About 150 ft W. and 700 ft S. of the E¼ corner. Altitude about 1,190 ft. Finished by Durand & Son.

Materials	Thickness (feet)	Depth (feet)
Soil	30	30
Basalt	288	318
No record, old hole	169	487
Basalt, hard, blue	36	523
Basalt; water	2+	525
Basalt, black	16	541
Basalt, blue	4	545
Basalt, gray	2	547

15/32-1J1. Delbert Pence. About 1,370 ft N. and 115 ft W. of SE corner. Altitude 1,366 ft. Drilled by John Barnet, 1955.

Materials	Thickness (feet)	Depth (feet)
Dirt	15	15
Basalt, gray	41	56
Sandstone, red	15	71
Basalt, dark	46	117
Basalt, hard, dark	11	128
Basalt, hard, gray	37	165
Basalt, dark	105	270
Basalt, hard, gray	5	275
Basalt, soft, brown	19	294
Basalt, dark	40	334
Basalt, soft, brown; water	19	353

Casing: 12-inch.

16/23-34C2. Beverly Cafe. In Beverly. Altitude about 540 ft.

Materials	Thickness (feet)	Depth (feet)
Gravel	25	25
Sand and boulders	23	48
"Hardpan"	9	57
Sand, fine	4	61
"Hardpan"	4	65
Gravel and boulders	16	81

Casing: 36-inch.

16/23-34F2. Henry Bise. About 300 ft N. and 20 ft W. of center of sec. Altitude about 570 ft. Drilled by Neal W. Rettig, 1956.

Materials	Thickness (feet)	Depth (feet)
Boulders and gravel	45	45
Sand	83	128
Clay, blue	6	134
Sand and gravel	7	141

Casing: 8-inch, perforated 136-140 ft.

16/24-10M1. Leon Nunnally. About 300 ft E. and 600 ft S. of the W¼ corner. Altitude about 1,156 ft. Drilled by Durand & Son, 1940.

Materials	Thickness (feet)	Depth (feet)
Sand	6	6
Basalt, broken, gray	9	15
Basalt, broken, gray; water	12	27
Basalt, hard, gray; no water	100	127

16/25-1Q1. Royal City Development Co. About 350 ft N. and 100 ft E. of S¼ corner. Altitude about 1,030 ft. Drilled by John Barnett, 1956.

Materials	Thickness (feet)	Depth (feet)
Topsoil	40	40
Basalt, black	48	88
Basalt, hard	91	179
Clay, blue	8	187
Clay, red	10	197
Clay	53	250
Clay, blue	4	254
Basalt	22	276
Basalt, black	56	332
Basalt, broken; water	14	346
Basalt, hard, broken	125	471
Basalt, hard	4	475
Shale	6	481
Basalt and shale streaks	26	507
Basalt, broken; clay	38	545
Basalt	22	567
Wood, decomposed	8	575
Basalt, black	30	605
Basalt, hard, black; soft streaks, water-bearing	30	635
Basalt, black	25	660
Basalt, gray	55	715
Basalt, black	125	840
Basalt, gray	20	860
Basalt, black; water	12	872
Basalt, gray	35	907

Casing: 12-, 8-inch.

16/25-6M1. Bureau of Reclamation. About 690 ft S. and 180 ft E. of W¼ corner. Altitude 1,221.0 ft. Drilled by Durand & Son, 1949.

Materials	Thickness (feet)	Depth (feet)
Sand, brown	3	3
Caliche, hard, white	6	9
Caliche, broken, brown	6	15
Caliche, broken, gray	7	22
Caliche, sandy, brown	3	25

16/25-6M1--Continued

Materials	Thickness (feet)	Depth (feet)
Caliche, gray.	5	30
Basalt, black.	20	50
Basalt, hard, black. . .	8	58
Basalt, broken, black. .	2	60
Basalt, hard, black. . .	18	78
Basalt, hard, gray . . .	72	150
Basalt, broken, black, gray and yellow.	3	153
Basalt, red.	9	162
Basalt, hard, gray . . .	29	191
Basalt, gray	13	204
Basalt, black	4	208
Basalt, medium hard, gray	22	230
Basalt, hard, gray. . . .	106	336
Basalt, vesicular, black	26	362
Basalt, gray.	15	377
Basalt, vesicular, black	4	381
Basalt, gray.	54	435
Basalt, vesicular, black	48	483
Basalt, hard, gray. . .	59	542
Basalt, glassy, vesicular, broken, weathered; fine gravel; palagonite and non-tronite.	18	560
Basalt, glassy, very broken, black.	25	585
Basalt, broken, black .	8	593
Basalt, black.	16	609
Basalt, very broken, slightly glassy, black.	16	625
Basalt, gray.	32	657
Basalt, vesicular, porous	22	679
Basalt, probably vesicular, black.	41	720
Basalt, gray.	18	738
Basalt, broken, vesicular, black; water	5	743
Basalt, vesicular, black	24	767
Basalt, magnetic, glassy, gray.	84	851

Casing: 18-, 15-, 12-inch.

16/25-34A1. W. B. Underhill. About 300 ft S. and 75 ft W. of the NE corner of sec. Altitude about 564 ft. Dug-drilled, 1940.

Soil.	28	28
Sand and gravel; water.	22	50
Clay.	2	52
Sand and gravel; water.	11	63

Casing: 4-feet.

16/25-34C2. C. W. Bovee. About 300 ft W. and 900 ft S. of the N¼ corner. Altitude about 575 ft. Dug by Charles Toskey, 1933.

Materials	Thickness (feet)	Depth (feet)
Soil and basalt, angular	26	26
Sand, blue (basaltic?) .	12	38
Gravel and boulders. . .	8	46
Boulders, basalt, angular (2 ft diameter). . . .	9	55
Gravel, loose; sand, fine	5	60

16/25-35D1. C.M. St. P. & P. R.R. About 1,150 ft E. and 50 ft S. of the NW section corner. Altitude about 560 ft. Drilled by N.C.Jannsen, 1940.

Silt and sand.	22	22
Gravel, well rounded; water	43	65
Basalt.	2	67

16/26-3N1. Bureau of Reclamation. About 29 ft N. and 65 ft E. of SW corner. Altitude 984.1 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, calcareous, gray; caliche particles in lower portinn.	20	20
Sand, silty, calcareous, gray to yellowish. . .	30	50

Casing: 1½-inch, perforated 5-50 ft.

16/26-11A1. Bureau of Reclamation. About 29 ft S. and 5 ft W. of NE corner. Altitude 1,000.1 ft. Drilled by Bach Drilling Co., 1955.

Sand, medium to fine, gray	20	20
Caliche, sandy, gray. .	10	30
Sand, medium, cemented, calcareous, gray. . .	10	40
Sand, micaceous, light yellow.	10	50

Casing: 1½-inch, perforated 5-50 ft.

16/26-36D1. A. V. Rasor. About 300 ft S. and 600 ft E. of NW corner of sec. Altitude about 562 ft. Dug in 1944.

Materials	Thickness (feet)	Depth (feet)
Soil.	2	2
Gravel.	38	40

Casing: 5 feet.

16/27-3R1. Bureau of Reclamation. About 50 ft N. and 29 ft W. of SE corner. Altitude 1,112.9 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine grained, slightly calcareous, gray	10	10
Caliche, sandy at top to dense, massive at bottom, light gray.	15	25
Silt, clayey, calcareous, light yellow.	25	50

Casing: 1½-inch, perforated 5-50 ft.

16/27-5R1. Bureau of Reclamation. About 29 ft N. and 65 ft W. of SE corner. Altitude 1,092.8 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine grained, silty, light gray; with caliche particles.	8	8
Caliche, hard, massive, slightly sandy.	20	28
Silt, clayey with depth, calcareous, light yellow.	22	50

Casing: 1½-inch, perforated 5-50 ft.

16/27-18L1. --Parsons. About 700 ft S. and 600 ft E. of center of section. Altitude about 845 ft. Drilled by J. H. Rettig.

Materials	Thickness (feet)	Depth (feet)
Soil.	5	5
Soil and gravel . . .	20	25
Basalt.	225	250

Casing: 6-inch.

16/28-6A1. Bureau of Reclamation. About 29 ft S. and 143 ft W. of NE corner. Altitude 1,074.7 ft. Drilled by Bach Drilling Co., 1955.

Silt, calcareous, caliche fragments in lower portion.	15	15
Caliche, sandy, light gray.	10	25
Sand, quartz, fine grained, fragments of caliche.	8	33
Basalt, weathered, brown, with limonitic staining.	6	39

Casing: 1½-inch, perforated 4-39 ft.

Table 3.--Drillers' logs of wells--Con.

16/28-7D1. Bureau of Reclamation. About 300 ft E. and 29 ft S. of NW corner. Altitude 960.4 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, micaceous, gray to light tan.	16	16
Sand, fine, cemented; caliche fragments.	4	20
Basalt, weathered, brown to black; caliche in seams	4	24

Casing: 1½-inch, perforated 5-24 ft.

16/28-7R1. Bureau of Reclamation. About 25 ft N. and 29 ft W. of SE corner. Altitude 916.8 ft. Drilled by Bach Drilling Co., 1955.

Sand, medium, light tan; caliche particles.	6	6
Boulders, gravel and sand, calcareous, basaltic, cemented.	9	15
Sand, fine, calcareous, light tan.	5	20
Sand, calcareous, gravelly, light tan.	10	30
Gravel, medium, basaltic, with fine sand.	3	33
Basalt, slightly weathered, brown to black.	5	38

Casing: 1½-inch, perforated 5-38 ft.

16/29-1D1. Bureau of Reclamation. About 29 ft S. of NW corner. Altitude 1,090.5 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, compact, light yellow.	10	10
Silty, sandy, very fine, compact, light gray.	8	18
Gravel, fine to medium, rounded.	3	21
Gravel, fine, sandy, basaltic	3	24
Sand, fine, basaltic.	2	26
Basalt, angular, weathered, reddish brown.	9	35

Casing: 1½-inch, perforated 4-35 ft.

16/29-12A1. Bureau of Reclamation. About 29 ft W. and 250 ft S. of NE corner. Altitude 1,178.9 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	2	2
Caliche, sandy, light color	10	20
Caliche, sandy, silty, light yellow.	10	30
Silt, clayey, calcareous, compact, light yellow	20	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-13A1. Bureau of Reclamation. About 29 ft S. and 40 ft W. of NE corner. Altitude 1,179.1 ft. Drilled by Bach Drilling Co., 1954.

Silt, light gray to yellow.	10	10
Silt, sandy, calcareous, light gray; pieces of small cemented gravel	10	20
Silt, sandy, calcareous, light gray.	10	30
Silt, sandy, calcareous, light yellow.	5	35
Silt, yellow.	10	45
Silt and clay, yellow.	45	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-13D1. Bureau of Reclamation. About 29 ft S. and 100 ft E. of NW corner. Altitude 1,162.4 ft. Drilled by Bach Drilling Co., 1954.

Silt and gravel; silt, light gray to light yellow; gravel, coarse, rounded, with calcareous coating	3	3
Gravel, fine, silty, calcareous.	5	8
Sand, coarse; fine gravel, cemented, calcareous, light gray.	5	13
Caliche, hard, dense.	5	18
Silt, calcareous, yellow	22	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-23N1. Bureau of Reclamation. About 29 ft N. and 50 ft E. of SW corner. Altitude 1,129.1 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, light to dark gray; some fine gravel	3	3
Sand medium, calcareous, light yellow	5	8
Caliche and gravel, fine	6	14
Sand, fine; fragments of fine gravel	6	20
Silt, yellow	25	45
Silt and clay, yellow	5	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-26A1. Bureau of Reclamation. About 29 ft S. and 150 ft W. of NE corner. Altitude 1,142.6 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	3	3
Sand, fine, calcareous, gray	5	8
Sand, gravelly; sand is fine, calcareous; gravel is fine, cemented	10	18
Silt, sandy, with clay, light yellow	7	25
Silt, light yellow; some clay particles	15	40
Silt and clay, light yellow	10	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-33A1. Bureau of Reclamation. About 15 ft S. and 39 ft W. of NE corner. Altitude 1,071.4 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Gravel, silty, fine, basaltic, calcareous	5	5
Gravel, cemented, fine, silty, calcareous	7	12
Sand, fine, basaltic	6	18
Silt, quartzitic, light brown	5	23
Silt, light yellow; also a few coarse particles of basaltic sand	25	48
Silt, very fine, basaltic sand	2	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-34E1. Bureau of Reclamation. About 175 ft E. of W¼ corner. Altitude 1,076.1 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	2	2
Sand and gravel; fine to medium gravel containing much silty sand	19	21
Sand and gravel, cemented, or a boulder	21	21

Casing: 1½-inch, perforated 7-21 ft.

16/29-34F1. Bureau of Reclamation. About 400 ft W. of center of sec. Altitude 1,102.8 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	4	4
Sand and gravel, fine to medium with a few small boulders	17	21

Casing: 1½-inch, perforated 14-21 ft.

16/29-34H1. Bureau of Reclamation. About 25 ft W. of E¼ corner. Altitude 1,117.1 ft. Drilled by G. H. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	4	4
Sand and gravel; sand and gravel, very fine to medium	25	29
Caliche	--	29

Casing: 1½-inch, perforated 22-29 ft.

16/29-34N1. Bureau of Reclamation. About 1,250 ft N and 200 ft E. of SW corner. Altitude 1,079.4 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy	2	2
Sand and gravel. Fine to coarse; cobbles and some small boulders	23	25
Sand, cemented	--	25

Casing: 1½-inch, perforated 18-25 ft.

16/29-34N2. Bureau of Reclamation. About 200 ft E. and 175 ft N. of SW corner. Altitude 1,051.5 ft. Drilled by G. M. Groves, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	3	3
Sand and gravel; gravel, fine to medium with a few small boulders.	6	9
Silt, material wet at gravel-silt contact. .	1	10

Casing: 1½-inch, perforated 3-10 ft.

16/29-34Q1. Bureau of Reclamation. About 1,300 ft N. of S¼ corner. Altitude 1,104.4 ft. Drilled by G. M. Groves, 1954.

Silt, sandy.	2	2
Sand and gravel, fine to medium; cobbles, few boulders.	5	7

Casing: 1½-inch, perforated 0-7 ft.

16/29-35N1. Bureau of Reclamation. About 100 ft N. and 29 ft E. of SW corner. Altitude 1,115.5 ft. Drilled by Bach Drilling Co., 1954.

Sand, silt and caliche, medium; basaltic gravel	3	3
Gravel, fine basaltic; caliche and silt. . . .	15	18
Gravel, fine to medium, basaltic, silty; caliche	10	28
Silt and gravel silt, gray, cementing fine gravel of basaltic and caliche. .	7	35
Silt, gray; basalt and caliche.	5	40
Silt, calcareous, micaceous, light yellow	10	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-35P1. Bureau of Reclamation. About 50 ft N. and 1,500 ft E. of SW corner. Altitude 1,104.4 ft. Drilled by G. M. Groves, 1954.

Silt, sandy.	3	3
Sand and gravel; few small boulders.	4	7

Casing: 1½-inch, perforated 0-7 ft.

16/29-36D1. Bureau of Reclamation. About 29 ft S. and 100 ft E. of NW corner. Altitude 1,127.2 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand.	5	5
Sand, fine, light gray; gravel, basaltic. . . .	5	10
Sand, fine, light gray, small particles of caliche	10	20
Sand, fine, light gray; medium particles of caliche	20	40
Sand and silt, light gray	5	45
Silt and sand, light gray	5	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-36N1. Bureau of Reclamation. About 50 ft N. and 74 ft E. of SW corner. Altitude 1,117.3 ft. Drilled by Bach Drilling Co., 1954.

Silt, gravelly, gray; caliche and basalt particles. . .	3	3
Silt, gray; basalt grains	5	8
Caliche, sandy, gray . . .	10	18
Silt, micaceous, calcareous, gray to light yellow. . .	21	39
Silt, micaceous, light yellow; some basalt particles . .	11	50

Casing: 1½-inch, perforated 5-50 ft.

16/29-36R1. Oshino Bros. About 1,100 ft N. and 150 ft W. of SE corner. Altitude about 1,142 ft. Drilled by Radke & Son, 1958.

Topsoil.	9	9
Caliche.	22	31
Clay.	139	170
Basalt.	237	407

Casing: 6-inch.

16/30-9N1. Bureau of Reclamation. About 29 ft N. and 40 ft E. of SW corner. Altitude 1,223.6 ft. Drilled by Bach Drilling Co., 1954.

Silt, light gray to yellow	10	10
Silt, sandy, calcareous, light gray.	5	15
Silt, sandy, light gray; pieces of small cemented gravel.	5	20

Table 3.--Drillers' logs of wells--Con.

16/30-9N1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, sandy; fragments of caliche.	10	30
Silt, sandy, calcareous, light yellow	5	35
Silt, light yellow.	10	45
Silt, yellow; fragments of clay.	5	50

Casing: 1½-inch, perforated 5-50 ft.

16/30-18A1. Bureau of Reclamation. About 90 ft S. and 707 ft W. of NE corner. Altitude 1,190.2 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Loam silty.	28	28
Caliche, sandy; sand, fine, chiefly light-colored minerals.	18	46
Basalt, vesicular, weathered, broken, dark gray.	3	49
Basalt, scoriaceous, soft, reddish brown.	34	83
Basalt, moderately hard, brown.	27	110
Basalt, hard, dense, black	30	140
Basalt, moderately hard, black.	20	160
Basalt, hard, dense, black	75	235
Basalt, scoriaceous, vesicular, soft, brown.	30	265
Basalt, deeply weathered, soft, brown; palagonite.	13	278
Sand, medium to fine, black; palagonite.	3	281
Basalt, hard, dense, black	64	345
Basalt, weathered, porous, gray; caliche fragments; appears to be an interflow; water.	47	392

Casing: 10-inch.

16/30-21N1. Bureau of Reclamation. About 29 ft N. and 70 ft E. of SW corner. Altitude 1,186.9 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, dark brown, quartz, well rounded; muscovite.	5	5
Silt and sand, calcareous, light gray; quartz grains, well rounded.	5	10

16/30-21N1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt and sand, calcareous, light gray, fragments of caliche; quartz, well rounded; hornblende and augite	10	20
Sand and caliche, light gray; quartz, rounded.	25	45
Silt, calcareous, light yellow, well rounded quartz; muscovite.	5	50

Casing: 1½-inch, perforated 5-50 ft.

16/30-34N1. Bureau of Reclamation. About 60 ft N. and 29 ft E. of SW corner. Altitude 1,158.7 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, well rounded; silt, dark gray.	10	10
Silt and sand; very fine, well rounded quartz; dark gray to light brown.	5	15
Sand, medium, well rounded quartz, light gray	10	25
Sand and silt, well rounded, fine, light yellow	20	45
Sand, fine, calcareous, well rounded, light gray	5	50

Casing: 1½-inch, perforated 5-50 ft.

16/31-1A2. Jack Damon. About 400 ft S. and 920 ft W. of NE corner. Altitude 1,410 ft. Drilled by Davisson & Dreyer, 1950.

Materials	Thickness (feet)	Depth (feet)
Soil.	10	10
Caliche.	4	14
Basalt, hard and blue	57	71
Basalt, medium, brown	2	73
Basalt, hard, blue.	17	90
Basalt, medium, brown	6	96
Basalt, hard, blue.	18	114
Basalt, medium, brown	11	125
Basalt, hard, blue.	16	141
Basalt, medium, red	31	172
Basalt, hard, blue.	24	196
Basalt, medium, brown	13	209
Basalt, hard, blue.	145	354
Basalt, medium, red.	8	362
Basalt, medium, black	16	378
Basalt, hard, gray.	15	393
Sand, black.	21	414

Table 3.--Drillers' logs of wells--Con.

16/31-1A2--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, blue. . . .	86	500
Clay, blue.	2	502
Sand, black.	13	515
Basalt, hard, blue. . . .	12	527
Basalt, medium, black . .	15	542
Clay, sandy, blue	1	543
Basalt, black and coarse.	29	572
Basalt, hard, black . . .	3	575
Basalt, medium, black . .	358	633

Casing: 10-inch.

16/31-19H1. Jack Damon
About 600 ft N. and 100 ft W. of E¼ corner. Altitude about 1,284 ft.
Drilled in 1900 to 240 ft., deepened by Dreyer, 1950.

Soil, sandy.	35	35
Basalt, blue.	7	42
Basalt, red.	48	90
Basalt, blue.	132	222
Basalt, soft, red	15	237
Sand, black	8	245
Sand, black; basalt in alternate layers. . .	173	418
Sand and gravel, black; streaks of blue basalt .	69	487
Sand, coarse.	66	553

Casing: 12-inch.

16/31-35J1. Don Damon. About 100 ft S. and 100 ft W. of E¼ corner. Altitude about 1,450 ft. Drilled by J. W. Davisson, 1956.

Soil.	42	42
Shale and rock.	13	55
Basalt, hard.	4	59
Basalt, soft.	98	157
Basalt, hard, gray. . . .	130	287
Basalt, soft, green . . .	16	303
Basalt, hard, gray. . . .	100	403
Sand, brown; water. . . .	75	478
Basalt, hard, gray. . . .	20	498
Basalt, soft, black . . .	12	510
Basalt, hard, gray . . .	60	570
Basalt, soft, black . . .	56	626
Sand; water.	11	637
Rock, soft, black	79	716
Basalt, hard, gray. . . .	44	760
Clay, blue.	7	767

16/31-35J1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, soft, blue. . . .	27	794
Basalt, hard, gray. . . .	19	813
Sand; water.	5	818
Basalt, hard, black . . .	8	826
Basalt, soft, black . . .	52	878
Sand.	3	881
Basalt, hard, black . . .	20	901

Casing: 16-inch.

16/32-3B1. Mildred Phillips.
About 950 ft S. and 500 ft E. of N¼ corner. Altitude about 1,632 ft.

Soil.	20	20
Caliche.	10	30
Clay, heavy.	120	150
Caliche.	10	160
Basalt.	120	280

Casing: 6(?)-inch.

17/23-7A1. Corps of Engineers, Vantage Damsite. About 1½ mile N. of Vantage Bridge. Altitude about 520 ft.

Sand and boulders. . . .	33	33
Basalt, fine, broken . .	23	56
Sand, black.	16	72
Basalt.	25	97
Basalt, solid.	30	127

17/23-7G1. Corps of Engineers, Vantage Damsite. About 1 mile N. of Vantage Bridge. Altitude about 508 ft.

Gravel and boulders. . .	14	14
Basalt, fine, broken . .	75	89
Sand.	10	99

17/23-7G2. Corps of Engineers, Vantage Damsite. About 1 mile N. of Vantage Bridge. Altitude about 505 ft.

Gravel and boulders. . .	41	41
Sand.	9	50
Basalt, fine, broken . .	99	149

17/24-2K1. Bureau of Reclamation. About 600 ft S. and 100 ft E. of center quarter corner. Altitude about 1,212 ft. Drilled by Giard Bros. before 1916.

Materials	Thickness (feet)	Depth (feet)
Rock, soft.	150	150
Basalt.	100	250

17/24-2P1. R. H. Simmons. About 400 ft N. and 250 ft W. of S¼ corner. Altitude about 1,240 ft. Dug and drilled by Giard Bros before 1916.

Caliche(?).	150	150
Clay.	85	235
Basalt.	66	301
"Decomposed material" .	26	327

17/24-3A1. Bureau of Reclamation. About 29 ft S. and 25 ft W. of NE corner. Altitude 1,187.3 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, calcareous, gray.	10	10
Caliche, dense, hard, massive, light gray to light tan; few sand grains.	40	50

Casing: 1½-inch, perforated 5-50 ft.

17/24-4J1. William Sund. About 100 ft W. and 350 ft S. of E¼ corner. Altitude about 1,267 ft. Drilled by Lee Smith.

Clay, black sand;gravel	300	300
Basalt.	20	320

Casing: 6-inch.

17/24-10A1. John Bepple. About 650 ft S. and 900 ft W. of NE corner. Altitude about 1,350 ft. Drilled by Pete Snyder, 1947.

Soil.	15	15
Caliche and sandy shale	70	85
Basalt, intermittently broken and solid . . .	55	140
Basalt, silicified. . .	15	155
Basalt.	195	350

Casing: 10-inch.

17/24-24E1. H. M. Perry. About 550 ft N. and 100 ft E. of W¼ corner. Altitude about 1,238 ft. Drilled by J. Cockran.

Materials	Thickness (feet)	Depth (feet)
Soil.	5	5
"Limerock".	40	45
Sandstone, soft, red. .	55	100
Clay, yellow.	80	180
Basalt; some red streaks, dark and heavy	550	730
Clay, blue.	30	760
Basalt.	40	800

Casing: 6-inch.

17/25-11E1. Bureau of Reclamation. About 1,100 ft E. and 360 ft N. of W¼ corner. Altitude 1,154 ft. Drilled by Frank Zimmerman, 1951.

Soil.	30	30
Caliche and soil. . . .	13	43
Caliche	17	60
Sand and clay.	85	145
Clay and some sand. . .	47	192
Clay.	36	228
Basalt, soft and broken	57	285

Casing: 12-, 8-inch.

17/25-23K1. Bureau of Reclamation. About 540 ft S. and 50 ft E. of center of section. Altitude 1,226.8 ft. Drilled by B. L. Price, 1955-57.

Caliche and basalt gravel (fill from Frenchman Hills tunnel excavation). .	6	6
Caliche and basaltic gravel	14	20
Sand, fine, calcareous, chiefly quartz, brown .	30	50
Silt, sandy, light brown	10	60
Clay, compact, green to light tan.	8	68
Basalt, slightly weathered, dark brown to black . .	9	77
Basalt, dense, hard, black	13	90
Basalt, medium hard, slightly iron stained, dark gray	30	120
Basalt, vesicular, black	30	150
Basalt, medium hard, dark gray to black.	40	190
Basalt, weathered, broken, brown.	6	196

17/25-23K1--Continued

Material	Thickness (feet)	Depth (feet)
Basalt, scoriaceous, iron stained	44	240
Basalt, medium hard, with broken zones, black	65	305
Basalt, vesicular, dark brown	4	309
Basalt, medium hard, dark gray	34	343
Basalt, broken, vesicular, black to brown	3	346
Basalt, brown to black	11	357
Basalt, scoriaceous, soft, broken, brown	13	370
Basalt, slightly iron stained, medium hard, black	20	390
Basalt, black to brown	25	415
Basalt, hard, gray	34	449
Basalt, jointed, gray	6	455
Basalt, hard, gray	29	484
Basalt, jointed, brown to black	26	510
Basalt, very hard, gray	20	530
Basalt, jointed, black	5	535
Basalt, hard, dense, black	64	599
Basalt, vesicular, hard, black	3	602
Basalt, jointed, medium hard, brown	6	608
Basalt, dense, hard, gray to black	40	648
Basalt, vesicular, broken, brown to black	11	659
Basalt, hard, dense, black	26	685
Basalt interflow, vesicular, and opaline minerals	28	713
Basalt, hard, black	35	748
Basalt, jointed, black	10	758
Basalt, hard to very hard, black	44	802
Basalt, vesicular, black	10	812
Basalt, medium hard, black	20	832
Interflow, chiefly opal	3	835
Basalt, hard, gray	10	845
Basalt, weathered, dark brown	12	857
Basalt, gray to black	51	908
Basalt, hard, brown	36	944
Basalt, dense, very hard, black	13	957

Casing: 12-, 6-inch

17/25-27Q1. Bureau of Reclamation, formerly G. W. Jamisson. About 200 ft E. and 100 ft N. of S¼ corner. Altitude about 1,130 ft. Drilled before 1926.

Materials	Thickness (feet)	Depth (feet)
Soil	14	14
"Limerock"	7	21
Clay	20	41
Basalt	359	400

17/26-25M1. Bureau of Reclamation. About 50 ft N. and 29 ft E. of SW corner. Altitude 1,167.4 ft. Drilled by Bach Drilling Co., 1955.

Sand, silty, calcareous, gray	10	10
Caliche, sandy, light gray	10	20
Silt, clayey, calcareous, light yellow	20	40
Sand, fine, silty, cemented, caliche particles	10	50

Casing: 1½-inch, perforated 5-50 ft.

17/26-27N1. Bureau of Reclamation. About 29 ft N. and 73 ft E. of SW corner. Altitude 1,095.7 ft. Drilled by Bach Drilling Co., 1955.

Sand, silty, calcareous, gray	10	10
Caliche, sandy, light gray	10	20
Silt, clayey, light yellow	30	50

Casing: 1½-inch, perforated 5-50 ft.

17/26-30D1. K. C. Tolman. About 2,000 ft N. and 100 ft E. of W¼ corner. Altitude 1,173 ft. Drilled by Price.

Soil	4	4
Caliche and clay	42	46
Basalt, gray	115	161
Basalt, gray and brown	39	200
Basalt, brown	80	280

Casing: 6-inch.

17/26-32D1. Bureau of Reclamation. About 29 ft S. and 50 ft E. of NW corner. Altitude 1,054.9 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, calcareous, gray	20	20
Gravel, medium, cemented with caliche	7	27
Silt, clayey, calcareous, gray	8	35
Sand, silty, calcareous, cemented, gray	15	50

Casing: 1½-inch, perforated 5-50 ft.

17/26-34D1. James P. Needham. About 220 ft E. and 200 ft S. of NW corner of sec. Altitude about 1,085 ft. Drilled in 1916 and later.

Soil	80	80
"Limey hardpan"	40	120
Basalt	80	200

Casing: 6-inch.

17/27-4A1. Bureau of Reclamation. About 38 ft S. and 80 ft W. of NE corner. Altitude 1,090.9 ft. Drilled by Cowe Drilling Co., 1955.

Sand, medium, basaltic	2	2
Caliche, sandy	15	17
Silt, clayey, calcareous, gray to light tan	43	60

Casing: 1½-inch, perforated 5-60 ft.

17/27-8P1. Charles Robbins. About 1,200 ft N. and 100 ft W. of S¼ corner. Altitude about 1,105 ft.

Sand, black, coarse (dune sand)	5	5
"Hardpan" and sandstone	29	34
Gravel, ½-inch diameter; water	7	41

17/27-18D1. Bureau of Reclamation. About 100 ft S. and 100 ft E. of NW corner. Altitude 1,110.2 ft. Drilled by Cowe Drilling Co., 1955.

Sand, medium, basaltic, calcareous	10	10
Boulder	2	12
Silt, calcareous, light tan	18	30
Caliche, hard, massive	8	38
Sand, fine, calcareous, gray	8	46

Casing: 1½-inch, perforated 5-46 ft.

17/27-31D1. Bureau of Reclamation. About 600 ft S. and 900 ft E. of NW corner. Altitude 1,169.5 ft. Drilled by F. Zimmerman, 1950-51.

Sand, medium, micaceous, subrounded, to subangular, light tan	10	10
Sand, subrounded to subangular, medium to coarse, light tan	20	30
Sand, medium, subangular to subrounded, light tan to reddish brown	35	65
Caliche, sandy, light gray	25	90
Caliche, hard to soft, sandy, tuffaceous, light tan and gray	25	115
Caliche, hard, light gray to white, intermixed with small amounts of hard, black, medium basalt, fragments	10	125
Basalt, soft, deeply weathered red with palagonite fragments and some hard vesicular fragments	7	132
Basalt, hard, fine to vitreous, black	83	215
Sand, coarse, cemented, subrounded to subangular, micaceous, light gray	25	240
Sand, clayey, medium	30	270
Basalt, hard and soft, palagonite, small feldspar crystals. Much calcite, nontronite, iron oxides	190	460
Basalt, broken; water	10	470
Basalt, hard	30	500
Basalt, soft, dark	30	530
Basalt, hard	55	585
Wood, lignitized	5	590
Basalt, gray	90	680

17/27-31D1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, gray. . . .	95	775
Basalt, broken, vesicular, glassy; water.	35	810

Casing: 18-, 15-, 10-inch.

17/28-12D1. Bureau of Reclamation. At East end, O'Sullivan Dam. Altitude 1,068.85 ft. Drilled by F. Zimmerman, 1950-51.

Silt.	1	1
Basalt, dense, black. . .	37	38
Basalt, broken, vesicular	12	50
Basalt, dense, reddish brown.	24	74
Basalt, weathered	6	80
Basalt, gray.	39	119
Basalt, vesicular, red. .	14	133
Basalt, vesicular, broken.	5	138
Basalt, moderately hard, black.	50	198
Basalt, black	19	217
Basalt, broken.	1	218
Basalt, dense, gray . . .	7	225
Basalt, soft, weathered, with calcite and nontronite, in vesicles.	15	240
Basalt, vesicular, with reddish brown palagonite	18	258
Basalt, moderately hard, black.	4	262
Basalt, hard.	8	270

Casing: 8-inch.

17/28-16E1. Don Speirs. About 1,100 ft N. and 350 ft E. of W¼ corner. Altitude about 1,048 ft. Drilled by Radke & Son, 1954.

Silt and clay.	25	25
Basalt.	60	85
Basalt; water.	8	93

Casing: 6-inch.

17/28-19D1. Oil and gas test well drilled by Peoples Oil & Gas Co. About 500 ft S. and 400 ft E. of NW corner of sec. Altitude about 1,443 ft. Drilled by G. C. Hoff, Stroud et al.

17/28-19D1--Continued

Materials	Thickness (feet)	Depth (feet)
Soil.	20	20
Basalt, black.	80	100
Basalt, broken and black.	10	110
Basalt, black.	10	120
Basalt.	4450	4570

17/28-31L1. A.D. Lewallen. About 520 ft S. and 620 ft W. of section center. Altitude about 1,139 ft. Drilled by B. L. Price, 1958.

Soil.	5	5
Caliche.	5	10
Clay.	7	17
Clay, sandy.	53	70
Basalt, brown	15	85
Basalt, gray.	5	90
Basalt, brown	35	125
Basalt, gray.	33	158
Basalt, gray, soft. . . .	5	163
Sandstone, soft.	16	179
Sand and clay.	16	195
Basalt, gray.	24	219
Basalt, brown; water. . .	2	221
Basalt, brown.	7	228
Basalt, gray.	2	230

Casing: 6-inch.

17/29-11D1. Bureau of Reclamation. About 39 ft S. and 50 ft E. of NW corner. Altitude 1,109.4 ft. Drilled by Bach Drilling Co., 1954.

Sand, well rounded quartz, muscovite and biotite, light brown.	5	5
Caliche, silty, light gray	10	15
Silt and Clay, calcareous, light brown; well rounded quartz grains.	5	20
Sand and caliche, very calcareous, fragments of well rounded gravel, light gray	10	30
Sand, fine, brown, caliche	15	45
Sand, fine, calcareous, caliche.	5	50

Casing: 1½-inch, perforated.

17/29-12G1. Bureau of Reclamation. About 40 ft N. and 675 ft E. of center of section. Altitude 1,238.6 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, calcareous, micaceous	20	20
Caliche, sandy, light colored	16	36
Caliche and basalt	4	40
Basalt, black with caliche in weathered seams	5	45

Casing: 1½-inch, perforated 5-45 ft.

17/29-14A1. Bureau of Reclamation. About 29 ft S. and 15 ft W. of NE corner. Altitude 1,246.4 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Caliche, sandy, well rounded quartz grains, light gray to white	10	10
Caliche, sandy, light gray to white	2	12
Caliche, sand and basalt	2	14
Basalt, fresh, hard, feldspar phenocrysts	6	20

Casing: 1½-inch, perforated 5-20 ft.

17/29-24N1. Bureau of Reclamation. About 29 ft N. and 15 ft E. of SW corner. Altitude 1,236.0 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, well rounded quartz grains, light brown	5	5
Sand and gravel. Sand, fine, calcareous, light brown. Gravel, fine, basaltic	5	10
Sand, fine, light gray; small fragments of well rounded basaltic gravel	5	15
Basalt and caliche, deeply weathered, angular, feldspar phenocrysts, nontronite	3	18
Basalt, broken, weathered, nontronite	3	21

Casing: 1½-inch, perforated 5-21 ft.

17/29-24R1. Bureau of Reclamation. About 50 ft N. and 29 ft W. of SE corner. Altitude 1,284.8 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, well rounded quartz grains, light brown	5	5
Sand, silty, well rounded quartz grains, light brown	10	15
Silt, calcareous, light gray	5	20
Caliche, silty, well rounded quartz grains, light gray	5	25
Caliche, sandy, well rounded quartz grains, light gray	5	30
Caliche, fragments of basalt	2	32
Caliche and basalt, coarse, angular, weathered	3	35
Basalt, weathered, feldspar, phenocrysts, nontronite, light brown to black	3	38

Casing: 1½-inch, perforated 5-38 ft.

17/30-1A1. Bureau of Reclamation. About 75 ft S. and 39 ft W. of the NE corner. Altitude 1,192.9 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, slightly sandy	10	10
Caliche and subrounded, basaltic gravel	25	35
Gravel, medium, basaltic	15	50

Casing: 1½-inch, perforated 5-50 ft.

17/30-1A2. Bureau of Reclamation. About 50 ft S. and 39 ft W. of the NE corner. Altitude 1,192.3 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, micaceous, calcareous, mostly light colored mineral grains	8	8
Caliche with basalt, sand and silt	5	13
Sand and gravel, mostly carbonate coated basalt, small amount mica and quartz	5	18

Casing: 1½-inch, perforated.

17/30-2C1. Bureau of Reclamation. About 1,000 ft S. and 29 ft W. of the N¼ corner. Altitude 1,141.0 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty; grains of caliche.	20	20
Sand, fine, silty, including a few pieces of coarse gravel.	10	30

Casing: 1½-inch, perforated 5-30 ft.

17/30-2Q2. Clarence Kissler. About 100 ft N. and 200 ft E. of S¼ corner. Altitude about 1,179 ft. Drilled by Jeske.

Soil.	10	10
Basalt.	50	60
Basalt; water	2	62
Basalt.	53	115
Basalt, soft; water. . .	30	145
Basalt.	45	190
Sand.	1	191
Basalt.	40	231
Basalt, thin sand lenses	13	244
Basalt.	8	252
Basalt; water	3	255

Casing: 12-inch

17/30-5D1. Bureau of Reclamation. About 39 ft S. and 70 ft E. of NW corner. Altitude 1,206.3 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, rounded, gray	10	10
Silt, sandy, light brown	20	30
Silt and caliche, numerous quartz grains, light gray	5	35
Sand, fine, light gray, numerous quartz grains, muscovite.	5	40
Sand, medium, light gray, fragments of caliche, numerous quartz grains .	5	45
Silt, light brown; numerous quartz grains. . . .	5	50

Casing: 1½-inch, perforated 5-50 ft.

17/30-9N1. City of Warden. About About 250 ft N. and 1,300 ft E. of SW corner. Altitude about 1,238 ft. Drilled by John Barnett, 1957.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	25	25
Sand.	24	49
Basalt, broken, water-bearing, black.	31	80
Basalt, broken, water-bearing, black; water .	22	112
Basalt, hard, gray. . .	47	159
Clay and broken basalt .	20	179
Basalt, hard, gray. . .	26	215
Basalt.	30	245
Basalt, hard.	33	278
Basalt, black.	36	314
Basalt; water.	5	319

Casing: 12-inch.

17/30-10D1. Bureau of Reclamation. About 25 ft S. and 39 ft E. of NW corner. Altitude 1,232.9 ft. Drilled by Bach Drilling Co., 1954.

Silt, calcareous, gray .	5	5
Sand, calcareous, coarse, gray.	5	10
Sand, calcareous, coarse	5	15
Sand and silt, calcareous, gray.	5	20
Silt, calcareous, gray, rounded quartz grains .	30	50

Casing: 1½-inch, perforated 5-50 ft.

17/30-10H1. Ted Jeske. About 200 ft N. and 1,100 ft W of E¼ corner. Altitude about 1,255 ft. Drilled by Ted Jeske, 1958.

Soil and clay.	90	90
Basalt, broken, brown. .	39	129
Basalt.	44	173
Basalt, hard, gray . . .	52	225
Basalt, medium, alternating hard and soft.	30	255

(First water at 90 ft, may have picked up a little below 230 ft.)

17/30-10P1. Town of Warden. About 100 ft N. and 350 ft W. of S¼ corner. Altitude about 1,280 ft. Drilled by Durand & Son.

Materials	Thickness (feet)	Depth (feet)
Soil, soft, yellow. . .	3	3
Caliche, soft, white . .	22	25
Sand, soft, yellow. . .	53	78
Basalt, broken, black .	17	95
Basalt, hard, black . .	11	106
Basalt, medium, brown .	14	120
Basalt, broken, brown .	25	145
Basalt, hard, black; water	42	187
Basalt, medium, brown .	17	204
Basalt, hard, black . .	19	223
Basalt, medium, black .	5	228
Basalt, hard, black . .	22	250
Basalt, medium, black .	32	282
Basalt, hard, black . .	5	287
Basalt, medium, black .	28	315
Basalt, hard, black. .	5	320
Basalt, medium, black .	23	343
Basalt, hard, black. .	7	350
Basalt, medium, black .	4	354
Basalt, hard, black . .	36	390
Basalt, soft, black . .	27	417
Basalt, hard, black . .	22	439
Basalt, broken, black .	9	448
Basalt, medium, black .	48	496
Basalt, broken, black .	24	520
Basalt, medium, black .	15	535
Basalt, broken, black .	31	566
Basalt, medium, black .	23	589
Basalt, broken, black .	11	600
Basalt, medium to hard	85	685

Casing: 10-inch.

17/30-12H1. Donald Smith. About 400 ft N. and 30 ft W. of E¼ corner. Altitude about 1,253 ft. Drilled by W. B. Frear, 1953.

Soil and sand.	20	20
"Hardpan" and basalt gravel.	24	44
Basalt.	61	105
Basalt, soft	20	125
Basalt, hard, gray . .	44	169
Sand; water.	8	177
Basalt, hard, gray . .	77	254
Basalt, "honeycomb"; water	12	266
Basalt.	59	325
Basalt, "honeycomb"; water	25	350

Casing: 8-inch.

17/30-13A1. Bureau of Reclamation. About 300 ft S. and 29 ft W. of NE corner. Altitude about 1,234 ft. Drilled by Bach Drilling Co., 1953.

Material	Thickness (feet)	Depth (feet)
Sand, fine, calcareous, micaceous.	9	9
Gravel, mostly basalt .	5	14

Casing: 1½-inch, perforated.

17/30-13A2. Bureau of Reclamation. About 298 ft S. and 29 ft W. of the NE corner. Altitude about 1,234.1 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, micaceous, calcareous, brown. . .	8	8
Basalt, medium hard, brown	20	28
Basalt, hard, black . .	22	50

Casing: 1½-inch, perforated 5-50 ft.

17/30-18A1. Bureau of Reclamation. About 60 ft S. and 29 ft W. of NE corner. Altitude 1,250.9 ft. Drilled by Bach Drilling Co., 1954.

Silt, light brown. . .	5	5
Sand, fine, calcareous, light gray.	10	15
Caliche, sandy, fine, very calcareous, light gray, a few quartz grains . .	20	35
Caliche, sandy, fine, calcareous, brown, well rounded quartz grains	10	45
Sand, fine, light brown	3	48
Basalt, feldspar phenocrysts, weathered.	2	50

Casing: 1½-inch, perforated 5-50 ft.

17/30-32H1. Claude E. Campbell. About 500 ft NW of E¼ corner. Altitude about 1,305 ft. Drilled by Joy Drilling Co., 1952.

Silt and clay.	19	19
Sand and gravel, cemented	21	40
Basalt, black.	50	90
Basalt, bray.	143	233
Basalt, black	41	274
Basalt, gray.	88	362
Basalt, black and gray .	182	544
Basalt; water.	8	552

17/31-6R1. Bureau of Reclamation. About 29 ft N. and 50 ft W. of SE corner. Altitude about 1,213 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, fine, micaceous, calcareous, light brown.	20	20
Silt and clay; silt is fine, micaceous, calcareous, Clay, massive, light green	5	25
Silt, sandy with caliche layers, fine, micaceous light brown, sand is black basalt.	10	35
Silt, calcareous, micaceous, light brown.	4	39
Basalt, weathered, broken, dense.	5	44

Casing: 1½-inch, perforated.

17/31-8R1. Bureau of Reclamation. About 700 ft N. and 800 ft W. of SE corner. Altitude 1,249.1 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy, calcareous.	8	8
Boulders, basalt, partly cemented with caliche.	7	15
Boulders and gravel, basalt, partly cemented with calcite. Silt with quartz and mica grains.	30	45
Sand, packed, basalt with some quartz; water	17	62
Basalt, moderately weathered,	41	103
Sand, fine, calcareous, black	2	105
Basalt, feldspar.	47	152
Basalt, broken, weathered	3	155

17/32-24A2. Edward Kulm. About 100 ft S and 100 ft W. of NE corner. Altitude about 1,565 ft. Drilled by Joy Drilling Co., 1952.

Silt and clay.	60	60
Basalt, black.	65	125
Basalt, gray.	22	147
Basalt, black	22	169
Basalt, gray.	144	313
Basalt, black	27	340
Basalt, gray.	78	418
Basalt, black	48	466

17/31-24A2--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, black, porous; water	4	470
Basalt, black.	101	571
Basalt, gray.	4	575
Basalt, black, porous; water	4	579

Casing: 8-inch.

18/23-12C2. Edwin Drake. About 100 ft S. and 3500 ft W. of NE corner of section. Altitude about 1,242 ft.

Soil.	18	18
"Limey hardpan"	4	22
Basalt.	253	275

Casing: 6-inch.

18/23-36H1. Donald Davison. About 2,710 ft S. and 230 ft W. of NE corner. Altitude about 1,302 ft. Drilled by R. J. Strasser in 1949 and 1950.

Soil	7	7
Clay, white.	2	9
Clay whitish.	13	22
Clay, brown.	80	102
Basalt, broken, clay in seams	4	106
Basalt, solid, black.	13	119
Basalt, blue-black.	12	131
Basalt, black.	27	158
"Diorite", gray and black	39	197
Basalt, black.	3	200
Basalt, broken	9	209
Clay, yellow.	2	211
Basalt, flint-like, brown	1	212
Clay, yellow.	16	228
Basalt, broken.	2	230
Basalt, black.	11	241
Basalt, soft and hard layers, black.	20	261
Basalt, hard, blue.	8	269
Basalt, soft and hard layers, black.	12	281
Basalt, medium hard and hard layers.	19	300
Basalt, softer.	3	303
Basalt, harder.	4	307
Basalt, medium hard	5	312
Basalt, very hard.	10	322
Basalt, medium soft	3	325
Basalt, medium hard	17	342
Basalt, hard.	6	348
Basalt, medium hard	6	354

18/23-36H1—Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard.	3	357
Basalt, soft, porous, with clay, blue in pores	18	375
Basalt, hard.	5	380
Basalt, medium.	4	384
Basalt, hard.	2	386
Basalt, medium with hard streaks each foot.	15	401
Basalt, hard.	6	407
Basalt, soft.	2	409
Basalt, hard.	13	422
Basalt, broken.	2	424
Basalt, hard.	4	428
Basalt, broken.	2	430
Basalt, hard.	60	490
Basalt, soft and hard streaks	8	498
Basalt, with talc streaks	7	505
Basalt, fractured	7	512
Basalt, hard.	14	526
Basalt, "honeycombed"; water	3	529
Basalt, black.	18	547
Basalt, hard.	38	585
Basalt, soft, red	4	589
Basalt, medium and hard streaks.	14	603
Basalt, medium hard, black	12	615
Basalt, hard.	3	618
Basalt, black.	2	620
Basalt, hard.	38	658
Basalt, soft.	1	659
Basalt, hard.	6	665
Basalt, porous; water	3	668
Basalt, hard, yield 900 gpm	2	670

Casing: 16-inch.

18/24-4D1. Bureau of Reclamation. About 29 ft S. of NW corner. Altitude 1,202.4 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to coarse, silty, gray.	5	5
Gravel, basaltic, fine to medium and subrounded; caliche.	20	25
Caliche, massive, dense, hard	25	50

Casing: 1½-inch, perforated 5-50 ft.

18/24-6H1. Bureau of Reclamation. About 975 ft N. and 403 ft W. of E¼ corner. Altitude 1,224.3 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and sand, calcareous, gray.	14	14
Caliche; gravel, basaltic	3	17
Gravel, basaltic, fine; sand, quartz grains, calcareous, varicolored.	20	37
Basalt, hard, dense, gray, porphrytic.	23	60
Basalt, hard, gray	60	120
Basalt, weathered, gray.	20	140
Basalt, weathered, broken, gray.	23	163
Breccia, fragmental, weathered, highly silicified, brown.	10	173
Basalt, hard, slightly weathered, some nontronite, gray.	7	180
Basalt, weathered, black	20	200
Basalt, black.	18	218
Sand, feldspathic, medium, dark gray.	1	219
Basalt, dark gray	4	233
Sand, feldspathic, medium, very angular, dark gray	8	241
Basalt, hard, dense, black	56	297
Basalt, soft, black.	12	309
Basalt, medium, black.	21	330

18/24-6J1. E. J. Webley. About 200 ft W. of E¼ corner. Altitude about 1,224 feet. Drilled by J. Cochran.

Materials	Thickness (feet)	Depth (feet)
Soil.	10	10
Gravel and sand.	22	32
Basalt.	258	290

Table 3.--Drillers' logs of wells--Con.

18/24-8N1. Bureau of Reclamation. About 45 ft N. and 39 ft E. of SW corner. Altitude 1,214.3 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, fine gravel and caliche, gray. . .	15	15
Caliche, sandy, loose, gray to light tan. . .	30	45
Gravel, basaltic, fine, angular, with fragments of caliche.	5	50

Casing: 1½-inch, perforated 5-50 ft.

18/24-20A1. Bureau of Reclamatinn. About 39 ft S. and 30 ft W. of NE corner. Altitude 1,200.7 ft. Drilled by Bach Drilling Co., 1954.

Sand, silty, light gray with caliche.	10	10
Caliche, sandy, fine, micaceous, gray. . . .	35	45
Basalt, porphyritic, weathered and broken. .	5	50

Casing: 1½-inch, perforated 5-50 ft.

18/24-22D1. J. G. Zacher. About 80 ft S. and 170 ft E of NW corner of section. Altitude about 1,201 ft. Drilled by J. Cochran.

Soil.	6	6
"Limerock".	½	6½
Sand.	25½	32
Basalt.	161	193

Casing: 6-inch.

18/24-22D2. Bureau of Reclamation. About 39 ft S. and 50 ft E. of NW corner of section. Altitude 1,200.9 ft. Drilled by Bach Drilling Co.1954

Sand, fine, gray, some gray massive caliche. . .	10	10
Sand, basaltic, coarse and dense, massive caliche, gray.	15	25
Caliche, sandy, increasingly calcareous with depth, light gray.	25	50

Casing: 1½-inch, perforated 5-50 ft.

18/24-23A1. Bureau of Reclamation. About 100 ft S., and 100 ft W. of NE corner. Altitude 1,189.9 ft. Drilled by Russel Cowe Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, basaltic, medium, with quartz grains and caliche	10	10
Sand, granitic and basaltic, medium to coarse. Some sandy to massive caliche.	22	32
Sand, calcareous, medium, brown.	10	42
Sand, calcareous, medium to fine, light tan. . . .	40	82
Silt, sandy, calcareous, light tan.	18	100
Basalt, weathered, with caliche.	5	105

Casing: 1½-inch, perforated 5-105 ft.

18/24-29D1. Bureau of Reclamation. About 100 ft S. and 39 ft E. of NW corner. Altitude 1,210.8 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, calcareous, light brown.	2	2
Caliche, dense, hard, massive, light gray.	21	23
Basalt, deeply weathered, dark gray to brown. .	6	29

Casing: 1½-inch, perforated 5-29 ft.

18/24-32D1. V. Kline. About 810 ft S. and 110 ft E. of NW corner of section. Altitude 1,239 ft. Drilled by Gerald C. Hoff in 1919.

Soil.	30	30
Basalt, black	70	100
Basalt, gray.	60	160
"Silica rock" (diatomite?)	20	180
Basalt, "honeycombed", black; water.	10	190
Basalt, broken, black; water.	30	220

18/24-32N2. Glen Woodward. About 30 ft N. and 550 ft E. of SW corner. Altitude about 1,320 ft. Drilled by Frank Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Soil, sand and clay. . . .	75	75
Sand, rock and clay. . . .	60	135
Basalt.	10	145
Basalt, hard, gray. . . .	40	185
Basalt, gray.	22	207
Basalt, hard, gray	8	215
Basalt, gray.	9	224
Basalt, hard.	9	233
Basalt, hard, gray	22	255
Clay, "chalk rock", soft .	25	280
Basalt, broken.	12	292
Basalt.	30	322
Basalt, gray.	12	334
Basalt, water level, 310 ft	28	362
Basalt, hard.	2	364
Basalt, firm.	10	374
Basalt.	51	425

Casing: 8-inch.

18/24-33D1. Bureau of Reclamation. About 29 ft S. and 150 ft E. of NW corner. Altitude 1,207.4 ft. Drilled by Bach Drilling Co, 1954.

Silt, sandy, calcareous, gray.	5	5
Caliche, sandy, light gray to light tan; sand, basaltic, fine to coarse.	17	22
Basalt, deeply weathered with calcite crystals.	4	26
Basalt, porphyritic, weathered, dark gray.	4	30

Casing: 1½-inch,

18/24-33H1. W. H. Cook. About 2,220 ft S. and 120 ft W. of NE corner. Altitude about 1,197 ft. Drilled by owner.

Soil.	25	25
Caliche.	5	30
Gravel and sand.	20	50
"Rock," hard.	18	68
Sand, black; water. . . .	2	70

Casing: 8-inch.

18/24-33Q1. W. H. Cook. About 70 ft N. and 2,500 ft W. of SE corner. Altitude 1,239 ft. Drilled by owner.

Materials	Thickness (feet)	Depth (feet)
Soil.	20	20
Caliche and clay. . . .	40	60
Basalt.	30	90
Basalt, broken.	5	95
Basalt.	30	125
Basalt, soft; water . .	8	133
Basalt.	35	168

Casing: 8-inch.

18/24-33R1. W. H. Cook. About 700 ft N. and 600 ft W. of SE corner. Altitude about 1,210 ft. Drilled by owner.

Soil.	30	30
Caliche	6	36
Gravel and sand. . . .	19	55
"Rock," hard.	5	60

Casing: 8-inch.

18/24-34A1. Bureau of Reclamation About 335 ft S. and 29 ft W. of NE corner. Altitude 1,171.7 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, gray with caliche.	2	2
Caliche, massive, dense, gray.	21	23
Sand, Basaltic, calcareous, fine to coarse. . . .	5	28
Basalt, deeply weathered, limonitic, with secondary calcite.	7	35

Casing: 1½-inch, perforated 5-35 ft.

18/25-10D1. Bureau of Reclamation. About 100 ft S. and 100 ft E. of NW corner. Altitude 1,152.6 ft. Drilled by Russel Cowe Drilling Co., 1955.

Sand, basaltic, medium	10	10
Sand, basaltic, silty, fine.	30	40
Silt, calcareous, sandy, clayey.	10	50
Silt, calcareous, clayey	10	60

Table 3.--Drillers' logs of wells--Con.

18/25-10D1--Continued

Materials	Thickness (feet)	Depth (feet)
Sand, fine to silty, caliche, bluish. . . .	10	70
Sand and caliche. Sand is medium, quartzitic, cemented with calcite, bluish green; caliche, slightly sandy, white.	12	82

Casing: 1½-inch, perforated 4-82 ft.

18/25-22M1. R. J. Baily. Location obscured dus to shifting sands. Altitude not known.

Sand.	70	70
"Quicksand".	30	100
"Rock," porous, gray .	23	123

18/25-22N1. Bureau of Reclamation. About 100 ft N. and 100 ft E. of SW corner. Altitude 1,154.4 ft. Drilled by Russel Cowe Drilling Co., 1955.

Sand, basaltic medium	40	40
Sand, fine, light tan	10	50
Silt, sandy, light tan	10	60
Silt, sandy, slightly clayey, bluish gray, caliche. .	10	70
Sand, medium, bluish gray, cemented with caliche	15	85

Casing: 1½-inch, perforated 4-85 ft.

18/26-6J1. Paul Lausier. About 400 ft S. and 300 ft W. of E¼ corner. Altitude about 1,145 ft.

Sand, light gray. . . .	10	10
Sand, basaltic, dark. .	35	45
Sandstone(?) (reportedly dips west).	10	55
Sandstone, soft; water at 55 ft.	9	64
Gravel; water	1	65

18/26-10N1. Bureau of Reclamation. About 100 ft N. and 100 ft E. of SW corner. Altitude 1,127.2 ft. Drilled by Russel Cowe Drilling Co., 1955.

Sand, basaltic, medium, black.	30	30
Silt, gray to light tan	10	40

18/26-10N1--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous, gray. .	9	49
Caliche, sandy, gray to light tan.	18	67

Casing: 1½-inch, perforated 5-67 ft.

18/26-18F1. Mrs. R. E. Davie. About 400 ft N. and 150 ft W. of center of section. Altitude about 1,140 ft. Drilled by Donald Peterson.

Sand (dune sand).	43	43
Clay, fetid, contains wood and fossil shells, black . .	22	65
Limestone.	8	73
Clay, heavy, black. . . .	14	87
"Quicksand," micaceous, gray; water.	90	177
Sand and clay, gray . . .	8	185
Clay, black	26	211

18/26-30C1. F. W. Iverson. Well has been destroyed, exact location unknown. Altitude not known.

Sand, gravel and "hardpan"	62	62
Shale, plastic, clay, sand with gas.	50	112

18/26-34N1. Bureau of Reclamation. About 203 ft N. and 100 ft E. of SW corner. Altitude 1,129.0 ft. Drilled by Russel Cowe Drilling Co., 1955.

Sand, basaltic, medium to fine, black.	20	20
Sand, micaceous, calcareous, fine.	45	65

Casing: 1½-inch, perforated 5-65 ft.

18/27-4H1. Bureau of Reclamation. About 100 ft W. of E¼ corner. Altitude 1,048.2 ft. Drilled by Russel Cowe Drilling Co., 1955.

Sand, basaltic, calcareous, fine to medium.	6	6
Boulder, basaltic. . . .	5	11

Casing: 1½-inch, perforated 5-11 ft.

18/27-4J2. Bureau of Reclamation. About 10 ft S. and 100 ft W. of the E¼ corner. Altitude 1,051.6 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, silty, light gray. .	6	6
Gravel and boulders, basaltic, very coarse.	19	25

Casing: 1½-inch, perforated 5-25 ft.

18/28-2E1. Paul Landis. About 2,140 ft S. and 100 ft E. of NW corner. Altitude about 1,142 ft. Drilled by Moses Lake Drilling Co.

Soil, black.	3.5	3.5
Sand and gravel.	37.5	41
Basalt, blue.	49	90
Rock, broken (water 80 gpm)	23	113
Basalt.	74	187
Clay, blue.	2	189
"Soapstone" and rock, broken, (water 250 gpm).	37	226
Basalt.	109	335
Rock, porous,(water 250 gpm)	15	350
Basalt.	101	451
Sand, coarse, black. . . .	14	465

18/28-2N1. Paul Landis. About 1,100 ft N. and 75 ft E of SW corner. Altitude about 1,139 ft. Drilled by Ted Joy.

Topsoil.	2	2
Gravel.	35	37
"Hardpan"	50	87
Basalt.	33	120

Casing: 8-inch.

18/28-3A1. K. Goodrich. About 150 ft S. and 800 ft W. of NE corner of section. Altitude about 1,142 ft. Drilled by Durand & Son, 1946.

Gravel, coarse.	20	20
Gravel and boulders . . .	6	26
Gravel and some clay. . .	14	40
Clay, sandy.	19	59
Boulders, basaltic. . . .	41	100
Gravel.	26	126

Casing: 10-inch, perforated 105-120 ft.

18/28-4D2. J. M. Barnett. About 750 ft S. and 600 ft E. of NW section corner. Altitude about 1,067 ft. Drilled by V. L. Rudberg, 1951.

Materials	Thickness (feet)	Depth (feet)
Soil and gravel.	5	5
"Hardpan" and clay-water in "hardpan" below 24 ft	38	43
Basalt, black.	57	100
Basalt, brown; water . .	10	110
Basalt, blue, gray . . .	73	183
Basalt, gray; water 183-185 ft.	7	190

Casing: 6-inch

18/28-4D3. Clarence Blaser. About 300 ft S. and 125 ft E. of NW corner of sec. Altitude about 1,077 ft. Drilled by Joy Bros. 1954.

Boulders.	8	8
Clay.	49	57
Basalt, broken;water. .	13	70
Basalt, firm.	14	84
Basalt, hard.	11	95
Basalt, broken.	20	115

Casing: 6-inch.

18/28-4D4. James Wilson. About 550 ft S. and 200 ft E. of NW sec. corner. Altitude about 1,074 ft. Drilled by Frank Zimmerman, 1953.

Boulders and gravel. . .	20	20
Sand and gravel.	45	65
Basalt.	37	102
Basalt, broken	1	103

Casing: 8-inch.

18/28-23R1. Bureau of Reclamation. About 50 ft N. and 29 ft W. of SE corner. Altitude 1,146.18 ft. Drilled in 1952.

Silt, sandy, brown. . .	4	4
Sand, loose, black. . .	46	50

Casing: 1½-inch, perforated 35-50 ft.

18/28-24G2. Harold L. Schwab. About 700 ft N. and 200 ft E. of center of section. Altitude about 1,138 ft. Drilled by Joy Drilling Co., 1951.

Materials	Thickness (feet)	Depth (feet)
Soil, sand and gravel. . .	146	146
Basalt, black.	48	194
Basalt; water.	3	197
Basalt, black.	153	350
Basalt, gray.	66	416
Basalt, black.	120	536
Basalt; water.	10	546

Casing: 6-inch.

18/28-24K1. Philip Roth. About 250 ft S. and 2600 ft W of the E¼ corner. Altitude about 1,142 ft. Drilled by Joy Drilling Co., 1952.

Topsoil.	2	2
Gravel.	28	30
Gravel and broken basalt .	15	45
Clay, yellow.	56	101
Clay and broken basalt . .	8	109
Basalt, broken.	48	157
Basalt.	4	161
Basalt, hard.	58	219
Basalt, broken-red; water.	26	245
Basalt, broken.	90	335
Basalt, hard.	118	453

Casing: 12-inch.

18/28-24N1. Philip Roth. About 240 ft N. and 800 ft E. of SW corner. Altitude about 1,150 ft. Drilled by Durand & Son, 1948.

Soil.	3	3
Gravel and sand	78	81
Clay, yellow.	31	112
Clay and gravel	9	121
Clay.	15	137
Clay and basalt, broken. .	25	162
Basalt, black.	52	214
Basalt, gray	41	255
Basalt, variegated	9	264
Basalt, black.	49	313
Basalt, gray.	2	315
Basalt, black.	10	325
Basalt, gray.	38	363
Basalt, broken.	40	403
Basalt, dark.	178	581
Basalt, black	9	590

Casing: 20-, 18-inch.

18/28-26F1. Frank Elder, Jr. About 325 ft N. and 2,350 ft E. of W¼ corner. Altitude about 1,110 ft. Drilled by O. Zinkgraf, 1945.

Materials	Thickness (feet)	Depth (feet)
Dug pit.	40	40
Sand and gravel.	30	70
Clay, brown.	71	141
Basalt, black.	56	197
Basalt, black, and clay, blue and brown.	27	224
Basalt, black; water . .	88	312
Basalt, brown.	45	357
Basalt, black.	98	455
Basalt, blue.	55	510
Basalt, black.	291	801

Casing: 12-, 10-inch.

18/28-26J1. —Stevens. About 300 ft S. and 75 ft W. of E¼ corner. Altitude about 1,154 ft. Drilled by Zimmerman, 1953.

Sand and gravel.	19	19
Sand, gravel and clay. .	19	38
Clay and sand.	47	85
Sand, coarse with some clay	27	112
Basalt, broken, clay . .	12	124
Basalt.	3	127
Basalt, broken; water. .	15	142
Basalt, hard.	5	147
Basalt, broken.	12	159
Basalt.	1	160

Casing: 6-inch.

18/28-34R1. Bureau of Reclamation. About 800 ft N. and 200 ft W. of SE Sec. corner. Altitude about 1,105 ft.

Soil, sandy.	2	2
Sand and gravel.	18	20
Sand and gravel, clay. .	38	58
Sand, black and clay . .	4	62
Sand and gravel, coarse.	13	75
Sand, coarse, black,gravel	5	80
Sand, coarse.	15	95
Sand and gravel.	22	117
Sand and coarse gravel .	11	128
Basalt, broken.	8	136
Basalt.	16	152
Basalt, dense, gray. . .	11	163
Basalt, black.	9	172
Basalt, vesicular. . . .	6	178

18/28-34R1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, vesicular, broken, caving	23	201
Sand and basalt, broken	1	202
Sand	2	204
Basalt	7	211
Basalt, black	9	220
Basalt, dense	11	231
Basalt, black	8	239
Basalt, vesicular	13	252
Basalt, broken, sand	7	259
Basalt, broken, dense	4	263
Basalt, dense	5	268

Casing: 8-inch.

18/28-35D1. Bureau of Reclamation. About 29 ft S. and 50 ft E. of NW corner of section. Altitude about 1,055 ft. Drilled, 1952.

Silt, sandy, brown	4	4
Sand, loose, black	6	10
Sand, hard, black; gravel	10	20
Gravel, hard, black	20	40
Gravel, hard, black;caliche	10	50

Casing: 6-inch, perforated 35-50 ft.

18/28-35R1. Bureau of Reclamation. About 29 ft N. and 50 ft W. of SE corner. Altitude about 1,080 ft. Drilled, 1952.

Silt, sandy; gravel	3	3
Sand and gravel, firm, basalt and caliche grains	27	30
Gravel, hard; basalt,caliche	20	50

Casing: 6-inch.

18/28-36D1. Bureau of Reclamation. About 50 ft S. and 100 ft E. of NW section corner. Altitude about 1,133 ft. Drilled by Ralph Cassel, 1952.

Soil	8	8
Sand, black	55	63
Caliche	20	83
Clay, sandy, brown	27	110
Clay, sandy, yellow	23	133
Basalt, black	4	137
Basalt, soft	47	184
Basalt, hard, gray	18	202
Basalt, soft, brown	16	218

Casing: 6-inch.

18/29-1A2. C. B. Farms. About 400 ft S. and 150 ft W. of NE section corner. Altitude about 1,274 ft. Drilled by Frank Zimmerman in 1950.

Materials	Thickness (feet)	Depth (feet)
Soil	12	12
"Rock", white (caliche)	15	27
Sandstone, brown	3	30
Basalt, cracked, red	39	69
Basalt, brown	13	82
Basalt, hard, gray	6	88
Basalt, broken, brown	9	97
Basalt, hard	23	120
Basalt, hard, gray	12	132
Basalt, broken	42	174
Basalt, medium hard	6	180
Basalt, hard, gray	25	205
Basalt, broken,gray,black	19	224
Basalt, hard, gray	14	238
Basalt, soft, broken	4	242
Basalt, soft, broken;water	6	248
Basalt, gray	28	276
Basalt, hard, gray	25	301
Basalt, hard, gray, brown	8	309
Basalt, hard, gray	34	343
Basalt, hard, gray, brown	6	349
Basalt, broken	6	355
Basalt, broken; water	19	374
Basalt, hard, black	40	414
Basalt, hard, gray	33	447
Basalt, broken	23	470
Basalt, hard, blue	15	485
Basalt, porous,broken;water	25	510

18/29-1B1. Menan Starch Co. About 210 ft S. and 50 ft E. of N¼ corner. Altitude about 1,243 ft. Drilled by Joy Drilling Co., 1955.

Topsoil	15	15
Basalt, broken	105	120
Basalt, gray	50	170
Basalt, broken,black; water	11	181
Basalt, gray	21	202
Basalt, black	47	249
Basalt, gray	71	320
Basalt, broken, black, water	34	354
Basalt, gray	70	424
Basalt, broken, black; water	38	462
Basalt, gray	45	507

18/29-1B1--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, broken, black; water	35	542

Casing: 8-inch.

18/29-1F1. C. B. Farms. About 150 ft N. and 200 ft W. of center of section. About 1,266 ft. Drilled by Frank Zimmerman, 1950.

Topsoil	13	13
Basalt, broken; water 204-233 ft.	220	233
Basalt, hard, blue	100	333
Basalt, broken; water	67	400
Basalt, hard, blue	27	427
Basalt, hard, gray	58	485
Basalt, broken; water	8	493
Basalt, hard, blue	86	579
Basalt, broken, porous; water	25	604

Casing: 15-inch.

18/29-2A1. J. E. Reeves. About 100 ft S. and 750 ft W. of NE corner. Altitude about 1,255 ft. Drilled by Joy Bros., 1953-54.

(?)	34	34
Basalt, broken	11	45
Basalt, hard	4	49
Basalt, broken	27	76
Basalt, hard	10	86
Basalt, broken	39	125
Basalt, hard	14	139
Basalt, broken	43	182
Basalt, hard	10	192
Basalt, broken; water	12	204
Basalt, hard	44	248
Basalt, broken	22	270

Casing: 6-inch.

18/29-2A2. Bureau of Reclamation. About 29 ft S. and 90 ft W. of the NE corner. Altitude 1,232.4 ft. Drilled by Bach Drilling Co., 1955.

Silt, calcareous, light brown	18	18
Caliche, sandy, silty, hard, light brown	4	22
Caliche and basalt, weathered zone, dark gray	3	25

18/29-2A2--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, medium hard, dark gray to black	5	30

Casing: 1½-inch, perforated 4-30 ft.

18/29-3C1. Plainview Water Users Assoc. About 1,300 ft S. and 1,100 ft W. of N¼ corner. Altitude about 1,225 ft. Drilled by Verne Rudberg, 1952.

Soil	24	24
Caliche	5	29
Basalt, brown	20	49
Basalt, hard, gray	254	303

Casing: 8-inch.

18/29-4R1. Bureau of Reclamation. About 50 ft N. and 29 ft W. of SE corner. Altitude 1,181.6 ft. Drilled, 1952.

Silt, sandy	2	2
Clay, calcareous, light brown	18	20
Clay, silty, calcareous	20	40
Basalt, weathered, vesicular, clayey	10	50

Casing: 1½-inch, perforated 35-50 ft.

18/29-5N1. Bureau of Reclamation. About 40 ft N. and 39 ft E. of SW corner. Altitude 1,164.8 ft. Drilled, 1952.

Silt, argillaceous, sandy, brown	2	2
Caliche, silty	8	10
Basalt, weathered, caliche	10	20
Basalt, weathered	30	50

Casing: 1½-inch, perforated 35-50 ft.

18/29-6P1. Ed Lehnert. About 300 ft N. and 250 ft W. of S¼ corner. Altitude 1,156 ft. Drilled by Radke & Sons.

Silt and clay	30	30
Basalt, "honeycombed"	30	60
Basalt; water	9	69

Casing: 6-inch.

18/29-6R1. United Produce Growers Co, Inc. About 65 ft N. and 65 ft W. of SE section corner. Altitude about 1,164 ft. Drilled by Frank Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Caliche and broken rock.	32	32
Basalt, broken.	15	47
Basalt, broken, and clay	25	72
Basalt, broken.	20	92
Basalt, broken; yellow clay	30	122
Basalt, broken; water.	16	138
Basalt, water level, 105 ft	18	156
Basalt, coarse rock; water at 140 ft.	20	176
Basalt, broken.	21	197
Basalt.	14	211
Basalt, hard.	11	222
Basalt.	14	236
Basalt, hard.	9	245
Basalt, broken.	23	268
Basalt.	15	283
Basalt, broken; water 141 ft	17	300
Basalt.	8	308
Basalt, broken.	2	310
Basalt, hard, gray	13	323
Basalt.	9	332
Basalt, hard, gray.	9	341
Basalt.	33	374
Basalt, medium hard.	8	382
Basalt; water at 129 ft.	10	392
Basalt, hard.	30	422
Basalt; water.	14	436
Basalt, hard.	5	441
Basalt.	35	476
Basalt, broken.	33	509
Basalt, hard.	16	525

Casing: 8-inch.

18/29-7R1. Earl N. Davey. About 1,300 ft N. and 320 ft W. of the SE corner. Altitude about 1,169 ft. Drilled by Frank Zimmerman and R. G. Kittleson, 1948.

Soil.	2.5	2.5
Gravel, pea.	67.5	70
Basalt.	50	120
Basalt, black	341	461
Basalt; water	60	521

Casing: 12-inch.

18/29-8P1. Victor Water Corp. About 100 ft N. and 200 ft W. of S¼ corner. Altitude about 1,165 ft. Drilled by V.E. Dilley, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Sand, gravel, caliche.	36	38
Basalt, brown.	43	81
Basalt, black.	40	121
Basalt, gray	60	181
Basalt, porous, black; water.	7	188
Basalt, black.	2	190

Casing: 6-inch.

18/29-9H1. Hamilton Produce Co. About 1,100 ft N. and 900 ft W. of E¼ corner. Altitude about 1,167 ft. Drilled by Radke & Son, 1955.

Topsoil.	2	2
Caliche.	18	20
Silt and clay.	58	78
Basalt.	34	112
Basalt; water.	7	119

Casing: 8-inch.

18/29-9N1. Thurm Baker. About 200 ft N. and 100 ft E. of SW corner section. Altitude about 1,158 ft. Drilled by Basin Drilling Co., 1953.

Soil.	3	3
Soil, sandy.	9	12
Gravel and sand.	47	59
Basalt.	38	97
Basalt, broken.	13	110
Basalt, very hard, blue	50	160
Basalt, broken.	7	167

Casing: 6-inch.

18/29-9N2. Bureau of Reclamation. About 50 ft N. and 29 ft E. of SW corner. Altitude 1,158.3 ft. Drilled, 1952.

Sand, silty.	3	3
Sand, soft, black.	7	10
Clay, silty, calcareous, yellow.	10	20
Clay, silty and sandy, calcareous, brown.	30	50

Casing: 6-inch, perforated 35-50 ft.

Table 3.--Drillers' logs of wells--Con.

18/29-11E1. Unit No. 91, Water Users, Inc. About 40 ft N. and 50 ft E. of W¼ corner. Altitude about 1,220 ft. Drilled by Joy Bros., 1952.

Materials	Thickness (feet)	Depth (feet)
Soil, sandy.	14	14
Clay, sandy.	13	27
Basalt, broken. . . .	20	47
Basalt.	10	57
Basalt, broken	38	95
Basalt, firm.	10	105
Basalt; water 110-123 ft	18	123
Basalt, lost water . .	12	135
Basalt.	5	140
Basalt, broken	72	212
Basalt, hard.	17	229
Basalt, broken; water	10	239
Basalt, firm.	11	250

Casing: 6-inch.

18/29-12D1. Bureau of Reclamation. About 50 ft S. and 39 ft E. of NW corner. Altitude 1,253.1 ft. Drilled, 1952.

Silt, sandy, brown. . .	6	6
Silt, brown.	4	10
Clay, light brown, caliche	10	20
Sand, very hard, black basalt, caliche, clay.	30	50

Casing: 6-inch, perforated 35-50 ft.

18/29-13K1. Howard E. Meader. About 150 ft S. and 775 ft E. of section center. Altitude about 1,171 ft. Drilled by Basin Drilling Co., 1954.

Soil.	4	4
Clay.	22	26
Sand and small gravel .	29	55
Clay.	52	107
Basalt, broken.	8	115
Basalt, hard.	17	132
Basalt, broken; water .	8	140

Casing: 6-inch.

18/29-15B1. Jes Perez. About 150 ft S. and 2,600 ft E. of NE corner. Altitude about 1,155 ft. Drilled by Basin Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Soil.	5	5
Sand.	7	12
Sand and gravel.	43	55
Basalt.	35	90
Basalt, hard.	26	116
Basalt, very hard. . . .	44	160
Basalt, broken; water. . .	16	176

Casing: 8-inch.

18/29-16R1. Bureau of Reclamation. About 50 ft N. and 29 ft W. of SE corner. Altitude 1,163.1 ft. Drilled in 1952.

Silt, sandy, brown. . . .	4	4
Caliche, clay, firm, white	16	20
Sand, hard, black. . . .	30	50

Casing: 8-, 6-inch, perforated 35-50.

18/29-17P1. Bureau of Reclamation. About 170 ft N. and 20 ft W. of S¼ corner. Altitude about 1,170 ft. Drilled by Ralph Cassel, 1951-52.

Sand, basalt, black; quartz.	42	42
Clay, silty, red	8	50
Caliche.	10	60
Clay, calcareous, red. . .	30	90
Basalt, dense, nontronitic clay in upper portion, slightly weathered, black.	61	151
Basalt, vesicular, weathered, red.	54	205
Basalt, vesicular, weathered, clay, brown.	5	210
Basalt, moderately weathered, clay, black.	19	229
Basalt, hard, gray. . . .	11	240
Basalt, soft, weathered, gray, clay.	28	268
Basalt, hard, gray	27	295
Basalt, jointed and broken with clay, brown.	5	300
Basalt, weathered, gray. .	10	310
Basalt, vesicular, gray. .	32	342

18/29-18R1. A. B. Anderson. About 300 ft N. and 200 ft W. of SE corner of section. Altitude about 1,168 ft.

Materials	Thickness (feet)	Depth (feet)
Soil.	3	3
Sand, black.	85	88
Basalt.	192	280

Casing: 6-inch.

18/29-19D1. Bureau of Reclamation. About 29 ft S. and 290 ft E. of NW corner Altitude 1,120.0 ft. Drilled 1952.

Sand, silty.	2.5	2.5
Sand, gravel, clay, soft, brown	7.5	10
Caliche, soft, gray.	10	20
Sand, calcareous, argillaceous, soft, brown.	20	40
Clay, silty, reddish.	10	50

Casing: 6-inch, perforated 35-50 ft.

18/29-20D1. Bureau of Reclamation. About 50 ft S. and 39 ft E. of NW corner. Altitude 1,169.1 ft. Drilled 1952.

Sand, silty, brown.	3	3
Sand, loose, black.	47	50

Casing: 6-inch, perforated 35-50 ft.

18/29-21D1. --Sesby. About 100 ft S. and 200 ft W. of NW corner of section. Altitude about 1,176 ft. Drilled by Joy Bros., 1953.

Topsoil.	4	4
Sand.	20	24
Clay.	36	60
Basalt, broken.	58	118
Basalt, hard.	52	170
Basalt, broken.	20	190
Basalt, hard.	4	194

Casing: 6-inch.

18/29-22B1. Norman A. Williams. About 200 ft S. of N¼ corner. Altitude about 1,155 ft. Drilled by Joy Bros., 1953.

Topsoil.	10	10
Sand.	2	12
Basalt, broken, streaked with hard layers.	59	71
Basalt, hard.	7	78
Basalt, broken.	49	127
Basalt, hard.	77	204
Basalt, broken.	34	238
Basalt, hard.	24	262
Basalt; water.	6	268

Casing: 6-inch.

18/29-24D1. Bureau of Reclamation. About 29 ft S. and 5 ft E. of NW corner. Altitude 1158.9 ft. Drilled 1952.

Silt, sandy, brown.	6	6
Sand and clay, soft, brown	14	20
Caliche and clay, hard, light brown.	10	30
Sand, hard to very hard, black.	20	50

Casing: 6-inch, perforated 35-50 ft.

18/29-29M1. Melvin E. Schwab. About 200 ft S. and 600 ft E. of W¼ corner. Altitude about 1,140 ft. Drilled by Joy Bros., 1951.

Topsoil.	20	20
Soil and sand.	90	110
Basalt, black	89	199
Basalt; water.	21	220

Casing: 6-inch.

18/29-30E1. Isabel Ralph. About 50 ft N. and 150 ft E. of W¼ corner. Altitude about 1,128 ft. Drilled by Radke & Sons.

Silt and clay.	130	130
Basalt, black.	28	158
Basalt; water.	5	163

Casing: 6-inch.

18/29-31D1. Bureau of Reclamation. About 60 ft S. and 29 ft E. of NW corner. Altitude 1,132.9 ft. Drilled, 1952.

Sand, silty, brown.	4	4
Sand, firm, black	46	50

Casing: 6-inch, perforated 35-50 ft.

Table 3.--Drillers' logs of wells--Con.

18/29-32D1. Bureau of Reclamation. About 60 ft S. and 29 ft E. of NW corner. Altitude 1,113.4 ft. Drilled, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, brown. . .	3	3
Sand, firm, black. . .	27	30
Sand, firm, basalt and caliche.	20	50

Casing: 6-inch, perforated 35-50 ft.

18/29-33C1. Columbia Farm. About 1,280 ft S. and 1,100 ft W. of N¼ corner. Altitude about 1,120 ft. Drilled, 1954.

Sand.	85	85
Clay; water.	54	139
Basalt, broken.	45	184
Basalt, "honeycombed" 250 gal of water. . .	16	200
Basalt, black.	27	227
Basalt, "honeycombed"; water.	13	240
Basalt, gray.	39	279
Basalt, "honeycombed", sand; water.	7	286

Casing: 12-inch.

18/29-33H1. Columbia Farm. About 1,500 ft S. and 1,250 ft W. of NE section. Altitude about 1,138 ft. Drilled by W. B. Freer, 1954.

Sand.	95	95
Clay.	5	100
Gravel.	30	130
Basalt, black.	45	175
Sand and "honeycomb" basalt; water.	15	190
Basalt, gray.	11	201
Basalt, "honeycomb"; water	9	210

Casing: 12-inch.

18/29-34C1. Bureau of Reclamation. About 200 ft S. and 500 ft W. of the N¼ corner. Altitude about 1,134 feet.

Sand and gravel. . . .	50	50
"Limestone".	5±	55±
Clay.	105±	160

18/29-35R1. Bureau of Reclamation. About 29 ft N. and 15 ft W. of SE corner. Altitude 1,167.7 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, muscovite, well-rounded quartz; light gray	5	5
Silt, muscovite, well-rounded quartz, light yellow. . .	15	20
Caliche, sandy, calcareous, light gray. well-rounded quartz.	10	30
Caliche, sandy, light gray	15	45
Sand and caliche, fine, light green.	5	50

Casing: 1½-inch, perforated 5-50 ft.

18/29-36A1. Bureau of Reclamation. About 40 ft S. and 39 ft W. of NE corner. Altitude 1,165.4 ft. Drilled by Bach Drilling Co., 1954.

Silt, calcareous, gray, quartz.	5	5
Silt, gray.	5	10
Sand, fine, gray.	20	30
Sand, fine, calcareous, gray	20	50

Casing: 1½-inch, perforated 5-50 ft.

18/30-3A2. J. A. Terteling & Sons. About 30 ft S. and 160 ft W. of NE section corner. Altitude about 1,140 ft. Drilled by Durand & Son, 1951.

Clay and sand.	10	10
"Hardpan" and clay. . . .	38	48
Clay and gravel; water at 50 ft, bailed dry. . . .	12	60
Gravel and clay.	4	64
Gravel.	12	76
Rock and clay; w/l 70 ft .	18	94
Gravel.	15	109
Basalt, black.	18	127
Basalt, broken.	100	227
Basalt, black; w/l 51 ft .	13	240
Basalt, broken; w/l 105 ft	26	266

Casing: 10-, 8-inch.

18/30-3N1. Bureau of Reclamation. About 350 ft N. and 39 ft E. of SW corner. Altitude 1,129.8 ft. Drilled 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, brown. . . .	4	4
Clay, sandy, brown. . . .	36	40
Sand, clayey, brown, gravel	10	50

Casing: 6-inch, perforated 35-50 ft.

18/30-6P1. Emma Hintz. About 150 ft N. and 825 ft W. of S¼ corner. Altitude about 1,212 ft. Drilled by W. B. Freer, 1954.

Soil.	20	20
Clay.	20	40
Basalt, broken.	40	80
Basalt, gray.	60	140
Basalt, "honeycomb" and water-bearing sand.	36	176

Casing: 6-inch.

18/30-7A1. Bureau of Reclamation. About 60 ft S. and 29 ft W. of NE corner. Altitude 1,224.8 ft. Drilled 1952.

Silt, brown.	4	4
Clay, silty, calcareous, brown	16	20
Sand, hard, black; basalt and caliche, clay.	10	30
Clay, silty, calcareous, gray	20	50

Casing: 6-inch, perforated 35-50 ft.

18/30-11G1. Jacob Rennick. About 75 ft N. and 100 ft E. of center of section. Altitude about 1,268 ft. Drilled by Frank Zimmerman, 1951.

Topsoil.	3	3
Loam, sandy.	15	18
Basalt, broken.	3	21
Basalt, medium hard . . .	106	127
Basalt, hard.	120	247
Basalt, broken; water . .	5	252
Basalt, hard, blue. . . .	175	427
Basalt, broken, porous. .	6	433

Casing: 10-inch.

18/30-13N2. Bureau of Reclamation. About 29 ft N. and 30 ft E. of SW corner. Altitude 1,221.8 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, micaceous, calcareous, light colored.	20	20
Silt with clay, micaceous, calcareous.	3	23
Silt, caliche; sandy, calcareous, quartz. . . .	12	35
Caliche with silt and clay	10	45
Caliche with fine sand	5	50

Casing: 1½-inch, perforated.

18/30-15N1. Bureau of Reclamation. About 50 ft N. and 39 ft E. of SW corner. Altitude about 1,202 ft. Drilled by Bach Drilling Co., 1953.

Silt, micaceous, calcareous, mineral grains. .	10	10
Silt, clay, mineral grains	21	31
Caliche with silt and clay, loose sand.	19	50

Casing: 1½-inch, perforated.

18/30-16R1. Bureau of Reclamation. About 78 ft N. and 172 ft W. of SE corner. Altitude 1,206.3 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy, calcareous, mostly quartz and basalt	20	20
Silt, sandy with clay, calcareous.	40	60
Clay, silty, green. . . .	23	83
Sand, cemented, brown; basalt.	30	113
Basalt, hard, fresh. . .	58	171
Basalt, broken.	14	185

Casing: 8-, 6-, inch.

18/30-17K1. Walter Melrose. About 800 ft S. and 400 ft E. of center of section. Altitude 1,153 ft. Drilled by Joy Bros., 1953.

Clay, sandy.	90	90
Sand and basalt; water .	20	110

Table 3.--Drillers' logs of wells--Con.

18/30-17K1--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel and basalt. . . .	37	147
Sand, medium.	3	150

Casing: 8-inch.

18/30-17R1. Bureau of Reclamation. About 29 ft N. and 50 ft W. of SE corner. Altitude about 1,181 ft. Drilled by Bach Drilling Co., 1953.

Silt, micaceous, calcareous, mostly mineral grains. .	36	36
Caliche, silt and clay. .	14	50

Casing: 6-inch, perforated.

18/30-20N1. Bureau of Reclamation. About 29 ft N. and 50 ft E. of SW corner. Altitude 1,130.7 ft. Drilled by Bach Drilling Co., 1954.

Sand, fine, gray, rounded quartz grains.	15	15
Sand, fine, gray, rounded quartz, white and rose .	20	35
Gravel, basaltic, coarse, rounded, caliche	5	40
Gravel, fine basaltic, caliche.	10	50

Casing: 1½-inch, perforated 5-50 ft.

18/30-22R1. Bureau of Reclamation. About 29 ft N. and 50 ft W. of SE corner. Altitude 1,217.8 ft. Drilled by Bach Drilling Co., 1953.

Silt, micaceous.	21	21
Sand, fine; quartz, basalt	9	30
Caliche, sandy.	5	35
Silt, sandy, calcareous, quartz.	15	50

Casing: 1½-inch, perforated.

18/30-33A1. O. W. Bowen. About 1,100 ft S. and 125 ft W. of NE corner. Altitude about 1,152 ft. Drilled by Verne Rudberg, 1950.

Soil, sand, gravel. . . .	32	32
"Hardpan".	40	72
Basalt.	78	150

Casing: 8-inch.

18/30-34D1. Bureau of Reclamation. About 30 ft S. and 39 ft E. of NW corner. Altitude 1,128.9 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt, light gray, rounded quartz grains.	5	5
Silt, yellow to gray, rounded quartz grains.	5	10
Sand, fine, gray, rounded quartz grains.	15	25
Sand, medium, gray, rounded quartz grains.	3	28
Sand, gray; quartz, basalt	3	31
Gravel, calcareous, well rounded, dark gray, caliche and quartz.	3	34
Basalt, dark brown, weathered, phenocrysts of feldspar.	6	40
Basalt, dark brown, slightly weathered, feldspar. . .	3	43

Casing: 1½-inch, perforated 5-43 ft.

18/30-35A1. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,202.8 ft. Drilled by Bach Drilling Co., 1953.

Silt, fine, light colored	9	9
Silt, micaceous, fine; clay, light colored caliche. . .	13	22
Clay, silty, calcareous, micaceous, light gray. . .	28	50

Casing: 1½-inch, perforated.

18/30-35N1. Bureau of Reclamation. About 29 ft N. and 50 ft E. of SW corner. Altitude 1,181.9 ft. Drilled by Bach Drilling Co., 1954.

Silt, dark gray; quartz. .	10	10
Sand, fine; quartz. . . .	8	18
Sand; well rounded quartz.	5	23
Sand, medium; basaltic gravel, caliche, well-rounded quartz	5	28
Gravel, medium, basaltic, brown, well-rounded. . .	8	36
Sand, basaltic, caliche, well-rounded quartz. . .	14	50

Casing: 1½-inch, perforated 5-50 ft.

18/31-2E1. Ella Borsig. About 1,300 ft N. and 900 ft E. of the W¼ corner. Altitude about 1,214 ft.

Materials	Thickness (feet)	Depth (feet)
Silt, in 6-inch bands. . .	15	15
Clay, white; "hardpan" . .	20	35
Gravel, basaltic; water. .	6	41

Concrete curb: 48-inch.

18/31-2H1. C. E. Hagan. About 1,250 ft N. and 70 ft W. of E¼ corner. Altitude about 1,220 ft. Drilled by Joy Bros. 1953.

Silt and clay.	28	28
Clay and gravel.	10	38
Basalt, broken, black;water	45	83
Basalt, gray.	36	119
Basalt, black.	37	156
Basalt, gray.	51	207
Basalt, porous, black;water	8	215
Basalt, gray.	11	226
Basalt, porous, black;water	29	255
Basalt, black, porous. . .	30	285
Basalt, porous, black;water	23	308
Basalt, gray.	88	396
Basalt, porous, black;water	7	403
Basalt, hard, gray. . . .	2	405

Casing: 12-, 8-inch.

18/31-4G1. Jake Kasele. About 1,400 ft S. and 75 ft E. of N¼ corner. Altitude about 1,190 ft. Drilled by W. B. Freer, 1957.

Clay, sandy.	47	47
Basalt, brown.	39	86
Basalt.	28	114
Basalt, hard, gray. . . .	56	170
Basalt, dark.	66	236
Basalt, broken; water. . .	10	246
Basalt, hard, gray. . . .	20	266
Clay and broken basalt;water	15	281
Basalt, medium hard. . . .	12	293

Casing: 12-inch.

18/31-5A3. Jacob A. Weber. About 600 ft S. and 100 ft W. of NE corner. Altitude about 1,183 ft. Drilled by Joy Bros., 1952.

Topsoil.	30	30
Basalt, broken.	18	48
Gravel; water.	4	52

18/31-6A3--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt and gravel. . .	11	63
Basalt, broken. . . .	17	80
Basalt.	1	81
Basalt, hard.	8	89
Clay.	20	109
Basalt, broken	3	112
Basalt, hole caving. .	6	118
Basalt, hard.	46	164
Basalt, broken. . . .	9	173
Basalt; water w/l dropped 24 ft-w/l= 54 ft. . .	9	182
Basalt, hard.	19½	201½

Casing: 10-inch.

18/31-6F1. Bill Hattori. About 75 ft W. of center section. Altitude about 1,167 ft. Drilled by Frank Zimmerman, 1951.

Topsoil and clay. . . .	22	22
Clay.	18	40
Topsoil, broken basalt	4	44
Basalt.	8	52
Basalt, hard.	2	54
Basalt.	21	75
Basalt, broken.	30	105
Basalt.	80	185
Basalt, broken.	69	254

Casing: 15-inch.

18/31-6H2. Paul Lyman. About 1,620 ft S. of NE corner section. Altitude about 1,172 ft. Drilled by Joy Bros., 1950.

Soil, sandy.	16	16
Basalt, black.	148	164
Basalt; water.	5	169
Basalt.	95	264
Basalt; water.	18	282
Basalt, solid, gray. .	77	359
Basalt; water.	11	370

Casing: 16½ inch.

18/31-13R2. Robert Frautz. About 1,050 ft N. and 460 ft W. of SE corner of section. Altitude about 1,462 ft. Drilled by John Davisson, 1953.

Materials	Thickness (feet)	Depth (feet)
Soil.	30	30
Basalt, soft; water . .	119	149
Basalt, hard, gray. . .	21	170
Basalt, soft; water . .	34	204
Basalt, hard, gray. . .	99	303
Basalt, soft, black;water	24	327
Basalt, hard, gray. . .	64	391
Sand, clay.	38	429
Basalt, hard, gray. . .	8	437
Basalt, soft, black;water	38	475
Basalt, hard, gray. . .	32	507
Basalt, soft, black;water	36	543
Basalt, hard, black . .	50	593
Basalt, soft, black;water	20	613

Casing: 12-inch.

18/31-23A1. Walter E. Franz. About 500 ft S. and 300 ft W. of NE corner. Altitude about 1,436 ft. Drilled by Joe Dvorak, 1948.

Soil.	28	28
Basalt.	12	40
Basalt, soft.	60	100
Basalt, hard, gray. . .	20	120
Basalt, soft.	40	160
Basalt, "honeycomb", soft	40	200
Basalt, broken, hard. .	110	310
Basalt; water.	45	355

Casing: 6½-inch.

18/32-6A1. Victor Franz. About 1,100 ft S. and 800 ft W. of NE corner. Altitude about 1,320 ft. Drilled by Frank Zimmerman, 1950.

Topsoil.	5	5
Clay, red.	10	15
Basalt, broken, blue;water	25	40
Basalt, hard, blue . .	63	103
Basalt, gray.	102	205
Basalt, hard, blue. . .	25	230
Basalt, broken; water .	33	263
Basalt, hard, blue. . .	47	310
Basalt, broken.	35	345
Basalt, hard, gray. . .	38	383
Basalt, porous, black;water	27	410

Casing: 8-inch.

18/32-29H2. Mrs. Julius A. Franz. About 25 ft S. and 50 ft W of E¼ corner. Altitude about 1,454 ft. Drilled by John Davisson, 1950.

Materials	Thickness (feet)	Depth (feet)
No record.	278	278
Basalt, medium, black. .	10	288
Basalt, hard, blue . . .	25	313
Basalt, soft, red; water	11	324
Basalt, medium, black. .	4	328
Basalt, soft, yellow;water	1	329
Basalt, hard, blue. . .	2	331
Sand, black; water . . .	7	338
Basalt, hard, blue . . .	21	359
Sand, black; water . . .	14	373
Basalt, hard, blue . . .	3	376
Basalt, medium, black. .	14	390
Basalt, hard, black. . .	12	402
Sand, black.	13	415
Basalt, hard, blue . . .	9	424
Basalt, soft, black; water	9	433
Basalt, hard, blue. . .	19	452
Basalt, soft, black; water	14	466
Basalt, hard, blue. . .	2	468

Casing: 8-inch.

19/23-3A1. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,324.0 ft. Drilled by Bach Drilling Co., 1953.

Silt, calcareous; quartz, mica, feldspar, basalt. .	9	9
Caliche, with some silt. .	21	30
Silt, sandy, clay.	10	40
Caliche, silty; quartz, mica, and basalt.	10	50

Casing: 6-inch.

19/23-5A2. Bureau of Reclamation. About 29 ft S. and 29 ft W. of NE corner. Altitude about 1,440 ft. Drilled by Bach Drilling Co., 1953.

Silt.	30	30
Caliche, a little silt . .	20	50

Casing: 6-inch.

19/23-11D1. Bureau of Reclamation. About 100 ft S. and 29 ft E. of NW corner. Altitude 1,294.8 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil	0.5	0.5
Gravel and boulders, silty	17.5	18
Basalt, dense, weathered, black	6	24

Casing: 6-inch, perforated.

19/23-12A1. Bureau of Reclamation. About 45 ft S. and 100 ft W. of NE corner. Altitude 1,270.7 ft. Drilled by Bach Drilling Co., 1953.

Gravel and boulders; calcareous, silty, gravel is basalt	19	19
Boulders of basalt, clay	15	34
Boulders and caliche	28	62
Basalt, weathered	40	102
Basalt, deeply weathered, clay and calcite	51	153
Basalt, deeply weathered, clay	--	153

Casing: 6-inch.

19/23-28P1. C. D. Hayward. About 350 ft N. and 500 ft W. of S¼ corner. Altitude about 1,390 ft. Drilled by M. F. Cochran, 1905.

Soil	50	50
Basalt	450	500
"White mud" (Diatomite?)	100	600
Basalt, blue	70	670

19/24-3B1. Obey Skidmore. About 1,080 ft S. and 2,550 ft W. of NE corner. Altitude about 1,235 ft. Drilled by Basin Drillers, 1953.

Soil	3	3
Sand	19	22
Gravel	32	54
Basalt, very hard, blue	17	71
Basalt, very hard, gray	38	109
Basalt, hard, black	8	117
Basalt, gray	25	142
Basalt, blue	22	164
Basalt, black	10	174
Basalt, broken; water	12	186

Casing: 6-inch.

19/24-3Q1. Bureau of Reclamation. About 118 ft N. and 29 ft E. of S¼ corner. Altitude 1,232.3 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, silty; caliche	10	10
Silt, caliche, light gray	10	20
Gravel, pea, basaltic, silty; caliche	10	30
Gravel, pea to pebble, silty, sandy basaltic	10	40
Gravel, clean, pebble to pea, basaltic, subrounded	5	45
Sand, medium to fine, basaltic, slightly silty	5	50

Casing: 6-inch, perforated 5-50 ft.

19/24-4N1. Bureau of Reclamation. About 39 ft N. and 50 ft E. of SW corner. Altitude 1,239.4 ft. Drilled by Bach Drilling Co., 1953.

Silt	6	6
Sand, gravel and boulders, mostly basalt and caliche	19	25
Sand and gravel, cemented	4	29
Silt, very fine, quartz and basalt	21	50

Casing: 6-inch, perforated.

19/24-5B1. W. C. Grigg. About 160 ft S. and 1,400 ft W. of NE corner. Altitude about 1,248 ft. Drilled by Hewett, 1943.

Silt	5	5
"Limerock"	30	35
Basalt	320	355

Casing: 8-inch.

19/24-5N1. Bureau of Reclamation. About 29 ft N. and 100 ft E. of SW corner. Altitude 1,256.6 ft. Drilled by R.J.Strasser, 1951.

Loam, sandy	1	1
Boulders	8	9
Caliche, light gray	18	27
Sand, fine	2	29
Gravel, cemented	5	34
Clay, light gray	16	50

Casing: 1½-inch, perforated 35-50 ft.

19/24-5N2. Bureau of Reclamation. About 50 ft N. and 5 ft E. of the SW corner. Altitude 1,260.0 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Gravel, pea, sandy, loosely cemented with caliche.	10	10
Sand, silty, dark gray, fine gravel, caliche.	10	20
Caliche, sandy, light gray	8	28
Caliche, sandy, reddish brown.	2	30
Gravel, pea to pebble, basaltic, caliche.	10	40
Silt, sandy, light tan.	10	50

Casing: 1½-inch, perforated 5-50 ft.

19/24-7J1. Howard Hyer. About 100 ft S. and 600 ft W of E¼ corner. Altitude about 1,256 ft. Drilled by V. C. Reinbolt in 1912.

Very soft material, "boulders and mud", caves easily	167	167
Basalt, creviced, blue; water.	100	267
Basalt; water, shale, hard	235	502

Casing: 10-inch.

19/24-11M1. Leo E. Healy. About 2,540 ft N. and 160 ft E. of SW corner. Altitude about 1,224 ft. Drilled by Pete Snyder, 1947.

Topsoil.	12	12
"Limerock"	15	27
Sand.	33	60
Basalt.	131	191

Casing: 8-inch.

19/24-11N1. Bureau of Reclamation. About 29 ft N. and 50 ft E. of SW corner. Altitude 1,222.8 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	4	4
Sand, fine to medium, basalt	14	18
Silt, fine, sandy.	7	25
Caliche, silty.	5	30
Silt, fine, sandy.	5	35
Sand and gravel, silty	8	43
Silt, fine, light brown.	7	50

19/24-12A1. H. A. Terwilliger. About 250 ft S. and 1,180 ft W. of NE corner. Altitude about 1,216 ft. Drilled by Zimmerman Drillers, 1953.

Materials	Thickness (feet)	Depth (feet)
No record.	67	67
Gravel.	11	78
Basalt, broken	3	81
Basalt.	28	109
Basalt, hard.	21	130
Basalt.	9½	139½
No record.	44	183½
Sand.	1½	185

Casing: 6-inch.

19/24-12D1. Bureau of Reclamation. About 39 ft S. and 100 ft E. of NW corner. Altitude 1,210.4 ft. Drilled by USBR Forces, 1951.

Sand, fine, tan.	11½	11½
Silt, light gray	12½	24
Sand, silty, basalt.	7	31
Clay, plastic.	5	36
Silt, compact.	11	47
Clay, silty, dark brown.	2½	49½

Casing: 1½-inch, perforated 43-49 ft.

19/24-17N1. Bureau of Reclamation. About 29 ft N. and 400 ft E. of SW corner. Altitude 1,234.7 ft. Drilled by Bach Drilling Co., 1953

Silt, sandy.	3	3
Boulders, gravel and sand; basalt and caliche, quartz	18	21
Gravel and sand, cemented; basalt and quartz.	16	37
Silt and clay.	13	50

19/24-21A1. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,225.6 ft. Drilled by Bach Drilling Co., 1953.

Sand, medium; gravel, fine.	15	15
Sand, fine; gravel, fine.	9	24
Caliche, sand and silt.	12	36
Silt, sandy, fine.	14	50

Casing: 6-inch, perforated.

19/24-23A1. Bureau of Reclamation. About 50 ft S. and 29 ft W. of NE corner. Altitude 1,212.4 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	2	2
Sand, fine to medium. .	8	10
Caliche, quartz, basalt.	13	23
Sand, coarse, silty, mostly basalt, some quartz. .	19	42
Silt, sand, mostly quartz, little basalt.	8	50

Casing: 1½-inch, perforated.

19/24-23N1. Bureau of Reclamation. About 29 ft N. and 40 ft E. of SW corner. Altitude 1,224.7 ft. Drilled by Bach Drilling Co., 1954.

Sand, silty.	5	5
Gravel, silty, gray. . .	13	18
Caliche, dense, hard, gray	10	28
Gravel, fine to medium .	22	50

Casing: 1½-inch, perforated 5-50 ft.

19/24-24M2. Allen Kehl. About 2,430 ft N. and 630 ft E. of SW corner. Altitude about 1,216 ft. Drilled by Austin Drilling Co., 1955.

Topsoil.	11	11
Sand.	14	25
Caliche.	12	37
Sand.	94	131
Basalt, hard.	94	225

Casing: 6-inch.

19/24-26R1. Bureau of Reclamation. About 120 ft N. and 55 ft W. of SE corner. Altitude 1,217.0 ft. Drilled by Bach Drilling Co., 1954.

Sand, medium, dark gray, subrounded grains of quartz	10	10
Sand, silty, light brown, quartz and basalt. . . .	5	15
Sand, medium, gray, chiefly subrounded quartz grains	15	30
Caliche, sandy, light gray	20	50

Casing: 1½-inch, perforated 5-50 ft.

19/24-28D1. Bureau of Reclamation About 29 ft S. and 27 ft E. of NW corner. Altitude 1,229.0 ft. Drilled by Bach Drilling Co., 1954.

Silt, sandy, light gray. .	10	10

19/24-28D1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Gravel and caliche. . .	5	15
Gravel, silty.	20	35
Sand, fine, brown. . .	15	50

Casing: 1½-inch, perforated 5-50 ft.

19/24-28N1. G. W. Murphy. About 500 ft N. and 900 ft E. of SW corner of section. Altitude about 1,225 ft. Drilled by Oliver Zinkgraf, 1945.

Soil.	5	5
Gravel and grit, basaltic	3	8
Caliche.	2	10
Clay.	70	80
Basalt, water at 186 ft in "honeycomb" basalt . .	130	210

Casing: 6-inch.

19/24-28N2. G. W. Murphy. About 480 ft N. and 845 ft E. of SW corner of section. Altitude about 1,224 ft. Drilled by Mr. Murphy, 1953.

Soil.	5	5
Gravel.	6	11
Caliche.	2	13
Gravel.	17	30
Sandstone, brown; water	50	80
Basalt; water	60	140
No record.	50	190

Casing: 12-inch.

19/24-29A1. Otheal Scott. About 100 ft S. and 960 ft W. of NE corner. Altitude 1,230 ft. Drilled by Bach Drilling Co., 1,230.

Gravel and boulders . .	40	40
Clay and caliche. . . .	32	72
Basalt.	10	82

Casing: 6-inch.

19/24-29D1. E. Kruse. About 100 ft S. and 710 ft E. of NW corner. Altitude about 1,219 ft. Drilled by Bach Drilling Co., 1955.

Gravel, boulders. . . .	15	15
Clay and caliche. . . .	45	60
Sand and basalt	11	71

Casing: 6-inch.

Table 3.—Drillers' logs of wells--Con.

19/24-29N2. Bureau of Reclamation. About 200 ft N. and 121 ft E. of SW corner. Altitude 1,209.4 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy; quartz, mica, and basalt.	17	17
Gravel, silted; quartz, mica, and basalt.	24	41
Silt and clay, sandy, light gray.	9	50

Casing: 1½-inch, perforated.

19/24-30R1. W. P. Stingley. About 150 ft N. and 250 ft W. of SE corner of section. Altitude about 1,208 ft. Drilled by the Western Land and Drilling Co.

Gravel and boulders. . . .	30	30
Basalt, "honeycombed", soft	75	105
"Silica" (diatomite?). . .	20	125
Basalt, "honeycombed". . .	25	150

Casing: 6-inch.

19/24-34D1. Bureau of Reclamation. About 99 ft S. and 55 ft E. of NW corner. Altitude 1,226.6 ft. Drilled by Bach Drilling Co., 1954.

Silt, gravelly; silt is light gray, gravel is fine. .	5	5
Gravel, fine, dirty. . .	10	15
Caliche, hard, dense, gray	15	30
Gravel, silty; gravel is fine, dirty, basaltic, caliche. Silt is gray .	20	50

Casing: 1½-inch, perforated 5-50 ft.

19/24-34R1. Bureau of Reclamation. About 29 ft N. and 45 ft W. of SE corner. Altitude 1,219.8 ft. Drilled by Bach Drilling Co., 1954.

Sand, silty, gray; quartz and basaltic grains. . .	5	5
Sand, silty; white quartz	5	10
Gravel, sandy. Gravel is coarse, poorly graded, basaltic, medium sand, white quartz, micaceous. . . .	5	15

19/24-34R1--Continued.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, gray, basaltic, and granitic.	10	25
Caliche, sandy medium to fine; quartz and basalt	25	50

Casing: 1½-inch, perforated 5-50 ft.

19/25-1N1. Bureau of Reclamation. About 70 ft N. and 29 ft E. of SW corner. Altitude 1,178.0 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	2	2
Sand, medium, loose, black	42	44
Clay, tan.	6	50

Casing: 1½-inch, perforated 35-50 ft.

19/25-2M1. Andrew C. Wegner. About 175 ft S. and 50 ft E. of W¼ corner. Altitude about 1,167 ft. Drilled by Mr. Goodwin in 1911.

Sand, black and gravel	40	40
"Limerock".	2	42
"Hardpan", in variegated laminae.	42	84
Sandstone, micaceous; water	16	100

Casing: 10-inch.

19/25-2N2. Andrew C. Wegner. About 300 ft N. and 400 ft E. of SW corner of section. Altitude about 1,157 ft. Dug by Matt Dishaw.

Soil.	2	2
Sand, black.	16	18
"Limerock".	2	20
"Hardpan", jointed, stratified, variegated colors	68	88
Sandstone, soft. . . .	11	99
Sand, yellow, micaceous	33	132
Clay.	45	177
Sandstone(?), porous, creviced, brown. . . .	6	183
Gravel, pea.	1	184

Casing: 10-inch.

19/25-3N1. E. D. Bolick. About 150 ft N. and 150 ft E. of SW corner. Altitude about 1,210 ft. Drilled by Basin Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Soil, sandy	2	2
Sand, coarse	4	6
Sand	53	59
Clay	53	112
"Gumbo", clay	19	131
Clay, brown	34	165
Silt and sand	7	172

Casing: 6-inch.

19/25-6M2. Skone, Connors, and E. R. Craven. About 250 ft S. and 20 ft E. of W¼ corner. Altitude about 1,198 ft. Drilled by E. R. Craven, 1958.

Loam, sandy	2½	2½
Sand, black	½	3
Clay, reddish	6	9
Sand and large boulders; water	11	20

Infiltration trench.

19/25-6R1. Bureau of Reclamation. About 39 ft N. and 70 ft W. of SE corner. Altitude 1,214.8 ft. Drilled by USBR Forces, 1951.

Sand, loose, black	33	33
Silt, caliche pebbles, light gray	11½	44½
Sand, fine, silty, light brown	5½	50

Casing: 1½-inch, perforated 44-50 ft.

19/25-9C1. Morel Ranches Inc. About 390 ft S. and 2,900 ft W. of NE section corner. Altitude about 1,220 ft. Drilled by Verne Rudberg.

Sand, loamy	50	50
"Hardpan"	5	55
Caliche	12	67
Caliche and gravel	13	80
Sandstone, reddish	30	110
Clay	20	130
Sand, loose	25	155
Basalt, brown	25	180

Casing: 6-inch.

19/25-10A1. Paul Lauzier. About 75 ft S. and 350 ft W. of NE corner of section. Altitude about 1,155 ft. Drilled by J. L. Pearson, 1911.

Materials	Thickness (feet)	Depth (feet)
Soil	8	8
"Limerock"	4	12
Clay	58	70
Sand, water-bearing	1	71
Clay	28	99
Sand, coarse, white; water	61	160

Casing: 8-inch.

19/25-10D1. Bureau of Reclamation. About 39 ft S. and 50 ft E. of NW corner. Altitude 1,212.4 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy	1	1
Sand, medium, loose, black	41	42
Sand, fine, tan	8	50

Casing: 1½-inch, perforated 35-50 ft.

19/25-15A1. Bureau of Reclamation. About 29 ft S. and 60 ft W. of NE corner. Altitude 1,192.7 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy	2	2
Sand, medium, loose, black	43	45
Clay, tan	5	50

Casing: 1½-inch, perforated 35-50 ft.

19/25-18D1. D. W. Snyder. About 400 ft S. and 300 ft E of NW corner of section. Altitude about 1,201 ft. Drilled by C. O. Anderson.

Sand	20	20
"Hardpan"	78	98
Basalt, hard, blue	96	194

Casing: 6-inch.

19/26-1R1. Bureau of Reclamation. About 270 ft N. and 830 ft W. of SE corner. Altitude 1,257.3 ft. Drilled by Bach Drilling Co., 1956.

Sand, medium to coarse	50	50
Sand and gravel; sand is medium to coarse	90	140
Silt, sandy, light brown; varicolored quartz	40	180

19/26-1R1.--Continued

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, light tan	50	230
Clay, sticky, gray. . .	5	235
Sand, fine, silty, light gray, micaceous. . . .	15	250
Sand, fine, granitic, quartz	60	310
Clay, sticky, slightly sandy, blue to gray. .	75	385
Basalt, soft, deeply weathered, broken, brown. .	36	421
Basalt, broken, light gray, streaks of clay	38	459

Casing: 10-inch.

19/26-2R1. Bureau of Reclamation. About 75 ft N. and 39 ft W. of the SE corner. Altitude 1,255.7 ft. Drilled by Bach Drilling Co.

Sand fine to coarse, basaltic.	50	50

Casing: 1½-inch, perforated 5-50 ft.

19/26-4K1. Mrs. Frances Shirmer. About 100 ft S. and 300 ft E. of C¼ corner. Altitude about 1,244 ft. Drilled by Chaffee and Thompson.

Soil.	3	3
Sand, black.	100	103
"Ashy material"	37	140
Rock, red, decayed. . .	35	175
Sandstone, soft, gray .	10	185

Casing: 6-inch.

19/26-4Q1. Bureau of Reclamation. About 155 ft N. and 50 ft E. of S¼ corner. Altitude 1,242.4 ft. Drilled by Bach Drilling Co., 1955.

Sand, silty.	2	2
Sand, medium to coarse, basaltic.	100	102
Silt, calcareous, tan	72	174
Sand, fine, quartz. . .	91	265
Sand, very fine, granitic	65	320
Clay, bluish gray, sticky	82	402
Sand, gravelly, clayey.	10	412
Basalt, weathered, sand and clay.	4	416
Basalt, weathered, broken, black.	20	436

Casing: 10-inch.

19/26-5D1. O. J. Vincent. About 200 ft S. and 250 ft E. of NW corner. Altitude about 1,200 ft. Drilled by J. S. Dishman, 1953.

Materials	Thickness (feet)	Depth (feet)
Sand, blue, and gravel.	8	8
Sand.	2	10
Boulders, coarse. . . .	10	20
Sand and gravel. . . .	40	60
Sand, fine, gray . . .	25	85
Mud, gray and sandy . .	25	110
"Shale", broken, gray; water from 125-130 ft.	20	130

Casing: 6-inch.

19/26-7A1. Bureau of Reclamation. About 75 ft S. and 29 ft W. of NE corner. Altitude 1,237.2 ft. Drilled by Bach Drilling Co., 1956.

Sand silty.	3	3
Sand, fine to coarse, black, basaltic; pea gravel .	47	50

Casing: 6-inch.

19/26-9R1. Bureau of Reclamation. About 75 ft N. and 39 ft W. of SE corner. Altitude 1,234.6 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty.	3	3
Sand, coarse to fine, basaltic, black. . . .	47	50

Casing: 6-inch.

19/26-11J1. A. E. Lund. About 1,200 ft S. and 400 ft W. of E¼ corner. Altitude about 1,254 ft. Drilled by A. Lund, 1949.

Soil.	4	4
Sand.	143	147
Sandstone; water. . . .	143	290
Clay, blue.	110	400
Basalt.	60	460
Basalt, reddish-brown .	20	480
Basalt, hard, tested 20 gpm at 486 ft, reduced hole from 12-inch to 8-inch at 500 ft.	20	500
Basalt, porous. . . .	10	510
Basalt, soft, red . .	9	519
Basalt, hard, black. .	21	540

Table 3.--Drillers' logs of wells--Con.

19/26-11J1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt and clay.	15	555
Basalt, gray.	10	565
Basalt, porous	32	597
Basalt; water.	17	614
Basalt, hard	33	647
Basalt, broken and clay, blue.	15	662
Basalt, hard, blue	33	695
Basalt, creviced; water.	10	705

Casing: 12-inch, perforated at 185 ft, 240 ft, and 270 ft.

19/26-13D2. Dr. Whitlow. About 250 ft S. and 422 ft E. of NW section corner. Altitude about 1,244 ft. Drilled by J. S. Dishman, 1954.

No record.	6	6
Sand.	54	60
Gravel.	1	61
Sand and gravel.	7	68
Gravel.	35	103
Sand.	38	141
Caliche(?).	33	174
Sand and "Mud".	25	199
Sand.	13	212

Casing: 5-inch.

19/26-14R1. Bureau of Reclamation. About 29 ft N. and 75 ft W. of the SE corner. Altitude 1,229.8 ft. Drilled by Bach Drilling Co., 1956.

Sand, gravelly. Sand is medium to coarse, gravel is pea.	20	20
Sand, fine to medium, slightly silty, basaltic, black.	30	50

Casing: 1½-inch, perforated.

19/26-16D1. Paul Lauzier. About 300 ft S. and 1,050 ft E. of NW corner. Altitude about 1,236 ft. Drilled by W. T. Dow, 1915.

Sand, fine, gray.	4	4
Sand, coarse, black	96	100
Clay, light.	20	120
"Limerock"	13	133
Clay.	27	160
Sandstone; water.	50	210

Casing: 10-inch.

19/26-18R1. Bureau of Reclamation. About 75 ft N. and 29 ft W. of the SE corner. Altitude 1,177.8 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to medium, silty, light tan.	8	8
Sand, medium, uniform, light gray, basaltic.	30	38
Caliche, massive; quartz, basalt.	12	50

Casing: 1½-inch, perforated 5-50 ft.

19/26-20D1. Bureau of Reclamation, formerly R. L. Hale. About 1,100 ft S. and 300 ft E. of NW section corner. Altitude about 1,180 ft. Drilled by J. L. Pearson.

Sand, fine, light.	5	5
Sand, coarse, black.	45	50
Clay, white.	40	90
Sandstone, soft, yellow; water.	10	100

Casing: 6-inch.

19/26-28A2. Bureau of Reclamation. About 500 ft S. and 39 ft W. of the NE corner. Altitude 1,166.7 ft. Drilled by Bach Drilling Co., 1956.

Sand, medium to coarse, silty, chiefly basaltic.	20	20
Silt, sandy.	10	30
Sand, fine, basaltic	10	40
Silt, slightly sandy with caliche modules.	10	50

Casing: 1½-inch, perforated 5-50 ft.

19/26-29N1. Paul Names. About 300 ft N. and 1,100 ft E. of SW section corner. Altitude 1,194 ft. Drilled by Gerald C. Hoff, 1939.

No log.	102	102
"Limerock".	6	108
Clay, white.	10	118
"Limerock"; white clay.	5	123
"Limerock".	4	127
Clay, white	13	140
Clay, very sticky, white.	4	144
Clay, white.	2	146
Clay, white, with sand.	3	149

19/26-29N1.--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, white.	5	154
Clay, buff.	28	182
Soapstone(?).	8	190
Sandstone; water	15	205

Casing: 8-inch.

19/26-29N2. Paul Names. About 900 ft N. and 1,300 ft E. of SW section corner. Altitude about 1,184 ft. Drilled by G.C.Hoff, 1939.

Soil.	4	4
Sand, coarse, black. . .	10	14
Sand, fine, black	4	18
Sand, coarse, black, boulders in sand 26-41 ft. . . .	35	53
Sandstone, with clay. . .	3	56
Clay, buff.	14	70
Clay, buff; white sand. .	7	77
"Limerock".	9	86
Sandstone.	3	89
Clay, white.	4	93
Sandstone.	17	110
"Limerock"	8	118
Sandstone; water.	10	128
Clay, sticky, brown . . .	4	132
Clay, brown and white . .	10	142
Clay, white.	18	160
Clay, tough, brown . . .	10	170
Sandstone; water.	14	184
Clay, brown.	13	197

Casing: 10-inch.

19/27-1J1. F. L. Strode. About 300 ft S. and 100 ft W. of E¼ corner. Altitude about 1,072 ft. Drilled by F. L. Zimmerman.

Topsoil.	3	3
Gravel; water.	37	40
"Hardpan".	5	45
Clay, red.	25	70
Basalt, broken.	5	75
Clay, red.	40	115
Basalt, medium hard;water	82	197
Basalt, hard, black. . .	43	240
Basalt, porous, black; water.	20	260
Basalt, hard, black. . .	3	263

Casing: 12-, 8-inch, perforated 35-40 ft.

19/27-2N1. Bureau of Reclamation. About 500 ft N. and 50 ft E. of SW corner. Altitude 1,114.4 ft. Drilled by Basin Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders. .	27	27
Gravel, rounded, basaltic	23	50
Boulders and gravel, boulders are medium, basaltic.	18	68
Gravel, basaltic. . . .	19	87
Sand, fine to medium, basaltic, black. . . .	2	89
Gravel, basaltic,subrounded	1	90

Casing: 6-inch, perforated 75-90 ft.

19/27-4L1. C. S. Speolstra. About 200 ft S. and 800 ft W. of center of section. Altitude about 1,125 ft. Drilled by Joy Bros., 1952.

Boulders.	71	71
Clay and sand	1	72
Clay.	48	120
Clay, blue.	32	152
Basalt, broken.	18	170
Basalt, hard.	5	175
Basalt.	32	207

Casing: 12-inch.

19/27-4M3. Glen Dittman. About 575 ft S. and 750 ft E. of W¼ corner. Altitude about 1,126 ft. Drilled by Joy Bros., 1954.

Clay.	139	139
Basalt, black.	59	198
Basalt, gray.	72	270
Basalt, black.	91	361
Basalt, broken; water .	17	378

Casing: 10-inch.

19/27-7A1. Frank Salvino. About 130 ft.S.and 250 ft W. of NE section corner. Altitude about 1,182 ft. Drilled by Dewey Fox, 1953.

Topsoil.	38	38
Gravel.	62	100
Clay, yellow.	98	198
Clay, blue.	38	236
Basalt.	41	277
Basalt, black.	25	302
Basalt,; water	4	306

Table 3.--Drillers' logs of wells--Con.

19/27-7A1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, gray	86	392
Basalt, black	103	495
Basalt; water,	11	506
Basalt, black	44	550
Basalt; water	20	570

Casing: 12-inch.

19/27-7A2. Bureau of Reclamation. About 39 ft S. and 275 ft W. of the NE corner. Altitude 1,182.2 ft. Drilled by Bach Drilling Co., 1956.

Sand, boulders	2	2
Gravel and boulders, basaltic	7	9
Gravel and sand, gravel is pea to nut. Sand is fine to coarse, basaltic, black	21	30
Sand, coarse to fine, light gray, quartz and calcite	12	42
Gravel, pea to egg, basaltic, slightly sandy	10	52

Casing: 1½-inch, perforated 5-52 ft.

19/27-7J1. Frank Salvino. About 100 ft S. and 150 ft W. of E¼ corner. Altitude about 1,166 ft. Drilled by T. T. Joy in 1949.

Soil	2½	2½
Gravel	62½	65
Clay, yellow	111	176
Clay, blue	27	203
Basalt, broken; water	17	220
Basalt, black	36	256

Casing: 12-inch.

19/27-7K1. Frank Salvino. About 700 ft S. and 700 ft E. of center of section. Altitude about 1,165 ft. Drilled by Dewey Fox, 1953.

Soil	3	3
Gravel	2	5
Sand	3	8
Gravel	20	28
Gravel and boulders	12	40
Gravel	11	51
Boulders and gravel	19	70
"Hardpan"	23	93
Clay	12	105

19/27-7K1.--Continued

Materials	Thickness (feet)	Depth (feet)
Clay, sandy	29	134
Silt and sand; water	16	150
Clay and sand	55	205
Basalt	31	236
Basalt, broken; water	5	241
Basalt, hard	1	242

19/27-8C1. Clyde Stokes. About 75 ft S. and 900 ft W. of N¼ corner. Altitude about 1,150 ft. Drilled by Ray Gilstrap and Goodwin.

Gravel	30	30
"Hardpan"	30	60
Clay	10	70
"Quicksand"; water	12	82
Clay, blue	58	140
Basalt	40	180
"Soapstone"(?); water	10	190
Sand (basalt), black	20	210

Casing: 9-inch.

19/27-9P1. Bureau of Reclamation. About 39 ft N. and 2 ft W. of S¼ corner. Altitude 1,087.2 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty, boulders	3	3
Gravel and boulders	23	26
Gravel, cemented	9	35
Boulders, basaltic	10	45
Gravel, sandy, pea to 2" size; fine to coarse sand, basaltic	12	57
Silt, sandy, tan	7	64

Casing: 1½-inch, perforated 5-62 ft.

19/27-12A1. Joe Koniski. About 600 ft S. and 100 ft W. of NE corner. Altitude about 1,124 ft. Drilled by Frank Zimmerman, 1948.

Dug (no log)	95	95
Clay	26	121
Basalt, broken, black	78	199
Basalt, porous, black; water	6	205

Casing: 48-, 12-inch.

Table 3.--Drillers' logs of wells--Con.

19/27-12P2. Bureau of Reclamation. About 29 ft N. and 50 ft W. of S¼ corner. Altitude 1,103.1 ft. Drilled by Basin Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders. . .	24	24
Gravel, pea to large, sub-rounded, basaltic. . .	51	75

Casing: 1½-inch, perforated 5-75 ft.

19/27-13H1. Clinton Cordell. About 318 ft N. and 360 ft W. of E¼ corner. Altitude about 1,126 ft. Drilled by Basin Drilling Co., 1950.

Soil.	3	3
Boulders.	15	18
Gravel.	30	48
Sand, black	9	57
Gravel, small.	22	79
Gravel, coarse	14	93
Gravel, small.	5	98
Gravel, coarse; water .	8	106

Casing: 12-inch.

19/27-14E1. Bureau of Reclamation. About 50 ft N. and 29 ft E. of W¼ corner. Altitude 1,141.8 ft. Drilled by Basin Drilling Co., 1956.

Boulders and gravel, basaltic, massive.	40	40
Gravel, pea to large size, boulders, basaltic. . .	70	110
Sand, coarse, clean, basaltic.	4	114
Gravel, nut to pea size, basaltic.	1	115

Casing: 1½-inch, perforated 4-115 ft.

19/27-14R2. Bureau of Reclamation. About 86 ft N. and 29 ft W. of the SE corner. Altitude 1,090.6 ft. Drilled by Bach Drilling Co., 1956.

Boulders and gravel. . .	61	61
Sand, fine to medium, black	2	63
Sand and gravel; sand, fine to coarse, basaltic; gravel, pea, basaltic. .	7	70

Casing: 1½-inch, perforated 0-67 ft.

19/27-15J1. H.T. Mast. About 1,850 ft N. and 900 ft W. of SE corner. Altitude about 1,144 ft. Drilled by Art Decker, 1950.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel.	120	120
"Hardpan".	16	136
Clay, blue.	29	165
Clay, yellow	18	183
Basalt, brown.	42	225
Basalt, hard, gray . . .	75	300

Casing: 10-inch.

19/27-15Q1. Leo Ehr. About 75 ft N. and 75 ft E. of S¼ corner. Altitude about 1,148 ft. Drilled by Vern Rudberg, 1948.

Gravel, cobbles and boulders.	150	150
Clay.	50	200
Basalt.	75	275

Casing: 12-inch.

19/27-15R1. H. T. Mast. About 500 ft N. and 800 ft W. of SE section corner. Altitude about 1,142 ft. Dug and drilled by Al Decker.

Soil.	2	2
Gravel and boulders. . .	108	110
"Hardpan".	20	130
Clay, blue.	74	204
Basalt, rotten.	20	224
Basalt, hard.	15	239

Casing: 12-inch.

19/27-16D2. Martin Moore. About 300 ft S. and 1,310 ft E. of NW corner. Altitude about 1,092 ft.

Soil.	3	3
Gravel and boulders . .	37	40
Clay and "hardpan". . .	102	142
Basalt.	63	205

Casing: 12-inch.

19/27-16E1. Clyde Stokes. About 1,050 ft N. and 50 ft E. of W¼ corner. Altitude about 1,107 ft. Drilled by Vern Rudberg, 1950.

Materials	Thickness (feet)	Depth (feet)
Gravel	35	35
Clay	130	165
"Hardpan"	5	170

Casing: 12-inch.

19/27-16P2. Bureau of Reclamation. About 29 ft N. and 400 ft W. of S¼ corner. Altitude 1,080.1 ft. Drilled by Basin Drilling Co., 1956.

Sand, silty	1	1
Gravel and boulders, basaltic	27	28
Gravel, basaltic	7	35
Gravel and sand. Gravel is pea to 2", basaltic. Sand, coarse to fine, basaltic	10	45
Sand, medium, basaltic and quartz, light gray	6	51
Gravel, basaltic, pea to 2" size	4	55

Casing: 1½-inch, perforated 5-55 ft.

19/27-16Q1. W. L. Mead. About 50 ft N. and 200 ft E. of S¼ corner. Altitude about 1,071 ft. Drilled by Vern Rudberg, 1952.

Soil	3	3
Gravel	57	60
"Hardpan"	3	63

Casing: 12-inch.

19/27-18R2. Al Pederson. About 1,300 ft N. and 200 ft W. of SE corner. Altitude about 1,136 ft. Drilled by owner, 1950.

Soil	2½	2½
Sand and gravel	56½	58½
Basalt	4½	63
Clay, yellow	97	160
Mica, sand; water	2	162
Clay, blue	46	208
Basalt	3	211
Basalt; water	13	224
Basalt, very hard, blue	21	245
Basalt; water	2	247
Basalt, hard, gray-blue	3	250

19/27-18R3. Bureau of Reclamation. About 29 ft N. and 170 ft W. of the SE corner. Altitude 1,135.3 ft. Drilled by Basin Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Gravel, basaltic, fine to coarse	30	30
Caliche, sandy, soft	10	40
Silt, sandy, light brown	20	60
Sand, fine to medium, tan	25	85
Silt, clayey, calcareous, gray	25	110

Casing: 1½-inch, perforated 5-110 ft.

19/27-23Q1. R. W. Goodwin. About 1,200 ft N. and 300 ft E. of S¼ corner. Altitude about 1,116 ft. Dug and drilled, 1946.

Sand and gravel, small	70	70
Sand and cobbles	10	80
Sand and gravel, small	13	93
"Hardpan"	4	97
Gravel	8	105

Casing: 48-, 7-inch.

19/27-23R1. Silvia Heft. About 1,000 ft N. and 1,450 ft W. of SE section corner. Altitude about 1,105 ft. Dug by G. C. Hill.

Soil, sandy	3	3
Gravel, coarse, and boulders	74½	77½

19/27-25A1. O. L. Moulton. About 150 ft S. and 100 ft W. of NE section corner. Altitude about 1,056 ft.

Soil	2	2
Gravel	4	6
Sand, blue	3	9
Gravel and boulders	21	30

19/27-26B1. William Goodwin. About 220 ft S. and 20 ft E. of N¼ section corner. Altitude about 1,108 ft. Drilled by G. C. Hoff.

Gravel; water	85	85
"Hardpan"	65	150
Basalt, black; water	65	215
Basalt, black, solid	22	237

Table 3.--Drillers' logs of wells--Con.

19/27-26C1. F. P. Hansen. About 130 ft S. and 400 ft W. of N¼ section corner. Altitude about 1,108 ft.

Materials	Thickness (feet)	Depth (feet)
Gravel.	85	85
"Hardpan"	65	150
Basalt.	75	225

Casing: 8-inch.

19/27-26Q1. Bureau of Reclamation. About 365 ft N. and 100 ft E. of the S¼ corner. Altitude about 1,069.8 ft. Drilled by Basin Drilling Co., 1956

Sand, fine, gray. . . .	9	9
Gravel, basaltic, some coarse grained sand. . .	36	45

Casing: 6-inch, perforated 5-45 ft.

19/27-28A1. Bureau of Reclamation. About 40 ft S. and 50 ft W. of NE corner. Altitude 1,085.3 ft. Drilled by Bach Drilling Co., 1956.

Boulders and gravel, basaltic.	57	57
Sand, fine, black, pea gravel	6	63

Casing: 1½-inch, perforated 3-63 ft.

19/27-28B1. Sam Andrews. About 900 ft S. and 70 ft E. of N¼ corner. Altitude about 1,104 ft. Drilled by Verne Rudberg, 1951.

Soil.	3	3
Gravel.	87	90

Casing: 12-inch.

19/27-29A1. --Yamamoto. About 50 ft S. and 50 ft W. of NE corner. Altitude about 1,101 ft. Dug and drilled by Hosack & Son.

Soil and boulders, large	3	3
Soil and gravel.	7	10
Gravel.	45	55
Sand.	2	57
Gravel.	12	69
Sand.	3	72
Clay.	3	75
Sand.	2	77
Gravel.	4	81
Gravel; water	19	100

Casing: 16-inch, perforated 81-94 ft.

19/27-29H1. --Yamamoto. About 1,900 ft N. and 75 ft W. of NE corner. Altitude about 1,100 ft.

Materials	Thickness (feet)	Depth (feet)
Soil and rocks.	3	3
Sand and gravel.	69	72
Sand and gravel; water. .	16	88

Casing: 15-inch.

19/27-29P1. Bureau of Reclamation. About 147 ft N. and 5 ft W. of S¼ corner. Altitude 1,063.4 ft. Drilled by Basin Crilling Co., 1956.

Sand, fine, light brown; quartz and basalt. . . .	5	5
Gravel, basaltic, pea to 2" size.	20	25
Gravel and sand; gravel is pea to nut, sand is coarse, basaltic.	10	35
Gravel, pea to 2", subrounded, basaltic; caliche. . . .	6	41

Casing: 1½-inch, perforated 5-41 ft.

19/27-34E1. Bureau of Reclamation. About 1,000 ft N. and 50 ft E. of W¼ corner. Altitude 1,062.4 ft. Drilled by Basin Drilling Co., 1956.

Sand, light gray, quartz	8	8
Gravel, basaltic, rounded to subrounded.	27½	35½

Casing: 6-inch, perforated 20½-35½.

19/28-1C1. D. E. Swanson. About 80 ft S. and 1,520 ft E. of NW corner. Altitude about 1,095 ft. Drilled by Frank Zimmerman.

Boulders.	17	17
Boulders and gravel . . .	10	27
Basalt, broken.	30	57

Casing: 8-inch.

19/28-1N1. Bureau of Reclamation. About 50 ft N. and 29 ft E. of SW corner. Altitude 1,079.9 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	2	2
Boulders and sand. . . .	17	19
Basalt;	6	25

Casing: 6-inch.

19/28-1R1. Bureau of Reclamation. About 1,000 ft N. and 35 ft W. of the SE corner. Altitude 1,210.6 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, fine to coarse, basaltic, silty.	10	10
Sand and gravel; sand is fine, basaltic; gravel is pea to nut, basaltic	40	50

Casing: 1½-inch, perforated 5-50 ft.

19/28-2E1. J. L. Hansen. About 1,490 ft S. and 150 ft E. of NW corner. Altitude about 1,125 ft. Drilled by Radke & Son.

Gravel and boulders.	45	45
Gravel, cemented.	23	68
Gravel; water.	4	72
No record.	20	92

Casing: 6-inch.

19/28-5R1. M. M. Carter. About 50 ft N. and 1,280 ft W. of SE corner. Altitude about 1,094 ft. Drilled by Denny Lesperance, 1954.

Topsoil.	5	5
Sand and gravel.	15	20
Gravel, mixed.	27	47

Casing: 6-inch.

19/28-6C3. D. Richardson. About 700 ft S. and 925 ft W. of N¼ corner. Altitude about 1,082 ft. Drilled by Basin Drilling Co., 1950.

Soil.	2	2
Gravel.	38	40
"Hardpan", clay, soft.	35	75
Basalt, broken.	7	82

Casing: 10-inch.

19/28-6P2. Mary Schiffner. About 1,300 ft N. and 50 ft W of S¼ corner. Altitude about 1,075 ft. Dug, 1940.

Materials	Thickness (feet)	Depth (feet)
Soil.	3	3
Gravel, coarse.	3	6
"Hardpan".	½	6½
Sand, black.	8½	15
Gravel, coarse.	22	37

19/28-6Q1. H. Tokunaga. About 1,310 ft N. and 30 ft E. of S¼ corner. Altitude about 1,075 ft. Dug 1937.

Gravel, coarse.	6	6
Basalt "hardpan".	3	9
Sand, black.	9	18
Gravel, coarse.	19	37

Casing:

19/28-9G1. G. A. Loudenback. About 1,340 ft S. and 30 ft E. of N¼ quarter section corner. Altitude about 1,178 feet. Drilled by R. G. Kittleson, 1949.

Gravel and boulders.	103	103
Cobbles and boulders, basaltic.	23	126
Sandstone, soft.	6	132
Sandstone, soft; water	29	161
Clay with gravel	8	169
Clay.	7	176
Gravel and boulders.	19+	195+
Basalt.	20+	215

19/28-9L1. G. A. Loudenback. About 2,580 ft N. and 2,030 ft E. of SW corner. Altitude about 1,179 ft. Drilled by Verne Rudberg, 1951.

Gravel and rock, loose.	132	132
Sand and gravel; water.	10	142
Clay and gravel.	33	175
Basalt, "honeycomb", brown	54	229
Basalt, hard.	15	244
Basalt, very hard	60	304
Basalt, softer, black	16	320
Basalt, soft, dull.	6	326
Basalt, broken, brown	4	330
Basalt, broken.	8	338

Casing: 12-inch.

19/28-10A3. U. E. Brandon. About 80 ft S. and 1,000 ft W. of NE Corner. Altitude about 1,120 ft. Drilled by Basin Drilling Co., 1946.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Gravel and boulders. .	76	78

Casing: 6-inch.

19/28-10E1. Joseph Reddy. About 200 ft N. and 800 ft E. of W¼ corner. Altitude about 1,110 ft.

Soil.	2½	2½
Sand and gravel. . . .	60	62½
Clay, sandy; water . .	17.5	80

Casing: 6-inch.

19/28-10L3. A. Ray Groff. About 500 ft S. and 510 ft W. of section corner. Altitude about 1,111 ft. Drilled by A. F. Austin, 1954.

Topsoil, big boulders.	5	5
Gravel, cemented. . .	75	80
"Quicksand".	5	85
Clay, sandy.	24	109

Casing: 6-inch.

19/28-10L4. Hazel Butler. About 840 ft S. and 700 ft W. of section center. Altitude about 1,107 ft. Drilled by Joy Bros., 1954.

Soil.	2	2
Gravel.	74	76
Gravel; water. . . .	6	82

Casing: 8-inch.

19/28-10L5. Abraham Schaber. About 750 ft S. and 1,280 ft W. of section center. Altitude about 1,107 ft. Drilled by Radke & Son, 1953

Gravel and boulders. .	60	60
"Hardpan".	10	70
Gravel; water.	5	75

19/28-11J1. Luther Gales. About 300 ft S and 500 ft W. of E¼ corner. Altitude about 1,077 ft. Drilled by Oliver Zinkgraf, 1945.

Materials	Thickness (feet)	Depth (feet)
Gravel.	40	40
Basalt.	167	207

Casing: 14-inch.

19/28-11R6. C. F. Simons. About 90 ft N. and 300 ft W. of SE corner. Altitude about 1,074 ft. Drilled by Oliver Zinkgraf, 1946.

Soil.	5	5
Basalt, broken.	15	20
Basalt, solid	155	175

Casing: 10-inch.

19/28-12B1. Leah C. Bertholdi. About 75 ft S. and 300 ft E. of N¼ corner. Altitude about 1,092 ft.

Soil.	6	6
"Hardpan".	1	7
"Limerock".	4	11
Gravel, containing shells	2	13
Basalt; water 25-27 ft.	14	27

19/28-12K1. Skyline Acres. About 800 ft S. and 800 ft E. of center of section. Altitude about 1,192 ft. Drilled by W. B. Freer, 1953.

Soil.	2	2
Boulder and gravel. . .	8	10
Gravel.	58	68
Caliche.	4	72
Clay.	11	83
Basalt, medium hard;water	35	118
Basalt, hard, gray; water	100	218
Sand, brown; water. . .	10	228
Basalt, hard.	18	246
Basalt, broken.	4	250
Basalt, hard.	4	254
Basalt, shell (flaky) .	11	265
Basalt, soft, black . .	25	290
Basalt, shell (flaky) .	15	305
Basalt, broken.	24	329

Casing: 8-inch.

19/28-12K2. C. C. Weatherbee. About 775 ft S. and 1,300 ft E. of center of section. Altitude about 1,198 ft. Drilled by owner, 1955.

Materials	Thickness (feet)	Depth (feet)
Gravel, heavy; boulders	35	35
Sand, fine, loose	35	70
Clay; water at 80 ft	20	90
Basalt, weathered	24	114

Casing: 6-inch.

19/28-13R1. Bureau of Reclamation. About 1,200 ft N. and 300 ft W. of SE corner. Altitude about 1,201 ft. Drilled by A.E. Hosack & Son, 1947.

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Gravel and boulders	13	15
Gravel, small and sand	9	24
"Hardpan," light	6	30
Clay, brown	33	63
Clay, red	9	72
Basalt, brown and black	65	137
"Calcium" rock(diatomite?)	13	150
Basalt, hard, gray, brown, black; water at 160, 205, 218 and 225 ft	98	248
Basalt, soft, brown;water	2	250
Basalt, gray, brown;water	10	260
Basalt, soft, brown	2	262
Basalt, hard, gray	2	264
Basalt, loose, porous	2	266
Basalt, hard, black	4	270
Basalt, soft, black	1	271
Basalt, hard, black	2	273
Crevice; water	1	274
Basalt, "springy", gray	3	277
Clay, blue; water	3	280
Basalt, hard, blue, gray	9	289
Clay, blue	1	290
Basalt, loose, blue	5	295
Basalt, hard, gray, blue	34	329
Basalt, "springy", gray	6	335
Basalt, brown; water	2	337
Basalt, hard, gray	35	372
Basalt, gray, with crevice	2	374
Basalt, hard, gray	4	378
Basalt, brown; water	10	388
Basalt, hard, gray, black	73	461
Clay, blue; water	1	462
Basalt, firm, black	13	475
Conglomerate, brown, big flow of water possible	41	529

19/28-13R1--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, soft, blue;water	11	540
Basalt, hard, blue	8	548
Basalt, black; small crevice; water	20	568

Casing: 20-inch.

19/28-14A2. Burrel H. Crisp. About 100 ft S. and 50 ft W of NE corner. Altitude about 1,078 ft.

Materials	Thickness (feet)	Depth (feet)
Soil	5	5
Gravel	14	19
Basalt, hard and broken	21	40
Basalt, hard, black	9	49
Basalt, hard, black;water	16	65
Basalt, hard, black	35	100
Crevice	3	103
Basalt	4	107

Casing: 6-inch.

19/28-14H3. Henry Farmer. About 500 ft N. and 400 ft W. of E¼ corner. Altitude about 1,082 ft.

Materials	Thickness (feet)	Depth (feet)
Soil	7	7
Basalt, broken	13	20
Basalt, broken; water	27	47
Basalt, broken; clay	48	95
Basalt, vesicular; water	17	112

Casing: 6-inch.

19/28-14J1. Lauren Lambert. About 250 ft S. and 200 ft W. of E¼ corner. Altitude about 1,104 ft. Drilled by Frank Zimmerman, 1949.

Materials	Thickness (feet)	Depth (feet)
Log unrecorded	105	105
Basalt, hard	10	115
Basalt, hard, crevice	11	126
Basalt, broken	9	135
Basalt, hard	5	140
Basalt, broken	6	146
Basalt	39	185

19/28-14K1. United Concrete Pipe Corp. About 450 ft S. and 2,560 ft W. of E¼ corner. Altitude about 1,057 ft. Drilled by Verne Rudberg, 1951.

Materials	Thickness (feet)	Depth (feet)
Fill and soil	4	4
"Hardpan"	2	6

Table 3.--Drillers' logs of wells--Con.

19/28-14K1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, brown.	31	37
Basalt, "honeycomb"; water	10	47

Casing: 8-inch.

19/28-15A2. Guy Harris. About 800 ft S. and 190 ft W of NE section. Altitude about 1,085 ft. Drilled by Basin Drilling Co., 1953.

Soil.	3	3
Gravel.	23	26
Sand.	13	39
Gravel; water	13	52

Casing: 6-inch.

19/28-15Q1. City of Moses Lake. About 1,060 ft N. and 2,010 ft W. of SE corner. Altitude about 1,070 ft. Drilled 1950.

Soil.	2	2
Gravel, coarse.	8	10
Gravel and boulders . .	4	14
Boulders.	4	18
Boulders and coarse gravel	3	21
Gravel, coarse.	3	24
Gravel, dry.	8	32
Sand and gravel. . . .	10	42
Basalt, blue; boulders.	11	53
Clay, sandy, yellow . .	11	64
Gravel, loose.	1	65
Sand and gravel. . . .	9	74
Gravel and broken basalt	6	80
Basalt, brown (caving)	22	102
Basalt, broken, blue. .	8	110
Basalt, blue.	5	115
Basalt, blue (caving) .	7	122
Basalt, creviced, blue.	10	132
Basalt, hard, blue. . .	11	143
Basalt, black.	15	158
Basalt, crevided, dark.	28	186
Basalt, blue.	14	200
Shale, blue.	5	205
Basalt, creviced, blue.	20	225
Basalt, hard, blue. . .	36	261
Shale, blue.	4	265
Basalt, broken, blue. .	27	292
Basalt, hard, blue. . .	9	301
Basalt, gray.	47	348
Basalt, broken, blue. .	16	364
Basalt, gray.	23	387

19/28-15Q1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, blue.	56	443
Clay, blue.	7	450
Shale, brown.	8	458
Basalt, broken, blue. . . .	18	476
Basalt, hard, gray.	122	598
Basalt, broken, blue. . . .	7	605
Basalt, black.	51	656
Basalt, creviced, black . .	14	670
Basalt, broken, black. . .	84	754
Basalt, hard, blue.	8	762
Basalt, hard, dark.	61	823
Basalt, dark (caving) . . .	4	827
Basalt, hard, dark.	19	846
Basalt, dark (caving) . . .	4	850
Basalt, hard, dark.	23	873
Basalt, hard, gray.	36	909

Casing: 16-inch.

19/28-16K1. Ben Peterson. About 160 ft N. and 2,030 ft W. of SE corner. Altitude about 1,151 ft. Drilled by Kittleson, 1948-49.

Gravel, coarse.	20	20
Sand, fine and pea gravel .	40	60
Clay and sand layers. . . .	140	200
Gravel and sand; water. . .	8	208

Casing: 8-inch.

19/28-17H1. William Hjaltaliu. About 150 ft N. and 450 ft W. of E¼ corner. Altitude about 1,067 ft. Drilled by Denny Lesperance, 1953.

Soil.	6	6
Sand and gravel.	44	50
Sand.	5	55
Gravel; water	5	60

Casing: 6-inch.

19/28-19K1. Robert Fain and --Payne. About 2,300 ft N. and 1,000 ft E. of S¼ corner. Altitude about 1,060 ft. Drilled by Austin Drilling Co., 1953.

Gravel, cobbles and boulders cemented.	40	40
Sand, black; fine gravel; water.	10	50
"Quicksand"	25	75
Clay, blue and yellow . . .	25	100
Gravel, pea, black; water .	10	110
Clay, white.	6	116

Casing: 8-inch.

19/28-19N3. D. Rayhill. About 1,050 ft N. and 300 ft E. of SW section. Altitude about 1,071 ft. Dug

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2½	2½
Topsoil and basalt . . .	3	5½
Gravel and sand.	57½	63
Gravel and sand; water .	7	70

Casing: 60-inch.

19/28-20R1. Mountain View Tracts Inc. About 1,300 ft N. and 1,000 ft W. of SE corner. Altitude about 1,060 ft. Drilled by Denny Lesperance, 1953.

Gravel and sand.	33	33
Gravel and sand; water .	7	40
"Hardpan" and gravel . .	5	45
Gravel and sand; water .	5	50

Casing: 8-inch.

19/28-22B1. City of Moses Lake. About 1,240 ft S. and 1,350 ft W. of NE Corner. Altitude about 1,075.5 ft Drilled by Durand & Son.

Soil and gravel.	3	3
Boulders, 6+ ft diam . .	5	8
Boulders.	4	12
Boulders, cemented . . .	5	17
Gravel.	1	18
Gravel, loose	18	36
Boulders, 6+ ft diam . .	3	39
Gravel, yellow clay. . .	6	45
Basalt, black, crevice at 50 ft	11	56
Basalt, porous, and clay	5	61
Basalt, brown.	9	70
Basalt, black.	1	71
Basalt, brown.	10	81
Basalt, black.	3	84
Basalt, brown; water . .	16	100
"Soapstone".	3	103
Basalt, black.	5	108
Basalt, blue.	8	116
Basalt, gray.	69	185
Basalt, brown, creviced	5	190
Basalt, brown.	12	202
Basalt, brown and black	12	214
Basalt, brown.	7	221
Basalt, black, crevice 255 ft	34	255
Basalt, gray.	21	276
Shale, blue, crevice 284 ft	8	284
Basalt, crevices; water.	11	295

19/28-22B1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, black.	34	329
Basalt, gray	41	370
Basalt, black.	21	391
Basalt, gray.	13	404
Basalt, black.	8	412
Basalt, gray.	21	433
Basalt, soft, clay; water	8	441
Basalt, "rotten"; water .	9	450
Basalt, black.	1	451
Basalt, porous.	3	454
Basalt, black, hard and soft streaks 1 to 2 ft thick	19	473
Basalt, medium, black. .	17	490
Basalt, hard, gray. . .	11	501
"Volcanic cinder,"; water	38	539
Shale, blue.	1	540
Basalt, hard, black. . .	4	544

Casing: 12-, 10-, 8- inch.

19/28-22B2. City of Moses Lake. About 1,150 ft S. and 1,400 ft W. of NE corner. Altitude about 1,072 ft. Drilled by Durand & Son.

Boulders.	18	18
Gravel, coarse.	17	35
Gravel; water, red clay .	5	40
Basalt, black; gravel . .	3	43
Basalt, brown.	8	51
Basalt, black.	3	54
Basalt, vesicular, and clay	16	70
Basalt, brown.	4	74
Basalt, vesicular; clay .	6	80
Basalt, black.	5	85
Basalt, vesicular; clay .	15	100
Basalt, black.	3	103
Basalt, hard, black . . .	19	122
Basalt, gray; water 80-126 ft.	4	126
Basalt, black.	7	133
Basalt, gray, creviced; water 133-160 ft	21	154
Basalt, hard, dark. . . .	18	172
Basalt, broken, dark. . .	73	245
Basalt, hard.	25	270
Shale, blue.	5	275
Basalt, dark	35	310
Basalt, gray.	67	377
Basalt, black	151	528
Basalt, soft.	17	545
Basalt, hard, black . . .	128	673
Basalt, hard, gray. . . .	9	682

19/28-22B2.--Continued

Materials	Thickness (feet)	Depth (feet)
Shale, green.	1	683
Basalt, medium, dark.	8	691
Basalt, hard, gray.	29	720
Basalt, medium, dark.	3	723
Basalt, broken, dark.	18	741
Basalt, dark gray.	7	748
Basalt, broken, dark.	14	762
Shale, green.	1	763

Casing: 16-, 12-inch.

19/28-22K3. Gus Dickens. About 1,900 ft N. and 50 ft E. of S¼ corner. Altitude about 1,078 ft.

Gravel.	36	36
"Hardpan".	35	71
Basalt.	65	136

19/28-22P2. Elmer Hansen. About 100 ft N. and 825 ft W. of S¼ corner. Altitude about 1,058 ft. Drilled by W. B. Freer, 1953.

Boulders.	20	20
Clay.	28	48
Basalt.	46	94
Basalt; water.	6	100

Casing: 8-inch.

19/28-23D8. City of Moses Lake. About 135 ft S. and 1,330 ft W. of N¼ corner. Altitude about 1,064 ft. Drilled by Durand & Son., 1957.

Topsoil, brown.	1	1
Gravel, gray and boulders	25	26
Clay, brown, and gravel	15	41
Gravel, gray.	4	45
Gravel, cemented, brown	10	55
Gravel, cemented, gray.	2	57
Clay, soft, yellow.	2	59
Clay, brown, and gravel	12	71
Basalt, gray.	4	75
Basalt, broken, brown	4	79
Basalt, gray.	36	115
Clay, gray; basalt, broken	6	121
Basalt, gray.	33	154
Basalt, porous; clay, brown	56	210
Basalt, gray.	22	232
Basalt, gray, porous.	4	236
Basalt, gray.	7	243

19/28-23D8.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, broken; clay, gray	10	253
Basalt, porous; clay, gray	8	261
Basalt, gray.	83	344
Basalt, porous, gray.	5	349
Basalt, gray.	119	468
Basalt, broken, gray.	6	474
Basalt, gray.	152	626
Clay, sticky, brown	2	628
Clay, sticky, green	5	633
Clay, sticky, gray	6	639
Clay, green; beasalt, broken, gray.	7	646
Basalt, broken, gray.	13	659
Basalt, gray.	34	693
Basalt, broken, brown	13	706
Basalt, porous, gray.	3	709
Basalt, "honeycomb" (vesicular) gray.	19	728
Basalt, gray.	220	948

Casing: 24-, 20-inch.

19/28-24D1. John McDowell. About 150 ft S. and 810 ft E. of NW corner. Altitude about 1,176 ft. Drilled by Basin Drillers.

Gravel.	30	30
Basalt.	147	177

Casing: 6-inch.

19/28-24D2. Bureau of Reclamation. About 50 ft S. and 29 ft E. of NW corner. Altitude 1,154.3 ft. Drilled by R. J. Strasser, 1951.

Boulders and sand.	23	23
Clay, tan.	27	50

Casing: 1½-inch, perforated 35-50 ft.

19/28-24H1. Forbes Driggs. About 50 ft N. and 1,250 ft W. of E¼ corner. Altitude about 1,200 ft. Drilled by Frank Zimmerman, 1949.

Topsoil.	3	3
Gravel, small.	26	29
Caliche.	14	43
Shale and clay	83	126
Basalt, rotten; water.	18	144
Basalt, hard, blue	101	245
Basalt, porous; water.	12	257
Basalt, hard, gray.	58	315
Basalt, porous, gray; water	30	345

Casing: 12-inch.

Table 3.--Drillers' logs of wells--Con.

19/28-24J1. James A. Crawford. About 1,600 ft N. and 45 ft W. of S¼ corner. Altitude about 1,196 ft. Drilled by Radke & Son, 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and clay.	90	90
Basalt, "honeycomb"	20	110
Basalt.	10	120
Basalt; water	11	131

Casing: 6-inch.

19/28-24P1. Otto Pepper, et al. About 500 ft N. and 400 ft W. of S¼ corner. Altitude about 1,191 ft. Drilled by A.O. Pederson, 1949.

Soil.	4	4
Gravel and cobbles.	42	46
Clay.	35	81
Basalt.	15	96
Basalt, hard, gray.	9	105
Basalt.	50	155
Basalt, broken; water	3	158
Basalt.	38	196
Basalt, broken; water	10	206
Basalt.	124	330
Basalt; water.	18	348
Basalt.	82	430
Basalt, coarse, broken; water.	10	440

Casing: 8-inch.

19/28-24P2. Otto Pepper, et al. About 530 ft N. and 100 ft W. of S¼ corner. Altitude about 1,196 ft. Drilled by Basin Drillers, 1946

Topsoil.	2	2
Gravel.	68	70
Basalt.	89	159

Casing: 8-inch.

19/28-24Q1. Roy D. McGrath. About 37 ft N. and 1,697 ft W. of SE corner sec. 24. Altitude about 1,202 ft. Drilled by Frank Zimmerman, 1950.

Topsoil.	2	2
Sand and gravel, black	28	30
Sand.	40	70
Clay, red	21	91
Basalt, broken.	49	140
Basalt, hard, black.	104	244
Basalt, broken, black; water	16	260

Casing: 12-inch.

19/28-24R1. J. C. Koeppen. About 1,100 ft N. and 600 ft W. of SE corner. Altitude about 1,200 ft. Drilled by Frank Zimmerman.

Materials	Thickness (feet)	Depth (feet)
Soil.	2	2
Gravel.	21	23
"Hardpan".	9	32
Basalt, white.	28	60
Basalt, gray.	68	128
Basalt, black.	112	240

Casing: 6-inch.

19/28-25A1. Keizo Shigeno. About 75 ft S. and 845 ft W. of NE Corner. Altitude about 1,200 ft. Drilled by Frank Zimmerman, 1951.

Old hole.	140	140
Basalt, hard, blue.	15	155
Basalt.	7	162
Basalt, hard.	50	212
Basalt.	3	215
Basalt, hard.	6	221
Basalt, hard, gray.	5	226
Basalt, hard.	8	234
Basalt, broken; water	9	243
Basalt, broken.	22	265
Basalt, hard.	1	266

Casing: 8-inch.

19/28-25C1. Bill Hattori. About 1,150 ft S. and 50 ft W. of N¼ corner. Altitude about 1,196 ft. Drilled by Frank Zimmerman.

Topsoil.	2	2
Gravel, coarse.	12	14
Gravel, fine.	50	64
Shale.	46	110
Basalt, broken.	30	140
Basalt, porous; water.	5	145
Basalt, hard.	125	270
Basalt, porous; water.	23	293

Casing: 12-inch.

19/28-25L1. Bill Hattori. About 1,400 ft N. of S¼ corner. Altitude about 1,191 ft. Drilled by Frank Zimmerman, 1949.

Materials	Thickness (feet)	Depth (feet)
Gravel, coarse.	29	29
Sand, coarse.	36	65
"Rock" and clay, white, brown	25	90
Basalt, broken.	49	139
Basalt, hard.	93	232
Basalt, broken.	36	268
Basalt, hard.	56	324
Basalt, broken	10	334
Basalt, black.	90	424
Basalt, broken.	26	450
Basalt, hard.	20	470
Basalt, hard, gray.	5	475
Basalt, broken.	20	495
Basalt, hard.	5	500

Casing: 12-inch.

19/28-26A1. Chief Moses Jr. High School. About 520 ft S. and 50 ft W. of NE corner. Altitude about 1,172 ft. Drilled by Durand & Son, 1956.

Gravel, heavy, coarse. . . .	32	32
Sand and gravel.	23	55
Clay, brown.	35	90
Basalt, brown.	43	133
Basalt, hard, gray, brown. .	26	159

Casing: 10-inch.

19/28-26C3. --Harden. About 900 ft S. and 1,425 ft E. of NW corner. Altitude about 1,156 ft. Drilled by Basin Drillers, 1947.

Gravel.	33	33
"Hardpan"	63	96
Basalt.	44	140

Casing: 8-inch.

19/28-27C3. Chicago, Milwaukee & St. Paul R.R. About 750 ft SW of N¼ corner. Altitude about 1,056 ft. Drilled by O. F. Zinkgraf, 1946.

Soil and gravel.	4	4
Gravel and boulders.	21	25
Clay.	35	60
"Hardpan"	15	75
Clay, gumbo.	6	81
Basalt.	46	127

Casing: 12-inch, set to 67 feet.

19/28-26D2. Percy Driggs. About 1,220 ft S. and 320 ft E. of NW sec. corner. Altitude about 1,122 ft. Drilled by Joy Bros., 1953.

Materials	Thickness (feet)	Depth (feet)
Clay.	78	78
Basalt, broken. . . .	55	133
Basalt, gray.	91	224
Basalt, black. . . .	54	278
Basalt, gray.	45	323
Basalt, black.	53	376
Basalt, gray.	103	479
Basalt, broken; water	21	500

19/28-26J1. Sam Driggs. About 100 ft S. and 75 ft W. of E¼ corner. Altitude about 1,164 ft. Drilled by Frank Zimmerman.

Topsoil.	3	3
Gravel, pea.	32	35
Clay.	34	69
"Hardpan".	35	104
Shale; water 127-135 ft	24	128
Basalt, porous, black	132	260
Basalt, loose, black.	256	516
Basalt, gray.	124	640
Clay.	92	732
Basalt, black	263	995

19/28-26M1. George Rawlins. About 410 ft S. and 225 ft E. of W¼ corner. Altitude about 1,154 ft. Drilled by W. B. Freer.

Gravel.	100	100
Clay.	40	140
Basalt, gray.	40	180
Basalt; water	6	186

Casing: 6-inch.

19/28-27C1. Ed Kramer. About 750 ft S. and 1,000 ft W. of N¼ corner. Altitude about 1,059 ft.

Soil and gravel. . .	6	6
"Hardpan".	34	40
Basalt.	50	90
Basalt, "honeycomb" .	6	96
Basalt.	4	100

19/28-27D1. Homer Jones. About 775 ft S. and 1,000 ft E. of NW corner. Altitude about 1,060 ft. Drilled by Basin Drilling Co., 1946-47.

Materials	Thickness (feet)	Depth (feet)
Topsoil	2	2
Gravel	5	7
"Hardpan"	43	50
Basalt, hard	5	55
Basalt	38	93

Casing: 6-inch.

19/28-27D2. Mrs. Mildred Elliott. About 650 ft N. and 750 ft E. of NW section corner. Altitude about 1,060 ft. Drilled by Basin Drillers, 1946.

Gravel	7	7
"Hardpan"	35	42

Casing: 6-inch.

19/28-27M1. Martin Johnson. About 200 ft S. and 400 ft E. of W¼ corner. Altitude about 1,061 ft.

Soil	4	4
Gravel, cobbles, boulders	6	10
"Hardpan"	20	30
Basalt, hard	60	90
Basalt, cavernous	1	91

19/28-28H3. Lewis Townsend. About 900 ft N. and 750 ft W. of E¼ corner. Altitude about 1,070 ft. Drilled by Ted Joy, 1954.

Topsoil	2	2
Gravel	8	10
Sand	6	16
Clay	22	38
Basalt, broken, black	8	46
Basalt, black; water	41	87

Casing: 6-inch.

19/28-28J2. Capistrano Park Water System. About 550 ft S. and 1,072 ft W. of E¼ corner. Drilled by Jack Hartches.

Soil	2	2
Sand and gravel	14	16
"Hardpan"	36	52
Basalt	21	73

Casing: 10-inch.

19/28-28J3. Capistrano Water System. About 575 ft S. and 1,175 ft W. of E¼ corner. Altitude about 1,072 ft. Drilled by Jack Hartches, 1949.

Materials	Thickness (feet)	Depth (feet)
No record	128	128
Basalt, black	12	140
Basalt	7	147
"Soapstone" and basalt	9	156
Basalt, gray	39	195
Basalt, hard, gray	9	204
Basalt, coarse, broken; water	46	250

Casing: 12-inch.

19/28-28K1. Schneirla Bros. About 75 ft S. and 2,400 ft W. of E¼ corner. Altitude about 1,073 ft.

Soil	4	4
Gravel, cemented	8	12
Boulders (no fines)	8	20
"Hardpan"	20	40
Basalt	60	100

19/28-28K4. City of Moses Lake. About 1,000 ft S. and 14,000 ft W. of E¼ corner. Altitude about 1,073 ft. Drilled by Durand & Son, 1953.

Topsoil	1	1
Sand, gravel and boulders	2	3
Gravel and boulders	3	6
Boulders	6	12
Clay, sandy, soft, brown	11	23
Clay, sandy, brown	15	38
Boulders and sand	6	44
Basalt, broken, brown, medium hard with brown mud	27	71
Basalt, hard, gray	15	86
Basalt, medium hard, gray; water level 28 ft.	4	90
Basalt, broken, brown, some sand, (caving on bottom)	3	93
Basalt, hard, gray	6	99
Basalt, broken, brown	3	102
Basalt, hard, brown	34	136
Basalt, broken, caving	2	138
Basalt, hard, brown	2	140
Basalt, broken, caving	4	144
Basalt, brown, hard	2	146
Basalt, hard, gray	54	200
Basalt, broken, medium soft, brown	25	225

19/28-28K4.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, broken, medium soft, dark	15	240
Basalt, medium to hard, dark	313	553
Basalt, medium to hard, sark	33	586
Basalt, hard, gray	10	596
Basalt, medium hard, dark	21	617
Basalt, hard, gray	7	624
Basalt, medium hard, dark	7	631
Basalt, medium hard, gray	7	638
Basalt, medium hard, dark	5	643
Basalt, hard, gray	15	658
Open cave	1	659
Basalt, broken	5	664
Siltstone(Driller says shale) gray-green, micaceous, water bailed was very clear	26	690
Basalt, medium hard, black	21	711
Basalt, dark, hard	6	717
Basalt, medium, dark	33	750
Basalt, broken, red	25	775
Basalt, medium, dark	2	777
Basalt, hard, dark	98	875
Basalt, black, layers of shale	7	882
Basalt, hard, dark	41	923
Basalt, medium hard	14	937
Basalt, hard, gray	23	960
Basalt, broken, soft	3	963
Basalt, medium hard, dark	35	998
Basalt, hard, dark	2	1000

Casing: 12-inch.

19/28-28Q1. C. H. Storms. About 1,240 ft N. and 400 ft E. of S¼ corner. Altitude about 1,080 ft. Drilled by Frank Zimmerman, 1952.

Materials	Thickness (feet)	Depth (feet)
Boulders	14	14
Boulders and clay	29	43
Clay and gravel	11	54
Basalt	42	96
Basalt, broken	14	110

Casing: 6-inch.

19/28-29N1. Basin Development & Sales. About 300 ft N. and 1,300 ft E. of SW corner. Altitude about 1,048 ft. Drilled by Frank Zimmerman, 1946.

Materials	Thickness (feet)	Depth (feet)
Sand	5	5
Gravel	5	10
Sand; water	33	43
"Hardpan"	9	52
Basalt	97	149

Casing: 10-inch.

19/28-30B1. Thomas Hansen. About 200 ft S. and 400 ft E. of N¼ corner. Altitude about 1,066 ft.

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Gravel	13	15
Sand, black, running	2	17
Gravel	25	42

19/28-30P1. Bureau of Reclamation. About 331 ft N. and 1,300 ft W. of the S¼ corner. Altitude 1,062.3 ft. Drilled by Basin Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, granitic and basaltic, gray	10	10
Sand, same as above; fine gravel	10	20
Sand and gravel. Sand fine to coarse, chiefly basaltic. Gravel, fine to medium, basaltic	15	35

Casing: 1½-inch, perforated 5-35 ft.

19/28-33B1. Leo Ehrs. About 1,050 ft S. and 800 ft E. of N¼ corner. Altitude about 1,071 ft. Drilled by Vern Rudberg.

Materials	Thickness (feet)	Depth (feet)
Topsoil	3	3
Gravel and boulders	8	11
"Hardpan"	24	35

Casing: 6-inch.

19/28-33P2. S. A. Starks. About 900 ft N. and 1,700 ft E. of SW corner. Altitude about 1,085 ft. Drilled by Radke & Son, 1953.

Materials	Thickness (feet)	Depth (feet)
Clay, sand and gravel	92	92
Basalt	14	106
Basalt; water	9	115

Casing: 6-inch.

19/28-34J1. Virgil Morgan. About 200 ft S. and 300 ft W. of the E¼ section corner. Altitude about 1,155 ft. Drilled by Simmons, 1949.

Gravel	52	52
Clay	75	127
Basalt	8	135
Shale	4	139
Basalt, soft, rotten	16	155

Casing: 8-inch.

19/28-34N1. Owner unknown. About 150 ft N. and 1,150 ft E. of SW corner. Altitude about 1,127 ft.

Gravel	33	33
Clay	57	90
Basalt, impermeable	30	120
Basalt; water	120	128

Casing: 8-inch.

19/28-35A1. Bureau of Reclamation. About 100 ft S. and 29 ft W. of NE corner. Altitude 1,169.1 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, and gravel	50	50

Casing: 1½-inch, perforated 35-50 ft.

19/28-35D1. Welch & Kandra. About 285 ft N. and 135 ft E. of NW corner. Altitude about 1,157 ft. Drilled by Basin Drillers, 1949.

Gravel	30	30
"Hardpan"	60	90
Basalt, porous	10	100
Basalt	48	148

Casing: 6-inch.

19/28-35Q1. Emilio Valdez. About 580 ft N. and 165 ft E. of S¼ corner. Altitude about 1,136 ft. Drilled by Basin Drillers, 1949.

Materials	Thickness (feet)	Depth (feet)
Gravel	49	49
Basalt, porous	10	59
Basalt	26	85

Casing: 6-inch.

19/28-36B1. R. G. Kittleson. About 400 ft S. and 700 ft E. of N¼ corner. Altitude about 1,193 ft.

Soil	3	3
Gravel, fine	25	28
Caliche and gravel	89	117
Basalt; 10 ft of water	23	140
Basalt; 12 ft of water	100	240
Basalt, tested 120 gpm	80	320
Basalt, tested 300 gpm	80	400
Basalt, cuttings washing away at this depth (crevice)	135	535

19/29-5N2. Bureau of Reclamation. About 29 ft N. and 50 ft E. of SW corner. Altitude 1,206.8 ft. Drilled by R. J. Strasser, 1951.

Sand, medium, silty and caliche, tan	20	20
Basalt, shattered and weathered	30	50

Casing: 1½-inch, perforated 35-50 ft.

19/29-5Q1. Ray Smith. About 75 ft N. and 250 ft E. of S¼ corner. Altitude about 1,226 ft. Drilled by Ray Smith and Gene Clark, 1955.

Soil	23	23
Caliche	4	27
Basalt, hard	28	55
Basalt, "honeycomb", red; water	5	60
Basalt, hard	10	70

Casing: 6-inch.

19/29-6A3. Emanuel Jingling. About 250 ft S. and 150 ft W. of NE corner. Altitude about 1,220 ft. Drilled by Joy Bros., 1954.

Materials	Thickness (feet)	Depth (feet)
Clay and sand.	141	141
Basalt, black.	48	189
Basalt; water.	10	199

Casing: 6-inch.

19/29-7D1. C. C. Brown. About 900 ft S. and 150 ft E. of NW corner. Altitude about 1,203 ft. Drilled by Radke & Son, 1953.

Soil.	3	3
Boulders and gravel. .	67	70
Basalt.	32	102

Casing: 6-inch.

19/29-8F1. Frank Zimmerman. About 400 ft N. and 100 ft W. of the center quarter corner. Altitude about 1,254 ft. Drilled by Frank Zimmerman.

Silt(?) dirt and basalt, porous.	18	18
Basalt, porous.	10	28
Basalt, hard.	13	41
Basalt, hard, gray . . .	11	52
Basalt, porous.	23	75
Basalt, porous, cracked.	25	100
Basalt, hard, gray. . .	14	114
Water strata, hole caving	4	118
Basalt, gray.	58	176
Basalt, hard, gray. . .	2	178
Basalt, gray.	11	189
? (lost water).	9	198
Basalt, brown and gray.	19	217
Basalt, black.	6	223
Basalt, hard, black . .	2	225
Basalt, black.	6	231
Basalt, black and brown	14	245
Basalt, hard, black . .	6	251
Basalt, black.	8	259
Basalt, porous.	15	274
Basalt, blue.	8	282
Basalt, and red rock. .	15	297
Basalt, porous.	17	314
Basalt, cracked	15	329
Basalt, hard-tested 40 gpm	1	330
Basalt, blue.	18	348
Basalt, hard, blue. . .	14	362
Basalt, porous and "water" rock (tested 60 gpm)	19	381

19/29-8F1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, black.	4	385
Basalt, black and red rock	16	401
No record.	82	483

Casing: 8-inch.

19/29-8P1. Lloyd Goehri. About 200 ft N. and 600 ft W. of S¼ corner. Altitude about 1,220 ft. Drilled by Radke & Son, 1954.

Silt, clay and sand. . .	32	32
Basalt.	28	60
Gravel.	5	65
Basalt.	25	90
Basalt; water.	11	101

Casing: 5-inch.

19/29-16E1. Wheeler Water Assoc. About 275 ft N. and 50 ft E. of W¼ corner. Altitude about 1,228 ft. Drilled by Dille Bros., 1953.

Topsoil.	20	20
Gravel.	11	31
Basalt, brown.	35	66
Water, 58-60 ft		
Basalt, black.	49	115
Basalt, gray.	23	138
Basalt, porous, brown. .	20	158
Basalt, black.	21	179
Basalt, brown.	58	237
Basalt, black.	31	268
Basalt, porous, black. .	20	288
Water 268-288 ft.		

Casing: 6-inch.

19/29-17R1. Dewey Davisson. About 1,250 ft N. and 75 ft W. of SE corner. Altitude about 1,222 ft. Drilled by Frank Zimmerman, 1951.

Silt, clay and sand . .	30	30
Basalt, broken.	18	48
Basalt, hard.	36	84
Basalt, gray.	26	110
Basalt, broken.	7	117
Basalt.	9	126
Basalt, hard, gray. . .	5	131
Basalt, gray.	5	136
Basalt, broken.	5	141
Basalt.	6	147
Basalt, broken.	53	200

19/29-17R1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt.	55	255
No record	16	271

Casing: 6-inch.

19/29-18R1. Bureau of Reclamation. About 25 ft N. and 5 ft W. of SE corner. Altitude 1,172.6 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	2	2
Sand and gravel.	36	38
Basalt.	6	44

Casing: 1½-inch, perforated 29-44 ft.

19/29-18R2. Bureau of Reclamation. About 42 ft N. and 38 ft W. of SE corner. Altitude 1,173.2 ft. Drilled by Bach Drilling Co., 1955.

Sand, fine, silty; quartz and basalt grains. . .	6	6
Sand and gravel; Sand is fine, silty, gravel is pea to nut	26	32
Basalt, medium hard, black	5	37

Casing: 1½-inch, perforated 4-37 ft.

19/29-20G1. U & I Sugar Co. About 500 ft N. and 1,320 ft W. of E¼ corner. Altitude about 1,211 ft. Drilled by Durand & Son, 1952.

Topsoil and caliche. . .	19	19
Basalt, porous and fractured.	55	74
Basalt, very hard, gray.	81	155
Basalt, medium hard, dark; water seepage at 165 ft	65	220
Basalt, very dense, hard, gray.	20	240
Basalt, medium hard, dark	28	268
Basalt, very dense, hard, gray.	11	279
Basalt, medium, dark . .	11	290
Basalt, very dense, hard, gray.	54	344
Basalt, very dense, hard, gray, little medium hard dark basalt.	61	405
Basalt, broken, medium hard, gray.	37	442
Basalt, very hard, gray.	5	447

19/29-20G1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, broken, hard, gray	38	485
Basalt, hard, fractured, black.	15	500
Basalt, dense, hard, black	15	515
Basalt, medium hard, broken, brown.	14	529
Basalt, very hard, dense, gray.	62	591
Basalt, medium hard, gray	9	600
Clay, soft, green . . .	7	607
Clay, gray and white. .	10	617
Basalt, porous, broken, brown	3	620
Basalt, very dense, hard, gray.	34	654
Basalt, soft, dark. . .	12	666
Basalt, hard, black . .	9	675
Basalt, broken, brown, with clay mixed. . . .	13	688
Basalt, hard, gray. . .	1	689
Basalt, soft, broken, brown	30	719
Basalt, very hard, sense, gray.	44	763
Basalt cinters, brown .	2	765
Basalt, very dense, hard, gray.	9	774
Basalt, very dense, hard, gray.	129	903
Basalt, medium, porous, dark.	2	905
Basalt, very hard, dense, gray.	32	937
Basalt, broken, gray. .	7	944
Basalt, very dense, hard, gray.	86	1030

Casing: 20-inch.

19/29-20K1. U & I Sugar Co. About 950 ft S. and 1,300 ft E. of center of section. Altitude about 1,199 ft. Drilled by N.C.Jannsen, 1953.

Soil.	1	1
Caliche.	4	5
Basalt, broken.	20	25
Shale, brown.	9	34
Basalt, dense black, with calcite amysdules. . .	32	66
Basalt, hard, mostly dense losing quite a bit of water	66	132

19/29-20K1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, some hard, some fractured	237	369
Sand, black and chunks of basalt	12	381
Basalt, hard, black	59	440
Basalt	288	728

Casing: 6-inch.

19/29-20N1. U & I Sugar Co. About 1,350 ft S. and 100 ft E. of W¼ corner. Altitude about 1,172 ft. Drilled by Durand & Son., 1955.

Clay, soft, brown;topsoil	3	3
Sand, medium gray, gravel; water at 40 ft	8	11
Rock, medium gray, caliche	36	47
Basalt, hard, gray	8	55
Basalt, medium hard, brown	11	66
Basalt, hard, gray	76	142
Basalt, medium, brown	14	156
Basalt, hard, brown	19	175
Basalt, extra hard, gray	47	222
Basalt, broken, medium brown, clay	18	240
Basalt, broken, medium blue, clay	29	269
Basalt, hard, blue	21	290
Basalt, extra hard, blue	42	332
Basalt, broken, medium brown, clay	12	344
Basalt, medium hard, black	16	360
Basalt, extra hard, blue	19	379
Basalt, extra hard, gray	16	395
Basalt, medium gray	13	408
Basalt, extra hard, gray	6	414
Basalt, hard, gray	49	463
Basalt, medium gray; crevice, water at 463 ft	3	466
Basalt, hard, gray	11	477
Basalt, medium, gray	17	494
Basalt, hard, gray	28	522
Basalt, hard, gray	58	580
Basalt, broken, medium brown	14	594
Basalt, hard, brown	7	601
Basalt, medium, broken, black	3	604
Basalt, hard, gray	6	610
Clay, soft, green	40	650
Basalt, medium gray, porous, very sticky green clay	19	669

19/29-20N1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, firm, broken, black	23	692
Basalt, hard, black, hole caving	2	694
Basalt, hard, gray	22	716
Basalt, extra hard, gray	46	762
Basalt, medium, gray	3	765
Basalt, hard, gray	20	785
Basalt, extra hard, gray	25	810
Basalt, medium, gray	2	812
Basalt, hard, gray	8	820
Basalt, medium, gray	16	836
Basalt, hard, gray	4	840
Basalt, medium, gray	16	856
Basalt, hard, gray	4	860
Basalt, extra hard, gray	16	876
Basalt, medium, broken, gray	4	880
Basalt, extra hard, gray	11	891
Basalt, medium, gray	2	893
Basalt, hard, gray	11	904
Basalt, medium, gray	2	906
Basalt, hard, gray	6	912

Casing: 18-inch.

19/29-21A1. Bureau of Reclamation. About 80 ft S. and 29 ft W. of NE corner. Altitude 1,283.7 ft. Drilled by R. J. Strasser, 1951

Sand, fine silty, tan	23	23
Basalt	6	29

Casing: 1½-inch, perforated 14-29 ft.

19/29-22C1. Bureau of Reclamation. About 700 ft S. and 1,700 ft E. of NW corner. Altitude about 1,269 ft. Drilled by Frank Zimmerman, 1951.

Silt and broken basalt	25	25
Basalt, broken, caving	10	35
Basalt	31	66
Basalt, very hard	63	129
Basalt, broken, brown; clay	19	148
Basalt, broken	7	155
Basalt, black	5	160
Basalt, medium hard	5	165
Basalt, broken	4	169
Basalt	16	185
Basalt, broken	9	194

19/29-22C1.--Continued

Material	Thickness (feet)	Depth (feet)
Basalt	6	200
Basalt, medium hard	4	204
Basalt, coarse	20	224
Clay, gray and basalt	16	240
Basalt, coarse	10	250
Basalt, medium hard	39	289
Basalt, hard	20	309
Basalt, firm	17	326
Basalt, vesicular, broken	26	352

Casing: 8-inch.

19/29-22E1. William Raugust. About 750 ft N. and 100 ft E. of W¼ corner. Altitude about 1,294 ft. Drilled by Morrison & Morrison, 1952.

Topsoil	15	15
Basalt	85	100
Basalt, gray	75	175
Basalt, broken; water	15	190
Basalt	35	225
Basalt, sand and gravel	20	245
Basalt, more water at 245 ft	75	320
Sand, black; more water at 325 ft	5	325
Basalt	175	500
Basalt, broken	25	525
Basalt, broken; black sand	35	560
Basalt	25	585

Casing: 12-inch.

19/29-22R1. Eugene Harwood. About 40 ft N. and 600 ft W. of SE corner. Altitude about 1,282 ft. Drilled by Frank Zimmerman, 1955.

Topsoil	3	3
Clay and silt	10	13
Caliche	37	50
Basalt, hard	107	157
Clay and broken basalt; water	48	205
Basalt, blue	46	251
Basalt, broken and clay; water	39	290
Basalt, medium	245	535
Basalt, porous; water	25	560

Casing: 12-inch.

19/29-26R1. Fred Radach. About 900 ft N. and 100 ft W. of SE corner. Altitude about 1,309 ft. Drilled by Mr. Brill.

Materials	Thickness (feet)	Depth (feet)
Soil	8	8
"Limerock"	12	20
Basalt	376	396

Casing: 8-inch.

19/29-27N1. Bureau of Reclamation. About 29 ft N. and 60 ft E. of SW corner. Altitude 1,252.2 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, silty, tan	29½	29½
Basalt	6	35½

Casing: 1½-inch.

19/29-28J1. G. E. Giles. About 1,000 ft S. and 200 ft W. of the E¼ corner. Altitude about 1,235 ft. Drilled by Al Decker, 1950.

Silt	20	20
Caliche	10	30
Basalt, rotten	40	70
Basalt, hard, colored	160	230
"Water" rock	20	250

Casing: 6-inch.

19/29-28J5. Bureau of Reclamation. About 750 ft S. and 40 ft W. of E¼ corner. Altitude 1,231.2 ft. Drilled by Frank Zimmerman, 1954.

Sand, fine, light tan	19	19
Sand and silt, light gray; fragments of caliche	11	30
Caliche, sandy	5	35
Caliche and basalt, transition zone, soft, weathered	5	40
Basalt, weathered, soft, brown	10	50
Basalt, slightly weathered, medium hard, light gray	12	62
Basalt, broken, with clayey zones, light gray	29	91
Basalt, weathered, medium hard, light brown	6	97
Basalt, hard, dense, gray	35	132

19/29-28J5.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, very hard, dense, gray	14	146
Basalt, broken, gray	10	156
Basalt, broken, black; clayey seams	19	175
Basalt, medium hard, dark brown	10	185
Basalt, hard, dense, black	40	225
Basalt, soft, clayey, brown; scoriaceous, interflow zone	12	247
Basalt, soft, weathered, light brown	11	258

Casing: 12-inch.

19/29-29A1. U&I Sugar Co. About 200 ft N. and 1,275 ft W. of NE corner. Altitude about 1,188 ft. Drilled by Durand & Son, 1956.

Materials	Thickness (feet)	Depth (feet)
Topsoil	2	2
Caliche	15	17
Sand and gravel	13	30
Basalt; water at 31 ft	50	80
Sandstone, hard	8	88
Basalt	120	208
Basalt with clay	27	235
Basalt	175	410
Clay, green	21	431
Basalt	29	460
Basalt; water	26	486

Casing: 10-, 8-, 6-inch, perforated 139-149 ft.

19/29-32D1. Bureau of Reclamation. About 30 ft S. and 29 ft E. of NW corner. Altitude 1,180.0 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Caliche	2½	2½
Clay	2	4½
Basalt	6	10½

19/29-32R2. Bureau of Reclamation. About 50 ft N. and 29 ft W. of the SE corner. Altitude 1,174.9 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Caliche and gravels, cemented; gravel, basaltic	16	16
Basalt, deeply weathered, dark brown	15	31

Casing: 1½-inch, perforated 5-31 ft.

19/30-28M1. Ted Jeske. About 200 ft W. and 200 ft E. of W¼ corner. Altitude about 1,376 ft. Drilled by Ted Jeske, 1950.

Materials	Thickness (feet)	Depth (feet)
Soil and caliche	15	15
Basalt, broken	105	120
Basalt, hard	25	145
Basalt	102	247
Clay and sand; water	3	250
Basalt; water	200	450
Clay	3	453
Basalt	112	565

19/30-30L1. George Gies. About 200 ft S. and 100 ft W. of the center ¼ corner. Altitude about 1,341 ft. Deepened by Frank Zimmerman, 1949.

Materials	Thickness (feet)	Depth (feet)
Soil	6	6
Caliche	3	9
Unconsolidated material	26	35
Basalt, yields 750 gpm	640	675

19/30-32N1. Bureau of Reclamation. About 500 ft NE of SW corner. Altitude about 1,278 ft. Drilled by Bach Drilling Co., 1950-51.

Materials	Thickness (feet)	Depth (feet)
Silt	12	12
Caliche and basalt, broken	11	23
Basalt, vesicular, medium hard	17	40
Basalt, dense, feldspar, medium hard	12	52
Basalt, dense, feldspar, hard	10	62
Basalt, soft, feldspar type, brown	8	70
Basalt, medium hard, broken, feldspar type, brown	40	110
Basalt, medium hard, feldspar, black and brown	15	125
Basalt, soft, feldspar, brown and gray	25	150
Basalt, medium hard, feldspar, blue-black	10	160
Basalt, hard, feldspar, blue-black	25	185
Basalt, broken, vesicular, glassy, feldspar	18	203
Basalt, hard, feldspar, blue-black	19	222
Basalt, medium hard, gray and brown	38	260

19/30-32N1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, gray. . .	72	332
Basalt, broken, vesicular, clay; water.	13	345
Basalt, hard, black . .	6	351

Casing: 8-inch.

19/30-34N1. Bureau of Reclamation. About 33 ft N. and 29 ft E. of SW corner. Altitude 1,161.9 ft. Drilled by Bach Drilling Co., 1953.

Silt, micaceous, calcareous, light colored.	30	30
Silt with clay, micaceous, calcareous, light colored	6	36
Caliche, clay, silt, sand and fine gravel. . . .	14	50

Casing: 1½-inch, perforated.

19/30-35K1. Lester Allen. About 150 ft S. and 700 ft E. of center of section. Altitude about 1,170 ft. Drilled by Frank Zimmerman, 1949.

Topsoil.	19	19
"Hardpan".	16	35
Basalt.	35	70
Basalt, porous; water. .	2	72
Basalt, hard	78	150
Basalt, porous; water. .	5	155
Basalt, hard.	85	240
Basalt, porous; water. .	24	264
Basalt, hard.	11	275
Basalt, porous.	10	285
Basalt, hard.	45	330
Basalt, porous; large flow of water.	30	360

Casing: 12-, 8-inch.

19/31-16H1. Jake Kagele, Jr., About 40 ft N. and 1,300 ft E. of E¼ corner. Altitude about 1,414 ft. Drilled by Frank Zimmerman, 1954.

Topsoil.	5	5
Caliche.	6	11
Basalt, brown.	23	34
Basalt, medium hard, blue	16	50
Basalt, brown.	30	80
Basalt, hard, gray, blue	62	142
Basalt, broken, blue . .	19	161

19/31-16H1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, blue.	146	307
Basalt, broken, blue; water	11	318
Basalt, black.	114	432
Basalt, porous, black; water	18	450
Basalt, gray.	67	517
Basalt, broken, porous, brown.	48	565

Casing: 12-inch.

19/31-16R1. John Kagele. About 200 ft N. and 700 ft W. of the SE section corner. Altitude about 1,290 ft. Drilled by Kastl, 1950.

Soil.	17	17
Basalt.	53	70
Basalt; water	5	75
Basalt.	30	105

19/32-4J1. Jacob Greenwalt, Jr. About 500 ft SW of E¼ corner. Altitude about 1,600 ft. Drilled by John Davis, 1949.

Soil.	22	22
Basalt, hard, black. .	36	58
Basalt, hard, blue. .	20	78
Basalt, soft, red. . .	19	97

19/32-16M1. Everett Doss. About 100 ft S. and 40 ft E. of W¼ corner. Altitude about 1,394 ft. Drilled by Davisson & Dreyer.

Soil.	5	5
Clay.	7	12
Gravel.	11	23
Basalt, hard.	27	50
Basalt, soft; water. .	2	52
Basalt, hard.	8	60
Basalt, soft; water. .	38	98
Basalt, hard.	3	101

Casing: 8-inch.

19/32-19N1. J. A. Franz & Sons. About 550 ft N. and 650 ft E. of SW section corner. Altitude about 1,290 ft. Drilled by T.T.Joy, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil	22	22
Sand and pea gravel	6	28
Basalt, broken, black	5½	33½
Basalt, gray	16	49½
Basalt, broken, black and brown; small amount water	3½	53
Basalt, black	26½	79½
Basalt, gray	12	91½
Basalt, black and brown	17½	109
Basalt, gray	55	164
Basalt, black	25	189
Basalt, gray	56	245
Basalt, black	45	290
Basalt, porous, red;water	12	302
Basalt, gray	99	401
Basalt, black; water	2	403
Basalt, gray	8	411

Casing: 12-inch.

19/32-31C1. Henry Gering. About 1,060 ft S. and 50 ft W. of N¼ corner. Altitude about 1,469 ft. Drilled by Joy Drilling Co.

Materials	Thickness (feet)	Depth (feet)
Topsoil	10	10
Basalt, black; water	53	63
Basalt, gray	67	130
Basalt, brown; water	30	160
Basalt, gray	50	210
Basalt, broken	45	255
Basalt, gray	95	350
Basalt, broken	48	398
Basalt, gray	48	446
Basalt, broken	6	452
Shale, black	40	492
Basalt, broken; water	22	514
Basalt, gray	6	520

Casing: 12-inch.

20/23-1Q1. E.G. Williams, Jr. About 1,100 ft N. and 100 ft E. of S¼ section corner. Altitude about 1,358 ft. Drilled by Pioneer Drilling Co. and deepened by Jannsen and P.Snyder.

Materials	Thickness (feet)	Depth (feet)
Sedimentary formations	60	60
Basalt	246	306
Basalt, gray	5	311
Basalt, gray, fractured	8	319

20/23-1Q1.—Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, gray	3	322
Basalt, blue	4	326
Basalt, brown; water	12	338
Basalt, black	23	361
Basalt, brown, fractured	21	382
Basalt, hard, black	6	388
Basalt, brown; water	16	404
Clay, blue	26	430
Basalt, broken, brown	75	505

20/23-9Q1. W. H. Babcock. About 320 ft N. and 1,750 ft W. of SE corner. Altitude about 1,428 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Topsoil	12	12
Caliche	18	30
Clay and caliche	20	50
Basalt, soft	130	180
Basalt, hard	70	250
Basalt, soft	15	265
Clay, blue	37	302

A little water at 180 ft.

20/23-10N1. Bureau of Reclamation. About 1,100 ft N. and 1,300 ft W. of S¼ corner. Altitude 1,354.0 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, light gray; mostly quartz some basalt, mica	10	10
Caliche and silty sand; mostly quartz some basalt and mica	28	38
Sand, calcareous, basalt and quartz	1	39
Basalt, deeply weathered, soft, feldspar type; with clay and calcite	21	60
Basalt, moderately weathered, feldspar type;clay,caliche	40	100

Casing: 10-inch.

20/23-11H2. Clarence Schorzman. About 2,450 ft W. and 250 ft W. of NE corner. Altitude about 1,335 ft. Drilled by Frank Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Topsoil	10	10
Clay, sandy	35	45
Basalt, broken	45	90
Basalt, hard, blue	72	162
Basalt, hard, gray	66	228

Table 3.--Drillers' logs of wells--Con.

20/23-11H2.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, porous.	40	268
Basalt, hard, gray.	174	442
Shale, blue.	33	475
Basalt, hard, gray	220	695
Basalt, broken.	41	736
Basalt, gray.	151	887
Basalt, porous.	23	910
Basalt, gray.	52	962
Basalt, porous.	18	980
Basalt, gray.	20	1000

20/23-12A1. Golden Valley Water. About 1,040 ft S. and 90 ft W. of NE corner. Altitude about 1,336 ft. Drilled by Bach Drilling Co., 1954.

Soil.	5	5
Caliche.	20	25
Sandstone.	33	58
Basalt.	27	85
Basalt, broken, soft, brown	20	105
Basalt, black.	25	130
Basalt, hard, black.	130	260
Basalt.	18	278
Crevice	2	280
Basalt.	20	300
Basalt, hard.	29	329
Sand, soft.	2	331
Basalt, hard.	14	345
Sand; water.	10	355
Basalt, hard.	15	370

Casing: 12-inch.

20/23-12J1. Emmanuel Schultz. About 250 ft S. and 400 ft W. of E¼ corner. Altitude about 1,324 ft. Deepened by N. C. Jannsen Co., 1932.

Old well.	294	294
Basalt, hard.	1	295
Basalt.	6	301
Basalt, blue.	5	311
Basalt, brown; water.	20	331
Basalt, brown.	20	351
Basalt, blue, hard.	4	355
Basalt, black.	22	377
Basalt, brown; water.	11	388
Shale, gray.	1	389
"Conglomerate" rock	2	391

20/23-16A1. Bureau of Reclamation. About 74 ft S. and 50 ft W. of NE corner. Altitude about 1,391.7 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous. Mostly quartz, minor feldspar, mica and basalt. Sandy from 15 to 20 ft.	25	25
Clay, silty, calcareous.	5	30
Caliche, minor silt, clay	12	42
Caliche, sandy, brown; half granitic, half basaltic.	8	50

Casing: 6-inch.

20/23-16H1. --Schorzmann. About 50 ft N. and 250 ft W. of E. section corner. Altitude about 1,394 ft.

Soil.	40	40
Basalt, "rotten," brown	225	265
Basalt, hard.	35	300
Basalt, "honeycomb," black	21	321

Casing: 7-inch.

20/23-19C1. Dave Roddy. About 110 ft S. and 140 ft W. of N¼ corner of sec. 19. Dug.

Sand, fine.	50	50
Gravel.	15	65
Clay and gravel	7	72

Casing: 36-inch.

20/23-19E2. Mona Sumner. About 635 ft N. and 1,555 ft W. of section center. Dug, 1946.

Loam.	6	6
Gravel.	12	18
Sand.	6	24
Gravel.	12	36

Casing: 43-inch.

20/23-19F1. Dave Roddy. About 45 ft N. and 300 ft W. of center of section. Altitude about 574 ft. Dug 1900

Materials	Thickness (feet)	Depth (feet)
Soil.	2	2
Gravel, coarse.	5	7
Gravel, clean.	64	71

Casing: 44-inch.

20/23-22D1. Bureau of Reclamation. About 29 ft S. and 50 ft E. of NW corner. Altitude 1,365.4 ft. Drilled by Bach Drilling Co., 1953.

Silt, calcareous. Mostly quartz; minor feldspar, basalt, mica. Sandy 15-25 ft	25	25
Caliche, silt.	15	40
Caliche, sandy, brown; quartz and basalt . .	10	50

Casing: 6-inch, perforated 0-50 ft.

20/23-22M2. A. W. Blanchett. About 2,590 ft N. and 320 ft E. of SW corner. Altitude about 1,338 ft. Drilled by Basin Drilling Co., 1952.

Soil.	7	7
Clay.	47	54
Basalt, broken. . . .	22	76
Basalt, soft, hard . .	36	112
Basalt, hard, blue . .	14	126
Basalt, broken. . . .	33	159
Basalt, black.	42	201
Basalt, broken	35	236
Basalt, black.	40	276
Basalt, broken	25	301
Basalt, blue.	12	313
Basalt, broken. . . .	47	360
Basalt, black	22	382
Basalt, broken; water.	30	412
Shale, blue.	8	420

Casing: 8-inch.

20/23-23M1. Elmer Gerken. About 100 ft S. and 1,300 ft E. of W¼ section corner. Altitude about 1,310 ft. Drilled by Pete Snyder.

Soil.	10	10
"Limerock"	7	17
Silt, sandy.	23	40

20/23-23M1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt.	63	103
Basalt, vesicular . .	13	116
Basalt; water at 335 ft	364	480
Clay, blue.	24	504
Basalt.	86	590

20/23-24M1. Conrad Weber. About 2,130 ft S. and 10 ft W. of NE corner. Altitude about 1,298 ft. Drilled by Bach Drilling Co., 1955.

Sand and gravel. . . .	70	70
Basalt.	5	75

Casing: 6-inch.

20/23-25E1. Henry Weber, Jr. About 65 ft N. and 125 ft E. of W¼ corner. Altitude about 1,300 ft. Drilled by Durand & Son, 1944.

Soil, sandy.	25	25
Soil, clay.	23	48
Basalt, soft.	26	74
Basalt, hard	16	90
Basalt, soft	39	129
Basalt, hard	14	143
Basalt, soft.	2	145
Basalt, hard.	7	152
Basalt, soft	16	168
Clay, yellow.	7	175
Basalt, soft.	10	185
Basalt, hard, blue . .	30	215
Basalt, hard, gray . .	98	313
Clay.	1	314
Basalt, black	33	347
Basalt, hard, gray . .	40	387
Basalt; water.	8	395
Basalt, soft.	25	420
Basalt, gray.	27	447
Shale, green.	5	452
Basalt, porous, black.	16	468
Basalt, brown; sand, water	4	472
Basalt, hard, gray. .	8	480

Casing: 8-inch.

Table 3.--Drillers' logs of wells--Con.

20/23-26Q1. A.L.Anderson. About 190 ft N. and 2,570 ft W. of SE corner. Altitude 1,298 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Soil, clay, gravel. . .	50	50
Basalt.	10	60

Casing: 6-inch.

20/23-27A2. Bureau of Reclamation. About 50 ft S. and 30 ft W. of NE corner. Altitude 1,304.5 ft. Drilled by Bach Drilling Co., 1955.

Silt, light tan to light gray.	20	20
Silt, calcareous, caliche, light gray.	17½	37½
Sand and caliche, fine, light tan.	5½	43

Casing: 6-inch, perforated 5-43 ft.

20/23-34D1. Bureau of Reclamation. About 50 ft S. and 29 ft E. of NW corner. Altitude 1,362.7 ft. Drilled by Bach Drilling Co., 1953.

Silt, very calcareous. Mostly quartz, some feldspar, mica and basalt.	15	15
Caliche, silty, quartz .	20	35
Sand, fine, silty, cemented, calcareous.	15	50

Casing: 1½-inch, perforated.

20/23-35A1. H. C. Weber. About 110 ft S. and 1,250 ft W. of NE corner. Altitude about 1,290 ft. Deepened by N. C. Jannsen Drilling Co., 1933.

Old hole.	289	289
Basalt.	6	295
Basalt, black	28	323
Basalt, blue.	9	332
Basalt, black	7	339
Basalt, hard, black . . .	3	342
Basalt, black	17	359
Basalt, hard, black . . .	4	363
Basalt, black.	11	374
Basalt, and "soapstone" .	11	385
Basalt, black.	20	405
"Soft spot" and "soapstone"; water.	6	411
Basalt, hard, black . . .	3	414

Casing: 6-inch.

20/23-35A2. Bureau of Reclamation. About 29 ft S. and 50 ft W. of NE corner. Altitude 1,286.0 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, very calcareous. Mostly quartz, some feldspar, mica, basalt	16	16
Caliche, some quartz, mica and basalt. . . .	9	25
Sand and gravel, coarse, mostly basalt, some granitic and metamorphic ingredients.	5	30
Sand and gravel, silty, cemented, calcareous .	20	50

Casing: 1½-inch, perforated.

20/24-1H1. Minerva Smith. About 1,200 ft N. and 380 ft W. of E¼ corner. Altitude about 1,380 ft. Drilled by Western Land & Drilling Co.

Soil.	3	3
Gravel.	43	46
Basalt.	354	400

Casing: 10-inch.

20/24-1N1. Bureau of Reclamation. About 20 ft N. and 29 ft E. of SW corner. Altitude 1,305.1 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	2	2
Gravel, cemented. . .	34	36
Basalt.	6	42

Casing: 1½-inch, perforated 27-42 ft.

20/24-3M1. Bureau of Reclamation. About 29 ft N. and 70 ft E. of SW corner. Altitude 1,305.4 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, silty, tan	20	20
Gravel and caliche, cemented, tan.	13	33
Caliche, soft; clay, tan	5	38
Basalt, shattered, weathered.	6	44

Casing: 1½-inch, perforated 29-44

Table 3.--Drillers' logs of wells

20/24-6A2. Bureau of Reclamation. About 16 ft S. and 29 ft W. of NE corner. Altitude 1,420.3 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Sand, gravel, caliche.		
Sand, fine to coarse, basaltic. Gravel is cemented by caliche.	20	20
Caliche and basalt.	5	25
Basalt, medium hard, broken, dark brown.	9	34

Casing: 1½-inch.

20/24-6E1. Wayne Ker. About 1,950 ft S. and 180 ft E. of NW corner. Altitude about 1,376 ft. Deepened by N. C. Jannsen, 1932.

Old hole.	349	349
Basalt.	14	363
Basalt, fractured	6	369
Basalt, brown.	15	384
Basalt, hard, black	4	388
Basalt, brown; water.	20	408
Shale, gray, blue-green	12	420

Casing: 6-inch.

20/24-6R1. Mederie Gwanlock. About 300 ft N. and 800 ft W. of SE corner. Altitude about 1,335 ft. Drilled by F. M. Cochran.

Soil.	25	25
Basalt.	245	270
Basalt, "honeycomb"	25	295

Casing: 8-inch.

20/24-7A2. L. S. Bowser. About 200 ft S. and 900 ft W. of NE corner. Altitude about 1,338 ft. Drilled by Pioneer Drilling Co.

Soil.	15	15
"Limerock".	25	40
Basalt.	263	303

20/24-7A3. Bureau of Reclamation. About 29 ft S. and 80 ft W. of NE corner. Altitude 1,333.3 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Sand, fine, silty, tan.	18	18
Caliche, gray.	2	20
Sand, fine silty, light brown.	18	38
Caliche, soft, light gray	12	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-7J1. City of Quincy. About About 1,760 ft N. and 410 ft W. of SE corner. Altitude about 1,311 ft. Drilled by Bach Drilling Co., 1955.

Topsoil.	3	3
Silt.	7	10
Gravel, clay.	15	25
Sand and gravel.	27	52
Basalt, black.	260	312
Basalt, broken, brown.	12	324
Basalt, black.	18	342
Basalt, brown.	13	355
Basalt, black.	45	400

Casing: 54-, 20-inch.

20/24-8H1. Floyd Oliver. About 1,300 ft N. and 1,250 ft W. of E¼ corner. Altitude about 1,304 ft. Drilled by Pioneer Drilling Co.

Soil.	12	12
"Hardpan"	28	40
Basalt; water at 255 ft	215	255
Basalt, "honeycomb"; water	23	278
Basalt.	54	332
Basalt, blue.	8	340
Basalt, gray.	25	365
Basalt, brown	4	369
Basalt, black; water 365-374 ft.	19	388
Basalt, blue	49	437
Basalt, porous, black;water	16	453
Basalt, hard, black,creviced	5	458

Table 3.--Drillers' logs of wells--Con.

20/24-8L1. Great Northern Ry. Co. About 1,000 ft S. and 1,100 ft W. of center ¼ corner. Altitude about 1,302 ft. Drilled by the Western Land & Drilling Co., 1911.

Materials	Thickness (feet)	Depth (feet)
Soil	40	40
Basalt	160	200
Clay	8	208
Basalt, "honeycomb"; water	42	250
Basalt	60	310
Basalt, "honeycomb"	40	350
Basalt, hard	12	362
Basalt, "honeycomb"	12	374

Casing: 10-inch.

20/24-8L2. Great Northern Railway Co. About 1,000 ft N. and 1,100 ft W. of center ¼ corner. Altitude about 1,302 ft. Drilled by Great Northern Ry. Co., 1929.

Clay, sandy, and gravel	35	35
Basalt	60	95
Crevice	5	100
Clay and sediment	15	115
Basalt, broken, brown	10	125
Crevice	7	132
Basalt, broken, brown	23	155
Basalt, hard, black	30	185
Basalt, hard	5	190
Basalt, black	10	200
Basalt, gray-D/W 248 ft	65	265
Basalt, black	5	270
Basalt, "honeycomb";water	22	292
Basalt	20	312
Basalt, gray	20	332
Basalt, gray, very coarse and hard	4	336
Basalt, "honeycomb";water	5	341
Basalt, gray	11	352
Basalt, "honeycomb";water	8	360
Basalt, brown	10	370
Basalt, hard, gray	7	377
Sand, gray; water	5	382
Basalt, hard, gray	10	392
Sand; water	9	401

20/24-9D1. Cedergreen Corp. About 20 ft S. and 50 ft E. of NW corner. Altitude about 1,316 ft. Drilled by F. M. Creel, 1914.

Materials	Thickness (feet)	Depth (feet)
Soil	12	12
Conglomerate (gravel)?	58	70
"Limerock"	10	80
Conglomerate (gravel)?	27	107
Diatomite	3	110
Conglomerate (gravel)?	15	125
Basalt, hard, black	11	136
Basalt, soft, black	4	140
Basalt, hard, black	58	198
Basalt, soft, brown	27	225
Basalt, hard, black	13	238
Basalt, medium hard, brown; water at 253 ft.	25	263
Basalt, medium hard, black	18	281
Basalt, hard, black	20	301
Basalt, soft, brown; water	19	320
Basalt, hard, black	14	334
Basalt, "honeycomb", soft; water	11	345
Basalt, medium hard, brown	27	372
Basalt, medium hard, black	8	380
Basalt, hard, black	44	424

20/24-9E2. Cedergreen Corp. About 50 ft N. and 50 ft E. of W¼ corner. Altitude about 1,296 ft. Drilled by C.C. Hoff, 1923.

Soil, silty	60	60
Basalt, black	190	250
Basalt, "honeycomb";water	10	260
Basalt, black	30	290
Basalt, "honeycomb";water	10	300
Basalt, black	25	325
Basalt, "honeycomb";water	15	340
Basalt	5	345

20/24-10N1. Bureau of Reclamation. About 85 ft N. and 29 ft E. of SW corner. Altitude 1,272.9 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, silty, tan	25	25
Sand, clay, and caliche, tan	25	50

Casing: 1½-inch, perforated 35-50 ft.

Table 3.--Drillers' logs of wells

20/24-12N2. Bureau of Reclamation. About 80 ft N. and 29 ft E. of SW corner. Altitude 1,254.1 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy, tan. . . .	15	15
Caliche, light brown. .	15	30
Gravel, cemented, tan .	5	35
Caliche and sand, silty, light brown.	15	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-14J1. M. Springsteen. About 100 ft S. and 900 ft W. of E¼ corner. Altitude about 1,245 ft. Drilled by Charles Miller.

Soil.	17	17
"White rock".	3	20
Basalt, decomposed. . .	10	30
Basalt.	215	245

20/24-18A1. Weiler and Martin. About 680 ft S. and 430 ft W. of NE corner. Altitude about 1,298 ft.

Soil.	35	35
Basalt, "rotten". . . .	65	100
Basalt, hard.	245	345
Basalt, "honeycomb" . .	29	374
No record.	76	450

Casing: 10-inch.

20/24-18R2. Bureau of Reclamation. About 29 ft N. and 85 ft W. of SE corner. Altitude 1,279.8 ft. Drilled by R. J. Strasser, 1951.

Sand, fine.	19	19
Caliche, light tan. . .	22	41
Sand, fine.	9	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-20R1. Mar-Brah Water Assoc. About 1,000 ft N. and 60 ft W. from the SE corner. Altitude about 1,258 ft. Drilled by V.E.Dilley, 1953.

Topsoil.	15	15
Gravel and boulders . .	25	40
Basalt, brown; water	38	78
Basalt, black.	82	160
Basalt, brown.	40	200
Basalt, black.	7	207

20/24-22D1. Bureau of Reclamation. About 29 ft S. and 60 ft E. of NW corner. Altitude about 1,256 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam sandy, tan.	16	16
Caliche, light brown . .	14	30
Caliche and clay, light brown.	3	33
Gravel.	5	38
Clay, sandy, tan	12	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-23H1. Dr. R. Anderson. About 2,590 ft S. and 1,267 ft W. of NE corner. Altitude about 1,234 ft. Drilled by Basin Drilling Co., 1951.

Soil, sandy.	6	6
Clay, sandy.	33	39
Clay.	22	61
Clay, brown.	37	98
Basalt, broken; shells .	28	126
Water, 19 gpm		
Basalt, very hard, gray.	23	149
Basalt, very hard, blue.	29	178
Basalt, hard, black. . .	29	207
Basalt, blue.	33	240
Basalt, broken; water. .	7	247

20/24-24D1. Bureau of Reclamation. About 39 ft S. and 70 ft E. of NW corner. Altitude 1,232.4 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy, tan. . . .	10	10
Caliche, light tan. . .	8	18
Gravel, cemented, light tan	12	30
Caliche, light tan . . .	20	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-25N1. Bureau of Reclamation. About 250 ft N. and 39 ft E. of SW corner. Altitude 1,213.0 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	6	6
Caliche, light brown . .	14	20
Caliche and sand, light brown.	20	40
Caliche, light gray. . .	10	50

Casing: 1½-inch, perforated 35-50 ft.

20/24-26D1. Bureau of Reclamation. About 29 ft S. and 65 ft E. of NW corner. Altitude 1,230.8 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous	10	10
Sand and gravel. Sand, fine, silty, caliche fragments. Gravel, pea; coarse sand, basaltic	28	38
Caliche, gravelly at top to dense, massive at bottom	12	50

Casing: 1½-inch, perforated 5-50 ft.

20/24-28D1. Bureau of Reclamation. About 1,300 ft S. and 29 ft E. of NW corner. Altitude 1,248.2 ft. Drilled by Bach Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Silt, calcareous	10	10
Caliche, silty, sandy at top, massive at bottom	20	30
Silt, light brown at top to gray at bottom	20	50

Casing: 1½-inch, perforated 5-50 ft.

20/24-30D1. A. B. Bebeau. About 330 ft S. and 220 ft E. of NW corner. Altitude about 1,265 ft. Drilled by Frank Zimmerman, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil, clay and sand, yellow	20	20
Clay, sandy	45	65
Basalt, broken; water 65-70 ft	10	75
Basalt, medium hard	10	85
Basalt, hard	5	90
Basalt, medium hard	34	124
Basalt	16	140
Basalt, hard; water 165-170 ft	27	167
Basalt, broken; clay	5	172
Basalt, hard	8	180

Casing: 6-inch.

20/24-31A1. L. R. Fairchild. About 300 ft S. and 340 ft W. of NE corner. Altitude about 1,281 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Soil, sandy, and caliche	8	8
Caliche	17	25
Gravel and sand	30	55
Clay and caliche	34	89
Basalt	11	100

Casing: 6-inch.

20/24-32D2. Bureau of Reclamation. About 29 ft S. and 140 ft E. of NW corner. Altitude 1,279.3 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy	5	5
Silt, caliche layers, gray	7	12
Caliche, light gray	15	27
Basalt	7	34

Casing: 1½-inch, perforated 19-34 ft.

20/24-33B1. O. Shoruman. About 300 ft S. and 1,440 ft W. of NE corner. Altitude about 1,246 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Soil	18	18
Sand, black	17	35
Gravel	16	51
Basalt	20	71

Casing: 6-inch.

20/24-34D1. Bureau of Reclamation. About 29 ft S. and 60 ft E. of NW corner. Altitude 1,234.5 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy	8	8
Caliche, light tan	6	14
Gravel, cemented	4	18
Caliche, light gray	25	43
Basalt	6	49

Casing: 1½-inch, perforated 34-49 ft.

20/25-3R1. Edwin Nasburg. About 200 ft N. and 700 ft W. of SE corner. Altitude about 1,272 ft. Drilled by J. S. Dishman, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil	8	8
Caliche	3	11
Gravel	4	15
Basalt, brown	10	25
Basalt, broken, brown	15	40
Basalt, firm, blue	5	45
Basalt, blue	30	75
Basalt, brown	35	110

Table 3.--Drillers' logs of wells

20/25-3R1. --Continued.

Material	Thickness (feet)	Depth (feet)
Basalt, broken, blue, crevice	20	130
Basalt, firm, blue	10	140
Basalt, broken, blue	14	154
Basalt, broken, brown; water 154-158 ft.	4	158
Basalt, brown	2	160
"Soapstone", caving badly	2	162
"Lime-sand"	2	164
Basalt, hard	3	167
Sand, caving badly	1	168

Casing: 6-inch.

20/25-4M1. Bureau of Reclamation Pumping Plant. About 500 ft SE of the W¼ corner. Altitude 1,298 ft. Drilled by the Basin Drilling Co., 1950.

Material	Thickness (feet)	Depth (feet)
Clay	3	3
"Hardpan"	4	7
Gravel, basaltic	3	10
Gravel and "hardpan"	5	15
Basalt, broken	8	23
Basalt	17	40
Basalt, hard	5	45
Basalt	72	117
Basalt and clay	18	135
Basalt	23	158
Fault	2	160
Basalt	3½	163½
Crevice	½	164
Basalt	9	173
Crevice	1	174
Basalt	329	503
Basalt, very hard, black	30	533
Basalt, black	14	547
Basalt, hard, black	17	564
Basalt, black	15	579
Basalt, black with red stains	1	580
Crevice	1	581
Red stain in drill water	7	588
Crevice	1	589
Basalt	35	624
Basalt, broken	1	625
Basalt	11	636
Basalt, broken	3	639
Basalt, opalized with soapstone	3	642
Basalt, black	17	659
Basalt, broken, black	15	674

Casing: 10-inch.

20/25-4R1. Bureau of Reclamation. About 75 ft N. and 10 ft W. of SE corner. Altitude 1,259.0 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy	2	2
Caliche and cemented gravel	30	32
Clay, sandy, light gray	8	40
Clay and caliche, brown	10	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-5N1. G. C. Hoff. About 1,200 ft N. and 700 ft E. of SW corner. Altitude about 1,292 ft. Drilled by Western Land and Drilling Co. and N. C. Jannsen Drilling Co.

Material	Thickness (feet)	Depth (feet)
Soil	20	20
"Hardpan"	10	30
Gravel	8	38
Basalt, "honeycomb", soft, brown	40	78
Basalt, hard, creviced, gray	60	138
Basalt, "honeycomb", soft, black	20	158
Basalt, black	37	195
Basalt, hard, black	23	218
Basalt, "honeycomb", brown; water	30	248
Basalt, very hard, "whitish"	3	251
Basalt, coarse, black	17	268
Basalt, "honeycomb", red	22	290
Basalt, hard, gray	8	298
Basalt, "honeycomb", brown; water	12	310

20/25-6D1. LaVerne E. Pontsler. About 600 ft S. and 550 ft E. of NW corner. Altitude about 1,408 ft. Drilled by V. E. Dilley, 1953.

Material	Thickness (feet)	Depth (feet)
Gravel	31	31
Basalt, broken, brown	60	91
Basalt, black	55	146
Basalt, blue	20	166
Basalt, black	50	216
Basalt, brown	20	236
Basalt, broken, black, water	8	244
Basalt, black	1	245

Casing: 6-inch.

20/25-6R1. Bureau of Reclamation. About 80 ft N. and 39 ft W. of SE corner. Altitude about 1,273 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy.	8	8
Gravel, cemented . . .	27	35
Gravel, porous. . . .	5	40
Caliche, tan	10	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-8D2. Charles A. Faw. About 100 ft S. and 200 ft E. of NW corner. Altitude about 1,273 ft. Drilled by Gerald C. Hoff, 1920.

Soil and "limerock". .	50	50
Basalt, black, crevice at 200 ft contained combustible vegetable matter. . .	200	250
Basalt, "honeycomb", black; water.	1	251
Basalt, black.	199	450

20/25-8M1. Chris Berger. About 50 ft S. and 1,210 ft E. of W¼ corner. Altitude about 1,247 ft. Drilled by Western Land & Drilling Co., 1912.

Soil.	61	61
Basalt, "honeycomb". .	50	111
Basalt.	35	146
Basalt, "honeycomb". .	40	186
"Clay" or "talc", black	12	198
Basalt, "honeycomb"; water at 208 ft.	10	208
Basalt.	77	285
Basalt, "honeycomb". .	11	296
Basalt, blue and basalt, "honeycomb", black. .	100	396

Casing: 14-inch.

20/25-8M2. Elmer Soule. About 200 ft S. and 1,100 ft E. of W¼ corner. Altitude about 1,246 ft. Drilled by G. C. Hoff, 1920.

Soil and "limerock". .	50	50
Basalt, black.	200	250
Basalt, "honeycomb", black, small yield of water.	2	252
Basalt, black.	198	450

Casing: 10-inch.

20/25-8P1. R. M. Anderson. About 150 ft N. and 1,500 ft E. of SW corner. Altitude about 1,242 ft. Drilled by Gerald C. Hoff, 1918.

Materials	Thickness (feet)	Depth (feet)
Soil.	3	3
Sand, coarse, black . . .	20	23
Silt and "limerock" . . .	130	153
Basalt, black.	40	193
Basalt, hard, gray. . . .	32	225
Diatomite.	5	230
Basalt, "honeycomb", black, water.	10	240
"Petrified wood", agatized	10	250
Peat. Turned drilling water black.	20	270
Basalt, black	50	320
Basalt, "honeycomb", black; water.	10	330
Basalt, black.	60	390
Basalt, "honeycomb";water	20	410
Basalt, black.	20	430

Casing: 10-inch.

20/25-10A1. Mell Haygood. About 1,320 ft S. and 500 ft W. of NE corner. Altitude about 1,255 ft. Drilled by J. S. Dishman, 1953.

Topsoil and rock.	2	2
Sand and coarse gravel. .	6	8
Sand, fine.	3	11
Boulders.	3	14
Boulders, gravel mix. . .	10	24
Basalt, broken, brown . .	11	35
Basalt, firm, brown. . .	15	50
Basalt, brown.	10	60
Clay, yellow.	5	65
Basalt, broken, variegated	15	80
Basalt, firm, blue. . . .	10	90
Basalt, loose, broken;water	2	92
Basalt, cavey, blue,boulders	10	102
Basalt, hard, blue. . . .	18	120
Basalt, loose, crevice. .	1	121
Basalt, hard, gray, slide rock.	4	125
Basalt, hard, gray. . . .	23	148
Bad crevice, loose rock .	2	150
Basalt, gray.	4	154

Casing: 6-inch.

Table 3.—Drillers' logs of wells

20/25-10K1. Larry Nielsen. About 300 ft N. and 850 ft E. of W¼ corner. Altitude about 1,202 ft. Drilled by J. S. Dishman, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	8	8
Sand and gravel. . . .	8	16
Basalt, broken, brown.	19	35
Basalt, loose, blue. .	3	38
Basalt, broken, loose.	4	42
"Slide rock", loose. .	3	45
"Slide rock", blue . .	10	55
"Chalk rock", sand, gravel, clay, variegated. . .	5	60
Basalt, cavey.	2	62
Clay and river wash gravel, yellow.	3	65
Clay and gravel mix,yellow	3	68
Basalt, firm, brown; watr at 84-86 ft, 4 gpm. .	18	86
Basalt, firm, blue. .	2	88
Basalt, broken, blue;water	2	90
Gravel, coarse. . . .	2	92

20/25-10F1. Harold Carlson. About 1,000 ft N. and 850 ft W. of center of section. Altitude about 1,254 ft. Drilled by J. S. Dishman, 1953.

Topsoil.	2	2
Sand and medium gravel	4	6
Sand and coarse gravel	14	20
Sand and medium coarse gravel.	6	26
Sand, gravel, caliche.	19	45
Basalt, brown, mixed .	5	50
Basalt, broken, blue .	15	65
Basalt, broken, brown.	15	80
Conglomerate, variegated, yellow.	5	85
Basalt, broken, brown.	20	105
"Soapstone," variegated, yellow; water. . . .	5	110
Basalt, firm, red. . .	5	115
Basalt, red.	5	120
Conglomerate, broken .	5	125
"Soapstone", fine;water	7	132
Basalt, loose, broken.	2	134

Casing: 6-inch.

20/25-14R1. Bureau of Reclamation. About 5 ft W. of SE corner. Altitude 1,239.2 ft. Drilled by R. J. Strassor, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy.	1	1
Gravel and boulders. . .	22	23
Boulders, large.	6	29

Casing: 1½-inch, perforated 14-29 ft.

20/25-16J1. Ben Kriete. About 1,050 ft S. and 150 ft W. of E¼ corner. Altitude about 1,228 ft. Drilled by Smiley Dishman, 1953.

Topsoil.	2	2
Sand and gravel.	8	10
Sand and boulders. . . .	6	16
Boulders and sand. . . .	12	28
Sand and cobblestones. .	14	42
Gravel and boulders. . .	13	55
Clay, yellow.	10	65
Shale, sandy, yellow . .	15	80
Basalt, broken, soft,brown	20	100
"Soapstone", conglomerate	55	155
Basalt, broken, brown. .	35	190
Basalt, blue.	10	200
Basalt, hard, blue . . .	10	210
Basalt, firm, brown. . .	2	212
Basalt, brown.	8	220
Basalt, broken, brown. .	8	228
Sand, fine, blue; water.	2	230

Casing: 6-inch.

20/25-16K1. S. Winchester Water Assoc., Inc. About 1,850 ft N. and 45 ft E. of S¼ corner. Altitude about 1,226 ft. Drilled by Frank Zimmerman, 1952.

Sand and gravel.	40	40
Clay, yellow.	50	90
Shale; water at 130 ft .	70	160
Basalt, hard.	10	170
Basalt, hard, blue . . .	5	175
Basalt.	10	185
Basalt, black; water 190 ft	27	212
Shale.	23	235

Casing: 6-inch.

20/25-17N1. Bureau of Reclamation. About 39 ft N. and 60 ft E. of SW corner. Altitude 1,230.6 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy.	6	6
Sand, medium loose, black	18	24
Clay, sandy light brown.	26	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-18C1. Albert D. Jones. About 200 ft S. and 800 ft W. of N¼ corner. Altitude about 1,238 ft. Drilled by Joy Drilling Co., 1952(?)

Clay.	110	110
Basalt, black.	133	243
Basalt; water.	5	248

Casing: 6-inch.

20/25-19D1. N.W. McClure. About 150 ft S. and 1,050 ft W. of NW corner. Altitude about 1,232 ft. Drilled by Austin Drilling Co., 1954.

Clay, sandy.	112	112
Basalt.	20	132

Casing: 6-inch.

20/25-19E1. Don Harvey and Earl Baldwin. About 1,320 ft N. and 175 ft E. of W¼ corner. Altitude about 1,230 ft. Drilled by Simmons, 1953.

Topsoil and sand. . . .	30	30
Sand and clay.	47	77
Basalt, broken.	13	90
Basalt and clay.	30	120
Sand.	27	147
Basalt.	19	166
Basalt, hard.	20	186
Basalt, gray.	7	193
Basalt, hard.	17	210
Basalt.	9	219
Basalt, gray.	8	227
Basalt, hard.	23	250
Basalt.	10	260
Basalt, broken	11	271

Casing: 10-inch.

20/25-20A1. W. B. Cox. About 200 ft S. and 200 ft W. of NE corner. Altitude about 1,184 ft. Drilled by the Western Land & Drilling Co., 1911.

Materials	Thickness (feet)	Depth (feet)
Soil.	1½	1½
Gravel.	13½	15
"Hardpan"	100	115
Gravel.	5	120
Basalt "honeycomb";water	80	200
Basalt.	60	260
Basalt, "honeycomb","rotten", talcose; water	15	275
Basalt, hard.	30	305
Basalt, "honeycomb"; water	20	325
Basalt.	60	385
Basalt, "honeycomb" very porous; water.	30	415

20/25-21A2. USBR Winchester Farm. About 1,300 ft S. and 500 ft W. of NE corner. Altitude 1,225.5 ft. Drilled by R.J. Strasser and USBR, 1948.

Gravel, sandy.	18	18
Gravel, black.	22	40
Sand, with scattered gravel	9	49
Sand, dry, black. . . .	26	75
Sand.	17	92
Sand, black	28	120
Clay, red	20	140
Sand, yellow.	15	155
Sand, clay, and rock. .	39	194
Basalt and clay. . . .	25	219
Basalt, hard, black, gray, and brown.	105	324
Basalt, seams of opal and lenses of diatomite. .	15	339
Basalt, hard.	161	500
Basalt, porous.	55	555
Basalt, hard, blue. . .	45	600
Basalt, black.	5	605
Basalt, broken.	3	608
Basalt, black.	7	615
Basalt, vesicular; water	10	625
Basalt, porous, black .	10	635
Basalt, broken, vesicular	5	640
Basalt, porous, black .	6	646
Basalt, dense, gray. .	6	652

Casing: 12-inch.

Table 3.—Drillers' logs of wells

20/25-21G1. Bureau of Reclamation. About 1,600 ft S. and 1,500 ft W of NE corner. Altitude about 1,210 ft. Drilled by Mr. Gilstrap in 1911, and by Glen McDowell in 1947.

Materials	Thickness (feet)	Depth (feet)
Sand	60	60
"Hardpan"	60	120
No record (sand and gravel reported in this interval)	151	271
Basalt, black	14	285
Basalt, dense	12	297
Basalt, black	3	300
Basalt, broken, vesicular	4	304
Volcanic breccia or agglomerate; water	4	308
Basalt, black	6	314
Breccia, volcanic, tuff	2	316
Basalt, broken	4	320
Gravel	1	321
Sand and gravel	1	322
Ash, volcanic; clay and agate	8	330
"Hardpan" or claystone	10	340
Breccia, volcanic or agglomerate	4	344
Basalt, black	10	354
Shale	6	360
Sandstone	6	366
Basalt, dense, gray	12	378

Casing: 8-inch.

20/25-22D2. Bureau of Reclamation. About 50 ft S. and 29 ft E. of NW corner. Altitude 1,232.0 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy	3	3
Sand and boulders	47	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-22M1. William Mathis. About 1,000 ft S. and 700 ft E. of W¼ corner. Altitude about 1,206 Drilled by Charles Reader, 1910.

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Gravel and sand, black	38	40
"Hardpan," (fire clay)	133	173
Gravel, coarse	1	174

Casing 6-inch.

20/25-24A1. Lee E. Tucker. About 1,300 ft S. and 300 ft W. of NE corner. Altitude about 1,236 ft. Drilled by Austin Drilling Co., 1955.

Materials	Thickness (feet)	Depth (feet)
Gravel, large	40	40
Sand, black	58	98
Clay	2	100
"Quicksand"	40	140
Loam, sandy	47	187

Casing: 6-inch.

20/25-25D1. Bill L. Israel. About 400 ft S. and 100 ft E. of NW corner. Altitude about 1,220 ft. Drilled by McKinroy Drilling Co., 1952. (memory log)

Materials	Thickness (feet)	Depth (feet)
Topsoil	2	2
Sand, coarse; medium gravel	168	170
Sandstone, red-brown	10	180

Casing: 6-inch.

20/25-25J1. Paul Reynolds. About 750 ft S. and 150 ft W. of E¼ corner. Altitude about 1,222 ft. Drilled by Smiley Dishman, 1951.

Materials	Thickness (feet)	Depth (feet)
Topsoil	10	10
Gravel and sand	20	30
Sand and gravel, fine	15	45
Sand and gravel	15	60
Sand, fine	15	75
Gravel, coarse	5	80
Shale, sandy, brown	5	85
Basalt, hard, reddish	15	100
Shale, sandy, blue	10	110
Shale, sandy, brown (caving)	5	115
Shale, brown (caving badly)	15	130
Shale, hard, "shelly", variegated	10	140
Shale, sandy, brown and red	20	160
Sand, brown; water	25	185
Sandstone, broken; water	20	205
Clay, yellow	5	210

Casing: 8-inch.

20/25-26P1. Robert M. Anderson. About 50 ft N. and 1,200 ft W. of S¼ corner. Altitude about 1,215 ft. Drilled by Basin Drilling, 1954.

Materials	Thickness (feet)	Depth (feet)
Topsoil	2	2
Sand and gravel	65	67
Sandstone and clay	103	170

Casing: 6-inch.

20/25-26R1. J. W. Sharpe. About 1,300 ft N. and 150 ft W. of SE corner. Altitude about 1,224 ft. Drilled by Austin Drilling Co.

Topsoil	2	2
Sand, black	78	80
Clay	60	140
Sandstone; water	40	180
Caliche	5	185

Casing: 6-inch.

20/25-26R2. Bureau of Reclamation. About 60 ft N. and 29 ft W. of SE corner. Altitude 1,215.3 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy	1	1
Sand, medium, loose, black	49	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-27A1. Victor Sternad. About 200 ft S. and 1,200 ft W. of NE corner. Altitude about 1,218 ft. Drilled by Austin Drilling Co., 1954.

Gravel	65	65
Caliche	5	70
Gravel	1	71
Caliche	9	80
Clay and sandstone	70	150

Casing: 6-inch.

20/25-28R1. Bureau of Reclamation. About 29 ft N. and 10 ft W. of SE corner. Altitude 1,196.0 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy	2	2
Sand, medium, loose, black	43	45
Clay, dark gray	5	50

Casing: 1½-inch, perforated 35-50 ft.

20/25-29H1. Bureau of Reclamation. In NE¼ of Sec. 29. Altitude 1,225.4 ft. Drilled by Bach Drilling Co., 1950.

Materials	Thickness (feet)	Depth (feet)
Sand, basalt, quartz, mica	50	50
Silt, sandy, fine, tan	40	90
Marl, calcareous, light tan; caliche, sticky	45	135
Silt, micaceous, fine, light tan	20	155
Sand, fine, gray, granitic; water	7	162
Silt, with clay, fine micaceous, sticky, light gray	9	171
Sand and gravel, fine. Granitic sand and basalt gravel, caliche pebbles	2	173
Basalt, weathered	2	175

Casing: 8-inch.

20/25-36B1. Morrison Flats Water Assoc. About 100 ft S. and 100 ft E. of N¼ corner. Altitude about 1,212 ft. Drilled by Bach, 1950-51.

Topsoil	2	2
Sand, black	50	52
Gravel, loose	21	73
Clay, sticky	6	79
Caliche	16	95
Silt, fine, clayey, sticky	15	110
Silt, sandy, reddish brown	75	185
Silt, sandy, light gray	14	199
Clay, sticky, light gray	15	214
Silt, sandy, compact or cemented, gray	33	247
Clay, sticky, blue when wet, gray when dry	3	250

Casing: 8-inch.

20/25-36B2. Don Gronewald. About 150 ft S. and 900 ft E. of N¼ corner. Altitude about 1,215 ft. Drilled by Jack Harrison, 1953.

Topsoil	2	2
Sand, coarse, black	58	60
Siltstone(?)	147±	207

Casing: 6-inch.

Table 3.--Drillers' logs of wells

20/25-36R1. J. Powell. About 150 ft N. and 125 ft W. of SE corner. Altitude about 1,194 ft. Drilled by Austin Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil	15	15
Sand, black (or gray)	45	60
Clay	70	130
Sandstone; water	30	160

Casing: 6-inch.

20/26-13N1. Bureau of Reclamation. About 1,300 ft N. and 30 ft E. of SW corner. Altitude about 1,246.2 ft. Drilled by Bach Drilling Co, 1956.

Sand, silty; boulders	4	4
Gravel and boulders, basaltic	14	18
Sand, fine to coarse, slightly silty, basaltic	34	52

Casing: 1½-inch, perforated 5-52 ft.

20/26-18R2. Bureau of Reclamation. About 70 ft N. and 29 ft W. of SE corner. Altitude 1,247.7 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy	1	1
Boulders and sand, loose	49	50

Casing: 1½-inch, perforated 35-50 ft.

20/26-21A1. Bureau of Reclamation. About 100 ft S. and 100 ft W. of the NE corner. Altitude 1,242.0 ft. Drilled by Bach Drilling Co., 1956.

Sand, fine, silty, light gray	2	2
Sand, basaltic, fine to medium, calcareous	8	10
Gravel and boulders, chiefly basaltic	20	30
Boulders, large, basaltic	15	45
Gravel, large size, chiefly; basaltic	5	50
Gravel and boulders, pea to large boulders, basaltic	35	85
Boulders, large, basaltic	10	95
Silt, sandy light tan; quartz, micaceous, muscovite, biotite, few caliche fragments	95	190

20/26-21A1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy, light tan, coarse, basaltic sand	30	220
Clay, silty, sticky, light yellow	20	240
Clay, very sticky, blue	12	252
Gravel, basaltic with caliche fragments	4	256
Basalt, medium hard, black; slightly weathered at top	14	270
Basalt, hard, black	20	290
Basalt, hard, gray	35	325
Basalt, medium hard, gray	27	352
Basalt, black to brown; with palagonite	28	380
Basalt	10	390
Sand, black	2	392
Basalt	24	416

Casing 10-inch.

20/26-21R1. Bureau of Reclamation. About 9 ft N. and 39 ft W. of the SE corner. Altitude 1,220.6 ft. Drilled by Bach Drilling Co., 1956.

Sand, silty	2	2
Gravel and boulders, basaltic	17	19
Sand, basaltic, coarse to fine, black	33	52

Casing: 6-inch.

20/26-22P1. Bureau of Reclamation. About 650 ft N. and 700 ft W. of S¼ corner. Altitude about 1,248 ft. Drilled by J.W.Murphy and R. Cartwell.

Soil	2	2
Gravel and boulders	40	42
Sand, black	28	70
"Hardpan," sand and gravel and sandstone	80	150
Sand	14	164
Clay, blue	20	184
"Quicksand"	3	187
Shale, blue	163	350
Basalt	25	375
Basalt, porous, "honeycomb;" water	12	387

Casing: 10-inch.

20/26-26R2. Bureau of Reclamation. About 75 ft N. and 29 ft W. of the SE corner. Altitude 1,258.4 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, silty.	2	2
Sand and gravel. Sand, fine to coarse, basaltic. Gravel, pea, basaltic	38	40
Gravel and sand. Gravel, pea to nut, basaltic. Sand, fine to coarse, basaltic	10	50

Casing: 6-inch, perforated 5-50 ft.

20/26-27A1. Mariam Elyea Amick. About 1,300 ft S. and 300 ft W. of NE corner. Altitude about 1,236 ft.

Materials	Thickness (feet)	Depth (feet)
Soil.	2	2
Sand, black; gravel.	118	120
Clay, occasional sand stringers; water at 145	79	199
Gravel, fine; water.	1	200

20/26-30R2. Bureau of Reclamation. About 70 ft N. and 29 ft W. of SE corner. Altitude 1,230.7 ft. Drilled by R. J. Strasser, 1951.

Materials	Thickness (feet)	Depth (feet)
Loam, sandy.	1	1
Sand, medium, loose, black	49	50

Casing: 1½-inch, perforated 35-50 ft.

20/26-31C1. White Trail Water Assoc. About 180 ft S. and 100 ft W. of N¼ corner. Altitude about 1,228 ft. Drilled by Vern Rudberg, 1952.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Sand.	93	95
"Hardpan".	10	105
Caliche.	10	115
Sandstone; water at 160 ft	70	185

Casing: 6-inch.

20/26-31R1. Otto Gans. About 525 ft N. and 100 ft W. of SE corner. Altitude about 1,205 ft. Drilled by J. S. Dishman, 1953.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel.	15	15
Cobbles, coarse.	5	20
Sand, fine.	10	30
Gravel, coarse, boulders	35	65
Sand and gravel	10	75

20/26-31R1.--Continued.

Materials	Thickness (feet)	Depth (feet)
"Mud" and silt, yellow.	10	85
Shale or "mud", yellow.	40	125
Shale, sandy; water.	30	155

Casing: 6-inch.

20/26-32N1. Ralph Herron. About 200 ft N. and 400 ft E. of SW corner. Altitude about 1,206 ft. Drilled by Austin Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Boulders and gravel, coarse.	20	20
Sand, gray.	70	90
Clay.	40	130
Quicksand.	20	150
"Sandstone"; water	35	185

Casing: 6-inch.

20/26-33R1. Bureau of Reclamation. About 75 ft N. and 39 ft W. of SE corner. Altitude 1,246.4 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Sand, coarse to medium, basaltic.	30	30
Sand, medium to fine, basaltic, slightly silty	20	50

Casing: 1½-inch, perforated 5-50 ft.

20/27-26Q1. W. B. Hill. About 500 ft N. and 100 ft E. of S¼ corner. Altitude about 1,105 ft.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Sand and gravel, loose	58	60
Sand and gravel; water	22	82

Casing: 30-inch.

20/27-28D1. Virgil Perringer. About 250 ft S. and 1,250 ft E. of NW corner. Altitude about 1,120 ft.

Materials	Thickness (feet)	Depth (feet)
Gravel.	25	25
"Hardpan"	70	95
Clay, blue.	5	100
Basalt; water	70	170

Table 3.--Drillers' logs of wells

20/27-35C2. Eugene Hobson. About 20 ft S. and 35 ft W. of N¼ corner. Altitude about 1,104 ft.

Material	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Sand and gravel. . . .	93	95

Casing: 12-inch.

20/27-35F1. Dennie Lesperance. About 100 ft N. and 100 ft W. of section center. Altitude about 1,080 ft. Drilled by owner, 1950

Soil.	3	3
Gravel.	30	33
Gravel and rocks; water	2	35
Sand, fine.	5	40
Gravel; water.	5	45

Casing: 6-inch.

20/27-35F2. Mrs. Margaret Todd. About 175 ft N. and 1,300 ft W. of sec. corner. Altitude about 1,082 ft. Drilled by Dennie Lesperance, 1951

Soil.	2	2
Clay and gravel. . . .	32	34
Sand and gravel, black	18	52

Casing: 6-inch,

20/27-35J1. Phillip Och. About 20 ft S. and 1,585 ft E of section corner. Altitude about 1,064 ft. Drilled by Basin Drilling Co.

Soil.	2	2
Boulders and gravel . .	24	26
Gravel; water.	16	42

Casing: 6-inch.

20/27-35L1. Joe Todd. About 200 ft S. and 300 ft W. of section center. Altitude 1,078 ft. Drilled by Dennie Lesperance, 1952.

Soil and rocks.	4	4
Sand and gravel. . . .	12	16
Sand, clean.	5	21
Gravel; water.	18	39

Casing: 6-inch.

20/27-35L2. Joe Todd. About 640 ft S. and 250 ft W. of section center. Altitude about 1,055 ft. Drilled by Dennie Lesperance, 1953.

Materials	Thickness (feet)	Depth (feet)
Soil.	3	3
Silt, gravel and rock .	4	7
Sand, gravel, rock. . .	14	21

Casing: 6-inch.

20/27-35M1. George Misshart. About 800 ft S. and 1,740 ft W. of section center. Altitude about 1,053 ft. Drilled by Denny Lesperance, 1954

Topsoil.	3	3
Boulders, big.	7	10
Sand, clean.	4	14
Gravel, fine; water . .	10	24

Casing: 6-inch.

20/28-1N1. E. Gloyd Water Assoc, About 25 ft N. and 1,340 ft E. of SW section corner. Altitude about 1,267 ft. Drilled by A. T. Huntes, 1942(?).

Soil.	2	2
Gravel.	43	45
Basalt.	80	125

Casing: 6-inch.

20/28-2J1. L. Hansen. About 900 ft S. and 100 ft W. of E¼ corner. Altitude about 1,262 ft. Drilled by Joy Bros., 1954.

Gravel, coarse.	59	59
Basalt, hard.	21	80

Casing: 6-inch.

20/28-2N1. C.L. Angvick. About 490 ft N. and 180 ft E. of SW corner. Altitude about 1,237 ft. Drilled by Radke & Son, 1954.

Silt, clay, and sand. .	72	72
Basalt.	17	89
Gravel; water	10	99

Casing: 8-inch.

Table 3.--Drillers' logs of wells--Con.

20/28-9J1. George Neddo. About 1,380 ft N. and 1,160 ft W. of SE section corner. Altitude about 1,134 ft. Drilled by Radke & Son.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders. . .	40	40
Gravel, cemented. . . .	8	48
Gravel; water.	2	50

Casing: 6-inch.

20/28-10Q1. Obe Healea. About 300 ft N. and 1,900 ft E. of SW corner. Altitude about 1,118 ft. Drilled by Radke & Son.

Gravel and sand.	44	44
Basalt.	4	48
Basalt; water	2	50

Casing: 6-inch.

20/28-11R1. Bureau of Reclamation. About 29 ft N. and 50 ft W. of SE corner. Altitude 1,252.8 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy.	1	1
Boulders.	10	11
Basalt.	6	17

Casing: 1½-inch, perforated 2-17 ft.

20/28-12M1. W. Hansen. About 2,320 ft N. and 60 ft W. of SW section. Altitude about 1,255 ft. Drilled by Vern Rudberg, 1950-51.

Gravel.	53	53
Basalt, hard.	12	65
Basalt, soft.	20	85
Basalt, hard	86	171
Basalt, soft.	9	180

Casing: 6-inch.

20/28-13B1. Wesley Bly. About 75 ft S. and 950 ft E. of N¼ corner. Altitude about 1,274 ft. Drilled by E. C. Morrison, 1954.

Boulers.	7	7
Gravel and boulders. . .	26	33
Gravel.	27	60
Basalt.	37	97
Basalt, black; water . .	106	203

Casing: 8-inch.

20/28-13Q1. Howard E. Knopp. About 100 ft N. and 1,000 ft E. of S¼ corner. Altitude about 1,275 ft. Drilled by Radke & Son, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, clay, and sand. . .	104	104
Basalt, black.	16	120
Basalt; water.	6	126

Casing: 6-inch.

20/28-17G1. N. Fiorito. About 1,785 ft S. and 615 ft E. of N¼ corner. Altitude about 1,155 ft. Drilled by Frank Zimmerman, 1958.

Topsoil.	3	3
Sand and small gravel. .	9	12
Gravel, coarse.	9	21
Gravel and large boulders	38	59
Gravel, small; water . .	5	64
Clay.	20	84
Basalt, broken.	24	108
Basalt, hard.	36	144
Basalt, broken; water. .	10	154
Basalt, hard.	26	180
Basalt, broken; water. .	32	212

Casing: 12-inch.

20/28-26N2. B. P. A. Larson Substation. About 150 ft N. and 310 ft E. of SW section corner. Altitude about 1,106 ft. Drilled by Courtney Bach, 1958.

Gravel and boulders. . .	30	30
Basalt.	16	46
Sand.	3	49
Basalt, medium soft. . .	24	73
Basalt, soft.	2½	75½
Basalt, hard.	4½	80

Casing: 12-inch.

Table 3.--Drillers' logs of wells

20/28-27E1. Moses Lake Flight Center. About 1,640 ft S. and 250 ft E. of NW section corner. Altitude about 1,155 ft. Drilled by R. J. Strasser, 1955.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders.	23	23
Gravel and silt. . .	6	29
Boulders, sand and gravel	30	59
Gravel and clay. . .	14	73
Gravel, clay and boulders	3	76
Gravel, loose; sand;water	7	83
Boulders, gravel and clay	22	105
Basalt, hard, gray .	29	134

Casing: 24-inch.

20/28-32C1. Larson Air Force Base. About 1,100 ft S. and 200 ft W. of N¼ corner. Altitude 1,194.8 ft. Drilled by Durand & Son, 1943.

Sand, gravel, boulders	124	124
Clay and gravel. . . .	52	176
Basalt.	9	185
Clay.	10	195
Clay and gravel, sandy	5	200
Basalt.	38	238
Basalt, very hard. . .	42	280
Basalt, soft.	50	330
Basalt, hard.	20	350
Basalt, medium hard. .	50	400
Basalt, very hard. . .	70	470
Basalt, soft.	10	480
Basalt, hard.	70	550
Basalt, hard, black. .	60	610
Basalt, hard, black;water	7½	617½
Basalt, hard, black. .	22½	640
Basalt, medium hard. .	12½	652½
Basalt, porous; water.	66½	719
Basalt, hard.	6	725

20/28-32J1. Larson Air Force Base. About 1,000 ft S. and 1,000 ft W. of E¼ corner. Altitude 1,187.3 ft. Drilled by Jannsen Drilling Co.,1943.

Sand, gravel, clay, and boulders.	89	89
Clay.	1½	90½
Sand, gravel, boulders, clay streaks; porous.	21½	112
Clay, brown.	61	173
Shale, sandstone, clay	4	177
Basalt, broken; water	23	200
Basalt, "honeycomb"porous	14	214
Basalt, hard.	10	224
Clay, blue.	1	225

20/28-32J1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, "honeycomb," alternating hard and medium hard	60	285
Basalt, broken.	7	292
Clay, blue.	2	294
Basalt, broken, soft layers	79	373
Basalt, hard, solid . . .	37	410
Basalt, medium hard . . .	20	430
Basalt, oxidized.	10	440
Basalt, "honeycomb" . . .	15	455
Basalt, hard.	18	473
Basalt, porous.	14	487
Basalt, medium hard. . .	9	496
"Obsidian", very hard . .	36	532
Basalt, "honeycomb;" water	28	560
Basalt, hard, broken. . .	40	600
Basalt, broken; water . .	12	612
Basalt, hard, solid. . .	100	712

Casing: 18-inch.

20/28-33E1. Larson Air Force Base, well 3. About 2,200 ft S. and 820 ft E. of NW corner. Altitude 1,168.83 ft. Drilled by A. A. Durand, 1953.

Gravel and boulders. . .	85	85
Gravel and clay; caving; water.	57	142
Basalt, broken.	23	165
Basalt, dark.	254	419
Basalt, soft, red; water	6	425
Basalt, soft, broken; water	26	451
Basalt, hard.	62	513
Basalt, broken; water . .	2	515
Basalt, hard.	192	707
Clay, blue-green.	16	723
Basalt, broken; water . .	68	791

Casing: 24-inch.

20/28-34M1. Mrs. E. G. McGreer. About 1,400 ft N. and 100 ft E. of SW corner. Altitude about 1,153 ft. Drilled by Vern Rudberg, 1952.

Sand, loose; gravel, boulders.	86	86
"Hardpan".	10	96
Gravel.	5	101

Casing: 6-inch.

20/28-34N1. Leonard Loyd. About 100 ft N. and 1,300 ft E. of SW corner. Altitude about 1,150 ft. Drilled by W. B. Freer, 1953.

Materials	Thickness (feet)	Depth (feet)
Gravel	60	60
Clay	15	75
Gravel; water	15	90

Casing: 6-inch.

20/28-35H1. Bernard Lybbert. About 1,600 ft S. and 1,200 ft E. of NE corner. Altitude about 1,091 ft. Drilled by Vern Rudberg, 1953.

Materials	Thickness (feet)	Depth (feet)
Gravel	20	20
Basalt, hard	85	105

Casing: 6-inch.

20/28-35N1. Bill Fredrickson. About 650 ft N. and 220 ft E. of SW corner. Altitude about 1,126 ft. Drilled by Vern Rudberg, 1952.

Materials	Thickness (feet)	Depth (feet)
Gravel	40	40
Basalt, brown	20	60

Casing: 6-inch.

20/28-36B1. Leonard Davidson. About 240 ft S. and 200 ft E. of N¼ corner. Altitude about 1,252 ft. Drilled by B. L. Price, 1958.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel	131	131
Basalt, gray	8	139
Basalt, soft, gray	1	140
Basalt, hard, gray	2	142

Casing: 6-inch.

20/29-18J1. E. F. Lane. About 1,700 ft N. and 150 ft W. of SE corner. Altitude about 1,279 ft. Drilled by Radke & Son, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, clay, and sand	50	50
Basalt	30	80
Gravel; water	1	81

Casing: 6-inch.

20/29-18N1. E. P. Hamel. About 200 ft N. and 1,300 ft E. of SW corner. Altitude about 1,278 ft. Drilled by Radke & Son, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt and clay	52	52
Basalt	88	140
Basalt; water	9	149

Casing: 6-inch.

20/29-18Q1. Ivan J. Polson. About 150 ft N. and 90 ft E. of S¼ corner. Altitude about 1,272 ft.

Materials	Thickness (feet)	Depth (feet)
Silt, clay, and sand	70	70
Basalt, gray	70	140
Basalt, soft; water	13	153

Casing: 6-inch.

20/29-19C1. Virgil Cole. About 150 ft S. and 1,800 ft E. of NW corner. Altitude about 1,276 ft. Drilled by Basin Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Soil	2	2
Gravel and boulders	50	52
Basalt, broken	22	74
Basalt, hard, blue	19	93
Basalt, hard, gray	67	160
Basalt, broken; water	8	168

Casing: 6-inch.

20/29-19R1. Ben Zickler. About 150 ft N. and 650 ft W. of SE corner. Altitude about 1,274 ft. Drilled by Joy Bros., 1954(?).

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders	75	75
Gravel and sand	15	90
Sand	24	114
Basalt, broken	21	135
Basalt, hard	15	150
Basalt, broken	57	207
Basalt, hard	26	233

Casing: 6-inch.

Table 3.--Drillers' logs of wells

20/29-20D1. Hartvig Roseburg. About 350 ft S. and 150 ft E. of NW corner. Altitude about 1,277 ft. Drilled by Radke & Son, 1953.

Materials	Thickness (feet)	Depth (feet)
Clay, silt, and sand. . .	50	50
Basalt, black.	115	165
Basalt; water.	7	172

Casing: 6-inch.

20/29-20N1. Bureau of Reclamation. About 60 ft N. and 39 ft E. of SW corner. Altitude 1,266.5 ft. Drilled by R. J. Strasser, 1951.

Boulders.	31	31
Basalt.	6	37

Casing: 1½-inch, perforated 22-37 ft.

20/29-26N1. Bureau of Reclamation. About 75 ft N. and 29 ft E. of SW corner. Altitude 1,229.7 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, silty, tan. .	20	20
Basalt.	6	26

Casing: 1½-inch, perforated 12-27 ft.

20/29-27J1. Albert Peters. About 600 ft SW of E¼ corner. Altitude about 1,230 ft. Drilled by Frank Zimmerman, 1950.

Unconsolidated material .	74	74
Basalt.	47	121
Basalt, porous.	11	132
Basalt, cracked	8	140
Basalt, porous.	10	150
Basalt, ...	5	155
Basalt, porous and clay .	28	183
Basalt, hard, black . . .	2	185
Basalt, cracked; red rock	20	205
Basalt, black.	10	215
Basalt, hard, black . . .	35	250
Basalt, gray.	22	272
Basalt, hard, gray. . . .	22	294
Water.	7	301
Unreported.	6	307
Basalt, black.	3	310
Crevice.	3	313
Basalt, black.	5	318
Basalt, gray.	11	329
Basalt, hard, gray;crevice	10	339
Basalt, gray.	6	345

20/29-27J1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, porous, black	14	359
Basalt, black.	5	364
Crevice.	3	367
Basalt, black	4	371
Basalt, porous, black.	6	377
Basalt, porous;"water" rock.	3	380
Basalt, cracked. . . .	14	394

Casing: 18-inch.

20/29-28C1. Bureau of Reclamation. About 850 ft S. and 100 ft W. of N¼ corner. Altitude about 1,288 ft. Drilled by Frank Zimmerman, 1951.

Silt.	15	15
Basalt, hard.	65	80
Basalt, broken, vesicular	61	141
Basalt, hard.	20	161
Basalt, broken, vesicular, palagonitic.	29	190
Basalt, moderately hard	12	202
Basalt, broken; calcite in cavities and joints, feldspar phenocrysts. . .	39	241
Basalt, moderately hard	15	256
Basalt, broken. . . .	40	296
Basalt, hard.	21	317
Basalt, broken	17	334
Basalt, moderately hard, highly magnetic. . .	51	385
Basalt, broken; clay, blue, water.	21	406
Basalt, broken	10	416

Casing: 8-inch.

20/29-29D1. Dale Foster. About 50 ft S. and 300 ft E. of NW corner. Altitude about 1,270 ft. Drilled by Radke & Son, 1952.

Silt, clay, sand. . .	190	190
Basalt.	10	200
Basalt, "honeycomb";water	15	215

Casing: 6-inch.

Table 3.--Drillers' logs of wells—Con.

20/29-29P1. C. J. Steelman. About 125 ft N. and 750 ft W. of S¼ corner. Altitude about 1,278 ft. Drilled by Radke & Son, 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, clay, and sand	50	50
Basalt, black	8	58
Basalt; water	4	62

Casing: 6-inch.

20/29-29P2. Kathleen Taft. About 500 ft N. and 300 ft W. of S¼ corner. Altitude about 1,277 ft. Drilled by Joy Drilling Co., 1953.

Clay, broken, rock formation	13	13
Basalt, hard, gray	13	32
Basalt, broken, redgwater	22	54
Basalt, hard, gray	18	72

Casing: 6-inch.

20/29-30A1. A. P. Lewis. About 285 ft S. and 550 ft W. of NE section. Altitude about 1,274 ft. Drilled by Radke & Son.

Silt, clay, and sand	160	160
Basalt, "honeycomb"	20	180
Basalt, black	20	200
Basalt; water	16	216

Casing: 6-inch.

20/29-30C1. W. D. Van Cleave. About 300 ft S. and 200 ft W. of N¼ corner. Altitude about 1,270 ft. Drilled by Radke & Son, 1953.

Bedrock	130	130
Water	3	133

Casing; 6-inch.

20/29-32N1. Bureau of Reclamation. About 39 ft N. and 3 ft E. of SW corner. Altitude 1,189.8 ft. Drilled by R. J. Strasser, 1951.

Sand, medium, loose, black	4	4
Sand, fine, tan	46	50

Casing: 6-inch.

20/29-34J1. Paul F. Dills. About 400 ft S. and 380 ft W. of E¼ corner. Altitude about 1,230 ft. Drilled, 1907.

Materials	Thickness (feet)	Depth (feet)
Soil	7	7
Basalt, "honeycomb", brown	78	85
Basalt, hard, dense	5	90
Basalt, cavity in which bit dropped 3 feet	3	93

Casing: 6-inch.

20/30-35R1. John Weis. About 250 ft N. and 1,000 ft W. of the SE section corner. Altitude about 1,340 ft.

Soil	2	2
Basalt, hard, solid	110	112
Basalt, broken, creviced; water	5	117

Casing: 6-inch.

20/31-31B1. Christine Bischoff. About 50 ft S. and 1,600 ft W. of NE corner. Altitude about 1,435 ft. Drilled by Frank Zimmerman, 1953.

Soil	9	9
Basalt, solid	253	262
Basalt, broken	8	270
Basalt, medium hard	44	314
Basalt, hard	6	320
Basalt, medium hard	53	373
Basalt, broken, porous; water	27	400

Casing: 8-inch.

21/23-26H1. William Schorzman. In SE¼ of NE¼ sec. 26. Drilled by V. E. Dilley, 1953.

Topsoil	4	4
Basalt, broken, brown	50	54
Basalt, black	34	88
Sand; water	5	93
Clay, blue	40	133
Basalt, black	60	193
Basalt, bray	17	210
Sand, brown; water	2	212
Basalt, black	78	290
Basalt, black; water	15	305
Basalt, black	5	310

Casing: 8-, 6-inch.

Table 3.—Drillers' logs of wells

21/24-11D1. F. F. Boroff. About 500 ft S. and 400 ft E. of NW Corner. Altitude about 1,600 ft. Drilled by Durand & Son, 1939.

Materials	Thickness (feet)	Depth (feet)
Soil.	3	3
Clay, brown, tough. . .	6	9
Basalt, broken, black .	5	14
Basalt, broken, brown .	15	29
Basalt, black.	13	42
Basalt, blue.	27	69
Basalt, black; water. .	1	70
Basalt, gray.	4	74
Basalt, broken, gray; water	1	75
Basalt, gray.	4	79
Basalt, very hard, gray	8	87
Basalt, softer, gray. .	1	88
Basalt, hard, gray. . .	5	93
Basalt, black.	9	102

21/24-26B1. F. F. Boroff. About 350 ft S. and 800 ft E. of N¼ corner. Altitude about 1,800 ft. Drilled by Curley Beard, 1950

Basalt and caliche. . .	40	40
Basalt.	175	215

Casing: 6 inch.

21/24-31L1. Overn Bros. About 100 ft S. and 250 ft W. of center of section 31. Altitude about 1,474 ft. Drilled by J. S. Dishman, 1952.

Topsoil, caliche, gravel	12	12
Sand brown; basalt. . .	2	14
Basalt, broken, brown .	31	45
Basalt, creviced, brown	20	65
Basalt, loose, cavey. .	25	90
Basalt, blue.	30	120
Basalt, broken, brown .	40	160
Basalt, blue, crevice .	5	165
Basalt, hard, blue. . .	20	185
Basalt, blue, creviced.	15	200
Basalt, brown; water 272'	15	215
Basalt, broken, brown .	10	225
Basalt, hard, blue. . .	15	240
Basalt, hard, blue. . .	20	260
Basalt, dense, very hard	12	272
Sand and "sliderock". .	9	281
Basalt, hard, blue. . .	4	285
"Gumbo" blue.	10	295
Basalt, firm	5	300
Basalt, broken.	5	305
Basalt, hard, blue. . .	3	308

21/24-31L1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, shelly, blue. . .	17	325
Basalt, hard, blue. . . .	15	340
Basalt, hard, gray. . . .	67	407

Casing: 8-, 6-inch.

21/25-15D1. Sieverkropp Bros. About 250 ft S. and 300 ft E. of NW corner. Altitude 2,370 ft. Drilled by G. C. Huff, 1940.

Old dug well.	22	22
Basalt, hard, blue. . . .	8	30
Basalt, broken, blue. . .	1	31
Basalt, hard, blue . . .	15	46
Basalt, "honeycomb," black; water.	1	47
Basalt, blue.	7	54
Basalt, very hard, gray .	5	59
Basalt, gray.	5	64
Basalt, gray.	8	72
Basalt, brown; water. . .	1	73
Basalt, brown	3	76

21/25-30G1. F. F. Boroff. About 550 ft N. and 1,500 ft W. of E¼ corner. Altitude about 1,760 ft. Drilled, 1950.

Basalt and caliche. . . .	40	40
Basalt.	285	325

Casing: 8-inch.

21/25-35P1. G. C. Maltby. About 700 ft N. and 100 ft W. of S¼ corner. Altitude about 1,396 ft. Drilled by J. S. Dishman, 1953.

Topsoil.	1	1
Silt and gravel.	7	8
Basalt, broken; caliche	17	25
Gravel, coarse.	10	35
Basalt, broken, brown. .	8	43
Basalt, hard, blue . . .	22	65
Basalt, hard, gray. . . .	20	85
Basalt, creviced.	2	87
Basalt, broken, brown. .	28	115
Basalt, firm, blue . . .	10	125
Basalt, broken, brown. .	25	150
Basalt, broken, blue . .	10	160

21/25-35P1.—Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, firm, blue. . .	5	165
Basalt, hard, gray. . .	20	185
Basalt, shelly, variegated	35	220
Basalt, firm, blue. . .	10	230
Basalt, mud, caliche. .	20	250
Basalt, broken, brown .	10	260
Basalt, "soapstone" . .	5	265
Basalt, broken, "ledgy", blue.	10	275
Basalt, broken, gray. .	13	288
Sand, fine; water. . .	5	293
Basalt, firm, gray. . .	19	312

Casing: 8-inch.

21/26-2L1. Herb Meyers. About 1,250 ft S. and 1,200 ft W. of center of section. Altitude about 1,279 ft. Drilled by Brown Drilling Co., 1953.

Topsoil.	5	5
Gravel.	55	60
Clay.	85	145
Sand and clay; water. .	30	175

Casing: 8-inch.

21/26-2M1. J. Sharror. About 400 ft S. and 400 ft E. of W¼ corner. Altitude about 1,271 ft. Drilled by Erdman Drilling Co.

Clay and gravel. . . .	40	40
"Hardpan".	140	180
Gravel.	23	203

21/26-7J1. O. E. Schempp. About 1,400 ft N. and 700 ft W. of SE corner. Altitude about 1,630 ft. Drilled by J. S. Dishman, 1953.

"Hardpan".	15	15
Basalt, alternate hard and soft.	48	63
"Sliderock", loose, cavey	5	68
Basalt, broken, brown.	27	95
Basalt, broken, blue .	29	124
"Chalk rock", fine sand; water.	4	128
Basalt, broken, loose.	2	130
Basalt, ledgy, blue. .	14	144
Basalt, broken, blue .	21	165
Basalt, hard, gray . .	15	180
Basalt, very crevicey.	4	184

Casing: 8-, 6-inch.

21/26-7K1. O.E. Schempp. About 400 ft SE of center of sec. Altitude about 1,685 ft. Drilled, 1949.

Materials	Thickness (feet)	Depth (feet)
Silt and clay.	15	15
Basalt.	3	18
Basalt, broken	15	33
Basalt.	2	35
Basalt, broken	17	52
Basalt.	4	56
Basalt, broken; water. .	18	74
Basalt.	4	78
Basalt, broken	24	102
Basalt.	5	107
Basalt, broken, yellow clay	29	136
Basalt, broken, porous .	2	138
Basalt, solid, blue. . .	10	148

Casing: 8-inch.

21/26-8M1. City of Ephrata. About 1,480 ft N. and 100 ft E. of SW corner. Altitude about 1,590 ft. Drilled by Durand & Son, 1952.

Boulders and clay. . . .	20	20
Basalt, very hard . . .	26	46
Basalt, broken; water. .	9	55
Basalt, hard.	21	76
Basalt, fractured, caving	3	79
Basalt, hard.	2	81
Basalt, soft, and clay .	38	119
Basalt, hard.	2	121
Basalt, broken.	39	160
Basalt, hard.	66	226
Basalt, soft.	35	261
Basalt.	13	274
Basalt, hard.	23	297
Basalt, soft, clay, caving	4	301
Basalt, hard.	23	324
Basalt, broken	5	329
Basalt, very hard . . .	62	391
Basalt, very hard; water	39	430
Basalt, very hard with streaks of soft basalt.	26	456
Basalt, soft brown. . .	4	460
Basalt, black and gray .	149	609
Basalt, broken.	48	657
Clay, black and brown. .	26	683
Basalt, hard.	5	688
Basalt, hard.	13	701
Basalt, very hard, gray and black.	82	783
Basalt, broken.	10	793
Basalt, hard, gray . . .	88	881

Table 3.--Drillers' logs of wells

21/26-8M1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, hard, black. . .	19	900
Basalt, very hard, gray.	90	990
Clay, blue interbed. . .	3	993
Basalt, hard, gray . . .	7	1,000

Casing: 20-, 14-inch.

21/26-8N1. City of Ephrata. About 600 ft N. and 1,100 ft E. of SW corner. Altitude about 1,580 ft. Drilled by Durand & Son, 1953.

Topsoil, broken rock, boulders, cement gravel	5	5
Boulders.	3	8
Basalt, broken; boulders	6	14
Gravel; basalt, hard. .	20	34
Basalt, broken, hard. .	3	37
Basalt, broken, mixed with yellow cement gravel .	3	40
Gravel, cemented, hard, yellow.	14	54
Gravel, cemented, hard, yellow; boulders . . .	1	55
Boulders, hard, gray. .	4	59
Rock, broken, gray, yellow	8	67
Gravel, cemented, medium yellow.	8	75
Gravel, cemented, hard, yellow.	23	98
Basalt, hard, gray. . .	14	112
Basalt, broken, some sand	4	116
Basalt, hard, gray. . .	36	152
Basalt, medium hard, gray	33	185
Basalt, hard, gray. . .	18	203
Basalt, broken, medium, brown.	13	216
Basalt, broken, medium, black.	16	232
Basalt, broken, brown .	21	253
Basalt, medium soft, dark	19	272
Basalt, broken, medium, brown.	24	296
Basalt, medium hard . .	8	304
Basalt, medium, brown .	47	351
Basalt, hard, gray. . .	2	353
Basalt, hard, brown . .	54	407
"Crevice".	4	411
Basalt, blue.	19	430
Basalt, hard, gray. . .	20	450

21/26-10C1. Russell Hunt. About 500 ft S. and 1,225 ft W. of N¼ corner. Altitude about 1,271 ft. Drilled by Basin Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Soil.	6	6
Gravel.	16	22
Sand.	9	31
Gravel.	18	49
Basalt, vesicular . .	13	62
Basalt.	19	81
Basalt, broken. . . .	47	137
Basalt, broken; water	9	146

Casing: 6-inch.

21/26-10G2. Bob Billingsley. About 700 ft N. and 1,450 ft W. of E¼ corner. Altitude about 1,290 ft. Drilled by G. C. Huff, 1940.

Boulders.	35	35
Sand and gravel, fine	4	39
Sand and boulders . .	4	43
Sand.	12	55
Boulders, large . . .	2	57
Sand.	4	61
Sand, fine, clay, mixed	6	67
Basalt.	14	81
Gravel; water. . . .	4	85
Basalt, brown; water.	10	95
Basalt, blue	32	127

21/26-15D1. Grant County. About 1,300 ft S. and 270 ft E. of NW corner. Altitude about 1,284 ft. Drilled by G. C. Huff, Sr.

Clay, some sand. . .	170	170
Basalt, hard, massive	180	350
Basalt, "honeycomb"; water	15	365

21/26-15E1. Grant County PUD, well 2. About 850 ft N. and 500 ft E. of W¼ corner. Altitude about 1,278 ft. Drilled by Ralph Cassel, 1949.

Clay, red.	28	28
Clay, gra; smooth gravel, cemented.	146	174
Basalt, solid, black	48	222
Clay, gray; smooth gravel, cemented.	20	242
Basalt, solid, black	52	294
Clay, gray; smooth gravel, cemented.	26	320

21/26-15E1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, porous, black. .	25	345
Basalt, solid, black . .	2	347

Casing: 10-, 6-inch.

21/26-15F1. Great Northern Ry. Co. About 1,100 ft N. and 1,150 ft W. of center ¼ corner. Altitude about 1,272 ft. Drilled by C. E. Miller, 1916.

Soil.	20	20
Gravel and boulders, cemented	263	283
Basalt, hard.	44	327
Basalt, soft; water . . .	3	330
Basalt.	170	500

Casing: 12-, 10-, 8-inch.

21/26-16B3. City of Ephrata. About 260 ft S. and 100 ft E. of N¼ corner. Altitude about 1,345 ft. Drilled by Durand & Son, 1941.

Soil.	1	1
Basalt, broken, black . .	18	19
Basalt, hard, black . . .	11½	30½
Basalt, broken, black; water	½	31
Basalt, hard, black . . .	12	43
Basalt, soft, black . . .	12	55
Shale, brown.	25	80
Basalt, brown.	27	107
Basalt, black.	64	171
Basalt, blue.	16	187
Conglomerate, brown . . .	4	191
Basalt, gray.	12	203
Basalt, "honeycomb", brown; water at 1,100 gpm . . .	5	208
Basalt, gray.	16	224
Basalt, black.	17	241
Basalt, "honeycomb", black; water.	1	242
Basalt, black.	6	248
Basalt, "honeycomb" black; water.	½	248½
Basalt, black.	1½	250
Basalt, very hard, gray .	10	260

Casing: 12-inch.

21/26-21E1. City of Ephrata. About 500 ft N. and 500 ft E. of W¼ corner. Altitude about 1,490 ft. Drilled by Durand & Son, 1952.

Materials	Thickness (feet)	Depth (feet)
Silt and boulders. . . .	16	16
Gravel.	49	65
Silt, yellow, some gravel	35	100
Basalt, broken, dark . .	7	107
Basalt, broken, yellow .	10	117
Basalt, medium, dark . .	23	140
Basalt, hard, gray . . .	37	177
Basalt, medium, dark . .	2	179
Basalt, hard, gray . . .	11	190
Basalt, medium, dark . .	30	220
Shale, green; broken basalt	7	227
Shale, soft, green . . .	27	254
Shale, soft, yellow. . .	5	259
Basalt, variegated; water	5	264
Basalt, broken, dark. .	8	272
Basalt, medium, dark, hole caving.	3	275
Basalt, medium, dark . .	7	282
Basalt, soft, dark . . .	7	289
Basalt, medium, dark . .	6	295
Basalt, medium, brown. .	7	302
Basalt, medium, dark . .	5	307
Basalt, hard, gray. . .	31	338
Basalt, medium, broken, dark.	9	347
Basalt, dark.	3	350
Basalt, medium, dark . .	16	366
Basalt, hard, gray . . .	22	388
Basalt, soft, broken, brown	42	430
Basalt, medium, black. .	10	440
Basalt, medium, dark. .	26	466
Basalt, firm, dark. . .	8	474
Basalt, hard, gray . . .	14	488
Basalt, medium, dark . .	8	496
Basalt, medium, black. .	16	512
Basalt, hard, gray. . .	5	517
Basalt, medium, black. .	6	523
Basalt, medium, dark . .	7	530
Basalt, hard, gray; crevice	43	573
Basalt, medium, gray . .	7	580
Basalt, firm, dark. . .	7	587
Basalt, hard, gray. . .	13	600
Basalt, hard, dark; crevice	3	603
Basalt, hard, caving, gray	15	618

Casing: 24-, 20, 16-inch.

Table 3.--Drillers' logs of wells

21/26-21H1. Roy Behm. About 500 ft N. and 300 ft W. of E¼ corner. Altitude about 1,252 ft. Drilled 1914.

Material	Thickness (feet)	Depth (feet)
Soil.	8	8
Gravel, coarse.	32	40
"Hardpan".	120	160
Sand; water.	3	163

Casing: 10-inch.

21/26-22E2. E.P. Calkins. About 900 ft N. and 1,000 ft E. of W¼ corner. Altitude about 1,265 ft. Drilled, 1912.

Gravel.	35	35
"Hardpan".	115	150
Sand.	20	170
"Hardpan" and gravel. .	125	295

Casing: 8-inch.

21/26-22G1. City of Ephrata. About 2,100 ft S. and 1,850 ft W. of NE corner. Altitude about 1,323 ft. Drilled by C. E. Miller.

Gravel and boulders . .	130	130
Basalt, soft, decomposed, red.	67	197
Clay, white; gravel . .	50	247
No record.	38	285

21/26-22N1. Manuel Berschauer. About 200 ft N. and 475 ft E. of SW corner. Altitude about 1,278 ft. Drilled by Bach Drilling Co.

Boulders and soil. . .	20	20
Gravel, mixed with clay	51	71
Basalt, broken.	20	91
Basalt, and sandstone .	133	224

Casing: 6-inch.

21/26-23L1. Ephrata Airport. About 500 ft SW of center ¼ corner. Altitude about 1,260 ft. Drilled by G. C. Hoff, 1940.

Soil and boulders. . . .	2	2
Gravel, cemented	3	5
Gravel, boulders	17	22
Clay and gravel.	8	30
Clay.	6	36
"Limerock".	5	41
Clay, brown.	10	51

21/26-23L1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Boulders.	4	55
Clay, yellow.	89	144
Gravel; water	6	150
Clay, white.	9	159
Basalt, black.	15	174
Basalt, hard, gray. . .	2	176
Basalt, black.	1	177
Basalt, hard, gray. . .	72	249
Basalt, gray.	11	260
Basalt, black	5	265
Clay, blue.	1	266
Basalt, broken, black; water, small quantity.	33	299
Basalt, black.	26	325
Basalt, gray	46	371
Basalt, "honeycomb", black; water.	4	375
Basalt, black; water. .	45	420
Basalt, black; water, crevices at 421,424 ft	5	425

Casing: 6-inch.

21/26-28H1. City of Ephrata, (sewage plant). About 1,200 ft N. and 850 ft W of E¼ corner. Altitude about 1,242 ft. Drilled by Erdman Drilling Co., 1947.

Gravel.	40	40
Clay, sandy	110	150
"Hardpan".	26	176
Sand.	2	178

Casing: 8-inch.

21/26-28K1. Ralph Abelson. About 100 ft S. and 1,150 ft E. of center of section. Altitude about 1,230 ft. Drilled by Brown Drilling Co., 1953.

Topsoil.	3	3
Gravel.	31	34
Basalt, black.	25	59
Basalt, broken.	90	149
Basalt, medium hard . .	76	225
Basalt, black	83	308
Basalt, hard.	8	316
Basalt, black.	14	330
Basalt, medium hard . .	12	342
Basalt, black.	15	357
Basalt, hard.	10	367

Table 3.--Drillers' logs of wells

23/30-32D1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, black.	8	170
Basalt, brocken, black .	17	187
Basalt, black.	27	214
Basalt, hard.	4	218
Basalt, red; black sand.	3	221
Basalt, brown.	6	227
Basalt, black.	33	260
Basalt, broken	15	275
Basalt.	5	280
Basalt, black.	5	285
Basalt, hard.	15	300

Casing: 16-inch.

23/30-34L1. Alvin Liebing. On south side of earth dam across coulee floor. Altitude about 1,440 ft. Drilled by Melvin Kropp, 1956.

Soil.	14	14
Gravel and rock.	46	60
Basalt; water	90	150
Basalt, hard.	34	184
Basalt, crevice; water. .	16	200
Basalt.	4	204

Casing: 10-inch.

23/29-14J1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, porous	34	355
Basalt	35	390
Basalt, hard	96	486
Basalt, porous and broken	26	512
Basalt	4	516
Basalt, hard	89	605
Basalt, hard, gray	5	610
Basalt	18	628
Basalt, hard	13	641
Basalt	9	650
Basalt, hard	2	652
Basalt	5	657
Basalt, hard	7	664

Casing: 12-inch.

23/29-34B1. Virgil Stevens. About 100 ft S. and 1,500 ft E. of NE corner. Altitude about 1,696ft. Drilled by Frank Zimmerman, 1954.

Topsoil	5	5
"Hardpan", caliche, basalt	8	13
Basalt, broken	4	17
Basalt, medium hard	4	21
Basalt	10	31
Basalt, medium	103	134
Basalt	7	141
Basalt, medium	8	149
Basalt	5	154
Basalt, hard	6	160
Basalt, medium	28	188
Basalt, hard	19	207
Basalt, medium	7	214
Basalt, soft	4	218
Basalt, broken	42	260
Basalt, firm	7	267
Basalt, hard	12	279
Basalt and clay	16	295
Clay	5	300
Clay and basalt	15	315
Clay	10	325
Unknown, reports missing	33	358
Basalt, medium	5	363
Basalt, broken; clay	24	387
Basalt, broken	8	395
Basalt, medium	30	425
Basalt, broken	27	452
Basalt; water	8	460
Basalt	10	470
Basalt, medium	15	485
Basalt	6	491
Basalt, medium	5	496

23/29-34B1.--Continued

Materials	Thickness (feet)	Depth (feet)
Basalt, hard	12	508
Basalt	12	520
Basalt, hard	81	601
Basalt, broken	15	616
Basalt, coarse	4	620
Basalt	1	621
Basalt, medium	26	647
Basalt	61	708
Basalt, hard	16	724
Basalt, broken; water	24	748
Basalt	79	827
Basalt, medium hard	38	865
Basalt	85	950
Basalt	22	972
Basalt, soft	3	975
Basalt, medium	25	1,000

Casing: 16-inch.

23/30-29F1. Art Fiess. On floodplain of Wilson Creek, near center of SE¼, NW ¼, sec. 29. Altitude about 1,395 ft.

Soil	12	12
Clay	14	26
Gravel	33	59
Sand	25	84
Gravel	33	117
Basalt, broken	18	135
Basalt, black	15	150
Basalt, broken; water	60	210
Basalt, hard	55	265
Basalt, broken; water	8	273
Basalt, very hard, gray	17	290

Casing: 12-inch.

23/30-32D1. Art Fiess. About 900 ft S. and 300 ft E. of NW section corner. Altitude about 1,370 ft. Drilled by Frank Zimmerman, 1954.

Boulders and gravel	8	8
Boulders	7	15
Gravel	5½	20½
Sand	19½	40
Gravel and clay	66	106
Basalt, broken; clay	13	119
Clay	3	122
Basalt	2	124
Basalt, brown	11	135
Basalt, hard	17	152
No record	10	162

Table 3.--Drillers' logs of wells

22/30-9F1. C. F. Mordhorst. About 2,550 ft S. and 1,700 ft E. of NW corner sec. Altitude about 1,275 ft. Dug by Mullins & Sanders, 1949.

Materials	Thickness (feet)	Depth (feet)
Peat	1½	1½
Clay, bluish gray	3½	5
Cobblestones and sand	15	20

Casing: 48-inch.

22/30-13F1. George Starkel. About 800 ft SE of SE corner of cemetery. ft Drilled by L. V. Beard, 1954. Alt. 1,340.

Gravel	10	10
Basalt, broken	38	48
Basalt; water	4	52
Basalt, broken	68	120
Basalt, medium hard	38	158
Basalt, hard, gray	21	179
Basalt, hard, blue	18	197
Basalt, fractured; water	22	219
Basalt, medium hard	9	228

Casing: 12-inch.

22/30-13H1. Adolphe Schell. About 435 ft N. and 600 ft W. of E¼ corner. Altitude about 1,290. Drilled by Joy Bros., 1954.

Topsoil	3	3
Gravel	36	39

Casing: 8-inch.

22/30-14C1. Roger James. About 324 ft S. and 735 ft W. of N¼ corner sec. Altitude about 1,300 ft. Drilled by R. C. Rowden, 1951.

Dug sump	20	20
Basalt, black	15	35
Basalt, hard, dark	13	48
Basalt, soft, red, black, green	28	76
Basalt; water	14	90
Basalt, dark gray	55	145

23/28-27J1. Orval Pearce. About 500 ft S. and 1,300 ft W. of E¼ corner. Altitude about 1,520 ft. Drilled by Holman, 1948.

Materials	Thickness (feet)	Depth (feet)
Soil and gravel	10	10
Basalt; water, 80 ft	294	304
Sand, black; water	10	314
Basalt	1	315

Casing: 6-inch.

23/28-36E1. Bureau of Reclamation. At Long Lake Headworks. Altitude about 1,319 ft. Drilled by Frank Zimmerman, 1951.

Sand and gravel, loose	12	12
Gravel, loose	28	40
Basalt, hard, black	45	85
Basalt, medium hard, moderately weathered, black	17	102
Basalt, very broken and loose	16	118
Basalt, broken, dense, black	12	130
Basalt, hard, black	11	141
Basalt, broken	8	149
Basalt, hard	4	153
Basalt, dense, black	22	175
Basalt, broken, vesicular, black and brown; water	12	187

Casing: 8-inch.

23/29-14J1. W. F. Stevens. About 700 ft S. and 735 ft W. of E¼ corner. Altitude about 1,596 ft. Drilled by Frank Zimmerman, 1953.

Topsoil	3	3
Clay, sandy; gravel	6	9
Basalt	72	81
Clay and gravel	6	87
Basalt, broken; clay	18	105
Basalt	65	170
Basalt, hard; water	14	184
Basalt, porous	24	208
Clay, green	7	215
Clay and basalt, broken	12	227
Basalt	9	236
Basalt, broken	6	242
Basalt	42	284
Basalt, hard	35	319
Basalt, porous; water	2	321

22/29-1Q2.--Continued.

Material	Thickness (feet)	Depth (feet)
Basalt; water.	11	113
Basalt, medium hard.	4	117
Basalt, broken; water.	13	130
Basalt, loose, broken.	13	143
Basalt, hard.	7	150
Basalt, broken.	7	157
Basalt, medium hard.	8	165
Basalt, broken; clay	10	175
Basalt, medium hard.	10	185
Basalt, red.	16	201
Basalt, medium hard.	11	212
Basalt, hard.	123	335
Basalt, decomposed, porous; water.	23	358

Casing: 16-inch.

22/29-5F1. E.D.Williamson. About 1,800 ft S. of N¼ corner. Altitude about 1,264 ft. Drilled by Frank Zimmerman, 1954.

Clay and silt.	32	32
Gravel.	4	36
Gravel, cemented	10	46
Gravel, coarse.	3	49
Sand, fine, black.	9	58
Sand, dry, black.	10	68
"Hardpan", hard brown.	2	70
Gravel; water.	5	75
Gravel, cemented, brown.	6	81
Clay, hard and "rocks"	1	82
Clay and gravel.	12	94
Gravel; water.	1	95
Basalt, broken; water.	2	97
Basalt, hard, black.	3	100
Basalt, hard, black.	42	142
Basalt, hard, gray.	62	204
Basalt, broken, black, porous, water 204-218 ft	14	218
Basalt, porous.	8	226
Basalt, hard.	42	268

Casing: 12-inch.

22/29-6F2. E.D. Williamson. About 1,850 ft S and 1,200 ft W. of N¼ corner. Altitude about 1,262 ft. Drilled by Sam Osborn, 1954.

Gravel.	60	60
Basalt, hard, blue.	80	140
Basalt, soft, black	80	220
Basalt, soft, decomposed, seams and crevices	20	240

22/29-12C2. Great Northern Ry. Co. About 1,200 ft S. and 1,600 ft E. of NW corner. Altitude about 1,278 ft. Drilled 1939.

Materials	Thickness (feet)	Depth (feet)
Gravel, loose.	9	9
Clay, sandy.	11	20
Clay and gravel.	5	25
Gravel, cemented.	4	29
Gravel, loose.	3	32
Gravel and boulders.	6	38
Basalt.	10	48
Basalt, brown.	3	51
Basalt, black.	93	144
Basalt, very hard.	53	197
Basalt, soft, yellow	12	209
Basalt, porous, black.	118	327

Casing: 8-, 12-inch.

22/29-17D1. Charles Williamson. About 50 ft S. and 50 ft E. of NW corner. Altitude about 1,633 ft. Drilled by Frank Zimmerman, 1958

Topsoil.	4	4
"Hardpan".	4	8
"Rock", rotten, brown.	4	12
Caliche.	12	24
Basalt, broken	8	32
Basalt, hard.	72	104
Basalt, medium	38	142
Basalt, broken, blue;water	40	182
Basalt, hard, gray	35	217
Basalt, rotten, brown.	24	241
Basalt, hard.	35	276
Basalt, porous; water.	25	301
Wood, not fossilized	18	319
Basalt, hard, blue	57	376
Basalt, coarse, black.	8	384
Clay, green.	8	392
Basalt, broken, and clay	6	398
Coal.	1	399
Clay, broken rock, gray	23	422
Basalt, very hard, gray-blue.	203	625

Drilling 11/12/58.

Table 3.--Drillers' logs of wells

22/28-8E2. R. W. Abelson. About 2,350 ft S. and 1,200 ft E. of NW section corner. Altitude about 1,270 ft. Drilled by J. S. Dishman, 1953.

Materials	Thickness (feet)	Depth (feet)
Sand and gravel. . . .	126	126
Basalt, broken, brown.	24	150
Basalt, broken, brown; sandstone, variegated sand, silt; water.	20	170
Basalt, red.	6	176
Basalt, broken, blue .	4	180
Basalt, firm, gray . .	20	200

Casing: 8-inch.

22/28-27C1. Lars Hanson. About 400 ft S. and 650 ft W. of N¼ corner. Altitude about 1,418 ft. Drilled by Frank Zimmerman, 1953.

Topsoil.	4	4
Caliche.	2	6
Gravel and boulders. .	6	12
Basalt, broken	58	70
Basalt, medium hard. .	90	160
Basalt, hard, gray . .	165	325
Basalt, medium, blue .	27	352
No record.	95	447
Basalt, hard, gray . .	16	463
Basalt, broken; water	4	467
Basalt, medium, blue .	8	475

Casing: 16-inch.

22/28-34H1. Holgar A. Hansen. About 400 ft N. and 200 ft W. of the E¼ corner. Altitude about 1,330 ft.

Soil.	2	2
Sand and pebble gravel	26	28
Gravel, boulder . . .	10	38
Basalt.	22	60
Basalt, "honeycomb"; water	3+	63
Basalt.	127	190
Basalt, cavernous; water	5	195
Basalt.	5	200

22/28-34H2. H. R. Hansen. About 50 ft N. and 450 ft W. of E¼ corner. Altitude about 1,339 ft. Drilled 1948.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders. . .	47	47
Gravel.	13	60
Basalt, porous.	30	90
Basalt, hard, black. . .	30	120
Basalt, hard, blue . . .	30	150
Basalt, cracked, porous	18	168
Basalt, hard, black. . .	15	183
Basalt, hard, blue . . .	29	212
Basalt, cracked; water .	19	231
Basalt, solid, blue. . .	19	250
Basalt, very hard, solid, gray.	19	269
Basalt, porous, black; water.	14	283

Casing: 10-inch.

22/28-34R1. Burt Wessler. About 200 ft N. and 700 ft W. of SE section corner. Altitude 1,338± ft. Drilled by Sam Osborn, 1957.

Silt.	1	1
Sand and gravel.	81	82
Basalt, black.	73	155
Basalt, hard, gray and blue	25	180
Basalt.	120	300

Casing: 8-inch.

22/28-35M1. Lee Hesseltine. About 400 ft S. and 400 ft E. of the W¼ corner. Altitude about 1,322 ft. Dug by H. Hanson.

Sand and gravel.	40	40
Basalt, "honeycomb" . . .	5	45
Basalt, "honeycomb"; . . .	3	48

22/29-1Q2. City of Wilson Creek. About 250 ft N. and 510 ft E. of S¼ corner. Altitude about 1,282 ft. Drilled by Frank Zimmerman, 1955.

Gravel.	52	52
Gravel and boulders. . .	13	65
Basalt.	10	75
Basalt, broken, brown. .	9	84
Basalt, broken.	6	90
Basalt, coarse.	7	97
Basalt.	5	102

Table 3.--Drillers' logs of wells--Con.

22/27-31M2. Francis Frits. About 240 ft S. and 1,100 ft E. of W¼ corner. Altitude about 1,094 ft. Drilled by J. S. Dishman, 1958.

Materials	Thickness (feet)	Depth (feet)
Soil and large cobble stones	5	5
Boulders	3	8
"Cobble stone"	2	10
"Cobble stone", boulders	8	18
Boulders	22	40
"Cobble stone", boulders	8	48
"Slide rock", hard, gray	26	74
"Cobble stone"; water 80 ft	6	80
"Cobble stone"; gravel	10	90
Gravel; sand, silt; water	6	96

Casing: 8-inch.

22/27-31M3. A.L. Rosheit. About 250 ft S. and 900 ft E. of W¼ corner. Altitude about 1,096 ft. Drilled by Bach Drilling Co., 1956.

Topsoil	2	2
Boulders with some sand and gravel	43	45
"Slide rock", loose	25	70
"Cobblestone", boulders	34	104

Casing: 8-inch.

22/28-4R2. Bureau of Reclamation. About 29 ft N. and 170 ft W. of SE corner. Altitude 1,262.1 ft. Drilled by R. J. Strasser, 1951.

Sand, fine, silty, tan	35	35
Sand, fine, loose, tan	15	50

Casing: 18-inch, perforated 35-50 ft.

22/28-5C1. Donna M. Lucht, About 1,200 ft S. and 2,640 ft E. of NW section. Altitude about 1,366 ft. Drilled by C. I. Woolery, 1955.

Topsoil	5	5
Sand, fine	85	90
Sand, coarse	90	180
Gravel, coarse	8	188
Sand, coarse	20	208
Gravel, coarse; boulders	17	225
Basalt, hard, blue	22	247
Basalt, gray	2	249
Basalt, hard, blue	14	263
Basalt, black	5	268

22/28-5C1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, "honeycomb"; water	7	275
Basalt, solid, black	8	283
Basalt, broken, black; water	7	290
Basalt, black	13	303

Casing: 14-inch.

22/28-5N1. Robert A. Brooks. About 350 ft N. and 1,270 ft E. of SW corner. Altitude about 1,300 ft. Drilled by E.A.Holman & Son, 1949.

Sand, fine	12	12
Gravel, basaltic, black	133	145
Basalt	25	170
Gravel, basaltic, coarse	18	188

Casing: 8-inch.

22/28-6R2. Bureau of Reclamation. About 60 ft N. and 5 ft W. of SE corner. Altitude 1,275.8 ft. Drilled by R. J. Strasser, 1951.

Loam, sandy, tan	5	5
Sand and gravel, silty	45	50

Casing: 6-inch.

22/28-7M1. Bureau of Reclamation. About 550 ft S. and 450 ft E. of W¼ corner. Altitude about 1,260 ft. Drilled by A. A. Durand, 1947.

Topsoil	1	1
Gravel; small boulder	49	50
Gravel; sand and clay	20	70
Gravel, coarse, caving	10	80
Gravel, coarse	5	85
Sand, coarse, silted	20	105
Boulders and gravel, large	20	125
Boulders	10	135
Basalt "shelly"	23	158
Basalt, hard	12	170
Basalt, black	10	180
Basalt, hard, black	10	190
Basalt, black	10	200
Basalt, gray	5	205
Basalt, black	69	274
Basalt, hard, black	1	275
Basalt, vesicular, black	14	289
Basalt, vesicular	15	304
Basalt, vesicular, black	15	319
Basalt, black	38	357

Casing: 16-inch.

Table 3.--Drillers' logs of wells

22/27-31D1.—Continued.

Materials	Thickness (feet)	Depth (feet)
Boulders, basaltic, very hard, gray. . .	20	75
Sand and gravel; water	10	85

Casing: 6-inch.

22/27-31G1. Bureau of Reclamation. About 700 ft N. and 300 ft E. of center of section. Altitude 1,156.7 ft. Drilled by Bach Drilling Co., 1951.

Boulders, granite and basalt; with finer material	45	45
Gravel.	44	89
Basalt.	6	95

Casing: 14-inch.

22/27-31G2. Bureau of Reclamation. About 750 ft N. and 250 ft E. of center of section. Altitude 1,157.7 ft. Drilled by Bach Drilling Co.

Boulders, granite and basalt; with finer material	60	60
Gravel and sand. . . .	18	78

Casing: 6-inch.

22/27-31G3. Bureau of Reclamation. About 800 ft N. and 140 ft E. of center of section. Altitude 1,156.8 ft. Drilled by Bach Drilling Co.

Boulders, granite and basalt; with finer material	60	60
Gravel, muddy.	20	80

Casing: 6-inch.

22/27-31G4. Bureau of Reclamation. About 900 ft N. of center of section. Altitude 1,156.7 ft. Drilled by Bach Drilling Co.

Boulders and cobbles, granitic and basaltic. .	30	30
Gravel.	35	65
Sand, fine, black	9	74

Casing: 6-inch.

22/27-31G5. Bureau of Reclamation. About 2,350 ft S. and 1,750 ft W. of NE corner. Altitude 1,156.5 ft. Drilled by USBR, 1943.

Materials	Thickness (feet)	Depth (feet)
Gravel, coarse; boulders and sand.	37	37
Loam, sandy.	7	44
Loam, gravelly, sandy. .	12	56
Loam, sandy.	2	58
Clay.	11	69
Loam, sandy.	10	79
Basalt, vesicular. . . .	18	97
Basalt, dense.	6	103
Basalt, slightly vesicular	10	113
Basalt, dense.	16	129
Basalt, vesicular. . . .	23	152
Basalt, dense.	36	188
Basalt, vesicular. . . .	17	205
"Mud".	1	206
Basalt, slightly vesicular	15	221
Basalt, dense.	57	278

22/27-31M1. Bureau of Reclamation. About 1,850 ft N. and 400 ft E. of SW corner. Altitude 1,205.0 ft. Drilled by USBR, 1943.

Gravel.	4	4
Sand.	13	17
Sand and gravel	24	41
Gravel and boulders . .	12	53
Gravel and sand. . . .	10	63
Gravel.	11	74
Gravel and boulders . .	10	84
Gravel.	9	93
Sand and gravel. . . .	3	96
Sand and clay.	2	98
Loam, silty.	5	103
Loam.	4	107
Loam, sandy.	7	114
Sand.	2	116
Sand, coarse.	8	124
Sand and soil.	3	127
Sand, silty.	9	136
Basalt, slightly vesicular	9	145
Basalt, vesicular . . .	20	165

22/27-30M1. Bureau of Reclamation. About 600 ft S. and 28 ft E. of W¼ corner. Altitude 1,164.5 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Gravel.	5	5
Gravel and boulders . .	5	10
Gravel.	10	20
Gravel, cemented. . . .	10	30
Gravel, some sand . . .	49	79
Basalt.	6	85

Casing: 14-inch.

22/27-30M4. Bureau of Reclamation. About 850 ft S. and 25 ft E. of W¼ corner. Altitude about 1,165 ft. Drilled by Bach Drilling Co.

Boulders of granite and basalt with finer material	65	65
Gravel and finer material	11	76

Casing: 6-inch.

22/27-30P3. J. B. Reynolds. About 200 ft N. and 700 ft W. of S¼ corner. Altitude about 1,158 ft. Drilled by J. S. Dishman, 1951.

Sand and caliche.	11	11
Gravel, coarse and boulders	2	13
Boulders.	5	18
Sand and gravel	7	25
Gravel, coarse.	3	28
Gravel.	2	30
Sand and some gravel. . .	5	35
Basalt; boulders, blue. .	3	38
Basalt, hard, broken, blue	12	50
Sand, fine; water. . . .	4	54
Basalt, broken.	10	64
Basalt, hard, blue. . . .	2	66

Casing: 6-inch.

22/27-30Q1. Sam Kobata. About 150 ft N. and 300 ft E. of S¼ corner. Altitude about 1,154 ft. Drilled by Sam Osborn, 1954.

Gravel; water at 30 ft. .	34	34
Basalt, vesicular, black.	56	90
Basalt; water at 172 ft .	82	172
Basalt, black; water at 290 ft, streaks of yellow rock.	138	310

Casing: 6-inch.

22/27-31B3. Bureau of Reclamation. About 100 ft S. and 50 ft E. of N¼ corner. Altitude 1,149.7 ft. Drilled by USBR.

Materials	Thickness (feet)	Depth (feet)
Clay, silty.	1	1
Clay.	6	7
Boulders and cobbles, cemented.	12	19
Gravel and cobbles, loose	4	23
Gravel and cobbles, cemented	10	33
Basalt.	15	48

Casing: 1½-inch.

22/27-31C1. Walt Kammeyer. About 250 ft S. and 550 ft W. of N¼ corner. Altitude about 1,154 ft. Drilled by J. S. Dishman, 1952.

Topsoil.	3	3
Caliche.	4	7
Boulders, 12-14-inch diam.	11	18
Basalt, "shelly", blue .	4	22
Basalt, "shelly", sand mix, blue.	6	28
Basalt, broken, blue . .	12	40
Basalt, broken, blue . .	4	44
"Slide rock", blue. . .	6	50
Gravel, coarse; sand . .	8	58
Gravel, coarse.	2	60
Boulders; coarse gravel.	11	71

Casing: 8-inch, perforated 55-65 ft.

22/27-31C3. L. A. Bush. About 130 ft S. and 1,600 ft E. of NW section corner. Altitude about 1,158 ft. Drilled by W. J. Herde, 1954.

Topsoil and boulders. .	11	11
Basalt, broken; clay. .	47	58
Basalt, broken, not hard	13	71

Casing: 6-inch.

22/27-31D1. C. G. Wing. About 130 ft S. and 475 ft E. of NW sec. corner. Altitude about 1,180 ft. Drilled by J. S. Dishman, 1953.

Topsoil.	1	1
Gravel, coarse; boulders	9	10
Gravel, coarse	4	14
Sand, gravel, coarse (blue basalt.	11	25
Basalt, boulders, broken, blue.	30	55

Table 3.--Drillers' logs of wells.

22/27-19F5. Bureau of Reclamation. About 2,553 ft S. and 998 ft W. of N¼ corner. Altitude 1,079.9 ft. Drilled by Bach Drilling Co., 1954.

Materials	Thickness (feet)	Depth (feet)
Silt and clay, fine	31	31
Gravel	7	38
Sand	2	40

Casing: 3-inch, perforated 30-40 ft.

22/27-19F6. Bureau of Reclamation. About 2,417 ft S. and 836 ft W. of N¼ corner. Altitude about 1,086.7 ft. Drilled by Bach Drilling Co., 1956.

Silt, sand and gravel	5	5
Clay and sand	23	28
Clay and gravel	6	34
Gravel, slightly sandy	17	51

Casing: 12-inch, screen 31-51 ft.

22/27-19N1. City of Soap Lake. About 1,000 ft N. and 200 ft E. of SW corner. Altitude about 1,118 ft. Drilled by G. C. Huff, Sr.

Boulders, gravel, sand water at gravel base, poor quality. Cased off.	54	54
Basalt; water of fair quality in "honeycomb" zones, but cased off.	216	270
Clay, blue.	30	300
Basalt, hard, solid	130	430
Basalt, porous to cavernous; water rose to 21 ft.	30	460
Basalt, hard, solid	6	466

Casing: 8-inch.

22/27-21M1. Bureau of Reclamation. About 700 ft SE of W¼ corner. Altitude 1,203.83 ft. Drilled by USBR, 1943.

Gravel	4	4
Sand	11	15
Sand and some clay	8	23
Sand and gravel	6	29
Basalt, vesicular	30	59

22/27-23R1. E. W. Short. About 125 ft N. and 175 ft W. of SE corner. Altitude about 1,194 ft.

22/27-23R1.--Continued

Materials	Thickness (feet)	Depth (feet)
Gravel, medium to coarse; water	106	106
Basalt, cavernous and water 250-258 ft.	152	258

Casing: 48-inch. (memory log)

22/27-29L1. Bureau of Reclamation. About 1,450 ft N. and 350 ft W. of S¼ corner. Altitude 1,205.0 ft.

Gravel	5	5
Sand and gravel	3	8
Gravel and boulders	13	21
Gravel	6	27
Sand, gravel; boulders	6	33
Sand and gravel	17	50
Clay, silty	39	89
Basalt, vesicular	28	117
Basalt, dense	22	139

22/27-29M1. Carl Heinrich. About 40 ft S. and 150 ft E. of W¼ corner. Altitude about 1,168 ft. Drilled by J. S. Dishman, 1952.

Topsoil	6	6
Boulders and sand	6	12
Boulders	2	14
Sand, gravel, yellow	12	26
Basalt, broken, brown	10	36
Basalt, "shelly", blue	14	50
Basalt, blue	10	60
Basalt, fractured, blue	15	75
Basalt, blue	20	95
Basalt, broken, brown; water	27	122

Casing: 6-inch.

22/27-29P1. August Drittenbass. About 500 ft N. and 700 ft W. of S¼ corner. Altitude about 1,198 ft. Drilled by G. C. Huff, 1914, 1934.

Boulders, gravel, sand	50	50
Clay	30	80
Basalt	110	190
Basalt, "honeycomb"; water	8	198
Basalt, hard, gray	30	228
Basalt, "honeycomb"; water	34	262
Basalt, hard, gray	6	268

22/26-24R1. Bureau of Reclamation. About 31 ft N. and 1,247 ft W. of SE corner. Altitude 1,133.0 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	6	6
Gravel, cobbles.	70	76
Gravel, with sand.	17	93
Basalt.	5	98

Casing: 6-inch.

22/26-24R2. Bureau of Reclamation. About 31 ft N. and 748 ft W. of SE corner. Altitude 1,128.9 ft. Drilled by Bach Drilling Co., 1952.

Silt, sandy.	14	14
Cobbles, gravel with sand	12	26
Gravel, sandy.	16	42
Basalt.	5	47

Casing: 6-inch.

22/26-24R3. Bureau of Reclamation. About 31 ft N. and 946 ft W. of SE corner. Altitude 1,130.5 ft. Drilled by Bach Drilling Co., 1952.

Silt, sandy.	10	10
Gravel, basaltic, sandy, silty.	49	59
Sand, basaltic.	18	77
Basalt, black, few feldspar crystals.	5	82

Casing: 6-inch, perforated 55-57 ft.

22/26-24R4. Bureau of Reclamation. About 31 ft N. and 1,146 ft W. of SE corner. Altitude 1,131.5 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	10	10
Gravel and sand, silty	45	55
Sand, black.	20	75

Casing: 2-inch, perforated.

22/26-25B2. Bureau of Reclamation. About 159 ft S. and 1,700 ft W. of NE corner. Altitude 1,146.8 ft. Drilled by Bach Drilling Co., 1956.

Silt, sandy.	1	1
Gravel and sand, coarse; basaltic; few quartz grains	91	92
Basalt, medium, black.	6	98

Casing: 6-inch, perforated 5-98 ft.

22/26-35G1. Bureau of Reclamation, Diamond test hole drilled in 1942. About 1,400 ft S. and 1,750 ft W. of NE corner. Altitude about 1,268 ft.

Materials	Thickness (feet)	Depth (feet)
Gravel, pebble and cobble with sand (no core).	42	42
Silt, reddish brown, massive; carbonate and silt stringers.	6	48
Gravel, subangular, ¼-inch to 1-inch pebbles, basaltic	2	50
Silt, clayey, massive, reddish-brown; stringers of basaltic sand.	66½	116½
Gravel, subangular, basaltic	2½	119
Silt, massive, clayey, reddish brown.	5	124
No core.	4	128
Silt, massive, clayey, reddish brown.	29	157
No core.	12	169
Sand, angular, basaltic, loose.	3	172
Basalt, broken, gray, dense, nonporphyritic	40	212

22/26-36C1. T. L. Campbell. About 450 ft S. and 500 ft W. of N¼ corner. Altitude about 1,226 ft. Drilled by J. S. Dishman, 1952.

Topsoil.	2	2
Gravel, cemented	5	7
Sand and gravel.	5	12
Gravel, coarse; boulders	8	20
Boulders.	10	30
Gravel, coarse; boulders	10	40
Gravel and sand.	15	55
Sand and gravel.	30	85
Sand, gravel; boulders	7	92
Clay, sandy, yellow; silt.	13	105
"Mud", brown; silt, sandy.	33	138
Sand; water.	4	142
Basalt, broken, brown.	4	146

Casing: 6-inch.

22/27-19F4. Bureau of Reclamation. About 2,624 ft S. and 1,044 ft W. of N¼ corner. Altitude 1,081.0 ft. Drilled by Bach Drilling Co., 1954.

Silt and clay, fine.	34	34
Gravel.	7	41
Sand.	5	46

Casing: 8-inch, perforated 36-46 ft.

Table 3.--Drillers' logs of wells

22/26-24Q6. Bureau of Reclamation. About 40 ft N. and 125 ft E. of S¼ corner. Altitude 1,181.8 ft. Drilled by Frank Zimmerman.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	5	5
Silt, compacted with basalt gravel. Gravel is small pieces of angular basalt	15	20
Sand, silty, with gravel	10	30
Basalt gravel.	87	117
Basalt.	6	123

Casing: 12-inch.

22/26-24Q7. Bureau of Reclamation. About 31 ft N. of S¼ corner. Altitude 1,178.0 ft. Drilled by Bach Drilling Co., 1952.

Silt, sandy.	20	20
Gravel, sandy, silty . .	70	90
Basalt, dense feldspar and calcite crystals. .	5	95

Casing: 2-inch, perforated.

22/26-24Q8. Bureau of Reclamation. About 31 ft N. and 200 ft E. of S¼ corner. Altitude 1,168.2 ft. Drilled by Bach Drilling Co., 1953.

Silt.	20	20
Gravel, basalt with sand and some silt.	50	70
Gravel and sand, basaltic	28	98

Casing: 2-inch, perforated 73-98 ft.

22/26-24Q9. Bureau of Reclamation. About 31 ft N. and 628 ft E. of S¼ corner. Altitude 1,147.57. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	5	5
Boulders, gravel, sand, basaltic.	35	40
Gravel, sand, basaltic	30	70
Sand, gravel, basaltic	25	95
Gravel and sand, basaltic with quartz, feldspar.	18	113
Basalt.	5	118

Casing: 12-inch; 10-inch screen 73-113 ft.

22/26-24Q10. Bureau of Reclamation. About 31 ft N. and 530 ft E. of S¼ corner. Altitude 1,147.8 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Gravel, basaltic; sand and silt.	80	80

Casing: 6-inch, perforated 60-80 ft.

22/26-24Q11. Bureau of Reclamation. About 31 ft N. and 730 ft E. of S¼ corner. Altitude 1,147.7 ft. Drilled by Bach Drilling Co., 1952.

Gravel, basaltic; sand, silt.	73	73
Sand, black; some gravel	10	83

22/26-24Q12. Bureau of Reclamation. About 31 ft N. and 1,756 ft W. of SE corner. Altitude 1,144.9 ft. Drilled by Bach Drilling Co., 1956.

Sand and silt.	1½	1½
Gravel, medium to coarse, basaltic.	38½	40
Gravel and boulders, basaltic	5	45
Gravel, medium to coarse, basaltic; feldspar. . .	60	105
Basalt, broken.	5	110
Basalt, severely broken.	9	119

Casing: 18-inch; 16-inch screen 88-119 ft.

22/26-24Q13. Bureau of Reclamation. About 281 ft N. and 1,752 ft W. of SE corner. Altitude 1,141.3 ft. Drilled by Bach Drilling Co., 1956.

Boulders and gravel, silty	20	20
Sand and gravel.	10	30
Gravel, coarse, basaltic; cobbles.	50	80
Sand and gravel; sand, fine, granitic, basaltic. Gravel, pea, basaltic.	10	90
Gravel, coarse, basaltic; cobbles.	10	100
Gravel, basaltic, fine to coarse, sandy.	8	108
Basalt, soft, fresh; feldspar phenocrysts. .	9	117

Casing: 6-inch, perforated 5-117 ft.

Table 3.--Drillers' logs of wells--Con.

22/26-24P3. Bureau of Reclamation. About 31 ft N. and 1,148 ft W. of S¼ corner. Altitude 1,202.1 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	15	15
Gravel, basalt with sand	15	30
Sand, silty.	60	90
Sand, clay, brown. . . .	23	113
Basalt.	5	118

Casing: 6-inch, perforated 60-114 ft.

22/26-24P4. Bureau of Reclamation. About 31 ft N. and 398 ft W. of S¼ corner. Altitude 1,177.6 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	15	15
Sand, gravel and cobbles	60	75
Sand, quartz, brown. . .	32	107
Basalt.	5	112

Casing: 12-inch, perforated.

22/26-24P5. Bureau of Reclamation. About 31 ft N. and 500 ft W. of S¼ corner. Altitude 1,177.3 ft. Drilled by Bach Drilling Co., 1952.

Silt, sandy, with a few basalt gravels.	35	35
Gravel, basaltic, sandy.	30	65
Sand, medium, clay and feldspar present. . . .	35	100
Sand, medium, black, few fragments of feldspar .	5	105

Casing: 6-inch.

22/26-24P6. Bureau of Reclamation. About 31 ft N. and 298 ft W. of S¼ corner. Altitude 1,177.2 ft. Drilled by Bach Drilling Co., 1952.

Silt, sandy.	25	25
Gravel and sand; silt. .	65	90
Sand, silty, compact, brown	10	100
Sand, compact, medium, black.	9	109

Casing: 6-inch, perforated 89-109 ft.

22/26-24Q1. Bureau of Reclamation. About 31 ft N. and 352 ft E. of S¼ corner. Altitude 1,153.2 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	4	4
Gravel and cobbles; sand	102	106
Basalt.	5	111

Casing: 6-inch.

22/26-24Q2. Bureau of Reclamation. About 31 ft N. and 1,748 ft. Altitude 1,144.6 ft. Drilled by Bach Drilling Co., 1952.

Gravel, sand, basaltic	19	19
Sand.	10	29
Gravel, cobbles, sand, basaltic.	75	104
Gravel, muddy.	15	119
Basalt.	5	124

Casing: 6-inch, perforated 55-120 ft.

22/26-24Q3. Bureau of Reclamation. About 31 ft N. and 1,498 ft W. of SE corner. Altitude 1,138.0 ft. Drilled by Frank Zimmerman, 1952.

Sand, silty and gravel.	2	2
Gravel, coarse basalt .	10	12
Gravel and boulders, coarse basalt.	15	27
Gravel, coarse basalt .	10	37
Gravel, medium, basaltic	70	107
Basalt.	5	112

Casing: 12-inch, 10-inch screen 61-107.

22/26-24Q4. Bureau of Reclamation. About 31 ft N. and 1,596 ft W. of SE corner. Altitude 1,141.7 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	5	5
Gravel, sand, few boulders	78	83

Casing: 5-inch, perforated 63-83 ft.

22/26-24Q5. Bureau of Reclamation. About 31 ft N. and 1,396 ft W. of SE corner. Altitude 1,133.9 ft. Drilled by Bach Drilling Co., 1953.

Silt, sandy.	5	5
Gravel, sand	50	55
Sand, black; gravel. . .	21	76

Casing: 6-inch, perforated 56-76 ft.

Table 3.—Drillers' logs of wells

22/26-23M1.—Continued

Materials	Thickness (feet)	Depth (feet)
Clay, mica, buff.	12	202
Basalt, weathered, soft	23	225
Basalt, medium hard	41	266
Sand.	2	268
Basalt.	14	282
Basalt, vesicular, soft, red, with clay.	53	335
Basalt, dense, black.	107	442
Sand, fine, brown	6	448

Casing: 10-inch.

22/26-24J1. Bureau of Reclamation. About 616 ft S. and 1,069 ft W. of E¼ corner. Altitude 1,096.2 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Clay, calcareous, buff	5	5
Clay, calcareous, buff, some sand.	15	20
Boulders and gravel, basaltic.	5	25
Gravel and sand, basaltic	25	50
Basalt.	5	55

Casing: 6-inch.

22/26-24J2. Bureau of Reclamation. About 616 ft S. and 453 ft W. of E¼ corner. Altitude 1,094.5 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	5	5
Clay; some gravel and sand	30	35
Boulders, basalt.	5	40
Gravel and sand, basaltic	17	57

Casing: 6-inch, perforated 35-55 ft.

22/26-24K1. Bureau of Reclamation. About 616 ft S. and 1,772 ft W. of E¼ corner. Altitude 1,119.2 ft. Drilled by Bach Drilling Co., 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil, silt.	5	5
Sandy, gravel and sand	10	15
Gravel, basaltic.	40	55
Sand, black.	31	86
Basalt.	5	91

Casing: 6-inch, perforated 66-86 ft.

22/26-24L1. City of Soap Lake. About 1,400 ft N. and 110 ft W. of S¼ corner. Altitude 1,157.1 ft. Drilled by Frank Zimmerman, 1952.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	3	3
Gravel, large.	19	22
Sand and gravel.	59	81
Clay, sandy; small amount of surface water.	13	94
Basalt, hard, gray	88	182
Basalt, "faulty", blue	14	196
Basalt, hard, gray	106	302
Basalt, "faulty", gray	12	314
Basalt, hard, gray	31	345
Clay.	47	392
Sand, fine.	8	400
Basalt, hard, gray	5	405
Basalt, porous, blue, water.	30	435

Casing: 16-inch.

22/26-24P1. Bureau of Reclamation. About 31 ft N. and 148 ft W. of S¼ corner. Altitude 1,177.0 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Silt, sandy.	18	18
Gravel and sand.	10	28
Gravel and sand; silt.	79	107
Gravel and sand, slightly cemented, brown	12	119
Basalt.	5	124

Casing: 6-inch, perforated 70-119 ft.

22/26-24P2. Bureau of Reclamation. About 31 ft N. and 648 ft W. of S¼ corner. Altitude 1,180.3 ft. Drilled by Bach Drilling Co., 1952.

Materials	Thickness (feet)	Depth (feet)
Gravel and sand, silt.	24	24
Sand; silt and gravel.	56	80
Silt, consolidated fragments of basalt, clay, feldspar	5	85
Sand, medium basalt, feldspar, quartz.	4	89
Basalt.	5	94

Casing: 6-inch, perforated 50-89 ft.

22/26-12B7. Bureau of Reclamation. About 2,020 ft N. and 1,926 ft W. of E¼ corner. Altitude 1,106.3 ft. Drilled by Bach Drilling Co., 1956.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders, basaltic	32	32
Gravel and cobbles, basaltic	30	62

Casing: 13-inch.

22/26-12C1. Bureau of Reclamation. About 1,100 ft S. and 940 ft W. of N¼ corner. Altitude 1,106.8 ft. Drilled by Bach Drilling Co., 1952.

Sand and gravel, coarse	22½	22½
Basalt, broken	1½	24
Basalt, black	25	49

22/26-12C2. Bureau of Reclamation. About 1,200 ft S. and 690 ft W. of N¼ corner. Altitude 1,113.6 ft. Drilled by J. S. Dishman, 1953.

Sand, silty	2	2
Caliche	5	7
Gravel, coarse; boulders and sand, basaltic	23	30
Boulders, basaltic	4	34
Gravel and sand, basaltic; sand is coarse	24	58
Boulders, basalt, with some gravel	12	70
Boulder and gravel, basaltic	22	92
Basalt, broken	13	105
Basalt, hard, gray	5	110
Basalt, broken, loose, caving	8	118
Basalt, gray; sand	10	128
Basalt, hard, gray	44	172
Basalt, broken, caving	10	182
Basalt, hard	1	183
Crevice	1	184
Basalt, hard	3	187

Casing: 8-inch.

22/26-13M1. Bureau of Reclamation. About 850 ft S. and 450 ft E. of W¼ corner. Altitude 1,373.9 ft. Drilled by Frank Zimmerman, 1951.

Materials	Thickness (feet)	Depth (feet)
Topsoil	3	3
Gravel and talus, cemented, mostly subangular and angular basalt fragments	24	27
Basalt, vesicular and dense, moderately weathered	113	140
Basalt, vesicular, soft, reddish brown	35	175
Basalt, moderately weathered, dense	5	180
Basalt, medium hard, dense, black	27	207
Basalt, hard, black	72	279
Basalt, broken, vesicular, black	16	295
Basalt, vesicular, medium hard, black	4	299
Basalt, vesicular, moderately weathered, medium hard	31	330

Casing: 8-inch.

22/26-13N1. Bill Isreal. About 1,150 ft N. and 150 ft E. of SW corner. Altitude about 1,374 ft. Drilled by Bach Drilling Co., 1954.

Soil and gravel	5	5
Basalt, medium hard, black	15	20
Basalt, soft, reddish	15	35
Basalt, medium hard, black	65	100
Basalt, hard, dark	77	177

Casing: 8-inch.

22/26-23M1. Westmont Acres, Inc. About 530 ft S. and 1,154 ft E. of W¼ corner. Altitude 1403.9 ft. Drilled by Bach Drilling Co., 1952.

Gravel	5	5
Boulders, basalt	7	12
Basalt, dense, feldspar, black	98	110
Basalt, weathered	4	114
Basalt, dense, black	32	146
Basalt, soft, brown	0.3	146.3
Basalt, dense, feldspar, black	43.7	190

Table 3.--Drillers' logs of wells

22/26-1M1. Bureau of Reclamation. About 100 ft S. and 500 ft E. of W¼ corner. Altitude about 1,128 ft. Drilled by Bureau of Reclamation, 1951.

Materials	Thickness (feet)	Depth (feet)
Sand, silty.	2	2
Gravel, cobbles, and boulders, cemented. . .	13	15
Gravel and cobbles, cemented	10	25
Gravel, cobbles, boulders, loose.	8	33
Gravel, cobbles and boulders, cemented.	7	40
Gravel, cobbles, and boulders, loose.	18	58
Basalt, weathered. . . .	2	60

Casing: 6-inch, perforated 0-57 ft.

22/26-1P1. Bureau of Reclamation. About 381 ft N. and 1,202 ft W. of S¼ corner. Altitude 1,122.8 ft. Drilled by L. T. Storey, 1953.

Clay, soft, white. . . .	6	6
Sand, gravel, and basalt, boulders.	50	56
Basalt.	4½	60½

Casing: 1½-inch, perforated.

22/26-2A1. Bureau of Reclamation. About 1,090 ft S. and 1,011 ft W. of NE corner. Altitude 1,114.1 ft. Drilled by L. T. Storey, 1953.

Topsoil.	5	5
Boulders.	2	7
Gravel, principally dense basalt gravel.	22	29
Large boulder	1	30
Gravel, coarse.	6	36
Boulder.	1	37
Gravel, coarse; white clay and boulders.	12	49
Clay, sand, gravel and boulders.	4½	53½

Casing: 1½-inch, perforated.

22/26-2H1. Bureau of Reclamation. About 1,802 ft S. and 320 ft W. of NE corner. Altitude 1,119.5 ft. Drilled by L. T. Storey, 1953.

Materials	Thickness (feet)	Depth (feet)
Topsoil.	2	2
Boulders.	4	6
Gravel and large boulders	37	43
Sand, brown, white clay and gravel.	7	50
Sand and gravel. . . .	10	60
Sand, gravel, and clay	5	65

Casing: 1½-inch, perforated.

22/26-12B2. W. J. Hill. About 950 ft S. and 550 ft E. of N¼ corner. Altitude about 1,096 ft. Drilled by J. S. Dishman, 1952.

Topsoil and caliche. .	7	7
Basalt, broken. . . .	8	15
Basalt, broken, blue .	10	25
Sand and gravel. . . .	3	28
Sand, fine.	6	34
Basalt, broken. . . .	2	36
Gravel, medium coarse.	4	40

Casing: 6-inch.

22/26-12B4. --Fabry. About 100 ft S. and 800 ft E. of N¼ corner. Altitude about 1,135 ft. Drilled by J. S. Dishman, 1952.

Topsoil.	8	8
Basalt, broken. . . .	4	12
Sand and gravel, cemented	2	14
Basalt, broken. . . .	7	21
Basalt, hard, blue . .	76	97
Basalt, broken, brown.	5	102

Casing: 6-inch.

22/26-12B6. Vern Johnson. About 950 ft S. and 250 ft E. of N¼ corner. Altitude about 1,097 ft. Drilled by J. S. Dishman, 1954.

Topsoil.	7	7
Gravel and sand. . . .	5	12
Gravel and boulders. .	9	21
Boulders.	5	26
Gravel, sand; water. .	2	28
Sand and gravel. . . .	2	30
Sand.	5	35
Boulders and broken log	3	38
Basalt, broken, blue .	2	40

Casing: 6-inch.

21/28-35M1. R. R. Jones. About 2,500 ft N. and 125 ft E. of SW corner. Altitude about 1,262 ft. Drilled by Radke & Sons.

Materials	Thickness (feet)	Depth (feet)
Silt, clay, and sand.	100	100
Basalt, "honeycomb"	40	140
Basalt.	15	155
Basalt; water	8	163

Casing: 6-inch.

21/28-36P1. Ter-lund-son Water Assoc., Inc. About 100 ft N. and 900 ft W. of S¼ corner. Altitude about 1,280 ft. Drilled by Bill Radke.

Topsoil.	2	2
Boulders and gravel, coarse	34	36
Basalt.	84	120

Casing: 6-inch.

21/30-3E1. Archie Zickler. About 2,250 ft S. and 100 ft E. of NW corner. Altitude about 1,684 ft. Drilled by Frank Zimmerman, 1956.

Topsoil.	19	19
Basalt, coarse	16	35
Basalt, medium hard.	18	53
Basalt, hard.	5	58
Basalt, medium hard.	12	70
Basalt, coarse.	33	103
Basalt, medium hard	8	111
Basalt, coarse.	8	119
Basalt, hard.	4	123
Basalt, medium.	8	131
Basalt, hard.	10	141
Basalt, broken	12	153
Basalt, medium	12	165
Basalt, hard.	11	176
Basalt, broken; water.	27	203
Basalt, hard.	7	210
Basalt, medium.	36	246
Basalt, hard.	25	271
Basalt, broken; clay	25	296
Basalt, coarse; water.	23	319
Basalt, medium.	73	392
Basalt, broken	19	411
Basalt, hard.	5	416
Basalt, medium.	22	438
Basalt; water.	13	451

Casing: 12-inch.

22/25-6C1. Mayer Bros. About 150 ft S. and 42 ft W. of N¼ corner. Altitude about 1,600 ft. Drilled by E. D. Robinson, 1951.

Materials	Thickness (feet)	Depth (feet)
Soil and clay.	17	17
Basalt, broken.	7	24
Basalt, broken; water.	11	35
Basalt, hard.	15	50
Basalt, broken.	12	62
Basalt; water.	88	150
Basalt, hard.	50	200

Casing: 10-inch.

22/25-13J2. V.J. Barbre. About 1,400 ft N. of SE corner. Altitude about 2,100 ft. Drilled by J. S. Dishman.

Topsoil.	12	12
Silt, sandy; water	2	14
Gravel and boulders.	26	40
Basalt, brown.	8	48
Clay, yellow.	22	70
Basalt, broken, brown	48	118

Casing: 8-inch.

22/25-13J3. V.J. Barbre. About 2,100 ft N. and 300 ft W. of SE corner. Altitude about 2,070 ft. Drilled by Valley Drilling Co., 1956.

Topsoil.	16	16
Sand and boulders.	24	40
Basalt, broken	10	50
Clay, yellow.	22	72
Basalt, broken, brown.	18	90
"Soapstone" conglomerate; water.	5	95
Basalt, firm, blue	35	130
Basalt, hard, gray	35	165
"Soapstone"; water.	5	170
Basalt, hard, gray	24	194
Basalt, broken; water.	6	200
Basalt, hard, gray	11	211

Casing: 8-inch.

Table 3.--Drillers' logs of wells

21/28-22M1. O. C. Flasted. About 100 ft S. and 150 ft E. of the W¼ corner. Altitude about 1,282 ft. Drilled before 1916.

Material	Thickness (feet)	Depth (feet)
Soil and gravel, to 3 ft diameter.	60	60
"Rock".	250	310

Casing: 6-inch.

21/28-22R1. Bureau of Reclamation. About 29 ft N. and 70 ft W. of SE corner. Altitude 1,274.6 ft. Drilled by Bach Drilling Co., 1955.

Boulders and gravel, basaltic.	8	8
Basalt, hard, black.	6.5	14.5

Casing: 6-inch.

21/28-22R2. T.H. Erickson. About 1,200 ft N. and 250 ft W. of SE corner. Altitude about 1,288 ft. Drilled by Sam Osborn, 1954.

Gravel.	37½	37½
Basalt, hard.	24½	62
Basalt, soft, red	8	70
Basalt, hard.	14	84

Casing: 6-inch.

21/28-23D1. Bureau of Reclamation. About 250 ft S. and 200 ft E. of NW corner. Altitude about 1,295 ft. Drilled by Frank Zimmerman, 1951.

Sand, coarse, silty, basalt	32	32
Sand and gravel, basaltic, loose.	46	78
Boulders and gravel	5	83
Basalt, dense.	8	91
Basalt, soft, weathered, dark brown.	8	99
Basalt, broken, black, moderately weathered, feldspar phenocrysts.	51	150

Casing: 8-inch.

21/28-24R1. George S. Moore. About 135 ft N. and 160 ft W. of SE section corner. Altitude about 1,294 ft. Drilled by Sam Osborn, 1954.

Materials	Thickness (feet)	Depth (feet)
Gravel and boulders.	37	37
Basalt, hard, blue-gray	30	67
Basalt, soft, black.	25	92
Basalt, broken, soft, seamed, creviced.	7	99
Basalt.	6	105

Casing: 6-inch.

21/28-26R1. Ryland Farms Inc. About 200 ft N. and 200 ft W. of SE corner. Altitude about 1,269 ft. Drilled by Radke & Son.

Silt, clay, and sand.	53	53
Basalt.	73	126
Basalt; water	8	134

Casing: 6-inch.

21/28-34B1. Bureau of Reclamation. About 900 ft S. and 2,200 ft W. of NE corner. Altitude about 1,270 ft. Drilled by Radke & Son.

Silt, clay, and sand.	60	60
Basalt, black.	55	115
Basalt; water.	6½	121½

Casing: 6-inch.

21/28-34C1. Clyde Henderson. About 1,250 ft S. and 2,100 ft E. of NW corner. Altitude about 1,262 ft. Drilled by Radke & Son, 1957.

Silt, clay, and sand	45	45
Basalt.	5	50
Basalt; water.	34	84

Casing: 6-inch.

21/28-34R1. Bureau of Reclamation. About 50 ft N. and 56 ft W. of SE corner. Altitude 1,255.5 ft. Drilled by R. J. Strasser, 1951.

Boulders.	12	12
Basalt.	6	18

Casing: 1½-inch, perforated 3-18 ft.

Table 3.--Drillers' logs of wells--Con.

21/26-28K1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, black	10	377
Basalt, hard	20	397
Basalt, black	27	424
Basalt, hard	2	426
Shale, blue(tested 120 gpm)	26	452
Basalt, hard	6	458
Shale	25	483
Basalt, hard	45	528
Basalt, medium hard	7	535
Basalt, black	37	572
Basalt, medium hard	8	580

Casing: 10-inch.

21/26-28K2. Ralph Abelson. About 800 ft S. and 150 ft E. of center of section. Altitude about 1,230 ft. Drilled by Brown Drilling Co., 1952.

Topsoil	3	3
Gravel	21	24
Basalt, black	1	25
Basalt	19	44
Basalt, black	5	49
Clay and gravel	11	60
Basalt, brown	10	70
Basalt, gray	11	81
Basalt, brown	13	94
Basalt, gray	7	101
Cracked "rock" and clay	3	104
"Clay rock"	14	118
Clay	11	129
"Clay rock"	6	135
Basalt, black	56	191
Basalt, broken	4	195
Basalt	5	200
Basalt, broken	2	202
Basalt, porous, black	8	210
Basalt, black	11	221
Basalt, porous, black	19	240
Clay, yellow	4	244

Casing: 10-inch.

21/26-31C1. Dr. J. S. Lingenfelter. About 924 ft S. and 2,112 ft E. of NW corner. Altitude about 1,400 ft. Drilled by Durand & Son, 1952.

Soil	4	4
"Hardpan"	36	40

21/26-31C1.--Continued.

Materials	Thickness (feet)	Depth (feet)
Basalt, broken	5	45
Basalt, hard, gray	45	90
"Mud and rock"	6	96
Basalt, soft	4	100
Basalt, blue	8	108
Basalt, hard, gray	104	212
Basalt, medium, broken	18	230
Clay and gravel	7	237
Basalt, soft, brown	6	243
Basalt, blue	19	262
Basalt, broken and mud	2	264
Basalt, blue	101	365
Basalt, gray	35	400

Casing: 6-inch.

21/28-19F1. Christopher Loan. About 900 ft N. and 100 ft W. of the center of section. Altitude about 1,162 ft. Drilled by Tony Dick, 1939.

Gravel	3	3
Basalt; water at 26 and 60 ft	89	92
Basalt, cavernous; water	1	93

Casing: 6-inch.

21/28-21A1. R. C. Major. About 350 ft S. and 350 ft W. of NE corner. Altitude about 1,286 ft. Drilled by Radke & Son, 1953.

Silt, sand, and clay	48	48
Basalt, black	37	85
Basalt; water	8	93

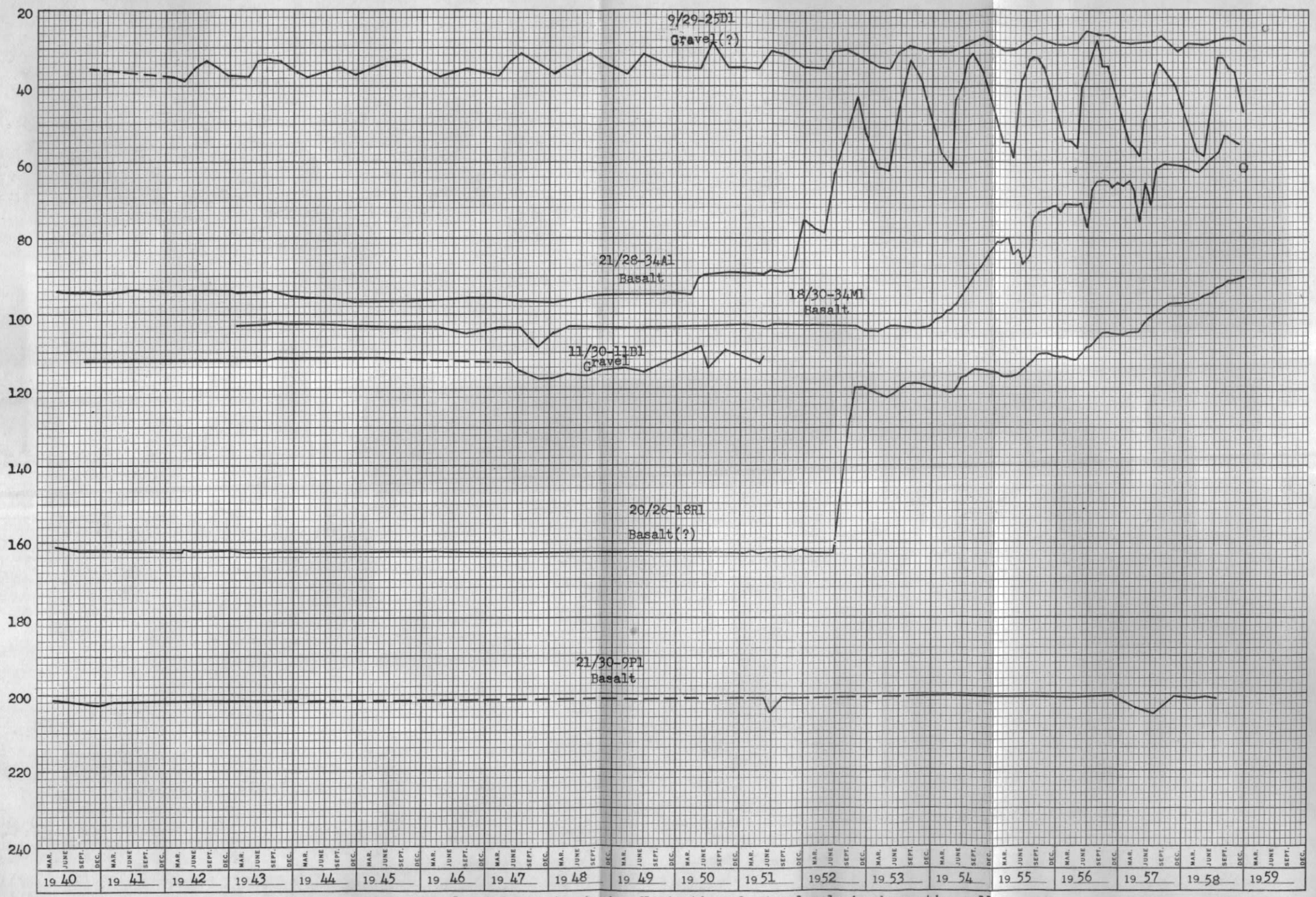

Fig. 1.--Hydrographs showing fluctuation of water levels in observation wells.

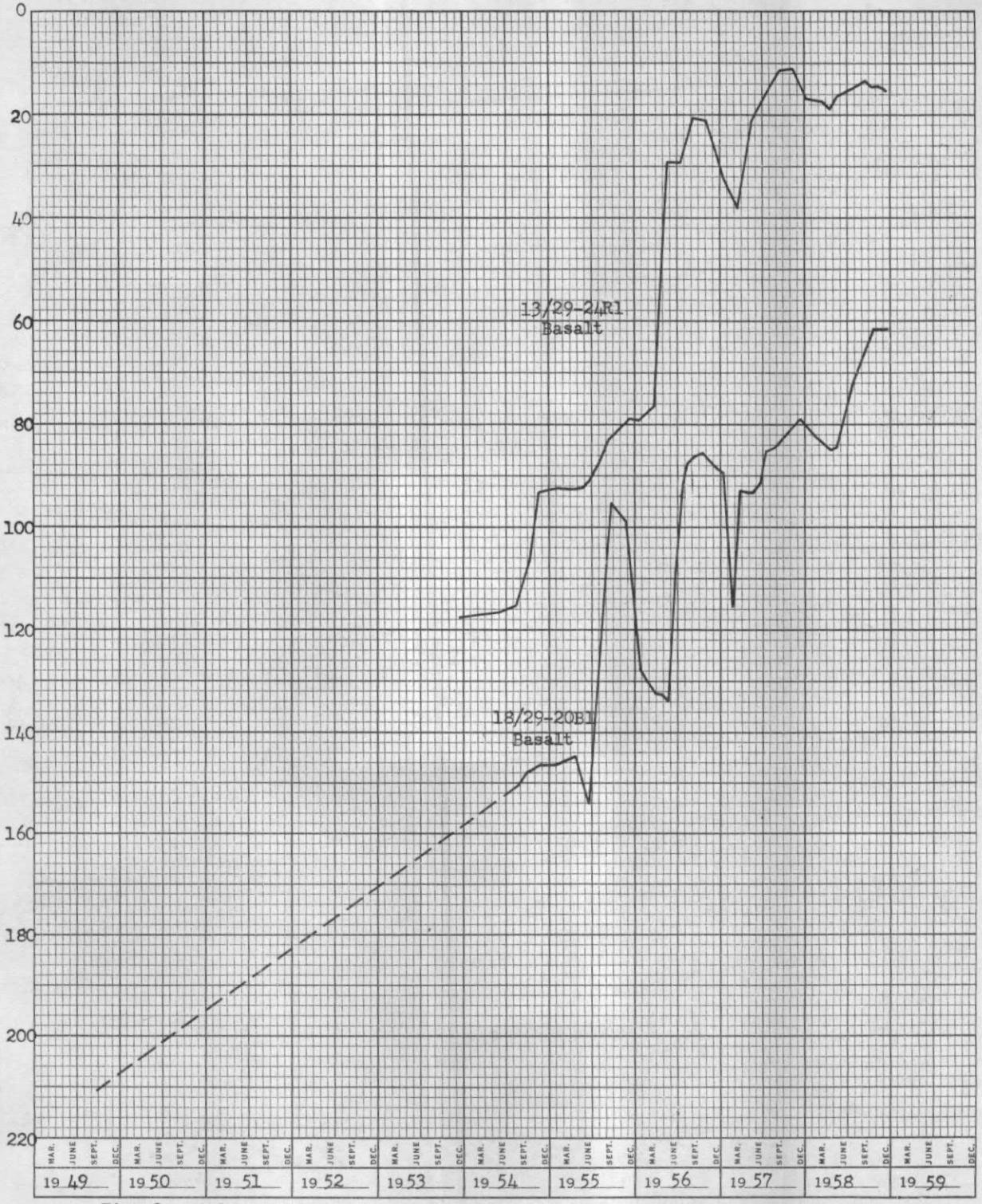

Fig. 2.--Hydrographs showing fluctuation of water levels in observation wells.

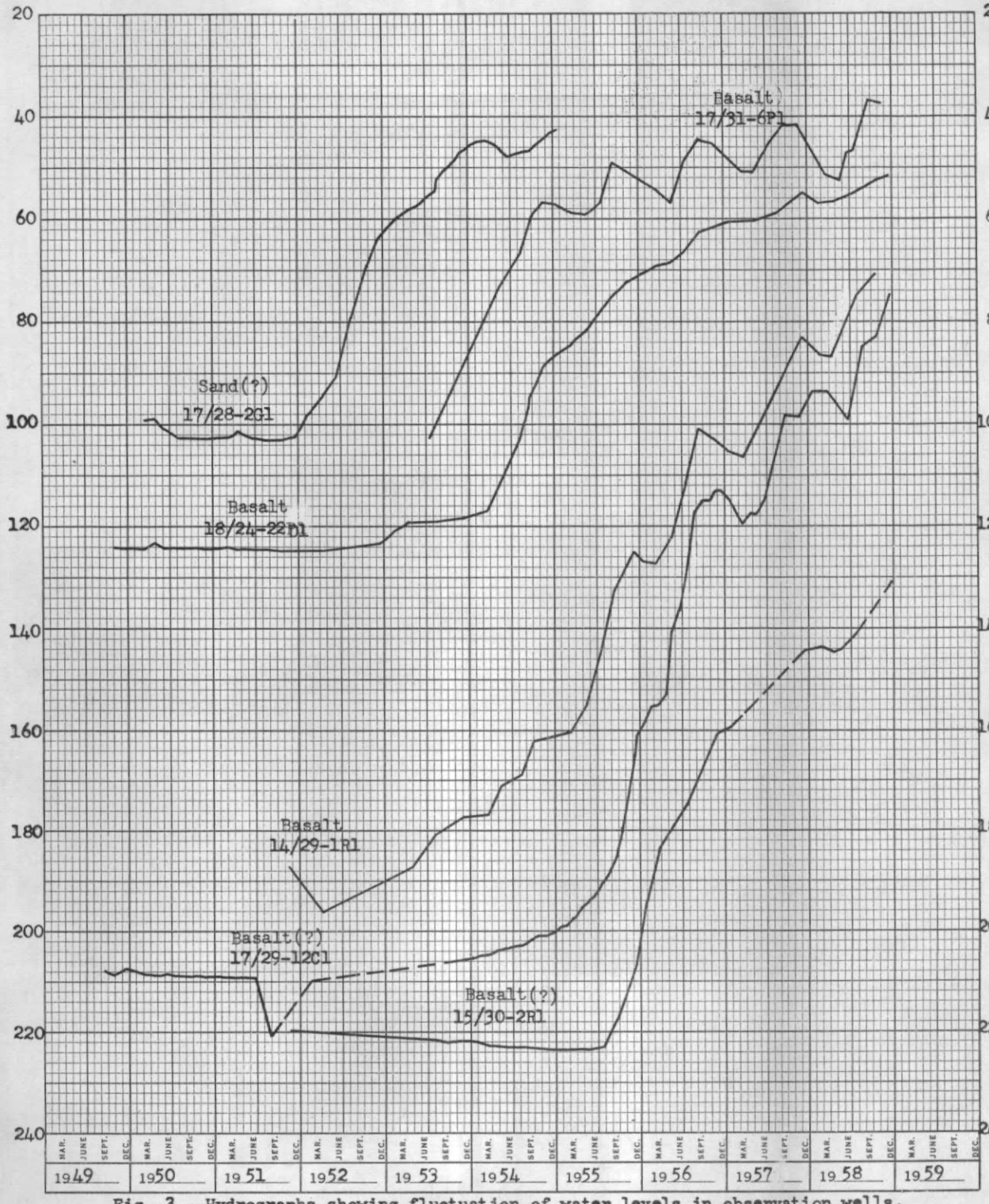

Fig. 3.--Hydrographs showing fluctuation of water levels in observation wells.

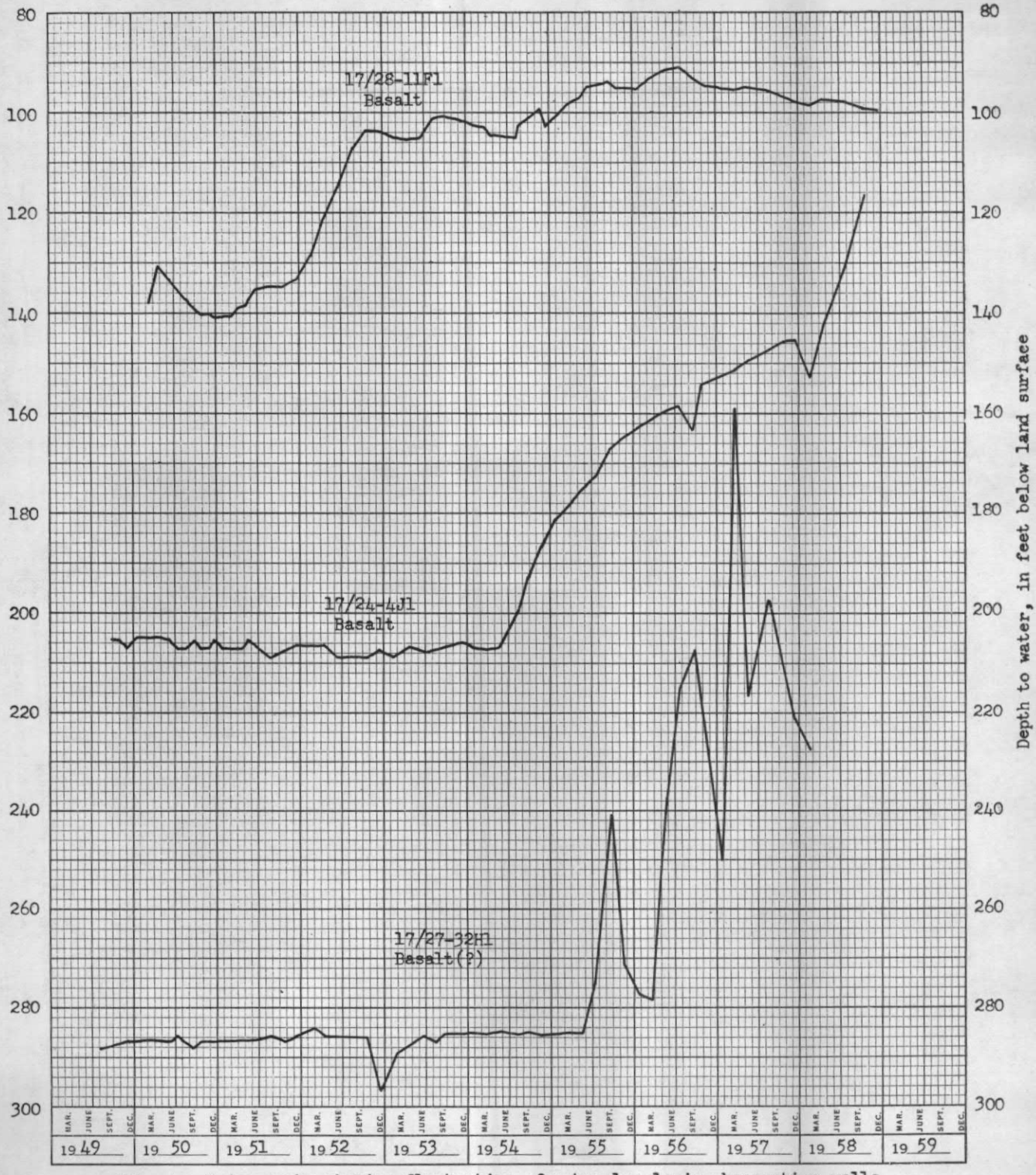

Fig. 4.--Hydrographs showing fluctuation of water levels in observation wells.

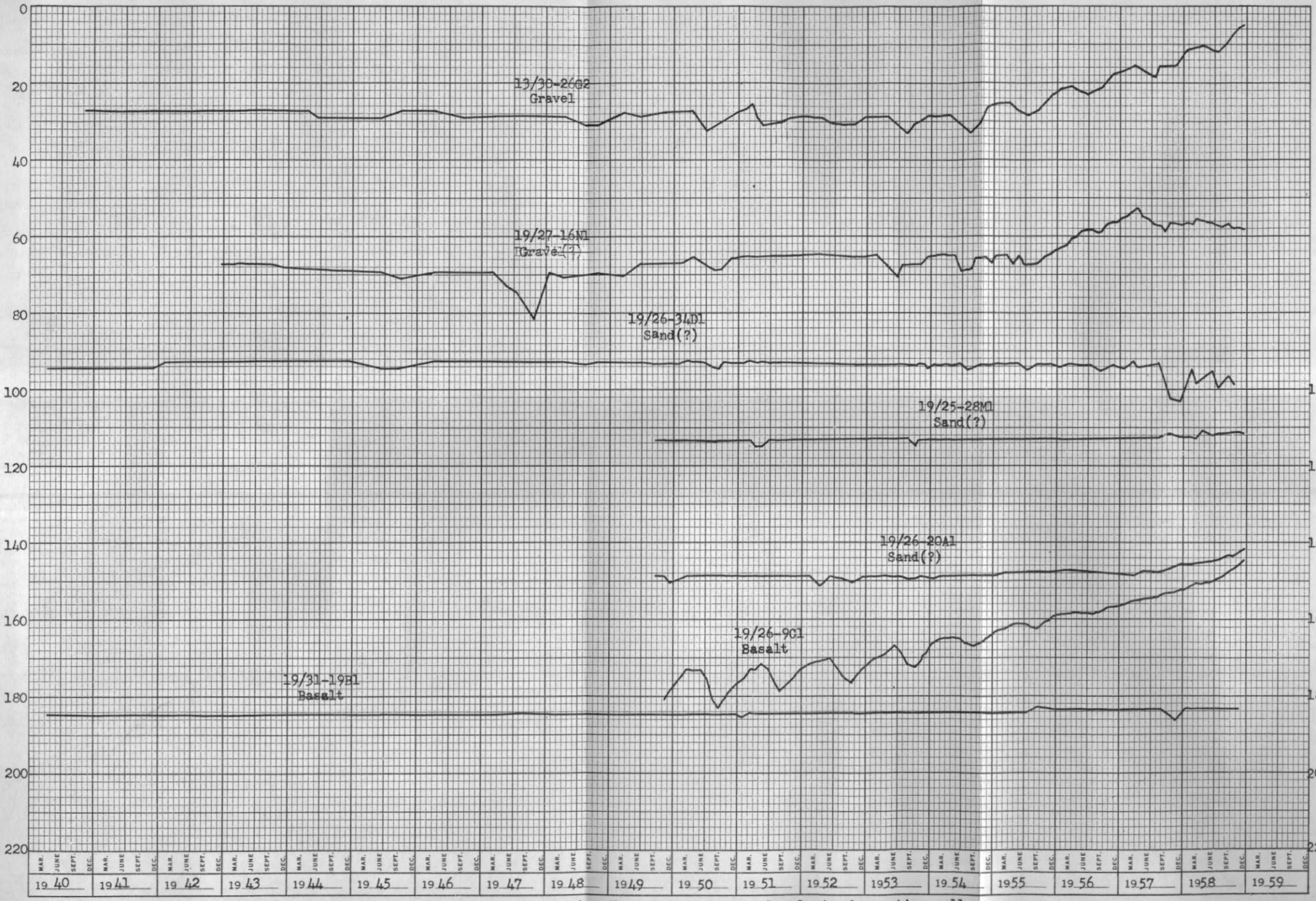

Fig. 5.--Hydrographs showing fluctuation of water levels in observation wells.

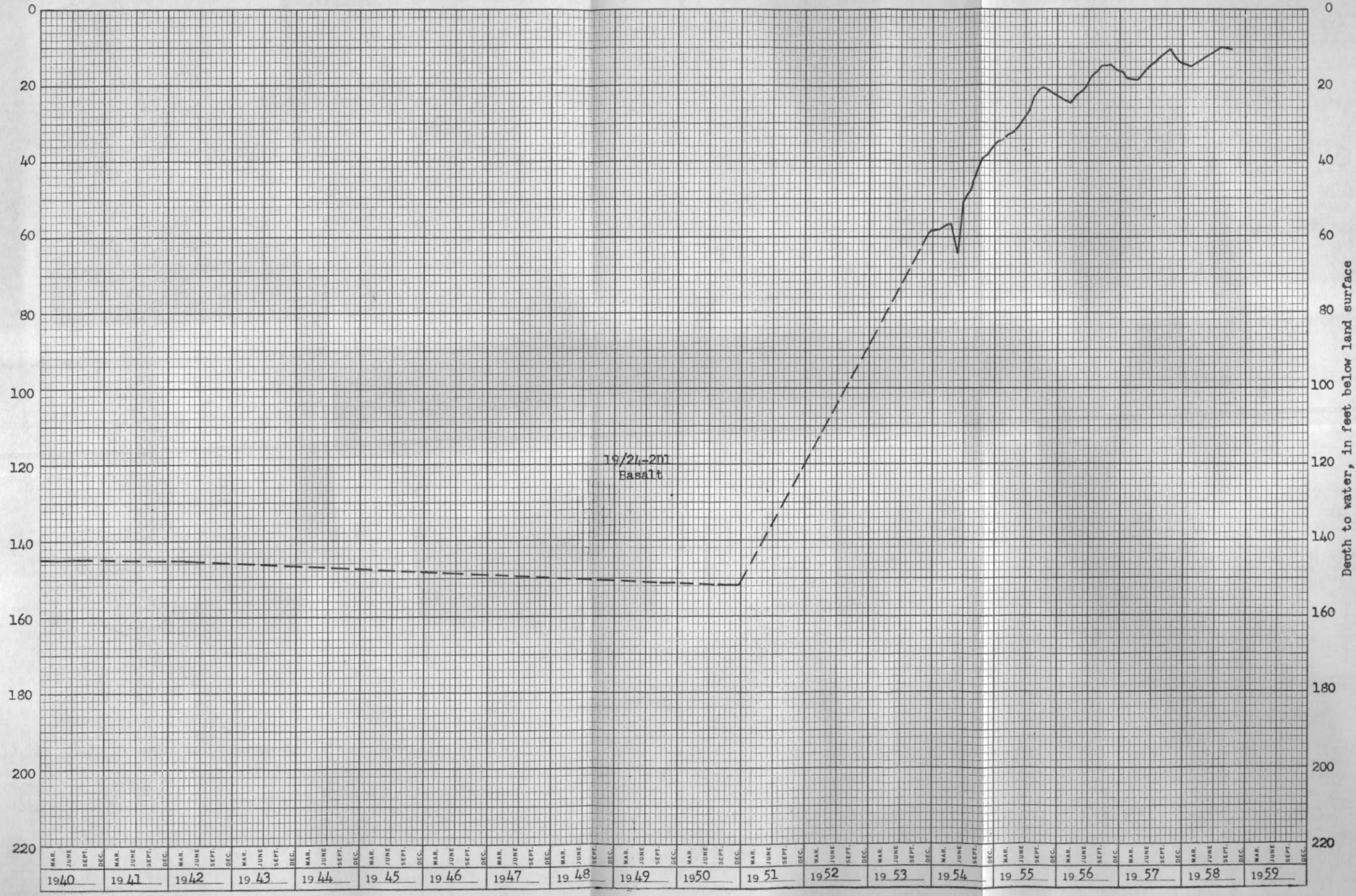

Figure 6.--Hydrograph showing fluctuation of water level in well 19/24-2D1

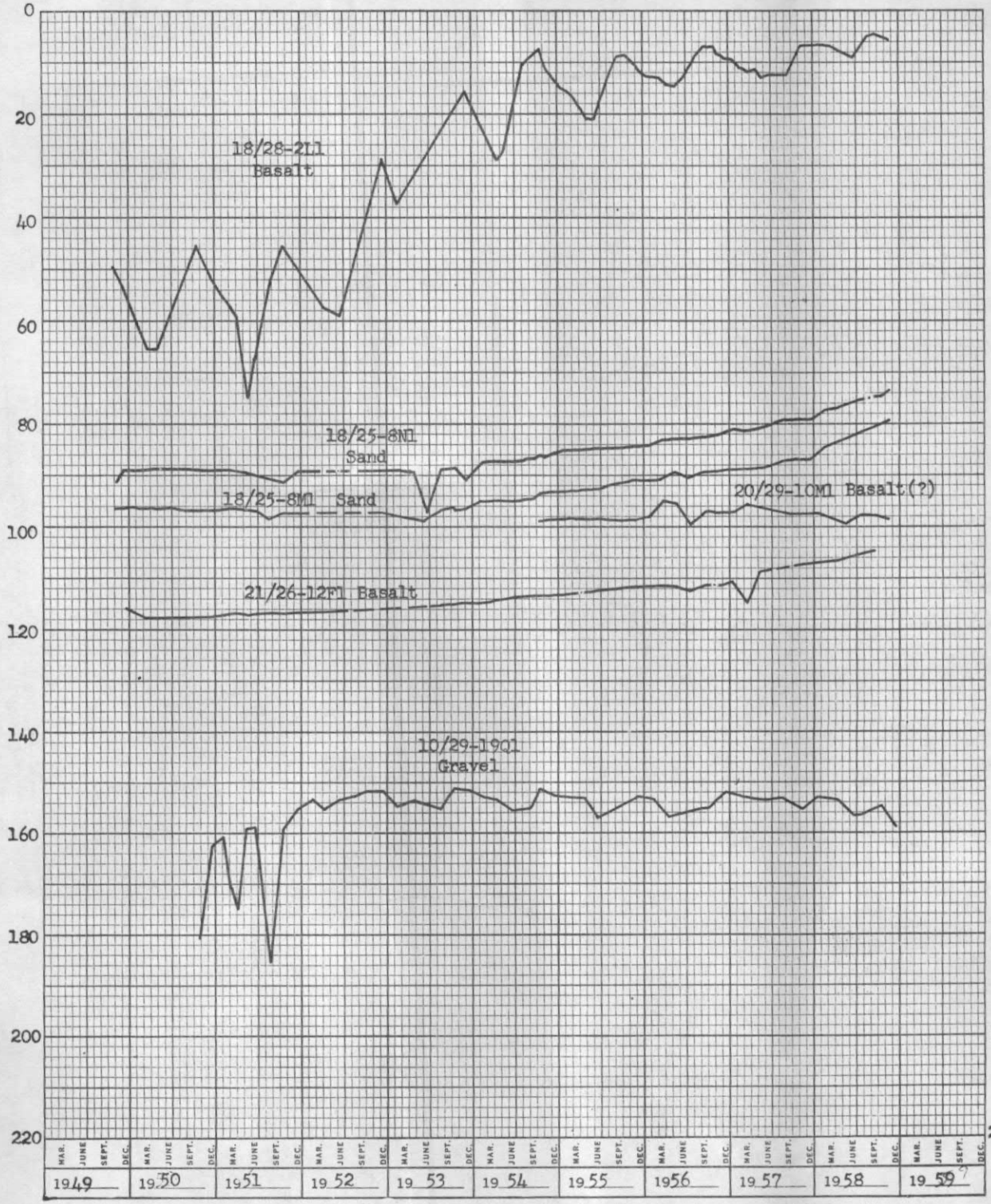

Fig. 7.--Hydrographs showing fluctuation of water levels in observation wells.

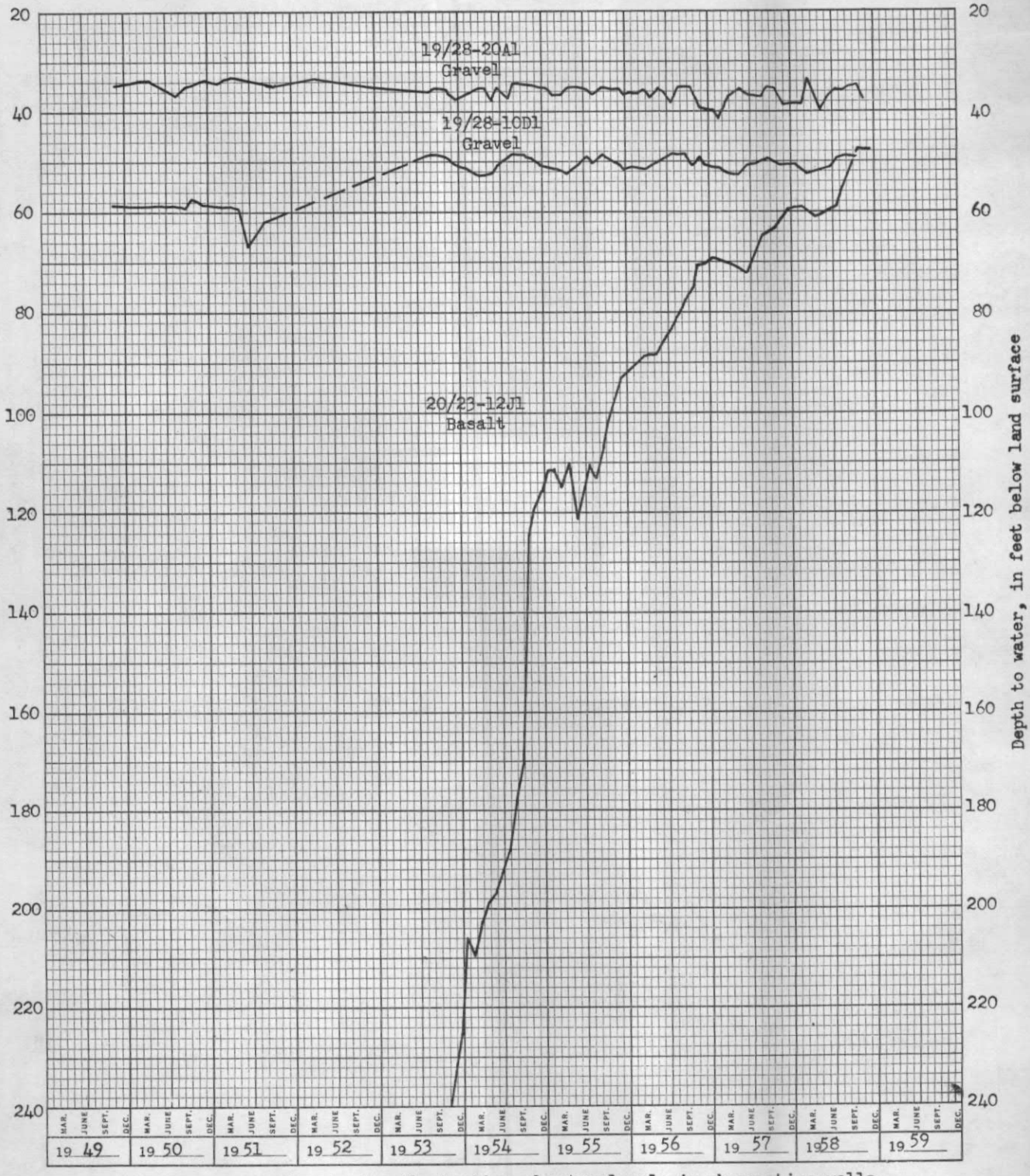

Fig. 8.--Hydrographs showing fluctuation of water levels in observation wells.

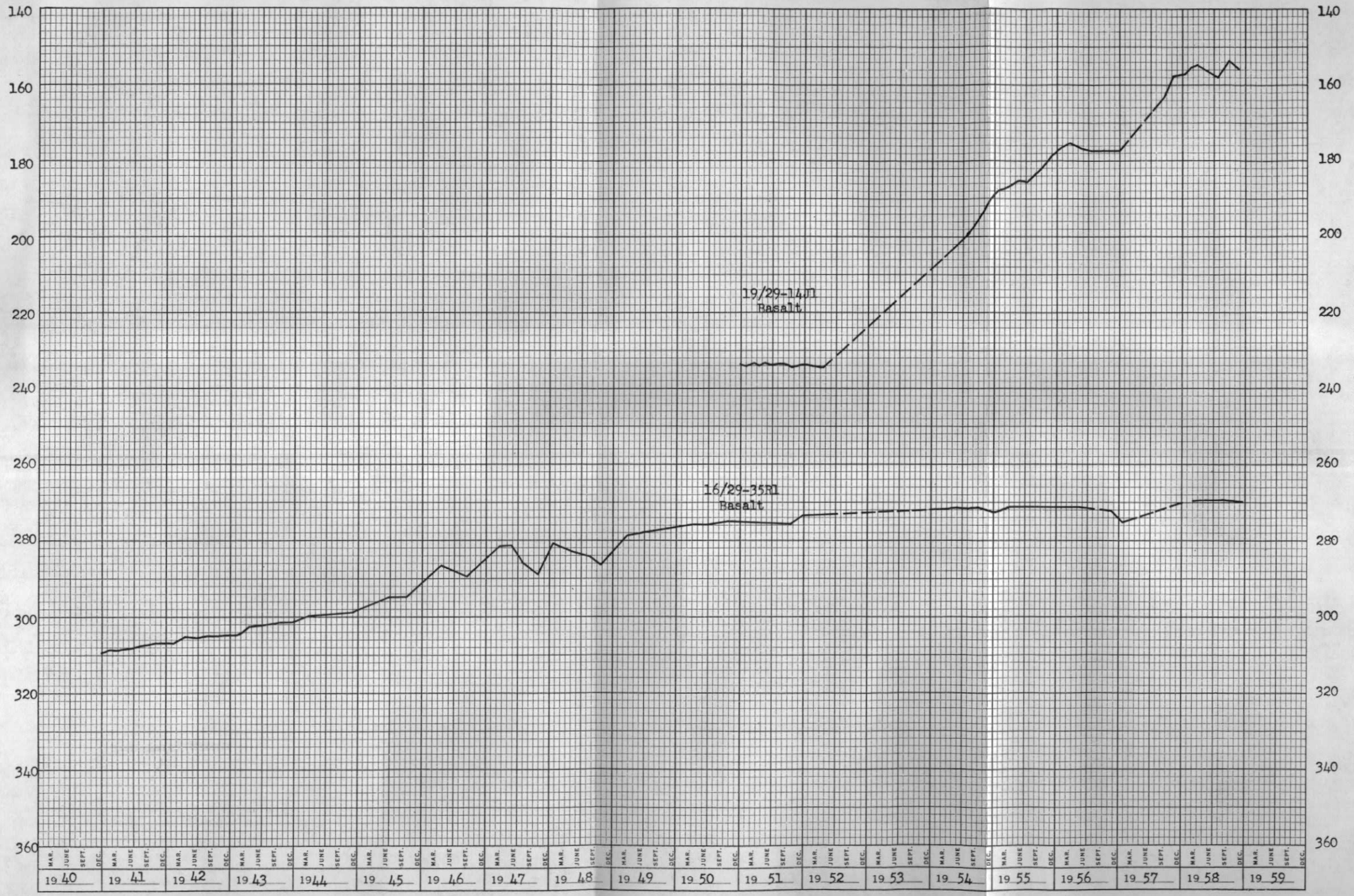

Fig. 9.--Hydrographs showing fluctuation of water levels in observation wells.

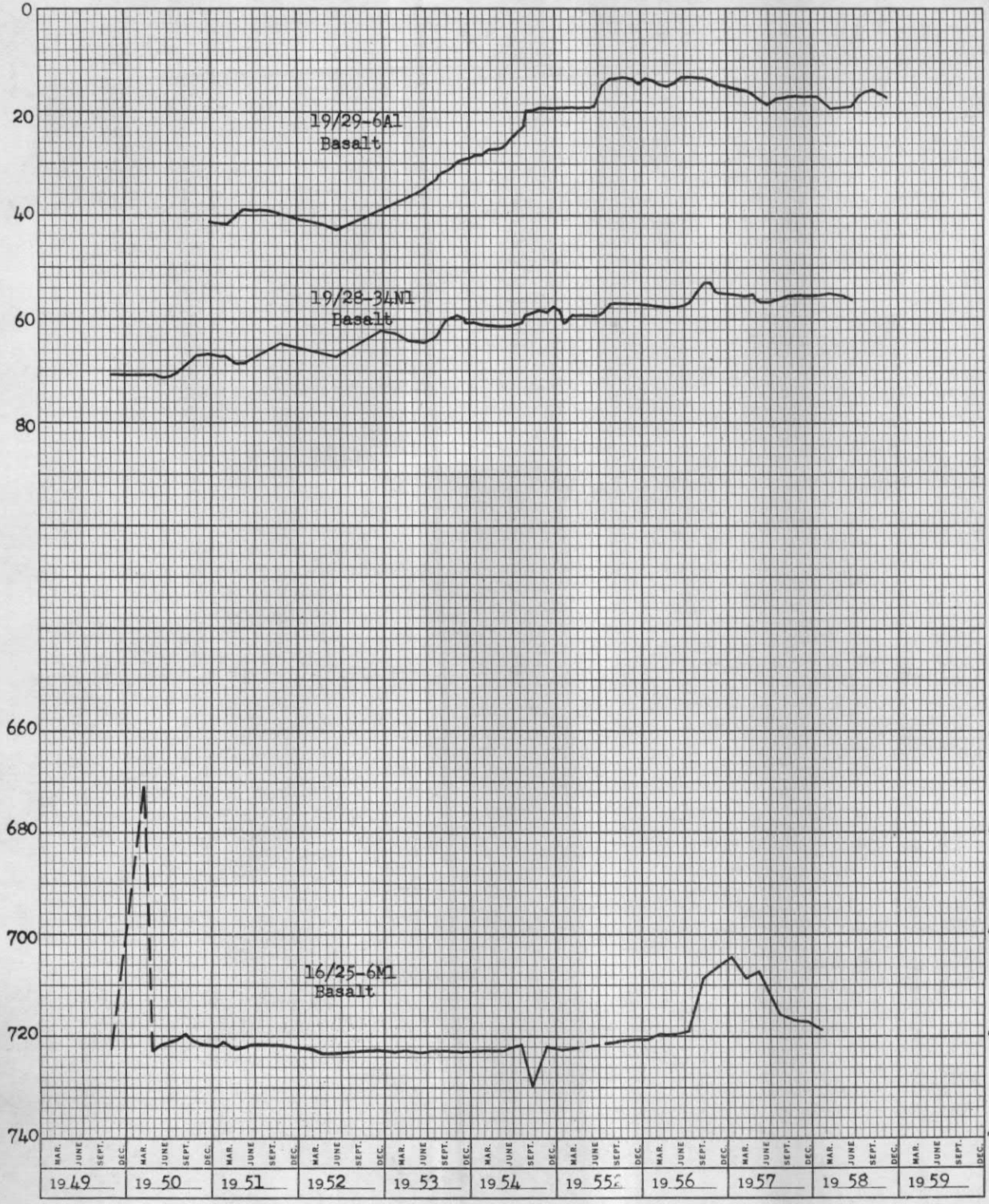

Fig. 10.--Hydrographs showing fluctuation of water levels in observation wells.

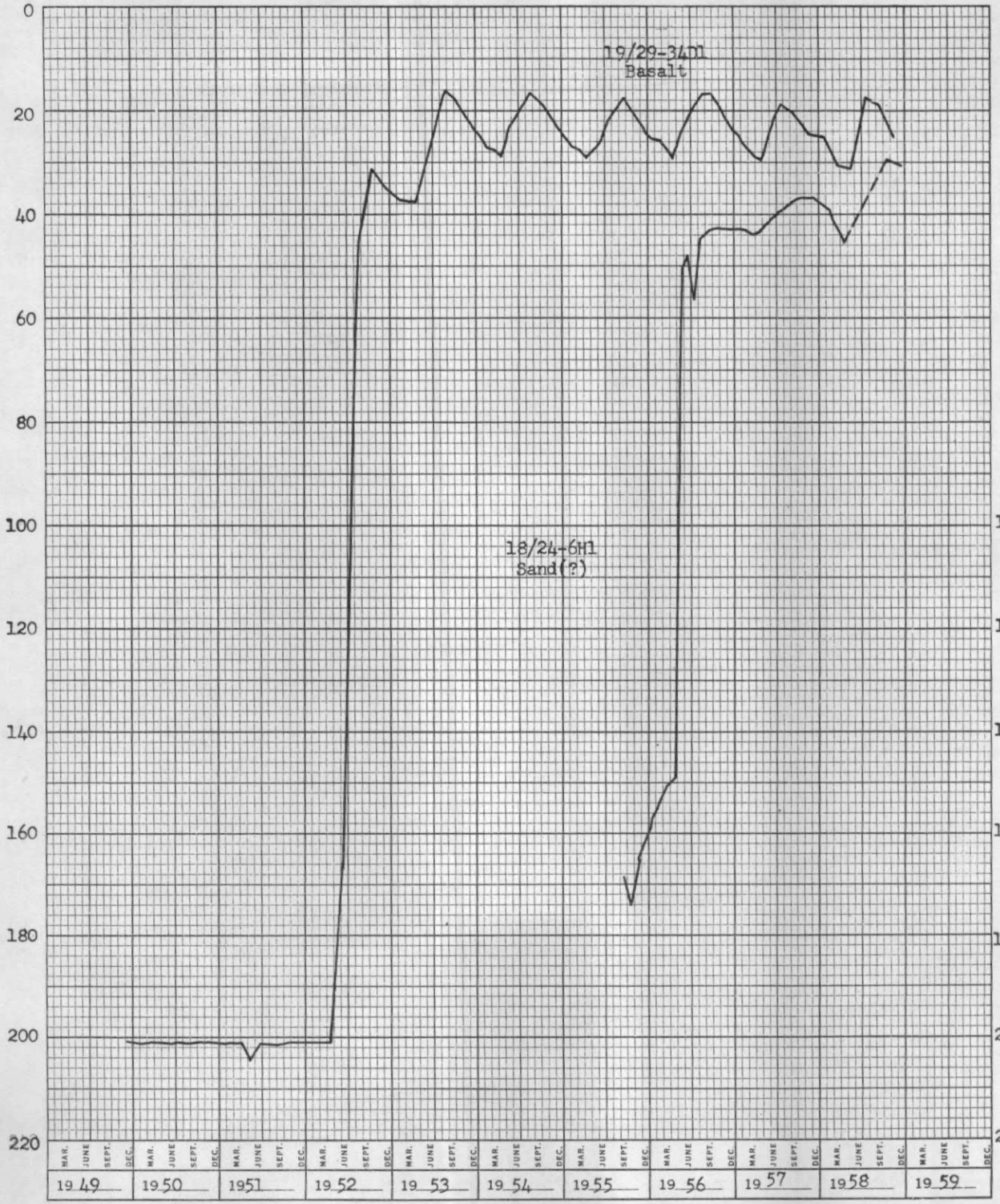

Fig. 11.--Hydrographs showing fluctuation of water levels in observation wells.

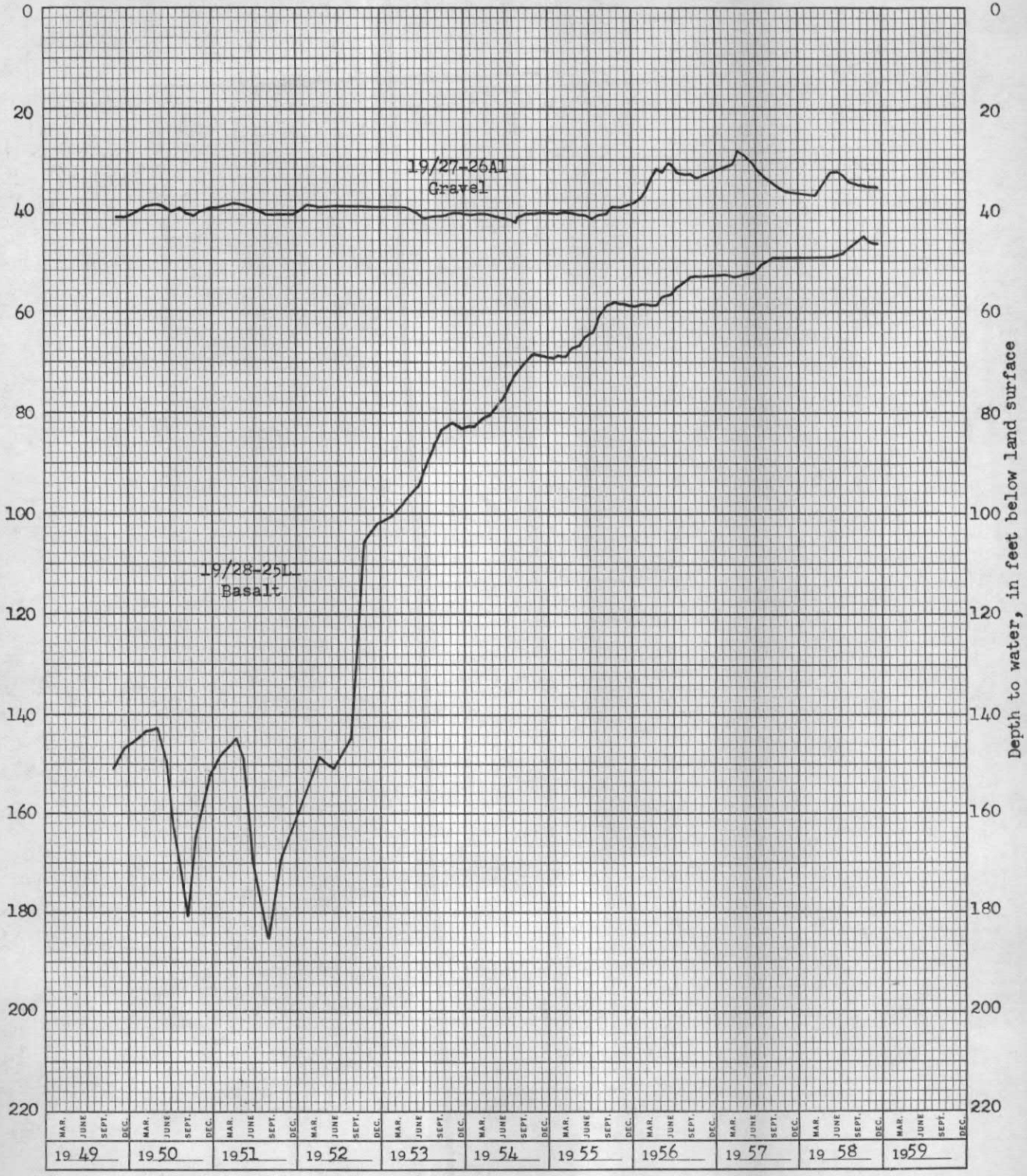

Fig. 12.--Hydrographs showing fluctuation of water levels in observation wells.

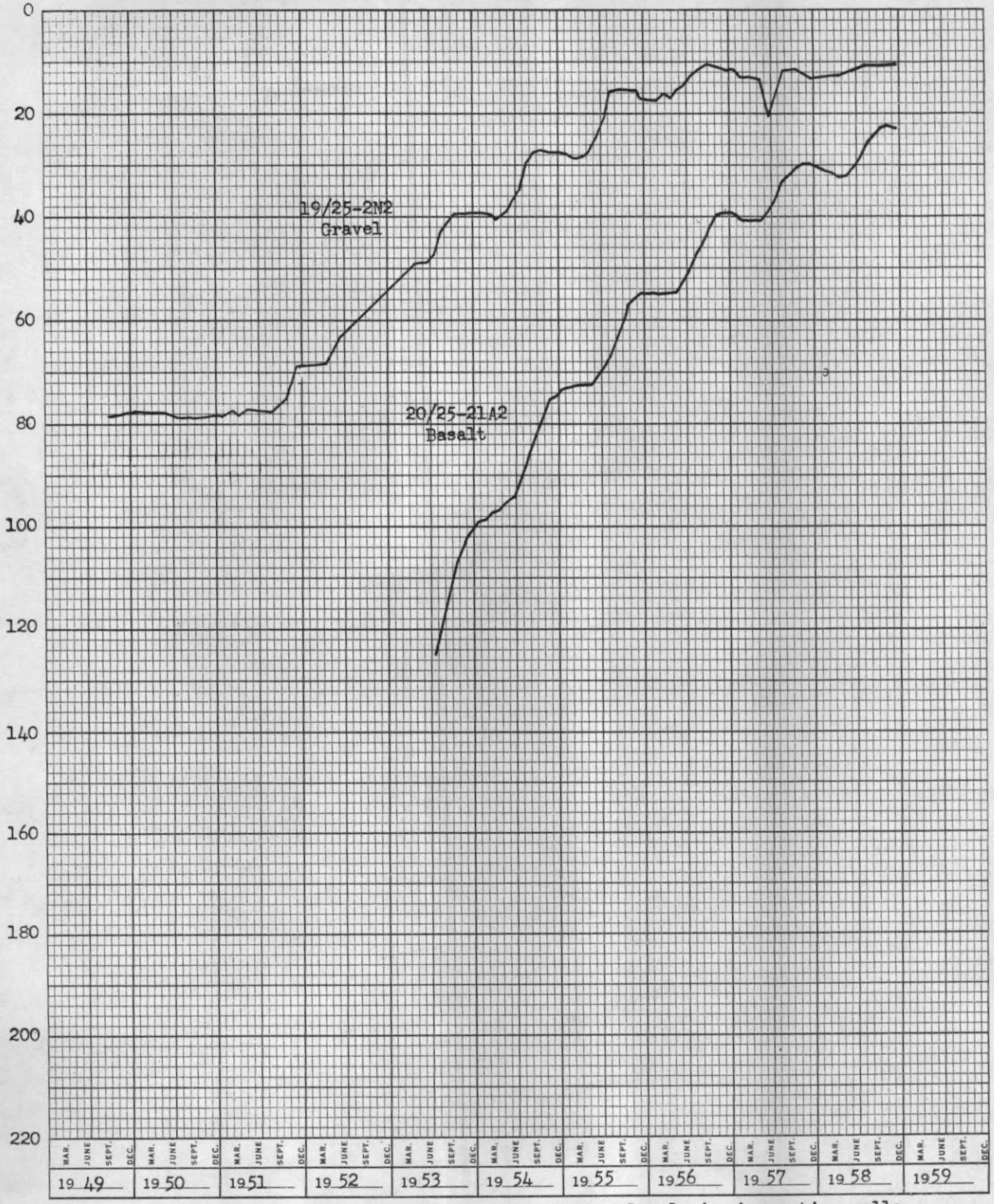

Fig.13.--Hydrographs showing fluctuation of water levels in observation wells.

Fig. 14.--Hydrographs showing fluctuation of water levels in observation wells.

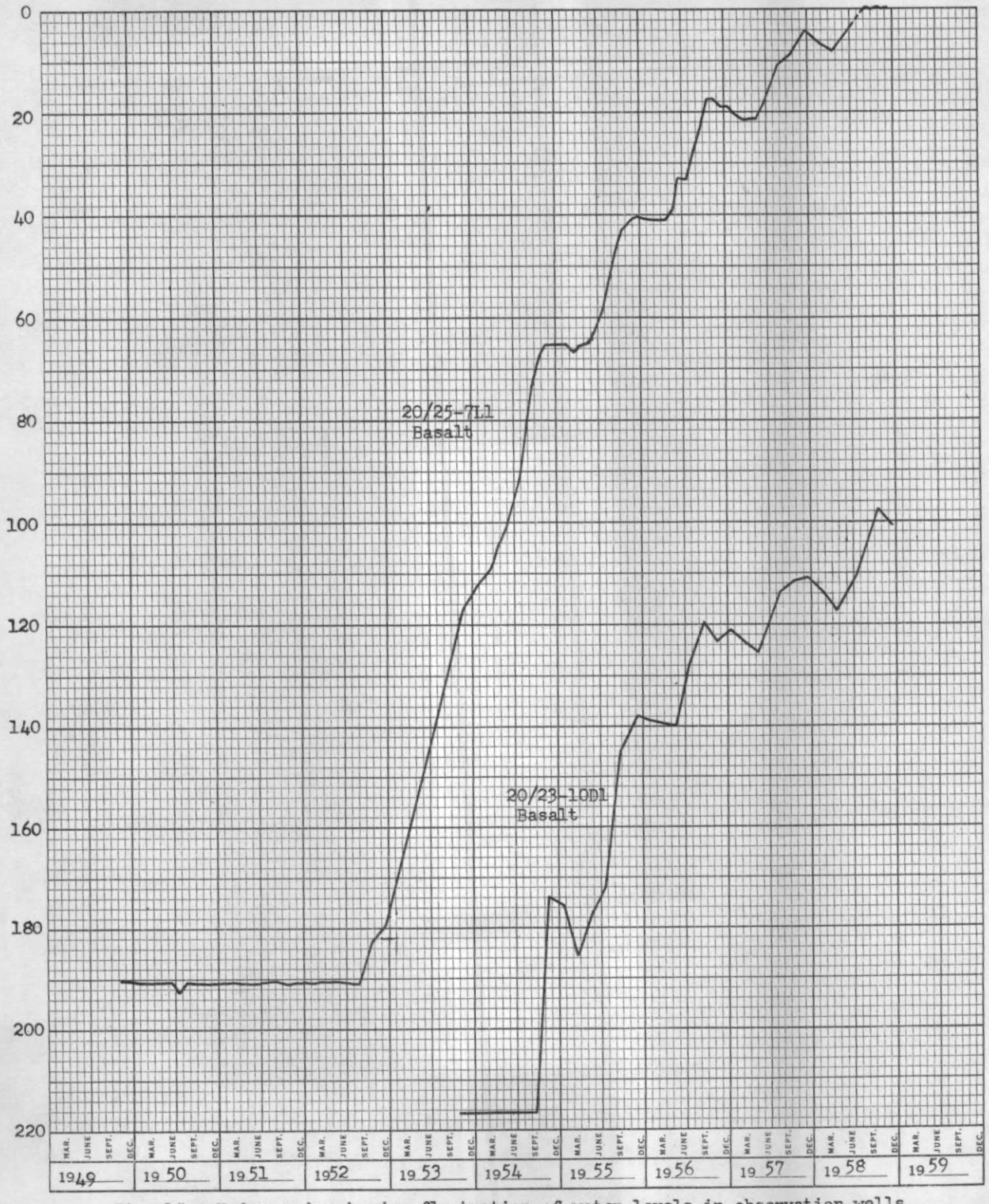

Fig. 15.--Hydrographs showing fluctuation of water levels in observation wells

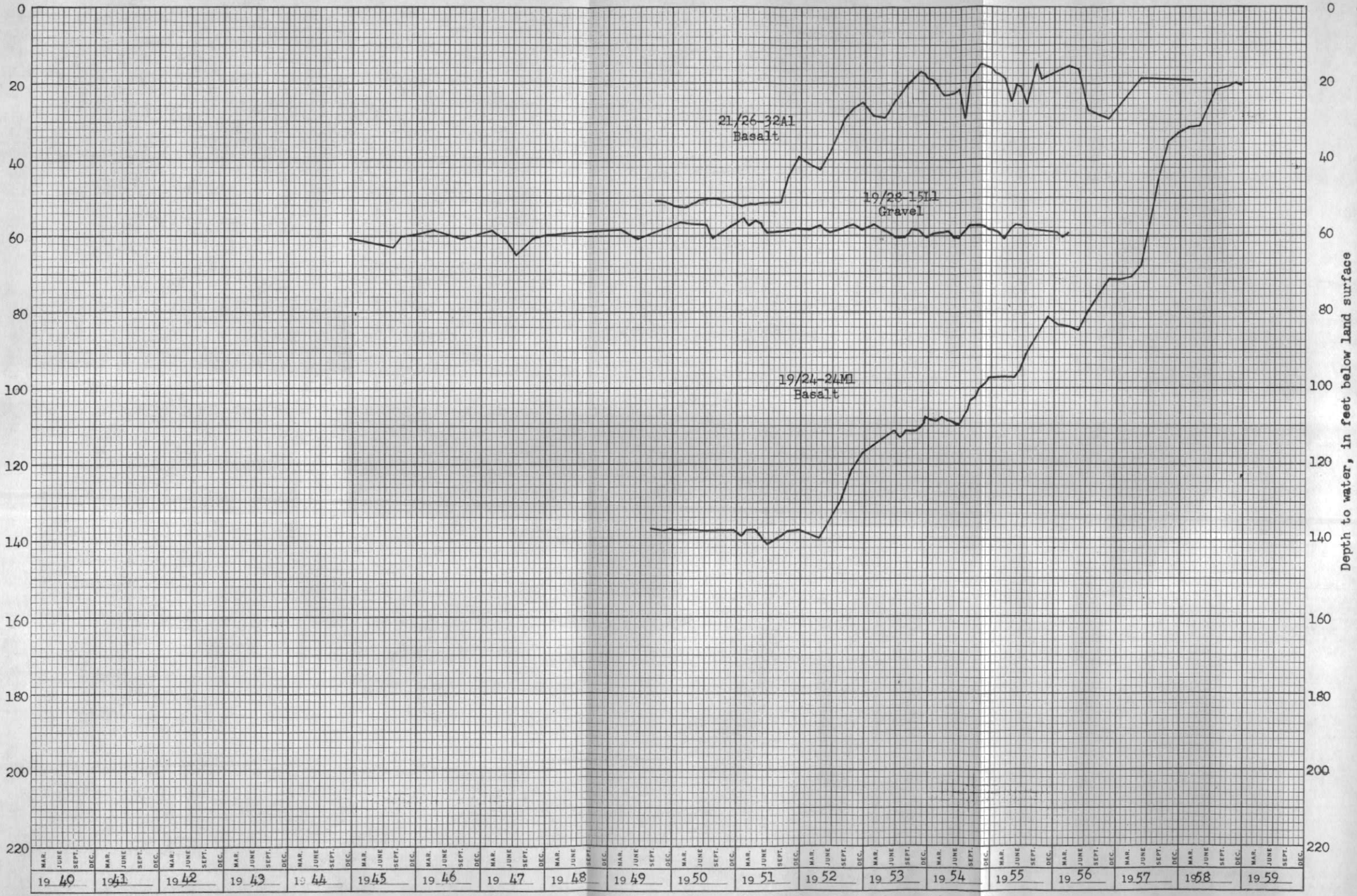

Fig. 16.-- Hydrographs showing fluctuations of water levels in observation wells.

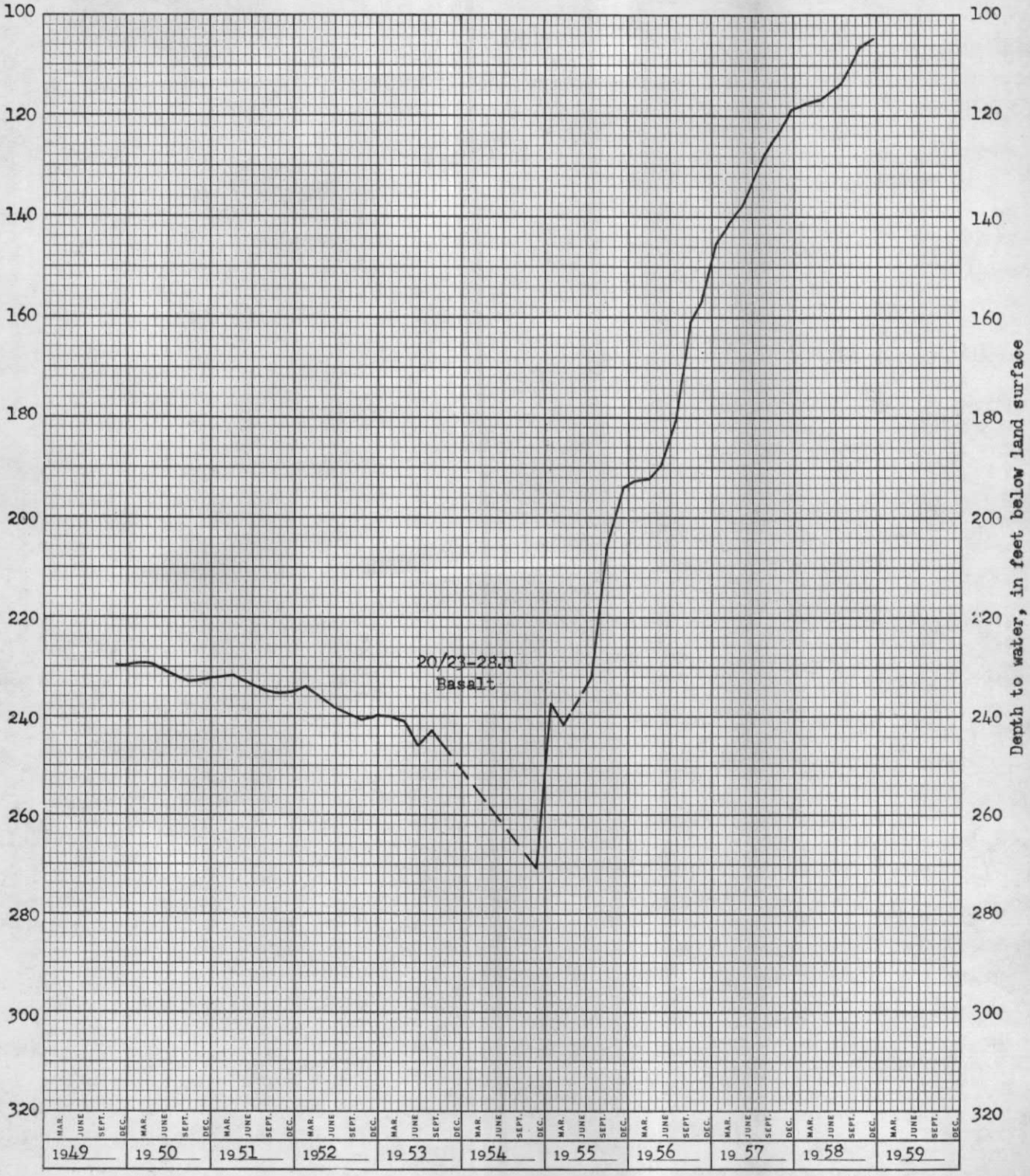

Figure 17.--Hydrograph showing fluctuation of water level in well 20/23-28J1.

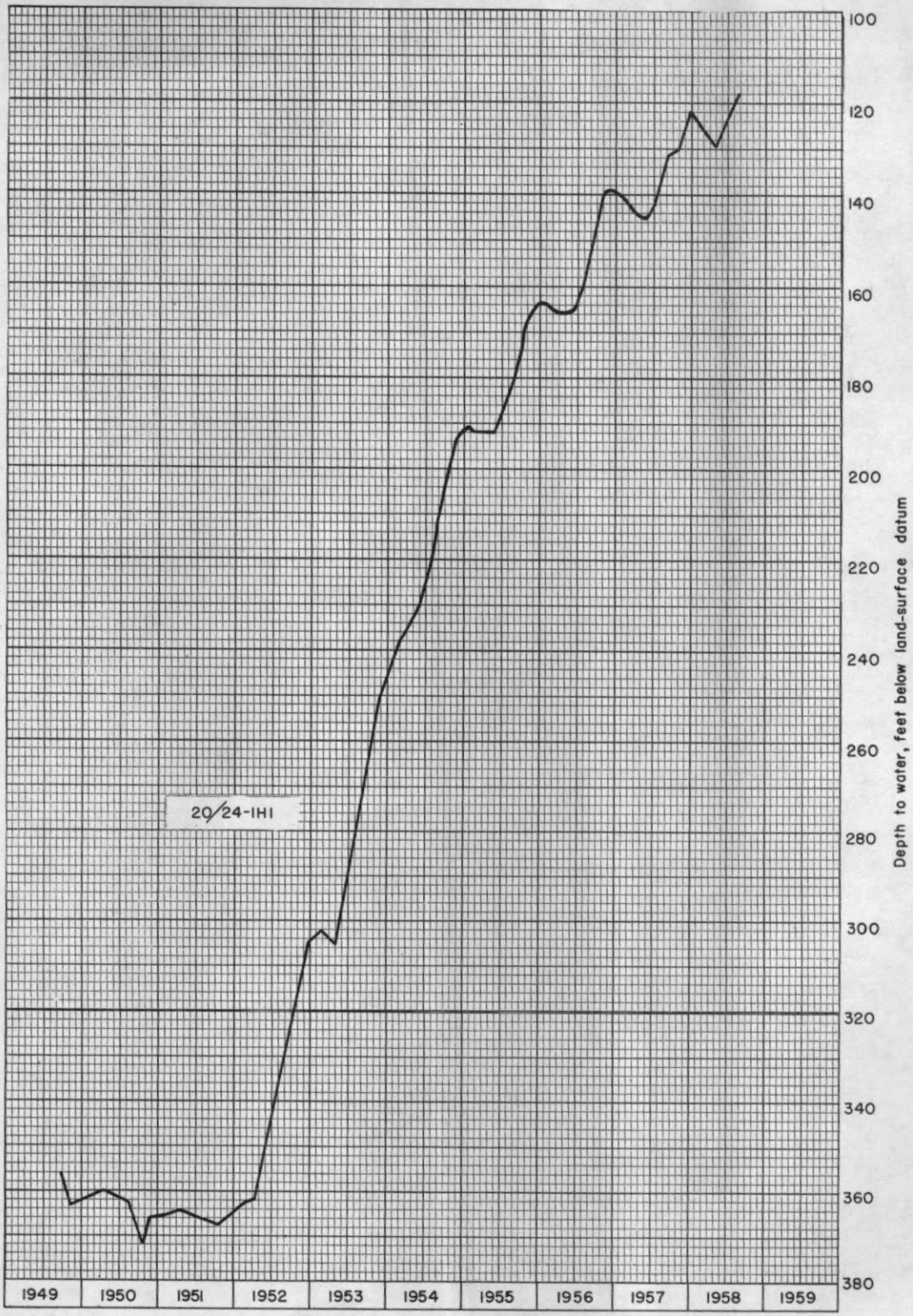

Figure 18.-- Hydrograph showing fluctuation of water level in well 20/24-1H1

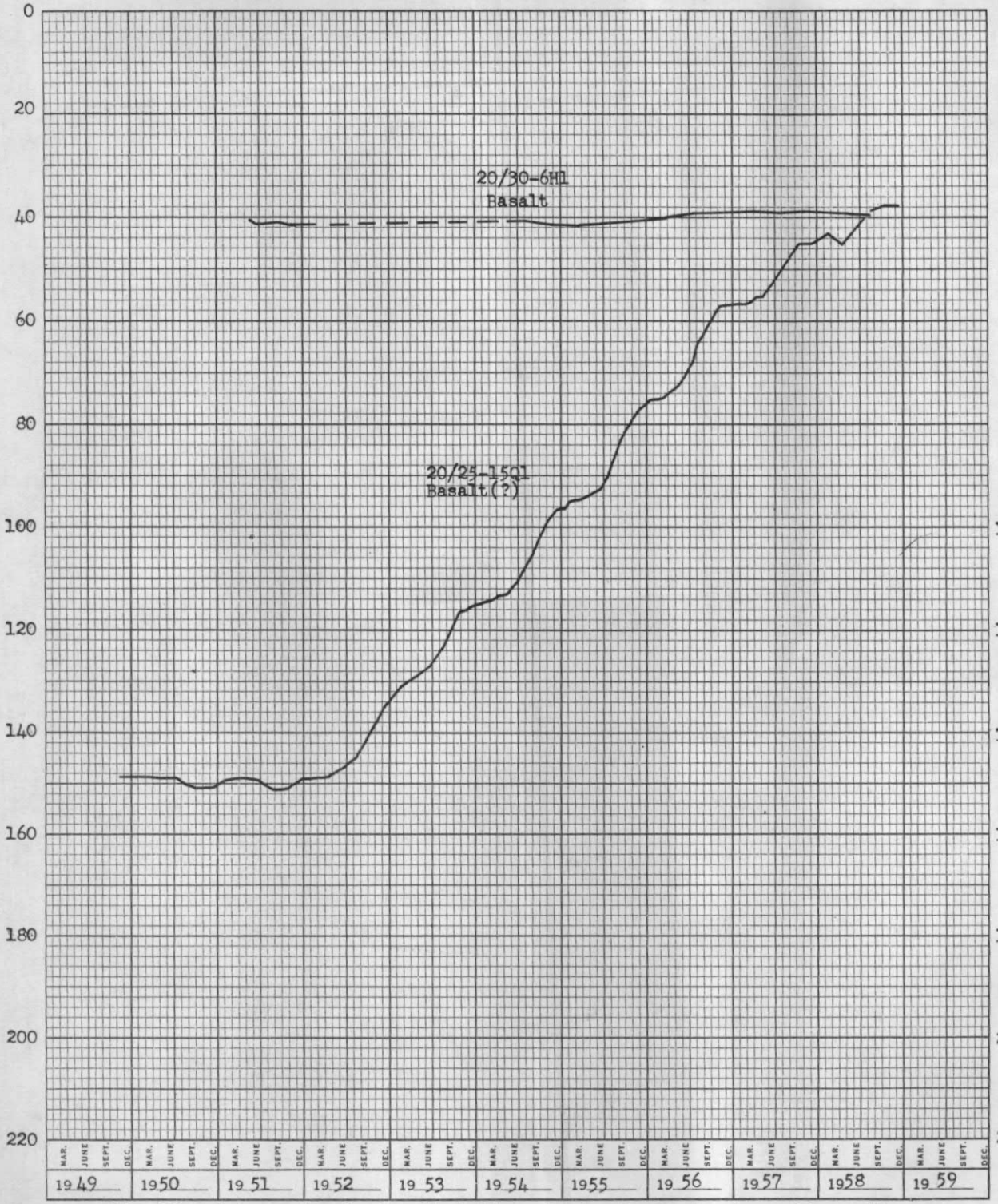

Fig. 19.--Hydrographs showing fluctuation of water levels in observation wells.

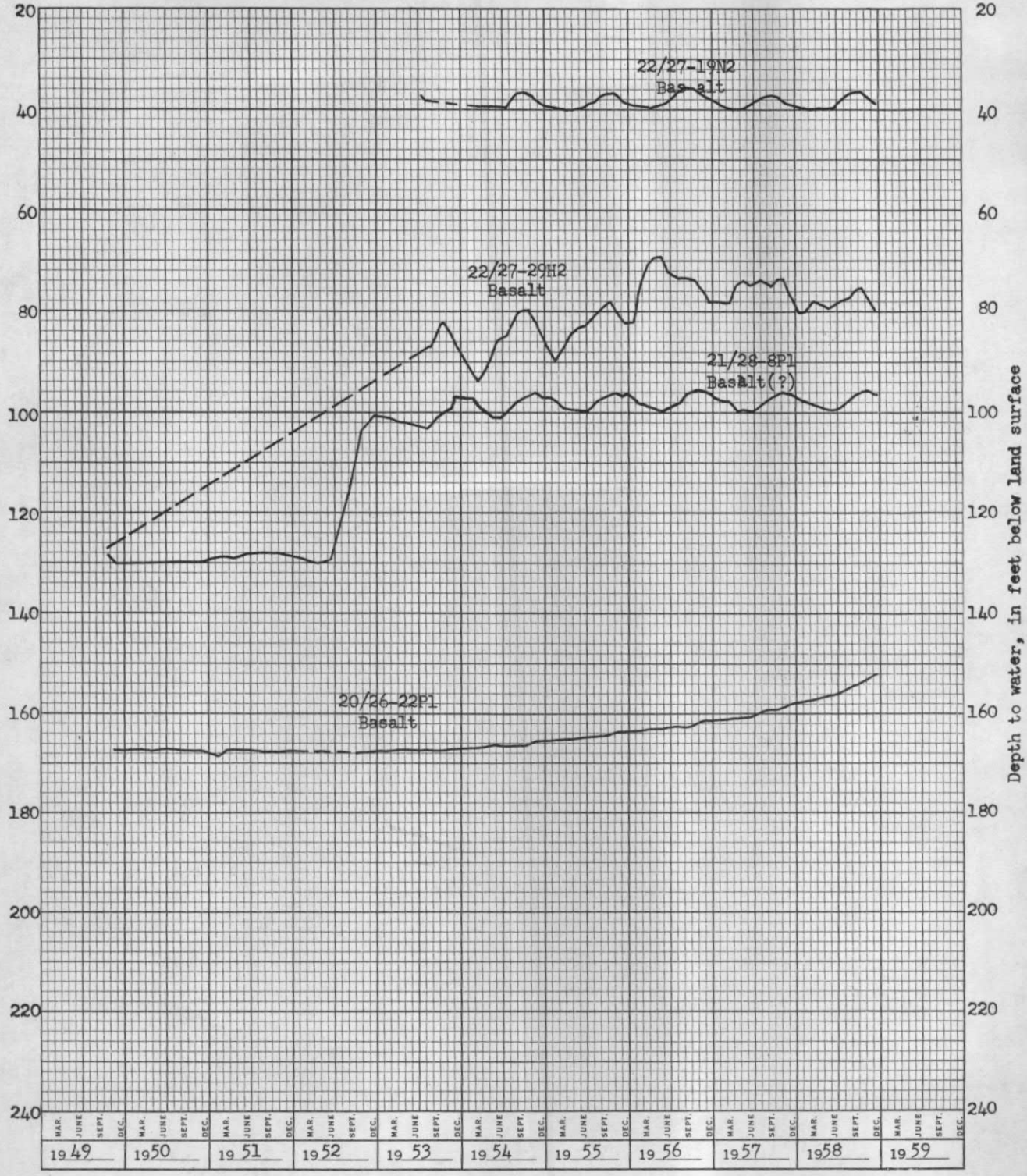

Fig. 20.--Hydrographs showing fluctuation of water levels in observation wells.

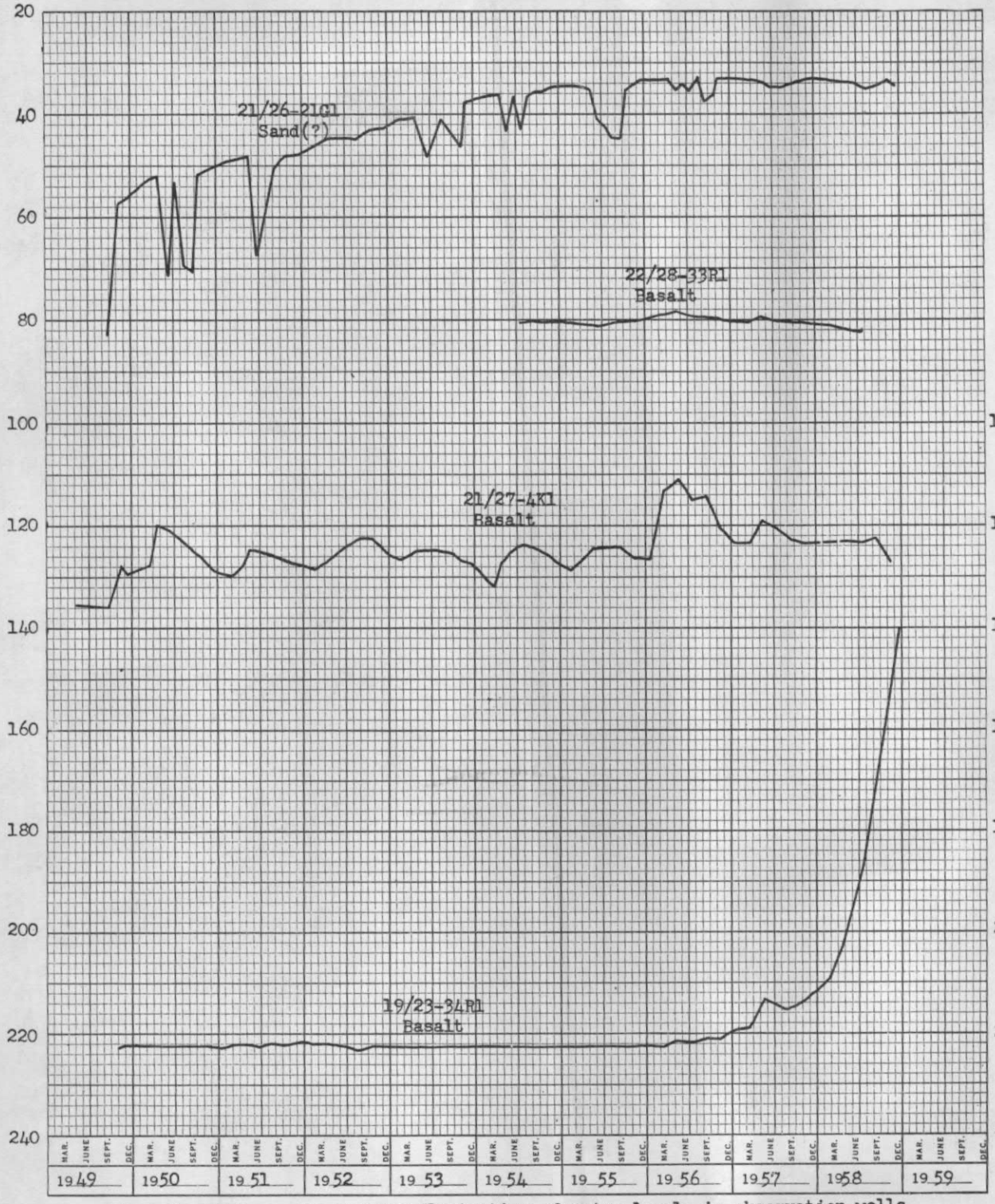

Fig. 21.--Hydrographs showing fluctuation of water levels in observation wells

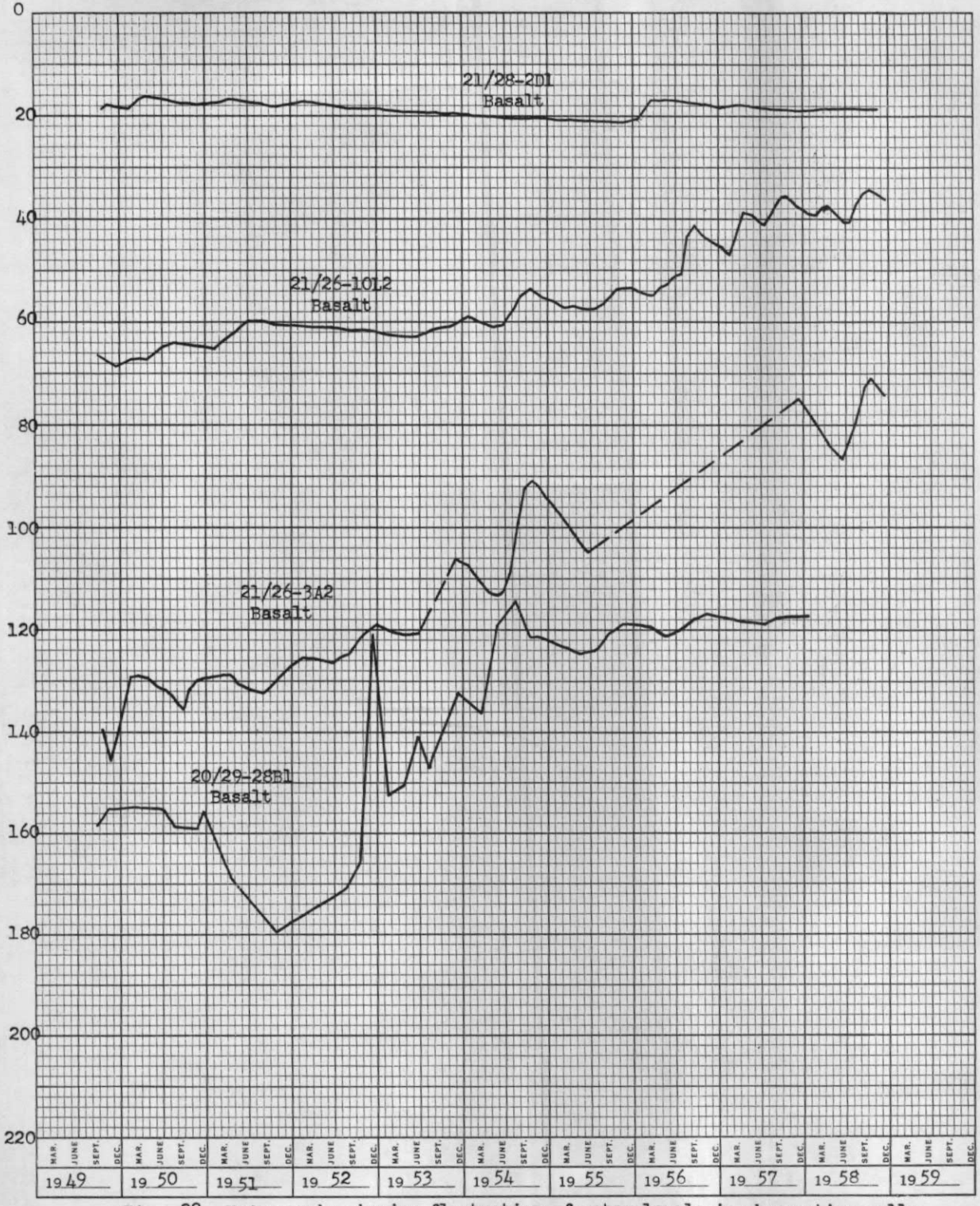

Fig. 22.--Hydrographs showing fluctuation of water levels in observation wells.

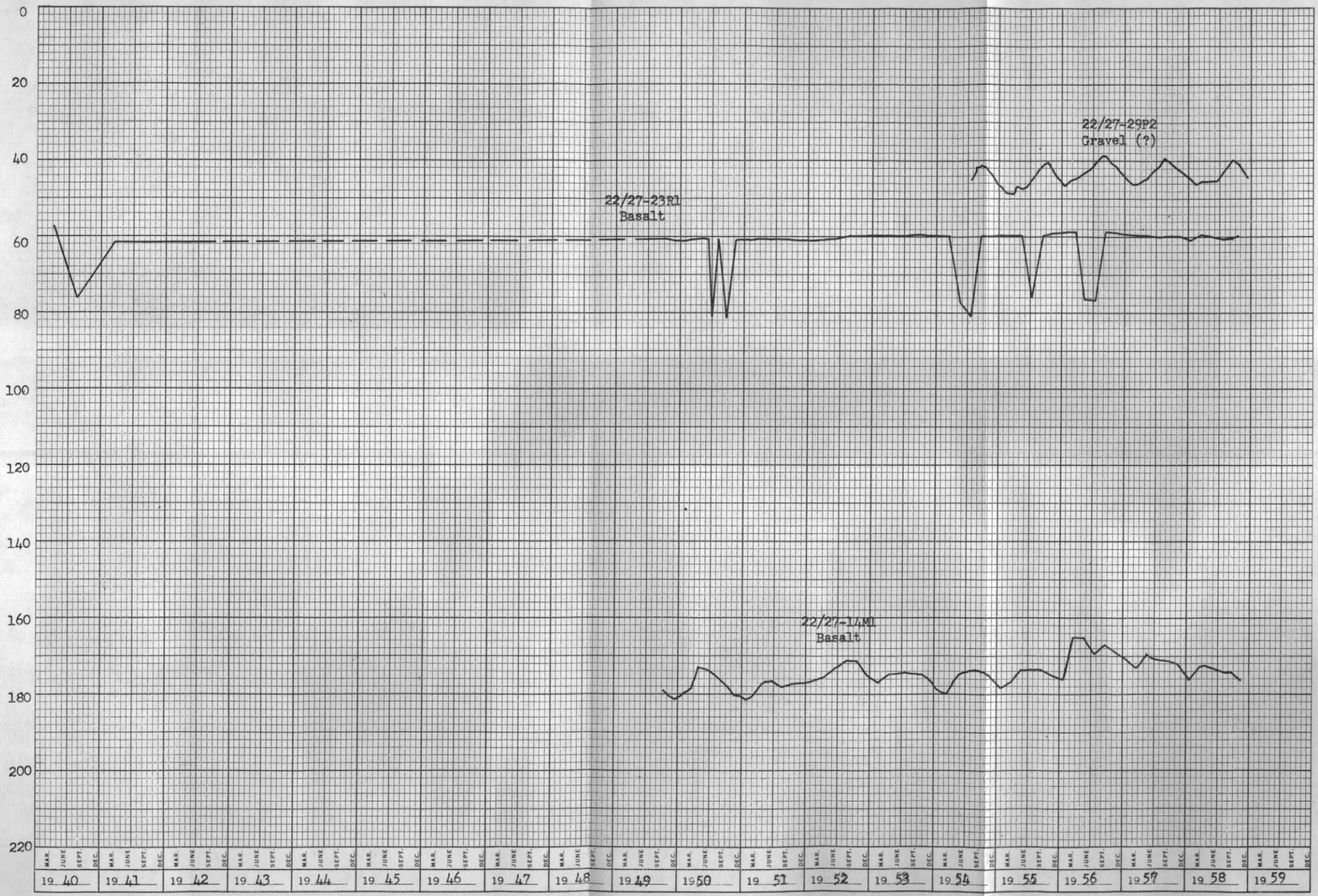

Fig. 23.--Hydrographs showing fluctuation of water levels in observation wells.

Fig. 24.--Hydrographs showing fluctuation of water levels in observation wells.