Water Levels and Artesian Pressure in Observation Wells in the United States in 1947

Part 5. Northwestern States

Prepared under the direction of C. G. PAULSEN, *Chief Hydraulic Engineer*

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming, and other agencies, by personnel of the Water Resources Division under the direction of:

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INTRODUCTION

By A. N. Sayre and others

Significance of records of water level and artesian pressure

The rock formations of the earth are great natural reservoirs in which a part of the water derived from rain and snow is stored to supply wells and springs and to maintain the flow of streams during periods of fair weather. Water levels in wells register the stages of these natural reservoirs; they show the extent to which water supplies are depleted by drought or by heavy pumping, whether for public waterworks, irrigation, or industrial uses, and the extent to which they are replenished in seasons of abundant rainfall or melting snow. The changes in pressure recorded on flowing wells indicate depletion or replenishment of the artesian reservoirs.

Annual publication of records by Geological Survey

The regular publication of records of water level and artesian pressure in the United States was begun by the Geological Survey in 1935 and has continued yearly since. The records for the entire country were published in a single volume each year through 1939. Beginning with 1940 the records have been published in six volumes, covering the northeastern, southeastern, north-central, south-central, northwestern, and southwestern sections of the country. Hawaii is included in the southwestern section. (See fig. 1.) The following table gives the numbers of these reports. This series of water-supply papers is in a sense an inventory, year by year, of the ground-water supplies in such parts of the country as have been covered.

Water-supply papers on water levels and artesian pressure in observation wells in the United States

Year	North-eastern States	South-eastern States	North-central States	South-central States	North western States	South western States and Hawaii
1935	777	777	777	777	777	777
1936	817	817	817	817	817	817
1937	840	840	840	840	840	840
1938	845	845	845	845	845	845
1939	886	886	886	886	886	886
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028
1946	1071	1072	1073	1074	1075	1076
1947	1096	1097	1098	1099	1100	1101

Scope of present volume

The present volume covers the northwestern States and gives records of water level and artesian pressure in about 1,430 observation wells of the Geological Survey and cooperating agencies in Colorado, Idaho, Montana, Oregon, Utah, Washington, and Wyoming. Of these wells, 48 are equipped with automatic water-stage recorders. For some wells not previously reported complete records of water level are given. For wells whose previous records have been published this volume gives only the current records. If a complete description of a well has been published in a previous report, only the well number or the well number and a brief identifying description are given in this report. The numbers in parentheses immediately following a well number are those of the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicates that a description of the well is given in the paper whose number is so marked. This report includes about 6,450 individual determinations of water level and artesian pressure.

Land-surface datum

Before 1943, in Geological Survey reports, the water levels and artesian pressures for some wells were given in feet above or below the measuring points and for other wells in feet above or below sea level or above or below various assumed datum planes. It had been considered inadvisable to adopt a standard procedure in expressing water levels and artesian head until after a period of trial with datum planes of different kinds. In

1943, however, it was decided that uniform practice should be adopted. Accordingly, precise datum planes were established approximating the land surface at each well. The water levels and artesian heads for all wells listed in this report are given in reference to land-surface datum planes.

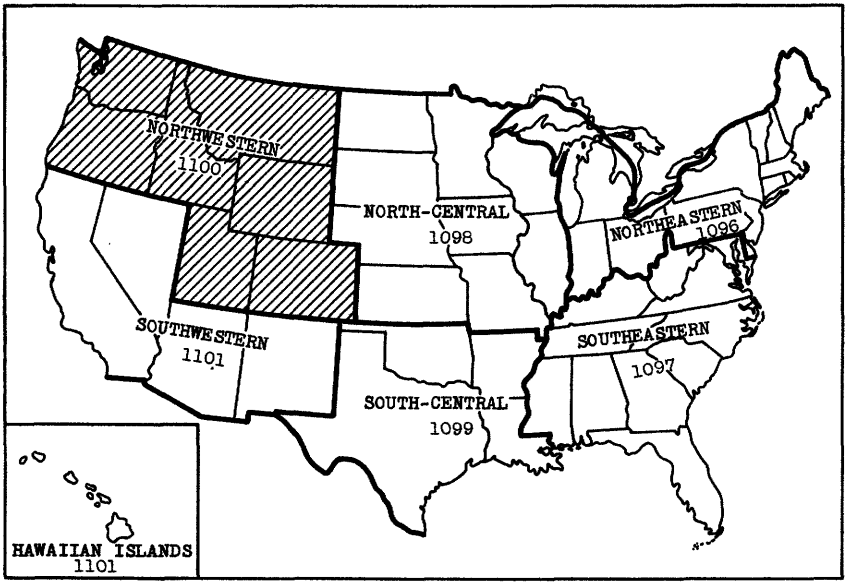


Figure 1.--Outline map of the United States showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1947. The shaded section represents the part of the country covered by this volume.

If the water levels or artesian heads are referred to land-surface datum for the first time, a conversion factor is given in the descriptive matter preceding them in order to facilitate comparison of the older and newer records. Wherever the conversion factor is given in earlier reports it is not repeated in this report. New data as to the positions of the measuring point and of the bench marks, in feet above or below land-surface datum planes, will be published in succeeding annual reports.

Network of key observation wells

During 1942 the Geological Survey established a network of key observation wells in order to make available current information on general ground-water conditions over the country. These wells were selected because

the fluctuations of water level in them are believed to be typical and they represent the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1947 the network included about 160 wells in 45 States. About 40 of the wells were established expressly for the network in 1942 and about 20 were established in 1943; the other 100 were selected from wells measured regularly in connection with cooperative ground-water investigations. The coverage of the country is still far from adequate, and it is expected that some wells not now included will be added to the network from time to time.

Changes in ground-water level in 1947 in the northwestern part of the United States

The average precipitation in four of the States in the northwestern section--Colorado, Idaho, Utah, and Wyoming--was above normal in 1947. It was normal in Montana and below normal in Oregon and Washington. The fluctuations of both water level and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. In certain of the observation wells there are fluctuations caused by differences in the rate of pumping or artesian flow from other wells in the area, but most of the observation wells are not noticeably affected by pumping or artesian flow. A summary of the changes in ground-water level is given in the chapter for each State.

Acknowledgments

Acknowledgments for effective services in the preparation of this water-supply paper are due Mrs. Frances Dowell, Mrs. Nauvoo Ragland, Misses Dorothy M. Ireland and Beulah Brunson, and Rodney Hart. Miss Ireland had general charge of the assembling of the several reports and did the editing; Mr. Hart prepared the illustrations; and Mrs. Dowell, Mrs. Ragland, and Miss Brunson did the offset typing.

COLORADO

By T. G. McLaughlin, W. E. Code, and W. R. Smith

PROGRAM OF WORK

The observation-well program in Colorado, which was begun in 1942 was continued in 1947 in cooperation with the Colorado Water Conservation Board and with W. E. Code, Colorado Agricultural Experiment Station, Colorado A. and M. College.

During the year 1947 a report on the "Geology and ground-water resources of parts of Lincoln, Elbert, and El Paso Counties, Colorado, with special reference to Big Sandy Creek Valley above Limon", by Thad G. McLaughlin, was published as Ground-Water Series, Bulletin 1, of the Colorado Water Conservation Board. A report on the sump drain area of the San Luis Valley is being prepared. Field work was begun in 1947 in Baca County, in the Monte Vista area of the San Luis Valley, and in the South Platte River Valley between Kersey, Colorado, and Paxton, Nebraska. The South Platte project is being conducted in cooperation with the Bureau of Reclamation, U. S. Dept. of Interior, as a part of the Missouri Basin program. Studies were continued in 1947 in the Denver artesian basin and in the Grand Junction artesian basin in Mesa County.

Water-level measurements were being made in 210 wells at the end of 1946. During the year measurements were discontinued in 10 wells and begun in 17 new wells. At the end of 1947, therefore, observations were being made in 217 wells, and 847 wetted-tape measurements are given below.

The water levels in 176 wells were measured twice yearly by W. E. Code; 3 of the wells were equipped with automatic water-stage recorders; 60 wells, including 50 wells previously measured twice yearly by Code, were measured at monthly intervals by members of the Fort Morgan office of the division of ground water; 23 wells were measured at monthly intervals by members of the Denver office of the division of ground water; 3 wells were measured monthly by engineers of the Denver office of the division of

surface water, through the courtesy of Robert Follansbee, district engineer; and 1 well was observed monthly by a local observer.

WELL-NUMBERING SYSTEM

The well-numbering system used in this report is described in Water-Supply Paper 1027.

FLUCTUATIONS OF WATER LEVEL

The measurement of water levels in eastern Colorado, which was begun in 1929 by W. E. Code, has furnished an important record of ground-water conditions in that region. During the period 1929-47 the water table has been affected by the longest drought of record (1930-40) by a great expansion of irrigation with water from wells, and by a recent long period of above normal precipitation (1941-47). Although the trends of water levels in the South Platte drainage area have been discussed by Code,[1/] it is believed that enough additional water-level data have been obtained to warrant further discussion of water-level fluctuations in that area. In addition, the fluctuations of water levels in areas outside the South Platte drainage, which have not heretofore been discussed, are summarized.

The following summary of water-level fluctuations deals only with those areas in Colorado where the record of observations covers at least 5 years. For a more detailed description of the areas in the South Platte drainage basin the reader is referred to Code's reports.

South Platte River Drainage area

Boxelder Creek, near Wellington.--Measurements made in this area since 1929 by W. E. Code indicate a pronounced decline in water levels in the northern part of the area from the beginning of record until 1941. The rate of decline ranged from about 2 feet a year in the northern part of the area to essentially no decline near the confluence of Boxelder Creek and Cache la Poudre River. Water levels in the upper part of the valley after reaching record lows in 1941 and 1942 rose abruptly to near record highs in 1943 and 1944 and declined rapidly to near record lows in 1946 and 1947. The wells in the lower part of the valley have had little or no effect on the general water level since the beginning of record.

1/ Code, W. E., Use of ground water for irrigation in the South Platte Valley of Colorado: Colorado Agricultural Experiment Station Bull. 483, pp. 24-43, Sept. 1943. Code, W. E., Ground-water supply of Prospect Valley, Colorado: Colorado Agricultural Experiment Station Tech. Bull. 34, pp. 23, 24, Oct. 1945.

Cache la Poudre River area.--Five observation wells have been maintained by Code in the Cache la Poudre Valley. The records of water levels indicate no major fluctuations as the result of drought, pumping, or above-normal precipitation.

Lone Tree Creek area.--The effects of pumping and of the long drought are shown clearly by the fluctuations of water levels in Lone Tree Creek Valley. The declines ranged from a few feet in some areas to as much as 20 to 30 feet in a few localities near Eaton. The water levels in most wells reached their lowest points in 1940 and 1941 and then rose abruptly until 1943 after which they remained relatively stationary or declined slowly.

Crow Creek area.--Irrigation wells in Crow Creek Valley obtain water not only from the alluvium but also from porous zones in the underlying Brule clay. The water table in the vicinity of Gill declined moderately during the drought and, after reaching lowest levels in 1940 and 1941, rose moderately for a few years and has remained relatively stationary since that time.

South Platte Valley from Denver to LaSalle.--Water-level fluctuations in the upper part of the South Platte Valley show clearly the seasonal effects of applying surface water for irrigation. Water levels in the fall at the end of the irrigation season generally are from 2 to 10 feet higher than they are in the spring before irrigation begins. Except for seasonal fluctuations, the water table has remained essentially stationary since the beginning of record in 1929. In a few places, however, there was a moderate decline and low water levels generally were attained in 1941 and 1942. The water levels in those places have risen to normal levels during the recent period of above-normal precipitation.

Boxelder Creek.--Records in this area were begun by Code in 1933. The water levels during the remainder of the drought were essentially constant or declined only slightly. There was an abrupt rise in water levels in 1942 after which they have remained nearly constant at levels above those recorded at the beginning of record in 1933.

Prospect Valley area.--The fluctuations of water levels in the Prospect Valley area during the period from 1933 to 1944 are described in detail in Code's report on that area. From the beginning of record until 1941

there was an average annual decline in water levels amounting to about 2 feet owing to the long drought and to excessive pumping for irrigation. Between 1941 and 1943 there was an abrupt rise in water levels in most of the observation wells in the area. Since that time most wells have risen gradually or have remained relatively stationary, although two wells declined to record lows in 1947.

Water-level fluctuations in this area show the seasonal effects of pumping even though surface water also is used for irrigation. The water levels in the spring, before pumping begins, generally are from 2 to 6 feet higher than they are in the fall at the end of the pumping season.

Kiowa Creek area.--Irrigation in the Wiggins area along Kiowa Creek has developed largely since 1937. The records of water levels begun by Code between 1936 and 1938 show that there has been a general decline since pumping began. The decline was moderately constant at the rate of 0.25 to 0.50 foot a year until 1946 and 1947 when declines were abrupt. The water levels in this area are lowest at the end of the pumping season but generally rise 2 or 3 feet before pumping begins in the spring. Seasonal fluctuations were particularly large in 1946 and 1947 when the water level declined as much as 8 feet in a few wells during the period of pumping.

Bijou Creek area.--Irrigation from wells has been developed in many places along Bijou Creek Valley, and records of water-level fluctuations in 17 wells are available. The water level in most of these wells declined steadily from the beginning of record in 1940 until 1945. The water level in some wells declined several feet in 1946 but there was an abrupt rise in water level in many wells in 1947.

Beaver Creek area.--Although the number of irrigation wells in Beaver Creek Valley has increased from 53 in 1940 to 116 in 1947, there appears to be no serious lowering of the water table in that area to date. The water levels in most wells have not declined appreciably since the beginning of record in 1928 and 1929. In a few wells, however, there has been a decline of 2 to 3 feet since 1942 probably because of the rapid increase in the number of pumping plants in that area. The water levels in this valley are always lowest in the fall at the end of the pumping season.

Lower South Platte Valley.--In the lower part of the South Platte Valley extending from below Wiggins to the Colorado-Nebraska State line the water table has not been greatly affected by pumping. In the area west of Fort Morgan the water table apparently declined during the few years preceding 1941 although the records for that period are incomplete. The water levels in that area rose abruptly between 1941 and 1943 but have declined slowly since then.

Below Fort Morgan the water levels declined slightly from the beginning of record until about 1940 or 1941 and have risen since that time to the present record or near-record high levels. Irrigation with surface water in the lower South Platte Valley causes a seasonal fluctuation of water levels amounting to about 2 feet. The water levels in this area are highest at the end of the irrigation season.

Arkansas River Drainage area

Arkansas Valley in Otero County.--The water levels in wells in the vicinity of Fowler have been measured periodically by W. E. Code since 1929. The land in this area is irrigated largely by water diverted from the Arkansas River, but supplementary supplies of water are pumped from wells. The effect of pumping upon the water levels in this area has been slight. Water levels declined slowly during the drought and reached low points during 1940 and 1941. The levels recovered rapidly in 1942 and 1943 and have remained relatively constant since that time. The seasonal fluctuations generally amount to about 2 feet, the highest levels being at the end of the irrigation season.

Arkansas Valley in Pueblo County.--Although water levels in the vicinity of Pueblo have been measured by Code since 1929 and by the division of ground water since 1942, there appears to be no significant change in general ground-water conditions other than the seasonal fluctuations caused by the application of surface water for irrigation. The water levels in this area remained relatively constant throughout the drought but have risen slightly during the recent period of above-normal precipitation.

Colorado River Drainage area

Roaring Fork and Crystal Rivers area.--Monthly observations of the water levels in two wells (C-7-88-29ab and C-8-88-27bc) along the Crystal

and Roaring Fork Rivers, in the vicinity of Carbondale, Colorado, have been made by members of the division of surface water since 1942. The water levels in these wells display large seasonal fluctuations. The water levels are lowest during the first months of the year, rise abruptly in the spring, reaching their highest levels in midsummer, and decline during the remainder of the year. The summer level in well C-8-88-27bc, near Roaring Fork River, generally is about 15 feet higher than the winter level, and the summer level in well C-7-88-29ab, near Crystal River, generally is about 8 feet above the winter level. Inasmuch as the average magnitude of these fluctuations is several times as great as the average magnitude of fluctuations of gage heights in the nearby streams, the water-level fluctuations are believed to be caused by rapid recharge from melting snow during the spring. After the snow has melted and the recharge has become relatively small, the water level declines as the ground water is discharged into the streams or is lost by transpiration or evaporation. Only small quantities of water are pumped for domestic use from well C-8-88-27bc and no water is pumped from well C-7-88-29ab.

Except for the seasonal fluctuations there has been no significant trend in water levels in these wells since the records were begun.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

C-1-60-4ccc (*1027, p. 6 ; 1075, p. 6). W. L. Freeman. Water levels, in feet below land-surface datum, 1947: Aug. 26, 27.10; Oct. 8, 23.80; Nov. 4, 23.47; Dec. 3, 23.14.

C-1-60-17dcc (*1027, p. 7 ; 1075, p. 6). Carl Sanden. Water levels, in feet below land-surface datum, 1947: Oct. 8, 30.85; Nov. 4, 29.77; Dec. 3, 28.81.

C-1-60-29cbd (*1027, p. 7; 1075, p. 6). J. D. Singleton. Water levels, in feet below land-surface datum, 1947: Oct. 8, 33.55; Nov. 4, 32.55; Dec. 3, 31.14.

C-1-62-22dac (Published incorrectly as C-1-62-22-cac) (*1075, p. 6). Charles B. Nordloh. Water levels, in feet below land-surface datum, 1947: Apr. 30, 45.41; Oct. 29, 45.98.

C-1-62-34cd (*1075, p. 6). John H. Nordloh. No measurements made in 1947.

C-1-65-11cd. David Patton. SE¼SE¼ sec. 11, T. 18, R. 65 W. Irrigation well, diameter 30 inches, depth 42 feet. Measuring point, top of casing 0.6 foot above land-surface datum. Equipped with electrically driven turbine pump. Water level, in feet below land-surface datum, 1947: Oct. 28, 14.53.

C-1-66-7cc (*1027, p. 7; 1075, p. 6). C. Hose. Water levels, in feet below land-surface datum, 1947: Apr. 17, 20.89; Oct. 28, 17.72.

C-1-66-19dc (*1027, p. 7; 1075, p. 6). A. B. Perry. Water levels, in feet below land-surface datum, 1947: Apr. 29, 33.68; Oct. 28, 27.06.

C-1-67-13db (*1027, p. 7; 1075, p. 6). Ed Schnute. Water levels, in feet below land-surface datum, 1947: Apr. 17, 22.26; Oct. 28, 18.64.

C-1-67-35cda (*1027, p. 8; 1075, p. 6). L. A. Ernst. Water levels, in feet below land-surface datum, 1947: Apr. 29, 22.16; Oct. 28, 17.00.

C-2-60-19bcc (*1027, p. 8; 1075, p. 6). Oscar Helgesen. Water levels, in feet below land-surface datum, 1947: Aug. 26, 17.73; Oct. 8, 17.58; Nov. 4, 17.57.

C-2-65-2bdd (*1027, p. 8; 1075, p. 6). Box Elder Farms. Measurements discontinued.

C-2-65-11dcd (*1027, p. 8; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 28.20; Oct. 28, 27.72.

C-2-65-14dcb (*1027, p. 9; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 14.00; Oct. 28, 13.62.

C-2-65-23dab (*1027, p. 9; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 14.79; Oct. 28, 15.36.

C-2-65-26dba (*1027, p. 9; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 17.45; Oct. 28, 18.27.

C-2-65-35dbb (*1027, p. 9; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 15.12; Oct. 28, 16.10.

C-2-65-35dcd (*1027, p. 9; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 14.10; Oct. 28, 15.17.

C-2-67-10dcd (*1027, p. 10; 1075, p. 6). Box Elder Farms. Water levels, in feet below land-surface datum, 1947: Apr. 29, 29.05; Oct. 28, 22.27.

C-2-67-20dcd (*1027, p. 10; *1075, p. 6). Charles Fadden. Water levels, in feet below land-surface datum, 1947: Apr. 17, 24.85; Oct. 28, 22.95.

C-2-67-31db (*1027, p. 10; 1075, p. 6). M. M. Summers. Water levels, in feet below land-surface datum, 1947: Apr. 17, 25.40; Oct. 28, 24.52.

C-3-65-23ddd (*1027, p. 11; 1075, p. 7). L. Erling. Water levels, in feet below land-surface datum, 1947: Apr. 29, 15.58; Oct. 28, 15.36.

C-3-67-6dd (*1027, p. 11; 1075, p. 7). H. L. Swanson. Water levels, in feet below land-surface datum, 1947: Apr. 17, 19.02; Oct. 28, 17.50.

Arapahoe County

C-4-68-33cd (*948, p. 8; 990, p. 6; 1020, p. 5; 1027, p. 11; 1075, p. 7). Frank Hornbuckle.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	8.65	May 1	7.86	June 27	4.60	Oct. 3	7.60
Feb. 17	8.79	13	6.61	July 1	5.29	19	7.96
Mar. 13	8.60	26	6.29	19	6.29	Nov. 18	8.71
26	8.22	June 12	6.13	Sept. 8	6.65	Dec. 18	9.20
Apr. 17	8.55						

Baca County

C-29-42-10dd. Harold Walker. SE¼NE¼ sec. 10, T. 29 S., R. 42 W. Abandoned domestic and stock well, diameter 5 inches, depth 26.1 feet. Measuring point, top of pipe clamp, southeast side, 0.30 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 1	18.93	Aug. 8	19.86	Oct. 16	22.02	Dec. 21	21.59
July 3	19.82	Sept. 7	21.59	Nov. 25	21.72		

C-29-43-1-aab. R. B. Holt. NW¼NE¼NE¼ sec. 1, T. 29 S., R. 43 W. Abandoned domestic and stock well, diameter 6 inches, depth unknown. Measuring point, top of casing, east side, 0.45 foot above land-surface datum.

Water level, in feet above land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
July 29	0.32	Sept. 7	0.05	Nov. 25	0.31
Aug. 7	a .05	Oct. 16	.17	Dec. 21	b .45

a Below land-surface datum.
b Water flowing over casing.

C-29-46-18add. Owner unknown. SE¼SE¼NE¼ sec. 18, T. 29 S., R. 46 W. Abandoned domestic and stock well, diameter 6 inches, depth 78.4 feet. Measuring point, top of casing, east side, 0.3 foot below land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 4	45.52	Aug. 7	44.51	Oct. 16	44.83	Dec. 21	45.31
July 7	44.45	Sept. 7	44.14	Nov. 14	45.06		

C-30-45-34ccc. Owner unknown. SW¼SW¼SW¼ sec. 34, T. 30 S., R. 45 W. Stock well, diameter 6 inches, depth 136.7 feet. Measuring point, base at steel pipe clamp, west side, 1.3 feet above land-surface datum. Equipped with windmill.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
June 3	87.22	Aug. 7	87.32	Oct. 16	87.17
July 3	87.28	Sept. 7	88.28	Dec. 21	87.25

C-30-46-5ccc. Owner unknown. SW¼SW¼SW¼ sec. 5, T. 30 S., R. 46 W. Abandoned domestic and stock well, diameter 6 inches, depth 128.5 feet. Measuring point, top of wood clamp, west side, 0.33 foot above land-surface datum. Equipped with a cylinder pump driven by a gasoline engine.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 24	92.93	July 7	92.80	Sept. 7	93.11	Nov. 14	92.72
June 4	92.67	Aug. 8	93.12	Oct. 16	92.87	Dec. 21	92.99

C-30-46-17bc. Owner unknown. SW¼NW¼ sec. 17, T. 30 S., R. 46 W. Unused irrigation well, diameter 10 feet, depth 14.7 feet. Measuring point, base of pump, south side, 1.2 feet above land-surface datum.

Water level, in feet, below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 24	9.71	July 4	10.38	Sept. 7	11.85	Nov. 14	12.30
June 4	9.61	Aug. 8	9.63	Oct. 16	12.34	Dec. 21	11.87

C-31-46-28bbc. Owner unknown. SW¼NW¼NW¼ sec. 28, T. 31 S., R. 46 W. Abandoned domestic and stock well, diameter 6 inches, depth 162.7 feet. Measuring point, top of casing, east side, 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 21	134.11	July 4	133.84	Sept. 7	133.75	Nov. 20	133.84
June 2	134.18	Aug. 8	134.01	Oct. 16	133.55	Dec. 21	133.70

C-31-49-11bab. Owner unknown. NW¼NE¼NW¼ sec. 11, T. 31 S., R. 49 W. Abandoned domestic and stock well, diameter 5 inches, depth 206.7 feet. Measuring point, top of casing, southeast side, 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Mar. 24	179.72	July 4	179.90	Sept. 7	180.67	Nov. 13	180.30
June 3	179.61	Aug. 7	180.36	Oct. 16	180.32	Dec. 21	179.16

C-32-43-20aaa. Owner unknown. NE¼NE¼NE¼ sec. 20, T. 32 S., R. 43 W. Abandoned stock well, diameter 6 inches, depth 170.9 feet. Measuring point, top of casing, north side, 0.54 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
July 22	86.45	Sept. 7	86.45	Nov. 14	86.27
Aug. 7	86.53	Oct. 16	86.40	Dec. 21	86.40

C-32-48-8cbb. Owner unknown. NW¼NW¼SW¼ sec. 8, T. 32 S., R. 48 W. Abandoned domestic and stock well, diameter 6 inches, depth 247.0 feet. Measuring point, top of casing, southeast side, 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	194.35	Aug. 7	194.32	Oct. 16	193.85	Dec. 21	193.93
July 4	194.31	Sept. 7	194.17	Nov. 12	194.10		

C-33-45-13dad. Owner unknown. SE¼NE¼SE¼ sec. 13, T. 33 S., R. 45 W. Abandoned domestic and stock well, diameter 6 inches, depth 186.5 feet. Measuring point, top of 2½-inch pipe, southeast side, 3.75 feet above land-surface datum.

Water level, in feet below land-surface datum, 1947

June 3	80.01	Aug. 7	79.91	Oct. 16	79.98	Dec. 21	80.09
July 4	79.92	Sept. 7	79.93	Nov. 14	79.99		

C-35-45-7db. Owner unknown. NW¼SE¼ sec. 7, T. 35 S., R. 45 W. Abandoned domestic and stock well, diameter 6 inches, depth 230.7 feet. Measuring point, top of casing, east side, 0.1 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Mar. 24	168.51	July 4	168.50	Sept. 7	168.74	Nov. 14	168.38
June 2	168.65	Aug. 8	168.89	Oct. 16	168.59	Dec. 21	168.70

Elbert County

C-9-57-8abb (*1075, p. 7). J. C. Mattson.

Water level, in feet below land-surface datum, 1947

Jan. 26	5.74	May 3	5.66	Oct. 8	5.95	Nov. 16	6.00
Mar. 9	5.74	June 6	5.44	Sept.13	6.19	Dec. 20	5.88
Apr. 5	5.45	July 2	5.00	Oct. 13	6.30		

C-9-58-27aaa (*1075, p. 7). James E. Stubbs Estate. No measurements made in 1947.

C-9-58-34ccb (*1075, p. 7). Heber Ellsworth.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	11.93	May 3	11.22	Sept.13	10.76	Nov. 16	11.24
Mar. 9	11.76	June 6	10.68	Oct. 13	11.07	Dec. 20	11.47
Apr. 5	11.45	July 2	10.48				

C-10-58-8ccc (*1075, p. 7). Owner unknown.

Water level, in feet below land-surface datum, 1947

Jan. 26	9.44	May 3	9.31	Aug. 9	9.34	Nov. 16	9.76
Mar. 9	9.26	June 7	9.15	Sept.13	9.89	Dec. 20	9.58
Apr. 5	9.28	July 2	8.33	Oct. 13	10.16		

C-10-58-21bb (*1075, p. 8). Mrs. Frances Simpson.

Water level, in feet below land-surface datum, 1947

Jan. 26	33.05	May 3	32.18	Aug. 8	32.17	Nov. 16	32.42
Mar. 9	32.88	June 7	32.70	Sept.13	32.24	Dec. 20	32.56
Apr. 5	32.63	July 2	32.45	Oct. 13	32.37		

C-10-59-13ca (*1075, p. 8). John Kochis.

Water level, in feet below land-surface datum, 1947

Jan. 26	9.40	May 3	8.69	Aug. 9	9.02	Nov. 16	10.21
Mar. 9	8.63	June 7	8.72	Sept.13	9.80	Dec. 20	10.11
Apr. 5	8.81	July 2	9.00	Oct. 13	10.08		

C-10-59-22ab (*1075, p. 8). William Groff.

Water level, in feet below land-surface datum, 1947

Jan. 26	11.97	May 3	10.52	Aug. 9	12.74	Nov. 16	11.72
Mar. 9	10.75	June 7	10.53	Oct. 13	11.30	Dec. 20	11.25
Apr. 5	10.62						

C-10-60-26cd (*1075, p. 8). Simla Cemetery.

Water level, in feet below land-surface datum, 1947

Jan. 26	23.68	May 3	23.78	Aug. 9	23.76	Nov. 16	24.00
Mar. 9	24.63	June 7	23.52	Sept.13	25.00	Dec. 20	23.90
Apr. 5	24.89	July 2	23.30	Oct. 13	25.12		

El Paso County

C-11-61-1b (*1075, p. 8). Owner unknown. Measuring point beginning Apr. 5, 1947, top of 2-inch pipe in casing, 1.58 feet above land-surface datum and 1.58 feet above old measuring point.

Water level, in feet below land-surface datum, 1947

Jan. 26	11.54	May 3	11.62	Aug. 9	11.50	Nov. 16	12.41
Mar. 9	11.43	June 7	11.41	Sept.13	12.19	Dec. 20	11.69
Apr. 5	11.49	July 2	11.75	Oct. 13	12.57		

C-11-62-22ad (*1075, p. 8). Anthony Eurich.

Water level, in feet below land-surface datum, 1947

Jan. 26	6.36	May 3	6.13	Aug. 9	5.49	Nov. 16	5.71
Mar. 9	6.63	June 7	5.92	Sept.13	5.59	Dec. 20	5.72
Apr. 5	6.26	July 2	5.97	Oct. 13	5.69		

C-15-66-11cbd (*1027, p. 11; 1075, p. 9). Venetucci Bros. Water levels, in feet below land-surface datum, 1947: Apr. 16, 38.10; Nov. 6, 37.95.

C-15-66-14abd (*1027, p. 11; 1075, p. 9). T. L. Bender. Water levels, in feet below land-surface datum, 1947: Apr. 16, 24.05; Nov. 16, 23.49.

C-15-66-25aaa (*1027, p. 11 ; 1075, p. 9). W. E. Busch. Water levels, in feet below land-surface datum, 1947: Apr. 16, 29.78; Nov. 6, 28.65.

C-16-65-16bb (*1027, p. 11; 1075, p. 9). L. F. Oldensteadt. Water levels, in feet below land-surface datum, 1947: Apr. 16, 37.18; Nov. 16, 27.47.

Garfield County

C-7-88-29ab (*948, p. 8; 990, p. 6; 1020, p. 5; 1027, p. 11; 1075, p. 9). J. F. Smith.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	35.76	Apr. 12	33.25	July 17	25.80	Oct. 21	29.85
Feb. 18	36.09	May 20	30.83	Aug. 17	27.20	Nov. 15	34.01
Mar. 17	36.09	June 14	22.31	Sept.18	29.48	Dec. 18	38.90

Larimer County

B-5-68-17abb (*1027, p. 12; 1075, p. 9). George Peak. Water levels, in feet below land-surface datum, 1947: Apr. 28, 13.39; Oct. 27, 5.43.

B-6-68-1ba (*1027, p. 12; 1075, p. 9). M. J. Warner. Water levels, in feet below land-surface datum, 1947: May 2, 11.51; Nov. 18, 10.53.

B-7-68-9aaa (*1027, p. 12; 1075, p. 9). Edward Wright. Water levels, in feet below land-surface datum, 1947: May 7, 8.09; Nov. 4, 7.64.

B-7-68-10cbb (*1027, p. 12; 1075, p. 9). Drake Estate. Water levels, in feet below land-surface datum, 1947: May 7, 5.97; Nov. 4, 4.88.

B-7-68-22bbb (*1027, p. 13; 1075, p. 9). Ray Pitcher. Water levels, in feet below land-surface datum, 1947: May 2, 5.57; Nov. 18, 5.10.

B-7-68-23cbb (*1027, p. 13; 1075, p. 9). W. A. Scott. Water levels, in feet below land-surface datum, 1947: May 2, 7.28; Nov. 18, 6.44.

B-8-68-4bba (*1027, p. 13; 1075, p. 9). A. Heckman. Water levels, in feet below land-surface datum, 1947: May 7, 27.41; Nov. 4, 24.45.

B-8-68-10cbb (*1027, p. 13; 1075, p. 9). A. L. Bee. Water levels, in feet below land-surface datum, 1947: May 7, 16.34; Nov. 4, 16.22.

B-8-68-16aaa (*1027, p. 14; 1075, p. 9). R. E. Nutter. Water levels, in feet below land-surface datum, 1947: May 7, 21.72; Nov. 4, 21.46.

B-8-68-22cbb (*1027, p. 14; 1075, p. 9). J. E. Swansen. Water levels, in feet below land-surface datum, 1947: May 7, 9.60; Nov. 4, 9.56.

B-8-68-27cbb (*1027, p. 14; 1075, p. 9). A. L. Seamans. Water levels, in feet below land-surface datum, 1947: May 7, 12.39; Nov. 4, 12.10.

B-8-68-28aab (*1027, p. 15; 1075, p. 9). F. L. Bartels. Water levels, in feet below land-surface datum, 1947: May 7, 7.63; Nov. 4, 7.07.

B-8-68-33ccc (*1027, p. 15 ; 1075, p. 9). F. C. Kluver. Water levels, in feet below land-surface datum, 1947: May 7, 14.05; Nov. 4, 13.00.

B-9-68-17ab (*1027, p. 15 ; 1075, p. 9). Harlan Seworth. Water levels, in feet below land-surface datum, 1947: May 7, 45.87; Nov. 4, 43.44.

B-9-68-28bbb (*1027, p. 15; 1075, p. 10). E. F. Meedel. Water levels, in feet below land-surface datum, 1947: May 7, 22.10; Nov. 4, 20.00.

B-9-68-33bdc (*1027, p. 16; 1075, p. 10). W. E. Dalby. Water levels, in feet below land-surface datum, 1947: May 7, 31.09; Nov. 4, 26.68.

Lincoln County

C-9-56-26aa (*1075, p. 10). Owner unknown.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	20.10	May 3	19.30	Aug. 8	19.24	Nov. 16	19.33
Mar. 9	19.43	June 6	19.24	Sept.13	19.33	Dec. 20	a 20.41
Apr. 5	19.38	July 2	19.07	Oct. 13	a 19.73		

a Windmill pumping.

Logan County

B-7-52-7acc (*1027, p. 16; 1075, p. 10). H. F. Schaefer. Water levels, in feet below land-surface datum, 1947: Sept. 8, 11.65; Oct. 6, 11.32.

B-7-53-21bcc (*1027, p. 16; 1075, p. 10). Victor Hessler.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
May 1	14.86	Oct. 6	14.72	Dec. 11	14.58
Aug. 28	a 17.15	Nov. 4	13.50	30	14.69

a Pumped 2 hours prior to measurement.

B-7-53-23bbb (*1027, p. 16; 1075, p. 10). William Nisson.

Water level, in feet below land-surface datum, 1947

May 1	32.27	Oct. 6	27.61	Dec. 11	29.15
Sept. 8	28.05	Nov. 4	28.10	30	29.36

B-7-53-26ab (*1027, p. 16; 1075, p. 10). Ben Fisher.

Water level, in feet below land-surface datum, 1947

May 1	10.26	Oct. 6	9.40	Dec. 11	9.30
Sept. 8	8.65	Nov. 4	8.95		

B-7-53-33aaa (*1027, p. 17; 1075, p. 10). David Wagner. Water level, in feet below land-surface datum, 1947: May 1, 13.47. Well caved in before Oct. 6, 1947; measurements discontinued.

B-7-54-12cbb (*1027, p. 17; 1075, p. 10). John Amen.

Water level, in feet below land-surface datum, 1947

Sept. 8	10.95	Nov. 4	11.15	Dec. 30	11.10
Oct. 6	9.18	Dec. 11	10.88		

B-8-52-10acc (*1027, p. 17; 1075, p. 10). G. A. Henderson.

Water level, in feet below land-surface datum, 1947

May 1	5.55	Oct. 6	4.65	Dec. 10	4.70
Sept. 9	3.76	Nov. 4	4.95		

B-8-52-17cbb (*1027, p. 17; 1075, p. 10). Joseph Wilson.

Water level, in feet below land-surface datum, 1947

May 1	19.94	Aug. 9	16.88	Nov. 4	17.30
July 28	18.50	Oct. 6	16.50	Dec. 10	18.04

Morgan County

B-1-55-18bcc (*1027, p. 17; 1075, p. 10). R. H. Awmiller.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
May 1	37.19	Oct. 2	39.15	Dec. 9	38.22
Aug. 6	38.00	Nov. 3	38.92	31	38.38

B-1-55-31dac (*1027, p. 18; 1075, p. 10). James Bolinger. Depth 62 feet. Water levels, in feet below land-surface datum, 1947: May 1, 33.70; Aug. 8, 37.20; Oct. 2, 33.27; Dec. 31, 32.86.

B-1-56-1dcc (*1027, p. 18; 1075, p. 10). Mrs. John Shaw.

Water level, in feet below land-surface datum, 1947

May 1	34.82	Nov. 3	36.86	Dec. 31	36.64
Oct. 2	38.00	Dec. 9	36.45		

B-1-60-12cc. Anna Hogan. SW¼SW¼ sec. 12, T. 1 N., R. 60 W. Irrigation well, diameter and depth unknown. Measuring point, hole in base of pump, 1.0 foot above land-surface datum. Equipped with electrically driven turbine pump.

Water level, in feet below land-surface datum, 1946-47

Oct. 30, 1946	33.07	Oct. 3, 1947	37.50	Dec. 3, 1947	33.12
Apr. 30, 1947	30.16	Nov. 11	34.27		

B-1-60-23bcc (*1027, p. 18; 1075, p. 10). Louis Westhoff. Water levels, in feet below land-surface datum, 1947: Apr. 30, 15.83; Nov. 4, 19.50; Dec. 3, 18.24.

B-1-60-26ccc (*1027, p. 18; 1075, p. 10). D. Baumgardner. Measurements discontinued after Nov. 3, well replaced by B-1-60-27dd. Water levels, in feet below land-surface datum, 1947: Apr. 30, 18.37; Nov. 3, 22.45.

B-1-60-27dd. Paul Wells. SE¼SE¼ sec. 27, T. 1 N., R. 60 W. Irrigation well, diameter 18 inches, depth 107 feet. Measuring point, top of casing, 0.5 foot above land-surface datum. Equipped with electrically driven turbine pump. Water levels, in feet below land-surface datum, 1947: Nov. 4, 20.44; Dec. 3, 19.17.

B-2-55-30bcc2 (*1027, p. 18; 1075, p. 10). J. A. Bickert. Water levels, in feet below land-surface datum, 1947: May 1, 20.50; Aug. 6, 25.00.

B-2-56-1ddd (*1027, p. 18; 1075, p. 10). G. A. Foiles.

Water level, in feet below land-surface datum, 1947

May 1	14.35	Oct. 2	15.44	Dec. 9	16.07
Aug. 6	15.04	Nov. 3	15.15	31	15.63

B-2-56-13aaa (*1027, p. 18; 1075, p. 11). J. E. Hunt.

Water level, in feet below land-surface datum, 1947

May 1	4.55	Oct. 2	7.07	Dec. 9	5.90
July 23	4.10	Nov. 3	6.50	31	5.76

B-2-56-24ddd (Published incorrectly as B-2-56-24aaa.) (*1027, p. 19; 1075, p. 11). Max Peterson. Diameter 48 inches, depth 58 feet. No measurements made in 1947.

B-2-60-4ddd (*1027, p. 19; 1075, p. 11). William Reck. Water levels, in feet below land-surface datum, 1947: Apr. 30, 54.59; Aug. 26, 58.47; Nov. 4, 56.09; Dec. 4, 55.59.

B-2-60-13dd (*1027, p. 19; 1075, p. 11). C. A. Bresnahan. Water levels, in feet below land-surface datum, 1947: Apr. 30, 46.83; Oct. 2, 50.55; Nov. 4, 49.48; Dec. 4, 48.91.

B-2-60-26dcd (*1027, p. 19; 1075, p. 11). R. A. Baer. New measuring point, vent hole in pump base, 1.0 foot above land-surface datum and 1.0 foot above old measuring point. Water levels, in feet below land-surface datum, 1947: Apr. 30, 54.88; Oct. 3, 66.68; Nov. 4, 60.99; Dec. 4, 59.29.

B-3-56-7ccb (*1027, p. 20; 1075, p. 11). Jacob Lenhardt.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
May 1	29.52	Oct. 2	24.25	Dec. 15	24.56
July 15	29.40	Nov. 7	23.90		

B-3-56-24bb (*1027, p. 20; 1075, p. 11). Chas. Henry. Depth 54 feet. Reported incorrectly as 47 feet in Water Supply Paper 1027.

Water level, in feet below land-surface datum, 1947

May 1	4.72	Oct. 2	6.05	Dec. 9	5.40
July 18	7.00	Nov. 3	5.65	31	5.40

B-3-57-6dc (*1027, p. 20; 1075, p. 11). City of Fort Morgan.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.85	44.94	45.15	45.53	45.93	45.84	45.92	45.42	.....	.....	44.08	43.47
2	.....	44.94	45.15	45.56	45.99	.....	45.92	45.42	.....	.....	44.03	43.49
3	.....	44.96	45.18	45.58	46.02	.....	45.92	45.41	.....	.....	44.01	43.47
4	.....	44.96	45.21	45.59	46.03	.....	45.90	45.43	.....	.....	43.98	43.44
5	.....	44.96	45.22	45.59	46.05	.....	45.90	45.46	.....	.....	43.93	43.44
6	.....	44.99	45.23	45.60	46.08	.....	45.89	45.45	45.34	44.58	43.91	43.42
7	.....	44.99	45.23	45.61	46.10	.....	45.90	45.45	45.33	44.58	43.89	43.42
8	.....	44.99	45.25	45.63	46.10	.....	45.90	45.50	45.30	44.57	43.87	43.41
9	.....	44.99	45.26	45.66	46.11	.....	45.87	45.52	45.30	44.52	43.86	43.42
10	.....	45.00	45.26	45.67	46.10	.....	45.86	45.53	45.27	44.49	43.85	43.43
11	.....	45.01	45.28	45.67	46.10	.....	45.84	45.54	45.22	44.45	43.81	43.43
12	.....	45.01	45.29	45.68	46.08	.....	45.84	.....	45.17	44.44	43.76	43.41
13	44.85	45.02	45.29	45.69	46.11	.....	45.83	.....	45.13	44.41	43.74	43.40
14	44.86	45.03	45.29	45.70	46.12	.....	45.80	.....	45.10	44.38	43.71	43.41
15	44.89	45.03	45.30	45.72	46.10	.....	45.79	.....	45.07	44.35	43.69	43.41
16	44.90	45.04	45.31	45.73	46.04	.....	45.78	.....	45.04	44.32	43.67	43.40
17	44.89	45.06	45.32	45.74	46.01	.....	45.74	.....	45.02	44.30	43.64	43.41
18	44.89	45.07	45.36	45.77	46.00	.....	45.70	.....	45.02	44.29	43.63	43.41
19	44.86	45.10	45.36	45.77	45.99	.....	45.69	.....	44.99	44.27	43.61	43.42
20	44.90	45.10	45.38	45.78	45.97	.....	45.66	.....	45.99	44.24	43.60	43.42
21	44.90	45.10	45.38	45.81	45.97	.....	45.66	.....	45.97	44.23	43.60	43.39
22	44.90	45.10	45.38	45.83	45.99	.....	45.61	.....	45.94	44.22	43.56	43.41
23	44.90	45.11	.....	45.84	45.97	45.80	45.57	.....	45.90	44.19	43.54	43.41
24	44.89	45.12	.....	45.84	45.93	45.80	45.51	.....	45.90	44.17	43.54	43.45
25	44.90	45.13	45.43	45.85	45.93	45.83	45.46	45.55	45.87	.....	43.53	43.45
26	44.88	45.13	45.45	45.86	45.91	45.85	45.43	45.52	45.85	.....	43.53	43.43
27	44.90	45.16	45.46	45.90	45.92	45.87	45.43	45.50	45.83	.....	43.53	43.41
28	44.90	45.15	45.47	45.90	45.91	45.90	45.42	45.50	45.82	.....	43.51	43.41
29	44.92		45.49	45.91	45.87	45.92	45.46	45.50	45.80	.....	43.51	43.43
30	44.92		45.50	45.93	45.86	45.90	45.47	.....	45.78	44.12	43.49	43.45
31	44.93		45.53		45.85		45.41	.....		44.11		43.46

B-3-57-7cbc (*1027, p. 23; 1075, p. 11). Fred Kimball, Sr.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
May 8	48.60	Aug. 18	49.26	Nov. 3	46.72
July 8	47.50	Oct. 1	47.97	Dec. 2	46.42

B-3-57-30bbc (*1027, p. 23; 1075, p. 11). Hanna & Gelroth. Incorrectly reported as Hanna & Schillereff in Water Supply Paper 1027.

Water level, in feet below land-surface datum, 1947

Apr. 30	14.20	July 8	12.24	Nov. 3	11.95
May 20	13.95	Oct. 1	13.10	Dec. 3	12.60

B-3-58-8ca (Published incorrectly as B-3-58-8bcc in *1027, p. 23; 1075, p. 11). H. W. Clatworthy.

Water level, in feet below land-surface datum, 1947

Apr. 30	53.05	Aug. 18	50.37	Nov. 3	48.79
July 9	50.78	Oct. 1	49.68	Dec. 2	49.56

B-3-58-11bb (*1027, p. 23; 1075, p. 11). Alix Stark. Water levels, in feet below land-surface datum, 1947: Apr. 30, 56.21; Oct. 1, 56.90; Nov. 3, 54.47; Dec. 2, 53.76.

B-3-60-3ccc (*1027, p. 24; 1075, p. 12). H. A. Frank. Formerly owned by Laura E. Harshman Estate. Measuring point beginning Sept. 23, 1947, end of 2-inch pipe, 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 30	58.95	Oct. 13	63.02	Dec. 8	61.54
Sept.23	66.20	Nov. 4	62.63		

B-3-60-13cd (*1075, p. 12). Kroh Bros. SE¼SW¼ sec. 13, T. 3 N., R. 60 W. Incorrectly reported as SE¼SW¼ sec. 23, T. 3 N., R. 60 W. in Water-Supply Paper 1075.

Water level, in feet below land-surface datum, 1947

Apr. 30	54.93	Oct. 8	56.34	Dec. 4	55.45
Sept.24	57.92	Nov. 4	55.74		

B-3-60-22ccc (*1027, p. 24; 1075, p. 12). B. A. Holden. Water levels, in feet below land-surface datum, 1947: Apr. 30, 53.79; Oct. 3, 62.33; Nov. 4, 56.84; Dec. 4, 56.14.

B-3-60-32cba (*1027, p. 24; 1075, p. 12). S. F. Danesthrop. Water levels, in feet below land-surface datum, 1947: Apr. 30, 41.81; Nov. 4, 42.44; Dec. 4, 42.30.

B-4-55-4dc (*1027, p. 24; 1075, p. 12). Mr. Walker. Formerly owned by F. DeBacker. SW¼SE¼ sec. 4, T. 4 N., R. 55 W. Incorrectly reported as NW¼SE¼ sec. 4, T. 4 N., R. 55 W. in Water-Supply Paper 1027. Water level, in feet below land-surface datum, 1947: May 1, 11.45. Measurements discontinued.

B-4-55-9dcc (*1027, p. 24; 1075, p. 12). R. Skhooleyet. Formerly owned by E. C. Blauer.

Water level, in feet below land-surface datum, 1947

May 1	17.37	Aug. 28	15.30	Nov. 3	15.35
July 11	15.80	Oct. 6	15.15	Dec. 9	15.81

B-4-55-18ccd (*1027, p. 25; 1075, p. 12). Mr. Baumgardner.

Water level, in feet below land-surface datum, 1947

May 1	21.00	Oct. 6	18.49	Dec. 9	18.62
Aug. 28	19.40	Nov. 3	17.95		

B-4-56-23dc (*1027, p. 25; 1075, p. 12). Hansen Bros.

Water level, in feet below land-surface datum, 1947

May 1	20.35	Aug. 28	18.40	Nov. 3	18.29
July 1	19.80	Oct. 6	17.99	Dec. 9	18.86

B-4-60-34cc (*1027, p. 25; 1075, p. 12). M. D. Harshman. Measurements discontinued.

B-4-60-34dcc (*1075, p. 12). H. E. Brubaker. Depth 220 feet.

Water level, in feet below land-surface datum, 1947

Apr. 30	67.40	Oct. 3	73.55	Dec. 8	70.65
Aug. 18	74.44	Nov. 4	71.96		

B-5-55-35ddc (*1027, p. 25; 1075, p. 12). John Pabst. New measuring point, top of wooden platform, 1.3 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: May 1, 17.70; Aug. 28, 17.97.

Otero County

C-22-58-21bd (*1027, p. 26; 1075, p. 12). C. Meyer. Water levels, in feet below land-surface datum, 1947: Apr. 16, 32.17; Nov. 6, 28.30. Measurement taken in adjacent well with measuring point approximately 0.8 foot higher.

C-22-59-16dca (*1027, p. 26; 1075, p. 12). C. J. Stauder. Water levels, in feet below land-surface datum, 1947: Apr. 16, 21.83; Nov. 6, 19.25.

C-22-59-17bd (*1027, p. 26; 1075, p. 12). W. H. Sauer. Water levels, in feet below land-surface datum, 1947: Apr. 16, 15.18; Nov. 6, 12.88.

C-22-59-17ccc (*1027, p. 26; 1075, p. 12). M. Simpson. Water levels, in feet below land-surface datum, 1947: Apr. 16, 20.75; Nov. 6, 16.48.

C-22-59-18ccc (*1027, p. 26; 1075, p. 12). M. C. Kesterson. Water levels, in feet below land-surface datum, 1947: Apr. 16, 23.12; Nov. 6, 18.5.

C-22-59-24bc (*1027, p. 27; 1075, p. 12). H. I. Barnard. Water levels, in feet below land-surface datum, 1947: Apr. 16, 22.59; Nov. 6, 18.65.

C-22-59-29cbb (*1027, p. 27; 1075, p. 12). M. Madson. Water levels, in feet below land-surface datum, 1947: Apr. 16, 13.78; Nov. 6, 11.10.

C-23-57-3bc (*1027, p. 27; 1075, p. 12). H. L. Garber. Water levels, in feet below land-surface datum, 1947: Apr. 15, 23.72; Nov. 6, 20.43.

C-23-57-12daa (*1027, p. 27; 1075, p. 12). American Crystal Sugar Co. Water levels, in feet below land-surface datum, 1947: Apr. 15, 10.64; Nov. 6, 9.90.

C-23-57-32bdb (*1027, p. 27; 1075, p. 12). J. C. Vroman. Water levels, in feet below land-surface datum, 1947: Apr. 16, 12.35; Nov. 6, 12.03.

Pitkin County

C-8-88-27bc (*948, p. 8; 990, p. 7; 1020, p. 5; 1027, p. 27; 1075, p. 13). R. O. Sewell.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	30.36	Apr. 12	29.56	July 13	15.45	Oct. 21	25.00
Feb. 18	28.73	May 20	18.58	Aug. 10	15.33	Nov. 15	30.90
Mar. 17	24.73	June 14	21.59	Sept.18	20.60	Dec. 18	26.00

Pueblo County

C-20-63-34bcd (*1027, p. 28; 1075, p. 13). Excelsior Ranch. Water level, in feet below land-surface datum, 1947: Nov. 6, 10.92.

C-20-60-33aa (*948, p. 8; 990, p. 7; 1020, p. 5; 1027, p. 28; 1075, p. 13). C. M. Ellsworth heirs. Measurements discontinued after Mar. 26; new owner converted well into cesspool. Water levels, in feet below land-surface datum, 1947: Jan. 10, 11.48; Jan. 23, 11.49; Feb. 26, 11.60; Mar. 26, 11.52.

C-21-61-23bb (*1027, p. 28; 1075, p. 13). Frank Trebis. Water levels, in feet below land-surface datum, 1947: Apr. 15, 15.38; Nov. 6, 16.10.

C-21-61-23db (*1027, p. 28; 1075, p. 13). Ralph Wright. Water level, in feet below land-surface datum, 1947: Nov. 6, 11.72.

C-21-62-9cdl (*1027, p. 28; 1075, p. 13). Bert Potestio. Measurements discontinued.

C-21-62-9cd2 (*1075, p. 13). Bert Potestio. Water level, in feet below land-surface datum, 1947: Nov. 6, 13.98.

C-21-63-8ca (*1027, p. 29; 1075, p. 13). J. T. McCorkle. Water levels, in feet below land-surface datum, 1947: Apr. 16, 33.04; Nov. 6, 28.5.

C-21-63-11cdc (*1027, p. 29; 1075, p. 13). C. A. Wilcox. Water levels, in feet below land-surface datum, 1947: Apr. 16, 22.35; Nov. 6, 19.08.

C-21-64-3dbd (*1027, p. 29; 1075, p. 13). Joseph Thomas. Water levels, in feet below land-surface datum, 1947: Apr. 16, 19.31; Nov. 6, 14.60.

C-21-64-10bbc (*1027, p. 29; 1075, p. 13). Tony Morrello. Water levels, in feet below land-surface datum, 1947: Apr. 16, 12.70; Nov. 6, 9.61.

Washington County

B-5-54-20bcc (*1027, p. 29; 1075, p. 13). Mr. Palmer. Formerly owned by A. Segeast.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
May 1	16.51	Oct. 6	13.75	Dec. 9	14.30
Aug. 21	14.70	Nov. 3	13.80		

Weld County

B-1-63-2ccc (*1027, p. 30; 1075, p. 13). R. Ogi.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	62.81	62.25	.....	61.67	60.50	59.66	.....	62.33	61.09	59.84	58.87
2	.....	62.72	62.18	.....	61.54	60.45	.....	.....	62.26	61.08	59.74	58.90
3	.....	62.76	62.15	.....	61.42	60.45	.....	.....	62.10	60.98	59.71	58.83
4	.....	62.72	62.18	.....	61.39	60.43	.....	.....	62.30	60.95	59.70	58.79
5	.....	62.64	62.22	61.75	61.52	.....	.....	.....	62.54	60.90	59.67	58.79
6	.....	62.65	62.15	61.75	61.61	.....	.....	.....	62.60	60.82	59.64	58.74
7	.....	62.65	62.10	61.70	61.62	.....	.....	.....	.....	60.81	59.61	58.72
8	.....	62.63	62.08	.....	.....	.....	.....	.....	.....	60.75	59.58	58.69
9	.....	62.62	62.09	.....	.....	60.36	59.70	.....	.....	60.75	59.52	58.68
10	63.20	62.52	62.05	.....	.....	60.41	59.58	.....	62.69	60.68	59.50	58.67
11	63.15	62.55	62.05	.....	.....	60.32	59.51	62.5	62.60	60.69	59.48	58.61
12	63.15	62.55	62.12	.....	.....	60.22	59.57	.....	62.41	.....	59.46	58.60
13	63.12	62.52	62.05	.....	.....	60.18	59.60	.....	62.20	.....	59.39	58.57
14	63.06	62.45	62.05	.....	61.08	60.16	.....	.....	62.13	.....	59.35	58.51
15	63.05	62.46	62.04	.....	61.01	60.12	.....	.....	62.09	.....	59.35	58.50
16	63.00	62.45	61.98	.....	60.95	60.08	.....	.....	61.88	.....	59.31	58.50
17	.....	62.45	61.98	.....	60.93	.....	.....	.....	61.83	.....	59.29	58.45
18	.....	62.42	61.98	.....	60.88	.....	.....	.....	61.81	.....	59.24	58.43
19	.....	62.44	61.95	.....	60.83	.....	60.42	.....	61.81	.....	59.22	58.41
20	.....	62.40	61.93	.....	60.80	.....	60.45	.....	.....	.....	59.18	58.42
21	.....	62.35	61.91	.....	60.88	60.07	60.82	62.54	.....	.....	59.18	58.36
22	62.95	62.35	61.87	.....	.....	60.00	61.05	62.75	.....	.....	59.15	58.31
23	62.89	62.35	61.94	.....	60.72	59.90	.....	62.80	.....	.....	59.10	58.31
24	62.89	62.31	61.94	61.49	60.80	59.80	.....	62.75	.....	.....	59.07	58.30
25	62.90	62.29	61.88	61.63	60.70	59.88	.....	62.55	.....	.....	59.08	58.28
26	62.82	62.29	61.88	61.60	60.69	59.75	.....	.....	61.36	.....	59.03	58.21
27	62.85	62.23	61.86	61.53	60.60	.....	.....	.....	61.26	.....	59.03	58.20
28	62.79	62.29	.....	61.54	60.60	.....	.....	.....	61.22	.....	58.97	58.18
29	62.80		.....	61.45	60.54	.....	60.90	62.45	61.17	59.87	58.98	58.13
30	62.80		.....	61.60	60.46	.....	60.97	62.50	61.10	59.88	58.91	58.13
31	62.83		.....		60.50		.....	62.36		59.88		58.12

B-1-63-2ddc (*1027, p. 31; 1075, p. 14). Mr. Rider.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 30	45.41	Oct. 8	43.60	Nov. 5	43.17
Sept.19	43.67	29	43.20	Dec. 8	43.56

B-1-63-3ccc (*1027, p. 31; 1075, p. 14). John Baumgardner.

Water level, in feet below land-surface datum, 1947

Apr. 30	52.00	Oct. 8	51.03	Nov. 5	49.33
Sept.19	52.32	29	49.53	Dec. 8	48.37

B-1-63-9dd (*1027, p. 31; 1075, p. 14). Mr. Shaklee.

Water level, in feet below land-surface datum, 1947

Apr. 30	56.15	Oct. 8	53.37	Nov. 5	51.81
Sept.19	54.04	29	52.70	Dec. 8	51.54

B-1-63-10cdd (*1027, p. 31; 1075, p. 14). L. H. Alden.

Water level, in feet below land-surface datum, 1947

Apr. 30	60.62	Oct. 8	58.53	Nov. 5	57.08
Sept.19	59.70	29	57.42	Dec. 8	56.17

B-1-63-15dc (*1027, p. 32; 1075, p. 14). F. C. Kluver. Water levels, in feet below land-surface datum, 1947: Apr. 30, 82.62; Oct. 8, 81.75; Oct. 29, 79.54; Nov. 5, 79.02.

B-1-63-22ddc (*1027, p. 32; 1075, p. 14). J. J. Suppes.

Water level, in feet below land-surface datum, 1947

Apr. 30	83.01	Oct. 8	81.66	Nov. 5	80.40
Sept.19	85.05	29	80.60	Dec. 8	79.47

B-1-63-27dc (*1027, p. 32; 1075, p. 14). William Vogt.

Water level, in feet below land-surface datum, 1947

Apr. 30	93.10	Oct. 29	92.45	Dec. 8	91.87
Oct. 8	94.23	Nov. 5	92.23		

B-1-63-28abb (*1027, p. 32; 1075, p. 14). Hudson-Gardens Co.

Water level, in feet below land-surface datum, 1947

Apr. 30	70.36	Oct. 8	72.70	Nov. 5	72.20
Sept.22	72.79	29	72.92	Dec. 8	73.54

B-1-64-18bbd (*1027, p. 32; 1075, p. 14). Joseph DeBell. Water levels, in feet below land-surface datum, 1947: Apr. 29, 14.65; Oct. 28, 11.95.

B-1-65-12ccc (*1027, p. 32; 1075, p. 14). Joseph Wertz.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Apr.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	14.00	13.33	13.12	13.60	13.50	13.51
2	.....	.....	13.94	13.29	13.10	13.55	13.45	13.60
3	.....	.....	13.89	13.24	13.10	13.50	13.44	13.59
4	.....	.....	13.85	13.42	13.11	13.51	13.48	13.54
5	.....	.....	13.89	14.10	13.09	13.50	13.48	13.55
6	.....	.....	13.83	14.50	13.10	13.49	13.46	13.54
7	.....	.....	13.71	14.74	13.10	13.50	13.48	13.56
8	.....	.....	13.62	15.00	13.12	13.50	13.48	13.58
9	.....	.....	13.57	15.25	13.78	13.48	13.46	13.62
10	.....	.....	13.21	15.50	14.40	13.45	13.48	13.62
11	.....	.....	13.10	15.52	14.65	13.53	13.50	13.61
12	.....	.....	.....	15.11	14.80	13.55	13.50	13.64
13	.....	.....	13.13	14.76	15.01	13.50	13.48	13.62
14	.....	.....	13.10	14.40	15.13	13.47	13.49	13.59
15	.....	.....	13.04	14.62	15.10	13.48	13.50	13.60
16	.....	.....	13.05	14.95	15.52	13.46	13.50	13.63
17	.....	.....	13.10	15.02	15.75	13.50	13.50	13.61
18	.....	.....	13.10	15.30	15.58	13.51	13.50	13.62

B-1-65-12ccc--Continued.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Apr.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	.....	.....	13.09	15.12	14.99	13.50	13.50	13.66
20	.....	.....	13.10	14.35	14.68	13.47	13.50	13.69
21	.....	.....	13.10	13.80	14.50	13.44	13.53	13.62
22	.....	.....	13.14	13.25	14.34	13.50	13.55	13.68
23	.....	.....	13.17	13.16	14.20	13.50	13.54	13.69
24	.....	14.14	13.17	13.31	14.12	13.50	13.54	13.71
25	.....	14.14	13.14	13.32	14.03	13.50	13.59	13.71
26	.....	14.08	12.89	13.30	13.93	13.49	13.58	13.66
27	.....	13.91	12.72	13.29	13.83	13.47	13.59	13.66
28	.....	14.00	12.74	13.24	13.78	13.45	13.59	13.64
29	17.17	14.00	13.20	13.20	13.70	13.44	13.62	13.62
30	.....	14.00	13.34	13.19	13.64	13.48	13.60	13.69
31			13.38	13.17		13.50		13.69

B-1-65-24cdc (*1027, p. 33 ; 1075, p. 14). Joseph Wertz. Water levels, in feet below land-surface datum, 1947: Apr. 29, 17.21; Oct. 28, 13.61.

B-1-65-25cd (*1027, p. 33; 1075, p. 14). Fred Haffner, Sr. Water levels, in feet below land-surface datum, 1947: Apr. 29, 33.41; Oct. 28, 32.30.

B-1-66-7dd (*1027, p. 33; 1075, p. 15). W. A. Wallace. Water levels, in feet below land-surface datum, 1947: Apr. 28, 19.03; Oct. 27, 14.94.

B-1-66-30ad (*1027, p. 33; 1075, p. 15). G. J. Mancini. Water levels, in feet below land-surface datum, 1947: Apr. 29, 17.70; Oct. 28, 13.70.

B-1-66-31dcd (*1027, p. 33; 1075, p. 15). Carl Caranci. Water levels, in feet below land-surface datum, 1947: Apr. 29, 19.10; Oct. 28, 17.50.

B-2-62-18cbc (*1027, p. 34; 1075, p. 15). Mrs. Sadie Knox.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 29	24.30	Oct. 9	24.94	Nov. 5	24.75
Sept.23	25.08	29	24.43	Dec. 8	24.60

B-2-62-19cdc (*1027, p. 34; 1075, p. 15). M. C. Klausner. Water level, in feet below land-surface datum, 1947: Apr. 29, 35.27. Well caved in after this date and is being replaced by B-2-62-19cdc2.

B-2-62-19cdc2. M. C. Klausner. SW¼SE¼SW¼ sec. 19, T. 2 N., R. 62 W. Irrigation well, diameter 18 inches, depth 87 feet. Measuring point, top of casing, 1.5 feet above land-surface datum. Equipped with electrically driven turbine pump. Measured yield in 1943, 1,168 gallons a minute. This well replaced B-2-62-19cdc and is 75 feet west of it. Water levels, in feet below land-surface datum, 1947: Sept. 23, 38.25; Oct. 29, 36.98; Nov. 5, 36.75; Dec. 8, 36.17.

B-2-63-15dcd (*1027, p. 34; 1075, p. 15). Mrs. Sadie Knox.

Water level, in feet below land-surface datum, 1947

Apr. 29	21.02	Oct. 29	21.30	Dec. 8	20.55
Oct. 9	26.32	Nov. 5	21.03		

B-2-63-22cc (*1027, p. 35; 1075, p. 15). W. M. Huff.

Water level, in feet below land-surface datum, 1947

Apr. 29	33.47	Oct. 8	34.36	Nov. 5	32.70
Sept.23	35.40	29	33.02	Dec. 8	31.80

B-2-63-22dc (*1027, p. 35 ; 1075, p. 15). Zimbleman Bros.

B-2-63-22dc--Continued.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 29	36.30	Oct. 9	39.00	Nov. 5	36.20
Sept.23	41.54	29	36.60	Dec. 8	35.09

B-2-63-23acc (*1027, p. 35 ; 1075, p. 15). Edward Weickum.

Water level, in feet below land-surface datum, 1947

Apr. 29	47.16	Oct. 9	46.61	Nov. 5	46.63
Sept.22	47.60	29	46.73	Dec. 8	45.52

B-2-63-28ddd (*1027, p. 35 ; 1075, p. 15). C. V. Maddux.

Water level, in feet below land-surface datum, 1947

Apr. 29	40.18	Oct. 9	39.97	Nov. 5	38.40
Sept.22	40.92	29	38.72	Dec. 8	37.54

B-2-63-32aa (*1027, p. 36; 1075, p. 15). H. Young.

Water level, in feet below land-surface datum, 1947

Apr. 29	32.06	Oct. 9	30.45	Nov. 5	30.13
Sept.22	30.92	29	29.79	Dec. 8	29.78

B-2-63-34ccc (*1027, p. 36; 1075, p. 15). R. L. Martin.

Water level, in feet below land-surface datum, 1947

Apr. 29	56.46	Oct. 29	54.65	Dec. 8	53.19
Oct. 9	55.74	Nov. 5	54.32		

B-2-63-35dcc (*1027, p. 36; 1075, p. 15). William A. Carlson.

Water level, in feet below land-surface datum, 1947

Apr. 29	48.83	Oct. 28	48.95	Dec. 8	48.02
Oct. 9	50.75	Nov. 5	48.76		

B-2-63-36bcb (*1027, p. 36; 1075, p. 15). Martin Sheid.

Water level, in feet below land-surface datum, 1947

Apr. 29	48.55	Oct. 9	49.94	Nov. 5	49.02
Sept.22	50.88	29	49.10	Dec. 8	48.49

B-2-64-30cbc (*1027, p. 37; 1075, p. 15). Floyd Schroeder. Water levels, in feet below land-surface datum, 1947: Apr. 29, 10.70; Oct. 29, 11.26.

B-2-66-7ddd (*1027, p. 37; 1075, p. 15). A. L. Johnson. Water levels, in feet below land-surface datum, 1947: Apr. 28, 14.25; Oct. 27, 10.05.

B-2-66-20bc (*1027, p. 37; 1075, p. 15). E. F. Krause. Water levels in feet below land-surface datum, 1947: Apr. 28, 14.98; Oct. 27, 10.62.

B-2-66-29cc (*1027, p. 37; 1075, p. 15). S. J. Rhode. Water levels, in feet below land-surface datum, 1947: Apr. 28, 20.05; Oct. 27, 15.28.

B-3-64-17cc (*1027, p. 38; 1075, p. 15). E. D. Seldin. Water levels, in feet below land-surface datum, 1947: Apr. 29, 5.30; Oct. 29, 7.40.

B-3-64-30ccc (*1027, p. 38; 1075, p. 15). Mrs. Maude C. Hanson. Water levels, in feet below land-surface datum, 1947: Apr. 29, 5.36; Oct. 29, 7.39.

B-3-66-7dd (*1027, p. 38; 1075, p. 15). F. Salmanca. Measurements discontinued.

B-3-66-18cbc. August Engdahl. SW¼NW¼SW¼ sec. 18, T. 3 N., R. 66 W. Irrigation well, diameter 18 inches, depth 30 feet. Measuring point, top of pump base, 0.8 foot above land-surface datum. Equipped with electrically driven turbine pump. Water levels, in feet below land-surface datum, 1947: Apr. 28, 19.12; Oct. 27, 10.71.

B-4-64-1ccc (*1027, p. 38; 1075, p. 15). Mrs. Alice St. John. Water levels, in feet below land-surface datum, 1947: May 2, 8.87; Oct. 29, 8.37.

B-4-64-10ddd (*1027, p. 38; 1075, p. 15). F. L. Chestnut. Water levels, in feet below land-surface datum, 1947: May 2, 7.44; Oct. 29, 6.66.

B-4-64-12cc (*1027, p. 38; 1075, p. 16). H. Duell. Water levels, in feet below land-surface datum, 1947: May 2, 14.72; Oct. 29, 13.50.

B-4-65-6da (*1027, p. 39; 1075, p. 16). C. E. Goodner. Water levels, in feet below land-surface datum, 1947: Apr. 28, 14.08; Oct. 27, 7.65.

B-4-65-18daa (*1027, p. 39; 1075, p. 16). Root Bros. Water levels, in feet below land-surface datum, 1947: Apr. 28, 9.32; Oct. 27, 7.10.

B-4-66-9cdd (*1027, p. 39; 1075, p. 16). E. S. Linden. Measurements discontinued.

B-4-66-9cdc (Published incorrectly as B-4-66-13cdc in *1075, p. 16). E. S. Linden. Water levels, in feet below land-surface datum, 1947: Apr. 28, 25.91; Oct. 27, 17.40.

B-4-66-13dd (*1027, p. 39; 1075, p. 16). Paul Jewel. Water levels, in feet below land-surface datum, 1947: Apr. 28, 16.70; Oct. 27, 13.29.

B-4-66-14bab (*1027, p. 40; 1075, p. 16). W. H. Ewing. Water levels, in feet below land-surface datum, 1947: Apr. 28, 21.40; Oct. 27, 12.68.

B-4-66-15ccc (*1027, p. 40; 1075, p. 16). H. G. Martin. Water levels, in feet below land-surface datum, 1947: Apr. 28, 28.50; Oct. 27, 17.30.

B-4-66-15ddd (*1027, p. 40; 1075, p. 16). M. L. Winslow.

Lowest daily water level, in feet below land-surface datum, 1947

Day	Jan.	Mar.	Apr.	May	June	Oct.
1	.....	.....	11.85	12.40	.....	.....
2	.....	.....	11.88	12.41	.....	.....
3	.....	11.23	11.90	12.42	.....	.....
4	.....	11.26	11.91	12.43	.....	.....
5	.....	11.30	.....	12.45	.....	.....
6	.....	11.31	.....	12.48	.....	.....
7	.....	11.33	.....	12.50	.....	.....
8	.....	11.36	.....	12.51	.....	.....
9	.....	11.37	12.00	.....	.....	.....
10	10.00	11.39	12.01	.....	.....	.....
11	10.01	11.42	12.02	.....	.....	.....
12	10.02	11.45	12.04	.....	.....	.....
13	10.03	11.48	12.06	.....	.....	.....
14	10.07	11.50	12.08	.....	.....	.....
15	10.11	11.51	12.11	.....	.....	.....
16	10.13	11.52	12.13	.....	.....	.....
17	10.14	11.54	12.14	.....	.....	.....
18	10.78	11.58	12.15	.....	.....	.....
19	10.79	11.61	12.18	.....	.....	.....
20	10.81	11.62	12.20	.....	.....	.....
21	.....	11.64	12.21	.....	.....	.....
22	.....	11.65	12.24	.....	.....	.....
23	.....	11.67	12.26	.....	.....	.....
24	.....	11.69	12.28	.....	10.80	.....
25	.....	11.72	12.30	.....	.....	.....
26	.....	11.74	12.31	.....	.....	.....
27	.....	11.76	12.32	.....	.....	3.14
28	.....	11.78	12.33	.....	.....	.....
29	.....	11.79	12.36	.....	.....	.....
30	.....	11.80	12.38	.....	.....	.....
31	.....	18.82		.....		.....

B-4-66-17bcc (*1027, p. 43; 1075, p. 16). R. C. Patrie. Water levels, in feet below land-surface datum, 1947: Apr. 28, 7.23; Oct. 27, 6.58.

B-4-66-19ddd (*1027, p. 43; 1075, p. 16). J. C. Breckon. Water levels, in feet below land-surface datum, 1947: Apr. 28, 21.58; Oct. 27, 12.46.

B-4-66-27add (*1027, p. 43; 1075, p. 16). John O. Lorenz. Water levels, in feet below land-surface datum, 1947: Apr. 28, 5.28; Oct. 27, 3.60.

B-4-66-28cc (*1027, p. 43; 1075, p. 17). Elbert Cogburn. Water levels, in feet below land-surface datum, 1947: Apr. 28, 23.84; Oct. 27, 16.14.

B-4-66-31dcc (*1027, p. 43; 1075, p. 17). W. D. Farr. Water levels, in feet below land-surface datum, 1947: Apr. 28, 20.28; Oct. 27, 13.40.

B-4-67-13cd (*1027, p. 43; 1075, p. 17). E. H. Sappington. Water levels, in feet below land-surface datum, 1947: Apr. 28, 9.66; Oct. 27, 3.65.

B-5-64-35ddd (*1027, p. 43; 1075, p. 17). P. Hoshiko. Water levels, in feet below land-surface datum, 1947: May 2, 8.65; Oct. 29, 6.62.

B-5-65-13ddc (*1027, p. 44; 1075, p. 17). F. A. Plumb. Water levels, in feet below land-surface datum, 1947: Apr. 28, 18.75; Oct. 29, 9.81.

B-5-65-26bcc (*1027, p. 44; 1075, p. 17). George Alles, Sr. Water levels, in feet below land-surface datum, 1947: Apr. 28, 10.78; Oct. 27, 6.11.

B-5-65-27ccb (*1027, p. 44; 1075, p. 17). Henry A. Alles. Water levels, in feet below land-surface datum, 1947: Apr. 28, 14.19; Oct. 27, 9.30.

B-6-63-29bbb (*1027, p. 44; 1075, p. 17). H. L. Wells. Water levels, in feet below land-surface datum, 1947: May 2, 12.71; Nov. 18, 11.56.

B-6-64-24aaa (*1027, p. 44; 1075, p. 17). M. R. Leaver. Water levels, in feet below land-surface datum, 1947: May 2, 10.48; Nov. 18, 9.52.

B-6-64-26da (*1027, p. 45; 1075, p. 17). Asa Jones. Water levels, in feet below land-surface datum, 1947: May 2, 8.00; Nov. 18, 8.98.

B-6-64-30bba (*1027, p. 45; 1075, p. 17). M. O. Patten. Water levels, in feet below land-surface datum, 1947: May 2, 13.96; Nov. 18, 13.95.

B-6-64-32cab (*1027, p. 45; 1075, p. 17). Charles Moore. Water levels, in feet below land-surface datum, 1947: May 2, 26.00; Nov. 18, 24.73.

B-6-65-3bb (*1027, p. 45; 1075, p. 17). T. H. Wilson. Water levels, in feet below land-surface datum, 1947: Jan. 8, 8.20; May 12, 8.06; Nov. 18, 7.40.

B-6-65-10bbb (*1027, p. 45; 1075, p. 17). L. C. Roberts. Water levels, in feet below land-surface datum, 1947: Jan. 8, 8.53; May 12, 8.13; Nov. 18, 7.25.

B-6-65-15bbb (*1027, p. 46; 1075, p. 17). H. N. Huff. Water levels, in feet below land-surface datum, 1947: Jan. 8, 10.83; May 12, 11.36; Nov. 18, 9.88.

B-6-65-17bbc (*1027, p. 46; 1075, p. 17). H. W. Farr. Water levels, in feet below land-surface datum, 1947: May 9, 26.18; Nov. 18, 23.95.

B-6-65-18bbb (*1027, p. 46; 1075, p. 17). James Milne. Water levels, in feet below land-surface datum, 1947: May 9, 26.87; Oct. 29, 24.35.

B-6-65-21aab (*1027, p. 46; 1075, p. 17). H. N. Bickling. Water levels, in feet below land-surface datum, 1947: May 9, 10.67; Nov. 18, 8.66.

B-6-65-34bb (*1027, p. 47; 1075, p. 17). Ildo Williams. Water levels, in feet below land-surface datum, 1947: May 2, 15.00; Nov. 18, 10.37.

B-6-66-1bab (*1027, p. 47; 1075, p. 17). Gust Johnson. Water levels, in feet below land-surface datum, 1947: May 9, 26.63; Oct. 29, 26.60.

B-6-66-20ccd (*1027, p. 47; 1075, p. 17). J. K. Emerson. Water levels, in feet below land-surface datum, 1947: May 2, 15.18; Nov. 18, 12.95.

B-6-67-12bb (*1027, p. 47; 1075, p. 17). Chris Felte. Water levels, in feet below land-surface datum, 1947: May 2, 7.11; Nov. 18, 6.65.

B-6-67-17dc (*1027, p. 48; 1075, p. 17). Henry Kraus. Measuring point beginning Nov. 18, 1947, top of 36-inch casing, 1.4 feet below land-surface datum, 1.4 feet below old measuring point. Water levels, in feet below land-surface datum, 1947: May 2, 7.23; Nov. 18, 6.82.

B-6-67-22aaa (*1027, p. 48; 1075, p. 17). F. A. Davis. Water levels, in feet below land-surface datum, 1947: May 2, 7.70; Nov. 18, 6.86.

B-7-65-7bcc (*1027, p. 48; 1075, p. 18). A. B. Stewart. Water levels, in feet below land-surface datum, 1947: Jan. 8, 36.48; May 12, 36.22; Nov. 18, 36.30.

B-7-65-10bcb (*1027, p. 48; 1075, p. 18). M. H. Graham. Water levels, in feet below land-surface datum, 1947: Jan. 8, 11.93; Nov. 18, 12.58.

B-7-65-16bbb (*1027, p. 48; 1075, p. 18). K. Akahoshi. Water levels, in feet below land-surface datum, 1947: Jan. 8, 4.94; May 12, 5.50; Nov. 18, 4.96.

B-7-65-18cdb (*1027, p. 48; 1075, p. 18). Harry Clark. Water levels, in feet below land-surface datum, 1947: Jan. 8, 22.78; May 12, 23.75; Nov. 18, 23.10.

B-7-65-21aaa (*1027, p. 49; 1075, p. 18). H. G. Liebhart. Water levels, in feet below land-surface datum, 1947: Jan. 8, 7.20; Nov. 18, 7.38.

B-7-65-28aa (*1027, p. 49; 1075, p. 18). R. F. Blandon. Water levels, in feet below land-surface datum, 1947: Jan. 8, 14.92; May 12, 14.80; Nov. 18, 14.45.

B-7-65-30bbb (*1027, p. 49; 1075, p. 18). J. L. Nix. Water levels, in feet below land-surface datum, 1947: Jan. 8, 17.05; May 12, 17.35; Nov. 18, 16.53.

B-7-66-1ab (*1027, p. 49; 1075, p. 18). C. A. Pettibone. Water levels, in feet below land-surface datum, 1947: Jan. 8, 16.99; May 16, 17.73; Nov. 18, 14.81.

B-7-66-2abb (*1027, p. 50; 1075, p. 18). L. Fletcher. Water levels, in feet below land-surface datum, 1947: Jan. 8, 28.43; Nov. 18, 25.23.

B-7-66-14aba (*1027, p. 50; 1075, p. 18). A. A. Larson. Water levels, in feet below land-surface datum, 1947: May 9, 16.72; Nov. 18, 14.34.

B-7-66-14bcc (*1027, p. 50; 1075, p. 18). Mrs. Alice Ehn. Water levels, in feet below land-surface datum, 1947: May 9, 17.05; Nov. 18, 14.46.

B-7-66-25bcc (*1027, p. 51; 1075, p. 18). Guy Clarke. Water levels, in feet below land-surface datum, 1947: May 9, 28.98; Oct. 29, 28.87.

B-8-65-8bbb (*1027, p. 51; 1075, p. 18). H. L. Kramer. Water levels, in feet below land-surface datum, 1947: Jan. 8, 19.67; May 13, 20.40; Nov. 18, 20.63.

B-8-65-20dbb (*1027, p. 51; 1075, p. 18). Edward Vadeburg. Water levels, in feet below land-surface datum, 1947: Jan. 8, 13.75; May 13, 14.70; Nov. 18, 13.18.

B-8-65-28bbb (*1027, p. 51; 1075, p. 18). W. T. Miller. Water levels, in feet below land-surface datum, 1947: Jan. 8, 12.06; May 13, 11.99; Nov. 18, 10.60.

B-8-65-28dbb (*1027, p. 51; 1075, p. 18). A. C. Babb. Water levels, in feet below land-surface datum, 1947: Jan. 8, 9.05; Nov. 18, 7.50.

B-8-65-34abb (*1027, p. 52; 1075, p. 18). J. F. Duncan. Water levels, in feet below land-surface datum, 1947: Jan. 8, 5.84; Nov. 18, 5.08.

B-8-65-34dcc (*1027, p. 52; 1075, p. 18). A. B. McClave. New measuring point, top of 48-inch casing, 1.5 feet above land-surface datum, 3.2 feet above old measuring point. Water levels, in feet below land-surface datum, 1947: Jan. 8, 6.77; May 13, 6.72; Nov. 18, 6.36.

B-8-66-1bab (*1027, p. 52; 1075, p. 18). Herman Babb. Water levels, in feet below land-surface datum, 1947: Jan. 8, 19.65; May 13, 21.08; Nov. 18, 20.30.

B-8-66-22aaa (*1027, p. 53; 1075, p. 18). Troy Jones. Water levels, in feet below land-surface datum, 1947: Jan. 8, 16.20; May 13, 17.84, pumped recently; Nov. 18, 18.42.

B-8-66-26cbb2. C. Fisk. NW¼NW¼SW¼ sec. 26, T. 8 N., R. 66 W. Irrigation well, diameter 96 inches, depth 38 feet. Measuring point, top of plank cover, 1.7 feet above land-surface datum. Equipped with electrically driven turbine pump. This well replaces B-8-66-26cbb2 and is 50 feet west of it. Water levels, in feet below land-surface datum, 1947: Jan. 8, 25.2; May 13, 24.24; Nov. 18, 22.57.

B-9-65-18cbb (*1027, p. 53; 1075, p. 18). U. S. Dept. of Agriculture. Water level, in feet below land-surface datum, 1947: May 13, 20.68.

B-10-66-12dd (*1027, p. 53; 1075, p. 18). U. S. Dept. of Agriculture. Water level, in feet below land-surface datum, 1947: May 13, 23.70.

B-10-66-22ccc (*1027, p. 53; 1075, p. 18). U. S. Dept. of Agriculture. Water level, in feet below land-surface datum, 1947: May 13, 44.33.

IDAHO

By R. L. Nace

PROGRAM OF WORK

Systematic investigation of the ground-water resources of Idaho were begun in 1946 in cooperation with the Idaho Department of Reclamation. The investigations include inventories and special areal studies of geology and ground-water resources, and the development of a State-wide network of selected wells in which periodic observations are made of fluctuations in static water levels and artesian pressures.

The network of observation wells was somewhat expanded in 1947 to achieve better coverage of important areas in the State. At the end of the year observations were being made in the 10 counties of Ada, Boise, Bonneville, Canyon, Cassia, Elmore, Kootenai, Latah, Minidoka, and Oneida. Measurements of observation wells in Ada and Canyon Counties are made by the Geological Survey and the Nampa-Meridian Irrigation District, in Kootenai County by the Geological Survey and the Washington Water Power Company, and elsewhere by the Geological Survey and local observers.

FLUCTUATIONS OF WATER LEVEL

Water levels in most wells in Kootenai County were slightly above the 1946 year-end levels, and well above average levels. The gains represent increased underground storage resulting from a substantial excess of precipitation during the year. In May one well in Latah County reached its lowest level of record, and water levels in this well are consistently lower than in 1940, the last previous year in which the well was measured.

In a single observation well in Boise County the water level reached its lowest level of record in August, but by the end of the year it had recovered substantially.

Observation wells in the Boise Valley of Ada and Canyon Counties are in a heavily irrigated area where the effects of local precipitation on water levels are largely masked by the effects of recharge by seepage

losses from irrigation. Local complications in water-level fluctuations are introduced also by drainage canals and pumped drainage wells. The seven wells that were measured showed small net rises of less than 2 feet during the year. Total rainfall in the area was well below normal but somewhat more than during 1946. The increased precipitation doubtless produced a small net gain in underground storage.

The Raft River area, Cassia County, is represented by a single well, in which there was a net decline of 0.5 foot despite 50 percent more precipitation than in 1946. Both surface- and ground-water supplies in the Raft River Valley are relatively small. During the past several years new developments have produced a progressive increase in the draft on underground supplies. The effects of further development on underground storage require close observation.

The single observation well in Bonneville County showed a net decline in the water table of 0.9 foot in 1947, possibly the result of a slight rainfall deficiency.

Of 24 flowing and nonflowing wells in the Malad Valley, Oneida County, 5 show small net rises of water levels during the year; for 6 wells year-end water levels are not available for comparison; the remaining 13 wells show net declines of 0.1 foot to 6.8 feet. Precipitation in the area was slightly above normal and exceeded the 1946 total. The range of water-level fluctuations during the year was unusually large; in May and June seven wells reached their highest levels in 5 to 7 years of record; three of the same wells, and four others dropped to their lowest recorded levels in October. Variations in the net changes of water levels in individual wells in the Malad Valley are partly the result of local pumpage and discharge by flowing wells. On the other hand, the generally lowered year-end water levels in the valley reflect withdrawals from permanent storage by increased irrigation pumpage. Available evidence does not indicate that overdraft on underground storage has occurred, but the effects of further ground-water developments on permanent underground storage require close observation.

Water-level fluctuations during 1947 in 41 observation wells with 5 or more years of record are summarized in the following tables.

Summary of net changes in water levels, in feet below land-surface datum in observation wells in Idaho, 1947 1/

County and well No.	Length of record (years)	Highest of record: Water level	Highest of record: Date	Lowest of record: Water level	Lowest of record: Date	Extreme observed range for period of record	Year-end water level 1947 2/: Water level	Year-end water level 1947 2/: Date	Year-end water level 1947 2/: Above (+) or below (-) 1946	Above lowest level of record in percent of total observed range
Ada:										
4N 1W-36dal	a 26	2.5	10-27-32	23.7	2- 9-15	21.2	3.1	11- 5	+0.2	97
3N 1W-1ccl	b 17	7.0	11- 3-38	18.7	4-14-15	11.7	7.9	11- 5	+.5	92
10ccl	c 26	2.0	6- 3-47	11.0	Dec. 1913	9.0	3.3	11- 3	+.1	86
3N 1E-4bal	d 19	10.8	11- 1-43	27.6	11-26-26	16.8	11.3	11- 6	+.5	97
5aal	15	8.4	11- 6-47	21.3	3-23-35	12.9	8.4	11- 6	+1.8	100
11bbl	24	6.2	9-14-33	19.9	3-31-24	13.7	7.8	11-17	+.3	88
Boise:										
7N 2E-34cal	5	31.6	5-12-43	42.1	8-6,13-47	10.5	40.5	12-31	-1.6	15
Bonneville:										
3N 41E-6cbl	e 8	34.0	8-19-25	63.4	3-27-43	29.4	52.6	12-27	-.9	37
Canyon:										
3N 2W-23dcl	f 22	17.3	9-29-21	28.8	11-18-29	11.5	17.7	10-20	+1.6	97
Cassia:										
13S 26E-24aal	8	2.4	5- 1-42	7.9	10- 1-41	5.5	(4.7)	6-26	....	58
16S 27E-26abl	g 11	11.7	10- 8-41	25.5	8-15-36	13.8	18.8	10-28	-.5	49
Kootenai:										
53N 4W-24bbl	19	455.5	6-20-34	478.1	1-15-32	22.6	464.2	12-29	-.5	62
51N 5W-33bbl	20	142.7	5- 2-34	166.6	2-11-32	23.9	151.0	12-12	+.1	65
50N 5W-1aal	19	186.9	8- 7-34	212.3	12- 8-31	25.4	193.4	12-12	+1.0	74
Latah:										
39N 5W-7ddl	h 5	50.1	4-19-38	63.1	5- 2-47	13.0	(63.1)	5- 2	....	0
10acl	i 8	10.6	5- 6-35	17.6	2- 1-37	7.0	(12.3)	5- 2	....	76
Oneida:										
14S 33E-31abl	7	3.8	4- 2-47	7.2	7-28-41	3.4	4.9	8-12	....	70
14S 35E-10abl	6	117.5	5-28-47	124.6	10-13-47	7.1	124.6	10-13	-6.8	0
13abl	5	67.2	4- 9-47	76.3	10-21-44	9.1	74.8	10.14	+.8	16

* See footnotes at end of table.

Summary of net changes in water levels, in feet below land-surface datum in observation wells in Idaho, 1947[1]--Cont.

County and well No.	Length of record (years)	Highest of record: Water level	Highest of record: Date	Lowest of record: Water level	Lowest of record: Date	Extreme observed range for period of record	Year-end water level 1947[2]: Water level	Year-end water level 1947[2]: Date	Year-end water level 1947[2]: Above (+) or below (-) 1946	Above lowest level of record in percent of total observed range
Oneida:										
14S 35E-27aa1	5	52.6	4- 9-47	59.0	10-14-47	6.4	59.0	10-14	-0.1	0
35bd1	5	29.0	2-25-46	k 20.6	8-20-47	8.4	k20.9	10-14	-4.0	4
36bc1	5	15.7	4- 1-47	19.6	10-23-46	3.9	18.8	10-14	+.8	20
14S 36E-3ca1	j 7	59.2	10-16-32	72.8	4-12-32	13.6	68.7	10-14	-.2	30
29ba1	6	23.2	7-20-43	30.8	10-21-44	7.6	28.3	10-15	-3.0	33
32aa1	5	k 7.6	(5- 2-44 (2-25-46	k .9	10-21-44	6.7	(k 6.2)	4.2	...	80
32da1	5	k 3.7	4- 2-47	.8	10-21-44	4.5	k 1.3	10-15	...	47
15S 35E-1db1	5	k 25.9	5- 3-44	k 19.5	10-15-47	6.4	k19.5	10-15	-2.1	0
12ab2	5	k 23.9	3- 1-45	k 17.0	8-18-44	6.9	k18.7	10-17	+.4	27
12bb1	5	k 14.5	4- 1-47	k 4.8	8-25-47	9.7	k 4.8	8-25	...	0
14ad1	5	k 6.4	10-22-46	k 1.9	5- 3-44	4.5	k 6.0	10-7	-.4	91
15S 36E-5aa4	6	k 16.0	10-23-45	k 10.5	8-23-46	5.5	k12.7	10-15	...	40
6ac2	5	k 16.7	2-24-46	k 7.3	10-14-47	9.4	k 7.3	10-14	-4.9	0
6ba1	5	k 23.1	5- 4-44	k 14.6	8-15-47	8.5	k15.1	10-13	-.9	6
8aa1	5	k 20.1	4- 2-47	k 11.8	6-29-43	8.3	k17.9	10-15	0	73
8aa5	5	k 35.9	10-23-45	k 14.9	8-18-44	21.0	k25.4	10-15	-1.2	50
10ad1	5	k 13.6	3- 3-45	k 8.5	7-15-43	5.1	k10.2	10-17	-2.0	33
29ca2	5	k 12.9	(5- 3-44 (3- 1-45	k 7.0	10-28-43	5.9	k11.1	10-8	+.5	70
30ab1	5	k 14.9	5- 3-44	k 12.3	7- 7-43	2.6	k13.7	10-8	-.3	54
ab2	5	k 12.4	8-20-47	k 10.1	7-17-45	2.3	k11.5	10-8	-.2	61
ac2	5	k 15.4	(3- 1-45 (10-22-46	k 12.1	7- 6-43	3.3	(k13.0)	8-20	...	28
ac3	5	k 3.6	3- 1-45	k 2.0	10-22-46	1.6	(k 2.3)	8-20	...	19

1/ Wells with less than 5 years of record not included in table.

2/ Parenthetical figures are for wells in which measurements are inadequate for comparison of 1946 and 1947 year-end levels.

a Discontinuous record, 1915-17, 1925-47
b Intermittent record, 1913-16, 1925, 1934-35, 1938-47.
c Discontinuous record, 1912-17, 1928-47.
d Discontinuous record, 1926-29, 1933-47.
e Discontinuous record, 1923, 1925, 1942-47.
f Discontinuous record, 1921, 1925, 1928-47.
g Discontinuous record, 1936, 1938-47.
h Discontinuous record, 1937-40, 1947
i Discontinuous record, 1934-40, 1947.
j Discontinuous record, 1931-32, 1943-47.
k Above land-surface datum.

Comparison of net changes in water level in observation wells in Idaho with precipitation, 1947

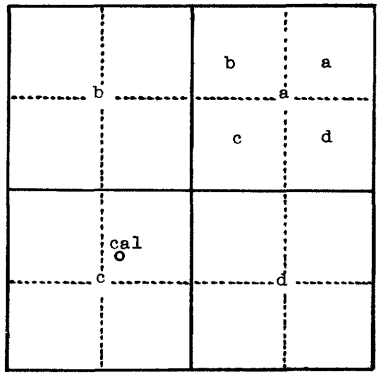
County and well No.	Net change	Departure from average (feet)a/	Station	Precipitation, in inches, at nearest U. S. Weather Bureau stations: Total precipitation	Departure from normal	Net departure from 1946 total
Ada:						
4N 1W-36da1	+0.2	+4.0	Meridian	8.61	-3.07	-0.13
3N 1W-1cc1	+.5	+2.7				
10cc1	+.1	+1.3	Nampa	6.99	-2.86	+1.17
3N-1E-4ba1	+.5	+6.8				
5aa1	+1.8	+5.9	Boise(airport)	10.08	-3.02	+.22
11bb1	+.3	+3.4				
Boise:						
7N 2E-34ca1	-1.6	-1.9	Emmett	11.03	-.42	+.65
Bonneville:						
3N 41E-6cb1	-.9	-4.9	Ririe	11.81	.....	.....
Canyon:						
3N 2W-23dc1	+1.6	+3.3	Caldwell	9.03	-1.18	+1.54
			Nampa	6.99	-2.86	+1.17
Cassia:						
16S 27E-26ab1	-.5	-.7	Strevell	9.12	.....	+3.20
Kootenai:						
53N 4W-24bb1	-.5	+1.2				
51N 5W-33bb1	+.1	+4.2	Coeur d'Alene	28.98	+4.63	+2.31
50N 5W-1aa1	+1.0	+5.8				
Oneida:						
14S 35E-10ab1	-6.8	-5.9				
13ab1	+.8	-4.1				
27aa1	-.1	-2.9				
35bd1 b	-4.0	-3.9				
36bc1	+.8	+.7				
14S 36E-3ca1	-.2	+2.1				
29ba1	-3.0	-1.6				
15S 35E-1db1 b	-2.1	-2.8	Malad	15.89	+.88	+.36
12ab2 b	+.4	-.4	Malad(airport)	15.02		+1.85
14ad1 b	-.4	+.9				
15S 36E-6ac2 b	-4.9	-5.3				
6ba1 b	-.9	-2.2				
8aa1 b	+.0	+1.7				
8aa5 b	-1.2	+.3				
10ad1 b	-2.0	-1.3				
29ca2 b	+.5	-.2				
30ab1 b	-.3	+.2				
ab2 b	-.2	+.1				

a Average used is nonweighted average of all recorded measurements for each well.

b Flowing artesian well.

WELL-NUMBERING SYSTEM

Idaho well numbers indicate the locations of wells within the official rectangular subdivisions of the public lands, with reference to the Boise base line and meridian. The first two segments of a number designate the township and range. The third segment gives the section number, followed by two letters and a numeral, which indicate the quarter-section, 40-acre tract, and serial number of the well within the tract. Quarter-sections are lettered a, b, c, and d in counterclockwise order from the northeast quarter of each section, as in the diagram below. Within quarter-sections the 40-acre tracts are lettered in the same manner. Well 7S 2E-34cal is in the NE¼SW¼ sec. 34, T. 7 S., R. 2 E.



WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Ada County

4N 1W-36dal (*1075, p. 25). Richard Foster. Water level influenced strongly by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 1, 5.9; Apr. 2, 4.8; June 3, 2.7; Nov. 5, 3.1.

3N 1W-1ccl (*1075, p. 26). Jerald Dunten. Water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 1, 10.2; Apr. 3, 10.6; June 3, 7.1; Nov. 5, 7.9.

3N 1W-10ccl (*1075, p. 26). Arthur Keck. Taps water in shallow Quaternary sediments; water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 1, 4.3; Apr. 3, 4.7; June 3, 2.0; Nov. 3, 3.3.

3N 1E-4bal (*1075, p. 26). Ellen F. Beebe. Taps water in Quaternary sand and gravel; water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 3, 17.7; Mar. 28, 18.7; Nov. 6, 11.3.

3N 1E-5aal (*1075, p. 27). J. E. Wingate. Taps water in Quaternary sand and gravel; water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 3, 15.2; Mar. 28, 16.2; June 3, 11.1; Nov. 6, 8.4.

3N 1E-11bbl (*1075, p. 27). H. L. Randall. Water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Mar. 4, 9.7; Apr. 1, 11.6; June 3, 5.8; Nov. 7, 7.8.

3N 2E-21bcl. Bureau of Reclamation, U. S. Dept. of Interior. Drilled drainage and irrigation well, depth 58 feet, diameter 14 inches, slotted steel casing, open bottom. Measuring point, top of casing at east side, about 0.8 foot above land-surface datum. Taps water in shallow sand and gravel; water level influenced principally by irrigation and seepage from irrigation canals.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 24	9.7	June 3	5.8	Dec. 11	6.7
Mar. 31	9.3	Aug. 4	8.9		

Boise County

7N 2E-34cal (*1027, p. 64; 1075, p. 27). US 99. Jack N. Kohtala. Water level influenced principally by local precipitation. Float-gage readings.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	38.8	Apr. 9	39.1	July 16	42.2	Oct. 15	41.2
8	39.0	16	39.1	23	43.1	22	41.1
15	38.6	23	39.3	30	41.9	29	40.8
22	38.8	30	39.7	Aug. 6	42.1	Nov. 5	40.8
29	38.6	May 6	39.8	13	42.1	12	41.3
Feb. 5	38.8	14	39.5	20	41.7	19	40.6
12	38.9	21	40.3	27	41.9	26	40.8
19	38.9	28	40.3	Sept. 3	41.6	Dec. 3	40.5
26	38.8	June 4	40.3	10	41.2	6	a40.8
Mar. 5	38.8	11	39.9	17	40.9	10	40.8
12	39.2	18	39.5	24	40.8	17	40.8
19	39.2	25	40.4	Oct. 1	41.4	24	40.7
26	39.0	July 2	40.4	8	41.7	31	40.5
Apr. 2	39.0	9	40.4				

a Tape-line measurement.

Bonneville County

3N 41E-6cbl (*1027, p. 62; 1075, p. 28). US 82. Poplar Store. Water level influenced principally by local irrigation and precipitation. Tape-line measurements.

Water level, in feet below land-surface datum, 1947

Jan. 4	52.5	Apr. 5	57.2	July 5	41.4	Oct. 4	40.7
11	52.2	12	57.7	12	40.2	11	41.5
18	42.8	19	58.1	19	38.9	18	42.7
25	42.0	26	58.3	26	37.4	25	44.8
Feb. 1	46.3	May 3	58.0	Aug. 2	36.8	Nov. 1	45.2
8	52.0	10	56.4	9	36.8	8	45.8
15	52.0	17	54.1	16	37.2	15	46.8
22	52.6	24	a51.7	23	37.4	22	47.9
Mar. 1	53.7	31	a44.8	30	37.8	29	49.3
8	54.5	June 7	46.5	Sept. 6	38.0	Dec. 6	49.7
15	55.4	14	45.5	13	37.9	13	50.7
22	56.1	21	44.3	20	37.9	20	51.6
29	56.7	28	42.8	27	39.3	27	52.6

a Field record by observer not clearly legible.

Canyon County

3N 2W-23dc1 (*1075, p. 28). Mrs. A. J. Richards and others. Water level influenced principally by local irrigation. Water levels, in feet below land-surface datum, 1947: Feb. 28, 21.6; Apr. 21, 22.3; June 3, 19.0; Oct. 20, 17.7.

Cassia County

10S 23E-20dc1. City of Burley well 1. Unused dug and drilled well, diameter 72 inches, depth about 42 feet, concrete casing, open bottom. Measuring point, upper surface of steel rim of manhole at concrete floor level, about at land-surface datum. Taps water in Quaternary alluvial sand and gravel; water level influenced principally by irrigation and by pumpage of nearby wells. Tape-line measurements. Water levels, in feet below land-surface datum, 1947: Aug. 13, 13.3; Oct. 1, 13.8; Nov. 1, 13.0; Dec. 1, 13.0.

10S 23E-20dc3. City of Burley well 5. Drilled public-supply well, diameter 24 to 15 inches, depth about 1,115 feet, 469 feet of stove-pipe casing, open hole below. Measuring point, center of air-line pressure gage by pump base, about 1.0 foot above land-surface datum. Taps artesian water in Pleistocene (?) gravel and lava below the Burley lake beds. Air-line measurements. Water levels, in feet below land-surface datum, 1947: Aug. 13, 200; Oct. 1, 196; Oct. 3, 196. On Aug. 13 well had been pumping until 30 minutes before measurement.

13S 26E-24aa1. John C. Hitt. Dug irrigation well, diameter 36 to 8 inches, depth 24 feet, perforated galvanized corrugated-iron casing, open bottom. Measuring point, top of well casing at south side, about at land-surface datum. Taps water in Quaternary alluvial gravel; water level influenced principally by local precipitation and irrigation. Measurements by local observer, U. S. Geological Survey, and U. S. Soil Conservation Service.

Water level, in feet below land-surface datum, 1941-47

Date	Water level	Date	Water level	Date	Water level
June 19, 1941	5.2	Jan. 1, 1942	5.9	Apr. 5, 1944	4.0
July 3	5.2	Feb. 1	5.7	Sept. 23	6.2
Aug. 1	5.5	Mar. 1	5.0	Apr. 1, 1945	5.3
Sept. 1	7.0	Apr. 1	3.2	Nov. 1	5.7
Oct. 1	7.9	May 1	2.4	Apr. 1, 1946	4.6
Nov. 1	7.6	June 1	6.2	1, 1947	4.1
Dec. 1	7.7	Nov. 15, 1943	6.6	June 26	4.7

13S 27E-30bc1. J. D. Pierce. Dug irrigation well, diameter 72 inches, depth 27 feet, perforated concrete casing, open bottom. Taps water in Quaternary alluvial cobble gravel; water level influenced principally by local irrigation and stage of Raft River. Measuring point, top of concrete well curb at north side, about 0.5 foot above land-surface datum. Water level, in feet below land-surface datum, 1947: June 25, 5.9.

16S 27E-26ab1 (formerly 35ab1) (*1027, p. 63; 1075, p. 28). Mr. Cook. Water level influenced principally by local precipitation. Water levels, in feet below land-surface datum, 1947: June 25, 22.1; Oct. 28, 18.8.

Elmore County

1N 4E-23aa1. James O. Beck. Drilled test well, diameter 18 inches, depth 64 feet, perforated stove-pipe casing, open bottom. Measuring point, top of casing at west side, about 0.4 foot above land-surface datum. Taps water in Quaternary alluvial sands; water level influenced principally by local precipitation. Water levels, in feet below land-surface datum, 1947: Feb. 28, 23.1; July 3, 23.6.

Kootenai County

53N 4W-24bbl (886, p. 92; *889-B, pp. 136-137; 910, p. 10; 940, p. 9; 948, p. 11; 990, p. 10; 1020, p. 10; *1027, p. 55; 1075, p. 28). Washington Water Power Co. well 91. C. T. Jurgens. Taps water in fluvioglacial gravel. Water levels from float-gage readings by owner.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 3	a463.90	July 20	a461.53	Sept. 4	462.00	Dec. 22	464.05
May 24	a462.55	Aug. 4	461.65	Oct. 27	463.12	29	464.15
July 7	461.55	18	461.75	31	a463.18		

a Measured by U. S. Geological Survey or Washington Water Power Co.

51N 5W-33bbl (886, p. 92; *889-B, p. 135; 910, p. 9; 948, p. 11; 990, p. 9; 1020, p. 10; *1027, p. 55; 1075, p. 29). Washington Water Power Co. well 58. Spokane International Railway Co. Taps water in fluvioglacial gravel.

Water level, in feet below land-surface datum, 1947

Feb. 28	150.92	May 24	149.12	July 21	148.24	Oct. 31	150.59
Mar. 3	150.98	July 18	148.12	Sept. 2	148.50	Dec. 12	151.01
Apr. 18	150.70						

50N 5W-1aal (886, p. 91; *889-B, p. 133; 910, p. 10; 940, p. 8; 948, p. 10; 990, p. 9; 1020, p. 10; *1027, p. 55; 1075, p. 29). Washington Water Power Co. well 96. Post Falls Irrigation District. Taps water in fluvioglacial gravel. Pumping at time of each measurement.

Water level, in feet below land-surface datum, 1947

Feb. 28	194.88	May 24	194.90	July 21	189.22	Oct. 31	192.69
Mar. 3	195.00	July 18	189.19	Sept. 2	190.02	Dec. 12	193.35
Apr. 18	195.22						

Latah County

39N 5W-7dd1 (formerly 39/5-7R1) (886, p. 94; 910, p. 12). Inland Motor Freight Co. Unused drilled well, diameter 8 inches, depth 231 feet, black iron casing. Measuring point, top of casing at southeast side, 2,560.9 feet above mean sea-level datum of 1929, and about at land-surface datum. Taps artesian water in Moscow Basin. Measurements resumed. Water level, in feet below land-surface datum, 1947: May 2, 63.1.

39N 5W-10ac1 (formerly Latah County well 32; Geological Survey Oregon district office No. South Palouse 39/5-10G1) (*777, pp. 262, 263; *817, p. 489; 840, p. 635; *845, p. 685; 886, p. 93; 910, p. 9). Geological Survey, U. S. Dept. of Interior. Bored water-table observation well, diameter 1½ inches, depth 21.5 feet, galvanized-pipe casing, drive-point sand screen at bottom of hole. Measuring point, top of 1½-inch casing, about 2,640 feet above mean sea-level datum of 1929 (barometric elevation), and about 1.9 feet above land-surface datum. Measurements resumed. Water level, in feet below land-surface datum, 1947: May 2, 12.29.

Minidoka County

9S 22E-33ad1. Bureau of Reclamation, U. S. Dept. of Interior. Formerly owned by Corps of Engineers, U. S. Army. Unused drilled military supply well, diameter 12 inches, with 10-inch liner casing, depth 252.5 feet, stove-pipe casing to lava bedrock at shallow depth, open hole below. Measuring point, top of 10-inch inner casing, 4,190.6 feet above Bureau of Reclamation datum, and about 0.5 foot above land-surface datum. Taps water in Snake River basalts. Water level, in feet below land-surface datum, 1947: Oct. 30, 227.5.

9S 24E-1db2. Louis Madrid. Drilled domestic well, diameter 6 inches, depth 87 feet, black iron casing to lava bedrock at shallow depth, open hole below. Measuring point, top of casing, 4,203.3 feet above Bureau of Reclamation datum and about 0.2 foot above land-surface datum. Taps water in Snake River basalts. Water level, in feet above land-surface datum, 1947: Oct. 31, 60.8.

Oneida County

11S 35E-30cb1. Russell Daniels. Unused drilled test well, diameter 8 inches, depth 204 feet, stove-pipe casing, open bottom. Measuring point, top of casing, about 1.0 foot above land-surface datum. Taps water in Pleistocene (?) alluvial sands under low local artesian pressure. Water level, in feet below land-surface datum, 1947: July 21, 27.4

11S 35E-31ac1. Russell Daniels. Unused drilled stock well, diameter 4 inches, depth 92 feet, black iron casing, open bottom. Measuring point, top of casing, about 1.0 foot above land-surface datum. Probably taps local water table in Quaternary river gravel. Water level, in feet below land-surface datum, 1947: July 21, 40.6.

13S 35E-33cc1 (*1075, p. 29). Mrs. K. T. Jones. Taps water in Paleozoic rocks. Water levels, in feet below land-surface datum, 1947: Apr. 9, 294.2; May 28, 293.9; Aug. 12, 294.2; Oct. 13, 294.6.

13S 35E-36cc1 (*1075, p. 29). Dave Deschamps. Taps regional water table in Pleistocene sediments. Water levels, in feet below land-surface datum, 1947: Apr. 9, 81.6; May 28, 81.7; Aug. 12, 81.8; Oct. 13, 81.8.

14S 35E-31ab1. Myrle Hubbard. Drilled domestic well, diameter 4 inches, depth about 70 feet, black iron casing, open bottom. Measuring point, top of casing, about 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1944-47

Date	Water level	Date	Water level	Date	Water level
Apr. 5, 1944	5.6	Oct. 12, 1945	5.2	May 5, 1947	4.1
Oct. 10	6.3	Apr. 1, 1946	4.1	29	4.4
Nov. 10	6.1	2, 1947	3.8	Aug. 12	4.9
Apr. 2, 1945	4.6				

14S 34E-31da1. Roy Davis. Unused drilled stock well, diameter 4 inches, depth 399 feet, black iron casing, open bottom. Measuring point, top of casing, about 0.3 foot above land-surface datum. Taps water in Paleozic rocks. Water levels, in feet below land-surface datum, 1947: May 1, 381.1; May 29, 389.9; Aug. 12, 380.8.

14S 35E-10ab1 (*1020, p. 10; *1027, p. 63; 1075, p. 29). John W. Leavitt. Taps water in Bonneville formation.

Water level, in feet below land-surface datum, 1947

Apr. 1	118.5	May 28	117.5	Oct. 13	124.6
9	119.2	Aug. 12	117.6		

14S 35E-13db1 (*1020, p. 11; *1027, p. 63; 1075, p. 29). Progressive Pump Co. Measuring point beginning Apr. 9, 1947, top of casing at south side, 0.37 foot below former measuring point and about 0.4 foot above land-surface datum. Taps water in delta beds of Bonneville formation. Water levels, in feet below land-surface datum, 1947: Apr. 2, 67.2; Apr. 9, 67.2; Oct. 14, 74.8.

14S 35E-27aa1 (*1020, p. 11; 1027, p. 64; *1075, p. 30). Davis & Ipsen. Taps water in Bonneville formation. Water levels, in feet below land-surface datum, 1947: Apr. 1, 53.9; Apr. 9, 52.7; Oct. 14, 59.0.

14S 35E-35bd1 (*1020, p. 11; *1027, p. 64; 1075, p. 30). John W. Price. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements except on Aug. 20. Water levels, in feet above land-surface datum, 1947: Apr. 1, 28.3; Aug. 20, 20.6; Oct. 14, 20.9.

14S 35E-36bc1 (*1020, p. 12; *1027, p. 64; 1075, p. 30). Smith & Illum. Measuring point, notch in east side of casing, 0.5 foot below former measuring point, and about at land-surface datum. Taps water in Bonneville formation. Water levels, in feet below land-surface datum, 1947: Apr. 1, 15.7; Oct. 14, 18.8.

14S 35E-36ca1 (*1020, p. 12; *1027, p. 64; 1075; p. 30). Hill & Illum. Measuring point 2, top of 1½-inch casing, 1.8 feet below measuring point 1, 4,488.64 feet above mean sea-level datum of 1929, and about 0.6 foot above land-surface datum. Taps water in Bonneville formation; artesian well, flows except in summer months. Water levels, in feet with reference to land-surface datum, 1947: Apr. 1, +4.5; Aug. 19, -1.½ Oct. 14, flowing. Measurements discontinued.

14S 36E-3ca1 (*1020, p. 12; 1027, p. 65; 1075, p. 30). Walter K. Dastrup. Taps water in delta sand and gravel of Bonneville formation.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Apr. 2	69.4	May 28	67.9	Oct. 14	68.7
9	68.3	Aug. 19	68.5		

14S 36E-29ba1 (*1020, p. 14; *1027, p. 65; 1075, p. 30). R. R. Jones. Nonflowing artesian well; taps water in Bonneville formation.

Water level, in feet below land-surface datum, 1947

Apr. 2	26.8	May 28	24.8	Oct. 15	28.3
9	24.7	Aug. 12	27.9		

14S 36E-32aa1 (1020, p. 15; *1027, p. 66; 1075, p. 30). R. J. Harding. Flowing artesian well; taps water in Bonneville formation. Water level, in feet above land-surface datum, 1947: Apr. 2, 6.2.

14S 36E-32da1 (*1020, p. 16; *1027, p. 66; 1075, p. 30). William Howard. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements except on Aug. 15. Water levels, in feet above land-surface datum, 1947: Apr. 2, 3.7; Aug. 15, 0.5; Oct. 15, 1.3.

15S 35E-1da1 (*1020, p. 16; 1027, p. 67; 1075, p. 30). Joseph Josephson. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Aug. 15, 24.5; Oct. 14, 25.2.

15S 35E-1db1 (*1020, p. 16; *1027, p. 66; 1075, p. 30). L. R. Waldron. Formerly owned by Dan Tovey. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 1, 25.3; Aug. 15, 17.4; Oct. 15, 19.5.

15S 35E-11ab1 (1020, p. 17; *1027, p. 67; 1075, p. 31). Levi Waldron. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Aug. 16, 3.4. Measurements discontinued.

15S 35E-12ab2 (*1020, p. 18; 1027, p. 67; 1075, p. 31). James H. Williams. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements, except on Apr. 1. Water levels, in feet above land-surface datum, 1947: Apr. 1, 22.9; Aug. 20, 18.5; Oct. 17, 18.7.

15S 35E-12bb1 (*1020, p. 18; 1027, p. 68; 1075, p. 31). James H. Williams. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 1, 14.5; Aug. 25, 4.8.

15S 35E-14ad1 (*1020, p. 19; *1027, p. 68; 1075, p. 31). Ben Jones. Flowing artesian well; taps water in Bonneville formation. Water levels, in feet above land-surface datum, 1947: Apr. 1, 5.6; Oct. 7, 6.0.

15S 35E-24ad2 (*1020, p. 19; *1027, p. 68; 1075, p. 31). Portage Canal Co. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements. Water level, in feet above land-surface datum, 1947: Aug. 16, 11.7. Measurements discontinued.

15S 35E-24ad4 (*1020, p. 19; *1027, p. 68; 1075, p. 31). Portage Canal Co. Flowing artesian well; taps water in Bonneville formation. Well flowing prior to measurements. Water level, in feet above land-surface datum, 1947: Aug. 16, 17.3. Measurements discontinued.

15S 35E-24ad5 (*1020, p. 19; *1027, p. 69; 1075, p. 31). Portage Canal Co. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Aug. 16, 34.5. Measurements discontinued.

15S 36E-5aa4 (*1020, p. 20; 1027, p. 69; *1075, p. 31). Dives Bros. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 2, 15.5; Aug. 23, 10.5; Oct. 15, 12.7.

15S 36E-6ac1 (*1020, p. 21; *1027, p. 70; 1075, p. 31). Will John. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Aug. 15, 6.5. Measurements discontinued.

15S 36E-6ac2 (*1020, p. 21; 1027, p. 70; 1075, p. 31). Will John. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 1, 15.6; Aug. 15, 8.7; Oct. 14, 7.3.

15S 36E-6ba1 (*1020, p. 22; 1027, p. 70; 1075, p. 31). A. E. Scott. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 2, 19.8; Aug. 15, 14.6; Oct. 13, 15.1.

15S 36E-8aa1 (*1020, p. 23; *1027, p. 71; 1075, p. 31). Edward Vaughn. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Apr. 2, 20.1; Aug. 21, 15.6; Oct. 15, 17.9.

15S 36E-8aa5 (*1020, p. 23; 1027, p. 72; 1075, p. 32). Edward Vaughn. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Aug. 21, 25.1; Oct. 15, 25.4. Measurements discontinued.

15S 36E-10ad1 (1020, p. 24; *1027, p. 72; 1075, p. 32). Warren Busch. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Aug. 16, 9.8; Oct. 17, 10.2. Measurements discontinued.

15S 36E-29ca2 (*1020, p. 25; 1027, p. 73; *1075, p. 32). Tom Dudley. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Oct. 8, 11.1.

15S 36E-30ab1 (*1020, p. 25; *1027, p. 73; 1075, p. 32). John W. Jenkins. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Oct. 8, 13.7.

15S 36E-30ab2 (*1020, p. 26; *1027, p. 73; 1075, p. 32). John W. Jenkins. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurements. Water levels, in feet above land-surface datum, 1947: Aug. 20, 12.4; Oct. 8, 11.5.

15S 36E-30ac2 (1020, p. 26; *1027, p. 74; 1075, p. 32). John W. Jenkins. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Aug. 20, 13.0. Measurements discontinued.

15S 36E-30ac3 (1020, p. 26; *1027, p. 74; 1075, p. 32). John W. Jenkins. Flowing artesian well; taps water in Bonneville formation. Flowing prior to measurement. Water level, in feet above land-surface datum, 1947: Aug. 20, 2.3. Measurements discontinued.

MONTANA

By F. A. Swenson

PROGRAM OF WORK

The observation-well program in the valley and delta area between Kalispell and Flathead Lake, in Flathead County, was discontinued between December 1944 and December 1946 but has been carried on since then by the Bureau of Reclamation in cooperation with the Geological Survey. This investigation was begun in May 1928 by the Geological Survey under the authorization of the Federal Power Commission to determine the effects of the water table under about 25 square miles of area by the regulation of the altitude of the water surface in Flathead Lake and Flathead River. Flathead Lake has been subject to regulation by Kerr Dam since April 1938, and this information is needed in connection with questions relating to the effects of regulation on agriculture and construction projects in the area. The results of a study of the records for 1928 to 1937, inclusive, are contained in a report by Cady.[1/] Between December 1946 and October 1947, the latest measurements received, 405 measurements were made in 36 of the original 47 observation wells, the others having been destroyed. The locations and descriptions of the wells in Flathead County are published in Water-Supply Papers 777 and 990; for convenience, the descriptions of those wells in which water levels were measured during 1946 and 1947 are reported herein. Records of water levels in the wells from 1928 through 1944 are published in Water-Supply Papers 777, 817, 840, 845, 886, 910, 940, 990, and 1020. The wells in Prairie and Valley Counties reported in Water-Supply Papers 990 and 1020 have not been measured since the summer of 1944.

Since 1942 wells in Blaine and Missoula Counties have been measured under the direction of A. H. Tuttle, district engineer, division of surface water of the Geological Survey.

1/ Cady, R. C., Effect upon ground-water levels of proposed surface-water storage in Flathead Lake, Montana: U. S. Geol. Survey Water-Supply Paper 849-B, pp. 59-81, 1941.

In late 1945, 1946, and 1947 measurements were started on 59 wells in Hill, Chouteau, Valley, Roosevelt, and Sheridan Counties. These observation wells were established in connection with geologic and hydrologic investigations being made of areas proposed for irrigation under the Missouri River Basin Development Plan. Some of the measurements on these wells have been made by members of the Bureau of Reclamation. Since these wells were established a total of 575 measurements has been made.

During June and early July 1947, 25 additional observation wells were established to give a better State-wide coverage. These wells have been measured under the direction of A. H. Tuttle, district engineer of the Geological Survey. A total of 83 measurements was made in these wells during the latter part of the year.

WELL-NUMBERING SYSTEM

The records of water levels in observation wells given in the following pages are shown by counties in alphabetical sequence. Under each county the records are given in order of well numbers. All wells are numbered in accordance with a coordinate system, based on Bureau of Land Management surveys, which has been adopted for use in all ground-water studies in the Missouri River Basin and made in connection with the Missouri River Basin development plan. The well number, under this system, also gives the location of the well by township, range, and section. The State of Montana is divided under the Montana principal meridian and base line system and the first letter (capital) of the well number indicates the quadrant in which the well lies. These quadrants are lettered A, B, C, and D beginning in the northeast quadrant and continuing in a counterclockwise direction. The first number indicates the location of the well by township; the second by range; the third by section. The lower-case letters following the section number indicate the location of the well in the section. The first letter locates it in the quarter section and the second in the quarter-quarter section or 40-acre tract. The letters are assigned beginning in the northeast quarter and continuing in a counterclockwise direction. If two or more wells are located within the same 40-acre tract, they are assigned consecutive serial numbers after the lower-case letters. Figure 2 illustrates this well-numbering system.

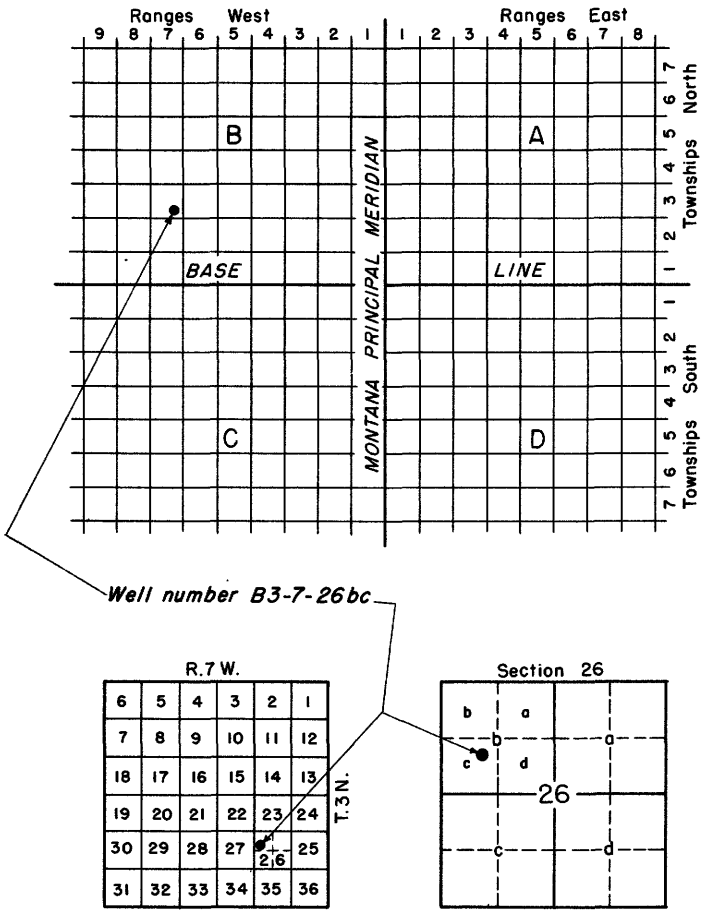


Figure 2.--Sketch showing well-numbering system adopted for use in Montana.

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WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Beaverhead County

C-8-9-9bb. James Rebich. Dug well in alluvial gravels. Measuring point, top of 4- by 6-inch plank at hole, 1.2 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 23, 8.44; Sept. 26, 18.06; Dec. 4, 23.97.

Bighorn County

D-2-34-25db. Dug well in alluvial fill. Measuring point, base of pump, west side, 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 10, 3.64; Nov. 1, 7.52.

Blaine County

A-33-18-16dc (*1075, p. 34). Geological Survey, U. S. Dept. of Interior. Formerly owned by Lundeen.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 22	8.62	Aug. 16	9.05	Nov. 4	9.06	Dec. 10	9.19
July 19	8.90	Oct. 27	8.98	21	9.08		

Broadwater County

A-7-2-32cd. V. J. Doig. Dug well in valley fill. Measuring point, top of plank cover, 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 20, 3.56; Oct. 12, 4.60; Dec. 1, 4.60.

Carter County

D-9-60-19cc. Alzada Gospel Church. Drilled well in alluvial fill. Measuring point, top of steel plate at 3/4-inch hole, 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 6, 18.94; Oct. 27, 18.82.

Chouteau County

A-29-13-22ab. William Drake. Unused well, 4 feet square, depth 50 feet. Taps water in glacial till outwash. Measuring point is 0.6 foot above land-surface datum, and 2,694.23 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 14, 1946	31.44	Aug. 30, 1946	31.66	Apr. 27, 1947	31.42
June 4	31.46	Oct. 2	31.50	June 6	31.50
July 5	32.47	24	31.46	July 7	32.12
Aug. 1	31.59				

A-28-13-5dd. Christopher Jensen. Unused well, 4 feet square. Taps water in glacial till and outwash. Measuring point is 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Aug. 31, 1945	9.88	Aug. 30, 1946	9.41	July 7, 1947	6.77
Apr. 5, 1946	5.89	Oct. 2	9.83	Aug. 5	8.77
May 6	6.33	24	7.46	Sept. 3	9.56
June 4	6.55	May 5, 1947	5.43	Oct. 21	9.99
July 5	7.05	June 6	5.85	Dec. 22	6.24
Aug. 1	8.05				

A-28-13-7bb. Robert W. Martin. Unused well, diameter 5 inches, depth 60 feet. Taps water in Judith River sandstone. Measuring point is 0.1 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 14, 1946	49.08	Oct. 24, 1946	48.52	Aug. 5, 1947	48.60
July 5	48.42	May 5, 1947	48.73	Sept. 3	49.45
Aug. 1	48.44	June 6	48.70	Oct. 21	48.75
30	48.34	July 8	48.57	Dec. 22	48.68
Oct. 10	48.68				

A-28-12-8dd. S. M. Dyrland. Domestic and stock well, depth 27 feet. Taps water table in glacial till and outwash. Measuring point is 1.5 feet above land-surface datum and 2,873.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

May 6, 1946	5.57	Oct. 10, 1946	13.56	Aug. 5, 1947	a 9.21
June 4	6.67	24	a 13.99	Sept. 3	9.51
July 5	8.14	May 5, 1947	.65	Oct. 21	9.73
Aug. 1	10.31	June 6	2.20	Dec. 22	11.77
30	13.98	July 8	4.34		

a Pumped recently.

A-28-11-10cc. A. J. Cline. Domestic and stock well, depth 31 feet. Taps water in glacial till and outwash. Measuring point is 0.5 foot above land-surface datum and 2,906.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

May 6, 1946	8.37	Oct. 10, 1946	14.61	July 8, 1947	9.15
June 4	10.41	24	15.74	Aug. 5	11.22
July 5	10.86	May 5, 1947	5.77	Sept. 3	13.41
Aug. 1	13.21	June 6	8.00	Oct. 21	15.29
30	14.22				

A-28-10-23cc. Burl Miner. Unused well, diameter 3 inches, depth over 300 feet. Taps water in Eagle sandstone. Measuring point is 2.5 feet above land-surface datum and 2,935.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

July 5, 1946	242.0	Aug. 30, 1946	242.30	Oct. 24, 1946	242.06
Aug. 1	242.55	Oct. 10	242.63	May 5, 1947	242.54

A-28-10-28ab. Maynard Johnson. Stock well, diameter 41 inches, depth 25 feet. Taps water in valley fill. Measuring point is 2.5 feet above land-surface datum and 2,922.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

June 28, 1946	4.71	Oct. 10, 1946	11.27	July 8, 1947	4.61
July 5	6.17	24	11.49	Aug. 5	7.16
Aug. 1	8.17	May 5, 1947	1.48	Sept.13	8.92
30	10.01	June 6	2.55	Dec. 22	11.16

A-29-13-21aa2. Geological Survey, U. S. Dept. of Interior. Observation well, diameter 2 inches, depth 210 feet. Measuring point is 0.4 foot above land-surface datum and 2,679.47 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

May 13	16.65	Aug. 25	16.27	Dec. 10	16.23
June 18	15.93	Oct. 28	16.72		

A-29-11-32bb. P. Christofferson. Unused well, 5 feet square, depth 19 feet. Taps water in valley fill. Measuring point is 3.5 feet above land-surface datum and 2,921.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

May 22, 1946	4.79	Oct. 24, 1946	8.78	Aug. 5, 1947	7.70
July 5	6.55	May 5, 1947	2.40	Sept. 3	8.42
Aug. 1	7.87	June 6	4.30	Oct. 21	8.60
30	8.62	July 8	6.22	Dec. 22	8.80
Oct. 10	8.56				

A-28-11-2ab. Gordon Crofoot. Unused well, 4 feet square, depth 12 feet. Taps water in glacial till and outwash. Measuring point is 1.5 feet above land-surface datum and 2,849.5 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 20, 1946	6.97	Oct. 24, 1946	9.64	Aug. 5, 1947	8.62
Aug. 1	9.05	May 5, 1947	4.82	Sept. 3	10.56
30	9.24	June 6	6.15	Oct. 21	9.90
Oct. 10	9.54	July 8	7.47	Dec. 22	10.30

A-29-11-16cc. State of Montana. Stock well, 6 feet square, depth 27 feet. Taps water in glaciolacustrine deposits. Measuring point is 2.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 22, 1946	13.06	Oct. 24, 1946	12.93	Aug. 5, 1947	11.41
July 5	12.64	May 5, 1947	10.99	Sept. 4	11.53
Aug. 1	12.71	June 6	11.00	Oct. 21	11.69
30	12.78	July 8	11.31	Dec. 22	14.03
Oct. 10	12.84				

Custer County

A-7-47-13dd. Drilled well in valley fill (?), depth 46 feet. Measuring point, top of casing, 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 6, 43.10; Oct. 26, 38.45; Nov. 26, 39.62.

Daniels County

A-35-47-12cd. State of Montana. Dug well in glacial till. Measuring point, top of plank cover at notch, 1.5 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 16, 15.05; Aug. 29, 15.30; Oct. 14, 15.32; Dec. 13, 15.39.

Dawson County

A-18-56-25cb. Mrs. Bud Stevenson. Dug well in terrace deposit. Measuring point, top of curb, south side, 0.75 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 5, 24.77; Aug. 26, 24.77; Oct. 3, 24.79; Nov. 25, 24.87.

Fergus County

A-14-16-9dd. Dug well into sandy formation. Measuring point, top of 6- by 6-inch beam, at hole in platform, 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 11, 29.33; Aug. 7, 28.85; Oct. 15, 29.13; Dec. 8, 29.71.

Flathead County

Previous water-supply papers reporting measurements of the depth to water in wells in Flathead County have identified the wells by serial numbers. This report establishes a uniform, coordinate system of well numbering which has been described in preceding pages and the following tabulation gives a cross index of the old and new numbers; the number in parentheses which follows the new well number in the following tabulation of well measurements in Flathead County is also the old well number:

Old well No.	New well No.	Old well No.	New well No.
1	B-27-20-17cc	25	B-28-21-35db
2	B-27-20-22bd1	26	B-28-21-35da
3	B-27-20-22ac	27	B-28-21-36db
4	B-27-20-22bd2	28	B-28-21-36dd
5	B-27-21-24dc	29	B-27-20- 6ba
6	(Abandoned)	30	B-27-20- 5bb
7	B-27-21-13cd	31	B-27-20- 5ab
8	B-27-21-23ab	32	B-28-20-32da
9	B-27-20-19ad	33	B-27-20- 5aa
10	B-27-20-20bd	34	B-27-20- 5da
11	B-27-20-20aa	35	B-27-20- 5dd
12	B-27-20-21bc2	36	B-27-20- 8da
13	B-27-20-21ca	37	B-27-20- 8dd
14	B-27-20-21aa	38	B-27-20-17ad
15	B-27-20-22aa	39	B-27-20-21ab
16	B-27-20-16cb	40	B-27-20-20da
17	B-27-20-16bc	41	B-27-20-20ab
18	B-27-20- 8aa	42	(Abandoned)
19	B-27-20- 8bb	43	B-27-20-19ba
20	B-27-21- 1dd	44	B-27-20-19bb
21	B-27-20- 6aa	45	B-27-21-23aa
22	B-28-20-31ad	46	B-27-20-21bd1
23	B-28-21-34da	47	B-28-21-34bc
24	B-28-21-33ad		

All the above wells are cased with 1½-inch galvanized-iron pipe except numbers B-27-20-21bd1 and B-28-21-34bc which are 3- by 4-feet in cross section and about 14 feet deep. The 1½-inch wells were bored with a hand auger and penetrate only a few feet below the water table.

The following records of water level were made by the Bureau of Reclamation, U. S. Dept. of Interior.

B-27-20-5aa. (33). Hartman east. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,898.63 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	11.40	Apr. 2, 1947	10.31	July 2, 1947	10.33
Jan. 8, 1947	11.24	May 2	10.45	Aug. 5	10.44
Feb. 4	11.03	14	10.49	Sept. 3	10.47
Mar. 3	10.35	June 4	10.50	Oct. 7	10.48

B-27-20-5ab. (31). Hartman west. Measuring point, top of casing, 1.0 foot above land-surface datum and 2,906.68 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	16.95	Apr. 2, 1947	16.22	July 2, 1947	15.97
Jan. 8, 1947	17.07	May 2	16.38	Aug. 5	16.02
Feb. 4	16.95	14	16.15	Sept. 3	16.00
Mar. 3	16.55	June 4	16.10	Oct. 7	15.92

B-27-20-5bb. (30). Hodgeson School. Measuring point, top of casing, 1.7 feet above land-surface datum and 2,905.87 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	14.90	Apr. 2, 1947	13.77	July 2, 1947	13.90
Jan. 8, 1947	14.90	May 2	13.80	Aug. 5	13.56
Feb. 4	14.85	14	13.91	Sept. 3	14.16
Mar. 3	14.32	June 4	13.80	Oct. 7	13.86

B-27-20-5da. (34). O'Connell. Measuring point, top of casing, 1.2 feet above land-surface datum and 2,900.40 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	11.02	Apr. 2, 1947	10.21	July 2, 1947	10.00
Jan. 8, 1947	11.02	May 2	10.10	Aug. 5	9.90
Feb. 4	10.82	14	10.11	Sept. 3	9.93
Mar. 3	10.60	June 4	10.10	Oct. 7	10.02

B-27-20-5dd. (35). Bellinger. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,901.74 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	13.67	Apr. 2, 1947	12.40	July 2, 1947	12.40
Jan. 8, 1947	13.62	May 2	12.44	Aug. 5	12.42
Feb. 4	13.37	14	12.48	Sept. 3	12.51
Mar. 3	12.60	June 4	12.10	Oct. 7	12.52

B-27-20-6aa. (21). Thompson. Measuring point, top of casing, 0.4 foot above land-surface datum and 2,891.98 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	0.85	Apr. 2, 1947	1.10	July 2, 1947	0.70
Jan. 8, 1947	.93	May 2	2.10	Aug. 5	.98
Feb. 4	a .15	14	1.90	Sept. 3	.70
Mar. 3	a .04	June 4	1.40	Oct. 7	.33

a Frozen, measurement to ice.

B-27-20-6ba. (29). Syverson. Measuring point, top of casing, 2.2 feet above land-surface datum and 2,895.81 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	2.25	Apr. 2, 1947	4.80	July 2, 1947	1.58
Jan. 8, 1947	3.06	May 2	4.70	Aug. 5	1.62
Feb. 4	3.80	14	1.57	Sept. 3	1.62
Mar. 3	4.17	June 4	1.80	Oct. 7	1.55

B-27-20-8bb. (19). Manning. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,891.28 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	3.30	Apr. 2, 1947	1.54	July 2, 1947	2.13
Jan. 8, 1947	3.05	May 2	2.60	Aug. 5	2.91
Feb. 4	1.91	14	2.19	Sept. 3	2.71
Mar. 3	1.62	June 4	2.40	Oct. 7	2.63

B-27-20-8da. (36). Wagoner. Measuring point, top of casing, 0.5 foot above land-surface datum and 2,903.32 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	16.15	Apr. 2, 1947	15.55	July 2, 1947	15.40
Jan. 8, 1947	16.11	May 2	15.45	Aug. 5	15.20
Feb. 4	16.04	14	15.50	Sept. 3	15.15
Mar. 3	15.85	June 4	15.40	Oct. 7	15.10

B-27-20-8dd. (37). Damon. Measuring point, top of casing, 0.2 foot above land-surface datum and 2,898.19 feet above sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 2	11.17	May 14	11.33	July 2	10.85	Sept. 3	10.93
May 2	11.10	June 4	10.90	Aug. 5	10.91	Oct. 7	10.92

B-27-20-17ad. (38). Lee. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,890.57 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	3.80	Apr. 2, 1947	2.24	July 2, 1947	2.35
Jan. 8, 1947	3.63	May 2	2.50	Aug. 5	2.78
Feb. 4	2.84	14	2.48	Sept. 3	2.79
Mar. 3	2.70	June 4	2.60	Oct. 7	2.80

B-27-20-17cc. (1). Beauchamp. Measuring point, top of casing, 1.0 foot above land-surface datum and 2,896.64 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	5.65	Apr. 2, 1947	4.12	July 2, 1947	4.75
Jan. 8, 1947	5.42	May 2	4.88	Aug. 5	5.77
Feb. 4	5.18	14	5.10	Sept. 3	5.52
Mar. 3	4.85	June 4	5.30	Oct. 7	5.31

B-27-20-19ad. (9). Keller. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,895.63 feet above sea level.

Water level, in feet below land-surface datum, 1947

Apr. 2	3.70	Aug. 5	4.64	Oct. 7	4.20
July 2	3.87	Sept. 3	4.30		

B-27-20-19ba. (43). Kleinhams. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,898.05 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	8.81	Apr. 2, 1947	7.70	July 2, 1947	7.40
Jan. 8, 1947	8.56	May 2	7.60	Aug. 5	7.67
Feb. 4	8.29	14	7.65	Sept. 3	7.82
Mar. 3	7.93	June 4	7.60	Oct. 7	7.85

B-27-20-19bb. (44). Websters. Measuring point, top of casing, 1.0 foot above land-surface datum and 2,905.16 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	15.23	Apr. 2, 1947	13.50	July 2, 1947	13.82
Jan. 8, 1947	15.07	May 2	13.75	Aug. 5	14.05
Feb. 4	14.90	14	13.90	Sept. 3	14.23
Mar. 3	14.02	June 4	13.90	Oct. 7	14.26

B-27-20-20aa. (11). Taylor north. Measuring point, top of casing, 1.6 feet above land-surface datum and 2,895.14 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	6.54	Apr. 2, 1947	4.63	July 2, 1947	4.82
Jan. 8, 1947	6.36	May 2	4.95	Aug. 5	5.38
Feb. 4	5.61	14	5.67	Sept. 3	5.11
Mar. 3	5.20	June 4	5.20	Oct. 7	5.25

B-27-20-20ab. (41). Zellar. Measuring point, top of casing, 0.8 foot above land-surface datum and 2,897.42 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	8.33	Apr. 2, 1947	6.60	July 2, 1947	6.36
Jan. 8, 1947	7.62	May 2	6.58	Aug. 5	6.88
Feb. 4	7.34	14	6.88	Sept. 3	6.93
Mar. 3	7.00	June 4	6.80	Oct. 7	7.07

B-27-20-20bd. (10). Yeaw. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,896.50 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	6.32	Apr. 2, 1947	5.07	July 2, 1947	5.86
Jan. 8, 1947	6.63	May 2	6.18	Aug. 5	7.04
Feb. 4	6.24	14	6.33	Sept. 3	6.48
Mar. 3	5.90	June 4	6.40	Oct. 7	6.19

B-27-20-20da. (40). Taylor south. Measuring point, top of casing, 1.3 feet above land-surface datum and 2,895.42 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	2.95	Apr. 2, 1947	3.67	May 14, 1947	1.77
Jan. 8, 1947	4.67	May 2	4.98	July 2	2.37
Feb. 4	4.38				

B-27-20-21aa. (14). Rousseille. Measuring point, top of casing, 0.8 foot above land-surface datum and 2,898.36 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	7.00	May 2, 1947	9.91	Aug. 5	6.68
Feb. 4, 1947	7.92	14	9.30	Sept. 3	6.51
Mar. 3	8.65	June 4	7.60	Oct. 7	6.43
Apr. 2	9.50	July 2	6.82		

B-27-20-21ab. (39). Conrad north. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,893.16 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	3.70	Apr. 2, 1947	1.25	July 2, 1947	2.90
Jan. 8, 1947	3.32	May 2	3.27	Aug. 5	4.42
Feb. 4	2.66	14	3.10	Sept. 3	4.13
Mar. 3	2.45	June 4	3.30	Oct. 7	3.65

B-27-20-21bcl. (46). Taylor, recorder. Measuring point, top of casing, at land-surface datum and 2,896.60 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	12.53	Mar. 3, 1947	12.00	May 14, 1947	11.65
Jan. 8, 1947	12.30	Apr. 2	11.42	June 4	11.70
Feb. 4	12.10	May 2	11.28	July 2	(a)

a Filled; measurements discontinued.

B-27-20-21ca. (13). Conrad south. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,892.96 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	4.27	May 2, 1947	2.03	Aug. 5, 1947	4.56
Jan. 8, 1947	3.39	14	2.55	Sept. 3	4.58
Feb. 4	2.96	July 2	2.60	Oct. 7	4.68
Mar. 3	1.87				

B-27-20-22ac. (3). Oldenberg east. Measuring point, top of casing, 0.8 foot above land-surface datum and 2,896.60 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	11.60	Apr. 2, 1947	10.82	July 2, 1947	10.35
Jan. 8, 1947	11.17	May 2	10.67	Aug. 5	10.10
Feb. 4	11.29	14	10.63	Sept. 3	10.15
Mar. 3	11.05	June 4	10.50	Oct. 7	10.13

B-27-20-22bdl. (2). Oldenberg north. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,896.06 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	7.70	Apr. 2, 1947	6.47	July 2, 1947	4.20
Jan. 8, 1947	7.37	May 2	6.45	Aug. 5	6.68
Feb. 4	7.01	14	6.74	Sept. 3	6.84
Mar. 3	6.75	June 4	6.50	Oct. 7	6.84

B-27-20-22bd2. (4). Oldenberg south. Measuring point, top of casing, 1.1 feet above land-surface datum and 2,895.15 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	7.10	Apr. 2, 1947	5.52	June 4, 1947	5.60
Jan. 8, 1947	6.45	May 2	5.45	July 2	5.15
Feb. 4	6.13	14	5.51	Oct. 7	6.10

B-27-21-1dd. (20). Reed. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,892.21 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	3.10	Apr. 2, 1947	2.32	July 2, 1947	2.18
Jan. 8, 1947	3.20	May 2	2.30	Aug. 5	2.48
Feb. 4	2.85	14	2.31	Sept. 3	2.41
Mar. 3	2.65	June 4	2.30	Oct. 7	2.28

B-27-21-13cd. (7). Cleary. Measuring point, top of casing, 0.1 foot above land-surface datum and 2,908.17 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	18.90	Apr. 2, 1947	17.81	July 2, 1947	17.87
Jan. 8, 1947	18.86	May 2	17.95	Aug. 5	17.87
Feb. 4	18.50	14	17.97	Sept. 3	17.91
Mar. 3	18.00	June 4	17.90	Oct. 7	17.92

B-27-21-23aa. (45). Three Corners. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,910.82 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	20.95	May 2, 1947	19.94	Aug. 5, 1947	19.87
Jan. 8, 1947	20.86	14	19.98	Sept. 3	19.97
Feb. 4	20.52	June 4	19.90	Oct. 7	19.97
Apr. 2	20.00	July 2	19.80		

B-27-21-23ab. (8). Koenig. Measuring point, top of casing, 2.2 feet above land-surface datum and 2,894.82 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	3.50	Apr. 2, 1947	2.10	July 2, 1947	1.98
Jan. 8, 1947	3.35	May 2	2.08	Aug. 5	2.37
Feb. 4	2.95	14	2.15	Sept. 3	2.48
Mar. 3	2.45	June 4	2.10	Oct. 7	2.47

B-27-21-24dc. Van Rinsum. Well filled Dec. 5, 1946; measurements discontinued.

B-28-20-31ad. (22). Lowden. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,905.62 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	13.52	Apr. 2, 1947	14.02	July 2, 1947	13.00
Jan. 8, 1947	13.70	May 2	14.60	Aug. 5	12.95
Feb. 4	13.94	14	13.94	Sept. 3	12.88
Mar. 3	13.70	June 4	13.30	Oct. 7	12.80

B-28-20-32da. (32). Papendicks. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,899.50 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	9.15	Apr. 2, 1947	6.10	July 2, 1947	6.97
Jan. 8, 1947	8.93	May 2	6.69	Aug. 5	7.56
Feb. 4	8.71	14	6.96	Sept. 3	7.77
Mar. 3	5.80	June 4	7.20	Oct. 7	7.85

B-28-21-34bc. (47). Parkers, recorder. Measuring point, top of casing, at land-surface datum and 2,900.50 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	11.83	May 14, 1947	5.45	Aug. 5, 1947	10.78
Feb. 4, 1947	11.94	June 4	7.85	Sept. 3	11.12
Apr. 2	12.50	July 2	8.39	Oct. 7	11.39
May 2	13.27				

B-28-21-35da. (26). Caton. Measuring point, top of casing, 0.6 foot above land-surface datum and 2,901.95 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 5, 1946	10.13	Apr. 2, 1947	9.99	July 2, 1947	9.39
Jan. 8, 1947	10.10	May 2	10.40	Aug. 5	9.24
Feb. 4	10.10	14	10.38	Sept. 3	9.26
Mar. 3	9.70	June 4	9.80	Oct. 7	9.25

B-28-21-36db. (27). Weaver. Measuring point, top of casing, 0.7 foot above land-surface datum and 2,897.86 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	5.18	Apr. 2, 1947	8.66	July 2, 1947	4.15
Jan. 8, 1947	6.10	May 2	8.60	Aug. 5	4.62
Feb. 4	7.19	14	6.38	Sept. 3	4.60
Mar. 3	7.91	June 4	4.30	Oct. 7	4.65

B-28-21-36dd. (28). Hancock. Measuring point, top of casing, 1.0 foot above land-surface datum and 2,904.43 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Dec. 5, 1946	12.65	Apr. 2, 1947	13.10	July 2, 1947	12.18
Jan. 8, 1947	12.80	May 2	13.30	Aug. 5	12.04
Feb. 4	13.07	14	13.16	Sept. 3	11.98
Mar. 3	12.95	June 4	12.45	Oct. 7	11.86

Gallatin County

D-2-4-14dd. Dug well in alluvial fill. Measuring point, top of tile casing, 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 21, 2.80; Sept. 10, 3.38; Oct. 20, 5.60; Dec. 31, 7.45.

Glacier County

B-32-11-3dd. Dug well in glacial outwash. Measuring point, edge of concrete curb at 4-inch hole, 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

June 30	2.28	Oct. 8	1.71	Dec. 10	2.09
Sept. 8	2.26	29	1.81		

Granite County

B-6-14-27ad. State of Montana. Dug well in valley fill. Measuring point, top of plank cover, at south corner, 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 24, 4.95; Oct. 29, 5.74; Dec. 13, 5.42.

Hill County

A-31-14-23bc. Clint Clark. Domestic and stock well, diameter 48 inches, depth 24 feet. Taps water in glacial till and outwash. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 26, 1946	18.02	Oct. 2, 1946	18.25	Aug. 5, 1947	18.52
July 5	18.21	24	18.15	Sept. 4	18.74
Aug. 1	18.32	May 5, 1947	18.07	Oct. 21	18.27
30	18.34	July 7	18.18	Dec. 22	18.22

A-30-14-8bd. R. Swan. Domestic and stock well, diameter 48 inches, depth 38 feet. Taps water in glacial till and outwash. Measuring point, is 0.8 foot above land-surface datum.

A-30-14-8bd--Continued.

Water level, in feet below land-surface datum, 1945-47

Date	Water level	Date	Water level	Date	Water level
Aug. 31, 1945	31.40	Aug. 30, 1946	32.99	July 7, 1947	a 34.23
Apr. 5, 1946	32.35	Oct. 2	32.84	Aug. 5	32.31
May 6	32.17	24	32.79	Sept. 4	32.80
June 4	32.42	May 5, 1947	32.88	Oct. 21	34.74
July 5	33.88	June 13	32.3	Dec. 22	34.84
Aug. 1	32.80				

a Pumped recently.

A-30-13-26dc. Great Northern Railway Co. Stock well, 4.5 feet square, depth 14 feet. Taps water in alluvium. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 10, 1946	8.86	Oct. 24, 1946	9.53	Aug. 5, 1947	10.15
July 5	9.25	Apr. 27, 1947	9.84	Sept. 3	9.73
Aug. 1	9.18	June 6	9.95	Oct. 21	9.47
30	9.28	July 7	9.86	Dec. 22	9.70
Oct. 2	9.43				

A-30-13-35bc. William Cowan. Unused well, diameter 48 inches, depth 21 feet. Taps water in alluvium. Measuring point is 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Aug. 31, 1945	16.90	Aug. 30, 1946	15.59	July 7, 1947	15.75
Apr. 5, 1946	17.92	Oct. 2	16.03	Aug. 5	14.55
May 6	17.15	24	16.22	Sept. 3	14.09
June 4	18.13	Jan. 4, 1947	16.9	Oct. 21	14.78
July 5	16.36	Apr. 27	17.49	Dec. 22	15.30
Aug. 1	15.46	June 6	17.55		

A-30-11-32cb. Frank Silvernale. Stock well, 4 feet square, depth 17 feet. Taps water in glacial fill and alluvium. Measuring point is 3.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Sept. 1, 1945	12.60	Aug. 1, 1946	6.85	June 6, 1947	8.4
Apr. 5, 1946	7.36	30	9.11	July 8	9.54
May 6	9.48	Oct. 10	9.74	Aug. 5	9.24
June 4	10.89	24	11.10	Sept. 4	11.43
July 5	4.74	May 5, 1947	5.66	Oct. 21	9.58

A-29-11-3cc. George Dillman. Domestic and stock well, 6 feet square, depth 12 feet. Taps water in glacial till and alluvium. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Sept. 1, 1945	8.95	Aug. 1, 1946	b 10.41	June 6, 1947	5.3
Apr. 5, 1946	6.94	30	6.55	July 8	5.72
May 6	6.96	Oct. 10	6.61	Aug. 5	6.73
June 4	6.10	24	6.62	Sept. 4	8.62
July 5	a 5.22	May 5, 1947	4.81	Oct. 21	7.25

a Area adjacent to well flooded.
b Pumped prior to measurement.

A-30-11-27cb. E. J. Walls. Stock well, 4 feet square, depth 25 feet. Taps water in glacial till. Measuring point is 2.5 feet above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Sept. 1, 1945	18.85	Aug. 30, 1946	18.84	July 8, 1947	18.83
May 6, 1946	18.30	Oct. 10	18.86	Aug. 5	18.96
June 4	18.39	24	18.87	Sept. 4	19.12
July 5	18.58	May 5, 1947	18.56	Oct. 21	20.95
Aug. 1	18.75	June 6	18.50		

A-32-15-17dd. Geological Survey, U. S. Dept. of Interior. Observation well, diameter 2 inches, depth 180 feet. Measuring point is 0.2 foot above land-surface datum and 2,580.25 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: May 27, 33.79; June 18, 52.56; Sept. 25, 47.4; Oct. 28, 47.24.

A-30-11-36dd. O. K. Olson. Domestic and stock well, diameter 12 inches, depth 40 feet. Taps water in glacial till. Measuring point is 0.6 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946

Date	Water level	Date	Water level	Date	Water level
May 15	9.95	Aug. 1	11.34	Oct. 10	11.44
July 5	9.87	30	11.94	24	11.46

A-30-12-36aa. Fred Schmith. Stock well, diameter 6 inches, depth 738 feet. Taps water in Eagle sandstone. Measuring point is 3.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 6, 1946	28.20	Aug. 30, 1946	b 39.97	July 8, 1947	27.92
June 4	28.11	Oct. 10	28.59	Aug. 6	28.81
July 5	28.51	May 5, 1947	27.86	Sept. 4	28.28
Aug. 1	a100				

a Windmill pumping, water level below 100 feet.
b Pumped prior to measurement.

A-30-13-29dc. A. Nedregger. Domestic well, 4 feet square, depth 21 feet. Taps water in glacial till and outwash. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1945-47

Sept. 1, 1945	18.40	Aug. 1, 1946	18.61	July 8, 1947	11.72
Apr. 5, 1946	19.03	30	17.95	Aug. 6	12.40
May 6	17.33	Oct. 10	17.55	Sept. 4	12.84
June 4	16.88	May 5, 1947	12.52	Oct. 21	13.38
July 5	18.68	June 6	11.22		

Jefferson County

B-1-4-8cd. Joe Merrick. Well in valley fill. Measuring point, top of plank cover, 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 23, 6.00; Sept. 29, 3.22; Dec. 7, 5.30.

Lake County

B-21-20-2dc. Dug well in glacial till or outwash. Measuring point, top of plank cover, 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 26, 26.58; Oct. 1, 24.81; Dec. 2, 25.50.

Lewis and Clark County

B-20-6-8da. Dug well in valley fill. Measuring point, top of 1-inch board, west side, lying on logs, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: July 2, 9.19; Sept. 8, 10.96; Oct. 28, 11.03; Dec. 13, 11.34.

Lincoln County

B-31-31-32db. Dug well in valley fill. Measuring point, top of plank cover at ½-inch hole, 0.8 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 27, 8.50; Sept. 25, 10.48; Nov. 20, 8.90.

McCone County

A-19-48-10db. Eldridge. Bored well in valley fill. Measuring point, 2- by 2-inch curb top, 0.5 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 12, 28.68; Aug. 26, 28.90; Oct. 4, 26.86.

Mineral County

B-18-28-24dc. Walter Nettleton. Dug well in valley fill. Measuring point, top of plank cover at pump, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 25, 6.57; Sept. 23, 7.63; Nov. 19, 7.67.

Missoula County

B-13-19-18ba (*1075, p. 35). US. 148. Mrs. Edna Denkenberger.

Water level, in feet below land-surface datum, 1942-45, 1947

Date	Water level	Date	Water level	Date	Water level
Sept.12, 1942	22.26	Jan. 1944	26.05	Mar. 28, 1945	28.85
Nov.	25.78	Mar.	28.28	May 8	27.70
Dec.	27.88	Apr.	27.68	June 18	19.35
Feb. 1943	27.49	May 20	24.15	Aug. 3	20.80
Apr.	26.72	June 23	20.40	Sept.24	22.70
May	22.05	July 21	21.12	Nov. 7	28.90
June	18.98	Aug. 18	21.43	Sept. 1947	23.20
July	17.91	Oct. 6	24.19	Oct. 16	25.42
Aug.	20.42	Dec. 6	27.30	Nov. 18	25.90
Sept.	22.38	Jan. 1, 1945	28.66	Dec. 21	25.40
Nov.	24.96				

Phillips County

A-31-34-8ca. W. D. Miller. Drilled well in valley fill. Measuring point, top of casing, 1.7 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 17, 4.53; Sept. 17, 4.12; Nov. 3, 4.45.

Powder River County

D-5-51-33da. Broadus Rodeo Association. Drilled well in sandy beds. Measuring point, top of casing, 0.4 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 6, 35.63; Oct. 26, 35.79.

Ravalli County

B-7-20-18ab. Dug well on alluvial fan. Measuring point, top of plank cover, 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 24, 5.87; Oct. 15, 4.85; Dec. 18, 5.59.

Roosevelt County

A-27-48-10cb. Joseph Comrad. Stock well, diameter 36 inches, depth 36 feet. Taps water in alluvial deposits. Measuring point is 0.5 foot above land-surface datum and 1,978.98 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 27, 1946	a 20.82	July 12, 1947	16.92	Oct. 7, 1947	15.34
July 9	b 18.23	Aug. 11	16.50	27	16.19
May 1, 1947	16.90	Sept. 4	16.95	Dec. 3	16.5
June 2	17.15				

a Pumped recently.
b Measurement made 1½ hours after cloudburst.

A-27-48-12bc. Harry Johnston. Unused well, diameter 5 inches, depth 175 feet. Measuring point is 1.2 feet above land-surface datum and 1,983.39 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 27, 1946	22.65	June 2, 1947	21.60	Oct. 7, 1947	20.99
July 9	a 22.05	July 12	21.53	27	21.00
Oct. 8	21.45	Aug. 11	21.40	Dec. 4	21.50
May 1, 1947	21.70	Sept. 4	20.96		

a Measurement made 2 hours after cloudburst.

A-27-49-7bb. Unused well, diameter 4 inches, depth 45 feet. Taps water in alluvial deposits. Measuring point is 1.8 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: Oct. 27, 7.45; Dec. 4, 7.6.

A-28-49-34bd. Eddie Bear. Unused well, diameter 4 inches, depth 52.4 feet. Taps water in alluvial deposits. Measuring point is at land-surface datum and 1,998.82 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 27, 1946	36.86	June 2, 1947	34.45	Oct. 7, 1947	34.56
July 9	36.87	July 12	34.46	27	34.36
Oct. 8	35.53	Aug. 11	34.61	Dec. 5	34.8
May 1, 1947	34.22	Sept. 4	34.46		

A-28-49-35ca. Unused well, diameter 4 inches, depth 49 feet. Taps water in alluvial deposits. Measuring point is 0.5 foot above land-surface datum and 1,984.85 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 27, 1946	28.16	July 12, 1947	14.86	Oct. 22, 1947	15.93
July 9	28.59	Sept. 2	15.31	27	16.06
Oct. 8	28.88	4	15.00	Nov. 23	16.41
May 1, 1947	14.70	Oct. 7	15.78	Dec. 4	16.5
June 2	14.91				

A-28-50-33dc. Unused well, diameter 4½ inches, depth 77 feet. Taps water in alluvial deposits. Measuring point is 0.3 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: Oct. 27, 19.65; Dec. 5, 20.0.

A-27-51-9ca. Leo Combs. Unused well, diameter 1.5 inches, depth 33 feet. Taps water in alluvial deposits. Measuring point is 0.2 foot above land-surface datum and 1,950.02 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 26, 1946	13.44	June 2, 1947	9.68	Oct. 7, 1947	8.24
July 9	13.80	July 12	10.42	27	7.92
Oct. 8	10.38	Aug. 11	9.15	Dec. 4	9.9
May 1, 1947	9.42	Sept. 5	8.61		

A-27-52-8ac. Unused well, diameter 4 inches, depth 86 feet. Taps water in glacial till. Measuring point is 1.8 feet above land-surface datum and 1,988.87 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 29, 1946	66.70	June 2, 1947	66.74	Oct. 7, 1947	66.55
July 10	66.64	July 12	66.74	27	66.63
Oct. 7	66.51	Aug. 4	66.99	Dec. 4	67.1
May 1, 1947	66.76	Sept. 5	66.57		

A-27-52-8adl. Unused well, diameter 5 inches, depth 68 feet. Taps water in glacial till. Measuring point is at land-surface datum and 2,001.40 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 29, 1946	(a)	June 2, 1947	65.82	Oct. 7, 1947	64.91
July 10	(a)	July 12	66.7	27	65.99
Oct. 8	(a)	Aug. 4	65.90	Dec. 5	67.0
May 1, 1947	65.77	Sept. 5	65.23		

a Dry.

A-27-52-16bd. Rattle Thunder. Unused well, diameter 5 inches, depth 64 feet. Taps water in alluvial deposits. Measuring point is 1.0 foot above land-surface datum and 1,961.50 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 26, 1946	40.51	July 12, 1947	37.92	Oct. 7, 1947	36.84
July 16	39.35	Aug. 4	37.38	26	36.69
May 1, 1947	36.36	Sept. 5	37.03	Dec. 4	37.5
June 2	37.12				

A-28-53-30dd. Unused well, diameter 4 inches, depth 34 feet. Measuring point is 0.3 foot above land-surface datum and 1,943.48 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 26, 1946	30.24	June 2, 1947	26.24	Oct. 7, 1947	25.81
July 10	30.61	July 11	27.03	26	25.81
Oct. 7	28.38	Aug. 4	26.67	Dec. 4	27.0
May 1, 1947	26.49	Sept. 5	26.09		

A-29-52-26bc. McIllwain. Unused well, 6 feet square, depth 11 feet. Taps water in glaciolacustrine deposits. Measuring point is 1.2 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Apr. 29, 1946	5.62	July 11, 1947	5.05	Oct. 7, 1947	5.65
July 10	6.02	Aug. 4	5.64	26	5.55
June 2, 1947	5.17	Sept. 5	5.46		

A-30-53-29dd. Unused well, diameter 4 inches, depth 88 feet. Taps water in glacial till. Measuring point is 1.3 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Apr. 29, 1946	57.56	Aug. 4, 1947	57.54	Oct. 26, 1947	57.40
June 2, 1947	57.47	Sept. 5	57.44	Dec. 4	57.30
July 11	57.42	Oct. 7	57.50		

A-30-56-7cc. Christopherson. Unused well, diameter 3 inches, depth 87 feet. Measuring point is 0.4 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

July 10, 1946	60.52	June 2, 1947	60.25	Oct. 7, 1947	60.55
Oct. 7	59.91	July 11	60.43	26	60.45
May 1, 1947	60.19	Sept. 5	60.48	Dec. 4	59.8

A-30-55-1aa. Unused well, diameter 4 inches. Measuring point is 1.6 feet above land-surface datum and 2,001.60 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 3	29.11	Aug. 4	29.27	Oct. 7	29.49	Dec. 4	28.2
July 11	29.16	Sept. 5	29.35	26	29.32		

A-30-55-36ad. Stock well, diameter 24 inches, depth 47 feet. Measuring point is 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum: Apr. 25, 1946, 11.65; July 10, 1946, 16.75; July 7, 1947, 22.14; Dec. 4, 1947, 10.3.

A-28-57-28dd. Unused well, diameter 5 inches, depth 29 feet. Taps water in Fort Union formation. Measuring point is 0.2 foot above land-surface datum and 1,988.69 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 25, 1946	27.52	July 14, 1947	25.07	Oct. 25, 1947	25.10
July 10	26.82	Sept. 5	25.02	Nov. 24	25.02
Oct. 7	26.70	Oct. 7	25.18	Dec. 4	25.3
June 24, 1947	26.09				

A-29-51-27da. Bureau of Reclamation, U. S. Dept. of Interior. Observation well, diameter 2 inches, depth 29 feet. Measuring point is 0.5 foot above land-surface datum and 2,097.4 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: May 19, 28.0; Oct. 27, 27.09.

A-29-51-36bb. Bureau of Reclamation, U. S. Dept. of Interior. Observation well, diameter 2 inches, depth 19 feet. Measuring point is 1.2 feet above land-surface datum and 2,064.8 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: Oct. 27, 8.33; Dec. 3, dry.

Sheridan County

A-31-56-31bb. Unused well, diameter 2.5 inches, depth 84 feet. Taps water in glaciofluvial deposits. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 25, 1946	24.17	June 2, 1947	23.94	Oct. 7, 1947	23.97
July 10	24.08	July 11	23.90	26	23.96
Oct. 7	24.10	Aug. 9	23.98	Dec. 4	23.8
May 1, 1947	24.05	Sept. 5	23.93		

A-31-56-30bb. Geological Survey, U. S. Dept. of Interior. Observation well, diameter 1.5 inches, depth 203 feet. Taps water in glaciofluvial deposits. Measuring point is 2.0 feet above land-surface datum and 2,009.14 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 12	55.32	Aug. 4	55.34	Oct. 7	55.34	Dec. 4	55.0
July 8	55.26	Sept. 5	55.29	26	55.24		

A-31-55-27bc. Fish & Wildlife Service, U. S. Dept. of Interior. Unused well, diameter 30 inches, depth 7 feet. Taps water in glaciolacustrine deposits or outwash. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 25, 1946	4.47	June 2, 1947	3.45	Oct. 7, 1947	5.65
July 10	5.29	July 11	4.38	26	5.70
Oct. 7	5.41	Aug. 4	4.91	Dec. 4	5.9
May 1, 1947	3.48	Sept. 5	5.44		

A-31-55-24aa. Unused well, diameter 4 inches, depth 99 feet. Taps water in glaciofluvial deposits. Measuring point is 1.0 foot above land-surface datum and 2,038.81 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 2	92.40	Aug. 4	92.44	Oct. 7	92.42	Dec. 4	92.2
July 11	92.39	Sept. 5	92.42	26	92.42		

A-32-56-31bb. Geological Survey, U. S. Dept. of Interior. Observation well, diameter 1.5 inches, depth 225 feet. Taps water in glaciofluvial deposits. Measuring point is 1.3 feet above land-surface datum and 1,969.34 feet above mean sea level.

Water level, in feet below land-surface datum, 1947

June 12	33.08	Aug. 4	33.30	Oct. 7	33.53	Dec. 3	32.7
July 8	32.96	Sept. 5	33.39	26	33.46		

A-33-56-31bb. Unused well, diameter 3 inches, depth 71 feet. Measuring point is 1.6 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Apr. 24, 1946	36.62	June 2, 1947	36.60	Oct. 7, 1947	36.55
July 10	37.47	July 11	36.40	26	36.49
Oct. 7	36.65	Aug. 4	36.48	Dec. 3	36.8
May 1, 1947	36.60	Sept. 5	36.48		

A-33-57-33dd. Domestic and stock well, diameter 6 inches, depth 75 feet. Measuring point is 1.0 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

July 7, 1946	69.33	July 11, 1947	69.16	Oct. 7, 1947	69.39
Oct. 7	69.43	Aug. 4	69.23	26	69.19
May 1, 1947	69.36	Sept. 5	69.19	Dec. 3	68.7
June 3	69.08				

A-33-58-34bb. Unused well, diameter 18 inches, depth 86 feet. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

July 11, 1946	69.83	July 11, 1947	69.66	Oct. 7, 1947	69.89
Oct. 7	69.93	Aug. 4	69.73	26	69.69
May 1, 1947	69.86	Sept. 5	69.69	Dec. 3	69.2
June 3	69.58				

Stillwater County

D-2-23-29ba. Alvin Southworth. Drilled well in alluvial sand and gravel. Measuring point, top of casing, 0.25 foot above land-surface datum.

Water level, in feet below land-surface datum, 1947

June 11	9.86	Oct. 22	4.19	Dec. 10	5.37
Sept. 6	3.44	Nov. 30	4.95		

Sweetgrass County

A-4-14-14ba. Spike VanCleave. Dug well in valley fill. Measuring point, top of plank cover, north side, under trap door, 2.0 feet above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 11, 4.73; Oct. 21, 12.88.

Teton County

B-25-1-15ab. Don Meech. Dug well in valley fill. Measuring point, top of steel curb under trap in pit, 6.5 feet below land-surface datum. Water levels, in feet below land-surface datum, 1947: July 1, 14.40; Sept. 27, 14.98; Nov. 3, 15.72; Dec. 8, 14.98.

Toole County

B-36-2-8cc. Cloyd Hannon. Dug well in glacial till. Measuring point, top of plank cover at arrow, 1.0 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: July 1, 4.12; Sept. 12, 7.02; Nov. 2, 6.60; Dec, 9, 6.86.

Valley County

A-26-45-1cb. George Conner. Unused well, diameter 5 inches, depth 50 feet. Taps water in alluvial deposits. Measuring point is 1.1 feet above land-surface datum and 2,015.65 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: May 5, 23.35; Oct. 30, 23.48; Dec. 2, 22.9.

A-26-45-6aa. Unused well, diameter 4 inches, depth 25 feet. Taps water in alluvial deposits. Measuring point is 0.5 foot above land-surface datum and 2,023.15 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: June 4, 19.95; Oct. 30, 20.64; Dec. 2, 22.0.

A-27-45-33dc. Eva Mae Smith. Unused well, diameter 12 inches, depth 18 feet. Taps water in alluvial deposits. Measuring point is 1.2 feet above land-surface datum and 2,011.20 feet above mean sea level. Water levels, in feet below land-surface datum, 1947: May 28, 9.69; Oct. 24, 9.50; Dec. 2, 9.9.

A-27-43-22cd. Unused well, diameter 20 inches, depth 28 feet. Taps water in glacial till. Measuring point is 0.2 foot above land-surface datum and 2,096.41 feet above mean sea level.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 2, 1946	24.09	June 3, 1947	24.09	Oct. 6, 1947	23.92
July 9	24.13	July 1	23.75	30	23.84
Oct. 8	24.29	Aug. 4	23.83	Dec. 2	25.5
May 2, 1947	24.02	Sept. 4	23.86		

A-28-36-1aa. Unused well, diameter 6 inches, depth 99 feet. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 3, 1946	91.59	June 3, 1947	90.28	Sept. 4, 1947	92.99
July 8	92.29	July 1	90.30	Oct. 6	90.59
Oct. 9	91.48	7	91.80	30	90.76
May 2, 1947	91.50	Aug. 4	90.24	Dec. 2	90.9

A-28-38-1bb. Unused well, diameter 6 inches, depth 52 feet. Measuring point is 2.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 3, 1946	39.93	June 3, 1947	37.50	Sept. 4, 1947	37.07
July 8	39.07	July 1	37.62	Oct. 6	36.72
Oct. 9	38.28	7	38.99	30	37.06
May 2, 1947	37.80	Aug. 4	37.19	Dec. 2	37.0

A-27-41-23bb. John Rawe. Unused well, 24 by 48 inches, depth 21 feet. Taps water in glacial till. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 1, 1946	17.21	June 3, 1947	17.13	Sept. 4, 1947	16.85
July 8	17.21	July 1	17.14	Oct. 6	16.92
Oct. 8	17.28	7	16.89	30	16.99
May 2, 1947	17.32	Aug. 4	17.04	Dec. 2	17.2

A-27-41-7bc. Mrs. Dan Oakland. Unused well, diameter 12 inches, depth 16 feet. Measuring point is 0.3 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 2, 1946	14.68	June 3, 1947	14.01	Sept. 4, 1947	13.89
July 8	15.65	July 1	14.08	Oct. 6	14.04
Oct. 8	14.73	Aug. 4	13.97	30	14.11
May 2, 1947	14.02				

A-27-39-7ad. Unused well, diameter 12 inches, depth 21 feet. Measuring point is 2.0 feet above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

May 4, 1946	8.62	June 3, 1947	9.22	Sept. 4, 1947	8.21
July 8	9.09	July 1	9.36	Oct. 6	8.78
Oct. 9	10.27	8	9.60	30	8.75
May 2, 1947	9.02	Aug. 4	10.21		

A-26-40-3bd. Unused well, 4 feet square, depth 8.0 feet. Measuring point is 0.5 foot above land-surface datum.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
May 4, 1946	4.25	June 3, 1947	2.70	Sept. 4, 1947	6.07
July 8	6.10	July 1	1.37	Oct. 6	6.68
Oct. 9	6.57	8	2.08	30	6.92
May 2, 1947	1.41	Aug. 4	4.94	Dec. 2	6.9

Yellowstone County

A-4-33-1aa. Cross Service Station. Drilled well in valley fill. Measuring point, top of casing in round building, 0.2 foot above land-surface datum. Water levels, in feet below land-surface datum, 1947: June 9, 9.65; Sept. 4, 7.74; Nov. 29, 10.33; Dec. 15, 10.65.

OREGON

By F. A. Watkins

SCOPE OF THE WATER-LEVEL PROGRAM

The water-level program of Oregon was continued during 1947 in coopera tion with Oregon State Engineer. Measurements were made through the year at 78 wells. Twenty wells were discontinued and descriptions of 4 wells ap pear in this report for the first time. Altogether, 845 measurements of water level or pressure head were made not including readings from recorder charts; also included in this report are 87 measurements made prior to 1947 Two float gages were in operation throughout the year and one automatic water-stage recorder was in operation during part of the year. A local ob-server made weekly tape measurements at one well, and at three other wells the owners made daily to monthly readings of pressure head either with wa-ter manometer tubes or pressure gage.

During the year, two reports were completed and released, one on grcun water in the Prineville area and the other on ground-water contamination in the North Salem area. In addition, the Lake County report--which was held in abeyance during the war--is being revised for early release, a report on well interference in the Beaverton area was started, and field work on a ground-water inventory of the Walla Walla River Basin, in Umatilla County, is in progress. This work is all being carried on in cooperation with the Oregon State Engineer.

PRECIPITATION

The first of the two following tables shows average monthly and sea-sonal distribution of precipitation at two representative stations for 50 years of record, in inches and in percentage of the whole; also, for the water year ending September 30, 1947, it is shown in percentage of the aver age of record. The second table shows the precipitation in inches for the water year ending September 30, 1947, and in percentage of the 50-year aver age at 18 representative stations in the State. Precipitation over most of

the State was below average except in the Willamette Valley where it was average or slightly above average. Snowfall was below normal over most of the State.

Monthly precipitation at two representative stations in the State of Oregon in 1946-47, in percentage of the yearly average for the 50-year period ending Sept. 30, 1940

Month	Portland Willamette Valley subprovince (western Oregon)			Baker Grande Ronde subprovince (eastern Oregon)		
	50-year average		1946-47	50-year average		1946-47
	Inches	Percent	Percent	Inches	Percent	Percent
October	2.80	7.2	12.8	0.74	6.6	6.7
November	6.05	15.5	18.4	1.02	9.0	12.2
December	6.66	17.0	15.4	1.23	10.9	6.6
January	5.80	14.9	11.0	1.19	10.6	6.6
February	4.74	12.1	8.0	1.06	9.4	2.8
March	3.92	10.0	13.5	1.05	9.3	6.7
Subtotal	29.97	76.7	79.1	6.29	55.8	41.6
April	2.73	7.0	5.4	.98	8.7	6.6
May	1.93	4.9	2.2	1.25	11.1	4.5
June	1.48	3.8	7.6	1.10	9.7	15.3
July	.48	1.2	3.3	.48	4.3	.5
August	.61	1.6	.7	.46	4.1	.4
September	1.86	4.8	2.5	.71	6.3	5.9
Subtotal	9.09	23.3	21.7	4.98	44.2	33.2
The year	39.06	100.0	100.8	11.27	100.0	74.8

Precipitation and relative wetness at 18 representative climatologic stations in the State of Oregon for the year ending Sept. 30, 1947

Province	Station and county	Precipitation 1946-47	
		Inches	Percentage of 50-year average a/
Northern Coast Ranges	Ashland, Jackson	20.60	104.6
	Astoria, Clatsap	73.99	95.9
	Bandon, Coos	*55.52	88.2
	Grants Pass, Josephine	26.83	91.6
	Newport, Lincoln	58.24	85.6
Puget-Willamette Trough	Albany, Linn	36.58	90.3
	Eugene, Lane	41.83	111.0
	Falls City, Polk	73.59	101.8
	Portland, Multnomah	39.32	100.8
	Salem, Marion	37.87	99.0
	Zigzag, Clackamas	*84.82	108.5
Columbia Plateau	Baker, Baker	8.42	74.8
	Bend, Deschutes	9.31	74.7
	LaGrande, Union	24.72	129.0
	The Dalles, Wasco	13.39	99.1
	Umatilla, Umatilla	7.21	95.4
Basin and Range	Harney Branch Experiment Station, Harney	10.71	118.3
	Klamath Falls, Klamath	11.75	90.1

a Average for years ending Sept. 30, 1891, to 1940.
* Estimated in minor part.

SUMMARY OF WATER-LEVEL FLUCTUATIONS

Willamette Valley subprovince

Four rounds of water-level measurements were made in 14 wells in the Willamette Valley. In well 1N/1-34N1 (US 107), at Portland, 13 measurements were made for the Nation-wide monthly Water Resources Review. In well 15/4W-32M1, at Junction City, 53 tape measurements were made by a local observer. Altogether 115 measurements of water level were made in 15 wells in 1947. The description of one well appears in this report for the first time. The table for this well includes three measurements made prior to 1947.

In 13 wells for which comparable measurements were available, the year-end water levels were 0.36 foot higher in 1947 than in 1946.

Wells in the Willamette Valley subprovince are listed under Benton, Lane, Linn, Marion, Multnomah, and Yamhill Counties.

Deschutes River subprovince

Prineville area

Rounds of water-level measurements were made 3 times in 1947. The number of wells was reduced after May 1947 because the detailed investigation in this area had disclosed the more representative "index" wells. Altogether, 207 measurements of water level were made in 23 wells in 1947. Also included in this report are 42 measurements made prior to 1947. Twenty wells were discontinued in this report and descriptions for 3 wells are published for the first time. One pressure gage and one water manometer tube were in use throughout the year and an automatic water-stage recorder and another water manometer tube were in use during part of the year.

In three wells having comparable records, two drawing water from the Pleistocene (?) artesian aquifer show an average decline of 4.04 feet while the other, which is about 3.5 miles northwest of Prineville and out of the area of heavier pumping, shows a rise of 4.70 feet over the year-end level of 1946.

Records for observation wells in the Prineville area are listed under Crook County.

Summer Lake subprovince

Two rounds of measurements were made in 1947 on seven wells in the Fork Rock Valley and one well in the Chewaucan River Valley. Water levels in October 1947 were slightly below those of July 1946. Records for these wells are listed under Lake County.

Walla Walla subprovince

In the Walla Walla Basin 27 rounds of water-level measurements were made, 9 rounds by W. C. Mason, local watermaster, 16 by the Bureau of of Reclamation, and 2 by the Geological Survey. In addition, a float gage was maintained throughout the year in one well and read at weekly intervals by the owner. In all, 448 measurements were made in 15 wells. 42 measurements made in 1946 are included in this report. One well was discontinued in 1947.

In the 15 wells, the September levels were on the average about 1.76 feet below the September 1946 levels. In well 6N/35-36H1 the highest level of the year occurred in May and was 0.57 foot below the high of 1946. Wells in the Walla Walla Basin are listed under Umatilla County.

Harney Basin subprovince

Two rounds of water-level measurements were made in nine wells. One well equipped with a float gage was read at weekly intervals by a local observer. Altogether, 73 measurements of water level were made in 1947. Measurement of one well was discontinued. At the float-gage well, 23/31-33E1, the September-end water level of 1947 was 0.20 foot below the September-end water level of 1946, but the high water level of 1947--in June--was 0.69 foot above the high level of 1946, which also occurred in June. Records for these wells are listed under Harney County.

Grande Ronde subprovince

Observation wells maintained in the Grande Ronde subprovince are in both the "Baker" (Powder River) and the Grande Ronde valleys. Two rounds of water levels were made in each of these areas during 1947. In the Baker Valley, three of the four wells measured in May 1947 were slightly above the July measurement in 1946, and the fourth well was slightly below its 1946 level. At three wells in the Grande Ronde Valley, the water levels in May 1947 were slightly higher than those of July 1946. Records for observation wells in these two valleys are listed under Baker and Union Counties.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

The following records of water levels in observation wells are given by counties in alphabetical sequence, with the names of the respective ground-water subprovinces indicated after each county name. Under each county the records are given in order of well numbers, the system of which has been described in Water-Supply Paper 990, page 19.

Baker County--Baker Valley

Grande Ronde subprovince

7/39-20N1 (*817, p. 239; 845, p. 405; 886, p. 617; 910, p. 19; 940, p. 16; *948, p. 16; 990, p. 19; 1020, p. 40; 1027, p. 81 ; 1075, p. 40). City of Baker. Permanent observation well. Taps shallow water in alluvium. Water levels, in feet below land-surface datum, 1947: May 10, 1.94; Oct. 8, 6.44.

8/39-22F1 (*817, p. 240; 845, p. 405; 886, p. 617; 910, p. 19; 940, p. 16; *948, p. 16; 990, p. 19; 1020, p. 40; 1027, p. 81; 1075, p. 40). Baker County. Permanent observation well. Taps shallow water in alluvium. Water levels, in feet below land-surface datum, 1947: May 10, 4.43; Oct. 8, 5.85.

8/40-19D1 (*817, p. 240; 845, p. 405; 886, p. 617; 910, p. 19; 940, p. 16; *948, p. 16; 990, p. 19; 1020, p. 40; 1027, p. 82 ; 1075, p. 40). Baker County. Permanent observation well. Taps shallow water in alluvium. Water levels, in feet below land-surface datum, 1947: May 10, 3.13; Oct. 8, 5.99.

8/40-23A1 (*817, p. 240; 845, p. 405; 886, p. 617; 910, p. 19; 940, p. 16; *948, p. 16, 990, p. 19; 1020, p. 41; 1027, p. 82 ; 1075, p. 40). Baker County. Permanent observation well. Taps shallow water in alluvium. Water level, in feet below land-surface datum, 1947: May 10, 4.12.

Benton County

Willamette Valley subprovince

14/5W-10R1 (*845, p. 413; 886, p. 622; *890, p. 182; 910, p. 25; 940, p. 17; *948, p. 16; 990, p. 20; 1020, p. 41; 1027, p. 82 ; 1075, p. 40). Chris Lindseth. Formerly owned by Mrs. Thomas Harvey. Taps water in old (?) alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 2, 9.81; June 12, 14.26; Aug. 25, 15.77; Nov. 20, 11.70.

Crook County

Deschutes River subprovince

14/15-11B1. Earl Forest. NW¼NE¼ sec. 11, T. 14 S., R. 15 E., 3.5 miles north of the mouth of McKay Creek and 2.5 miles east of new Madras road, about 50 feet south of center line of road under pump house in barnyard. Drilled well, diameter 8 inches, depth 110 feet. Water from sandy material of Pleistocene (?) lacustrine sediments. Measuring point, top of concrete pump base at south side, 2 feet below land-surface datum, which is about 2,985 feet above sea level. Water levels, in feet below land-surface datum, 1947: Mar. 20, 23.80; Oct. 10, 17.89.

14/15-15P1 (*1027, p. 82 ; 1075, p. 40). G. W. Slayton. Measurement discontinued.

14/15-15Q1 (*1027, p. 82 ; 1075, p. 40). M. D. Colahan. Formerly owned by Claude Williams. Flowing artesian water. Pressure-gage readings by owner.

Water level, in feet above land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Nov. 23, 1946	54.5	Mar. 22, 1947	61.5	Sept.19,1947	62.5
Dec. 19	55.0	May 12	50.0	Oct. 5	63.5
Feb. 12, 1947	58.0	June 3	60.0	10	64.3
14	59.0	July 2	57.0	Nov. 7	61.5
19	59.5	Aug. 16	53.5	Dec. 2	58.5
Mar. 19	60.5				

14/15-21H1 (*1027, p. 83 ; 1075, p. 41). James Small. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 19, 28.0; May 12, 27.0. Measurement discontinued.

14/15-22B1 (*1027, p. 83 ; 1075, p. 41). Josiah Williams. Flowing artesian water. Continual varied flow of water from well to cattle troughs. Water levels, in feet above land-surface datum, 1947: Mar. 19, 65.0; May 12, 63.0. Measurements discontinued.

14/15-24M1 (*1027, p. 83 ; 1075, p. 41). Foy Hibbard. Nonflowing artesian water. Water levels, in feet below land-surface datum, 1947: Mar. 19, 7.34; May 12, 8.66. Measurements discontinued.

14/15-25E1 (*1027, p. 83 ; 1075, p. 41). R. M. Doty. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 19, 14.0; May 13, 12.8. Measurements discontinued.

14/15-36G1 (*1027, p. 84 ; 1075, p. 41). C. W. Woodford. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 12.00; May 12, 7.5. Measurements discontinued.

14/15-36H1 (*1027, p. 84 ; 1075, p. 41). Alton Basey. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 32.5; May 12, 24.5. Measurement discontinued.

14/16-19H1. Leslie Clauson. SE¼NE¼ sec. 19, T. 14 S., R. 16 E., 2 miles north of north city limits of Prineville, 120 feet west of center line of county road 3, at west end of shed. Drilled well, diameter 6 inches, depth 46.5 feet. Water from sandy material of Pleistocene (?) lacustrine sediments. Measuring point, top of 6-inch casing, west side, 1.5 feet below land-surface datum which is about 2,970 feet above sea level. Water levels, in feet below land-surface datum: Oct. 28, 1944, 8.00; Oct. 10, 1947, 7.17.

14/16-30N1 (*1027, p. 84 ; 1075, p. 41). Orville Yancey. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 19, 26.0; May 12, 22.0. Measurement discontinued.

14/16-31F1 (*1027, p. 84 ; 1075, p. 41). Mrs. Lon Smith. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 19, 15.0; May 12, 11.0, recovering. Measurements discontinued.

14/16-31H1 (1075, p. 41). Pioneer Cemetery Association. Nonflowing confined water. Water-stage recorder removed May 16, 1947: Measurements discontinued.

Water level at noon, in feet below land-surface datum, 1947
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	66.52	Jan. 20	66.43	Feb. 5	66.36	Feb. 25	66.31
10	66.49	25	66.42	10	66.35	28	66.31
15	66.45	31	66.38	15	66.33	Mar. 5	66.30

14/16-31H1--Continued.

Water level at noon, in feet below land-surface datum, 1947
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 10	66.30	Mar. 31	66.32	Apr. 20	66.36	May 5	66.50
15	66.30	Apr. 5	66.32	25	66.37	10	66.80
20	66.30	10	66.33	30	66.39	15	66.85
25	66.32	15	66.34				

14/16-31J1 (*1027, p. 84 ; 1075, p. 42). City of Prineville Ry. Flowing artesian water. Water level, in feet above land-surface datum, 1947: Mar. 18, 6.0. Measurements discontinued.

14/16-31M1 (*1027, p. 85 ; 1075, p. 42). O. C. Hawk. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 24.0; May 12, 20.0. Measurements discontinued.

14/16-31P1 (*1027, p. 85 ; 1075, p. 42). Grover C. Barron. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 19.0; May 12, 14.0. Measurements discontinued.

14/16-31Q1 (*1027, p. 85 ; 1075, p. 42). Sarah Yancey Estate. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 14.5; May 12, 10.5. Measurements discontinued.

14/16-32N1 (*1027, p. 85 ; 1075, p. 42). E. E. Wagoner. Originally flowing artesian water; at present drawn down by adjacent pumped wells so that water level is below land surface most of the year. Water levels, in feet with reference to land-surface datum, 1947: Mar. 18, 8.97; May 12, 9.66; Oct. 10, 10.14.

15/16-5A2 (*1027, p. 86 ; 1075, p. 43). O. M. Young. Nonflowing confined water. Water levels, in feet below land-surface datum, 1947: Mar. 18, 7.04; May 12, 6.27. Measurements discontinued.

15/16-5D1. Pacific Power & Light Co. NW¼NW¼ sec. 5, T. 15 S., R. 16 E., in Prineville, at the southeast corner of intersection of 4th and Court Streets, on north side of pump house just east of door. Driven well, diameter 2 inches, depth 40± feet. Water from alluvium along Ochoco Creek. Measuring point, top of pipe flange north side, 0.8 foot above land-surface datum which is about 2,865 feet above sea level. Water levels, in feet below land-surface datum: Sept. 13, 1943, 6.74; Oct. 10, 1947, 6.80.

15/16-6A1 (*1027, p. 86 ; 1075, p. 43). M. E. Gerow. Flowing artesian water.

Water level, in feet above land-surface datum, 1947

Jan. 10	11.5	Feb. 22	12.0	May 12	8.0	Oct. 10	5.0
22	11.5	Mar. 2	12.25	June 3	8.5	Nov. 10	8.0
Feb. 3	11.5	15	12.5	17	8.67	Dec. 10	8.5
12	11.67	Apr. 11	10.0	July 2	8.5		

15/16-6A2 (*1027, p. 87 ; 1075, p. 44). Tom Smith. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 14.5; May 12, 10.0. Measurements discontinued.

15/16-6A3 (*1027, p. 87 ; 1075, p. 44). George Whiteman. Flowing artesian water. Water levels, in feet above land-surface datum, 1947: Mar. 18, 6.5; May 12, 2.0. Measurements discontinued.

15/16-6A4 (*1027, p. 87 ; 1075, p. 44). William Mackay. Flowing artesian water. Measurements discontinued.

Water level, in feet above land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Nov. 24, 1946	4.8	Jan. 14, 1947	3.3	Mar. 11, 1947	5.0
25	3.1	15	3.3	12	4.5
26	4.1	16	3.5	13	5.5
27	3.5	17	3.1	14	4.6
28	4.2	18	3.7	15	5.1
29	3.6	19	4.5	16	5.5
30	4.6	20	3.6	17	4.4
Dec. 1	5.0	21	3.1	18	4.2
2	4.5	22	3.2	19	4.4
3	4.6	23	3.8	20	4.3
4	4.3	24	3.6	21	4.6
5	5.6	25	4.3	22	4.6
6	4.0	26	3.8	23	5.4
7	5.3	27	3.6	24	4.7
8	5.2	28	3.6	25	4.4
9	4.3	29	3.7	26	4.6
10	4.5	30	3.5	27	4.7
11	4.2	31	3.4	28	4.6
12	4.3	Feb. 1	4.2	29	5.2
13	4.7	2	4.5	30	5.4
14	4.9	3	4.2	31	4.6
15	5.5	6	3.8	Apr. 1	4.7
16	4.2	7	3.6	2	4.5
17	4.7	8	3.9	3	4.2
18	4.6	9	4.1	4	4.1
19	4.3	10	3.8	5	4.2
20	4.3	11	3.8	6	4.3
21	4.6	12	4.1	7	4.1
22	4.9	13	4.0	8	4.1
23	4.2	14	4.1	9	3.1
24	4.3	15	4.8	10	3.1
25	5.1	16	5.0	11	2.1
26	4.3	17	3.9	12	2.0
27	4.1	18	4.6	13	2.4
28	3.1	19	4.4	14	1.2
29	5.0	20	4.6	15	0.0
30	3.9	21	5.1	16	1.0
31	4.4	22	4.9	17	1.1
Jan. 1, 1947	4.7	23	5.2	18	2.3
2	3.8	24	4.2	19	2.0
3	4.8	25	4.5	21	2.8
4	3.8	26	4.1	21	1.9
5	4.4	27	4.2	22	1.6
6	4.1	28	4.4	23	1.2
7	3.8	Mar. 1	4.3	24	1.4
8	3.5	2	5.6	25	1.3
9	3.3	3	4.6	26	1.2
10	3.3	4	4.5	27	1.0
11	3.5	5	4.3	28	1.1
12	4.5	7	4.7	29	.9
13	3.2	8	5.2	30	.0
14	3.3	9	5.7	May 12	a .20

a Below land-surface datum.

Harney County

Harney Basin subprovince

22/31-34N1 (*817, p. 243; *841, p. 152; 845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; *948, p. 16; 990, p. 20; 1020, p. 41; 1027, p. 88 ; 1075, p. 44). Frank Whiting. Taps confined water in Danforth formation. Water level, in feet below land-surface datum, 1947: May 11, 8.93.

23/31-3D2 (*777, p. 151; *817, p. 244; *845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; 948, p. 16; 990, p. 20; 1020, p. 41; 1027, p. 88 ; 1075, p. 44). Harney County. Permanent observation well. Taps shallow water table. Water levels, in feet below land-surface datum, 1947: May 11, 3.51; Oct. 8, 6.45.

23/31-14A3 (*777, p. 151; *817, p. 245; 845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; *948, p. 16; 990, p. 20; 1027, p. 88 ; 1075, p. 44). Harney County. Permanent observation well. Taps shallow water table. Water levels, in feet below land-surface datum: Oct. 12, 1944, 10.91; May 11, 1947, 6.19; Oct. 8, 1947, 9.95.

23/31-16E1 (*777, p. 151; *817, p. 245; 845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; *948, p. 16; 990, p. 20; 1020, p. 41; 1027, p. 88 ; 1075, p. 45). Harney County. Permanent observation well. Taps shallow water table. Water levels, in feet below land-surface datum, 1947: May 11, 3.83; Oct. 8, 7.67.

23/31-33E1 (*777, p. 152; *817, p. 245; 845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; *948, p. 16; 990, p. 20; 1020, p. 41; 1027, p. 88 ; 1075, p. 45). U. S. 109. Harney County. Permanent observation well. Taps shallow water table. From float-gage readings by Newton Hotchkiss, observer.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.36	Apr. 13	2.82	July 6	2.37	Oct. 8	a 6.61
12	6.44	20	2.40	13	2.87	12	6.66
19	6.64	28	2.37	20	3.48	19	6.71
26	6.73	May 4	1.82	27	4.07	26	6.77
Feb. 2	6.75	11	a 1.61	28	4.15	28	6.79
9	6.68	11	1.69	Aug. 3	4.60	Nov. 2	6.83
16	6.33	18	1.85	10	5.05	9	6.88
23	5.57	25	2.07	17	5.44	16	6.87
27	5.48	28	1.80	25	5.64	23	6.85
Mar. 2	5.46	June 1	1.18	Sept. 7	6.06	28	6.82
9	5.39	8	.90	14	6.21	Dec. 7	6.76
16	5.30	15	1.52	21	6.34	14	6.72
23	5.02	22	1.64	28	6.46	21	6.69
28	4.49	28	1.89	Oct. 5	6.90	28	6.67
Apr. 6	3.44						

a By Geological Survey.

23/32-7L1 (*777, p. 152; *817, p. 245; *841, p. 163; 845, p. 406; 886, p. 618; 910, p. 19; 940, p. 17; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89; 1075, p. 45). Harney Branch Experiment Station. Taps shallow water table. Water levels, in feet below land-surface datum, 1947: May 11, 7.12; Oct. 8, 7.06.

23/32-7L2 (*777, p. 152; *817, p. 246; *841, p. 164; 845, p. 407; 886, p. 618; 910, p. 19; 940, p. 18; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 45). Harney Branch Experiment Station. Taps confined water in deep valley fill. Water levels, in feet below land-surface datum, 1947: May 11, 4.99; Oct. 8, 7.22.

23/32-7Q3 (*817, p. 246; 845, p. 407; 886, p. 618; 910, p. 20; 940, p. 18; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 45). Harney Branch Experiment Station. Well destroyed; measurements discontinued.

23/32-30R1 (*777, p. 152; *817, p. 247; 845, p. 407; 886, p. 618; 910, p. 20; 940, p. 18; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 45). Harney County. Permanent observation well. Taps shallow water table. Water levels, in feet below land-surface datum, 1947: May 11, 11,78; Oct. 8, 11.86.

24/31-28E1 (*777, p. 152; *817, p. 247; 845, p. 407; 886, p. 619; 910, p. 20; 940, p. 18; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 45). Harney County. Permanent observation well. Taps shallow water table. Water levels, in feet below land-surface datum, 1947: May 11, 8.62; Oct. 8, 9.89.

Lake County--Fort Rock Valley

Summer Lake subprovince

25/14-15E1 (*777, p. 160; *817, p. 241; *845, p. 405; 886, p. 617; 910, p. 20; 940, p. 19; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 45). Soil Conssrvation Service. Taps confined water. Water levels, in feet below land-surface datum, 1947: May 11, 48.81; Oct. 9, 48.84.

26/15-22B1 (*777, p. 160; 817, p. 241; 845, p. 405; 886, p. 617; 910, p. 20; 940, p. 19; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 89 ; 1075, p. 46). Soil Conservation Service. Taps confined water. Water levels, in feet below land-surface datum, 1947: May 11, 28.20; Oct. 9, dry.

27/15-4G1 (*777, p. 160; *917, p. 241; 845, p. 405; 886, p. 617; 910, p. 20; 940, p. 19; *948, p. 17; 990, p. 21; 1020, p. 42; 1027, p. 90 ; 1075, p. 46). H. M. Parks. Taps confined water. Water levels, in feet below land-surface datum, 1947: May 11, 42.13; Oct. 9, 42.25.

27/15-4G2 (*777, p. 160; 817, p. 241; *845, p. 405; 886, p. 617; 910, p. 20; 940, p. 19; *948, p. 17; 990, p. 22; 1020, p. 42; 1027, p. 90 ; 1075, p. 46). H. M. Parks. Taps confined water. Water levels, in feet below land-surface datum, 1947: May 11, 43.09; Oct. 9, 43.62.

27/17-22R2 (*845, p. 406; *910, p. 20; 940, p. 19; 948, p. 18; 990, p. 22; 1020, p. 42; 1027, p. 90 ; 1075, p. 46). W. D. Collins. Taps water table. Water levels, in feet below land-surface datum, 1947: May 11, 28.06; Oct. 9, 28.12.

27/18-6E2 (*910, p. 20; 940, p. 19; *948, p. 18; 990, p. 22; 1020, p. 42; 1027, p. 90 ; 1075, p. 46). W. D. Collins. Taps water table. Water levels, in feet below land-surface datum, 1947: May 11, 23.83; Oct. 9, 23.94.

27/18-7N1 (*845, p. 406; 886, p. 617; 910, p. 20; 940, p. 19; *948, p. 18; 990, p. 22; 1020, p. 42; 1027, p. 90 ; 1075, p. 46). Mr. Martin. Formerly owned by M. S. Buchanan. Taps water table. Water levels, in feet below land-surface datum, 1947: May 11, 28.91; Oct. 9, 28.12.

36/21-6B1 (*940, p. 19; *948, p. 18; 990, p. 21; 1020, p. 42; 1027, p. 90; 1075, p. 46). Prior to 1944, number of well was listed incorrectly as 26/21-6B1. C. W. E. Jennings. Taps water table. Water levels, in feet below land-surface datum, 1947: May 11, 13.71; Oct. 9, 14.07.

Lane County

Willamette Valley subprovince

15/4W-32M1 (*777, p. 149; *817, p. 259; 845, p. 413; 886, p. 623; *890, p. 187; 910, p. 25; 940, p. 19; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 90 ; 1075, p. 46). Junction City. Taps water in gravel. Measurements by J. Fay Miller, local observer.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	a 5.42	Apr. 1	3.84	July 19	7.43	Oct. 11	8.00
4	5.22	May 3	5.62	26	7.61	18	7.21
11	5.01	10	5.74	Aug. 2	7.94	25	6.43
18	4.96	17	5.80	9	8.19	31	5.46
25	4.91	24	6.11	16	8.34	Nov. 8	5.51
Feb. 1	4.86	31	6.41	23	8.51	15	5.52
8	4.80	June 7	6.48	25	a 8.62	20	a 5.08
15	4.69	12	a 6.60	30	8.82	22	5.54
22	4.61	14	6.61	Sept. 6	8.94	29	5.57
Mar. 1	4.50	21	6.95	13	9.18	Dec. 6	5.31
7	4.40	30	7.22	20	9.31	13	4.93
14	4.31	July 5	7.29	27	9.54	20	4.42
21	4.51	12	7.37	Oct. 4	8.42	27	4.10
28	3.84						

a By Geological Survey.

16/3W-32G1 (*777, p. 149; *817, p. 259; 845, p. 413; 886, p. 623; *890, p. 190; 910, p. 25; 940, p. 19; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 90 ; 1075, p. 46). Leo Sidwell. Taps water in young alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 2, 8.46; June 12, 10.63; Aug. 25, 11.48; Nov. 20, 7.57.

Linn County

Willamette Valley subprovince

10/4W-12F1 (*777, p. 147; *817, p. 257; *845, p. 412; 886, p. 623; *890, p. 167; 910, p. 25; 940, p. 20; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 90 ; 1075, p. 46). Henry Hoefer. Taps water in gravel. Water levels, in feet below land-surface datum, 1947: Jan. 2, 17.40; June 12, 19.94; Aug. 25, 21.95; Nov. 19, 17.35.

11/5W-36Q1 (*777, p. 147; *817, p. 258; *845, p. 412; 886, p. 623; *890, p. 171; 910, p. 25; 940, p. 20; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). E. L. Beach. Formerly owned by Oregon Agricultural Experiment Station, East Farm. Taps water in old (?) alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 2, 15.04; Nov. 20, 15.05.

12/2W-14B1 (*940, p. 20; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). Sigurd H. Lanstrom. Taps water in alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 2, 6.60; June 12, 7.78; Aug. 25, 9.60; Nov. 20, 4.60.

12/3W-9R1 (*777, p. 148; *817, p. 258; *845, p. 413; 886, p. 623; *890, p. 178; 910, p. 25; *940, p. 20; *948, p. 18; 990, p. 22; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). J. H. Swatzka. Taps water in old alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 2, 3.89; June 12, 7.29; Aug. 25, 18.11, pumping; Nov. 20, 2.50.

Marion County

Willamette Valley subprovince

4/1W-2C1 (*845, p. 412; 886, p. 623; *890, p. 149; *910, p. 25; 940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). W. F. Keil. Taps water in valley fill. Water levels, in feet below land-surface datum, 1947: Jan. 3, 4.41, recovering from recent pumping; June 18, 10.57, recovering from recent pumping; Aug. 26, 14.91; Nov. 19, 1.81.

4/1W-23G1. Ben Burch. SW¼NE¼ sec. 23, T. 4 S., R. 1 W., about 1.5 miles south of Aurora and 150 feet west of Southern Pacific Railroad, about 20 feet north of house. Dug well, diameter 48 inches, depth 60 feet. Water from old alluvium. Measuring point, top of concrete well cover at small opening on east side, 0.5 foot above land-surface datum which is about 175 feet above sea level.

Water level, in feet below land-surface datum, 1945-47

Date	Water level	Date	Water level	Date	Water level
Sept.28, 1945	57.82	Jan. 3, 1947	53.54	Aug. 26, 1947	54.34
July 2, 1946	55.83	June 18	54.35	Nov. 19	54.49
Sept.24	53.78				

4/2W-4C1 (*777, p. 145; *817, p. 256; 845, p. 412; 886, p. 623; *890, p. 146; 910, p. 25; 940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). W. J. Gering. Taps water in young alluvium. Water levels, in feet below land-surface datum, 1947: Jan. 3, 12.78; June 18, 15.02; Aug. 26, 16.11; Nov. 19, 13.21.

4/2W-34R1 (*777, p. 145; *817, p. 256; *845, p. 412; 886, p. 623; 890, p. 148; 910, p. 25; *940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 43; 1027, p. 91 ; 1075, p. 47). Johnson School. Taps water in valley fill. Water levels, in feet below land-surface datum, 1947: Jan. 3, 3.11; June 18, 11.56; Aug. 26, 15.97; Nov. 19, 2.54.

5/2W-25M1 (*845, p. 412; 886, p. 623; *890, p. 153; 910, p. 25; 940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 44; 1027, p. 91 ; 1075, p. 47). Agricultural Research Corporation (Sam H. Brown). Taps confined water in sand and gravel. Water levels, in feet below land-surface datum, 1947: Jan. 3, 15.64; June 18, 18.10; Aug. 26, 22.01; Nov. 19, 16.44.

6/3W-33R1 (*777, p. 146; 817, p. 257; *845, p. 412; 886, p. 623; *890, p. 157; 910, p. 25; 940, p. 20, *948, p. 19; 990, p. 23; 1020, p. 44; 1027, p. 91; 1075, p. 47). Gideon E. Stolz. Taps water in gravel and cobbles. No measurements made in 1947.

6/1-7M1 (*777, p. 146; *817, p. 257; *845, p. 412; 886, p. 623; *890, p. 159; 910, p. 25; 940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 44; 1027, p. 91 ; 1075, p. 47). Fred Lucht. Taps water in gravel. Water levels, in feet below land-surface datum, 1947: Jan. 3, 2.32; June 18, 5.16; Aug. 26, 11.17; Nov. 19, 1.10.

Multnomah County

Willamette Valley subprovince

1N/1-34N1 (*940, p. 20; *948, p. 19; 990, p. 23; 1020, p. 44; 1027, p. 91 ; 1075, p. 47). U. S. 107. Weisfield & Goldberg. Taps confined water in alluvium.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	28.37	Apr. 30	28.42	July 31	28.16	Nov. 4	29.35
Feb. 3	28.76	June 2	25.79	Aug. 29	30.81	Dec. 1	29.39
Mar. 3	28.56	30	26.09	Oct. 1	36.19	30	31.66
31	28.67						

Umatilla County--Walla Walla Basin

Walla Walla subprovince

5N/35-1C1 (*777, p. 159; *817, p. 255; 840, p. 346; 845, p. 411; 886, p. 619; 910, p. 21; 940, p. 21; *948, p. 19; 990, p. 23; 1020, p. 44; 1027, p. 92 ; 1075, p. 48). John Clark. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	12.63	Mar. 26, 1947	21.08	June 13, 1947	23.69
19	13.22	31	17.29	24	27.66
27	14.03	Apr. 8	20.70	July 9	a31.07
Jan. 9, 1947	14.97	17	18.92	17	a30.66
21	18.30	29	15.33	Aug. 11	a29.8
30	14.59	May 1	16.05	Sept.10	26.69
Feb. 11	15.90	9	16.51	12	27.20
20	17.63	20	20.19	Oct. 8	27.13
Mar. 3	20.29	June 3	22.25	Nov. 19	14.84
13	18.73	5	22.14	Dec. 19	20.69

a Pumping.

5N/35-2C1 (*777, p. 159; *817, p. 256; 840, p. 346; 845, p. 411; 886, p. 619; 910, p. 21; 940, p. 21; *948, p. 20; 990, p. 24; 1020, p. 44; 1027, p. 92; 1075, p. 48). E. J. McSherry. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Dec. 13, 1946	17.99	Feb. 20, 1947	19.21	July 9, 1947	14.62
19	18.32	Mar. 3	18.69	Aug. 11	15.28
27	18.47	13	18.46	Sept.10	15.64
Jan. 9, 1947	17.42	26	17.99	Oct. 8	17.54
21	17.87	31	18.46	Nov. 19	18.30
30	18.09	May 1	17.03	Dec. 19	18.90
Feb. 11	19.62	June 4	12.93		

5N/35-3H1 (*777, p. 160; *817, p. 256; 840, p. 345; *845, p. 412; 886, p. 619; 910, p. 21; 940, p. 21; *948, p. 20; 990, p. 24; 1020, p. 44; 1027, p. 92 ; 1075, p. 48). J. M. Morse Estate. Taps water table.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 31	33.28	July 9	16.98	Sept.10	18.24	Nov. 19	35.69
May 1	26.86	Aug. 11	16.33	Oct. 8	28.94	Dec. 19	34.58
June 4	17.60						

6N/35-13R1 (*777, p. 155; *817, p. 251; 840, p. 343; 845, p. 408; 886, p. 619; 910, p. 21; 940, p. 21; *948, p. 20; 990, p. 24; 1020, p. 44; 1027, p. 92 ; 1075, p. 48). M. O. Beauchamp. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	6.06	Mar. 31, 1947	7.10	June 13, 1947	4.98
19	5.78	Apr. 8	6.37	24	4.98
26	5.50	17	6.06	July 9	5.40
Jan. 9, 1947	5.59	29	5.27	17	5.51
21	5.86	May 1	5.48	Aug. 11	6.40
31	6.20	8	5.12	Sept.10	7.88
Feb. 20	6.41	20	4.64	Oct. 8	8.39
Mar. 3	7.11	June 3	4.99	Nov. 19	6.38
13	7.07	4	6.05	Dec. 20	4.98
25	7.28				

6N/35-14L1 (*777, p. 155; *817, p. 251; 840, p. 343; 845, p. 408; 886, p. 620; 910, p. 22; 940, p. 21; *948, p. 20; 990, p. 24; 1020, p. 44; 1027, p. 92; 1075, p. 48). Conrad Miller. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 12, 1946	7.22	Mar. 26, 1947	9.17	June 13, 1947	7.31
19	7.46	31	9.08	24	7.99
27	7.37	Apr. 8	8.44	July 9	8.26
Jan. 9, 1947	8.09	17	8.62	17	8.02
21	7.90	29	8.57	Aug. 13	9.35
30	7.79	May 1	8.62	Sept.10	8.66
Feb. 11	8.21	9	8.29	Oct. 8	9.08
20	8.10	20	8.07	Nov. 19	7.88
Mar. 3	8.42	June 3	8.07	Dec. 19	7.71
13	8.84	5	7.89		

6N/35-20G1 (*777, p. 156; 817, p. 251; 840, p. 343; 845, p. 408; 886, p. 620; 910, p. 22; 940, p. 22; *948, p. 20; 990, p. 24; *1020, p. 44; 1027, p. 92; 1075, p. 48). McBride. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	4.94	Mar. 25, 1947	6.85	June 13, 1947	4.18
19	4.88	31	5.88	24	a 13.10
27	4.61	Apr. 8	4.59	July 9	a 21.49
Jan. 9, 1947	5.85	17	4.09	17	a 20.57
21	6.09	29	3.89	Aug. 11	(b)
31	6.01	May 1	3.89	Sept.10	a 14.14
Feb. 11	6.06	8	3.93	Oct. 8	9.51
20	6.24	20	3.98	Nov. 19	6.05
Mar. 3	6.26	June 3	4.69	Dec. 20	6.07
13	6.52	4	a 14.09		

a Pumping.
b Dry.

6N/35-20Q1 (*777, p. 156; *817, p. 251; 840, p. 343; 845, p. 408; 886, p. 620; 910, p. 22; 940, p. 22; *948, p. 21; 990, p. 24; 1020, p. 46; 1027, p. 92; 1075, p. 48). R. P. Lile. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	30.65	Mar. 31, 1947	33.55	June 13, 1947	29.39
19	31.81	Apr. 8	32.90	24	29.48
27	31.74	17	31.53	July 9	31.49
Jan. 24, 1947	35.33	29	30.91	17	a 34.52
31	35.80	May 1	30.86	Aug. 11	35.04
Feb. 11	(b)	8	30.87	Sept.10	(b)
20	(b)	20	30.00	Oct. 8	(b)
Mar. 3	(b)	June 3	29.94	Nov. 19	33.25
13	(b)	4	29.85	Dec. 20	34.34
25	35.35				

a Pumping.
b Dry.

6N/35-24C1 (*777, p. 156; *817, p. 252; 840, p. 343; *845, p. 409; 886, p. 620; 910, p. 22; 940, p. 22; *948, p. 21; 990, p. 25; 1020, p. 46; 1027, p. 93; 1075, p. 49). William Pomeringin. Measurements discontinued.

6N/35-24Q1 (*777, p. 156; *817, p. 252; 840, p. 344; 845, p. 409; 886, p. 620; 910, p. 22; 940, p. 22; *948, p. 21; 990, p. 25; 1020, p. 46; 1027, p. 93; 1075, p. 49). C. B. Miller. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	8.88	Mar. 26, 1947	9.99	June 13, 1947	10.63
19	9.53	31	10.17	24	a 14.57
27	9.94	Apr. 8	10.03	July 9	17.06
Jan. 9, 1947	10.20	17	10.06	17	a 17.90
21	10.20	29	9.96	Aug. 11	16.48
30	9.43	May 1	10.05	Sept.10	16.34
Feb. 11	9.99	9	9.94	12	16.17
20	9.81	20	10.49	Oct. 8	14.89
Mar. 3	10.21	June 3	a 13.98	Nov. 19	11.05
13	9.83	5	10.45	Dec. 19	10.60

a Pumping.

6N/35-26C2 (*777, p. 157; *817, p. 252; 840, p. 344; *845, p. 409; 886, p. 620; 910, p. 22; 940, p. 22; *948, p. 21; 990, p. 25; 1020, p. 46; 1027, p. 93; 1075, p. 49). Earl Ransom. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 12, 1946	20.75	Mar. 26, 1947	20.55	June 13, 1947	12.81
19	19.02	31	19.98	24	a 14.73
27	18.33	Apr. 8	18.84	July 9	16.59
Jan. 9, 1947	14.82	17	19.27	17	a 17.88
21	17.01	29	18.77	Aug. 12	a 17.25
30	17.21	May 1	18.83	Sept.10	15.40
Feb. 11	17.72	9	16.85	Oct. 8	18.15
20	17.42	20	12.77	Nov. 19	21.98
Mar. 3	20.68	June 3	12.98	Dec. 19	21.99
13	21.38	4	13.01		

a Pumping.

6N/35-28H1 (*777, p. 157; *817, p. 253; 840, p. 345; *845, p. 410; 886, p. 621; 910, p. 23; 940, p. 23; *948, p. 22; 990, p. 25; *1020, p. 46; 1027, p. 93; 1075, p. 49). W. J. Rand. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	11.45	Mar. 25, 1947	11.89	June 13, 1947	10.04
19	11.69	Apr. 1	11.65	24	10.38
27	12.02	8	11.88	July 12	10.61
Jan. 9, 1947	12.69	17	11.18	17	10.86
21	12.92	29	11.11	Aug. 13	11.42
31	12.79	May 1	11.78	Sept.10	11.42
Feb. 11	13.01	8	11.05	12	11.23
20	13.27	20	10.64	Oct. 8	10.78
Mar. 3	12.98	June 3	10.94	Nov. 19	11.31
13	12.37	4	10.32	Dec. 20	12.75

6N/35-28N1 (*777, p. 157; *817, p. 254; 840, p. 345; 845, p. 410; 886, p. 621; 910, p. 23; 940, p. 23; *948, p. 22; 990, p. 26; 1020, p. 46; 1027, p. 93; 1075, p. 49). Lottie McKnight. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	14.27	Feb. 20, 1947	24.95	Apr. 29, 1947	15.62
19	16.27	Mar. 3	24.74	May 1	15.78
27	18.48	13	22.53	8	15.04
Jan. 9, 1947	21.44	25	20.96	20	12.43
21	23.87	31	19.35	June 3	12.27
31	24.17	Apr. 8	16.98	4	12.38
Feb. 11	24.44	17	15.55	13	11.78

6N/35-28N1--Continued.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
June 24, 1947	a 16.94	Aug. 11, 1947	20.30	Oct. 8, 1947	15.39
July 9	16.40	Sept.10	20.28	Nov. 19	13.75
17	18.10	12	20.05	Dec. 20	21.21

a Pumping.

6N/35-30M1 (*777, p. 158; *817, p. 254; 840, p. 345; 845, p. 410; *886, p. 621; 910, p. 24; 940, p. 23; *948, p. 22; 990, p. 26; 1020, p. 46; 1027, p. 94 ; 1075, p. 49). Thad Shephard. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Dec. 13, 1946	14.25	Mar. 25, 1947	21.90	June 13, 1947	14.80
19	15.02	31	23.11	24	16.74
26	16.16	Apr. 8	22.89	July 9	18.74
Jan. 9, 1947	19.96	17	20.41	17	20.35
21	23.02	29	16.78	Aug. 11	25.31
31	25.15	May 1	16.51	Sept.10	26.20
Feb. 11	27.09	8	18.72	12	26.01
20	26.66	20	19.06	Oct. 8	24.24
Mar. 3	a 21.49	June 3	15.78	Nov. 19	19.97
13	a 17.79	4	15.90	Dec. 20	19.86

a Irrigating near well.

6N/35-34C1 (*777, p. 158; *817, p. 254; 840, p. 345; 845, p. 410; 886, p. 622; 910, p. 24; 940, p. 24; *948, p. 22; 990, p. 26; 1020, p. 46; 1027, p. 94 ; 1075, p. 49). Alpha Reese. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Dec. 13, 1946	47.89	Mar. 25, 1947	47.05	June 13, 1947	21.60
19	48.20	31	45.20	24	31.50
27	48.49	Apr. 8	41.96	July 9	a 43.65
Jan. 9, 1947	49.04	17	42.88	17	42.98
21	49.01	29	43.57	Aug. 11	a 45.13
31	49.03	May 1	43.02	Sept.10	a 39.17
Feb. 11	50.30	9	36.22	12	a 39.35
20	50.31	20	25.19	Oct. 8	35.58
Mar. 3	49.95	June 3	27.87	Nov. 19	48.90
13	48.02	4	a 28.81	Dec. 19	49.58

a Pumping.

6N/35-36C1 (*777, p. 158; *817, p. 254; 840, p. 345; 845, p. 410; 886, p. 622; 910, p. 24; 940, p. 24; *948, p. 22; 990, p. 26; 1020, p. 45; 1027, p. 94 ; 1075, p. 50). Mr. Redfern. Taps water table.

Water level, in feet below land-surface datum, 1946-47

Dec. 13, 1946	10.30	Mar. 26, 1947	19.80	June 13, 1947	24.83
19	11.75	31	21.11	24	34.50
27	13.49	Apr. 8	24.15	July 9	35.46
Jan. 9, 1947	12.93	17	23.88	17	35.52
21	15.76	29	14.14	Aug. 11	36.18
30	13.06	May 1	13.90	Sept.10	34.68
Feb. 11	14.60	9	11.81	Oct. 8	34.85
20	15.90	20	14.84	Nov. 19	16.35
Mar. 3	18.54	June 3	a 29.10	Dec. 19	21.15
13	18.50	5	29.26		

a Pumping.

6N/35-36H1 (*777, p. 159; *817, p. 255; 840, p. 345; 845, p. 411; 886, p. 622; 910, p. 24; 940, p. 24; *948, p. 22; 990, p. 26; 1020, p. 45; 1027, p. 94 ; 1075, p. 50). U. S. 108. Walter Hermann. Taps water table. Measurements are from float-gage readings by owner.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	c 17.43	May 6, 1947	11.35	Aug. 21, 1947	29.60
19	c 12.63	9	c 10.67	24	29.95
27	c 11.81	10	10.54	28	29.66
Jan. 9, 1947	c 11.52	19	10.52	Sept. 3	29.49
21	c 12.21	20	c 10.21	10	b 30.38
30	c 11.52	24	10.08	12	30.16
Feb. 1	11.53	27	10.93	12	a 30.04
5	11.68	28	11.60	23	28.82
10	11.85	June 2	13.32	Oct. 3	30.16
11	c 11.89	3	c 13.66	5	30.91
17	11.90	5	14.78	8	b 31.48
20	c 11.99	5	b 14.84	12	31.81
21	12.07	9	16.44	15	32.11
25	12.42	13	c 17.03	22	31.44
27	12.59	15	17.39	25	30.26
Mar. 3	c 12.98	16	17.74	28	29.25
6	13.10	18	18.54	Nov. 4	27.05
10	13.23	21	19.25	7	27.10
13	c 12.98	24	c 19.35	10	26.90
20	13.10	27	20.81	13	24.09
26	13.44	28	21.21	14	23.09
26	c 13.44	July 2	21.89	16	21.53
28	13.58	9	b 23.70	19	19.53
31	b 14.20	15	25.45	19	b 19.46
Apr. 2	14.65	17	a 25.75	24	17.68
5	15.32	18	26.03	26	17.22
8	c 15.80	21	26.66	29	16.65
13	16.39	24	27.15	Dec. 2	16.12
17	16.36	28	27.63	5	15.52
17	c 16.35	Aug. 3	28.15	7	15.24
23	15.06	7	28.35	11	15.56
26	14.27	11	28.53	15	16.10
28	13.86	11	b 28.62	19	b 16.92
29	c 13.56	13	28.87	21	16.90
May 1	13.01	16	29.45	24	16.86
1	b 12.92	18	29.72	29	17.35
3	12.07				

a Tape measurement by Geological Survey.
b Tape measurement by W. C. Mason, watermaster, Distric 5.
c Tape measurement by Bureau of Reclamation.

Union County--Grande Ronde Valley

Grande Ronde subprovince

1/39-17L1 (*910, p. 21; 940, p. 24; *948, p. 23; 990, p. 27; 1020, p. 45; 1027, p. 94 ; 1075, p. 50). A. F. Furman. Taps water table. Water levels, in feet below land-surface datum, 1947: May 10, 19.19; Oct. 8, 18.99.

3/38-10B1 (*817, p. 242; 845, p. 406; 886, p. 617; 910, p. 21; 940, p. 24; *948, p. 23; 990, p. 27; 1020, p. 45; 1027, p. 95 ; 1075, p. 50) County of Union. Taps water table. Water levels, in feet below land-surface datum, 1947: May 10, 6.30; Oct. 8, 6.91.

3/38-25B1 (*817, p. 242; 845, p. 406; 886, p. 617; 910, p. 21; 940, p. 24; *948, p. 23; 990, p. 27; 1020, p. 45; 1027, p. 95 ; 1075, p. 50). County of Union. Taps water table. Water levels, in feet below land-surface datum, 1947: May 10, 6.41; Oct. 8, 8.82.

Yamhill County

Willamette Valley subprovince

5/5W-13B1 (*777, p. 146; *817, p. 257; 845, p. 412; 886, p. 623; *890, p. 150; 940, p. 25; *948, p. 23; 990, p. 27; 1020, p. 45; 1027, p. 95 ; 1075, p. 51). George Fuller. Taps confined water in gravel and sand. Water levels, in feet below land-surface datum, 1947: June 18, 15.62; Aug. 26, 20.00; Nov. 19, 12.44.

UTAH

By W. B. Nelson and R. G. Butler

PROGRAM OF WORK

Ground-water investigations in Utah, in cooperation with the State Engineer, have been in progress since 1935. The investigations include two interrelated programs which may be designated as (1) a yearly State-wide inventory of ground-water storage based on periodic measurements and on continuous records of water-level fluctuations in selected wells in each of the more important ground-water basins, and (2) detailed studies of individual basins to determine the source, movement, and disposal of the ground water and to show the relation of present development to the maximum economic development that is possible in those areas.

The relative amounts of water stored from year to year in underground reservoirs may be determined from the measurements of water levels in wells in much the same way that storage in a surface reservoir is determined from observation of its stages. Records of water-level fluctuations in wells are useful, also, in showing the periods and amounts of natural recharge, the effects of natural and artificial discharge, the direction of movement of the water, and in many other ways. The usefulness of the measurements increases, in general, with the length of the record. Long-period records are especially valuable in the detailed studies of the source, movement, and disposal of ground water in individual basins. The State-wide program thus serves, not only as a yearly inventory of ground-water storage, but also as a source of basic data for subsequent detailed studies.

The State-wide inventory now includes measurements in 42 ground-water areas, comprising practically all of the regions in which wells have been developed in the State. In each of these areas the selected observation wells are measured periodically with a steel tape, or, in the case of a flowing well, with a mercury manometer gage. In many of the areas one or more wells are equipped with continuous recording water-stage or pressure

gages which are serviced once a week. During 1947 a total of 1,967 measurements were made in 634 wells and 41 water-stage and pressure recorders were maintained. The data thus collected are tabulated and summarized in this annual volume on water levels and artesian pressure in observation wells in the northwestern States.

Two other agencies assisted the Federal Geological Survey in making measurements in observation wells included in the State-wide program. Measurements of water levels were made by Salt Lake City Corporation in Salt Lake County and by the Bureau of Reclamation, United States Department of the Interior, in Wasatch County. Measurements by these agencies are indicated in the tabulation.

FLUCTUATIONS OF WATER LEVEL

Utah lies within three ground-water provinces as outlined by Meinzer.[1] The three that include parts of Utah are the Southwestern Bolson province, the Montana-Arizona plateau, and the Northern Rocky Mountains province, which are approximately coextensive with the Utah portions of the Basin and Range, Colorado plateau, and Middle Rocky Mountains physiographic provinces as outlined by Fenneman.[2] The characteristics peculiar to each of these ground-water provinces have been described in an earlier report.[3] Each of the three provinces has been divided into several ground-water areas, and for each area representative observation wells have been selected to show the changes in water levels each year. The net rise or decline of level is the mathematical average of the changes in water levels in the selected wells making up a group and may be considerably different from the changes in water level in individual wells in the area. A summary of the water levels for the period 1935-45 is given in an earlier report.[4]

Average water-level changes in groups of observation wells in areas within the Southwestern Bolson ranged from -2.4 feet to +3.8 feet during 1947. In the Flowell district, Pavant Valley, water levels in observation

1/ Meinzer, O. E., The occurrence of ground water in the United States: U. S. Geol. Survey Water-Supply Paper 489, pp. 309-314, 1923.

2/ Fenneman, N. M., Physical divisions of the United States: U. S. Geol. Survey map, 1:700,000, 1930.

3/ Thomas, H. E., and Bach, W. K., Utah, in Water levels and artesian pressure in observation wells in the United States in 1940: U. S. Geol. Survey Water-Supply Paper 910, p. 35, 1941.

4/ Thomas, H. E., and Nelson, W. B., Utah, Water levels and artesian pressure in observation wells in the United States in 1945, Pt. 5, Northwestern States: U. S. Geol. Survey Water-Supply Paper 1027, p. 101, 1948.

wells rose on an average of 5.2 feet, and at the end of 1947 were higher than at any time since 1929. Of the 27 areas under observation, water levels declined in 16 and rose in 11 during the year.

In ground-water areas of the Northern Rocky Mountains province water levels in observation wells were generally about the same at the end of 1947 as at the end of 1946.

The average change in observation wells in areas of the Montana-Arizona plateau province ranged from +2.3 feet in Sanpete Valley to -1.1 feet in the San Juan river area. Of the nine areas under observation, water levels declined in four and rose in five.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Utah are listed alphabetically by counties, and numerically within the ground-water areas. Wells are listed by their coordinate number in numerical order under each area or district.[5/] The State claim or application number is that used in the State Engineer's records. Claim number is for wells that were used prior to the passage of the ground-water law in March 1935 and application numbers refer to wells developed subsequently.

The table includes statements as to depth, diameter, measuring point, and other data on new observation wells, for which no records have been published previously. All other wells have been listed in Water-Supply Paper 1075, together with references to earlier publications that include water-level measurements. In the following list, the data for each well include the location or coordinate number, the State claim or application number, and the name of the owner of the well. Thereafter the dates of water-level measurements in 1947 are listed, with the position of the water level in feet below land-surface datum unless otherwise indicated. Wells that were discharging by artesian flow when visited were closed for a period of 10 minutes prior to measurement of artesian pressure.

The following table shows the number of observation wells in Utah by counties and areas within the counties, the number that have been discontinued, the number of automatic water-stage and pressure recorders in use, and the number of periodic measurements included in the report.

5/ For description of the well-numbering system in use in Utah see Thomas, H. E. and Bach, W. K., Water levels and artesian pressure in observation wells in the United States in 1940, Part 5, Northwestern States: U. S. Geol. Survey Water-Supply Paper 910, p. 38.

Distribution, by counties and areas, of observation wells in Utah in 1947

County and groundwater area (numbers in parentheses correspond to areas shown on figure 4 in Water-Supply Paper 1027)	Number of observation wells		Number of periodic measurements	Wells with recording gage	
	During 1947	Discontinued during year		Throughout year	Part of year
Beaver					
Beaver Valley (4)	6	0	19	0	0
Escalante Valley (1)	23	1	103	0	1
Box Elder					
East Shore area (15)	12	1	60	0	1
Lower Bear River Valley (18)	8	2	13	0	0
Mantua Valley (16)	2	1	3	0	0
Blue Spring Valley (19)	3	0	3	0	0
Curlew Valley (20)	3	0	3	0	0
Grouse Creek Valley (23)	3	0	3	0	0
Park Valley (22)	6	0	6	0	0
Raft River Valley	3	0	3	0	0
Cache					
Cache Valley (17)	19	0	51	1	0
Carbon	1	0	1	0	0
Davis					
East Shore area (15)					
Layton District	10	0	36	0	1
Bountiful District	69	46	555	6	8
Duchesne					
Uinta Basin (31)	20	0	41	0	0
Garfield					
East Sevier Valley (26)	5	0	7	0	0
Upper Sevier Valley (25)	3	0	5	0	0
Grand					
Colorado River area (32)					
Courthouse Syncline	2	0	3	0	0
Green River Desert	1	0	3	0	0
Moab-Spanish Valley	2	0	2	0	0
Iron					
Cedar City Valley (2)					
Coal Creek District	6	0	20	1	0
Enoch District	4	0	7	0	0
Hamilton Fort District	2	0	2	0	0
Iron Springs District	5	0	9	0	0
Kanarraville District	3	0	6	0	0
Midvalley District	5	0	8	0	0
Quеatchupah District	3	0	4	0	0
Rush Lake District	3	0	3	0	0
Escalante Valley (1)	38	4	72	0	1
Parowan Valley (3)					
Buckhorn District	3	0	4	0	0
Little Salt Lake District	5	0	7	0	0
Paragonah District	2	0	3	0	0
Parowan District	6	0	12	0	0
Summitt District	1	0	2	0	0
Juab					
Juab Valley (8)					
Chicken Creek District	2	0	4	0	0
Salt Creek District	6	1	13	0	0
Snake Valley (7)	5	0	4	0	0
Millard					
Escalante Valley (1)	4	0	4	0	0
Pavant Valley (5)					
Fillmore District	0	0	0	0	0
Flowell District	3	0	4	1	0
Hatton District	6	0	12	0	0
Kanosh District	4	0	3	0	0
Meadow District	2	0	3	0	0
Pavant District	4	0	8	0	0
Sevier Desert (6)	19	0	33	0	0
Snake Valley (7)	7	0	4	0	0

Distribution, by counties and areas, of observation wells in Utah in 1947

County and ground-water area (numbers in parentheses correspond to areas shown on figure 4 in Water-Supply Paper 1027)	Number of observation wells		Number of periodic measurements	Wells with recording gage	
	During 1947	Discontinued during year		Throughout year	Part of year
Morgan					
Morgan Valley (37)	12	1	20	0	0
Piute					
Grass Valley (28)	2	0	4	0	0
Upper Sevier Valley (26)	2	0	4	0	0
Rich					
Bear Lake Valley (40)	12	1	10	0	0
Upper Bear River Valley (39)	7	0	7	0	0
Salt Lake					
Jordan Valley (14)	34	0	171	2	1
San Juan					
San Juan River area (33)					
Moab-Spanish Valley	1	0	1	0	0
Church Rock Syncline	6	0	6	0	0
LaSal Valley	1	0	1	0	0
Sage Plain	11	0	60	0	1
Sanpete					
Central Sevier Valley (29)	4	0	7	0	0
Sanpete Valley (30)	24	0	52	1	1
Sevier					
Central Sevier Valley (29)	12	1	19	1	0
Grass Valley (28)	3	0	3	0	0
Summit					
Weber Canyon	1	0	0	0	0
Kimball Valley (36)	2	0	3	0	0
Rhodes Valley (35)	8	1	12	0	0
Tooele					
Rush Valley (12)	10	0	20	0	0
Salt Lake Desert	2	0	0	0	0
Tooele Valley (13)					
Burmester District	7	1	12	0	0
Erda District	6	0	134	1	0
Grantsville District	6	0	10	1	0
Lake Point District	3	0	6	0	0
Marshall District	2	0	4	0	0
Uintah					
Uinta Basin (31)	7	2	6	0	0
Utah					
Cedar Valley (11)	2	1	3	0	0
Goshen Valley (9)	2	0	4	0	0
Utah Lake Valley (10)					
North Utah Basin	22	1	38	2	0
South Utah Basin	16	1	30	0	0
Wasatch					
Weber Valley (34)	7	0	8	3	0
Washington					
Escalante Valley (1)	3	0	8	0	0
Virgin River area (24)	1	0	2	0	0
Wayne					
Fremont Valley (27)	3	0	4	0	0
Weber					
East Shore area (15)	42	1	127	1	3
Ogden Valley (38)	2	0	0	2	0
	634	67	1967	23	18

Beaver County - Beaver Valley

(C-28-7)16aaa-1. Mar. 19, 60.52; Dec. 5, 61.20.

(C-28-7)21daa-1. E. F. Baldwin. Mar. 19, 21.25; Dec. 5, 14.55.

(C-29-7)3cbb-1. Harry Hodges. Mar. 19, 16.67; Dec. 5, 19.08.

(C-29-7)17cdd-1. State claim 6919. Drought Relief Administration. Mar. 19, 22.30; Sept. 10, 7.20; Dec. 5, 18.57.

(C-29-7)28dbd-1. James Nowers.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	19.20	Mar. 27	18.45	May 26	13.80	Sept.10	15.82
Feb. 28	18.20	Apr. 27	17.80	June 26	12.89	Dec. 5	17.45
Mar. 19	19.02						

(C-29-8)25cac-1. State claim 13115. Beaver School District. Flowing prior to measurements. Mar. 19, +12.4; Dec. 5, +12.7.

Beaver County - Escalante Valley

(For other wells in this valley see pp. 110-111; 113; 135.)

(C-26-10)32cad-1. State claim 10257. Burton Smithson. Mar. 20, 12.12.

(C-27-10)18da. Hazel Cannon. Mar. 20, 12.54; Dec. 6, 13.90.

(C-28-10)8cdd-1. J. R. Murdock.

Water level, in feet

Feb. 17	1.30	Apr. 25	2.22	July 27	4.31	Nov. 7	3.50
Mar. 15	2.03	May 25	2.80	Aug. 24	4.32	Dec. 6	2.50
20	2.01	June 29	3.45	Sept.28	4.21	25	2.45

(C-28-10)19add-1. State claim 6564. J. A. Kirk and Sam Cline.

Water level, in feet

Feb. 17	4.63	May 25	a 19.62	Aug. 24	4.25	Dec. 6	4.16
Mar. 20	2.47	June 29	a 20.87	Sept.28	5.84	25	3.82
Apr. 25	a 18.70	July 27	a 17.70	Nov. 7	4.62		

a Pumping.

(C-28-10)29cdc-1. State application 11742. J. H. Hanlon.

Water level, in feet[1]

Feb. 17	8.20	May 25	a 17.56	Aug. 24	13.66	Dec. 6	9.74
Mar. 20	8.09	June 29	a 17.57	Sept.28	a 21.02	25	9.25
Apr. 25	11.70	July 27	a 21.75	Nov. 7	10.33		

a Pumping.

(C-28-10)30acd-1. State claim 15131. State of Utah. Mar. 20, 6.89. Measurements discontinued.

(C-28-10)33aba-2. Duluth Land Co.

Water level, in feet

Feb. 17	21.70	May 25	24.34	Aug. 24	23.35	Dec. 6	21.88
Mar. 20	22.92	June 29	24.25	Sept.28	23.01	25	22.46
Apr. 25	23.78	July 27	24.23	Nov. 7	20.94		

(C-28-10)22dab-1. Houston & Goff. July 14, 32.70; Dec. 3, 32.72.

(C-28-11)36add-1. State of Utah.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	8.55	May 25	8.69	Aug. 24	13.20	Dec. 6	10.90
Mar. 20	8.05	June 29	10.57	Sept.28	13.07	27	10.34
Apr. 25	8.46	July 27	12.19	Nov. 7	11.99		

(C-29-10)6dcd-1. State claim 13116. Duluth Land Co., Milford. Automatic water-stage recorder installed on May 22.

Water level, in feet
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	29.86	30.14	30.87	30.87	31.11	.....	30.02
2	.....	.....	.....	.....	29.89	30.18	30.78	30.88	31.11	.....	30.02
3	.....	.....	.....	.....	29.93	30.22	30.67	30.88	31.11	.....	30.00
4	.....	.....	.....	.....	29.97	30.27	30.65	30.89	31.11	.....	29.99
5	.....	.....	.....	.....	29.99	30.31	30.65	30.90	31.09	.....	29.98
6	.....	.....	.....	.....	29.98	30.36	30.64	30.91	31.08	.....	29.96
7	.....	.....	.....	.....	29.93	30.41	30.64	30.93	31.07	.....	29.96
8	.....	.....	.....	.....	29.88	30.44	30.65	30.95	31.06	30.36	29.95
9	.....	.....	.....	.....	29.89	30.47	30.66	30.95	31.05	30.32	29.93
10	.....	.....	.....	.....	29.92	30.50	30.69	30.97	31.03	30.27	29.91
11	.....	.....	.....	.....	29.94	30.50	30.72	31.00	31.00	30.23	29.89
12	.....	.....	.....	.....	29.93	30.41	30.73	31.00	30.94	30.21	29.90
13	.....	.....	.....	.....	29.90	30.34	30.74	31.01	30.90	30.19	29.88
14	.....	.....	.....	.....	29.88	30.31	30.75	31.01	30.85	30.19	29.86
15	.....	.....	.....	.....	29.87	30.33	30.76	31.02	30.81	30.18	.....
16	.....	.....	.....	.....	29.86	30.36	30.77	31.03	30.77	30.16	.....
17	a29.97	.....	.....	.....	29.87	30.40	30.79	31.03	30.74	30.15	.....
18	.....	.....	.....	.....	29.86	30.47	30.79	31.05	30.69	30.13	.....
19	.....	.....	.....	.....	29.86	30.52	30.80	31.05	30.62	30.11	.....
20	.....	a29.94	.....	.....	29.88	30.56	30.80	31.06	.....	30.10	.....
21	.....	.....	.....	.....	29.90	30.61	30.80	31.06	.....	30.09	29.89
22	.....	.....	.....	29.92	29.89	30.65	30.80	31.07	.....	30.10	29.87
23	.....	.....	.....	29.94	.....	30.68	30.80	31.07	.....	30.10	.....
24	.....	.....	.....	29.96	.....	30.69	30.81	31.08	.....	30.12	.....
25	.....	.....	a30.05	29.96	.....	30.72	30.81	31.08	.....	30.12	.....
26	.....	.....	.....	29.97	29.94	30.74	30.82	31.08	.....	30.10	.....
27	.....	.....	.....	29.97	29.99	30.70	30.83	31.08	.....	30.09	29.49
28	.....	.....	.....	.....	30.03	30.76	30.84	31.09	.....	30.07	29.45
29		.....	.....	.....	30.08	30.80	30.84	31.12	.....	30.05	29.41
30		.....	.....	.....	30.11	30.84	30.85	31.11	.....	30.04	29.38
31		.....		.....		30.86	.....		.....		29.37

a Tape measurement.

(C-29-10)16ccc-1. G. S. Barclay.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	45.19	May 25	46.03	Aug. 24	45.97	Dec. 6	46.30
Mar. 20	45.72	June 29	46.09	Sept.28	45.95	25	46.27
Apr. 25	46.05	July 27	46.32	Nov. 7	46.19		

(C-29-11)1add-1. State claim 10290. Duluth Land Co. Mar. 19, 18.92.

(C-29-11)4baa-1. W. H. Child. No measurements made in 1947.

(C-29-11)11cdd-1. State claim 7540. Preston Davis.

Water level, in feet

Feb. 17	17.40	May 25	18.10	Aug. 24	19.04	Dec. 6	18.31
Mar. 19	17.32	June 29	18.53	Sept.28	18.83	27	18.19
Apr. 25	17.79	July 27	19.07	Nov. 7	18.54		

(C-29-11)20dcd-1. Public land. Mar. 19, 1.62.

(C-29-11)22ddd-1. State claim 10667. P. V. Haworth.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	24.80	May 25	25.73	Aug. 24	26.52	Dec. 6	25.44
Mar. 19	24.88	June 29	25.88	Sept.28	26.06	27	25.38
Apr. 25	24.90	July 27	26.37	Nov. 7	25.57		

(C-29-11)29ada-1. Public land. Mar. 19, 13.70.

(C-29-11)35bcd-1. Public land. Mar. 19, 40.91.

(C-30-11)4cdd-1. Mar. 19, 25.64.

(C-30-12)4add-1. T. J. Norris. Mar. 20, 109.50.

(C-30-12)11bbb-1. D. L. Barnes. Mar. 20, 32.51.

(C-30-12)31cab-2. State claim 13455. Corrine Dibkey. Mar. 20, 15.73.

(C-30-13)29dcc-1. C. D. Vaughn. Mar. 20, 56.05.

(C-30-13)34bbb-1. J. F. Dinwiddie. Mar. 20, 45.80.

Box Elder County - East Shore area

(B-7-2)2aba-1. State claim 11922. Earl Lemon.

Water level, in feet

Feb. 19	39.86	Apr. 25	39.26	June 30	38.94	Oct. 29	40.23
27	39.85	May 30	37.78	Aug. 28	39.32	Nov. 26	40.49
Mar. 31	39.58	June 25	38.27	Sept.26	39.73	Dec. 31	41.10

(B-7-2)11baa. Bonneville Orchard Co. Unused dug well. Measuring point, top of concrete curb, 0.5 feet below land-surface datum.

Water level, in feet

Apr. 2	38.60	June 25	37.01	Aug. 28	34.64	Oct. 29	34.35
24	38.32	July 30	35.73	Sept.26	33.93	Nov. 26	35.25
May 30	37.40						

(B-7-2)11baa-3. Bonneville Orchard Co. State claim 6409. Unused irrigation well, diameter 10 inches, depth 365 feet. Measuring point, bottom of hole in casing, 1.5 feet above land-surface datum.

Water level, in feet

Apr. 24	34.60	June 25	33.72	Aug. 28	31.53	Oct. 29	31.53
May 30	34.25	July 30	32.50	Sept.26	31.39	Nov. 26	32.80

(B-7-2)11cda-1. State claim 1489. First Savings Bank of Ogden. Apr. 2, 19.97; May 19, 20.00; Dec. 31, 19.93.

(B-8-2)11cad-1. State claim 973. Clark. Apr. 2, 30.60; May 19, 29.55; Dec. 31, 29.69.

(B-8-2)23cdb-1. State claims 1284 and 8126. Willard Water Co.

Water level, in feet

Feb. 19	38.78	May 19	31.52	July 31	34.90	Oct. 28	39.22
Apr. 2	39.30	30	29.25	Aug. 28	37.20	Nov. 26	39.30
15	38.20	June 25	29.50	Sept.26	38.12	Dec. 31	39.80
24	37.32						

(B-8-2)26cdd-1. State claim 917. A. P. Ward. Apr. 2, +31.8; Dec. 31, +30.3.

(B-8-2)35add-1. M. C. Marsh. Recorder removed on Feb. 19 and measurements discontinued.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	22.67	Jan. 7	22.65	Jan. 28	22.54	Feb. 1	22.64
3	22.69	8	22.66	29	22.56	2	22.65
4	22.69	9	22.66	30	22.60	3	22.67
5	22.69	27	22.54	31	22.62	19	23.00
6	22.65						

(B-9-2)12ccc-1. State claim 499. G. D. Reeder. Apr. 2, 6.05; Dec. 31, 7.74.

(B-9-2)14dac-1. State claim 549. W. W. and J. F. Knudsen. Apr. 2, 21.69; Dec. 31, 20.77.

(B-9-2)25bda-1. State claim 268. First National Bank of Brigham. Apr. 2, 20.30; Dec. 31, 21.27.

(B-9-2)35dcd-1. State claim 477. F. H. Hansen. Apr. 2, 41.98; Dec. 31, 40.49.

Box Elder County - Lower Bear River Valley

(B-9-3)1bbb-1. State claim 8477. Federal Land Bank. Apr. 2, 4.28; Dec. 31, 5.24.

(B-10-3)8dc. State application 16985. G. A. Gardner. Apr. 2, 5.40; Dec. 31, 7.57.

(B-10-3)32aaa-1. B. E. Stallings. Apr. 2, 4.19; Dec. 31, 6.01.

(B-11-3)21bbb-2. J. A. House. Apr. 2, 4.00; measurements discontinued.

(B-11-3)21bbb-3. J. A. House. Apr. 2, 3.78; Dec. 31, 3.95.

(B-11-4)11aaa-1. State claim 3337. Fred Deininger. Apr. 2, 5.78; Dec. 31, 5.10.

(B-12-3)11db-2. R. D. McFarlene. Apr. 2, 5.70; measurements discontinued.

(B-12-4)11cb. State claim 14152. Adolph Harris. Oct. 28, 113.70.

Box Elder County - Mantua Valley

(B-9-1)22ccc-1. Raymond Jeppesen. Mar. 31, 31.0; Dec. 30, 26.24.

(B-9-1)27bbb-1. C. M. Jeppesen. Mar. 31, 22.89; measurements discontinued.

Box Elder County - West Box Elder area

Blue Spring Valley

(B-13-5)17bca-1. State claim 3776. R. A. Miller. Oct. 28, 61.16.

(B-13-5)28cba. Joseph Aebischur. Oct. 28, 58.02.

(B-13-6)1cac-1. Deacon Bros. Oct. 28, 150.38.

Curlew Valley

(B-12-11)16cdc-1. Grazing Service, U. S. Dept. of Interior. Oct. 28, 8.40.

(B-14-8)11ab. B. S. Cutler. Oct. 28, 44.98.

(B-14-9)10ada-1. Abe Rose. Oct. 28, 96.49.

Grouse Creek Valley

(B-10-18)28dcd-1. State application 13796. Grazing Service, U. S. Dept. of Interior. Oct. 28, 119.58.

(B-11-18)22aa. A. L. Paskett. Oct. 28, 19.82.

(B-11-18)23bb. Central Pacific Railway Co. Oct. 28, 19.75.

Park Valley

(B-10-15)26bad-1. State application 13796. Grazing Service. U. S. Dept. of Interior. Oct. 28, 95.75.

(B-12-14)2aa. A. J. Hirschie. Oct. 28, 8.51.

(B-13-13)28dd. L. G. Carter. Oct. 28, 13.92.

(B-13-13)32aa. John Vance. Oct. 28, 33.75.

(B-13-14)25ab. J. H. Kunzler. Oct. 28, 15.17.

(B-13-14)26bd. W. A. Newman. Oct. 28, 18.51.

Raft River Valley

(B-14-15)3ddd-1. State claim 19482. M. A. Smith. Oct. 28, 50.28.

(B-14-15)11cc. M. A. Smith. Formerly owned by Mrs. C. B. Tracy. Oct. 28, 24.05.

(B-15-14)36. H. Alberts. Oct. 28, 3.99.

Cache County - Cache Valley

(A-9-1)10add-1. State claim 8135. Drought Relief Administration. Feb. 18, 26.37; Mar. 31, 26.24; May 20, 25.82.

(A-10-1)4ab. O. H. Anderson.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level
Feb. 18	10.24	May 20	10.85	Dec. 30	9.94
Mar. 31	10.58	Oct. 27	9.15		

(A-11-1)3bda-1. State claims 23 and 8136. Drought Relief Administration.

Water level, in feet

Feb. 18	31.42	May 19	32.53	Dec. 30	31.37
Apr. 1	32.70	Oct. 27	29.98		

(A-11-1)8dda-3. State claim 1199. Amalgamated Sugar Co. Apr. 1, +14.9; Dec. 30, +15.3.

(A-11-1)18ddd-1. State claim 5950. Lovenus Olsen. Flowing prior to measurements. Mar. 31, +9.5; Dec. 30, +9.5.

(A-11-1)30bbd-2. State claim 18191. Wilford Ward. Formerly owned by L. S. Hill. Feb. 18, +1.90; Mar. 31, +0.87; May 20, +0.30; Dec. 30, +0.97.

(A-12-1)3bbb-1. State claims 19 and 8129. Smithfield Irrigation Co. Feb. 17, 10.12; Apr. 1, 12.34; May 19, 13.10; Dec. 30, 8.07.

(A-12-1)3bbb-2. Nora Johnson.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level
Feb. 17	10.77	May 19	13.53	Dec. 30	9.75
Mar. 31	12.94	Oct. 27	5.41		

(A-12-1)29bdd. Arnold Nielson.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	18.8	May 18	19.7	Oct. 3	21.6	Oct. 23	21.9
18	18.6	19	19.9	4	21.7	24	21.8
19	18.8	20	20.0	5	21.6	27	21.9
20	18.6	21	20.1	6	21.4	28	21.6
21	18.6	22	19.8	7	21.4	29	21.7
22	18.4	23	19.7	8	22.0	30	21.7
23	18.3	24	19.5	9	21.8	31	21.5
24	18.4	25	19.4	10	21.5	Nov. 1	21.8
25	18.4	26	19.6	11	21.2	2	21.8
26	18.4	29	20.0	12	21.3	3	21.6
Apr. 1	19.8	30	19.8	13	21.3	4	21.6
2	19.7	31	19.8	14	21.1	5	21.6
3	19.6	June 1	19.7	15	21.2	12	21.6
4	19.5	2	19.8	16	21.4	13	21.6
5	19.6	3	19.8	18	21.7	14	21.6
6	19.6	4	19.8	19	21.7	15	21.7
7	19.5	10	19.9	20	21.9	16	21.5
8	19.5	11	20.1	21	21.8	Dec. 30	21.3
May 17	19.7	12	20.0	22	21.8		

(A-12-1)31dab-1. State claim 2537. R. S. Painter. Apr. 1, +37.1; Dec. 30, +36.9.

(A-13-1)29bdb-1. State claim 1682. J. C. Cannell. Apr. 1, 1.62; May 19, 0.31; Dec. 30, +1.25.

(A-14-1)22bad-1. State claim 17652. C. B. Stoddard. Apr. 1, +10.4.

(A-14-1)34adb-1. State claim 1373. Crockett Well Co. Feb. 16, 10.30; Apr. 1, 10.72; May 19, 10.70; Oct. 27, 14.60.

(A-14-1)34dca-1. State application 12652. Richmond Irrigation Co. Apr. 1, 2.13; May 19, 1.75; Oct. 27, 3.21.

(B-11-1)13bbc-1. State claim 19315. Alma Olsen. Apr. 1, +41.1; Dec. 30, +41.9.

(B-11-1)35caa-1. State claim 1475. J. A. Lieshman. Flowing through hole in plug prior to measurements. Mar. 31, +19.4; Dec. 30, +19.2.

(B-12-1)8cdb-2. State claim 16851. Edward Edwards. Flowing prior to measurements. Apr. 1, +10.4; Dec. 30, +10.3.

(B-13-1)30acc-1. State claim 2757. E. R. Ballard. Flowing prior to measurements. Apr. 1, +22.3; Dec. 31, +21.7.

Carbon County

(D-13-9). State claim 11742. Helper City. Oct. 18, 10.90.

Davis County - East Shore area

Layton District

(B-3-1)15aab-1. State claim 8156. Drought Relief Administration.

(B-3-1)15aab-1--Continued.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level
Mar. 25	13.70	July 29	13.81	Dec. 9	14.34
May 29	13.47	Oct. 3	14.00		

(B-3-1)24aaa-4. State claim 10019. Lagoon Resort. Mar. 25, +11.5; Aug. 1, +7.7.

(B-3-1)24aad-1. State claim 10012. Lagoon Resort. Mar. 25, +4.5; Aug, 1, +3.9.

(B-4-1)19cd. Charles Layton.

Water level, in feet

Mar. 25	0.66	July 29	2.13	Dec. 9	0.83
May 29	1.75	Oct. 3	1.39		

(B-4-1)30ba. W. W. Evans.

Water level, in feet

Mar. 25	1.31	July 29	1.09	Dec. 9	1.36
May 29	.85	Oct. 3	.77		

(B-4-1)34cdc-3. State claim 14733. Kaysville Canning Corporation. Mar. 25, 4.02; May 29, 3.40; Dec. 9, 3.82.

(B-4-2)1dcc-1. State claim 8139. Drought Relief Administration.

Water level, in feet

Mar. 25	174.53	Apr. 24	174.57	July 1	174.77
Apr. 2	174.40	May 7	174.68	30	174.82

(B-4-2)9caa-1. State claim 11285. A. D. Miller. Flowing prior to measurements. Apr. 7, +20.0; May 29, +18.3; July 29, +17.00.

(B-4-2)10daa-1. State claim 8143. Drought Relief Administration. Apr. 7, 36.76.

(B-5-3)36ada-1. State claim 3074. Mary Stoddard. Flowing prior to measurements. Apr. 7, +27.7; May 29, +26.6; July 29, +25.2; Dec. 9, +27.2.

Bountiful District

(A-2-1)6dcd-2. State claim 188. Zions Aid Society.

Water level, in feet

May 2	13.2	Aug. 1	14.7	Oct. 10	12.2
June 10	17.4	Sept. 3	13.4	Dec. 11	11.9

(A-2-1)7aba-4. State claim 14688. Kate M. Chase.

Water level, in feet above land-surface datum

May 2	28.5	Aug. 1	a 27.7	Oct. 6	a 27.6
June 10	33.6	Sept. 3	a 28.2	Dec. 11	27.6

a Flowing on lawn prior to measurement.

(A-2-1)7abd-3. State claim 7455. Alvin Schofield. Measurements discontinued after Oct. 10.

Water level, in feet above land-surface datum

May 2	a 23.2	Aug. 1	a 23.3	Oct. 10	a 20.6
June 10	29.1	Sept. 3	a 21.1		

a Flowing prior to measurement.

(A-2-1)7aca-4. State claim 12473. Wm. E. Cheney. Apr. 12, +11.7; measurements discontinued.

(A-2-1)7bdc-1. State claim 957. William F. Cheney. Recorder removed and measurements discontinued after Nov. 20.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	55.2	56.1	57.3	56.5	57.9	....	61.5	....	56.1	58.4	....
2	55.2	56.3	57.2	56.5	58.0	59.2	61.2	....	56.2	58.4	....
3	55.1	56.5	57.2	56.4	57.9	59.1	60.8	....	56.8	58.3	....
4	56.2	56.1	57.2	56.4	57.8	59.7	60.5	56.9	56.9	58.3	58.4
5	56.3	55.8	57.3	56.4	57.7	58.3	60.4	57.0	57.0	58.4	58.4
6	56.4	55.7	57.2	56.4	57.4	58.7	60.2	57.0	57.1	58.4	....
7	56.5	55.9	56.9	56.5	....	58.7	60.2	57.4	57.3	58.2	58.4
8	56.0	55.7	56.9	56.6	....	58.7	60.1	57.2	57.7	58.3	58.4
9	56.1	55.8	56.7	56.7	56.5	59.0	60.0	57.4	57.2	58.2	58.4
10	55.6	55.9	....	56.6	56.5	59.4	59.8	57.0	57.6	58.4	58.2
11	56.0	56.1	....	56.6	56.2	59.7	59.4	56.8	57.2	58.4	....
12	56.2	56.0	....	56.8	56.4	59.9	59.4	....	57.2	58.4	....
13	55.9	56.4	....	57.1	56.4	60.1	59.4	....	57.8	58.4	
14	56.0	57.1	....	57.1	56.2	60.2	59.8	56.8	57.8	58.3	58.2
15	56.0	57.0	....	57.1	56.4	60.1	59.3	56.8	....	58.4	58.2
16	55.6	57.0	....	57.0	56.3	60.6	59.2	56.9	....	58.5	58.1
17	56.6	57.1	....	57.0	56.7	60.7	59.2	56.8	....	58.5	58.0
18	56.7	57.2	....	57.2	56.8	61.6	59.0	56.7	....	58.4	58.0
19	56.7	57.0	....	57.0	56.9	61.7	59.0	56.8	....	58.4	58.2
20	56.7	57.2	....	57.0	57.0	61.4	58.9	56.7	....	58.4	58.0
21	56.6	56.9	....	57.1	57.0	61.6	58.9	56.4	....	58.5	....
22	56.5	56.8	....	57.3	57.9	61.5	58.7	56.4	58.0	....	....
23	56.8	56.8	....	57.2	57.4	61.2	58.5	56.4	58.0	....	....
24	55.8	56.9	....	57.1	57.3	62.0	58.5	56.4	58.0	....	....
25	55.9	56.9	....	....	57.3	61.8	58.6	56.4	58.1	....	....
26	55.7	56.8	....	....	57.4	61.6	58.5	56.4	58.2	....	....
27	55.8	56.9	....	....	57.4	....	58.4	56.3	58.2	....	....
28	56.0	57.4	56.7	57.6	57.7	....	58.6	56.1	58.0	....	....
29	55.9		56.5	57.6	58.2	....	....	56.0	58.4	....	....
30	55.9		56.5	57.8	58.6	61.6	....	56.4	58.5	....	....
31	55.9		56.5		58.7		....	56.4		....	

(A-2-1)7dba-2. State claim 2027. Orson U. James. Measurements discontinued after Dec. 11.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 28	24.7	May 16	27.5	June 26	21.7	Oct. 6	22.4
Apr. 16	25.1	23	20.2	Aug. 1	a 18.7	Nov. 3	26.3
18	25.6	June 10	32.2	Sept. 3	a 23.4	Dec. 11	27.0
May 9	17.4						

a Flowing prior to measurement.

(A-2-1)7dba. Ezra B. Parrish. Measurements discontinued after Dec. 11

Water level, in feet above land-surface datum

Apr. 16	17.2	June 10	20.8	Sept. 3	a 14.4	Nov. 3	18.2
May 9	16.2	26	19.9	Oct. 6	16.7	Dec. 11	18.7
16	17.6	Aug. 1	a 16.3				

a Flowing prior to measurement.

(A-2-1)7dba-6. State claim 240. Ezra B. Parrish. Measurements discontinued after Dec. 11.

Water level, in feet above land-surface datum

Apr. 16	24.6	June 26	29.9	Sept. 3	a 24.7	Nov. 3	26.0
May 16	27.4	Aug. 1	a 22.6	Oct. 6	25.4	Dec. 11	26.4
June 10	31.6						

a Flowing prior to measurement.

(A-2-1)7dca-7. State claim 16528. Naomi R. Smith. Measurements discontinued after Dec. 11.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level
May 2	16.7	Aug. 1	a 15.2	Oct. 9	16.6
June 10	21.0	Sept. 3	16.1	Dec. 1	17.6

a Flowing prior to measurement.

(A-2-1)7ddc-1. State claims 4989 and 8155. Centerville City Corporation.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	12.76	Apr. 28	11.47	June 10	5.30	Aug. 18	9.59
Mar. 14	13.00	May 16	9.78	17	4.43	25	10.50
28	12.95	23	8.96	30	4.91	Nov. 3	10.52
Apr. 11	12.64	June 2	6.86	July 16	7.86	Dec. 11	10.06
18	12.35						

(A-2-1)8cbc. John Coombs. Measurements discontinued.

Water level at noon, in feet
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.
1	.....	50.48	50.67	49.79	43.33	39.23	42.54	45.67	.....
2	.....	50.44	50.68	49.77	43.10	39.21	42.68	45.70	.....
3	.....	50.44	50.65	49.72	42.90	39.21	42.82	45.83	48.62
4	.....	50.46	50.69	49.69	42.62	39.27	42.91	45.92	.....
5	.....	50.49	50.70	49.64	42.36	.....	42.98	46.02	.....
6	.....	50.49	50.69	49.58	42.06	.....	43.06	46.14	.....
7	.....	50.49	50.67	49.52	41.81	39.52	43.16	46.26	.....
8	.....	.....	50.59	49.47	41.65	39.60	43.21	46.38	.....
9	.....	.....	50.58	49.41	41.40	39.65	.....	46.46	.....
10	.....	.....	50.57	49.31	41.21	39.67	.....	46.59	.....
11	.....	.....	50.57	49.23	41.07	39.76	43.55	46.69	.....
12	.....	.....	50.50	49.09	40.94	39.91	43.61	46.75	.....
13	.....	.....	50.45	48.85	40.67	40.02	43.68	.....	.....
14	.....	.....	50.43	48.57	40.54	40.14	43.73	.....	.....
15	.....	.....	50.41	48.28	40.36	.....	.....	47.05	.....
16	.....	.....	50.40	48.02	40.25	40.41	.....	47.08	.....
17	.....	.....	50.34	.....	.....	40.52	.....	47.14	.....
18	.....	.....	50.35	.....	.....	40.64	44.12	47.25	.....
19	.....	.....	50.34	.....	.....	40.73	44.20	47.29	.....
20	.....	.....	50.30	.....	.....	40.85	44.31	47.31	.....
21	50.45	.....	50.27	.....	.....	40.95	44.41	.....	.....
22	50.46	.....	50.24	.....	.....	41.08	44.57	47.36	.....
23	50.45	.....	50.22	45.74	.....	41.21	44.66	47.38	.....
24	.....	.....	50.17	45.42	39.55	41.35	.....	47.41	.....
25	.....	.....	50.15	45.19	39.46	41.49	44.91	47.44	.....
26	.....	.....	.....	44.99	39.39	41.64	45.03	47.49	.....
27	.....	.....	.....	44.71	39.32	41.80	45.22	47.54	.....
28	50.48	50.66	49.90	44.56	.....	41.93	45.28	47.57	.....
29		50.68	49.86	44.30	.....	42.07	45.36	47.60	.....
30		50.67	49.84	44.00	39.30	42.20	45.46	.....	.....
31		50.71		.....		42.36	45.56		

(A-2-1)17ccb-1. State claim 11318. Will Holbrook. Water-stage recorder removed on Dec. 19.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.83	32.24	32.63	32.71	31.27	.....	24.87	23.90	24.19	24.08	.....	27.55
2	30.95	32.24	32.57	32.68	31.20	29.17	24.76	23.94	24.22	24.12	.....	27.64
3	30.97	32.21	32.57	32.64	31.12	27.13	24.58	23.94	24.30	24.20	.....	27.67
4	30.98	32.34	32.56	32.63	31.05	27.03	24.36	23.94	24.30	24.19	26.01	.....

(A-2-1)17ccb-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	31.00	32.36	32.61	32.62	31.02	26.87	24.18	23.89	24.28	24.10	26.09	.....
6	31.02	32.39	32.62	32.58	.....	26.78	24.24	23.91	24.29	24.12	26.20	.....
7	31.12	32.40	32.61	32.56	.....	26.62	24.28	23.92	24.35	24.15	26.26	.....
8	31.18	32.41	32.60	32.48	.....	26.50	24.09	24.03	24.44	24.25	26.27	.....
9	31.22	32.42	32.62	32.42	30.61	26.49	23.94	23.95	24.47	24.25	26.34	.....
10	31.26	32.45	32.62	32.34	30.49	26.32	23.72	23.59	24.57	24.30	.....	.....
11	31.27	32.50	32.62	32.30	30.30	26.24	23.66	23.70	24.59	24.40	.....	.....
12	31.30	32.51	32.65	32.30	30.15	26.24	23.77	23.74	24.56	24.53	.....	28.14
13	31.35	32.53	32.64	32.27	30.01	26.12	23.86	23.72	24.47	24.55	26.57	28.14
14	31.42	32.56	32.60	32.24	29.89	26.05	23.82	23.64	24.63	24.60	26.68	28.13
15	31.53	32.54	32.61	32.22	29.76	26.01	.....	23.69	24.59	24.62	26.72	28.19
16	31.56	32.51	32.62	32.19	29.60	25.89	23.82	23.72	24.46	24.30	26.83	28.28
17	31.64	32.50	32.62	32.01	29.49	25.81	23.87	23.67	24.38	24.86	26.88	28.24
18	31.66	32.56	32.61	31.94	29.34	25.73	23.95	23.71	24.47	24.89	26.89	28.33
19	31.67	32.56	32.64	31.87	29.19	25.62	23.84	23.72	24.45	24.90	26.95	28.38
20	31.74	32.57	32.67	31.82	29.00	25.52	23.85	23.69	24.41	25.05	27.02	.....
21	31.83	32.60	32.70	31.78	28.95	25.48	23.82	23.74	24.35	.....	27.07	.....
22	31.89	32.61	32.67	31.73	28.77	25.46	23.84	23.80	24.28	.....	27.16	.....
23	31.91	32.61	32.71	31.72	28.55	25.37	23.84	23.77	24.20	25.18	27.20	.....
24	31.92	32.60	32.71	31.67	28.45	25.27	23.91	23.68	24.17	24.29	27.25	.....
25	31.95	32.59	32.75	.....	28.31	25.22	23.88	23.82	24.12	25.33	27.34	.....
26	31.96	32.58	32.68	.....	28.18	25.17	23.92	23.88	24.14	25.38	27.35	.....
27	32.01	32.59	.....	.....	27.90	25.07	23.98	24.01	24.11	25.43	27.42	.....
28	32.02	32.62	32.68	31.40	27.69	25.08	23.92	23.99	24.04	25.48	27.45	.....
29	32.12		32.69	31.35	27.61	25.04	23.94	24.02	24.04	25.57	27.52	.....
30	32.16		32.68	31.32	.....	25.00	23.97	24.10	24.03	.....	27.53	.....
31	32.23		32.70		.....		23.84	24.15		.....		.....

(A-2-1)17cdd-1. State claim 6184. Loren Briggs. Measurements discontinued after Dec. 11.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 21	51.70	May 9	51.35	July 16	50.84	Oct. 6	48.91
Mar. 21	51.57	16	51.30	21	52.24	15	50.94
28	51.58	23	51.18	28	53.59	Nov. 3	51.24
Apr. 11	51.50	June 10	50.99	Aug. 11	52.56	26	51.13
18	51.43	23	50.78	Sept. 2	52.70	Dec. 11	51.20
28	51.45	July 7	54.51	8	50.85		

(A-2-1)18aab-2. Frank Earl. Measurements discontinued after Dec. 11.

Water level, in feet above land-surface datum

Apr. 12	4.32	June 10	10.8	Aug. 1	7.9	Oct. 6	5.5
28	4.78	July 16	9.2	Sept. 3	5.9	Dec. 11	7.2
May 9	5.4						

(A-2-1)18abd-4. State claim 235. T. Q. Williams. Flowing prior to measurements. Measurements discontinued after Dec. 11.

Water level, in feet above land-surface datum

Apr. 12	20.2	May 16	21.6	Aug. 1	19.0	Oct. 6	19.7
28	20.9	June 10	26.4	Sept. 3	19.4	Dec. 11	21.8
May 9	18.1	26	23.4				

(A-2-1)18abd-7. State claim 9744. Emma Barton. Measurements discontinued on Dec. 11.

Water level, in feet above land-surface datum

Apr. 16	20.6	June 10	27.3	Sept. 3	20.4	Nov. 3	22.6
Feb. 28	21.5	26	27.6	Oct. 6	21.7	Dec. 11	22.9
May 9	21.6	Aug. 1	21.6				

(A-2-1)18abd. T. Q. Williams.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.4	22.6	21.9	22.4	23.6	25.9	27.4	18.6	20.9	23.3	23.0	23.0
2	23.4	22.6	22.2	22.2	23.6	26.1	27.3	21.7	19.9	23.3	23.1	23.1
3	23.3	22.5	22.4	22.4	23.6	24.9	27.1	22.5	19.5	23.0	23.2	23.4
4	23.6	22.5	22.5	22.4	21.0	25.3	24.2	22.9	19.1	22.7	23.1	23.4
5	23.6	22.5	22.4	22.2	22.6	27.4	24.3	23.5	19.2	....	23.1	23.5
6	23.5	22.4	22.4	22.3	22.6	27.8	24.8	23.8	19.2	22.8	....	23.5
7	23.5	22.7	22.5	22.3	22.9	27.9	22.8	23.4	18.6	22.9	23.1	23.5
8	23.6	22.5	22.5	22.4	23.1	28.0	22.1	23.4	18.8	22.8	23.2	23.2
9	23.6	22.5	22.5	22.4	20.9	28.1	25.3	22.9	18.6	22.8	23.1	23.1
10	23.6	22.4	22.6	22.5	22.8	28.7	25.4	22.9	18.3	23.0	23.0	23.1
11	23.6	22.4	22.5	22.4	23.4	28.7	23.9	23.7	20.0	22.8	23.0	23.0
12	23.6	22.4	22.5	22.6	23.7	28.7	21.9	24.0	21.4	....	23.1	....
13	23.6	22.7	22.5	22.6	24.3	28.9	23.3	23.9	21.8	22.9	23.1	23.1
14	23.6	....	22.6	22.9	24.5	29.3	23.3	23.8	21.8	22.8	23.1	23.1
15	23.6	....	22.6	22.9	24.8	29.3	23.2	23.5	21.6	23.1	23.2	23.2
16	23.6	....	22.5	22.6	25.1	29.4	24.9	23.6	22.1	23.2	23.2	23.1
17	23.5	....	22.6	22.9	25.3	29.2	24.0	22.7	22.3	23.1	23.1	23.1
18	23.4	....	22.5	22.8	25.6	29.3	24.4	23.1	22.3	23.1	23.1	23.1
19	23.4	....	22.5	22.8	25.6	....	21.9	19.5	22.6	23.1	23.3	23.1
20	23.4	....	22.5	23.0	25.5	....	23.0	19.3	22.8	23.2	23.2	....
21	23.4	....	22.6	23.0	25.9	....	22.4	19.5	23.2	22.9	23.1	....
22	23.4	....	22.5	22.9	23.9	....	22.0	20.7	23.2	23.0	23.1	....
23	23.3	....	22.4	22.9	25.7	....	21.8	21.7	23.2	23.0	23.1	....
24	23.6	....	22.3	23.0	25.9	....	22.0	21.7	22.8	23.0	23.0	....
25	23.5	....	22.4	23.2	25.0	28.1	19.6	22.6	23.4	23.1	23.0	....
26	23.5	....	22.4	23.3	26.0	27.4	21.2	22.2	23.4	23.0	23.1	....
27	22.9	....	22.5	23.3	24.1	25.3	21.6	21.3	23.2	23.0	23.2	23.1
28	22.7	22.6	22.5	23.4	26.1	27.1	21.9	21.5	23.0	23.2	23.1	23.1
29	22.7		22.3	23.6	26.6	....	21.6	22.2	23.3	23.1	23.1	23.0
30	22.6		22.4	23.6	26.7	27.4	19.0	23.3	23.3	23.0	23.1	23.0
31	22.7		22.4		25.3		18.2	23.3		23.0		23.0

(A-2-1)18baa-1. State claim 5391. F. W. Cottrell. Mar. 28, +36.2; June 27, +36.7; Aug. 1, +32.80. Measurements discontinued.

(A-2-1)18baa-2. State claim 6954. John J. Porter. Flowing prior to measurement. Aug. 18, +19.5. Measurements discontinued.

(A-2-1)18baa-5. State claim 6962. Herbert Haacke. Diameter 2 inches, depth 185 feet. Measuring point, top recorder support, 1.5 feet above land-surface datum, and 4,267.25 feet above mean sea level. Automatic water-stage recorder installed on Nov. 18. Recorder removed and measurements discontinued after Dec. 20, 1947.

Water level, in feet above land-surface datum, 1946
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 18	21.2	Dec. 1	21.8	Dec. 10	22.2	Dec. 20	22.1
19	21.4	2	22.0	11	22.1	21	22.2
22	22.4	3	22.1	12	22.0	22	22.1
23	22.4	4	21.8	13	22.2	23	22.1
26	22.0	5	21.9	14	22.3	24	22.2
27	21.9	6	22.2	15	22.2	25	22.1
28	21.8	7	22.3	16	22.2	26	22.1
29	22.0	8	22.1	18	22.5	27	22.2
30	21.9	9	22.0	19	22.0	28	21.8

(A-2-1)18baa-5--Continued.

Water level at noon, in feet above land-surface datum, 1947
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	....	....	22.3	22.8	23.5	22.0	20.6	17.1	19.4	23.3	24.0
2	....	22.2	22.1	22.9	23.2	22.2	19.9	17.1	18.2	22.4	23.8
3	....	22.0	22.3	22.8	23.2	22.0	18.8	17.8	19.4	22.4	....
4	....	....	22.4	22.9	23.1	22.5	18.3	19.1	18.5	22.8	23.6
5	....	....	22.4	22.9	22.7	23.8	17.7	19.7	19.5	22.4	24.4
6	22.1	....	22.3	22.9	22.7	24.5	16.9	19.7	19.4	22.4	....
7	....	21.9	22.4	23.0	a17.9	a21.2	17.7	19.3	18.8	22.5	....
8	....	21.7	22.4	23.2	....	24.5	17.3	17.8	17.4	22.6	23.2
9	....	21.8	22.4	23.1	21.7	25.0	17.9	17.5	18.1	22.3	23.3
10	....	21.8	22.4	23.0	22.1	25.2	17.3	18.7	19.1	22.5	23.0
11	....	21.9	22.5	23.0	22.5	25.2	16.8	19.5	19.3	23.1	23.2
12	....	21.8	22.4	23.7	22.9	25.4	17.3	20.3	19.5	....	....
13	....	21.6	22.3	23.4	23.5	25.7	16.5	20.4	19.7	23.3	....
14	....	21.9	22.4	23.5	23.7	25.9	17.1	20.5	19.6	23.8	22.4
15	....	22.0	22.7	23.5	23.8	25.9	17.1	20.6	19.8	23.8	22.6
16	....	22.1	22.8	23.5	24.0	25.6	16.6	20.4	19.8	23.4	22.6
17	22.6	22.3	22.8	23.1	24.3	25.2	16.3	19.6	19.8	23.4	22.8
18	22.3	22.3	22.9	22.8	23.8	25.4	16.1	19.2	20.1	23.5	22.9
19	22.3	22.1	22.9	23.1	24.0	24.9	16.8	18.6	21.1	....	22.8
20	....	22.0	22.8	23.1	23.6	25.0	15.7	17.8	21.6	....	22.6
21	....	22.0	22.9	23.4	23.8	a20.9	16.1	17.7	21.9	....	....
22	....	22.1	22.9	23.6	23.1	25.0	16.6	18.3	22.3	....	....
23	....	22.1	22.9	23.5	22.7	25.1	16.1	17.7	22.5	23.7	....
24	22.2	22.0	22.9	23.6	22.5	24.3	16.7	17.3	22.6	23.8	....
25	22.3	22.3	23.0	23.5	a19.0	22.2	16.7	18.0	22.1	24.0	....
26	22.3	....	23.1	23.8	21.3	21.6	15.8	17.6	22.6	23.8	....
27	22.4	....	22.9	23.7	21.4	21.9	16.2	18.4	23.2	23.9	....
28	....	22.3	23.0	23.8	21.4	20.9	16.4	19.5	23.3	23.8	....
29	....		22.9	23.9	21.5	21.3	15.7	20.3	23.4	23.9	....
30	22.5		22.9	23.9	21.5	21.5	15.7	20.3	23.4	23.9	....
31	....		22.7		21.9		15.8	19.1		23.9	

a Adjacent well flowing.

(A-2-1)18bac-1. State claim 11399. L. C. Selleneit. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 16	26.2	June 26	23.3	Sept. 3	22.2	Nov. 13	26.4
28	27.1	Aug. 1	a 17.5	Oct. 6	a 22.9	Dec. 12	24.0
June 9	28.2						

a Flowing prior to measurement.

(A-2-1)18bdc-4. State claim 15214. T. C. Waddoups. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Apr. 16	21.4	June 9	24.7	Aug. 1	15.4	Oct. 6	22.1
28	23.2	27	20.2	Sept. 3	16.3	Dec. 12	21.6

(A-2-1)18cba-1. State claim 427. Albert Mann. Measurements discontinued after Nov. 13.

Water level, in feet above land-surface datum

Apr. 16	21.5	June 27	a 15.5	Sept. 3	a 15.2	Nov. 13	20.8
June 9	23.2	Aug. 1	a 14.5	Oct. 6	a 18.6		

a Flowing prior to measurement.

(A-2-1)18dab-2. Anna E. Bangerter. Flowing prior to measurements. May 20, +2.90; Aug. 1, +2.97; Sept. 3, +2.28; Nov. 13, +2.48; measurements discontinued.

(A-2-1)18dca-2. State claim 18335. Earl L. Burnham.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 21	7.65	Apr. 28	5.77	May 23	4.40	Oct. 6	5.47
24	7.65	May 9	7.15	June 10	2.52	Nov. 13	5.59
Apr. 16	6.60	16	4.72	27	4.04	Dec. 11	6.01

(A-2-1)19cct-1. State claim 16478. Kirkland Nursery. Recorder removed on July 16.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	42.95	.....	42.71	41.96	38.25	.....	34.15	.....	.....	.....	.....
2	42.96	.....	42.66	41.90	38.03	.....	34.14	.....a34.65	.....	.....	.....
3	42.96	.....	42.63	41.82	37.86	.....	34.08	.....	.....	.....	.....
4	43.01	.....	42.60	41.78	37.71	.....	33.99	a34.42	.....	.....	.....
5	43.01	.....	42.59	.....	37.59	.....	33.91	.....	.....	.....	.....
6	42.98	.....	42.58	.....	37.48	.....	.....	.....	.....	.....	.....
7	42.99	43.32	42.57	.....	37.35	.....	33.74	.....	.....	.....	.....
8	43.01	43.32	.....	.....	37.26	.....	33.63	.....a35.52	.....	.....	.....
9	43.05	43.30	.....	.....	37.16	.....	33.58	.....	.....	.....	.....
10	43.03	43.30	.....	.....	37.08	.....	33.54	.....	.....	.....	.....
11	43.01	43.31	.....	40.46	36.97	.....	33.54	a34.46	.....	.....	.....
12	43.01	43.26	.....	40.33	36.83	.....	33.62	.....	.....	.....	a40.15
13	43.03	43.25	.....	40.23	36.57	.....	33.67	.....	.....	.....	.....
14	43.03	43.24	.....	40.09	36.38	.....	33.68	.....	.....	.....	.....
15	43.04	43.21	.....	39.95	36.17	.....	33.68	.....	a35.11	a38.70	.....
16	43.08	43.18	.....	39.80	35.92	.....	33.71	.....	.....	.....	.....
17	43.14	43.15	.....	39.67	.....	.....	.....	.....	.....	.....	.....
18	43.15	43.15	.....	39.58	.....	.....	.....	a34.54	.....	.....	.....
19	43.15	43.14	.....	39.50	.....	.....	.....	.....	.....	.....	.....
20	43.17	43.11	.....	38.38	.....	.....	.....	.....	.....	.....	.....
21	43.19	43.07	42.62	39.34	.....	.....	a33.83	.....	.....	a39.17	.....
22	43.20	43.02	42.59	39.31	.....	.....	.....	.....	a35.58	.....	.....
23	43.21	42.96	42.59	39.31	.....	.....	.....	.....	.....	.....	.....
24	43.21	42.91	42.60	39.17	.....	.....	.....	.....	.....	.....	.....
25	43.22	42.84	42.59	39.08	.....	.....	.....	a34.63	.....	.....	.....
26	43.21	42.79	42.55	.....	.....	.....	.....	.....	.....	.....	.....
27	43.22	42.74	42.48	.....	.....	.....	.....	.....	.....	.....	.....
28	43.20	42.73	42.46	38.74	.....	.....	a34.13	.....	.....	.....	.....
29	43.23		42.31	38.63	.....	.....	.....	.....	.....	.....	.....
30	43.24		42.12	38.48	.....	34.13	.....	.....	.....	.....	.....
31	43.27		42.04		.....		.....	.....		.....	

a Tape measurement.

(A-2-1)19dbc-1. State claim 1447. Bountiful City Corporation.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	68.26	May 9	a115.0	June 18	60.41	Oct. 9	64.18
Mar. 24	67.58	16	64.63	24	60.07	Nov. 12	64.97
Apr. 12	67.35	June 2	65.16	30	60.44	Dec. 12	65.83
25	65.38	10	65.27	July 14	61.50		

a Pumping.

(A-2-1)20bda-1. State claim 14701. J. W. Foster. Unused well, diameter 4 feet, depth 40 feet. Measuring point, top of well cover, at land-surface datum. Recorder removed on Oct. 15 and measurements discontinued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
1	25.59	23.82	22.28	20.93	19.58	.....	22.52	23.80	25.34	.....
2	25.64	23.78	22.48	20.54	19.93	22.96	22.48	23.91	25.40	.....
3	25.70	23.81	22.70	20.21	20.18	22.90	22.46	24.00	25.46	.....
4	25.70	23.76	22.93	20.03	20.39	22.85	22.49	24.04	25.52	.....

(A-2-1)20bda-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.
5	25.69	23.71	23.18	20.07	20.57	22.77	22.54	24.13	25.57	.....
6	25.67	23.73	23.41	20.26	20.73	22.72	22.54	24.18	25.64	27.72
7	25.69	23.75	23.57	20.53	20.91	22.63	22.49	24.19	25.71	.....
8	25.66	23.75	23.73	20.74	21.08	22.57	22.42	24.20	25.82	.....
9	25.60	23.78	23.87	21.03	21.26	22.57	22.37	24.19	.....	.....
10	25.55	23.82	23.96	21.28	21.35	22.63	22.34	24.15	.....	.....
11	25.47	.....	24.06	21.34	21.47	22.70	22.32	24.15	.....	.....
12	25.35	23.12	24.16	21.38	21.57	22.85	22.34	24.15	.....	.....
13	25.25	23.36	24.22	21.42	21.73	22.92	22.26	24.18	.....	.....
14	25.13	23.28	24.26	21.45	21.81	22.97	22.05	24.22	.....	.....
15	25.05	23.28	.....	.....	21.91	22.99	.....	24.27	26.65	29.63
16	.....	23.12	.....	.....	22.04	23.00	.....	24.31	.....	.....
17	24.86	22.94	.....	.....	22.15	23.01	22.00	24.36	.....	.....
18	24.76	22.76	.....	22.00	22.27	22.97	22.12	24.41	.....	.....
19	24.65	22.47	.....	22.04	22.44	22.88	22.26	24.46	.....	.....
20	24.61	22.14	.....	22.04	22.52	22.88	22.39	24.52	.....	.....
21	24.61	21.82	24.21	22.05	22.59	22.71	22.45	24.59	.....	.....
22	24.60	21.61	24.00	22.05	22.70	22.65	22.50	24.67	27.96	.....
23	24.60	21.52	23.87	22.09	22.87	22.59	22.58	24.74	.....	.....
24	24.55	21.48	23.76	20.80	.....	22.53	22.72	24.80	.....	.....
25	24.51	21.51	23.60	.....	.....	22.50	22.85	24.92	.....	.....
26	24.36	21.63	23.33	.....	.....	22.51	23.02	24.98	.....	.....
27	24.17	21.78	23.11	.....	.....	22.54	23.17	25.06	.....	.....
28	24.00	22.04	22.83	17.86	.....	22.56	23.29	25.12	.....	.....
29	23.95		22.50	18.50	.....	22.59	23.41	25.19	27.38	.....
30	23.85		21.97	19.09	.....	22.59	23.53	25.24	.....	.....
31	23.86		21.47		.....		23.66	25.29		.....

(A-2-1)20bdd-1. State claim 20665. Eunice Orden. Unused well, diameter 5 feet, depth 52 feet. Measuring point, top of concrete curb, at land-surface datum. Measurements discontinued after Nov. 26.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 21	a 20.38	May 16	a 19.29	July 7	23.91	Sept. 2	29.53
28	a 20.86	23	a 20.30	14	24.98	8	29.84
Apr. 4	a 22.06	June 2	a 20.72	21	26.52	Oct. 3	30.54
12	a 22.38	10	a 21.15	28	27.71	15	30.72
18	a 20.40	17	21.45	Aug. 11	28.58	Nov. 3	a 30.41
25	a 20.70	23	22.50	18	28.94	13	a 21.00
May 2	a 21.78	30	22.96	25	29.32	26	a 19.80
9	a 18.95						

a Water in Stone Creek 100 feet south.

(A-2-1)20cad-2. State claim 12515. Mabel Barlow. Measurements discontinued.

Water level, in feet

Feb. 21	23.20	May 16	21.60	June 30	22.00	Sept. 2	23.52
Apr. 11	23.14	June 2	21.56	July 7	22.32	8	25.30
18	23.32	10	21.67	21	23.69	Oct. 3	23.26
May 2	22.86	23	22.00	28	25.70	Dec. 11	23.54

(A-2-1)20cdd-1. State claim 1012. Fredrick Riley. Recorder removed on July 21. Measurements discontinued after Dec. 12.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Oct.	Dec.
1	17.43	.....	17.82	19.03	.....	.....	12.50	.....	.....
2	17.44	.....	17.95	19.01	.....	14.50	11.60	a16.55	.....
3	17.49	.....	17.95	19.06	.....	13.90	12.46	.....	.....
4	17.49	.....	18.02	19.18	.....	14.27	12.71	.....	.....
5	17.49	.....	18.17	18.74	.....	14.58	13.53	.....	.....

(A-2-1)20cdd-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Oct.	Dec.
6	17.51	.....	18.31	18.84	.....	14.88	14.25	.....	.....
7	17.57	18.46	18.35	19.03	.....	14.90	13.98	.....	.....
8	17.63	18.49	.....	19.14	.....	14.38	11.75	.....	.....
9	17.66	18.52	.....	19.06	16.89	14.52	14.32	.....	.....
10	17.75	18.53	.....	18.70	16.75	14.95	15.13	.....	.....
11	17.77	17.72	.....	18.74	16.60	15.39	14.82	.....	.....
12	17.82	17.50	.....	18.74	16.43	15.20	15.45	.....	a16.50
13	17.86	17.41	.....	18.77	16.24	15.29	15.76	.....	.....
14	17.89	17.20	18.55	18.79	16.21	15.35	15.30	.....	.....
15	17.97	16.96	18.61	18.79	16.40	14.19	15.72	.....	.....
16	17.99	16.87	18.64	18.78	16.64	14.32	16.08	.....	.....
17	18.02	16.88	18.59	18.78	16.28	14.34	16.26	.....	.....
18	18.03	16.91	18.54	18.78	15.11	.....	16.29	.....	.....
19	18.07	16.90	18.66	18.86	15.90	.....	16.50	.....	.....
20	18.15	16.93	18.72	18.86	15.92	.....	16.72	.....	.....
21	18.16	17.10	18.72	18.85	14.91	.....	16.70	.....	.....
22	18.17	17.16	18.75	18.89	14.76	.....	.....	.....	.....
23	18.16	17.24	18.84	18.92	14.40	.....	.....	.....	.....
24	18.17	17.40	18.92	18.85	14.09	13.89	.....	.....	.....
25	18.18	17.53	18.94	18.84	14.53	13.80	.....	.....	.....
26	18.18	17.60	18.95	18.85	14.28	13.50	.....	.....	.....
27	18.17	17.70	19.02	.....	14.43	13.57	.....	.....	.....
28	18.21	17.80	19.07	.....	14.39	12.73	a17.95	.....	.....
29	18.32		19.11	.....	.....	13.03	.....	.....	.....
30	18.36		19.08	.....	.....	12.63	.....	.....	.....
31	18.42		19.03		.....		.....	.....	.....

a Tape measurement.

(A-2-1)20cdd-2. State claim 1441. H. I. Burningham. Measurements discontinued after Dec. 12.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 11	16.48	June 2	13.60	July 7	14.63	Aug. 18	17.74
18	16.30	10	13.78	21	16.87	Sept. 2	16.51
May 2	15.39	23	13.28	28	17.01	Oct. 3	15.80
16	15.80	30	12.18	Aug. 11	16.75	Dec. 12	16.11

(A-2-1)20ddc-1. T. A. Briggs. Recorder removed and measurements discontinued after Nov. 23.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	21.95	.....	23.38	23.68	23.35	.....	6.77	9.95	13.33	16.61	.....
2	21.99	.....	23.39	23.69	23.35	18.83	6.79	10.09	13.47	16.71	.....
3	22.05	.....	23.40	23.68	23.33	18.04	....	10.25	13.59	16.81	19.14
4	22.07	.....	23.41	23.67	23.29	17.50	6.67	10.38	13.69	16.89	19.18
5	22.09	.....	23.43	.....	23.26	16.83	6.61	10.50	13.78	16.97	.....
6	22.10	.....	23.45	.....	23.22	15.95	6.62	10.64	13.87	17.05	.....
7	22.14	22.97	23.45	.....	23.18	14.80	6.65	10.78	13.93	17.14	.....
8	22.18	22.98	.....	.....	23.14	13.80	6.90	10.91	14.05	17.23	.....
9	22.21	23.00	.....	.....	23.10	12.97	6.99	11.04	14.18	17.29	.....
10	22.23	23.03	.....	.....	.....	12.35	7.07	11.15	14.32	17.36	.....
11	22.25	23.06	.....	.....	.....	11.79	7.18	11.26	14.45	17.45	.....
12	22.29	23.09	.....	23.69	.....	11.29	7.32	11.36	14.56	17.53	.....
13	22.31	23.12	.....	.....	.....	10.79	7.44	11.46	14.65	17.61	19.74
14	22.35	23.12	23.64	.....	.....	10.39	7.55	11.52	14.79	.....	.....
15	22.41	23.13	23.64	.....	.....	10.01	7.67	11.63	14.88	17.78	.....
16	22.45	23.14	23.62	.....	22.62	9.69	7.78	11.75	14.98	17.83	.....
17	22.46	23.16	23.63	.....	22.56	9.33	7.91	11.87	15.09	17.93	.....
18	22.46	23.18	23.62	23.45	22.51	9.09	8.04	11.99	15.25	18.00	.....
19	22.48	23.21	23.62	23.45	22.43	8.85	8.18	12.07	15.40	18.07	.....
20	22.51	23.23	23.61	23.44	22.36	8.59	8.31	12.17	15.51	18.13	20.10

(A-2-1)20ddc-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
21	22.55	23.27	23.61	23.43	22.28	8.42	8.48	12.27	15.62	18.20	20.15
22	22.58	23.29	23.62	23.42	22.21	8.25	8.59	12.38	15.71	18.30	20.21
23	22.60	23.31	23.63	23.43	22.10	8.05	8.73	12.40	15.80	18.38	20.26
24	22.60	23.32	23.64	23.42	.....	7.85	8.87	12.43	15.90	18.46	.....
25	22.62	23.33	23.66	23.41	.....	7.66	9.00	12.55	16.01	18.52	.....
26	22.63	23.35	23.68	23.40	.....	7.53	9.13	12.64	16.10	18.57	.....
27	22.65	23.36	23.69	23.39	.....	7.40	9.26	12.77	16.23	18.63	.....
28	22.66	23.36	23.69	23.38	.....	7.32	9.43	12.86	16.33	18.70	.....
29	22.70		23.69	23.37	21.56	7.22	9.56	12.97	16.42	18.76	.....
30	22.72		23.69	23.36	21.32	6.93	9.70	13.10	16.51	.....	.....
31	22.77		23.69		.....		9.82	13.22		.....	

(A-2-1)20ddd-1. State claim 1525. Ray Knighton. Recorder removed on June 18. Measurements discontinued after Nov. 20.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Nov.
1	25.85	.....	25.95	25.77	16.65	.....	.....	.....	.....	.....
2	25.87	.....	25.94	25.75	16.16	10.43	.....	.....	a20.60	.....
3	25.89	.....	25.94	25.73	15.74	10.49	.....	.....	.....	.....
4	25.90	.....	25.94	25.69	15.27	10.59	.....	.....	.....	.....
5	25.91	.....	25.94	25.66	14.81	10.63	.....	.....	.....	.....
6	25.93	.....	25.93	25.58	14.42	10.74	.....	.....	.....	.....
7	25.93	26.03	25.93	25.50	14.14	10.76	a14.11	.....	.....	.....
8	25.94	26.02	25.93	25.40	.....	10.80	.....	.....	a21.15	.....
9	25.95	26.02	25.92	25.28	12.95	10.90	.....	.....	.....	.....
10	25.96	26.02	25.92	25.15	.....	10.90	.....	.....	.....	.....
11	25.98	26.01	25.91	24.99	.....	10.91	.....	a18.90	.....	.....
12	25.98	26.02	25.91	24.90	.....	10.96	.....	.....	.....	.....
13	25.99	26.01	25.90	24.72	.....	10.97	.....	.....	.....	.....
14	25.99	26.00	25.89	24.38	.....	11.02	a15.43	.....	.....	.....
15	26.00	26.00	25.89	24.07	.....	11.08	.....	.....	.....	.....
16	26.00	25.99	25.88	23.74	10.57	11.13	.....	.....	.....	.....
17	26.01	25.99	25.88	23.34	10.40	11.25	.....	.....	.....	.....
18	26.01	25.99	25.87	22.84	10.25	11.35	.....	a19.45	.....	.....
19	26.01	25.99	25.87	22.43	10.13	.....	.....	.....	.....	.....
20	26.02	25.98	25.86	21.92	10.05	.....	.....	.....	.....	a24.40
21	26.02	25.98	25.86	21.40	9.97	.....	a16.55	.....	.....	.....
22	26.02	25.98	25.85	20.88	9.95	.....	.....	.....	.....	.....
23	26.02	25.98	25.85	20.74	9.94	a11.84	.....	.....	.....	.....
24	26.01	25.97	25.85	19.97	9.93	.....	.....	.....	.....	.....
25	26.01	25.96	25.84	19.42	9.92	.....	.....	a20.04	.....	.....
26	26.01	25.96	25.83	19.00	9.92	.....	.....	.....	.....	.....
27	26.01	25.96	25.83	18.49	9.94	.....	.....	.....	.....	.....
28	26.01	25.95	25.80	18.00	10.07	.....	a17.54	.....	.....	.....
29	26.01		25.80	17.55	10.13	.....	.....	.....	.....	.....
30	26.00		25.79	17.10	10.17	a12.79	.....	.....	.....	.....
31	26.00		25.79		.....		.....	.....	.....	

a Tape measurement.

(A-2-1)31ada-1. State application 17511. R. N. Schulter.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 2	131.70	June 10	132.04	July 28	133.45	Oct. 6	132.31
19	131.55	23	131.82	Sept. 2	132.43		

(A-2-1)31caa-1. State application 17634. H. E. Calder.

Water level, in feet

Apr. 18	155.90	July 7	155.28	Sept. 2	155.43	Nov. 13	155.14
May 2	155.59	28	155.29	Oct. 6	155.27	Dec. 11	155.38
19	155.32						

(A-2-1)31cca-1. State claim 8147. South Bountiful Junction Water Co.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	124.82	June 10	123.17	July 28	124.23	Nov. 13	125.13
Apr. 14	124.90	23	123.98	Sept. 2	124.70	Dec. 11	125.51
May 2	124.65	July 7	124.12	Oct. 6	124.73		

(B-2-1)13aab-1. State application 17402. Leonard Napoli. Measurements discontinued after Dec. 12.

Water level, in feet

Mar. 11	38.8	Apr. 28	39.0	June 27	38.2	Oct. 6	36.7
14	38.8	May 9	38.7	Aug. 1	31.8	Nov. 5	37.9
Apr. 16	38.7	June 3	37.7	Sept. 4	34.5	Dec. 12	36.1

(B-2-1)acd-1. Security Investment Co. Mar. 11, +43.3. Measurements discontinued.

(B-2-1)13caa-2. State application 14810. A. W. Seequist. Flowing prior to measurements. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	42.7	Apr. 16	49.4	June 3	42.4	Oct. 3	43.2
11	48.2	23	49.2	26	39.5	Nov. 2	46.2
13	48.2	25	49.2	July 31	35.5	Dec. 12	44.7
14	49.1	May 16	43.7	Sept. 3	36.0		

(B-2-1)13cab-1. State claim 11590. David Pack. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	21.3	Mar. 14	24.9	June 3	22.2	Sept. 3	a 21.4
11	25.1	Apr. 16	25.5	26	a 25.2	Oct. 3	a 25.5
13	24.8	May 16	23.6	July 31	a 21.6	Dec. 12	29.4

a Flowing prior to measurement.

(B-2-1)13cda-1. State claim 11982. Earl Holbrook. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 11	44.2	Apr. 23	45.1	June 3	40.1	Oct. 3	41.5
13	43.7	25	44.8	27	38.6	Nov. 12	45.0
14	43.7	28	45.0	July 31	31.8	Dec. 12	44.3
Apr. 16	45.1	May 16	41.9				

(B-2-1)13cdd-6. State claim a-1521. Leland Smith. Measurements discontinued after Oct. 3.

Water level, in feet above land-surface datum

Mar. 11	53.3	Apr. 23	55.0	May 9	50.6	July 31	a 40.8
13	53.8	25	44.3	June 3	55.6	Oct. 3	52.1
Apr. 16	54.1	28	55.3	27	53.9		

a Flowing prior to measurement.

(B-2-1)13daa-2. State claim 530. James Kippen. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	36.3	Apr. 16	37.1	June 27	33.3	Oct. 3	34.8
11	36.3	23	37.7	July 31	26.3	Nov. 12	35.4
13	35.5	May 16	37.4	Sept. 3	a 28.8	Dec. 12	34.4
14	35.4	June 3	36.2				

a Flowing prior to measurement.

(B-2-1)13dba-3. State claim 18739. Charles Stewart. Mar. 11, +41.5; Mar. 13, +40.2; Mar. 14, +39.9. Measurements discontinued.

(B-2-1)13ddd-1. State claim 449. William Bull. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level
Mar. 23	23.9	Sept. 4	19.9	Nov. 12	23.9
July 31	14.8	Oct. 3	23.7	Dec. 12	23.1

(B-2-1)24aaa-7. State application 15555. Measurements discontinued after Nov. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	26.4	Apr. 23	28.1	June 3	29.7	Sept. 4	26.2
11	26.3	25	27.2	24	30.5	Oct. 3	28.1
13	26.3	28	28.4	July 31	23.2	Nov. 12	28.1
Apr. 16	27.7	May 16	28.5				

(B-2-1)24acc-8. State claim 15266. Susie Wright. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level
Mar. 6	14.9	May 2	a 15.3	Dec. 12	a 16.1
Apr. 16	a 15.3	16	a 16.6		

a Flowing prior to measurement.

(B-2-1)24baa-9. State claim 15203. D. E. McKean Estate. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	33.1	Apr. 16	33.4	June 3	27.2	Oct. 3	31.4
11	33.4	23	33.7	24	28.5	Nov. 12	34.4
13	33.2	25	33.0	July 31	21.6	Dec. 12	33.9
14	33.5	May 16	30.5	Sept. 3	25.3		

(B-2-1)24bad-3. State claim 2677. C. R. Gull.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.5	46.5	47.1	47.3	48.0	47.8	48.5	....	46.3	48.2	48.9	....
2	46.5	46.5	47.0	47.1	48.3	47.6	48.1	46.0	46.7	48.3	48.7	....
3	47.0	46.5	47.3	47.1	48.0	47.6	47.6	47.0	46.2	48.2	48.6	....
4	47.0	46.7	47.4	47.2	47.5	47.6	47.6	47.0	46.4	48.3	48.7	....
5	46.6	46.5	47.0	47.2	47.7	47.9	47.0	47.5	46.3	48.4	48.5	49.1
6	46.6	46.5	47.0	47.1	47.5	48.0	47.3	47.3	....	48.6	48.6	....
7	46.8	46.6	47.2	47.4	47.3	48.2	47.5	....	46.0	48.4	48.6	....
8	46.5	46.5	47.3	47.6	47.2	47.7	....	46.4	46.0	48.0	48.7	....
9	46.5	46.5	47.1	47.5	47.0	48.0	46.1	46.8	45.9	47.8	48.6	....
10	46.7	46.6	47.0	47.6	47.3	48.2	46.6	47.0	45.5	47.7	48.6	....
11	46.5	46.7	47.0	47.6	47.0	....	47.2	47.4	45.6	48.1	48.7	....
12	46.3	46.5	47.6	47.6	47.5	....	47.1	47.9	45.7	48.1	48.6	49.1
13	46.5	46.5	47.7	47.6	47.4	....	47.0	47.6	46.1	48.6	48.6	....
14	46.6	46.7	47.1	47.9	47.7	....	....	47.7	45.7	48.8	48.7	....
15	47.0	46.7	47.4	47.9	47.9	....	47.1	47.7	46.0	48.6	48.6	....
16	46.3	46.6	47.0	47.6	48.2	....	47.2	47.6	46.3	48.6	48.3	....
17	46.5	46.8	47.2	47.6	48.3	50.0	47.0	47.6	46.1	48.7	48.1	....
18	46.5	46.9	47.2	47.5	48.2	49.9	46.8	48.1	46.8	48.7	48.5	....
19	46.7	46.6	46.8	47.6	48.1	49.4	46.8	47.4	47.6	48.7	48.6	....
20	46.4	46.7	46.9	47.7	48.0	49.5	46.7	48.1	47.7	48.6	48.5	....
21	46.5	47.1	47.0	47.6	47.9	49.5	47.5	47.3	47.9	48.4	49.1	....
22	46.4	46.9	47.0	47.8	47.5	49.6	46.8	47.3	48.3	48.5	49.1	....

(B-2-1)24bad-3--Continued.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	46.4	46.8	46.6	47.7	....	49.8	45.5	47.4	48.5	48.7	48.6	....
24	46.5	46.9	46.8	....	47.4	49.9	....	47.8	48.4	48.7	48.9	....
25	46.5	47.0	47.1	47.8	47.2	49.5	46.5	47.9	48.4	48.8	48.9	....
26	46.3	46.7	46.9	47.7	47.8	....	46.5	47.7	48.5	48.7	49.0	....
27	46.5	46.9	46.9	47.9	47.9	48.9	....	46.7	48.4	48.9	....	....
28	46.5	47.1	47.2	48.2	47.6	....	....	47.6	48.5	49.2	....	....
29	46.3		46.9	48.3	47.6	48.0	....	47.8	48.6	48.7	....	....
30	46.2		46.8	48.0	....	....	46.2	47.5	48.6	48.7	....	48.7
31	46.5		47.0		47.9		46.1	47.2		48.7		48.9

(B-2-1)24bad-5. State claim 11382. George Mann.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.3	30.7	30.6	28.9	27.6	25.6	23.7	20.3	25.2	28.6	30.2	29.7
2	30.2	30.6	30.5	28.8	28.5	25.4	22.2	20.9	25.1	28.1	30.4	....
3	30.3	30.3	30.5	28.9	28.1	24.6	22.2	22.9	25.0	28.1	30.5	....
4	30.0	30.4	30.6	29.1	27.4	26.0	23.0	23.5	24.6	28.0	30.3	....
5	30.4	30.6	30.6	29.4	27.0	26.5	21.7	23.5	24.6	28.0	30.5	....
6	30.3	30.5	30.5	29.6	26.5	26.4	21.4	23.5	24.4	28.2	30.4	....
7	30.4	30.5	30.5	29.5	25.7	26.0	21.7	21.9	24.3	27.8	30.4	....
8	30.5	30.5	30.5	29.9	25.6	25.3	21.4	21.6	24.0	27.9	30.3	....
9	30.2	30.5	30.5	29.9	24.7	26.2	21.5	22.3	23.8	28.1	30.2	....
10	30.4	30.4	30.5	30.0	24.9	27.7	21.8	24.0	24.0	28.0	30.1	....
11	30.5	30.5	30.6	29.9	26.0	28.7	21.3	25.3	24.7	28.1	30.3	....
12	30.2	30.6	30.3	30.0	26.7	28.8	20.8	25.9	24.7	28.5	30.3	30.1
13	30.5	30.5	30.3	30.3	27.7	29.2	20.8	25.8	25.0	28.7	30.2	30.1
14	30.5	30.6	30.3	30.1	28.3	29.8	20.8	25.9	25.1	28.9	30.0	29.9
15	30.2	30.6	30.5	29.7	28.6	29.7	21.5	25.6	24.8	29.2	30.2	29.7
16	30.0	30.7	30.4	29.6	28.7	29.7	22.0	24.4	25.3	29.4	30.2	29.8
17	29.3	30.6	30.6	28.3	28.9	28.8	21.5	23.7	25.7	29.2	30.1	29.9
18	29.3	30.6	30.6	27.8	28.8	28.7	20.3	23.0	25.9	29.2	30.2	29.8
19	30.1	30.6	30.6	28.5	28.5	27.2	19.1	23.4	26.4	29.3	30.3	29.9
20	29.6	30.6	30.3	28.5	27.8	26.3	20.1	23.6	27.0	29.7	30.0	29.9
21	30.5	30.6	30.1	28.8	27.2	26.7	20.1	23.2	27.5	29.4	29.9	29.9
22	30.6	30.6	30.0	29.0	26.5	26.5	20.8	24.0	28.1	29.1	30.0	29.9
23	30.5	30.6	29.2	29.2	25.8	26.3	20.3	25.0	28.1	29.5	29.9	29.7
24	30.0	30.6	28.5	29.4	26.5	25.2	21.0	24.6	28.3	29.5	29.8	29.9
25	30.3	30.7	29.8	29.5	24.8	26.1	20.8	24.6	28.6	29.6	29.9	29.8
26	30.2	30.6	29.2	29.3	25.7	25.5	20.2	24.1	28.6	29.5	30.0	30.0
27	30.3	30.6	29.7	29.4	25.1	24.8	20.1	23.7	28.1	29.6	29.8	29.8
28	30.6	30.6	29.6	29.3	25.5	23.2	20.2	25.5	28.5	30.0	29.7	29.7
29	30.7		29.1	29.3	25.3	24.6	20.4	25.5	29.1	29.8	29.9	29.9
30	30.5		29.1	28.1	24.7	24.3	20.9	25.4	28.7	29.6	29.9	29.9
31	30.6		29.2		25.3		20.8	25.2		29.9		29.7

(B-2-1)24cda-6. Charles Taylor. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	21.5	May 16	24.1	Sept. 3	23.4	Oct. 6	24.1
Apr. 16	22.8	Aug. 21	24.1	9	23.1	Nov. 12	24.4
May 2	23.4	25	23.9	19	24.1	Dec. 12	24.0

(B-2-1)24cda-8. Charles Taylor. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	14.7	June 3	14.3	Aug. 25	12.7	Sept.27	15.7
Apr. 16	14.4	27	15.2	Sept. 3	15.1	Oct. 6	16.2
May 2	14.8	July 31	11.9	6	15.1	Nov. 12	17.2
16	16.1	Aug. 18	14.4	19	16.1	Dec. 12	16.6

(B-2-1)24dcc-3. Wasatch Oil Refining Co., Woods Cross.

Water level, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.9	5.7	6.2	7.0	8.5	8.0	8.9	8.0	8.2	8.1	8.2	8.0
2	6.0	5.6	6.3	7.3	8.3	8.0	9.0	8.0	8.2	8.1	...	7.9
3	5.9	5.5	6.3	7.4	8.0	8.1	8.8	8.3	8.2	8.1	8.1	7.9
4	5.8	5.6	6.3	7.3	7.8	8.3	8.5	8.5	8.1	8.3	8.2	7.9
5	5.7	5.7	6.3	7.3	7.6	8.5	8.5	8.5	8.1	8.3	8.0	8.0
6	5.8	5.8	6.4	7.3	7.3	8.5	8.6	8.5	8.1	8.2	8.0	8.0
7	5.7	5.8	6.5	7.4	7.7	8.5	...	8.4	8.2	8.0	8.2	8.0
8	5.8	5.8	6.4	7.5	...	8.1	8.3	8.1	7.9	8.0	8.2	8.0
9	5.9	5.7	6.1	7.5	...	8.2	8.6	8.2	7.8	8.1	8.2	7.9
10	6.0	5.7	6.1	7.5	...	8.4	8.8	8.5	7.9	8.2	8.1	7.8
11	5.9	5.7	...	7.4	...	8.6	8.9	8.5	8.0	8.1	8.0	8.0
12	5.9	5.8	...	7.6	...	8.9	8.7	8.7	8.1	8.2	8.0	...
13	5.8	6.0	...	7.5	...	9.0	8.6	8.9	8.1	8.4	8.1	...
14	5.8	6.0	6.4	7.6	...	9.2	...	9.0	7.9	8.2	8.1	...
15	5.7	5.9	6.4	7.7	...	9.2	8.6	9.0	7.9	8.1	8.1	...
16	5.8	5.7	6.4	7.7	...	9.4	8.8	8.8	8.0	8.3	8.1	...
17	5.7	5.8	6.3	7.7	8.5	9.5	8.5	8.8	8.1	8.4	8.0	...
18	5.7	5.8	6.3	7.8	8.5	9.5	8.6	8.4	8.3	8.5	8.0	7.8
19	5.7	6.0	6.2	7.7	8.5	9.0	8.5	8.4	8.4	8.4	8.0	7.9
20	5.6	6.1	6.2	7.8	8.3	9.0	8.4	8.5	8.4	8.3	8.0	7.8
21	5.6	6.1	6.5	7.8	8.3	9.2	8.2	8.5	8.5	8.2	8.0	...
22	5.6	6.0	6.6	7.8	8.3	9.5	8.0	8.7	8.5	8.1	8.0	...
23	5.7	5.9	6.5	8.0	8.3	9.5	8.5	8.6	8.4	8.1	7.9	...
24	5.7	5.9	6.5	8.1	8.4	9.5	8.7	8.7	8.5	8.2	8.0	...
25	5.6	6.0	6.6	8.2	8.3	9.0	8.7	8.6	8.5	8.2	7.9	7.6
26	5.6	6.1	6.7	8.2	8.1	9.0	8.4	8.6	8.5	8.2	8.0	7.7
27	5.6	5.8	6.8	...	8.3	9.3	8.2	8.4	8.4	8.1	8.0	7.7
28	5.7	6.2	6.9	8.2	8.1	8.9	8.2	8.5	8.4	8.1	8.0	...
29	5.7		7.0	8.4	8.4	8.7	8.0	8.4	8.4	8.2	8.0	...
30	5.7		7.0	8.5	8.3	8.6	8.2	8.5	8.2	8.1	8.0	...
31	5.7		6.9		8.0		8.0	8.7		8.2		...

(B-2-1)25bab-1. State claim 11299. J. H. Day. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	21.0	June 3	21.6	Aug. 25	22.5	Sept.27	22.3
Apr. 16	a 22.0	26	a 22.9	Sept. 2	22.1	Oct. 6	a 22.2
May 2	22.5	July 31	21.8	19	22.1	Dec. 12	23.2
16	22.4	Aug. 18	22.4				

a Flowing prior to measurement.

(B-2-1)25bad-2. State claim 12452. Myrtle Hatch. Mar. 6, +6.2; Oct. 6, +8.4; Dec. 12, +8.7.

(B-2-1)25bbd-1. Reuben Hatch. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	13.6	June 3	12.6	July 31	12.5	Oct. 6	14.7
Apr. 16	13.2	27	14.0	Sept. 2	12.7	Dec. 12	16.2
May 2	12.6						

(B-2-1)25bbd-2. Reuben Hatch. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	17.7	June 3	17.5	Sept. 2	18.4	Nov. 12	20.4
Apr. 16	18.0	27	18.8	Oct. 6	18.8	Dec. 12	20.5
May 2	18.1	July 31	18.0				

(B-2-1)25bda-3. S. H. Smith. Measurements discontinued after Dec. 12.

(B-2-1)25bda-3--Continued.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 6	6.30	June 3	4.22	Aug. 25	3.14	Oct. 6	3.72
Apr. 11	5.40	27	3.00	Sept. 2	3.26	Nov. 12	3.80
May 2	4.61	July 31	3.39	19	3.43	Dec. 12	3.97
15	4.10	Aug. 18	3.25				

(B-2-1)25caa-4. Adolphus Ellis.

Water level, in feet

Mar. 6	8.95	May 16	7.90	July 31	6.37	Nov. 12	6.35
Apr. 14	8.10	June 3	7.82	Sept. 3	6.19	Dec. 12	6.68
May 2	7.71	27	6.38	Oct. 6	6.44		

(B-2-1)26aaa-2. State claim 12474. Alvin Winegar. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	27.6	May 2	25.1	July 31	24.2	Nov. 12	29.1
10	27.7	June 3	24.7	Sept. 3	25.1	Dec. 12	30.4
Apr. 16	25.9	26	25.6	Oct. 6	28.2		

(B-2-1)26aaa-3. State claim 12512. James Layton. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	39.2	May 2	a 36.7	July 31	a 37.3	Nov. 12	42.1
10	39.1	June 3	37.1	Sept. 3	37.9	Dec. 12	42.9
Apr. 12	a 37.2	26	a 36.3	Oct. 6	39.5		

a Flowing prior to measurement.

(B-2-1)26aad-1. State claim 3556. N. L. Starrs. Formerly owned by Clyde Hatch.

Water level, in feet above land-surface datum

Mar. 6	47.7	Mar. 13	47.6	June 3	45.7	Oct. 6	46.9
7	47.7	21	47.4	23	48.2	Nov. 12	49.4
10	47.3	Apr. 16	48.9	July 31	45.4	Dec. 12	49.6
11	47.5	May 2	48.3	Sept. 3	46.2		

(B-2-1)26dda-2. State claim 11306. Winnie Whitecar. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	19.3	Apr. 16	20.3	June 23	15.5	Oct. 6	17.1
7	18.9	May 2	18.8	July 31	10.5	Nov. 12	20.7
10	17.9	June 3	11.7	Sept. 3	13.4	Dec. 12	21.1

(B-2-1)27ddd-4. State claim 12034. Albert Thalman. Flowing prior to measurements. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	33.8	Mar. 17	33.8	June 3	29.9	Oct. 6	26.8
7	33.9	18	31.2	23	30.5	Nov. 12	32.8
10	33.6	Apr. 16	34.1	July 31	24.0	Dec. 12	33.8
11	33.7	May 2	33.7	Sept. 3	24.0		

(B-2-1)34ada-3. State claim 9308. M. H. Dearden. Measurements discontinued after Dec. 12.

Water level, in feet above land-surface datum

Mar. 6	23.2	Mar. 18	22.9	June 23	a 16.7	Oct. 6	16.3
10	23.0	Apr. 16	23.5	July 31	a 13.6	Nov. 12	19.7
11	23.1	May 2	23.0	Sept. 3	a 15.0	Dec. 12	20.5
17	23.2	June 3	a 17.2				

a Flowing prior to measurement.

(B-2-1)35dad-1. State claim 11335. D. E. Howard. Flowing prior to measurements.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 10	14.3	Apr. 16	15.5	June 26	13.5	Oct. 6	14.8
11	14.6	May 2	15.4	July 31	9.6	Dec. 12	15.5
13	14.7	June 3	11.8	Sept. 3	13.2		

(B-2-1)36bad-2. State claim 4550. M. P. Parkin.

Water level, in feet

Mar. 6	16.22	May 16	15.62	July 31	13.9	Nov. 12	14.02
Apr. 11	16.58	June 3	14.71	Sept. 3	13.56	Dec. 12	14.00
May 2	15.12	23	14.12	Oct. 6	13.72		

(B-2-1)36bbd-1. State claim 951. Anna I. Lemon. Water-stage recorder removed on Apr. 19.

Water level, in feet above land-surface datum
(From recorder charts)

Jan. 3	10.3	Feb. 2	10.1	Mar. 8	10.2	Apr. 5	10.6
3	10.3	3	10.0	9	10.1	6	10.6
5	10.2	7	10.0	10	10.1	7	10.7
6	10.4	8	9.9	11	10.2	8	10.9
7	10.3	9	9.9	12	10.2	9	10.9
8	10.2	10	9.8	13	10.2	10	10.8
9	10.1	11	9.9	14	10.2	11	10.9
10	10.4	12	9.9	15	10.4	12	11.0
11	10.4	13	9.8	16	10.4	13	11.0
12	10.4	14	9.9	17	10.5	18	11.0
13	10.3	15	10.0	18	10.5	19	11.1
14	10.4	16	10.0	19	10.5	20	11.1
17	10.2	17	10.1	20	10.4	21	11.0
18	10.2	18	10.1	21	10.4	22	11.2
19	10.2	19	10.1	22	10.4	23	11.1
20	10.2	20	10.0	23	10.2	24	11.0
21	10.2	21	10.1	24	10.2	25	11.1
22	10.1	22	10.1	25	10.5	May 10	9.9
23	10.0	23	10.0	26	10.6	11	9.8
24	10.2	24	10.1	27	10.4	12	9.6
25	10.2	25	10.3	28	10.6	13	9.9
26	10.2	26	10.3	29	10.6	14	9.9
27	10.1	27	10.3	30	10.5	15	9.9
28	10.3	28	10.2	31	10.5	16	9.9
29	10.1	Mar. 1	10.3	Apr. 1	10.6	17	9.4
30	10.0	2	10.3	2	10.6	18	9.4
31	10.0	3	10.3	3	10.6	19	9.5
Feb. 1	10.0	7	10.2	4	10.6	Nov. 12	a 10.6

a Tape measurement.

(B-2-1)36caa-1. William Moss Estate. Measurements discontinued after Dec. 12.

Water level, in feet

Mar. 6	6.55	May 16	5.95	Aug. 18	4.37	Oct. 6	4.42
Apr. 12	5.97	June 3	5.67	Sept. 3	3.80	Dec. 12	4.56
May 2	5.87	July 1	5.05				

(B-2-1)36ccb-1. State claim 17108. Edna T. Harwood. Oct. 5, +5.22.

Duchesne County - Uinta Basin

(For other wells in this basin see page 130.)

U(C-1-2)4adc-1. State claim 8162. Drought Relief Administration. Oct. 14, 13.35.

U(C-1-2)15bbc-1. State claim 2152. R. M. Clarke. Flowing prior to measurement. Oct. 14, +14.3.

U(C-1-2)27aaa-1. State claim 8169. Montwell L. D. S. Ward. Formerly owned by Drought Relief Administration. Oct. 14, +15.2. Well flowing prior to measurement.

U(C-1-3)28dcd-1. D. H. Allred. Oct. 13, 4.57.

U(C-1-3)31cca-5. R. A. Lister. Oct. 13, 1.93.

U(C-1-4)14aad-1. State application 12748. Forest Service, U. S. Dept. of Agriculture. Oct. 13, 2.43.

U(C-1-4)28dcc-1. State claim 8170. Drought Relief Administration. Oct. 13, 9.48.

U(C-1-5)13ada-3. State claim 8165. Drought Relief Administration. Oct. 13, 6.00.

U(C-2-1)15dda-1. State application 12977. R. Q. Warnock. Oct. 13, +46.0.

U(C-2-1)22bb. State application 12440. E. H. Peterson. Oct. 14, +15.2.

U(C-2-1)22bcb-1. State claim 958. Stephen Wogac. Oct. 14, +18.2.

U(C-2-2)13ddc. State application 15324. Hugh Gagon. Measurements discontinued.

U(C-2-2)23bac-1. State claim 1658. City of Roosevelt. Flowing prior to measurement. Oct. 14, +4.7.

U(C-2-3)33ccd-1. E. B. Thompson. Flowing prior to measurements. Oct. 13, +3.85.

U(C-3-3)8cdd-1. Henry Richins. Oct. 13, +21.2.

U(C-3-4)7cad-1. Knight Investment Co. Oct. 13, 100.68.

U(C-3-4)21aaa-1. Knight Investment Co. Oct. 13, 101.75.

U(C-3-4)22bab-1. Knight Investment Co. Oct. 13, 158.71.

U(C-4-2)5bb. Drought Relief Administration.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	2.17	Apr. 1	4.19	July 3	2.83	Oct. 15	2.32
15	2.39	17	4.36	15	2.69	Nov. 1	2.16
Feb. 1	2.68	May 1	4.77	Aug. 1	2.20	15	2.11
15	3.15	15	3.66	15	3.47	Dec. 1	1.99
Mar. 1	3.35	June 1	3.09	Sept.17	2.09	15	1.98
17	4.40	15	2.86	Oct. 1	2.42		

U(C-4-3)4bdc-1. State application 12568. Bureau of Reclamation, U. S. Dept. of Interior. Oct. 14, 7.31.

Garfield County - East Sevier Valley

(C-31-2)10cba-1. Gus Lambson. Mar. 26, 9.68.

(C-32-2)2dad-1. T. W. Roberts. Mar. 26, 9.59; Dec. 10, 10.83.

(C-35-34dca-1. State claim 5140. Charles and Will Proctor. Mar. 25, 5.60; Dec. 10, 7.47.

(C-36-3)7aac-1. Lillie Stead. Dec. 10, 3.86.

(C-36-3)18bdd-1. R. G. Syrett. Dec. 10, 68.12.

Garfield County - Upper Sevier Valley

(For other wells in this valley see page 116.)

(C-33-5)28bcd-1. State application 11739. Annie Wilcock. Mar. 26, 48.30; Dec. 10, 4[illegible].72.

(C-34-5)8abd-2. D. W. Woodward. Formerly owned by Deward Hayward. Mar. 26, 19.30; Dec. 10, 15.60.

(C-36-5)29da. J. A. Yardley. Mar. 25, 32.62.

Grand County - Colorado River area

Courthouse Syncline

(D-22-19)27dbb-1. Frank Paxton. Mar. 31, 45.43; Oct. 15, 45.10.

(D-24-20)22bac-1. State application 13068. Bureau of Land Management, U. S. Dept. of Interior. Oct. 15, 12.02.

Green River Desert

(D-22-24)29cbc-1. State application 13068. Bureau of Land Management, U. S. Dept. of Interior. Mar. 17, 19.00; Mar. 31, 18.25; Oct. 15, 21.75.

Moab-Spanish Valley

(D-25-21)28add-1. State application 13068. Bureau of Land Management, U. S. Dept. of Interior. Mar. 17, 32.72; Oct. 15, 36.75.

(D-26-22)17dbb-2. Cleveland. Oct. 15, 48.60.

Iron County - Cedar City Valley

Coal Creek District

(C-35-11)21dbd-1. State claim 1222. D. C. Urie.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	26.55	26.14	25.69	26.29	25.25	24.98	25.49	.....	26.80	26.63	26.39
2	.....	26.51	26.08	25.68	26.30	.....	24.99	25.56	25.80	26.81	26.58	26.40
3	.....	26.51	26.07	25.65	26.28	.....	24.99	25.63	25.87	26.80	26.64	.....
4	.....	26.50	26.05	25.67	26.27	25.18	25.02	25.66	25.92	26.76	26.64	.....
5	.....	26.45	26.07	25.70	26.27	25.17	25.06	.....	25.94	26.72	26.62	.....
6	.....	26.45	26.05	25.70	26.24	25.17	.....	25.50	25.97	26.76	26.66	.....
7	26.90	26.42	26.03	25.71	26.19	25.16	25.07	25.42	26.04	26.81	26.66	26.35
8	26.89	26.40	26.01	25.64	26.13	25.14	25.07	25.37	26.13	26.80	26.62	.....
9	26.88	26.37	26.02	25.63	26.06	25.12	25.02	25.33	26.19	26.82	26.59	.....
10	26.81	26.37	26.00	25.69	25.99	25.04	25.02	25.35	26.24	26.83	26.63	.....
11	26.76	26.39	25.98	25.68	25.93	24.96	25.01	25.38	26.31	26.86	26.60	.....
12	26.71	26.36	26.00	25.70	25.90	24.92	25.01	25.39	26.34	26.87	26.60	.....
13	26.74	26.35	25.98	25.68	.....	24.87	25.07	25.36	26.33	26.85	.....	.....
14	26.74	26.34	25.94	.....	25.78	24.84	25.13	25.33	26.35	26.80	.....	26.24
15	26.78	26.30	25.93	25.70	25.75	24.85	.....	25.37	.....	26.77	.....	26.25
16	.....	26.26	25.92	25.74	25.73	24.85	25.25	25.38	26.29	26.72	.....	26.23
17	.....	26.23	25.88	25.73	25.69	24.83	25.31	25.40	26.26	26.74	26.53	26.22
18	.....	26.26	25.88	25.74	25.67	24.87	25.36	25.41	26.30	26.75	26.49	26.23
19	.....	26.24	25.88	25.81	25.67	24.88	25.40	25.40	26.36	26.73	26.47	26.20
20	.....	26.23	25.87	25.83	25.66	24.87	25.43	25.42	26.39	26.69	26.49	26.19
21	26.70	26.22	25.85	25.85	25.58	24.91	25.47	25.44	26.42	26.67	26.48	.....
22	26.67	26.22	25.82	25.90	25.53	24.94	25.50	25.50	26.44	26.71	.....	26.23
23	26.64	26.21	25.80	25.97	25.50	24.97	25.52	25.54	26.46	26.69	26.50	26.20
24	26.63	.....	25.84	26.03	25.47	24.95	25.54	25.57	26.50	26.70	26.50	26.22
25	26.62	26.15	25.90	26.11	25.45	24.94	25.56	25.59	26.53	26.69	26.49	26.22
26	26.59	26.13	25.75	26.15	25.40	24.94	25.60	25.58	26.58	26.66	26.48	26.19
27	26.55	26.11	25.76	26.19	25.35	24.92	25.55	25.62	26.64	26.65	26.45	26.15
28	26.51	26.13	25.73	26.20	25.35	24.94	25.50	25.63	26.71	26.63	26.43	26.12
29	26.55		25.72	26.23	25.33	24.97	25.45	25.67	26.76	26.63	26.44	26.08
30	26.57		25.69	26.27	25.28	24.98	25.41	25.73	26.78	26.66	26.45	26.08
31	26.55		25.70		25.27		25.44	24.78		26.67		26.11

(C-35-11)21dcc-1. State claim 11599. Wilford Fife. Mar. 24, 28.34; Dec. 7, 31.75.

(C-35-11)27acc-1. State claim 382. Fernleigh Gardner.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	42.56	Mar. 30	40.32	Aug. 17	49.14	Nov. 30	42.32
26	42.17	May 21	41.77	Sept. 7	48.31	Dec. 7	41.85
Feb. 24	41.17	June 8	43.38	29	47.88	28	40.96
Mar. 24	40.10	July 8	46.25	Nov. 2	45.00		

(C-35-11)33aac-1. State claim 5126. Cottonwood Pump & Irrigation Co. Mar. 24, 63.12; Dec. 7, 65.70.

(C-36-11)8aab-1. State claim 13494. Leonard Hargrave. Mar. 24, 52.60; Dec. 7, 54.85.

(C-36-11)18aba-2. State claim 17383. Jacob Smith. Mar. 24, 22.22; Dec. 7, 22.68.

Enoch District

(C-34-10)31cbc-1. M. S. Jones. Mar. 22, 0.16.

(C-35-10)18cbb-1. Richard Williams. Mar. 22, 46.83; Dec. 7, 51.82.

(C-35-11)1cdc-1. State claim 17278. Ray Grimshaw. Mar. 22, 2.07; Dec. 7, 3.44.

(C-35-11)14dab-1. State claim 14000. Davis Murie. Mar. 22, 3.11; Dec. 7, 3.47.

Hamilton Fort District

(C-36-12)26cbb-1. State claim 13747. Cox & Thorley. No measurements made in 1947.

(C-37-12)11dbc-1. Oliver Berkhelder. Mar. 24, 7.01; Dec. 9, 9.44.

Iron Springs District

(C-35-11)31acd-1. State claim 13498. Heber Jensen. Mar. 24, 23.65; Dec. 7, 25.54.

(C-35-12)34dcd-1. State claim 4873. R. J. and W. M. Shay. Mar. 24, 15.81.

(C-36-12)1aaa-2. State claim 13995. M. J. McFarland. Mar. 24, 10.89; Dec. 7, 12.64.

(C-36-12)12dba-1. State claim 15411. Branch Agricultural College. Mar. 24, 14.36; Dec. 7, 15.74.

(C-36-12)14bbd-1. G. H. Pratt. Mar. 24, 6.41; Dec. 7, 6.75.

Kanarraville District

(C-37-12)23acb-1. State claim 13010. Federal Land Bank. Mar. 24, 52.29; Dec. 8, 53.73.

(C-37-12)34abb-1. State claims 1646 and 8184. Kanarra Field & Reservoir Co. Mar. 24, 38.53; Dec. 9, 39.43.

(C-38-12)3bcb-1. State claim 12845. Ford & Williams. Mar. 24, 66.32; Dec. 9, 66.42.

Midvalley District

(C-34-11)29bad-1. E. E. Williams. Mar. 22, 24.12.

(C-34-11)36cdc-2. State claim 10820. George Grimshaw. Mar. 22, 18.65; Dec. 7, 20.66.

(C-35-11)4dda-1. State claim 5121. Federal Land Bank. Mar. 22, 3.31.

(C-35-11)8cdd-1. State claim 13703. Mar. 24, 11.46; Dec. 7, 12.85.

(C-35-11)15aac-1. State claim 1220. H. D. Haight. Mar. 22, 5.67; Dec. 7, 7.10.

Queatchupah District

(C-36-12)20ddc-1. State claim 13516. E. L., H. D., and L. M. Jones. Mar. 24, 1.90; Dec. 7, 1.92.

(C-36-12)28ccc-1. A. P. Spilsbury. Flowing prior to measurement. Mar. 24, +7.3.

(C-37-12)9baa-1. State claim 16350. Platt Watson. Flowing prior to measurement. Mar. 24, +4.98.

Rush Lake District

(C-33-11)ddd-1. State claim 6005. G. P. Stapley. Mar. 22, 34.82.

(C-34-10)6ccc-1. State claim 11213. Public land. Mar. 22, 9.43.

(C-34-11)9cdc-1. D. C. Evans. Mar. 22, 21.56.

Iron County - Escalante Valley

(For other wells in this valley see pp. 85-87; 113; 135.)

(C-31-12)9abb-1. R. R. McGinty and others. Measurements discontinued.

(C-31-12)19ccd-1. State claim 20091. Public land. Mar. 20, 48.88.

(C-31-13)1a-1. State claim 6486. Public land. Mar. 20, 27.48.

(C-31-13)4cdd-1. Pearl Boeck. Mar. 20, 24.50.

(C-31-13)33ccc-1. Lemont Lowe. Mar. 20, 33.75.

(C-32-14)28bbb-1. State claim 17227. Joseph Dyson. Mar. 20, 2.34.

(C-33-13)3d. Rebecca Bullock. Mar. 20, 64.61.

(C-33-15)12aaa-1. State of Utah. Mar. 20, 15.86.

(C-33-15)19bcc-1. Robins & Maguire. Mar. 21, 72.38.

(C-33-15)31cbb-1. Jesse Carlson. Mar. 21, 27.13.

(C-33-16)10ccc-1. Aram Boghession. Mar. 21, 91.23.

(C-33-16)19ddd-1. Clarence Lynd. Mar. 21, 66.35; Sept. 11, 66.20.

(C-33-17)29dcb-1. Frank Webster. No measurements made in 1947.

(C-34-14)31ccc-1. Geological Survey, U. S. Dept. of Interior. Mar. 21, 14.47; June 26, 13.43; Dec. 8, 14.34.

(C-34-16)9cbc-1. Augustus Lott. Mar. 21, 6.93; June 26, 6.20; Sept. 11, 6.92; Dec. 8, 7.38.

(C-34-17)9ddd-1. William Haight. Mar. 21, 30.21; Sept. 11, 30.23.

(C-35-12)18ddd-2. State claim 11258. Columbia Steel Co. Mar. 21, 11.32; Sept. 12, 12.70; Dec. 8, 12.24.

(C-35-15)3dcc-1. State claim 3790. R. D. Clarke. Formerly owned by C. G. Clarke. Mar. 21, 13.20; June 26, 12.15; Sept. 12, 12.86; Dec. 8, 14.05.

(C-35-15)3dcc-2. State claim 3788. R. D. Clarke. Formerly owned by C. G. Clarke. Mar. 21, 12.70; June 26, 13.46; Sept. 11, 12.73; Dec. 8, 13.58.

(C-35-15)6cdd-1. Frank Bridel. Mar. 21, 11.68; June 26, 11.80; Sept. 12, 13.18; Dec. 8, 13.00.

(C-35-15)30acc-2. Hugh Ash. Mar. 21, 27.46.

(C-35-16)3bcd-1. State claim 3792. C. G. Clarke. Mar. 21, 15.18; June 26, 15.46; Sept. 11, 16.57.

(C-35-16)20cdd-2. Eva Hard. Mar. 21, 20.42; June 26, 21.60. Measurements discontinued.

(C-35-16)22add-1. State claim 10337. C. and S. Inatomi. Sept. 11, 24.00; Dec. 8, 23.31.

(C-35-17)3bbb-1. State claim 8432. L. E. and H. M. Sevy. Mar. 21, 45.97; Sept. 11, 46.28.

(C-35-17)25cdd-1. Henry Brenn. Mar. 21, 36.29; Sept. 10, 38.33; Dec. 8, 40.72.

(C-36-15)8bba-1. R. F. Jones. Mar. 21, 86.09; Sept. 12, 86.55.

(C-36-16)5a-2. Public land. Mar. 21, 49.67; Sept. 11, 52.80; Dec. 8, 51.46.

(C-36-16)8ddd-1. J. A. Eldredge. Mar. 21, 57.42; Sept. 11, 59.50; Dec. 8, 58.88.

(C-36-16)16dda-1. C. J. Erickson. Mar. 21, 57.47; Sept. 11, 59.62.

(C-36-16)19. T. W. Jones. Mar. 21, 76.66; Sept. 12, 79.41.

(C-36-16)19caa-1. J. A. Eldredge. June 26, 86.55; Sept. 12, 84.32.

(C-36-16)27dcd-1. State claim 10283. Ivins Investment Co. Mar. 21, 124.31; Sept. 11, 125.24.

(C-36-16)29daa-1. State application 16189. Weyl-Zuckerman Co. Sept. 12, 89.38; Dec. 8, 88.30.

(C-36-16)31bdd-1. W. H. Leigh. Mar. 21, 103.39; Sept. 12, 108.62; Dec. 8, 107.30.

(C-36-16)32ddd-1. J. C. Bosshardt. Mar. 21, 128.15; Sept. 21, 132.67; Dec. 8, 131.95.

Iron County - Parowan Valley

Buckhorn District

(C-32-8)1ada-1. Iron County. Mar. 22, 48.62.

(C-32-8)34aad-3. H. W. Lunt, Roadside Park, Paragonah. State claim 18168. Mar. 22, +8.2; Dec. 6, +10.2.

(C-32-8)35bcb-1. State claim 5683. H. N. Edwards. Flowing prior to measurements. Mar. 22, +6.8; Dec. 6, +8.0.

Little Salt Lake District

(C-33-9)28abd-1. State claim 17259. John Dolorinski. No measurements made in 1947.

(C-33-9)32ccd-2. State claim 17335. Alfred Wilcox. Flowing prior to measurement. Mar. 22, 10.2.

(C-33-9)34cbd-2. State claim 5694. Mary Marsden. Mar. 22, 19.49; Dec. 7, 23.07.

(C-34-9)6bcd-1. State claim 13506. G. D. Hyatt. Mar. 22, 4.64; Dec. 7, 5.51.

(C-34-9)8bdd-1. State claim 4868. P. H. Gurr. Sept. 15, 18.22; Dec. 7, 19.30.

Paragonah District

(C-33-8)28bbb-1. State claim 15133. State of Utah. Mar. 22, 10.27; Dec. 6, 13.25.

(C-34-8)5bca-1. Drought Relief Administration. Dec. 6, 22.75.

Parowan District

(C-33-9)24aba-1. State claim 10202. A. J. Decker. Mar. 22, +15.9.

(C-33-9)34dcd-1. State claim 6750 and State application 1426. Federal Land Bank. Mar. 22, 5.62; Dec. 7, 8.05.

(C-33-9)35ddd-1. State claim 13812. State of Utah. Mar. 22, 41.14; Dec. 7, 43.51.

(C-33-9)36dcd-1. State claim 494. H. L. Adams. Mar. 22, 42.27; Dec. 6, 43.60.

(C-34-9)10bdd-1. State claim 8801. Federal Land Bank. Sept. 15, 61.33; Dec. 7, 57.25.

(C-34-9)16cdd-1. State claim 5818. Federal Land Bank. Mar. 22, 29.49; Sept. 15, 30.36; Dec. 7, 29.19.

Summit District

(C-34-10)24abc-1. State application 12115. R. J. Green. Mar. 22, 52.84; Dec. 7, 54.50.

Juab County - Juab Valley

Chicken Creek District

(C-15-1)4ddd-1. C. H. Johnson. Flowing prior to measurements. Mar. 28, +5.35; Dec. 14, +5.35.

(C-15-1)12aba-1. State claim 10223. R. C. Mangleson. Mar. 28, 52.13; Dec. 14, 53.37.

Salt Creek District

(C-12-1)36dca-1. State claim 2227. Orson Cazier. Mar. 28, 9.15; Dec. 14, 17.60.

(D-11-1)9bbb-4. State claim 3099. J. L. and H. J. Fowkes. Mar. 28, +13.6; Dec. 14, +13.3.

(D-11-1)31abc-1. Loren Keyte. Flowing prior to measurements. Mar. 28, +3.27; Dec. 14, +3.35.

(D-13-1)6cbc-1. State claim 8188. Nephi Irrigation Co.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level
Mar. 28	15.37	May 22	14.81	Dec. 14	17.38
Apr. 25	15.85	Sept.10	16.42		

(D-14-1)6baa-1. State claim 2730. C. H. Garrett. Mar. 28, 189.16; Dec. 14, 188.88.

Juab County - Snake Valley

(For other wells in this valley see pp. 115-116.)

(C-11-16)6ccc. J. H. Guilmette. Oct. 15, 18.25.

(C-11-17)1bdc-1. State claim 8190. Drought Relief Administration. Oct. 15, 1.77.

(C-13-18)14dcc-1. Will Parker. Oct. 15, 13.60.

(C-13-18)23aab-2. Charles Nielson. Oct. 15, 4.85.

Millard County - Escalante Valley

(For other wells in this valley see pp. 85-87; 110-111; 135.)

(C-24-10)22aca-1. Grazing Service, U. S. Dept. of Interior. Mar. 20, 11.46.

(C-24-10)22acb-1. Grazing Service, U. S. Dept. of Interior. Mar. 20, 8.43.

(C-25-10)9dba-1. E. C. Hiltbrand. Mar. 20, 56.20.

(C-25-10)26caa-1. State of Utah. Mar. 20, 17.08.

Millard County - Pavant Valley

Pavant District

(C-19-4)31bcc-1. State claim 4263. Union Pacific Railway Co. Mar. 18, 8.40; Dec. 5, 7.46.

(C-19-5)4dda-1. State claim 16405. Lawrence Clark. Mar. 18, 26.31; Dec. 5, 25.74.

(C-20-5)13dad-1. C. H. Day. Mar. 18, 41.16; Dec. 5, 39.91.

(C-20-5)22bcc-1. State claim 7671. Arnold Lesin. Flowing prior to measurements. Mar. 18, +9.6; Dec. 5, +10.2.

Flowell District

(C-21-5)9cdc-1. State claim 6221. John Carling. Flowing prior to measurements. Mar. 19, 5.80; Dec. 5, flowing.

(C-21-5)21aba-1. State of Utah.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Oct.	Nov.	Dec.
1	....	6.45	6.15	6.66	12.37	a13.58	.....	....	3.73	0.95
2	....	6.55	6.12	8.30	.....	a13.58	.....	....	3.46	.92
3	....	6.55	6.00	9.15	.....	.....	.....	....	....	.94
4	....	6.45	6.06	9.45	.....	.....	.....	....	....	.94
5	....	6.48	5.92	9.79	.....	.....	.....	....	....	.90
6	....	6.43	5.98	9.90	.....	.....	.....	....	....	.87

a Nearby well pumping.

(C-21-5)21aba-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Oct.	Nov.	Dec.
7	6.60	6.42	5.95	9.88	.....	.....	12.47	....	3.25	0.86
8	....	6.38	....	9.98	12.45	12.77	12.47	....	2.99	.81
9	....	....	....	10.59	12.45	12.80	12.46	10.10	2.78	.81
10	....	....	....	10.80	12.40	12.95	12.41	10.03	2.76	.83
11	....	....	....	10.97	12.34	12.77	12.41	9.91	2.32	....
12	....	....	....	11.06	12.17	12.71	12.43	9.88	2.26	....
13	....	....	5.85	11.17	12.27	12.72	12.44	9.58	....	....
14	....	....	5.85	.....	12.29	12.74	.....	9.40	....	....
15	....	6.35	5.85	11.54	12.32	12.82	.....	7.95	....	.95
16	....	6.27	5.72	11.68	12.32	.....	.....	7.85	1.94	.65
17	....	6.23	5.67	11.80	12.28	13.58	.....	....	1.92	....
18	....	6.33	5.68	11.79	12.35	12.95	12.38	7.20	1.84	....
19	....	6.30	5.70	11.80	12.39	12.85	12.34	6.99	1.95	....
20	....	6.32	5.73	11.83	12.41	13.49	12.32	6.81	....	....
21	....	6.33	....	.....	12.46	12.67	12.31	6.64	....	.44
22	....	6.38	....	.....	12.52	12.42	a12.55	6.61	....	....
23	....	6.38	....	.....	12.57	12.35	a12.91	6.59	....	....
24	....	6.32	....	.....	12.59	12.43	.....	....	....	....
25	....	6.25	....	12.16	12.61	12.41	.....	....	....	....
26	6.45	....	....	12.28	12.55	12.40	.....	....	....	....
27	....	....	....	12.34	a12.71	12.38	.....	4.81	1.26	....
28	....	....	....	12.33	a12.95	12.52	.....	4.66	1.19	.20
29	....		....	12.34	a13.42	12.61	.....	4.41	1.19	.16
30	....		....	12.40	.....	12.58	.....	4.16	1.04	....
31	....		5.64		.....		.....	3.94		....

a Nearby pumping well.

(C-21-5)34baa-1. State claim 17381. Frank Sweeting. Mar. 19, 33.03; Sept. 10, 36.62; Dec. 5, 30.38.

Hatton District

(C-22-5)28bcc-1. State claim 7675. H. M. Bushnell. Mar. 19, 13.65; Dec. 5, 11.66.

(C-22-5)28dbd-1. State claim 16860. Charles Swallow. Mar. 19, 34.61; Dec. 5, 30.50.

(C-22-5)29cda-1. State claim 11976. O. E. Beckstrand. Mar. 19, 4.72; Dec. 5, 5.70.

(C-22-5)33cdd-1. State application 13367. L. A. Kimball. Mar. 19, 53.40; Dec. 5, 50.70.

(C-23-5)6daa-1. State claim 8201. Hatton Well Co. Mar. 19, 43.92; Dec. 5, 40.40.

(C-23-6)1cad-1. State application 12,538. Waldo George. Mar. 19, 47.76; Dec. 5, 47.47.

Kanosh District

(C-23-6)8bdb-1. State claim 16582. H. F. and C. H. Watts. No measurements made in 1947.

(C-23-6)19abb-1. Mar. 19, 51.37.

(C-23-6)29baa-1. State claim 6581. Mar. 19, 65.90.

(C-24-7)25. Frank Paxton. Dec. 5, 167.10.

Meadow District

(C-22-5)9dbc-1. State claim 2232. R. Sweeting. Mar. 19, 1.28; Dec. 5, flowing.

(C-22-5)17acc-1. State claim 3296. William Blake. Mar. 19, +31.2; Dec. 5, +32.6.

Millard County - Sevier Desert

(C-15-4)20dcc-1. Spencer Nielson. Mar. 17, 120.93; Dec. 3, 120.15.

(C-15-5)1aaa-1. I. P. Hinckley. Mar. 17, 98.59; Dec. 3, 97.76.

(C-15-7)17dad-1. I. H. Losee. Flowing prior to measurement. Mar. 17, +2.65.

(C-15-8)23bba-1. State claim 12279. C. D. Ashby. Flowing prior to measurement. Mar. 17, +4.25.

(C-16-7)4abb-1. L. N. Hinckley. Mar. 17, +8.0; Dec. 3, +8.5. Flowing prior to measurement on Mar. 17.

(C-16-7)7ccb-1. Millard County. Mar. 16, 1.33; Dec. 4, 1.44.

(C-16-7)21acd-1. Martin Tanner. Mar. 17, 11.26; Dec. 3, 11.96.

(C-16-8)3add-2. Porley Probst. Formerly owned by War Relocation Authority. State application A-13178. Flowing prior to measurements. Mar. 17, +5.46; Dec. 4, +5.36.

(C-16-8)15ddd-3. State claim 12335. Frank Foot. Mar. 18, 1.04; Dec. 3, 0.61.

(C-16-8)19ddd-1. War Relocation Authority. Flowing prior to measurements. Mar. 18, +0.48; Dec. 4, +1.10. Measurements discontinued.

(C-16-8)21ddd-1. State claim 768. War Relocation Authority. Flowing prior to measurement. Mar. 18, +2.23.

(C-16-8)27acd-1. War Relocation Authority. Mar. 17, 5.88. Measurements discontinued.

(C-16-8)32baa. War Relocation Authority. Mar. 18, 4.93; Dec. 3, 4.39.

(C-17-6)7dbb-2. Edward M. Dalton. Mar. 17, +0.37; Dec. 3, +0.50.

(C-17-6)33dcc-1. State claim 10288. Duluth Land Co. Mar. 18, +9.4; Dec. 4, +10.3.

(C-17-7)20cbb-1. State claim 12287. W. J. Webb. Flowing prior to measurements. Mar. 18, +6.1; Dec. 4, +6.2.

(C-17-7)30aaa-1. J. G. Parry. Mar. 18, +3.03; Dec. 3, +2.94, flowing prior to measurements.

(C-18-5)6bba-1. State claim 4261. Union Pacific Railway Co. Flowing prior to measurements. Mar. 18, +21.4; Dec. 4, +18.9. Measurements discontinued.

(C-18-7)5aaa-2. State claim 7624. S. A. Webb. Mar. 18, +5.3; Dec. 7, +6.2.

Millard County - Snake Valley

(For other wells in this valley see page 113.)

(C-18-19)20dad-1. Mrs. Ward Robinson. Oct. 10, 22.83.

(C-18-19)20ddd-1. State claim 7420. Louise Robinson. Oct. 11, 24.88.

(C-20-19)7aab. G. S. Quayte. No measurements made in 1947.

(C-20-19)7bbd. Marcus Sorenson. No measurements made in 1947.

(C-22-19)6b. Cecil Rowley. Oct. 10, 57.67.

(C-22-19)9cc. Fred Loper. Measurements discontinued.

(C-23-19)9cdb-1. Thomas Dearden. Oct. 10, 13.83.

Morgan County - Morgan Valley

(A-3-2)24cba-1. State claim 12405. Hyrum Adams. Apr. 12, 15.84; Dec. 15, 16.81.

(A-4-2)8ccd-1. State claim 12133. L. H. Kobabe. Apr. 12, 17.00.

(A-4-2)15ccc. State claim 6594. Jake Pentz. Apr. 12, 21.70; Dec. 15, 21.79.

(A-4-2)17dbd-1. Heber Anderson Estate. Apr. 12, 21.05; Dec. 15, 22.40.

(A-4-2)26cc. State Application 11666. J. C. Little. Apr. 12, 16.07; Dec. 15, 12.55.

(A-4-2)28baa-1. State claim 9247. Morgan County school district. Apr. 12, 25.10; Dec. 15, 24.98.

(A-4-2)35cdd-1. State claim 11785. Albert Wiggins. Apr. 12, 29.12; Dec. 15, 23.47.

(A-4-3)31bcc. Morgan County. Apr. 12, 23.93; Dec. 15, 23.89.

(A-4-3)31cab-1. State claim 12410. Como Springs Resort Co. Apr. 12, 2.30; Dec. 15, 1.88.

(A-4-4)30aac-2. State claim 5670. J. A. Millyard. Apr. 12, 11.16; Dec. 15, 10.68.

(A-5-1)27db. E. R. France. Apr. 12, 1.24.

Piute County - Grass Valley

(For other wells in this valley see page 126.)

(C-27-1)27abc-2. State Claim 2905. H. B. Crandall. Flowing prior to measurements. Mar. 26, +3.38; Dec. 11, +4.60.

(C-30-2)33a. Mar. 26, 12.59; Dec. 10, 12.88.

Piute County - Upper Sevier Valley

(For other wells in this valley see page 108.)

(C-30-3)15bba-1. C. P. Jessen. Mar. 26, 23.61; Dec. 10, 20.56.

(C-30-4)25bcc-1. State claim 8210. Drought Relief Administration. Mar. 26, 20.68; Dec. 10, 20.00.

Rich County - Bear Lake Valley

(A-13-5)10bbb-1. Thomas Hodges. Oct. 27, 12.54.

(A-13-5)10bbb-2. Thomas Hodges. Oct. 27, 14.95.

(A-13-5)21ad. Drought Relief Administration. Oct. 27, 3.17.

(A-13-5)22bd. Willis Bros. Oct. 27, 17.76.

(A-13-5)22da. Max Green. Oct. 27, 13.82.

(A-13-5)25db. Willis Bros. Oct. 27, 6.03.

(A-13-6)30bb. Rich County. Flowing prior to measurement. Oct. 27, +6.77.

(A-14-5)21bd. Thomas Hodges. Oct. 27, 13.28.

(A-14-5)21bda. J. W. Gibbons. Oct. 27, 16.61.

(A-14-5)21bdb. Alex Johnson. No measurements made in 1947.

(A-14-5)21cd. C. W. Pope. Oct. 27, 4.26.

Rich County - Upper Bear River Valley

(A-9-8)17ac. State claim 6837. S. Francis & Sons Co. Oct. 27, 5.47.

(A-10-7)20aaa-1. State claim 1886. Joseph Hatch. Oct. 27, 9.91.

(A-11-7)9cd-1. F. H. Jackson. Oct. 27, 11.51.

(A-11-7)9cd-2. F. H. Jackson. Oct. 27, 11.33.

(A-11-7)21bc. Loren Jackson. Oct. 27, 6.15.

(A-12-7)26bb-1. William Hoffman. Oct. 27, 7.31.

(A-12-7)26bb-2. William Hoffman. Oct. 27, 7.20.

Salt Lake County - Jordan Valley

(B-1-1)6cca-1. State claim 747. Rudy Gun Club. Flowing prior to measurement. Dec. 3, +19.9.

(B-1-1)26ddc-2. L. T. Farnsworth. Flowing prior to measurements. Apr. 1, +5.7; Dec. 3, +4.6.

(B-1-1)33cda-1. State claim 8867. Salt Lake City Corporation. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	12.70	June 24	13.10	Aug. 24	13.10	Oct. 9	12.80
Mar. 28	12.80	Aug. 1	12.55	Sept.27	12.75	Nov. 22	12.80
May 15	12.66						

(B-1-1)36abc-1. Utah Oil Co. Measurements by Salt Lake City Corporation.

Water level, in feet

Feb. 5	10.41	June 24	8.60	Aug. 24	11.05	Oct. 9	18.80
Mar. 24	9.17	Aug. 1	10.60	Sept.27	16.10	Nov. 22	17.15
May 15	9.30						

(B-1-2)36baa-1. E. J. Jeremy. Flowing prior to measurements. Apr. 1, +15.1; Dec. 3, +15.0.

(C-1-1)2cda-1. J. D. Brown. Measurements discontinued.

(C-1-1)22bda-1. State claim 2199. William Gedge. Apr. 1, +10.7; Dec. 3, +10.8.

(C-1-1)33abb-1. W. D. Hill. Apr. 1, +18.0; Dec. 3, +20.8.

(C-1-1)5bbb-1. State claim 13403. Morton Salt Co. Apr. 1, +18.3; Dec. 3, +18.8.

(C-1-2)19dad-1. State claim 5828. Utah Copper Co. Apr. 1, +13.0; Dec. 3, +18.1.

(C-1-2)22cbb-1. F. E. Fowler. Flowing prior to measurements. Apr. 1, +14.0; Dec. 3, +16.2.

(C-2-1)1bab-2. State claim 4058. C. S. Walters. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 17	19.25	May 19	17.30	Aug. 21	14.90	Oct. 16	17.50
Mar. 25	19.60	June 17	18.00	Sept.29	16.40	Nov. 24	19.00
Apr. 16	19.40	July 31	13.60				

(C-2-1)10bad-1. E. B. Lindsey. Apr. 1, 12.27; Dec. 3, 5.04.

(C-2-1)22bd. W. A. Diamond. Measurements by Salt Lake City Corporation.

Water level, in feet

Jan. 24	70.90	May 29	71.92	July 31	69.20	Sept.18	65.45
Feb. 28	72.12	June 28	70.90	Aug. 18	67.96	Dec. 16	68.25

(C-2-1)24adc-1. State claim 16012. J. D. Blain. Apr. 1, 22.31; Dec. 3, 20.45.

(C-2-1)24ccc-2. J. R. Smith. Apr. 1, 1.43; Dec. 3, 0.80.

(C-3-1)25aa. Sproul Bros. Apr. 1, 27.75.

(C-3-1)27cdd-1. J. R. Dansie and others. Apr. 1, 23.17; Dec. 3, 12.27.

(D-1-1)5aad-1. Salt Lake Corporation.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	103.39	103.08	102.68	102.10	102.02	100.78
2	103.49	102.97	102.74	101.98	102.66	100.78
3	103.57	103.00	102.60	101.88	102.39	100.87
4	103.48	103.00	102.54	101.98	102.25	100.89
5	103.33	102.86	102.60	102.06	102.15	100.98
6	103.17	102.90	102.71	102.10	102.07	101.02
7	103.29	102.87	102.67	102.11	102.01	100.98
8	103.28	102.84	102.62	101.95	101.93	100.94
9	103.28	102.78	102.69	101.90	101.81	100.97
10	103.17	102.83	102.64	102.06	101.76	100.88
11	103.05	102.92	102.64	102.11	101.71	100.77
12	102.90	102.86	102.71	102.13	101.77	100.89
13	103.09	102.88	102.64	102.05	101.77	100.87
14	102.99	102.89	102.54	101.95	101.63	100.82
15	103.20	102.80	102.53	101.90	101.64	100.87
16	103.28	102.68	102.50	101.96	101.64	100.84
17	103.25	102.61	102.45	101.76	101.56	100.84
18	103.17	102.72	102.43	101.80	101.62	100.86
19	103.00	102.71	102.34	101.83	101.51	100.78
20	103.02	102.71	102.09	101.74	101.36	100.64
21	103.07	102.72	102.10	101.74	101.36	100.63
22	103.06	102.72	102.35	101.66	101.24	100.74
23	102.99	102.73	102.25	101.75	101.06	100.82
24	102.97	102.72	102.25	101.72	100.90	100.80
25	103.02	102.73	102.25	101.76	100.82	100.60
26	102.88	102.72	102.06	101.74	100.58	100.40
27	102.89	102.58	102.16	101.69	100.52	100.40
28	102.76	102.54	102.08	101.73	100.61	100.55
29	102.90		102.36	101.75	100.70	100.58
30	102.92		102.20	101.86	100.58	100.54
31	103.04		102.18		100.69	

(D-1-1)5aad-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	100.54	108.16	101.15	100.78	.....	100.45
2	100.44	107.58	101.08	100.80	.....	100.52
3	100.42	.....	100.96	100.87	.....	100.48
4	100.46	.....	100.96	100.82	.....	100.48
5	100.57	.....	100.97	100.73	.....	100.51
6	100.47	.....	100.97	100.72	.....	100.46
7	100.40	104.00	100.97	100.74	.....	100.48
8	100.44	103.98	100.98	100.84	.....	100.50
9	100.46	103.82	100.98	100.74	.....	100.54
10	100.30	103.66	100.98	100.67	.....	100.63
11	100.26	103.40	100.98	100.66	.....	100.62
12	101.80	103.26	101.88	100.72	.....	100.64
13	101.36	102.85	100.88	100.72	100.51	100.62
14	101.14	.....	100.89	100.69	100.55	100.61
15	101.46	.....	100.89	.....	100.53	100.61
16	101.60	.....	100.88	.....	100.59	100.62
17	101.92	.....	100.18	.....	100.63	100.48
18	102.50	.....	100.38	.....	100.55	100.51
19	103.80	.....	100.58	.....	100.56	100.56
20	104.62	101.92	100.69	.....	100.56	100.48
21	105.34	101.72	100.70	.....	100.62	100.47
22	104.22	101.66	100.70	.....	100.68	100.54
23	103.64	101.70	100.70	.....	100.70	100.59
24	103.82	101.68	100.73	.....	100.73	100.60
25	104.03	101.74	100.73	.....	100.73	100.60
26	103.98	101.51	100.76	.....	100.74	100.52
27	105.20	101.56	100.79	.....	.....	100.42
28	106.00	101.42	100.78	.....	100.60	100.32
29	106.50	101.38	100.78	.....	100.61	100.32
30	107.20	101.30	100.77	.....	100.55	100.32
31	107.67	101.24		.....		100.44

(D-1-1)6ccd-1. Royal Laundry Co. Measurements by Salt Lake City Corporation.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 4	11.50	June 27	9.60	Aug. 24	10.52	Oct. 17	14.90
Mar. 24	10.60	Aug. 2	9.70	Sept.27	12.90	Dec. 19	15.25
May 29	9.65						

(D-1-1)7abd-6. Salt Lake City Corporation. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Feb. 3	6.45	June 28	5.50	Aug. 29	5.10	Oct. 17	6.60
Mar. 24	7.75	Aug. 2	5.00	Sept.27	5.70	Nov. 2	7.90
May 29	6.05						

(D-1-1)9aca-1. State claim 4836. Salt Lake City Corporation.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	145.15	145.31	143.78	143.62	140.62	139.99
2	145.26	145.24	143.60	141.32	140.53	139.91
3	145.25	145.28	143.43	141.25	140.49	139.92
4	145.20	145.18	143.42	141.26	140.37	139.89
5	145.17	145.05	143.35	141.32	140.34	139.86
6	145.15	145.12	143.26	141.29	140.34	139.90
7	145.26	145.18	143.17	141.26	140.28	139.85
8	145.25	144.96	143.05	141.08	140.26	139.81
9	145.22	144.89	143.01	141.18	140.21	139.89
10	145.18	144.98	142.86	141.38	140.20	139.82
11	145.16	145.00	142.84	141.38	140.18	139.83

(D-1-1)9aca-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
12	144.95	144.91	.....	141.38	140.25	139.87
13	145.12	144.97	.....	141.35	140.23	139.84
14	145.17	144.88	.....	141.24	140.08	139.83
15	145.33	144.82	.....	141.21	140.21	139.85
16	.....	144.73	.....	141.05	140.22	139.82
17	.....	144.70	.....	140.87	140.18	139.76
18	.....	144.70	.....	140.99	140.18	139.77
19	.....	144.62	.....	140.95	140.17	139.75
20	.....	144.56	141.96	140.77	140.16	139.71
21	145.20	144.53	141.79	140.77	140.17	139.83
22	145.20	144.45	141.67	140.73	140.19	139.90
23	145.24	144.28	141.74	140.81	140.19	139.90
24	145.21	144.17	141.74	140.70	140.18	139.86
25	145.25	144.09	141.63	140.75	140.15	139.87
26	.....	144.00	141.52	140.60	140.12	139.88
27	.....	143.98	141.57	140.58	140.05	139.89
28	145.12	143.91	141.47	140.56	140.12	139.95
29	145.34		141.50	140.57	140.01	139.99
30	145.21		141.51	140.67	139.91	140.04
31	145.34		141.51		140.00	

Water level at noon, in feet
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	139.96	140.58	140.94	141.09	141.33	141.44
2	139.97	140.55	140.92	141.17	141.32	141.54
3	139.96	140.60	141.00	141.17	141.38	141.48
4	139.98	140.61	140.93	141.17	141.49	141.54
5	140.02	140.58	140.93	141.14	141.46	141.52
6	140.02	140.62	140.93	141.13	141.38	141.47
7	140.09	140.68	140.90	141.22	141.43	141.51
8	140.12	140.72	140.96	141.23	141.38	141.57
9	140.14	140.70	140.95	141.17	141.43	141.57
10	140.08	140.77	141.08	141.18	141.49	141.63
11	140.10	140.75	141.08	141.21	141.47	141.59
12	140.23	140.73	141.08	141.30	141.35	141.65
13	140.25	140.75	141.00	141.24	141.38	141.54
14	140.25	140.75	141.05	141.23	141.48	141.51
15	140.26	140.74	141.07	141.22	141.39	141.54
16	140.29	140.74	140.96	141.16	141.42	141.63
17	140.32	140.81	140.78	141.35	141.33	141.56
18	140.35	140.83	140.96	141.34	141.38	141.66
19	140.31	140.80	141.00	141.31	141.46	141.69
20	140.30	140.80	141.01	141.23	141.53	141.61
21	140.37	140.83	141.01	141.34	141.51	141.69
22	140.37	140.92	140.99	141.38	141.56	141.74
23	140.38	140.92	140.97	141.36	141.57	141.74
24	140.35	140.92	140.97	141.42	141.54	141.77
25	140.36	140.92	140.98	141.36	141.60	141.74
26	140.40	140.92	141.10	141.35	141.55	141.68
27	140.41	140.97	141.09	141.30	141.55	141.62
28	140.43	140.92	141.07	141.30	141.53	141.57
29	140.47	140.91	141.05	141.35	141.57	141.59
30	140.46	140.94	141.07	141.47	141.48	141.66
31	140.50	140.94		141.46		141.72

(D-1-1)19bba-1. State claim 13468. Salt Lake County Hospital. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	10.00	Apr. 23	13.50	Aug. 1	6.70	Oct. 9	8.80
Mar. 20	11.70	May 29	11.30	Sept.27	8.90	Nov. 21	13.40
25	14.20	June 24	9.90				

(D-1-1)20cdc-4. Louie Lund. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 19	3.65	May 20	2.30	Aug. 24	2.50	Oct. 28	2.90
Mar. 24	9.20	June 27	2.10	Sept.26	3.40	Nov. 22	4.20
28	3.30						

(D-1-1)21accl. State claim 33. Utah State Prison. Measurements by Salt Lake City Corporation.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level
Feb. 28	76.17	Sept.26	71.77	Dec. 2	72.70
Mar. 24	75.58	Oct. 23	72.61		

(D-1-1)30bbc-9. L. W. Amodt. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 25	12.90	June 24	7.45	Aug. 24	5.70	Oct. 9	7.90
Apr. 23	13.30	July 31	3.30	Sept.29	8.30	Nov. 21	12.60
May 29	10.55						

(D-1-1)31caa-2. State claim 4120. William Sorenson. Measurements by Salt Lake City Corporation.

Water level, in feet above land-surface datum

Feb. 19	12.60	May 22	11.30	Sept.29	10.40	Nov. 24	13.10
Apr. 23	13.10	June 28	5.30	Oct. 16	11.50		

(D-2-1)4dbd-4. Eugene Templeman. Measurements by Salt Lake City Corporation.

Water level, in feet

Jan. 7	+1.20	Mar. 11	0.10	May 31	+0.30	Sept.10	+3.70
14	+.85	24	.47	June 21	+1.30	27	+4.35
21	+.80	Apr. 10	.86	25	+1.75	Oct. 14	4.20
30	+.65	25	.50	July 14	+1.90	28	+3.95
Feb. 5	+.43	29	.53	30	+2.80	Nov. 19	+3.10
8	+.87	May 6	.90	Aug. 6	+3.80	26	+2.95
11	+.55	16	.47	21	+4.05	Dec. 15	+2.60
17	+.42	20	.25	30	+3.50	29	+2.25
28	+.08	28	+.25				

(D-2-1)5aaa-1. State claim 6685. M. L. Davis. Measurements by Salt Lake City Corporation.

Water level, in feet

Feb. 24	+1.80	June 27	0.25	Aug. 29	0.20	Oct. 16	+2.55
Mar. 28	+1.63	July 28	1.22	Sept.23	+1.55	Nov. 24	+2.55
May 29	+1.60						

(D-2-1)8bbb-1. State claim 218. A. B. and T. E. Hogge. Measurements by Salt Lake City Corporation.

Water level, in feet

Feb. 17	+0.30	June 21	1.45	Aug. 26	4.20	Oct. 6	+0.10
Mar. 28	+.30	July 14	2.58	Sept.11	+.55	Nov. 28	+.40
May 29	+.25						

(D-2-1)15acc-1. M. A. Keyser.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	66.04	69.25	70.94	71.82	69.12	64.84	61.57	59.50	59.76	61.42	63.32	64.92
2	66.31	69.15	70.75	71.77	68.93	64.77	61.58	59.43	59.77	61.51	63.11	64.97
3	66.51	69.32	70.78	71.69	68.70	64.59	61.53	59.42	60.04	61.63	63.39	65.02
4	66.51	69.41	70.85	71.84	68.64	64.25	61.50	59.24	60.04	61.63	63.47	65.14
5	66.49	69.33	70.90	71.92	68.64	63.94	61.39	59.23	60.04	61.54	63.57	65.23
6	66.60	69.43	71.02	71.92	68.64	63.87	61.37	59.11	60.10	61.52	.....	65.23
7	66.74	69.43	71.02	71.91	68.51	63.70	61.27	.....	60.18	61.58	64.10	65.32
8	66.86	69.49	71.02	71.48	68.43	63.60	61.24	.....	60.34	61.64	64.10	65.41
9	66.93	69.51	71.14	71.31	68.33	63.34	61.10	.....	60.38	61.63	63.99	65.53
10	66.93	69.65	71.14	71.56	68.26	63.20	60.82	.....	60.56	61.60	64.25	65.52
11	66.81	69.97	71.24	71.55	68.09	63.05	60.77	.....	60.69	61.60	64.32	.....
12	66.95	69.93	71.36	71.55	68.15	63.06	60.78	.....	60.69	61.76	64.34	.....
13	67.06	70.00	71.37	71.29	68.08	62.97	60.77	.....	60.64	61.85	64.35	.....
14	67.30	70.02	71.31	71.05	67.71	62.78	60.64	.....	60.81	61.80	64.41	.....
15	67.86	70.00	71.30	70.73	67.61	62.72	60.52	.....	60.81	61.75	64.48	.....
16	67.93	69.96	71.30	70.72	67.44	62.61	60.40	.....	60.78	61.70	64.55	.....
17	67.92	69.87	71.30	70.40	67.21	62.58	60.41	.....	60.70	61.89	64.66	65.95
18	67.90	70.31	71.27	70.32	67.08	62.63	60.40	.....	60.98	61.97	64.66	66.00
19	67.86	70.31	71.33	70.33	67.00	62.55	60.28	.....	61.08	61.97	64.55	66.11
20	68.05	70.39	71.40	70.19	66.89	62.41	60.14	59.25	61.10	61.97	64.58	66.09
21	68.24	70.45	71.46	69.94	66.50	62.28	60.07	59.23	61.10	62.00	64.61	66.03
22	68.25	70.55	71.42	69.77	66.43	62.35	60.02	59.20	61.11	62.25	64.84	66.15
23	68.25	70.56	71.32	69.80	66.38	62.36	59.80	59.37	61.10	62.33	64.84	66.22
24	68.32	70.55	71.70	69.63	66.22	62.21	59.78	59.36	61.12	62.52	64.85	66.30
25	68.48	70.51	71.67	69.58	65.98	62.05	59.76	59.33	61.12	62.53	64.91	66.30
26	68.46	70.50	71.49	69.43	65.80	61.99	59.73	59.37	61.20	62.53	64.92	66.23
27	68.56	70.52	71.70	69.29	65.52	62.09	59.72	59.60	61.31	62.61	64.89	66.11
28	68.50	70.85	71.69	69.17	65.48	62.06	59.64	59.50	61.32	62.68	64.89	66.10
29	68.86		71.72	69.07	65.41	62.06	59.63	59.55	61.33	62.82	64.92	65.93
30	69.01		71.68	69.12	65.15	62.06	59.60	59.67	61.36	63.12	64.93	66.09
31	69.19		71.82		64.83		59.57	59.77		63.23		66.30

(D-3-1)5cdc-1. Sam Jones. Apr. 1, 9.35; Dec. 3, 4.71.

San Juan County - San Juan River area

Moab - Spanish Valley

(D-27-22)2dda-1. State application 13070. Oct. 15, 276.92.

Church Rock Syncline

(D-28-22)1caa-1. State application 14265. State Road Commission. Oct. 15, 19.73.

(D-28-23)19dcc-1. State application 13070. Bureau of Land Management, U. S. Dept. of Interior. Oct. 15, 281.10.

(D-29 -23)33dbb-1. State application 13070. Bureau of Land Management, U. S. Dept. of Interior. Oct. 15, 31.21.

(D-30-23)10add-1. State claim 8429. State Road Commission. Oct. 13, 32.44.

(D-30-24)35bac-1. State claim 8538. Molybdenum Corporation. Oct. 18, 194.47.

(D-31-23)23add-1. State claim 8254. Bureau of Land Management, U. S. Dept. of Interior. Oct. 15, 101.33.

LaSal Valley

(D-29-24)18bab-1. State claim 89. Joseph Redd. Oct. 18, 52.25.

Sage Plain

(D-32-23)36dcc. Frank Redd. Oct. 16, 48.65.

(D-33-24)26bdc-1. State claim 8236. H. L. Hansen. Oct. 16, 80.12.

(D-34-24)25aad-1. State application 16754. C. A. Frost. Oct. 16, 176.09.

(D-34-26)4dad-1. State claim 8249. State Land Board. Oct. 16, 44.81.

(D-34-26)6ccd-1. State application 16702. W. C. Huffman. Oct. 16, 115.25.

(D-34-26)30ccb-1. State claim 8243. Clement Johnson. Oct. 17, 5.17.

(D-36-21)7. Office of Indian Affairs, U. S. Dept. of Interior. Oct. 16, 16.10.

(D-36-22)27ddb-1. U. S. 119. M. F. Lyman.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	21.7	Apr. 25	21.9	Aug. 10	19.6	Nov. 25	21.6
27	21.5	May 12	21.6	27	19.6	Dec. 3	21.3
Feb. 10	23.15	26	21.1	Sept.10	20.1	10	21.3
27	21.45	June 10	20.4	25	21.1	17	21.2
Mar. 10	22.0	25	20.7	Oct. 10	20.7	24	21.4
25	22.0	July 10	19.6	23	21.3	31	20.9
Apr. 10	21.8	26	19.7	Nov. 10	21.4		

(D-36-22)27ddb-2. U. S. 119a. M. F. Lyman.

Water level, in feet

Jan. 10	53.8	Apr. 25	54.0	Aug. 10	53.0	Nov. 10	52.5
27	54.4	May 12	53.6	27	52.8	25	52.5
Feb. 10	53.1	26	53.6	Sept.10	53.0	Dec. 10	52.1
27	53.5	June 10	53.3	25	52.7	17	53.5
Mar. 10	54.4	25	53.8	Oct. 10	52.7	24	52.5
25	54.9	July 10	52.9	23	52.1	31	52.1
Apr. 10	54.0	26	53.2				

(D-37-22)10ddc-1. State application 16124. Bureau of Land Management, U. S. Dept. of Interior. Oct. 16, 88.62.

(D-40-22)29bcc-1. F. A. Nielson. Oct. 16, 7.42.

Sanpete County - Central Sevier Valley

(For other wells in this valley see pp. 125-126.)

(C-19-1)23bcc-1. State claim 1457. C. H. Beal. Mar. 27, 30.69; Dec. 13, 29.90.

(C-19-1)25cd-2. W. J. Wintch and R. P. Dyreng. Flowing prior to measurement. Dec. 13, +0.85.

(D-20-1)5bd. Federal Land Bank. Mar. 27, 20.86; Dec. 13, 16.34.

(D-20-1)20aaa-1. State claim 6356. Federal Land Bank. Mar. 27, 31.50; Dec. 13, 29.04.

(D-14-2)13aa. Ernest Hansen. Flowing prior to measurement. Mar. 28, 19.2.

(D-14-3)33bcc-1. State claim 3708. Joseph Cloward. Flowing prior to measurements. Mar. 28, +5.2; Dec. 13, +6.2.

(D-15-3)8cda-3. State claim 13671. William Prestwick. Flowing prior to measurements. Mar. 28, +3.70; Dec. 13, +3.55.

(D-15-3)28aba-1. State claim 2100. Isaac Reynolds. Flowing prior to measurements. Mar. 28, +2.47; Dec. 13, +2.65.

(D-15-4)4dda-1. State claim 3606. Twin Creek Irrigation Co.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 28	22.05	Dec. 21	17.73	Dec. 25	18.00	Dec. 29	18.19
Dec. 13	17.38	22	17.79	26	18.07	30	18.25
19	17.69	23	17.85	27	18.12	31	18.32
20	17.70	24	17.93	28	18.16		

Sanpete County - Sanpete Valley

(D-15-4)6ada-1. State claims 3741 and 8279. W. H. Brinton. Mar. 28, 4.41; Dec. 13, 4.78.

(D-15-4)29bac-1. State claim 8276. Drought Relief Administration. Mar. 28, 7.25.

(D-16-3)4aaa-1. State claim 2252. J. F. Bagnall. Flowing prior to measurements. Mar. 28, +7.3; Dec. 13, +7.3.

(D-16-3)14dca-1. State claim 65. Chris Larsen. Mar. 28, 11.48; Dec. 13, 11.54.

(D-16-3)15aca-1. State claim 8492. Federal Land Bank. Mar. 28, 29.00; Dec. 13, 27.30.

(D-16-3)15adc-1. State application 12588. E. L. Davidson. Mar. 28, 49.21; Dec. 13, 46.38.

(D-16-3)32ddc-2. State claim 11676. George Beal.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.8	13.6	....	13.3	13.3	15.7	19.7	....	....	19.6	19.1	....
2	....	14.3	13.8	13.5	13.2	16.0	19.9	18.8	....	19.6	19.1	....
3	....	14.3	13.8	13.3	13.3	16.0	20.0	18.8	....	19.5	18.9	....
4	....	14.2	13.8	13.2	13.4	16.2	20.3	19.4	....	19.4	19.0	18.6
5	....	....	13.7	13.3	13.3	16.4	20.7	19.9	....	19.4	18.9	18.6
6	....	....	13.8	13.3	13.3	16.6	20.8	20.6	....	19.5	19.1	18.6
7	....	14.3	13.8	13.3	13.4	16.7	21.1	20.8	....	19.4	18.9	18.6
8	....	14.3	13.7	13.3	13.5	16.8	21.1	19.6	....	19.4	18.9	18.5
9	....	14.2	13.6	13.2	13.5	16.8	21.2	19.4	....	19.3	18.9	18.6
10	....	14.1	13.7	13.2	13.4	17.1	21.6	19.7	....	19.5	18.7	18.8
11	....	14.0	13.6	13.2	13.5	17.0	21.5	20.7	....	19.3	....	18.8
12	14.6	13.9	13.5	13.4	13.5	17.5	21.7	20.5	....	19.1	19.0	18.8
13	14.3	13.9	13.7	13.3	13.6	17.5	21.9	20.7	....	19.0	18.9	....
14	14.8	14.0	13.7	13.3	13.7	17.6	....	20.9	....	19.0	18.8	18.8
15	14.7	14.1	13.6	13.3	13.8	17.7	....	21.1	....	....	18.9	18.6
16	14.8	14.1	13.6	13.2	13.8	17.9	22.0	21.5	....	....	18.8	18.4
17	14.6	14.0	13.7	....	13.8	18.0	21.6	21.6	....	19.3	18.7	18.8
18	14.5	14.0	13.7	....	13.9	18.1	21.8	21.8	20.3	19.2	....	18.5
19	....	13.9	13.7	13.3	14.0	18.3	22.0	....	20.1	19.2	18.7	18.5
20	14.7	14.1	13.7	13.4	14.1	18.2	22.2	21.7	20.0	19.2	18.7	18.4
21	14.7	13.9	13.6	13.4	14.2	18.3	21.1	21.6	20.0	19.3	18.8	18.2
22	....	13.9	13.6	13.3	14.3	19.0	20.5	21.7	19.6	19.1	....	18.5
23	....	13.8	13.5	13.3	14.4	19.1	19.8	21.8	19.8	19.0	....	18.6
24	....	13.8	13.4	13.2	14.6	19.1	19.5	21.9	....	19.0	18.7	....
25	....	....	13.4	13.2	14.8	19.0	20.0	21.8	19.7	19.1	18.7	18.7
26	....	....	13.5	13.2	14.9	19.1	19.9	22.0	19.7	19.1	18.6	18.4
27	14.3	....	....	13.2	15.0	19.4	20.3	21.8	19.6	19.1	18.7	18.5

(D-16-3)32ddc-2--Continued.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	14.2	....	....	13.3	15.0	19.5	....	21.7	19.6	19.2	....	18.3
29	14.5		13.5	13.3	15.1	19.6	.....	21.7	19.6	19.5	18.7	18.2
30	14.4		13.5	13.3	15.3	19.7	....	21.8	19.6	19.0	18.6	18.6
31	14.4		13.4		15.5		....	....		19.0		18.1

(D-16-3)33ccb-1. State claim 7333. Chris Olsen. Mar. 27, 3.10; Dec. 13, 2.57.

(D-17-2)1bca-2. State claim 11528. G. A. Anderson. Flowing prior to measurements. Mar. 27, +6.1; Dec. 13, +8.3.

(D-17-2)36cbd-1. G. B. Cox. Dec. 13, +3.8.

(D-17-3)4bcc-1. State application 11763. R. A. Olsen and others. Mar. 27, 4.04.

(D-17-3)6dba-1. State claim 11431. Niels Christensen. Flowing prior to measurements. Mar. 27, +4.3; Dec. 13, +5.5.

(D-17-3)9cbd-1. State claims 4446 and 8260. S. E. Christensen.

Water level, in feet below land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	36.15	Apr. 16	37.32	June 7	27.99	Sept. 5	19.16
Mar. 27	37.03	22	37.26	17	23.70	Dec. 4	25.88
28	37.05	May 11	36.70	July 3	19.21	13	26.50
Apr. 7	37.15	28	32.08	Aug. 4	18.40		

(D-17-3)17adb-1. State claim 8261. Drought Relief Administration. Mar. 27, 47.07; Dec. 13, 37.00.

(D-17-3)30dbd-1. State claim 2696. Ernest Monk. Flowing prior to measurements. Mar. 27, +10.7; Dec. 13, +13.3.

(D-18-2)1da. L. H. Hougaard. Mar. 27, 77.32; Dec. 13, 68.00.

(D-18-2)12babl. State claim 13390. City of Manti. Mar. 27, 78.15; Dec. 13, 69.95.

(D-19-2)17aad-1. State claim 13462. W. G. Frischknecht. Dec. 13, 1.02.

(D-19-2)32aac-1. State claim 11881. Mayfield Irrigation Co. Mar. 27, 37.95; Dec. 13, 30.09.

Sevier County - Central Sevier Valley

(For other wells in this valley see pp. 123-124.)

(C-21-1)13bda-1. State claim 5817. Federal Land Bank. Flowing prior to measurements. Mar. 27, +6.3; Dec. 12, +7.4.

(C-21-1)27aad-1. State claim 8407. E. A. Thorsen. Mar. 27, 3.23; Dec. 12, 2.24.

(C-22-1)8bbd-1. Max Curtis. Mar. 27, 29.60; Dec. 12, 28.80.

(C-23-2)1aac-1. State claim 16479. U. S. Gypsum Co. Flowing prior to measurement. Mar. 26, +2.4. Measurements discontinued.

(C-23-2)15bdd-3. State claim 1989. Sevier School District. Mar. 26, +7.1; Dec. 12, +8.3.

(C-23-2)15ccc. Martha Avery.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Dec.
1	...	5.4	...	...	2.0	...	2.0	2.2	3.8	...
2	...	5.4	...	...	1.9	...	1.8	2.2	...	...
3	...	5.6	...	...	2.0	...	...	2.3	...	...
4	...	...	...	...	...	...	...	2.3	...	...
5	...	...	...	...	...	...	...	...	...	...
6	...	...	...	...	2.3	...	...	2.2	...	...
7	...	...	...	...	2.3	...	...	2.2	...	...
8	...	...	...	...	2.0	...	...	...	...	...
9	...	5.9	4.8	1.9	1.9	...	...	2.1	...	...
10	...	5.9	4.8	1.8	2.0	...	...	2.2	...	...
11	...	5.8	4.7	1.7	2.6	2.1	...	2.3	...	...
12	...	5.7	4.7	1.7	...	2.0	2.9	2.6	...	...
13	...	5.8	4.6	1.8	...	2.0	3.0	2.6	...	6.5
14	...	5.9	4.7	1.9	2.8	2.0	3.3	2.6	...	...
15	...	5.9	4.6	2.0	2.8	...	3.2	2.9	...	...
16	...	5.9	3.5	2.0	2.7	...	3.1	...	...	...
17	4.8	5.9	3.3	2.0	...	...	3.0	...	...	...
18	4.7	5.7	...	1.9	...	...	...	...	5.3	...
19	4.7	5.7	...	2.1	...	...	...	...	5.0	...
20	4.8	5.6	...	1.9	...	...	...	...	...	...
21	4.7	5.6	...	2.0	...	...	...	...	...	...
22	4.8	5.6	...	1.8	...	...	...	...	...	...
23	5.2	5.6	...	1.7	...	...	...	...	...	...
24	5.4	5.6	...	...	...	...	2.8	...	...	...
25	5.6	5.8	...	...	...	...	2.7	...	...	...
26	5.6	5.7	...	1.9	...	...	2.2	...	...	...
27	5.6	5.7	...	...	...	...	2.2	3.3	...	...
28	5.6	...	...	...	...	...	2.2	3.2	...	...
29		...	...	...	...	2.2	2.2	3.2	...	...
30		...	...	...	...	2.1	2.2	3.4	...	...
31		...		2.0		2.1	2.1		...	

(C-23-2)15dcb-4. State claim 1969. F. M. Jackson. Flowing prior to measurements. Mar. 26, +8.1; Dec. 12, +9.0.

(C-23-2)19dab-1. State claim 8447. William Hallows. Flowing prior to measurements. Mar. 27, +21.8; Dec. 12, +27.3.

(C-23-2)26cdb-1. State claim 323. N. C. Johnson. Dec. 12, +6.7.

(C-23-2)31dcb-2. State claim 3302. Pacific National Life Insurance Co. Mar. 27, +7.4; Dec. 12, +8.8.

(C-25-3)3bbd-1. Luther Winget. Mar. 27, 15.31; Dec. 12, 10.50.

(C-25-4)2db. R. W. Pinney. Mar. 27, 50.98; Dec. 12, 47.54.

Sevier County - Grass Valley

(For other wells in this valley see page 116.)

(C-26-1)23ddb-1. State claim 12620. A. E. DeLange. Flowing prior to measurement. Dec. 11, +13.1.

(C-26-1)25acc-1. State claim 3159. A. R. Brown. Flowing prior to measurement. Dec. 11, +16.4.

(D-25-1)31cba-1. Charles Burr. Flowing prior to measurement. Dec. 11 +2.3.

Summit County - Weber Canyon

(A-3-4)4. Thomas Overd. No measurements made in 1947.

Kimball Valley

(D-1-4)31bdb-1. Theodore Johnson. Apr. 2, 8.29; Dec. 15, 6.36.

(D-1-4)31dc. Apr. 2, 1.55.

(D-1-5)4cd. Joe Bean. Apr. 2, 7.68; Dec. 15, 6.80.

Summit County - Rhodes Valley

(D-1-6)19dad-1. State claim 3699. A. W. Frazier. Apr. 2, 12.83; Dec. 15, 13.52.

(D-2-6)5dbb. Burton Peterson. Apr. 2, 7.40; Dec. 15, 6.90.

(D-2-6)8aaa. State claim 12248. Ed Rockhill. Apr. 2, 11.52; Dec. 15, 9.63.

(D-2-6)20ccc. State claim 12231. A. H. Padfield. Apr. 2, 3.91; Dec. 15, 3.31.

(D-2-6)28ccc-1. Lillian McNeil. Apr. 2, 22.08; Dec. 15, 26.44.

Tooele County - Rush Valley

(C-5-5)2bc. Alma Young. Mar. 20, 24.19; Dec. 4, 23.71.

(C-5-5)30bcb-1. State claim 8286. Willard Sager. Mar. 20, 11.68; Dec. 4, 13.40.

(C-5-5)31dbd-1. Mar. 20, 20.69; Dec. 4, 20.54.

(C-5-5)32add-1. Mar. 20, 27.10; Dec. 4, 27.11.

(C-5-5)32adb-1. Stookey Bros. Mar. 20, 1.57; Dec. 4, 1.63.

(C-8-5)20dc. Mar. 20, 8.56; Dec. 4, 7.74.

(C-8-5)30ccc-1. State claim 1573. H. I. Yates. Mar. 20, 5.25; Dec. 4, 7.63.

(C-8-5)31add-1. D. J. Fredrickson. Mar. 20, 19.72; Dec. 4, 19.26.

(C-8-6)23cd. Flowing prior to measurements. Mar. 20, +2.07; Dec. 4, +1.45.

(C-9-5)6bca-1. State claim 8285. Drought Relief Administration. Mar. 20, 17.60; Dec. 4, 18.75.

Tooele County - Salt Lake Desert

(C-7-10)25cca. Grazing Service, U. S. Dept. of Interior. Measurements discontinued.

(C-7-10)25c. Dugway Proving Ground. Measurements discontinued.

Tooele County - Tooele Valley

Burmester District

(C-2-4)16aad-2. State claim 14209. Utah Wool Pulling Co. Apr. 1, 6.13; Dec. 4, 5.85.

(C-2-4)17dad-1. E. J. Jeremy. Flowing prior to measurements. Apr. 1, +24.7; Dec. 5, +24.7.

(C-2-5)5acc-3. A. Searle. Apr. 1, 0.85; Dec. 5, 1.05.

(C-2-5)25aab-1. State of Utah. Flowing prior to measurements. Apr. 1, +11.7; Dec. 5, +11.6.

(C-2-5)27ccd-3. State claim 17008. Edwin Cassity. Apr. 1, 0.19; Dec. 5, 0.07.

(C-2-6)23cbb-1. State claim 16776. C. H. Worthington. Mar. 20, 2.02; Dec. 5, 2.87.

Erda District

(C-2-4)27ccb-1. State claim 902. V. J. Crocheron. No measurements made in 1947.

(C-2-4)31dca-1. State claim 15160. State of Utah.

Water level at noon, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 25	7.87	July 20	7.60	Sept. 6	7.07	Oct. 25	7.42
31	7.68	28	7.40	14	6.93	Nov. 1	7.60
June 7	7.60	Aug. 2	7.30	20	6.90	18	7.52
21	7.86	9	7.18	27	7.13	15	7.67
30	7.87	17	7.12	Oct. 6	7.26	22	7.64
July 5	7.63	24	6.99	11	7.16	30	7.60
14	7.42	30	6.95	18	7.12	Dec. 6	7.95

(C-2-4)33abb-2. State claim 806. L. T. Liddell.

Water level, in feet above land-surface datum

Jan. 4	14.12	Apr. 5	13.92	July 5	10.33	Oct. 5	10.12
11	14.33	12	13.87	13	10.08	11	10.71
18	14.35	19	14.37	20	9.81	18	11.00
25	14.46	26	14.50	27	9.79	26	11.59
Feb. 2	14.42	May 3	12.71	Aug. 2	9.71	Nov. 2	11.75
8	14.63	10	11.50	9	9.08	8	12.54
15	14.71	18	11.25	16	9.12	15	13.00
22	14.83	25	11.79	23	8.67	22	13.50
Mar. 1	15.04	31	10.54	31	8.63	30	13.50
8	15.21	June 7	10.54	Sept. 6	8.96	Dec. 6	13.77
15	15.21	16	11.59	14	9.19	13	13.79
22	14.58	21	11.63	20	9.59	20	13.96
29	14.29	28	11.21	27	10.19	27	14.17

(C-2-4)33abb-4. State claim 808. L. T. Liddell.

Water level, in feet above land-surface datum

Jan. 4	15.81	Apr. 5	16.66	July 5	12.06	Oct. 5	12.06
11	15.93	12	15.74	13	11.60	11	12.43
18	15.91	19	15.66	20	11.72	18	13.02
25	16.02	26	16.06	27	11.47	26	13.74
Feb. 1	16.02	May 3	14.21	Aug. 2	11.19	Nov. 2	13.89
8	16.23	10	12.60	9	11.02	8	14.41
15	16.19	18	12.89	16	11.02	15	14.58
22	16.21	25	12.27	Aug. 23	10.58	22	14.72
Mar. 1	16.35	31	12.29	31	10.56	30	14.99
8	16.49	June 7	12.06	Sept. 6	10.99	Dec. 6	15.10
15	16.52	16	12.68	14	11.04	13	15.25
22	16.54	21	12.87	20	11.21	20	15.21
29	15.79	28	12.64	27	11.58	27	15.29

(C-2-4)33add-1. State claim 899. Ida L. Clegg.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.34	33.03	32.69	32.87	.....	34.21	34.47	34.93	35.76	35.31	34.82	33.93
2	33.38	32.93	32.56	32.76	.....	34.19	34.57	34.93	35.79	35.31	34.75	33.96
3	33.46	32.97	32.57	32.70	32.93	34.21	34.41	35.02	35.84	35.34	34.80	33.89
4	33.42	32.99	32.54	32.74	.....	34.14	34.45	35.05	35.67	35.37	34.78	33.88
5	33.35	32.90	32.59	32.82	.....	34.14	34.48	35.15	35.64	35.28	34.76	33.88
6	33.22	32.90	32.61	32.88	.....	34.23	34.50	35.11	35.63	35.27	34.81	33.81
7	33.34	32.86	32.57	32.91	.....	34.21	34.54	35.11	35.67	35.28	34.80	33.81
8	33.34	32.85	32.54	32.81	.....	34.21	34.58	35.23	35.66	35.31	34.56	33.83
9	33.33	32.81	32.58	32.70	.....	34.20	34.60	35.26	35.67	35.25	34.50	33.83
10	33.26	32.80	32.53	32.84	33.47	34.19	34.63	35.28	35.63	35.15	34.51	33.86
11	33.16	32.88	32.54	32.85	.....	34.14	34.72	35.29	35.69	35.17	34.45	33.83

(C-2-4)33add-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
12	33.08	32.84	32.61	32.90	.....	34.21	34.72	35.32	35.66	35.18	34.45	33.85
13	33.10	32.85	32.60	32.87	.....	34.15	34.71	35.32	35.61	35.15	34.43	33.80
14	33.10	32.86	32.52	32.74	.....	34.13	34.68	35.35	35.68	35.13	34.39	33.71
15	33.24	32.78	32.53	32.66	33.76	34.10	34.67	35.33	35.60	35.10	34.38	33.70
16	33.29	32.70	32.52	32.68	33.74	34.04	34.71	35.35	35.52	35.04	34.28	33.75
17	33.21	32.67	32.48	32.61	33.76	34.05	34.72	35.40	35.48	35.14	34.27	33.66
18	33.16	32.73	32.46	32.61	33.66	34.07	34.73	35.35	35.56	35.15	34.20	33.69
19	33.12	32.70	32.49	32.65	33.75	34.02	34.73	35.34	35.61	35.12	34.17	33.70
20	33.13	32.73	32.50	32.60	33.78	33.99	34.76	35.49	35.59	35.06	34.18	33.64
21	33.16	32.72	32.47	32.58	33.76	34.01	34.80	35.51	35.56	35.10	34.17	33.63
22	33.12	32.77	32.51	32.55	33.84	34.07	34.77	35.56	35.52	35.12	34.18	33.65
23	33.07	32.75	32.56	32.60	33.93	34.09	34.84	35.62	35.48	35.11	34.17	33.67
24	33.07	32.70	32.67	32.59	33.81	34.06	34.87	35.63	35.47	35.16	34.16	33.66
25	33.08	32.65	32.65	32.60	33.99	34.05	34.89	35.63	35.45	35.14	34.17	33.65
26	32.97	32.63	32.51	32.61	34.01	34.06	34.91	35.62	35.39	34.96	34.13	33.60
27	32.98	32.60	32.60	32.54	34.05	34.09	34.93	35.71	35.40	34.91	34.10	33.53
28	32.91	32.62	32.69	32.53	34.09	34.19	34.94	35.66	35.37	34.85	34.06	33.46
29	32.94		32.74	.....	34.15	34.27	34.93	35.71	35.33	34.84	34.06	33.43
30	32.98		32.78	.....	34.14	34.32	34.93	35.70	35.30	34.88	34.00	33.44
31	32.97		32.84		34.17		34.97	35.79		34.88		33.50

(C-2-4)33bcb-2. State claim 16796. Franklin Whitehouse. Flowing prior to measurements. Mar. 20, +2.95; Dec. 5, +1.95.

Grantsville District

(C-2-5)19dcc-1. G. L. Sutton. Flowing prior to measurements. Apr. 1, +4.9; Dec. 5, +4.4.

(C-2-5)31bbd-3. State claim 17112. Tony Castagno. Apr. 1, +15.8; Dec. 5, +16.9.

(C-2-6)36bac-1. State application 12189. J. R. Clark. Mar. 20, 21.56; Dec. 5, 20.50.

(C-2-6)36cdd-1. E. C. Walk.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	78.99	78.77	.....	78.52	78.37	76.37	75.92	76.66	.....	78.03	78.37	78.49
2	79.00	78.74	.....	78.54	78.33	76.33	75.91	76.70	.....	78.06	78.40	78.49
3	79.00	78.78	.....	78.51	78.31	76.36	75.89	76.78	.....	78.08	78.44	78.48
4	78.98	.....	.....	78.57	78.29	76.35	75.90	.....	.....	78.09	78.42	78.49
5	78.93	78.79	.....	78.60	78.27	76.33	75.92	76.82	.....	.....	78.45	78.45
6	78.96	.....	.....	78.62	78.23	76.38	75.93	76.86	.....	.....	78.46	78.42
7	78.99	.....	.....	78.63	78.21	76.36	75.96	76.90	.....	78.21	78.46	78.39
8	78.99	.....	.....	78.59	78.13	76.34	76.01	76.95	.....	78.28	78.44	78.37
9	.....	.....	.....	.....	78.10	76.36	76.02	76.97	77.74	78.27	78.46	.....
10	.....	.....	.....	.....	78.06	76.38	76.01	77.05	77.79	78.29	78.48	.....
11	.....	.....	.....	.....	78.02	76.41	76.01	77.01	77.82	78.28	78.47	.....
12	.....	.....	.....	.....	77.98	76.43	76.07	.....	77.82	78.31	78.48	.....
13	.....	78.82	.....	.....	77.92	76.40	76.10	.....	77.82	78.30	78.44	78.35
14	.....	78.81	.....	.....	77.88	76.41	76.10	.....	77.88	78.30	78.48	78.33
15	.....	78.78	.....	.....	.....	76.41	76.12	.....	77.87	78.30	78.45	78.32
16	.....	.....	.....	.....	77.74	76.37	76.16	.....	.....	78.28	78.49	78.35
17	.....	.....	78.38	.....	77.63	76.35	76.19	.....	.....	78.34	78.48	78.32
18	.....	.....	78.39	.....	77.53	76.29	76.20	.....	.....	78.35	78.49	78.34
19	.....	.....	.....	.....	77.40	76.15	.....	.....	.....	78.34	78.49	.....
20	.....	.....	.....	.....	77.20	.....	76.20	.....	77.97	78.31	78.51	.....
21	.....	78.77	.....	.....	77.03	76.08	76.25	.....	77.97	78.38	78.50	.....
22	78.86	.....	.....	.....	76.92	76.07	76.26	.....	77.98	78.38	78.53	78.38
23	78.85	.....	.....	.....	76.84	76.04	76.29	.....	77.99	78.39	78.52	78.40
24	78.82	.....	.....	78.56	76.74	76.00	76.32	.....	78.00	78.41	78.52	78.40
25	78.81	.....	.....	78.56	76.66	75.95	76.35	.....	78.00	78.40	78.56	78.41

(C-2-6)36cdd-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	78.79	.....	.....	78.51	76.56	75.90	76.39	.....	78.00	78.40	78.55	.....
27	78.75	.....	.....	78.50	76.46	75.90	76.41	.....	78.00	78.40	78.55	.....
28	78.72	.....	.....	78.46	76.49	.....	76.50	.....	77.98	78.37	78.54	.....
29	78.80		.....	78.42	76.43	75.90	76.56	.....	77.99	78.39	78.55	.....
30	78.74		.....	78.43	76.37	75.91	76.58	.....	78.02	78.43	78.51	.....
31	78.79		.....		76.39		76.62	.....		78.43		.....

(C-3-5)5bbb-1. State claim 15330. R. W. Brown. Mar. 20, +0.14; Dec. 5, +1.14, flowing prior to measurements.

(C-3-5)6dda-1. State claim 9952. Federal Land Bank. Mar. 20, 52.97; Dec. 5, 53.11.

Lake Point District

(C-2-4)1bcc-1. Jesse Long. Apr. 1, 36.23; Dec. 5, 34.83.

(C-2-4)2aba-1. B. N. Griffith. State application 11962. Apr. 1, +7.1; Dec. 5, +7.1.

(C-2-4)3dcc-1. Nick Soter. Apr. 1, 4.39; Dec. 5, 3.99.

Marshall District

(C-2-5)34add-1. State application 13537. B. H. Woodward. Flowing prior to measurements. Mar. 20, +12.9; Dec. 5, +12.1.

(C-2-5)36caa-1. State claim 13692. J. A. and S. W. Smith. Mar. 20, 31.67; Dec. 5, 31.54.

Uintah County - Uinta Basin

(For other wells in this basin see pp. 106-107.)

U(B-1-1)2caa-2. Ralph Redfood. Formerly owned by Jay Larsen. Oct. 14, 21.16.

U(D-1-1)14bbc-1. State claim 1868. George Hackford. Oct. 14, 8.10.

U(D-1-1)23abb-1. Albert Daniels. No measurements made in 1947.

(D-3-21)17cda-1. State claim 6641. M. M. Bingham. Flowing prior to measurement. Oct. 14, +7.3.

(D-3-21)30dca-1. State claim 2629. R. G. Alexander. Flowing prior to measurement. Oct. 14, +4.48. May leak underground when closed in.

(D-4-21)2bcd-1. Gibson Ranch Co. Oct. 14, 7.22.

(D-4-21)12acc-1. Lonzo McCarl. Oct. 14, 6.66.

Utah County - Cedar Valley

(C-6-2)29cac-1. Marsh Williams. Flowing prior to measurements. Apr. 8, +4.7; Dec. 16, +5.5.

(C-6-2)32baa-2. State claim 17686. W. C. Thomas. Flowing prior to measurement. Apr. 8, +4.0. Measurements discontinued.

Utah County - Goshen Valley

(C-10-1)2aad-1. State claim 5206. Albert Morgan. Apr. 7, 12.37; Dec. 19, 12.58.

(D-9-1)29cdc-1. Apr. 7, 27.16; Dec. 19, 25.09.

Utah County - Utah Lake Valley

North Utah Basin

(C-5-1)2daa-3. State claims 10922, 10923, and 10924. O. J. Roberts. Apr. 8, 15.32; Apr. 18, 15.28; May 5, 15.24; Dec. 16, 14.66.

(D-5-1)8aaa-1. State claim 11095. Lehi Irrigation Co. Apr. 8, 27.55; May 5, 28.43; Dec. 17, 26.19.

(D-5-1)9ccc-3. State claim 16332. E. N. Webb. Apr. 8, +10.4; May 5, +6.5; Dec. 17, +12.1.

(D-5-1)9dbb-1. State claim 11083. City of Lehi. Apr. 8, 10.92; May 5, 12.50; Dec. 17, 10.04.

(D-5-1)14adb-1. State claim 8371. Drought Relief Administration.

Water level at noon, in feet

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	52.25	52.41	.....	.....	53.14	50.88	50.24	50.52	50.85	50.25	50.22	49.99
2	52.33	52.20	.....	.....	52.95	50.73	50.27	.....	50.77	50.39	49.96	50.04
3	52.56	52.27	.....	.....	52.92	50.72	50.40	.....	50.64	50.46	50.16	50.10
4	52.55	52.38	.....	.....	53.00	50.65	50.29	.....	50.62	50.34	50.24	50.11
5	52.35	52.15	52.30	.....	52.96	50.55	50.37	50.26	50.49	.....	50.15	50.14
6	.....	52.20	52.39	.....	52.86	50.62	.....	50.14	50.20	50.14	50.42	49.94
7	.....	52.10	52.38	.....	.....	50.55	50.41	50.37	.....	50.19	50.48	.....
8	.....	52.05	52.32	53.06	.....	.....	50.44	50.39	50.57	50.15	50.30	50.08
9	.....	51.98	52.60	52.82	.....	50.41	50.39	50.21	50.44	50.14	.....	50.21
10	.....	52.01	.....	53.25	.....	50.42	50.18	50.09	50.56	50.03	50.43	50.31
11	.....	52.30	.....	53.34	.....	50.15	50.22	50.04	50.83	49.95	50.34	50.30
12	51.50	52.27	.....	53.43	.....	50.27	50.19	49.84	50.74	.....	50.37	50.42
13	51.56	52.31	.....	53.30	.....	50.19	.....	49.81	50.50	50.13	50.33	50.30
14	51.74	52.36	.....	53.13	52.57	50.06	50.37	49.80	.....	50.02	50.31	.....
15	52.21	52.17	.....	53.04	52.56	.....	50.37	49.88	50.56	49.99	50.31	50.10
16	52.44	51.96	.....	53.17	52.47	50.04	50.40	49.92	50.43	49.86	.....	50.25
17	52.38	51.88	.....	53.07	52.36	50.01	50.53	.....	50.23	50.10	50.50	50.15
18	52.26	52.11	52.75	53.04	52.21	50.16	50.59	50.25	50.28	50.27	50.33	50.22
19	52.13	52.12	.....	53.22	52.07	50.10	50.55	50.14	50.31	50.25	50.28	50.35
20	52.15	52.20	.....	53.06	52.01	50.02	.....	50.14	50.27	50.11	50.33	50.21
21	52.19	52.22	.....	53.08	51.74	50.10	50.30	50.08	.....	50.04	50.38	.....
22	52.22	52.26	.....	53.01	51.68	.....	50.36	50.02	50.16	50.24	50.52	50.33
23	52.18	52.34	52.98	53.23	51.58	50.46	50.30	50.20	50.08	50.24	.....	50.49
24	52.18	52.31	53.30	53.18	51.59	50.36	50.38	.....	50.10	50.35	50.65	50.53
25	52.17	52.19	53.26	53.20	51.45	50.18	50.41	50.28	50.11	50.32	50.65	50.57
26	52.00	52.13	.....	53.10	51.33	50.09	.....	50.23	50.15	.....	50.64	50.45
27	51.91	52.03	.....	.....	51.08	49.95	.....	50.41	50.20	.....	50.47	50.24
28	51.72	52.27	.....	52.96	51.06	50.03	50.50	50.45	.....	50.07	50.37	50.14
29	51.98		.....	53.06	51.07	50.23	50.50	50.48	50.24	50.07	50.41	50.01
30	52.15		.....	53.23	50.93	50.24	50.50	50.71	50.20	50.28	.....	50.08
31	52.29		53.23		50.90		50.52	.....		50.40		50.38

(D-5-1)15bca-1. State claim 5061. Eugene Briggs. Flowing prior to measurements. Apr. 8, +38.0; May 5, +36.7.

(D-5-1)17adc-12. State claim 11174. H. C. Comer. Apr. 8, 35.6; May 5, +35.2; Dec. 17, +37.6.

(D-5-1)17add-5. State claim 3628. M. S. Lott. Apr. 8, +26.7; May 5, +22.3; Dec. 17, +28.4.

(D-5-1)20aba-1. State claim 6860. Jacob Cox. Apr. 8, +55.3; May 5, +55.2.

(D-5-1)20aba-2. State claim 6861. Jacob C. Cox.

(D-5-1)20aba-2--Continued.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	35.3	35.5	35.6	....	24.8	26.9	20.5	19.1	23.8	30.9	33.8
2	35.1	35.1	....	35.6	....	24.5	26.5	20.6	19.2	23.9	30.8	34.1
3	35.3	35.2	....	35.5	....	23.9	24.3	20.4	19.4	23.8	31.1	34.1
4	35.3	35.4	....	35.6	....	24.3	22.5	21.0	18.5	24.0	31.3	33.9
5	35.3	35.3	....	....	....	23.2	22.7	21.6	19.1	....	31.3	34.1
6	35.4	35.3	....	....	30.3	24.0	23.5	22.1	18.3	25.3	31.3	34.4
7	35.4	35.3	....	....	29.9	23.9	24.1	22.0	17.5	25.8	31.5	34.1
8	35.5	35.3	....	35.2	29.4	22.8	23.5	21.7	18.0	25.8	31.6	34.7
9	35.5	35.2	....	35.0	....	22.9	22.5	21.7	19.0	26.2	31.6	34.9
10	35.7	35.2	35.5	35.3	....	23.1	22.4	21.6	19.5	26.9	31.6	34.5
11	35.7	35.2	35.9	35.3	....	23.1	22.4	24.0	19.2	27.4	32.1	35.1
12	35.6	35.2	35.8	35.1	....	24.7	22.5	25.0	20.2	27.7	31.9	35.5
13	35.8	35.1	35.7	35.0	....	25.5	21.9	24.5	20.2	28.0	31.9	35.5
14	35.8	35.1	35.7	35.0	....	25.9	20.9	23.9	21.0	28.3	32.1	35.5
15	35.6	35.1	35.8	35.1	....	25.8	20.5	24.5	20.9	28.3	32.3	35.6
16	35.9	35.1	35.6	....	....	26.0	20.1	24.4	21.4	28.3	32.4	35.9
17	35.9	35.1	35.5	....	....	25.7	19.7	23.1	21.5	28.8	32.8	35.8
18	35.7	35.0	35.9	....	....	27.1	20.1	23.1	22.2	28.9	33.1	35.5
19	35.6	34.8	35.8	....	....	25.0	19.2	23.3	23.2	29.2	32.9	35.7
20	35.5	34.7	35.9	34.0	....	24.9	18.7	21.9	23.6	29.3	32.8	35.7
21	35.3	34.6	35.8	33.9	....	25.2	19.5	22.4	23.7	29.4	33.0	35.5
22	35.4	34.5	35.8	34.0	26.2	27.1	20.1	22.9	25.3	29.4	33.2	35.7
23	35.2	34.6	35.8	33.9	25.5	28.3	20.5	22.9	25.7	29.4	32.8	35.8
24	35.4	35.1	35.8	34.2	24.3	28.6	20.5	22.2	25.5	29.7	32.9	35.9
25	35.5	35.0	35.9	34.1	23.3	27.4	20.6	21.5	25.6	29.8	33.4	35.8
26	35.4	35.3	35.8	....	23.1	28.3	20.3	20.7	25.7	30.0	33.5	35.8
27	35.3	35.2	35.8	....	23.5	26.3	19.7	20.5	....	30.3	33.6	35.8
28	35.3	35.4	35.7	....	23.4	26.5	19.8	20.1	....	30.5	33.5	35.5
29	35.3		35.9	....	24.0	26.9	19.7	20.3	....	30.7	33.7	35.5
30	35.1		35.7	....	24.5	27.1	18.7	19.4	....	30.8	33.6	35.7
31	35.3		35.7		24.7		20.1	17.7		30.9		35.5

(D-5-1)23dab-3. State claim 17054. City of American Fork. Flowing prior to measurements. Apr. 8, +24.8; May 5, +24.2; Dec. 17, +27.7.

(D-5-2)18dcd-2. A. C. Christensen. Flowing prior to measurements. Apr. 8, +4.55; May 5, +4.87; Dec. 17, +7.7.

(D-5-2)29dba-4. State claim 13150. Mark Rickins. Flowing prior to measurements. Apr. 8, +17.2; May 5, +17.8; Dec. 17, +20.0.

(D-6-2)3bdd-1. State claim 1651. Pioneer Pumping Co. Apr. 8, 45.88; May 5, 44.10; Dec. 17, 39.26.

(D-6-2)10add-1. State claim 3123. City of Orem. Apr. 8, 41.34; May 6, 39.26; Dec. 17, 41.56.

(D-6-2)16cbc-1. Frank Burningham. Flowing prior to measurements. Apr. 8, +2.96; Dec. 17, +6.4.

(D-6-2)18add-2. State application 11747. J. L. Larson. Apr. 8, +20.3; May 5, +18.8; Dec. 17, +23.4.

(D-6-2)24dbd-1. Isaac Boyce. Apr. 8, 121.66; May 5, 122.02; Dec. 17, 118.18.

(D-6-2)28bad-1. State claim 2087. Henry Williamson. Apr. 8, +15.1; May 5, +14.6; Dec. 17, +17.0.

(C-7-2)12bcb-1. State claim 105. Provo City Corporation. Apr. 8, +28.9; May 5, +25.3; Dec. 17, +31.1.

South Utah Basin

(D-7-2)35ccd-1. Angus Hales. Flowing prior to measurements. Apr. 7, +8.0; Dec. 17, +7.2.

(D-7-2)36dcc-2. H. H. Spatford. Flowing prior to measurements. Apr. 7, +18.0; Dec. 17, +17.2.

(D-7-3)32bcc-1. State claim 8345. Drought Relief Administration. Apr. 7, +53.4; Dec. 17, +54.0.

(D-7-3)33baa-6. State claim 7006. A. W. Finley. Flowing prior to measurements. Apr. 7, +10.6; Dec. 17, +11.3.

(D-8-1)13aaa-1. State claim 14076. R. G. Francis. Flowing prior to measurements. Apr. 7, +16.7; Dec. 17, +15.0.

(D-8-1)25ccb-1. State claim 11790. F. S. Hiatt. Flowing prior to measurements. Apr. 7, +17.5; Dec. 19, +17.5.

(D-8-2)4cba2. State claim 10844. Mary Barney. Flowing prior to measurements. Apr. 7, +34.1; Dec. 17, +33.3.

(D-8-2)7ddd-1. State claim 10762. A. H. Beers. Apr. 7, +20.0; Dec. 17, +16.0.

(D-8-2)23dbd-1. State claim 13201. Utah-Idaho Sugar Co. Flowing prior to measurement. Apr. 7, +25.5.

(D-8-2)29add-1. State application 11860. Reed Reynolds. Flowing prior to measurements. Apr. 7, +12.5; Dec. 17, +11.7.

(D-8-3)4cad-1. State application 11830. Springville Canning Co. Flowing prior to measurements. Apr. 7, +24.7; Dec. 17, +26.7.

(D-8-3)15ccb-1. E. Whitcomb. Apr. 7, 9.20. Measurements discontinued.

(D-9-1)1cbc-2. State claim 8344. Drought Relief Administration. Apr. 7, 1.36; Dec. 19, 1.81.

(D-9-2)5ddc-2. State claim 1139. Payson City Corporation. Apr. 7, +16.0; Dec. 19, +17.6.

(D-9-2)11aaa-1. State claim 3364. Salt Lake & Utah Railroad Corporation. Flowing prior to measurement. Apr. 7, +40.9; Dec. 19, +39.2.

(D-9-2)18bcd-1. State claim 8357. Drought Relief Administration. Apr. 7, 5.68; Dec. 19, 5.13.

Wasatch County - Heber Valley

(D-2-5)20cc. Lee Bros. Measurements by Provo River Water Commissioner except on Apr. 2 and Dec. 15.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	27.5	Apr. 30	28.06	July 14	27.9	Oct. 15	27.24
Feb. 17	26.84	May 25	27.4	Aug. 14	28.6	Nov. 20	26.75
Mar. 12	26.8	June 19	27.0	Sept.15	27.05	Dec. 15	26.98
Apr. 2	26.27						

(D-2-5)31ada-1. State claim 11234. Harry Morris. Measurements by Provo River Water Commissioner except on Apr. 2 and Dec. 15.

Water level, in feet

Jan. 18	10.05	Apr. 30	13.1	July 14	4.96	Oct. 15	6.2
Feb. 17	10.05	May 25	3.14	Aug. 21	5.4	Nov. 20	11.7
Mar. 12	7.9	June 19	3.2	Sept.15	10.7	Dec. 15	9.90
Apr. 2	7.15						

(D-3-4)35bbc-1. State claims 8379 and 11260. Drought Relief Administration. Apr. 2, 2.48; Dec. 15, 3.42.

(D-3-5)29cac-1. Miles Clyde. Apr. 2, 9.57; Dec. 15, 6.65.

(D-4-2)12aaa-1. Hartley Carlisle.

Water level, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.77	50.10	52.06	53.20	51.43	24.05	.....	13.97	15.53	23.05	25.68	34.96
2	46.81	50.23	52.15	53.27	51.73	24.05	.....	14.04	16.29	23.23	25.85	35.27
3	46.86	50.35	52.25	53.35	51.79	23.58	12.45	14.18	16.80	23.43	26.04	35.57
4	46.95	50.44	52.36	53.41	51.32	23.10	11.95	14.17	17.08	23.69	26.20	35.85
5	47.05	50.55	52.45	53.49	.....	22.88	12.02	13.88	17.35	24.06	26.37	36.00
6	47.14	50.70	52.56	53.53	.....	22.84	12.15	13.50	17.28	24.39	26.54	36.17
7	47.25	50.79	52.65	.....	48.27	22.14	12.20	13.12	17.34	24.59	26.74	36.33
8	47.33	50.90	52.74	.....	.....	22.37	12.45	13.08	17.81	24.73	26.89	36.54
9	47.45	50.98	52.83	53.73	.....	21.32	12.04	12.82	18.11	24.99	27.15	36.78
10	47.57	51.06	52.91	.....	.....	20.82	12.70	12.49	18.41	25.16	27.73	36.98
11	47.68	51.15	52.94	.....	.....	20.38	13.30	11.95	.....	25.35	28.25	37.27
12	47.79	51.22	52.89	.....	.....	19.60	13.80	11.44	.....	25.59	28.72	37.48
13	47.91	51.31	52.86	.....	.....	19.21	14.09	11.29	.....	25.80	29.22	37.68
14	48.03	51.40	52.86	.....	.....	19.90	14.34	11.65	.....	25.89	29.60	37.84
15	48.17	51.48	52.77	.....	38.96	15.61	14.48	12.33	.....	25.86	29.97	38.04
16	48.30	51.56	52.39	54.08	37.59	14.09	14.49	12.73	.....	25.82	30.31	38.25
17	48.42	51.65	52.17	53.90	37.42	.....	14.40	13.16	19.67	25.78	30.66	38.51
18	48.52	51.70	52.16	53.41	37.64	.....	14.31	13.64	20.23	25.56	30.98	38.72
19	48.65	51.72	52.23	.....	37.55	13.47	14.15	13.92	20.55	25.43	31.33	38.89
20	48.76	51.70	52.36	.....	36.60	13.49	13.58	14.25	20.71	25.39	31.62	39.07
21	48.87	51.73	52.44	.....	36.16	12.98	13.29	14.41	21.18	25.35	31.90	39.24
22	48.98	51.79	52.51	.....	35.83	13.63	13.01	14.59	21.41	25.27	32.22	39.43
23	49.07	51.85	52.60	.....	35.35	13.21	13.03	14.52	21.48	25.20	32.61	39.63
24	49.17	51.88	52.66	53.12	35.00	12.78	12.90	14.33	21.57	25.11	32.90	39.90
25	49.31	51.85	52.75	52.71	34.11	12.53	13.34	14.23	21.82	24.97	.....	40.06
26	49.43	51.83	52.85	52.17	32.53	12.71	13.42	14.59	21.89	24.86	33.61	40.23
27	49.57	51.89	52.92	51.73	31.19	12.38	12.98	14.68	22.17	24.83	33.97	40.40
28	49.65	51.97	52.95	51.26	29.37	.....	13.36	14.86	22.27	24.85	34.15	40.57
29	49.78		53.02	.....	27.05	.....	13.69	15.24	22.60	24.91	34.40	40.73
30	49.87		53.08	51.17	24.79	.....	13.51	15.44	22.87	25.16	34.65	40.90
31	49.98		53.14		24.15		13.76	15.67		25.45		41.12

(D-4-4)14abb-1. Charlotte Brown.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	18.85	.....	18.14	18.36	....	....	6.53	8.03	13.54	13.88	16.22
2	18.12	18.87	.....	18.21	18.30	....	....	6.73	8.56	13.59	13.88	16.25
3	.....	18.89	.....	18.27	18.25	.....	1.56	7.02	8.98	13.68	13.67	16.31
4	.....	18.90	.....	18.34	18.22	....	1.84	6.94	9.02	13.74	13.72	16.48
5	.....	18.92	19.15	18.42	.....	....	2.21	6.30	8.83	13.31	13.86	16.55
6	.....	18.93	19.17	18.47	.....	3.53	2.57	6.11	9.08	13.47	14.01	16.61
7	.....	18.94	19.19	18.54	14.99	3.79	2.76	6.18	9.36	13.78	14.14	16.68
8	18.29	18.95	19.21	18.59	14.69	3.60	2.72	6.69	9.63	13.97	14.28	16.73
9	.....	18.97	19.22	18.65	13.95	3.48	2.68	5.60	9.23	14.04	14.34	16.77
10	18.32	18.98	19.16	18.70	13.63	2.54	2.39	4.98	9.57	13.74	14.45	16.76
11	.....	19.00	18.93	18.76	13.16	3.03	1.95	4.77	9.95	13.48	14.53	16.80
12	.....	19.02	18.83	18.82	12.82	1.80	2.82	5.15	10.27	13.35	14.60	16.85
13	.....	19.04	18.75	18.86	11.48	2.83	3.47	5.42	10.43	13.31	14.78	16.88
14	.....	19.05	18.69	18.80	10.99	3.08	3.78	5.57	10.55	13.38	14.89	16.95
15	18.42	19.07	18.17	18.73	10.44	3.44	3.92	5.41	10.48	13.38	14.99	16.98
16	.....	19.07	17.44	18.68	10.32	3.56	3.68	5.13	10.65	13.54	15.10	17.00
17	.....	19.06	17.52	18.67	10.26	3.52	3.76	5.73	10.70	13.70	15.18	17.07
18	.....	18.98	17.62	18.66	9.55	3.40	4.37	6.18	10.97	13.62	15.28	17.08
19	.....	18.95	17.73	18.63	8.23	2.73	4.90	6.56	11.20	13.41	15.38	17.12
20	.....	18.90	17.84	18.60	8.14	2.66	4.21	6.44	11.55	13.23	15.48	17.12
21	.....	18.95	17.94	18.62	8.16	2.25	4.93	6.65	11.92	13.24	15.57	17.17
22	18.65	18.98	18.04	18.69	6.53	1.83	4.96	6.96	12.23	.....	15.64	17.19
23	18.70	19.02	18.15	18.69	5.55	....	5.22	7.17	12.52	.....	15.73	17.21

(D-4-4)14abb-1--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	18.70	18.89	18.24	18.63	5.75	....	5.30	6.96	12.57	.....	15.80	17.10
25	18.72	18.85	18.28	18.60	5.55	....	5.46	7.32	13.00	.....	15.85	17.09
26	18.75	18.80	13.27	18.61	5.87	2.74	5.25	7.18	13.17	.....	15.91	17.12
27	18.77	.....	18.17	18.61	6.23	2.79	5.47	7.57	13.33	.....	15.97	17.15
28	18.78	.....	18.11	13.57	6.03	2.82	5.54	7.52	13.47	.....	16.03	17.16
29	18.81		18.07	18.50	6.02	2.59	5.58	6.95	13.38	14.21	16.09	17.17
30	18.82		18.07	18.42	5.74	2.45	5.29	7.22	13.49	14.12	16.15	17.19
31	18.84		18.08		5.45		5.80	7.21		13.92		17.26

(D-4-4)14ccc-1. State claim 8380. Town of Charleston. Flowing from June 12 to Aug. 17, inclusive.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	Aug.	Sept.	Oct.	Nov.	Dec.
1	0.60	3.04	3.58	3.31	1.77	+6.24	.....	+7.37	+5.18	+4.71	+3.77
2	.78	3.03	3.55	3.33	1.56	+6.43	.....	+7.25	+5.14	+4.75	+3.71
3	.88	3.11	3.58	3.32	1.30	+6.70	.....	+7.13	+5.13	+4.72	+3.68
4	.95	3.15	3.60	3.37	1.02	+6.81	.....	+6.99	+5.14	+4.72	.....
5	1.02	3.13	3.68	3.42	.84	+6.91	.....	+6.89	+5.14	+4.72	.....
6	1.09	3.20	3.72	3.41	.51	+7.03	.....	+6.79	+5.13	+4.65	.....
7	1.26	3.22	3.74	3.41	.25	+7.22	.....	+6.68	+5.07	+4.63	.....
8	1.38	3.26	3.73	3.35	+.31	+7.50	.....	+6.58	+4.96	+4.65	.....
9	1.46	3.28	3.81	3.32	+.78	+7.73	.....	+6.50	+4.87	+4.67	.....
10	1.52	3.29	3.80	3.39	+1.18	+8.09	.....	+6.37	+4.82	+4.62	.....
11	1.55	3.37	3.78	3.43	+1.63	+8.43	.....	+6.23	+4.77	+4.65	+3.31
12	1.63	3.38	3.74	3.43	+1.89	.....	.....	+6.17	+4.68	+4.60	+3.25
13	1.76	3.42	3.69	3.40	+2.12	.....	.....	+6.12	+4.67	+4.59	+3.23
14	1.85	3.45	3.64	3.38	+2.23	.....	.....	+6.00	+4.66	+4.53	+3.24
15	2.05	3.44	3.61	3.35	+2.37	.....	.....	+5.93	+4.62	+4.50	+3.20
16	2.12	3.43	3.49	3.34	+2.48	.....	.....	+5.89	+4.65	+4.46	+3.14
17	2.16	3.46	3.41	3.22	+2.64	.....	.....	+5.83	+4.59	+4.43	+3.73
18	2.23	3.52	3.37	3.13	+2.93	.....	+8.44	+5.74	+4.58	+4.43	+3.67
19	2.29	3.52	3.36	3.06	+3.42	.....	+8.42	+5.78	+4.58	+4.42	+3.61
20	2.42	3.53	3.35	2.93	+3.73	.....	+8.32	+5.82	+4.61	+4.35	+3.62
21	2.50	3.54	3.32	2.82	+4.23	.....	+8.24	+5.82	+4.60	+4.28	+3.58
22	2.55	3.57	3.28	2.69	+4.38	.....	+8.18	+5.86	+4.55	+4.20	+3.52
23	2.60	3.57	3.31	2.62	+4.57	.....	+8.16	+5.93	+4.58	+4.13	+3.45
24	2.65	3.53	3.35	2.49	+4.78	.....	+8.15	+5.90	+4.57	+4.07	+3.42
25	2.72	3.45	3.30	2.45	+4.94	.....	+8.02	+5.83	+4.63	+4.00	+3.38
26	2.72	3.46	3.24	2.37	+5.12	.....	+7.92	+5.70	+4.63	+3.94	+3.36
27	2.77	3.44	3.31	2.27	+5.27	.....	+7.77	+5.53	+4.63	+3.90	+3.35
28	2.77	3.53	3.28	2.13	+5.38	.....	+7.70	+5.43	+4.63	+3.86	+3.34
29	2.87		3.31	2.00	+5.32	.....	+7.70	+5.35	+4.63	+3.78	+3.33
30	2.90		3.29	1.88	+5.73	.....	+7.62	+5.28	+4.62	+3.77	+3.26
31	3.01		3.33		+6.06		+7.49		+4.63		+3.13

Washington County - Escalante Valley

(For other wells in this valley see pp. 85-87; 110-111; 113.)

(C-37-17)12cbc-1. Charles Sides. Mar. 21, 23.84; Sept. 11, 30.14; Dec. 8, 29.55.

(C-37-17)14adc-1. J. C. Bosshardt. Mar. 21, 31.84; Sept. 11, 37.05; Dec. 8, 39.40.

(C-37-17)[illegible]bb-1. State application 14146. J. W. Holt. Mar. 21, 15.68; Dec. 8, [illegible]5.95.

Washington County - Virgin River Valley

(C-42-11)3ac. Drought Relief Administration. Mar. 25, 18.23; Dec. 9, 19.02.

Wayne County - Fremont Valley

(D-27-2)25bd. State claim 7164. S. E. Tanner. Flowing prior to measurement. Dec. 11, 11.1.

(D-28-4)36cdb-1. V. A. Lee. Mar. 26, 12.81.

(D-29-4)15cbd-1. W. P. Coleman. Mar. 26, 4.32; Dec. 11, 1.24.

Weber County - East Shore area

(B-5-1)5daa-1. Ogden City. Mar. 25, 77.13; July 30, 79.03; Dec. 10, 76.93.

(B-5-2)1ddd-1. Ogden City Corporation. June 16, 153.10; June 16, 162.95, well to south pumping.

(B-5-2)1ddd-2. State application 16483. Ogden City Corporation. June 15, 147.15; July 1, 153.20.

(B-5-2)4aaa-2. State claim 5523. Florian Prevedel.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	....	3.58	3.31	....	1.42	0.58	0.77	....
2	....	....	....	3.63	3.28	....	1.41	.56	.80	1.30
3	....	....	3.93	3.66	3.23	....	1.43	.53	.81	1.37
4	....	....	3.84	3.67	3.18	....	1.40	.58	.82	....
5	....	....	3.79	3.69	3.15	....	1.37	.61	.89	....
6	....	....	3.80	3.67	3.12	....	1.36	.62	.87	....
7	....	....	3.66	3.67	....	....	1.34	.61	.91	1.41
8	....	....	3.58	3.69	....	....	1.27	.61	1.05	....
9	....	....	3.62	3.74	2.96	1.75	1.25	.61	1.11	....
10	....	....	3.62	3.73	2.82	....	1.18	.63	....	....
11	....	....	3.64	3.82	2.74	....	1.07	.73	....	1.47
12	....	....	3.64	3.81	2.71	....	1.09	.69	1.29	....
13	....	....	3.64	3.80	2.64	1.75	.94	.65	....	....
14	....	....	3.65	3.80	2.60	1.75	.86	.68	....	1.52
15	....	....	3.64	3.78	2.54	1.75	.78	.70	....	....
16	....	....	3.63	3.79	2.47	1.75	.74	.72	....	....
17	....	....	3.64	3.78	2.42	1.75	.74	.71	....	....
18	....	....	3.62	3.71	2.37	1.74	.87	.69	....	....
19	....	....	3.57	3.61	2.31	1.71	.82	.69	....	....
20	....	....	3.59	3.70	2.30	1.71	.78	...	....	1.67
21	....	....	3.60	....	....	1.70	.76	...	....	....
22	....	....	3.60	3.51	2.18	1.68	.74	...	....	....
23	....	....	3.57	3.55	2.12	1.63	.73	.67	....	....
24	....	3.93	3.59	3.57	....	1.62	.72	.65	...	1.81
25	3.89	....	3.60	3.47	2.01	1.58	.71	.64	....	....
26	....	....	....	3.41	1.91	1.58	.67	.65	....	....
27	....	....	....	3.39	1.90	1.58	.65	.67	....	1.94
28	....	....	3.61	3.38	1.89	1.57	.62	.69	....	....
29	....	....	3.57	3.44	1.91	1.54	.60	.81	....	....
30	....	....	3.52	3.47	....	1.50	.60	.81	....	2.10
31	....		3.50		....	1.44		.79		....

(B-5-2)4add-1. State claim 715. James R. Rawson. Flowing prior to measurements. Feb. 19, +2.2; Mar. 25, +1.93.

(B-5-2)4cdd-1. State application 11889. Donas Ward. Formerly owned by Samuel Peterson.

(B-5-2)4cdd-1--Continued.

Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 25	33.3	July 1	29.2	Aug. 28	30.1	Oct. 29	31.9
May 29	28.6	29	28.9	Oct. 3	30.3	Dec. 9	32.2
June 16	30.3						

(B-5-2)6bdd-1. J. Virgil Stoddard. Apr. 7, +18.6; July 29, +16.9; Dec. 9, +17.1.

(B-5-2)9aaa-1. State application 14996. Lawrence Mayberry. Flowing prior to measurements.

Water level, in feet above land-surface datum

Feb. 19	19.8	July 1	17.8	Aug. 28	17.0	Oct. 29	17.8
Mar. 25	19.4	29	17.3	Oct. 3	16.9	Dec. 9	18.2
May 29	17.9						

(B-5-2)9baa-1. State claim 15032. Karesville L.D.S. Ward. Flowing prior to measurements.

Water level, in feet above land-surface datum

Feb. 19	3.9	July 29	1.70	Oct. 3	0.36	Nov. 5	0.68
Mar. 25	3.70	Aug. 28	1.40	29	.63	26	2.07
May 29	2.73	Sept.26	.46	Nov. 3	.65	Dec. 9	2.85
July 1	3.02						

(B-5-3)13ddc-1. State claim 1298. J. D. Hoopsr. Apr. 7, +31.9; May 29, +29.4; July 29, +28.3; Dec. 9, +31.6.

(B-5-3)15dda-1. State application 11790. T. W. Read. Apr. 7, +44.1; May 29, +44.1; July 29, +43.6; Dec. 9, +42.0.

(B-6-1)4ada-1. State claim 17890. A. M. Gardner. Flowing prior to measurement. Apr. 24, +12.7.

(B-6-1)6caa-1. State claim 595. Martin Harris. Apr. 7, +52.5; July 30, +45.0; Oct. 8, +46.8.

(B-6-1)8acb-1. L. W. Winkler and Carl Nielson. Apr. 24, 4.92; Dec. 10, 5.70.

(B-6-1)8bdd-16. State claim 5438. J. T. Bybee. Apr. 24, +9.6; July 30, +8.5; Oct. 8, +8.2.

(B-6-1)21add-1. State claim 8389. Drought Relief Administration. May 29, 47.01; July 30, 49.45; Dec. 10, 49.11.

(B-6-1)28dab. City of Ogden. No measurements made in 1947.

(B-6-1)28dba-1. City of Ogden. May 29, 102.94; July 30, 103.65; Oct. 8, 103.89; Dec. 10, 103.48.

(B-6-1)29abb-1. State application 13003. Becker Products Co.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	17.7	17.2	17.6	17.6	17.9	17.2	....	12.7	13.3	13.9	15.6
2	....	17.7	17.4	17.6	17.6	17.9	....	....	12.1	13.4	14.0	15.7
3	18.3	17.8	17.5	17.6	17.7	17.9	....	....	11.6	13.4	14.0	15.8
4	18.3	17.7	17.5	17.5	17.6	17.9	....	....	11.5	13.7	14.1	15.9
5	18.6	17.7	17.4	17.4	17.7	17.8	....	10.5	11.1	13.4	14.1	15.9
6	19.6	17.7	17.3	17.4	17.7	17.6	....	10.6	10.9	13.1	14.0	16.0
7	18.6	17.7	17.3	17.4	17.4	17.4	....	11.1	10.8	13.1	14.0	16.0
8	18.4	17.7	17.4	17.6	17.4	16.7	....	11.2	10.8	13.1	14.1	16.0
9	18.3	17.7	17.4	17.6	17.3	16.6	14.4	11.9	10.7	13.1	14.2	16.0
10	18.5	17.8	17.4	17.5	17.3	16.5	14.0	12.1	11.1	13.2	14.1	16.0

(B-6-1)29abb-1--Continued.

Water level at noon, in feet above land-surface datum
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	18.5	17.8	17.4	17.4	17.3	16.4	13.8	12.3	11.5	13.3	14.1	16.0
12	18.8	17.8	17.4	17.4	17.4	16.4	....	12.5	11.4	13.3	14.2	15.9
13	18.5	17.7	17.4	17.5	17.6	16.4	....	12.7	11.6	13.5	14.3	16.0
14	18.5	17.7	17.4	17.6	17.8	16.5	....	12.8	11.7	13.6	14.3	16.1
15	16.7	17.6	17.4	17.6	17.8	16.6	13.7	12.9	11.8	13.7	14.4	....
16	16.1	17.8	17.4	17.6	17.8	16.6	13.5	12.7	11.9	13.8	14.5	....
17	16.4	17.6	17.5	17.6	17.8	16.5	....	12.7	11.6	13.8	14.6	....
18	16.8	17.5	17.5	17.5	17.8	16.5	....	12.0	11.9	13.7	14.7	16.2
19	17.7	17.4	17.5	17.5	17.8	16.5	....	11.6	12.0	13.8	14.8	16.1
20	17.9	17.4	17.5	17.6	17.3	16.5	....	11.3	12.1	14.1	14.8	16.2
21	17.9	17.4	17.5	17.6	17.8	16.4	....	11.8	12.2	13.8	14.8	16.1
22	17.8	17.3	17.6	17.6	....	16.3	11.5	12.0	12.3	13.7	14.8	16.1
23	17.8	17.3	17.5	17.5	....	16.3	....	12.2	12.4	13.4	14.9	16.0
24	17.6	17.4	17.4	17.6	....	16.5	....	12.5	12.5	13.4	14.9	16.0
25	17.6	17.5	17.5	17.6	....	16.8	....	12.7	12.6	13.5	15.0	16.0
26	17.7	17.4	17.6	17.6	....	....	....	12.3	12.8	13.6	15.2	15.8
27	17.8	17.5	17.6	17.6	....	....	....	11.7	12.9	....	15.2	15.9
28	17.9	17.0	17.6	17.7	17.8	....	....	12.2	13.0	13.8	15.2	16.0
29	17.8		17.5	17.6	17.9	....	10.7	12.5	13.2	13.8	15.3	16.1
30	17.9		17.6	17.6	17.9	....	10.8	12.8	13.2	13.8	15.5	....
31	17.7		17.6		17.8		10.4	12.6		13.8		....

(B-6-1)29ccc. Ogden Union Railroad & Depot Co.

Water level, in feet above land-surface datum
(From recorder charts)

Day	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	....	....	16.1	....	10.4	12.6	12.9	13.3
2	....	....	16.1	16.0	10.4	11.9	12.8	12.9
3	....	....	16.3	15.5	10.9	11.6	12.8	12.8
4	....	....	16.4	15.0	11.0	11.2	12.9	12.9
5	....	....	16.4	15.2	11.7	11.1	13.0	12.8
6	....	....	16.5	15.2	11.8	10.9	13.1	12.7
7	....	....	16.6	14.9	11.3	10.7	13.1	12.7
8	....	....	16.1	14.3	10.9	10.5	13.1	13.1
9	....	....	15.8	14.1	11.4	10.3	13.1	12.9
10	....	....	16.1	13.8	11.5	10.9	13.1	12.7
11	....	....	15.5	13.5	11.8	11.1	12.7	12.9
12	....	....	15.7	13.2	12.2	11.4	12.9	13.1
13	....	....	15.9	12.9	12.3	11.6	12.9	13.1
14	....	....	16.1	12.6	12.5	11.7	13.2	12.9
15	....	....	16.0	12.4	12.5	11.8	13.1	13.0
16	....	....	16.1	12.3	12.7	12.0	13.2	13.0
17	....	....	15.8	12.2	12.7	11.3	12.9	12.8
18	....	....	15.5	12.0	12.1	11.4	13.0	12.9
19	....	....	15.4	12.0	11.7	11.8	....	13.0
20	....	....	15.3	11.8	11.4	11.9	....	13.0
21	....	....	15.5	11.6	11.7	12.0	12.9	12.9
22	....	....	16.1	11.5	12.0	12.1	12.8	12.9
23	....	....	16.1	11.5	12.1	12.2	12.7	12.8
24	....	....	15.7	11.3	12.3	12.4	12.7	12.8
25	15.8	....	15.3	11.2	12.5	12.6	12.6	13.0
26	....	....	15.5	11.1	12.4	12.7	12.6	13.6
27	....	....	15.6	10.9	11.4	12.6	12.7	....
28	....	....	15.6	10.7	12.1	12.7	13.4	....
29	....	16.5	....	10.7	12.4	12.9	13.1	....
30	....	16.6	....	10.7	12.5	12.7	13.0	....
31	....	16.1		10.5	12.6		13.1	

(B-6-1)30bcb-2. American Packing & Provision Co. Mar. 25, +6.9.

(B-6-1)30cca-1. State claim 1030. California Packing Corporation.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	.....	29.68	31.10	31.37	31.83	31.70	30.91
2	.....	.....	.....	.....	29.85	.....	29.68	31.14	31.39	31.84	31.65	30.90
3	29.50	.....	.....	.....	.....	.....	29.70	31.18	31.44	31.86	31.67	30.89
4	.....	.....	.....	29.69	.....	.....	29.73	31.20	31.45	31.84	31.69	30.87
5	.....	.....	.....	.....	.....	.....	29.80	31.19	31.43	31.80	31.66	30.85
6	.....	.....	.....	.....	.....	29.48	29.83	31.18	31.44	31.76	31.71	30.81
7	.....	29.52	29.77	.....	.....	.....	29.86	31.19	31.45	31.76	31.72	30.81
8	.....	.....	.....	.....	.....	.....	29.90	31.20	31.50	31.78	31.70	30.80
9	29.50	.....	.....	.....	29.66	.....	30.00	31.16	31.51	31.75	31.69	30.80
10	.....	.....	.....	.....	.....	.....	.....	.....	31.60	31.69	31.62	30.84
11	.....	.....	.....	29.82	.....	.....	30.02	.....	31.70	31.64	31.54	30.82
12	.....	.....	.....	.....	.....	29.43	.....	.....	31.75	31.69	31.51	30.85
13	.....	.....	.....	.....	.....	29.42	.....	31.15	31.73	31.69	31.51	30.85
14	.....	29.54	29.77	.....	.....	29.42	30.21	31.17	31.81	31.68	31.48	30.76
15	.....	.....	.....	.....	.....	29.46	30.27	31.17	31.81	31.68	31.42	30.76
16	.....	.....	.....	.....	29.56	29.47	30.33	31.17	31.76	31.63	31.34	30.78
17	29.53	.....	.....	.....	.....	29.48	30.41	31.20	31.65	31.69	31.34	30.74
18	.....	.....	.....	29.81	.....	29.51	30.53	31.22	31.64	31.72	31.36	30.76
19	.....	.....	.....	.....	.....	29.52	30.58	31.21	31.69	31.72	31.29	30.77
20	.....	.....	.....	.....	.....	29.51	.....	31.21	31.72	31.69	31.26	30.75
21	.....	29.67	29.76	.....	.....	29.54	30.60	31.22	31.74	31.69	31.17	30.77
22	.....	.....	.....	.....	.....	29.59	30.66	31.26	31.74	31.73	31.20	30.77
23	.....	.....	.....	.....	29.56	29.63	30.72	31.30	31.73	31.74	31.19	30.80
24	29.51	.....	.....	.....	.....	29.61	30.78	31.32	31.74	31.78	31.15	30.82
25	.....	.....	.....	29.85	.....	29.61	30.84	31.31	31.75	31.78	31.15	30.83
26	.....	.....	.....	.....	.....	29.61	30.88	31.29	31.80	31.76	31.11	30.81
27	.....	.....	.....	.....	.....	29.60	30.93	31.29	31.84	31.75	31.08	30.77
28	.....	29.76	29.78	.....	.....	29.63	30.97	31.30	31.84	31.72	31.04	30.71
29	.....		.....	.....	.....	29.67	31.02	31.30	31.85	31.67	31.07	30.68
30	.....		.....	.....	.....	29.70	31.05	31.33	31.84	31.71	31.00	30.73
31	29.50		.....		29.47		31.07	31.35		31.75		30.76

(B-6-2)8abd-1. State claim 2471. West Weber Cemetery. Flowing prior to measurements. Apr. 7, +15.2; July 30, +14.3; Dec. 9, +15.1.

(B-6-2)11dad-1. State claim 5613. Jerome Wheeler. Well flowing prior to measurements.

W Water level, in feet above land-surface datum

Date	Water level	Date	Water level	Date	Water level
Apr. 7	24.7	Oct. 8	18.2	Dec. 9	18.1
July 30	18.4	29	18.0		

(B-6-2)12aab-3. State application 13028. Weber County School District. Apr. 7, +17.7; Dec. 10, +14.2.

(B-6-2)22dcd-1. No measurements made in 1947.

(B-6-2)25ccc-1. State claim 15111. G. E. Stratford. Mar. 25, +7.4.

(B-6-2)26ada-1. State claim 1196. Amalgamated Sugar Co. Mar. 25, +12.0; Dec. 10, +10.2.

(B-6-2)34dbb-1. State application 11869. Heber Swarner. Measurements discontinued.

(B-6-2)35bcc-1. State claim 5512. George Lowe. Measurements discontinued after Dec. 9.

(B-6-2)35bcc-1--Continued.

Water level, in feet

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 19	5.73	Sept.21	10.16	Oct. 18	10.04	Nov. 11	9.42
Mar. 25	6.00	22	10.16	19	10.04	12	9.04
May 29	6.29	23	10.16	20	10.05	13	8.85
June 13	5.70	26	10.21	21	10.04	14	8.64
16	5.86	27	10.24	22	10.08	15	8.34
17	6.07	28	10.27	23	10.04	16	8.21
23	6.22	29	10.28	24	10.06	17	8.07
25	6.34	30	10.29	25	10.07	18	7.79
July 1	6.22	Oct. 1	10.30	26	10.07	19	7.53
14	7.82	2	10.37	27	10.07	20	7.45
21	7.99	3	10.31	28	10.07	26	7.35
29	8.34	4	10.25	29	10.02	27	7.27
31	9.25	5	10.13	30	9.98	28	7.21
Aug. 6	8.68	6	10.12	31	9.99	29	7.19
8	8.78	7	10.13	Nov. 1	10.01	30	7.13
28	8.93	8	10.13	2	10.00	Dec. 1	7.00
Sept.10	9.55	9	10.13	3	9.98	2	6.94
11	9.76	11	10.11	4	9.96	3	6.93
12	9.94	12	10.11	5	9.93	4	6.93
13	10.05	13	10.11	6	9.92	5	6.92
14	10.14	14	10.10	7	9.92	6	6.77
17	10.16	15	10.08	8	9.91	7	6.73
18	10.16	16	10.05	9	9.79	8	6.71
19	10.16	17	10.04	10	9.67	9	6.70
20	10.16						

(B-6-3)26bbb-1. State claim 7505. Mrs. F. G. Kelley. Apr. 7, +27.9; Dec. 9, +28.1.

(B-7-1)32ada-1. State claim 14931. Joseph Folkman. Apr. 24, +14.8; July 30, +10.5; Dec. 9, +15.3.

(B-7-1)33baa-5. State claim 16832. J. P. Spackman. Flowing prior to measurement. Apr. 24, +10.2; Dec. 9, +9.5.

(B-7-2)21dc. Annie Maw. Apr. 7, +3.61; Dec. 9, +3.45.

(B-7-2)32aca-1. State application 15170. Dean Baker. Apr. 7, +39.2; July 30, +34.5; Oct. 8, +37.2; Dec. 9, +36.8.

(B-7-2)32dab-1. State claim 15095. Marie Olsen. Apr. 7, +33.2; Dec. 9, +33.3.

(B-7-2)36cdd-1. State application 14082. J. D. Brown. Flowing prior to measurements. Apr. 7, +41.0; July 30, +31.1.

(B-7-3)35daa-1. State claim 5489. Neal Wayment. Apr. 7, +10.2; Dec. 9, +10.2.

Weber County - Ogden Valley

(A-6-1)11dc. Bureau of Reclamation, U. S. Dept. of Interior.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.21	.....	33.91	21.18	20.50	.....	18.79	29.38	27.75	30.12	29.20	.....
2	32.41	.....	33.82	20.79	20.04	.....	18.93	28.32	29.08	30.45	29.26	39.26
3	32.62	36.03	33.77	20.52	19.52	12.57	19.30	24.78	30.24	31.34	29.41	.....
4	32.79	.....	34.55	20.23	22.22	11.61	21.81	24.25	30.98	31.79	29.58	.....
5	32.98	.....	34.55	20.48	22.64	11.41	21.67	24.10	31.26	32.16	29.68	.....
6	33.14	.....	34.55	21.51	23.69	12.63	20.73	24.08	31.45	32.33	29.82	.....
7	33.25	.....	34.55	21.59	23.72	12.79	20.69	24.50	31.63	32.48	29.97	.....
8	33.27	.....	33.67	21.57	23.66	12.17	20.79	26.94	31.84	32.15	30.08	.....
9	34.30	.....	33.08	21.44	23.76	11.22	19.64	23.98	32.22	30.94	30.21	41.20

(A-6-1)11dc--Continued.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
10	34.48	.....	32.78	21.32	18.47	11.52	19.55	23.32	32.12	30.24	30.38	.....
11	.....	34.83	32.43	21.22	13.03	12.88	19.62	.....	.....	28.89	31.59	.....
12	.....	.....	32.14	21.13	10.58	13.04	21.87	23.30	.....	28.53	32.00	.....
13	.....	.....	31.91	21.00	9.69	13.06	22.42	23.30	.....	28.42	33.07	.....
14	34.67	.....	31.69	20.84	9.38	12.80	22.72	23.33	.....	28.27	33.55	.....
15	.....	.....	31.36	20.56	9.75	11.63	22.93	23.91	.....	28.21	33.92	.....
16	.....	.....	30.88	23.14	11.73	11.69	20.97	23.98	31.57	28.12	34.40	.....
17	.....	.....	30.41	23.31	13.73	12.87	20.70	24.09	32.31	28.10	34.91	36.87
18	.....	34.63	29.93	21.11	14.87	13.10	20.70	26.44	32.20	28.18	.....	36.80
19	.....	34.60	29.25	19.96	15.72	13.14	23.17	26.91	30.77	.....	36.40	36.73
20	.....	34.54	27.20	18.93	16.68	13.13	23.68	27.14	29.87	.....	38.31	36.63
21	36.10	34.47	26.58	.....	16.97	13.24	23.95	27.31	27.96	28.60	39.18	36.53
22	.....	34.42	26.14	.....	17.12	13.43	24.18	27.51	27.61	28.78	.....	36.38
23	.....	34.36	25.62	.....	17.21	13.50	24.36	27.68	27.50	28.91	.....	36.30
24	.....	34.28	25.19	18.54	17.24	13.55	24.54	27.73	27.44	29.08	40.18	36.19
25	.....	34.17	24.60	21.16	17.28	13.64	24.70	27.86	27.60	29.23	.....	36.10
26	.....	34.09	23.78	21.54	17.35	14.69	24.85	28.25	29.43	29.40	.....	36.02
27	.....	33.99	23.57	21.51	18.25	17.18	25.00	29.31	29.79	29.56	.....	35.92
28	36.08	33.93	23.38	21.33	.....	17.87	25.50	29.63	29.93	29.72	.....	35.83
29	.....		23.23	21.11	.....	18.24	26.86	27.69	29.99	29.84	.....	35.73
30	.....		22.97	20.84	.....	18.56	27.88	27.37	30.06	29.88	.....	35.16
31	.....		22.24		.....		28.36	27.33		29.23		35.55

(A-6-1)12aa-1. City of Ogden.

Water level at noon, in feet
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.44	3.87	3.86	0.15	+4.18	+8.21	+6.87	+1.27	1.41	3.01	2.67	4.74
2	2.46	3.88	3.83	+.08	+4.61	+8.30	+6.75	+1.06	1.62	3.03	2.56	4.77
3	2.57	3.88	3.81	+.24	+5.12	+8.33	+6.62	+1.23	1.91	3.16	2.61	4.78
4	2.62	3.96	3.77	+.42	+5.43	+8.45	+6.20	+1.41	2.11	3.20	2.64	4.86
5	2.65	3.96	3.99	+.52	+5.68	+8.52	+5.91	+1.39	2.20	3.21	2.62	4.97
6	2.60	3.95	4.35	+.51	+5.84	+8.38	+5.93	++.30	2.28	3.22	2.64	4.96
7	2.70	3.99	4.50	+.48	+6.00	+8.34	+5.88	+.17	2.37	3.25	2.76	5.03
8	2.79	3.97	4.18	+.59	+6.18	+8.34	+5.70	.26	2.53	3.28	2.78	5.05
9	2.86	3.92	3.93	+.68	+6.29	+8.50	+5.66	.16	2.62	3.14	2.73	5.17
10	2.95	3.88	3.81	+.68	+6.60	+8.58	+5.62	.00	2.76	3.01	2.82	5.25
11	2.98	3.95	3.68	+.71	+7.51	+8.48	+5.49	+.10	2.62	2.78	2.87	4.89
12	3.02	3.99	3.62	+.71	+8.22	+8.42	+5.16	+1.12	2.55	2.71	3.00	4.68
13	3.00	3.98	3.52	+.78	+8.63	+8.53	+4.85	+1.03	2.52	2.67	3.16	4.70
14	3.08	4.02	3.39	+.95	+8.78	+8.62	+4.65	+.95	2.60	2.66	3.25	4.65
15	3.20	3.99	3.24	+1.17	+8.86	+8.76	+4.46	+.84	2.64	2.66	3.35	4.68
16	3.31	3.95	3.04	+1.17	+8.86	+8.84	+4.48	+.75	2.83	2.63	3.35	4.71
17	3.33	3.93	2.83	+1.11	+8.71	+8.74	+4.45	+.63	2.99	2.70	3.48	4.63
18	3.36	3.95	2.62	+1.28	+8.52	+8.61	+4.36	+.33	3.10	2.75	3.59	4.63
19	3.43	3.92	2.53	+1.67	+8.28	+8.57	+4.06	+.03	2.95	2.76	3.69	4.65
20	3.50	3.93	2.30	+2.07	+8.07	+8.53	+3.80	.12	2.84	....	3.95	4.63
21	3.58	3.93	2.05	+2.48	+7.95	+8.44	+3.57	.27	2.50	2.69	4.20	4.59
22	3.62	3.93	1.83	+2.92	+7.87	+8.33	+3.34	.26	2.40	2.75	4.38	4.63
23	3.64	3.94	1.63	+3.12	+7.76	+8.28	+3.17	.40	2.39	2.75	4.48	4.65
24	3.66	3.90	1.56	+3.31	.....	+8.25	+3.01	.50	2.40	2.75	4.59	4.64
25	3.68	3.86	1.38	+3.25	.....	+8.24	+2.84	.64	2.43	2.75	4.61	4.65
26	3.69	3.84	1.17	+3.14	.....	+8.18	+2.69	.79	2.62	2.72	4.57	4.61
27	3.70	3.83	1.07	+3.27	.....	+7.76	+2.55	1.07	2.78	2.73	4.68	4.57
28	3.68	3.78	.87	+3.48	+7.60	+7.44	+2.40	1.23	2.85	2.72	4.72	4.52
29	3.67		.75	+3.70	+7.93	+7.22	+2.07	1.25	2.88	2.72	4.77	4.51
30	3.78		.54	+3.94	+8.21	+7.01	+1.78	1.23	2.95	2.73	4.75	4.55
31	3.78		.42		+8.22		+1.54	1.32		2.73		.....

WASHINGTON

By F. A. Watkins

SCOPE OF WATER-LEVEL PROGRAM

The program of periodic measurements of water levels in observation wells in the State of Washington was continued in 1947 in connection with several projects involved in a general inventory of the ground-water resources of the State. These projects were carried out in cooperation with the Washington State Department of Conservation and Development, the city of Tacoma, and Walla Walla County.

Field work was started on ground-water inventories in three different areas during the year, Whatcom County, Walla Walla County, and the Wenas Creek Valley. The work in Whatcom County and Wenas Valley is being carried on in cooperation with the Washington State Department of Conservation and Development and the Walla Walla County work is in cooperation with Walla Walla County. In addition, two reports on ground water were completed and placed in the open file--one is on the Central Chehalis Valley and the other covers the South Bar area of Grays Harbor.

As the following table shows, the records obtained include 1,372 measurements in 122 wells distributed unevenly over 19 of the 39 counties in the State. An automatic water-stage recorder was operated on one well throughout the year. Nonrecording float gages were maintained throughout the year on 17 wells. These gages were read by local observers. Descriptions of 10 wells are given in this report for the first time, 1 each in Douglas, Kittitas, Pierce, Whatcom, and Whitman Counties, 2 in Lincoln and 3 in Thurston County.

Distribution of observation wells in the State of Washington, 1947

County	Number of observation wells			Number of records of water level in this report		Number of wells with water-stage recorders (R) or float gages (F)		
	Established during 1947	Discontinued in 1947	At year end	1946 and earlier	1947	Throughout 1947	Part of 1947	At year end
Adams	0	0	2	0	8	0	0	0
Benton	0	0	1	0	4	0	0	0
Chelan	0	0	2	0	79	1F	0	1F
Douglas	b 1	0	1	23	3	0	0	0
Franklin	0	0	5	0	19	0	0	0
Grant	0	0	13	0	100	2F	0	2F
King	0	0	1	0	2	0	0	0
Kitsap	0	0	1	0	6	0	0	0
Kittitas	c 1	0	1	2	3	0	0	0
Lewis	0	0	1	0	2	0	0	0
Lincoln	c 2	0	3	4	12	0	0	0
Okanogan	0	0	6	0	175	3F	0	3F
Pierce	1	4	39	6	a 367	4F,1R	0	4F,1R
Snohomish	0	10	7	0	62	0	0	0
Spokane	0	0	23	0	453	7F	0	7F
Thurston	3	0	4	0	13	0	0	0
Walla Walla	0	0	1	3	25	0	0	0
Whatcom	1	0	4	0	15	0	0	0
Whitman	b 1	0	7	4	24	0	0	0
The State	10	14	122	42	1,372	17F,1R	0	17F,1R

a In addition, 5 measurements were made in 2 water-table lakes.
b Measurements begun in 1945.
c Measurements begun in 1946.

Precipitation

The first of the two following tables shows seasonal distribution of precipitation at two representative stations in the State of Washington for 50 years of record, in inches and in percentage of the whole, also for the water-year ending September 30, 1947, in percentage. The second table shows the precipitation, in inches, for the water-year ending September 30, 1947, and in percentage of the 50-year average at 13 representative stations in the State. These tables indicate that precipitation for the period was below normal over most of the State. Snowfall was above normal in the Cascade Range and the Okanogan Highlands and near normal for the rest of the State. That the annual precipitation is not in all cases reflected in ground-water levels for that year was shown by the measurements obtained on wells which tap water in the sand and gravel aquifer beneath the tight Vashon till capping in the Snohomish County area.

Monthly precipitation at two representative stations in the State of Washington in 1946-47, in percentage of the yearly average for the 50 years ending Sept. 30, 1940

Month	Olympia (for western Washington) 50-year average		1946-47	Waterville (for eastern Washington) 50-year average		1946-47
	Inches	Percent	Percent	Inches	Percent	Percent
October	4.32	8.2	9.2	0.73	6.6	10.8
November	8.47	16.1	18.4	1.43	12.9	24.4
December	9.37	17.8	13.2	1.72	15.6	2.7
January	7.98	15.2	14.9	1.45	13.1	4.7
February	6.40	12.2	13.4	1.20	10.9	5.4
March	5.12	9.7	7.0	.79	7.2	5.4
	41.66	79.2	76.1	7.32	66.3	53.4
April	3.39	6.4	6.7	.69	6.2	5.4
May	2.38	4.5	.3	.85	7.7	2.3
June	1.58	3.0	4.6	.83	7.5	15.0
July	.62	1.2	2.9	.40	3.6	4.8
August	.64	1.2	1.0	.38	3.4	.5
September	2.35	4.5	2.7	.58	5.3	8.0
The year	52.62	100.0	94.3	11.05	100.0	89.4

Precipitation, in inches and percentages, at 13 representative stations in the State of Washington for year ending Sept. 30, 1947

Province [a]	Station and county [b]	Precipitation, 1946-47	
		Inches	Percentage of 50-year average [c]
Northern Coast Ranges	Port Angeles, Clallam	23.58	93.3
	Aberdeen, Grays Harbor	74.36	88.9
Puget-Willamette Trough	Olga, San Juan	26.56	90.0
	Seattle, King	32.82	100.5
	Olympia, Thurston	49.62	94.3
	Vancouver, Clark	38.65	105.5
Northern Rocky Mountains	Lakeside, Chelan	8.45	79.3
	Colville, Stevens	16.38	96.5
	Spokane, Spokane	15.12	99.7
Columbia Plateau	Ellensburg, Kittitas	7.54	84.2
	Waterville, Douglas	9.89	89.4
	Kennewick, Benton	6.41	92.5
	Walla Walla, Walla Walla	13.81	85.7

a Ground-water provinces and subprovinces are defined in Water-Supply Paper 990, pages 147-152.

b All stations on lowland or regional plateau, long-term records of precipitation not available for mountain stations.

c Average for years ending Sept. 30, 1891, to 1940.

SUMMARY OF WATER-LEVEL FLUCTUATIONS

The following table summarizes the net change in water levels during the year ending September 30, 1947, in the four areas of the State for which fairly long records have been obtained.

Summary of water levels in certain areas of the State of Washington, 1946-47

Area	Number of observation wells	Length of water-level records (years)	Observed range of water level (feet)	Water levels at end of Sept. 1947: Above (+) or below (-) year-end level of 1946 (average, in feet)	Water levels at end of Sept. 1947: Above lowest of record (average, in percent of observed range)
Puget-Willamette Trough: Tacoma area (Pierce County); wells tapping regional water body in glacial deposits:					
Long-term record	1	40	4.94	-0.27	31
Short-term record	8	8-10	3.11-12.72	+.05	36
Columbia Plateau province: Columbia Basin (Adams, Franklin, and Grant Counties):					
Wells in sand and gravel	6	6-9	0.5-25.2	-1.81	34
Wells in basalt	7	8-10	1.80-27.95	+.003	36
Palouse River area (Whitman County) artesian wells tapping basalt:					
Moderate-term record	2	12	11.40-11.58	-1.46	3
Short-term record	1	8	8.68	-1.14	16
Northern Rocky Mountains province: Spokane Valley (Spokane County) wells in outwash gravel:					
Intermediate-term records, influent conditions	4	19-20	12.96-21.05	-0.94	37
Long-term records effluent conditions	3	31-36	16.72-21.80	+2.76	30
Intermediate-term records, effluent conditions	5	17-20	4.78-19.80	+1.00	23

Areas of intensive investigation

Tacoma area, Puget Sound subprovince

The program of water-level measurements in observation wells was continued during 1947 in cooperation with the city of Tacoma. Three rounds of measurements were made covering 30 wells; in addition, 9 rounds of measurements were made at 7 municipal wells and 8 rounds were made at 1 municipal well, by Lawrence Angeline, of the Tacoma Water Division. Four wells equipped with float-gages were read at intervals varying from weekly to semimonthly. An automatic water-stage recorder was operated on one well throughout the year.

A description of one well is given in this report for the first time. The water-level records for this well include one measurement in 1945 and five measurements in 1946.

Ground-water levels in the Tacoma area were slightly higher in September 1947 than they were in September 1946. A group of eight selected wells show a rise of 0.05 foot.

Snohomish County, Puget Sound subprovince

The program of water-level measurements in observation wells was continued during 1947, although the number of wells and the frequency of measurements was reduced after June 1947. Five rounds of measurements were made covering 7 wells, three rounds covering 9 wells and one round covering 1 well. Altogether, measurements were made in 17 observation wells. In addition, a report on ground water in Snohomish County was completed and placed in the hands of the editor. This report was prepared in cooperation with Snohomish County Public Utility District No. 1.

Ground-water levels in Snohomish County were essentially the same in August 1947 as they were in August 1946 except in wells tapping the subtill sands and gravels. These wells show an average rise of 0.33 foot--an apparent regional rise in accordance with the long-range accumulative rainfall deviation cycle to which this aquifer responds.

Columbia Basin, Columbia Plateau province

The water-level program in the Columbia Basin was continued in 1947 in cooperation with the Washington State Department of Conservation and Development. The observation wells in this area are listed under the

counties of Adams, Franklin, and Grant. Four rounds of measurements were made covering 20 wells, and 1 well, which is equipped with a float gage, was read at weekly intervals.

Ground-water levels in six selected wells which tap shallow sand and gravel showed an average decline of 1.81 feet, and water levels in 7 wells which tap the deeper basalt showed an average rise of less than 0.01 foot.

Palouse River area, Columbia Plateau province

The obsevation well program in Whitman County consisted of four rounds of measurements covering seven wells. One well is described for the first time in this report. The water-level records for this well include one measurement in 1945 and three in 1946.

Water levels in one shallow water-table well show a rise of 0.32 foot and in another well of the same type show a decline of 0.24 foot. Water levels in the artesian wells at Pullman and Steptoe continued their downward trend, showing an average decline of 1.38 feet.

Spokane Valley, Northern Rocky Mountains province

The program of water-level measurements in the Spokane Valley was continued during 1947 in cooperation with the Washington State Department of Conservation and Development. Float gages were maintained throughout the year on seven wells with readings daily to weekly by local observers. Tape measurements were made by representatives of either the Geological Survey or the Washington Water Power Company.

There was an average rise of 1.88 feet in eight selected wells in the arsa of effluent ground water that sustains the low flow of the Spokane River, and an average decline of 0.94 foot in four wells in the upstream area where the river is influent. On the average, the year-end ground-water levels in 12 wells, expressed in relation to the observed ranges of fluctuations, were about 30 percent above the lowest stages of record.

WELL-NUMBERING SYSTEM

Observation wells are listed alphabetically by counties and numerically by townships within the county. The system has been described on page 157 of Water-Supply Paper 990.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Adams County

Columbia Basin

16/29-35R1 (*940, p. 140; 948, p. 135; 990, p. 158; 1020, p. 151; 1027, p. 200 ; 1075, p. 151). Kathryn D. Tate. Taps water in basalt. Water level influenced principally by precipitation. Water levels, in feet below land-surface datum, 1947: Mar. 6, 281.40; May 21, 281.40; July 18, 285.70; Oct. 29, 288.80.

19/31-19B1 (*940, p. 140; 948, p. 135; 990, p. 158; 1020, p. 151; 1027, p. 200 ; 1075, p. 151). Barbara Dormaier. Taps water in basalt. Water level influenced principally by precipitation. Water levels, in feet below land-surface datum, 1947: Mar. 1, 184.27; May 21, 184.24; July 18, 183.97; Oct. 28, 184.29.

Benton County

Yakima River Basin

9/27-19G1 (*990, p. 158; 1020, p. 151; 1027, p. 200 ; 1075, p. 151). Paul Root. Formerly owned by Frank Davis. Taps water from gravel in valley fill of the Yakima River. Water levels, in feet below land-surface datum, 1947: Mar. 6, 14.19; May 21, 13.29; July 15, 14.11; Nov. 2, 14.01.

Chelan County

Wenatchee River Basin

23/19-4D1 (*990, p. 159; 1020, p. 152; 1027, p. 200; 1075, p. 151). U. S. 69. City of Cashmere well 1. Water from gravel in terrace deposit of Wenatchee River. Water level commonly depressed at time of reading, from antecedent pumping in this and 3 nearby city wells. Water levels, in feet below land-surface datum, 1947: Feb. 27, 17.44; May 27, 16.07; July 23, 25.15, pumping; Oct. 28, 36.50, pumping.

23/19-4E2 (1027, p. 201; 1075, p. 152). U. S. 69A. City of Cashmere. Natatorium well. Water from sand and gravel in terrace deposit of Wenatchee River. Water level affected by pumping in this and 3 nearby city wells and by change of river stage.

Water level, in feet below land-surface datum, 1947
(From daily readings by local observer)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	17.00	Apr. 5	17.39	July 5	18.32	Oct. 5	17.32
10	17.28	10	16.26	10	18.39	10	17.26
15	17.44	15	15.85	15	18.42	15	17.29
20	17.54	20	16.05	20	18.82	20	17.28
25	17.53	25	16.34	23	a18.74	25	17.37
31	17.39	30	16.22	25	18.35	28	a17.28
Feb. 5	17.51	May 5	16.74	31	17.45	31	17.30
10	17.70	10	16.80	Aug. 5	17.47	Nov. 5	17.24
15	17.58	15	16.94	10	17.72	10	17.24
20	17.30	20	17.22	15	18.40	15	16.94
25	16.25	25	17.18	20	18.36	20	17.34
27	a16.22	27	17.34	25	17.91	25	17.52
28	16.49	31	17.48	31	17.84	30	17.48
Mar. 5	17.05	June 5	18.10	Sept. 5	17.90	Dec. 5	17.60
10	17.59	10	17.38	10	17.72	10	17.80
15	17.83	15	17.74	15	17.50	15	17.82
20	17.29	20	18.49	20	17.33	20	17.94
25	17.24	25	17.80	25	17.18	25	18.06
31	17.64	30	18.58	31	16.95	31	18.24

a By Geological Survey

Douglas County

Columbia Plateau

25/22-22C1. City of Waterville. NW¼NW¼ sec. 22, T. 25 N., R. 22 E., near northeastern corner of city limits, just east of county fairgrounds. Dug interconnected infiltration works including (1) a 50- by 20-foot main sump, 24 feet deep; (2) a 6- by 180-foot trench, 24 feet deep; (3) a well 6 feet square and 22 feet deep; and (4) a second well 8 feet square and 22 feet deep. Water from basalt. Measuring point, top inside edge of concrete wall at west end of main infiltration sump, 0.5 foot above land-surface datum which is about 2,605 feet above sea level.

Water level, in feet below land-surface datum, 1945-47
(Selected noon readings from recorder charts)

Date		Water level	Date		Water level	Date		Water level
June 18, 1945	bc	7.24	Jan. 15, 1946		4.34	Sept.12, 1946	bc	15.77
20	a	8.14	Feb. 15		3.89	15	a	14.67
July 20	a	9.64	Mar. 15		3.03	Oct. 15	a	8.52
Aug. 15	a	10.68	Apr. 12	c	2.90	Nov. 15		6.18
Sept.17	a	11.68	15		2.95	22		5.82
Oct. 20	a	7.58	May 15	a	5.32	Feb. 28, 1947	c	3.56
Nov. 15		6.13	June 15	a	5.67	July 22	c	16.67
Dec. 13	c	5.08	July 15	a	10.25	Oct. 29	c	7.20
15		5.06	Aug. 15	a	18.75			

a Water level recovering from recent withdrawal.
b Pumping.
c Tape measurement.

Franklin County

Columbia Basin

9/29-25D1 (*948, p. 135; 990, p. 161; 1020, p. 152; 1027, p. 201; 1075, p. 152). Owner unknown. Taps water in gravel of terrace deposit of the Columbia River. Water levels, in feet below land-surface datum, 1947: Mar. 6, 37.16; May 21, 32.63; June 15, 31.25; Nov. 2, 33.89.

11/30-11B1 (*940, p. 141; 948, p. 136; 990, p. 161; 1020, p. 152; 1027, p. 201; 1075, p. 152). Northern Pacific Railway Co. Taps water in glacial-outwash gravel. Water level affected by infiltration from runoff in Esquatzel Coulee. Water levels, in feet below land-surface datum, 1947: Mar. 6, 112.56; May 21, 112.55; July 18, 114.72; Nov. 2, 117.29.

13/30-26G2 (*940, p. 141; 948, p. 136; 990, p. 161; 1020, p. 152; 1027, p. 201; 1075, p. 152). M. M. Poe. Taps water in glacial-outwash gravel. Water level affected by nearby pumping and by infiltration from runoff in Esquatzel Coulee. Water levels, in feet below land-surface datum, 1947: Mar. 6, 28.10, pumping; May 21, 28.05; Nov. 2, 28.35.

13/32-10A1 (*990, p. 162; 1020, p. 152; 1027, p. 201; 1075, p. 153). Owner unknown. Taps water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 6, 253.50; May 21, 253.83; July 18, dry; Nov. 2, dry.

13/34-4G1 (*990, p. 162; 1020, p. 152; 1027, p. 202; 1075, p. 153). City of Kahlotus. Taps water in gravel deposit in Washtucna Coulee. Water levels, in feet below land-surface datum, 1947: Mar. 6, 50.02, pumping; May 21, 51.54, pumping; July 18, 52.90, pumping; Nov. 2, 52.97, pumping.

Grant County

Columbia Basin

18/30-34M1 (*990, p. 162; 1020, p. 152; 1027, p. 202 ; 1075, p. 153). Owner unknown. Probably taps water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 6, 103.42; May 21, 103.43; July 18, 103.48; Oct. 29, 108.70.

19/24-7J1 (*940, p. 141; 948, p. 136; 990, p. 163; 1020, p. 153; 1027, p. 202; 1075, p. 153). E. J. Hutton. Taps water in basalt. Water level influenced principally by precipitation. Water levels, in feet below land-surface datum, 1947: Feb. 28, 171.18; May 22, 171.30; July 18, 171.42; Oct. 28, 171.57.

19/26-34D1 (*940, p. 142; 948, p. 138; 990, p. 163; 1020, p. 153; 1027, p. 202 ; p. 153). F. H. Bordwell. Water from sand in Pleistocene (?) lake deposit. Water levels, in feet below land-surface datum, 1947: Mar. 1, 92.30; May 22, 92.38; July 18, 92.35; Oct. 28, 92.32.

19/27-16N1 (*948, p. 138; 990, p. 163; 1020, p. 153; 1027, p. 202; 1075, p. 153). M. R. Steele. Taps water in glacial-outwash gravel. Water levels, in feet below land-surface datum, 1947: Mar. 1, 69.20; May 22, 72.87, pumping; July 18, 74.50, pumping; Oct. 28, 81.77.

19/28-15L1 (*940, p. 142; 948, p. 139; 990, p. 164; 1020, p. 153; 1027, p. 202 ; p. 153). Owner unknown. Taps water in fluvioglacial deposit. Water level is affected by changes in stage of Moses Lake. Water levels, in feet below land-surface datum, 1947: Mar. 1, 58.55; May 22, 60.98, pumping; July 18, 64.88, pumping; Oct. 28, 60.66.

19/28-22G1 (*948, p. 139; 990, p. 164; 1020, p. 153; 1027, p. 202; 1075, p. 153). Max G. Belnap. Formerly owned by Donald M. Farrell. Taps water in glacial-outwash gravel. Water levels affected by changes in stage of Moses Lake.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by owner)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	24.71	Mar. 23	24.37	July 18	a 25.95	Oct. 12	26.68
12	24.64	25	24.37	20	26.01	19	26.62
19	24.60	30	24.36	27	26.12	26	26.52
26	24.54	Apr. 6	24.35	Aug. 3	26.13	28	26.61
Feb. 2	24.48	13	24.32	10	26.30	31	26.47
9	24.50	May 22	a 24.77	17	26.39	Nov. 8	26.40
16	24.50	June 1	24.85	24	26.47	14	26.37
23	24.49	88	25.03	31	26.62	21	26.31
27	24.47	15	25.15	Sept. 7	26.73	28	26.27
Mar. 1	a 24.51	22	25.29	14	26.76	Dec. 5	26.20
2	24.46	29	25.51	21	26.77	12	26.13
9	24.46	July 6	25.66	28	26.75	19	26.07
16	24.43	13	25.80	Oct. 5	26.73	26	26.01

20/26-18R1 (*940, p. 143; 948, p. 140; 990, p. 165; 1020, p. 153; 1027, p. 202 ; 1075, p. 153). D. J. Miles. Probably taps water in basalt. Water levels, in feet below land-surface datum, 1947: Feb. 28, 162.61; May 22, 162.69; July 19, 162.80; Oct. 29, 162.55.

20/28-15F1 (*948, p. 141; 990, p. 165; 1020, p. 153; 1027, p. 202 ; 1075, p. 153). County of Grant. Taps water in glacial-outwash gravel and basalt. Water levels, in feet below land-surface datum, 1947: Mar. 1, 19.72; May 22, dry; July 18, dry; Oct. 28, dry.

21/26-3H1 (*940, p. 143; 948, p. 141; 990, p. 165; 1020, p. 154; 1027, p. 203 ; 1075, p. 154). Sivert Andersen. Taps water in basalt. Water level is affected by pumping in 2 irrigation wells 0.25 mile north and 0.50 mile south. Water levels, in feet below land-surface datum, 1947: Feb. 28, 129.78; May 22, 141.00, nearby well pumping; July 19, 142.18; Oct. 29, 137.77.

21/28-34A1 (*940, p. 143; 948, p. 141; 990, p. 166; 1020, p. 154; 1027, p. 203 ; 1075, p. 154). Arabella E. Bunnell. Taps water in basalt. Water level influenced principally by precipitation. Water levels, in feet below land-surface datum, 1947: Mar. 1, 95.99; May 22, 96.23; July 18, 96.34; Oct. 28, 96.57.

22/27-30P1 (*948, p. 142; 990, p. 166; 1020, p. 154; 1027, p. 203; 1075, p. 154). Woodsie G. Smith. Formerly owned by L. W. Beasley. Taps water in basalt. Water levels in feet below land-surface datum, 1947: Feb. 28, 48.16; May 22, 76.94, pumping; July 19, 77.63, pumping; Oct. 29, 52.41.

22/28-6R1 (*948, p. 143; 990, p. 167; 1020, p. 154; 1027, p. 203 ; 1075, p. 154). Chas. A. Kennedy. Taps water in glacial-outwash gravel. Measurements from float-gage readings by owner. Water level affected by automatic domestic pump operation. Water levels, in feet below land-surface datum, 1947: Feb. 28, 167.06; July 19, 167.33, pumping; Oct. 29, 169.50.

22/30-18M1 (*940, p. 144; 948, p. 143; 990, p. 167; 1020, p. 155; 1027, p. 203 ; 1075, p. 154). Owner unknown. Taps water in glacial-outwash gravel. Water level fluctuates in response to infiltration from runoff in nearby coulee. Water levels, in feet below land-surface datum, 1947: Feb. 28, 17.33; May 22, 17.43; July 19, 17.42; Oct. 29, 17.40.

King County

Glacial plains of the Puget Trough

26/6-13N1 (*990, p. 168; 1020, p. 155; 1027, p. 204; 1075, p. 154). Jacob DeBoer. Taps water in sand of fluvioglacial deposit. Water levels, in feet below land-surface datum, 1947: Feb. 14, 38.40; Dec. 20, 39.58;

Kitsap County

Glacial plains of the Puget Trough

23/1-2C 2 (*990, p. 168; 1020, p. 155; 1027, p. 204 ; 1075, p. 154). W. A. Hiersch. Taps water in sand in fluvioglacial deposits of an extensive rolling upland. Measurements by owner.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Jan. 19	53.75	May 17	50.72	Aug. 13	52.06
Mar. 16	52.12	June 21	50.84	Dec. 17	53.96

Kittitas County

20/15-25Q1. Mr. Ackerlund. SW¼SE¼ sec. 25, T. 20 N., R. 15 E., 1.27 miles east of center of Cle Elum and 400 feet north of U. S. Highway 10. In northeast quadrant of tee-intersection, 50 feet north and 10 feet east of northeast corner of house. Dug well, diameter 5 feet, depth 15 feet. Water from alluvium of flood plain along Yakima River. Measuring point, top of 2-inch plank deck 1 foot south of pump column, at land-surface datum which is about 1,905 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 4, 1946	6.89	Feb. 27, 1947	5.06	Oct. 28, 1947	8.65
Aug. 22	7.29	July 23	7.37		

Lewis County

Cowlitz River Basin

11/1W-5H1 (*990, p. 169; 1020, p. 155; 1027, p. 204 ; 1075, p.154). Mrs. Joseph Sommer. Taps water in compact sand in deeply weathered terrace deposit. Water levels, in feet below land-surface datum, 1947: Aug. 12, 42.55; Dec. 16, 38.74.

Lincoln County

Columbia Plateau

21/38-24G2. Owner unknown. SW¼NE¼ sec. 24, T. 21 N., R. 38 E. 400 feet east-northeast of stone arches at the east city limits of Sprague along U. S. Highway 10, 100 feet south of center line of U. S. Highway 10 at north side of small gravel pit. Driven well, diameter 1¼ inches, depth 22 feet. Water from gravel bar on the edge of scabland channel in Cow Creek Valley. Measuring point, rim of pump cylinder bowl at west side, 2.4 feet above land-surface datum which is about 1,890 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Aug. 19, 1946	14.80	Mar. 6, 1947	14.25	July 19, 1947	17.43
Oct. 12	16.85	May 25	14.55	Nov. 2	19.07

25/37-14M1 (*990, p. 170; 1020, p. 155; 1027, p. 204 ; 1075, p.155). Charles Straub, Sr. Taps water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 1, 21.97; May 22, 22.11; July 22, 22.43; Nov. 1, 22.91.

26/34-10N1. Mr. Maquette. SW¼SW¼ sec. 10, T. 26 N. , R. 34 E., in Creston, near west city limits, about 125 feet northeast of concrete grain elevators, 50 feet north of U. S. Highway 10A and 55 feet east of gravel and 55 feet east of gravel road north, in vegetable garden plot. Drilled well, diameter 6 inches, depth 28.8 feet. Water from alluvial material near edge of scabland channel. Measuring point, top edge of 6-inch steel casing at south side, at land-surface datum which is about 2,440 feet above sea level.

Water level, in feet below land-surface datum, 1946-47

Apr. 10, 1946	3.95	Mar. 1, 1947	6.25	July 22, 1947	7.80
Aug. 20	6.82	May 26	6.95	Oct. 30	8.25

Okanogan County

Okanogan River Valley

34/26-26Q1 (*990, p. 170; 1020, p. 155; 1027, p.204; 1075, p. 155). City of Omak. Taps water in stream gravel of Okanogan River.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by city water department)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	13.70	Mar. 22	14.00	June 7	10.79	Aug. 23	14.42
11	13.67	29	13.94	14	11.24	30	14.46
18	13.32	Apr. 5	13.76	21	11.85	Sept. 6	14.50
25	13.70	12	13.86	28	12.61	13	14.44
Feb. 1	13.94	19	12.86	July 5	13.03	20	14.41
8	13.85	26	12.49	12	13.67	27	14.42
15	13.70	May 2	11.38	20	14.10	Oct. 4	14.32
22	14.08	10	9.15	23 ab	24.42	12	14.14
27 a	14.13	17	10.40	26	14.18	18	14.09
Mar. 2	14.16	26 ab	21.83	Aug. 4	14.20	25	13.95
8	14.25	26	10.41	11	14.36	30 a	13.85
15	14.30	31	9.86	16	14.68	Nov. 1	13.84

a By Geological Survey.
b Pumping.

34/26-26Q1--Continued.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by city water department)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 8	13.92	Nov. 22	14.02	Dec. 7	14.00	Dec. 20	13.95
15	13.90	30	13.96	13	14.05	27	13.94

34/26-28A1 (*990, p. 171; 1020, p. 156; 1027, p. 205; 1075, p. 155). Charles Byrd. Taps water in terrace gravel deposit west of Okanogan River Water levels, in feet below land-surface datum, 1947: Feb. 27, 32.61; May 26, 39.86, pumping; July 23, 38.82, pumping; Oct. 30, 31.90.

34/26-28P1 (*990, p. 171; 1020, p. 165; 1027, p. 205; 1075, p. 155). Samuel Peterson. Taps water in terrace gravel deposit west of Okanogan River. Water levels, in feet below land-surface datum, 1947: Feb. 27, 14.90; May 26, 23.77, pumping; July 23, 18.38, recovering from recent pumping; Oct. 30, 14.30.

34/26-35R1 (*1020, p. 156; 1027, p. 205; 1075, p. 155). City of Omak well 4. Taps water in coarse alluvial deposit of the Okanogan River. One or more of three pumps operating at the time of each measurement.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by city water superintendent)

Jan.	4	26.61	Apr.	5	27.04	July	5	24.69	Oct.	4	28.26
	11	26.67		12	26.98		13	25.30		11	27.95
	18	26.45		20	26.60		19	24.49		18	27.49
	25	26.74		26	27.00		23	a 26.87		26	27.04
Feb.	1	26.80	May	3	26.62		26	26.87		30	27.20
	8	26.87		10	25.76	Aug.	2	27.16	Nov.	1	27.15
	15	26.72		17	25.31		9	27.33		8	27.20
	22	26.83		26	25.51		16	27.72		16	26.83
	27	s 26.81		26	a 25.15		23	27.89		23	26.72
Mar.	2	26.46		31	24.29		30	28.18		30	26.70
	8	26.95	June	7	23.74	Sept.	6	28.08	Dec.	7	26.65
	15	26.80		16	24.52		13	28.00		13	26.95
	22	26.80		21	24.36		20	28.27		21	26.70
	29	27.15		28	24.44		27	28.28		28	26.65

a By Geological Survey.

36/26-13K1 (*990, p. 172; 1020, p. 156; 1027, p. 205; 1075, p. 156). Owner unknown. Taps water in fluvioglacial gravel. Water levels, in feet below land-surface datum, 1947: Feb. 27, 7.77; May 26, 29.65; July 23, 29.45; Oct. 30, 29.58.

40/27-28Q1 (*990, p. 172; 1020, p. 156; 1027, p. 205; 1075, p. 156). City of Oroville well 1. Taps water in gravel of valley alluvium.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by city water superintendent)

Jan.	6	17.66	Mar.	31	18.07	July	14	16.99	Oct.	30	a 17.44
	13	17.65	Apr.	10	18.07		23	17.26	Nov.	1	17.45
	20	17.66		15	18.01		23	a 17.28		8	17.50
	27	17.72		21	17.68		31	17.09		15	17.60
Feb.	3	17.59	May	13	16.26	Aug.	7	17.26		17	17.61
	12	17.84		20	16.07		12	17.29		25	17.76
	18	17.75		26	a 16.06		27	17.28		28	17.77
	26	17.92		27	16.01	Sept.	4	17.28	Dec.	4	17.75
	27	a 17.95	June	2	15.72		13	17.12		15	17.88
Mar.	10	17.94		10	15.46	Oct.	2	17.21		20	17.94
	17	17.96		23	15.77		14	17.27		30	17.96
	24	17.92	July	5	16.38		23	17.30			

Pierce County

Alluvial and glacial plains of the Puget Trough

17/2-16Q3 (*1020, p. 157; 1027, p. 205 ; 1075, p. 156). Roy Gonia. Regional water table. Measuring point 2, beginning Mar. 4, 1946, top of 8-inch tile casing, 0.10 foot below land-surface datum. Water levels, in feet below land-surface datum, 1947: Mar. 11, 28.34; Aug. 12, 38.05; Dec. 16, 35.08.

17/2-16Q4 (*1020, p. 157; 1027, p. 206 ; 1075, p. 156). James Gonia. Confined artesian water. Water levels, in feet below land-surface datum, 1947: Mar. 11, 5.66; Aug. 12, 8.33; Dec. 16, 9.02.

18/2-34N1. Frank Betchard. SW¼SW¼ sec. 34, T. 18 N., R. 2 E., about 0.2 mile south of road to Fort Lewis, in Roy, along highway to McKenna, about 75 feet west of highway in fence line between adjoining houses. Dug well, diameter 36 inches, depth 15 feet. Water from shallow water table along Muck Creek. Measuring point, top south side of 36-inch concrete tile casing, 2.5 feet above land-surface datum which is about 310 feet above sea level.

Water level, in feet below land-surface datum, 1945-47

Date	Water level	Date	Water level	Date	Water level
Dec. 26, 1945	5.66	Aug. 19, 1946	8.77	Mar. 11, 1947	4.76
Mar. 8, 1946	3.71	Oct. 23	10.55	Aug. 12	9.27
May 20	6.34	Dec. 26	3.49	Dec. 16	6.51

18/3-14Q1 (*990, p. 175; 1020, p. 157; 1027, p. 206 ; p. 156). W. J. Fochs. Formerly owned by A. S. Morris. Taps confined water beneath the Vashon till. Water level, in feet below land-surface datum, 1947: Mar. 11, 37.10.

18/3-27E1 (*990, p. 175; 1020, p. 157; 1027, p. 206 ; 1075, p. 156). H. E. Bowman. Regional water table above the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 11, 13.57; Aug. 12, 16.25; Dec. 16, 13.83.

18/4-3M1 (*990, p. 176; 1020, p. 157; 1027, p. 206; 1075, p. 156). C. F. Southard. Perched water table in or above the Vashon till. Water levels, in feet below land-surface datum, 1947: Aug. 12, 5.70; Dec. 1.13.

18/4-7P1 (*990, p. 177; 1020, p. 157; 1027, p. 206 ; 1075, p. 157). Joe Jupiter. Regional water table below the Vashon till. Water levels, in feet below land-surface datum, 1947: Aug. 12, 79.18; Dec. 17, 76.78.

18/4-14C1 (*990, p. 178; 1020, p. 157; 1027, p. 206 ; 1075, p. 157). W. Rodlund. Probably in the regional zone of saturation. Water levels, in feet below land-surface datum, 1947: Mar. 11, 52.38; Aug. 12, 56.36; Dec. 17, 57.48.

19/2-10F1 (*990, p. 178; 1020, p. 158; 1027, p. 206 ; 1075, p. 157). Lakewood Water District. Confined water, probably nonartesian. One or more pumps operating in adjacent wells.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by L. E. Crusoe, operator)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	46.82	Feb. 2	45.82	Mar. 26	44.16	Aug. 20	a 48.07
7	46.88	10	44.36	Apr. 8	44.05	27	a 48.09
13	46.86	16	44.21	16	43.46	31	48.10
16	47.20	Mar. 10	43.69	22	43.41	Sept. 6	a 49.09
23	46.90	21	44.03	Aug. 13	49.48	12	a 48.89

a No pumps operating.

19/2-10F1--Continued.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by L. E. Crusoe, operator)

Date	Water level	Date	Water level	Date	Water level
Sept.19	48.88	Oct. 15	a 48.98	Nov. 24	a 48.48
25	a 48.18	28	a 48.78	Dec. 17	48.64

a No pumps operating.

19/3-2Q1 (*990, p. 182; 1020, p. 158; 1027, p. 207 ; 1075, p. 157). I. G. Young. Local perched water table, in the Vashon till. Water levels, in feet below land-surface datum, 1947: Aug. 13, 7.38; Dec. 18, 0.45.

19/3-3Q1 (*990, p. 182; 1020, p. 158; 1027, p. 207 ; 1075, p. 157). D. Stuart, tenant. Regional water table. Water levels, in feet below land-surface datum, 1947: Mar. 11, 149.52; Aug. 13, 149.16; Dec. 17, 151.43.

19/3-7B1 (*990, p. 183; 1020, p. 158; 1027, p. 207 ; 1075, p. 157). W. J. Fritz. Regional water table, above the Vashon till. Measuring point 2, beginning Oct. 23, 1946, top of 4-inch pipe inserted in well, 3.65 feet below land-surface datum and 4.40 feet below pump house floor. Measurement discontinued.

19/3-9C1 (*990, p. 183; 1020, p. 158; 1027, p. 207 ; 1075, p. 157). N. G. Kramer. Perched water table in the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 10, 7.41; Aug. 13, 15.98; Dec. 17, 15.86.

19/3-28F1 (*990, p. 184; 1020, p. 158; 1027, p. 207; 1075, p. 158). C. C. Modahl. Regional water table, above the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 10, 27.30; Aug. 12, 30.96; Dec. 17, 30.17.

19/4-4J1 (*990, p. 185; 1020, p. 158; 1027, p. 207 ; 1075, p. 158). R. J. Moreland. Perched water table in the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 11, 11.26; Aug. 13, 22.55; Dec. 17, 10.40.

19/4-7A1 (*990, p. 185; 1020, pp. 158-159; 1027, p. 207 ; 1075, p.158). Ada Lilja. Perched water table in the Vashon till.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by owner)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.77	Mar. 31	20.95	July 28	32.80	Oct. 13	34.66
13	20.09	Apr. 7	21.85	Aug. 4	33.09	20	34.42
20	21.10	14	22.05	11	33.83	27	34.61
27	14.96	21	22.51	13	a 33.22	Nov. 3	34.35
Feb. 3	13.94	29	23.20	18	33.59	10	34.41
11	14.58	June 2	25.78	23	33.81	17	34.26
17	15.42	9	27.88	Sept. 1	33.99	24	32.75
24	17.10	16	28.58	8	34.13	Dec. 1	32.11
Mar. 3	17.74	23	29.58	15	34.26	8	31.08
10	19.12	30	30.41	22	34.38	15	29.72
11	a 19.78	July 7	31.17	29	34.47	17	a 29.14
17	18.88	14	31.85	Oct. 6	34.56	29	24.05
24	20.25	21	32.40				

a By Geological Survey.

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19/4-20K3 (*990, p. 187; 1020, p. 159; 1027, p. 208 ; 1075, p. 158). Mrs. Margaret Gould. Regional water table. Water levels, in feet below land-surface datum, 1947: Mar. 11, 180.15; Aug. 12, 187.23. Measurement discontinued.

19/4-21G1 (*990, p. 187; 1020, p. 159; 1027, p. 208 ; 1075, p. 158). Leroy Powell. Perched water table, just above the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 11, 1.60; Aug. 12, 3.97; Dec. 17, 1.75.

19/4-24A3 (*990, p. 188; 1020, p. 159; 1027, p. 208; 1075, p. 158). Birchal A. Baker. Confined water. Water levels, in feet below land-surface datum, 1947: Aug. 13, 15.28; Dec. 18, 13.66.

19/5-19M1 (*990, p. 188; 1020, p. 159; 1027, p. 208; 1075, p. 159). C. J. Lawson. Regional water table. Tape measurements by owner. Water levels, in feet below land-surface datum, 1947: Mar. 10, 2.21; Aug. 13, 2.75; Dec. 18, 1.43.

20/2-10F1 (*990, p. 189; 1020, p. 160; 1027, p. 208; 1075, p. 159). C. L. Stout. Probably semiperched water table below the Vashon till.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by owner)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 22	101.75	Apr. 27	101.50	June 22	101.15	Aug. 30	100.92
Mar. 2	101.69	May 3	101.47	July 6	101.03	Sept. 7	100.79
13	101.80	10	101.35	13	100.96	Oct. 1	100.88
16	101.75	19	101.35	18	100.95	12	101.07
29	101.52	25	101.29	Aug. 9	100.94	Nov. 8	101.19
Apr. 5	101.68	June 1	101.19	13	a100.47	22	101.37
10	101.64	8	101.19	24	100.89	Dec. 17	a101.34
21	101.63	15	101.16				

a By Geological Survey.

20/2-13H1 (*990, p. 191; 1020, p. 160; 1027, p. 208; 1075, p. 159). City of Tacoma well 4-A. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(From tape measurements by Tacoma Water Division)

Jan. 31	14.99	Apr. 29	14.61	Sept. 4	14.90	Dec. 1	15.31
Feb. 26	13.01	July 29	15.06	Oct. 30	15.15	26	14.72
Mar. 31	13.46						

20/2-13J1 (*990, p. 191; 1020, p. 160; 1027, p. 209; 1075, p. 159). City of Tacoma well 6-A. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(From tape measurements by Tacoma Water Division)

Jan. 31	35.43	Apr. 29	34.27	Sept. 4	35.22	Dec. 1	35.75
Feb. 26	33.29	July 29	35.45	Oct. 30	35.92	26	35.03
Mar. 31	33.64						

20/2-15L2 (*990, p. 192; 1020, p. 160; 1027, p. 209; 1075, p. 159). C. H. Erickson. Probably semiperched water table below the Vashon till. Water level, in feet below land-surface datum, 1947: Mar. 11, 123.87.

20/2-26J1 (*990, p. 193; 1020, p. 161; 1027, p. 209; 1075, p. 159). James Holroyd. Regional water table, above the Vashon till. Water level, in feet below land-surface datum, 1947: Mar. 11, 28.04.

20/3-9E1 (*990, p. 195; 1020, p. 161; 1027, p. 209; 1075, p. 160). National Soap Co. Measurements discontinued.

20/3-18D1 (*990, p. 196; 1020, p. 161; 1027, p. 209; 1075, p. 160). City of Tacoma well 2-A. Confined nonartesian water in large part.

20/3-18D1--Continued.

Water level, in feet below land-surface datum, 1947
(From tape measurement by Tacoma Water Division)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	35.98	Apr. 29	26.53	Sept. 4	26.76	Dec. 1	27.86
Feb. 26	25.73	July 29	27.05	Oct. 30	28.37	26	27.01
Mar. 31	26.22						

20/3-19F1 (*990, p. 197; 1020, p. 161; 1027, p. 209; 1075, p. 160). City of Tacoma well 5-A. Measurements discontinued.

20/3-19P1 (*990, p. 199; 1020, p. 161; 1027, p. 209; 1075, p. 160). City of Tacoma well 1-A. Measurements discontinued.

Water level, in feet below land-surface datum, 1947
(From tape measurements by Tacoma Water Division)

Jan. 31	32.73	Apr. 29	30.06	Sept. 4	31.08	Dec. 1	31.43
Feb. 26	29.59	July 29	30.99	Oct. 30	31.47	26	30.89
Mar. 31	29.90						

20/3-19P4 (*990, p. 202; 1075, p. 160). City of Tacoma well 11. Confined nonartesian water in large part.

Water level at noon, in feet below land-surface datum, 1947
(From recorder charts)

Jan. 5	32.98	Apr. 5	32.56	June 24	33.11	Sept. 5	33.77
10	33.02	10	32.55	26	a 35.20	10	33.65
13	32.92	15	32.43	30	a 33.80	15	33.55
22	33.04	23	a 34.90	July 5	33.59	20	33.59
31	a 35.62	25	33.45	8	33.36	24	33.57
Feb. 5	33.09	30	32.85	12	a 37.05	Oct. 31	34.13
10	32.56	May 3	32.78	15	33.70	Nov. 5	33.89
13	33.56	7	32.74	25	a 36.73	16	a 36.52
17	a 33.77	10	32.75	28	33.75	20	34.77
20	32.66	14	32.75	31	33.59	25	34.38
25	32.46	20	a 34.94	Aug. 5	33.60	30	34.19
28	32.45	25	a 36.35	10	a 34.35	Dec. 5	34.07
Mar. 5	a 33.62	29	a 36.26	13	33.71	10	34.03
10	32.47	June 2	a 34.50	16	a 34.67	17	33.94
15	32.40	4	a 33.51	20	33.66	20	a 34.50
20	32.48	11	33.19	22	33.64	24	33.85
26	a 36.83	15	33.17	24	a 34.56	31	33.46
31	32.68	20	33.19	25	33.90		

[a] Water level recovering from recent withdrawal in adjacent public-supply well.

20/3-30C2 (*990, p. 208; 1020, pp. 161, 162; 1027, p. 210; 1075, p. 161). US 68. City of Tacoma well 5. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(From tape measurements by Tacoma Water Division)

Jan. 31	38.66	Apr. 29	36.13	Sept. 4	37.14	Dec. 1	37.40
Feb. 26	35.78	July 30	36.99	Oct. 30	37.56	26	36.94
Mar. 31	35.98						

20/3-30C4 (*990, p. 212; 1020, p. 162; 1027, p. 210; 1075, p. 161). City of Tacoma well 8-A. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(Tape measurements by Tacoma Water Division)

Jan. 31	38.03	Mar. 31	33.50	July 29	36.68	Oct. 30	37.19
Feb. 26	35.35	Apr. 29	35.98	Sept. 4	36.80	Dec. 26	36.54

20/3-30L5 (*990, p. 221; 1020, p. 162; 1027, p. 210; 1075, p. 161). City of Tacoma well 7-A. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(Tape measurements by Tacoma Water Division)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	21.40	Apr. 29	20.53	Sept. 4	21.30	Dec. 1	21.72
Feb. 26	19.78	July 29	21.27	Oct. 30	21.83	26	21.05
Mar. 31	20.32						

20/3-30N1 (*990, p. 222; 1020, p. 162; 1027, p. 210; 1075, p. 161). City of Tacoma well 3-A. Confined nonartesian water in large part.

Water level, in feet below land-surface datum, 1947
(Tape measurements by Tacoma Water Division)

Jan. 31	39.11	Apr. 29	37.90	Sept. 4	39.46	Dec. 1	39.63
Feb. 26	36.91	July 29	39.15	Oct. 30	39.91	26	38.98
Mar. 31	37.66						

20/3-32D2 (*990, p. 224; 1020, p. 163; 1027, p. 210; 1075, p. 161). John Erdahl. Formerly owned by Bronson. Regional water table, below the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 10, 61.76; Aug. 13, 61.77; Dec. 17, 59.84.

20/3-34E1 (*990, p. 225; 1020, p. 162; 1027, p. 211; 1075, p. 161). Frank Reding. Perched water body, just above the Vashon till. Water levels, in feet below land-surface datum, 1947: Mar. 10, 2.13; Aug. 13, 8.92; Dec. 18, 2.42.

20/3-35G1 (*990, p. 225; 1020, p. 163; 1027, p. 211; 1075, p. 161). I. S. Broxson. Regional water table below the Vashon till.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by owner)

Jan. 1	180.67	Apr. 6	179.53	July 13	179.84	Oct. 12	180.31
5	180.73	13	179.53	20	179.85	19	180.36
12	180.67	20	179.51	27	179.83	26	180.38
19	180.67	27	179.50	Aug. 3	179.93	Nov. 2	180.44
26	180.58	May 4	179.52	10	179.97	9	180.46
Feb. 2	180.52	11	179.52	13 a	180.44	17	180.50
9	180.41	18	179.53	17	180.01	24	180.54
16	180.33	25	179.52	24	180.08	30	180.56
23	180.21	June 2	179.53	31	180.12	Dec. 9	180.66
Mar. 2	180.03	8	179.58	Sept. 7	180.18	15	180.67
9	179.86	15	179.67	13	180.26	18 a	180.70
16	179.71	22	179.66	21	180.21	21	180.67
23	179.64	30	179.69	29	180.24	28	180.70
30	179.53	July 6	179.75	Oct. 7	180.30		

a By Geological Survey.

20/4-24F2 (*990, p. 226; 1020, p. 163; 1027, p. 211; 1075, p. 162). Standard Brands of California, Inc. Confined artesian water. Nearby well 24F3 pumping at time of each measurement. Water levels, in feet with reference to land-surface datum, 1947: Mar. 10, +1.39; Aug. 13, -0.65; Dec. 18, +0.70.

20/4-24F3 (*990, p. 227; 1020, p. 163; 1027, p. 211; 1075, p. 162). Standard Brands of California, Inc. Confined, artesian water. Pumping at time of each measurement. Water levels, in feet below land-surface datum, 1947: Aug. 13, 3.28; Dec. 18, 1.19.

20/4-36H2 (*990, p. 227; 1020, p. 163; 1027, p. 211; 1075, p. 162). Frank Chervenka. Probably confined nonartesian water. Water levels, in feet below land-surface datum, 1947: Mar. 10, 5.12; Aug. 13, 7.48; Dec. 18, 5.69.

21/2-25B2 (*990, p. 228; 1020, p. 163; 1027, p. 211; 1075, p. 162). City of Tacoma. Confined water. Water levels, in feet below land-surface datum, 1947: Mar. 11, 44.98; Dec. 17, 46.17.

21/3-26N1 (*990, p. 228; 1020, p. 163; 1027, p. 212; 1075, p. 162). City of Tacoma well Tideflats 1. Confined artesian (flowing) water.

Water level in feet, in well 21/3-26N1 corresponding tidal height of Hylebos Waterway, 1947

Date	Time	Well			Waterway
		Above land-surface datum	Above city datum	Above sea-level datum 1929	Above (+) or below (-) sea level datum of 1929
Mar. 11	12:35 p.m.	4.96	31.80	17.84	-3.24
Dec. 17	1:20 p.m.	4.93	31.77	17.81	+2.59

Stages in water-table lakes

American Lake (*990, p. 230; 1020, p. 163; 1027, p. 212; 1075, p. 163). Murray Creek enters lake from east; no surface outlet. Small quantities of water withdrawn from lake on numerous abutting properties. Lake stages, in feet above sea-level datum of 1929, 1947: Mar. 10, 232.6; Aug. 13, 230.8; Dec. 17, 230.6.

Gravelly Lake (*990, p. 230; 1020, p. 164; 1027, p. 212; p.). No surface inlets or outlets. Small quantities of water withdrawn for summer use on abutting properties. Lake stages, in feet above sea-level datum of 1929, 1947: Aug. 13, 213.44; Dec. 17, 212.07.

Snohomish County

Puget Sound subprovince

27/4-10P1 (*1027, p. 212; 1075, p. 163). E. A. Lichtenstein. Water from Pleistocene pre-Vashon sand and gravel beds. Water levels, in feet below land-surface datum, 1947: Feb. 13. 107.96; Apr. 19, 107.80; June 5, 107.75. Measurements discontinued June 1947.

27/4-28P1 (*1027, p. 212; 1075, p. 163). Peter Peisch. Taps water from Pleistocene pre-Vashon sand and gravel beds. Water levels, in feet below land-surface datum, 1947: Feb. 13, 104.04; Apr. 19, 103.36; June 5, 103.42. Measurements discontinued June 1947.

27/4-30A2 (*1027, p. 212 ; 1075, p. 163). Don Schaffer. Taps water from Pleistocene pre-Vashon sand beds.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 13	142.30	June 5	141.26	Dec. 19	141.35
Apr. 19	141.67	Aug. 14	141.13		

27/5-21D1 (*1027, p. 213; 1075, p. 163). Vincent Nardoni. Taps water from Pleistocene pre-Vashon sand and gravel beds. Water level, in feet below land-surface datum, 1947: Feb. 13, 90+, pump off five minutes. Measurement discontinued February 1947.

28/4-13H1 (*1027, p. 213; 1075, p. 163). A. H. Dorr. Taps water from Pleistocene pre-Vashon sand and gravel beds.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 13	3.22	June 5	7.28	Dec. 19	3.29
Apr. 19	5.65	Aug. 14	8.98		

28/5-20D1 (*1027, p. 213; 1075, p. 164). F. A. Franke. Water from Pleistocene pre-Vashon sand beds. Water levels, in feet below land-surface datum, 1947: Feb. 13, 118.46; Apr. 19, 117.74; June 5, 117.60. Measurements discontinued June 1947.

28/6-22J1 (*1027, p. 213; 1075, p. 164). C. B. Downing. Water from Pleistocene pre-Vashon sand and gravel beds. Water levels, in feet below land-surface datum, 1947: Feb. 13, 8.04; Apr. 18, 9.38, recovering after pumping; June 4, 8.45. Measurements discontinued June 1947.

29/5-2F1 (*1027, p. 214; 1075, p. 164). L. Falkner. Water is from Pleistocene pre-Vashon gravel.

Water level, in feet below land-surface datum, 1947

Feb. 13	110.50	June 4	110.55	Dec. 19	110.90
Apr. 8	110.38	Aug. 14	110.94		

30/5-8L1 (*1027, p. 214; 1075, p. 164). B. M. Harrison. Water from Vashon outwash sand. Water levels, in feet below land-surface datum, 1947: Feb. 13, 2.32; Apr. 18, 2.73; June 4, 5.63. Measurements discontinued June 1947.

30/5-22A1 (*1027, p. 214; 1075, p. 164). G. Torie. Water from Vashon outwash sand and gravel.

Water level, in feet below land-surface datum, 1947

Feb. 13	17.88	June 4	20.40	Dec. 19	18.17
Apr. 18	18.27	Aug. 14	21.14		

30/6-6N1 (*1027, p. 214; 1075, p. 164). Mrs. S. E. Creeden. Water from perched body in pervious zones of Vashon till. Water levels, in feet below land-surface datum, 1947: Feb. 14, 0.96; Apr. 18, 1.40; June 4, 4.40. Measurements discontinued June 1947.

30/6-10J1 (*1027, p. 214; 1075, p. 164). C. C. Moen. Water from Vashon glacial outwash gravel. Water levels, in feet below land-surface datum, 1947: Feb. 14, 49.55; Apr. 18, 49.17; June 4, 49.45. Measurements discontinued June 1947.

31/5-7B1 (*1027, p. 215; 1075, p. 164). Peter Henning. Water from Recent alluvium. Water levels, in feet below land-surface datum, 1947: Feb. 12, 7.34; Apr. 18, 8.20; June 4, 8.95; Aug. 14, 9.99.

31/5-10J3 (*1027, p. 215; 1075, p. 164). J. W. Monigar. Water from Pleistocene pre-Vashon sand.

Water level, in feet below land-surface datum, 1947

Feb. 14	24.96	June 4	26.00	Dec. 19	24.89
Apr. 18	24.15	Aug. 14	26.97		

31/5-21N1 (*1027, p. 215; 1075, p. 165). C. E. Edlund. Water from Vashon outwash sand. Water levels, in feet below land-surface datum, 1947: Feb. 12, 5.03; Apr. 18, 5.28; June 4, 6.58. Measurements discontinued June 1947.

31/6-19E1 (*1027, p. 215; 1075, p. 165). A. Anderson. Water from perched body in pervious zones of Vashon till. Water levels, in feet below land-surface datum, 1947: Feb. 14, 3.22; Apr. 18, 3.95; June 4, 6.25. Measurements discontinued June 1947.

32/4-5Q1 (*1075, p. 165). Elmer Norgaard. Water from regional water table in sub-till sand and gravel.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 12	128.36	June 4	128.25	Dec. 19	128.39
Apr. 17	128.35	Aug. 14	128.46		

Spokane County

Columbia Plateau

24/41-10A1 (*948, p. 149; 990, p. 234; 1027; p. 164; 1027, p. 216; 1075, p. 165). Delbert Kramer. Taps water in basalt. Considerable drawdown within short period of pumping, recovers slowly. Water levels, in feet below land-surface datum, 1947: Mar. 6, 36.27; May 24, 36.96; July 22, 41.44.

25/41-36R1 (*948, p. 150; 990, p. 234; 1020, p. 164; 1027, p. 216; 1075, p. 165). J. D. Stark. Taps water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 6, 24.53; May 24, 25.60; July 22, 27.64, pumping; Nov. 1, 27.57.

25/42-13B1 (886, p. 918, *889, pp. 93-94; 910, p. 169; 940, p. 144; 948, p. 143; 990, p. 234; 1020, p. 164; 1027, p. 216 ; 1075, p. 165). Washington Water Power Co. well 90. Empire Cold Storage Co. Taps water in fluvioglacial gravel in Spokane Valley.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	a186.84	Apr. 18	a184.85	July 21	a188.35	Dec. 12	a188.48
Mar. 4	185.37	May 23	182.47	Oct. 31	a189.89		

a Pumping.

25/42-14L1 (*948, p. 143; 990, p. 234; 1020, pp. 164-165; 1027, p. 216; 1075, p. 165). Riverside Park Cemetery Association. Taps water in gravel of fluvioglacial outwash in Spokane Valley.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by maintenance employees)

Jan. 4	92.77	Mar. 4	a 93.35	Apr. 30	92.19	Aug. 6	96.94
8	93.14	5	93.48	May 2	92.00	11	97.12
21	94.16	10	93.55	5	91.63	15	97.70
25	94.30	15	93.70	10	91.10	20	98.05
31	93.81	19	93.78	14	90.55	25	98.25
Feb. 3	93.65	24	93.72	19	90.16	30	98.88
5	93.57	31	93.34	24	a 90.86	Sept. 4	98.90
10	93.56	Apr. 2	93.25	July 22	a 96.53	10	98.87
15	93.73	4	93.16	22	96.24	12	98.85
19	93.65	9	92.88	25	96.29	29	98.91
25	93.46	14	92.71	29	96.10	30	98.90
28	93.41	19	92.69	31	96.35	Oct. 2	98.89
Mar. 1	93.42	24	92.53	Aug. 2	96.63	6	98.76

a Geological Survey.

25/42-14L1--Continued.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by maintenance employees)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 10	98.72	Oct. 31	a 97.33	Nov. 24	96.73	Dec. 15	96.05
15	98.60	Nov. 3	97.27	29	96.72	19	96.00
20	98.41	10	96.95	Dec. 2	96.55	26	95.41
25	97.77	14	96.86	5	96.33	31	95.48
31	97.38	19	96.81	10	96.15		

a By Geological Survey.

25/43-11G3 (*886, p. 919; 889; pp. 98, 99; 910, p. 170; 940, p. 145; 948, p. 144; 990, p. 235; 1020, p. 165; 1027, p. 216; 1075, p. 166). Spokane Water Division well 3. Taps water in tongue of fluvioglacial gravel in Spokane Valley. Water level depressed somewhat by continuous withdrawal in this or adjacent wells. Measurements are from float-gage readings made ordinarily at 7:30 a.m. by A. H. Schaefer, pumping plant engineer.

Water level, in feet below land-surface datum, 1947

Jan. 6	24.18	Apr. 7	19.90	July 14	27.98	Oct. 13	27.10
13	24.83	14	21.03	21	27.44	20	27.31
20	24.38	21	19.30	28	27.84	27	26.64
27	20.82	28	17.70	Aug. 4	27.98	Nov. 3	26.11
Feb. 3	21.64	May 12	16.54	11	29.09	10	26.08
10	22.72	19	17.93	18	29.13	17	26.11
17	21.84	26	21.40	25	29.45	24	26.50
24	21.32	June 2	25.28	31	29.68	Dec. 1	24.41
Mar. 3	21.82	9	23.08	Sept. 7	29.11	8	26.28
10	22.55	16	20.03	15	29.22	15	25.30
17	22.50	23	25.09	22	28.64	22	22.53
24	20.68	30	26.50	29	28.22	29	25.40
31	20.90	July 7	27.82	Oct. 6	28.68		

25/43-11G6 (886, p. 919; *889, pp. 101-107; 910, p. 171; 940, p. 146; 948, p. 145; 990, p. 236; 1020, p. 166; 1027, p. 217; 1075, p. 166). Spokane Water Division "Gage well" 1. Taps water in fluvioglacial gravel in the Spokane Valley. Affected by pumping in adjacent wells. Water levels, in feet below land-surface datum, 1947: Mar. 4, 52.57; May 24, 50.73; July 21, 58.02; Nov. 1, 57.06.

25/43-11K1 (886, p. 920; *889-B, pp. 108-113; 910, p. 171; 940, p. 146; 948, p. 146; 990, p. 237; 1020, p. 166; 1027, p. 217; 1075, p. 166). Spokane Water Division "Gage well" 2. Taps water in fluvioglacial gravel in the Spokane Valley. Water level moderately depressed by continuous withdrawal from adjacent wells. Water levels, in feet below land-surface datum, 1947: Mar. 4, 63.15; May 24, 60.77; July 21, 67.28; Nov. 1, 67.26.

25/43-14K1 (886, p. 920, *889-B, pp. 113-114; 910, p. 172; 940, p. 147; 948, p. 146; 990, p. 236; 1020, p. 166; 1027, p. 217; 1075, p. 166). Washington Water Power Co. well 3. Ohio Match Co. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947

Feb. 28	43.26	May 24	40.72	July 21	47.17	Nov. 1	a47.35
Mar. 4	43.56	July 18	47.07	Aug. 29	49.32	Dec. 12	46.35
Apr. 18	42.31						

a Pump shut down.

25/43-17D1 (886, p. 921; *889-B, pp. 114-115; 910, p. 172; 940, p. 147; 948, p. 146; 990, p. 237; 1020, p. 166; 1027, p. 217; 1075, p. 166). Washington Water Power Co. well 88. New Method Laundry. Taps water in fluvioglacial gravel.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28 a	45.99	May 23	44.09	July 21	48.46	Oct. 31	48.95
Mar. 4	46.16	July 18	48.25	Sept. 2	50.06	Dec. 12	48.00
Apr. 18	45.33						

a Pump shut down.

25/44-2B1 (886, p. 921; *889-B, pp. 115-116; 910, p. 172; 940, p. 147; 948, p. 146; 990, p. 237; 1020, p. 166; 1027, p. 217; 1075, p. 167). Washington Water Power Co. well 49. Trentwood Irrigation District. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947

Feb. 28 a	96.61	May 23	94.66	July 21	98.10	Oct. 31	101.12
Mar. 4	96.55	July 18	97.91	Aug. 29	101.55	Dec. 12	99.47
Apr. 18 a	95.79						

25/44-15E1 (*886, p. 921; 889-B, pp. 118-119; 910, p. 173; 940, p. 147; 948, p. 147; 990, p. 237; 1020, pp. 166-167; 1027, p. 217; 1075, p. 167). Washington Water Power Co. well 15. Modern Electric Water well 5. Taps water in fluviogacial gravel in Spokane Valley. One or more of three pumps operating in well at time of each measurement.

Water level, in feet below land-surface datum, 1947
(From float-gage readings made by maintenance men)

Jan. 4	131.57	Apr. 12	129.81	July 12	137.02	Oct. 4	134.80
11	131.01	18 b	130.00	18 b	137.72	11	134.67
18	131.36	19	129.67	19	137.81	18	134.51
25	131.78	26	129.21	21 a	138.01	25	134.38
Feb. 1	130.85	May 3	128.82	26	137.98	Nov. 1 a	134.36
8	130.71	8 c	127.72	Aug. 2	138.68	1	134.34
15	130.65	10	131.51	9	139.49	8	134.31
22	130.62	17	131.66	16	140.06	15	134.28
28 b	130.40	24 a	131.88	23	141.18	22	134.10
Mar. 1	130.60	24	132.38	29 b	141.39	29	133.79
4 a	130.43	31	133.35	30	141.02	Dec. 6	133.51
8	130.51	June 7	133.52	Sept. 6	135.31	12 b	133.48
15	130.33	14	134.11	13	135.17	13	133.27
22	130.19	21	134.96	20	135.06	20	133.02
29	130.11	28	135.42	27	134.93	27	132.78
Apr. 5	129.96	July 5	136.21				

a By Geological Survey.
b By Washington Water Power Co.
c Pump shut down.

25/44-19D1 (886, p. 921; *889-B, pp. 119-121; 910, p. 173; 940, p. 148; 948, p. 147; 990, p. 237; 1020, p. 167; 1027, p. 218; 1075, p. 167). Washington Water Power Co. well 5. Edgecliff Sanitarium. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947

Feb. 28	75.17	May 24 a	72.43	July 21 a	98.10	Nov. 1	79.09
Mar. 4	75.38	July 18 a	78.19	Aug. 29 a	80.40	Dec. 12	78.03
Apr. 18	74.31						

a Pumping.

25/44-22N1 (*948, p. 147; 990, p. 238; 1020, p. 167; 1027, p. 218; 1075, p. 167). Modern Electric Water Co. well 7. Taps water in fluvioglacial gravel in Spokane Valley. 300 gallon-a-minute pump operating in the well.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by R. Hagan, maintenance man)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	141.50	Apr. 9	140.87	July 9 b	146.22	Oct. 8	145.45
8	141.83	16	140.59	16 b	146.61	15	145.25
15	142.20	23	140.35	21 a	146.66	22	145.16
22	142.48	30	139.92	23 b	146.87	29	144.98
29	142.14	May 7 b	143.61	30 b	147.19	Nov. 1 a	144.83
Feb. 5	141.42	12	139.15	Aug. 6 c	147.72	5	114.87
12	141.78	12 b	143.08	13 c	148.21	12	144.79
19	141.60	21 b	142.66	20 c	148.44	19	144.65
26	141.48	24 b	142.79	27 c	148.52	26	144.48
Mar. 4 a	141.40	28 b	142.91	Sept. 3 c	149.01	Dec. 3	144.32
5	141.45	June 4 b	143.75	9	145.48	10	144.16
12	141.60	11 b	144.04	17	145.39	17	143.91
19	141.65	18 b	144.87	24	145.30	24	143.79
26	141.39	25 b	145.36	Oct. 1	145.37	31	143.68
Apr. 2	141.10	July 2 b	146.02				

a By Geological Survey.
b Pumping for domestic and irrigation use.
c Pumping for irrigation only; all other readings while pumping for domestic use only.

25/44-21J1 (886, p. 922; *889-B, pp. 121-122; 910, p. 173; *940, p. 148; 948, p. 147; 990, p. 237; 1020, p. 167; 1027, p. 218; 1075, p. 167). Washington Water Power Co. well 17. Modern Electric Water Co. well 3. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947

Feb. 28	98.14	May 24	a 99.34	July 21	a105.36	Nov. 1	101.58
Mar. 4	98.16	July 18	a105.18	Aug. 29	a107.42	Dec. 12	100.85
Apr. 18	97.20						

a Pumping.

25/44-23D1 (886, p. 922; *889-B, pp. 123-124; 910, p. 173; 940, p. 148; 948, p. 148; 990, p. 238; 1020, p. 167; 1027, p. 219; 1075, p. 168). Washington Water Power Co. well "L. A. L." Lewis A. Lewis. Taps water in fluvioglacial gravel in the Spokane Valley. Water levels, in feet below land-surface datum, 1947: Mar. 4, 86.72; May 24, 83.68, pumping; July 21, 59.33; Nov. 1, 62.92.

25/45-10C1 (886, p. 922; *889-B, p. 125; 910, p. 173; 940, p. 148; 948, p. 148; 990, p. 238; 1020, p. 168; 1027, p. 219; 1075, p. 168). Washington Water Power Co. well 41. Mrs. George Clark. Taps water in fluvioglacial gravel in the Spokane Valley. Water levels, in feet below land-surface datum, 1947: Mar. 3, 60.48; May 23, 56.21; July 21, 59.33; Nov. 1, 62.92.

25/45-16C1 (*886, p. 922; 889-B, pp. 126-127; 910, p. 173; 940, p. 148; 948, p. 148; 990, p. 238; 1020, p. 168; 1027, p. 219; 1075, p. 168). U. S. 70. Washington Water Power Co. well 38. Inland Empire Paper Co. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by local observer)

Jan. 4	102.42	Feb. 2	102.79	Feb. 28	b102.61	Mar. 16	103.10
11	102.78	9	102.71	Mar. 2	102.62	23	103.10
18	103.40	16	102.89	3	a102.75	30	102.71
25	103.44	23	102.62	9	102.97	Apr. 6	102.44

a By Geological Survey.
b By Washington Water Power Co.

25/45-16C1--Continued.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by local observer)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 13	102.18	June 22	100.05	Aug. 24	103.81	Nov. 1	a105.46
18	b 102.07	29	100.59	29	b104.02	5	105.46
20	102.09	July 6	101.29	31	104.10	9	105.39
27	101.48	13	101.77	Sept. 7	104.30	16	105.54
May 4	100.82	18	b101.93	14	104.41	27	105.65
11	100.59	20	102.16	21	104.87	30	104.85
18	99.09	21	a102.11	28	105.31	Dec. 7	105.01
23	a 98.81	27	102.42	Oct. 5	105.54	12	b105.10
25	98.69	Aug. 3	102.71	11	105.48	14	105.06
June 1	99.50	11	103.14	18	105.42	21	104.86
8	99.73	17	103.53	26	105.38	28	104.77
15	99.71						

a By Geological Survey.
b By Washington Water Power Co.

25/45-18A1 (886, p. 923; *889-B, pp. 127-128; 910, p. 174; 940, p. 149; 948, p. 148; 990, p. 239; 1020, p. 168; 1027, p. 219; 1075, p. 168). Washington Water Power Co. well 40. O. B. Nilson. Taps water in fluvioglacial gravel in the Spokane Valley. Water levels, in feet below land-surface datum, 1947: Feb. 28, 87.31; Apr. 18, 86.54, pumping; July 18, 87.16, pumping; Aug. 29, 89.24, pumping.

26/43-7Q1 (*948, p. 149; 990, p. 239; 1020, p. 168; 1027, p. 219; 1075, p. 168). C. E. Marr. Taps water in fluvioglacial gravel.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 28	75.78	Apr. 18	75.52	July 20	75.63
Mar. 4	76.36	May 23	75.74	Oct. 31	76.52

26/43-16D1 (*1020, pp. 168-169; 1027, p. 220; 1075, p. 169). Defense Plant Corporation test well. Taps water in fluvioglacial gravel. Measurements are from float-gage readings by company employees. Water levels, in feet below land-surface datum, 1947: Mar. 4, 160.86; May 23, 160.38; July 21, 160.22; Oct. 31, 161.07.

26/43-19A1 (886, p. 923; *889-B, pp. 128-129; 910, p. 174; 940, p. 149; 948, p. 149; 990, p. 239; 1020, p. 169; 1027, p. 220; 1075, p. 169). Washington Water Power Co. well "C. H." Whitworth Water District No. 2. Taps water in fluvioglacial gravel. Pumping at time of each measurement.

Water level, in feet below land-surface datum, 1947
(From float-gage readings by A. O. Brown, observer)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	137.37	July 21	137.47	Sept. 20	136.91	Nov. 5	137.61
5	137.25	Aug. 1	136.17	25	136.92	10	137.62
10	137.12	5	136.21	30	137.22	15	137.63
15	137.04	10	136.27	Oct. 1	137.35	20	137.64
20	137.00	15	136.43	5	137.40	25	137.64
25	136.82	20	136.51	10	137.43	Dec. 1	137.56
30	136.57	25	136.53	15	137.55	5	137.57
Feb. 1	136.57	30	136.48	20	137.58	10	137.59
28	b135.91	Sept. 1	136.79	25	137.56	15	137.55
Mar. 4	a136.50	5	136.79	29	137.57	20	137.52
Apr. 18	b135.92	10	136.83	31	a 137.05	25	137.42
May 23	a137.54	15	136.89	Nov. 1	137.61	30	137.46

26/43-34P1 (886, p. 923, *889-B, pp. 129-131; 910, p. 174; 940, p. 149; 948, p. 149; 990, p. 240; 1020, p. 170; 1027, p. 220; 1075, p. 169). Washington Water Power Co. well 80. Great Northern Railway Co. Taps water in fluvioglacial gravel. Pumping at time of each measurement. Water levels, in feet below land-surface datum, 1947: Mar. 4, 175.55; July 21, 177.34; Oct. 31, 178.92.

26/44-32R1 (886, p. 923; *889-B, p. 131; 910, p. 175; 940, p. 149; 990, p. 240; 1020, p. 170; 1027, p. 220; 1075, p. 169). Washington Water Power Co. well 46. Hutton Settlement. Taps water in fluvioglacial gravel in the Spokane Valley.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 28	96.33	May 23	93.16	July 21	a98.51	Oct. 31	101.15
Mar. 4	96.37	July 18	a98.18	Sept. 2	99.80	Dec. 12	104.60
Apr. 18	95.46						

Thurston County

Alluvial and glacial plains of the Puget Trough

15/3W-13D1. J. T. Hagerty. NW¼NW¼ sec. 13, T. 15 N., R. 3 W., 150 feet west of U. S. Highway 99. 0.5 mile north of junction of State Highway 9, in frame pump house directly behind the Elk Service Station. Drilled well, diameter 6 inches, depth 51 feet. Taps regional water table in outwash gravels. Measuring point, top of north side of 6-inch steel casing, at land-surface datum which is about 171 feet above sea level. Water levels, in feet below land-surface datum, 1947: Jan. 13, 21.00; Aug. 12, 29.89; Dec. 16, 24.64.

16/1W-19G1 (*990, p. 240; 1020, p. 170; 1027, p. 221; 1075, p. 169). Town of Tenino. Taps water in gravel in fluvioglacial deposits. Water levels, in feet below land-surface datum, 1947: Mar. 8, 6.72; May 16, 7.44; Aug. 12, 10.51; Dec. 16, 3.61.

16/2W-29E1. U. S. Army. SW¼NW¼ sec. 29, T. 16 N., R. 2 W., approximately 5 miles west of Tenino and 2 miles north of U. S. Highway 99 on Mound Prairie, in yard 75 feet behind abandoned farmhouse. Drilled well, diameter 8 inches, depth 60 feet. Water from regional water table. Measuring point, top west side of 8-inch steel casing, 0.8 foot above land-surface datum which is about 209 feet above sea level. Water levels, in feet below land-surface datum, 1947: May 5, 22.70; Aug. 12, 28.18; Dec. 16, 25.61.

16/3W-29N1. Owner unknown. SW¼SW¼ sec. 29, T. 16 N., R. 3 W., about 800 feet east of north-south gravel road, 1 mile north of junction of State Highways 9 and 1M, 90 feet north of lane, in open field. Drilled well, diameter 6 inches, depth 58 feet. Water from regional water table. Measuring point, top south side of metal ring on 6-inch casing, at land-surface datum which is about 138 feet above sea level. Water levels, in feet below land-surface datum, 1947: May 3, 38.64; Aug. 12, 40.61; Dec. 16, 39.27.

Walla Walla County

Walla Walla River Basin

6/35-16B1 (*777, p. 155; *817, p. 251; 840, p. 343; 845, p. 408; 886, p. 622; 910, p. 24; 940, p. 25; 990, p. 240; 1020, p. 170; 1027, p. 221; 1075, p. 170). Claude Winn. Taps water in alluvial deposit of the Little Walla Walla River.

6/35-16B1-Continued.

Water level, in feet below land-surface datum, 1946-47

Date	Water level	Date	Water level	Date	Water level
Dec. 13, 1946	4.79	Mar. 25, 1947	5.19	June 5, 1947	5.32
18	4.94	31	5.22	13	5.17
26	4.95	Apr. 8	5.02	23	5.44
Jan. 10, 1947	5.17	17	5.22	July 9	5.57
21	4.89	29	5.09	16	5.37
31	4.66	May 1	5.15	Sept.10	5.64
Feb. 11	4.61	8	5.12	Oct. 8	5.05
20	4.23	20	4.75	Nov. 19	4.57
Mar. 3	4.67	June 2	5.37	Dec. 19	4.78
13	4.82				

Whatcom County

Alluvial and glacial plains of the Puget Trough

39/2E-25R1 (*1075, p. 170). J. W. Elsbree. Water from regional water table in sub-till sand and gravel zone. Water levels, in feet below land-surface datum, 1947: Feb. 12, 56.60; Apr. 17, 56.45; Aug. 14, 58.60; Dec. 19, 57.86.

40/1-4J1 (*990, p. 241; 1020, p. 170; 1027, p. 221; 1075, p. 170). City of Blaine. Taps water in fluvioglacial deposits (?). Water levels, in feet below land-surface datum, 1947: Feb. 12, 66.45; Apr. 17, 66.15; Dec. 19, 69.93.

40/3-15E1. City of Lynden. SW¼NW¼ sec. 15, T. 40 N., R. 3 E., about 1.25 miles northeast of Lyden, in cedar grove 150 feet north of gravel road at a point 600± feet east of the tee-intersection at W¼ corner of section. Drilled well diameter 10 inches, depth 68 feet. Water from regional water table. Measuring point, top of 2-inch plank decking, at land-surface datum which is about 100 feet above sea level. Water levels, in feet below land-surface datum, 1947: Feb. 12, 12.67; Apr. 17, 12.64; Aug. 14, 14.67; Dec. 19, 14.55.

41/1-31Q1 (*990, p. 241; 1075, p. 170). City of Blaine. Taps artesian water in glacial deposits. Water levels, in feet above land-surface datum, 1947: Feb. 12, 21.5; Apr. 17, 22.5; Aug. 16, 20.5; Dec. 19, 20.5.

Whitman County

Palouse River Basin

14/45-4N1 (*845, p. 710; 886, p. 928; 910, p. 179; 940, p. 151; 948, p. 153; 990, p. 241; 1020, p. 170; 1027, p. 221; 1075, p. 170). Emory Crawford. Confined water (artesian) in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 5, 46.83; May 25, 47.25; Oct. 19, 48.20.

14/45-5B1 (*845, p. 710; 886, p. 928; 910, p. 179; 940, p. 151; 948, p. 153; 990, p. 241; 1020, p. 170; 1027, p. 221; 1075, p. 170). Washington State College well 1. Confined water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 5, 29.70; May 25, 30.21; July 19, 31.55; Oct. 19, 30.90.

14/45-5D2 (*845, p. 711; 886, p. 928; 910, p. 179; 940, p. 151; 948, p. 153; 990, p. 242; 1020, p. 170; 1027, p. 221; 1075, p. 170). Standard Lumber Co. Taps confined water (artesian) in basalt. Water level, in feet below land-surface datum, 1947: Mar. 5, 2.95.

14/45-11N2 (*840, p. 633; 845, p. 696; 886, p. 925; 910, p. 150; 948, p. 150; 990, p. 242; 1020, p. 170; 1027, p. 221; 1075, p. 170). Geological Survey. Water-table well. Water levels, in feet below land-surface datum, 1947: Mar. 5, 3.03; May 25, 4.38; July 19, 6.26; Oct. 19, 6.79.

15/46-20K1 (*777, pp. 261-262; 817, pp. 488, 490, 491; *840, pp. 628, 630; 845, p. 690; 948, p. 150; 990, p. 244; 1020, p. 170; 1027, p. 221; 1075, p. 170). J. D. Carson. Water-table well. Water levels, in feet below land-surface datum, 1947: Mar. 5, 5.89; May 25, 6.39; July 19, 7.18; Oct. 19, 7.66.

18/41-1B1. Inland Empire Milling Co. NW¼NE¼ sec. 1, T. 18 N., R. 41 E., in town of St. John, northwest of intersection of Park and Front Streets, 48 feet north of centerline of Front Street and 120 feet west of centerline of Park Street. Drilled well, diameter 6¼ inches, depth 84 feet. Water probably from basalt bedrock. Measuring point, top of 6¼-inch steel casing, 1.2 feet above land-surface datum which is about 2,100 feet above sea level.

Water level, in feet below land-surface datum, 1945-47

Date	Water level	Date	Water level	Date	Water level
Oct. 7, 1945	3.37	Oct. 12, 1946	2.45	July 19, 1947	3.71
Apr. 8, 1946	2.27	Mar. 5, 1947	2.35	Oct. 19	2.40
Aug. 19	3.59	May 25	2.37		

18/43-35P1 (*990, p. 244; 1020, p. 171; 1027, p. 221; 1075, p. 171). G. H. Noe. Taps confined water in basalt. Water levels, in feet below land-surface datum, 1947: Mar. 5, 9.43; May 25, 10.98; July 19, 13.25; Oct. 19, 14.85.

WYOMING

By Frank Visher and D. A. Warner

PROGRAM OF WORK

Periodic measurements of water level in observation wells in Wyoming were continued in 1947 in cooperation with the Wyoming State Planning and Water Conservation Board. Measurements of the key observation wells were continued as described in Water-Supply Paper 1075, page 172.

At the beginning of 1947, 197 wells were being measured, and at the end of 1947, 124 wells were being measured. During the year, 341 water-level measurements were made. The key observation wells were measured monthly, and the other wells less frequently.

FLUCTUATIONS OF WATER LEVEL

A general description of the two areas under study in Laramie County is given in Water-Supply Paper 990, pages 246-251.

Crook, Goshen, Fremont, and Sublette Counties

The observation wells in these counties penetrate alluvial deposits near the banks of streams, and the water levels in these wells fluctuated in response to variations in the stages of the streams and to seasonal differences in precipitation.

Laramie County

Egbert-Pine Bluffs-Carpenter area

In the Egbert-Pine Bluffs part of the Egbert-Pine Bluffs-Carpenter area there was an average decline in water level of 0.5 foot from April 1946 to April 1947 in 39 wells. This decline may be attributed largely to increased pumping from wells in 1947 and, in part, to the fact that precipitation between April 1946 and April 1947 was 1.6 inches less than the precipitation between April 1945 and April 1946.

In the Carpenter area the average decline of water levels in 15 wells was 0.13 foot. The smaller decline in this area probably is due to the geologic conditions there which are more favorable for recharge.

Cheyenne area

In the Cheyenne well field the water levels in wells are rarely comparable to those in other areas because all the wells are affected by pumping. Pumping is seasonal, and the periods of pumping in any well varies. In the past, the water levels in the well field have declined steadily since pumping began, but they now appear to be approaching equilibrium under present pumping and climatic conditions.

WELL-NUMBERING SYSTEM

An explanation of the well-numbering system used in this report may be found in Water-Supply Paper 990, pages 251-252. The eight key observation wells are numbered in accordance with a Nation-wide network of observation wells.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Crook County

54-64-7bc (*1075, p. 174). U. S. 145. S. J. Brimmer.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	15.33	May 7	14.99	July 9	14.79	Oct. 10	15.62
Mar. 19	14.80	22	15.09	Aug. 14	15.15	Nov. 30	15.54
Apr. 15	14.70	June 3	15.18	Sept.18	15.45	Dec. 3	15.72

Fremont County

34-98-32baa (*1075, p. 174). U. S. 143. Alfonso Biasibetti. Measurements discontinued after July 1947.

Water level, in feet below land-surface datum, 1947

Jan. 29	24.33	Mar. 24	25.13	May 20	25.80	July 31	26.66
Feb. 25	24.70	Apr. 30	25.56	June 23	25.90		

Goshen County

24-64-29ada (*1075, p. 174). U. S. 140. National Park Service.

Water level, in feet below land-surface datum, 1947

Jan. 29	18.59	Apr. 30	18.09	July 10	16.12	Nov. 3	18.50
Mar. 6	18.63	May 15	18.03	Aug. 25	17.15	Dec. 3	18.52
Apr. 4	18.17	June 17	17.87	Sept.17	17.45		

Laramie County

Cheyenne area

15-67-32dba (*948, p. 179; 990, p. 258; 1020, p. 177; 1027, p. 227; 1075, p. 175). Warren Livestock Co. Measurements discontinued Dec. 31, 1946.

15-68-30cd (*948, p. 180; 990, p. 258; 1020, p. 177; 1027, p. 227; 1075, p. 175). Warren Livestock Co. Measurements discontinued Dec. 31, 1946.

15-68-33ab (*948, p. 181; 990, p. 258; 1020, p. 177; 1027, p. 225; 1075, p. 175). Warren Livestock Co. Measurements discontinued Dec. 31, 1946.

15-68-34aaa (*948, p. 179; 990, p. 258; 1020, p. 177; 1027, p. 225; 1075, p. 175). Warren Livestock Co. Measurements discontinued Dec. 31, 1946.

15-69-5abd (*990, p. 258; 1020, p. 177; 1027, p. 225; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-5ddb (*990, p. 259; 1020, p. 177; 1027, p. 225; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-6abb (*948, p. 182; 990, p. 259; 1020, p. 177; 1027, p. 225; 1075, p. 175). King Merritt. Measurements discontinued Dec. 31, 1946.

15-69-6acc (*948, p. 182; 990, p. 259; 1020, p. 177; 1027, p. 225; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-6bdb (*948, p. 182; 990, p. 259; 1020, p. 178; 1027, p. 225; 1075, p. 175). King Merritt. Measurements discontinued Dec. 31, 1946.

15-69-6ddd (*990, p. 259; 1020, p. 178; 1027, p. 225; 1075, p. 175). King Merritt. Measurements discontinued Dec. 31, 1946.

15-69-8cbc (*948, p. 181; 990, p. 259; 1020, p. 178; 1027, p. 225; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-9aaa (*948, p. 180; 990, p. 259; 1020, p. 178; 1027, p. 225; 1075, p. 175). King Merritt. Measurements discontinued Dec. 31, 1946.

15-69-9caa (*948, p. 179; 990, p. 260; 1020, p. 178; 1027, p. 225; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-10cd (*948, p. 180; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 175). Mr. Van Tassel. Measurements discontinued Dec. 31, 1946.

15-69-12cc (*948, p. 180; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 175). E. A. Goodman. Measurements discontinued Dec. 31, 1946.

15-69-15abb (*990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 175). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-18ddd (*948, p. 179; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 175). Mr. Lorenz. Measurements discontinued Dec. 31, 1946.

15-69-21abb (*948, p. 181; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 176). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

15-69-24bb (*948, p. 180; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 176). E. A. Goodman. Measurements discontinued Dec. 31, 1946.

14-66-31bd (U. S. 67). (*948, p. 181; 990, p. 260; 1020, p. 178; 1027, p. 226; 1075, p. 176). State of Wyoming. Measurements discontinued Dec. 31, 1946.

14-67-10ccc (*940, p. 168; 948, p. 175; 990, p. 261; 1020, p. 178; 1027, p. 226; 1075, p. 176). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

14-67-31bbd (*940, p. 167; 948, p. 175; 990, p. 261; 1020, p. 178; 1027, p. 226; 1075, p. 176). Mark T. Cox, III. Measurements discontinued Dec. 31, 1946.

14-67-36ccc (*940, p. 167; 948, p. 175; 990, p. 261; 1020, p. 178; 1027, p. 226; 1075, p. 176). Curtis Vaughn.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 17	55.18	Apr. 30	50.64	Nov. 5	54.46
Apr. 7	56.53	June 24	39.09		

14-68-2dd (*948, p. 179; 990, p. 261; 1020, p. 178; 1027, p. 226; 1075, p. 176). Fred Koster. No measurements made in 1947.

14-68-14cb (*940, p. 167; 948, p. 174; 990, p. 261; 1020, p. 179; 1027, p. 226; 1075, p. 176). U. S. 66. City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 17	8.65	Apr. 30	8.52	Nov. 5	8.44
Apr. 7	8.58	June 24	8.27		

14-68-17dcd (*940, p. 166; 948, p. 173; 990, p. 261; 1020, p. 179; 1027, p. 226; 1075, p. 176). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 17	6.07	Apr. 28	5.52	Nov. 5	7.13
Apr. 7	5.38	June 24	5.30		

14-68-20abc (*940, p. 166; 948, p. 173; 990, p. 261; 1020, p. 179; 1027, p. 226; 1075, p. 176). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 17	9.74	Apr. 30	9.82	Nov. 5	9.87
Apr. 7	9.85	June 24	8.79		

14-68-20bab (*940, p. 166; 948, p. 173; 990, p. 261; 1020, p. 179; 1027, p. 226; 1075, p. 176). City of Cheyenne. Water level, in feet below land-surface datum, 1947: Feb. 17, 21.27.

14-68-20bbb (*940, p. 166; 948, p. 173; 990, p. 261; 1020, p. 179; 1027, p. 226; 1075, p. 176). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Feb. 17, 9.61; Apr. 7, 14.00; Apr. 30, 10.38; June 24, 5.30.

14-68-20bbc (*940, p. 165; 948, p. 173; 990, p. 262; 1020, p. 179; 1027, p. 226; 1075, p. 176). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

14-68-23ddc (*940, p. 162; 948, p. 170; 990, p. 262; 1020, p. 179; 1027, p. 227; 1075, p. 176). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 17	a 82.25	Apr. 30	60.94	Nov. 5	59.40
Apr. 7	62.53	June 24	58.90		

a Pumped recently.

14-68-23ddd (*940, p. 162; 948, p. 170; 990, p. 262; 1020, p. 179; 1027, p. 227; 1075, p. 176). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 17	12.30	Apr. 30	7.89	Nov. 5	7.09
Apr. 7	8.95	June 24	5.94		

14-68-25aba (*940, p. 164; 948, p. 171; 990, p. 262; 1020, p. 179; 1027, p. 227; 1075, p. 176). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

14-68-25bcb (*1075, p. 177). City of Cheyenne. Water level, in feet below land-surface datum, 1947: Nov. 5, 29.38.

14-68-25dda (*940, p. 164; 948, p. 171; 990, p. 262; 1020, p. 179; 1027, p. 227; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 30, 38.40; June 24, 37.35; Nov. 5, 36.89.

14-68-26bdd2 (*1027, p. 227; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 7, 11.02; Apr. 30, 8.97; June 24, 5.92; Nov. 5, 12.29.

14-68-26bdc (*940, p. 171; 948, p. 178; 990, p. 262; 1020, p. 180; 1027, p. 227). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

14-68-26cbb (*940, p. 163; 948, p. 171; 990, p. 262; 1020, p. 179; 1027, p. 227; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Feb. 17, 67.57; Apr. 7, 66.77; Apr. 30, 65.42; June 24, 64.25. Measurements discontinued after June 1947.

14-68-26cbc1 (*940, p. 162; 948, p. 170; 990, p. 262; 1020, p. 180; 1027, p. 227; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 7, 31.82; Apr. 28, 29.78; June 24, 27.12.

14-68-26db (*940, p. 171; 948, p. 178; 990, p. 262; 1020, p. 180; 1027, p. 227; 1075, p. 177). Rex Crews. Measurements discontinued Dec. 31, 1946.

14-68-26dd (*940, p. 171; 948, p. 178; 990, p. 262; 1020, p. 180; 1027, p. 227; 1075, p. 177). Irvin O'Connor. Measurements discontinued Dec. 31, 1946.

14-68-27dcc (*940, p. 162; 948, p. 169; 990, p. 263; 1020, p. 180; 1027, p. 227; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 28, 48.68; June 24, 46.28; Sept. 10 31.45.

14-68-28bb (*948, p. 179; 990, p. 263; 1020, p. 180; 1027, p. 228; 1075, p. 177). Arthur Francis. Measurements discontinued Dec. 31, 1946.

14-68-30daa (*940, p. 171; 948, p. 178; 990, p. 263; 1020, p. 180; 1027, p. 228; 1075, p. 177). Irwin O'Connor. Measurements discontinued Dec. 31, 1946.

14-68-33dcc (*1027, p. 228; 1075, p. 177). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 14	139.89	Apr. 28	139.34	Sept.10	139.64
Apr. 7	139.89	June 24	139.67	Nov. 4	139.91

14-68-34aab (*940, p. 162; 948, p. 169; 990, p. 263; 1020, p. 180; 1027, p. 228; 1075, p. 177). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 28, 40.62; June 24, 37.12; Sept. 10, 45.94.

14-68-34ccb (*990, p. 263; 1020, p. 180; 1027, p. 228; 1075, p. 177). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	74.45	Apr. 28	72.33	Sept. 9	72.41
Apr. 7	73.82	June 24	72.18	Nov. 4	78.40

14-68-34ddd (*1020, p. 180; 1027, p. 228; 1075, p. 177). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 2	87.90	Apr. 28	85.64	Sept.10	88.99
Apr. 7	87.09	June 24	86.68	Nov. 4	86.25

14-68-35cbc (*1027, p. 228; 1075, p. 178). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	80.21	Apr. 28	75.65	Sept. 9	76.77
Apr. 7	78.58	June 24	75.12	Nov. 4	76.74

14-68-35cdd (*1027, p. 228; 1075, p. 178). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	70.68	Apr. 28	69.12	Sept. 9	71.35
Apr. 7	69.77	June 24	70.10	Nov. 4	71.09

14-68-36aac (*1020, p. 181; 1027, p. 228; 1075, p. 178). Arthur King. Measurements discontinued Dec. 31, 1946.

14-68-36ad (*940, p. 164; 948, p. 172; 990, p. 263; 1020, p. 181; 1027, p. 228; 1075, p. 178). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 14	36.40	Apr. 30	31.88	Sept.10	31.71
Apr. 7	34.73	June 24	30.60	Nov. 5	30.90

14-68-36ac (*940, p. 165; 948, p. 172; 990, p. 263; 1020, p. 165; 1027, p. 229; 1075, p. 178). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 30, 30.62; June 24, 27.53; Sept. 10, 31.24; Nov. 4, 28.30.

14-68-36bc (*940, p. 165; 948, p. 172; 990, p. 263; 1020, p. 181; 1027, p. 229; 1075, p. 178). City of Cheyenne. Water levels, in feet below land-surface datum, 1947: Apr. 30, 30.57; June 24, 30.78; Sept. 10, 32.18; Nov. 4, 32.59.

13-66-18ad (*948, p. 179; 990, p. 263; 1020, p. 181; 1027, p. 229; 1075, p. 178). P. J. Black Lumber Co. No measurements made in 1947.

13-66-32ad (*948, p. 178; 990, p. 263; 1020, p. 181; 1027, p. 229; 1075, p. 178). Dorian Lumis. No measurements made in 1947.

13-66-32cad (*940, p. 168; 948, p. 176; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). W. J. Merna. No measurements made in 1947.

13-67-2da (*948, p. 178; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). Bresnahan Estate. No measurements made in 1947.

13-67-6add (*940, p. 167; 948, p. 175; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). A. L. King. No measurements made in 1947.

13-67-6daa (*940, p. 167; 948, p. 175; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). A. L. King. Measurements discontinued Dec. 31, 1946.

13-67-6ddd (*940, p. 167; 948, p. 175; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). A. L. King. Measurements discontinued Dec. 31, 1946.

13-67-11aaa (*940, p. 170; 948, p. 177; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). J. J. Brannigan. No measurements made in 1947.

13-67-13bb (*940, p. 170; 948, p. 177; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 178). Warren Livestock Co. No measurements made in 1947.

13-67-15aa (*940, p. 170; 948, p. 176; 990, p. 264; 1020, p. 181; 1027, p. 229; 1075, p. 179). Warren Livestock Co. No measurements made in 1947.

13-67-16ab (*940, p. 169; 948, p. 176; 990, p. 264; 1020, p. 182; 1027, p. 229; 1075, p. 179). Warren Livestock Co. No measurements made in 1947.

13-67-19ca (*940, p. 170; 948, p. 177; 990, p. 264; 1020, p. 182; 1027, p. 229; 1075, p. 179). Warren Livestock Co. No measurements made in 1947.

13-67-21bd (*940, p. 170; 948, p. 177; 990, p. 264; 1020, p. 182; 1027, p. 229; 1075, p. 179). Warren Livestock Co. No measurements made in 1947.

13-67-27bb (*940, p. 171; 948, p. 177; 990, p. 265; 1020, p. 182; 1027, p. 230; 1075, p. 179). Warren Livestock Co. No measurements made in 1947.

13-67-33acl (*940, p. 168; 948, p. 176; 990, p. 265; 1020, p. 182; 1027, p. 230; 1075, p. 179). Union Pacific Railroad Co. No measurements made in 1947.

13-68-3bba (*1020, p. 182; 1027, p. 230; 1075, p. 179). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 14	79.60	Apr. 28	79.05	Sept.10	79.10
Apr. 7	79.60	June 24	79.20	Nov. 4	79.64

13-68-4aad (*1020, p. 182; 1027, p. 230; 1075, p. 179). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	73.36	Apr. 28	84.17	Sept.10	74.81
Apr. 7	84.34	June 24	75.28	Nov. 4	75.37

13-68-4acd (*1020, p. 182; 1027, p. 230; 1075, p. 179). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	99.83	Apr. 28	100.14	Sept.10	99.67
Apr. 7	99.93	June 24	99.87	Nov. 4	100.66

13-68-4cbc (*1027, p. 230; 1075, p. 179). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	171.58	Apr. 28	171.27	Sept.10	171.69
Apr. 7	171.76	June 24	171.74	Nov. 4	171.58

13-68-4dbb (*948, p. 181; 990, p. 265; 1020, p. 182; 1027, p. 230; 1075, p. 179). Arthur King. Measurements discontinued Dec. 31, 1946.

13-68-4dcc (*1020, p. 182; 1027, p. 230; 1075, p. 179). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	121.40	Apr. 28	119.21	Sept.10	118.50
Apr. 7	118.76	June 24	119.71	Nov. 4	119.87

13-68-8cb (*948, p. 181; 990, p. 265; 1020, p. 182; 1027, p. 230; 1075, p. 179). Bert McGee. No measurements made in 1947.

13-68-13cc (*948, p. 181; 990, p. 265; 1020, p. 183; 1027, p. 230; 1075, p. 179). James Morton.

Water level, in feet below land-surface datum, 1947

Feb. 14	38.50	Apr. 28	39.28	Sept. 9	42.74
Apr. 7	38.44	June 24	39.02		

13-68-14aad (*1020, p. 185; 1027, p. 231; 1075, p. 180). City of Cheyenne. Measurements discontinued Dec. 31, 1946.

13-68-14add (*1027, p. 231; 1075, p. 180). Patrick Finnerty. Water levels, in feet below land-surface datum, 1947: Feb. 2, 73.80; Apr. 7, 75.55; Apr. 28, 76.48; June 24, 75.12. Measurements discontinued after June 1947.

13-68-14bbb (*1027, p. 231; 1075, p. 180). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level
Feb. 14	84.50	Apr. 28	84.45	Sept. 9	84.93
Apr. 7	84.62	June 24	84.85	Nov. 4	85.20

13-68-14cbb (*1027, p. 232; 1075, p. 180). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	43.94	Apr. 28	44.00	Nov. 4	45.48
Apr. 7	44.00	Sept. 9	45.12		

13-68-14ddd (*1020, p. 183; 1027, p. 232; 1075, p. 180). City of Cheyenne.

Water level, in feet below land-surface datum, 1947

Feb. 14	77.32	Apr. 28	77.02	Sept. 9	80.05
Apr. 7	77.67	June 24	78.32	Nov. 4	80.78

13-68-15cdb (*1020, p. 183; 1027, p. 232; 1075, p. 180). Mrs. A. L. Boyce. No measurements made in 1947.

13-68-18ab (*940, p. 171; 948, p. 178; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 180). William Conrad. No measurements made in 1947.

13-68-31cc (*940, p. 171; 948, p. 178; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 180). Warren Livestock Co. No measurements made in 1947.

13-69-11ad (*948, p. 178; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Bert McGee. No measurements made in 1947.

13-69-12ad (*948, p. 179; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Bert McGee. No measurements made in 1947.

13-69-24dd (*948, p. 181; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Warren Livestock Co. No measurements made in 1947.

13-69-34dd (*940, p. 171; 948, p. 178; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Warren Livestock Co. No measurements made in 1947.

12-65-6ab (*940, p. 172; 948, p. 178; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Owner unknown. Measurements discontinued Dec. 31, 1946.

12-67-5ddd (*940, p. 170; 948, p. 177; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Warren Livestock Co. No measurements made in 1947.

12-67-11ba (*940, p. 170; 948, p. 177; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Warren Livestock Co. No measurements made in 1947.

12-68-1dc (*940, p. 168; 948, p. 177; 990, p. 265; 1020, p. 183; 1027, p. 232; 1075, p. 181). Warren Livestock Co. No measurements made in 1947.

Laramie County

Egbert-Pine Bluffs--Carpenter area

15-60-8cb (*910, p. 182; 940, p. 185; 948, p. 162; 990, p. 265; 1020, p. 184; 1027, p. 232; 1075, p. 181). Victor Sundlin. Water levels, in feet below land-surface datum, 1947: Apr. 3, 89.33; Apr. 29, 89.44; June 26, 89.51.

15-60-29bbb (*1027, p. 233; 1075, p. 181). W. T. Young. Water levels, in feet below land-surface datum, 1947: Apr. 3, 57.43; Apr. 29, 57.50.

15-60-30cb (*910, p. 183; 940, p. 159; 948, p. 163; 990, p. 266; 1020, p. 184; 1027, p. 233; 1075, p. 181). Mary A. Simpson. Water levels, in feet below land-surface datum, 1947: Apr. 3, 44.92; Apr. 29, 44.61; June 26, 44.64.

15-60-31add (*990, p. 266; 1027, p. 233; 1075, p. 182). Moritz Floy. Water levels, in feet below land-surface datum, 1947: Apr. 3, 58.85; Apr. 29, 58.77; June 24, 58.81.

15-60-32ab (*910, p. 184; 940, p. 161; 948, p. 165; 990, p. 266; 1020, p. 185; 1027, p. 233; 1075, p. 182). W. T. Young. Equipped with automatic water-stage recorder.

Daily noon water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	48.52	Jan. 26	48.22	Oct. 1	49.45	Oct. 25	50.15
2	48.52	27	48.22	2	49.52	26	50.16
3	48.51	28	48.22	3	49.59	27	50.16
4	48.47	29	48.19	4	49.65	28	50.16
5	48.45	Mar. 17	47.93	5	49.71	29	50.15
6	48.43	Apr. 3	47.84	6	49.77	30	50.15
7	48.43	Sept.13	48.89	7	49.82	31	50.21
8	48.43	14	48.88	8	49.86	Nov. 1	50.28
9	48.40	15	48.90	9	49.90	2	50.33
10	48.38	16	48.89	10	49.93	3	50.37
11	48.46	17	48.86	11	49.96	4	50.38
12	48.42	18	48.82	12	49.99	5	50.37
13	48.40	19	48.79	13	50.01	6	50.34
14	48.41	20	48.78	14	50.04	7	50.30
15	48.42	21	48.78	15	50.05	8	50.25
16	48.42	22	48.82	16	50.05	9	50.20
17	48.42	23	48.87	17	50.06	10	50.16
18	48.40	24	48.93	18	50.07	11	50.12
19	48.35	25	49.02	19	50.08	12	50.06
20	48.36	26	49.10	20	50.08	13	50.03
21	48.36	27	49.20	21	50.08	14	50.00
22	48.35	28	49.28	22	50.08	15	49.95
23	48.32	29	49.37	23	50.08	16	49.92
24	48.30	30	49.37	24	50.12	17	49.90
25	48.30						

15-60-34ad (*990, p. 266; 1020, p. 185; 1027, p. 233; 1075, p. 182). J. R. Wilkinson Estate. Water level, in feet below land-surface datum, 1947: Apr. 3, 60.58.

15-60-34bc (*910, p. 183; 940, p. 159; 948, p. 163; 990, p. 266; 1020, p. 185; 1027, p. 234; 1075, p. 182). Glenn Macy. Water levels, in feet below land-surface datum, 1947: Apr. 3, 70.00; Apr. 29, 69.12; June 26, 69.03.

14-60-3daa (*990, p. 267; 1020, p. 185; 1027, p. 234; 1075, p. 182). Mrs. John Wilkinson. Water levels, in feet below land-surface datum, 1947: Apr. 3, 47.26; Apr. 29, 50.58; June 26, 50.34.

14-60-5bcc (*990, p. 267; 1020, p. 185; 1027, p. 234; 1075, p. 182). C. C. Gross. Water levels, in feet below land-surface datum, 1947: Apr. 3, 29.21; Apr. 29, 29.16; June 26, 29.23.

14-60-7dda (*990, p. 267; 1020, p. 185; 1027, p. 234; 1075, p. 183). Mrs. John Wilkinson. Water levels, in feet below land-surface datum, 1947: Apr. 3, 3.13; Apr. 29, 3.06; June 26, 3.00.

14-60-7ddd (*990, p. 267; 1020, p. 185; 1027, p. 234; 1075, p. 183). Mrs. John Wilkinson. Water levels, in feet below land-surface datum, 1947: Apr. 3, 18.43; Apr. 29, 18.45; June 26, 17.31.

14-60-8bcc (*990, p. 267; 1020, p. 186; 1027, p. 234; 1075, p. 183). H. L. Wisroth. Water levels, in feet below land-surface datum, 1947: Apr. 3, 31.60; Apr. 29, 31.56; June 26, 31.44.

14-60-8cbc (*910, p. 183; 940, p. 159; 948, p. 163; 990, p. 267; 1020, p. 186; 1027, p. 234; 1075, p. 183). H. L. Wisroth. Water levels, in feet below land-surface datum, 1947: Apr. 3, 10.39; Apr. 29, 10.56; June 26, 10.47.

14-60-10dcc (*910, p. 182; 940, p. 158; 948, p. 163; 990, p. 267; 1020, p. 186; 1027, p. 234 ; 1075, p. 183). Mrs. Ellison. Water levels, in feet below land-surface datum, 1947: Apr. 3, 15.74; Apr. 29, 15.79; June 26, 15.08.

14-60-11bbb (*990, p. 268; 1020, p. 186; 1027, p. 234; 1075, p. 183). J. R. Wilkinson Estate. Water levels, in feet below land-surface datum, 1947: Apr. 3, 16.27; Apr. 29, 16.32; June 26, 14.59.

14-60-11bbc (*990, p. 268; 1020, p. 186; 1027, p. 235; 1075, p. 183). J. R. Wilkinson Estate. Measurements discontinued Dec. 31, 1946.

14-60-11bcc1 (*990, p. 268; 1020, p. 186; 1027, p. 235 ; 1075, p. 183). J. R. Wilkinson Estate. Water levels, in feet below land-surface datum, 1947: Apr. 3, 15.60; Apr. 29, 15.50; June 26, 13.07.

14-60-11bcc2 (*990, p. 268; 1020, p. 186; 1027, p. 235; 1075, p. 183). J. R. Wilkinson Estate. Measurements discontinued Dec. 31, 1946.

14-60-11cbb (*990, p. 268; 1020, p. 186; 1027, p. 235; 1075, p. 183). J. R. Wilkinson Estate. Measurements discontinued Dec. 31, 1946.

14-60-11cbc (*990, p. 268; 1020, p. 187; 1027, p. 235; 1075, p. 184). J. R. Wilkinson Estate. Water levels, in feet below land-surface datum, 1947: Apr. 3, 17.54; Apr. 29, 17.47.

14-60-14bbc (*990, p. 268; 1020, p. 187; 1027, p. 235 ; 1075, p. 184). E. G. Sanders. Water levels, in feet below land-surface datum, 1947: Apr. 3, 31.22; Apr. 29, 31.21; June 24, 31.86.

14-60-16dcc (*990, p. 269; 1020, p. 187; 1027, p. 235; 1075, p. 184). Mrs. John Wilkinson. Water levels, in feet below land-surface datum, 1947: May 1, 13.10; June 26, 12.59.

14-60-18add (*990, p. 269; 1020, p. 187; 1027, p. 236; 1075, p. 184). H. L. Wisroth. Water levels, in feet below land-surface datum, 1947: Apr. 3, 57.59; Apr. 29, 57.54; June 26, 57.52.

14-60-18dad (*990, p. 269; 1020, p. 187; 1027, p. 236; 1075, p. 184). Ruth Anderson. Measurements discontinued Dec. 31, 1946.

14-60-18dda (*990, p. 269; 1020, p. 187; 1027, p. 236; 1075, p. 184). Ruth Anderson. Measurements discontinued Dec.331, 1946.

14-60-18ddd (*990, p. 269; 1020, p. 187; 1027, p. 236; 1075, p. 184). Ruth Anderson. Measurements discontinued Dec. 31, 1946.

14-60-20cbc (*990, p. 269; 1020, p. 188; 1027, p. 236; 1075, p. 184). C. F. Paullin. Measurements discontinued Dec. 31, 1946.

14-60-21aaa (*990, p. 269; 1020, p. 188; 1027, p. 236; 1075, p. 184). Carl Fornstrom. Water levels, in feet below land-surface datum, 1947: May 1, 4.07; June 27, 3.54.

14-60-21aba (*990, p. 269; 1020, p. 188; 1027, p. 236; 1075, p. 184). Carl Fornstrom. Measurements discontinued Dec. 31, 1946.

14-60-21abb (*990, p. 270; 1020, p. 188; 1027, p. 236; 1075, p. 184). Carl Fornstrom. Measurements discontinued Dec. 31, 1946.

14-60-28bb (*910, p. 183; 940, p. 160; 948, p. 164; 990, p. 270; 1020, p. 188; 1027, p. 236; 1075, p.). Herbert Campbell. Water levels, in feet below land-surface datum, 1947: May 1, 23.09; June 27, 22.31.

14-60-29bbb (*990, p. 270; 1020, p. 188; 1027, p. 236; 1075, p. 185). C. F. Paullin. Water levels, in feet below land-surface datum, 1947: Apr. 3, 47.63; Apr. 29, 47.35; June 26, 46.69.

14-60-29bbc (*990, p. 270; 1020, p. 188; 1027, p. 237; 1075, p. 185). C. F. Paullin. Water levels, in feet below land-surface datum, 1947: Apr. 3, 48.35; Apr. 29, 48.93; June 26, 48.10.

14-60-29bcc (*990, p. 270; 1020, p. 188; 1027, p. 237; 1075, p. 185). C. F. Paullin. Measurements discontinued Dec. 31, 1946.

14-61-2ca (*910, p. 183; 940, p. 160; 948, p. 164; 990, p. 270; 1020, p. 189; 1027, p. 237; 1075, p. 185). Carl Bogie. Water levels, in feet below land-surface datum, 1947: Apr. 4, 27.45; June 27, 26.78.

14-61-7ccc (*990, p. 270; 1020, p. 189; 1027, p. 237; 1075, p. 185). R. W. Richer. Water levels, in feet below land-surface datum, 1947: Apr. 4, 30.82; May 1, 30.96; June 27, 30.67.

14-61-14ab (*910, p. 183; 940, p. 160; 948, p. 164; 990, p. 270; 1020, p. 189; 1027, p. 237; 1075, p. 185). H. R. Eggrs. Water levels, in feet below land-surface datum, 1947: Apr. 4, 57.64; May 1, 58.72; June 27, 57.64.

14-61-16bbb (*990, p. 271; 1020, p. 189; 1027, p. 237; 1075, p. 185). Bruce Bell. Water levels, in feet below land-surface datum, 1947: Apr. 4, 43.01; May 1, 43.04; June 27, 43.80.

14-61-18bbc (*990, p. 271; 1020, p. 189; 1027, p. 237; 1075, p. 186). F. J. Janesofsky. Water levels, in feet below land-surface datum, 1947: Apr. 4, 19.60; May 1, 19.75; June 27, 18.95.

14-61-18bcb (*910, p. 182; 940, p. 157; 948, p. 162; 990, p. 271; 1020, p. 189; 1027, p. 237; 1075, p. 186). F. J. Janesofsky. Measurements discontinued Dec. 31, 1946.

14-61-18cbc (*990, p. 271; 1020, p. 189; 1027, p. 238; 1075, p. 186). Mr. Bomhoff. Water levels, in feet below land-surface datum, 1947: Apr. 4, 29.52; Apr. 29, 29.55; June 27, 28.35. Measurements discontinued June 27, 1947.

14-61-18ccb (*990, p. 271; 1020, p. 189; 1027, p. 238; 1075, p. 186). Mr. Bomhoff. Measurements discontinued Dec. 31, 1946.

14-61-21bb (*910, p. 181; 940, p. 157; 948, p. 161; 990, p. 271; 1020, p. 189; 1027, p. 238; 1075, p. 186). C. E. Kaser. Equipped with automatic water-stage recorder.

Daily noon water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 17	44.66	Apr. 3	44.67	Apr. 19	44.70	May 5	44.73
18	44.68	4	44.66	20	44.70	6	44.74
19	44.69	5	44.67	21	44.70	7	44.74
20	44.70	6	44.68	22	44.70	8	44.74
21	44.70	7	44.69	23	44.71	9	44.74
22	44.68	8	44.69	24	44.71	10	44.74
23	44.68	9	44.67	25	44.71	11	44.74
24	44.69	10	44.68	26	44.72	16	44.77
25	44.70	11	44.70	27	44.72	17	44.78
26	44.68	12	44.70	28	44.71	18	44.77
27	44.70	13	44.70	29	44.71	19	44.77
28	44.69	14	44.70	30	44.73	20	44.78
29	44.68	15	44.70	May 1	44.74	21	44.78
30	44.66	16	44.70	2	44.74	22	44.78
31	44.66	17	44.70	3	44.74	23	44.78
Apr. 1	44.67	18	44.70	4	44.74	24	44.78
2	44.67						

14-61-21bcb (*990, p. 271; 1020, p. 190; 1027, p. 238; 1075, p. 186). C. E. Kaser. Water levels, in feet below land-surface datum, 1947: Apr. 4, 37.37; Apr. 29, 39.19; June 27, 43.25.

14-61-21cbc (*990, p. 271; 1020, p. 190; 1027, p. 239; 1075, p. 186). C. E. Kaser. Water levels, in feet below land-surface datum, 1947: Apr. 4, 24.19; Apr. 29, 24.97. Measurements discontinued Apr. 29, 1947.

14-61-28bcb (*990, p. 272; 1027, p. 239; 1075, p. 187). Mary Higgison. Water levels, in feet below land-surface datum, 1947: Apr. 4, 29.00; Apr. 29, 28.85; June 27, 26.55.

14-61-28bbb (*990, p. 272; 1020, p. 190; 1027, p. 239; 1075, p. 187). Harry Bymer. Water levels, in feet below land-surface datum, 1947: Apr. 4, 19.01; Apr. 29, 20.76. Measurements discontinued Apr. 29, 1947.

14-61-29bb (*910, p. 182; 940, p. 158; 948, p. 162; 990, p. 272; 1020, p. 191; 1027, p. 239; 1075, p. 187). A. E. Cook. Water level, in feet below land-surface datum, 1947: May 2, 25.65.

14-62-12cc (*910, p. 182; 940, p. 157; 948, p. 161; 990, p. 272; 1020, p. 191; 1027, p. 239; 1075, p. 187). C. E. Kaser. Water levels, in feet below land-surface datum, 1947: Apr. 4, 4.92; May 2, 5.25.

14-62-22bb (*910, p. 183; 940, p. 159; 948, p. 164; 990, p. 272; 1020, p. 191; 1027, p. 239; 1075, p. 187). J. W. Minnick. Water levels, in feet below land-surface datum, 1947: Mar. 5, 95.26; May 1, 95.20; June 27, 95.21.

14-62-24ad (*910, p. 182; 940, p. 157; 948, p. 162; 990, p. 272; 1020, p. 191; 1027, p. 239; 1075, p. 187). Union Pacific Railroad Co. No measurements made in 1947.

14-62-24daa (*990, p. 273; 1020, p. 191; 1027, p. 239; 1075, p. 187). Fred Schuetz. Water levels, in feet below land-surface datum, 1947: May 1, 22.50; June 27, 22.50.

14-62-36db (*910, p. 183; 940, p. 160; 948, p. 164; 990, p. 273; 1020, p. 191; 1027, p. 240; 1075, p. 187). J. M. Bastain. Water level, in feet below land-surface datum, 1947: May 1, 6.33.

14-63-12cd (*940, p. 161; 948, p. 165; 990, p. 273; 1020, p. 191; 1027, p. 240; 1075, p. 187). J. D. Johnson. No measurements made in 1947.

14-63-20bc (*940, p. 161; 948, p. 165; 990, p. 273; 1020, p. 191; 1027, p. 240; 1075, p. 187). Elmer Gibson. No measurements made in 1947.

14-63-34daa (*948, p. 168; 990, p. 273; 1020, p. 191; 1027, p. 240; 1075, p. 188). Lorena F. G. Noyes. Water level, in feet below land-surface datum, 1947: May 2, 96.04.

13-60-8cb (*910, p. 183; 940, p. 158; 948, p. 163; 990, p. 273; 1020, p. 192; 1027, p. 240; 1075, p. 188). Herbert Campbell. Water levels, in feet below land-surface datum, 1947: May 1, 41.97; June 26, 36.02.

13-60-31aa (*910, p. 181; 940, p. 156; 948, p. 161; 990, p. 274; 1020, p. 192; 1027, p. 240; 1075, p. 188). W. T. Young, Jr. Water level, in feet below land-surface datum, 1947: May 2, 37.70.

13-60-31ddd (*948, p. 168; 990, p. 274; 1020, p. 192; 1027, p. 240; 1075, p. 188). W. T. Young, Jr. Water level, in feet below land-surface datum, 1947: May 2, 17.17.

13-61-3dc (*910, p. 183; 940, p. 160; 948, p. 164; 990, p. 274; 1020, p. 192; 1027, p. 241; 1075, p. 188). Jim Dolan. No measurements made in 1947.

13-61-5dba (*910, p. 182; 940, p. 158; 948, p. 162; 990, p. 274; 1020, p. 192; 1027, p. 241; 1075, p. 188). J. D. Wasson. Water levels, in feet below land-surface datum, 1947: May 1, 1.30; June 27, 0.35.

13-61-18bc (*910, p. 182; 940, p. 158; 948, p. 162; 990, p. 274; 1020, p. 192; 1027, p. 241; 1075, p. 188). Mr. Johnson. Water level, in feet b below land-surface datum, 1947: May 1, 47.77.

13-61-22cb (*910, p. 182; 940, p. 159; 948, p. 163; 990, p. 274; 1020, p. 192; 1027, p. 241; 1075, p. 189). Mr. Evans. Measurements discontinued Dec. 31, 1946.

13-61-24aa (*910, p. 182; 940, p. 158; 948, p. 162; 990, p. 273; 1020, p. 192; 1027, p. 241; 1075, p. 189). Leona J. Whited. Water levels, in feet below land-surface datum, 1947: May 1, 9.53; June 27, 8.39.

13-61-31ddc (*948, p. 168; 990, p. 275; 1020, p. 192; 1027, p. 241; 1075, p. 189). Max Thelan. No measurements made in 1947.

13-61-34cb (*1027, p. 241; 1075, p. 189). H. E. Grover. Water level, in feet below land-surface datum, 1947: May 2, 29.49.

13-62-21ccc (*948, p. 168; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189). Union Pacific Railroad Co. Water level, in feet below land-surface datum, 1947: May 2, 44.78.

13-62-24aba (*948, p. 168; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189) Lydia M. Wilkowski. Measurements discontinued Dec. 31, 1946.

13-62-28add (*948, p. 168; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189). George L. Reeder. Measurements discontinued Dec. 31, 1946.

13-62-29bc (*948, p. 166; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189). William H. Chamberlain. Measurements discontinued Dec. 31, 1946.

13-62-29ccc (*948, p. 166; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189). Union Pacific Railroad Co. Measurements discontinued Dec. 31, 1946.

13-62-30bcc (*948, p. 166; 990, p. 276; 1020, p. 193; 1027, p.242; 1075, p. 189). Jamee H. Carnes. Water level, in feet below land-surface datum, 1947: May 2, 45.30.

13-62-31cac (*948, p. 166; 990, p. 275; 1020, p. 193; 1027, p. 242; 1075, p. 189). Carpenter General Store. Measurements discontinued Dec. 31, 1946.

13-62-34ccd (*1027, p. 242; 1075, p. 190). Jack Lee. Water level, in feet below land-surface datum, 1947: May 2, 56.20.

13-63-8acc (* 48, p. 166; 990, p. 276; 1020, p. 193; 1027, p. 242; 1075, p. 190). Emil Gustafeson. Water level, in feet below land-surface datum, 1947: May 2, 66.33.

13-63-10aaa (*948, p. 168; 990, p. 276; 1020, p. 194; 1027, p. 242; 1075, p. 190). William Dittmer. Water level, in feet below land-surface datum, 1947: May 2, 68.40.

13-63-14dcc (*948, p. 166; 990, p. 276; 1020, p. 194; 1027, p. 243; 1075, p. 190). Ralph V. Kent. Measurements discontinued Dec. 31, 1946.

13-63-22bba (*948, p. 167; 990, p. 276; 1020, p. 194; 1027, p. 243; 1075, p. 190). Ralph V. Kent. Water level, in feet below land-surface datum, 1947: May 2, 56.63.

13-63-26ca (*948, p. 167; 990, p. 276; 1020, p. 194; 1027, p. 243; 1075, p. 190). Ed Oline. Water level, in feet below land-surface datum, 1947: May 2, 49.60.

13-63-33cb (*948, p. 166; 990, p. 276; 1020, p. 194; 1027, p. 243; 1075, p. 190). D. A. Bunnell. Measurements discontinued Dec. 31, 1946.

13-64-28ccb (*948, p. 167; 990, p. 277; 1020, p. 194; 1027, p. 243; 1075, p. 190). L. A. Foster. Measurements discontinued Dec. 31, 1946.

13-64-30cbb (*948, p. 167; 990, p. 277; 1020, p. 194; 1027, p. 243; 1075, p. 190). Wilbur Sevope. Measurements discontinued Dec. 31, 1946.

12-60-5ccd (*948, p. 169; 990, p. 277; 1020, p. 194; 1027, p. 243; 1075, p. 190). William Young. Water level, in feet below land-surface datum, 1947: May 2, 24.24.

12-61-1dcc (*948, p. 169; 990, p. 277; 1020, p. 194; 1027, p. 243; 1075, p. 191). Union Pacific Railroad Co. Measurements discontinued Dec. 31, 1946.

12-61-3abb (*1027, p. 243; 1075, p. 191). Harry Anderson. Water level, in feet below land-surface datum, 1947: May 2, 32.75.

12-61-10dcc (*948, p. 169; 990, p. 277; 1020, p. 195; 1027, p. 244; 1075, p. 191). Joseph L. McDonald. Measurements discontinued Dec. 31, 1946.

12-62-6aab (*948, p. 167; 990, p. 277; 1020, p. 195; 1027, p. 244; 1075, p. 191). William Flamme. Measurements discontinued Dec. 31, 1946.

12-62-8aa (*948, p. 168; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Bank of Carpenter. Measurements discontinued Dec. 31, 1946.

12-62-9aba (*948, p. 168; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). D. A. Bunnell. Water level, in feet below land-surface datum, 1947: May 2, 51.67.

12-62-13abb (*948, p. 169; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Roy D. Smith. No measurements made in 1947.

12-63-3baa (*948, p. 167; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Roy L. Gasurant. Water level, in feet below land-surface datum, 1947: May 2, 43.18.

12-63-3da (*948, p. 166; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Wyoming Farm Loan Board. Measurements discontinued Dec. 31, 1946.

12-63-12da (*948, p. 169; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Otis Breeden. Water level, in feet below land-surface datum, 1947: May 2, 4.84.

12-64-4bb (*948, p. 167; 990, p. 278; 1020, p. 195; 1027, p. 244; 1075, p. 191). Wyoming Hereford Ranch. Measurements discontinued Dec. 31, 1946.

Natrona County

29-86-19cc (*1075, p. 192). U. S. 141. James Grieves (Dumbell Ranch).

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	9.13	Apr. 15	9.39	July 21	5.96	Oct. 13	8.79
Feb. 21	9.31	May 26	8.56	Aug. 18	7.96	Nov. 10	9.13
Mar. 13	9.45	June 16	7.88	Sept.18	8.27		

29-87-33ca (*1075, p. 192). U. S. 142. State of Wyoming.

Water level, in feet below land-surface datum, 1947

Jan. 21	6.51	Apr. 15	6.20	July 21	4.14	Oct. 13	7.32
Feb. 21	6.45	May 26	5.04	Aug. 18	5.18	Nov. 10	6.24
Mar. 13	6.37	June 16	4.43	Sept.18	5.78		

Sublette County

35-111-8db (*1075, p.192). U. S. 144. Robert Albert.

Water level, in feet below land-surface datum, 1947

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	28.11	Apr. 16	29.01	July 21	21.76	Oct. 20	24.51
Feb. 19	28.56	May 19	27.41	Aug. 22	21.63	Nov. 21	25.71
Mar. 17	28.76	June 20	25.86	Sept.30	23.07		