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GROUND-WATER CONDITIONS IN THE EAST SHORE AREA, BOX ELDER, DAVIS, AND WEBER COUNTIES, UTAH 1960-69

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ABSTRACT

The East Shore area is in north-central Utah between the east shore of Great Salt Lake and the Wasatch Range. The climate is semiarid. The growth of industry and agriculture and the related increase in population has steadily increased the demand for adequate water supplies in the East Shore area. The population was about 225,000 persons in 1970, an increase of about 47,000 since 1960. Annual ground-water withdrawals through large-diameter wells for municipal and industrial supply increased from about 10,000 acre-feet in 1960 to about 21,000 acre-feet in 1969. Additional pumpage from large-diameter wells for irrigation and other purposes was about 5,500 acre-feet in 1969; most of the water that is used for agriculture is supplied by surface-water sources. Discharge from small-diameter, chiefly flowing, wells is estimated to be 12,000 acre-feet per year.

During 1960-69 water levels rose an average of 5 feet in the Bountiful and Brigham districts and declined an average of 10 feet in the Weber Delta district, chiefly as a result of withdrawals from wells. The rise of water levels in parts of the Bountiful district was due chiefly to decreased withdrawal from wells brought about by importing water from the Weber River basin, and to additional recharge resulting from use of imported water for lawn irrigation.

During 1962-69 there was no significant change in chemical quality over a large area. The water quality has varied locally, but it has generally been a year-to-year fluctuation rather than a long-term trend. Most of the water in the East Shore area is suitable for both domestic use and irrigation.

A new well on the Syracuse-Antelope Island causeway penetrated two artesian aquifers that yielded sodium bicarbonate and sodium chloride type waters, which contained about 330 and 661-783 mg/l (milligrams per liter) of dissolved solids, respectively. New wells north of Little Mountain produced a sodium bicarbonate type water generally containing less than 500 mg/l of dissolved solids. Temperature of the water from those wells is abnormally high. Data from wells at and near Hill Air Force Base indicate that a sodium bicarbonate type water may exist at depth below a more dilute calcium magnesium bicarbonate water.

INTRODUCTION

Purpose and scope

This report is one of a series that is prepared by the U.S. Geological Survey in cooperation with the Utah Department of Natural Resources, Division of Water Rights, which describes water resources in selected areas in Utah. The period of study on which this report was based was from July 1968 to March 1970, but the period of record covered by the report is from 1960 to 1969. The purposes of this study were to determine changes in ground-water development in the East Shore area and to determine the effects of those changes on the ground-water system since the area was last studied (Smith and Gates, 1963). The study was also made to obtain additional information to guide further development of ground water in the area, in order to meet growing needs for municipal, industrial, and agriculture water supplies.

Detailed description of the hydrologic system in the East Shore area is beyond the scope of this report. Feth and others (1966) and Thomas and Nelson (1948) previously described parts of the area in detail and pertinent information from those reports is included here. Some ground-water information from the vicinity of Antelope Island, which is west of the East Shore area, is included in this report.

Description of the area

The East Shore area has been previously defined by Thomas and Nelson (1948, p. 63) as that area in north-central Utah between the east shore of Great Salt Lake and the Wasatch Range and between the mouths of the Jordan and Bear Rivers. Thomas and Nelson divided this area into three subareas or ground-water districts—Bountiful, Weber Delta, and Brigham. The Bountiful district includes that part of the area south of T. 3 N., the Brigham district includes that part of the area north of T. 7 N., and the Weber Delta district includes the central and largest part of the East Shore area.

The project area for this report is in Davis, Weber, and Box Elder Counties and includes all the Weber Delta and Bountiful districts and the southern part of the Brigham district. Although the project area does not embrace the entire East Shore area as defined by Thomas and Nelson (1948, p. 63), for convenience in referring to it in this report, the project area is called the East Shore area. The southern border of the area is the Davis-Salt Lake County line; the northern border is the first section line north of Willard. The area is about 40 miles long and ranges in width from 3 to 20 miles (fig. 1); it covers about 450 square miles.

The climate of the East Shore area is controlled largely by dry continental air masses and is semiarid. The recorded extremes of temperature are -30°F (-34°C) and 111°F (44°C); the average annual temperature is near 51°F (11°C) throughout the area. Average annual precipitation ranges from about 12 inches near the shore of Great Salt Lake to about 20 inches near the base of the Wasatch Range.[1]

The project area is one of the more densely populated parts of Utah. In 1970 the population was about 227,000. The following table gives the figures (rounded from U.S. Bureau of Census data) for Davis and Weber Counties:

[1] Climatological data taken from records of the Environmental Science Services Administration, U.S. Department of Commerce.

	1950	1960	1970
City of Bountiful	6,000	17,000	28,000
Davis County (total)	31,000	65,000	99,000
City of Ogden	57,000	70,000	69,000
Weber County (total)	83,000	111,000	126,000

About 2,000 persons reside in that part of Box Elder County covered by this report. In 1960 about 80 percent of the population was in urban areas.

Previous studies and acknowledgments

Previous investigations in the East Shore area include detailed studies in the Bountiful district by Thomas and Nelson (1948) and in the Weber Delta district by Feth and others (1966). A study of water-level and quality-of-water data collected during 1953-61 in the southern and central parts of the East Shore area was made by Smith and Gates (1963). The East Shore area has also been included in a series of annual reports on ground-water conditions in Utah. The latest in the series is by Sumsion and others (1970) and includes references to previous reports in the series. Other investigations have been summarized in the report by Feth and others (1966).

The cooperation of the many landowners in the East Shore area who gave permission for data acquisition from their property is gratefully acknowledged. The cooperation of the various officials of State and municipal governments in supplying information is also appreciated. Special thanks are extended to officials and personnel of the Great Salt Lake Minerals and Chemicals Corp., the Weber Basin Water Conservancy District, the U.S. Bureau of Reclamation, and the Utah State Parks and Recreation Division for their cooperation and assistance.

GROUND WATER

Summary of general conditions

The ground-water reservoir in the East Shore area consists of unconsolidated and semiconsolidated deposits, which range in grain size from clay to boulders. At the base of the Wasatch Range the deposits consist chiefly of coarse-grained delta, alluvial-fan, and slope-wash deposits; they grade westward into fine-grained but well-sorted lacustrine deposits. The principal aquifers consist of gravel or gravel and sand in the east half of the area and of sand in the west half.

The major sources of recharge to the ground-water reservoir in the East Shore area are subsurface flow from the Wasatch Range, direct infiltration from precipitation, and seepage from the Weber and Ogden Rivers, mountain front streams, and irrigated areas. Subsurface flow from

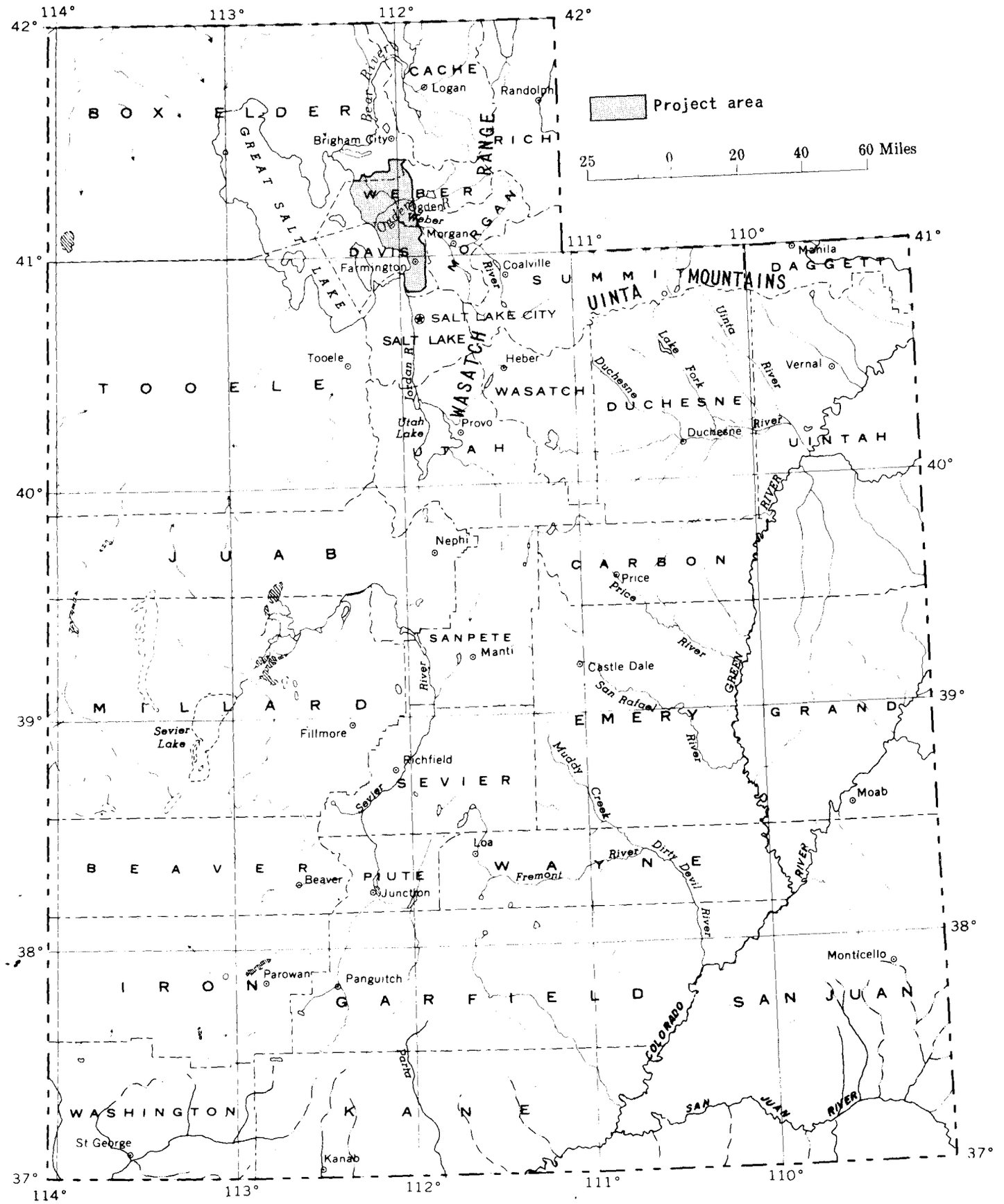

Figure 1.—Index map of Utah showing the location of the area described in this report.

the Wasatch Range accounts for nearly half of the natural recharge to the reservoir. Feth and others (1966, p. 39) estimated annual natural recharge in the Weber Delta district to be 70,000 acre-feet and attributed 30,000 acre-feet to subsurface flow from the mountain front.

The conclusion that considerable quantities of water enter the area in the subsurface from the mountain front is supported to some extent by local conditions at well (A-2-1)20ddb-1, east of Bountiful. This well is in the vicinity of a major fault zone in an area where the ground water was believed to be under water-table conditions. When this well was completed, however, it was reported to have an artesian head of 51 feet above land surface and to flow about 1,000 gpm (gallons per minute). From examination of the drill cuttings, it is inferred that the well taps coarse unconsolidated deposits or perhaps underlying brecciated bedrock. Water probably enters the aquifer from the nearby mountain block and is confined beneath poorly sorted, poorly permeable mud-rock flow deposits. The flow of the well must be derived solely from recharge from the mountain block because the confining mud-rock flow would prevent any local recharge. Similar conditions may exist locally elsewhere along the mountain front.

Ground water in the East Shore area occurs chiefly under artesian conditions in a multiaquifer reservoir. Water-table and perched conditions occur locally in the stream deltas and along the mountain front. Some wells are finished in water-table aquifers; however, the majority of wells in the area are finished in artesian aquifers and this report deals mainly with the artesian aquifers.

In the Bountiful district, Thomas and Nelson (1948) defined three separate artesian aquifers—the shallow, intermediate, and deep aquifers. Local differences in lithology occur within the district, and frequently it is not possible to distinguish among the aquifers. Depths to the tops of the aquifers below land surface range from 60 to 250 feet, from 250 to 500 feet, and more than 500 feet for the shallow, intermediate, and deep aquifers, respectively. Each aquifer varies considerably in thickness.

For most of the Weber Delta district, Feth and others (1966, p. 36-37) have delineated two major artesian aquifers. The more productive and areally extensive is the Delta aquifer, the top of which is from 500 to 700 feet below land surface and which generally is from 50 to 150 feet thick. The Sunset aquifer is shallower, but it is not as productive nor as extensive as the Delta aquifer. The top of the Sunset aquifer in most places is from 250 to 400 feet below land surface, and the aquifer is from 50 to 250 feet thick. Artesian aquifers exist above the Sunset aquifer in many parts of the area, but they are generally less productive and are limited in areal extent. The Delta and Sunset aquifers do not extend to the area south of Kaysville because of a bedrock high near Kaysville. (See Feth and others, 1966, p. 36.) In the area of Ogden-Plain City-North Ogden the two aquifers are not recognizable as separate units.

Ground water moves generally westward from the areas of recharge toward Great Salt Lake. Feth and others (1966, p. 54-56) estimated that 40,000 acre-feet of water flows annually through a section of ground-water reservoir about 13 miles long and 1,300 feet thick in the Weber Delta district. Some water is intercepted and discharged by wells; some moves upward through the confining beds and is discharged by springs, seeps, and evapotranspiration in the lowlands near Great Salt Lake; and some continues through the aquifers westward under the lake.

The movement of water in aquifers beneath Great Salt Lake has been traced almost as far as Antelope Island. In 1968 a test well—(B-4-3)19acc-1—was drilled on the causeway from Syracuse to Antelope Island about three-quarters of a mile northeast of the northern tip of the

island. The well was 127 feet deep, and a flow of about 10 gpm of fresh water was reported from 97 feet. In 1969 well (B-4-3)19caa-3 was drilled on the causeway about a quarter of a mile west of well (B-4-3)19acc-1. Lithologic samples taken from well (B-4-3)19caa-3, while not wholly dependable, indicate that the well penetrated alternating layers of clay and sand or sand in a clay matrix. The samples show an increase of grain size of the sand with depth from very fine near the surface to very coarse at 481 feet, where the driller reported consolidated rock. The well casing is perforated in fine to coarse sand at intervals from 423 to 475 feet; and when completed the well flowed about 280 gpm with a static head of about 54 feet above the causeway. Although the well now produces only from 423 to 475 feet, it also yielded water during drilling from a depth of about 150 to 170 feet with an artesian head of about 30 feet above the causeway.

The aquifers in the East Shore area extend beneath Great Salt Lake, and the general movement of ground water in these aquifers is from east to west. However, the chemical quality of some of the water obtained from the deeper aquifer by one of the wells on the causeway suggests the possibility that some of the water may be derived from precipitation on Antelope Island. (See p. 17.) Additional test wells are needed in this area for better evaluation of this matter.

Extension of the delineation of the aquifers in the Weber Delta district as described by Feth and others (1966) was made possible by the drilling of 15 test wells during 1967-69 in secs. 31 and 32, T. 7 N., R. 3 W., near Little Mountain. The depths and diameters of the test wells range from 412 to 920 feet and from 2 to 4 inches, respectively. One well has 65 feet of screen at various depths from 656 to 920 feet; each of the other wells has a 10- or 20-foot screened section at the bottom. Heads at the wells range from about 25 feet above land surface in the shallowest zone to about 55 feet in the deepest zone, and flows range from about 35 gpm in a shallow well (10 ft of screen) to 180 gpm in the deepest well (65 ft of screen). The most productive wells, per foot of screen length, are the wells finished in sand and gravel (as reported by the driller) at about the 700-foot depth.

Tests of aquifer performance, ranging from 24 to 97 hours, were conducted on the wells near Little Mountain in 1969. The tests indicated that the wells were producing water from four separate zones (see fig. 6). During the test period little or no vertical leakage between zones was indicated. The calculated hydraulic conductivity (a measure of the ability of the rocks to transmit water) (see appendix) of the 700-foot zone is about 80 $ft^3/day/ft^2$ (cubic feet per day per square foot) that of the 600-foot zone about 50 $ft^3/day/ft^2$; and that of the 400-foot zone about 160 $ft^3/day/ft^2$. The performance of the deepest zone was not tested. The calculated values of storage coefficient ranged from 0.00003 to 0.00014 for all zones tested, but longer tests would probably have resulted in larger values.

For an area of 140 square miles in the Weber Delta district, Feth and others (1966, p. 47) estimated that 80,000-100,000 acre-feet of water could be removed from active storage[1] with a decline in water level of 150 feet. In the same area, 300,000-600,000 acre-feet of additional water would be available by dewatering the upper 50 feet of the artesian aquifers. No estimate of active storage for other parts of the East Shore area was made, but Feth and others (1966, p. 49) calculated that an additional 730,000 acre-feet of water could be obtained by dewatering the topmost 50 feet of the aquifers in an additional 189 square miles in the Weber Delta district.

[1] Feth and others (1966, p. 46) used the term "active storage" to describe "water that can be readily developed and manipulated without dewatering the artesian aquifers."

Ground water is discharged from the area by wells and springs, by seepage into drains, lakes, and swamps, by subsurface flow, and by evapotranspiration. In 1939 the Utah State Engineer, in cooperation with the Works Progress Administration (Utah State Engineer, 1940, p. 33-41), estimated that 26,000 acre-feet of water was discharged by wells in the project area for this report. In 1946 Thomas and Nelson (1948, p. 195) estimated 14,000 acre-feet as the total annual draft upon the ground-water reservoir in the Bountiful district by wells, springs, and drains. In 1954 Feth and others (1966, p. 50) estimated that about 25,000 acre-feet was discharged annually by wells in the Weber Delta district. In 1959 Smith and Gates (1963) estimated that about 53,000 acre-feet was discharged annually by wells in the East Shore area. Springs account for a very small part of the total discharge of ground water. Feth and others (1966, p. 57) estimated that 20,000-70,000 acre-feet of water leaves the Weber Delta district as subsurface flow to Great Salt Lake.

Development of ground water

Well construction

The total number of wells constructed in the East Shore area during 1960-69 is shown in figure 2, and the wells constructed from 1960 through August 1969 are shown on plate 1 and tabulated in table 1. More than 75 percent of all the wells constructed are domestic and stock wells that are less than 6 inches in diameter, and most of these are flowing wells.

Most wells in the Bountiful district and in the southern part of the Weber Delta district near the mountain front are finished at depths of less than 400 feet, either because sufficient water was obtained above that depth or because consolidated rock was encountered. In the southwestern part of the Weber Delta district, the predominance of wells drilled to depths greater than 400 feet indicates that the best aquifer in this area is more than 400 feet deep. In the west-central part of the Weber Delta district, it appears that adequate supplies are being obtained from nearly all depths, but most wells in the area west and north of Roy are less than 400 feet deep. Wells in the east-central part of the Weber Delta district are mainly large-diameter public-supply wells more than 400 feet deep. In the northwest part of the Weber Delta district, most new water supplies are obtained from wells more than 400 feet in depth. In other parts of the project area the number of deep (more than 400 feet) wells constructed during 1960-69 is about the same as the number of shallow (less than 400 feet) wells constructed during the same period.

The number of wells constructed annually declined from 1964 to 1969, and the number of wells drilled for replacement of inoperative wells was less than 2 percent of the total number of new wells completed. This decrease in well construction coincides with the increased distribution of water through the facilities of water conservancy districts.

The total number of wells abandoned or unused in the project area is not known. However, the number of small-diameter wells abandoned or unused was estimated on the basis of a detailed inventory made in September 1969 in five land sections that were believed to be representative of the entire area (sec. 26, T. 2 N., R. 1 W.; sec. 14, T. 3 N., R. 1 W.; sec. 16, T. 4 N., R. 2 W.; sec. 19, T. 5 N., R. 2 W.; and sec. 16, T. 6 N., R. 2 W.). The inventory showed that 119 small-diameter wells were in use in the five sections. According to records of the Utah State Engineer, however, 173 small-diameter wells had been constructed in these five sections as of September 1969. Thus, about 30 percent of the total small-diameter wells on record were either abandoned or unused. Applying this percentage to the approximate number of 4,500 small-diameter wells in the project area (based on fig. 2 and Arnow and others, 1964, p. 16 and 20) indicates that about 1,400 small-diameter wells have either been abandoned or are unused, and about 3,100 such wells were in use in 1969.

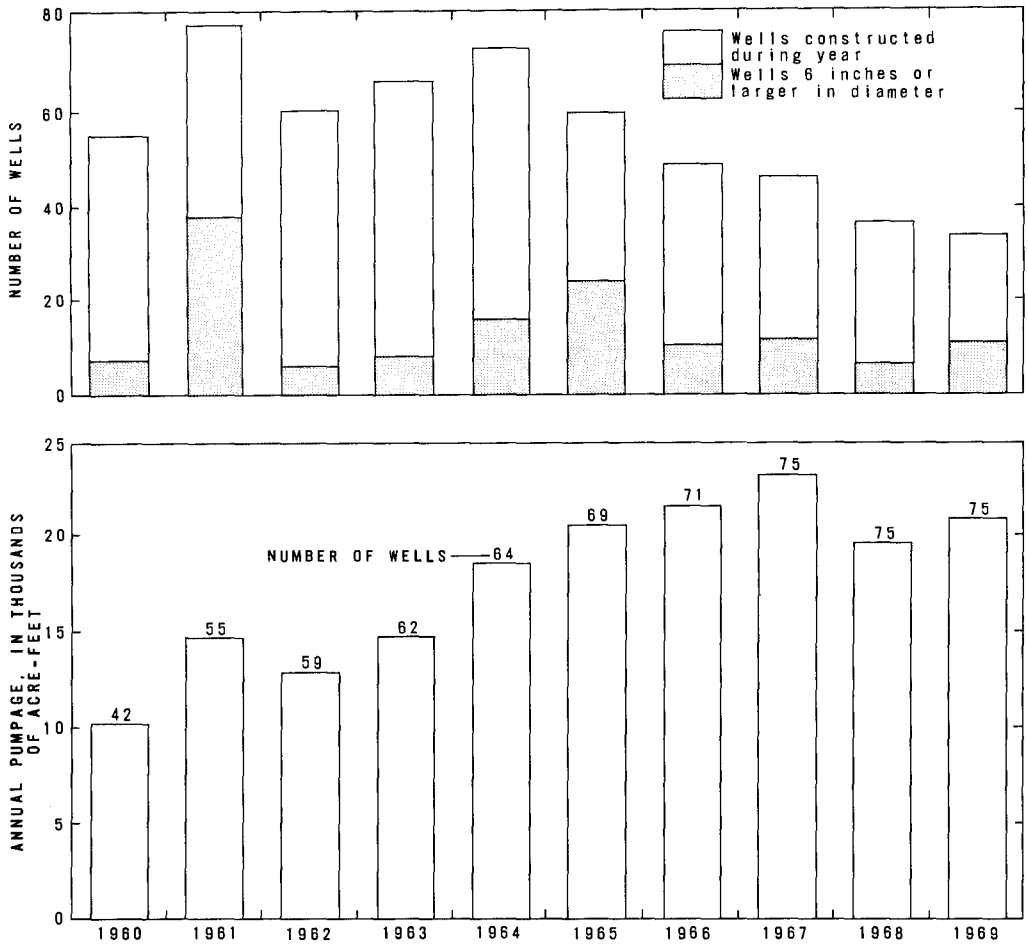

Figure 2.—Annual pumpage for municipal and industrial supply and well construction by years. (Pumpage data were supplied partly by U.S. Bureau of Reclamation and Utah State Engineer; well construction records were obtained from files of the Utah State Engineer.)

Pumpage from large-diameter wells

Most of the water pumped from the ground-water reservoir through large-diameter (6 inches or larger) wells is used for municipal or industrial supply, including military use. Annual pumpage from wells for these uses in the East Shore area for 1960-69 is shown in figure 2. In 1969, 75 wells were pumped to supply water for municipal and industrial use, and their locations are shown on plate 1. Of these 75 wells, 38 were constructed during 1960-August 1969. Annual pumpage by ground-water district for 1955-69 is shown in figure 3. The general increase in pumpage during 1960-69 was the result of increased industrial activity and related population growth. Minor deviations from the general trend probably reflect variations in demand caused by fluctuations of annual precipitation and variations in the available surface-water supplies, which are the main source of water for irrigation.

About 80 other large-diameter (mostly 6 inches) wells, in addition to those pumped for municipal and industrial supply, were constructed from 1960 to August 1969. These are multiple-use wells, which may provide water for domestic, stock, industrial, and irrigation uses; and pumping rates or flowing rates of these wells range from less than 10 to 1,000 gpm. The total discharge in 1969 from all multiple-use large-diameter wells was estimated to be 5,500 acre-feet.

Discharge from small-diameter wells

Water from small-diameter (less than 6 inches) wells is used for domestic, stock, irrigation, and industrial supplies, but use by industry is minor. Most of the wells flow and are used for more than one purpose. More wells are used for domestic and stock purposes than for irrigation, but the quantity of water discharged by wells for irrigation is greater than that for domestic and stock uses.

Various estimates have been made for the total discharge by small-diameter wells in the East Shore area. From a comprehensive inventory made in 1938-39 by the Utah State Engineer (1940, p. 37-38), it was estimated that the annual discharge by all wells (at that time nearly all were small-diameter wells) in the area for this report was about 26,000 acre-feet. Thomas and Nelson (1948, p. 190) estimated that the annual discharge from the artesian reservoir in 1946 in the Bountiful district was about 12,000 acre-feet. Feth and others (1966, p. 50) estimated that about 18,000 acre-feet was discharged in 1954 from the Weber Delta district by small-diameter flowing wells, Smith and Gates (1963, p. 16) reported that about 40,000 acre-feet was discharged in 1955 and 1959 from the southern and central parts of the East Shore area by flowing wells and small-diameter wells pumped for domestic use.

In this report, an estimate of discharge from small-diameter wells is made as follows: In 1939 about 4,400 small-diameter wells discharged about 26,000 acre-feet of water (about 5.9 acre-ft per year per well) in the project area (Nelson, 1951). In 1969 about 3,100 small-diameter wells were in use in the project area. Pumped wells comprise about 25 percent of all these small-diameter wells, and their discharge would not be substantially affected by change in pressure. Therefore, about 800 (0.25 x 3,100) small-diameter pumped wells discharged about 4,700 (800 x 5.9) acre-feet of water. The flowing wells comprise the remaining 2,300 wells. Based on discharge measurements of all flowing wells in the five representative land sections listed earlier, it was estimated that flowing wells have decreased in discharge since 1939 by about 30 percent in the Bountiful district and by 60-75 percent in the Weber Delta district. Using an average decrease of 50 percent for the entire area results in an estimated discharge of about 6,800 (2,300 x 5.9 x 0.50) acre-feet. Combining this with the discharge from the pumped wells yields about 12,000 acre-feet from all small-diameter wells in 1969. Because of the inherent errors in this type of calculation, the amount of 12,000 acre-feet should be considered as only a rough estimate.

The discharge of wells for irrigation and domestic and stock use in the project area has also been estimated on the basis of annual changes since 1959 in discharge of selected observation wells distributed throughout the area. By 1968 this discharge was estimated as about 27,000 acre-feet (Baker and others, 1969, p.4). That estimate included about 5,000 acre-feet of water from large-diameter wells, so only about 22,000 acre-feet was attributed to small-diameter wells. Decreasing this quantity by 30 percent to allow for unused and abandoned wells leaves a total of about 15,000 acre-feet, which is in reasonable agreement with the 12,000 acre-feet estimated in this study. A more accurate estimate could be obtained only by a detailed inventory of the entire area. The decrease in discharge by small-diameter wells from 1939 to 1969 is due in part to normal well deterioration with time, in part to a decrease in pressure in the artesian system and in part to a decrease in the number of small-diameter wells in use, owing to the increased availability of water from public supplies in many rural and suburban areas.

Summary of withdrawals

The following table lists ground-water withdrawals, in acre-feet, by wells for 1960 and 1969 in the project area:

1960	
Large-diameter wells used for municipal and industrial supply (fig. 2)	10,500
Large-diameter wells used for irrigation	100[1]
Small-diameter multiple-use wells	40,000[1]
Total (rounded)	51,000
1969	
Large-diameter wells used for municipal and industrial supply (fig. 2)	21,000
Large-diameter multiple-use wells	5,500
Small-diameter multiple-use wells	12,000
Total (rounded)	38,000

[1]Reported by Smith and Gates (1963, p. 16-17) in 1959 and was assumed to be the same for 1960.

The effect of ground-water withdrawals on the aquifers

Water-level fluctuations

Water-level changes in the project area from March 1960 to March 1969 are shown on plate 2. Water levels rose an average of 5 feet in both the Bountiful and Brigham districts; thus indicating that the net recharge to the aquifers was in excess of withdrawals for this period. In most of the Weber Delta district, however, water levels declined during 1960-69. The decline for the district averaged about 10 feet, thus indicating that withdrawals from the aquifers were in excess of recharge for the period.

Hydrographs of water levels in selected wells in the project area are shown in figure 3, together with the cumulative departure from average annual precipitation at Ogden Pioneer powerhouse and the annual pumpage for municipal and industrial supply in the various

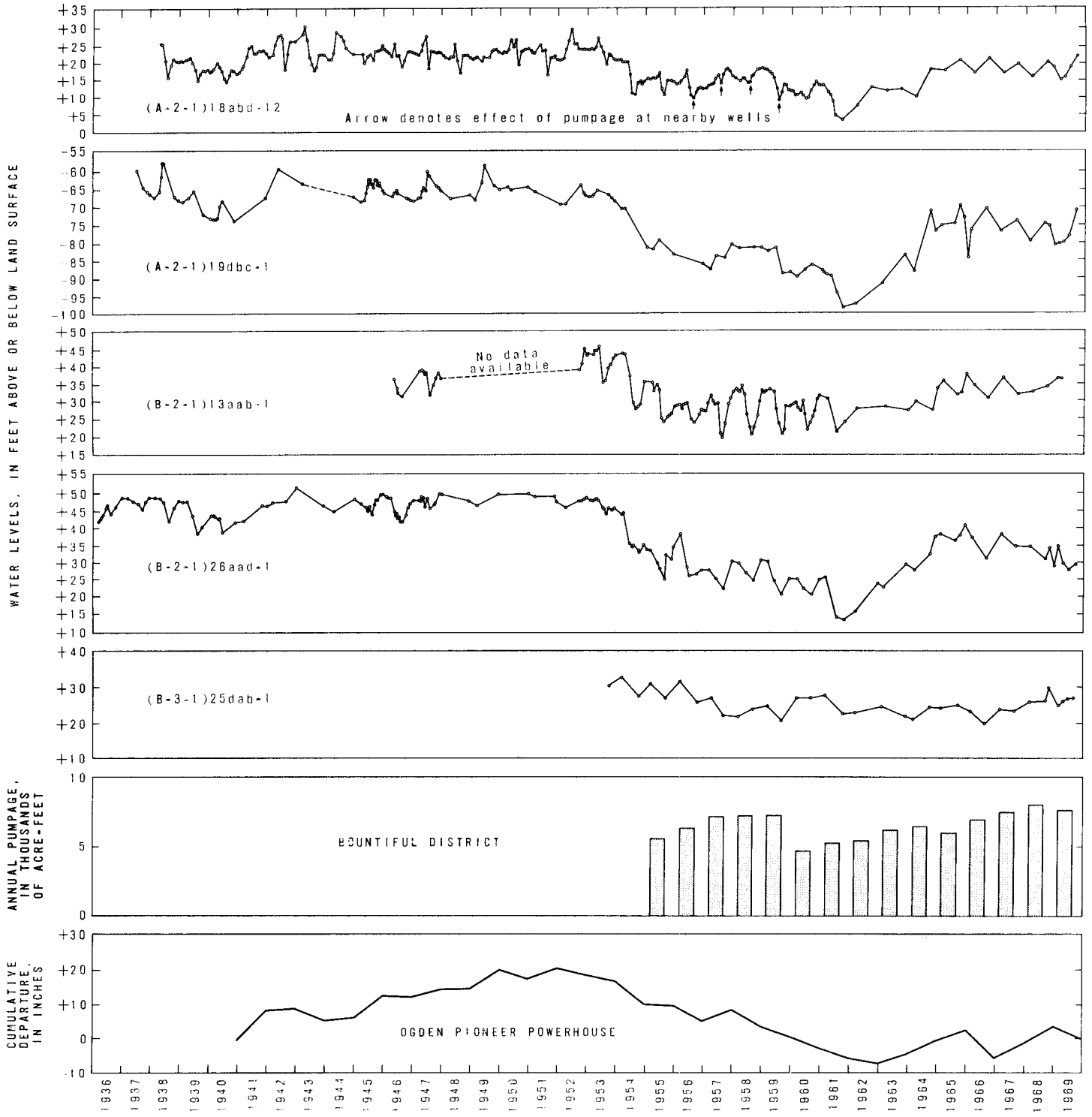

Figure 3.—Relation of water levels in selected wells to cumulative departure from the 1941-69 average annual precipitation at Ogden Pioneer powerhouse and municipal and industrial withdrawals from wells.

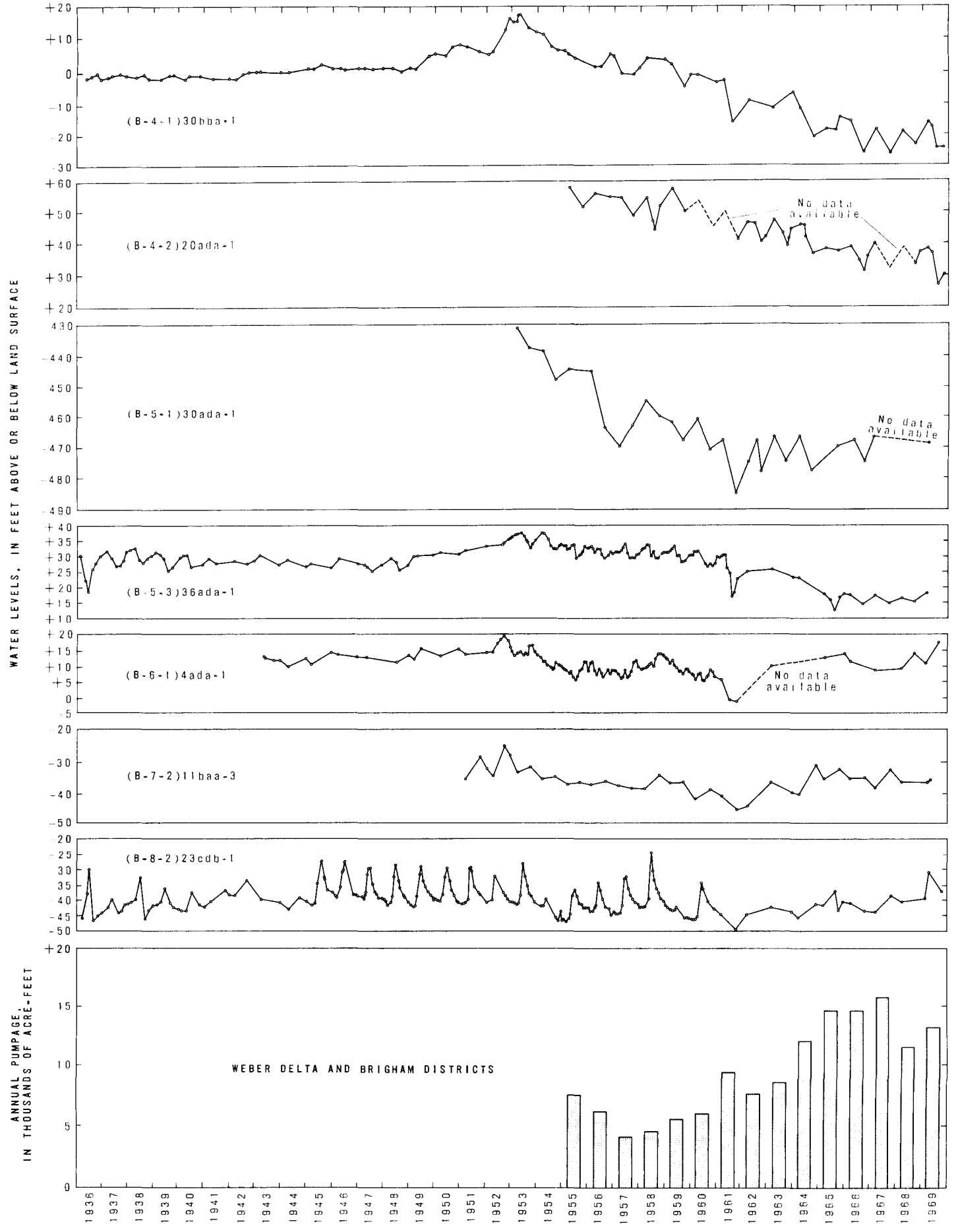

Figure 3—cont.

ground-water districts in the project area. Ogden Pioneer powerhouse is near the mouth of Ogden Canyon, and it was selected because fluctuations of precipitation at this station were assumed to be representative of regional fluctuations of precipitation. Note that the withdrawals by small-diameter wells and by large-diameter wells for multiple-use purposes were not combined on a year-to-year basis in figure 3 with annual pumpage for municipal and industrial supply. However, withdrawals from these wells for 1960 and 1969 are given in the above table; and in the following discussion, water-level fluctuations are related to total withdrawals from wells.

In the Bountiful district, water levels in 1969 showed a general recovery from the low levels reached in 1961 (see hydrographs of wells (A-2-1)19dbc-1, (B-2-1)13aab-1, (B-2-1)26aad-1, and (A-2-1)18abd-12). Water levels declined nearly 40 feet from the early 1950's to 1961 in parts of the district, but they have recovered about 30 feet since that low period. Large fluctuations in water levels are characteristic of the areas in the Bountiful district where withdrawals from wells are greatest. The rapid rate of recovery in the first half of the decade was due to decreased pumping, which in turn was due to the importation of water by aqueduct from the Weber River. The rate of recovery was slower during the latter part of the decade, because the pumping again increased to about the same level as that prior to 1960. The water level in well (B-2-1)26aad-1 probably best reflects this increased pumping.

Note that the low water levels in 1961 occurred after a long period of below average precipitation as well as after a period of heavy withdrawal from 1957 to 1959. In 1969, after 3 years of withdrawal about equal in amount to that for 1957-59, and the curve for cumulative departure from average annual precipitation showing only a slight upward trend, water levels remained considerably above the 1961 levels. This is due in part to urbanization in the recharge zone of the aquifers in the eastern part of the Bountiful district. Urbanization has resulted in a large amount of lawn watering, predominantly with surface water brought in from outside the area. This has resulted in a significant increase in the amount of recharge from the surface because the area previously was not irrigated, and the only source of surface recharge was from precipitation directly on the area. Elsewhere in the district, water-level fluctuations coincide more closely with changes in precipitation as is indicated by the hydrograph of well (B-3-1)25dab-1.

During 1950-63, water was diverted from Centerville Creek into a nearby spreading basin east of Centerville along the mountain front. The diversions generally were from April through August, during the period of maximum runoff when excess water was available for diversion. The average annual diversion was 230 acre-feet, and the largest annual diversion was 548 acre-feet in 1957. The amount of water diverted was small when compared to recharge by natural processes. The hydrograph of well (A-2-1)18abd-12, which is a shallow well (90 ft deep) about 1 mile west of the spreading basin, shows similar fluctuations of water levels both before and during the period of diversion. Therefore, it is inferred that water spreading has not appreciably affected water levels in the shallow zone in this area.

Throughout the Weber Delta district, with the exceptions of the bench areas near North Ogden and the extreme northern and southern parts of the district, water levels declined from 1960 through 1969. The declines ranged from 0 to 20 feet in the district. Hydrographs of wells (B-4-1)30bba-1, (B-4-2)20ada-1, (B-5-1)30ada-1, and (B-5-3)36ada-1 (fig. 3) show water-level fluctuations that are, in general, characteristic of most of the district.

The largest part of the water-level decline in the Weber Delta district occurred during the early to middle part of the decade 1960-69 and was due mainly to the effects of the drought that began in 1952, although pumping contributed to the declines. Water levels began declining almost continuously from 1952 until after the beginning of the period of above-average precipitation, 1963-69 (indicated by the graph of cumulative departure from the average annual precipitation, shown in fig. 3). With the onset of above-average precipitation, the rate of decline subsequently slowed, or nearly stopped.

The changes in water level shown on plate 2 are the summation of year-to-year changes (Sumsion and others, 1970; and earlier reports in that series), most of which are quite different in areal distribution from the net changes shown on plate 2. The year-to-year changes show mainly the localized effects of changes in rate of withdrawal from wells, whereas, the net change shows mainly a residual effect of the drought combined with continuing ground-water withdrawal at a lower rate.

The net water-level changes for 1960-69 as shown on plate 2 are due to a complex set of factors that are partly mutually reinforcing and partly opposing in effect on the water levels. The 11-year drought during 1952-62 resulted in a lower rate of recharge along the front of the Wasatch Range. Concurrently the drought created a larger demand for supplementary water that was provided from wells, and the natural discharge from phreatophytic vegetation increased. Also concurrently, the Great Salt Lake receded to an alltime low in 1963, which caused an additional increase in natural discharge to the lake. Some large pumped wells were installed. The largest declines occurred in the most heavily pumped areas such as that around Clearfield. The factors that combined to cause the decline were partly offset by the lessening of discharge from the many flowing wells as artesian pressures declined and as some of these wells were taken out of service.

Following the drought, withdrawal of ground water from wells did not cease; it continued at a somewhat lower rate. The water withdrawn must have come from one or more of three sources: (1) an increase in recharge, (2) a decrease in natural discharge, and (3) a decline in storage in the aquifer system. It is not probable that appreciable additional recharge from the mountain area was induced by lowering water levels; salvage of natural discharge was not greatly increased—it cannot be until water levels in the discharge area are greatly lowered; thus, most of the net decline during 1960-69 resulted from decrease in storage in the aquifer system.

Decrease in storage coupled with the finite time required for water to pass from the recharge area to the discharge area thus combined to produce a water-level decline during a period when recharge apparently increased and discharge from wells decreased. The distribution of the water-level changes in the Weber Delta district, as shown on plate 2, appear to bear out the conclusion that an appreciable part of the net decline is a residual effect of the preceding drought. The net declines during the study period were least near the mountains and greatest west of North Ogden and near the shore of Farmington Bay. Neither of the latter two areas is where the largest withdrawals of ground water occur. The most heavily pumped area, near Clearfield, experienced only moderate net declines in water level. In addition, water levels rose in areas closest to recharge sources and where withdrawals are small, such as in the bench areas near North Ogden and near Willard and Farmington. (See hydrographs of wells (B-6-1)4ada-1, (B-7-2)11baa-3, and (B-3-1)25dab-1.)

Water levels in the Brigham district rose during most of 1960-69 (see hydrograph of well (B-8-2)23cdb-1), and water levels in 1969 were about 5 feet higher than they were in 1960. Water levels in the Brigham district have not been greatly affected by withdrawals, because withdrawals in this area are not as heavy as in parts of the Weber Delta district.

Changes in storage

Changes in storage in the East Shore area for 1960-69 were computed by using water-level changes for the period (pl. 2) together with storage factors estimated by Feth and others (1966, p. 46-47). For 130 square miles of artesian aquifers in the Weber Delta district, Feth and others estimated that lowering the pressure 1 foot resulted in a release of water from storage of 60 acre-feet; and for 10 square miles of water-table aquifer, they estimated that an average of about 560 acre-feet could be released per foot of decline. The Weber Delta district comprises about 300 square miles, excluding the extreme northern and southern parts of the district. Assuming that water-table conditions prevail in 20 square miles, then artesian conditions prevail in about 280 square miles of the district. Thus the decrease in storage in the artesian aquifer caused by an average 10-foot decline in pressure during 1960-69 is about 1.300 acre-feet; the decrease in storage in the water-table aquifer for the 10-foot decline is about 11,200 acre-feet; and the total decrease is about 12,500 acre-feet.

In the Bountiful district, about 40 square miles is underlain by artesian aquifers and about 10 square miles by water-table aquifers. An average 5-foot increase in pressure for the district during 1960-69 amounts to an increase of about 3,000 acre-feet in storage. The increase in the Brigham district is probably 1,000 acre-feet or less for the same period. The net change in storage for the entire project area, then, is a decrease of about 8,000 acre-feet.

Chemical quality

Summary of general conditions

Smith and Gates (1963, p. 30) reported that three major types of water were found in the East Shore area—calcium magnesium bicarbonate, sodium bicarbonate, and sodium chloride. Some parts of the area contain mixtures of some or all the major types of water. The calcium magnesium bicarbonate type is predominant in aquifers extending along the mountain front and in a large area extending from the mountain front to west of Hooper. The calcium magnesium bicarbonate type is generally the water containing the lowest dissolved-solids content. This is the type of water found in all the mountain front streams and in the Ogden and Weber Rivers. The sodium bicarbonate type waters generally occur downgradient from the calcium magnesium bicarbonate type waters. Sodium bicarbonate type waters have been attributed to cation exchange (Feth and others, 1966, p. 60); that is, calcium and magnesium ions are exchanged for sodium as the water moves through the sediments. Most of the sodium chloride type water is in an area extending northwest from Ogden to Plain City and is the type generally associated with water containing the highest dissolved-solids content. Sparse data suggest that similar water may underlie much, or all, of the project area at depths exceeding those tapped by all but a few wells.

Plate 3 shows the dissolved-solids content and chemical type of the ground water in the East Shore area. The map is modified from a similar map of Smith and Gates (1963, fig. 8), which showed conditions in 1961, on the basis of data collected since 1961 and the use of slightly different criteria. The major difference between plate 3 and the map prepared by Smith and Gates is that water types and dissolved-solids content are depicted independently, and that water-type boundaries have been extended on the basis of new information. Comparison of the

two maps shows no major areal change of either dissolved-solids content or of water type. Both maps indicate areas where the chemical quality of the water varies with depth; but in most of the East Shore area variation was too small to be delineated at the map scale used, or the available data were insufficient for such delineation.

Chemical quality of water from new wells

The chemical-quality data obtained for the East Shore area from 1960 to 1969 are reported in table 2, which also includes most of the chemical-quality data reported by Smith (1961). Data collected in four areas are considered significant enough to warrant further discussion in the paragraphs that follow.

The chemical and physical properties of the ground water and the hydraulic properties of the aquifers north of Little Mountain suggest that the ground-water reservoir in that area contains at least four distinct water-bearing zones. The zones (pl. 3) were delineated on the basis of drillers' logs and water-quality, water-temperature, and water-level data obtained from 12 wells perforated at various depths. The presence of the zones was also supported by the results of aquifer tests (see p. 6).

The water in all four zones is of the sodium bicarbonate type, and the dissolved-solids content increases with depth from an average of 350 mg/l (milligrams per liter) in zone 1 to 500 mg/l in zone 4. Water from the deepest well, however, contained 980 mg/l of dissolved solids. The well casing is perforated in the upper part of zone 4 and in zone 3 as well as directly above bedrock, which was encountered at a depth of 920 feet. Thus the dissolved-solids content of the water in that part of the aquifer directly above bedrock may be much greater than 980 mg/l, because the composite sample obtained from the well may be diluted by water entering the well through perforations in the upper part of zone 4 and in zone 3.

Temperatures of water from wells north of Little Mountain are considerably higher than those of ground water in the adjacent area to the southeast. The water temperatures observed in the wells north of Little Mountain range from 25°C (77°F) in zone 1 to 39°C (102°F) in zone 4. The water temperature increases with depth, and the water in each zone has temperatures that are 4-5°C (7-9°F) higher than those in the overlying zone. In the adjacent area about 1-3 miles to the southeast, water temperature ranges from about 20°C to 22°C (68°-72°F) for depths similar to zones 1 to 3 (see pl. 3).

The source of heat causing the abnormally high ground-water temperatures north of Little Mountain is unknown, but it may be an underlying hot body or warm water that is moving upward along a fault. Feth and others (1966, p. 22) suggested that a major north-south fault may trend just east of Little Mountain and that warm saline ground water might be issuing in a line of seeps along the inferred fault southeast of Little Mountain. The water in zones 1, 2, 3, and in the upper part of zone 4 north of Little Mountain is not saline; thus the higher than normal temperatures probably result from conductive vertical heat transfer rather than from mixing with warm saline water.

In an effort to determine if zones 1-3 were continuous over a larger area, the dissolved-solids content of water and the water levels in wells finished in zones 1-3 were compared with similar data from three wells 1-3 miles to the southeast (pl. 3). Although the dissolved-solids content of the water and the water levels in the three wells follow a pattern similar to that of water from zones 1-3 (see pl. 3), the data are inadequate for definite correlation between the two areas.

Well (B-7-3)31aac-2 is perforated in several zones, and the available data indicate that the deeper part of zone 4 may contain highly mineralized water. The water in zone 4 is under greater artesian pressure than the water in the overlying zones, and it could contaminate the overlying zones by means of a well perforated in several zones, such as well (B-7-3)31acc-2.

The dissolved-solids content of the ground water increases with depth west of Woods Cross in an area where the water is of the sodium chloride type. The water from well (B-2-1)26cdd-4 was sampled during construction at several depths from 84 to 205 feet, and water from well (B-2-1)26cdd-3 was sampled at depths from 211 to 385 feet. The dissolved-solids content of the water was estimated from the specific conductance of the samples. The estimated dissolved-solids content ranged from about 500 to 700 mg/l in the 84 to 205 foot zone and from about 1,780 to 3,300 mg/l in the 211 to 385 foot zone (pl. 3). Sodium and chloride were the predominant ions in all samples, and all samples contained moderate amounts of calcium and magnesium. Measurements of the relative velocity of water within well (B-2-1)26cdd-3, in conjunction with the chemical-quality data, indicated that most of the water containing more than 1,000 mg/l came from a depth below 300 feet (R.H. Langford, written commun., 1962).

Data collected prior to and since 1963 near Hill Air Force Base indicate that a sodium bicarbonate water may exist below a more dilute calcium magnesium bicarbonate water in that area. Well (B-5-1)33baa-2, drilled in 1963 to a depth of 1,187 feet, is screened at intervals from 438 to 1,187 feet below land surface. Analyses of four water samples obtained during a 1-month period indicate that the water type varied from a calcium magnesium bicarbonate to a sodium bicarbonate type (table 2). The dissolved-solids content of the sodium bicarbonate type water ranged from 360 to 392 mg/l and that the calcium magnesium bicarbonate type water ranged from 228 to 246 mg/l. A similar water-quality change has been observed for well (B-5-1)30add-1 (pl. 3), and the reasons for the changes are discussed in the section on changes of chemical quality.

The dissolved-solids content in the deep sodium bicarbonate type water in wells (B-5-1)30add-1 and (B-5-1)33baa-2 near Hill Air Force Base is higher than that in the sodium bicarbonate type water found in the Delta aquifer northwest of the Weber delta (pl. 3). Because it has a higher dissolved-solids content, the sodium bicarbonate water found at depth in the Delta aquifer near Hill Air Force Base probably is not the source of the sodium bicarbonate type water in the Delta aquifer northwest of the Weber delta. Both bodies of sodium bicarbonate type water, however, may have resulted from similar processes of cation exchange as the water moved through fine-grained deposits (Feth and others, 1966, p. 63).

Chemical-quality data were obtained from a well on the Syracuse-Antelope Island causeway, which tapped aquifers beneath Great Salt Lake west of the East Shore area. (See p. 5 .) Samples of water from well (B-4-3)19caa-3, which were obtained from an artesian aquifer at depths between 423 and 475 feet, contained from 661 to 783 mg/l of dissolved solids; and the water was of the sodium chloride type. During the drilling of the well, a shallower artesian aquifer, which was eventually sealed off, was penetrated at a depth of 150 to 170 feet. This aquifer yielded a sodium bicarbonate type water containing about 330 mg/l of dissolved solids.

Comparison of the chemical analyses of water from the deeper aquifer with analyses of water from three springs near the north end of Antelope Island shows certain similarities. The springs are in secs. 30 and 33, T. 4 N., R 3 W., about 1½-2 miles south of the well. The dissolved-solids content of water from the springs ranges from 837 to 2,710 mg/l. Water from all three springs is of the sodium chloride type, and the higher the dissolved-solids content of the water, the higher is the relative concentration of sodium and chloride.

Water from spring (B-4-3)33bcc-S1 has a dissolved-solids content near that of water from the deeper aquifer in which well (B-4-3)19caa-3 is finished. The concentrations, in milligrams per liter, of the constituents in water from the spring and well are compared below:

	Spring	Well
Calcium	71	51
Magnesium	22	21
Sodium	182	202
Potassium	7.5	4.8
Bicarbonate	191	187
Sulfate	16	12
Chloride	329	350
Dissolved solids	837	783

The chemical similarity between water from the well and the springs may only be incidental. The sodium chloride water type is not unique to Antelope Island; sodium chloride type waters are also found in East Shore area aquifers which receive their recharge from the Wasatch Range. The water-quality relationships, however, in conjunction with additional geologic and hydrologic data may be of considerable significance in future studies made to determine the source of the water in the aquifers beneath Great Salt Lake west of the East Shore area.

Changes of chemical quality

Figure 4 shows the variation of dissolved-solids content in water from 13 wells sampled intermittently between 1943 and 1969. The dissolved-solids content in water from most of the wells varied only slightly during the period of sampling. Smith and Gates (1963, p. 34-39) discussed the reasons for the changes in water from eight of the wells shown in figure 4, and the following discussion covers those three wells in which the variation of dissolved-solids content has been greatest.

In the southern part of the East Shore area, near Woods Cross, water quality varies considerably both areally and with depth. The dissolved-solids content ranges from 250 mg/l to about 1,000 mg/l. The water containing the lowest dissolved-solids contents is generally of a calcium or calcium magnesium bicarbonate type, whereas the water containing the higher contents is generally of a sodium chloride or mixed type.

The chemical-quality data for four wells southwest of Woods Cross are indicative of the variable water-quality patterns within the area. Wells (B-2-1)34ada-3 and (B-2-1)36bbc-2 have been sampled repeatedly, and wells (B-2-1)26cdd-3 and (B-2-1)26cdd-4 were sampled at several depths as described in the previous section.

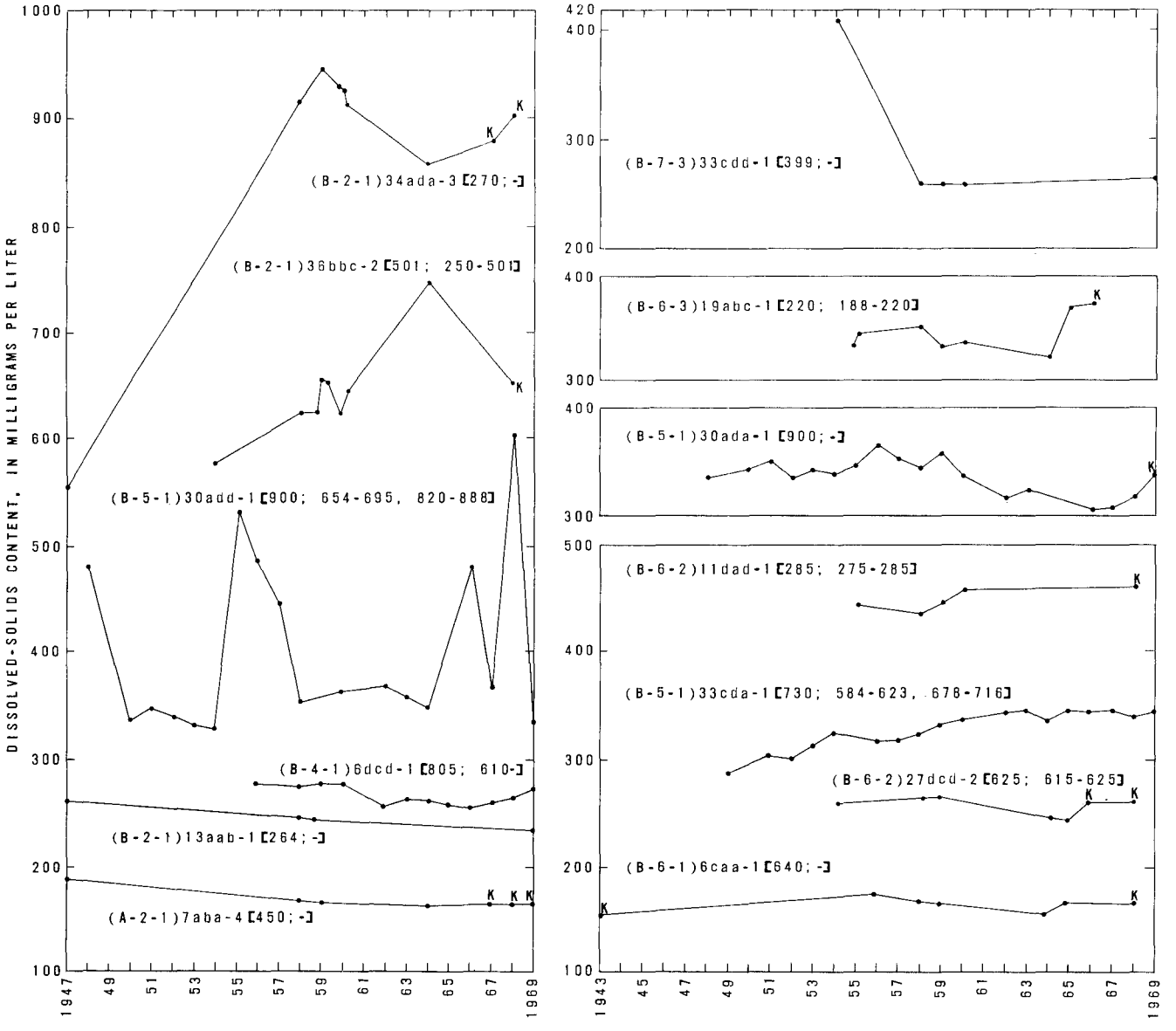

Figure 4.—Variation of dissolved-solids content in water from selected wells, 1943-69.

The dissolved-solids content in water from wells (B-2-1)34ada-3 and (B-2-1)36bbc-2 have ranged from 552 to 944 mg/l and 578 to 750 mg/l, respectively, during the period of sampling (fig. 4). The increase of dissolved-solids content in water from well (B-2-1)34ada-3 is due principally to increases of sodium and chloride, whereas the increase in water from well (B-2-1)36bbc-2 is due principally to increases of sodium, bicarbonate, and sulfate. Well (B-2-1)34ada-3 is 270 feet deep and is either screened near the bottom or has an open end. Well (B-2-1)36bbc-2 is 501 feet deep and is perforated at intervals from 250 to 501 feet.

Although the dissolved-solids contents have fluctuated during the period of sampling, the lowest observed content in each well was found in the initial sampling. The increases and subsequent fluctuations in dissolved-solids content in water from wells (B-2-1)34ada-3 and (B-2-1)36bbc-2, together with water-quality variation with depth in wells (B-2-1)26cdd-3 and (B-2-1)26cdd-4, suggest that the fluctuations may be due to upward movement of water with a higher dissolved-solids content. The movement may have resulted from localized pumping or from the overall withdrawal of ground water within the general area.

The chemical composition of water from well (B-5-1)30add-1 at Hill Air Force Base has fluctuated significantly during the period 1943-69 (fig. 4). The dissolved-solids content has varied from about 325 to 600 mg/l, and the chemical type has varied from a calcium bicarbonate type to a sodium bicarbonate type (pl. 3). The well is 900 feet deep, and the casing is perforated at depths of 654-695 and 820-888 feet in layers of clay, sand, and gravel. The well is generally pumped at a discharge of 800-900 gpm.

The variation of chemical quality is apparently due to different proportions of water being contributed by two different zones within the Delta aquifer. During periods of large withdrawals, a relatively larger amount of water is apparently contributed by the deeper zone.

The data on plate 3 indicate that well (B-5-1)30add-1 yields a mixture of water of two different chemical compositions. The extreme ends of the curves for each constituent probably approach the chemical compositions of the waters from the two zones; the extreme left-hand side of the curve represents primarily water from the upper zone, and the extreme right-hand side of the curve represents primarily water from the deeper zone. Samples obtained at different depths from nearby well (B-5-1)30ada-1 during April 1969, and data from nearby wells finished only in the shallower zone, also suggest that water of different chemical types occurs at different depths, with the dissolved-solids content generally increasing with depth.

The calcium bicarbonate type water is typical of the water from the Wasatch Range that recharges the ground-water reservoir, whereas the sodium bicarbonate type water is the product of complex chemical changes that have taken place as the water moved through the ground-water reservoir. The concentration of bicarbonate may have increased because of the increased carbon content made available by the oxidation of organic materials in the water-bearing sediments. Increased concentrations of bicarbonate in water are sometimes associated with processes causing sulfate reduction, and the almost complete absence of sulfate from the sodium bicarbonate type water probably is a reflection of this process. The reducing environment may result from organic decomposition in the sediments; and the sulfate is reduced to sulfide, which is a gas under natural conditions. The water from many flowing wells in the area has an odor of hydrogen sulfide, thus suggesting the existence of such a reducing environment.

Feth and others (1966, p. 63) have suggested that the increase in concentration of sodium in other parts of the East Shore area may be caused by cation exchange as the water moves through clays. The clays have a limited exchange capacity, however, and water probably has been moving through them for many hundreds of years. Once the cation exchange capacity is exceeded, cation exchange cannot continue. In order to provide the information necessary for more complete understanding of the geochemical relationships involved, additional data are needed regarding types of clays present, mineral chemistry, exchange capacities and exchangeable ions of the clays, and physical and chemical properties of the water within the ground-water reservoir.

Suitability for use

The suitability of water for irrigation depends upon the characteristics of the soil where the water is to be applied as well as upon the dissolved-solids content and chemical type of the water. Because of variable irrigation management practices and soil characteristics, determining the suitability of water for irrigation on the basis of water-quality criteria alone can be only approximate.

In general, for a given dissolved-solids content, a calcium bicarbonate or calcium magnesium bicarbonate type water is more suitable for irrigation than a sodium type water; and for any water type, the lower the dissolved-solids content, the more suitable the water is for irrigation, within reasonable limits.

In the East Shore area north of T. 5 N. and south of T. 4 N., ground water that is of a sodium chloride or a sodium bicarbonate type and contains more than 500 mg/l of dissolved solids is of poor quality for irrigation (pl. 3). Unless the drainage characteristics of the soils and the irrigation-management practices are good, use of this water could impair the productivity of crops.

In Tps. 4 and 5 N., most of the ground water is of a calcium magnesium bicarbonate or calcium bicarbonate type containing less than 500 mg/l of dissolved solids and is of suitable quality for irrigation.

The inorganic chemical-quality factors that affect the suitability of water for domestic and public supply are hardness and the quantities of dissolved constituents. Most of the water in the East Shore area contains more than 180 mg/l of hardness as calcium carbonate ($CaCO_3$) and is classed as very hard. Such hard water would generally be considered undesirable unless softened. The sodium bicarbonate type water (pl. 3) generally has lower hardness than the other water types.

The U.S. Public Health Service (1962) has established quality standards for drinking water which, although applying only to interstate carriers and others subject to Federal quarantine regulations, have been adopted by several states. The recommended maximum limits for some of the inorganic chemical constituents, in milligrams per liter, are listed on the following page:

Constituent	Concentration
Sulfate	250
Chloride	250
Fluoride	1.2[1]
Nitrate	45
Iron	.30
Dissolved solids	500

[1]Optimum concentration recommended for water used in public supplies at average annual maximum daily air temperatures prevailing in the East Shore area; presence of fluoride in average concentrations greater than two times the optimum value constitute grounds for rejection of the supply. (U.S. Public Health Service, 1962, p. 8.)

Most of the ground water in the East Shore area that contains less than 500 mg/l of dissolved solids (pl. 3 and table 2) also meets the maximum limits for the other constituents listed above.

CONCLUSIONS

The decline of water levels throughout most of the project area during 1960-69 continued a trend started in the previous decade; however, the rate of decline diminished in the latter part of the study period. A part of the decline was due to continuing withdrawals from wells and a part is due to residual effects of drought. Although part of the water-level decline can be attributed to increased pumping at large-diameter wells, about one-third of the total volume of ground water withdrawn during 1969 was discharged by small-diameter wells. The use of imported surface water in urban areas that are on the ground-water recharge zone has resulted in an increase of recharge in those areas.

Monitoring of water levels and withdrawals of water from wells should be continued in order to provide an assessment of the effect of continued ground-water development in the area.

No significant chemical-quality changes have occurred over a large area. The water quality has varied locally, but it has generally been a year-to-year fluctuation rather than a long-term trend. Significant seasonal variation of chemical quality was not observed during 1968 or 1969. Although increased development of the ground-water resources has caused water levels to decline considerably in some areas, significant water-quality changes over a large area have not been associated with the decline. In a small area near Woods Cross, however, water-quality changes observed in some wells may be due to water-level decline.

Water-quality monitoring should be continued in the East Shore area and near Antelope Island, especially at new well fields. Because of the proximity of Great Salt Lake to the new wells near Antelope Island and Little Mountain, it is conceivable that saline or brackish water could encroach into the fresh-water aquifers.

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APPENDIX

Well- and spring-numbering system

The system of numbering wells and springs in Utah is based on the cadastral land-survey system of the U.S. Government. The number, in addition to designating the well or spring, describes its position in the land net. By the land-survey system, the State is divided into four quadrants by the Salt Lake base line and meridian, and these quadrants are designated by the uppercase letters A, B, C, and D, indicating the northeast, northwest, southwest, and southeast quadrants, respectively. Numbers designating the township and range (in that order) follow the quadrant letter, and all three are enclosed in parentheses. The number after the parentheses indicates the section, and is followed by three letters indicating the quarter section, the quarter-quarter section, and the quarter-quarter-quarter section (generally 10 acres[1]); the letters a, b, c, and d indicate, respectively, the northeast, northwest, southwest, and southeast quarters of each subdivision. The number after the letters is the serial number of the well or spring within the 10-acre tract; the letter "S" preceding the serial number denotes a spring. If a well or spring cannot be located within a 10-acre tract, one or two location letters are used and the serial number is omitted. Thus (B-4-2)6dbb-1 designates the first well constructed or visited in the NW¼NW¼SE¼ sec., 6 T. 4 N., R. 2 W. Other sites where hydrologic data were collected are numbered in the same manner, but three letters are used after the section number and no serial number is used. The numbering system is illustrated in figure 5.

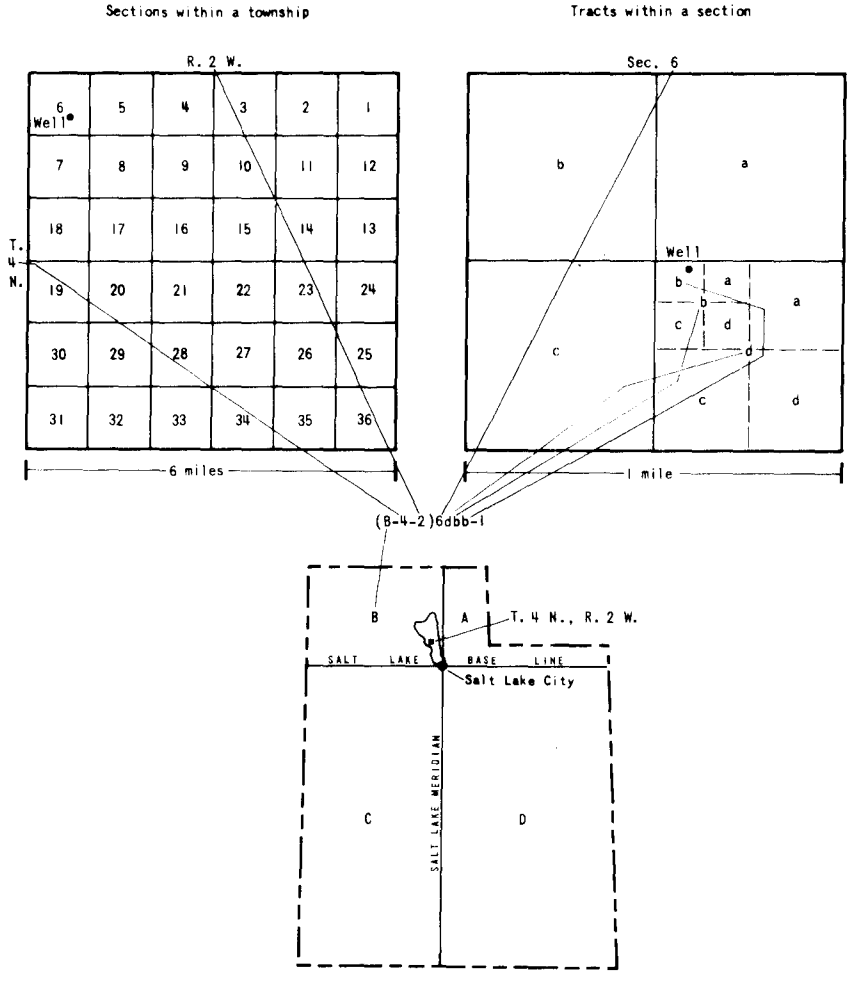

Figure 5.—Well- and spring-numbering system used in Utah.

[1]Although the basic land unit, the section, is theoretically a 1-mile square, many sections are irregular. Such sections are subdivided into 10-acre tracts, generally beginning at the southeast corner, and the surplus or shortage is taken up in the tracts along the north and west sides of the section.

Use of metric units

The results of chemical analyses and temperature measurements are given in this report in metric units, rather than the more familiar English units. Temperatures are given in degrees Celsius, and concentrations are reported in milligrams per liter or milliequivalents per liter.

Degrees Celsius (°C) are the units used for reporting temperature in the metric system. One degree Celsius is equal to 9/5 degrees Fahrenheit, and the freezing point of water is 0° on the Celsius scale. The following table may be used to convert the temperature data given in this report to the more familiar Fahrenheit scale:

TEMPERATURE-CONVERSION TABLE

For conversion of temperature in degrees Celsius (^{o}C) to degrees Fahrenheit (^{o}F). Conversions are based on the equation, $^{o}F = 1.8^{o}C + 32$; temperatures in ^{o}F are rounded to nearest degree. Underscored equivalent temperatures are exact equivalents. For temperature conversions beyond the limits of the table, use the equation given, and for converting from ^{o}F to ^{o}C, use $^{o}C = 0.5556\ (^{o}F - 32)$. The equations say, in effect, that from the freezing point ($0^{o}C$, $32^{o}F$) the temperature rises (or falls) $5^{o}C$ for every rise (or fall) of $9^{o}F$.

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
-20	-4	-10	14	0	32	10	50	20	68	30	86	40	104
-19	-2	-9	16	+1	34	11	52	21	70	31	88	41	106
-18	0	-8	18	2	36	12	54	22	72	32	90	42	108
-17	+1	-7	19	3	37	13	55	23	73	33	91	43	109
-16	3	-6	21	4	39	14	57	24	75	34	93	44	111
-15	5	-5	23	5	41	15	59	25	77	35	95	45	113
-14	7	-4	25	6	43	16	61	26	79	36	97	46	115
-13	9	13	27	7	45	17	63	27	81	37	99	47	117
-12	10	-2	28	8	46	18	64	28	82	38	100	48	118
-11	12	-1	30	9	48	19	66	29	84	39	102	49	120

Milligrams per liter (mg/l) is the base unit for expressing the concentration of chemical constituents in solution, and it represents the weight of solute per unit volume of water. For concentrations of less than about 7,000 mg/l, this unit is numerically very nearly equal to the unit parts per million (ppm), which was formerly used by the U.S. Geological Survey.

Milliequivalents per liter (meq/l) is the base unit for expressing the concentration of chemical constituents in terms of the interacting values of the electrically charged particles, or ions, in solution. One meq/l of a positively charged ion can react with 1 meq/l of a negatively charged ion. Meq/l is numerically equal to the unit equivalents per million, which was formerly used by the U.S. Geological Survey. For comparison of water types and for graphical presentation, meq/l is a more convenient unit than mg/l.

Terms describing aquifer characteristics

The capacity of an aquifer to transmit and store water is described by the transmissivity of the aquifer, the hydraulic conductivity of the water-bearing material, and the storage coefficient of the aquifer.

Transmissivity (T) is the rate at which water is transmitted through a unit width of the aquifer under a unit hydraulic gradient. The units for *T* are cubic feet per day per foot (ft^3/day/ft), which reduces to ft^2/day. The term transmissivity replaces the term coefficient of transmissibility, which was formerly used by the U.S. Geological Survey and which was reported in units of gallons per day per foot. To convert a value for coefficient of transmissibility to the equivalent value of transmissivity, multiply by 0.134; to convert from transmissivity to coefficient of transmissibility, multiply by 7.48.

The *hydraulic conductivity (K)* of a water-bearing material is the volume of water that will move through a unit cross section of the material in unit time under a unit hydraulic gradient. The units for *K* are cubic feet per day per square foot (ft^3/day/ft^2), which reduces to ft/day. The term hydraulic conductivity replaces the term field coefficient of permeability, which was formerly used by the U.S. Geological Survey and which was reported in units of gallons per day per square foot. To convert a value for field coefficient of permeability to the equivalent value of hydraulic conductivity, multiply by 0.134; to convert from hydraulic conductivity to coefficient of permeability, multiply by 7.48.

The *storage coefficient (S)* of an aquifer is the volume of water it releases from or takes into storage per unit surface area of the aquifer per unit change in head. *S* is a dimensionless number. Under confined conditions, *S* is typically small, generally between 0.001 and 0.00001. Under unconfined conditions, *S* is much larger, typically from 0.05 to 0.30.

BASIC DATA

Table 1.—Records of selected wells in the East Shore area

WELL NUMBER: SEE APPENDIX FOR EXPLANATION.
OWNER: SOME NAMES ABBREVIATED OWING TO SPACE LIMITATIONS OF AUTOMATIC DATA PROCESSING.
DATE: YEAR IN WHICH WELL WAS COMPLETED. WHERE THE YEAR IS NOT KNOWN, THE PRIORITY DATE OF THE WATER RIGHT IS GIVEN IN PARENTHESES OR THE MOST RECENT DATE OF DEEPENING IS INDICATED BY AN ASTERISK (*).
METHOD OF CONSTRUCTION: C, CABLE TOOL; J, JETTED; H, HYDRAULIC ROTARY; V, DRIVEN.
CASING DEPTH: DEPTH SHOWN IS DEPTH TO THE BOTTOM OF CASING, DEPTH TO TOP OF THE SCREEN, OR DEPTH TO FIRST PERFORATION, WHICHEVER IS APPLICABLE.
FINISH: O, OPEN-END CASING; P, PERFORATED CASING; S, SCREEN.
ALTITUDE OF LSD: LSD, LAND-SURFACE DATUM. SURVEYED ALTITUDES INDICATED BY A; OTHER ALTITUDES INTERPOLATED FROM U.S. GEOLOGICAL SURVEY 7½-MINUTE TOPOGRAPHIC MAPS.
WATER LEVEL: STATIC WATER LEVEL; "+", INDICATES A POTENTIOMETRIC HEAD ABOVE LAND SURFACE; F, WELL FLOWING, BUT NO WATER-LEVEL MEASUREMENT AVAILABLE. METHOD OF MEASUREMENT INDICATED BY: A, STEEL TAPE; C, AIRLINE GAGE; D, REPORTED BY DRILLER; F, PRESSURE GAGE; I, MANOMETER.
YIELD: RATE - GPM, GALLONS PER MINUTE; REPORTED UNLESS NOTED BY M, MEASURED BY U.S. GEOLOGICAL SURVEY. WHERE BOTH RATE AND DRAWDOWN ARE GIVEN AND WHERE WATER LEVEL IS "+", THE RATE IS THE PUMPING RATE; B, INDICATES RATE OF LESS THAN 1 GPM. DATE - MONTH AND YEAR OF WATER-LEVEL AND YIELD DATA.
WATER USE: USE SHOWN IS THE PRINCIPAL USE. H, DOMESTIC; I, IRRIGATION; N, INDUSTRIAL; P, PUBLIC SUPPLY; S, STOCK; U, NOT USED.
WELL USE: O, U.S. GEOLOGICAL SURVEY OBSERVATION WELL; T, TEST HOLE; U, NOT USED; W, WITHDRAWAL OF WATER; Z, DESTROYED.
LOG: AVAILABLE IN THE FILES OF UTAH DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATER RIGHTS, OR IN THE FILES OF U.S. GEOLOGICAL SURVEY. D, DRILLER'S; E, ELECTRIC; J, GAMMA RAY; N, NEUTRON; Y, ELECTRIC, RADIATION, AND SAMPLE (OR DRILLER'S); 6, RADIATION, TEMPERATURE, AND FLUID CONDUCTIVITY; 7, RADIATION, TEMPERATURE, FLUID CONDUCTIVITY, AND SAMPLE (OR DRILLER'S).
OTHER DATA AVAILABLE: C, CHEMICAL ANALYSIS, OR K, SPECIFIC CONDUCTANCE, IN TABLE 2.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING			ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD		DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
					DIAMETER (IN.)	DEPTH (FT)	FINISH			RATE (GPM)	DRAWDOWN (FT)					
(A-1-1) 6AAA- 1	SO DAVIS IMPDIS	1961	C	620	20	386	P	4810	238 D	10	450	8-61	P	W	D	--
(A-2-1) 6ABB- 7	E C NEWMAN	1967	C	101	6	90	P	4300	13 D	15	15	11-67	H	W	D	--
(A-2-1) 6ACC- 2	R G FORD	(1924)	--	59	3	--	--	4280	F	35 M	--	8-68	I	O	--	K
(A-2-1) 6ACD- 1	K HESS	1969	C	122	6	105	P	4325	27 D	25	15	8-69	H	W	D	--
(A-2-1) 6BBA- 1	L L JENSEN	1961	C	80	6	65	P	4222	28 D	20	10	2-61	H	W	D	--
(A-2-1) 6DBD-10	H W CURTIS	1965	J	84	2	80	P	4290	+12 D	10	--	5-65	H	W	D	--
(A-2-1) 6DCC- 2	J W REID	1964	H	196	3	176	P	4266	+1 D	7	--	1-64	H	W	D	--
(A-2-1) 6DCD- 2	ZION AID SOC	(1900)	J	60	2	--	O	4291 A	+10 I	5 M	--	3-69	H	O	D	--
(A-2-1) 7AAC- 7	PINEAE GREENHSE	1964	C	361	6	278	P	4315	F	150	--	9-64	H	W	D	--
(A-2-1) 7ABA- 4	J BRADSHAW	(1930)	--	450	3	--	O	4280 A	+16 I	--	--	10-68	H	O	--	C
(A-2-1) 7BAB- 4	R NIELSON	1965	J	85	3	85	P	4235	+5 D	5	--	4-65	H	W	D	--
(A-2-1) 7BDC- 2	CENTERVILLE CTY	1966	C	478	6	440	P	4245	+12 D	100	155	10-66	P	W	D	K
(A-2-1)17CCC- 3	BOUNTIFUL CITY	1961	C	500	20	140	P	4380	--	--	--	--	P	W	D	--
(A-2-1)18ABB- 2	CENTERVILLE CTY	1961	C	563	16	430	P	4272	--	--	--	--	P	W	D	C
(A-2-1)18ABD-12	T Q WILLIAMS	(1935)	J	90	2	90	O	4289	+15 I	--	--	3-69	U	O	--	--
(A-2-1)18ADB-15	P F JONES	1960	J	69	2	66	P	4305	2 D	--	--	12-60	H	W	D	--
(A-2-1)18CAA- 7	L A JONES	1961	J	116	3	--	--	4282	+1 D	3	--	7-61	H	W	D	--
(A-2-1)18CAB-18	R J CHAPMAN	1962	J	129	2	126	P	4268	F	7	--	11-62	H	W	D	--
(A-2-1)18CAB-19	M JOHNSON	1965*	J	190	2	--	P	4270	F	3	--	4-63	H	W	D	--
(A-2-1)18CBA- 1	V PETERSON	1968	J	168	2	110	P	4263	+5 D	5	--	3-68	--	W	D	--
(A-2-1)18CDA- 6	BOUNTIFUL CITY	1963	C	760	16	350	P	4295	18 D	1400	74	4-63	P	W	D	--
(A-2-1)19DAC- 1	BOUNTIFUL CITY	1934	--	380	12	170	P	4368 A	88 A	400	--	12-59	P	O	D	--
(A-2-1)20DDB- 1	BOUNTIFUL W C D	1967	C	591	16	401	P	4740	+51 D	3945	225	8-67	P	W	DJ	--
(A-2-1)29ACD- 2	G S DRUMENTI	1961	C	170	6	157	P	4550	120 D	--	--	6-61	H	W	D	--
(A-2-1)30ACD- 1	BOUNTIFUL CITY	1950	--	374	15	318	P	4440	--	--	--	--	P	W	--	C
(A-2-1)31ADA- 1	R N SCHLUTER	(1946)	--	195	4	--	--	4438	130 A	--	--	12-59	H	W	D	C
(A-2-1)31ADD- 2	R N SCHLUTER	1961*	H	245	8	180	P	4710	90 D	--	--	8-61	I	W	D	--
(A-2-1)31CCA- 1	SO DAVIS IMPDIS	(1934)	--	216	8	--	--	4498	132 A	--	--	3-69	H	O	--	--
(A-2-1)31CDD- 5	SO DAVIS IMPDIS	1967	C	500	16	280	P	4680	187 D	325	98	4-67	P	W	D	--
(A-2-1)32CCB- 1	BOUNTIFUL CITY	(1947)	--	412	10	--	--	4830	--	--	--	--	P	W	--	C
(A-3-1)18CAC- 1	N GROSS	1964	C	385	8	85	P	4400	20 D	50	160	6-64	H	W	D	--
(A-3-1)18CCB- 1	FARMINGTON CITY	1963	C	223	16	110	P	4315	39 D	1780	58	6-63	P	W	D	--
(A-3-1)18CDB- 1	H ERIKSSON	1966	C	135	6	120	P	4375	100 D	15	0	5-66	H	W	D	--
(A-3-1)19CCC- 2	D K SWANER	1965	C	180	6	105	P	4265	+11 D	50	--	8-65	S	W	D	--
(A-3-1)19CDA- 1	FARMINGTON CITY	1967	C	300	12	157	P	4315	40 D	900	75	4-67	P	W	D	--
(A-3-1)19CDB- 1	J ALLEN	1964	J	61	4	55	P	4305	+2 D	5	15	8-64	H	W	D	--
(A-3-1)19CDC- 2	B AND D ORTON	1967	C	200	8	102	P	4297	9 D	25	--	4-67	H	W	D	--
(A-3-1)19CDC- 3	D WILCOCK	1968*	C	356	6	350	P	4298	+7 D	4	--	9-68	H	W	D	--
(A-3-1)30BAB- 2	W LEAVITT	1961	C	228	8	185	P	4260	F	70	--	11-61	H	W	D	--
(A-3-1)30BBC- 2	G ANDERSON	1965	J	114	4	96	P	4250	+25 D	25	--	4-65	H	W	D	--
(A-3-1)30BBC- 3	D PRITCHETT	1969	C	142	6	108	P	4250	+15 D	60	--	1-69	H	W	D	--
(A-3-1)30BBD- 1	W LEAVITT	1966	C	125	6	80	P	4255	+20 D	50	--	2-66	S	W	D	--
(A-3-1)30BDD- 1	L F STODDARD	1964	C	228	6	104	P	4350	60 D	60	--	3-64	H	W	D	--
(A-3-1)30CAA- 2	L S RICE	1961	H	234	8	26	P	4315	23 A	180	--	3-69	I	O	D	--
(A-3-1)30CAA- 3	FARMINGTON CITY	1964	C	233	12	156	P	4325	30 D	60	123	6-64	P	W	D	--
(A-3-1)30CAB- 5	M MANNING	1966	C	110	4	104	P	4265	+10 D	2	--	7-66	H	W	D	--
(A-3-1)31CAD- 3	R E PETTY	1967	C	129	6	102	P	4300	--	15	20	8-67	H	W	D	--
(A-3-1)31CAD- 4	P SCHWARTZ	1967	C	146	6	132	P	4300	18 D	15	20	11-67	H	W	D	--
(A-3-1)31CDA- 2	FARMINGTON CITY	1964	C	165	12	140	O	4300	--	--	--	--	P	W	D	--
(A-3-1)31DBB- 1	R SHARP	1969	H	135	6	101	P	4320	30 D	25	12	1-69	H	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(A-3-1)31DCB- 4	C HANSEN	1965	C	115	6	81	P	4305	15 D	15	10	9-65	H	W	D	--
(A-3-1)31DCB- 5	L ATKIN	1968	C	123	6	102	P	4320	37 D	30	15	8-68	H	W	D	--
(A-3-1)31DCB- 6	L R SEELY	1969	C	120	6	101	P	4330	19 D	20	5	4-69	H	W	D	--
(A-3-1)31DCC- 1	J L HOLBROOK	1963	C	112	6	83	P	4300	10 D	20	10	9-63	H	W	D	--
(A-3-1)31DCC- 2	E A HOLBROOK	1965	C	117	6	88	P	4300	15 D	15	5	10-65	H	W	D	--
(B-1-1) 28AA- 1	N S L STOCKYARD	1961	C	549	12	400	P	4233	F	100	--	9-61	I	W	D	--
(B-1-1)10AAC- 1	O B HOLBROOK	1965	J	231	2	221	S	4215	+5 I	14 M	--	11-68	--	O	D	P
(B-1-1)11ABC- 3	WEST STATES REF	1960	--	319	8	150	P	4235	25 D	40	80	3-60	N	W	D	--
(B-1-1)11ADC- 2	FRONTIER OIL CO	1962	C	344	12	284	P	4315	82 D	700	165	7-62	N	W	D	--
(B-2-1)12CDA- 2	W C DIEHL	1966	J	78	2	68	S	4214	+9 D	12	--	8-66	H	W	D	--
(B-2-1)12DBB- 1	E A HIGGINS	1966	C	502	8	345	P	4210	+5 D	200	--	6-66	H	W	D	--
(B-2-1)12DCD- 1	B A CHILDS	1964	J	210	4	204	P	4225	+20 D	20	--	4-64	H	W	D	--
(B-2-1)13AAB- 1	L NAPOLI	(1946)	--	264	2	--	--	4237 A	+36 I	--	--	3-69	H	O	D	C
(B-2-1)13ADC- 4	A EGGETT	1960	V	184	2	--	P	4246	F	20	--	9-60	H	W	D	--
(B-2-1)13BBB- 4	W A LAW	1962	H	210	2	190	P	4212	F	20	--	8-62	S	W	D	--
(B-2-1)13CAB- 5	K PACK	1960	V	182	3	176	P	4226	+25 D	25	--	10-60	H	W	D	--
(B-2-1)13DAB- 9	R E FREESTONE	1963	J	168	4	--	P	4240	+9 D	--	--	6-63	H	W	D	--
(B-2-1)13DDD- 3	V HANSEN	1966	C	130	4	120	P	4270	+20 D	50	--	4-66	H	W	D	--
(B-2-1)14ADA- 2	S HATCH	1963	H	281	4	60	P	4212	+3 D	--	--	11-63	H	W	D	--
(B-2-1)14DCB- 1	S V LUND	1968	H	210	2	200	P	4216	F	--	--	1-68	H	W	D	--
(B-2-1)14DCD- 1	L J KIDMAN	1966	J	174	2	164	S	4219	+22 I	15 M	--	3-69	I	O	D	--
(B-2-1)15DDD- 1	SO DAVIS IMPOIS	1961	C	450	8	419	P	4209	+33 I	4 M	--	11-68	P	W	D	C
(B-2-1)23AAA- 1	S L RILEY	1963	J	322	3	313	P	4227	F	17 M	--	8-68	H	W	D	C
(B-2-1)23ACC- 3	D L GLINES	1965	J	150	2	140	P	4224	+20 D	15	--	3-65	H	W	D	--
(B-2-1)23ACC- 4	R E JONES	1965	J	170	2	165	P	4224	+25 D	14	--	5-65	S	W	D	--
(B-2-1)23ACD- 3	R S MUIR	1964	H	166	4	158	P	4227	F	24	--	6-64	H	W	D	--
(B-2-1)23ADD- 6	A U ELDREDGE	(1920)	--	331	3	--	--	4233	+19 I	68 M	--	8-68	H	O	--	K
(B-2-1)23BBC- 1	A J V HUGOE	1965	J	170	2	140	P	4212	+15 D	8	--	3-65	H	W	D	--
(B-2-1)23BDD- 1	L HEPWORTH	(1919)	--	600	3	--	--	4220	F	60 M	--	8-68	H	D	--	C
(B-2-1)23CAB- 1	F R DEVEREAUX	1964*	H	225	3	222	P	4218	+18 D	20	--	12-64	H	W	D	--
(B-2-1)23DBB- 2	M M ARBUCKLE	1964	J	311	3	306	P	4225	+15 D	6	--	8-64	H	W	D	--
(B-2-1)23DBD- 1	R GEORGE	1964	J	155	2	149	P	4230	+15 D	18	--	4-64	S	W	D	--
(B-2-1)23DDA- 7	O H ELLIS	1961	H	419	6	260	P	4235	32 D	--	--	8-61	I	W	D	--
(B-2-1)23DDD- 5	B SCHULTIES	1965	C	255	6	204	P	4237	+20 D	150	--	8-65	H	W	D	--
(B-2-1)24ABD- 9	W EGGETTS	1959	--	133	2	128	P	4267	+6 D	35	--	12-59	--	W	D	--
(B-2-1)24ABD-10	W EGGETTS	1959	--	135	3	130	P	4266	+4 D	24	--	12-59	--	W	D	--
(B-2-1)24ABD-11	J A GERTSCH	1960	--	147	2	141	P	4263	+6 D	21	--	1-60	--	W	D	--
(B-2-1)24ACA- 5	W EGGETTS	1959	--	144	2	139	P	4272	1 D	35	4	12-59	--	W	D	--
(B-2-1)24BAC- 2	R BANGERTER	1961	C	335	8	250	P	4242	F	100	--	9-61	I	W	D	--
(B-2-1)24BAD- 3	C JEPPSON	(1920)	J	386	3	386	O	4248 A	+35 I	50 M	--	3-68	I	O	--	C
(B-2-1)24BAD-10	C JEPPSON	1954	--	150	2	--	--	4248	+22 I	--	--	3-69	I	O	--	--
(B-2-1)24BBA- 4	D MCKEAN	1961	H	250	6	90	P	4232	F	60	--	9-61	I	W	D	--
(B-2-1)24BBA- 5	J H ELLIS	1963	J	280	4	250	P	4233	+12 D	12	--	5-63	I	W	D	--
(B-2-1)24BBB- 2	J H ELLIS	1960	J	306	3	290	P	4230	+21 D	60	--	6-60	I	W	D	--
(B-2-1)24BCD- 3	B SCHULTIES	1967	J	130	2	120	P	4245	+10 D	20	--	8-67	H	W	D	--
(B-2-1)24CBD- 2	G B MANN	(1901)	J	325	3	--	--	4246	F	60 M	--	8-68	I	O	--	C
(B-2-1)24CDD-11	PHILLIPS PET CO	1953	--	607	16	430	P	4280	--	1960	62	--	N	W	--	C
(B-2-1)24DBA- 9	J H PETERSON	1963	C	225	6	150	P	4280	2 D	--	--	10-63	H	W	D	--
(B-2-1)24DBA-10	PRO UNTD BLD SP	1964	C	279	6	124	P	4285	21 D	--	--	4-64	H	W	D	--
(B-2-1)25BAA-15	PHILLIPS PET CO	1947	--	570	8	--	--	4285	--	650	--	--	N	W	D	C
(B-2-1)25BAC- 2	W S HATCH CO	1959	--	235	8	135	P	4280	24 D	250	8	1-59	--	W	--	--
(B-2-1)25BAD- 2	M A HATCH	(1895)	--	150	2	--	--	4288	6 A	--	--	3-69	I	O	--	--
(B-2-1)25BDC- 7	A D EAKLE	1961	C	304	8	112	P	4290	25 D	350	15	8-61	I	W	D	--
(B-2-1)25DAA- 1	WBWCD BOUNTIFUL	1961	C	815	20	435	P	4355	71 A	--	--	4-69	I	O	D	--
(B-2-1)26AAD- 1	P W NEAL	(1925)	J	250	3	250	O	4245 A	+34 I	--	--	3-69	H	O	--	--
(B-2-1)26ABB- 2	D C WINEGAR	1960	--	273	2	265	P	4235	F	20 M	--	8-68	H	W	D	C
(B-2-1)26BAA- 2	R ASHWORTH	1961	J	295	2	289	P	4228	F	25	--	1-61	H	W	D	--
(B-2-1)26BAB- 8	W R SMITH	1961	H	584	10	210	P	4228	F	65	--	7-61	I	W	D	C
(B-2-1)26BCC- 2	P WROCKLOFF	1965	H	251	4	246	P	4225	F	25	--	3-65	H	W	D	--
(B-2-1)26CCA- 1	L R CAHOON	1962	J	388	3	383	P	4232	+15 D	15	--	10-62	H	W	D	--
(B-2-1)26CDA- 6	L AND J PICUS	1967	J	172	2	162	P	4241	+10 D	10	--	9-67	H	W	D	--
(B-2-1)26CDA- 7	L PICUS	1967	J	225	2	218	P	4242	+14 D	20	--	8-67	H	W	D	--
(B-2-1)26CDD- 3	F THALMAN	1961	C	425	16	225	P	4243	+4 D	2250	125	7-61	U	U	7	C
(B-2-1)26CDD- 4	F THALMAN	1963	J	205	2	--	--	4243	--	--	--	--	--	T	--	C
(B-2-1)26DAD- 7	V J PERRY	1961	H	200	6	160	P	4266	10 D	60	10	7-61	I	W	D	--
(B-2-1)26DCB- 1	P E BURNHAM	(1935)	--	400	4	--	--	4245	F	120 M	--	8-68	--	W	--	C
(B-2-1)27ADA- 4	M B KINGSTON	1963	H	498	4	--	P	4223	F	60	--	2-63	S	W	D	--
(B-2-1)27DDD- 4	A THALMAN	(1885)	J	500	3	--	--	4230	+24 I	--	--	12-62	H	O	D	C
(B-2-1)34ADA- 3	D HART	(1896)	--	270	2	--	--	4232 A	F	--	--	7-68	H	W	--	C
(B-2-1)34ADD- 2	D M HUNTER	(1886)	--	410	3	--	--	4232	F	71 M	--	8-68	I	O	--	C

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(A-2-1)34DDD- 2	M DUNLOP	1961	H	250	4	170	P	4226	12 D	--	--	7-61	H	W	D	--
(A-2-1)35ADA- 7	BONNEVILLE DIST	1962	J	240	2	235	P	4274	20 D	15	--	10-62	H	N	D	--
(A-2-1)35DAD- 1	G O HATCH	(1890)	--	84	2	--	--	4244	+15 I	4 M	--	10-69	S	O	D	C
(A-2-1)36BBC- 2	PETROFLEX CORP	1953	--	501	12	250	P	4275	--	--	--	--	N	W	--	C
(A-3-1) 18BC- 1	E NICHOLLS	(1952)	--	300	8	195	P	4555 A	174 A	350	7	1/ 3-69	I	O	D	--
(A-3-1) 20CC- 2	O HOLLIST	(1954)	--	386	4	--	--	4400	--	--	--	--	H	Z	--	C
(A-3-1) 30DD- 1	J R MONTGOMERY	1968	H	305	4	275	P	4355	40 D	--	--	12-68	H	W	D	--
(A-3-1) 4ABA- 3	C A SCOFFIELD	1964	J	773	2	763	S	4272	+13 D	15	--	9-64	H	W	D	--
(A-3-1) 4BCA- 2	G W WEBSTER	(1908)	--	250	2	--	--	4240	F	15 M	--	8-68	H	O	--	K
(A-3-1) 4CDA- 1	M J ROUECHE	1964	J	263	4	253	S	4242	+26 D	55	--	7-64	--	W	D	--
(A-3-1) 4CDA- 2	M J ROUECHE	1964	J	178	2	168	S	4241	+26 D	20	--	7-64	H	W	D	--
(A-3-1) 4CDA- 4	L ROUECHE	1952	--	657	2	--	O	4231 A	F	17 M	--	8-68	P	S	D	C
(A-3-1) 4CDB- 5	N B ROUECHE	1966	J	385	2	375	S	4230	+25 D	50	--	10-66	H	W	D	--
(A-3-1) 4DDB- 5	E W BRADY	1966	H	485	2	473	P	4258	F	14 M	--	11-68	H	W	D	K
(A-3-1) 5AAD- 1	P W WEBSTER	1968	H	668	2	658	P	4231	F	50	--	9-68	H	W	D	--
(A-3-1) 5DDA- 1	C O SMITH	1966	H	918	4	873	P	4226	+65 D	300	--	7-66	S	W	DE	C
(A-3-1) 5DDB- 2	J W GALBRAITH	1969	H	338	2	328	P	4222	F	40	--	10-69	H	W	D	--
(A-3-1) 9AAD- 3	W HARRIS	(1945)	--	648	2	--	--	4263 A	+13 I	--	--	3-69	H	O	D	K
(A-3-1)10CAA- 1	D K BURTON	1967	H	226	6	216	P	4290	9 D	--	--	9-67	H	W	D	--
(A-3-1)10CDA- 1	J DURFEE	1969	J	598	4	588	S	4270	+10 D	10	--	5-69	H	W	D	--
(A-3-1)11CAA- 1	S H FOWLER	1969	J	376	4	366	P	4235	24 D	20	10	5-69	H	W	D	--
(A-3-1)13ACA- 1	L MCGUGIN	1966	C	90	6	44	P	4295	12 D	30	0	8-66	H	W	D	--
(A-3-1)13CDA- 7	L J KIDMAN	1962	J	48	2	38	S	4250	+11 D	20	--	8-62	H	W	D	--
(A-3-1)13DAD- 1	G HESS	(1924)	--	172	3	--	--	4270	+16 I	--	--	9-68	S	O	--	--
(A-3-1)13DBD- 2	J S JOHNSON	1962	H	84	4	74	P	4275	8 D	40	3	12-62	H	W	D	--
(A-3-1)14AAB- 1	A C MCCULLOUGH	1965	J	157	2	147	S	4274	F	--	--	11-65	H	W	D	--
(A-3-1)15AAB- 1	H BENCH IRR CO	(1934)	C	720	12	635	--	4283 A	14 A	--	--	3-69	I	O	6	--
(A-3-1)15ACD- 1	L D S CHURCH	1930	--	260	2	260	O	4227	+19 I	3M	--	9-69	S	W	--	C
(A-3-1)15BAC- 1	GEN DAVIS CO SD	1960	J	985	4	937	P	4222	+60 D	25	--	9-60	P	W	D	K
(A-3-1)22ADB- 1	P J THOMAS	1966	H	335	4	260	P	4224	F	20	--	4-66	H	W	D	--
(A-3-1)22ADB- 2	P J THOMAS	1966	H	320	4	260	P	4224	F	20	--	4-66	H	W	D	--
(A-3-1)24ABB- 1	G SPACKMAN	(1939)	--	42	2	42	O	4256 A	+6 I	24M	--	3-69	U	O	--	--
(A-3-1)24BCA- 1	F RICHARDS	(1947)	--	176	3	--	--	4236 A	+18 I	--	--	7-59	S	W	D	C
(A-3-1)25ABC- 4	R RIGBY	1962	J	210	2	205	P	4233	+5 D	15	--	12-62	S	W	D	--
(A-3-1)25ADB- 1	S NEVEN	1968	H	220	4	200	P	4243	F	--	--	12-68	H	W	D	--
(A-3-1)25DAB- 1	E J SWEAT	(1945)	--	265	2	265	--	4238 A	+26 I	4M	--	10-68	H	O	D	C
(A-3-1)26AAA- 1	C K BURTON	1966	J	140	2	105	P	4225	+6 D	4	--	9-66	S	W	D	--
(A-3-1)26DBA- 1	F CABANESS	1963	H	200	4	186	P	4212	+1 D	6	--	10-63	H	W	D	--
(A-3-1)27ADA- 1	WHEELER MACH CO	1965	C	850	6	788	P	4213	+15 D	38	--	11-65	H	W	7	C
(A-3-1)35ABA- 1	FAR BAY REFUGE	1955	--	1220	6	--	--	4206	+70 F	--	--	9-69	H	W	--	C
(A-4-1) 3AAD- 1	NO DAVIS CO RD	1965	H	544	6	526	P	4860	418 D	--	--	12-65	N	W	D	--
(A-4-1) 3ABC- 1	J KOSTOFF	1965	H	243	6	--	P	4930	222 D	--	--	10-65	H	W	D	--
(A-4-1) 5CCC- 1	CLEARFIELD CITY	1961	C	850	24	520	P	4680	384 D	2725	15	1-61	P	W	7	--
(A-4-1) 6DCD- 1	HILL AFB NO 5	1955	--	805	20	610	P	4630	470 C	1000	--	7-62	P	W	--	C
(A-4-1) 7BAA- 1	WBWCD CLRFLD N2	1961	H	902	20	675	P	4585	290 D	2500	11	11-61	P	O	DF	C
(A-4-1) 7BAD- 1	V J LOPEZ	1968	J	28	4	13	S	4548	11 D	20	--	11-68	H	W	D	--
(A-4-1) 8ACD- 1	WBWCD LAYTONA	1956	--	802	20	675	P	4626 A	341 C	2450	25	1/ 4-69	P	W	UN	--
(A-4-1) 8DCD- 1	LAYTON CITY	1961	H	707	20	582	P	4525	226 D	2380	24	5-61	P	W	D	C
(A-4-1)10BAB- 1	U S B R TEST 3	1961	H	1205	--	--	--	4785	--	--	--	--	U	T	D	C
(A-4-1)12BDD- 1	G P SEEGER	1965	C	85	6	60	P	5080	45 D	45	2	6-65	H	W	D	--
(A-4-1)16BDD- 1	LAYTON CITY	1965	C	568	20	490	P	4495	208 D	2400	19	1-65	P	O	7	--
(A-4-1)19CDC- 1	C LAYTON	(1900)	--	400	2	--	--	4306 A	20 A	--	--	3-69	U	O	--	--
(A-4-1)22CBA- 1	W J MAYNARD	1964	H	375	4	369	P	4425	15 D	33	16	5-64	H	W	D	--
(A-4-1)23CCC- 1	MALAN & HESS	1965	H	258	6	--	P	4520	123 D	4	--	11-65	H	W	D	--
(A-4-1)24CAC- 1	K W MAW	1966	C	202	6	54	O	4990	61 D	3	192	1-66	H	W	D	--
(A-4-1)27ACD- 1	B COBURN	1963	--	52	4	10	P	4410	6 D	--	--	4-63	S	W	D	--
(A-4-1)27ADB- 2	E J PARKER JR	1962	C	85	12	35	P	4480	25 D	15	35	3-62	H	W	D	--
(A-4-1)27CCB- 1	F & J PASTRANA	1969	H	197	4	189	P	4335	42 D	30	--	3-69	H	W	D	--
(A-4-1)27DBB- 1	F B BINGHAM	1961	D	30	30	30	O	4405	14 D	--	--	2-62	H	W	D	--
(A-4-1)28BAC- 2	J L WARE	1966	H	71	8	61	P	4341	3 D	30	53	10-66	S	W	D	--
(A-4-1)29DCD- 2	ROBINS AND GROW	1967	J	488	2	478	S	4302	25 D	--	--	8-67	H	W	D	--
(A-4-1)30BBA- 1	W W EVANS	(1915)	--	525	2	--	--	4303	16 A	--	--	3-69	U	O	--	--
(A-4-1)31DCD- 2	W WINEGAR	1965	H	443	4	428	P	4221	F	132	--	6-65	S	W	D	--
(A-4-1)32ABB- 1	P D ROBINS	1950	J	770	2	760	S	4292	F	18M	--	11-68	H	W	--	C
(A-4-1)32BBB- 1	L W HILL	1969	J	486	4	476	S	4272	+12 D	20	--	4-69	H	W	D	--
(A-4-1)32DAA- 2	A WEBSTER	1968	H	479	2	469	P	4281	12 D	--	--	9-68	H	W	D	--
(A-4-1)32DBA- 2	A HARVEY	1969	J	481	2	471	S	4274	0 D	28	--	4-69	H	W	D	--
(A-4-1)32DCA- 1	J E WEBSTER	1965*	J	714	2	704	S	4252	+31 D	30	--	11-65	H	W	D	--
(A-4-1)34ADC- 2	N W SANDERS T C	1966	C	414	16	325	P	4405	54 D	--	--	7-66	N	W	D	--
(A-4-1)34CBC- 3	KAYSVILLE CANNG	(1930)	--	350	4	--	--	4296 A	13 A	--	--	3-69	U	O	D	--
(A-4-2) 6ABB- 2	B P DAHL	1967	H	617	2	607	P	4234	+28 D	42	--	2-67	H	W	D	--
(A-4-2) 6BAA- 2	B THURGOOD	1964	J	609	2	599	S	4232	+34 I	30M	--	11-68	H	O	D	C
(A-4-2) 6BDA- 2	R H MONTGOMERY	1966	H	464	2	454	P	4232	+13 D	13	--	9-66	H	W	D	--
(A-4-2) 6BDD- 2	R E MONTGOMERY	1963	J	332	2	305	S	4231	+15 D	20	--	8-63	H	W	D	--
(A-4-2) 6CAA- 5	G PARKER	1963	J	609	2	599	S	4230	+33 D	45	--	8-63	H	W	D	--
(A-4-2) 6DAB- 1	J D ABRAMS	1964	J	722	2	712	P	4232	+36 D	25	--	10-64	H	W	D	--
(A-4-2) 6DCA- 2	A E CLAYTHORN	1962	J	610	2	600	P	4229	+43 D	40	--	4-62	H	W	D	--
(A-4-2) 6DCC- 1	B P DAHL	1963	J	315	2	305	S	4229	+15 D	20	--	8-63	H	W	D	--
(A-4-2) 7AAA- 2	S P MANNING	1964	H	431	2	420	P	4234	F	40	--	6-64	H	W	D	--
(A-4-2) 7CCC- 1	MORTON SALT CO	(1920)	--	190	1	--	O	4205	+16 I	--	--	5-69	P	W	--	C

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(B-4-2) 7CDA- 5	J F SIMPSON	1966	H	585	4	485	P	4223	+15 D	60	--	2-66	H	W	D	--
(B-4-2) 7DBC- 1	C C PARKER	1960	J	123	2	113	S	4227	+11 D	15	--	12-60	S	W	D	--
(B-4-2) 7DCC- 1	J E KERR	(1895)	--	400	2	--	--	4227	F	10 M	--	8-68	H	W	--	C
(B-4-2) 7DCD- 2	J KERR	1952	--	588	2	--	--	4225	F	6 M	--	8-68	H	W	--	K
(B-4-2) 8CAB- 2	R C WIBERG	1961	J	425	2	415	P	4236	+21 D	25	--	1-61	H	W	D	--
(B-4-2) 8DDB- 1	W W STEED JR	1968	H	636	2	626	P	4238	+25 D	33	--	5-68	S	W	D	--
(B-4-2)10DAA- 2	SYRACUSE CITY	1951	--	628	12	598	P	4340	--	--	--	--	P	W	D	C
(B-4-2)12ABB- 1	G F WORTHING	1962	C	68	6	58	P	4476	14 D	5	16	7-62	S	W	D	--
(B-4-2)12BBB- 1	CLEFIELD NAVAL 1	1942	C	774	20	642	P	4429 A	150 A	1000	12	1/ 3-67	N	W	D	C
(B-4-2)13CBC- 1	H H GROMMESH	1963	J	587	2	577	S	4348	60 D	--	--	5-63	H	W	D	--
(B-4-2)13DAD- 1	M J REES	1960	J	580	2	570	P	4387	90 D	--	--	8-60	H	W	D	--
(B-4-2)14BAA- 1	SYRACUSE CITY 3	1965	H	754	16	601	P	4346	80 D	200	250	3-65	U	O	DJ	--
(B-4-2)14DAD- 1	W E BARTON	1962	J	577	2	567	P	4342	49 D	18	--	7-62	H	W	D	--
(B-4-2)16AAB- 1	A B WAITE	1963	H	671	2	659	P	4276	0 D	--	--	7-63	H	W	D	--
(B-4-2)16ADA- 3	W T SMEDLEY	1963	H	504	2	494	P	4247	+1 D	12	--	8-63	H	W	D	--
(B-4-2)16DDD- 2	W B RAMPTON	1960	J	642	2	632	P	4250	+33 D	40	--	6-60	H	W	D	--
(B-4-2)17ABB- 1	R A BOX	1969	H	614	4	604	P	4237	+21 D	19	--	8-69	H	W	D	--
(B-4-2)17CDD- 1	D H WILCOX	1962	H	583	2	562	P	4225	+28 I	10 M	--	10-69	H	O	D	C
(B-4-2)17DDC- 1	R HAMBLIN	1965	H	618	2	606	P	4228	+25 D	46	--	10-65	H	W	D	--
(B-4-2)20AAA- 2	R C BEAZER	1961	J	433	4	423	P	4228	+21 D	21	--	6-61	S	W	D	--
(B-4-2)20ABB- 4	E BILL	1964	H	614	2	604	P	4226	+28 D	50	--	9-64	H	W	D	--
(B-4-2)20ADA- 1	M BEAZER	(1931)	--	600	2	--	--	4226 A	+39 I	--	--	3-69	H	O	--	--
(B-4-2)20BBA- 5	R CLONTZ	1963	H	596	2	587	P	4222	+35 D	60	--	6-63	H	W	D	--
(B-4-2)20BBA- 6	O SEIFERT	1966	H	609	4	595	P	4223	+15 D	60	--	1-66	H	W	D	--
(B-4-2)20BBB- 3	G SANDOZ	1965	H	430	2	--	P	4223	F	48	--	6-65	H	W	D	--
(B-4-2)20CCA- 1	R SHEFFIELD	1961	H	595	4	562	P	4204	+40 D	150	--	9-61	I	W	D	C
(B-4-2)23CDD- 2	A H BARBER	1964 *	J	596	2	586	S	4254	+27 D	20	--	5-64	H	W	D	--
(B-4-2)23DAA- 1	V L MERRELL	1966	H	535	4	515	P	4300	24 D	15	--	11-66	H	W	D	--
(B-4-2)23DCC- 1	I D JOHNSON	1967 *	J	786	2	740	S	4262	+8 D	5	--	8-67	H	W	D	--
(B-4-2)24ABB- 1	N T ANDERSON	1968	J	571	2	561	S	4357	75 D	30	--	11-68	H	W	D	--
(B-4-2)24BCC- 2	S P LAYTON	1966	H	632	4	--	P	4309	--	40	10	4-66	H	W	D	--
(B-4-2)24CDD- 2	W H SIMMONS	1963	H	609	2	599	P	4288	0 D	10	10	6-63	H	W	D	--
(B-4-2)25ABA- 2	T KOLENDRIANOS	1968	J	588	2	578	S	4290	11 D	--	--	7-68	H	W	D	--
(B-4-2)25BAB- 1	A D MOTTA	1968	J	504	4	494	S	4283	9 D	--	--	7-68	H	W	D	--
(B-4-2)25BBA- 2	D E JENKINS	1967	H	600	2	590	P	4277	F	--	--	6-67	H	W	D	--
(B-4-2)25BBB- 1	J W REDFORD JR	1967 *	J	816	2	806	S	4248	+15 D	15	--	7-67	H	W	D	--
(B-4-2)25BBB- 2	A W CAHOON	1967	J	805	2	795	S	4274	+11 D	14	--	6-67	H	W	D	--
(B-4-2)25DAD- 1	H D CALL	1928	--	465	2	425	P	4260	F	16 M	--	8-68	H	W	--	C
(B-4-2)25DDD- 1	R L SCHILLING	1956	--	--	2	--	--	4245	F	9 M	--	8-68	H	W	--	K
(B-4-2)26AAA- 2	W BONE	(1952)	--	597	2	--	--	4272	0 A	--	--	9-68	H	O	--	--
(B-4-2)26AAD- 2	L BONE	1966	H	795	2	783	P	4262	+13 D	24	--	7-66	H	W	D	--
(B-4-2)27AAA- 1	L B MARSTON	1901	--	450	2	--	--	4234	F	12 M	--	8-69	S	O	--	--
(B-4-2)27ABA- 1	G E SMITH	1963	J	304	2	294	S	4232	+22 I	17 M	--	5-69	S	O	D	C
(B-4-3) 1BAD- 2	H NELSON	1963	J	407	6	372	S	4210	+39 D	300	--	7-63	H	W	D	--
(B-4-3)19ACC- 1	**STATE OF UTAH**	1968	H	127	3	--	--	4200	F	10	--	3-68	U	T	D	--
(B-4-3)19CAA- 3	**G S L AUTHORITY**	1969	H	481	8	423	P	4200	+53 I	280M		10-69	H	W	Y	C
(B-5-1) 6ABD- 2	M A GODFREY	1968	C	80	4	63	S	4319	+6 D	8	--	3-68	H	W	D	--
(B-5-1) 6ACC- 1	M TOOMER	1967	C	100	4	80	S	4325	+6 D	2	--	3-67	H	W	D	--
(B-5-1) 8CCA- 1	S OGDEN CONS DS	1967	H	450	20	362	P	4510	229 D	2145	256	6-67	P	W	7	--
(B-5-1)15ABB- 1	J E BROWNING CO	1967	C	320	10	--	P	4980	6 D	172	2	9-67	H	W	D	--
(B-5-1)17CBC- 1	WASHINGTON TRCE	1961 *	C	910	12	795	P	4650 A	372 D	1900	40	4-61	P	W	D	C
(B-5-1)17DDD- 1	WASHINGTON TRCE	1962	H	857	20	734	S	4722	434 D	2500	25	12-62	P	W	D	C
(B-5-1)18ABB- 1	WBWCD RIVERDALE	1960	H	730	20	670	S	4367	73 A	2500	133	1/ 4-69	P	O	Y	C
(B-5-1)20DDD- 2	WBWCD SU WEBER1	1961	H	1000	20	400	S	4422	135 A	4476	19	1/ 4-69	P	O	DE	C
(B-5-1)23DBD- 1	L D S CHURCH	1965	H	601	8	583	P	4815	425 D	70	--	8-65	H	W	DJ	C
(B-5-1)29BDB- 3	HILL AFB NO 3	1941	--	800	20	600	P	4731	--	740	8	-41	P	W	D	C
(B-5-1)29BDC- 1	HILL AFB NO 2	1941	--	627	20	555	P	4736 A	418 C	750	6	1/ 4-43	P	W	D	C
(B-5-1)30ADA- 1	HILL AFB NO 7	1945	--	900	20	--	P	4757 A	469 A	537	19	1/ 4-69	P	O	6	C
(B-5-1)30ADD- 1	HILL AFB NO 6	1942	--	900	20	654	P	4773 A	461 C	875	8	1/ 5-42	P	W	7	C
(B-5-1)33BAA- 2	WBWCD SU WEBER2	1963	--	1187	20	438	S	4530	246 A	5000	20	1/ 4-69	P	O	D	C
(B-5-1)33CDA- 1	HILL AFB NO 4	1943	--	730	20	584	P	4798 A	515 C	1080	8	1/ 8-64	P	W	D	C
(B-5-1)35AAA- 1	C WATERFALL CO	1964	H	230	10	210	S	4532	154 D	--	--	10-64	N	W	D	--
(B-5-2) 1DDD- 1	OGDEN CAA AIRPT	1943	--	527	14	428	P	4440	159 A	230	16	1/ 6-60	P	W	D	C
(B-5-2) 2BCC- 1	J J ANDERSON	1963	H	102	4	90	P	4297	+7 D	--	--	3-63	H	W	D	--
(B-5-2) 2CBB- 2	K F RAWSON	1964	J	112	2	102	S	4302	+15 D	12	--	6-64	H	W	D	--
(B-5-2) 3AAB- 1	TAYLOR-W WEBER	1965	H	340	24	266	S	4273	10 D	2400	83	11-65	P	W	7	C
(B-5-2) 3AAB- 2	TAYLOR-W WEBER	1966	H	340	10	272	P	4271	40 D	400	100	10-66	P	W	D	--
(B-5-2) 3ADA- 3	F B BINGHAM	1966	J	290	2	280	S	4288	18 D	10	--	1-66	H	W	D	--
(B-5-2) 3ADD- 2	P MCKINNON	1963	H	102	4	90	P	4290	+7 D	--	--	4-63	H	W	D	--
(B-5-2) 3CAA- 1	J E MEDURAS	1966	J	270	2	249	S	4274	--	30	20	11-66	H	W	D	--
(B-5-2) 3CAB- 1	P D THURGOOD	1963	J	173	2	163	S	4266	3 D	--	--	7-63	H	W	D	--
(B-5-2) 3CAB- 2	J E OSBORNE	1963	H	174	2	164	S	4267	6 D	--	--	8-63	H	W	D	--
(B-5-2) 3CAB- 3	G MOWER	1964	J	176	2	168	S	4265	--	35	--	5-64	H	W	D	--
(B-5-2) 3CBA- 1	E E JACKSON	1962	J	265	2	257	P	4266	3 D	45	--	6-62	H	W	D	--
(B-5-2) 3CBA- 2	T R HENDRY	1964	J	174	2	168	S	4265	3 D	25	--	5-64	H	W	D	--
(B-5-2) 3CBB- 1	B A WILLIAMSON	1962	J	175	2	165	S	4266	3 D	--	--	5-62	H	W	D	--
(B-5-2) 3CCC- 1	V B ANDERSON	1968	J	261	2	253	P	4263	7 D	20	--	10-68	H	W	D	--
(B-5-2) 3CCD- 1	F F BRISCOE	1964	J	84	2	63	P	4268	+9 D	5	--	4-64	H	W	D	--
(B-5-2) 3CCD- 2	L R SAUNDERS	1964	J	105	2	63	S	4268	+5 D	5	--	4-64	H	W	D	--
(B-5-2) 3DAA- 2	R NICKOLSON	1963	H	294	4	--	P	4290	--	--	--	--	H	W	D	--
(B-5-2) 3DBA- 1	L R CASE	1963	J	268	4	258	S	4280	8 D	--	--	7-63	H	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(B-5-2) 3DBB- 1	G C CAMPBELL	1962	J	273	2	265	P	4275	3 D	60	--	6-62	H	W	D	--
(B-5-2) 4CDD- 2	L D S CHURCH	1962	H	290	4	250	P	4257	3 D	100	7	7-62	H	W	D	--
(B-5-2) 4DDC- 4	D GENETTI	1967	J	259	2	249	S	4263	--	--	--	--	H	W	D	--
(B-5-2) 5AAA- 2	L FAVERO	1965	J	272	2	253	S	4253	7 D	--	--	5-65	H	W	D	--
(B-5-2) 5ACB- 2	C C HAWKES	--	J	914	2	--	S	4250	+22 I	30 M	--	8-68	H	W	--	C
(B-5-2) 5ACC- 1	J W PETERSON	1960	J	620	2	610	P	4249	+30 D	35	--	4-60	H	W	D	--
(B-5-2) 5BDD- 2	H W GREEN	1955	--	--	2	--	--	4248	F	16 M	--	8-68	H	W	--	C
(B-5-2) 6ADD- 3	ENGLAND BLD SUP	1965	J	653	2	643	S	4232	+23 D	40	--	9-65	H	W	D	--
(B-5-2) 6BDD- 1	J V STODDARD	1942	--	304	2	273	S	4222 A	+14 I	--	--	3-68	H	D	D	C
(B-5-2) 6BDD- 3	J V STODDARD	1944	J	609	2	--	S	4221	+26 I	25 M	--	8-68	H	D	--	C
(B-5-2) 6BDD- 4	J V STODDARD	1944	J	303	3	--	S	4220	+16 I	70 M	--	8-68	I	D	--	C
(B-5-2) 6CBC- 3	L B HOWELL	1960	J	362	2	352	P	4217	+16 D	50	--	6-60	H	W	D	--
(B-5-2) 6CCB- 1	R E AVIS	1963	J	360	2	350	S	4219	+23 D	30	--	10-63	H	W	D	--
(B-5-2) 6CCC- 1	B W LAMB	1964	J	370	2	360	S	4220	+20 D	35	--	11-64	H	W	D	--
(B-5-2) 6CDD- 3	D C BAILEY	1960	J	605	2	595	S	4230	+30 D	50	--	9-60	H	W	D	--
(B-5-2) 7AAA- 2	R F RAWSON	1965	J	206	4	196	S	4245	3 D	--	--	8-65	H	W	D	--
(B-5-2) 7CDA- 1	C H HOOPER	1962	H	240	16	96	P	4241	+1 D	--	--	7-62	I	W	D	--
(B-5-2) 7DAA- 2	L J PENMAN	1966	H	693	2	681	P	4241	F	36	--	12-66	H	W	D	--
(B-5-2) 7DAB- 3	E PENMAN	1968	J	1005	2	995	S	4246	+24 I	17 M	--	8-68	H	W	D	C
(B-5-2) 7DCB- 1	F FOWERS	(1945)	--	688	2	--	--	4240 A	F	6 M	--	9-68	H	W	D	C
(B-5-2) 7DDB- 5	M B JEX	1961	J	598	2	588	P	4236	+27 D	25	--	12-61	H	W	D	--
(B-5-2) 8BBB- 2	R HARTMAN	1966	H	693	2	683	P	4247	F	40	--	6-66	H	W	D	--
(B-5-2) 8BCB- 2	W L PETERSON	1962	J	659	2	649	S	4247	+23 D	--	--	4-62	H	W	D	--
(B-5-2) 9AAD- 1	R WOOD	1965	J	200	2	190	P	4263	20 D	5	0	12-65	H	W	D	--
(B-5-2) 9BAA- 2	L MAYBERRY	1942	--	546	2	--	--	4259 A	+5 I	--	--	3-69	I	D	D	--
(B-5-2) 9BBA- 4	J F GUTIERREZ	1963	J	251	2	241	P	4251	5 D	--	--	7-63	H	W	D	--
(B-5-2) 9CAC- 1	H A PETERSEN	1960*	J	594	2	584	P	4249	+25 D	35	--	10-60	H	W	D	--
(B-5-2)10BAD- 3	W E SLATER	1960	J	118	2	106	S	4298	+8 D	8	--	4-60	H	W	D	--
(B-5-2)10CAA- 1	W S PARKER	1968	J	120	2	105	S	4308	+5 D	3	--	9-68	H	W	D	--
(B-5-2)10CAA- 2	H G CHRISTENSEN	1969	C	105	2	84	P	4308	+4 D	5	--	6-69	H	W	D	--
(B-5-2)10CAA- 3	L G OPP	1969	C	126	2	105	S	4305	+4 D	3	--	6-69	H	W	D	--
(B-5-2)10DBC- 1	J V PETERSON	(1946)	--	120	2	--	--	4312	+2 D	10	--	11-54	S	W	D	C
(B-5-2)12DDA- 1	K A ALLEN	1964	H	275	4	90	P	4410	35 D	20	25	3-64	H	W	D	--
(B-5-2)14BDC- 1	ROY CITY	1965	H	1004	16	953	S	4228	228 D	1550	290	8-65	P	W	D	--
(B-5-2)15BAC- 1	B W HART	1964	H	42	2	32	P	4310	4 D	--	--	9-64	S	W	D	--
(B-5-2)15BBA- 1	E CARNEY	1967	H	110	4	98	P	4305	F	4	--	4-67	H	W	D	--
(B-5-2)15BBC- 1	J D SODENKAMP	1966	H	93	2	83	P	4281	+2 D	6	--	9-66	H	W	D	--
(B-5-2)15BCB- 1	C F WARD	1960	J	104	2	97	P	4298	+11 D	2	--	6-60	H	W	D	--
(B-5-2)15BCC- 2	G FAVERO	1960	J	354	2	344	P	4299	+16 D	25	--	7-60	H	W	D	--
(B-5-2)15DDD- 1	F E CALL	1963	H	152	4	105	P	4396	--	--	--	--	H	W	D	--
(B-5-2)15DDD- 2	J R HAMBELEN	1963	H	278	6	255	P	4394	80 D	30	58	4-63	I	W	D	--
(B-5-2)16AAD- 3	W E SLATER	1962	J	83	2	72	S	4283	+11 D	8	--	11-62	S	W	D	--
(B-5-2)16AAD- 4	P OBIN	1965	J	90	2	79	S	4286	+10 D	3	--	11-65	H	W	D	--
(B-5-2)16CAA- 2	C J MANNING	1962	J	716	2	706	P	4264	+27 D	45	--	4-62	H	W	D	--
(B-5-2)16DCD- 1	U S B R NO 5A	(1955)	--	810	6	--	--	4286 A	5 A	--	--	3-69	U	D	D	--
(B-5-2)16DDA- 2	HOOPER IMPDIS	1968	H	807	16	247	P	4296	20 D	--	--	6-68	P	W	7	--
(B-5-2)17AAD- 1	L W KASTING	1965	J	121	2	111	S	4246	+8 D	12	--	7-65	H	W	D	--
(B-5-2)17AAD- 2	T E DICKAMORE	1965	J	116	2	106	S	4247	+9 D	18	--	8-65	H	W	D	--
(B-5-2)17ABB- 1	R H OLSON	1966	H	773	2	763	P	4246	F	16	--	6-66	H	W	D	--
(B-5-2)17ABC- 2	A J FOWERS	1964	J	656	2	646	S	4246	+25 D	40	--	7-64	H	W	D	--
(B-5-2)17ADD- 3	W J VENSTRA	1967	J	117	2	107	S	4245	+7 D	18	--	9-67	H	W	D	--
(B-5-2)17BAD- 1	R V PONTIUS	1964	J	705	2	695	S	4246	+23 D	45	--	7-64	H	W	D	--
(B-5-2)17BBB- 1	R & B MARIGONI	1969	J	335	2	325	S	4238	+6 D	12	--	6-69	H	W	D	--
(B-5-2)17BCB- 3	L TODD	1960	J	636	2	626	P	4240	+33 D	45	--	6-60	H	W	D	--
(B-5-2)17CCA- 2	T H SIMPSON	1962	J	596	2	586	S	4242	+27 D	40	--	11-62	H	W	D	--
(B-5-2)17CDA- 1	V L COOK	1962	H	257	2	235	S	4242	+10 D	20	--	9-62	H	W	D	--
(B-5-2)18ABB- 2	D S CHENEY	1966	H	508	2	498	P	4237	F	19	--	3-66	H	W	D	--
(B-5-2)18ADB- 2	R F HANCOCK	1963	J	706	2	696	S	4238	+29 D	--	--	7-63	H	W	D	--
(B-5-2)18ADD- 4	E ZINIE	1966	H	484	2	474	P	4241	F	14	--	5-66	H	W	D	--
(B-5-2)18BAA- 1	R E AVIS	1963	J	619	2	609	S	4238	+25 D	45	--	3-63	H	W	D	--
(B-5-2)18CCA- 1	M J CUNNINGTON	1962	J	570	2	560	P	4240	+25 D	25	--	4-62	H	W	D	--
(B-5-2)18CCA- 2	T N RICHINS	1965	J	324	4	312	S	4240	+7 D	15	--	9-65	H	W	D	--
(B-5-2)18CCC- 1	B G PARKER	1965	J	545	2	535	S	4239	+18 D	30	--	9-65	H	W	D	--
(B-5-2)18CDA- 2	J T MARTIN JR	1961	J	651	2	641	P	4241	+31 D	45	--	3-61	H	W	D	--
(B-5-2)18DCB- 1	FORD FINANCE CO	1965	J	336	2	326	S	4241	+5 D	10	--	9-65	H	W	D	--
(B-5-2)18DDA- 5	L T CHRISTENSEN	1960	J	604	2	594	P	4242	+30 D	35	--	10-60	H	W	D	--
(B-5-2)19DDB- 1	E R KENDRICK	1960	J	175	2	165	P	4236	+15 D	15	--	12-60	H	W	D	--
(B-5-2)19DDC- 1	T J WATKINS	1964	J	675	2	665	S	4236	+28 D	40	--	10-64	H	W	D	--
(B-5-2)20BCC- 1	T B AUSTIN	1964	H	343	2	333	P	4235	+3 D	16	--	9-64	S	W	D	--
(B-5-2)21ADD- 4	D P STODDARD	1960	J	74	2	63	S	4302	+11 D	8	--	9-60	H	W	D	--
(B-5-2)21BDC- 1	N L REDFORD	1964	J	550	2	540	S	4262	+5 D	--	--	8-64	H	W	D	--
(B-5-2)21DCD- 2	M C STEWART	1962	J	85	2	73	--	4304	+18 D	20	--	11-62	H	W	D	--
(B-5-2)21DDD- 1	G E BEUS	(1931)	--	110	2	110	D	4317	+10 I	12 M	--	11-68	I	D	--	C
(B-5-2)22AAB- 1	L A CHILD	1960	J	104	2	93	P	4370	+3 D	3	--	6-60	H	W	D	--
(B-5-2)22BAB- 1	L L RODGERS	1968	H	116	4	108	P	4328	F	2	--	5-68	H	W	D	--
(B-5-2)22BBA- 1	F D PEACOCK	1961	J	101	2	91	S	4320	+7 D	--	--	12-61	H	W	D	--
(B-5-2)22BBA- 2	B CHRISTENSEN	1962	H	249	4	235	P	4320	21 D	--	--	6-62	H	W	D	--
(B-5-2)22BBA- 3	D STANGER	1966	H	120	4	110	P	4319	F	5 M	--	10-68	H	W	D	C
(B-5-2)22DDD- 2	F PATTERSON	1961	--	850	16	810	P	4395	90 D	2400	50	7-61	I	W	D	--
(B-5-2)26DAA- 1	SUNSET CITY	1962	H	920	16	880	P	4543	250 D	1300	70	7-62	P	W	D	--
(B-5-2)28DBA- 2	O NIELSON	1966	H	93	2	--	P	4319	+12 D	--	--	7-66	I	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(B-5-2)29ACA- 1	A FLINDER	1966	J	73	2	63	S	4268	+5 D	1	--	9-66	S	W	D	--
(B-5-2)29CCD- 2	W FLINT	1961	H	706	4	690	P	4265	F	103	--	11-61	H	W	D	--
(B-5-2)30BAD- 2	L V ROSS	1963	H	76	2	66	P	4235	F	20	--	4-63	S	W	D	--
(B-5-2)30CAA- 2	E P BINGHAM	1963	H	669	6	644	P	4235	+36 D	220	--	11-63	S	W	D	--
(B-5-2)31AAA- 3	L M HUNT	1963	H	689	4	--	P	4265	+10 D	30	--	9-63	H	W	D	--
(B-5-2)31ACB- 3	J MORAN	1966	H	220	2	200	P	4236	+1 D	2	--	1-66	H	W	D	--
(B-5-2)31ACC- 2	D J ERRIGO	1963	J	733	2	723	S	4237	+37 D	50	--	5-63	H	W	D	--
(B-5-2)31BCC- 1	J L RENKY	1967	H	584	2	574	P	4227	F	--	--	10-67	H	W	D	--
(B-5-2)31CAD- 1	A T BINGHAM	1964 *	H	785	6	638	P	4236	+30 D	200	--	8-66	S	W	D	--
(B-5-2)31CCC- 1	A C DAHL	1967	H	693	2	683	P	4226	+32 D	48	--	7-67	H	W	D	--
(B-5-2)31CDA- 4	A M JOHNSTON	1962	J	603	2	593	S	4235	+36 D	45	--	11-62	H	W	D	--
(B-5-2)31CDD- 1	C DAHL	1967	J	616	2	606	S	4235	+29 D	40	--	6-67	H	W	D	--
(B-5-2)31DBB- 2	O FENN	1967	H	349	2	338	P	4236	F	--	--	10-67	H	W	D	--
(B-5-2)31DBC- 1	A L FENN	1968	H	598	2	588	P	4236	+18 D	32	--	1-68	H	W	D	--
(B-5-2)31DBC- 2	N MORENO	1968	H	325	2	313	P	4236	F	11	--	6-68	H	W	D	--
(B-5-2)31DCB- 1	H N DRAPER	1966	H	626	2	616	P	4236	+23 D	42	--	6-66	H	W	D	--
(B-5-2)31DCC- 1	R W CARTER	1967	H	619	2	609	P	4235	+21 D	20	--	6-67	H	W	D	--
(B-5-2)31DCC- 2	R L CLEMENTS	1968	J	630	2	620	S	4236	+20 D	30	--	6-68	H	W	D	--
(B-5-2)32DDD- 1	WEST POINT TOWN	1955	--	871	12	735	P	4315	20 D	950	40	12-55	P	W	D	C
(B-5-2)33DDC- 1	WEST POINT TOWN	(1934)	--	808	12	--	--	4343 A	70 A	--	--	3-69	P	D	D	--
(B-5-2)34CCD- 1	WEST POINT TOWN	1960	H	865	16	802	P	4372	80 D	1400	45	11-60	P	W	D	--
(B-5-2)34CDC- 1	C MENDENHALL	1967	J	282	4	273	P	4376	100 D	--	--	4-67	H	W	D	--
(B-5-2)36BCC- 1	WBWCD CLRFLD N1	1961	H	995	20	910	S	4566	283 A	--	--	3-69	--	O	DE	--
(B-5-3)11DAD- 2	H J BYINGTON	1966 *	J	525	2	515	S	4220	+25 I	4M	--	5-69	H	W	--	C
(B-5-3)12BDD- 1	T S LOWE	1963 *	J	373	2	363	S	4223	+17 D	30	--	10-63	H	W	D	--
(B-5-3)12DDA- 4	JOHN M BELNAP	1963	J	583	2	573	S	4235	+21 D	40	--	2-63	H	W	D	--
(B-5-3)13ADA- 4	G L MITCHELL	1961	J	375	4	338	S	4236	+8 D	45	--	9-61	S	W	D	--
(B-5-3)13BCA- 1	D TREASE	1968	J	662	2	652	S	4230	+23 D	25	--	10-68	H	W	D	--
(B-5-3)13BDB- 1	C O PAULSEN	1961	J	223	4	210	S	4232	0 D	--	--	9-61	H	W	D	--
(B-5-3)13CAA- 3	M J ROPELATO	1960 *	J	727	2	717	S	4234	+27 D	30	--	7-60	H	W	D	--
(B-5-3)13CAA- 4	L J GARNER	1964	J	600	2	590	S	4233	+17 D	22	--	10-64	H	W	D	--
(B-5-3)13CCA- 4	L F JONES	1961	J	707	4	697	S	4236	+29 D	29	--	5-61	H	W	D	--
(B-5-3)13CDA- 4	J S ROBINSON	1961	J	609	2	599	S	4237	+21 D	35	--	4-61	H	W	D	--
(B-5-3)13CDB- 1	M J ROBINSON	1963	J	569	2	559	S	4236	+17 D	35	--	6-63	H	W	D	--
(B-5-3)13CDD- 3	L A RUMSEY	1962	J	707	2	697	S	4236	+26 D	35	--	6-62	H	W	D	--
(B-5-3)13DAD- 2	W W BOEHME	1960	J	320	2	310	S	4240	+7 D	10	--	10-60	H	W	D	--
(B-5-3)13DCB- 2	D A GARNER	1964	J	560	2	550	S	4236	+10 D	15	--	9-67	H	W	D	--
(B-5-3)13DDB- 2	R SIMMONS	1963	J	715	2	705	S	4239	+23 D	30	--	6-63	H	W	D	--
(B-5-3)13DDB- 3	C T KILTS	1964	J	887	2	863	S	4239	+36 D	40	--	7-64	H	W	D	--
(B-5-3)13DDC- 1	A HIPWELL	(1919)	J	615	2	595	P	4243 A	+12 I	4M	--	9-68	H	O	D	--
(B-5-3)13DDD- 6	D TREASE	1961	J	707	2	697	S	4239	+29 D	29	--	4-61	H	W	D	--
(B-5-3)14ACA- 1	P D FOWERS	1962	J	580	2	570	S	4228	+28 D	50	--	4-62	H	W	D	--
(B-5-3)14BAA- 2	V W MOORE	1962	J	480	2	470	S	4222	+21 D	40	--	4-62	S	W	D	--
(B-5-3)14BDA- 5	S J MOORE	1962	J	329	2	319	S	4227	+15 D	20	--	4-62	H	W	D	--
(B-5-3)14BDB- 1	V W MOORE	1962	J	330	2	320	S	4226	+17 D	25	--	4-62	S	W	D	--
(B-5-3)14CDD- 1	M L HUNTER	1963	J	630	2	620	S	4231	+29 D	50	--	3-63	H	W	D	--
(B-5-3)14DDA- 5	J R NAISBITT	1961	J	228	4	205	S	4232	2 D	60	--	9-61	S	W	D	--
(B-5-3)15AAA- 1	R F PARKER	1962	H	657	2	647	P	4216	F	40	--	4-62	H	W	D	C
(B-5-3)15DDA- 1	T W RHEAD	(1935)	--	649	2	--	--	4234 A	+21 I	26M	--	5-69	H	O	D	C
(B-5-3)24ABA- 7	N C JACKSON	1965	J	302	4	290	S	4237	+5 D	5	--	10-65	H	W	D	--
(B-5-3)24ABB- 1	M O PAGE	1963	H	774	4	754	P	4235	+32 D	40	--	9-63	H	W	D	--
(B-5-3)24ABC- 1	R D FREW	1963	J	609	2	597	S	4234	+25 D	--	--	6-63	H	W	D	--
(B-5-3)24ACB- 1	C P HIGLEY	1962	H	173	2	--	P	4234	F	--	--	12-62	S	W	D	--
(B-5-3)24ADA- 5	W C ANDERSON	1962	J	582	2	572	S	4237	+19 D	25	--	8-62	H	W	D	--
(B-5-3)24ADC- 1	B WILLIAMSON	1965	J	320	2	310	S	4234	+7 D	8	--	4-65	H	W	D	--
(B-5-3)24BAA- 5	R M CUTTLE	1960	J	640	2	630	S	4235	+24 D	40	--	6-60	H	W	D	--
(B-5-3)24CAD- 1	M L BENNETT	1960	J	653	2	623	S	4230	+36 D	55	--	7-60	H	W	D	--
(B-5-3)25ADC- 2	J J FREW	1964	J	616	2	606	S	4226	+27 I	--	--	5-69	H	W	D	C
(B-5-3)25DCD- 1	UNKNOWN	(1902)	--	520	2	--	O	4220	+17 I	12M	--	5-69	I	W	--	C
(B-5-3)25DDD- 3	D J KIRKMAN	1963	H	326	4	289	S	4227	F	27	--	5-63	H	W	D	--
(B-5-3)36ADA- 1	M E STODDARD	(1934)	J	460	3	353	P	4227 A	+15 I	60M	--	9-68	H	O	D	C
(B-5-3)36ADC- 1	H W STODDARD	1963	H	619	4	594	P	4225	+40 D	75	--	11-63	H	W	D	--
(B-5-3)36ADD- 8	D S FORD	1962	J	519	2	509	S	4227	+34 D	55	--	5-62	H	W	D	--
(B-5-3)36ADD- 9	H W STODDARD	1966	H	216	3	200	P	4226	+10 D	20	--	9-66	I	W	D	--
(B-5-3)36DAD- 2	C W STODDARD	1963	H	785	4	674	P	4226	+36 I	200M	--	5-69	H	W	D	C
(B-5-3)36DDD- 2	N H ROSS	1964	H	303	2	293	P	4223	F	22	--	4-64	H	W	D	--
(B-5-4)21BDC- 1	J D RICHARDS	1965	H	250	4	200	P	4220	+26 D	200	20	1-65	S	W	D	--
(B-5-4)21CBB- 1	H RICHARDS	(1928)	--	140	2	140	--	4230	F	2	--	11-64	S	W	--	C
(B-5-4)21CBB- 2	H RICHARDS	1961	--	172	2	--	P	4230	F	2	--	11-64	S	W	D	C
(B-6-1) 4ADA- 1	A M GARNER	(1900)	J	69	2	--	--	4441 A	+11 I	15M	--	3-69	S	O	--	C
(B-6-1) 4BBD- 5	WBWCD NO OGDEN	1967	C	1133	16	702	P	4362	52 A	750	60	8-68	P	O	D	C
(B-6-1) 5CDB- 1	H R PARKER	1966	H	1000	12	330	P	4308	8 A	400M	--	8-68	I	W	DE	C
(B-6-1) 6ABB- 2	R H TRACY	1965	J	540	2	530	S	4300	+15 D	25	--	5-65	H	W	D	--
(B-6-1) 6CAA- 1	M HARRIS	(1909)	--	640	2	--	--	4290 A	+29 I	--	--	3-69	H	O	--	C
(B-6-1) 6DAA- 3	G M JENSEN	1961	J	263	2	253	S	4308	8 D	25	2	7-61	H	W	D	--
(B-6-1) 6DAB- 3	P M GOOCH	1964	J	633	2	621	O	4302	+32 D	55	--	7-64	H	W	D	--
(B-6-1) 7DAD- 1	G MEDINA	1965	J	408	2	398	S	4262	+26 I	45M	--	10-68	H	W	D	C
(B-6-1) 8BAB- 1	K RUSSELL	1963	H	61	4	21	P	4300	16 D	20	--	12-63	H	W	D	--
(B-6-1)16DAC- 1	J DANCE	1960	J	458	2	448	S	4445	+6 D	40	--	5-60	H	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(B-6-1)20BCD- 1	W T PIERCE	1965	J	126	4	100	S	4279	+1 D	5	30	3-65	H	W	D	--
(B-6-1)29CBB- 1	UTAH BY PRODUCT	1960	H	842	8	800	P	4280	+20 D	300	--	12-60	N	W	D	C
(B-6-1)30BDD- 1	E E JONES	1968	H	145	4	135	P	4282	F	--	--	1-68	H	W	D	--
(B-6-1)30CCA- 1	CALIF PACK CORP	(1929)	C	731	10	224	P	4316 A	37 A	600	--	1/ 2-69	--	O	D	--
(B-6-1)35BCB- 1	U P RAILROAD	1965	C	520	12	395	P	4861	339 A	900	11	2-65	N	W	7	--
(B-6-1)35BCC- 1	U P RAILROAD	1965	C	510	12	352	P	4865	343 A	150	37	2-65	N	W	7	--
(B-6-2) 1ACD- 6	BONA VISTA WTRD	1963	H	1002	16	815	P	4276	+28 D	1450	197	9-63	P	W	D	--
(B-6-2) 1BAA- 3	J D BROWN	(1941)	J	617	2	--	--	4277 A	+14 I	--	--	3-69	H	O	D	--
(B-6-2) 2ACA- 1	H D WHITE	1964	J	193	2	172	P	4243	+8 D	6	--	8-64	S	W	D	--
(B-6-2) 4BDD- 1	G R MOSS	1965	J	294	2	273	P	4226	+16 D	20	--	10-65	H	W	D	--
(B-6-2) 4CBA- 1	W S FREESTONE	1962	J	84	2	63	P	4225	+14 D	4	--	4-62	S	W	D	--
(B-6-2) 5ACB- 2	T KNIGHT	(1951)	--	850	2	795	P	4240 A	+16 I	12 M	--	9-68	H	O	D	C
(B-6-2) 5ACD- 1	E M COOK	1965	J	323	2	303	P	4232	+10 D	3	--	4-65	H	W	D	--
(B-6-2) 6BBB- 5	L W SKEEN	1960	J	354	2	--	S	4217	+18 D	25	--	5-60	H	W	D	--
(B-6-2) 6BCB- 2	A D EAST	1960	J	350	2	340	P	4219	+5 D	13	--	8-60	H	W	D	--
(B-6-2) 6CAD- 3	K HOGGE	1966	J	777	2	735	S	4215	+10 D	10	--	4-66	H	W	D	--
(B-6-2) 6DBB- 2	O R WADE	1961	J	360	2	350	P	4219	+11 D	11	--	5-61	H	W	D	--
(B-6-2) 7BBD- 3	F EAST	1961	J	560	2	550	P	4225	+5 D	6	--	6-61	H	W	D	--
(B-6-2) 7BCB- 3	A PALLY	1964	J	504	2	484	P	4218	+7 D	10	--	6-64	H	W	D	--
(B-6-2)10CDA- 1	L J DERO	1964	J	147	2	126	P	4225	+10 D	12	--	6-64	S	W	D	--
(B-6-2)10DBD- 1	M D HALVERSON	1968	J	218	2	200	S	4230	+8 D	3	--	2-68	H	W	D	--
(B-6-2)11DAD- 1	J WHEELER	(1924)	J	285	2	275	P	4242 A	+18 I	8M	--	3-69	S	O	D	C
(B-6-2)12BAC- 1	H E BOWNS	1962	--	242	2	228	P	4241	+19 D	30	--	6-62	S	W	D	--
(B-6-2)12BAD- 1	R S WOOD	1960	J	232	2	222	P	4240	+22 D	40	--	11-60	H	W	D	--
(B-6-2)12BBB- 1	W R STOCKDALE	1963	J	336	4	313	S	4238	+21 D	150	--	5-63	S	W	D	--
(B-6-2)14CCC- 1	D R TUBBS	1962	H	288	2	267	P	4235	+18 D	10	--	4-62	H	W	D	--
(B-6-2)16AAC- 1	O E CHARLTON	1960	J	424	2	414	P	4232	+21 D	30	--	7-60	H	W	D	--
(B-6-2)16AAC- 2	A HIPWELL	1961	J	430	2	420	P	4232	+21 D	35	--	4-61	H	W	D	--
(B-6-2)16CCA- 1	R H MCLEAN	1960	J	308	2	298	P	4235	+7 D	15	--	11-60	H	W	D	--
(B-6-2)16CDD- 4	J ADAMS JR	1963	J	322	2	312	S	4235	+9 D	15	--	12-63	H	W	D	--
(B-6-2)16DAB- 3	L B VENSTRA	1964	J	344	2	334	S	4230	+14 D	25	--	7-64	H	W	D	--
(B-6-2)16DDD- 2	G FARR	1963	J	222	2	212	S	4230	+10 D	20	--	5-63	H	W	D	--
(B-6-2)17ABC- 3	L B HANCOCK	1961	J	692	2	682	S	4238	+21 D	25	--	5-63	H	W	D	--
(B-6-2)17ACA- 4	COFFMAN-PENMAN	1961	J	871	2	861	P	4237	+32 D	35	--	3-61	H	W	D	--
(B-6-2)17ADD- 2	A BORALHE	1964	J	504	2	494	S	4230	+22 D	30	--	4-64	H	W	D	--
(B-6-2)17CAD- 3	A R BLANCH	1962*	J	550	2	540	P	4234	+9 D	15	--	5-62	H	W	D	--
(B-6-2)17CAD- 4	A BLANCH	1963	J	430	2	420	S	4234	+11 D	18	--	6-63	H	W	D	--
(B-6-2)19AAD- 3	A C HESLOP	1964	J	507	2	497	S	4235	+14 D	20	--	4-64	H	W	D	--
(B-6-2)19DCB- 1	R J WIGHT	1969	J	539	3	525	P	4217	+25 D	60	--	6-69	H	W	D	--
(B-6-2)20ACD- 4	B DEGIORGIO	1960	J	666	2	656	P	4237	+29 D	--	--	5-60	H	W	D	--
(B-6-2)20BBD- 4	P RAUZI	1961	J	525	2	515	P	4235	+15 D	15	--	5-61	H	W	D	--
(B-6-2)20CDD- 3	A SEGNA	1959	--	540	2	530	S	4225	+21 I	4M	--	11-68	H	O	--	C
(B-6-2)21ACA- 2	J SURRAGE	1962	H	329	2	308	P	4239	F	19	--	5-62	S	W	D	--
(B-6-2)21ADD- 3	J SURRAGE SR	1968*	J	483	2	473	S	4236	+15 D	30	--	5-68	H	W	D	--
(B-6-2)21BAB- 3	L D S CHURCH	1963	J	562	2	552	S	4236	+21 D	30	--	8-63	H	W	D	--
(B-6-2)21DDD- 1	N L FLINDERS	1963	J	225	2	215	S	4238	+13 D	20	--	3-63	H	W	D	--
(B-6-2)22AAD- 2	J M LARSEN	1962	J	478	2	468	S	4255	+15 D	18	--	8-62	H	W	D	--
(B-6-2)22BBA- 2	P FLINDERS	1960	J	336	2	326	P	4240	+15 D	20	--	11-60	H	W	D	--
(B-6-2)25CCC- 1	G E STRATFORD	(1919)	--	690	6	--	--	4294 A	+6 I	--	--	4-48	S	W	D	C
(B-6-2)25CCC- 3	G E STRATFORD	(1934)	--	302	2	--	--	4295	21 D	--	--	-34	H	W	D	C
(B-6-2)26ADA- 1	AMALGAMATED SUG	1934	--	595	16	400	P	4275 A	0 A	--	--	3-69	N	O	D	--
(B-6-2)27BBA- 2	D LUCIA	1949	--	536	2	--	--	4251 A	+6 I	8M	--	9-69	S	W	D	C
(B-6-2)27CCC- 2	H SHERROD	1964	J	265	2	265	O	4248	+8 D	--	--	9-64	H	W	D	--
(B-6-2)27CCD- 1	C E BAILEY	1964	J	255	2	255	O	4250	+5 D	3	--	2-64	H	W	O	--
(B-6-2)27CDD- 1	L D DALLINGS	1962	J	535	3	525	S	4253	+21 D	40	--	8-62	H	W	O	--
(B-6-2)27DCD- 2	L DEFRIES	1949	J	625	2	615	S	4255 A	F	--	--	7-68	H	W	D	C
(B-6-2)28BAA- 2	B ROPELATO	1961	J	340	6	330	S	4234	--	--	--	--	S	W	D	--
(B-6-2)28CDD- 1	J H BUCK	1960*	J	961	2	--	P	4260	+30 D	30	--	7-60	H	W	D	--
(B-6-2)29ABB- 2	W D HAMMER	1962	J	553	2	543	P	4232	+25 D	--	--	5-62	H	W	D	--
(B-6-2)29BDA- 1	D F CLARKE	1962	J	507	2	497	S	4229	+11 D	40	--	5-62	H	W	D	--
(B-6-2)30BAA- 1	J SUGIMOTO	1961	J	532	2	510	S	4215	F	9M	--	11-68	N	W	D	K
(B-6-2)31AAA- 1	L M HUNT	1963	H	689	4	665	P	4217	+35 D	30	--	9-63	H	W	D	--
(B-6-2)32BBA- 2	R J WIGHT	1961	J	594	2	584	P	4222	+33 D	33	--	5-61	S	W	D	--
(B-6-2)32BBD- 2	R J WIGHT	1961	J	524	2	513	P	4227	+33 D	65	--	3-61	H	W	D	--
(B-6-2)32DAA- 1	E R GREEN	1960	J	663	2	653	P	4258	+13 D	18	--	6-60	H	W	D	--
(B-6-2)33AAD- 1	L N WELSH	1961	J	640	2	630	P	4249	+30 D	--	--	3-61	H	W	D	--
(B-6-2)33CDD- 1	D M HADLEY	1964	J	252	2	242	S	4245	+4 D	9	--	11-64	H	W	D	--
(B-6-2)33DDC- 2	D PREVEDEL	1955	--	682	2	--	--	4256	+16 I	--	--	5-69	S	O	--	C
(B-6-2)33DDD- 1	B A HADLEY	1960	J	956	2	946	P	4255	+34 D	25	--	12-60	H	W	D	--
(B-6-2)34DBA- 1	D MOSS	1964	H	261	4	250	P	4268	4 D	--	--	3-64	H	W	D	--
(B-6-2)34DCC- 1	H L FIET	1964	H	270	4	262	P	4268	7 D	80	--	9-64	H	W	D	--
(B-6-2)34DCD- 1	J S PARKER	1961	J	777	3	767	P	4271	+32 D	45	--	4-61	H	W	D	--
(B-6-2)35CCD- 3	J K BYINGTON	1961	H	333	4	305	P	4288	19 D	--	--	11-61	H	W	D	--
(B-6-3) 1ADA- 1	J F STEWART	1960	J	354	2	344	P	4216	+7 D	12	--	11-60	H	W	D	--
(B-6-3) 4DAB- 1	E J WAYMENT	1966	J	540	2	530	S	4215	+18 I	6M	--	10-68	S	W	D,I	C
(B-6-3) 5CCC- 1	R M JACOB	1960*	J	510	2	500	P	4211	F	8M	--	5-69	S	O	D	C
(B-6-3) 6CCA- 1	G S L M&C C N 1	1967	J	115	2	105	S	4220	F	10	--	10-67	N	W	D	--
(B-6-3) 6CDA- 1	G S L M&C C N 2	1967	J	244	2	234	S	4210	+14 D	5	--	5-67	N	W	D	--
(B-6-3) 7DBD- 1	R M JACOB	1960	J	283	2	273	P	4215	+19 D	20	--	4-60	S	W	D	--
(B-6-3)10AAC- 2	R M JACOB	1967	--	483	2	472	P	4215	F	--	--	4-67	H	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(A-6-3)10ACB- 2	R M JACOB	1967	H	752	2	742	P	4215	+38 I	14 M	--	5-69	S	W	D	C
(A-6-3)12BCC- 1	WARREN CEMETERY	1958	J	550	2	538	P	4216	+12 I	--	--	5-69	I	W	D	C
(A-6-3)13BCC- 2	MUIRBROOK FARMS	1965	J	532	2	522	S	4222	+9 D	17	--	8-65	S	W	D	--
(A-6-3)14ADD- 3	J H MEIBOS	1962	J	550	2	540	P	4225	+13 D	20	--	5-62	H	W	D	--
(A-6-3)14DAA- 2	G H MEIBOS	1961	J	870	2	860	P	4224	+31 D	35	--	11-61	H	W	D	--
(A-6-3)14DCC- 2	L D S CHURCH	1949	--	604	2	--	--	4220	F	8 M	--	8-68	H	W	D	C
(A-6-3)15CCD- 2	W HIGGS	1969	H	483	2	473	P	4217	F	--	--	4-69	H	W	D	--
(A-6-3)15CDD- 1	D D VAUGHN	1960	J	290	2	280	P	4217	+14 D	19	--	3-60	--	W	D	--
(A-6-3)15DDC- 1	R DAVIS	1963	J	325	2	315	S	4218	+11 D	10	--	3-63	H	W	D	--
(A-6-3)17AAA- 1	R M JACOB	1960	J	542	2	532	P	4215	+31 D	30	--	4-60	S	W	D	--
(A-6-3)17DBA- 1	R M JACOB	1960*	J	455	4	445	P	4215	+20 D	--	--	4-60	S	W	D	--
(A-6-3)18ABC- 1	R M JACOB	1960	J	150	2	140	P	4218	+12 D	--	--	4-60	S	W	D	--
(A-6-3)19AAB- 1	MARQUARDT ACFT	1957	--	229	6	150	P	4219	+14 D	150	--	4-57	N	W	D	C
(A-6-3)19ABC- 1	MARQUARDT ACFT	(1944)	--	220	2	188	P	4218 A	+8 I	1	--	5-54	N	W	D	C
(A-6-3)19ABC- 2	MARQUARDT ACFT	1957	--	295	6	176	P	4219	F	25	--	5-57	N	W	D	C
(A-6-3)20BAA- 1	V H SLATER	1961	J	412	2	402	P	4215	+22 D	20	--	4-61	H	W	D	--
(A-6-3)21DDC- 1	R M JACOB	1960*	J	535	2	525	P	4216	+35 D	30	--	4-60	S	W	D	--
(A-6-3)22AAA- 1	J E BARROW	(1943)	J	300	2	290	S	4220 A	+5 I	--	--	9-68	H	W	D	C
(A-6-3)23BAA- 3	K W BARROW	1963	J	272	2	251	S	4220	+5 D	2	--	3-63	H	W	D	--
(A-6-3)23BCC- 2	K F BARROW	1967	J	607	2	597	S	4220	+15 D	20	--	10-67	H	W	D	--
(A-6-3)23CDA- 1	A BARROW	1963	J	497	2	487	S	4219	+17 D	30	--	9-63	S	W	D	--
(A-6-3)24AAB- 2	S T KNIGHT	1964	J	790	2	780	S	4221	+27 D	25	--	8-64	H	W	D	--
(A-6-3)26ACD- 1	A BARROW	1963	J	257	2	247	S	4217	+15 D	20	--	9-63	S	W	D	--
(A-6-3)26BBB- 1	D WILSON	(1930)	J	512	3	--	S	4219 A	+16 I	8 M	--	11-68	H	O	--	C
(A-7-1)19ABB- 1	D R CURTIS	1968	C	116	8	100	P	4885	20 D	22	20	7-68	H	W	D	--
(A-7-1)20DDC- 2	BEN LOMOND INV	1961	C	360	16	117	P	4740	56 D	350	130	2-61	--	T	D	--
(A-7-1)27CBC- 1	NO OGDEN CITY	1960	C	581	16	295	P	4630	92 D	408	250	4-60	P	W	D	--
(A-7-1)28CDC- 3	L D S CHURCH	1960	C	265	8	250	P	4480	+19 D	55	--	5-60	--	W	D	--
(A-7-1)29DDC- 1	C M BARKER	(1930)	--	245	4	--	--	4388	F	126 M	--	8-69	H	O	--	C
(A-7-1)29DDC- 4	NO OGDEN CITY	1961	C	944	24	388	P	4395	73 D	725	167	8-61	P	W	D	C
(A-7-1)30ACD- 1	PLEASANT VIEW C	1966	C	190	16	75	P	4345	--	154	27	6-66	P	W	D	--
(A-7-1)30BDC- 1	H L MCLANE	1964	J	88	2	74	S	4325	+8 D	16	--	10-64	H	W	D	--
(A-7-1)30BDD- 1	L J HARRIS	1964	J	84	2	63	S	4330	+10 D	70	--	9-64	H	W	D	--
(A-7-1)30CCA- 3	P BARKER	1964	H	310	4	264	P	4308	+15 D	45	--	4-64	H	W	D	--
(A-7-1)30CCA- 4	K P BARKER	1964	J	294	2	286	O	4308	+20 D	20	--	4-64	H	W	D	--
(A-7-1)30DCA- 1	C & A BROWN	1916	--	180	3	--	--	4318	+16 I	13 M	--	8-68	S	O	--	C
(A-7-1)31ABC- 1	E STROMBERG	1963*	J	430	2	420	S	4315	+13 D	15	--	4-63	H	W	D	--
(A-7-1)31ACB- 9	N ELLIS	1964	J	475	3	469	O	4315	+7 D	18	--	8-64	H	W	D	--
(A-7-1)31BAC- 1	R ANDERSON	1962	H	416	4	392	S	4300	+23 D	60	--	7-62	H	W	D	--
(A-7-1)31BAC- 2	M ROYLANCE	1967	H	322	4	301	P	4305	F	--	--	8-67	H	W	D	--
(A-7-1)31BDB- 1	RANCH INN	(1946)	--	482	2	--	--	4302 A	+3 I	4 M	--	10-68	H	O	D	C
(A-7-1)31BDC- 1	A VELIS	1962	J	547	2	526	S	4305	+16 D	12	--	8-62	N	W	D	--
(A-7-1)31CAA- 1	L BERRATT	1962	H	589	4	569	P	4308	F	60	--	8-62	--	--	D	--
(A-7-1)31CCD- 1	L H CRANE	1968	J	504	2	494	S	4293	--	--	--	--	H	W	D	--
(A-7-1)31CDA- 2	G C FARRELL	1968	J	49	4	45	P	4304	2 D	20	--	5-68	H	W	D	--
(A-7-1)32ADA- 4	J FOLKMAN	(1900)	--	60	2	60	O	4364 A	+4 I	7 M	--	8-68	I	O	--	C
(A-7-1)32CAD- 1	J K MONTGOMERY	1963	J	329	3	317	S	4335	+41 D	18	--	6-67	H	W	D	--
(A-7-1)32CDA- 1	H R SHINNEY	1962*	J	253	2	252	O	4332	+39 D	20	--	11-62	H	W	D	--
(A-7-1)32CDB- 1	S H FOSTER	1962	J	252	2	236	S	4325	+9 D	18	--	9-62	H	W	O	--
(A-7-1)32CDD- 4	V S BERRETT	1960	V	442	2	432	S	4330	+32 D	20	--	5-60	H	W	D	--
(A-7-1)32DCA- 3	F G OLSEN	1967	H	117	6	104	P	4335	+8 D	48	--	12-67	H	W	D	--
(A-7-1)32DCB- 3	A B HUNT	1960	J	247	2	237	S	4340	+11 D	25	--	5-60	H	W	D	--
(A-7-1)32DDB- 6	N OGDEN CANNING	1968	H	226	6	212	P	4345	F	42	--	8-68	N	W	D	--
(A-7-1)33BAA- 5	J P SPACKMAN	(1934)	J	126	2	126	O	4489 A	+21 I	--	--	3-69	I	O	--	--
(A-7-1)33DBD- 2	NO OGDEN CITY	1961	C	636	16	436	P	4399	14 A	900	235	1/ 3-69	P	O	D	C
(A-7-1)34CAA- 1	P L TAGGERT	1967	C	187	6	150	P	4680	110 D	--	--	1-67	H	W	D	--
(A-7-2) 2ACA- 2	T LEMON	1961	C	332	10	95	P	4310	17 A	350	10	1/11-68	I	W	D	--
(A-7-2) 2CAD- 1	SO WILLARD WTCO	1961	C	365	10	200	P	4320	32 D	--	--	1-61	P	W	D	--
(A-7-2) 2CBA- 5	G M SMITH	1964	J	342	4	330	P	4247	+40 I	14 M	--	9-69	I	W	D	C
(A-7-2) 2CBB- 3	O COOK	1960	C	327	10	230	P	4245	+18 D	150	--	8-60	I	W	D	--
(A-7-2) 2CBD- 8	WESTERN FRT PCK	1968	C	330	10	200	P	4260	+24 I	35 M	--	8-68	N	W	O	C
(A-7-2) 2DBC- 2	C C COOK	1963	H	186	6	--	P	4325	31 D	--	--	3-63	H	W	D	--
(A-7-2) 3DAD- 1	G SMITH	(1932)	--	100	2	--	--	4228 A	+20 I	8 M	--	3-69	S	O	--	C
(A-7-2) 9AAB- 1	J W LARKIN	1969	H	225	2	215	P	4215	+9 I	35 M	--	5-69	H	W	D	C
(A-7-2) 9CDA- 1	U S B R WRW 2	1964	H	1206	6	1082	S	4218	+52 D	107	100	9-64	P	W	DJ	--
(A-7-2)10DBD- 1	WELLS & LARKIN	1961	C	782	16	510	P	4229	F	943	140	9-61	I	W	D	C
(A-7-2)11BAA- 3	J WHITE	(1930)	C	365	10	365	O	4331 A	37 A	--	--	3-69	I	O	--	--
(A-7-2)11CBA- 9	E WARD	1961	C	390	12	326	P	4270	35 D	870	65	7-61	I	W	D	--
(A-7-2)15BAA- 1	K WARREN	1961	J	515	2	505	S	4230	+25 D	25	--	10-61	H	W	D	--
(A-7-2)16AAA- 1	U S B R WRW 1	1964	H	1092	4	1082	S	4225	+49 D	62	--	8-64	--	W	D	--
(A-7-2)16CBA- 1	UNKNOWN	--	--	--	2	--	--	4218	F	5 M	--	5-69	S	W	--	C
(A-7-2)16DAA- 1	L D S CHURCH	1961	J	780	4	752	P	4227	+31 D	98	--	8-61	H	W	D	--
(A-7-2)16DAD- 1	L D S CHURCH	1959	--	1021	2	1009	P	4228	+34 I	--	--	5-69	S	W	D	C
(A-7-2)16DCD- 2	R G PENTON	1968	H	1176	2	1166	P	4227	+43 I	42 M	--	5-69	H	O	D	C
(A-7-2)20DAA- 1	J MAW	(1900)	--	150	2	--	--	4219 A	+10 I	6 M	--	7-68	S	O	--	C
(A-7-2)21BDD- 1	V T MAW	1960	J	730	2	--	S	4226	+15 D	25	--	4-60	H	W	D	--
(A-7-2)21CAD- 1	J D BINGHAM	1967	J	630	2	609	S	4226	+4 D	--	--	10-67	H	W	D	C
(A-7-2)21DCC- 1	A MAW	(1936)	--	--	2	--	--	4228	+4 I	8 M	--	3-69	S	O	--	--
(A-7-2)23DBD- 1	V HOUGH	1968	J	315	2	294	S	4250	+19 I	20 M	--	10-68	H	O	D	C
(A-7-2)23DCA- 1	V A AUCTIONS IC	1963	J	336	2	326	S	4250	+21 D	50	--	8-63	H	W	D	--

Table 1.—Continued.

WELL NUMBER	OWNER	DATE	METHOD OF CONSTRUCTION	WELL DEPTH (FT)	CASING DIAMETER (IN.)	CASING DEPTH (FT)	CASING FINISH	ALTITUDE OF LSD (FT)	WATER LEVEL (FT)	YIELD RATE (GPM)	YIELD DRAWDOWN (FT)	DATE	WATER USE	WELL USE	LOG	OTHER DATA AVAILABLE
(A-7-2)26ACD- 2	G DAVIS	1964	J	604	2	584	S	4250	+26 D	5	--	11-64	H	W	D	--
(A-7-2)26BAA- 3	E E BAKER	1962	J	348	2	327	S	4246	+20 D	36	--	4-62	H	W	D	--
(A-7-2)26CAD- 1	J N RANDALL	1960	J	378	2	368	S	4239	+30 D	65	--	11-60	H	W	D	--
(A-7-2)26DAA- 2	A ROCHELL	1962	J	507	2	493	S	4255	+27 D	20	--	9-62	H	W	D	--
(A-7-2)26DAA- 3	J L ROCHELL	1965	J	505	2	485	P	4255	+15 D	10	--	8-65	H	W	D	--
(A-7-2)26DAC- 1	J W RANDALL	(1905)	--	510	2	500	P	4259 A	+18 I	--	--	3-66	H	U	D	C
(A-7-2)27AAB- 1	R MENDENHALL	1962	J	336	2	315	S	4239	+20 D	75	--	11-62	H	W	D	--
(A-7-2)28ABB- 1	J MAW	--	--	--	2	--	--	4227	F	6M	--	9-68	S	U	--	K
(A-7-2)28BAD- 1	K L JACKSON	1965	J	802	2	760	S	4223	+17 D	15	--	12-65	H	W	D	--
(A-7-2)30DAD- 1	H D WHITE	1961	J	438	2	420	S	4210	+10 D	20	--	9-61	S	W	D	--
(A-7-2)31DAC- 2	C HADLEY	(1940)	--	524	2	--	--	4219 A	+7 I	--	--	12-59	H	W	D	C
(A-7-2)32BBB- 1	E O TAYLOR	1961	J	546	2	525	S	4214	+10 I	8M	--	11-68	H	U	D	C
(A-7-2)32BBB- 2	L D S CHURCH	1963	J	840	2	819	S	4214	+10 D	4	--	9-63	S	W	D	K
(A-7-2)32BCB- 1	B A SIMPSON	1962	J	517	2	496	S	4215	+6 D	5	--	10-62	H	W	D	--
(A-7-2)32DAC- 2	E O TAYLOR	1964	J	819	2	777	S	4235	+12 D	12	--	11-64	H	W	D	--
(A-7-2)33AAB- 1	L H ENGLAND	1961	J	483	2	462	S	4238	+9 D	8	--	6-61	H	W	D	--
(A-7-2)34AAA- 1	B ENGLAND	1968	J	210	2	200	S	4238	+6 D	5	--	5-68	H	W	D	--
(A-7-2)34BAB- 1	B ENGLAND	1963	J	756	2	714	S	4239	+18 D	30	--	7-63	H	W	D	--
(A-7-2)34BBB- 1	D J CHRISTENSEN	1961	J	660	2	650	S	4238	+42 D	55	--	9-61	H	W	D	C
(A-7-2)34BBB- 2	L KEYES	1966	H	517	2	507	P	4238	+18 I	20M	--	5-69	H	W	D	C
(A-7-2)34BBD- 1	M J VANWOWRKEN	1964	J	756	2	735	S	4239	+24 D	35	--	7-64	H	W	D	--
(A-7-3)31AAC- 1	G S L MRC C N14	1968	J	806	2	786	S	4207	+54 I	56M	--	2/ 12-69	N	W	DJ	C
(A-7-3)31AAC- 2	G S L MRC C N15	1969	H	920	10	656	S	4207	+52 I	180M	--	12-69	N	W	Y	C
(A-7-3)31ADC- 1	G S L MRC C N11	1968	J	712	3	692	S	4207	F	53M	--	2/ 12-69	N	W	D	K
(A-7-3)31DAA- 1	G S L MRC C N 3	1967	J	412	2	400	S	4207	+28 I	29M	--	2/ 12-69	N	W	D	K
(A-7-3)31DAA- 2	G S L MRC C N 4	1967	J	415	2	405	S	4207	+26 I	30M	--	2/ 12-69	N	W	D	C
(A-7-3)31DAA- 3	G S L MRC C N 5	1967	J	575	3	565	S	4207	+42 I	40M	--	2/ 12-69	N	W	D	K
(A-7-3)31DAA- 4	G S L MRC C N12	1968	J	717	3	697	S	4207	+42 I	69M	--	2/ 12-69	N	W	D	C
(A-7-3)31DAB- 1	G S L MRC C N 6	1967	J	590	3	580	S	4207	+43 I	29M	--	2/ 12-69	N	W	D	C
(A-7-3)31DAB- 2	G S L MRC C N 7	1967	J	710	3	690	S	4207	+45 I	72M	--	2/ 12-69	N	W	D	K
(A-7-3)31DAB- 3	G S L MRC C N10	1968	J	705	3	685	S	4207	+42 I	65M	--	2/ 12-69	N	W	D	K
(A-7-3)31DAC- 1	G S L MRC C N 8	1967	J	621	2	611	S	4207	+43 I	28M	--	2/ 12-69	N	W	D	K
(A-7-3)31DDA- 1	G S L MRC C N 9	1967	J	597	2	587	S	4207	+38 I	28M	--	2/ 5-69	N	W	DJ	K
(A-7-3)32CBB- 1	G S L MRC C N13	1968	J	717	3	697	S	4207	+42 I	90M	--	2/ 12-69	N	W	D	C
(A-7-3)33CDD- 1	G EAST NO 1	--	--	399	2	--	--	4211 A	+18 I	15M	--	5-69	S	U	--	C
(A-7-3)35DAA- 1	L STANGER	1928	J	145	2	145	U	4215 A	+11 I	3M	--	3-69	S	U	--	--
(A-8-2)21AAB- 1	WILLARD SKIN CR	1965	--	567	2	546	S	4205	+21 D	12	--	9-65	H	W	D	--
(A-8-2)23CAB- 1	M P FACER	1961*	C	225	10	90	P	4325	43 D	650	10	4-61	I	W	D	--
(A-8-2)23CDB- 1	WILLARD WATERCO	(1934)	C	255	12	97	P	4328 A	40 A	900	7	1/ 3-69	I	U	D	--
(A-8-2)23DDA- 1	WILLARD CITY	1962	C	460	16	290	P	4525	246 D	1650	70	12-62	P	W	D	--
(A-8-2)26BCA- 3	R G LEMMON	1961	C	327	10	280	P	4288	--	1000	50	2-61	I	W	D	--
(A-8-2)26BCD- 1	O F HARDING	(1934)	--	118	4	--	--	4270	F	7M	--	9-69	I	U	D	C
(A-8-2)26CAC- 1	G L BRAEGGER	1929	V	235	3	100	P	4255	+27 I	--	--	3-59	I	U	D	C

1/ DATE APPLIES TO WATER LEVEL ONLY. YIELD AND DRAWDOWN FIGURES REPRESENT WELL-TEST DATA TAKEN SHORTLY AFTER COMPLETION OF THE WELL.

2/ DISCHARGE MEASURED IN AUGUST 1969.

Table 2.—Chemical analyses of water from selected wells and springs in the East Shore area and Antelope Island.

SPECIFIC CONDUCTANCE: IN MICROMHOS/CM AT 25°C, F, FIELD MEASUREMENT.
SOURCE OF DATA: 1, U.S. GEOLOGICAL SURVEY; 3, UTAH STATE DEPARTMENT OF HEALTH; 8, U.S. Bureau of Reclamation.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMPERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (µG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	SODIUM PLUS POTASSIUM (NA+K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
					WELLS							
(A-2-1) 6ACC- 2	8-21-68	59	13	--	--	--	--	--	--	--	--	--
(A-2-1) 7ABA- 4	9- 8-47	450	17	23	--	30	7.9	--	--	23	140	--
(A-2-1) 7ABA- 4	12-12-58	450	17	21	0	17	7.3	--	--	32	131	0
(A-2-1) 7ABA- 4	11-18-59	450	16	19	--	17	7.1	--	--	31	126	0
(A-2-1) 7ABA- 4	10-15-64	450	18	20	--	16	7.9	--	--	31	129	0
(A-2-1) 7ABA- 4	9- 8-67	450	17	--	--	--	--	--	--	--	120	0
(A-2-1) 7ABA- 4	10- 1-68	450	16	--	--	--	--	--	--	--	126	0
(A-2-1) 7ABA- 4	9- 8-69	450	17	--	--	--	--	--	--	--	126	0
(A-2-1) 7BDC- 2	11-12-68	478	15	--	--	--	--	--	--	--	--	--
(A-2-1)18ABB- 2	7-11-61	563	--	--	--	6.0	2.1	68	.8	--	143	5
(A-2-1)20DDB- 1	9-26-67	591	--	17	--	35	13	24	3.0	--	154	1
(A-2-1)30ACD- 1	12- 8-58	374	11	13	0	61	17	--	--	23	250	0
(A-2-1)30ACD- 1	11- 6-59	374	11	11	--	52	22	--	--	26	254	0
(A-2-1)30ACD- 1	11-16-60	374	11	14	0	63	16	23	.5	--	248	0
(A-2-1)30ACD- 1	2-24-65	374	12	14	--	69	17	--	--	36	280	0
(A-2-1)31ADA- 1	8- 8-47	195	--	14	--	75	22	--	--	22	296	0
(A-2-1)31ADA- 1	10-10-58	195	--	15	--	79	18	--	--	26	296	0
(A-2-1)31ADA- 1	12- 6-60	195	--	15	0	78	19	21	1.6	--	288	0
(A-2-1)32CCB- 1	5-13-51	412	--	16	70	70	24	--	--	42	276	--
(A-2-1)32CCB- 1	2- 6-59	412	12	18	--	71	23	--	--	31	322	0
(A-2-1)32CCB- 1	11- 6-59	412	13	16	--	63	24	--	--	33	316	0
(A-2-1)32CCB- 1	11-16-60	412	13	14	0	75	20	28	1.6	--	300	8
(B-1-1)10AAC- 1	12-20-65	231	16	50	--	51	17	--	--	577	429	0
(B-1-1)10AAC- 1	2- 7-66	231	16	48	--	36	13	--	--	360	292	0
(B-1-1)10AAC- 1	11-13-68	231	16	48	--	45	20	--	--	570	433	0
(B-2-1)13AAB- 1	5- 9-47	264	--	23	--	12	3.5	--	--	80	197	7
(B-2-1)13AAB- 1	10-10-58	264	16	21	--	9.6	2.9	--	--	80	192	0
(B-2-1)13AAB- 1	3-25-59	264	14	20	--	10	1.9	--	--	80	194	0
(B-2-1)13AAB- 1	7-14-59	264	16	21	--	10	2.2	--	--	80	186	0
(B-2-1)13AAB- 1	5- 5-69	264	15	19	--	9.6	1.9	--	--	80	193	0
(B-2-1)15DDD- 1	11-12-68	450	13	.4	--	3.2	14	--	--	115	45	50
(B-2-1)23AAA- 1	8-20-68	322	14	12	--	63	21	41	1.3	--	225	0
(B-2-1)23ADD- 6	8-20-68	331	17	--	--	--	--	--	--	--	--	--
(B-2-1)23BDD- 1	8-29-68	600	18	--	--	--	--	--	--	--	220	12
(B-2-1)24BAD- 3	8-20-68	386	16	--	--	--	--	--	--	--	186	5
(B-2-1)24CBD- 2	8-21-68	325	15	--	--	--	--	--	--	--	196	0
(B-2-1)24CDD-11	12-12-58	607	15	17	--	48	14	--	--	35	192	0
(B-2-1)24CDD-11	11- 6-59	607	15	15	--	46	16	--	--	39	197	0
(B-2-1)25BAA-15	12-12-58	570	16	15	--	55	16	--	--	34	208	0
(B-2-1)25BAA-15	11- 6-59	570	13	13	--	56	16	--	--	37	222	0
(B-2-1)26ABB- 2	8-21-68	273	19	15	--	18	6.3	--	--	113	218	0
(B-2-1)26BAB- 8	4-17-62	584	16	--	--	23	7.7	119	2.0	--	145	11
(B-2-1)26CDD- 3	7-12-61	425	--	--	--	192	60	446	8.2	--	121	8
(B-2-1)26CDD- 3	8-15-61	425	--	--	--	195	70	455	7.8	--	73	0
(B-2-1)26CDD- 3	8-22-61	425	20	--	--	194	61	451	7.8	--	144	0
(B-2-1)26CDD- 3	9-26-61	425	--	--	--	173	58	414	7.0	--	156	0
(B-2-1)26CDD- 3	1-25-62	220[1]	17	14	--	181	60	--	--	402	158	0
(B-2-1)26CDD- 3	1-25-62	260[1]	17	--	--	--	--	--	--	454	136	0
(B-2-1)26CDD- 3	1-25-62	300[1]	17	--	--	--	--	--	--	493	122	0
(B-2-1)26CDD- 3	1-25-62	385[1]	16	--	--	--	--	--	--	507	120	0
(B-2-1)26CDD- 3	5- 7-63	211[1]	--	--	--	--	--	--	--	464	124	0
(B-2-1)26CDD- 3	5- 7-63	232[1]	--	--	--	--	--	--	--	474	120	0
(B-2-1)26CDD- 3	5- 7-63	254[1]	--	--	--	--	--	--	--	474	124	0
(B-2-1)26CDD- 3	5- 7-63	275[1]	--	--	--	--	--	--	--	501	114	0
(B-2-1)26CDD- 3	5- 7-63	300[1]	19	--	--	--	--	--	--	548	102	0
(B-2-1)26CDD- 3	5- 7-63	320[1]	--	--	--	--	--	--	--	526	102	0
(B-2-1)26CDD- 3	5- 7-63	340[1]	--	--	--	--	--	--	--	558	98	0
(B-2-1)26CDD- 3	5- 7-63	360[1]	--	--	--	--	--	--	--	556	100	0
(B-2-1)26CDD- 3	5- 7-63	380[1]	--	--	--	--	--	--	--	573	92	0
(B-2-1)26CDD- 4	5- 7-63	84[2]	16	--	--	--	--	--	--	73	292	0
(B-2-1)26CDD- 4	5- 7-63	105[2]	16	--	--	--	--	--	--	82	280	0
(B-2-1)26CDD- 4	5- 7-63	126[2]	15	--	--	--	--	--	--	82	310	0
(B-2-1)26CDD- 4	5- 7-63	147[2]	15	--	--	--	--	--	--	93	286	0
(B-2-1)26CDD- 4	5- 7-63	189[2]	16	--	--	--	--	--	--	87	290	0
(B-2-1)26CDD- 4	5- 7-63	200[2]	17	--	--	--	--	--	--	88	282	0
(B-2-1)26CDD- 4	5-13-63	205	--	--	--	--	--	--	--	96	284	0
(B-2-1)26DCB- 1	8-20-68	400	17	--	--	--	--	--	--	--	222	0
(B-2-1)27DDD- 4	2-21-62	500	20	--	--	--	--	--	--	--	--	--
(B-2-1)34ADA- 3	5- 9-47	270	16	8.9	--	36	10	--	--	161	264	0
(B-2-1)34ADA- 3	10-10-58	270	17	16	--	74	21	--	--	241	212	0
(B-2-1)34ADA- 3	11- 6-59	270	17	15	--	73	22	--	--	251	204	0
(B-2-1)34ADA- 3	4- 8-60	270	17	18	--	59	31	--	--	247	203	0
(B-2-1)34ADA- 3	6- 9-60	270	--	15	--	76	20	--	--	244	199	0
(B-2-1)34ADA- 3	11-10-60	270	17	13	0	74	22	238	3.4	--	208	0
(B-2-1)34ADA- 3	10-16-64	270	17	17	--	42	27	--	--	242	213	0
(B-2-1)34ADA- 3	9- 8-67	270	17	--	--	--	--	--	--	--	204	0
(B-2-1)34ADA- 3	7-25-68	270	16	--	--	--	--	--	--	--	218	0
(B-2-1)34ADD- 2	8-20-68	410	19	15	--	143	47	--	--	456	136	0
(B-2-1)34ADD- 2	9- 8-69	410	19	--	--	--	--	--	--	--	140	0
(B-2-1)35DBD- 1	8-20-68	84	13	--	--	--	--	--	--	--	260	0

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (µG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
						WELLS						
--	--	--	--	--	--	--	--	--	243	--	--	1
16	18	--	2.1	--	--	189	108	0	338	--	1.0	1
11	14	--	3.1	--	--	169	72	0	271	7.6	1.6	1
13	13	--	2.8	--	--	165	71	0	271	7.6	1.6	1
12	14	--	2.3	--	162	--	72	0	264	7.4	1.6	1
--	15	--	--	--	--	--	70	0	272	7.6	--	1
--	17	--	--	--	--	--	80	0	272	7.5	--	1
--	17	--	--	--	--	--	74	0	272	7.4	--	1
--	--	--	--	--	--	--	--	--	348	--	--	1
16	21	--	--	40	205	--	24	0	337	8.4	6.1	8
22	31	.1	.0	70	230	--	140	--	370	8.0	--	3
24	25	.3	6.2	--	--	292	222	17	511	7.6	.7	1
27	25	--	8.1	--	--	296	220	12	515	7.4	.8	1
28	27	.1	6.3	--	--	300	224	21	506	7.9	.7	1
35	29	--	14	--	341	--	240	10	569	7.5	1.0	1
37	30	--	1.9	--	--	348	278	35	588	7.6	.6	1
37	28	--	6.6	--	--	356	270	27	597	7.6	.7	1
33	26	.1	6.7	--	--	342	272	36	578	7.9	.6	1
24	38	.4	27	--	396	--	276	50	--	--	1.1	3
25	31	--	6.4	--	--	363	271	7	622	7.8	.8	1
23	27	--	7.4	--	--	348	256	0	612	8.2	.9	1
29	31	.1	7.3	--	--	358	270	11	593	8.3	.7	1
1.2	778	--	1.3	--	1720	--	197	0	3080	7.7	18	1
1.9	485	--	1.7	--	1090	--	144	0	1980	8.2	13	1
6.2	760	--	.7	--	1700	--	194	0	2920	8.0	18	1
15	30	--	1.7	--	--	260	44	0	381	--	5.2	1
9.5	30	--	.5	--	--	248	36	0	395	7.8	5.8	1
9.2	28	--	.1	--	--	244	34	0	393	8.1	6.0	1
11	30	--	.8	--	--	246	34	0	411	7.9	5.9	1
8.2	28	--	.2	--	236	--	32	0	393	7.7	6.2	1
.8	138	--	.3	--	349	--	66	0	657	9.1	6.2	1
62	55	.2	13	10	396	--	244	60	652	8.0	1.1	1
--	--	--	--	--	--	--	--	--	464	--	--	1
--	48	--	--	--	--	--	75	0	522	8.5	--	1
--	32	--	--	--	--	--	76	0	415	8.4	--	1
--	59	--	--	--	--	--	260	99	661	7.9	--	1
32	40	--	6.9	--	--	287	177	20	498	7.8	1.1	1
39	42	--	7.4	--	--	301	182	20	507	8.1	1.3	1
38	42	--	7.2	--	--	309	201	30	542	7.8	1.0	1
38	41	--	8.2	--	--	318	206	53	550	7.9	1.1	1
32	72	--	5.7	--	373	--	72	0	622	8.1	5.8	1
62	103	--	--	70	388	--	90	0	696	8.9	5.4	8
122	1040	--	--	0	2160	--	728	615	3690	--	7.2	8
183	1080	--	--	--	2150	--	774	715	3570	8.0	7.1	8
112	1060	--	--	310	2200	--	736	618	3640	7.9	7.2	8
111	946	--	--	--	1990	--	669	541	3320	8.1	6.9	8
47	985	.2	8.0	280	--	1780	700	570	3190	7.4	6.6	1
37	1160	.1	--	270	--	--	800	688	3780	7.3	7.0	1
32	1300	.2	--	270	--	--	895	795	4080	7.3	7.2	1
28	1340	.2	.3	--	--	--	915	817	4200	7.3	7.3	1
33	1190	--	--	--	--	--	805	703	3980	7.0	7.1	1
43	1210	--	--	--	--	--	820	722	4040	7.0	7.2	1
49	1200	--	--	--	--	--	815	713	4020	7.0	7.2	1
35	1290	--	--	--	--	--	860	766	4280	7.0	7.4	1
28	1470	--	--	--	--	--	995	911	4740	7.0	7.6	1
25	1400	--	--	--	--	--	940	856	4550	7.0	7.5	1
23	1520	--	--	--	--	--	1040	955	4850	6.9	7.5	1
20	1510	--	--	--	--	--	1020	943	4850	7.0	7.5	1
17	1600	--	--	--	--	--	1100	1030	5110	6.9	7.5	1
49	72	--	--	--	--	--	234	0	753	7.5	2.1	1
35	64	--	--	--	--	--	178	0	679	7.6	2.7	1
106	101	--	--	--	--	--	328	74	982	7.6	2.0	1
92	111	--	--	--	--	--	284	49	971	7.5	2.4	1
147	126	--	--	--	--	--	378	140	1110	7.4	1.9	1
147	131	--	--	--	--	--	378	147	1120	7.4	2.0	1
150	146	--	--	--	--	--	386	153	1160	7.3	2.1	1
--	121	--	--	--	--	--	112	0	820	7.9	--	1
--	--	--	--	--	375	--	--	--	661	--	--	8
55	141	--	10	--	--	552	131	0	958	--	6.1	1
63	390	--	9.0	--	--	918	272	98	1610	7.7	6.4	1
67	410	--	6.3	--	--	944	274	107	1730	7.9	6.6	1
54	412	--	6.6	--	--	928	273	106	1710	7.7	6.5	1
58	410	--	3.7	--	--	925	274	111	1710	7.9	6.4	1
68	384	.3	6.7	--	--	912	276	105	1660	8.0	6.2	1
88	334	--	5.3	--	859	--	215	40	1510	7.8	7.0	1
--	360	--	--	--	--	--	282	115	1560	8.0	--	1
--	--	--	--	--	--	--	276	97	1600	7.5	--	1
36	988	--	.3	--	1910	--	552	440	3130	7.7	8.4	1
--	925	--	--	--	--	--	570	455	3100	7.9	--	1
--	106	--	--	--	--	--	352	139	926	7.9	--	1

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMPERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (µG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	SODIUM PLUS POTASSIUM (NA+K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
(B-2-1)36BBC- 2	10-11-54	501	--	19	--	70	33	68	3.9	--	234	--
(B-2-1)36BBC- 2	10-10-58	501	16	17	--	93	27	--	--	96	314	0
(B-2-1)36BBC- 2	3-25-59	501	16	15	--	83	31	--	--	101	316	0
(B-2-1)36BBC- 2	7- 8-59	501	15	16	--	79	36	--	--	111	332	0
(B-2-1)36BBC- 2	11- 6-59	501	15	13	--	82	33	--	--	110	313	0
(B-2-1)36BBC- 2	4- 8-60	501	15	18	--	44	52	--	--	109	311	0
(B-2-1)36BBC- 2	11-10-60	501	15	15	0	87	29	105	3.3	--	310	0
(B-2-1)36BBC- 2	10-16-64	501	15	15	--	55	47	--	--	160	393	0
(B-2-1)36BBC- 2	7-25-68	501	13	--	--	--	--	--	--	--	158	0
(B-3-1) 2DCC- 2	7- 9-54	386	--	21	--	39	16	35	2.3	--	219	--
(B-3-1) 2DCC- 2	2- 6-59	386	12	17	--	37	19	--	--	36	225	0
(B-3-1) 2DCC- 2	11-18-59	386	12	15	30	37	18	--	--	33	221	0
(B-3-1) 4BCA- 2	8-20-68	250	16	--	--	--	--	--	--	--	--	--
(B-3-1) 4CDB- 4	8-20-68	657	20	19	--	27	6.8	--	--	46	192	0
(B-3-1) 4DDB- 5	11-14-68	485	18	--	--	--	--	--	--	--	--	--
(B-3-1) 5DDA- 1	11-14-68	918	24	30	--	25	7.3	--	--	32	161	0
(B-3-1) 9AAD- 3	9- 8-69	648	20	--	--	--	--	--	--	--	--	--
(B-3-1)15ACD- 1	9-11-69	260	16	41	--	36	18	--	--	68	320	0
(B-3-1)15BAC- 1	11-14-68	985	22	--	--	--	--	--	--	--	--	--
(B-3-1)15BAC- 1	9- 9-69	985	24	26	--	30	3.4	--	--	60	232	0
(B-3-1)24BCA- 1	7- 9-54	176	--	25	--	62	13	119	2.7	--	499	--
(B-3-1)24BCA- 1	10-10-58	176	16	21	--	67	15	--	--	120	510	0
(B-3-1)24BCA- 1	11- 6-59	176	14	17	--	63	16	--	--	133	508	0
(B-3-1)24BCA- 1	11- 9-60	176	12	20	20	30	14	123	1.3	--	380	8
(B-3-1)25DAB- 1	8-20-68	265	18	20	--	65	17	177	2.3	--	215	0
(B-3-1)27ADA- 1	12-11-68	850	21	26	--	20	3.9	--	--	111	301	0
(B-3-1)35ABA- 1	10-10-58	1220	33	36	--	30	1.0	--	--	256	88	0
(B-3-1)35ABA- 1	11- 6-59	1220	31	26	--	27	.5	--	--	256	88	0
(B-3-1)35ABA- 1	11-28-60	1220	29	32	480	26	4.4	250	2.1	--	79	0
(B-4-1) 6DCD- 1	1- 4-56	805	11	21	1100	43	15	33	6.7	--	274	0
(B-4-1) 6DCD- 1	5-22-58	805	11	18	80	43	14	37	5.4	--	275	0
(B-4-1) 6DCD- 1	4-29-59	805	13	19	1200	44	15	33	7.1	--	283	0
(B-4-1) 6DCD- 1	5-10-60	805	13	18	350	45	14	36	6.0	--	277	0
(B-4-1) 6DCD- 1	7-13-62	805	13	19	--	49	13	--	--	40	274	0
(B-4-1) 6DCD- 1	7-17-63	805	14	17	--	42	13	--	--	41	263	0
(B-4-1) 6DCD- 1	7-14-64	805	--	17	--	40	14	--	--	43	268	0
(B-4-1) 6DCD- 1	6-24-65	805	14	18	--	42	14	--	--	35	251	0
(B-4-1) 6DCD- 1	7-21-66	805	22	16	30	39	16	--	--	33	260	0
(B-4-1) 6DCD- 1	7-10-67	805	18	17	40	48	11	--	--	40	264	0
(B-4-1) 6DCD- 1	7-16-68	805	21	18	120	35	20	--	--	36	263	0
(B-4-1) 6DCD- 1	7-22-69	805	22	18	--	41	17	--	--	36	269	0
(B-4-1) 7BAA- 1	12- 2-61	902	--	--	--	69	17	19	2.7	--	286	1
(B-4-1) 7BAA- 1	12- 4-61	902	--	--	--	56	18	19	2.3	--	252	2
(B-4-1) 8DCD- 1	9- 6-61	707	--	--	--	47	12	17	1.6	--	198	0
(B-4-1)10BBB- 1	9- 8-61	1205	15	--	--	43	9.4	23	1.2	--	183	0
(B-4-1)32ABB- 1	11-14-68	770	17	--	--	--	--	--	--	--	194	0
(B-4-2) 6BAA- 2	11-14-68	609	15	13	--	51	14	18	1.9	--	227	0
(B-4-2) 6BAA- 2	9- 8-69	609	16	--	--	--	--	--	--	--	233	0
(B-4-2) 7CCC- 1	11- 2-64	190	14	19	280	35	15	--	--	58	266	0
(B-4-2) 7CCC- 1	5-14-69	190	14	19	--	33	14	44	5.2	--	256	0
(B-4-2) 7DCC- 1	8-28-68	400	15	19	--	42	15	--	--	29	234	0
(B-4-2) 7DCD- 2	8-21-68	588	14	--	--	--	--	--	--	--	--	--
(B-4-2)10DAA- 2	10- 1-68	628	--	5.6	--	57	16	15	2.8	--	224	0
(B-4-2)12BBB- 1	8-28-68	774	14	16	--	58	21	--	--	23	280	0
(B-4-2)17CDD- 1	8-21-68	583	16	--	--	--	--	--	--	--	222	0
(B-4-2)20CCA- 1	11-18-68	595	15	21	--	34	13	--	--	30	211	0
(B-4-2)25DAD- 1	8-20-68	465	14	16	--	32	7.3	--	--	15	146	0
(B-4-2)25DDD- 1	8-20-68	--	13	--	--	--	--	--	--	--	--	--
(B-4-2)27ABA- 1	5- 5-69	304	15	30	--	14	4.4	130	5.4	--	324	0
(B-4-2)27ABA- 1	9- 8-69	304	15	--	--	--	--	--	--	--	330	0
(B-4-3)19CAA- 3[3]	7-30-69	481	24	35	340	51	21	202	4.8	--	187	0
(B-4-3)19CAA- 3	8- 1-69	481[4]	23	--	--	--	--	--	--	--	216	0
(B-4-3)19CAA- 3	8- 2-69	481[4]	21	--	--	--	--	--	--	--	221	0
(B-4-3)19CAA- 3	8- 2-69[5]	481	24	--	--	--	--	--	--	--	187	0
(B-4-3)19CAA- 3	8- 2-69[6]	481	--	--	--	--	--	--	--	--	188	0
(B-4-3)19CAA- 3	8- 4-69	481	24	34	--	46	25	159	4.4	--	190	0
(B-4-3)19CAA- 3	8-20-69	481	24	--	--	--	--	--	--	--	166	--
(B-4-3)19CAA- 3[7]	9- 2-69	481	24	--	110	--	--	--	--	--	--	--
(B-4-3)19CAA- 3[8]	9- 5-69	481	24	--	250	--	--	--	--	--	--	--
(B-4-3)19CAA- 3	9- 8-69	481	24	--	--	--	--	--	--	--	--	--
(B-4-3)19CAA- 3[9]	9-15-69	481	24	--	70	--	--	--	--	--	--	--
(B-4-3)19CAA- 3	9-11-69	481	24	--	--	--	--	--	--	--	--	--
(B-5-1)17CBC- 1	4-20-61	910	21	--	--	53	14	16	2.0	--	202	5
(B-5-1)17CBC- 1	4-21-61	910	22	--	--	57	14	16	1.6	--	205	4
(B-5-1)17DDD- 1	12-19-62	857	--	--	--	54	17	19	2.7	--	240	0
(B-5-1)18ABB- 1	11-15-60[10]	730	21	--	--	47	10	44	2.0	--	173	7
(B-5-1)18ABB- 1	11-15-60[11]	730	21	--	--	47	11	35	1.6	--	179	5
(B-5-1)18ABB- 1	11-15-60[12]	730	21	--	--	48	11	32	1.6	--	182	5
(B-5-1)18ABB- 1	11-15-60[13]	730	21	--	--	47	12	29	1.6	--	174	9
(B-5-1)18ABB- 1	12-16-60	730	22	--	--	51	12	19	2.0	--	200	2

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (µG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
84	136	.0	10	--	578	--	312	120	952	--	1.7	8
86	140	--	11	--	--	624	344	86	1070	7.5	2.3	1
85	142	--	11	--	--	623	336	77	1070	7.8	2.4	1
97	144	--	10	--	--	656	342	70	1090	7.7	2.6	1
106	141	--	14	--	--	653	338	81	1090	7.8	2.6	1
85	150	--	8.5	--	--	620	326	71	1090	7.5	2.6	1
91	152	.1	11	--	--	645	334	80	1100	8.0	2.5	1
151	133	--	15	--	750	--	330	8	1180	7.9	3.8	1
--	--	--	--	--	--	--	360	230	1080	7.1	--	1
24	33	.3	--	--	266	--	162	0	482	--	1.2	8
19	30	--	.2	--	--	269	169	0	465	8.1	1.2	1
20	26	--	.2	--	--	258	167	0	464	7.7	1.1	1
--	--	--	--	--	--	--	--	--	341	--	--	1
1.2	23	--	6.4	--	222	--	96	0	368	7.8	2.0	1
--	--	--	--	--	--	--	--	--	332	--	--	1
3.2	18	--	.5	--	195	--	92	0	301	7.8	1.4	1
--	--	--	--	--	--	--	--	--	350	--	--	1
.5	33	--	1.8	--	349	--	162	0	571	7.4	2.3	1
--	--	--	--	--	--	--	--	--	400	--	--	1
.5	20	--	.2	--	267	--	88	0	394	7.9	2.8	1
--	51	--	--	--	509	--	209	0	887	--	3.6	8
2.3	48	--	.5	--	--	525	228	0	872	7.6	3.4	1
22	49	--	.4	--	--	550	220	0	865	8.0	3.9	1
2.1	48	.2	.3	--	--	434	132	0	711	8.3	4.7	1
1.0	315	.3	5.7	120	749	--	232	56	1320	8.0	5.1	1
2.0	40	--	3.2	--	354	--	66	0	570	7.8	5.9	1
26	380	--	.9	--	--	773	80	8	1400	7.9	12	1
26	372	--	3.4	--	--	754	70	0	1400	8.1	13	1
22	370	4.4	1.2	--	--	752	84	19	1390	7.6	12	1
1.5	21	.2	.0	--	--	278	167	0	470	7.4	1.1	1
1.0	20	.4	.8	--	--	275	166	0	489	7.9	1.2	1
1.0	17	.1	.9	--	--	279	172	0	467	7.5	1.1	1
2.1	20	.2	.4	--	--	278	168	0	473	7.7	1.2	1
5.8	21	.3	.3	--	258	--	175	0	482	7.7	1.3	1
1.4	22	.1	.3	--	265	--	160	0	466	7.5	1.4	1
2.9	20	.2	.6	--	261	--	158	0	457	7.7	1.5	1
7.8	18	.1	1.8	--	258	--	164	0	451	7.3	1.2	1
1.2	14	.1	.2	--	254	--	163	0	450	7.6	1.1	1
2.0	22	.2	.2	--	260	--	164	0	451	7.5	1.3	1
1.5	21	.1	5.2	--	264	--	172	0	455	7.4	1.2	1
1.0	21	.2	.5	--	272	--	173	0	460	7.2	1.2	1
21	20	--	--	0	298	--	242	6	528	--	.5	8
18	19	--	--	0	273	--	212	2	488	--	.6	8
21	15	--	--	0	225	--	166	4	385	8.1	.6	8
15	23	--	--	30	227	--	147	0	377	8.1	.8	8
--	31	--	--	--	--	--	126	0	345	7.7	--	1
16	20	.2	.4	40	250	--	184	0	427	8.1	.6	1
--	20	--	--	--	--	--	186	0	428	7.8	--	1
9.1	32	.5	.0	--	308	--	148	0	445	8.1	2.1	1
.8	24	.2	.2	110	264	--	140	0	442	8.0	1.6	1
2.5	24	--	.1	--	252	--	165	0	411	8.0	1.0	1
--	--	--	--	--	--	--	--	--	454	--	--	1
36	22	.3	.7	30	280	--	208	24	464	8.1	.4	1
19	22	--	2.2	--	297	--	232	2	506	8.0	.7	1
--	22	--	--	--	--	--	160	0	385	8.2	--	1
1.5	19	--	4.1	--	241	--	140	0	375	7.8	1.1	1
6.5	12	--	.1	--	157	--	110	0	261	7.7	.6	1
--	--	--	--	--	--	--	--	--	259	--	--	1
1.5	48	.4	.8	110	410	--	52	0	631	7.8	7.9	1
--	47	--	--	--	--	--	50	0	634	8.0	--	1
12	350	.5	.6	160	783	--	216	63	1360	7.6	6.0	1
--	61	--	--	--	--	--	--	--	516	7.7	--	1
--	53	--	--	--	--	--	--	--	509	7.6	--	1
--	290	--	--	--	--	--	--	--	1210	7.8	--	1
--	295	--	--	--	--	--	--	--	1220	7.5	--	1
8.8	290	.5	.4	110	661	--	220	64	1180	7.6	4.7	1
--	342	--	--	--	--	--	--	--	1770	7.7	--	1
--	295	.4	--	--	741	--	192	--	1250	7.9	--	1
--	315	.4	--	--	758	--	192	--	1260	8.0	--	1
--	320	.5	--	--	757	--	204	--	1270	8.0	--	1
--	--	--	--	--	--	--	--	--	1220	--	--	1
--	--	--	--	--	--	--	--	--	1200	--	--	1
25	19	--	--	100	259	--	191	17	429	--	.5	8
30	20	--	--	--	269	--	198	23	429	--	.5	8
20	24	--	--	--	238	--	205	8	474	7.9	.6	8
54	35	--	--	--	287	--	161	8	478	8.3	1.5	8
42	30	--	--	--	271	--	165	10	452	8.3	1.2	8
35	29	--	--	--	262	--	165	8	436	8.3	1.1	8
33	28	--	--	--	257	--	166	9	428	8.3	1.0	8
26	19	--	--	--	223	--	178	11	409	--	.6	8

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMPERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	SODIUM PLUS POTASSIUM (NA+K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
(B-5-1)18A8B- 1	12-18-60	730	23	--	--	50	12	19	2.0	--	201	2
(B-5-1)20DDD- 2	1- 3-62	1000	15	--	--	80	16	17	1.2	--	245	0
(B-5-1)23DBD- 1	10- 1-68	601	15	15	--	46	10	18	1.3	--	205	0
(B-5-1)29BDB- 3	4- 9-43	800	--	14	20	70	19	21	2.1	--	288	0
(B-5-1)29BDB- 3	5-13-48	800	14	14	20	74	16	--	--	20	288	0
(B-5-1)29BDB- 3	11-19-51	800	18	13	30	71	18	18	2.4	--	278	0
(B-5-1)29BDB- 3	4-14-52	800	12	12	30	73	19	20	1.7	--	296	0
(B-5-1)29BDB- 3	8- 7-52	800	12	16	60	62	17	50	5.7	--	346	0
(B-5-1)29BDB- 3	8-14-53	800	17	12	60	72	18	21	1.7	--	280	0
(B-5-1)29BDB- 3	8-31-54	800	12	13	50	74	20	16	1.3	--	278	0
(B-5-1)29BDB- 3	4- 5-56	800	--	11	0	73	19	19	1.7	--	290	0
(B-5-1)29BDB- 3	5- 7-57	800	13	11	0	73	17	18	1.6	--	280	0
(B-5-1)29BDB- 3	5-22-58	800	14	11	60	71	17	19	1.5	--	283	0
(B-5-1)29BDB- 3	4-29-59	800	14	12	0	71	17	18	1.8	--	287	0
(B-5-1)29BDB- 3	5- 9-60	800	12	13	0	74	16	19	1.8	--	281	0
(B-5-1)29BDB- 3	7-12-62	800	18	12	10	76	15	--	--	18	276	0
(B-5-1)29BDB- 3	7-10-63	800	--	11	30	71	16	--	--	22	275	0
(B-5-1)29BDB- 3	7-13-64	800	18	11	60	70	17	--	--	21	276	0
(B-5-1)29BDB- 3	6-30-65	800	17	12	30	72	18	--	--	16	272	0
(B-5-1)29BDB- 3	7-15-66	800	19	10	20	68	21	--	--	14	274	0
(B-5-1)29BDB- 3	7-13-67	800	19	10	0	74	16	--	--	21	280	0
(B-5-1)29BDB- 3	7-15-68	800	18	11	0	67	22	--	--	20	284	0
(B-5-1)29BDB- 3	7-24-69	800	16	11	--	71	27	--	--	2.5	286	0
(B-5-1)29BDC- 1	5-13-48	627	13	14	30	79	20	--	--	21	310	0
(B-5-1)29BDC- 1	9- 1-49	627	12	13	30	79	21	--	--	20	312	0
(B-5-1)29BDC- 1	4-14-52	627	12	14	20	76	20	24	2.6	--	320	0
(B-5-1)29BDC- 1	8- 7-52	627	13	12	50	78	20	22	2.3	--	317	0
(B-5-1)29BDC- 1	8-14-53	627	17	12	70	78	20	21	1.8	--	312	0
(B-5-1)29BDC- 1	8-31-54	627	12	12	50	78	21	20	2.0	--	305	0
(B-5-1)29BDC- 1	4-22-55	627	12	12	50	77	19	21	1.7	--	303	0
(B-5-1)29BDC- 1	5- 7-57	627	15	12	0	75	18	22	2.0	--	300	0
(B-5-1)29BDC- 1	5-22-58	627	17	11	70	73	18	19	1.7	--	293	0
(B-5-1)29BDC- 1	4-29-59	627	15	12	0	74	18	19	1.8	--	299	0
(B-5-1)29BDC- 1	5- 9-60	627	12	11	0	75	18	20	2.5	--	295	0
(B-5-1)29BDC- 1	7-12-62	627	16	12	--	81	17	--	--	20	296	0
(B-5-1)29BDC- 1	7-10-63	627	19	12	--	75	17	--	--	22	294	0
(B-5-1)29BDC- 1	7-13-64	627	14	11	--	75	18	--	--	22	295	0
(B-5-1)29BDC- 1	6-30-65	627	17	12	--	79	19	--	--	18	298	0
(B-5-1)29BDC- 1	7-15-66	627	20	11	30	75	21	--	--	15	296	0
(B-5-1)29BDC- 1	7-12-67	627	16	11	0	77	20	--	--	21	312	0
(B-5-1)29BDC- 1	7-12-68	627	19	11	10	73	23	--	--	21	309	0
(B-5-1)29BDC- 1	7-25-69	627	18	11	--	77	21	--	--	18	321	0
(B-5-1)30ADA- 1	9-14-48	900	11	13	150	73	19	--	--	26	312	0
(B-5-1)30ADA- 1	6-19-50	900	12	12	40	75	19	23	1.3	--	318	0
(B-5-1)30ADA- 1	5- 2-51	900	11	12	30	77	19	23	5.3	--	326	0
(B-5-1)30ADA- 1	7-16-52	900	12	11	30	75	19	24	2.4	--	311	0
(B-5-1)30ADA- 1	9- 9-53	900	12	12	30	76	20	23	2.0	--	315	0
(B-5-1)30ADA- 1	9- 9-54	900	12	10	40	75	20	23	2.0	--	315	0
(B-5-1)30ADA- 1	4-25-55	900	12	11	60	78	20	24	2.0	--	318	0
(B-5-1)30ADA- 1	4- 5-56	900	--	12	20	77	20	32	2.2	--	339	0
(B-5-1)30ADA- 1	5- 7-57	900	12	11	40	78	19	28	2.1	--	330	0
(B-5-1)30ADA- 1	5-22-58	900	11	11	70	77	18	24	1.8	--	318	0
(B-5-1)30ADA- 1	4-29-59	900	11	12	60	76	19	30	2.3	--	335	0
(B-5-1)30ADA- 1	5-10-60	900	12	9.6	10	78	18	23	2.1	--	314	0
(B-5-1)30ADA- 1	9-21-62	900	12	11	--	71	18	--	--	24	292	0
(B-5-1)30ADA- 1	7-12-63	900	13	11	--	73	17	--	--	29	300	0
(B-5-1)30ADA- 1	7-21-66	900	14	9.9	10	69	21	--	--	15	282	0
(B-5-1)30ADA- 1	7-14-67	900	14	11	10	69	18	--	--	26	288	0
(B-5-1)30ADA- 1	7-18-68	900	14	11	10	65	22	--	--	22	287	0
(B-5-1)30ADA- 1	4- 1-69	500[14]/	12	--	--	--	--	56	--	--	193	0
(B-5-1)30ADA- 1	4- 1-69	600[14]/	12	--	--	--	--	--	--	--	--	--
(B-5-1)30ADA- 1	4- 1-69	800[14]/	12	--	--	--	--	40	--	--	316	0
(B-5-1)30ADD- 1	4- 9-43	900	11	--	--	64	19	--	--	40	296	14
(B-5-1)30ADD- 1	4-22-46	900	--	15	60	72	21	--	--	41	356	0
(B-5-1)30ADD- 1	9-14-48	900	11	34	250	74	24	--	--	72	438	0
(B-5-1)30ADD- 1	6-19-50	900	12	14	20	73	19	20	5.8	--	308	0
(B-5-1)30ADD- 1	5- 2-51	900	12	14	50	74	20	25	4.6	--	323	0
(B-5-1)30ADD- 1	7-16-52	900	11	13	30	74	19	23	2.4	--	304	0
(B-5-1)30ADD- 1	9- 9-53	900	11	13	20	74	19	21	1.6	--	296	0
(B-5-1)30ADD- 1	9- 9-54	900	12	12	30	71	20	21	2.0	--	298	0
(B-5-1)30ADD- 1	4-25-55	900	12	25	100	84	26	80	6.8	--	504	0
(B-5-1)30ADD- 1	4- 5-56	900	--	23	20	79	24	66	6.8	--	448	0
(B-5-1)30ADD- 1	5- 7-57	900	12	20	50	79	21	59	6.0	--	416	0
(B-5-1)30ADD- 1	5-22-58	900	11	13	70	76	18	27	2.0	--	316	0
(B-5-1)30ADD- 1	5-10-60	900	12	12	10	83	18	26	2.1	--	338	0
(B-5-1)30ADD- 1	7-11-62	900	11	12	--	84	18	--	--	29	338	0
(B-5-1)30ADD- 1	7-12-63	900	13	11	--	79	19	--	--	30	335	0
(B-5-1)30ADD- 1	7-21-64	900	11	11	--	75	19	--	--	29	332	0
(B-5-1)30ADD- 1	7-22-66	900	13	20	50	76	25	--	--	75	450	0
(B-5-1)30ADD- 1	7-19-67	900	12	11	20	75	20	--	--	35	348	0

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
24	19	--	--	--	225	--	177	9	411	--	.6	8
27	18	--	--	--	274	--	266	66	484	8.0	.5	8
1.5	20	.3	.1	30	216	--	156	0	368	8.0	.6	1
28	21	.1	3.3	--	--	321	252	16	520	7.8	.6	1
35	19	.1	3.2	--	--	325	258	22	552	7.6	.5	1
32	18	.1	4.7	--	--	314	251	23	521	7.7	.5	1
30	18	.1	2.2	--	--	322	260	17	556	7.5	.5	1
25	20	.2	4.8	--	--	371	224	0	620	7.6	1.4	1
31	18	.4	5.0	--	--	317	254	24	536	7.7	.6	1
34	18	.1	4.3	--	--	318	266	38	533	7.5	.4	1
36	17	.1	2.6	--	--	322	260	22	545	7.4	.5	1
31	17	.1	2.8	--	--	310	252	22	526	7.4	.5	1
26	17	.1	2.4	--	--	304	247	15	557	8.0	.5	1
34	14	.1	2.8	--	--	312	248	13	512	7.5	.5	1
37	16	.1	2.2	--	--	317	250	20	533	7.5	.5	1
34	17	.1	4.7	--	293	--	250	24	532	7.4	.5	1
32	19	.0	3.4	--	300	--	241	15	529	7.8	.6	1
33	18	.0	3.7	--	299	--	244	18	524	7.7	.6	1
38	17	.1	1.8	--	300	--	254	31	526	7.8	.4	1
33	17	.2	2.9	--	305	--	256	31	525	7.8	.4	1
31	21	.2	2.4	--	309	--	248	18	526	7.6	.6	1
34	19	.2	4.1	--	308	--	255	22	535	7.7	.6	1
31	20	.3	.4	--	314	--	291	56	535	7.7	.1	1
37	20	.1	4.2	--	--	348	279	25	587	7.4	.5	1
39	18	.1	4.8	--	--	349	284	28	593	7.5	.5	1
36	20	.2	4.3	--	--	355	272	10	597	7.4	.6	1
37	19	.1	4.3	--	--	351	276	16	589	7.4	.6	1
38	18	.1	2.9	--	--	346	276	20	606	7.4	.6	1
41	19	.1	4.1	--	--	347	281	31	577	7.4	.5	1
37	17	.1	2.2	--	--	336	270	22	574	7.4	.6	1
34	16	.1	2.2	--	--	329	261	15	555	7.2	.6	1
38	16	.1	3.2	--	--	324	258	18	562	7.9	.5	1
36	14	.1	2.9	--	--	325	260	15	541	7.5	.5	1
36	17	.2	2.8	--	--	328	260	18	553	7.5	.5	1
40	18	.1	2.9	--	317	--	270	27	570	7.4	.5	1
36	19	.0	2.6	--	324	--	259	18	569	7.3	.6	1
36	18	.1	3.3	--	323	--	260	18	569	7.6	.6	1
44	16	.1	1.6	--	331	--	276	32	572	7.8	.5	1
38	17	.2	2.5	--	325	--	275	32	564	7.6	.4	1
36	20	.2	1.1	--	345	--	276	20	566	7.8	.6	1
36	20	.2	3.0	--	332	--	276	23	577	7.7	.5	1
34	12	.4	.7	--	342	--	278	15	577	7.7	.5	1
31	19	.4	.8	--	--	336	260	4	576	7.7	.7	1
33	20	.1	.5	--	--	341	265	4	585	7.5	.6	1
33	20	.1	.6	--	--	351	270	3	584	7.5	.6	1
32	20	.1	.7	--	--	337	265	10	582	7.5	.6	1
33	20	.1	.9	--	--	342	272	14	579	7.8	.6	1
34	19	.0	.9	--	--	339	269	11	583	7.4	.6	1
34	21	.1	.5	--	--	348	276	15	596	7.4	.6	1
35	22	.1	1.4	--	--	369	274	0	623	7.4	.8	1
31	20	.1	.8	--	--	353	273	2	600	7.2	.7	1
36	19	.1	1.6	--	--	345	269	8	599	8.1	.6	1
35	18	.1	1.5	--	--	359	266	0	586	7.4	.8	1
36	18	.2	.2	--	--	339	269	12	577	7.6	.6	1
36	18	--	1.1	--	319	--	252	13	551	7.8	.7	1
34	20	--	.7	--	326	--	252	6	581	7.4	.8	1
31	17	.2	2.3	--	307	--	257	26	537	7.6	.4	1
32	20	.2	2.0	--	309	--	244	8	530	7.7	.7	1
32	18	.1	3.8	--	319	--	250	15	537	7.7	.6	1
--	74	--	--	--	--	--	180	22	614	--	1.8	1
--	73	--	--	--	--	--	190	--	604	--	--	1
--	20	--	--	--	--	--	236	0	587	--	1.1	1
20	24	.2	2.7	--	--	330	238	0	564	--	1.1	1
17	30	.1	4.2	--	--	376	266	0	653	7.3	1.1	1
12	46	.4	1.1	--	--	480	283	0	778	7.6	1.8	1
28	20	.3	3.0	--	--	335	260	0	560	7.4	.5	1
24	24	.1	3.7	--	--	349	266	0	589	7.5	.7	1
28	24	.1	6.1	--	--	339	262	0	576	7.5	.6	1
29	21	.1	5.7	--	--	330	262	19	565	7.8	.6	1
29	20	.0	6.4	--	--	328	259	15	569	7.5	.6	1
5.4	55	.2	.4	--	--	531	316	0	898	7.4	2.0	1
15	44	.1	5.5	--	--	484	296	0	809	7.4	1.7	1
14	39	.1	3.3	--	--	446	286	0	744	7.8	1.5	1
31	22	.1	5.1	--	--	349	266	7	600	8.0	.7	1
32	21	.1	.4	--	--	361	280	3	609	7.6	.7	1
35	20	--	.5	--	--	366	283	6	623	7.5	.7	1
31	22	.1	.6	--	--	358	273	0	609	7.6	.8	1
29	20	.0	1.3	--	--	348	268	0	581	7.7	.8	1
28	36	--	1.4	--	--	484	291	0	804	7.7	1.9	1
28	23	.4	.1	--	--	364	272	0	608	7.8	.9	1

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMPERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (µG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	SODIUM PLUS POTASSIUM (NA+K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
(B-5-1)30ADD- 1	7-22-68	900	13	28	20	74	28	--	--	122	580	0
(B-5-1)30ADD- 1	7-31-69	900	15	11	--	75	21	--	--	20	304	0
(B-5-1)33BAA- 2	4- -64	1187	--	--	--	46	3.6	86	3.1	--	249	21
(B-5-1)33BAA- 2	4- -64	1187	--	--	--	48	5.6	76	2.3	--	252	16
(B-5-1)33BAA- 2	4-25-64	1187	--	--	--	45	16	16	1.6	--	171	7
(B-5-1)33BAA- 2	4-28-64	1187	--	--	--	52	18	16	1.6	--	187	9
(B-5-1)33CDA- 1	9- 1-49	730	12	24	100	49	15	--	--	37	282	0
(B-5-1)33CDA- 1	10- 4-51	730	11	22	160	51	16	36	8.2	--	298	0
(B-5-1)33CDA- 1	4-14-52	730	12	22	20	50	17	33	5.6	--	292	0
(B-5-1)33CDA- 1	8-14-53	730	13	22	80	54	18	35	6.6	--	303	0
(B-5-1)33CDA- 1	8-31-54	730	12	22	70	55	19	36	5.8	--	301	0
(B-5-1)33CDA- 1	4- 5-56	730	--	23	30	55	18	35	6.4	--	297	0
(B-5-1)33CDA- 1	5- 7-57	730	12	21	130	58	16	37	6.4	--	308	0
(B-5-1)33CDA- 1	5-22-58	730	12	22	90	55	18	35	5.6	--	307	0
(B-5-1)33CDA- 1	4-29-59	730	--	23	30	57	19	35	7.6	--	322	0
(B-5-1)33CDA- 1	5-12-60	730	12	23	40	60	18	36	7.1	--	327	0
(B-5-1)33CDA- 1	7-11-62	730	11	22	--	69	17	--	--	41	332	0
(B-5-1)33CDA- 1	7-11-63	730	14	22	--	62	19	--	--	42	328	0
(B-5-1)33CDA- 1	7-14-64	730	19	21	--	61	19	--	--	38	334	0
(B-5-1)33CDA- 1	6-29-65	730	16	22	--	63	21	--	--	35	325	3
(B-5-1)33CDA- 1	7-20-66	730	18	20	40	62	22	--	--	39	340	0
(B-5-1)33CDA- 1	7-11-67	730	13	19	10	64	18	--	--	42	336	0
(B-5-1)33CDA- 1	7-12-68	730	18	21	10	53	24	--	--	42	336	0
(B-5-1)33CDA- 1	7-23-69	730	19	22	--	60	22	--	--	38	348	0
(B-5-2) 1DDD- 1	4- 2-43	527	--	18	20	50	17	30	3.7	--	273	--
(B-5-2) 1DDD- 1	9-11-50	527	--	21	230	49	15	31	8.0	--	272	--
(B-5-2) 1DDD- 1	5-27-52	527	--	18	60	54	17	30	5.3	--	278	--
(B-5-2) 1DCD- 1	10- 8-58	527	15	10	--	66	15	--	--	20	234	0
(B-5-2) 1DDD- 1	11-17-59	527	10	8.2	--	75	21	--	--	28	274	0
(B-5-2) 1DDD- 1	6-08-60	527	14	8.3	--	67	17	--	--	20	218	10
(B-5-2) 1DDD- 1	11-16-60	527	10	7.9	0	82	19	28	2.3	--	280	0
(B-5-2) 3AAB- 1	11- 5-65	340	--	--	--	45	13	26	3.9	--	232	0
(B-5-2) 5ACB- 2	8-30-68	914	22	24	--	46	2.4	139	7.6	--	190	0
(B-5-2) 5BDD- 2	8-29-68	--	15	--	--	--	--	--	--	--	192	0
(B-5-2) 6BDD- 1	3- 5-54	304	--	32	--	37	14	36	8.2	--	254	--
(B-5-2) 6BDD- 1	12-10-58	304	16	33	280	38	16	--	--	45	282	0
(B-5-2) 6BDD- 1	11-17-59	304	16	25	--	38	15	--	--	42	274	0
(B-5-2) 6BDD- 1	11-16-60	304	16	29	40	38	15	36	6.7	--	268	0
(B-5-2) 6BDD- 3	8-29-68	609	19	16	--	36	9.7	23	3.1	--	190	0
(B-5-2) 6BDD- 3	9- 9-69	609	19	--	--	--	--	--	--	--	192	0
(B-5-2) 6BDD- 4	8-29-68	303	16	--	--	--	--	--	--	--	254	0
(B-5-2) 6BDD- 4	9- 9-69	303	16	--	--	--	--	--	--	--	262	0
(B-5-2) 7DAB- 3	8-29-68	1005	22	18	--	12	3.9	74	1.5	--	208	0
(B-5-2) 7DCB- 1	3- 5-54	688	--	20	--	38	11	19	2.7	--	190	--
(B-5-2) 7DCB- 1	1-12-59	688	19	20	--	41	12	--	--	22	196	0
(B-5-2) 7DCB- 1	11-18-59	688	--	16	--	40	12	--	--	22	191	0
(B-5-2) 7DCB- 1	9- 4-68	688	17	--	--	--	--	--	--	--	190	0
(B-5-2)10DAC- 1	11- 5-54	120	--	38	--	29	55	92	25	--	470	44
(B-5-2)10DBC- 1	1-12-59	120	14	36	--	35	65	--	--	96	580	0
(B-5-2)10DBC- 1	3-25-59	120	13	33	--	34	65	--	--	99	580	0
(B-5-2)10DBC- 1	7- 8-59	120	13	35	--	33	63	--	--	76	472	0
(B-5-2)10DBC- 1	9-29-66	120	13	--	--	--	--	--	--	56	468	0
(B-5-2)21DDD- 1	11-18-68	110	12	31	--	46	49	--	--	130	524	0
(B-5-2)22BBA- 3	10- 1-68	120	13	33	--	10	57	107	21	--	536	0
(B-5-2)32DCD- 1	3-16-56	871	--	15	--	27	24	--	--	51	238	--
(B-5-2)32DDD- 1	1-12-59	871	16	17	--	49	14	--	--	21	224	0
(B-5-2)32DCD- 1	11-18-59	871	16	16	--	47	13	--	--	21	216	0
(B-5-2)32DCD- 1	1- 5-61	871	15	18	0	48	13	19	1.7	--	215	0
(B-5-3)11DAD- 2	5-14-69	525	20	18	--	39	11	21	2.0	--	193	0
(B-5-3)15AAA- 1	5-14-69	657	24	--	--	--	--	--	--	--	133	0
(B-5-3)15DDA- 1	5-14-69	649	24	--	--	--	--	--	--	--	163	0
(B-5-3)25ADC- 2	5-14-69	616	16	15	--	45	14	16	1.7	--	203	0
(B-5-3)25DCD- 1	5-14-69	520	15	--	--	--	--	--	--	--	126	0
(B-5-3)36ADA- 1	8-30-68	460	14	18	--	38	14	24	2.0	--	218	0
(B-5-3)36DAD- 2	5-05-69	785	17	19	--	40	12	21	2.3	--	202	0
(B-5-4)21CBB- 1	11- 2-64	140	19	12	--	184	80	1140	60	--	112	0
(B-5-4)21CBB- 2	11- 2-64	172	20	7.8	--	146	68	990	56	--	132	0
(B-6-1) 4ADA- 1	9-10-69	69	11	12	--	57	25	--	--	13	271	0
(B-6-1) 4BBD- 5	6- 5-67	1133	--	--	--	29	12	10	1.6	--	145	0
(B-6-1) 4BBD- 5	6- 6-67	1133	--	--	--	29	11	10	1.2	--	143	0
(B-6-1) 4BBD- 5	6-21-67	1133	--	--	--	23	9.5	30	1.6	--	129	13
(B-6-1) 4BBD- 5	9-19-67	1133	15	--	--	9.4	4.6	25	6.6	--	75	5
(B-6-1) 4BBD- 5	11-20-67	1133	--	--	--	28	8.8	12	1.2	--	144	0
(B-6-1) 4BBD- 5	11-21-67	1133	--	--	--	29	7.4	14	1.2	--	146	0
(B-6-1) 4BBD- 5	11-22-67	1133	--	--	--	28	8.0	14	1.2	--	141	2
(B-6-1) 4BBD- 5	11-23-67	1133	--	--	--	30	6.1	14	1.2	--	142	2
(B-6-1) 4BBD- 5	11-24-67	1133	--	--	--	28	6.8	14	1.2	--	146	0
(B-6-1) 4BBD- 5	8-26-68[15]/	1133	16	--	--	--	--	--	--	--	148	0
(B-6-1) 4BBD- 5	8-26-68[16]/	1133	16	--	--	--	--	--	--	--	--	--
(B-6-1) 4BBD- 5	8-27-68	1133	16	--	--	--	--	--	--	--	--	--

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (µG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
3.8	54	.4	7.4	--	604	--	298	0	987	7.8	3.1	1
34	20	--	.5	--	333	--	271	22	565	7.8	.5	1
51	21	--	--	--	392	--	131	0	568	8.5	3.3	8
44	22	--	--	--	360	--	142	0	538	8.4	2.8	8
36	18	--	--	--	228	--	177	25	406	8.3	.5	8
46	18	--	--	--	246	--	203	35	439	8.4	.5	8
.9	22	.4	.1	--	--	287	184	0	487	7.5	1.2	1
1.6	22	.1	.1	--	--	304	193	0	500	7.6	1.1	1
2.2	24	.2	1.7	--	--	300	195	0	509	7.4	1.0	1
3.4	24	.2	2.2	--	--	315	208	0	532	7.5	1.0	1
6.4	26	.1	5.0	--	--	324	215	0	537	7.1	1.1	1
5.8	24	.1	5.5	--	--	319	211	0	536	7.3	1.0	1
6.0	24	.1	.5	--	--	319	206	0	539	7.1	1.1	1
9.0	24	.1	.9	--	--	321	212	0	571	8.0	1.0	1
8.3	22	.1	.9	--	--	333	220	0	547	7.5	1.0	1
7.4	25	.2	.3	--	--	338	224	0	566	7.7	1.0	1
19	24	.1	6.3	--	342	--	243	0	602	7.6	1.1	1
13	25	.0	6.2	--	345	--	232	0	604	7.3	1.2	1
11	19	.2	1.1	--	336	--	231	0	572	7.7	1.1	1
15	22	.1	5.1	--	348	--	246	0	586	8.4	1.0	1
8.2	24	.3	6.7	--	345	--	243	0	600	7.5	1.1	1
7.5	26	.2	4.5	--	345	--	232	0	579	7.6	1.2	1
4.5	26	.2	7.5	--	340	--	232	0	579	7.6	1.2	1
2.2	26	.2	.8	--	347	--	242	0	586	7.7	1.1	1
7.4	23	.1	.1	--	276	--	195	0	472	--	.9	1
7.7	23	.2	.0	--	279	--	184	0	479	--	1.0	1
13	20	.1	.4	--	297	--	204	0	510	--	.9	1
42	24	--	.5	--	--	292	226	34	510	7.6	.6	1
55	34	--	1.2	--	--	357	271	46	631	7.8	.7	1
48	23	--	.2	--	--	300	235	40	503	8.5	.3	1
62	38	.2	.1	--	--	378	284	54	628	7.9	.7	1
10	19	--	--	--	225	--	167	0	427	7.9	.9	8
1.5	205	.4	.5	240	509	--	126	0	939	7.7	5.4	1
--	11	--	--	--	--	--	125	0	366	7.8	--	1
--	20	.0	.8	--	276	--	148	0	459	--	1.3	8
.0	18	--	.2	--	--	289	159	0	471	7.8	1.5	1
.8	16	--	.2	--	--	272	156	0	465	7.6	1.5	1
2.7	19	.3	.2	--	--	279	159	0	452	7.9	1.2	1
8.2	18	.3	.8	40	206	--	130	0	359	8.1	.9	1
--	17	--	--	--	--	--	134	0	362	7.8	--	1
--	20	--	--	--	--	--	154	0	445	7.8	--	1
--	18	--	--	--	--	--	144	0	444	7.8	--	1
1.5	26	.3	.2	100	238	--	46	0	391	8.0	4.7	1
3.8	18	--	--	--	203	--	141	0	382	--	.7	8
17	16	--	.2	--	--	224	154	0	378	7.8	.8	1
18	16	--	.1	--	--	218	151	0	377	7.9	.8	1
--	20	--	--	--	--	--	162	6	372	7.9	--	1
1.4	85	.3	.6	--	564	--	296	0	1050	--	2.3	8
.0	63	--	.4	--	--	580	356	0	1020	7.6	2.2	1
1.0	65	--	.1	--	--	582	352	0	1020	7.7	2.3	1
4.7	64	--	31	--	--	539	342	0	963	7.9	1.8	1
7.4	72	--	--	--	--	--	371	0	1020	7.2	1.3	1
1.8	105	--	23	--	643	--	316	0	1090	8.0	3.2	1
1.0	72	.5	.4	320	552	--	260	0	981	8.0	2.9	1
55	16	.3	.9	--	290	--	166	0	--	--	1.7	3
13	19	--	.6	--	--	244	178	0	419	7.8	.7	1
13	18	--	.6	--	--	235	171	0	411	7.7	.7	1
12	18	.2	.1	--	--	236	173	0	403	7.8	.6	1
11	16	.2	.2	60	216	--	142	0	360	8.0	.8	1
--	30	--	--	--	--	--	76	0	397	7.5	--	1
--	29	--	--	--	--	--	84	0	382	7.7	--	1
17	18	.2	.4	50	240	--	168	2	389	8.0	.5	1
--	22	--	--	--	--	--	136	33	363	7.3	--	1
1.2	18	.1	2.0	50	222	--	152	0	382	8.0	.8	1
8.5	18	.2	.4	50	228	--	150	0	371	8.0	.7	1
.0	2240	.7	17	--	4360	--	790	698	6870	7.5	18	1
.0	1930	1.1	8.1	--	3600	--	645	537	5710	7.4	17	1
32	13	--	1.2	--	286	--	246	24	486	7.8	.4	1
17	7.8	--	--	--	136	--	123	4	249	8.0	.4	8
17	6.4	--	--	--	134	--	120	3	249	8.1	.4	8
24	7.8	--	--	--	202	--	96	0	269	8.7	1.4	8
19	12	--	--	--	138	--	42	0	194	8.5	1.7	8
6.2	7.1	--	--	--	137	--	106	12	245	8.2	.5	8
4.8	7.4	--	--	--	141	--	102	0	248	8.0	.6	8
5.3	7.8	--	--	--	140	--	104	15	246	8.3	.6	8
4.8	7.1	--	--	--	141	--	101	0	247	8.3	.6	8
1.0	7.1	--	--	--	141	--	98	0	247	8.2	.6	8
--	10	--	--	--	--	--	112	0	243	7.8	--	1
--	--	--	--	--	--	--	--	--	244	--	--	1
--	--	--	--	--	--	--	--	--	243	--	--	1

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMP-ERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISS-OLVED IRON (FE) (µG/L)	CAL-CIUM (CA) (MG/L)	MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	SODIUM PLUS POTAS-SIUM (NA+K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
(B-6-1) 4BBD- 5	8-28-68	1133	16	--	--	--	--	--	--	--	--	--
(B-6-1) 5CCB- 1	8-30-68	1000	18	16	--	30	11	9.6	1.6	--	166	0
(B-6-1) 6CAA- 1	4-14-43	640	--	--	--	32	10	--	--	14	146	12
(B-6-1) 6CAA- 1	2-24-56	640	--	--	--	32	10	11	2.3	--	156	--
(B-6-1) 6CAA- 1	10- 8-58	640	16	20	--	34	8.5	--	--	13	159	0
(B-6-1) 6CAA- 1	11-17-59	640	16	18	--	32	8.8	--	--	14	161	0
(B-6-1) 6CAA- 1	10-16-64	640	15	19	--	31	9.1	--	--	15	161	0
(B-6-1) 6CAA- 1	8-16-65	640	17	--	--	--	--	--	--	11	158	0
(B-6-1) 6CAA- 1	7-25-68	640	15	--	--	--	--	--	--	--	160	0
(B-6-1) 7DAD- 1	10- 2-68	408	16	20	--	29	11	62	17	--	206	0
(B-6-1)29CBB- 1	12-27-60	842	24	--	--	96	31	476	41	--	150	5
(B-6-2) 5ACB- 2	3- 4-54	850	--	24	--	17	5.2	90	2.3	--	271	--
(B-6-2) 5ACB- 2	10- 9-58	850	17	20	--	19	4.9	--	--	92	270	0
(B-6-2) 5ACB- 2	11- 4-59	850	16	20	--	19	5.8	--	--	89	272	0
(B-6-2) 5ACB- 2	10-19-64	850	19	22	--	17	6.1	--	--	94	276	0
(B-6-2) 5ACB- 2	9-29-66	850	20	--	--	--	--	--	--	--	266	0
(B-6-2) 5ACB- 2	7-26-68	850	18	--	--	--	--	--	--	--	274	0
(B-6-2)11DAD- 1	1-13-55	285	--	--	--	15	3.1	134	30	--	295	--
(B-6-2)11DAD- 1	10- 8-58	285	--	17	--	15	2.4	--	--	156	308	0
(B-6-2)11DAD- 1	11- 4-59	285	13	16	--	14	2.9	--	--	161	313	0
(B-6-2)11DAD- 1	11- 8-60	285	13	18	60	15	2.9	142	28	--	302	0
(B-6-2)11DAD- 1	10- 2-68	285	13	--	--	--	--	--	--	--	302	0
(B-6-2)20CDD- 3	11-21-68	540	16	21	--	33	8.3	--	--	36	195	0
(B-6-2)20CDD- 3	3-12-70	540	--	--	--	--	--	--	--	--	202	0
(B-6-2)25CCC- 1	5-13-43	690	22	--	--	178	43	--	--	233	172	--
(B-6-2)25CCC- 1	11- 4-58	690	20	22	--	181	44	--	--	232	167	0
(B-6-2)25CCC- 1	11-18-59	690	20	18	--	180	42	--	--	231	163	0
(B-6-2)25CCC- 3	5-14-43	302	--	--	--	34	17	--	--	65	322	0
(B-6-2)25CCC- 3	11- 4-58	302	16	20	--	36	17	--	--	68	336	0
(B-6-2)27BBA- 2	1-14-55	536	--	27	--	95	21	94	15	--	189	--
(B-6-2)27BBA- 2	11- 4-58	536	17	24	--	95	22	--	--	105	193	0
(B-6-2)27BBA- 2	11-18-59	536	17	21	--	95	23	--	--	104	189	0
(B-6-2)27BBA- 2	11-28-60	536	17	19	20	96	22	91	14	--	182	0
(B-6-2)27BBA- 2	9- 9-69	536	19	--	--	--	--	--	--	--	200	0
(B-6-2)27DCD- 2	10- 7-54	625	--	22	--	40	8.7	37	3.9	--	171	11
(B-6-2)27DCD- 2	11- 4-58	625	20	21	--	40	12	--	--	39	196	0
(B-6-2)27DCD- 2	11-18-59	625	20	19	--	42	10	--	--	41	193	0
(B-6-2)27DCD- 2	10-21-64	625	18	21	--	39	12	--	--	39	197	0
(B-6-2)27DCD- 2	8-13-65	625	21	19	--	41	11	--	--	42	190	0
(B-6-2)27DCD- 2	9-29-66	625	22	--	--	--	--	--	--	--	193	0
(B-6-2)27DCD- 2	7-25-68	625	20	--	--	--	--	--	--	--	198	0
(B-6-2)30BAA- 1	11-21-68	532	18	--	--	--	--	--	--	--	--	--
(B-6-2)33DDC- 2	5- 7-69	682	20	17	--	42	12	--	--	20	197	0
(B-6-3) 4DAB- 1	10- 9-68	540	21	25	--	4.0	3.4	197	4.8	--	502	0
(B-6-3) 5CCC- 1	5-14-69	510	25	--	--	--	--	--	--	--	196	0
(B-6-3)10ACB- 2	5-14-69	752	22	19	--	8.0	2.9	159	2.7	--	324	0
(B-6-3)12BCC- 1	5-14-69	550	18	20	--	14	5.8	79	3.4	--	240	0
(B-6-3)14DCC- 2	8-28-68	604	17	19	--	20	9.2	--	--	47	198	0
(B-6-3)19AAB- 1	12-10-58	229	17	40	10	104	17	--	--	332	146	0
(B-6-3)19AAB- 1	11- 5-59	229	22	35	--	96	18	--	--	340	146	0
(B-6-3)19AAB- 1	11-16-60	229	19	34	10	103	18	336	8.2	--	157	0
(B-6-3)19ABC- 1	7-26-55	220	--	--	--	7.4	4.0	114	9.0	--	279	--
(B-6-3)19ABC- 1	11- 3-55	220	--	17	--	.0	11	--	--	125	290	3
(B-6-3)19ABC- 1	10- 9-58	220	19	23	--	9.6	3.9	--	--	123	284	0
(B-6-3)19ABC- 1	11- 5-59	220	18	20	--	8.8	3.4	--	--	117	283	0
(B-6-3)19ABC- 1	11-16-60	220	18	21	20	8.8	5.4	111	6.6	--	282	0
(B-6-3)19ABC- 1	10-21-64	220	16	24	--	7.0	4.9	--	--	114	285	0
(B-6-3)19ABC- 1	8-13-65	220	19	--	--	--	--	--	--	116	272	0
(B-6-3)19ABC- 1	9-29-66	220	18	--	--	--	--	--	--	--	272	0
(B-6-3)19ABC- 2	10- 9-58	295	19	32	--	42	7.8	--	--	210	182	0
(B-6-3)19ABC- 2	11- 5-59	295	18	29	--	40	7.8	--	--	226	180	0
(B-6-3)19ABC- 2	11-16-60	295	18	33	10	41	9.2	207	5.5	--	172	0
(B-6-3)22AAA- 1	10- 9-68	300	--	21	--	15	9.2	--	--	63	218	0
(B-6-3)26BBB- 1	8-28-68	512	18	18	--	19	9.2	47	3.0	--	190	0
(B-7-1)29DDC- 1	8-27-68	245	12	--	--	--	--	--	--	--	191	0
(B-7-1)29DDC- 4	8- 7-61	944	--	--	--	44	8.9	15	1.2	--	154	9
(B-7-1)30DCA- 1	8-27-68	180	15	--	--	--	--	--	--	--	193	0
(B-7-1)31BDB- 1	3- 2-54	482	--	21	--	35	8.1	11	.8	--	162	--
(B-7-1)31BDB- 1	10- 7-58	482	18	19	--	41	6.8	--	--	11	164	0
(B-7-1)31BDB- 1	11- 3-59	482	13	16	--	40	6.8	--	--	11	165	0
(B-7-1)31BDB- 1	11- 8-60	482	13	18	10	39	8.8	10	1.5	--	168	0
(B-7-1)31BDB- 1	10- 2-68	482	16	--	--	--	--	--	--	--	161	0
(B-7-1)32ADA- 4	8-27-68	60	12	--	--	--	--	--	--	--	203	0
(B-7-1)33DBD- 2	11-30-60	636	7	--	--	33	12	9.0	2.0	--	152	0
(B-7-1)33DBD- 2	12- 1-60	636	7	--	--	29	11	11	2.0	--	145	0
(B-7-1)33DBD- 2	12-22-60	636	12	--	--	33	12	6.4	.8	--	154	2
(B-7-2) 2CBA- 5	11-20-68	342	13	--	--	--	--	--	--	--	--	--
(B-7-2) 2CBA- 5	9- 9-69	342	14	13	--	17	3.9	--	--	32	142	0
(B-7-2) 2CBD- 8	8-29-68	330	12	12	--	32	6.8	--	--	10	132	0
(B-7-2) 3DAD- 1	10- 8-58	100	13	15	--	40	7.8	--	--	21	181	0

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
--	--	--	--	--	--	--	--	--	242	--	--	1
6.5	8.5	.1	.7	30	154	--	122	0	265	7.9	.4	1
4.0	6.0	.2	.3	--	--	--	121	0	262	--	.6	1
5.8	9.6	--	--	--	175	--	121	0	275	--	.4	8
6.0	7.5	--	.6	--	--	168	119	0	269	7.8	.5	1
6.0	5.5	--	.5	--	--	164	116	0	272	7.9	.6	1
5.4	6.6	--	.0	--	156	--	115	0	266	7.7	.6	1
4.9	5.3	--	--	--	167	--	118	0	269	7.8	.4	1
--	--	--	--	--	--	--	119	0	269	7.6	--	1
1.2	81	.3	.2	110	315	--	118	0	582	7.9	2.5	1
8.2	897	--	--	--	1760	--	367	236	3150	--	11	8
1.4	30	.4	1.5	--	306	--	65	0	507	--	4.8	8
2.7	30	--	.3	--	--	302	68	0	492	7.9	4.8	1
2.3	28	--	1.5	--	--	300	72	0	493	8.1	4.6	1
3.1	30	--	.2	--	292	--	68	0	477	8.1	5.0	1
--	29	--	--	--	--	--	69	0	495	7.8	--	1
--	--	--	--	--	--	--	68	0	494	7.6	--	1
16	87	.5	--	--	442	--	51	0	754	--	8.2	8
2.9	93	--	.6	--	--	438	48	0	763	7.7	9.8	1
2.7	96	--	1.0	--	--	448	46	0	774	7.7	10	1
2.1	99	.7	1.6	--	--	459	50	0	771	7.9	8.7	1
--	100	--	--	--	--	--	62	0	776	8.0	--	1
3.2	21	--	1.0	--	215	--	116	0	352	7.9	1.4	1
--	21	--	--	--	--	--	--	--	359	8.0	--	1
.0	700	--	.2	--	--	1240	621	480	2400	--	4.0	1
.2	710	--	.5	--	--	1270	634	497	2440	7.5	4.0	1
3.7	700	--	.3	--	--	1260	622	488	2440	7.3	4.0	1
.0	22	.2	.1	--	--	297	155	0	533	--	2.3	1
.6	24	--	.3	--	--	331	162	0	558	7.7	2.3	1
1.9	276	--	--	--	682	--	325	170	1170	--	2.3	8
3.3	278	--	3.4	--	--	626	328	170	1180	7.6	2.5	1
6.2	280	--	.2	--	--	622	330	175	1200	7.3	2.5	1
3.1	275	.1	3.1	--	--	612	332	183	1170	7.9	2.2	1
--	275	--	--	--	--	--	316	152	1190	7.8	--	1
6.7	49	.0	.1	--	260	--	137	0	453	--	1.4	8
7.6	48	--	.8	--	--	264	151	0	455	7.9	1.4	1
9.1	48	--	.4	--	--	266	147	0	459	7.8	1.5	1
8.0	44	--	.3	--	248	--	148	0	428	8.0	1.4	1
9.1	51	--	.1	--	245	--	146	0	446	8.0	1.5	1
--	44	--	--	--	--	--	152	0	451	7.4	--	1
--	--	--	--	--	--	--	148	0	446	7.5	--	1
--	--	--	--	--	--	--	--	--	355	--	--	1
9.5	18	--	.0	--	216	--	154	0	377	7.7	.7	1
4.2	28	2.0	.9	700	531	--	24	0	816	8.0	17	1
--	44	--	--	--	--	--	46	0	648	7.7	--	1
1.2	84	.6	.4	400	453	--	32	0	741	8.0	12	1
1.8	28	.3	.3	210	275	--	60	0	446	7.9	4.4	1
.2	20	--	.1	--	220	--	88	0	351	7.9	2.2	1
.0	660	.4	1.5	--	--	1230	330	210	2330	7.3	7.9	1
18	645	--	10	--	--	1230	316	196	2290	7.5	8.3	1
2.3	650	.6	.9	--	--	1230	328	199	2290	7.4	8.0	1
8.6	41	.0	--	--	337	--	35	0	574	--	8.4	8
14	39	.8	1.0	--	348	--	38	0	--	--	8.8	3
1.4	52	--	.4	--	--	353	40	0	588	7.8	8.5	1
2.3	37	--	4.5	--	--	332	36	0	551	7.8	8.5	1
1.6	38	.6	4.3	--	--	337	44	0	538	8.2	7.3	1
.4	35	--	3.0	--	321	--	38	0	517	7.7	8.1	1
7.0	42	--	--	--	371	--	37	0	562	7.7	8.3	1
--	43	--	--	--	--	--	38	0	565	7.5	--	1
3.7	310	--	1.9	--	--	696	136	0	1270	7.5	7.8	1
23	318	--	4.2	--	--	737	132	0	1290	7.7	8.6	1
3.3	310	.7	5.1	--	--	700	140	0	1270	7.5	7.6	1
3.2	20	--	3.4	--	240	--	76	0	386	7.6	3.1	1
.8	22	.4	.4	110	210	--	86	0	354	7.8	2.2	1
--	9.0	--	--	--	--	--	156	0	311	7.7	--	1
18	13	--	--	0	212	--	146	5	327	8.5	.5	8
--	12	--	--	--	--	--	156	0	322	7.8	--	1
4.8	9.6	.0	1.3	--	177	--	105	0	296	--	.5	8
7.6	8.0	--	1.3	--	--	176	130	0	288	7.8	.4	1
3.9	7.2	--	1.2	--	--	167	127	0	281	7.5	.4	1
7.6	7.5	.1	1.9	--	--	177	134	0	283	7.6	.4	1
--	12	--	--	--	--	--	126	0	272	7.6	--	1
--	10	--	--	--	--	--	161	0	340	7.7	--	1
16	8.5	--	--	--	--	160	132	7	267	--	.2	8
13	8.5	--	--	--	--	155	118	0	258	--	.3	8
10	6.0	--	--	--	--	132	132	3	272	--	.2	8
--	--	--	--	--	--	--	--	--	239	--	--	1
.5	7.2	--	.0	--	157	--	58	0	234	7.6	1.8	1
8.2	9.0	--	.8	--	124	--	108	0	219	7.8	.4	1
7.0	12	--	4.3	--	--	196	131	0	323	7.4	.8	1

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMP-ERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISS-OLVED IRON (FE) (UG/L)	CAL-CIUM (CA) (MG/L)	MAG-NE-SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO-TAS-SIUM (K) (MG/L)	SODIUM PLUS POTAS-SIUM (NA+K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)
(B-7-2) 3DAD- 1	11- 3-59	100	12	12	--	41	7.8	--	--	17	180	0
(B-7-2) 3DAD- 1	11-16-60	100	12	13	90	42	8.0	12	5.0	--	182	0
(B-7-2) 3DAD- 1	8-29-68	100	16	--	--	--	--	--	--	--	--	--
(B-7-2) 9AAB- 1	5- 7-69	225	15	18	--	9.6	4.9	140	14	--	311	0
(B-7-2)10DBD- 1	11-20-68	782	24	16	--	75	10	--	--	216	169	0
(B-7-2)16CBB- 1	5- 6-69	--	16	34	--	19	10	--	--	840	452	0
(B-7-2)16DAD- 1	5- 7-69	1021	24	61	--	18	1.5	--	--	90	279	0
(B-7-2)16DCD- 2	5- 7-69	1176	25	28	--	21	4.4	49	6.8	--	193	0
(B-7-2)16DCD- 2	9- 9-69	1176	25	--	--	--	--	--	--	--	201	0
(B-7-2)20DAA- 1	3- 4-54	150	13	22	480	12	9.6	238	34	--	418	--
(B-7-2)20DAA- 1	10- 9-58	150	14	21	--	11	6.8	--	--	268	416	0
(B-7-2)20DAA- 1	11- 4-59	150	13	24	--	10	7.8	--	--	265	412	0
(B-7-2)20DAA- 1	10-19-64	150	13	25	--	10	9.7	--	--	269	416	0
(B-7-2)20DAA- 1	8-16-65	150	13	--	--	--	--	--	--	258	333	32
(B-7-2)20DAA- 1	7-26-68	150	11	--	--	--	--	--	--	--	408	0
(B-7-2)21CAD- 1	10- 9-68	630	--	33	--	240	71	--	--	621	150	0
(B-7-2)23DBD- 1	10- 2-68	315	17	22	--	34	10	35	4.5	--	193	0
(B-7-2)26DAC- 1	10-19-64	510	18	50	--	30	7.9	--	--	52	248	0
(B-7-2)26DAC- 1	8-12-65	510	18	51	--	35	7.1	--	--	45	242	0
(B-7-2)26DAC- 1	9-29-66	510	18	--	--	--	--	--	--	--	249	0
(B-7-2)28ABB- 1	9-16-68	--	16	--	--	--	--	--	--	--	--	--
(B-7-2)31DAC- 2	4-11-50	524	--	27	--	96	42	--	--	203	124	--
(B-7-2)31DAC- 2	5-27-54	524	--	32	--	97	39	193	15	--	157	--
(B-7-2)31DAC- 2	10- 9-58	524	17	28	--	99	38	--	--	208	158	0
(B-7-2)31DAC- 2	11- 4-59	524	14	28	--	93	41	--	--	207	158	0
(B-7-2)32BBB- 1	11-20-68	546	18	28	--	66	45	--	--	335	128	0
(B-7-2)32BBB- 1	9- 9-69	546	19	--	--	--	--	--	--	--	136	0
(B-7-2)32BBB- 2	11-20-68	840	16	--	--	--	--	--	--	--	--	--
(B-7-2)34BBB- 1	9-20-61	660	--	--	--	37	13	126	4.7	--	176	14
(B-7-2)34BBB- 2	10- 2-68	517	19	18	--	89	31	167	4.7	--	200	0
(B-7-2)34BBB- 2	5- 7-69	517	19	21	--	87	30	174	5.0	--	200	0
(B-7-2)34BBB- 2	9- 9-69	517	19	--	--	--	--	--	--	--	192	0
(B-7-3)31AAC- 1	9-27-68	806	39	24	--	15	4.4	148	9.4	--	305	0
(B-7-3)31AAC- 1	5- 7-69	806	--	30	--	15	3.4	148	10	--	282	0
(B-7-3)31AAC- 2	9-10-69	920	38	67	--	27	5.4	--	--	323	571	0
(B-7-3)31ADC- 1	9- 5-68	712	34	--	--	--	--	--	--	--	--	--
(B-7-3)31ADC- 1	5- 7-69	712	34	--	--	--	--	--	--	--	--	--
(B-7-3)31ADC- 1	8-20-69	712	35	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 1	9- 5-68	412	25	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 1	8-20-69	412	25	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 2	9- 5-68	415	25	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 2	8-20-69	415	25	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 2	12-17-69	415	2	23	--	5.2	2.2	111	7.6	--	--	--
(B-7-3)31DAA- 3	9- 5-68	575	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 3	5- 7-69	575	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 3	8-20-69	575	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 4	9- 5-68	717	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 4	5- 7-69	717	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 4	8-20-69	717	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAA- 4	12-17-69	717	--	35	--	10	1.2	165	5.7	--	394	0
(B-7-3)31DAB- 1	9- 5-68	590	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 1	5- 7-69	590	--	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 1	8-20-69	590	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 1	12-17-69	590	--	44	--	14	1.9	157	7.6	--	339	0
(B-7-3)31DAB- 2	9- 5-68	710	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 2	5- 7-69	710	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 2	8-20-69	710	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 3	9- 5-68	705	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 3	5- 7-69	705	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAB- 3	8-20-69	705	34	--	--	--	--	--	--	--	--	--
(B-7-3)31DAC- 1	9- 5-68	621	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DAC- 1	5- 7-69	621	29	--	--	--	--	--	--	--	--	--
(B-7-3)31DAC- 1	8-20-69	621	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DDA- 1	9- 5-68	597	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DDA- 1	5- 7-69	597	--	--	--	--	--	--	--	--	--	--
(B-7-3)31DDA- 1	8-20-69	597	30	--	--	--	--	--	--	--	--	--
(B-7-3)31DDA- 1	9-10-69	597	29	33	--	14	8.8	--	--	147	310	0
(B-7-3)32CBB- 1	9- 5-68	717	34	--	--	--	--	--	--	--	--	--
(B-7-3)32CBB- 1	9- 4-68	717	34	36	--	8.0	5.8	145	6.5	--	308	0
(B-7-3)32CBB- 1	8-20-69	717	34	--	--	--	--	--	--	--	--	--
(B-7-3)32CBB- 1	5- 7-69	717	34	38	--	20	3.9	--	--	181	316	0
(B-7-3)33CDD- 1	5-26-54	399	--	27	--	6.8	2.9	139	9.0	--	378	--
(B-7-3)33CDD- 1	10- 9-58	399	19	26	--	10	3.9	--	--	83	232	0
(B-7-3)33CDD- 1	11- 4-59	399	20	23	--	11	3.2	--	--	84	234	0
(B-7-3)33CDD- 1	12- 2-60	399	20	24	50	10	3.9	76	8.0	--	228	0
(B-7-3)33CDD- 1	5-14-69	399	20	25	--	9.6	4.4	75	8.2	--	225	0
(B-8-2)26BCD- 1	9- 9-69	118	13	12	--	59	14	--	--	13	232	0
(B-8-2)26CAC- 1	10- 8-58	235	14	15	--	31	7.3	--	--	26	152	0
(B-8-2)26CAC- 1	11-17-59	235	14	14	--	30	7.3	--	--	23	149	0
(B-8-2)26CAC- 1	11- 9-60	235	13	11	10	31	8.8	19	3.4	--	152	0

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (µG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
6.4	9.8	--	2.8	--	--	186	134	0	323	7.5	.6	1
8.2	9.0	.1	2.8	--	--	189	137	0	314	8.0	.4	1
--	--	--	--	--	--	--	--	--	326	--	--	1
1.0	80	.3	.4	160	431	--	44	0	713	8.0	9.2	1
8.5	390	--	.3	--	866	--	228	89	1480	7.9	6.2	1
8.2	1090	--	.7	--	2220	--	90	0	3900	7.6	39	1
.8	12	--	.2	--	327	--	52	0	460	7.8	5.4	1
4.5	10	.5	.2	80	221	--	70	0	333	7.8	2.5	1
--	9.0	--	--	--	--	--	66	0	329	7.6	--	1
1.2	205	.9	1.0	--	--	739	70	0	1290	--	--	1
3.7	208	--	1.4	--	--	725	56	0	1280	7.8	16	1
.0	210	--	1.2	--	--	721	58	0	1270	7.5	15	1
1.6	217	--	.5	--	720	--	65	0	1240	7.9	14	1
1.0	204	--	--	--	712	--	55	0	1280	9.0	15	1
--	--	--	--	--	--	--	60	0	1270	7.5	--	1
.2	1500	--	.3	--	2860	--	890	767	4610	7.7	9.0	1
22	24	.5	.1	30	245	--	126	0	404	8.0	1.4	1
5.1	8.2	--	.3	--	256	--	108	0	379	8.0	2.2	1
6.4	7.3	--	.1	--	262	--	117	0	384	8.0	1.8	1
--	8.0	--	--	--	--	--	116	0	396	7.6	--	1
--	--	--	--	--	--	--	--	--	4670	--	--	1
.3	534	.0	.1	--	1040	--	415	313	--	--	4.3	3
8.6	518	--	.4	--	1120	--	403	274	1940	--	4.2	8
5.8	510	--	1.4	--	--	968	404	274	1850	7.5	4.5	1
.0	510	--	.8	--	--	958	400	270	1860	7.5	4.5	1
1.5	680	--	13	--	1440	--	348	243	2360	7.5	7.8	1
--	690	--	--	--	--	--	352	240	2350	7.8	--	1
--	--	--	--	--	--	--	--	--	1290	--	--	1
16	170	--	--	150	474	--	144	0	865	8.3	4.6	8
.5	398	.3	.1	130	914	--	348	184	1560	7.9	3.9	1
.0	395	.3	.3	140	948	--	340	176	1570	7.7	4.1	1
--	407	--	--	--	--	--	366	209	1570	--	--	1
1.0	104	.7	.3	200	462	--	52	0	785	8.1	8.6	1
.2	106	.6	.6	260	473	--	52	0	775	7.8	8.9	1
.5	230	--	.2	--	980	--	90	0	1490	8.2	15	1
--	--	--	--	--	--	--	--	--	650	--	--	1
--	--	--	--	--	--	--	--	--	625	--	--	1
--	--	--	--	--	--	--	--	--	610	--	--	1
--	--	--	--	--	--	--	--	--	580	--	--	1
--	--	--	--	--	--	--	--	--	550	--	--	1
--	--	--	--	--	--	--	--	--	500	--	--	1
--	--	--	--	--	--	--	--	--	480	--	--	1
--	24	1.0	.4	370	335	--	22	0	519	8.5	10	1
--	--	--	--	--	--	--	--	--	725	--	--	1
--	--	--	--	--	--	--	--	--	700	--	--	1
--	--	--	--	--	--	--	--	--	680	--	--	1
--	--	--	--	--	--	--	--	--	650	--	--	1
--	--	--	--	--	--	--	--	--	660	--	--	1
--	--	--	--	--	--	--	--	--	660	--	--	1
.2	60	1.3	.2	340	488	--	31	0	751	7.7	13	1
--	--	--	--	--	--	--	--	--	710	--	--	1
--	--	--	--	--	--	--	--	--	690	--	--	1
--	--	--	--	--	--	--	--	--	660	--	--	1
.0	89	.9	.2	190	491	--	43	0	772	7.7	10	1
--	--	--	--	--	--	--	--	--	690	--	--	1
--	--	--	--	--	--	--	--	--	700	--	--	1
--	--	--	--	--	--	--	--	--	670	--	--	1
--	--	--	--	--	--	--	--	--	680	--	--	1
--	--	--	--	--	--	--	--	--	680	--	--	1
--	--	--	--	--	--	--	--	--	630	--	--	1
--	--	--	--	--	--	--	--	--	750	--	--	1
--	--	--	--	--	--	--	--	--	750	--	--	1
--	--	--	--	--	--	--	--	--	680	--	--	1
--	--	--	--	--	--	--	--	--	925	--	--	1
--	--	--	--	--	--	--	--	--	660	--	--	1
--	--	--	--	--	--	--	--	--	760	--	--	1
.8	96	--	.0	--	478	--	72	0	750	7.9	7.5	1
--	--	--	--	--	--	--	--	--	700	--	--	1
1.2	87	.8	.3	60	458	--	44	0	713	7.8	9.5	1
--	--	--	--	--	--	--	--	--	810	--	--	1
.8	142	--	.2	--	539	--	66	0	914	7.9	9.7	1
4.3	31	.2	.1	--	413	--	29	0	653	--	11	8
1.6	21	--	.3	--	--	260	42	0	421	7.8	5.5	1
.0	21	--	.3	--	--	258	40	0	424	7.7	5.7	1
1.4	23	.4	.3	--	--	259	42	0	409	7.5	5.1	1
1.8	22	.4	.3	210	263	--	42	0	416	8.0	5.0	1
33	7.7	--	.0	--	250	--	207	17	419	7.9	.4	1
18	13	--	2.8	--	--	188	108	0	298	7.8	1.1	1
16	10	--	2.1	--	--	175	104	0	301	7.6	1.0	1
18	12	.1	.5	--	--	179	114	0	297	7.8	.8	1

Table 2.—Continued.

LOCAL NUMBER	DATE OF SAMPLE	DEPTH OF WELL (FT.)	TEMPERATURE (DEG C)	SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (µG/L)	CALCIUM (CA) (MG/L)	MAGNESIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	POTASSIUM (K) (MG/L)	SODIUM PLUS POTASSIUM (NA+K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)
					SPRINGS							
(B-4-3)30DCD- S1[17]	11-10-64	--	13	15	--	192	23	659	25	--	161	0
(B-4-3)33BCC- S1[18]	11-10-64	--	17	25	--	71	22	182	7.5	--	191	0
(B-4-3)33BCC- S2[19]	11-10-64	--	17	31	--	143	24	332	11	--	168	0

1/ DEPTH OF SAMPLE COLLECTION; DEPTH OF WELL 425 FT.
2/ DEPTH OF SAMPLE COLLECTION; DEPTH OF WELL 205 FT.
3/ ANALYSIS INCLUDES 0.03 MG/L ARSENIC.
4/ COLLECTED FROM SHALLOW AQUIFER AT A DEPTH OF 150-170 FT.
5/ COLLECTED AT 1700 HOURS.
6/ COLLECTED AT 1830 HOURS.
7/ ANALYSIS INCLUDES 0.00 MG/L ARSENIC AND 0.01 MG/L SELENIUM.
8/ ANALYSIS INCLUDES 0.01 MG/L ARSENIC AND 0.01 MG/L SELENIUM.
9/ ANALYSIS INCLUDES 0.00 MG/L ARSENIC AND 0.02 MG/L SELENIUM.
10/ COLLECTED AT 1350 HOURS.
11/ COLLECTED AT 1420 HOURS.
12/ COLLECTED AT 1450 HOURS.
13/ COLLECTED AT 1520 HOURS.
14/ DEPTH OF SAMPLE COLLECTION; DEPTH OF WELL 900 FT.
15/ COLLECTED AT 0930 HOURS.
16/ COLLECTED AT 1440 HOURS.
17/ LADYFINGER SPRINGS; SAMPLE COLLECTED FROM POOL; DISCHARGE 1 GPM.
18/ DISCHARGE 4 GPM.
19/ ABOUT 200 FT SOUTH OF SPRING (B-4-3)33BCC-S1; DISCHARGE 5 GPM.

SULFATE (SO4) (MG/L)	CHLORIDE (CL) (MG/L)	FLUORIDE (F) (MG/L)	NITRATE (NO3) (MG/L)	BORON (B) (µG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH	SODIUM ADSORPTION RATIO	SOURCE OF DATA
						SPRINGS						
65	1280	.7	5.7	.16	2710	--	575	443	4200	7.6	12	1
16	329	.4	2.5	.10	837	--	268	111	1350	7.6	4.8	1
37	708	.5	.8	.15	1600	--	456	318	2490	7.6	6.8	1

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(*)—Out of Print

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No. 11. Amendments to plan of work and work outline for the Sevier River basin (Sec. 6, P.L. 566), U. S. Department of Agriculture, 1964.

*No. 12. Test drilling in the upper Sevier River drainage basin, Garfield and Piute Counties, Utah, by R. D. Feltis and G. B. Robinson, Jr., U. S. Geological Survey, 1963.

*No. 13. Water requirements of lower Jordan River, Utah, by Karl Harris, Irrigation Engineer, Agricultural Research Service, Phoenix, Arizona, prepared under informal cooperation approved by Mr. William W. Donnan, Chief, Southwest Branch (Riverside, California) Soil and Water Conservation Research Division, Agricultural Research Service, U.S.D.A., and by Wayne D. Criddle, State Engineer, State of Utah, Salt Lake City, Utah, 1964.

*No. 14. Consumptive use of water by native vegetation and irrigated crops in the Virgin River area of Utah, by Wayne D. Criddle, Jay M. Bagley, R. Keith Higginson, and David W. Hendricks, through cooperation of Utah Agricultural Experiment Station, Agricultural Research Service, Soil and Water Conservation Branch, Western Soil and Water Management Section, Utah Water and Power Board, and Utah State Engineer, Salt Lake City, Utah, 1964.

*No. 15. Ground-water conditions and related water-administration problems in Cedar City Valley, Iron County, Utah, February, 1966, by Jack A. Barnett and Francis T. Mayo, Utah State Engineer's Office.

*No. 16. Summary of water well drilling activities in Utah, 1960 through 1965, compiled by Utah State Engineer's Office, 1966.

No. 17. Bibliography of U. S. Geological Survey Water Resources Reports for Utah, compiled by Olive A. Keller, U. S. Geological Survey, 1966.

No. 18. The effect of pumping large-discharge wells on the ground-water reservoir in southern Utah Valley, Utah County, Utah, by R. M. Cordova and R. W. Mower, U. S. Geological Survey 1967.

No. 19. Ground-water hydrology of southern Cache Valley, Utah, by L. P. Beer, 1967.

No. 20. Fluvial sediment in Utah, 1905-65, A data compilation by J. C. Mundorff, U. S. Geological Survey, 1968.

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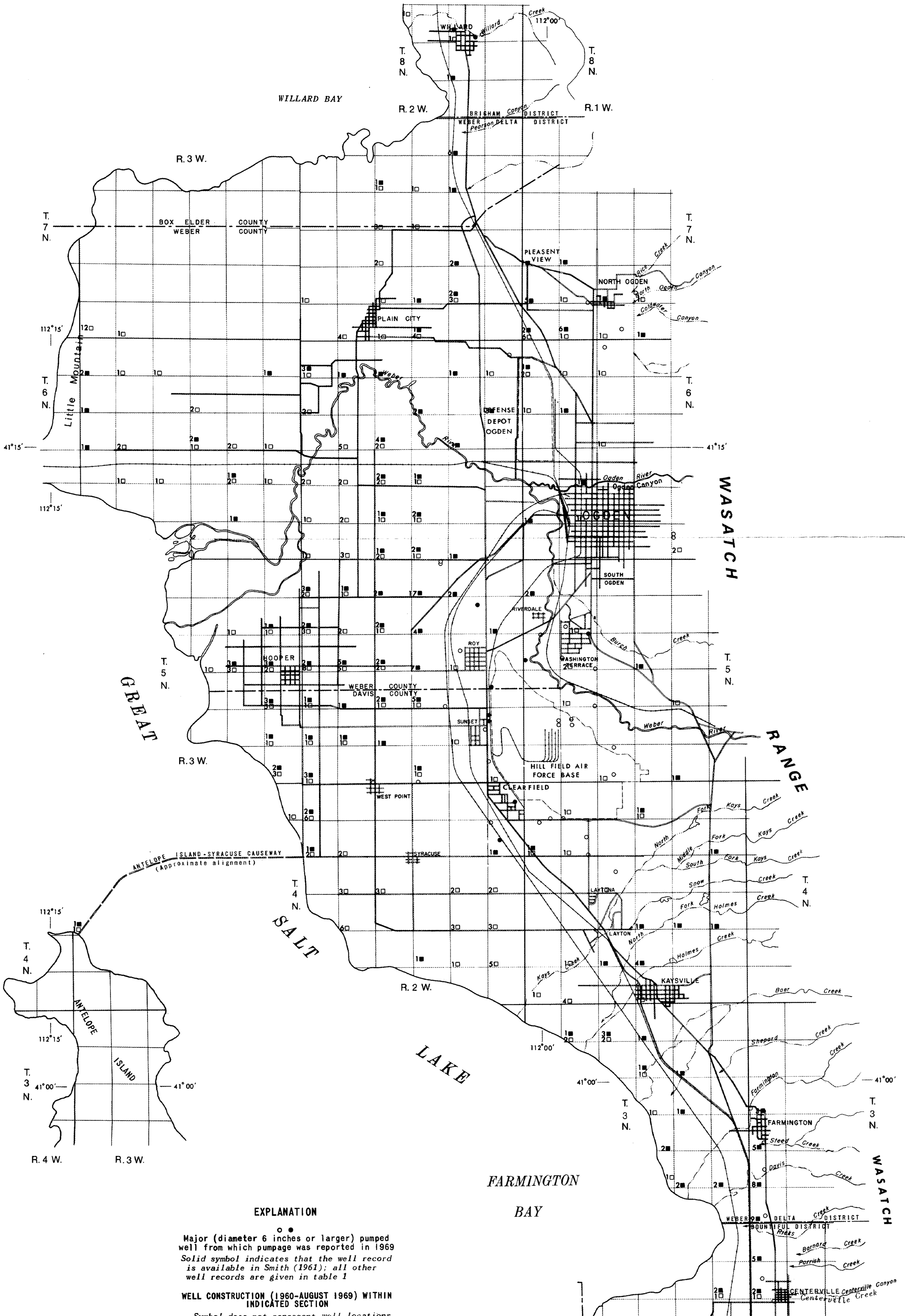

EXPLANATION

Major (diameter 6 inches or larger) pumped well from which pumpage was reported in 1969

Solid symbol indicates that the well record is available in Smith (1961); all other well records are given in table 1

WELL CONSTRUCTION (1960-AUGUST 1969) WITHIN INDICATED SECTION

Symbol does not represent well locations within the section

2■
Well less than 400 feet deep

3□
Well 400 feet or greater in depth

Number by symbol indicates the number of new wells constructed in the section

Boundary between ground-water districts

0 1 2 3 4 MILES

Base compiled and adapted from base maps of the U.S. Bureau of Reclamation (1955) and from U.S. Geological Survey Antelope Island (1954) and Antelope Island North (1954)

By E. L. Bolke, 1970

MAP SHOWING AREAL DISTRIBUTION OF WELLS CONSTRUCTED DURING 1960-AUGUST 1969 AND MAJOR PUMPED WELLS IN 1969 IN THE EAST SHORE AREA, BOX ELDER, DAVIS, AND WEBER COUNTIES, UTAH

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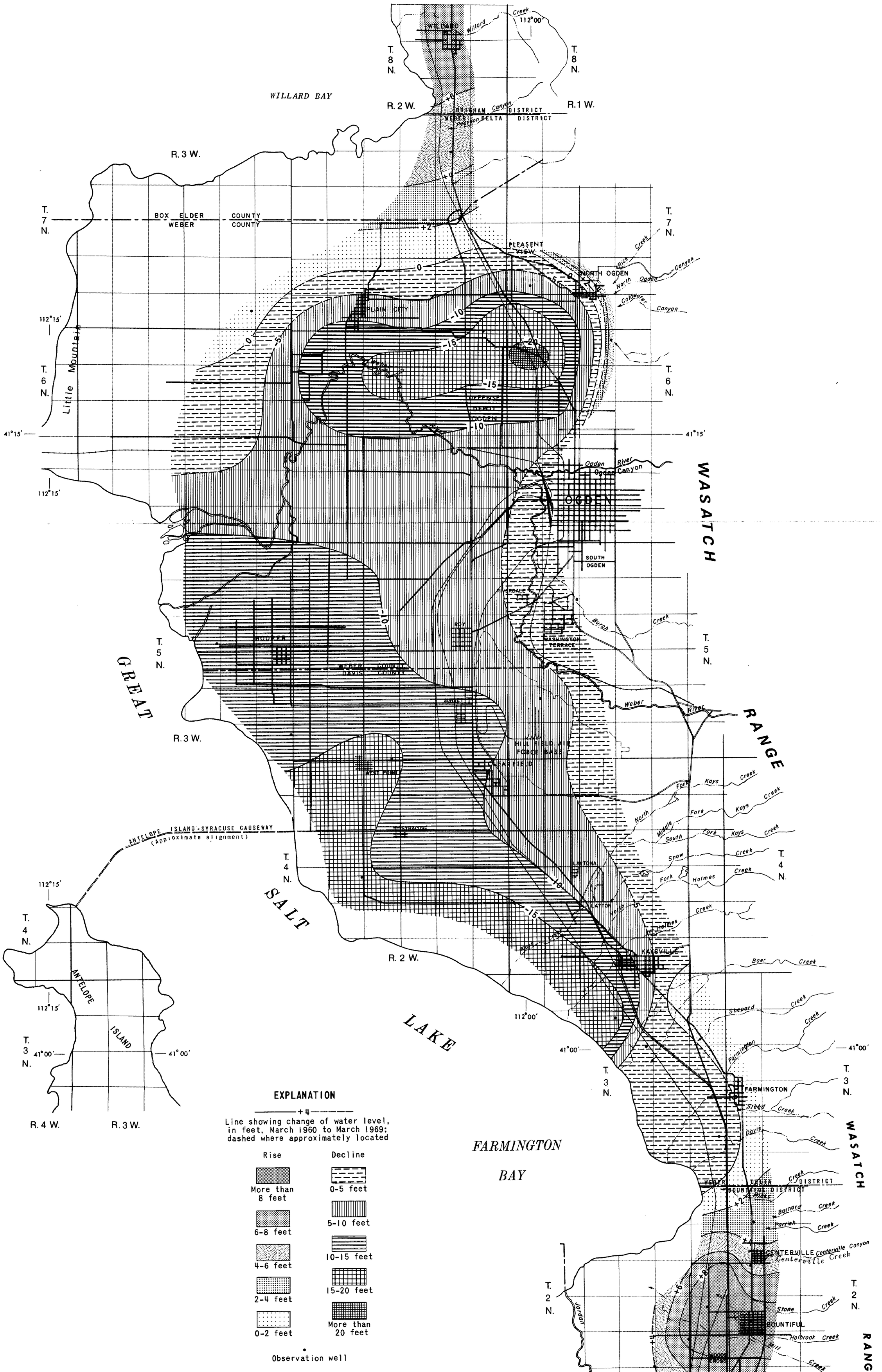

EXPLANATION

+4 — Line showing change of water level, in feet, March 1960 to March 1969; dashed where approximately located

Rise	Decline
More than 8 feet	0-5 feet
6-8 feet	5-10 feet
4-6 feet	10-15 feet
2-4 feet	15-20 feet
0-2 feet	More than 20 feet

Observation well

Boundary between ground-water districts

0 1 2 3 4 MILES

Base compiled and adapted from base maps of the U.S. Bureau of Reclamation (1955) and from U.S. Geological Survey Antelope Island (1954) and Antelope Island North (1954)

By E. L. Bolke, 1970

MAP SHOWING CHANGE OF WATER LEVELS FROM MARCH 1960 TO MARCH 1969 IN THE EAST SHORE AREA, BOX ELDER, DAVIS, AND WEBER COUNTIES, UTAH