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GEOLOGY AND GROUND-WATER RESOURCES OF GLACIAL DEPOSITS IN THE FLANDREAU AREA, BROOKINGS, MOODY, AND LAKE COUNTIES, SOUTH DAKOTA

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CONTENTS

ILLUSTRATIONS

TABLES

Tables--continued

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ABSTRACT

The surficial deposits in the Flandreau area consist chiefly of glacial drift deposited during the Cary, Tazewell (?) and Iowan (?) substages of the Wisconsin stage of glaciation. In addition, small deposits of recent sediments occur in stream valleys and lake basins. The Iowan (?) and Tazewell (?) Drifts have somewhat similar topographic expression, but the Tazewell (?) Drift generally occurs at higher altitudes and locally is less oxidized than the Iowan (?) Drift. The Cary Drift is characterized by a well-developed end moraine. It has a distinctive lithologic composition and has undergone less leaching than the Iowan (?) and Tazewell (?) Drifts.

Outwash deposits of sand and gravel generally have high-porosity ratios and are permeable. The total storage capacity of the outwash deposits (assuming total saturation) is approximately 260,000 acre-feet of water. The amount of ground water in transient storage in the outwash deposits during the summer of 1958 was about 140,000 acre-feet, nearly 60 percent of which was stored in the outwash deposits in the Big Sioux River valley.

When irrigation wells are constructed in the outwash deposits, care should be taken to locate the wells where the saturated thickness is sufficient to assure sustained yields during periods of subnormal precipitation. Some water produced from the outwash deposits is unfit for human consumption because of the high concentrations of nitrate, sulfate, and iron, but it is generally suitable for irrigation.

Small supplies of water may be obtained from sand lenses in the glacial till. However, the chemical character of the water should be carefully considered before it is used for human consumption or for irrigation.

Reserves of sand and gravel in the outwash deposits in the Flandreau area approximate 1,700,000,000 cubic yards. About 60 percent of this total, or 1,000,000,000 cubic yards, is in the Big Sioux River valley.

INTRODUCTION

Purpose and Scope of the Investigation

This report is based on a study of the geology, ground water resources, and sand and gravel resources of the Flandreau area made during the summers of 1958 and 1959. The investigation is one of a series being made by the South Dakota State Geological Survey in cooperation with the U. S. Geological Survey. The purpose of this investigation is to study the surface and subsurface geology and to determine the quantity and quality of ground water available for irrigation, municipal, domestic, and industrial use.

Special emphasis has been placed on the occurrence of ground water in the outwash deposits because they are the most important aquifers in the Flandreau area. This report also includes a description of the physical characteristics of the sand and gravel deposits that compose the outwash.

Location and General Features of the Area

The Flandreau area, named for the city of Flandreau, includes about 508 square miles near the eastern border of the State (fig. 1). It is served from the north and south by U. S. Highway 77 and State Route 13, and from the east and west by State Route 34. In addition, the area is served by the main lines of four railroads.

The area has a continental climate--warm summers and cold winters. The average annual precipitation recorded from 1935 to 1959 at the U. S. Weather Bureau station in Flandreau was about 23 inches. The mean annual temperature for the same period was about 45°F (fig. 2).

Flandreau, population 2,193 (1950 census), in the southeastern part of the report area, is the largest city. Residents depend primarily upon agriculture as a source of livelihood. The main crops are corn and wheat, and the principal livestock, cattle and hogs.

Physiographic Features

The Flandreau area is in the southeastern part of the Coteau des Prairies (Prairie Hills) section of the Central Lowlands physiographic province (Rothrock, 1943, p. 12) (fig. 1). Regional topographic features consist of gently sloping glacial outwash and undulating glacial moraine. The surface of the moraine is irregular and is dotted by both small and broad depressions. The topography of the eastern half of the area is much dissected by the valleys of the Big Sioux River and its tributaries. Maximum relief in the area is about 230 feet, altitudes ranging from 1,744 feet in the extreme western part to 1,513 feet in the southeastern part.

A distinct outwash plain near the city of Elkton, in the northeastern part of the area, has local topographic relief of about 5 feet and a general southwesterly slope of about 7 feet per mile.

Valley-train outwash occurs in the valleys of the Big Sioux River and its tributaries. The surface of the outwash has an altitude of about

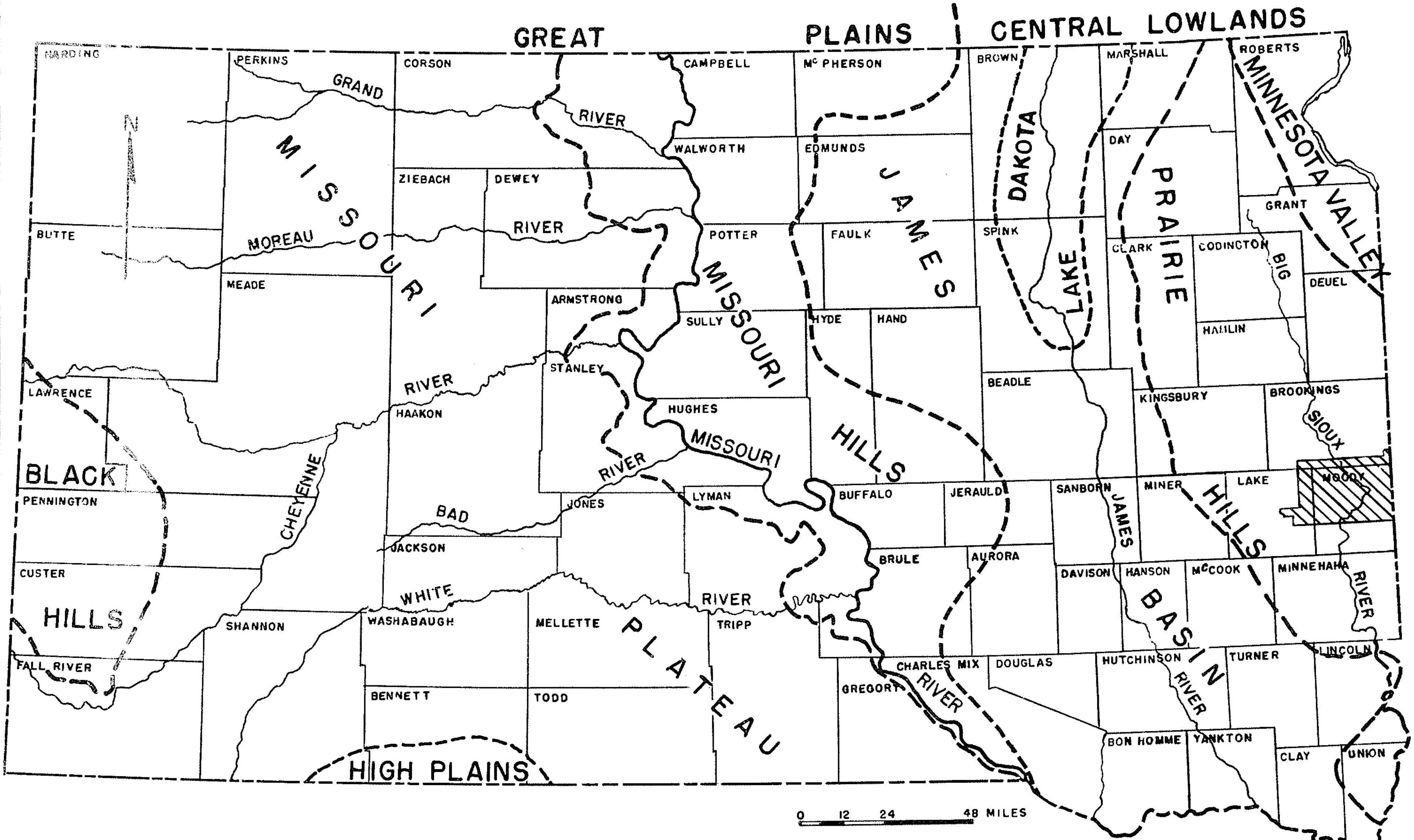

Figure I. Map of South Dakota showing physiographic provinces and location of the Flandreau area.

Mapped after Rothrock, 1943, p.8.

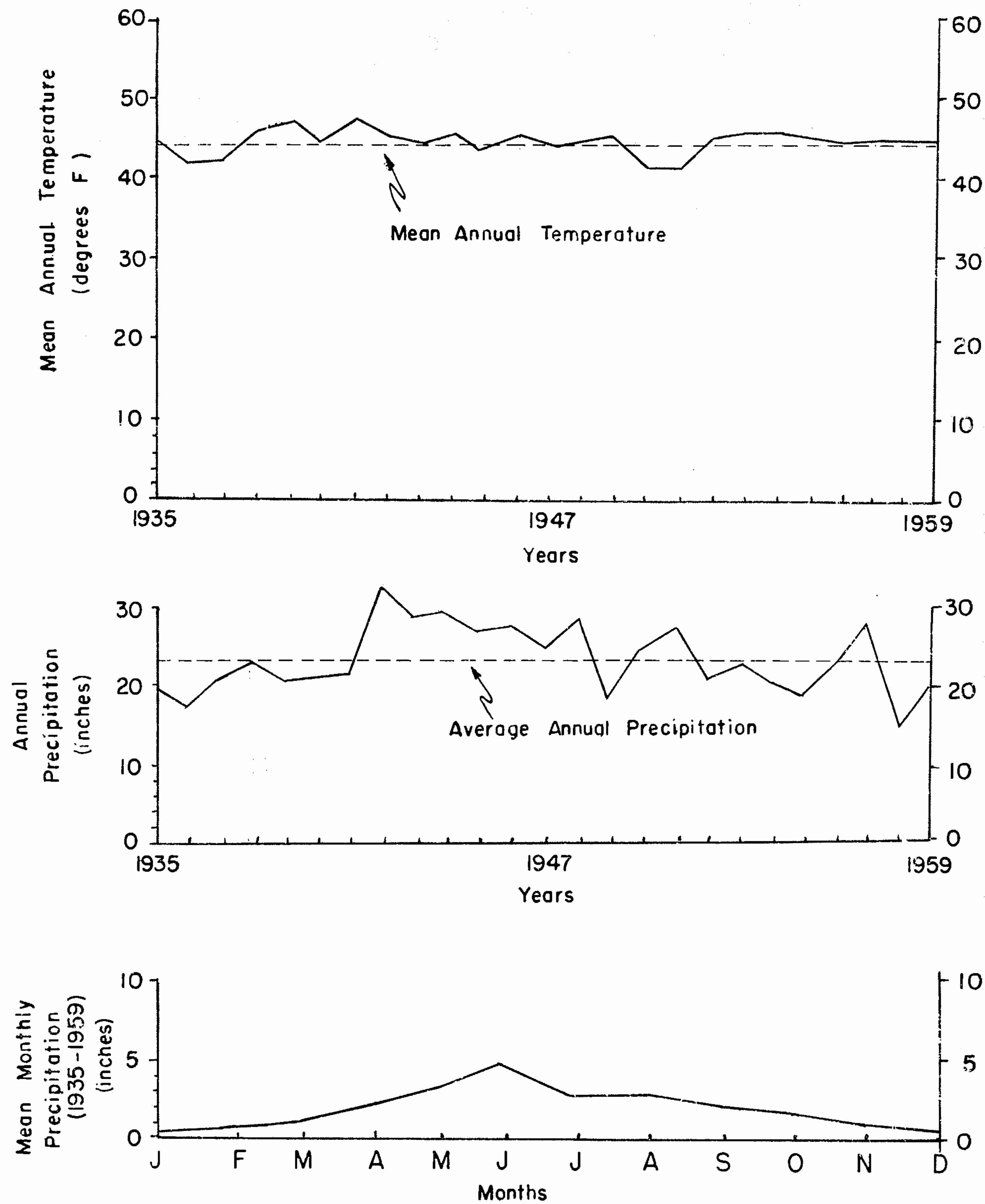

Figure 2.- Climatological Data, 1935 — 59, at Flandreau Weather Station (Data from U.S. Weather Bureau)

1,580 feet at the northern border of the area, and an altitude of 1,513 feet at its southern border. The average slope of the deposits is about 5 feet per mile southward.

Outwash terraces occur locally along the flanks of the Big Sioux River valley and of the tributary valleys of Spring, Flandreau, and Battle Creeks. The terrace deposits are along the edges of the valleys, 20 to 30 feet higher than the existing streambeds. The surfaces of the terraces are flat except where they have been modified by slope wash and ice-block depressions.

Methods and Procedures

The outwash deposits were mapped by planetable, at a scale of 1:31,680; the geology of the area was plotted on aerial photographs.

The thickness of the outwash deposits and the configuration of the surface of the underlying till were determined principally by means of 61 test holes (see table 1 and plate 1) drilled with a jeep-mounted auger owned by the State Geological Survey. Additional information was obtained from logs of existing wells. Resistivity measurements were used to augment test-hole information in drawing the sections shown on Plate 2.

In this report, references to substages of the Wisconsin stage that are earlier than the Cary substage are qualified by question marks, because only the Cary deposits have been studied regionally by the South Dakota State Geological Survey, and because the earlier deposits have not been dated by the carbon-14 method.

The differentiation of the glacial drift was determined by topographic expression, pebble composition, stratigraphic sequence, and degree of weathering. Additional information was obtained from an examination of road cuts and stream banks. A hand auger, 5 inches in diameter, was used to determine the depth of leaching on the upland where the surface is least altered by slope wash.

Records of 1,011 wells and test holes are included in Table 2 and their locations are shown on Plate 1. All measured water levels were determined by the wetted-tape method. Reported depths to water are listed if the wells could not be measured.

Water samples from 18 wells in the area were collected for chemical analysis. The analyses were made by the State Chemical Laboratory at Vermillion, and the South Dakota Department of Health at Pierre.

Estimates of reserves of sand and gravel in the Flandreau area were determined as follows: test holes, resistivity surveys, and logs and measurements of existing wells were used to calculate the volumes of the deposits for each section and partial section of land in the four principal outwash areas. The volumes of outwash materials in the individual sections were then added to obtain the total volume of sand and gravel for each area.

Estimates of the storage capacity of the outwash deposits and of the amount of water in transient storage were based upon water levels measured during the summer of 1958. Cumulative curves were used to estimate the average porosities of the outwash materials. The porosities, aquifer volumes, and saturated thicknesses were used to estimate storage capacities and amounts of water in transient storage.

The physical properties of the glacial drift were determined by field studies, and by laboratory studies made at facilities of the U. S. Bureau of Reclamation in Huron.

Well-Numbering System

The well-numbering system used in this report is illustrated on Figure 3, and is based upon the land subdivisions made by the U. S. Bureau of Land Management. The first numeral of a well designation indicates the township north of the base line; the second, the range west of the principal meridian; and the third, the section of the township in which the well is situated. The letters a, b, c, and d identify the quarter sections in a counterclockwise order and indicate the location of the well within the section: the first letter denotes the 160-acre tract; the second, the 40-acre tract; the third, the 10-acre tract, and the fourth, the $2\frac{1}{2}$-acre tract. Consecutive numerals are added if there is more than one well within a given tract. Thus, well 108-49-10cda is in the NE$\frac{1}{4}$SE$\frac{1}{4}$SW$\frac{1}{4}$ of section 10, T. 108 N., R. 49 W., and well 108-49-10cda2 would be the second well in this 10-acre tract.

Previous Investigations

Todd (1899) included a description of the topography of the Flandreau area as part of his study of the moraines of southeastern South Dakota. Leverett (1932) described general glacial features in the area, and Flint (1955) included the Flandreau area in his study of the Pleistocene geology of eastern South Dakota.

Acknowledgments

This project was under the supervision of A. F. Agnew, State Geologist and Director of the South Dakota State Geological Survey, and P. E. LaMoreaux, Chief of the Ground Water Branch, Water Resources Division, U. S. Geological Survey. The outwash deposits were mapped by K. Y. Lee, assisted by Cecil Harris; test drilling was done by Howard Loitwood and Spencer Brooks, and resistivity measurements were made by Daniel Lum and Robert Benson, all of the South Dakota State Geological Survey. The cooperation of residents of the Flandreau area was a great aid during the field investigation. The U. S. Bureau of Reclamation in Huron, helpfully provided laboratory facilities for mechanical analysis of outwash sediments.

GENERAL GEOLOGY

Late Quaternary Geologic History

During the Wisconsin stage of the Pleistocene glacial epoch, ice moved into the Flandreau area in three substages. The three substages, which appear to be represented in the report area by surficial deposits of glacial drift, are the Iowan (?), Tazewell (?) and Cary (see pl. 2).

The Iowan (?) Drift is the oldest glacial deposit mapped. Striations on the surface of the Precambrian Sioux Quartzite and granite bedrock east of the area indicate that the general direction of the Iowan (?)

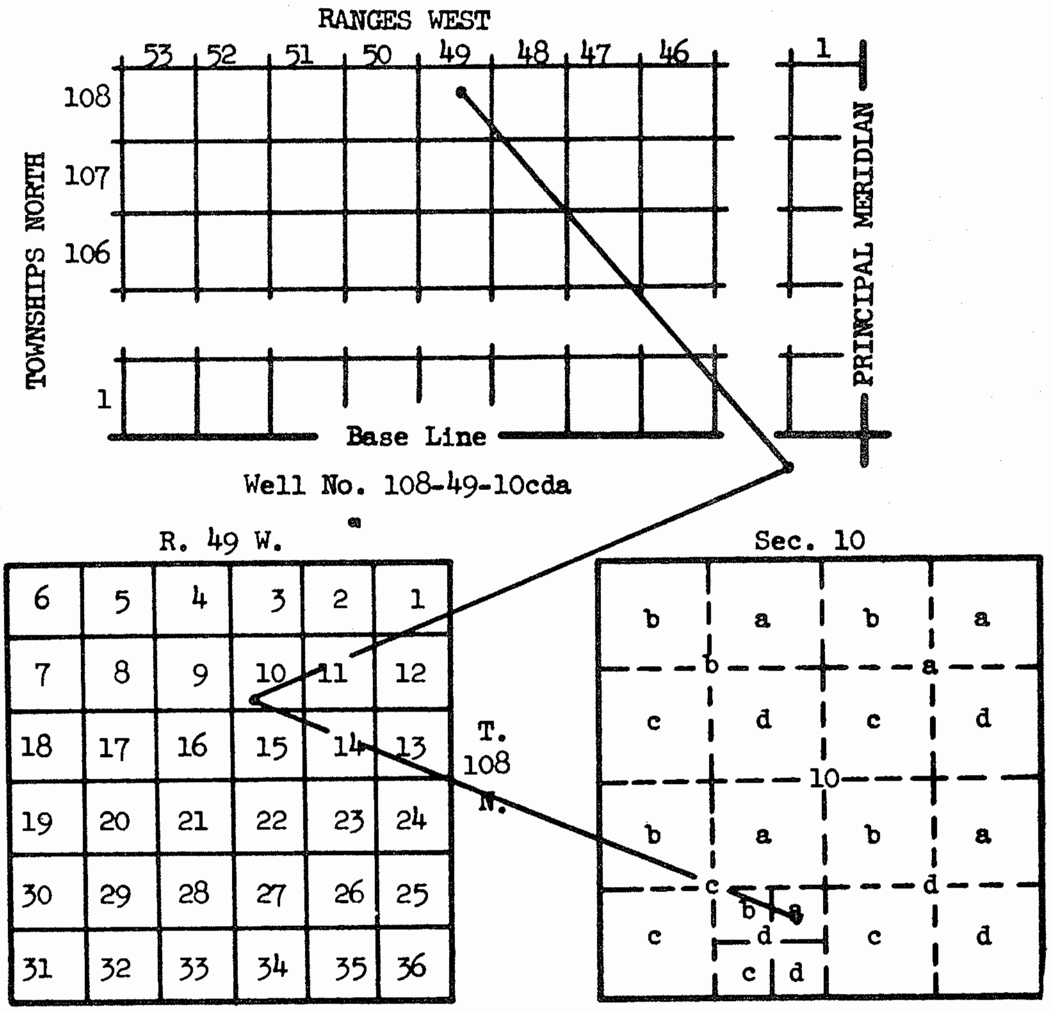

Figure 3.--Sketch illustrating well-numbering system.

ice movement locally was from the northeast to the southwest. During the retreat of Iowan (?) ice, 1 to 6 feet of loess was deposited on the surface of the drift. The fact that only the upper 1 to 2 feet of the drift is leached indicates that post-Iowan (?) deglaciation was short-lived. The Tazewell (?) Drift also moved into the area from the northeast and was deposited by the western part of the Des Moines lobe, which covered the lowland in Minnesota, South Dakota, and Iowa drained by the Des Moines River (Flint, 1955, p. 95, 133).

During the Cary substage, ice moved into the area mainly from the northwest and the drift was deposited from the eastern part of the James lobe, which covered the James River lowland in eastern South Dakota (Flint, 1955, p. 95, 133). The Cary outwash in the Big Sioux River valley was deposited primarily by meltwater derived from the ice of the James lobe in the western part of the area (Flint, 1955, p. 164). The Elkton-plain outwash, however, originated from the Des Moines ice lobe, to the east.

According to Flint (1955, p. 152), the Big Sioux River is located along the line of outwash between the James and Des Moines lobes and originated not later than the beginning of the Wisconsin stage of glaciation. Spring and Flandreau Creeks originate in the Cary end moraine of the Des Moines lobe in Minnesota, and Battle Creek rises in the Cary end moraine of the James lobe west of the Flandreau area. Mud Creek, however, heads in Iowan (?) Drift in the northeastern part of the report area. Therefore, it is possible that Mud Creek existed late in Iowan (?) time, whereas Spring, Flandreau, and Battle Creeks originated during Cary time.

Stratigraphic Relations

Stratigraphic information was obtained from a study of samples from 61 shallow test holes drilled in the area, from logs of deep wells drilled in and near the area, and from published material. The stratigraphic nomenclature used in this report conforms generally to that used by Flint in U. S. Geological Survey Professional Paper 262 published in 1955.

The stratigraphic section for the Flandreau area is summarized in the following table:

- Cenozoic
  - Quaternary system
    - Recent series:
      - Alluvium
      - Lake deposits
    - Pleistocene series:
      - Wisconsin stage
        - Cary substage
        - Tazewell (?) substage
        - Iowan (?) substage
- Mesozoic
  - Cretaceous system
    - Upper Cretaceous series:
      - Pierre Shale
      - Niobrara Formation

(continued on next page)

Upper Cretaceous series--continued
Carlile Shale
Greenhorn Limestone
Dakota Sandstone
Precambrian
Sioux Quartzite

A generalized section of the surficial geology is shown in Table 3 and the distribution of the units is shown on Plate 2.

Recent Deposits

The soil zone is composed principally of dark-brown sandy loam that is calcareous locally. The topsoil is silty, especially in the till areas, and ranges in texture from light to heavy. The subsoil is gray to brownish black, contains scattered caliche, and is less permeable than the topsoil. In the outwash areas the topsoil and subsoil are silty and sandy. Generally, the soil zone is more permeable in the outwash area than in the till area.

Recent deposits of alluvium and slope wash in the valleys of the Big Sioux River and its tributaries are composed primarily of clay, silt, and sand, but include varying amounts of fine gravel at some locations. The deposits range from 3 to 25 feet in thickness. Recent lake deposits in closed basins at scattered locations throughout the area consist primarily of clay and silt, and exhibit the fine laminations characteristic of quiet-water deposition. In places the lake deposits are mingled with thin deposits of alluvium.

Deposits of the Wisconsin Stage of the Pleistocene Glacial Epoch

The surficial deposits consist primarily of glacial drift that was deposited during the last, or Wisconsin stage, of the Pleistocene glacial epoch. On the basis of Flint's chronological classification for eastern South Dakota (1955, p. 77-80), the Cary, Tazewell (?), and Iowan (?) substages of the Wisconsin stage may be represented in the deposits of the Flandreau area. The Wisconsin Drift consists mainly of unstratified glacial till and stratified glacial outwash.

Deposits of glacial till cover about 80 percent of the area. Till is composed of heterogeneous materials that range in size from clay particles to boulders; clay is the predominant constituent. The till was deposited directly from the melting glacial ice or was pushed out along the margins of the advancing glacier. In either method of deposition, glacial till is subjected to little or no sorting or stratification during or after deposition. The voids between the larger particles, therefore, are usually filled with fine materials.

Two types of glacial moraines, ground moraine and end moraine, are found in the area. Both types are composed primarily of glacial till but they differ in origin and topographic form. Ground moraines were deposited from the main body of the ice and in this area are characterized by gentle slopes and moderately rolling surfaces. End moraines were deposited at the margins of the glacier and in this area are characterized by steep slopes, hummocks, and closed depressions.

Table 3.--Generalized section of surficial geology

System	Series	Stage	Substage	Lithology and water-yielding characteristics	Thickness (feet)
Quaternary	Recent			Alluvium: clay, silt, and sand with some gravel; yields little or no water to wells.	3 to 25
				Lake deposits: clay and silt; chiefly confined to till area; yield little or no water to wells.	4 to 20
	Pleistocene	Wisconsin	Cary	Outwash deposits forming plains, terraces, and valley trains; sand and gravel with silt and clay at top; yield moderate to large supplies of water.	4 to 85
				Till: boulder clay with rock fragments in a sand-rich matrix. Gray to brownish and greenish gray when moist; light gray to buff when dry; overlain by patches of loess; contains stratifield sand lenses which locally yield small supplies of water to wells.	20 to 45
			Tazewell (?)	Outwash deposits in terraces: sand and gravel with clay and silt on top; locally yield small supplies of water.	5 to 20
				Till: boulder clay, gray to buff and brownish-gray; less oxidized than Iowan (?); contains stratified sand lenses which locally yield small supplies of water to wells.	15 to 50
			Iowan (?)	Till: pebble clay, gray to brownish-gray; somewhat bluish-gray, compact, mostly oxidized; overlain by 1 to 6 feet of loess; contains stratified sand lenses which locally yield small supplies of water to wells.	20 to 60

Three types of glacial-outwash deposits occur in the Flandreau area: plain, valley-train, and terrace. An outwash plain is formed from sediments that are transported by meltwater from the margins of a glacier and deposited near the moraine. Valley-train outwash is deposited in preexisting stream channels and generally is a narrow elongate deposit that extends for many miles from the point of origin of the outwash materials. An outwash terrace may have been deposited originally as a plain or a valley train; however, subsequent deepening of a valley or basin by erosion caused the terrace to be higher topographically than the present surface of the drainage system. All outwash terraces in the Flandreau area are in stream valleys and were probably deposited originally as valley trains.

Deposits of the Cary substage.--The Cary Drift consists of till, which contains stratified sand lenses at scattered locations, and outwash deposits of sand and gravel. This drift comprises the surface deposits in more than half the Flandreau area, and is well exposed in the western, southwestern, and northwestern parts. It is also extensive in the Big Sioux River valley, in the valleys of Flandreau and Spring Creeks, and near the city of Elkton in the extreme northeastern part of the area. Generally, except in the immediate vicinity of the Big Sioux River and its larger tributaries, the surficial deposits of the Cary Drift are poorly drained and form a large number of closed basins and depressions.

Extensive deposits of the Cary ground moraine occupy about 135 square miles in the western half of the area.* (See pl. 2). The surface of this moraine is characterized by swells and swales, gentle slopes and closed depressions, but local relief is about 20 feet in areas that have been modified by stream dissection. Ponds and marshes are common along the contact of the Cary ground and end moraines.

The Cary end moraine covers about 80 square miles in the western part of the area where it is a stony discontinuous ridge that has steep slopes, hummocks, and closed depressions. The highest altitude in the report area (1,744 feet) is on the Cary end moraine. The maximum relief on the surface of the moraine is about 30 feet.

The Cary Till is gray to brownish-green sandy, pebbly clay that has blue-gray streaks. Where it is exposed, the till is weathered to a light gray-buff color. Rock fragments in the Cary Till are mainly limestone and dolomite, and in lesser amounts, igneous and sedimentary rocks. Exposures of the till in the report area range from 20 to 45 feet in thickness.

The soil that overlies the Cary Till is sandier than that developed on the Iowan (?) and Tazewell (?) Tills, and is leached to a depth of about 1 foot. Locally, in areas of relatively low topographic position, the till is overlain by deposits of loess (wind-deposited silt, clay, and find sand) that range from 1 to 6 feet in thickness.

Cary Outwash occurs as plain, terrace, and valley-train deposits and constitutes the surface of approximately 18 percent of the Flandreau area. The deposits are as much as 44 feet thick and are generally composed of sand, gravel, and small amounts of silt and clay. The gravel consists of approximately equal proportions of carbonate, igneous, and metamorphic rock fragments, and of lesser amounts of shale, sandstone, clay ironstone, and chert. The sand is mostly quartz grains and small amounts of accessory minerals, which include feldspar, tourmaline, mica, aragonite, and iron oxide.

* In the Chester and Dell Rapids quadrangles, which adjoin the southern border of the Flandreau area, Tipton (1959a, 1959b) has mapped as end moraine the southern extension of part of the ground moraine of this report.

Outwash-plain deposits that originated during the Cary substage occupy about 26 square miles of the northeastern part of the area in the vicinity of the city of Elkton. Locally this region is known as the Elkton plain. At the sites of 11 test holes (table 1) drilled in the outwash plain, sand and gravel deposits range from 1 to 26 feet and average 12 feet in thickness.

The sand and gravel are overlain by a soil zone that ranges from 3 to 45 inches in thickness. The soil that overlies the outwash plain is generally dark and leached at high altitudes and grades into clay, silt, and fine sand at low altitudes. The silt shows fine laminations that are characteristic of glacial-lake deposits. These indicate that ponded meltwater occupied the low places for long periods of time.

Deposits of outwash terrace that originated during the Cary substage are well developed along the edges of the valleys of the Big Sioux River and Battle Creek. Less extensive deposits occur along the edges of Spring and Flandreau Creeks.

Additional Cary Outwash deposits occur as valley train in two major pre-outwash channels. The larger channel marks the course of Battle Creek and extends from the northeast corner of Sec. 25, T. 109 N., R. 50 W., to the southwest about 14 miles, where it narrows and curves to the northwest for an additional 7 miles. A smaller outwash channel extends about 3 miles westward from the west edge of Lake Campbell.

Collapsed-outwash deposits occur near the south edge of Lake Campbell and near Mud and Milwaukee Lakes (see pl. 2). The irregular surface of the deposits results from their original deposition on ice that later melted and caused the material to slump (Flint, 1955, p. 66).

Deposits of the Tazewell (?) substage.--The Tazewell (?) Drift consists principally of ground moraine and covers a relatively small area of about 4 square miles near the city of Ward and about 2 square miles in the northeast corner of the area (see pl. 2). In contrast to the Cary Drift, the surface of the Tazewell (?) Drift has a well-integrated drainage system and forms no closed basins in this area; generally, its surface is gently rolling.

The Tazewell (?) till is gray to brown and yellow-gray pebbly clay that has bluish-gray streaks and patches. The pebbles are mainly fragments of limestone and dolomite, but also include lesser amounts of crystalline and clastic rocks. The till is leached to depths of 1 to 2 feet, and locally contains stratified deposits of sand and gravel. In its exposed sections the Tazewell (?) Till ranges in thickness from 15 to 50 feet and is somewhat fissile.

The Tazewell (?) Outwash occurs as terrace deposits that consist of stratified sand, gravel, and boulders. The terraces, which are remnants of more extensive terraces, are narrow, elongate deposits along the edges of creek valleys about 3 miles north-northwest of Elkton. The rock fragments in the terrace deposits are chiefly limestone and dolomite but include some crystalline and clastic rocks. The thickness of the outwash ranges from 5 to 20 feet.

Deposits of the Iowan (?) substage.--The Iowan (?) Drift consists entirely of till deposited as ground moraine in the eastern and central parts of the report area, where it covers approximately 190 square miles. At most locations the drift is covered with deposits of loess that range in thickness from 1 to 6 feet.

The topography of the Iowan (?) Drift consists of gently rolling swells and low, broad depressions. Its surface is drained by a well integrated system that is tributary to the Big Sioux River.

The Iowan (?) Till is brown to green-gray pebbly clay that is more oxidized than the Tazewell (?) Till; it is predominantly clay and includes small amounts of igneous, metamorphic, and sedimentary rock fragments. The average percentage distribution of pebble-size rock fragments in four samples of the Iowan (?) Till is as follows: 58 percent limestone and dolomite, 30 percent igneous and metamorphic rocks, and 12 percent shale, clay-ironstone, and sandstone. The exposed thickness of the Iowan (?) Till in the Flandreau area ranges from 20 to 60 feet; it is leached only to a depth of 1 to 2 feet.

Subsurface Rocks

Information concerning the depth to and composition of the bedrock was obtained from records of private wells drilled in the area, and from published well logs. In the western and northwestern parts of the area the bedrock is Pierre Shale of Late Cretaceous age, but east of the Lake-Moody County line the bedrock may be the Niobrara Formation or the Carlile Shale. In the western part of the area the complete sequence of Upper Cretaceous formations from the Dakota Sandstone of Late Cretaceous age to the Pierre Shale probably occurs between the Precambrian Sioux Quartzite and the glacial drift. To the east and south, however, the Dakota Sandstone and overlying Cretaceous shales pinch out in turn against the rising surface of the Sioux Quartzite. Along the east edge and in the southeast corner of the area the Sioux Quartzite may constitute the bedrock immediately below the glacial drift. No accurate data are available regarding the thickness of the Cretaceous formations or of the Sioux Quartzite in the report area.

Structure

In southeastern South Dakota the Precambrian Sioux Quartzite forms an eastward-trending subsurface structure known as the Sioux Ridge. A northward-trending spur of this ridge underlies the eastern part of the Flandreau area but has no surface expression; its irregular surface has a northwesterly slope of about 7 feet per mile. The Dakota Sandstone and the Pierre Shale apparently are relatively flat and dip slightly toward the northwest.

ECONOMIC GEOLOGY

Occurrence of Ground Water

Practically all ground water is derived from precipitation. Rain and meltwater from snow enters the ground by direct percolation or by percolation from streams and lakes that lie above the general water table. Ground water generally moves downward and laterally from areas of recharge to areas of natural discharge.

Ground water is discharged through transpiration by plants and evaporation from the soil in areas where the ground water level is near the land surface, by seepage into surface-water bodies, by pumping from wells, and through springs.

Any rock formation or stratum that will yield water in sufficient quantity to be important as a source of supply is called an aquifer (Meinzer, 1923, p. 52). Water moving in an aquifer from recharge areas to discharge areas may be considered to be in transient storage.

The amount of water that a rock can hold is determined by its porosity. Unconsolidated materials, such as clay, sand, and gravel, generally are more porous than consolidated rocks, such as sandstone and limestone; however, some consolidated rocks are very porous.

The ability of an aquifer to yield water by gravity drainage may be much less than is indicated by its porosity because part of the water is held in the pore spaces by molecular attraction between the water and the rock particles; the smaller the pores, the greater the proportion of water that will be held. The amount of water, expressed as a fraction of a cubic foot, that will drain by gravity from 1 cubic foot of an aquifer, is called the specific yield of an aquifer.

If the water in an aquifer is not confined by an overlying impermeable stratum, the water is said to be under water-table conditions. Under these conditions, the water can be obtained from the aquifer by gravity drainage--that is, by lowering the water level, as by pumping from a well.

Water is said to be under artesian conditions if it is confined in the aquifer by an overlying impermeable stratum. Under artesian conditions, hydrostatic pressure will raise the water in a well, or other conduit that penetrates the aquifer, above the top of the aquifer, and water is yielded by the aquifer as the water level in the well is lowered. However, the aquifer remains saturated as the water is yielded because the water expands and because the aquifer is compressed as the head is decreased. Gravity drainage does not occur under normal artesian conditions. The water-yielding ability of an artesian aquifer is called the coefficient of storage, and is generally much smaller than the specific yield of the same material under water-table conditions. The coefficient of storage 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 the component of head normal to that surface.

The water released from or taken into storage in a water-table aquifer in response to a change in head is attributed partly to gravity drainage or refilling of the zone through which the water moves, and partly to compressibility of the water and of the material in the saturated zone. However, the volume of water attributable to compressibility is a negligible part of the total volume of water released from or taken into storage and can be disregarded. Thus, for a water-table aquifer, the coefficient of storage is essentially equal to the specific yield.

The frictional resistance to the movement of water through pore spaces that are relatively large, such as those in coarse gravel, is not great and the material is said to be highly permeable. However, the resistance to the movement of water through small pore spaces, such as those in clay or shale, may be very great and the material is said to be relatively impermeable or to have low permeability. The coefficient of permeability is expressed quantitatively for field use as the number of gallons of water per day that will pass through a cross-sectional area of 1 square foot under unit hydraulic gradient at the local temperature of ground water.

The coefficient of transmissibility is convenient to use in ground water studies because it indicates a characteristic of the whole aquifer rather than of a small part. It is the average field permeability of the aquifer multiplied by its thickness, in feet.

The suitability of an aquifer as a source of water is governed by its permeability, its volume, and its capacity to store and ability to release water. Recharge to the aquifer must be adequate if the water-supply development is to continue indefinitely, because even a small rate of withdrawal will ultimately deplete the water in storage unless there is equal or greater recharge. Aquifers that are highly permeable but small in areal extent, and surrounded by relatively impermeable material such as glacial till, can be pumped dry in a comparatively short time. The high initial yield of a well may give the erroneous impression that a large volume of water is available indefinitely from the aquifer. Thus, before any substantial ground water development is made, sufficient test drilling, aquifer tests, and related studies should be made to determine the physical characteristics of, and the available recharge to, the aquifer.

Ground Water in the Glacial Outwash Deposits

Water-bearing glacial outwash deposits of sand and gravel occur in about 20 percent of the Flandreau area and occupy a total surface area of about 60,000 acres (see table 4). At the sites of 61 test holes, the deposits range in thickness from 1 to 45 feet and average about 17 feet. During the summer of 1958 the saturated thickness of the deposits ranged from 1 to 38 feet and averaged 12 feet. Estimates based on grain-size analyses and water-level data from wells and test holes indicate that in August, 1958, approximately 140,000 acre-feet of water was in transient storage in outwash deposits in the Flandreau area.

Table 4 lists the four principal localities in which outwash deposits of sand and gravel occur in the Flandreau area. The Big Sioux River valley, which is the largest, contains about half the surface area (30,000 acres) and about 60 percent of the volume of outwash deposits. Plate 3 shows the extent of the outwash deposits and their thickness at selected cross sections in the Big Sioux River valley. At the sites of 41 test holes drilled in the Big Sioux valley, deposits of outwash sand and gravel range in thickness from 6 to 45 feet, and average about 20 feet. In July, 1958, the water-saturated part of the deposits ranged in thickness from 3 to 38 feet and averaged about 13 feet. About 80,000 acre-feet of water is estimated to have been in transient storage in the outwash deposits in the Big Sioux River valley in the Flandreau area during the summer of 1958.

The topsoil that overlies the outwash deposits is generally sufficiently permeable to permit effective recharge to the deposits by rain and melted snow. Additional small amounts of water probably percolate into the outwash from the glacial till at the valley edges. Essentially, however, the amount of water available from the deposits is directly dependent upon the amount of precipitation in a given year.

Table 4.--Estimated reserves of sand and gravel, storage capacity, and water in transient storage in the outwash deposits

Location of outwash	Area (nearest thousand acres)	Reserves of sand and gravel (cubic yards)	Storage capacity of the outwash (acre-feet) 1/	Saturation (percent) 2/	Amount of water in transient storage (acre-feet)
Big Sioux River valley	30,000	1,000,000,000	170,000	50	80,000
Elkton plain	17,000	500,000,000	60,000	60	40,000
Battle Creek valley	11,000	210,000,000	20,000	60	15,000
Flandreau Creek valley	2,000	40,000,000	6,000	60	4,000
Total	60,000	1,750,000,000	256,000		139,000

1/ Estimated on the basis of the following average porosities: Big Sioux River valley, 28%
Elkton plain, 21%
Battle Creek valley, 21%
Flandreau Creek valley, 25%

2/ Estimates based upon water-level determinations made during the summer of 1958.

The regional movement of ground water in the Flandreau area is southeastward in the direction of the main surface drainage. When water levels are high, the valley outwash probably contributes large amounts of water to the Big Sioux River and its tributaries; when water levels are low, the outwash probably receives some recharge from the streams.

The outwash deposits furnish public water supplies for the cities of Flandreau, Elkton, and Egan (pl. 2). The city of Flandreau is supplied by three wells, two of which are used at standby wells. Well 3 (107-48-27bab3), which produces most of the water, is 33 feet deep, 60 inches in diameter, and penetrates 20 feet of outwash deposits of sand and gravel in the Big Sioux River valley. The well is pumped at a rate of about 320 gpm (gallons per minute) and supplies a total of about 71,000,000 gallons of water per year. City officials report that sufficient water for their needs is obtained without difficulty.

The city of Elkton is supplied by two wells: Well 1 (109-47-21cbd) is 28 feet deep, 60 inches in diameter, and is pumped at a rate of 160 gpm; well 2 (109-47-21bdd) is 44 feet deep, 21 inches in diameter, and is pumped at a rate of about 100 gpm. Production from both wells, which penetrate glacial outwash deposits of the Elkton plain, is reported to be adequate to meet municipal requirements.

The city of Egan, near the southern boundary of the area, also obtains its municipal supply from outwash deposits in the Big Sioux River valley. The Egan well (106-48-7cbb) is 10 feet in diameter and penetrates about 24 feet of outwash deposits of sand and gravel. The well is equipped with two centrifugal pumps that have a combined capacity of about 550 gpm. City officials report that the well draws down only 1 foot when pumped for prolonged periods at that rate, and that the well was unaffected by the drought during the period 1931 to 1940.

At the present time (1959) ground water in the outwash deposits in the Flandreau area is not used extensively for irrigation. Where irrigation is carried on, it is common practice to employ a series of sand-point wells that are moved as the screen openings become clogged with fine materials.

The outwash deposits generally thin toward the edges of the stream valleys and are narrow; hence, there is a definite possibility that in periods of scant precipitation, water levels at those localities would decline to the extent that water for large-scale irrigation would not be available. It would be advisable, therefore, to construct permanent wells only where the outwash sand and gravel is thickest and has the greatest areal extent, rather than where the deposits are thin and narrow or are near the edges of the valleys.

Size analyses indicate that the outwash materials become coarser and more uniform with depth; therefore, the deposits probably are more permeable and capable of yielding the most water from the bottom third of their thickness. Consequently, wells should be constructed to penetrate the entire thickness of the sand and gravel deposits. Values for the coefficients of transmissibility, permeability, and storage for the outwash deposits are not available because it was not possible to run an aquifer test when the field investigation was made. However, such tests should be made before substantial ground-water irrigation is attempted with water from the outwash deposits.

Ground Water in the Glacial Till

Glacial till occurs throughout the Flandreau area; it underlies the glacial outwash deposits in the river valleys and constitutes most of the surface deposits on the uplands. Aquifers in the glacial till supply many of the farm wells in the Flandreau area. Generally such wells produce only small quantities of water (1 to 10 gpm) but are adequate for farm and domestic needs. The water-yielding ability of the till is greatest where it contains large proportions of sand and gravel, and least where it is composed principally of clay.

A few wells in the area produce water from sand and gravel lenses that are completely surrounded by till. Generally these deposits have no surface expression and can be located only by chance, by test drilling, or by geophysical means. Deposits of this type vary considerably in thickness and in areal extent. The yields of wells that penetrate such deposits depend upon the volume of the individual lenses and upon the permeability of the till that surrounds them. Locally the initial yield of wells that penetrate sand lenses in the glacial till is large and gives the impression that a large volume of water will be available indefinitely. However, recharge to these aquifers through the surrounding dense till is slow and the aquifers are often dewatered by sustained pumping. Before significant investments are made in wells that will produce from sand lenses in the till, aquifer tests should be run to determine the capabilities of the aquifers.

The municipal-supply well (106-51-9cab1) in the city of Wentworth in Lake County, adjacent to the west edge of the report area, may penetrate a sand lens of the type described above. The Wentworth well is 400 feet deep, 8 inches in diameter, and has a reported static-water level of 100 feet below land surface. The well produces about 10 gpm of rather highly mineralized water, barely enough for municipal needs. A second municipal well (106-51-9cab2) is a dug well 20 feet deep and 20 feet in diameter, which penetrates glacial till. Water from this well, however, is unsafe for human consumption.

At locations where the glacial till will not yield an adequate amount of water, drilling is usually continued through the till and the underlying Cretaceous shales into the Dakota Sandstone, where an adequate supply can usually be obtained.

Quality of the Ground Water

Ground water dissolves a part of the soluble mineral constituents of the rock particles as it moves into and through an aquifer. The amount of dissolved solids depends principally on the amount and type of soluble materials in the aquifer and the length of time that the water is in contact with them. Therefore, water that has been stored underground for a long period of time in an aquifer or that has traveled a long distance from the recharge area, is more highly mineralized than water that has been stored a short time and recovered relatively near the recharge area.

The U. S. Public Health Service (1946) has established standards for drinking water used on common carriers in interstate traffic. Listed below are the recommended maximum concentrations of some of the chemical constituents commonly present in drinking water:

Chemical constituent	Recommended maximum (ppm)
Iron (Fe) plus manganese (Mn)	0.3
Magnesium (Mg)	125
Sulfate (SO_4)	250
Chloride (Cl)	250
Fluoride (F)	1.5 a/
Dissolved solids	500 b/

a/ Maximum permissible.
b/ 1,000 ppm permissible if water of better quality is not available.

The chemical quality of ground water in the Flandreau area was determined from the results of the analyses of water from 18 wells. Fifteen of the wells produce water from deposits of glacial outwash and three produce from sand lenses or sandy zones in the glacial till (table 5).

The chemical data (table 5) show that ground water in the Flandreau area is moderately to highly mineralized (the dissolved solids content ranges from 356 to 3,530 ppm). Recommended maximum limits of iron, sulfate, and nitrate are exceeded in water from some of the wells sampled, and the recommended maximum concentration of dissolved solids is exceeded in water from most of the wells sampled. However, water that contains more than the recommended limits of certain chemical constituents has been used in some areas of South Dakota for many years without noticeable ill effects.

Nearly all ground water contains some minerals that cause hardness. Hardness of water is caused principally by calcium and magnesium and to a lesser extent by iron, aluminum, strontium, barium, zinc, and free acid. Hard water is undesirable, especially when used for laundering, because it causes increased soap consumption as well as soap scum. Hardness of water of about 100 ppm as $CaCO_3$ is generally considered to be moderate; hardness of water of about 200 ppm or more is considered to be excessive. Water from all wells listed in Table 5 is very hard and would require softening to be satisfactory for most uses. Hardness of water from most of the wells sampled ranged from about 300 to 850 ppm as $CaCO_3$; hardness of water from two wells, however, was 1,098 and 1,980.

Nitrate salts (or compounds) in ground water may be due to decaying organic matter in the well, in the aquifer, or on the ground surface in the vicinity of the well and thus may be an indication of pollution. Excess nitrate may also be due to inorganic material such as mineral fertilizers. Water that contains more than about 44 ppm of nitrate may cause

Table 5. Chemical Analyses of Ground Water

Location	Owner	Date collected	Aquifer	Depth of well (feet)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids (Calculated)	Hardness as ($CaCO_3$)	Percent sodium
**106-48-7cbb	City of Egan	2/58	O	25	0.1	0.0	115	33	20	344	..	96	30	0.1	15.0	641	422	9
*106-49-1add	W. Jackson	7/58	T	190	...	...	481	188	305	478	19	2,280	28	...	....	3,531	1,980	25
*106-51-9cab1	City of Wentworth	7/58	T	400	...	...	255	52	380	314	17	1,450	..	...	....	2,310	851	49
*106-51-9cab2	........do.......	7/58	T	20	...	...	159	69	85	402	17	402	61	...	....	991	681	21
*107-47-20bca	A. McGlone	7/58	O	18	2.0	...	175	37	13	305	13	219	21	...	80.0	710	589	5
*107-48-9dac	V. Weston	7/58	O	14	4.0	Tr	155	35	10	356	25	247	22	0.4	6.0	680	533	4
**107-48-27bab2	City of Flandreau No. 2	11/55	O	32	...	...	298	86	64	408	..	740	39	0.4	16.0	1,640	1,098	11
*107-48-27bab3	City of Flandreau No. 3	7/58	O	33	Tr	3.0	167	46	29	390	12	311	22	...	8.0	787	608	10
*107-48-29ccc	R. Hammer	7/58	O	14.5	...	...	98	29	8	254	15	81	7	...	60.0	423	363	5
*107-51-9cca	T. Kehler	7/58	O	12	...	Tr	109	49	35	338	13	235	10	0.2	8.0	626	475	14
*108-49-9aaa	A. Teal	7/58	O	20	...	...	131	41	14	361	..	216	8	...	14.0	602	444	6
*108-49-16dcd	Mrs. Wilber Gullickson	7/58	O	18	2.0	...	98	35	15	217	6	155	5	0.4	15.0	438	388	7
*108-50-7aad	G. Strenge	7/58	O	20	...	...	199	26	20	323	15	214	39	...	....	672	602	7
**109-47-21cbd	City of Elkton No. 1	11/55	O	28	...	...	140	54	60	364	..	157	60	0.2	50.0	926	570	19
**109-47-21bdd	City of Elkton No. 2	10/58	O	44	...	...	121	50	20	336	..	90	35	0.2	54.0	663	508	7
*109-47-32cca	L. Brandt	7/58	O	32	0.8	...	149	38	17	288	24	305	10	...	0.8	686	527	7
*109-49-31cca	L. Harvey	7/58	O	14	...	...	120	2	5	249	5	100	2	...	....	356	307	3
*109-50-27aca	G. Hinkley	7/58	O	14	1.2	...	209	46	35	376	9	498	10	...	6.0	1,000	712	10

Source of analyses: *State Chemical Laboratory, Vermillion, S. Dak.
**South Dakota Department of Health, Pierre, S. Dak.

Aquifer: O - Glacial outwash deposit.
T - Sand lenses in glacial till.

cyanosis in infants when used in feeding formulas and for drinking (Comly, 1945; Silverman, 1949). Water from four of the wells sampled had a nitrate content in excess of 44 ppm (see table 5).

Water that contains fluoride in concentrations of about 1 ppm, consumed by children during calcification of their teeth, reportedly lessens the incidence of tooth decay. However, the consumption of water having more than 1.5 ppm may cause mottling of tooth enamel (Dean, 1936). Fluoride in excess of the permissible limit was not present in any of the seven water samples for which fluoride determinations were made.

In general, ground water in the report area may be used for most domestic needs but would require softening to avoid excessive soap consumption when used for laundering. Samples of water from new or unused wells should be submitted to the State Department of Health for bacteriological analysis before it is used for drinking.

Water that is satisfactory for certain domestic and industrial uses, such as laundering, may be unsatisfactory for irrigating crops. Irrigating with water that has a high dissolved-solids content may cause salts to accumulate in the root zone of the soil and may eventually cause the soil to become unproductive. The specific conductance of water is directly proportional to its dissolved-solids content and thus is a measure of the soluble salts that the water contains. According to the U.S. Salinity Laboratory Staff (1954, p. 70), "Nearly all irrigation waters that have been used successfully for a considerable time have conductivity values [specific conductance] of less than 2,250 micromhos per centimeter [equivalent to a dissolved-solids content of about 1,500 ppm]. Waters of higher conductivity are used occasionally, but crop production, except in unusual situations, has not been satisfactory." Although the specific conductance is not given in Table 5, it can be approximated by dividing the dissolved-solids content by 0.65. For most of the samples the approximation probably would be accurate within 10 percent.

Field determinations of specific conductance were made for 223 wells in the Flandreau area (see table 2). These determinations show that, in general, water from the glacial till or from sand and gravel lenses in the till has slightly higher specific conductance and hence is slightly more saline than water from the glacial outwash. According to the field determinations, the average specific conductance of water from wells in glacial till was 2,560 micromhos per centimeter.

Irrigating with water that has a high percent sodium may cause the soil to become impermeable. The percent sodium is calculated as follows:

$$\text{Percent sodium} = \frac{\text{Na} \times 100}{\text{Ca} + \text{Mg} + \text{Na} + \text{K}}$$

where all concentrations are in equivalents per million. The continued use of irrigation water in which the percent sodium is in excess of 50 may cause damage to the soil. However, the amount of damage to soil that will result from the continued use of a particular type of water also depends on other factors, such as salinity of the water, porosity of the soil, drainage, irrigation practices, and crop management. In general, the higher the percent sodium, the less suitable the water for irrigation.

The results of the detailed chemical analyses listed in Table 5 indicate that water from the 15 wells in outwash deposits is of suitable quality for irrigation because the percent sodium was less than 50 and the specific conductance (computed) was less than 1,600 micromhos per centimeter at 25°C. Water from the glacial till is highly variable in composition; two of the three wells sampled produce water that cannot be used successfully for irrigation for continued periods because the specific conductance is too high. Inasmuch as the suitability of the water for irrigation depends not only on its chemical quality but also on the soil type and drainage, analyses should be made of both soil and water before irrigation is begun.

Sand and Gravel Resources

Sand and gravel deposits underlie the soil zone in about 18 percent, or approximately 60,000 acres, of the Flandreau area. About 60 percent of the deposits are in the Big Sioux River valley, and the balance is distributed throughout the remaining three outwash areas. Estimated reserves of sand and gravel in the whole report area total approximately 1,750,000,000 cubic yards.

In areas where samples were gathered, the coarse fraction of the sand and gravel deposits contains individual rock fragments that range in size from pebbles to cobbles (see table 6). The composition of the coarse material is about 50 percent limestone and dolomite and some chert, 40 percent igneous and metamorphic rocks, and 10 percent sandstone, shale, and clay ironstone (see table 7). The granule fraction consists mainly of fragments of limestone, dolomite, and igneous and metamorphic rocks. The sand and silt fractions are rounded to subangular quartz grains, and include a small percentage of rock fragments and accessory detrital minerals. Lenticular patches of ferric iron oxide cement occur locally.

The principal mineral constituents of the outwash sand and gravel deposits (coarse, granule, and sand and silt fractions combined) are quartz, approximately 85 percent; limestone, dolomite, and metamorphic rocks, 10 percent; accessory detrital silicate minerals, 2 percent; and impurities such as sand filler and quartz-grain coating, 3 percent.

SUMMARY OF GROUND WATER CONDITIONS

Deposits of glacial outwash contain the most important aquifers and compose the surface deposits in about 18 percent of the Flandreau area. They range in thickness from 1 to 45 feet and average 17 feet. Their saturated thickness during the summer of 1958 ranged from 1 to 38 feet and averaged 12 feet. The glacial outwash is in four separate parts of the area, the largest of which is the Big Sioux River valley. Estimates of saturated thickness based upon water-level measurements made in August 1958 indicate that about 140,000 acre-feet of water was in transient storage in the four outwash areas; of this total, 80,000 acre-feet was in the Big Sioux River valley.

Table 6.--Wentworth's particle-size classification

Grade limits		Classification
Diameter, in millimeters	Diameter, in inches	
256 and above	10 and above	Boulder
256 to 128	10 - 5	Large cobble
128 to 64	5 - 2.5	Small cobble
64 to 32	2.5 - 1.25	Very large pebble
32 to 16	1.25 - .62	Large pebble
16 to 8	.62 - .31	Medium pebble
8 to 4	.31 - .15	Small pebble
4 to 2	.15 - .078	Granule
2 to 1	.078 - .039	Very coarse sand
1 to 1/2	.039 - .019	Coarse sand
1/2 to 1/4	.019 - .009	Medium sand
1/4 to 1/8	.009 - .004	Fine sand
1/8 to 1/16	.004 - .0024	Very fine sand
1/16 and below	.0024 and below	Silt and clay

Table 7.--Lithologic composition of gravel in the Cary outwash deposits at selected locations in the Flandreau area (percent by weight)

Rock type	Location of sample					Diameter range (inches)
	109-47-17add	108-50-7aab	108-51-26abd	106-48-7abd	107-48-29aab	
Dolomite						
gray	9	2	5	6	5	0.30 - 2.20
brown	9	2	3	12	11	.30 - 2.80
Limestone						
light-gray	24	17	18	20	21	.30 - 2.70
gray	10	11	7	6	5	.20 - 1.50
dark (black)	7	9	6	2	4	.30 - 2.60
Chert	1	2	2	2	1	.30 - 1.10
Total calcareous and associated rocks	60	43	41	48	47	
Sandstone						
gray	1	1				0.20 - 0.60
brown	2	1	1	1		.40 - .80
Shale	10	2	10	1	1	.30 - 1.50
Clay ironstone	3	7	5	1	2	.30 - 3.30
Total clastic and associated rocks	16	11	16	3	3	
Igneous						
granite	11	12	23	20	14	0.20 - 3.40
diorite		2	2	3	4	.40 - 1.90
basalt		7	1	3	6	.30 - 2.00
Metamorphic						
quartzite	2	3	3	1	4	.30 - 2.90
slate	8	16	11	20	12	.20 - 2.40
schist	2	5	2	2	8	.30 - 2.20
gneiss	1	1	1		2	.30 - 1.40
Total crystalline rocks	24	46	43	49	50	
Total percent	100	100	100	100	100	

Irrigation wells in the outwash deposits should be located where the deposits are thickest and of greatest extent. If practical, it is also advisable to locate the wells near the centers of the valleys where the deposits are usually thickest and most extensive.

Glacial till occurs throughout the Flandreau area and supplies water to many farm and ranch wells. Generally the wells produce only small amounts (1 to 10 gpm) of water but supplies are usually adequate for domestic needs and for cattle. The water-yielding ability of the till is greatest where it contains large proportions of sand and gravel and least where it is composed principally of clay.

Results of the chemical analyses of water from 18 wells in the Flandreau area show that the ground water is moderate to high in dissolved solids content. Recommended maximum limits of iron, sulfate, and nitrate are exceeded in some of the samples and recommended maximum concentration of dissolved solids is exceeded in most of the samples. Consequently, samples of water from new or unused wells should be submitted to the State Department of Health for bacteriological analyses before the water is used for drinking.

The analyses of water from 15 wells that produce from outwash deposits indicate that the water is suitable for irrigation. However, inasmuch as the suitability of water for irrigation depends not only on its chemical quality, but also on soil type and drainage, both soil and water should be analyzed before irrigation is begun.

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APPENDIX A

Table 1.--Logs of test holes (by well-numbering system)

107-48-5dbc
Test hole 35

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Silt and clay, black to gray	5	9
	Sand, medium	5	14
	Sand and gravel	13	27
Iowan(?) till:			
	pebble clay, gray	7	34

107-48-5dcc
Test hole 34

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	7	7
	Sand and gravel	37	44
Iowan(?) till:			
	Pebble clay, bluish-gray	10	54

Table 1.--Logs of test holes -- Continued

107-48-9bdd
Test hole 38

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy, calcareous at base	4	4
	Sand, medium to very coarse, rounded, granules and pebbles of limestone, dolomite, slate, granite, and shale; accessory minerals include feldspar, iron oxides, tourmaline, and hornblende	5	9
	Sand, medium to very coarse, rounded; gravel, granules and pebbles of limestone, dolomite, slate, schist, granite, shale, and ironstone; accessory minerals include feldspar, tourmaline, iron oxides, and chert	15	24
	Sand, medium to very coarse, rounded, small fragments of limestone, dolomite, granite, schist, slate, and shale; accessory minerals include tourmaline, feldspar, iron oxides, pyrite, and chert	5	29

Table 1.--Logs of test holes -- Continued

107-48-9bdd--Continued
Test hole 38

Unit Material	Thickness (feet)	Depth (feet)
Cary outwash deposits (Continued):		
Sand, medium to very coarse, rounded; gravel, granules and pebbles of limestone, dolomite, granite, slate, shale, and gneiss; accessory minerals include chert, feldspar, mica, epidote, pyrite, iron oxides, tourmaline, and others............	12	41
Iowan(?) till:		
Clay, bluish-gray to gray, silty, some oxidized streaks, granules and pebbles of rock fragments..........................	3	44

107-48-10ccc
Test hole 39

Unit Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:		
Soil, dark-brown, silty....................	4	4
Silt and clay, dark-gray...................	5	9
Sand, very coarse to coarse; some pebbles...	10	19
Iowan(?) till:		
Pebble clay, bluish-gray...................	5	24

Table 1.--Logs of test holes -- Continued

107-48-14ddd
Test hole 42

Unit	Material	Thickness (feet)	Depth (feet)
Recent alluvium:			
	Soil, dark-gray, silty	4	4
	Clay and silt, dark to brownish-gray; very fine sand	5	9
	Sand, brownish-gray, very fine, rounded; silt and clay	5	14
	Sand, very fine to fine, rounded; granules of rock fragments; accessory minerals	5	19
	Sand, fine to coarse, rounded; gravel, granules, and pebbles of limestone, granite, slate, and shale; accessory minerals include feldspar, tourmaline, iron oxides, pyrite, and chert	6	25
Iowan(?) till:			
	Clay, gray to brownish-gray; scattered pebbles and cobbles near base	4	29

Table 1.--Logs of test holes -- Continued

107-48-15baa
Test hole 40

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Silt and clay, black to gray	5	9
	Sand, medium to coarse	10	19
	Gravel	9	28
Iowan(?) till:			
	Pebble clay, bluish-gray	6	34

107-48-23daa
Test hole 43

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, medium	5	9
	Sand and gravel	9	18
Iowan(?) till:			
	Pebble clay, bluish-gray	6	24

Table 1.--Logs of test holes -- Continued

107-48-26baa
Test hole 60

Unit	Material	Thickness (feet)	Depth (feet)
Recent alluvium:			
	Soil, dark-brown, brownish-gray near base; silty	4	4
	Silt; some clay	5	9
	Sand, medium	12	21
Iowan(?) till:			
	Pebble clay, bluish-gray	3	24

107-48-27aac
Test hole 45

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Clay and silt	5	9
	Sand, medium	5	14
	Sand and gravel	8	22
Iowan(?) till:			
	Pebble clay, bluish-gray	7	29

Table 1.--Logs of test holes -- Continued

107-48-29aba
Test hole 46

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	19	20
Iowan(?) till:			
	Pebble clay, bluish-gray	4	24

107-48-29bab
Test hole 47

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Sand and gravel	5	9
	Sand, medium to coarse	20	29
	Gravel	1	30
Iowan(?) till:			
	Clay	1	31

Table 1.--Logs of test holes -- Continued

107-48-32bab
Test hole 61

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	4	4
	Sand, medium to coarse......................	15	19
	Gravel....................................	5	24
Iowan(?) till:			
	Pebble clay, bluish-gray....................	5	29

107-48-32cda
Test hole 55

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty.....................	4	4
	Sand, medium...............................	8	12
Iowan(?) till:			
	Pebble clay, bluish-gray....................	7	19

107-51-3abb
Test hole 85

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy.....................	2	2
	Sand and gravel............................	17	19
Cary till:			
	Boulder clay, bluish-gray to brownish-gray...	10	29

Table 1.--Logs of test holes -- Continued

107-51-3cbc
Test hole 84

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	1	1
	Sand and gravel............................	13	14
Cary till:			
	Boulder clay, bluish-gray to brownish-gray...	10	24

107-51-18cdd
Test hole 82

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	4	4
	Sand and gravel............................	5	9
Cary till;			
	Boulder clay, bluish-gray to brownish-gray...	5	14

107-51-19bbb
Test hole 80

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	1	1
	Sand and gravel............................	6	7
Cary till:			
	Boulder clay, bluish-gray to brown..........	2	9

Table 1.--Logs of test holes -- Continued

107-51-20bbb
Test hole 83

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Sand and gravel	7	11
Cary till:			
	Boulder clay, bluish-gray to brownish-gray	3	14

107-52-23aad
Test hole 81

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	2	2
	Sand and gravel	6	8
Cary till:			
	Boulder clay, bluish-gray to brown	6	14

108-47-8aba
Test hole 62

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Sand and gravel	5	9
Iowan(?) till;			
	Pebble clay, bluish-gray	5	14

Table 1.--Logs of test holes--Continued

108-47-9abb
Test hole 63

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	8	9
Iowan(?) till:			
	Pebble clay, bluish-gray	10	19

108-47-10abb
Test hole 64

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	3	3
	Sand and gravel	6	9
Iowan(?) till:			
	Pebble clay, bluish-gray	10	19

108-48-29bbc
Test hole 29

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, medium	10	14
	Gravel	9	23
Iowan(?) till:			
	Pebble clay, bluish-gray	6	29

Table 1.--Logs of test holes--Continued

108-48-32bcc
Test hole 32

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	4	4
	Sand and gravel	20	24
	Sand, coarse	4	28
Iowan(?) till:			
	Pebble clay, bluish-gray	6	34

108-48-32bda
Test hole 31

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Sand, medium to coarse	15	19
	Gravel	12	31
Iowan(?) till:			
	Pebble clay, bluish-gray	8	39

108-49-5bdd
Test hole 13

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	8	9
	Sand, medium	10	19
	Gravel	5	24
Iowan(?) till:			
	Pebble clay, bluish-gray	5	29

Table 1.--Logs of test holes--Continued

108-49-5ccd
Test hole 14

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand and gravel	10	14
	Sand, medium	3	17
Iowan(?) till:			
	Pebble clay, bluish-gray	7	24

108-49-5dcd
Test hole 15

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	3	3
	Sand and gravel	6	9
	Sand, coarse	7	16
Iowan(?) till:			
	Pebble clay, bluish-gray	8	24

108-49-6add
Test hole 11

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	2	2
	Sand and gravel	6	8
Iowan(?) till:			
	Pebble clay, bluish-gray	6	14

Table 1.--Logs of test holes--Continued

108-49-6bdc
Test hole 12

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty	1	1
	Sand, fine to medium	13	14
	Gravel	15	29
Iowan(?) till:			
	Pebble clay, bluish-gray	5	34

108-49-8dda
Test hole 19

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Sand and gravel	10	14
Iowan(?) till:			
	Pebble clay, bluish-gray	10	24

108-49-9baa
Test hole 16

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Clay, brownish-gray	5	9
	Sand, fine	10	19
	Gravel	13	32
Iowan(?) till:			
	Pebble clay, bluish-gray	7	39

Table 1.--Logs of test holes--Continued

108-49-9dbd
Test hole 17

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits;			
	Soil, brownish-gray, silty, sandy............	4	4
	Sand, fine to coarse.........................	15	19
	Sand and gravel..............................	5	24
Iowan(?) till;			
	Pebble clay, bluish-gray.....................	5	29

108-49-10cda
Test hole 18

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	2	2
	Sand and gravel..............................	26	28
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	6	34

108-49-21baa
Test hole 20

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty......................	4	4
	Gravel.......................................	10	14
	Sand, medium to coarse.......................	15	29
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	5	34

Table 1.--Logs of test holes--Continued

108-49-22abb
Test hole 22

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	11	12
Iowan(?) till:			
	Pebble clay, bluish-gray	7	19

108-49-22bbb
Test hole 21

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	3	4
	Sand, medium	9	13
Iowan(?) till:			
	Pebble clay, bluish-gray	6	19

108-49-23cac
Test hole 24

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, coarse	5	9
	Sand and gravel	2	11
Iowan(?) till:			
	Pebble clay, bluish-gray	8	19

Table 1.--Logs of test holes--Continued

108-49-23dcd
Test hole 23

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand and gravel	5	9
	Sand, coarse	5	14
	Gravel	4	18
Iowan(?) till:			
	Pebble clay, bluish-gray	6	24

108-49-24cbc
Test hole 25

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, coarse	10	14
Iowan(?) till:			
	Pebble clay, bluish-gray	5	19

108-49-24ccc
Test hole 26

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, fine	5	9
	Sand and gravel	8	17
Iowan(?) till:			
	Pebble clay, bluish-gray	7	24

Table 1.--Logs of test holes--Continued

108-49-25aaa
Test hole 28

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	4	4
	Sand and gravel..............................	20	24
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	10	34

Table 1.--Logs of test holes--Continued

108-50-1aab
Test hole 1

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, grading downward to gray, calcareous sand......................	4	4
	Sand, medium to coarse, rounded to subrounded; some fragments of shale, slate, and granite; accessory minerals include feldspar, tourmaline, hornblende, mica, and iron oxides.....	10	14
	Sand, medium to very coarse, rounded; gravel, small pebbles of shale, granite, and slate; accessory minerals include mica, iron oxides, chert, hornblende, and tourmaline...........	10	24
	Gravel, granules and pebbles of limestone, granite, slate, schist, and dolomite; coarse to very coarse, rounded to subrounded sand; accessory minerals include feldspar, chert, hornblende, tourmaline, mica, and iron oxides....................................	10	34
	Sand, medium to very coarse, subrounded; gravel, granules, and pebbles of limestone, dolomite, granite, shale, and slate; accessory minerals include feldspar, chert, mica, epidote, pyrite, iron oxides, and tourmaline..............................	5	39

Table 1.--Logs of test holes--Continued

108-50-1aab--Continued

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits--Continued:			
	Sand, medium to very coarse, rounded; gravel, granules, and pebbles of limestone, dolomite, slate, shale, schist, and granite. accessory minerals include feldspar, tourmaline, iron oxides, and chert................	10	49
Iowan(?) till:			
	Clay, bluish-gray, silty, some brown oxidized streaks; scattered granules and pebbles of rock fragments.............................	10	59

Table 1.--Logs of test holes--Continued

108-50-6cbc
Test hole 89

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	4	4
	Sand and gravel.............................	3	7
Cary till:			
	Boulder clay, bluish-gray to brownish-gray...	7	14

108-51-26aad
Test hole 87

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	4	4
	Sand and gravel.............................	17	21
Cary till:			
	Boulder clay, bluish-gray to brownish-gray...	3	24

108-51-35bab
Test hole 86

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	4	4
	Sand and gravel.............................	24	28
Cary till:			
	Boulder clay, bluish-gray to brownish-gray...	6	34

Table 1.--Logs of test holes--Continued

109-47-9baa
Test hole 76

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand and gravel	13	17
Iowan(?) till:			
	Pebble clay, bluish-gray	7	24

109-47-17ddb
Test hole 74

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	1	1
	Sand and gravel	5	6
Iowan(?) till:			
	Pebble clay, bluish-gray	8	14

109-47-20ada
Test hole 79

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand, medium	5	9
	Gravel	5	14
Iowan(?) till:			
	Pebble clay, bluish-gray	5	19

Table 1.--Logs of test holes--Continued

109-47-22bbb
Test hole 77

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Sand and gravel	9	13
Iowan(?) till:			
	Pebble clay, bluish-gray	6	19

109-47-27cdc
Test hole 71

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy	4	4
	Sand and gravel	1	5
Iowan(?) till:			
	Pebble clay, bluish-gray, brownish-gray	9	14

109-47-31ddd
Test hole 68

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy	4	4
	Sand, fine	5	9
	Sand and gravel	20	29
Iowan(?) till:			
	Pebble clay, bluish-gray	10	39

Table 1.--Logs of test holes--Continued

109-47-32abb
Test hole 69

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	3	3
	Sand and gravel.............................	26	29
Iowan(?) till:			
	Pebble clay, bluish-gray....................	5	34

109-47-32ddd
Test hole 67

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, sandy......................	4	4
	Sand and gravel.............................	22	26
Iowan(?) till:			
	Pebble clay, bluish-gray....................	3	29

109-49-31cbb
Test hole 4

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	9	9
	Sand and gravel.............................	13	22
Iowan(?) till:			
	Pebble clay, bluish-gray....................	7	29

Table 1.-- Logs of test holes--Continued

109-49-31dcc
Test hole 3

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	5	5
	Sand and gravel............................	9	14
	Sand, coarse................................	5	19
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	10	29

109-49-31ddd
Test hole 2

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	4	4
	Sand and gravel............................	10	14
	Gravel, pebble..............................	15	29
Iowan(?) till:			
	Pebble clay, bluish-gray, oxidized streaks...	15	44

109-50-25bcc
Test hole 6

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	3	3
	Sand and gravel............................	9	12
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	7	19

Table 1.--Logs of test holes--Continued

109-50-35dcd
Test hole 10

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	4	4
	Sand, fine to coarse.........................	25	29
	Gravel, pebble...............................	10	39
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	10	49

109-50-36baa
Test hole 5

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	4	4
	Sand and gravel..............................	10	14
	Gravel.......................................	5	19
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	10	29

109-50-36bcb
Test hole 7

Unit	Material	Thickness (feet)	Depth (feet)
Cary outwash deposits:			
	Soil, dark-brown, silty, sandy...............	3	3
	Sand, coarse.................................	6	9
	Sand and gravel..............................	30	39
Iowan(?) till:			
	Pebble clay, bluish-gray.....................	5	44

APPENDIX B

Table 2.--Records of wells and test holes

(1) Location number: See explanation of well-numbering system, p. 8.

(3) Depth of well: Measured depths in feet and tenths; reported depths in feet.

(5) Type: Dr, drilled; Du, dug; Dv, driven.

(7) Depth to water: Measured water levels in feet and hundredths; reported water levels in feet.

(9) Use: D, domestic; I, irrigation; N, none; O, observation; PS, public supply; S, stock; T, test.

(11) Aquifer: C, clay; G, gravel; S, sand; SS, sandstone; T, till.

(12) Altitude of land surface determined by planetable survey.

(13) Specific conductance: Expressed in micromhos per centimeter (micromhos/cm) at 25°C. An approximation of the dissolved solids in parts per million (ppm) may be obtained as follows: Specific conductance (micromhos/cm) x 0.65 = dissolved solids (ppm).

Table 2.--Records of wells and test holes

Location number (1)	Owner or name (2)	Depth of well (feet) (3)	Diameter or size (inches) (4)	Type (5)	Year com-pleted (6)	Depth to water be-low land surface (feet) (7)	Date of measure-ment (8)	Use of water (9)	Temper-ature (°F) (10)	Aqui-fer (11)	Altitude of land surface (feet) (12)	Specific con-ductance (13)	Remarks (14)
						BROOKINGS COUNTY							
109-47													
3ddd	P. Brandt	60	36	Du	....	29	7-23-58	S	....	S,G	1,736	.....	
4add	F. Duin	30	36	Du	....	18	8-25-58	D,S	....	S,G	1,720	.....	
4cbb	J. Wickur	23	36	Du	....	10	8-25-58	D,S	....	S,G	1,691	.....	
8ada	A. Wickur	36	30	Du	....	27	8-25-58	D,S	....	S,G	1,708	.....	
9baa	S. Dak. Geol. Survey	24	..	Dr	1958	10	8-13-58	T	....	...	1,703	.....	Test hole 76.
9dbd	Mrs. E. Nick	38	24	Du	....	33	8-25-58	D,S	....	S,G	1,720	.....	
10bbc	H. Hernick	30	32	Du	....	17	8-25-58	D,S	....	S,G	1,718	.....	
10cbc	V. Hernick	60	32	Du	....	40	8-25-58	D,S	....	S,G	1,731	.....	
15ccb1	W. Prosh	57.5	18	Du	....	45.95	8-13-58	D	....	...	.....	.....	
15ccb2	...do...	12.5	24	Du	.....	9.76	8-13-58	S	....	...	1,727	.....	
16daa	L. Kretsinger	128	24	Du	1944	125	8-13-58	D,S	....	S	.....	.....	Well goes dry at times.
17daa	M. Ellis	34	24	Du	....	20	8-25-58	D,S	....	S,G	1,714	.....	
17ddb	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-13-58	T	....	...	1,708	.....	Test hole 74.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-47 (Cont.)													
18ccd	H. Brandt	90	26 to 12	Dr	....	44.72	8-22-58	D,S	49	S,C	.....	.....	Water has clayey taste.
19aab	F. Olson	90	18 to 12	Dr	....	32.55	8-22-58	S	47	...	.....	.....	
19dad	G. Anderson	68.5	5.5	Dr	....	35.68	8-22-58	D,S	48	...	.....	1,400	
20abb	Unknown	28.9	26	Dr	....	9.26	8-20-58	S	..	G	.....	.....	
20ada	S. Dak. Geol. Survey	19	..	Dr	1958	14	8-13-58	T	..	S,G	1,705	.....	Test hole 79.
20cdd	L. Kramer	25.0	24	Dr	....	18.06	8-19-58	D,S	..	S,G	1,695	.....	
20dda	R. Shermer	22.4	25	Dr	....	19.08	8-19-58	S	..	S,G	1,706	.....	
21bdd	City of Elkton No. 2	44.2	21	Dr	1958	25.05	8-20-58	PS	..	G	1,708	.....	Chemical analysis in table 5.
21cbd	City of Elkton No. 1	28	60	Du	1917	19.13	8-20-58	PS	..	G	1,706	.....	Chemical analysis in table 5.
21ccd	F. Thompson	20	24	Dr	....	18.96	8-19-58	D,S	47	G	1,705	.....	
22bbb1	Mrs. R. Sivert	38	18	Du	....	27.63	8-13-58	D	..	G	1,725	.....	
22bbb2	S. Dak. Geol. Survey	19	..	Dr	1958	Dry	8-13-58	T	..	...	1,724	.....	Test hole 77.
22bcc	C. Jensen	39.3	26	Du	....	34.73	8-15-58	D,S	..	...	1,725	.....	
22ccc	Mrs. W. Markam	51	22	Dr	....	33.94	8-19-58	D,S	47	G	1,720	.....	
27cbb	W. Schmid	35	24	Du	1943	26.42	8-13-58	D,S	..	G	1,707	.....	
27cdc	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-13-58	T	..	...	1,706	.....	Test hole 71.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-47 (Cont.)													
27dcc	J. Carson	39.0	20	Du	....	27.32	8-13-58	S	47	S,G	1,717	.....	
28aab	W. Pape	36.2	36 x 24	Du	....	29.68	8-13-58	D,S	..	S,G	1,714	.....	
28bbb	B. Clausen	23.7	26	Du	....	18.10	8-15-58	S	50	S,G	1,764	.....	
28dda	W. Welsh	30	..	Du	1953	25	8-15-58	D	..	G	1,701	.....	
29aaa	J. Brune	24	20	Du	....	17.96	8-15-58	D	49	...	1,704	.....	
29abb	J. Howell	25	20	Du	1948	13.77	8-15-58	D	..	S	1,693	.....	
29ccc	A. Meyers	30	30	Du	1942	12	8-15-58	D	..	G	1,683	.....	
29ddd	B. Albaugh	35	18	Du	....	23	8-13-58	D	..	G	1,696	.....	
30aad	Mrs. H. Barber	24.0	20	Du	....	10.60	8-15-58	N	..	...	.....	.....	
30bbc	Hammer Estate	100	30	Du	1923	30	8-15-58	S	..	G	.....	.....	
30cbb	E. Hammer	56	30	Du	....	19.90	8-15-58	D,S	..	G	.....	.....	
30ddd	E. Blair	30	30	Du	....	24	8-13-58	S	..	G	.....	.....	
31cbb	G. Hegerfeld	91.0	26	Dr	....	26.77	8-19-58	D,S	48	S	.....	.....	
31ddd	S. Dak. Geol. Survey	39	..	Dr	1958	22	8-12-58	T	..	...	1,665	.....	Test hole 68.
32abb	...do...............	34	..	Dr	1958	15	8-12-58	T	..	...	1,686	.....	Test hole 69.
32bdd	W. Lees	90	20	Dr	....	17.76	8-19-58	D,S	..	...	.....	.....	
32cca	L. Brandt	32	30	Du	....	27.40	8-13-58	D,S	..	S	1,667	.....	Chemical analysis in table 5.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-47 (Cont.)													
32ddd	S. Dak. Geol. Survey	29	..	Dr	1958	15	8-12-58	T	..	...	1,680	.....	Test hole 67.
33aba	L. Baker	27	24	Dr	....	20.90	8-19-58	S	47	G	1,694	.....	
33cab	L. Moulton	23.5	14	Dr	....	18.65	8-20-58	D,S	..	...	1,675	.....	
34baa	J. Mosier	35	24	Du	....	25.17	8-15-58	D,S	..	G	1,706	.....	
34cbb	H. Smith	45	24	Du	....	25	8-13-58	D,S	....	...	1,706	.....	
109-48													
13ddd	F. Hegerfeld	70	24	Dr	....	20	8-20-58	D,S	..	...	.....	.....	
14cbc	J. Gebhart	60	20	Dr	....	23.55	8-20-58	D,S	..	....	.....	.....	
14dab	H. Smallfield	84.1	30	Dr	1928	47.46	8-20-58	S	47	...	.....	.....	
15adc	R. Meyers	18.0	26	Du	....	9.85	8-20-58	D,S	..	S	.....	.....	
19bab	Rochel	80	48 x 48	Dr	....	23	8-20-58	D,S	..	...	.....	.....	
19bbb	E. Jaack	77.8	18 to 12	Dr	....	49.80	8-18-58	D,S	..	G	.....	.....	
19cab	M. Ishmael	90	5	Dr	....	.....	....	D,S	48	SS	.....	735	
19ccd	Unknown	60.3	20	Dr	....	34	8-19-58	S	..	G	.....	.....	
20aba	J. Smith	45	20	Dr	....	33.70	8-18-58	S	48	...	.....	.....	
20bcb	W. Seuck	169	4	Dr	1933	85	8-20-58	D,S	..	SS	.....	1,025	
20daa	G. Pike	82.0	18	Dr	....	36.60	8-18-58	D,S	49	...	.....	.....	
21aad	W. Thielsen	65	20	Dr	1946	12.93	8-19-58	S	47	S,G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-48 (Cont.)													
21baa	L. Tolk	47	20	Dr	....	16.69	8-19-58	O	47	S	.....	.....	
21dcc	A. McPherson	79	26	Dr	1958	17.30	8-19-58	S	46	S	.....	.....	
22ada	Unknown	58.6	22	Dr	....	18.74	8-20-58	S	45	...	.....	.....	
22bcb	M. Baumenn	65	26	Dr	1958	25.90	8-19-58	N	....	S	.....	.....	
22ddc	W. McTague	55	20	Dr	....	23.06	8-20-58	D,S	48	...	.....	.....	
23ada	L. Heesch	19.5	..	Dr	....	16.04	8-20-58	S	..	...	.....	.....	
23ccd	R. Hurney	55	18	Dr	1953	27.51	8-20-58	D	..	S	.....	.....	
24bbb	C. Jensen	36.3	20	Dr	....	24.39	8-20-58	D	48	...	.....	1,620	
24ddd	Mrs. I. Culhane	65	30	Du	....	.....	....	D,S	..	...	.....	.....	
25bad	Fleming	75	26	Du	....	17.68	8-14-58	S	..	...	.....	.....	
26aaa	Mrs. M. Haley	35	30	Du	....	15	8-14-58	D,S	..	...	.....	.....	
26bbb	McCardy Bros.	70	18	Du	....	31.08	8-14-58	S	...	...	.....	.....	
26cdc	N. Kurtz	65	24	Dr	....	30	8-19-58	D,S	48	G	.....	.....	
27aaa	J. Thielen	65	36 x 24	Du	1915	26.63	8-14-58	D	..	G	.....	.....	
27ccc	A. Smith	200	5.5	Dr	....	.....	....	D,S	50	SS	.....	955	
28aaa	L. Gebhart	38.5	20	Dr	....	20.14	8-19-58	D,S	49	S	.....	.....	
28cdd	J. Rang	90	24	Dr	....	85	8-19-58	D,S	48	S	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BROOKINGS COUNTY--Continued													
109-48 (Cont.)													
28dda	L. Larsen	200	5.5	Dr	....	150	8-19-58	D,S	49	SS	.....	.....	
29bbc	H. Larson	57.5	24	Dr	....	41.30	8-18-58	D,S	48	G	.....	.....	Water contains iron.
29cbb	C. Greve	125	6	Dr	....	.....	....	D,S	48	SS	.....	695	
30dad1	D. Bartling	108	6	Dr	....	.....	....	S	48	SS	.....	770	
30dad2	D. Bartling	188	6	Dr	....	.....	....	D,S	..	SS	.....	665	
31aaa	R. Stein	64.0	26	Dr	....	11.76	8-21-58	S	..	...	.....	.....	
31bcc	I. Stembaugh	200	5	Dr	....	60	8-18-58	D,S	...	SS	.....	1,250	
31ddd	E. Grafing	285	5.5	Dr	....	200	8-18-58	D,S	48	SS	.....	925	
32daa	G. Lang	127	..	Dr	1908	87	1956	D,S	..	...	.....	1,030	Well is finished with sand point.
33bbb	L. Erickson	170	6	Dr	1911	110	4- 1-11	D,S	..	SS	.....	795	
33dad	O. Cochran	90	..	Dr	....	30	8-20-58	D,S	..	...	.....	.....	
34dad	D. Lynn	92	36	Du	....	62	8-14-58	S	..	...	.....	.....	
35add	N. Kurtz	45	26	Du	....	33.38	8-14-58	S	...	...	.....	.....	
35dda	P. Finley	50	24	Du	....	15	8-14-58	S	..	...	.....	.....	
36aad	Mrs. E. Icelloy	78.2	24	Dr	....	16.65	8-19-58	D,S	47	...	.....	.....	
36cbc	Dr. Henry	48	24	Du	....	23.17	8-14-58	S	49	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						BROOKINGS COUNTY--Continued							
109-49													
14ccc	School	16.2	12	Dr	....	12.00	8-14-58	PS	..	G,C	.....	.....	
14dcc	W. Dunlap	49	18	Dr	....	8.30	8-15-58	S	47	C	.....	.....	Water has unpleasant taste.
15dad	S. Maher	90	30 to 24	Dr	....	7.20	8-14-58	D,S	48	G	.....	.....	
16bcc	Unknown	13.0	38 x 38	Du	....	8.41	8-14-58	S	..	...	.....	.....	
17cdd	E. Telkamp	39.0	30	Dr	....	12.00	8-13-58	S	47	S	1,591	.....	
17dcc	G. Telkamp	18.0	24	Dr	....	9.60	8-14-58	S	51	S	1,605	.....	Water has unpleasant taste.
18bcc	Klingbile	9	20	Dr	....	8.20	8-13-58	O	..	...	1,567	.....	Water is not potable.
18dda	L. Whitehead	16	24	Dr	1946	12.50	8-13-58	S	50	S	1,563	.....	Water is alkaline.
20cbc	F. Alexander	15	24	Dr	....	11.00	8-13-58	D,S	..	S,D	.....	.....	
20ddd	A. Nelson	24.0	24	Dr	....	11.20	8-14-58	S	..	...	.....	.....	
21ada	A. Gleason	150	4.5	Dr	....	.....	....	D,S	..	...	.....	1,330	
21ccd	A. Nelson	24.0	18	Dr	....	15.40	8-14-58	D,S	47	...	.....	.....	Water is alkaline.
22daa	Unknown	..	5.75	Dr	....	80.30	8-15-58	S	..	...	.....	.....	
23aab	R. Eaton	50.0	24	Dr	....	15.70	8-15-58	S	47	...	.....	.....	
23cbb	A. Langner	200	4.5	Dr	....	.....	....	S	49	SS	.....	1,030	
23dcc	M. Sandbeck	24.0	24	Dr	....	7.20	8-15-58	S	..	G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-49 (Cont.)													
24bba	L. Leiferman	90	6	Dr	....	50.10	8-15-58	D,S	48	SS	.....	910	
24ccc	H. Leslie	136	6	Dr	1942	56	1942	D,S	48	SS	.....	920	
24ddc	E. Weigel	210	6 to 4	Dr	....	100	8-18-58	D,S	50	S	.....	.....	
25aad	J. Cheathan	40	24	Dr	1918	22	8-18-58	D,S	48	G	.....	.....	
25cbb	W. Brown	30	30 to 24	Dr	1944	16.90	8-15-58	S	48	G	.....	.....	
26abb	R. Hornby	168.0	6	Dr	....	89.10	8-15-58	D,S	..	...	.....	1,010	
26daa	R. Suhr	21.5	24	Dr	1957	18.50	8-15-58	D,S	..	...	.....	.....	
27aba	E. Heneghen	90	12	Dr	....	13.26	8-22-58	S	..	...	.....	.....	
28aab	Unknown	58.0	24	Dr	....	31.20	8-14-58	S	49	...	.....	.....	
28bbb	A. Nelson	16.0	20	Dr	....	11.80	8-18-58	D,S	51	...	.....	.....	
28ccc	F. Wiles	220	2	Dr	1928	.....	....	S	..	SS	.....	3,230	Water is alkaline; contains iron.
28dcc	J. Harvey	40	24	Dr	....	29.60	8-14-58	D	..	G,C	.....	.....	
29bcb	Larsen Estate	200	5	Dr	....	.....	....	S	49	...	.....	2,270	
29dcd	C. Nelson	150	6	Dr	....	50	8-14-58	D,S	..	...	.....	2,610	Water contains iron.
30aad	R. Demint	249	4	Dr	....	.....	....	S	49	SS	.....	2,800	
30bbb	W. Walters	81.6	18	Dr	1949	32.93	8-21-58	S	49	S	.....	.....	Water is not potable.
30cdb	L. Beneke	40	14	Dr	....	16.50	8-13-58	S	..	C	.....	.....	Water is alkaline. Well can be pumped dry.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-49 (Cont.)													
30ddc	F. Shaw	250	6	Dr	....	.....	....	S	49	SS	.....	2,760	Hardness 1,489 ppm; water contains iron.
31cbb	S. Dak. Geol. Survey	29	..	Dr	1958	13	7-18-58	T	..	...	1,572	.....	Test hole 4.
31cca	L. Harvey	14	6	Dv	1958	9	6----58	S	..	G	.....	.....	Chemical analysis in table 5.
31dab	E. Lamp	28	1.25	Dv	....	25	8-13-58	D,S	48	S,G	1,565	.....	Well is finished with sand point.
31dcc	S. Dak. Geol. Survey	29	..	Dr	1958	8	7-17-58	T	..	...	1,574	.....	Test hole 3.
31ddd	...do...............	44	..	Dr	1958	13	7-17-58	T	..	...	1,572	.....	Test hole 2.
32aab	C. Nelson	94.0	5.75	Dr	....	61.90	8-16-58	S	48	...	.....	3,790	
32baa	...do....	..	6	Dr	....	83.30	8-14-58	S	49	...	.....	2,210	
33aad	H. Shlobom	25	24	Dr	....	18.30	8-14-58	S	..	...	.....	.....	
33bbb	T. Moulton	21	24	Dr	1952	17.50	8-14-58	D,S	50	...	.....	.....	Well is finished with sand point.
33dad	Mrs. M. Schlobom	196	8	Dr	1943	.....	....	S	48	...	.....	2,970	Water has unpleasant taste.
34aaa	M. Langan	16	24	Dr	....	14	8-10-58	S	..	G	.....	.....	
34bab	F. McDonald	170	6	Dr	....	50	8-14-58	S	..	C	.....	1,880	Well can be pumped dry.
34ccb	J. Holm	200	8	Dr	....	60	8-14-58	S	49	C	.....	3,150	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-49 (Cont.)													
34daa	Mrs. S. Short	170	6	Dr	....	.....	....	S	50	...	.....	3,570	Water contains iron.
35bbb	K. Anderson	20.5	20 to 18	Dr	1949	16.87	8-21-58	D	50	G	.....	.....	
35ccb	V. Stembaugh	17.5	15	Dr	....	12.60	8-15-58	S	50	...	.....	.....	
35daa	G. Shutjer	254	5.5	Dr	1943	150	8-21-58	D,S	..	SS	.....	930	
36aba	E. Bothe	267	6	Dr	1935	50	8-18-58	D,S	48	SS	.....	2,090	
109-50													
13bcc	W. Plymate	..	30	Dr	1958	11.90	8-13-58	I	..	G	.....	.....	Well produces 40 gpm; drawdown 4 feet.
13dbb	D. Zemlicka	18	24	Dr	....	10.60	8-16-58	S	..	S,G	1,564	.....	
14add	Unknown	15.5	18	Dr	....	11.27	8-21-58	S	..	...	.....	.....	
15cbb	S. Dak. State College	45.7	18	Dr	....	11.94	8-22-58	I	50	...	1,550	.....	
15dbb	S. Billet	8.6	24 to 20	Dr	....	4.35	8-21-58	S	....	S,G	1,549	.....	
17ddd	Dr. L. Russell	15.5	18	Dr	....	11.67	8-26-58	S	50	...	1,552	.....	Water has disagree-able odor.
18add	O. Sween	18	20	Dr	....	10.65	8-25-58	S	51	...	1,567	.....	
18ccc	C. Bortnem	18	..	Dr	....	15.88	8-26-58	S	..	G	1,583	.....	
18ddc	C. Tate	268	26	Dr	....	19.28	8-25-58	D	47	S,G	.....	.....	
19bbc	Unknown	24.6	20	Dr	....	22.09	8-26-58	S	48	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						BROOKINGS COUNTY--Continued							
109-50 (Cont.)													
19cbb	Unknown	22.7	12	Dr	....	18.93	8-26-58	0	..	...	.....	.....	
19cbc	...do..	37.7	20	Dr	....	31.28	8-26-59	S	48	...	.....	.....	Water has disagreeable odor.
20bcc	G. Bortnem	11.2	48 x 48	Du	....	6.09	8-25-58	D,S	50	S,G	1,571	.....	
20dad	V. Stenberg	80	26 to 6	Dr	....	.....	....	D,S	..	...	.....	1,430	
21bcb	B. Sheldon	39.1	26	Dr	....	31.29	8-25-58	D	..	S	1,573	.....	Well is finished with sand point.
21dcd	Unknown	25.0	18	Dr	....	18.65	8-22-58	S	48	S,G	.....	.....	
22bab	L. Mailey	8	8	Dv	....	5.53	8-22-58	S	56	S,G	1,549	.....	Well is finished with sand point.
22cdd	C. Trygstad	9	2	Dv	....	7.39	8-22-58	S	58	S,G	.....	.....	Well is finished with sand point.
23aaa	B. Alexander	20	16	Dr	....	3.69	8-21-58	S	..	S,G	1,554	.....	Well is finished with sand point.
23cbb	A. Ponto	12	20	Dv	....	8.19	8-22-58	S	50	S,G	1,550	.....	Well is finished with sand point.
24add	L. Telkamp	17	28	Dr	....	11.10	8-13-58	D,S	..	S,G	.....	.....	
24ccb	Dr. D. Austin	18	3	Dv	....	5.50	8-13-58	I	....	S,G	1,556	.....	Well produces 250 gpm; drawdown 2 feet.
24dcc	T. Martinson	12	1.25	Dv	1950	10	8-13-58	D	..	S,G	1,559	.....	Well is finished with sand point.
25bcc1	E. Telkamp	10	2	Dv	....	8	8-13-58	S	51	S	1,577	.....	Well is finished with sand point.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-50 (Cont.)													
25bcc2	S. Dak. Geol. Survey	19	..	Dr	1958	8	7-18-58	T	..	...	1,573	.....	Test hole 6.
25dcc	R. Telkamp	15	..	Dv	....	12	8-13-58	S	..	S,G	1,583	.....	
26aba	E. Telkamp	8	..	Dv	1946	5	8-13-58	S	....	S,G	.....	.....	Well is finished with sand point
26bba	F. Hinkley	14	12	Dv	....	3.40	8-21-58	S	..	S,G	1,546	.....	
27aca	G. Hinkley	13.7	18	Dr	....	10.73	8-21-58	S	....	S,G	1,545	.....	Chemical analysis in table 5.
27ccb	W. Blos	12	1.25	Dv	....	11	8-22-58	S	52	...	.....	.....	Well is finished with sand point.
28add	V. Klinesfalter	18	24	Du	....	17.09	8-22-58	S	..	S,G	1,546	.....	
28bbb	D. Searls	60	2	Dr	....	58	8-25-58	D,S	49	G	.....	.....	Well is finished with sand point.
28dcc	Brookings Country Club	23.8	24	Dr	....	18.09	8-26-58	D	..	...	.....	.....	
29bbb	H. Berkland	270	2.5	Dr	1943	.....	....	S	49	S,G	.....	2,380	Well is finished with sand point.
29ccb	O. Bortnem	150	2.5	Dr	1955	100	8-25-58	D,S	48	G	.....	.....	Hardness 856 ppm. Well is finished with sand point.
29dda	S. Jorenby	40	18	Dr	....	23.51	8-25-58	D,S	48	...	.....	.....	
30aba	F. Durkee	300	2.25	Dr	....	.....	....	D,S	49	...	.....	2,570	Well is finished with sand point.
30bcc	Mrs. R. Berge	80	3	Dr	....	52.00	8-26-58	S	49	...	.....	1,090	Well is finished with sand point.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-50 (Cont.)													
30dda	C. Bjerke	60	4	Dr	....	20	8-25-58	D,S	..	...	.....	.....	Water has unpleasant taste.
31ada	J. Stangeland	44.8	26	Dr	....	14.89	8-25-58	D,S	48	...	.....	.....	
31bad1	S. Vick	270	2	Dr	....	80	8-26-58	S	49	...	.....	2,105	Well is finished with sand point.
31bad2	...do........	147	2	Dr	1958	.....	....	D,S	..	S	.....	1,830	Well is finished with sand point.
31ddd	O. Bortnem	30	24	Dr	1938	17.81	8-25-58	D,S	..	S,G	.....	.....	
32aba	M. Bakken	95	2	Dr	....	30	8-26-58	D,S	49	S,G	.....	1,960	Well is finished with sand point.
33bcd	D. Hall	19	2	Dv	....	.....	....	D	..	S,G	.....	.....	Well is finished with sand point.
33dad	A. Krowell	155	2	Dr	1958	100	8-21-58	S	..	S	.....	1,590	Well is finished with sand point.
34bbb	W. Tompkins	58	30 to 24	..	1957	36.48	8-21-58	D	..	S,C	.....	.....	Water has clayey taste.
34dab	F. Reuell	25.5	20 to 16	Dr	....	21.91	8-21-58	D,S	..	S,G	.....	.....	
35dcd	S. Dak. Geol. Survey	49	1.25	Dr	1954	8	7-18-58	T	..	...	1,570	.....	Test hole 10.
36aba	R. Green	13	1.25	Dv	....	12	8-13-58	S	51	S,G	1,579	.....	Well is finished with sand point.
36baa	S. Dak. Geol. Survey	29	..	Dr	....	12	7-18-58	T	..	...	1,573	.....	Test hole 5.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					BROOKINGS COUNTY--Continued								
109-50 (Cont.)													
36bbb	N. Nelson	15	2	Dv	....	10	8-13-58	I	51	S,G	1,577	.....	Well is finished with sand point.
36bcb1	G. Stratton	18	20	Dr	....	11.60	8-13-58	D,I	..	S,G	1,571	.....	
36bcb2	S. Dak. Geol. Survey	44	..	Dr	1958	9	7-18-58	T	..	...	1,570	.....	Test hole 7.
36bcc	C. Husum	19.2	26	Dr	....	10.34	8-21-58	I	49	G	1,574	.....	
109-51													
13bbbb	C. Wosje	30	1.5	Dr	1953	25	11-24-59	N	..	S,G	.....	.....	Well is finished with sand point.
13cccb	D. Sterud	35.9	32	Dr	1959	22.59	11-24-59	D,S	..	S,G	.....	.....	
14baa	E. Berkland	70	3	Dr	1959	65	12-15-59	D	..	T	.....	.....	
14cdd	G. Bjerke	35.1	30	Dr	1959	21.98	12-15-59	D	..	S,G	.....	.....	
15bbb	Swenson Bros.	40	24	..	1941	8	12-17-59	D,S	..	S,G	.....	.....	
15bbc	H. Manns	19.4	26	..	....	6.10	12-17-59	S	..	S,G	.....	.....	
15cdc	O. Dines	41.7	24	Dr	1948	29.21	12-17-59	D,S	..	S,G	.....	.....	
18dad	D. Kelberg	16.3	12	Dr	....	7.18	12-17-59	N	..	S,G	.....	.....	
19aba	F. Reuell	67.3	26	Dr	1959	50.32	12-17-59	D,S	..	S,G	.....	.....	
21bbb	H. Husby	40.6	20	Dr	....	12.01	....	S	..	S,G	.....	.....	
22dad	O. Dines	54.3	18	Dr	....	43.56	12-15-59	N	..	T	.....	.....	
22dcc	J. Johnson	45.0	22	..	....	27.88	12-15-59	S	..	S,G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
BROOKINGS COUNTY--Continued													
109-51 (Cont.)													
23aba	C. Mannured	29.2	3	..	....	25.05	11-24-59	N	..	S,G	.....	.....	
23dcd	L. Hamre	61.1	30	Dr	1932	48.33	11-30-59	D,S	..	S,G	.....	.....	
24aba	S. Sween	14.5	32	Du	1950	12.68	11-30-59	S	..	S,G	.....	.....	
24cbca	V. Hoff	28.3	36	Du	....	25.30	11-30-59	D,S	..	S,G	.....	.....	
25bcb	W. Kleinjon	77.9	26	Dr	1959	69.22	11-30-59	D,S	..	T	.....	.....	
25dad	Mrs. B. Vick	53.9	26	Dr	1955	48.73	11-30-59	D	..	T	.....	.....	
26daa	M. Sternd	82.8	20	Dr	1949	70.68	11-30-59	D	..	T	.....	.....	
28aaa	A. Hillestad	39.1	26	Dr	1959	26.17	11-30-59	D,S	..	S,G	.....	.....	
28ddc	O. Dines	103.8	20	Dr	1959	83.51	12-15-59	S	..	SS	.....	.....	
29ada	E. Sternd	97.1	..	Dr	....	70.67	12-17-59	D,S	..	SS	.....	.....	
29baa	T. Nellekson	76.0	20	Dr	....	27.24	12-17-59	S	..	S,G,T	.....	.....	
31bd	F. Intermill	23	30	Dr	1958	6	12-15-59	S	..	S,G	.....	.....	
34ada	J. Odegaard	324	2	Dr	1941	200	....	S	..	SS	.....	.....	
35add	J. Tebedahl	58.2	24	Dr	1951	45.01	11-30-59	D,S	..	T	.....	.....	
36adab	H. Bartnem	54.7	24	Dr	....	33.07	11-30-59	N	..	T	.....	.....	
110-47													
33ddd	W. Mueller	33	30	Du	....	19	8-25-58	S	..	G	1,731	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY							
106-51													
2bbc	G. Amert	250	2	Dr	1927	55	7-31-58	D,S	49	S	.....	1,840	Hardness 890 ppm; water is alkaline.
2dcc	E. Baumerger	640	2	Dr	....	125	7-29-58	D,S	51	SS	.....	2,950	
4ddc	C. Beeck	380	3	Dr	1956	135	7-29-58	S	50	SS	.....	3,060	
7aab1	C. Seedorf	530	4	Dr	1948	180	11----48	D,S	49	SS	.....	3,090	Water is soft.
7aab2	...do.....	75	24	Dr	1930	35	6----30	O	..	C	.....	.....	Well can be pumped dry.
8ada	F. Geisler	85	24	Dr	....	45	1952	S	49	...	.....	.....	Water is alkaline.
9acc	M. Ebdrup	71.0	20	Dr	....	46.40	7-29-58	S	49	...	.....	.....	
9cab1	City of Wentworth	400	6	Dr	1919	100	7-16-58	P	..	T	.....	.....	Chemical analysis in table 5.
9cab2	...do............	19.8	240	Du	1909	15.81	7-12-59	P	..	T	.....	.....	Chemical analysis in table 5.
10acc	M. Swenson	77.0	24	Dr	1953	25.81	7-29-58	N	..	...	.....	.....	Water is alkaline.
11abc	C. Mallowson	42	24	Dr	1953	5	1953	D,S	..	S	.....	.....	Water is alkaline.
11bbb	B. Swenson	17.0	12	Dr	....	9.00	7-29-58	S	49	...	.....	.....	
12aaa	A. Hillan	230	2	Dr	1940	30	1940	S	49	...	.....	2,480	
12bdd	O. Thombson	600	6	Dr	....	125	7-29-58	S	..	SS	.....	2,430	Water is alkaline.
107-51													
1ada	J. Olson	522	2	Dr	1954	80	8- 8-58	D,S	..	S	.....	2,470	
1ccc	A. Kramer	67	24	Dr	....	30.29	8- 6-58	S	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					LAKE COUNTY--Continued								
107-51 (Cont.)													
2ada	J. Orton	520	2	Dr	1955	120	8- 7-58	D,S	..	SS	.....	2,640	Water is alkaline.
2cbd	H. Gulstine	65	2.5	Dr	....	....	....	S	..	S	.....	2,930	Do.
2ccc	Mrs. R. Dyce	65	24	Dr	1915	51.41	8- 6-58	S	48	S	.....	.....	Water contains iron.
2dda	W. Orton	60	24	Dr	1940	25	8- 7-58	S	..	G	.....	.....	
3aad	Mrs. R. Dyce	20	20	Dr	....	11.82	8- 7-58	D	..	S	.....	.....	
3abb	S. Dak. Geol. Survey	29	..	Dr	1958	12	7-14-58	T	..	...	.....	.....	Test hole 85.
3cbc	...do...............	24	..	Dr	1958	7	7-14-58	T	..	...	.....	.....	Test hole 84.
3ccc	D. King	15	36	Dr	....	11.70	8- 7-58	D,S	50	G	.....	.....	
5cdd	J. Erickson	261	2	Dr	....	115	8- 7-58	S	48	S	.....	2,130	Water is alkaline. Well is finished with sand point.
6aaa	O. Aukschun	200	2	Dr	....	....	....	S	49	S	.....	2,150	Water contains iron. Well is finished with sand point.
6ddd	G. Gerling	250	2.5	Dr	1958	170	1958	S	49	S	.....	2,390	Well is finished with sand point.
7add	M. Kline	288	2.5	Dr	1954	....	....	S	..	S	.....	.....	Well is finished with sand point.
8aba	W. Skyberg	61	22	Dr	....	46.00	8- 7-58	S	..	...	.....	.....	
9aaa	R. Phelps	17.5	30	..	....	16.21	8- 8-58	D,S	48	G	.....	.....	
9cbd	Rutland Consolidated School.	11	..	Dr	....	8.62	8- 7-58	PS	..	G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					LAKE COUNTY--Continued								
107-51 (Cont.)													
9cca	T. Kehler	12	20	Dr	....	9.89	8- 5-58	D,S	..	G	.....	.....	Chemical analysis in table 5.
10bbc	F. Peck	11	48 x 20	Du	....	10.40	8- 8-58	D	..	G	.....	.....	
10ccd	M. Pickard	72	..	Dr	1946	40	8- 7-58	D,S	..	S	.....	.....	Water contains iron.
10dda	L. Lampson	95	2.5	Dr	1956	.....	....	D,S	48	S	.....	2,880	Water contains iron. Well is finished with sand point.
11aaa	Schwartz	80	2	Dr	1957	40	8- 7-58	S	..	S	.....	2,480	Well is finished with sand point.
11dcc	O. Leighton	90	4	Dr	1941	.....	....	S	..	S	.....	3,190	Well is finished with sand point.
12adb	V. Pickard	62	24	Dr	....	29.60	8- 6-58	D,S	..	...	.....	.....	
12cbc	F. Westall	67	24	Dr	....	23.21	8- 6-58	D,S	..	...	.....	.....	Water is alkaline; contains iron.
13abb	W. Kamper	200	..	Dr	....	.....	....	S	..	S	.....	2,790	Water is alkaline; contains iron. Well is finished with sand point.
14abc	H. Petheran	594	2	Dr	1933	.....	....	D,S	51	SS	.....	3,000	Water contains iron.
14bab	Unknown	64.5	16	Dr	....	49.10	8-12-58	S	..	...	.....	.....	
14ccc	P. Marquart	67.5	24	Dr	....	29.40	8- 5-58	S	48	...	.....	.....	
15aaa	W. Nicholson	241	2.5	Dr	1927	.....	....	O	48	S	.....	2,370	Well is finished with sand point.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					LAKE COUNTY--Continued								
107-51 (Cont.)													
15bbc	T. Hunter	83	24	Dr	1956	40	7-29-58	D,S	..	S	.....	.....	Water is alkaline.
15ccd	F. Miller Estate	620	2	Dr	....	300	1955	D,S	50	SS	.....	3,040	Do.
15ddd	J. Moen	265	2	Dr	1943	125	8- 7-58	S	..	S	.....	4,270	Well is finished with sand point.
16bba	T. Heyer	29.0	18	Dr	1956	13.39	8- 5-58	S	49	C	.....	.....	Water is alkaline.
17aaa	D. Carper	23.0	24	Dr	1955	16.70	8- 5-58	S	..	G	.....	.....	Do.
18cdd	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-14-58	T	..	...	.....	.....	Test hole 82.
18dad	A. Wagner	22	36	Dr	....	18	8-12-58	S	47	G	.....	.....	
19add	M. Hanneman	23	26	Dr	1953	14	8- 5-58	S	49	S	.....	.....	Well can be pumped dry.
19bbb	S. Dak. Geol. Survey	9	..	Dr	1958	Dry	8-13-58	T	..	...	.....	.....	Test hole 80.
20bbb	...do...............	14	..	Dr	1958	10	8-14-58	T	..	...	.....	.....	Test hole 83.
20ccb	W. McGrath	14	60 x 60	Du	1946	10.40	8- 5-58	S	50	G	.....	.....	Water is soft.
21bbc	W. Devaney	65	24	Dr	1918	40	8- 5-58	D,S	48	G	.....	.....	Water is alkaline; contains iron.
21cca	R. Woldt	84.0	24	Dr	....	16.80	8- 5-58	S	..	...	.....	.....	
21dcd	A. Renaas	65	28	Dr	1918	50	8- 5-58	S	48	...	.....	.....	Water is alkaline; contains iron. Well can be pumped dry.
22bba	P. Thode	323	3	Dr	....	150	8- 5-58	S	49	S	.....	2,710	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
LAKE COUNTY--Continued													
107-51 (Cont.)													
22cdc	H. Woldt	715	4	Dr	....	50	8- 5-58	D,S	..	SS	.....	2,770	
23bab	T. Moen	615	2	Dr	....	150	8- 5-58	D,S	..	SS	.....	2,230	Water contains iron.
24cdc	G. Welbon	66.0	24	Dr	1943	18.80	8- 5-58	S	..	...	.....	.....	
24dda	L. Clarksen	66.5	24	Dr	....	48.71	8- 7-58	S	..	...	.....	.....	
25baa	R. Molskness	250	2	Dr	....	160	8- 6-58	S	49	S	.....	2,710	Water contains iron. Well is finished with sand point.
25ccc	J. Gehrels	80	20	Dr	1933	28.80	8- 1-58	S	48	...	.....	.....	
26abc	K. Ellens	70	24 to 18	Dr	1956	63.70	8- 5-58	D,S	..	C	.....	.....	Water contains iron.
26bbc	H. Westman	92	18	Dr	1956	44.40	8- 5-58	D,S	..	S	.....	.....	
26ccb	L. Bloker	68.0	18	Dr	1932	24.30	8- 5-58	S	..	S,C	.....	.....	Do.
26ddd	R. Nicholson	600	3	Dr	....	.....	....	S	50	...	.....	3,120	Do.
27aaa	E. Gehrels	269	2.5	Dr	1940	.....	....	S	..	S	.....	3,100	Water is alkaline. Well is finished with sand point.
27cdc	Unknown	72.0	16	Dr	....	52.60	8- 1-58	S	..	...	.....	.....	
28aad	R. Johnson	550	..	Dr	1938	175	8- 7-58	S	50	SS	.....	3,130	Water contains iron.
28bbb	R. Woldt	68.0	20	Dr	....	41.90	8- 5-58	...	..	...	.....	.....	Well can be pumped dry.
28cdd	C. Alrerson	607	2	Dr	1944	135	8- 1-58	S	50	SS	.....	3,150	Water is alkaline.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
107-51 (Cont.)													
29bba	V. Schultz	400	2.5	Dr	1918	150	8- 5-58	S	48	...	.....	2,610	Water contains iron.
31dcd	W. Lafrentz	94	..	Dr	1943	32.90	8- 5-58	D,S	..	C	.....	.....	Hardness 1,027 ppm.
32aca	E. Wagness	44.0	20	Dr	....	9.20	7-31-58	S	..	C	.....	.....	
32dad	E. Kurtz	70	24	Dr	....	25	7-31-58	D,S	..	C	.....	.....	Water contains iron.
33dab	C. Bloker	80	20	Dr	1954	30.70	7-30-58	S	..	...	.....	.....	Water is alkaline. Well can be pumped dry.
34bdc	M. Maas	250	4	Dr	....	.....	....	D,S	48	S	.....	2,000	Well is finished with sand point.
34cdd	H. Hess	570	2	Dr	1954	80	7-31-58	D,S	..	SS	.....	3,010	Hardness 342 ppm.
34daa	V. Lothrod	650	2	Dr	1948	160	7-31-58	D,S	51	...	.....	3,040	Water is alkaline; contains iron.
35cbc	B. Boellaard	190	2	Dr	1952	60	7-31-58	S	48	G	.....	2,575	Water contains iron.
36cbc	Unknown	..	12	Dr	....	13.80	7-31-58	O	..	...	.....	.....	
36daa	R. Andersen	304	2.5	Dr	1954	.....	....	S	49	S	.....	3,060	Well is finished with sand point.
36ddc	W. Wright	32	20	Dr	....	24.30	7-31-58	S	48	C	.....	.....	
107-52													
1ddd	W. Stampe	627	2	..	1926	137.87	12-21-59	D,S	..	SS	.....	.....	
2bbb	B. Klassy	29.6	15	..	....	6.03	12-18-59	N	..	S,G	.....	.....	
3daa	M. Thompson	715	2	Dr	1942	.....	....	D,S	..	SS	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
107-52 (Cont.)													
4dcc	M. Downs	200	2	..	1953	.....	....	D,S	..	SS	.....	.....	
5ada	G. Downs	13.4	18	Du	....	11.14	12-18-59	D,S	..	S,G	.....	.....	
5cbc	E. Hyland	600	2.5	Dr	1948	180	12-17-57	D,S	..	SS	.....	.....	
8bcc	D. McGowan	270	4	Dr	1918	15	12-18-59	S	..	SS	.....	.....	
9bba	W. Whalen	8.4	26	Du	....	7.44	12-18-59	S	..	S,G	.....	.....	
9ccd	E. Gross	165	2	Dr	....	.....	....	S	..	SS	.....	.....	Well is finished with sand point.
10adb	T. Piearson	13.3	42	..	....	7.31	12-18-59	S	..	S,G	.....	.....	
10bcb	E. Hanneman	142	4	..	....	60	12-18-59	D,S	..	SS	.....	.....	
12dac	E. Halseth	23.3	22	..	....	11.57	12-21-59	S	..	S,G	.....	.....	
13abd	G. Carper	15.7	30	..	....	15.04	12-21-59	S	..	S,G	.....	.....	
13ccd	M. Querness	15.9	20	..	....	14.85	12-21-59	S	..	S,G	.....	.....	
14bcb	E. Dragseth	64.9	..	Dr	....	55.41	12-21-59	S	..	T	.....	.....	
16ddd	L. Crow	660	2	Dr	1951	.....	....	D,S	..	SS	.....	.....	
22ccc	H. Peters	200	2	..	....	.....	....	D,S	...	SS	.....	.....	
23aad	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-13-58	T	..	...	.....	.....	Test hole 81.
23daa	Mrs. J. Larson	52.5	18	Dr	1943	29.91	12-22-59	D,S	..	S,G	.....	.....	
24aab	C. Graff	30.7	26	Dr	1959	20.50	12- 2-59	D,S	..	S,G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
108-51													
1bbb	G. Pirlet	25	26	Du	....	20.17	8- 8-58	D,S	..	S	.....	.....	
1cbc	H. Nagel	14	26	Du	....	12.88	8- 8-58	S	..	...	.....	.....	
1dbd	R. Clark	35	30	Du	....	17	8- 8-58	D	..	S	.....	.....	
2aba	L. Elrerod	27	26	Du	....	22.94	8- 8-58	S	..	S	.....	.....	
2bab	F. Gednalske	270	3	Dr	....	.....	....	S	..	S	.....	2,790	
2cc	H. Bortnem	70	20	Du	1955	49.00	8- 7-58	S	..	G	.....	.....	Water has limy taste.
3bcb	S. Anundson	38	20	Du	....	15.09	8- 7-58	S	..	...	.....	.....	
3dda	E. Bortnem	617	3	Dr	....	125	8- 7-58	S	50	SS	.....	2,660	Water has limy taste.
4abb	O. Anderson	200	20	..	1950	.....	....	S	..	S	.....	3,820	Do.
4cc	H. Johnson	58	20	..	1953	35.82	8- 7-58	D,S	..	...	.....	.....	Do.
4daa	S. Anundson	42	18	Du	....	16.87	8- 7-58	D,S	..	S	.....	.....	
5add	E. Alguire	305	2	Dr	....	.....	....	D,S	50	S	.....	3,580	
5bad	M. Wosje	180	3	Dr	....	.....	....	S	50	S	.....	1,920	Water has limy taste.
5cbc	E. Hamilton	300	2.5	Dr	1951	.....	....	D,S	..	...	.....	2,410	Do.
6dcc	K. Murfield	300	2.5	Dr	1931	.....	....	S	..	S	.....	2,340	Do.
7abb	...do......	150	2.5	Dr	1956	.....	....	S	..	S	.....	1,820	
8bdd	P. Steffen	320	2	Dr	....	.....	....	S	50	S	.....	2,780	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
108-51 (Cont.)													
8caa	W. Steffen	12	24	Du	....	1.50	8- 7-58	S	..	G	.....	.....	
8cdb	...do.....	180	2	Dr	....	.....	....	S	50	...	.....	2,670	Water has limy taste.
9add	H. Olson	96	24	Du	....	82.97	8- 7-58	S	..	G	.....	.....	Do.
9cda	G. Borgard	650	2	Dr	1954	.....	....	S	50	SS	.....	2,600	Do.
10bba	L. Havrevold	90	2	Dr	1955	.....	....	S	50	S	.....	2,070	
10cbc	E. Elverud	300	2	Dr	....	.....	....	S	49	...	.....	2,140	
11aba	C. Simons	600	2	Dr	1940	.....	....	S	..	SS	.....	2,610	Water contains iron; has limy taste.
11baa	J. Bortnem	260	2	Dr	1926	.....	....	S	51	S	.....	3,560	Water has limy taste.
12aaa	V. Dahl	160	2	Dr	....	50	8- 7-58	D,S	50	...	.....	1,930	
13ada	O. Bortnem	90	24	Du	1943	75	8- 7-58	S	..	S	.....	.....	
13bbc	T. Estergaard	225	2	Dr	1954	.....	....	D,S	50	G	.....	1,890	
13ddc	M. Trygstad	90	5	Dr	....	30	8- 8-58	D,S	52	...	.....	1,350	
14bdd	R. Brazell	64	18	Du	....	62	8-12-58	D,S	..	S	.....	.....	Water is alkaline.
14dad	M. Blake	68	24	Du	....	58.63	8- 8-58	S	..	...	.....	.....	Water has limy taste.
15aba	M. Bortnem	58	24	Du	....	28	8- 7-58	S	..	...	.....	.....	Do.
15bbb	L. Clark	700	2	Dr	1937	.....	....	S	..	SS	.....	2,570	Do.
15cbb	E. Overskei	125	3	Dr	1900	.....	....	S	..	...	.....	3,650	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
108-51 (Cont.)													
16ada	Opdahl Bros.	125	3	Dr	1900	.....	....	D,S	..	S	.....	2,060	Water has limy taste.
16bbc	L. Holte	30	24	Du	....	15	8- 8-58	S	..	S	.....	.....	Water has unpleasant taste.
16ccd	C. Fuskerud	280	2	Dr	1950	.....	....	S	50	S	.....	2,620	Water has limy taste.
16dcd	L. Overskei	200	..	Dr	1953	.....	....	D,S	50	...	.....	2,835	
17adc	L. Holte	25	24	Du	....	21	8- 8-58	D,S	..	S	.....	.....	Well goes dry at times.
17bcb	C. Strand	735	2	Dr	....	.....	....	D,S	51	SS	.....	2,660	
19acb	G. Larson	335	2	Dr	1950	.....	....	D,S	..	S	.....	2,110	
20abd	O. Olson	22	30	Du	....	16	8-12-58	S	..	G	.....	.....	Water has limy taste.
20ccd	A. Ingemansen	280	2.5	Dr	1908	.....	....	S	50	S	.....	2,300	Water is not potable.
21bbb	Christensen Bros.	9	48	Du	....	8.84	8-11-58	N	..	...	.....	.....	
21dad	L. Holte	200	2	Dr	....	.....	....	D,S	..	S	.....	2,360	Water has limy taste.
22abc	S. Schult	150	2.5	Dr	1900	.....	....	S	50	S	.....	2,020	Do.
22bbc	Mrs. J. Tenning	600	2	Dr	....	.....	....	S	50	SS	.....	2,610	Do.
22cdc	G. Albertson	45	28	Du	1951	31	8-11-58	S	..	S	.....	.....	Do.
24aba	F. Miller	50	30	Du	1948	30	8-11-58	S	..	G	.....	.....	
24bbb	E. Elverud	35	24	Du	....	19.38	8-11-58	S	..	G	.....	.....	Do.
24cab	Mrs. H. Trygstad	18	36	Du	1908	12	8-11-58	D,S	..	S	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
108-51 (Cont.)													
25aad	C. Olson	200	..	Dr	1954	.....	....	D,S	50	S	.....	1,180	Hardness 582 ppm; water is alkaline. Well is finished with sand point.
25abb	R. Gross	28	20	Dr	....	18.20	8-11-58	S	...	C	.....	.....	Water has limy taste.
25cbc	H. Gilman	28	16	Dr	1905	22	8-12-58	D,S	48	S	.....	.....	Water contains iron.
25cdd	F. Schlimmer	32	2	Dr	....	20	8- 8-58	S	..	C	.....	.....	Water has clayey taste and disagreeable odor.
25dab	C. Weiland	67	24	Dr	1958	25.41	8-12-58	D,S	48	S	.....	.....	
26aad	S. Dak. Geol. Survey	24	..	Dr	1958	Dry	8-14-58	T	..	...	.....	.....	Test hole 87.
26baa	M. Albertson	20	24	Dr	....	18.60	8-12-58	S	48	...	.....	.....	Water contains iron.
26cdc	A. Delmage	28	24	Dr	1957	21.41	8- 8-58	D	..	G	.....	.....	
26dca	E. Peterson	37	30 to 16	Dr	1946	9.29	8- 8-58	S	48	C	.....	.....	Water has limy taste and disagreeable odor.
27aac	J. Burkard	250	2.5	Dr	....	200	8-11-58	D,S	49	S	.....	2,355	Well is finished with sand point.
27bbd	G. Fuckcreed	180	2.5	Dr	....	.....	....	S	49	S	.....	2,105	
27dab	L. Johnson	210	2	Dr	....	175	8-11-58	S	48	S	.....	1,905	
28aad	H. Schocker	170	3	Dr	1957	.....	....	D,S	49	S	.....	.....	
28bab	E. Christensen	108	6	Dr	1910	92.41	8-11-58	S	48	...	.....	2,460	Water contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					LAKE COUNTY--Continued								
108-51 (Cont.)													
28dba	P. Spolaws	250	2.5	Dr	....	.....	....	S	48	S	.....	2,160	Water is alkaline; contains iron.
29abb	A. Tweet	650	2.5	Dr	1947	400	8-11-58	S	52	S	.....	2,470	Water contains iron.
29bbb	I. Ingemansen	280	2.5	Dr	....	.....	....	D,S	50	S	.....	2,650	Water contains iron; well is finished with sand point.
30dac	B. Graff	75	..	Dr	....	50	8-11-58	S	..	...	.....	.....	Water is alkaline.
31daa	D. Kapp	17	24 to 20	Dr	....	10.89	8- 8-58	S	..	S	.....	.....	
32bbd	A. DePew	228	2	Dr	1948	128	8-12-58	S	48	G	.....	2,210	
32ccd	D. Gulstine	160	2.5	Dr	1942	100	8-12-58	S	48	S	.....	2,340	
32dcd	C. Odegard	70	2	Dr	....	40	8- 8-58	S	49	S,G	.....	2,130	Water is alkaline; contains iron.
33bcb	T. Volby	70	2	Dr	....	.....	....	D,S	..	S	.....	2,170	Water is alkaline; contains iron. Well is finished with sand point.
33cad	H. Volby	60	2	Dr	....	60	8- 8-58	D,S	50	S	.....	2,350	Water contains iron. Well is finished with sand point.
34cda	H. & E. Nicholaison	19	24	Dr	1918	18.50	8-12-58	D,S	..	G	.....	.....	
34dab	E. Hammer	20	30	Du	....	14.30	8- 8-58	S	49	G	.....	.....	
35baa	F. Spade	21.5	36	Du	....	19.82	8- 8-58	D,S	49	G	.....	.....	
35bab	S. Dak. Geol. Survey	34	..	Dr	1958	19	8-14-58	T	...	...	.....	.....	Test hole 86.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						LAKE COUNTY--Continued							
108-51 (Cont.)													
35dbb	E. Schlimmer	52	24	Dr	1954	32.10	8- 8-58	S	..	S,C	.....	.....	
36bad	J. Olson	32	20	Dr	1951	13.40	8- 8-58	D,S	..	C,G	.....	.....	Water is alkaline.
						MOODY COUNTY							
106-47													
5abc	F. McKellips	355	6	Dr	....	111.20	7-22-58	S	49	...	.....	.....	Water contains iron.
5ddc	L. Schmidt	190	6	Dr	1928	20	7-23-58	S	..	S	.....	.....	Do.
6ddc	D. Duncan	180	6	Dr	1905	110	7-23-58	S	..	SS	.....	.....	Do.
7bbb	W. Greenhoff	250	6	Dr	1918	.....	....	S	..	...	.....	.....	
8bbc	F. Duncan	287	6	Dr	1949	100	1949	S	50	S,C	.....	.....	Do.
9bcc	D. Ekern	130	6	Dr	1908	65	1957	D,S	50	...	.....	.....	Do.
106-48													
1ddd	R. Studeman	300	6	Dr	1918	75	7-23-58	S	49	...	.....	.....	Do.
2dcc	C. Daily	47.0	26	Dr	....	17.75	7-23-58	D	..	...	.....	.....	Well can be pumped dry.
4daa	S. Staunderkraus	165	6	Dr	....	125	7-23-58	...	..	...	.....	.....	
5bcd	F. Johnson	17.4	40 x 36	Du	....	14.10	7-25-58	S	..	S	1,520	.....	Well is finished with sand point.
6dcd	R. Ehrichs	23.0	24	Dr	1945	20.91	7-25-58	D	..	S	1,516	.....	Well can be pumped dry.
6ddd	W. Wicks	16	2	Dr	1936	13	7-25-58	D	..	S	1,512	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
MOODY COUNTY--Continued													
106-48 (Cont.)													
7adc	M. Herrick	15	24	Dr	....	9	7-25-58	S	..	S	1,506	.....	Water is soft.
7bbb	R. Jackson	23	..	Dr	....	22.50	7-25-58	D,S	..	S	1,517	.....	
7cbb	City of Egan	25	120	Du	1900	16.91	7-28-58	PS	..	S,G	1,513	.....	Chemical analysis in table 5.
10aab	B. Rosheim	125	6	Dr	....	50	7-23-58	S	49	...	.....	.....	Water contains iron.
10bbb	E. Babcock	180	4	Dr	1933	178	7-22-58	S	..	S	.....	.....	Water is alkaline; contains iron.
11bbb	R. Studeman	290	6	Dr	1947	16	1947	S	..	...	.....	.....	
12baa	B. Dailey	420	5	Dr	1914	150	7-23-58	S	50	S	.....	.....	Water is alkaline; contains iron.
106-49													
1add	W. Jackson	190	6	Dr	1910	40	7-25-58	S	49	S,G	1,556	.....	Chemical analysis in table 5.
1bcc	L. Hutton	460	6	Dr	1904	80.70	7-25-58	S	49	...	.....	.....	Water is alkaline.
3ddd	F. Fromberg	165	6	Dr	1914	20	7-30-58	S	48	...	.....	3,300	Water is alkaline; contains iron.
4bbb	M. Brandsma	186	6	Dr	1913	96	7-31-58	S	48	S	.....	3,100	Water is alkaline; contains iron.
4ccc	J. Geraets	200	6	Dr	....	.....	....	S	49	S	.....	2,650	Water contains iron.
4ddd	Hoisington	300	4	Dr	....	.....	....	S	..	...	.....	2,780	Water is alkaline.
5bab	A. Rude	328	2	Dr	1953	.....	....	D,S	..	S	.....	2,850	Water is alkaline; contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
106-49 (Cont.)													
5ccd	L. Anderson	175	5	Dr	1935	75	7-31-58	D,S	..	G	.....	2,860	Water is alkaline.
5ddc	M. Stahly	170	4	Dr	....	.....	....	D,S	49	S,C	.....	2,600	Water contains iron. Well is reported to pump sand.
7add	W. Mason	60	24	Dr	....	21.10	7-30-58	D,S	..	C	.....	.....	Water is alkaline.
8aad	L. Burkard	500	2	Dr	1950	.....	....	S	..	...	.....	2,180	Do.
8bab	G. Mines	39.5	24	Dr	....	11.40	7-30-58	D,S	..	G	.....	.....	Do.
9ada	L. Martinson	400	6 to 3	Dr	1948	110	7-30-58	S	48	C	.....	2,270	Water is alkaline; contains iron.
11aad	B. Bim	..	6	Dr	1934	25	7-30-58	S	49	...	.....	2,860	Water is alkaline; contains iron.
11cab	L. Thielsen	183	4	Dr	1943	80	7-30-58	S	..	S	.....	2,620	Water is alkaline; contains iron.
12aad	R. Ehrichs	25.5	18	Dr	....	22.50	7-25-58	O	..	...	1,545	.....	Water is soft. Well is finished with sand point.
106-50													
1bbb	J. Hanson	194	2	Dr	1945	.....	....	S	49	G	.....	2,200	
1dda	H. Miles	28.5	20	Dr	....	13.20	7-30-58	S	..	S	.....	.....	Water is alkaline. Well can be pumped dry.
2bbb	F. Richter	35	24	Dr	....	14.40	8- 4-58	D	49	S,C	.....	.....	
3aaa	W. Richter	37	12	Dr	....	17.30	8- 4-58	S	48	S,G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
106-50 (Cont.)													
3bcc	M. Thompson	320	3	Dr	....	150	8- 6-58	S	..	S	.....	.....	
3ccc	T. Hammer	90	24	Dr	....	9.10	7-29-58	D,S	47	C	.....	.....	Water is alkaline.
4aaa	L. Schmidt	60	24	Dr	1954	30	7----57	D,S	..	S	.....	.....	
4bbb	H. Gordon	70	24	Dr	....	19.75	8- 4-50	D,S	48	...	.....	.....	Water contains iron.
4cdc	C. Merges	45	..	Dr	....	20	7-29-58	S	50	...	.....	.....	Do.
5bcc	D. Zwart	65	20	Dr	1958	30	5-10-58	D,S	..	S	.....	.....	Well can be pumped dry.
5dcc	Strangeland	84	26	Dr	....	27.35	7-30-58	D	..	...	.....	.....	Water contains iron.
6aaa	C. Dilly	72	24	Dr	1953	22	1953	D,S	..	S,G	.....	.....	
6cdc	R. Zenner	270	..	Dr	1929	150	7----58	D,S	49	S	.....	2,380	Do.
7bca	Hillan	306	4	Dr	....	100	1917	S	..	S	.....	2,630	
8bcb	Mrs. M. Kringen	50	24	Dr	....	15	7-20-58	D,S	..	C	.....	.....	Water is alkaline. Well can be pumped dry.
9bbb	A. Schmidt	31.5	30	Dr	....	10.80	7-30-58	D,S	47	...	.....	.....	Water is alkaline. Well can be pumped dry.
10aaa	Mrs. E. Kriens	30	24	Dr	....	26.40	7-29-58	D,S	48	...	.....	.....	Water is alkaline.
11aac	H. Brendsel	39.0	24	Dr	....	11.90	7-29-58	D,S	47	...	.....	.....	
12aba	C. Wedell	260	2	Dr	....	.....	....	S	50	...	.....	2,920	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-47 3bbb	J. Sutton	33	24	Dr	1945	19.12	7- 7-58	D	58	...	.....	.....	
3cca	W. Halter	135	6	Dr	1918	114	7-16-58	S	47	...	.....	.....	
4abcc	L. Bisson, Jr.	40	36	Dr	....	19.49	7- 7-58	O	..	...	.....	.....	Water is not potable.
4bbcd	M. Barron	26.9	24	Dr	....	19.83	7- 7-58	D,S	..	...	.....	.....	Water is alkaline. Well goes dry at times.
4ccb	E. Anderson	300	6	Dr	1939	200	7-17-58	S	..	SS	.....	.....	Water is corrosive. Well can be pumped dry.
4ddc	Burggraff	400	6	Dr	1939	140	7-17-58	D,S	51	SS	.....	.....	
5ccc	Mrs. E. Kreber	290	2.5	Dr	1936	125	7-18-58	S	..	SS	.....	.....	Water contains iron.
6abc	W. Meyer	14	48	Du	....	7.29	7- 7-58	S	..	....	.....	.....	
8ada	K. Klitzke	280	4	Dr	1926	175	7-17-58	S	48	S	.....	.....	
8ccc	E. Lee	165	5 to 4	Dr	1915	110	7-18-58	...	48	S	.....	.....	
10cca	H. Gilmore	20	21.5	Dr	....	18.05	7-17-58	D,S	..	G	.....	.....	
15bcc	F. Reynolds	20.5	30	Dr	....	10.89	7-17-58	D,S	..	...	.....	.....	
15cdc	Thielson	32.0	27 to 20	Dr	....	17.95	7-22-58	D,S	..	...	.....	.....	
16bab	R. Lee	13.3	26 to 20	Dr	....	11.41	7-17-58	D,S	..	G	.....	.....	
18aab	F. Kreber	235	6	Dr	1950	100	1950	S	..	SS	.....	.....	Hardness 2,140 ppm; water contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-47 (Cont.)													
20aaa	W. Weigel	18.2	32 to 18	Dr	1946	4.70	7-21-58	D	..	S	.....	.....	Water is soft.
20bba	C. Estergaard	300	6	Dr	1938	60	7-21-58	S	49	SS	.....	.....	Water is alkaline; contains iron.
20bca	A. McGlone	18	20	Dr	....	16.11	7-21-58	D,S	..	...	.....	.....	Chemical analysis in table 5.
21adb	R. Strenge	35	30	Dr	....	18.20	7-21-58	D,S	49	...	.....	.....	
21bcc	W. Weigel	12	22 x 60	Du	1903	11.72	7-21-58	D,S	..	S,G	.....	.....	
21ccc	F. Kuehl	18.2	15	Dr	....	14.30	7-22-58	O	..	S,G	.....	.....	Water is alkaline.
22ccb	G. Mogle	27	18	Dr	....	9.25	7-21-58	D	49	...	.....	.....	
27ccd	E. Pearson	19.4	36	Dr	....	6.45	7-23-58	D,S	49	...	.....	.....	
28bcb	G. Carlson	30.5	18	Dr	....	19.45	7-21-58	O	49	...	.....	.....	
29cdd	L. Bisson	350	6	Dr	....	50	7-22-58	D,S	..	SS	.....	.....	Water is alkaline; contains iron.
30ccb	H. Taylor	288	5	Dr	....	125	7-22-58	S	..	S	.....	.....	Water contains iron.
31ccc	H. Keating	170	4	Dr	....	120	7-22-58	S	..	S	.....	.....	Water is alkaline; contains iron.
32daa	J. Miller	208	6	Dr	1957	100	1957	S	49	G	.....	.....	Water is alkaline; contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-48													
1aba	W. Lend	170	6	Dr	1924	40	7-18-58	S	48	SS	.....	.....	Water is alkaline; contains iron.
1bbb	E. Kramer	53.0	60 x 60	Dr	....	45.10	7-24-58	S	..	...	.....	.....	Well can be pumped dry.
1cbb	G. Dunlan	185	6	Dr	1905	85	7-17-58	S	49	SS	.....	.....	
1ddc	C. Babcock	125	6	Dr	1928	.....	....	S	..	SS	.....	.....	Water is alkaline; contains iron.
3ada	V. Dusek	160	6	Dr	1925	80	7-17-58	S	49	...	.....	.....	Water is alkaline; contains iron.
3ddd	H. Christensen	16	18	Dr	....	12.80	7-18-58	S	49	...	.....	.....	
4cbc	C. Gothier	20	24	Dr	1925	12.31	7-17-58	D	..	S,G	1,563	.....	Water is soft.
5abd	B. Bennett	23.7	23 to 18	Dr	....	13.10	7-17-58	D,S	..	...	1,585	.....	Do.
5dbc	S. Dak. Geol. Survey	34	..	Dr	1958	16	7-28-58	T	..	...	1,551	.....	Test hole 35.
5dcc	...do...............	54	..	Dr	1958	12	7-28-58	T	..	...	1,549	.....	Test hole 34.
6aba	R. Jones	244	4	Dr	1918	.....	....	S	49	S	.....	3,100	
6cbc	W. Noll	200	5	Dr	....	.....	....	S	50	...	.....	3,580	
7baa	M. Fargen	300	4	Dr	1903	.....	....	S	50	...	.....	3,590	
7ccc	Mrs. A. Tollersfield	200	5	Dr	....	.....	....	S	49	...	.....	2,920	
7dab	J. Headrick, Sr.	227	2	Dr	1916	.....	....	S	50	SS	.....	3,100	
8dbc	R. Headrick	200	4.5	Dr	1950	100	7-28-58	S	..	G	1,622	.....	Water contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-48 (Cont.)													
9baa1	L. McMahon	56	30	Dr	....	37.42	7-18-58	D	49	S	1,567	.....	Water contains iron.
9baa2	...do.....	185	2	Dr	1936	5	7-18-58	S	50	G	1,566	.....	
9bdd	S. Dak. Geol. Survey	44	..	Dr	1958	9	7-28-58	T	..	...	1,554	.....	Test hole 38.
9dac	V. Weston	14	12	Du	....	9.40	7-16-58	D	..	S,G	1,550	.....	Chemical analysis in table 5.
10cbc	F. Lovejoy	16.0	..	Dr	....	13.89	7-24-58	O	..	...	1,558	.....	
10ccc	S. Dak. Geol. Survey	24	..	Dr	1958	11	7-29-58	T	..	...	1,550	.....	Test hole 39.
11bba	Rice Bros.	128	6	Dr	1911	60	7-18-58	S	..	S	.....	.....	Water is alkaline.
11dad	A. Green	200	6	Dr	1918	12	7-18-58	D,S	48	...	.....	.....	Water contains iron.
12bab	Unknown	15.0	..	Dr	....	8.70	7-16-58	S	..	...	.....	.....	Well has been abandoned.
12dad	A. Rude	212	4	Dr	1943	142	7-18-58	D,S	48	SS	.....	.....	
12dcc	L. Lee	200	6	Dr	....	100	7-22-58	S	48	G	.....	.....	Water contains iron.
13bbb	E. Evans	13.0	14.5	Dr	....	6.30	7-18-58	S	49	C	.....	.....	
13bcc	A. Duncan	30.0	20	Dr	....	15.45	7-22-58	D,S	..	...	1,538	.....	Water is alkaline.
14ddd	S. Dak. Geol. Survey	29	..	Dr	1958	15	7-30-58	T	..	...	1,531	.....	Test hole 42.
15baa	...do...............	34	..	Dr	1958	11	7-31-58	T	..	...	1,548	.....	Test hole 40.
15ccc	M. Handberg	300	..	Dr	1948	70	7-28-58	S	49	...	.....	2,250	Water contains iron.
15dda	H. Kuehl	25.0	26	Dr	1946	24.10	7-24-58	S	..	G	1,553	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-48 (Cont.)													
16bcc	E. Carender	23.0	18	Dr	....	7.00	7-28-58	D	..	...	.....	.....	
17ada	W. Headrick	218	2	Dr	....	100	7-28-58	S	49	G	.....	2,770	Water is alkaline; contains iron.
17dcc	E. Carlson	185	5	Dr	....	100	7-28-58	S	50	SS	.....	.....	Water contains iro
18aad	C. Lee	150	6	Dr	1918	50	7-24-58	S	53	...	.....	2,350	
18ddd	Rile Bros.	158	6	Dr	....	60	7-18-58	S	..	S	.....	.....	
19baa	J. Bobbs	368	6	Dr	1918	90	7-24-58	S	50	S	.....	3,570	
19dda	Mrs. J. Keck	291	6	Dr	....	.....	....	S	50	...	.....	2,760	
20ccd	D. Headrick	14.5	36	Dr	....	13.30	7-28-58	D,S	..	S	1,531	.....	
21bdd	C. Schyan	47.5	6	Dr	....	42.25	7-28-58	S	50	S	.....	2,050	
21dac	Flandreau Indian School	29.2	42 to 12	Dr	....	5.17	10-14-55	PS	..	S,G	1,518	.....	Well produced 263 gpm, drawdown 6 fe in 1955.
22cab	L. Rommereim	62.0	24	Dr	....	11.30	7-24-58	S	..	...	1,515	.....	Water contains iro
22cdc	City of Flandreau	33	60 to 52	Dr	1956	9	8-12-58	PS	..	G	1,522	.....	Hardness 685 ppm.
23aad	T. Wakeman	12	18	Dr	1939	11.70	7-22-58	D	55	S,G	.....	.....	Water is alkaline; contains iron.
23daa	S. Dak. Geol. Survey	24	..	Dr	1958	11	7-29-58	T	..	...	1,529	.....	Test hole 43.
23bcc	W. Thom	68.0	26	Dr	....	30.50	7-25-58	S	..	G	1,544	.....	Water contains iro
24bcc	O. Hanson	16.0	28	Dr	1940	13.80	7-21-58	O	..	S	1,530	.....	Water is alkaline.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-48 (Cont.)													
24cbb	Unknown	16.2	18	Dr	....	13.40	7-22-58	O	..	...	1,519	.....	
25abb1	Clay	222	..	Dr	....	95	7-21-58	S	49	S	.....	.....	
25abb2	...do..............	29.5	20	Dr	....	21.25	7-21-58	O	48	C	.....	.....	
26abb	R. Sayles	15.0	32	Dr	....	11.50	7-24-58	S	..	G	1,525	.....	
26baa	S. Dak. Geol. Survey	24	..	Dr	1958	12	7-31-58	T	..	...	1,522	.....	Test hole 60.
27aac	...do..............	29	..	Dr	1958	11	7-31-58	T	..	...	1,526	.....	Test hole 45.
27abb	H. Shuggerud	15	20	Dr	....	14.41	7-24-58	S	46	...	1,527	.....	
27bab1	City of Flandreau No. 1	28	300	Du	1923	.....	....	...	..	S,G	.....	.....	
27bab2	...do.............No. 2	32	48	Dr	1939	10	9- 3-59	...	..	S,G	.....	.....	Chemical analysis in table 5.
27bab3	...do.............No. 3	33	60 to 50	Dr	1956	17	8-12-58	P	..	S,G	1,522	.....	Chemical analysis in table 5.
27ccc	E. Teal	47.4	32 to 24	Dr	1915	31.70	7-23-58	D	..	C	.....	.....	Water is alkaline.
29aba	S. Dak. Geol. Survey	24	..	Dr	1958	17	7-29-58	T	..	...	1,523	.....	Test hole 46.
29bab	...do..............	31	..	Dr	1958	12	7-30-58	T	..	...	1,514	.....	Test hole 47.
29ccc	R. Hammer	14.5	35	Dr	....	0.80	7-25-58	D,S	..	...	1,513	.....	Chemical analysis in table 5. Well is finished with sand point.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-48 (Cont.)													
29ddd	F. Kappelman	45	22	Dr	....	41.81	7-25-58	O	..	S	1,548	.....	
30ccc	J. Hochausen	490	6	Dr	1948	40	7-25-58	S	51	...	.....	.....	Water contains iron.
31ccc	C. Johnson	160	6	Dr	1910	60	7-25-58	S	..	...	.....	.....	Water is corrosive.
32baa	C. Fergen	23	3	Dr	....	.....	....	D,S	50	S	1,526	.....	Water is soft.
32bab	S. Dak. Geol. Survey	29	..	Dr	1958	14	8- 7-58	T	..	...	1,526	.....	Test hole 61.
32cda	...do...............	19	..	Dr	1958	8	8-13-58	T	..	...	1,523	.....	Test hole 55.
32cdd	M. Boever	16	24	Dr	....	9.40	7-25-58	D,S	..	S	1,520	.....	Water is soft.
33dad	P. Wiebers	38.0	20 to 18	Dr	....	32.00	7-23-58	D	..	C	.....	.....	
34abb	B. Ailts	168	6	Dr	1895	135	7-28-58	S	50	C	.....	2,830	Hardness 1,798.
35ccd	C. Larson	61.5	15	Dr	....	16.30	7-23-58	D	..	...	.....	.....	
36bab	C. Rudd	298	2	Dr	1951	150	7-22-58	S	..	S	.....	.....	Water contains iron.
36bcb	H. Keating	190	2	Dr	....	180	7-22-58	S	50	S	.....	.....	Do.
107-49													
1bcc	W. Duncan	260	4	Dr	....	90	7-24-58	S	50	S	.....	3,110	
1dad	C. Milne	240	6	Dr	....	.....	....	S	49	G	.....	3,780	
3aaa	H. Drewes	410	5 to 4	Dr	1914	.....	....	S	..	...	.....	2,160	
3bbb	W. Coakley	465	2.5	Dr	1936	.....	....	S	49	SS	.....	2,380	
4bbd	Mrs. A. Hardin	300	2	Dr	1945	.....	....	S	49	S	.....	2,690	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-49 (Cont.)													
4bbd	Mrs. A. Hardin	300	2	Dr	1945	.....	....	S	49	S	.....	2,690	
4cbc	Mrs. J. Harms	280	2	Dr	....	.....	....	S	50	S	.....	2,660	
4dcc	G. Derdall	15.0	24	Du	1948	8.59	7-23-58	D,S	..	C	.....	.....	
5bab	W. Hobbie	265	4	Dr	1928	.....	....	S	49	S	.....	2,680	
5ddd	M. Johnson	22	36	Du	1940	10	7-23-58	D,S	..	C	.....	.....	
6cdc	R. Chamberlin	350	6	Dr	1933	200	7-23-58	S	50	...	.....	3,480	
6ddc	Mrs. B. Greedes	225	6	Dr	....	.....	....	S	49	S	.....	3,790	
7bbb	D. Ricken	39.6	16	Du	....	28.61	8-12-58	D,S	..	S	.....	.....	
7dda	A. Duncan	26.4	26	Du	1948	15.31	7-29-58	D,S	47	...	.....	.....	
8bbb	Mrs. J. Turek	32.1	48	Du	....	16.35	7-31-58	D,S	..	S	.....	.....	
8cdc	H. Bell	250	6	Dr	1921	72	8- 5-58	S	49	S	.....	3,790	
9aaa	Mrs. W. Martin	72.9	24	Du	1945	64.53	7-29-58	S	..	...	.....	.....	
9ddd	A. Haugen	240	6	Dr	....	.....	....	S	..	S	.....	3,650	
10aad	E. Hammer	260	4	Dr	1947	.....	....	S	48	...	.....	3,850	
10bbb	J. Dahl	240	6	Dr	1954	40	7-29-58	S	49	S	.....	3,070	
10dcc	M. Dahl	260	6	Dr	....	.....	....	S	50	...	.....	2,950	
11bcc	N. Gullickson	245	4	Dr	1908	.....	....	S	..	G	.....	3,560	
11cbb	G. Hobbie	180	6	Dr	....	.....	....	D,S	49	...	.....	4,110	Well can be pumped dry.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-49 (Cont.)													
12dda1	Mrs. D. Jensen	50	24	Du	....	12	7-31-58	D,S	..	S	.....	.....	
12dda2	...do.........	28	24	Du	....	12	7-31-58	D	..	S	.....	.....	
13ada	H. Fargen	270	6	Dr	....	.....	....	S	52	...	.....	3,380	
13ccb	Hasvald Estate	200	6	Dr	1927	.....	....	S	50	G	.....	3,690	
13dcc	M. Hasvald	248	6	Dr	1952	.....	....	S	49	S	.....	3,620	
14abb	A. Gullickson	247	4	Dr	1900	.....	....	S	50	S	.....	3,830	
14baa	Mrs. S. Snuggerud	508	2	Dr	1956	.....	....	S	49	SS	.....	2,300	
14ccd1	M. Hasvald	20.8	40	Du	....	8.30	7-30-58	D,S	..	...	.....	.....	
14ccd2	...do.........	197.5	4	Dr	....	75	7-30-58	S	..	...	.....	3,490	
15bab	O. Larson	248	6	Dr	1890	190	7-30-58	N	..	G	.....	.....	
15ccd	J. McComb	200	6	Dr	1918	.....	....	S	49	S	.....	3,610	Water has unpleasant taste.
15dcd	L. Hasvald	400	4	Dr	1954	.....	....	S	50	SS	.....	2,300	
17bbb	E. Shackelford	17.3	24	Du	....	2.16	8- 5-58	S	..	...	.....	.....	
17ccd	Mrs. J. Bartz	300	6	Dr	1928	.....	....	S	49	...	.....	3,020	Water has unpleasant taste.
18aaa	E. Shackelford	23.6	26	Du	....	4.05	8- 5-58	N	..	...	.....	.....	
18aad	...do.........	34.9	26	Du	....	20.81	8- 5-58	N	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-49 (Cont.)													
18bbb	A. Jorgensen	257	2	Dr	....	200	7-31-58	S	50	S	.....	3,490	Well is finished with sand point; is reported to pump sand.
18dcc	J. Partz	315	2	Dr	1948	.....	....	S	50	...	.....	2,740	Well is finished with sand point.
19aad	C. Nelson	30.5	18	Du	1928	23.29	8- 4-58	S	..	...	.....	.....	Well goes dry at times.
19bab	J. Athey	300	2	Dr	1941	.....	....	S	50	S	.....	2,520	Well is finished with sand point.
19ddd	L. Bennett	706	2	Dr	1956	.....	....	S	50	SS	.....	2,260	
20ada	H. Bauer	62	24	Du	1942	58	8- 5-58	S	..	S	.....	.....	
20ccd	A. Bell	300	2	Dr	1946	.....	....	S	50	...	.....	2,960	Well is finished with sand point.
21aaa	L. Haugen	236	4	Dr	1935	150	8- 5-58	S	50	G	.....	3,485	Water contains iron.
21ccc	H. Davis	300	2	Dr	1951	.....	....	S	50	S	.....	3,300	
22aaa	J. Jessen	200	6	Dr	....	.....	....	S	50	S	.....	3,630	
22dcc	B. Langan	200	4	Dr	....	.....	....	S	50	...	.....	3,680	Well can be pumped dry.
23bab	C. B. Chamberlin	476	4	Dr	1928	100	8- 5-56	D,S	..	...	.....	2,440	
23cdd	C. Chamberlin	152	6	Dr	1913	.....	....	S	50	G	.....	3,860	
23ddc	A. Bradish	180	6	Dr	....	160	8- 5-58	S	49	...	.....	3,760	
24bab	L. Jorgensen	120	4	Dr	....	.....	....	S	48	...	.....	3,690	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-49 (Cont.)													
24ccd	C. Johanson	477	4	Dr	1956	.....	....	S	49	SS	.....	2,290	
24dda	G. Waydahl	200	4	Dr	....	.....	....	S	48	...	.....	4,600	
26aab	A. Anderson	240	6	Dr	1901	.....	....	S	..	S	.....	3,850	
26ccb	Amunson Bros.	408	6	Dr	....	.....	....	S	50	...	.....	2,350	
27aad	J. Powers	92	6	Dr	....	.....	....	S	..	...	.....	3,630	Well is finished with sand point.
28bbb	R. Christiansen	280	6	Dr	....	87.47	8- 5-58	S	49	...	.....	3,440	Water contains iron.
28dda	E. Sutton	90	6	..	....	.....	....	S	50	...	.....	3,350	
29bdd	R. Tinkey	11	48	Du	....	7.50	8- 6-58	D,S	..	G	.....	.....	
29ccc	C. Youel	22	30	Du	....	16.60	8- 6-58	D,S	..	...	.....	.....	
30add	J. Burkart	34	24 to 30	Du	1940	25	8- 6-58	D,S	..	S	.....	.....	
30cdb	E. Carstensen	20	36	Du	....	17	8- 6-58	D,S	..	G	.....	.....	
31cdc	H. Luschen	11	48 to 72	Du	1954	6.29	8- 6-58	D,S	..	G	.....	.....	
31dcc	S. Kenison	12.6	48	Du	....	8.90	7-31-58	D,S	..	G	.....	.....	
32aaa	R. Munson	9	30	Du	....	6.53	8- 6-58	D,S	..	...	.....	.....	
32caa	Rentschler	28	28	Dr	....	10.80	7-30-58	O	..	...	.....	.....	
32ddb	V. Johnson	22	24	Dr	....	5.00	7-30-58	O	..	...	.....	.....	
33aaa	L. Mousel	200	4	Dr	....	.....	....	S	50	...	.....	3,560	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-49 (Cont.)													
33bbb	H. Gasper	8.2	48	Du	....	5.50	7-31-58	D,S	..	G	.....	.....	Water is alkaline.
33ccb	L. Penning	40	36	Dr	....	32.30	7-31-58	D	48	...	.....	.....	Do.
34ccd	J. Rush	220	3	Dr	....	100	7-31-58	S	..	S	.....	3,350	Water is alkaline; contains iron.
34dad	H. Birnbaum	280	8	Dr	....	40	7-31-58	S	49	SS	.....	2,290	Water is alkaline; contains iron.
35ccc	A. Pedresen	300	6	..	....	100	8-11-58	S	..	...	.....	.....	Water contains iron.
36ada	H. Claswell	290	6	Dr	....	30	7-25-58	S	..	...	.....	.....	
36cdc	A. Hutton	232	5	Dr	1918	90	1950	S	..	...	.....	.....	Water is alkaline.
107-50													
1aaa	O. Johnson	325	2	Dr	1945	160	7-23-58	N	..	G	.....	.....	
1bac	H. Olson	35	20	Du	1918	17	7-23-58	S	..	G	.....	.....	
1ccd	D. Brinker	285	2	Dr	1957	.....	....	S	..	G	.....	.....	
2bab	W. Nelsen	..	16	Du	....	37.55	7-23-58	D,S	..	...	.....	.....	
2bbd	C. Larson	20	24	Du	1956	5	7-23-58	D,S	..	G	.....	.....	
2ccb	M. Richard	37.2	20	Du	....	13.72	7-23-58	N	49	...	.....	.....	
3bab	W. Specht	9.7	42 x 36	Du	1900	8.32	7-23-58	D,S	..	C	.....	.....	Well goes dry at times.
3bad	...do....	13.5	30	Du	1955	6	7-23-58	S	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-50 (Cont.)													
3cbc	H. Larimore	53.3	24	Du	....	13.81	7-23-58	S	..	...	.....	.....	
3dad	O. Bakkedahl	325	2	Dr	....	.....	....	D,S	49	...	.....	1,710	
4cdc	F. Anderson	300	2	Dr	....	.....	....	D,S	50	...	.....	2,250	
5baa	Unknown	21.4	20	Du	....	7.02	7-23-58	S	49	...	.....	.....	
5cdd	A. Poppe	29.6	20	Du	....	8.94	7-28-58	N	..	...	.....	.....	
6add	L. Wellman	44.1	24	Du	....	16.50	7-23-58	D,S	48	...	.....	.....	
6cdd	C. Krech	65	24	Du	....	22.30	7-22-58	D,S	..	C	.....	.....	
6ddd	M. George	54.8	24	Du	....	21.26	7-23-58	D,S	49	...	.....	.....	
7add	C. Krech	600	2	Dr	1955	.....	....	S	50	S	.....	2,450	
7cca	Unknown	12.5	32	Du	....	8.20	7-30-58	N	..	...	.....	.....	
8bbc	R. Tonsager	300	2	Dr	1943	.....	....	D,S	50	S	.....	2,580	
8cbc	A. Telkamp	330	..	Dr	....	.....	....	S	49	...	.....	2,350	Water contains iron.
8ddd	C. Acheson	360	2	Dr	....	.....	....	S	50	...	.....	2,310	
9aaa	V. Dobbs	250	..	Dr	1950	.....	....	D,S	49	...	.....	2,200	
9ccc	C. Krech	30.7	26	Du	1958	22.88	7-29-58	D,S	..	S	.....	.....	
9dda	W. Moore	348	2	Dr	1936	.....	....	S	50	S,G	.....	1,980	
10add	G. Bothwell	320	2	Dr	1938	.....	....	D,S	50	G	.....	1,680	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-50 (Cont.)													
10bcc	L. Welbig	365	2	Dr	1952	.....	....	S	50	S	.....	2,080	Well is finished with sand point.
11cbb	M. Klees	32.6	20	Du	....	18.63	7-30-58	S	..	...	.....	.....	
11ccc	B. Bothwell	18.0	20	Du	....	4.92	7-30-58	N	..	...	.....	.....	
11dcc	Mrs. H. Larimore	35	24	Du	1955	31	7-30-58	D,S	..	S	.....	.....	
12cdc	E. Johnson	76	6	Dr	1928	40	7-31-58	S	..	S	.....	.....	Water is alkaline.
13bbb	Mrs. A. Anderson	100	6	Dr	....	.....	....	D,S	50	S,G	.....	1,940	
13dcd	W. Johnson	290	2	Dr	1938	150	8- 5-58	S	49	...	.....	2,730	
14aab	B. Anderson	17.6	24	Du	1946	8.62	7-31-58	D,S	..	S	.....	.....	Water is soft.
14dda	R. Bothwell	320	2.5	Dr	....	.....	....	D,S	50	S	.....	2,620	
15bad	A. Reaves	250	2	Dr	1936	.....	....	S	50	S	.....	2,320	Well is finished with sand point.
16ada	J. Reaves	55	18	Du	....	37	7-31-58	S	..	...	.....	.....	
16baa	A. Toates	158	4	Dr	1904	.....	....	S	48	G	.....	2,170	
17aaa	Mrs. M. Vaughan	25.4	24	Du	....	15.49	7-31-58	D,S	..	S	.....	.....	
17dcc	Mrs. H. Christensen	82	24	Du	1948	34	7-31-58	D,S	..	...	.....	.....	
18aaa	F. Lee	140	4	Dr	....	.....	....	D,S	50	G	.....	2,380	
18ccd	R. Lewis	70	24	Du	1940	30	7-31-58	D,S	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
107-50 (Cont.)													
19bcb	J. Riley	360	2	Dr	1948	250	8- 4-58	S	50	...	.....	3,710	
20acc	V. Merrill	38	36	Du	1956	13	8- 5-58	D,S	..	...	.....	.....	
20bbd1	W. Toates	60	24	Dr	....	50	8- 4-58	S	..	...	.....	.....	Well can be pumped dry.
20bbd2	...do..........	10	30	Du	1948	9	8- 4-58	D	..	S	.....	.....	
20cda	L. Lewis	360	2	Dr	1940	150	7-31-58	S	49	S	.....	2,370	
21bbb	M. Nelson	60	20	Du	....	40	7-31-58	S	..	...	.....	.....	
21cbb	C. Hanson	40	24	Du	....	30	8- 4-58	D,S	..	...	.....	.....	
21ddd	O. Borthem	340	2	Dr	1942	.....	....	D,S	50	S	.....	1,830	
22bbb	E. Booth	20.7	20	Du	....	9.51	8- 4-58	S	49	...	.....	.....	Water has unpleasant taste.
22daa	R. Entringer, Sr.	36	24	Du	....	20	8- 1-58	D,S	..	S	.....	.....	
23cdc	C. Whaley	24	24	Du	1937	14	8- 1-58	D,S	..	G	.....	.....	
23dcd	B. Elhoff	220	2	Dr	....	140	8- 5-58	D,S	..	S	.....	2,020	
24aba	W. Johnson	300	2	Dr	1937	150	8- 5-58	S	..	...	.....	.....	
24cdd	C. Whaley	55	30	Du	1955	35	8- 4-58	S	..	...	.....	.....	
25add	R. Davies	38	30	Du	....	33	8- 6-58	D,S	..	G	.....	.....	
25bdc	E. King	10	18	Du	1935	4	8- 6-58	N	..	G	.....	.....	
25cdd	...do..........	43	20	Du	1930	14.62	8- 6-58	D	..	G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-50 (Cont.)													
25dbb	O. Kongsberg	25.9	26	Du	1935	7.29	8- 6-58	S	..	...	.....	.....	
26aaa	B. Ewell	76	..	Dr	....	46.50	8- 6-58	S	49	...	.....	.....	Water is alkaline.
26bbb	H. Krwon	25	..	Dr	....	10.11	8--6-58	S	49	S,G	.....	.....	
26daa	Unknown	60.5	24	Dr	....	23.60	8- 6-58	O	..	...	.....	.....	
27add	P. Jensen	20	18	Dr	....	11	8- 6-58	D,S	..	...	.....	.....	
27baa	D. Doyle	80	30	Dr	1958	6	7----58	S	48	S	.....	.....	Do.
28ddb	Unknown	28	18	Dr	....	7.10	8- 6-58	S	..	S,G	.....	.....	
29aba	C. Heinssen	40	24	Dr	....	10	8- 6-58	S,D	..	S,C	.....	.....	
29ddd	W. Ellis	120	20	Dr	....	66.70	8- 6-58	D,S	..	C	.....	.....	
30bcc	O. Espland	52	18	Dr	1880	26.10	8- 7-58	D,S	43	...	.....	.....	
30dcc	W. Mosier	65	..	Dr	....	60	8- 6-58	S	....	G	.....	835	
31ddd	W. Troup	74	18	Dr	1910	31.70	8- 4-58	S	....	S,G,C	.....	.....	
32bbb	J. Esplund	35	24	Du	....	9.05	8- 6-58	S	..	G	.....	.....	
32ccc	E. Kringen	42	20	Dr	....	29.30	8- 4-58	S	49	S	.....	.....	Water contains iron
32ddd	J. Lee	89	..	Dr	1920	70.31	8- 4-58	D,S	49	G	.....	.....	Water is alkaline; contains iron.
33aad	E. Thorber	54	24	Dr	1957	25.71	8----58	D,S	..	G	.....	.....	
34aad	D. Landis	16	24	Dr	....	9.80	8- 6-58	D,S	50	G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
107-50 (Cont.)													
34bbb	W. Notebom	60	30 to 24	Dr	1956	40	5----58	D,S	..	C	.....	.....	
34cba	C. Jensen	48	20	Dr	....	14.40	8- 6-58	D,S	..	S,C	.....	.....	
35bbc	Unknown	15.5	24	Dr	....	7	8- 6-58	S	..	G	.....	.....	
35ccc	T. Tompson	400	2.5	Dr	1952	.....	....	S	49	S	.....	2,240	Water is alkaline.
36abb	S. Kenson	360	..	Dr	1952	135	7-31-58	S	..	...	.....	1,990	
36cbc	R. Barke	500	4	Dr	....	.....	....	S	..	...	.....	2,470	Water is alkaline; contains iron.
36daa	J. Hanson	40	24	Dr	1923	25	8- 6-58	D	..	G	.....	.....	
36dcd	Unknown	40.5	26	Dr	....	5	8- 4-58	O	..	C	.....	.....	Well can be pumped dry.
108-47													
3cbb	J. Baker	23	24	Dr	....	13.62	7-10-58	D	49	...	1,692	.....	
4bba	A. Buus	22.0	22	Dr	....	20.00	7- 8-58	D,S	51	...	1,680	.....	
5baa	Mrs. N. Robertson and Mrs. L. Bender.	12	24	Du	....	10	7-13-58	D,S	..	S	1,658	.....	
5dad	L. Doyle	53	24	Dr	1957	20.60	7- 8-58	D,S	53	S	1,677	.....	
5dcc1	B. Styf	176	6	Dr	1956	.....	....	S	49	S	1,642	.....	Water has unpleasant taste.
5dcc2	...do...............	64	24	Dr	....	.....	....	D	48	...	1,641	.....	
6bba	P. Clasen	64.0	24	Dr	....	17.43	7- 8-58	O	..	...	1,658	.....	Water is not potable.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-47 (Cont.)													
6ccb	D. Bainbridge	36.0	36	Dr	....	11.70	7- 8-58	O	..	...	.....	.....	
7bab	B. Cochran	49	24	Dr	1942	13.61	7- 8-58	D,S	53	G	1,662	.....	
7ccc	J. Laytham	30	42	Dr	1930	21.68	7- 9-58	D,S	47	...	1,660	.....	
8aaa	A. Anderson	90	33	Dr	1932	17.70	7- 8-58	D,S	..	...	1,682	.....	
8aba	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-11-58	T	..	...	1,667	.....	Test hole 62.
8ddc	B. Vandyke	38.1	24	Dr	....	22.80	7- 9-58	D,S	..	...	.....	.....	Water contains iron.
9abb	S. Dak. Geol. Survey	19	..	Dr	1958	7	8-11-58	T	..	...	1,679	.....	Test hole 63.
9bbd	A. Deiterman	63.0	24	Dr	....	33.51	7- 9-58	D	..	...	.....	.....	
9cdc	H. Visser	54	24	Dr	1938	20.60	7- 9-58	D,S	51	S	.....	.....	
9ddd	W. Weber	85	24	Dr	1948	17.11	7-14-58	D,S	..	C	.....	.....	Water has disagree-able odor.
10abb	S. Dak. Geol. Survey	19	..	Dr	1958	Dry	8-11-58	T	..	...	1,694	.....	Test hole 64.
10cbc	D. Vandyke	15	24 x 20	Du	1943	7	7- 9-58	S	..	...	1,687	.....	
15ccc	V. Kieth	27	24	Dr	....	23.13	7- 8-58	D,S	50	S	.....	.....	
16bcb	C. Schoeneman	90	20.4	Dr	1955	39.11	7- 9-58	D,S	58	S	.....	.....	
18bac	M. Meyers	20	24	Dr	1947	11.60	7- 9-58	S	..	...	1,630	.....	
19ada	E. Anderson	55	24	Dr	1950	23.25	7- 9-58	D	54	...	.....	.....	
19bab	J. Henderson	40	36	Dr	....	29	7- 9-58	D,S	..	S	1,637	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-47 (Cont.)													
20ccb	A. Christensen	35	36	Dr	1924	7.15	7-11-58	D,S	..	...	.....	.....	
21aad	W. Sundermeyer	49.8	36	Dr	....	14.85	7- 9-58	O	50	...	.....	.....	
21bbb	C. Barthel	80.0	36	Dr	....	39.63	7- 8-58	S	..	...	.....	.....	
21dda	H. Bauer	51.9	24	Dr	....	21.75	7-14-58	D,S	49	...	.....	.....	
22aba	J. Doyle	91	24 to 20	Dr	1890	37.50	7- 9-58	D,S	48	...	.....	.....	
27ccc	E. Henry	55	24	Dr	1943	6	7-15-58	D,S	49	...	.....	.....	Water is soft.
29aab	H. Barron	40	24	Dr	1947	21.20	7-14-58	D	48	S,C	.....	.....	
29bab	C. Laurson	70	24	Dr	1935	50	7-15-58	D,S	..	...	.....	.....	
30adc	P. Stowl	20	..	Dr	....	13	7-16-58	D	49	...	.....	.....	Water is alkaline.
31dda	J. Paulson	200	6	Dr	1911	55	7-16-58	S	..	SS	.....	.....	
32bbb	J. Peters	170	6	Dr	....	.....	....	D,S	48	...	.....	.....	
33bbb	H. Dunlan	50	24	Dr	1943	15	1943	D,S	48	C	.....	.....	Water is alkaline.
33ccc	A. Barthel	38	30 to 18	Dr	1950	28.80	7-16-58	S	..	C	.....	.....	
34bbc	A. Kiecksee	30	..	Dr	1930	6.55	7-15-58	D,S	..	...	.....	.....	
34cbc	E. Pepper	400	6	Dr	....	.....	....	D,S	..	SS	.....	.....	
108-48													
1bba	V. Nissen	55.5	24	Du	....	23.99	7-14-58	D,S	..	...	.....	.....	
1ccb	B. Alberts	35.3	24	Dr	1953	10.90	7-10-58	D,S	49	S	.....	.....	Water contains iron.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-48 (Cont.)													
1daa	P. Paulson	160	6	Dr	....	70	7-18-58	S	48	SS	.....	.....	Water contains iron.
2ada	L. Burlage	31.1	24	Dr	....	20.55	7- 9-58	D,S	55	...	.....	.....	
2cdc	Smallfield Bros.	51.1	24	Dr	....	25.80	7-10-58	D,S	48	G	.....	.....	Water has unpleasant taste.
3bbb	E. Larson	..	26	Dr	....	16.15	7-24-58	D	50	G	.....	.....	Water is alkaline.
4aab	F. Fleming	227	6	Dr	1911	75	7-10-58	D,S	48	SS	.....	.....	Well was deepened 27 feet in 1945.
4dab	C. Stein	114	24 to 18	Dr	1945	42.05	7-10-58	D,S	50	S	.....	.....	Well was deepened 40 feet in 1945.
5aaa	Unknown	36.5	24	Dr	....	7.63	7- 9-58	S	..	...	.....	.....	
5aad	...do............	45.8	24	Dr	....	35.80	7- 9-58	S	..	...	.....	.....	
5dad	J. Smallfield	21.1	24	Dr	....	7.51	7-10-58	D,S	..	...	.....	.....	
5ddd	...do............	60.5	30	Dr	....	26.45	7-10-58	O	..	...	.....	.....	
7ccd	W. Sutherland	275	4	Dr	1922	150	1922	D,S	49	S,G	.....	.....	Water has clayey taste.
8baa	E. LaLorde	9.6	70 x 60	Du	....	6.55	7-10-58	S	..	S,C	.....	.....	Well can be pumped dry.
9bba	O. Smallfield	270	6	Dr	1930	.....	....	D,S	50	SS	.....	.....	
10aad	G. Clark	280	6	Dr	1926	100	1926	D,S	51	SS	.....	.....	
10bcc	W. Shaw	45	24	Dr	....	11.51	7-11-58	S	49	C	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-48 (Cont.)													
10ddd	R. Thielsen	65	6	Dr	1948	25	1948	D,S	50	S	.....	.....	
11aab	L. Feuske	50.2	24	Dr	....	25.65	7-10-58	D,S	49	...	.....	.....	Water contains iron.
11ddc	Cobb Bros.	31	6	Dr	1943	28	9----43	D	50	G	.....	.....	
12aad	J. Ludwig	33.3	30 to 18	Dr	....	20.50	7-11-58	D,S	..	S	.....	.....	
12bbb	B. Kansanback	45.0	30 to 18	Dr	....	10.00	7-11-58	O	54	...	.....	.....	Water is soft.
13aac	W. Myers	34	24 to 12	Dr	1953	8.71	7-11-58	D,S	52	S	.....	.....	
13bba	J. Myers	61.4	12	Dr	....	19.95	7-11-58	S	..	...	.....	.....	
14dcc	P. Gaylson	27	12	Dr	1938	21	7-14-58	D,S	46	S	1,623	.....	Do.
15aaa	W. Fuhs	196	6	Dr	1925	140	1957	...	48	SS	.....	.....	Water contains iron.
15add	H. Biteler	44	24 to 18	Dr	1948	26.65	7-11-58	D	58	C	.....	.....	
16dcc	B. Lathrop	130	6	Dr	1934	.....	....	S	48	SS	.....	.....	
17aad	T. Ullom	200	6	Dr	1943	.....	....	D,S	49	SS	.....	.....	Do.
18cdd	G. Brakke	18	48 x 48	Du	1898	15	7-15-58	S	..	G	.....	.....	
18dcd	Munson Sisters	16.0	28	Dr	....	6.75	7-15-58	O	..	C	.....	.....	
19cdd	L. Winter	16	24	Du	1908	10	7-24-58	D,S	..	G	1,564	.....	
20add	N. Seafield	220	4	Dr	....	180	7-15-58	S	49	S	.....	.....	Water is alkaline.
20cbc	L. Munson	20	24	Du	1898	12	7-15-58	S	49	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-48 (Cont.)													
20dda	L. Chambelen	20	18	Dr	1953	14.55	7-15-58	D,S	..	...	.....	.....	
21aca	H. Watson	180	6	Dr	1914	.....	....	S	48	SS	.....	.....	
22dcd	Lathrop	8	14 to 6	Dr	1923	7	7-15-58	D,S	51	G	.....	.....	
23ccc	School	34	24 to 20	..	....	17.60	7-15-58	D	48	S,G	.....	.....	
23ccd	E. Dougherty	9	24	Dr	....	4.50	7-15-58	D,S	..	S	.....	.....	
24bcd	W. Zeborth	8	55 x 55	Du	....	6.0	7-16-58	...	..	...	.....	.....	
25cbb	J. Earley	35	30	Dr	1900	20	5----58	...	47	...	.....	.....	Water is soft.
26add	B. Orth	40	30 to 20	Dr	1945	31	7-16-58	D	..	S	.....	.....	
26ccd	J. DeLay	27	36 to 18	Dr	1914	10	7-16-58	D	49	S	.....	.....	Water is alkaline.
27cbc	L. Scofield	160	6	Dr	1910	80	1952	D,S	49	...	.....	.....	
27dad	J. DeLay	214	6	Dr	1950	70	1950	S	..	SS	.....	.....	Water contains iron.
28adc	J. Meyer	12	30	Du	1932	8.35	7-16-58	D,S	..	G	.....	.....	Water is soft.
28cad	P. Mulder	180	6	Dr	1928	50	7-17-58	S	..	G	.....	.....	Water is alkaline.
28cbb	E. Pottratz	38	24	Dr	1943	31.09	7-14-58	...	48	S	.....	.....	
29aaa1	A. Reinhart	42.4	18	Dr	....	29.10	7-16-58	D,S	..	...	.....	.....	
29aaa2	...do.......	150	4	Dr	....	.....	....	O	..	...	.....	.....	Water contains iron.
29bbc	S. Dak. Geol. Survey	29	..	Dr	1958	8	7-24-58	T	..	...	1,566	.....	Test hole 29.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-48 (Cont.)													
29ddd	T. Fath	220	6	Dr	....	140	7-17-58	S	48	...	.....	.....	Water is alkaline.
30aaa	Munson Sisters	160	4	Dr	1915	8	7-24-58	D,S	49	G	1,590	2,660	
31bbc	C. Hagel	290	6	Dr	1948	.....	....	S	51	SS	.....	1,720	
31ccc	G. Rice	160	6	Dr	1918	.....	....	S	49	...	.....	3,750	
32bcc	S. Dak. Geol. Survey	34	..	Dr	1958	25	7-24-58	T	..	...	1,564	.....	Test hole 32.
32bda	...do...............	39	..	Dr	1958	11	7-24-58	T	..	...	1,548	.....	Test hole 31.
32cbc	M. Powers	27.5	24	Dr	....	25.42	7-28-58	D,S	48	G	.....	.....	
33cab	A. Glaser	28	24	Dr	....	18	7-17-58	D	48	S	.....	.....	
33ddd	F. Whaley	22	28	Dr	1949	12.10	7-16-58	D	..	...	.....	.....	
34bcc	J. McNeil	133	4	Dr	1936	43	8----36	S	49	G	.....	.....	Water contains iron.
35cdc	R. Smith	304	6 to 4	Dr	1928	150	7-17-58	S	49	SS	.....	.....	Water is alkaline.
35ddc	E. Swancutt	280	6	Dr	1918	.....	....	D,S	48	SS	.....	.....	Water contains iron.
36ddd	J. Paulson	200	6	Dr	1925	55	7-16-58	D,S	48	SS	.....	.....	Water is corrosive; contains iron.
108-49													
2addd	Mrs. Leetch	112	6	Dr	....	56.96	7- 8-58	D,S	55	SS	.....	.....	
2ccd	A. LaLande	19.3	18	Du	1910	15.84	7-11-58	D,S	47	S	.....	.....	Well can be pumped dry.
3ccc	F. Messner	33	24	Du	1940	21.09	7-11-58	N	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	MOODY COUNTY--Continued												
108-49 (Cont.)													
4addd	Mrs. M. Stoll	21.0	24	Du	....	7.84	7- 8-58	D,S	61	...	.....	.....	
4dddd1	C. Tattersfield Estate	18.0	1.5	..	1940	15.65	7- 9-58	D	56	S	1,569	.....	Well is finished with sand point.
4dddd2	...do................	35	30	Du	1937	14.75	7- 9-58	S	52	...	1,569	.....	
5addc	R. DeMint	22	24	Du	1949	20	7-8-58	D,S	54	S	.....	.....	
5bbbb1	W. Buller	12	32	Du	1930	10	7- 8-58	D,S	63	S	1,566	.....	
5bbbb2	...do................	8.5	30	..	1930	7	7- 8-58	S	..	S	1,669	.....	Water is not potable.
5bdd	S. Dak. Geol. Survey	29	..	Dr	1958	9	7-19-58	T	..	...	1,568	.....	Test hole 13.
5ccd	...do................	24	..	Dr	1958	12	7-21-58	T	..	...	1,562	.....	Test hole 14.
5dcd	...do................	24	..	Dr	1958	8	7-21-58	T	..	...	1,565	.....	Test hole 15.
6add	...do................	14	..	Dr	1958	7	7-19-58	T	..	...	1,566	.....	Test hole 11.
6baa	D. Ahern	12	6	Dv	1953	7.88	7- 9-58	S	..	S	1,567	.....	Water has unpleasant taste. Well is finished with sand point.
6bdc	S. Dak. Geol. Survey	34	..	Dr	1958	12	7-19-58	T	..	...	1,567	.....	Test hole 12.
6cba	H. Kamp	20	26	Du	1955	11.95	7- 9-58	D,S	..	S	1,567	.....	
6dda	W. Hartenhoff	12	30	Du	1954	11.43	7- 9-58	S	..	G	1,566	.....	
7aaa	F. Roth	21.6	26	Du	1954	8.87	7-17-58	D,S	..	...	.....	.....	
7aad	...do................	39.1	26	Du	1946	37.95	7-17-58	S	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-49 (Cont.)													
7dda	F. Ahern	43	30	Du	1956	14.44	7-11-58	S	49	C	.....	.....	
8bcb	Durland No. 7	23.1	..	Du	1930	18.73	7-11-58	N	..	C	.....	.....	Water is not potable.
8cbb	T. Durland	16.7	24	Du	1890	13.60	7-11-58	S	49	...	1,581	.....	
8dcc	Mrs. L. Johnson	18	26	Du	....	14	7-11-58	D	..	S	1,574	.....	
8dda	S. Dak. Geol. Survey	24	..	Dr	1958	8	7-21-58	T	..	...	1,566	.....	Test hole 19.
9aaa	A. Teal	20.2	24	Dr	1915	15.69	7-11-58	S	..	S	1,569	.....	Chemical analysis in table 5.
9baa	S. Dak. Geol. Survey	39	..	Dr	1958	12	7-21-58	T	..	...	1,563	.....	Test hole 16.
9cbb	C. Collins	12	1.5	Dv	....	9	7-11-58	D,S	..	S	1,570	.....	Well is finished with sand point.
9dbd	S. Dak. Geol. Survey	29	..	Dr	1958	13	7-21-58	T	..	...	1,568	.....	Test hole 17.
10bbc	O. Bratland	25.5	32	Du	1957	9.70	7-17-58	D,S	..	S	1,573	.....	
10cad1	E. Cocklin	28	24	Du	1953	17	7-11-58	D,S	..	C	1,569	.....	
10cad2	...do...............	28	36	Du	1956	15.34	7-11-58	S	48	C	.....	.....	
10cda	S. Dak. Geol. Survey	34	..	Dr	1958	9	7-21-58	T	..	...	1,569	.....	Test hole 18.
11aaa	C. Ullom	35	26	Du	1946	17.80	7-11-58	D,S	..	S	.....	.....	
11dda	G. Ullom	150	4	Dr	1920	81.35	7-11-58	D,S	..	SS	.....	.....	
12aaa	J. Baty	38.2	36	Dr	....	10.85	7-10-58	D,S	..	...	.....	.....	Water contains iron.
12dcc	M. Clark	240	6	Dr	1955	170	1955	S	48	G	.....	.....	Do.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-49 (Cont.)													
13dda	H. Koch	225	6	Dr	1910	60	7-15-58	S	50	...	.....	.....	Water contains iron.
14aaa	V. Callahan	265	6	Dr	....	.....	....	D,S	..	SS	.....	.....	
14dda	N. Nahnsen	21.0	26	Du	....	10.34	7-17-58	D,S	..	S	.....	.....	
14ddc	W. Finke	260	6	Dr	1953	.....	....	S	..	SS	.....	.....	Do.
16ada	K. Nass	12.8	24	Du	....	9.33	7-15-58	S	50	S	1,569	.....	Water has limy taste.
16bcc	L. Moore	13.3	24	Du	....	12.25	7-15-58	S	50	S	1,571	.....	
16ccd	O. Nass	17.6	28	Du	....	15.34	7-15-58	S	..	S	1,578	.....	
16dcd	Mrs. Wilber Gullickson	17.8	26	Du	....	13.43	7-15-58	S	49	S	1,575	.....	Chemical analysis in table 5.
17adc	Unknown	19.1	18	Du	....	15.74	7-15-58	N	..	...	.....	.....	
17bcc	G. LaMay	60	30 x 24	Du	1951	56	7-25-58	D	..	S,G	.....	.....	
17dbb	S. Eide	160	2	Dr	1953	80	7-17-58	S	..	S	.....	.....	Water is not potable.
18aad	Mrs. L. Johnson	204	3	Dr	1948	60.55	7-11-58	S	..	...	.....	.....	
18bbc	H. Parsley	48.5	30	Du	1945	39.10	7-15-58	D	..	C	.....	.....	Well goes dry at times.
19dad	H. Stokes	186	6 to 2	Dr	....	.....	....	D,S	..	S	.....	.....	
21baa	S. Dak. Geol. Survey	34	..	Dr	1958	14	7-21-58	T	..	...	1,568	.....	Test hole 20.
21bbc	M. Gullickson	22.4	20	Du	....	20.73	7-15-58	S	..	...	.....	.....	
21ccc	...do...............	160	6	Dr	1907	110	7-15-58	D,S	..	...	.....	.....	Water has unpleasant taste.

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-49 (Cont.)													
21cdd	S. Eide	165	6	Dr	1943	105	7-17-58	S	..	S	.....	.....	Water has unpleasant taste.
22abb	S. Dak. Geol. Survey	19	..	Dr	1958	8	7-22-58	T	..	...	1,562	.....	Test hole 22.
22bbb	...do...............	19	..	Dr	1958	7	7-22-58	T	..	...	1,569	.....	Test hole 21.
22cbb	N. Gullickson	12.9	26	Du	....	9.90	7-15-58	S	48	...	1,575	.....	
22ccd	C. Knutson	12	36	Du	1955	10	7-17-58	D,S	..	S,G	1,580	.....	
22ddd	Mrs. L. Fuller	12.7	18	Du	....	9.04	7-15-58	D,S	48	...	1,572	.....	
23bcc	E. Beck	12	40	Du	1956	10.88	7-15-58	D,S	47	S	1,568	.....	
23cac	S. Dak. Geol. Survey	19	..	Dr	1958	8	7-22-58	T	..	...	1,567	.....	Test hole 24.
23dab	O. Scofield	20	36	Du	....	15	7-15-58	D	..	S	1,574	.....	
23dcd	S. Dak. Geol. Survey	24	..	Dr	1958	8	7-22-58	T	..	...	1,567	.....	Test hole 23.
24ada	H. Reynolds	180	2	Dr	....	130	1956	S	50	...	.....	.....	
24bcc	D. Scofield	180	5 to 3	Dr	1908	50	7-15-58	S	60	S	.....	.....	Water contains iron.
24cbc	S. Dak. Geol. Survey	19	..	Dr	1958	12	7-22-58	T	..	...	1,566	.....	Test hole 25.
24ccc	...do...............	24	..	Dr	1958	11	7-24-58	T	..	...	1,562	.....	Test hole 26.
25aaa	...do...............	34	..	Dr	1958	8	7-24-58	T	..	...	1,561	.....	Test hole 28.
25ccc	R. Pulscher	185	4	Dr	1910	80	7-24-58	S	..	S	.....	2,870	
25dad	W. Pulscher	340	6	Dr	....	.....	....	...	49	G	.....	1,730	
26dcd	O. Solsaa	200	6	Dr	....	75	7-17-58	S	..	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-49 (Cont.)													
27adc	C. Knutsen	153	6	Dr	1941	27	7-24-58	S	50	S,C	....	3,750	
27cdd	C. Faris	100	5	Dr	1914	50	7-22-58	S	..	...	.....	.....	Water is not potable.
27ddd	...do.............	250	5	Dr	1912	.....	....	S	..	...	.....	.....	
28aaa	R. Minor	17.8	48	Du	....	16.34	7-18-58	D,S	..	...	.....	.....	
28ccb	B. Dierks	300	4	Dr	1906	225	7-18-58	S	..	S	.....	.....	Water contains iron.
29aab	J. Ernst	260	2.5	Dr	1950	80	7-17-58	D,S	..	S	.....	.....	Water has unpleasant taste.
29cdd	G. Erickson	300	2.5	Dr	1944	175	7-18-58	D,S	..	S	.....	.....	
30aab	Mrs. D. Doyle	300	2	Dr	1945	.....	....	S	..	S	.....	.....	Water contains iron.
30daa	R. Raines	30.2	30	Du	....	21.50	7-18-58	N	..	...	.....	.....	
31aad	L. Bankenhorn	32	30	Du	....	26.04	7-22-58	D,S	..	S	.....	.....	Water has limy taste.
31cdc	R. Headrick	65.7	26	Du	....	37.77	7-22-58	D,S	49	...	.....	.....	
33aaa	C. Faris	300	6	Dr	....	.....	....	S	..	S	.....	.....	
33bbb	B. Luttmann	350	6 to 4	Dr	1905	150	7-22-58	S	..	...	.....	.....	
35bbb	K. Thielsen	375	6	Dr	....	.....	....	S	..	...	.....	.....	
36ccb	Tighe Estate	360	2	Dr	1957	90	7-24-58	S	50	SS	.....	1,970	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-50													
1aab	S. Dak. Geol. Survey	59	..	Dr	1958	11	7-17-58	T	..	...	1,562	.....	Test hole 1.
1abd1	C. Doyle	12	30	Du	1951	8	7-17-58	D,S,I	..	S	1,567	.....	
1abd2	...do...............	12	24	Du	1944	8.50	7-17-58	S	..	S	1,567	.....	
1dcc	G. Hillestad	12.5	1.5	Dv	1951	6.94	7- 9-58	S	..	S	1,565	.....	
2bbbb	H. Ponto	130	4	Dr	1915	40	7-10-58	D,S	50	SS	.....	.....	
2bcc	J. Klay	200	6	Dr	....	55.95	7- 9-58	D,S	54	SS	.....	.....	Water contains iron.
2daa	W. Bliss	40	30	Du	....	29.35	7- 9-58	D,S	55	S	.....	.....	Do.
3bccc	C. Sapp	243	3	Dr	1953	100	7-10-58	D,S	53	S	.....	.....	
3cccc	N. Bartnem	75	24	Du	1950	49.79	7-10-58	N	..	S	.....	.....	
4cddd	I. Johnson	300	2.5 to 2	Dr	1943	.....	....	D,S	49	SS	.....	.....	
5aab	F. Bauman	26	18	Du	1933	23	7-10-58	D,S	50	S	.....	.....	
5dba	F. Long	10	16	Du	1930	5.66	7-10-58	D,S	54	G	.....	.....	
6aab	S. Gednalske	20	26	Du	1956	6.30	7-10-58	D,S	50	S	.....	.....	
6bbbb	E. Steen	92	24	Du	1954	33.81	7-10-58	D,S	..	G	.....	.....	
6cbc	S. Dak. Geol. Survey	14	..	Dr	1958	Dry	8-14-58	T	..	...	.....	.....	Test hole 89.
7aad	G. Strenge	20	12	Du	1948	14.35	7-10-58	D,S	49	S	.....	.....	Chemical analysis in table 5.
7acb	C. V. Lange	18	36	Du	1880	10	7-10-58	D,S	54	S	.....	.....	
7dcb	G. Derdall	19.0	18	Du	....	14.15	7-14-58	S	49	S,G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-50 (Cont.)													
8aba	N. Trygstad	12	24	Du	1880	8	7-14-58	S	..	G	.....	.....	
8bba	J. Erickson	22	15	Du	1917	11.35	7-14-58	D,S	..	S	.....	.....	
8cdb	G. Derdall	18.5	18	Du	....	13.60	7-14-58	D,S	49	S	.....	.....	
9baa	C. Gulbranson	22.6	18	Du	....	8.89	7-14-58	N	47	C	.....	.....	Water has disagree-able odor.
9dda	Mrs. Harding	14.6	26	Du	....	12.31	7-14-58	N	46	...	.....	.....	
10ccc	N. Goldhorn	40	24	Du	1953	32	7-14-58	D	49	S	.....	.....	
12add	F. Ponto	25	30	Du	1949	13	7-11-58	D	..	S	.....	.....	Water is soft.
13cdc	G. Luttmann	48.7	30	Du	1952	25.10	7-15-58	D,S	..	...	.....	.....	
13ddd	C. Lewis	50	24	Du	1946	41	7-25-58	D	..	S	.....	.....	
14aaa	Mrs. C. Long	44.3	24	Du	....	32.98	7-16-58	D,S	48	S	.....	.....	
15bbb	L. Erickson	60.7	20	Du	....	55.25	7-16-58	D,S	48	S	.....	.....	Well can be pumped dry.
15ccc	F. Revell	77.6	20	Du	....	54.50	7-16-58	S	..	C	.....	.....	
15ddd	L. Erickson	42	24	Du	1938	34	7-28-58	D,S	..	S	.....	.....	
16cbc	J. Trygstad	35.7	20	Du	1947	29.68	7-16-58	D	49	S	.....	.....	
17aaa	J. Swart	45.5	26	Du	....	15.80	7-16-58	D,S	..	...	.....	.....	
17bbc	A. Erickson	30	24	Du	1946	24	7-16-58	D,S	..	S	.....	.....	
17ccd	O. Madsen	20	18	Du	1874	16	7-16-58	D,S	..	G	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
						MOODY COUNTY--Continued							
108-50 (Cont.)													
17dcd	W. Schacht	60	24	Du	1954	50	7-17-58	D,S	..	C	.....	.....	
18aad	H. Mullett	42	24	Du	1940	23	7-16-58	D,S	..	C	.....	.....	
18bcd	M. Clark	48.8	24	Du	1956	40.50	7-16-58	D	48	C	.....	.....	
18cdd	G. Lengkeek	25.1	18	Du	....	21.52	7-16-58	D,S	49	...	.....	.....	
18dac	O. Madsen	66.7	18	Du	....	20.61	7-16-58	N	..	G	.....	.....	
19dcd	A. Johnson	11.0	72	Du	....	8.85	7-16-58	D,S	52	...	.....	.....	
20aaa	F. Haase	20.1	18	Du	....	10.00	7-16-58	N	..	...	.....	.....	
20add	C. Schacht	28.7	18	Du	....	10.45	7-16-58	N	48	...	.....	.....	Water has disagreeable odor.
20ccc	K. Falk	27	24	Du	....	21	7-17-58	D,S	..	S	.....	.....	
20ddd	A. Strenge	80.7	20	Du	....	77.10	7-16-58	D,S	49	S	.....	.....	Well can be pumped dry.
21aad	A. Langmeyer, Jr.	78.1	20	Du	....	53.09	7-16-58	N	..	...	.....	.....	
21ccd	H. Pier	33.4	18	Du	....	21.45	7-17-58	D,S	..	...	.....	.....	
21ddd	Benniwise Estate	84.0	26	Du	....	24.30	7-17-58	S	..	...	.....	.....	
22cdc	G. Drewes	52.4	18	Du	1931	41.77	7-17-58	D,S	48	...	.....	.....	
22ddd	S. Minor	30	32	Du	1958	16.80	7-17-58	N	..	C	.....	.....	
23aab	O. Quam	55.8	20	Du	....	43.90	7-16-58	D,S	..	...	.....	.....	
23bbb	B. Christiansen	16.2	20	Du	....	9.14	7-16-58	D,S	49	...	.....	.....	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
					MOODY COUNTY--Continued								
108-50 (Cont.)													
23cdc	B. Christiansen	20	48	Du	....	17	7-17-58	D,S	..	...	.....	.....	
23ddd	H. Harwood	60.6	20	Du	....	25.78	7-17-58	S	49	...	.....	.....	Water contains iron.
24bbb	D. Omodt	54.9	18	Du	....	34.80	7-15-58	S	48	...	.....	.....	
24dda	J. Dykhouse	43.3	29	Du	....	34.10	7-15-58	D,S	..	G	.....	.....	
25aad	B. Thorson	48.1	20	Du	....	34.68	7-25-58	S	..	...	.....	.....	
25bab	C. Gullickson	265	2	Dr	1940	130	7-21-58	D,S	..	S	.....	.....	
26aaa	Unknown	11.1	24	Du	....	10.82	7-21-58	N	..	...	.....	.....	
26bbb	F. Bothwell	320	4	Dr	1945	100	7-28-58	D,S	49	S	....	1,940	
26ccb	S. Jensen	21	24	Du	1954	14	7-21-58	D,S	..	S	.....	.....	
26dca	R. Leraas	29.4	18	Du	....	8.80	7-21-58	S	47	...	.....	.....	
27bbc	J. Thompson	120	30	Du	....	115	7-21-58	S	..	S	.....	.....	Well can be pumped dry.
27dda	B. Lampson	18	24	Du	1954	15	7-21-58	D	..	S	.....	.....	
28ccc	J. Trottman	28	24	Du	1940	19	7-21-58	D,S	..	...	.....	.....	
28ccd	R. Bothern	42	24	Du	1917	33.54	7-21-58	D,S	50	S	.....	.....	
28daa	C. Johnson	33.4	24	Du	....	25.18	7-21-58	S	..	...	.....	.....	
29aaa	W. Bothern	38.2	28	Du	1938	23.30	8-21-58	D,S	..	...	.....	.....	
29bcb	V. Hart	360	2.5	Dr	....	.....	....	S	50	...	.....	1,600	

Table 2.--Records of wells and test holes--Continued

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
MOODY COUNTY--Continued													
108-50 (Cont.)													
29cba	C. Drewes	25	24	Du	1940	8.88	7-22-58	S	..	G	.....	.....	
30ada	Keith Estate	30	30	Du	....	26	7-21-58	D,S	..	S	.....	.....	
30bbb	C. Drewes	56	20	Du	1933	28.75	7-22-58	D,S	..	...	.....	.....	
30bbc	C. Rickter	50.0	24	Du	1930	13.19	7-22-58	N	..	...	.....	.....	
30cbb	Unknown	24.0	20	Du	....	10.89	7-22-58	S	49	...	.....	.....	
30ddd	D. Smith	50	18	Du	1915	39.10	7-22-58	D,S	..	...	.....	.....	
31aaa	Hornby Farm	50	20	Du	....	22.71	7-22-58	S	49	...	.....	.....	
31bcc	L. Baumberger	80	30	Du	....	47	8-12-58	D,S	..	...	.....	.....	
31ccc	C. Drews	300	2	Dr	1943	.....	....	S	50	...	.....	2,170	
32aad	R. Bothern	50.8	20	Du	....	46.40	8-12-58	S	..	...	.....	.....	
33aad	B. Headrick	58.3	20	Du	....	44.70	8-12-58	S	49	...	.....	.....	
33daa	L. Dobbs	39.1	18	Du	....	28.37	7-22-58	S	49	...	.....	.....	
34bbb	A. Gulbranson	34	36	Du	....	25.80	7-21-58	D,S	..	C	.....	.....	
34dcc	N. Hartman	21.1	28	Du	....	9.90	7-22-58	D,S	..	...	.....	.....	Water is soft.
35aab	R. Leraas	30.6	20	Du	....	20.44	7-22-58	S	49	...	.....	.....	
35bbb	C. Gullickson	41	36	Du	....	23	7-22-58	D,S	..	...	.....	.....	
36ccc	L. Thiele	35.1	28	Du	....	2.48	7-23-58	D,S	..	S	.....	.....	