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COUNTY GROUND WATER STUDIES 11

Geology & Ground Water Resources

of

Renville and Ward Counties

Part 2—Ground Water Basic Data

by

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This is one of a series of county reports published cooperatively by the North Dakota Geological Survey and the North Dakota State Water Commission. The reports are in three parts; Part I describes the geology, Part II presents ground water basic data, and Part III describes the ground water resources. Part I and III will be published later and will be distributed as soon as possible.

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GEOLOGY AND GROUND WATER RESOURCES OF RENVILLE AND WARD COUNTIES, NORTH DAKOTA
PART II - GROUND WATER BASIC DATA

By

Wayne A. Pettyjohn

INTRODUCTION

Purpose and Scope

The purposes of the investigation of the geology and ground-water resources of Renville and Ward Counties, N. Dak., (fig. 1) were to determine the location and extent of the ground-water reservoirs (aquifers); to evaluate the occurrence and movement of ground water, including the sources of recharge and discharge; and to determine the chemical quality of the ground water. The investigation should provide sufficient information about the occurrence of ground water to plan its safe and intelligent development for irrigation, domestic, industrial, and municipal purposes.

The investigation was made cooperatively by the U.S. Geological Survey, North Dakota State Water Commission, North Dakota Geological Survey, Renville County Board of Commissioners, and Ward County Water Management District. The results of the investigation will be published in three separate parts of the bulletin series of the North Dakota Geological Survey and the county ground-water studies series of the North Dakota State Water Commission. Part I is an interpretive report describing the geology, Part II is a compilation of the ground-water basic data, and Part III is an interpretive report describing the ground-water resources. Part II makes available the hydrologic data collected during the investigation of the counties and functions as a reference for Parts I and III.

The information in this report consists of the following: (1) data on 1,373 wells and test holes; (2) water-level measurements in 81 observation wells; (3) logs of 242 test holes and selected wells; and (4) chemical analyses of 416 water samples.

The data in this report are useful for predicting geologic and ground-water conditions in Renville and Ward Counties. For example, a person considering the construction of a new well can locate the proposed site on plate 1 (in pocket). The characteristics of nearby wells may be determined from tables 1 and 2, and the water-level fluctuations in the area may be determined from table 3. The type of material encountered in nearby wells may be determined from table 4 and the chemical quality of water in adjacent wells may be determined from tables 5 and 6. However, such extrapolations should be made conservatively because of the irregular distribution of the water-bearing rocks.

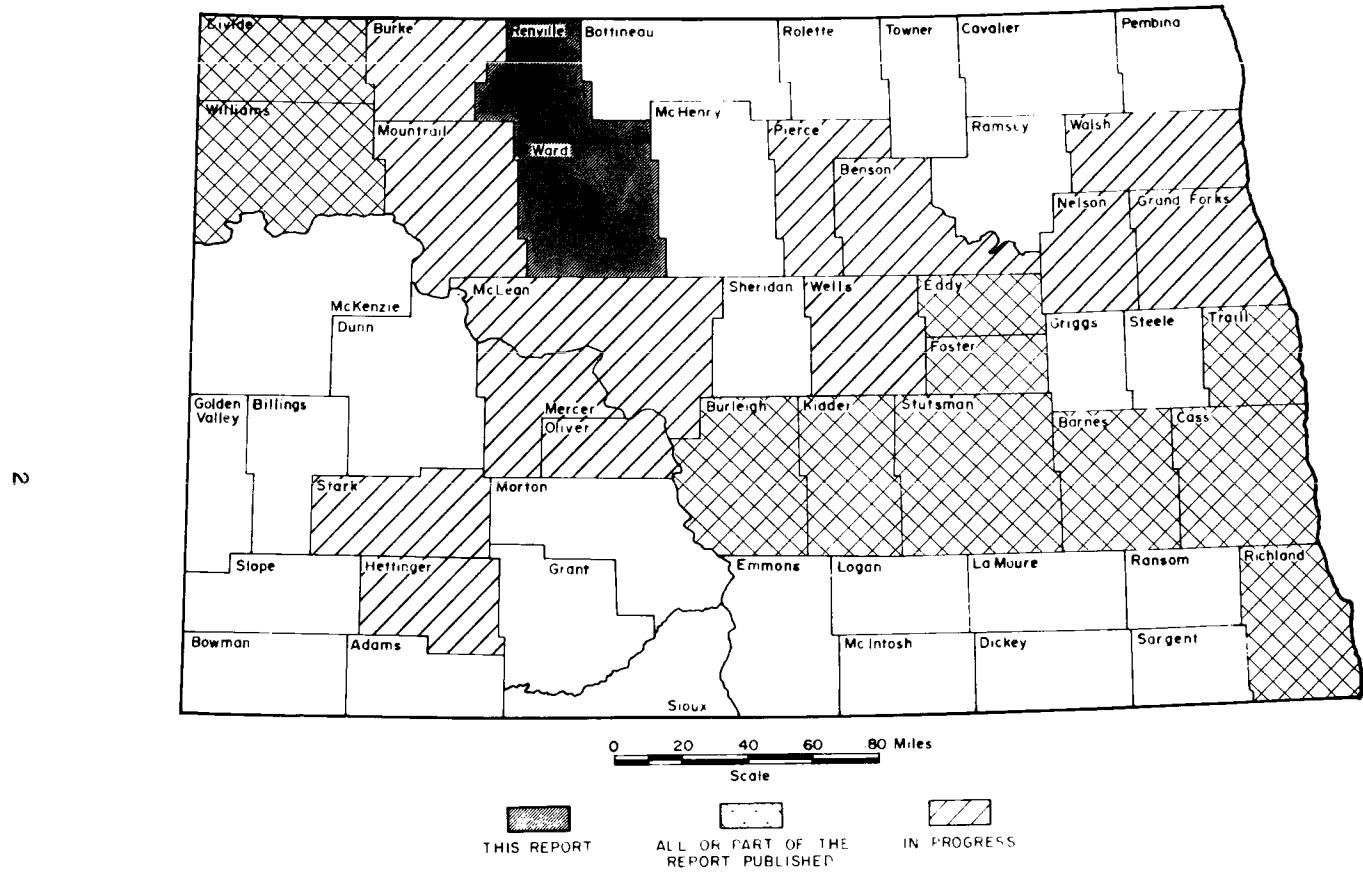


FIGURE 1—Location of county ground-water studies.

Well-Numbering System

The wells and test holes in the tables are numbered according to a system based on the location in the public land classification of the United States Bureau of Land Management. It is illustrated in figure 2. The first numeral denotes the township north of a base line, the second numeral denotes the range west of the fifth principal meridian, and the third numeral denotes the section in which the well is located. The letters a, b, c, and d designate, respectively, the northeast, northwest, southwest, and southeast quarter sections, quarter-quarter sections, and quarter-quarter-quarter sections (10-acre tract). For example, well 153-87-15ada is in the NE^{1/4}SE^{1/4}NE^{1/4} sec. 15, T. 153 N., R. 87 W. Consecutive terminal numerals are added if more than one well is recorded within a 10-acre tract. The location of each well and test hole listed in the tables is shown on plate 1.

Acknowledgments

Many of the test holes were drilled by the North Dakota State Water Commission. The cooperation of the residents of the counties, municipal and county officials, and well drillers who supplied general and specific information on farm, domestic, and municipal well installations is gratefully acknowledged.

EXPLANATION OF TABLES

The logs in table 4, except those furnished by commercial drilling companies, are composites of the well-site geologists' and drillers' descriptions, sample analyses, and electric logs (where available). Visual methods (megascopic and microscopic) were used to describe the composition and texture of the subsurface rock samples. Color descriptions were determined by comparing the sample with the Geological Society of America's rock-color chart (1963). Grain size determinations used in the logs refer to the Wentworth (1922) size scale.

The terminology in the commercial logs, except for the term "till," is that of the driller and only the order of description has been changed so as to present the principal lithology first.

The term "till" indicates an unsorted, unstratified, cohesive, agglomeration of rock particles ranging from clay to boulders. Generally clay is the predominant particle size. If a particle size other than clay is dominant, that particle size is used as a modifying term. Consequently, terms such as silty, sandy, or gravelly are textural terms used to indicate that the material described contains an appreciable, but not a dominant amount of the modifying material.

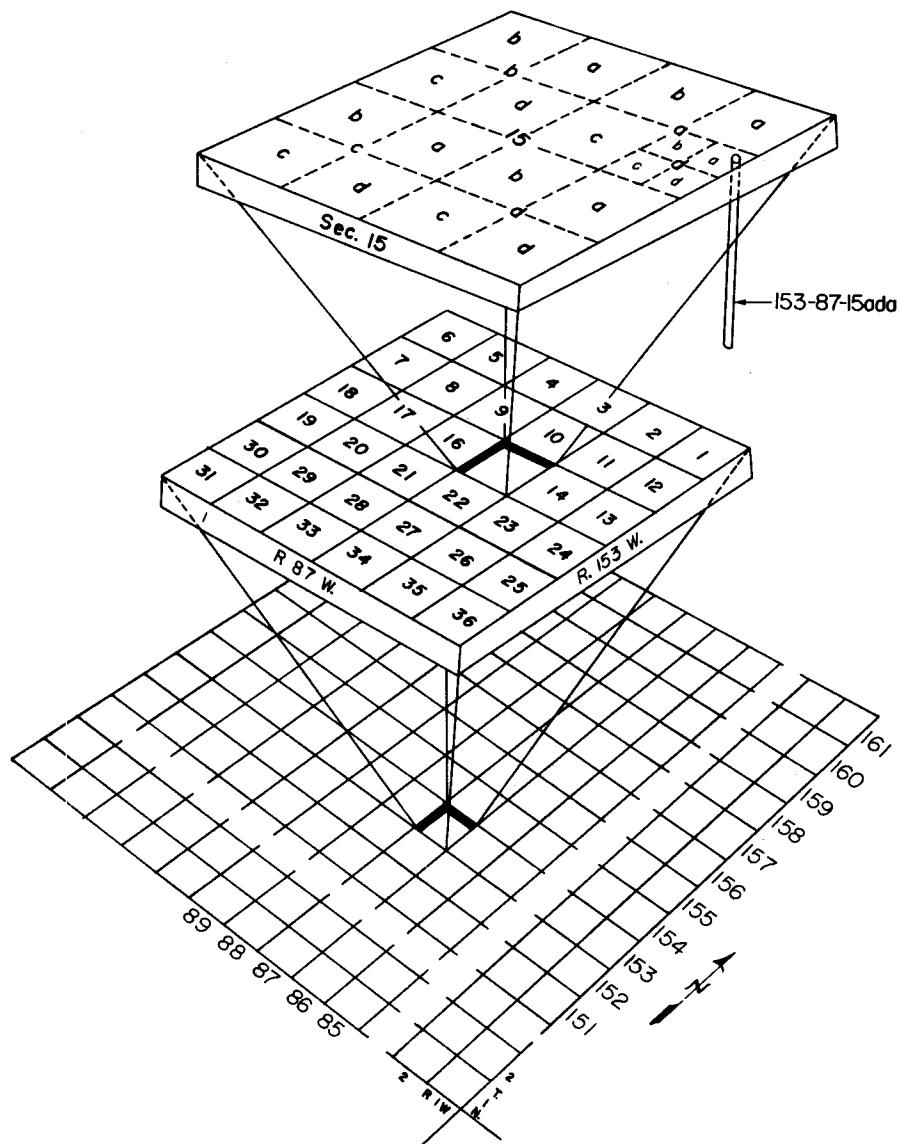


FIGURE 2 - System of numbering wells and test holes.

Observation wells were constructed in selected test holes. Casings for these wells consist for the most part of 1 $\frac{1}{2}$ -inch plastic pipe, slotted in the lower 10 or 20 feet or screened in the lower 2 feet. The observation wells were pumped for a few hours and a water sample was collected for chemical analysis (tables 5 and 6).

The stratigraphic nomenclature used in this report is that of the North Dakota Geological Survey and, in some instances, differs from that of the U.S. Geological Survey.

WATER-QUALITY DATA

All natural water contains dissolved mineral matter. Water in contact with soil or rock, even for only a few hours, will dissolve some mineral matter. The quantity of dissolved minerals in natural water depends primarily on the type of rock or soil with which the water has been in contact and the length of time of contact. Ground water is generally more highly mineralized than surface water because it remains in contact with rock and soil for much longer periods.

The mineral constituents and physical properties of natural water reported in the table of analyses include those that have a practical bearing on the value of the water for most purposes. The analyses generally include determinations of silica, iron, calcium, magnesium, sodium, potassium (or sodium and potassium together calculated as sodium), alkalinity as carbonate and bicarbonate, sulfate, chloride, fluoride, nitrate, boron, dissolved solids, pH, and specific conductance. The source and significance of the different constituents and properties of natural water are discussed in the following paragraphs.

Mineral Constituents in Solution

Silica (SiO_2)

Silica is dissolved from practically all rocks. Some natural waters contain less than 5 ppm (parts per million) of silica and few contain more than 50 ppm, but the more common range is from 10 to 30 ppm. Silica affects the usefulness of water because it contributes to the formation of scale in pipes, water heaters, and boilers.

Iron (Fe)

Iron is dissolved from many rocks and soils. On exposure to air, normal basic water that contains more than 1 ppm of iron soon becomes turbid with the insoluble reddish ferric oxide produced by oxidation. Surface water, therefore, seldom contains as much as 1 ppm of dissolved iron, although some acid water carries large quantities of iron in solution. Ground water commonly contains up to 10 ppm. Rarely, concentrations over 50 ppm may occur in water with a pH of 5 to 8 (Hem, 1959). Iron causes reddish-brown stains on porcelain or

enameled ware and fixtures and on fabrics washed in the water. The U.S. Public Health Service (1962) recommends an upper limit of 0.3 ppm of iron in drinking water.

Calcium (Ca)

Calcium is dissolved from almost all rocks and soils. Calcium and magnesium cause hard water and are largely responsible for the formation of scale in pipes, water heaters, and boilers. Water associated with granite or siliceous sand may contain less than 10 ppm of calcium, whereas water associated with dolomite and limestone, which are common in aquifers in Renville and Ward Counties, may contain from 30 to 100 ppm. Water that has been in contact with deposits of gypsum may contain several hundred parts per million of calcium.

Magnesium (Mg)

Magnesium is dissolved from many rocks, particularly from dolomitic rocks. Its effect in water is similar to that of calcium. The magnesium in soft water may amount to only 1 or 2 ppm, but water in areas that contain large quantities of dolomite or other magnesium-bearing rocks may contain from 20 to more than 100 ppm of magnesium.

Sodium and potassium (Na and K)

Sodium and potassium are dissolved from practically all rocks. Sodium is the predominant cation in some of the more highly mineralized water found in the western United States. Natural water that contains only 3 or 4 ppm of the two together is likely to carry almost as much potassium as sodium. As the total quantity of these constituents increases, the proportion of sodium becomes much greater. The potassium concentration in water commonly does not exceed 50 ppm. Moderate quantities of sodium and potassium have little effect on the usefulness of the water for most purposes, but water that contains more than 50 to 100 ppm of the two may require careful operation of steam boilers to prevent foaming. More highly mineralized water that contains a large proportion of sodium salts may be unsatisfactory for irrigation. The presence of several hundred parts per million of sodium in water makes it unsuitable for use in sodium-restricted diets used as therapy for cardiovascular diseases.

Bicarbonate and carbonate (HCO_3 and CO_3)

Bicarbonate and carbonate are commonly reported as alkalinity. Since the major causes of alkalinity in most natural water are carbonate and bicarbonate ions dissolved from carbonate rocks, the results are usually reported in terms of these constituents. Although alkalinity is primarily due to the presence of carbonate and bicarbonate, other ions also contribute to alkalinity such as silicates, phosphates, borates, possibly fluoride, and certain organic anions which may occur in colored waters. The significance of alkalinity

to the domestic, agricultural, and industrial user is usually dependent upon the nature of the cations (Ca, Mg, Na, K) associated with it. However, moderate amounts of alkalinity do not adversely affect most use.

Sulfate (SO_4)

Sulfate is dissolved from many rocks and soils--in especially large quantities from gypsum and shale. It is formed also by the oxidation of sulfides of iron (pyrite) and may therefore be present in considerable quantities in mine water. The concentration of sulfate in water is generally limited to about 1,500 ppm by the solubility of calcium sulfate (gypsum). Sulfate in water that contains much calcium and magnesium causes the formation of hard scale in steam boilers and may increase the cost of softening the water. Large concentrations of sulfate also cause a "soda" or "alkali" taste that is undesirable. The U.S. Public Health Service (1962) recommends that 250 ppm of sulfate should be the upper limit for drinking water.

Chloride (Cl)

Chlorides are generally very soluble compounds and are found in most rocks so that chlorides are found in all natural water. Large quantities of chloride may affect the industrial use of water by increasing the corrosiveness of water that contains large quantities of calcium and magnesium. Large concentrations of chloride also may give water a salty taste. The U.S. Public Health Service (1962) recommends an upper limit of 250 ppm of chloride for drinking water.

Fluoride (F)

Fluoride has been reported as being present in igneous and some sedimentary rocks to about the same extent as chloride. However, most fluorides, unlike the chlorides, are low in solubility so that the quantity of fluoride in natural water is ordinarily very small compared to that of chloride. Hem (1959) reported that fluoride concentrations in excess of 10 ppm are rare. Investigations have proved that fluoride concentrations of about 0.6 to 1.7 ppm reduce the incidence of dental caries, and that concentrations greater than 1.7 ppm also protect teeth from cavities but cause an undesirable black stain (Durfor and Becker, 1964). The U.S. Public Health Service (1962, p. 8) states, "When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper control limit (0.6 to 1.7 ppm). Presence of fluoride in average concentrations greater than two times the optimum value shall constitute grounds for rejection of the supply." Concentrations higher than the stated limits may cause mottled enamel in teeth.

Nitrate (NO_3)

Nitrate in water is considered a final oxidation product of nitrogenous material and may indicate contamination by sewage or other organic matter. The U.S. Public Health Service (1962) sets 45 ppm as the upper limit for nitrate. Ingestion of excessive quantities of nitrate may result in infantile methemoglobinemia. If the concentration is sufficiently great, both man and animals can be poisoned by nitrate.

Boron (B)

Boron in small quantities has been found essential for plant growth, but irrigation water containing more than 1 ppm of boron is detrimental to navy beans and other boron-sensitive crops.

Dissolved solids

The reported quantity of dissolved solids--the residue on evaporation--consists mainly of the dissolved mineral constituents in the water. It may also contain some organic matter and water of crystallization. Water with less than 500 ppm of dissolved solids is usually satisfactory for domestic and some industrial uses. Water containing several thousand parts per million of dissolved solids is commonly successfully used for irrigation where practices permit the removal of soluble salts through the application of large volumes of water on well-drained lands; but, generally water containing more than about 2,000 ppm is considered to be unsuitable for long-term irrigation under average conditions.

Properties and Characteristics of Water

Temperature

Temperature is an important factor in properly determining the quality of water. This is very evident for such a direct use as an industrial coolant. Temperature is also important, but perhaps not so evident, for its indirect influence upon concentrations of dissolved gases and distribution of chemical solutes in ground water. Normally, the temperature of ground water within 60 feet of the surface approximates the mean annual air temperature and increases 1°F for each 60 to 100 feet of increase in depth.

Hardness

Hardness is the characteristic of water that receives the most attention in industrial and domestic use. It is commonly recognized by the increased quantity of soap required to produce lather. The use of hard water is also objectionable because it contributes to the formation of scale in boilers, water heaters, radiators, and pipes, with a resultant

decrease in rate of heat transfer, possibility of water heater or boiler failure, and decrease of flow.

Hardness is caused almost entirely by compounds of calcium and magnesium. Other constituents--such as iron, manganese, aluminum, barium, strontium, and free acid--also cause hardness, although they usually are not present in quantities large enough to have any appreciable effect.

Generally, bicarbonate and carbonate determine the proportions of "carbonate" hardness of water. Carbonate hardness is the amount of hardness chemically equivalent to the amount of bicarbonate and carbonate in solution. Carbonate hardness is approximately equal to the amount of hardness that is removed from water by boiling and is termed temporary hardness.

Noncarbonate hardness is the difference between the hardness calculated from the total amount of calcium and magnesium in solution and the carbonate hardness. If the carbonate hardness (expressed as calcium carbonate) equals the amount of calcium and magnesium hardness (also expressed as calcium carbonate) there is no noncarbonate hardness. Noncarbonate hardness is about equal to the amount of hardness remaining after water is boiled. The scale formed at high temperatures by the evaporation of water containing noncarbonate hardness commonly is tough, heat resistant, and difficult to remove.

Although many people talk about soft water and hard water, there has been no firm line of demarcation. Water that seems hard to an easterner may seem soft to a westerner.

The Geological Survey has adopted the following classification:

Hardness range (calcium carbonate in ppm)	Hardness description
0-60	Soft
61-120	Moderately hard
121-180	Hard
more than 180	Very hard

For public use, water with hardness of about 200 ppm generally requires softening treatment (Durfor and Becker, 1964).

Sodium-adsorption ratio (SAR)

The term "sodium-adsorption ratio (SAR)" was introduced by the U.S. Salinity Laboratory Staff (1954). It is a ratio expressing the relative activity of sodium ions in exchange reaction with soil and is an index of the sodium or alkali hazard to the soil. Sodium-adsorption ratio is expressed by the equation:

$$SAR = \frac{Na^+}{\sqrt{Ca^{++} + Mg^{++}}}$$

where the concentrations of the ions are expressed in milliequivalents per liter (or equivalents per million for most irrigation water).

Water is divided into four classes with respect to sodium or alkali hazard: low, medium, high, and very high, depending upon the SAR and specific conductance. At a conductance of 100 micromhos per centimeter the dividing points are at SAR values of 10, 18, and 26; but at 5,000 micromhos the corresponding dividing points are SAR values of approximately 2.5, 6.5, and 11. Water ranges in respect to sodium hazard from that which can be used for irrigation on almost all soils to that which is generally unsatisfactory for irrigation.

Specific conductance (micromhos per centimeter at 25°C)

Specific conductance is a convenient, rapid determination used to estimate the amount of dissolved solids in water. It is a measure of the ability of water to conduct an electrical current. Commonly, the amount of dissolved solids (in parts per million) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from well to well and it may even vary in the same source with changes in the composition of the water (Durfor and Becker, 1964).

Specific conductance of most water in the eastern United States is less than 1,000 micromhos, but in the arid and semiarid western parts of the country, a specific conductance of more than 1,000 micromhos is common.

Hydrogen-ion concentration (pH)

Hydrogen-ion concentration is expressed in terms of pH units. The values of pH commonly are used as a measure of the solvent power of water or as an indicator of the chemical behavior certain solutions may have toward rock minerals.

The degree of acidity or alkalinity of water, as indicated by the hydrogen-ion concentration, expressed as pH, is related to the corrosive properties of water and is useful in determining the proper treatment for coagulation that may be necessary at water-treatment plants. A pH of 7.0 indicates that the water is neither acid nor alkaline. Readings progressively lower than 7.0 denote increasing acidity and those progressively higher than 7.0 denote increasing alkalinity. The pH of most ground water ranges between 5.5 and slightly more than 8.

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TABLE 1.--Records of wells and test holes, Renville County

<u>Method drilled</u>	<u>Depth to water below land surface</u>	<u>Specific conductance (micromhos per centimeter at 25°C)</u>
B, bored or augered	F, flows	1, 51-150
C, cable tool	Use of water	2, 151-300
D, dug	H, domestic	3, 301-500
H, hydraulic rotary	I, irrigation	4, 501-1,000
J, jetted	K, domestic and stock	5, 1,001-2,000
R, reverse rotary	L, industrial	6, 2,001-5,000
V, driven	P, public supply	7, 5,001-10,000
T, trenching	S, stock watering	8, 10,001-20,000
Z, other	U, unused	
<u>Aquifer</u>		<u>Remarks</u>
K3, Upper Cretaceous		(1) yield in gallons per minute
OC, Fort Union Group		(2) log available
OD, Tongue River Formation		D, driller's log
OE, Cannonball Formation		E, electric log
OJ, Tongue River and Ludlow Formations undifferentiated		G, geologist log or sample log
PC, Fox Hills Formation		
QG, Quaternary, Pleistocene		(3) temperature of water in degrees F
TL, Tertiary, Paleocene		
31, outwash	Lift and power	(4) frequency of water-level measurement
41, till	Lift	M, monthly
51, buried glaciofluvial deposits	C, centrifugal	N, none
52, buried channel deposits	J, jet	O, original (inventory) measurement only
	L, multiple (centrifugal)	
	M, multiple (turbine)	
	N, none	
	P, piston	
	S, submersible	
	T, turbine	
	Z, other	
<u>Lithology</u>	Power	
4, coarse grained	1, hand	
6, clayey	3, gasoline engine	
7, silty	5, electric motor	
8, sandy	6, windmill	
B, sedimentary rock unclassified	F, gasoline engine through 5 horsepower	
F, shale	S, electric motor through 1 horsepower	
G, gravel	T, electric motor > 1 to 5 horsepower	
O, organic	V, electric motor > 15 to 100 horsepower	
P, clay		
Q, silt or loess		
R, sand and gravel		
S, sand		
T, till		
V, sandstone		
X, silty sand		
ZL, coal		

Table 1.-Boggsville Wells and Test Holes, Roanoke County

LOCATION Reference Number	NAME	TYPE OF WELL (TEST)	DIA. INCHES)	DIA. OF WELL INCHES)	METHOD OF DRAIL- ING	DATE OF TEST	AQUIFER ED	DEPTH TO LOW LAND SURFACE (FEET)	LIFTING- TUBE	WATER HE- GAGE LEVEL IN FEET	DATE OF MEASURE- MENT WATER LEVEL IN FEET)	ELEVATION OF LAND SURFACE IN FEET)	LIFT AND CONDUC- TANCE POWER	SPECIFIC GRAVITY OF WATER	DATE OF TEST	REMARKS		(1) (2)		(3) (4)	
																(1)	(2)	(3)	(4)		
1590961-0149A	C. COLES STAN'S	PI.	200	2	TLC	1912	TLC	15	6-64	K	P S	I									
1590961-0149B	F. GORDON'S	PI.	250	4	TLC	1906	TLC	6	6-64	K	P F										
1590961-0149C	H. STAN'S	PI.	314	4	TLC	1906	TLC	5	6-64	K	P S	1815									
1590961-0149D	L. HOMESTEAD	PI.	314	4	TLC	1906	TLC	20	6-64	K	P S	1815									
1590961-0149E	M. DOLLY'S	PI.	200	4	TLC	1910	TLC	6	6-64	K	P S	1815									
1590961-0149F	N. DOLLY'S	PI.	13	1	H	1905	96.31	6	12-65	U	P S	1816									
1590961-0149G	O. S. S.	PI.	160	4	H	1905	96.31	6	12-65	U	P S	1816									
1590961-0149H	P. MACK'S	PI.	220	2	TLC	1920	TLC	12	6-64	K	P S	1816									
1590961-0149I	Q. MACK'S	PI.	34	1	H	1904	95.2	8	12	12-65	U	P S	1816								
1590961-0149J	R. MACK'S	PI.	200	1	H	1904	95.2	8	12	12-65	U	P S	1816								
1590961-0149K	S. MACK'S	PI.	200	1	H	1904	95.2	8	12	12-65	U	P S	1816								
1590961-0149L	D. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149M	E. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149N	F. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149O	G. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149P	H. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149Q	I. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149R	J. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149S	K. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149T	L. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149U	M. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149V	N. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149W	O. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149X	P. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149Y	Q. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149Z	R. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149AA	S. MCLEOD'	PI.	160	4	TLC	1904	95.31	6	6-64	K	P S	1816									
1590961-0149BB	A. J. DOLLY'S	PI.	300	4	TLC	1912	TLC	50	6-64	K	P S	1816									
1590961-0149CC	B. J. DOLLY'S	PI.	400	2	TLC	1910	TLC	5	12-65	U	P S	1816									
1590961-0149DD	C. J. DOLLY'S	PI.	200	4	TLC	1905	TLC	80	6-64	K	P S	1816									
1590961-0149EE	D. J. DOLLY'S	PI.	200	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149FF	E. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149GG	F. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149HH	G. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149II	H. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149JJ	I. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149KK	J. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149LL	K. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149MM	L. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149NN	M. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149OO	N. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149PP	O. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149QQ	P. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149RR	R. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149SS	S. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149TT	T. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149UU	U. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149VV	V. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149WW	W. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149XX	X. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149YY	Y. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149ZZ	Z. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149AA	A. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149BB	B. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149CC	C. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149DD	D. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149EE	E. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149FF	F. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149GG	G. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149HH	H. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149II	I. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149JJ	J. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149KK	K. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149LL	L. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149MM	M. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149OO	O. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149QQ	Q. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149RR	R. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149UU	U. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149YY	Y. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149ZZ	Z. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149AA	A. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149BB	B. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149CC	C. J. DOLLY'S	PI.	160	4	TLC	1905	TLC	6	3-33	U	P S	1816									
1590961-0149DD	D. J. DOLLY'S	PI.	160	4	TLC	1905</															

15N086000A0C	J	JOHNSON	405	3	1930	S	120	6-66	K	P S
15N086000A0C	H	MILLER	119	2	1958	Q651	120	6-66	H	P I
15N086000A0C	H	MILLER	200	4	1920	TLOO	60	9-66	K	P S
15N086000A0C	S	MILLER	245	6	1947	TLOO	60	9-66	U	N
15N086000A0C	M	VANDERSTROM	670	3	1908	TLOC	100	6-66	U	N
15N086000A0C	S	A F	100	3	1961	QC41	61	15	5-61	S S
15N086000A0C	S	G S	200	4	1947	QC41	61	15	5-61	S S
15N086000A0C	C	ERICSSON	205	2	1930	Q651	5	10	6-66	H
15N086000A0C	C	ERICSSON	200	4	1920	Q651	5	10	6-66	H
15N086000A0C	S	ERICSSON	25	1	1966	QC31	180	6-66	U	N
15N086000A0C	S	ERICSSON	80	4	1945	TLOC	8	6-66	U	N
15N086000A0C	C	ERICSSON	214	4	1961	TLOC	5	6-66	U	N
15N086000A0C	A	RUGENBICK	40	2	1950	Q651	5	12	6-66	X X
15N086000A0C	A	RUGENBICK	40	2	1952	Q651	5	15	6-66	X X
15N086000A0C	M	ANDERSON	300	4	1920	TLOC	5	15	6-66	X X
15N086000A0C	M	ANDERSON	4	4	0	Q631	5	3	7-65	S S
15N086000A0C	S	ANDERSON	20	1	1964	Q641	61	14	12-65	S 1
15N086000A0C	S	ANDERSON	7	3	1956	Q651	5	5	6-66	S S
15N086000A0C	E	EADON	60	18	1920	Q651	5	16	6-66	S S
15N086000A0C	B	MIDDLEDRIF	430	3	1916	TLOC	5	100	6-66	S S
15N086000A0C	T	RANDOLPH	500	4	1965	TLOC	165	6-66	K K	
15N086000A0C	S	G S	200	4	1920	TLOC	15	6-66	K K	
15N086000A0C	S	G S	400	6	1930	TLOC	75	6-66	H S	
15N086000A0C	J	UNDILIN	508	4	1946	TLOC	80	6-66	H S	
15N086000A0C	H	MILNEY	593	4	1961	TLOC	10	6-66	H S	
15N086000A0C	D	LIMKE	440	3	1961	QC41	61	10	6-66	H S
15N086000A0C	M	VENSEL	100	3	1912	TLOC	100	6-66	K U	
15N086000A0C	S	A F	618	3	1912	TLOC	100	6-66	K U	
15N086000A0C	C	HEBERG	105	3	1947	TLOC	180	6-66	K U	
15N086000A0C	C	HEBERG	648	5	1915	TLOC	150	6-66	S U	
15N086000A0C	S	G S	225	4	1947	TLOC	150	6-66	S U	
15N086000A0C	S	G S	560	4	1920	TLOC	150	6-66	S U	
15N086000A0C	M	ELBERG	560	4	1946	TLOC	150	6-66	S U	
15N086000A0C	M	ELBERG	50	2	1905	Q651	8	30	6-66	K U
15N086000A0C	B	ELBERG	651	4	1926	TLOC	5	120	6-66	S P 6
15N086000A0C	C	ELBERG	26	2	1902	Q651	5	20	6-66	S P 6
15N086000A0C	A	ELBERG	230	3	1915	TLOC	20	6-66	K U	
15N086000A0C	G	POPING	100	3	1961	Q641	61	13	5-61	S P 6
15N086000A0C	S	BRONES	465	3	1918	TLOC	5	90	6-66	S P 6
15N086000A0C	R	BRONES	470	2	1920	TLOC	60	6-66	K U	
15N086000A0C	D	STARKE	100	3	1961	Q641	61	13	5-61	S P 6
15N086000A0C	R	STARKE	640	3	1917	TLOC	100	6-66	K U	
15N086000A0C	R	PATTERSON	640	3	1917	TLOC	50	6-66	K U	
15N086000A0C	L	STEINBERGER	250	4	1920	TLOC	50	6-66	K U	
15N086000A0C	R	MAY	400	3	1948	Q641	8P	9-47	S S	
15N086000A0C	S	G S	50	5	1948	Q641	8P	9-47	S S	
15N086000A0C	S	G S	249	5	1948	Q641	8P	9-47	S S	
15N086000A0C	S	G S	50	5	1948	Q641	8P	9-47	S S	
15N086000A0C	S	G S	50	5	1948	Q641	8P	9-47	S S	
15N086000A0C	S	G S	375	3	1948	Q641	7P	7	4-7	H
15N086000A0C	C	MURRAY BROS	84	2	1955	Q631	6	3	11-48	H
15N086000A0C	B	BECKER	16	0	1948	Q641	10	6-66	P S	
15N086000A0C	G	GILSETH	50	3	1948	Q641	7P	15	5-61	T
15N086000A0C	S	G S	100	3	1961	Q641	61	47	S	T
15N086000A0C	S	A F	100	3	1961	Q651	8	66	U	N
15N086000A0C	S	G S	100	3	1961	Q651	8	66	U	N
15N086000A0C	B	MILLER	280	3	1961	TLOC	70	6-66	S S	
15N086000A0C	A	MILLER	301	3	1961	TLOC	30	6-66	S S	
15N086000A0C	G	IVERSON	300	3	1961	Q651	30	6-66	S S	
15N086000A0C	G	IVERSON	300	3	1961	Q651	30	6-66	S S	

TABLE 1, CONTINUED.

LOCATION NUMBER	OWNER IN NAME	DEPTH OF WELL (FEET)	DIA.M. OF WELL (INCHES)	METHOD OF DRILL-DRILL- ED	DATE ED	AQUIFER	LITHO- LOGY	DEPTH TO WATER RE- LLOW LAND SURFACE (FEET)	DATE OF MEASURE- MENT	USE OF WATER	LIFT AND POWER	SPECIFIC CONDUCT- ANCE	ELEVATION OF LAND SURFACE	REMARKS
														(1) (2) (3) (4)
160N084w14DL	E SANDERS	600	3			TLOC		80	9-47	S		6		D
160N084w15CCC	CLAY TWP SCHOOL	16	3½	T	1951	QG31	R	4	5-66	H	J S	3		
160N084w16DAA	U S G S	270	4	H	1947	TLOC	SP	2	8-47	U	N	7	1629	G D
160N084w17AA	P MULLAIN	430	3			TLOC			47	S		7		
160N084w18B3	L UFER-HOLTZER	360	4		1920	TLOC		70	6-64	S	P S	7	1678	
160N084w23DD	D MAY		4		1920	TLOC		15	6-64	S	P S	7	1644	
160N084w34DDU	* DAVIDSON	422	3		1916	TLOC		180	6-64	S	P S	7	1650	
160N084w35ADA	C TIMMS	14	3½	?	1910	QG31	G	8	6-64	S	P S	7	1630	
160N084w10DC	U S A F	100	3	H	1961	QG41	6T	16		U	N		1753	
160N084w13B3	J TOWNSEND	320	3		1920	TLOC	S		6-64	K	P 6	6	1722	60 G 49 D
160N084w15BAA	O LARSSON EST	500	4		1920	TLOC		60	6-64	S	P S	7	1748	
160N084w15CCC	D LILLIOTT	60	2½	B	1957	QG51	S	10	6-66	H	J S	5		
160N084w16CCC	S EMMERSON	500	3		1916	TLOC		90	6-64	K	P S	7	1732	
160N084w23ADC	R BUNNIGE	380	4		1916	TLOC	F	60	6-64	K	P S	7	1735	
160N084w32ADC	D FUNKE	8	3½	D	1319	QG31	G	5	6-64	P	P 1	1	1640	
160N084w35AAA	U S G S	265	4	H	1947					U	N		1742	G
160N084w05C3	K ZELTINGER	500	3		1920	TLOC		100	6-64	S	P S	7	1850	
160N084w10CCC	U S G S	317	4	H	1947					U	N		1828	G
160N084w16CCC	W RAU	26	2½		1356	QG51	S	16	6-64	S	P S	7	1852	
160N084w24DDC	L SEJAKERT	612	3		1925	TLOC		150	6-64	S	P S	7	1730	
160N084w28CDC	B DEWING	500	3	C	1902	TLOC	S		6-66	U	P S	6		
160N084w30A83	M SCHLAK	312	3		1920	TLOC		150	6-64	K	P S	7	1842	
160N084w35CDC	A KEITH	600	4	C		TLOC	S		6-66	S	P S	7		
160N084w35CDC	K NEUBECK EST		4		1930	TLOC			6-64	S	P 6	1	1821	
161N084w01DOD	U S G S	50	5	H	1948	QG41	P			U			1609	G
161N084w01UDC	U S G S	60	5	H	1948	QG51	S			U			1615	G
161N084w01DOD	P NILSSON	343	3			TLOC		15	6-47	S		7	1644	
161N084w04dp	G STRANDBERG	492	3			TLOC		2	6-47	S		8	1658	
161N084w04dp	G STRANDBERG	425	2		1925	TLOC	S	100	6-64	S	T		1658	
161N084w05A83	J NEWSTROM	492	3			TLOC			7-47	S		7	1662	
161N084w09A83	CLEIFFORD LTD								7-47	S		7	1656	
161N084w12DD	H WITTEMAN	400	4		1910	TLOC		22	6-47	S	P 6	7	1632	
161N084w12DA	F GEHRINGER	294	3			TLOC	F			S		7	1615	
161N084w13D	F PARIS													
161N084w14D	G HARCUS	375	4			TLOC		14	7-47	S		7	1642	D
161N084w15D93	J SJUTHAM	270	4			TLOC			7-47	S		7	1648	
161N084w16D93	J ROBERTS	3							7-47	S		7	1663	
161N084w17AA	L HORNER	500	3			TLOC		18	8-47	S		6	1676	
161N084w17HA		325		H	1953					U	N		1665	D N
161N084w17CD		325		H	1953					U	A	6	1675	D N
161N084w17CDC	U S G S	50	1		1965	QG41	6T	36	65	U		6	1655	D
161N084w17DA	JONES OIL CO	3872				TLOC	F			U			1655	D
161N084w17DC	W BUREN	390	4			TLOC		70	7-47	S		7	1695	
161N084w20AC	U S A F	103	3	H	1961	QG41	6T	14	5-61	U	N		1693	6 G 42 D
161N084w20ACA	U S G S	62	1		1965	QG41	6T	28	65	U	A	6	1683	D
161N084w20CDC	U S G S	61	1		1965	QG41	6T	26	65	U	A	6	1685	D
161N084w21AA		288		H	1953					U	N		1665	D N
161N084w21AAA	P GEHFINGER	350	3		1918	TLOC		15	6-64	K	P S		1663	
161N084w21BB 1	GREAT AM CAS CO	350	6			TLOC	V	30	9-45	U			1656	
161N084w21BB 2	BURDUIK	350				TLOC			7-47			7	1656	D D
161N084w21CD		303		H	1953					U	N		1660	D N
161N084w21DD		320		H	1953					U	N		1665	D N
161N084w22AA	D GEHRINGER	300	3			TLOC		30	9-45	S		7	1648	D

Table I, Continued.

NUMBER	LOCATION NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD DRILLING ED.	ACQUIFER ED.	LITHO- LOGY	DEPTH TO WATER BE- LOW LAND SURFACE (FEET)	DATE OF MEASURE- MENT OF WATER LEVEL (FEET)	LIFT AND CONDUCTI- VITY OF WATER POWER	SPECIFIC CONDUCTI- VITY OF WATER	ELEVATION OF LAND SURFACE	REMARKS			
												(1)	(2)	(3)	
620954326A	A KELP	358	3	TLOC	F		7	1662		S					
620954326C	A T. G. T. A.	400	3	QG1	Tp		8	1659		S					
620954326C	U S S	60	5	QG1	Tp		7	1615		G					
620954326C	R H. V. D. S.	10	36	QG1	S		4	1631		C F					
620954326C	R H. V. D. S.	60	36	QG1	S		2	1631							
620954326C	R H. V. D. S.	16	60	QG1	S		6-66	1601							
620954326C	R H. V. D. S.	50	4	QG1	P		U	1601							
620954326C	R H. V. D. S.	50	5	TLOC	Tp		U	1607							
620954326C	R H. V. D. S.	50	5	QG1	Tp		U	1612							
620954326D	R H. V. D. S.	50	5	QG1	G		U	1608							
620954326D	R H. V. D. S.	400	3	QG1	Tp		12	1753							
620954326D	R H. V. D. S.	25	24	QG1	S		6-64	S		P S					
620954326D	R H. V. D. S.	645	3	QG1	S		75	1715		P 1					
620954326D	R H. V. D. S.	493	3	QG1	S		56	1664		K 6					
620954326D	R H. V. D. S.	25	24	QG1	S		6-66	H		J S					
620954326D	R H. V. D. S.	410	3	QG1	S		100	1711		P 6					
620954326D	R H. V. D. S.	450	3	QG1	G		75	1664		S P S					
620954326D	R H. V. D. S.	100	1	QG1	G		12	1624							
620954326D	R H. V. D. S.	20	16	QG1	S		6-61	N		1634					
620954326D	R H. V. D. S.	46	6	QG1	S		6-66	H		P 3					
620954326D	R H. V. D. S.	546	4	QG1	S		18	1751							
620954326D	R H. V. D. S.	360	3	QG1	S		1914	1733							
620954326D	R H. V. D. S.	90	4	QG1	S		1915	1720							
620954326D	R H. V. D. S.	200	4	QG1	S		1965	1711							
620954326D	R H. V. D. S.	400	4	QG1	S		1962	1707							
620954326D	R H. V. D. S.	400	4	QG1	S		1962	1704							
620954326D	R H. V. D. S.	317	4	QG1	S		1967	1704							
620954326D	R H. V. D. S.	300	4	QG1	S		1920	1707							
620954326D	R H. V. D. S.	400	4	QG1	S		1920	1710							
620954326D	R H. V. D. S.	600	4	QG1	S		1920	1710							
620954326D	R H. V. D. S.	625	3	QG1	S		1923	1710							
620954326D	R H. V. D. S.	125	4	QG1	S		1947	1712							
620954326D	R H. V. D. S.	82	3	QG1	S		1961	1699							
620954326D	R H. V. D. S.	190	4	QG1	S		1965	1699							
620954326D	R H. V. D. S.	400	4	QG1	S		1962	1699							
620954326D	R H. V. D. S.	140	4	QG1	S		1962	1699							
620954326D	R H. V. D. S.	56	4	QG1	S		1966	1699							
620954326D	R H. V. D. S.	70	24	QG1	S		30	1699							
620954326D	R H. V. D. S.	50	0	QG1	S		17	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		25	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		150	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		150	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		150	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		150	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		20	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		54-7	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		50	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		13	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		54-7	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		70	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		9	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		7	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		100	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		100	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		100	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		100	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		100	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		100	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		100	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		100	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		100	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		100	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		100	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	125	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	82	3	QG1	S		100	1829							
620954326D	R H. V. D. S.	190	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	400	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	140	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	56	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	24	QG1	S		100	1829							
620954326D	R H. V. D. S.	50	0	QG1	S		100	1829							
620954326D	R H. V. D. S.	390	4	QG1	S		100	1829							
620954326D	R H. V. D. S.	70	4	QG1	S		1								

162NO87W26DC	J BATEKHUS	595	3	H	1965	TLOC		S-47	6	N	EG
162NO87W26AA1	U S G S	705	4	H	1965	TLOC		47	5-67	U N	EG
162NO87W26AA2	U S G S	254	4	H	1965	TLOC		45	5-67	U N	EG
162NO87W26AA3	U S G S	640	3	H	1965	TLOC		45	5-67	U N	EG
162NO87W700D	T LARSEN	320	4	H	1965	TLOC		45	5-67	U N	EG
162NO87W700C	N JENSEN	480	3	H	1965	TLOC		45	5-67	U N	EG
162NO87W800D	S JØHNSON	638	3	H	1928	TLOC	71	6-57	S S	EG	
162NO87W110D	S JØHNSON	638	4	H	1928	TLOC	71	6-57	S S	EG	
162NO87W176A	N HFI SØN	51	4	H	1964	QG41	66	6-72	S S	EG	
162NO874200D1	U S G S	51	1	H	1964	QG51	5	12-65	U U	EG	
162NO87W144D1	U S G S	73	1	H	1964	QG51	5	12-65	U U	EG	
162NO87W144D1	F PETERMAN	670	3	H	1964	QG51	5	12-65	U U	EG	
162NO87W144D1	F PETERMAN	670	0	H	1964	QG51	3	5-67	U U	EG	
162NO87W220D1	S SANDERSEN	300	3	H	1954	TLOC	20	6-64	S S	EG	
162NO87W220D1	S SANDERSEN	90	4	H	1954	TLOC	5	6-64	H H	EG	
162NO87W220D1	S SANDERSEN	314	3	H	1947	TLOC	8-47	U S	6	N	
162NO87W340D1	H SWENSON	245	4	H	1947	TLOC	20	8-47	U S	EG	
162NO87W340D1	H SWENSON	400	3	H	1916	TLOC	8	8-47	U S	EG	
162NO87W340D1	H SWENSON	405	4	H	1916	TLOC	8	8-47	U S	EG	
162NO87W340D1	H SWENSON	20	1	H	1964	QG51	5	12-65	U U	EG	
162NO87W340D1	H SWENSON	256	4	H	1964	QG51	5	12-65	U U	EG	
162NO87W340D1	S SANDBØN	300	4	H	1964	TLOC	15	6-64	S S	EG	
162NO87W340D1	S SANDBØN	370	3	H	1964	TLOC	10	8-47	S S	EG	
162NO87W340D1	C SANDERSEN	11	48	D	1928	TLOC	8	3-47	H H	EG	
162NO87W340D1	E DRY VALLEY SC	215	3	H	1928	TLOC	6	6-64	P S	EG	
162NO87W340D1	L NEHOUSI	336	3	H	1916	TLOC	8	8-47	S S	EG	
162NO87W340D1	L NEHOUSI	336	0	H	1916	TLOC	8	8-47	S S	EG	
162NO87W340D1	L NEHOUSI	336	3	H	1916	TLOC	8	8-47	S S	EG	
162NO87W340D1	L NEHOUSI	336	0	H	1916	TLOC	8	8-47	S S	EG	
162NO87W340D1	W THOMPSON	280	3	H	1916	TLOC	50	8-47	S S	EG	
162NO87W340D1	MKS STUDIO	325	3	H	1916	TLOC	5	6-64	U U	EG	
162NO87W340D1	F KRAUSE	450	2	H	1916	TLOC	10	7-47	S S	EG	
162NO87W340D1	F HEFFER	280	3	H	1916	TLOC	5	7-47	H H	EG	
162NO87W340D1	F HEFFER	18	40	D	1916	QG31	2	7-47	S S	EG	
162NO87W340D1	N WALKER	7	48	D	1916	QG31	15	7-47	S S	EG	
162NO87W340D1	N WALKER	7	48	D	1916	QG31	15	7-47	S S	EG	
162NO87W340D1	E MULDER	225	3	H	1916	TLOC	20	6-64	S S	EG	
162NO87W340D1	C JULIET	340	4	H	1916	TLOC	6	6-64	K K	EG	
162NO87W340D1	C JULIET	340	0	H	1916	TLOC	6	6-64	K K	EG	
162NO87W340D1	N NELSON	400	3	D	1916	QG51	10	8-47	S S	EG	
162NO87W340D1	F MCCRARY	12	36	D	1916	QG31	7	6-64	K K	EG	
162NO87W340D1	N HANSIN	450	2	H	1916	TLOC	10	7-47	S S	EG	
162NO87W340D1	F HEFFER	280	3	H	1916	TLOC	5	7-47	H H	EG	
162NO87W340D1	N WALKER	18	40	D	1916	QG31	2	7-47	S S	EG	
162NO87W340D1	N WALKER	7	48	D	1916	QG31	15	7-47	S S	EG	
162NO87W340D1	E MULDER	225	3	H	1916	TLOC	20	6-64	S S	EG	
162NO87W340D1	F ELTZ	376	3	H	1916	TLOC	30	8-47	S S	EG	
162NO87W340D1	F ELTZ	376	0	H	1916	TLOC	30	8-47	S S	EG	
162NO87W340D1	M WALSH	20	36	D	1916	QG51	10	8-47	S S	EG	
162NO87W340D1	M WALSH	378	4	H	1900	TLOC	6	8-47	S S	EG	
162NO87W340D1	G CHAPALAIN	375	3	H	1947	TLOC	33	7-47	S S	EG	
162NO87W340D1	A DESLAIRS-R	12	30	D	1947	TLOC	8	8-47	S S	EG	
162NO87W340D1	M HASKINS	350	3	H	1947	TLOC	8	8-47	S S	EG	
162NO87W340D1	J AYO	12	12	J	1916	QG51	10	8-47	K K	EG	
162NO87W340D1	F HALETON	16	40	D	1916	QG51	30	8-47	S S	EG	
162NO87W340D1	F HALETON	16	40	D	1916	QG51	30	8-47	K K	EG	
162NO87W340D1	T MILES	321	4	H	1916	TLOC	6	6-64	S S	EG	
162NO87W340D1	U S G S	310	4	H	1947	TLOC	4	8-47	U N	EG	
162NO87W340D1	W GAIN	21	6	Y	1915	QG51	17	6-64	J S	EG	
162NO87W340D1	G LAEFFEL	20	40	D	1944	QG51	11	8-47	K K	EG	
162NO87W340D1	L SMITH	465	4	H	1944	TLOC	30	8-47	S S	EG	
162NO87W340D1	L SMITH	465	0	H	1944	TLOC	30	8-47	S S	EG	

TABLE I. CUNNINGHAM

LOCATION NUMBER	CROWN NAT.	DEPTH FEET	DIAM. WELL (FEET)	METHOD OF WELL (FEET)	DATE OF DRILLING (ED)	ACQUIFER DEPTH TO LOW LAND (FEET)	LITHO- LOGY TO LOW LAND (FEET)	DEPTH TO WATER LEVEL TO LOW LAND (FEET)	DATE OF MEASURE- MENT TO WATER LEVEL (FEET)	LIFT TO WATER LEVEL (FEET)	SPECIFIC CONDUCT- ANCE WATER LEVEL (FEET)	ELEVATION OF LAND SURFACE (FEET)	REMARKS			
													(1)	(2)	(3)	
16-N-08740-200	L SMITH	500	3	TLC		847		6	8	1721						
16-N-08740-200	C LITTELL	350	3	TLC		847		6	7	1726						
16-N-08740-200	J ROLAND	500	3	TLC		106		7	7	1751						
16-N-08740-200	C PELTIER	400	3	TLC		48	7-4.5	5	6	1719						
16-N-08740-200	S TELLIS	402	3	TLC		847		6	7	1671						
16-N-08740-200	A MICHELETTI	13	24	AS		7	6-4.7	9	14.9	1749						
16-N-08740-200	W SIESS	400	4	TLC		75	6-64	5	5	1716						
16-N-08740-200	L DUNSON	340	4	TLC		84	6-47	6	5	1711						
16-N-08740-200	E BLOOM	480	3	TLC		847		6	6	1713						
16-N-08740-200	L DESEAR	500	3	TLC		847		6	7	1747						
16-N-08740-200	E KILLE	36	0	TLC		6	8-47	5	1	1741						
16-N-08740-200	E KILLE	700	4	TLC		30	6-64	5	5	1741						
16-N-08740-200	O ABY	716	56	TG		6	6-47	H	1	1777						
16-N-08740-200	K FUSS	596	4	TLC		140	6-64	K	5	1400						
16-N-08740-200	D PETERS	34	0	TLC		95	11	5	1	1772						
16-N-08740-200	H BULF	492	3	TLC		64	6-47	S	6	1792						
16-N-08740-200	U ALBRIGHT	400	4	TLC		61	5	12-65	U	1747						
16-N-08740-200	N SLO	20	1	TLC		40	8-47	6	6	1753						
16-N-08740-200	N SLO	375	3	TLC		40	8-47	X	6	1766						
16-N-08740-200	HALVORSEN	382	3	TLC		75	8-47	S	6	1771						
16-N-08740-200	J SMITH	378	3	TLC		50	8-47	S	6	1770						
16-N-08740-200	C JOHNSON	280	3	TLC		9	6-64	K	5	1620						
16-N-08740-200	A FUDS	34	28	TG		100	6-47	H	7	1776						
16-N-08740-200	H RAPP	365	3	TLC		45	6-64	K	5	1405						
16-N-08740-200	U ALBRIGHT	400	4	TLC		95	11-50	S	1	1811						
16-N-08740-200	K EMMEL	14	36	TG		3	11-50	S	1	1833						
16-N-08740-200	L EMMEL	11	40	TG		5	5-47	S	1	1833						
16-N-08740-200	A LEMMEL	70	36	TG		3	5-47	S	1	1833						
16-N-08740-200	I NODA	19	1	H		196*	5	12-65	U	1823						
16-N-08740-200	U S S	40	1	H		1964	61	12-65	U	1823						
16-N-08740-200	O NESS	10	46	D		2641	1	5-47	S	1806						
16-N-08740-200	I NODA	10	49	D		2641	7	11-50	S	1804						
16-N-08740-200	J SHAVIER	7	9	D		951	5	8-47	P	1	1693					
16-N-08740-200	C HIDGE	24	0	D		951	11	5-47	H	1803						
16-N-08740-200	S MORN	46	24	D		951	12-65	S	6	1844						
16-N-08740-200	H EMMEL	23	24	S		951	4	5-47	H	1805						
16-N-08740-200	J ASSEL	48	24	S		951	18	6-64	K	1805						
16-N-08740-200	35	13	3	D		951	1	5-47	H	1801						
16-N-08740-200	47	13	3	D		951	13	4-47	S	1804						
16-N-08740-200	65	19	8	D		951	20	5-47	S	1863						
16-N-08740-200	60	19	9	D		951	17	5-47	H	1853						
16-N-08740-200	1947	255	4	H		7	7-47	U	1	1844						
16-N-08740-200	L ST CLOIX	400	3	TLC		951	7	5-47	S	1805						
16-N-08740-200	J ST CLOIX	500	6	TLC		50	9-64	K	5	1805						
16-N-08740-200	R LINCOLN	600	3	TLC		100	5-47	S	6	1825						
16-N-08740-200	H LINCOLN	500	3	TLC		80	6-64	K	5	1825						
16-N-08740-200	A MARKEL	12	26	D		951	6	5-47	S	1817						
16-N-08740-200	I HODDELMAN	12	24	D		951	6	8-47	H	1817						
16-N-08740-200	E HODDELMAN	40	0	TLC		8	8-47	H	1	1815						
16-N-08740-200	SHEKOLD	24	22	D		951	14	6-64	P	1	1645					
16-N-08740-200	FEGGOTTS	12	40	D		951	9	8-47	S	1	1675					
16-N-08740-200	16-N-08740-200	8	48	D		951	6	8-47	S	1	1669					
16-N-08740-200	4	49	D		951	4	7-46	S	6	1635						

164N085W36B8	O STOLL	20	40	O	QGS1	10	8-47	S	6	1645	O
164N086W31AC	C LINDEMODO	450	4		TLDC	15	4-47	X	A	1774	C
164N086W31AD	C LINDEMODO	407	3			20	6-64	Y	P	1775	C
164N086W33BC		400	3			70	6-47	Z	S	1775	
164N086W34D0		20		J	QGS1		8-47	X	6	1764	
164N086W35CD			40	D	QG	6	8-47	S	1	1745	
164N087W32CC	O GILBERTSON	48	0		QG	2	5-47	S	Z	1741	O
164N087W32CD	O GILBERTSON	25	40		QGS1	8	5-47	H	1	1799	O
164N087W35DC	C BLACKDAHL	12	40	O	QGS1	8	8-47	O	i	1807	O
										1651	O

TABLE 2.--Records of wells and test holes, Ward County

(See headnotes for table 1, page 12.)

LOCATION NUMBER	OWNER OR NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD DRILL-DRILL-ED	DATE DRILL-ED	ALQUIFER	LITHOLOGY	DEPTH TO WATER LEVEL LOW LAND SURFACE (FEET)	DATE OF MEASURE-MENT	USF	LIFT AND POWER	SPECIFIC CONDUCTANCE	ELEVATION OF LAND SURFACE	REMARKS
		(1)	(2)	(3)	(4)									
15IN081W01A0	P IVES	20	2	TLOC	ZI	F	50	K	N	1940		44	C	
15IN081W01C0			2	TLOC	ZI			K	P 6	2010				
15IN081W02AA	IUAX TRAIL	56	6	B	TLOC	ZI	30	50	U	N	1970			
15IN081W03CB	L KASSNER	130	12	B	QG51	R	110	9-50	K	P 6	2132			
15IN081W06AB	C BOHLENDER	250	2	TLOC	ZI	175	9-50	S	P 6	2125				
15IN081W06BB	C BOHLENDER	150	2	TLOC	ZI	100	9-50	X	P 6	2132				
15IN081W06CB	D ROTELINK	310	5	TLOC	ZI	198	9-50	K	P 5	2123				
15IN081W08BB		13	48	D	QG31	R	4	9-50	H	N 6	2163			
15IN081W10B8	C ANHORN	48	0	QG31	R	2	50	H	P 1	2142				
15IN081W10BB	C ANHORN	265	4	1956	TLOC	ZI	235	5-64	K	P T	2145	2	58	
15IN081W12AB	P IVES	126	12	B	TLOC	ZI	29	50	U	P 6	2060			
15IN081W12DA	E BERG	285	2	TLOC	ZI	86	9-50	U	N	2145				
15IN081W18DAA1	E BERG	315	3	1942	TLOC	ZI	20	5-64	K	P T	2145		52	
15IN081W18DAA2	E BERG	298	4	1962	TLOC	ZI	90	5-64	S	P 6	2145			
15IN081W19AD 1	U S A F	100	3	H	1961	QG41	67		U	N	2156			
15IN081W19AD 2	B VIDLFTS	300	2	TLOC	ZI	80	9-50	K	P 6	2155				
15IN081W20CB	A BERG	290		TLOC	ZI			K	P 6	2155				
15IN081W20CB	A BERG	300	5	1955	TLOC	ZI	100	5-64	K	P S	2155	4	53	
15IN081W21AD 1	T MARTINSON	54		QG31	R	6	9-50	H	P 1	2134				
15IN081W21AD 2	T MARTINSON		3	TLOC	ZI			K	P 6	2138				
15IN081W22DC	F MARTINSON	54	30	9	QG51	R	6	9-50	H	N	2120			
15IN081W24DC	J SCHMERE	10	48	D	QG31	R	2	9-50	U	P 1	2137			
15IN081W25BB	H VANDERBERG	13	48	D	QG31	R	9	9-50	U	P 1	2145			
15IN081W26AC	A SCHÖNENBERG	4	48	D	QG31	R	2	9-50	U	N	2140			
15IN081W278A	A SCHÖNENBERG	11	30	D	QG41	R	6	9-50	H	N	2125			
15IN081W278B	A SCHÖNENBERG	268	4	1960	TLOC	ZI	60	5-64	K	S S	2149			
15IN081W28RC	C MUSENG	13	36	D	QG31	R	5	9-50	H	N	2152			
15IN081W28CB	C MUSENG			TLOC	ZI	99	9-50	S	P 6	2179				
15IN081W29AA	S SCHÖNENBERG	300	5	TLOC	ZI	131	9-50	K	P 6	2161				
15IN081W30AD	E VIDLFTS	300	3	TLOC	ZI			K	P 5	2145				
15IN081W32CA	J CATULLA	218	4	TLOC	ZI	150	9-50	K	P 6	2145				
15IN081W33CC	U S G S	175	4	H	1965	TLOC	ZI	170	9-50	U	N	2177	Eb	N
15IN081W33DA	E RYAN	190	4	H	1965	TLOC	ZI	170	9-50	U	N	2162		
15IN081W35AD	H VANDERBERG	11	48	D	QG31	P	4	9-50	H	P 1	2110			
15IN081W36CB	U S G S	55	4	H	1965	TLOC	ZI	145	50	J	N	2075	Eb	
15IN082W01CC	H HAUF	250	2	TLOC	ZI	145	50	U	P 6	2092				
15IN082W01DA 1	R BATKE	200	2	TLOC	ZI			K	P 6	2148				
15IN082W01DA 2	R BATKE	18	36	D	QG31	P	8	50	H	P 1	2113			
15IN082W01DA0	R HAUF	250	4	TLOC	ZI	250	5-64	U	N	2118				
15IN082W02AB	O KUGER	2		TLOC	ZI			U	P 6	2042				
15IN082W02BA	O KUGER			TLOC	ZI			K	P 6	2050				
15IN082W02Cq	M SCHÖENHALD	2		TLOC	ZI			U	P 6	2064				
15IN082W03AD	H POLSFUT	3		TLOC	ZI			U	P 6	2045				
15IN082W04AA1	F SCHÖENHALD	307	4	V	1950	TLOC	ZI	127	5-64	K	P 5	2055		
15IN082W04AA2	F SCHÖENHALD	325	2	TLOC	ZI	70	50	K	P 6	2055				
15IN082W05CC	M SCHÖENHALD	71	3	QG51	S	29	50	X	S	2113				
15IN082W06BA	D HANKEL	297	2	TLOC	ZI	235	50	P	S	2113				
15IN082W07CD	S HONCHROW	15	36	D	QG31	R	9	50	H	N	2155			
15IN082W09ACA	H BAUER	354	4	TLOC	S	200	50	K	P 5	2137				
15IN082W09AD	A KOTCHIAN	290	5	TLOC	ZI	100	50	K	P 6	2153				
15IN082W09DA	D KNUTSON	9	24	D	QG31	R	5	50	H	P 1	2107			
15IN082W10BC	A KOTCHIAN	20	8	QG31	R	9	50	U	N	2093				
15IN082W10CB	M SCHÖENHALD	290	5	TLOC	ZI	156	50	S	P 5	2138				

TABLE 2, CONTINUED.

LOCATION NUMBER	OWNER'S NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD OF DRILLING ED	ACQUIFER ED	LITHO- LOGY	DEPTH TO WATER AT SURFACE (FEET)	DATE OF MEASURE- MENT	USE OF WELL	SPLIT TEST CUP AND PLATE			HIGHLIGHTS
										111 111	111 111	111 111	
151N034W20AD	G JOHNSON	11	24	B	1963	QG31	8	6	3-54	H	P	S	
151N034W20BB	G JOHNSON	46	24	B	1963	QG31	5	11	3-64	H	J	S	
151N034W20BB	U S A F	80	4	B	1963	QG31	6	25	62	K	J	S	
151N034W20CD	H HAFER	50	18	E	1943	QG31	6	79	63	K	J	S	
151N034W20CD	E SAMBOR	261	4	TLOC	1935	TLOC	21	70	40	K	J	S	
151N034W20CD	H HAFER	240	4	TLOC	1935	TLOC	21	70	40	K	J	S	
151N034W20CD	H HAFER	65	18	TLOC	1941	QG31	5	40	64	J	N	S	
151N034W20AA	C TALBOT	120	4	TLOC	1941	QG31	6	40	64	J	P	S	
151N034W20AA	C TALBOT	95	4	TLOC	1941	QG31	6	40	64	H	P	S	
151N034W20AA	C TALBOT	50	4	TLOC	1943	QG31	6	30	64	H	P	S	
151N034W20CD	U S A F	95	4	TLOC	1965	QG31	8	18	12-65	U	N	S	
151N034W20CD	U S A F	28	1	TLOC	1919	QG31	5	8	3-64	K	P	S	
151N034W20CC	D MCAYNOR	12	24	B	1955	TLOC	20	60	60	H	J	S	
151N034W20CL	A ANDERSON	100	4	TLOC	1961	QG31	5	30	64	S	P	S	
151N034W20CZ	A ANDERSON	100	6	TLOC	1961	QG31	5	58	5-61	V	N	S	
151N034W20B8	U S A F	100	3	TLOC	1961	QG31	5	32	5-61	U	N	S	
151N034W20B8	U S A F	100	3	TLOC	1961	QG31	5	45	5-61	U	N	S	
151N035W20CD	U S A F	99	3	TLOC	1944	QG31	8	24	3-64	U	P	S	
151N035W20CD	L OLSEN	40	24	TLOC	1961	QG31	5	77	63	S	P	S	
151N035W20CD	F HANSEN	167	4	TLOC	1950	QG31	6	17	3-64	S	P	S	
151N035W20CD	F HANSEN	65	18	TLOC	1959	QG31	6	17	3-64	S	P	S	
151N035W20CD	E HANSEN	32	8	TLOC	1959	QG31	6	17	3-64	S	P	S	
151N035W20CD	E HANSEN	140	8	TLOC	1959	QG31	6	50	5-66	X	P	S	
151N035W20CD	P BLUM	150	6	TLOC	1959	QG31	5	50	5-66	X	P	S	
151N035W20CD	T JODNISIN	50	24	TLOC	1932	QG31	5	20	5-66	T	P	S	
151N035W20CD	F KRAMER	165	4	TLOC	1959	QG31	5	70	5-66	T	P	S	
151N035W20CC	E MILLISIN	90	24	TLOC	1961	QG31	5	70	5-66	X	P	S	
151N035W20CC	J ALLEN	60	8	TLOC	1961	QG31	5	30	5-66	X	P	S	
151N035W20CC	H FINKEN	220	4	TLOC	1961	QG31	5	30	5-64	K	S	S	
151N035W20CC	H FINKEN	75	4	TLOC	1965	QG31	5	35	3-64	K	S	S	
151N035W20CA	R BRANDT	60	24	TLOC	1965	QG31	5	30	4-64	U	P	S	
151N035W20CA	R SEVERSON	37	36	TLOC	1966	QG31	5	55	5-64	U	P	S	
151N036W20CD	U S A F	27	2	TLOC	1965	QG31	5	26	12-65	U	N	S	
151N036W20CD	N D S C	14	14	TLOC	1962	QG31	5	65	5-62	U	P	S	
151N036W20CB	CITY OF RYDER	18	96	TLOC	1963	QG31	5	8	63	P	S	S	
151N036W20CC	E ERB	16	8	TLOC	1962	QG31	5	30	5-62	J	P	S	
151N036W20CC	N D S C	52	4	TLOC	1962	QG31	5	30	5-62	J	P	S	
151N036W20CD	R WARD	14	14	TLOC	1963	QG31	5	40	4-62	J	P	S	
151N036W20CD	F BRADLEY	300	1	TLOC	1966	QG31	5	27	8-66	U	N	S	
151N036W20CD	U S A F	90	1	TLOC	1966	QG31	5	22	8-63	S	P	S	
151N036W20CD	J JENSEN	170	6	TLOC	1951	QG31	5	65	4-62	J	P	S	
151N036W20CD	E FRIDEN	26	26	TLOC	1963	QG31	5	8	63	P	S	S	
151N036W20CD	O OLSEN	21	21	TLOC	1963	QG31	5	4	63	P	S	S	
151N036W20CA	R YDER	25	25	TLOC	1963	QG31	5	30	5-64	J	P	S	
151N036W20CA	R YDER SCHOOL	16	16	TLOC	1963	QG31	5	35	3-64	K	S	S	
151N036W20CA	A ANDERSON	29	29	TLOC	1963	QG31	5	35	3-64	K	S	S	
151N036W20CA	MOTOR INN	48	48	TLOC	1963	QG31	5	35	3-64	K	S	S	
151N036W20CA	CREAMERY WELL	304	304	TLOC	1963	QG31	5	37	4-62	K	S	S	
151N036W20CA	CREAMERY WELL	304	304	TLOC	1963	QG31	5	37	4-62	K	S	S	
151N036W20CA	O K CAFE	24	24	TLOC	1963	QG31	5	37	4-64	K	S	S	
151N036W20CA	O K CAFE	67	24	TLOC	1957	QG31	5	12	4-64	K	S	S	
151N036W20CA	E OLSON	60	24	TLOC	1961	QG31	5	45	4-61	J	P	S	
151N036W20CB	U S A F	100	3	TLOC	1961	QG31	5	20	4-61	J	P	S	

1510030W19AA	é OLSEN	70	24	1955	QCS1	6	10	4-64	N	7	3	
1510030W19AB	r J. HANSON	150	4		TLOC	5	6	4-64	n	7	3	
1510030W19AB	p HANSON	153			TLOC	6	7	3-62	k	5	6	
1510030W19AB	é WILSON	168	6	1946	QCS1	6	7	5-66	h	5	6	
1510030W19AB	d WILSON	29	48	1946	TLOC	5	20	4-64	x	5	5	
1510030W19AB	p HANSON	100	6	1928	TLOC	71	30	4-64	s	5	5	
1510030W19AB	a BRANDT	36	4	1915	QCS1	9651	17	5-66	h	5	5	
1510030W19AB	a BRANDT	34	30	1915	TLOC	5	150	4-64	h	p f		
1510030W19AB	ú WILLE	210	6	1943	TLOC	61	32	5-61	u	2126	4	
1510030W19AB	j WILLE	101	3	1961	QCS1	40	4-64	s	p s	4	3	
1510030W19AB	ú S. A. F.			1921	TLOC	50	50	5-66	s	6	3	
1510030W19AB	a SKRISTJAR			1921	TLOC	50	50	5-66	s	6	3	
1510030W19AB	r LAKSEN	89	24	1927	QCS1	18	51	5-66	s	6	3	
1510030W19AB	ó HELSE	183	5	1943	TLOC	6	6	6	p s	FG	N	
1510030W19AB	ú S. G. S.	110	4	1966	TLOC	8	60	9-50	u	EG	N	
1510030W19AB	ú S. G. S.	160	4	1966	TLOC	8	8	9-50	u	EG	O	
1510030W19AB	ú NORDM. SKODA	11	24	1917	QCS1	6	50	4-64	k	p s	5	
1510030W19AB	ú WAKER	180	6	1915	TLOC	51	51	5-66	u	2126	4	
1510030W19AB	a ENICKSEN	290	5	1915	TLOC	51	51	5-66	u	6	6	
1510030W19AB	a ENICKSEN	69	6	1950	QCS1	18	51	5-66	s	6	6	
1510030W19AB	ú WÜHLK			1950	TLOC	6	6	6	p s	2130	6	
1510030W19AB	ú S. G. S.	103	4	1961	TLOC	6	6	6-61	u	2142	6	
1510030W19AB	ú S. G. S.	90	12	1961	QCS1	8	60	9-50	u	1692	6	
1510030W19AB	a LINDEUD	23	18	1961	TLOC	8	8	9-50	u	1710	6	
1510030W19AB	a LINDEUD	10	13	1915	TLOC	3631	8	9-50	u	1762	6	
1510030W19AB	a V. X.	200	2	1900	TLOC	5	1	9-50	u	1746	6	
1510030W19AB	ú SCARLETT	200	2	1900	TLOC	21	3	9-50	x	1752	6	
1510030W19AB	ú VIX	64	12	3	TLOC	6	6	9-50	x	1750	6	
1510030W19AB	ú W. J. P. TADAS			1959	TLOC	6	6	9-50	x	1750	6	
1520030W19AB	ú M. J. P. TADAS	100	4	1959	TLOC	5	6	5-64	s	1790	5	
1520030W19AB	ú M. J. P. TADAS	24	8	1963	QCS1	9	6	5-64	s	1790	5	
1520030W19AB	ú M. J. P. TADAS	25	2	1963	TLOC	5	6	5-64	s	1790	5	
1520030W19AB	ú M. J. P. TADAS	100	2	1963	TLOC	5	6	5-64	s	1790	5	
1520030W19AB	ú M. J. P. TADAS	253	2	1963	TLOC	27	9-50	u	p s	1755	6	
1520030W19AB	ú M. J. P. TADAS	100	12	8	TLOC	21	35	9-50	k	21	35	
1520030W19AB	ú M. J. P. TADAS	60	12	8	TLOC	21	6	9-50	k	1700	6	
1520030W19AB	ú M. J. P. TADAS	160	3	1961	TLOC	21	100	9-50	k	1700	6	
1520030W19AB	ú M. J. P. TADAS	64	12	3	TLOC	5	6	9-50	k	1745	6	
1520030W19AB	ú M. J. P. TADAS	54	12	8	TLOC	5	6	9-50	k	1745	6	
1520030W19AB	ú M. J. P. TADAS	61	12	3	TLOC	21	26	9-50	k	1745	6	
1520030W19AB	ú M. J. P. TADAS	39	12	8	TLOC	21	29	9-50	k	1745	6	
1520030W19AB	ú M. J. P. TADAS	68	12	8	TLOC	21	13	9-51	p	1750	6	
1520030W19AB	ú M. J. P. TADAS	100	3	1961	QCS1	3644	61	14	8-61	u	1760	6
1520030W19AB	ú M. J. P. TADAS	89	12	8	TLOC	5	2	9-50	u	1760	6	
1520030W19AB	ú M. J. P. TADAS	93	8	1961	TLOC	21	88	9-50	u	1760	6	
1520030W19AB	ú M. J. P. TADAS	137	3	1959	TLOC	5	65	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	54	12	8	TLOC	21	26	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	61	12	3	TLOC	21	29	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	39	12	8	TLOC	21	13	9-51	p	1845	6	
1520030W19AB	ú M. J. P. TADAS	68	12	8	TLOC	21	13	9-51	p	1845	6	
1520030W19AB	ú M. J. P. TADAS	100	3	1961	QCS1	3644	61	14	8-61	u	1845	6
1520030W19AB	ú M. J. P. TADAS	89	12	8	TLOC	5	2	9-50	u	1845	6	
1520030W19AB	ú M. J. P. TADAS	93	8	1961	TLOC	21	88	9-50	u	1845	6	
1520030W19AB	ú M. J. P. TADAS	63	8	1961	TLOC	21	10	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	49	12	9	TLOC	21	12	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	106	12	9	TLOC	21	99	9-50	u	1845	6	
1520030W19AB	ú M. J. P. TADAS	200	3	1961	QCS1	3644	61	14	8-61	u	1845	6
1520030W19AB	ú M. J. P. TADAS	126	12	8	TLOC	5	2	9-50	u	1845	6	
1520030W19AB	ú M. J. P. TADAS	89	12	8	TLOC	21	47	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	74	12	8	TLOC	21	30	9-50	k	1845	6	
1520030W19AB	ú M. J. P. TADAS	79	12	8	TLOC	21	18	9-50	h	1845	6	
1520030W19AB	ú M. J. P. TADAS	39	12	8	TLOC	21	25	9-50	h	1845	6	
1520030W19AB	ú M. J. P. TADAS	43	18	8	TLOC	21	25	9-50	s	1830	6	
1520030W19AB	ú M. J. P. TADAS	365	2	1961	TLOC	75	36	6-61	u	1964	11	
1520030W19AB	ú M. J. P. TADAS	102	3	1961	TLOC	75	12	9-50	h	1862	11	
1520030W19AB	ú M. J. P. TADAS	30	18	18	QCS1	75	12	9-50	h	1862	11	

Table 2, continued.

LOCATION NUMBER	OWNER OR NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD OF DRILL- ING ED.	AQUIFER TO SURFACE (FEET)	DEPTH TO WATER BE- LOW LAND LEVEL	LITHO- LOGY	DATE OF MEASURE- MENT	ELEVATION OF LAND SURFACE (FEET)	LIFT AND CONDUCT- ANCE POWER	SPECIFIC CAPACI- TY	DATE OF MEASURE- MENT	ELEVATION OF SURFACE (FEET)	REMARKS
(1)	(2)	(3)	(4)											
152N081W310A	R. BAITEK	200	4		1953	TLOC	T1	100	9-50	K	P 3	2,045		
152N081W24B	H BREVIG	160	4			TLOC	T1	130	5-64	K	P 3	1,942		
152N081W24B	H BREVIG	41	12			TLOC	T1	13	9-50	t	P 1	1,942		
152N081W24B	R. BAITEK	10	24			TLOC	T1	5	9-50	H	P 3	2,045		
152N081W24B	E HREICHEN	418	2			TLOC	T1	200	9-50	K	P 3	1,865		
152N081W24D	S. STREETER	200	2			TLOC	T1	55	9-50	K	P 3	1,823		
152N081W24D	I GALL	36	0			TLOC	T1	5	9-50	K	P 3	1,840		
152N081W24D						TLOC	T1	55	9-50	U	P 3	1,840		
152N081W24D	R. NEWMAN	200	4			TLOC	T1	5	5-64	K	P 3	1,941		
152N081W24D	H NEWMAN	180	2			TLOC	T1	10	9-50	S	P 3	1,943		
152N081W24D	H NEWMAN	14	12			TLOC	T1	5	9-50	H	P 1	1,920		
152N081W24D	A BAUMAN	180	3			TLOC	T1	100	9-50	K	P 3	1,973		
152N081W24D	N MELTY	192	2			TLOC	T1	100	9-50	K	P 3	1,663		
152N081W24D	METER BOINS	78	6	D		QGS1	R	16	9-50	S	P 3	1,907		
152N081W24D	J SELZER	57	6	H		TLOC	T1	36	9-50	K	P 6	1,935		
152N081W24D	A HARICHENKO	200	3			TLOC	T1	76	9-50	U	P 6	1,932		
152N081W24D	M WEICK BODIS	140	2			TLOC	T1	35	9-50	K	P 6	1,943		
152N081W24D	M WEICKER	160	2			TLOC	T1	107	9-50	K	P 6	1,938		
152N081W24D	A WEICKER	140	5			TLOC	T1	78	9-50	U	P 6	1,919		
152N081W24D	D JAHN	200	3			TLOC	T1	107	9-50	S	P 6	1,942		
152N081W24D	F MATTHIS	7	36	D		QGS1	P	3	9-50	H	P 1	1,943		
152N081W24D	H DILSON	75	5	S		QGS1	S	19	9-50	U	P 1	2,112		
152N081W24D	M KARALMA	330	4			TLOC	T1	260	5-64	S	P 1	2,110		
152N081W24D	M KARALMA	365	3			TLOC	T1	315	5-64	K	P 5	2,119		
152N081W24D	H SOUCIER	175	2			TLOC	T1	27	9-50	S	P 1	1,985		
152N081W24D	C BECHTOLD	34	6	H		TLOC	T1	21	9-50	U	P 1	1,923		
152N081W24D	L BECHTOLD	36	8	H		QGS1	R	21	9-50	U	P 1	1,925		
152N081W24D	R. HETCHENOLDFER	100	3			TLOC	T1	90	9-50	S	P 1	1,900		
152N081W24D	B LINKE	180	2			TLOC	T1	60	9-50	K	P 6	1,973		
152N081W24D	E DRIMAN	366	2			TLOC	T1	190	9-50	K	P 5	1,953		
152N081W24D	M OLSPN	9	24	H		QGS1	R	4	9-50	U	P 1	2,053		
152N081W24D	E HALDEN	260	3			TLOC	T1	167	9-50	K	P 6	1,939		
152N081W24D	E HALDEN	14	24	H		QGS1	R	10	9-50	H	P 1	2,130		
152N081W24D	C GLIESE	344	2			TLOC	T1	40	9-50	H	P 1	2,019		
152N081W24D	O MARTIN	130	5			QGS1	G	118	9-50	K	P 5	1,993		
152N081W24D	H HENKE	275	2			TLOC	T1	117	9-50	S	P 1	1,993		
152N081W24D	H HENKE	220	2			TLOC	T1	110	9-50	K	P 6	1,904		
152N081W24D	P SCHLECHI	200	2			TLOC	T1	60	9-50	K	P 5	1,953		
152N081W24D	U S A F	382				TLOC	T1	11-62	P	6		52		
152N081W24D	U S A F	396				TLOC	T1	8-62	P	6		50		
152N081W24D	U S A F	560				TLOC	T1	120	4-64	K	P 3	2,045		
152N081W24D	O MARTIN	223	3			QGS1	S	30	5-66	K	P 3	2,134		
152N081W24D	J LOJENSKY	50	48	D		1945	TLOC	120	4-64	K	P 3	2,134		
152N081W24D	U S G 5	320	4	H		1965	QGS1	30	5-66	K	P 3	2,134		
152N081W24D	W NICOLAISEN	159	5			1926	TLOC	6	4-64	S	P 5			
152N081W24D	L HEIDT	207	4			1961	TLOC	137	4-64	S	P 5			
152N081W24D	J VOVICH	225	4			1959	TLOC	21	165	4-64	S			
152N081W24D	S. SAMULIND	467	6			1949	TLOC	71	350	4-64	K			
152N081W24D	D HAUGERUD	254				1960	TLOC	5	4-64	K	P 1			
152N081W24D	J LOJENSKY	30	24	H		1945	QGS1	12	5-66	S	P 5			
152N081W24D	R BJERKE	12	48	D		1955	QC	7	5-66	U	P 5			
152N081W24D	B BENSON	280	4			1961	TLOC	75	5-66	K	P 5			
152N081W24D	C FIELD	13	48	D		1954	QGS1	6	5-66	K	P 5			

TABLE 2, CONTINUED.

LOCATION NUMBER	OWNER OR NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD OF DRILLING-EN	AQUIFER IN	DEPTH TO SURFACE (FEET)	LITHOLOGY	DATE OF SURVEY	DATE OF SURVEY	LIFT AND SURFACE (FEET)	SPECIFIC CONDUCTANCE	CAPACITY OF TUBE WELL (FEET)	PERMIT NO. (4)	REMARKS
(1)	(2)	(3)	(4)											
153N031W19AD	L. JOHNSON	200	2	TLOC	21	100	50	K	P	6	1705			0
153N031W19AD	E. REMANDT	205	2	TLOC	21	98	50	U	P	6	1753			0
153N031W19AD	J. SUTTER	300	2	TLOC	21	100	5-64	K	V	3	1793			0
153N031W19AD	D. BECK	42	12	Q	51	10	50	K	U	5	1723			0
153N031W19AD	D. BECK	340	4	TLOC	21	175	5-64	K	S	5	1622			0
153N031W19AD	E. BICK	27	12	8	1-42	13	50	K	P	3	1703			0
153N031W19AD	C. HEDAHL	55	12	Q	51	32	50	K	P	1	1731			0
153N031W19AD	C. HEDAHL	12	24	D	51	8	9-51	H	N	-	1717			0
153N031W19AD	D. BICK	81	12	B	TLOC	84	50	K	N	-	1732			0
153N031W19AD	N. LIEBELT	243	3	TLOC	5	651	5	K	P	5	1692			0
153N031W19AD	N. LIEBELT	55	12	B	TLOC	31	50	K	P	6	1549			0
153N031W19AD	R. NEUMAN	180	6	TLOC	52	32	50	K	P	5	1742			0
153N031W19AD	R. BURKE	205	2	TLOC	21	100	50	K	P	6	1760			0
153N031W19AD	J. JOHNSON	382	2	TLOC	21	100	60	K	P	4	1765			0
153N031W19AD	S. LANG	395	2	TLOC	21	100	50	K	U	1	1794			0
153N031W19AD	C. BECKLER	350	3	TLOC	5	200	5-64	K	P	6	1770			0
153N031W19AD	C. BECKLER	200	2	TLOC	21	110	50	K	P	6	1747			0
153N031W19AD	R. MAYER	125	4	TLOC	21	110	50	K	P	6	1735			0
153N031W19AD	C. KLEIMEL	12	12	B	TLOC	45	50	K	P	5	1747			0
153N031W19AD	F. KLEMPER	140	24	B	TLOC	93	10	K	P	1	1763			0
153N031W19AD	J. NICKELSON	97	9	B	TLOC	21	74	K	U	1	1794			0
153N031W19AD	C. DRAZ	105	18	B	TLOC	95	13	K	P	6	1770			0
153N031W19AD	G. PUTNEY	36	19	B	TLOC	95	16	K	P	6	1747			0
153N031W19AD	H. MOREY	200	6	TLOC	21	50	50	K	P	6	1735			0
153N031W19AD	M. KLEIMEL	194	4	C	1941	100	45	K	P	5	1747			0
153N031W19AD	N. BARKEN	120	4	C	1941	110	55	K	P	1	1763			0
153N031W19AD	C. BILINS	125	24	TLOC	21	55	50	K	P	6	1763			0
153N031W19AD	D. BILINS	90	18	B	TLOC	66	50	K	P	6	1747			0
153N031W19AD	E. KRUEGER	120	2	TLOC	21	60	9-50	K	P	6	1747			0
153N031W19AD	M. SAUSTAD	120	2	TLOC	21	70	9-50	K	P	6	1747			0
153N031W19AD	R. NEUMAN	180	2	TLOC	21	120	50	K	P	6	1747			0
153N031W19AD	R. NEUMAN	178	2	TLOC	21	118	9-50	K	P	6	1747			0
153N031W19AD	R. SODOM	3	26	D	1944	931	4	K	P	5	1747			0
153N031W19AD	F. MCCUSKEY	190	2	C	1941	110	13	6-64	K	5	1747			0
153N031W19AD	B. BUCHLER	185	2	TLOC	21	120	5-64	K	P	3	1747			0
153N031W19AD	M. REILLY	120	2	TLOC	21	65	9-50	K	P	5	1747			0
153N031W19AD	N. E. NORDQUIST	61	24	B	TLOC	55	9-50	K	P	5	1747			0
153N031W19AD	J. NOVAK	305	2	TLOC	V	100	4-64	S	P	6	1747			0
153N031W19AD	J. NOVAK	365	4	C	1960	TLOC	21	100	4-64	H	P	5	2005	1
153N031W19AD	G. FOSTER	19	24	B	QG31	5	2	K	P	1	1747			0
153N031W19AD	C. PIETSCHE	220	6	TLOC	21	28	5-50	K	P	6	1747			0
153N031W19AD	S. MIKKELSEN	31	24	B	QG31	7	50	K	P	6	1747			0
153N031W19AD	M. FIELD	95	5	TLOC	21	60	8-50	S	P	6	1747			0
153N031W19AD	E. ANDERSON	394	22	D	QG31	23	8-50	K	P	6	1745			0
153N031W19AD	J. KROPSKY	84	4	TLOC	21	14	9-51	K	P	1	1522			0
153N031W19AD	U. S. G. S.	96	1	H	1965	QG31	28	8-50	H	N	1663			0
153N031W19AD	A. FIELD	97	4	TLOC	21	58	9-50	H	P	5	1833			0
153N031W19AD											1846			0

TABLE 2, CONTINUED.

LOCATION NUMBER	OWNER (OR NAME)	DEPTH (IN FEET)	DIAM. OF WELL (INCHES)	METHOD OF DRILLING ED	AUGERED TO END	LITHO- LOGY	WATER DE- PTH LOW LAND SURFACE (FEET)	DATE OF MEASURE- MENT	LIQUID SPECIFIC GRAVITY AND CONDUCT- IVITY RATE	TEMPER- ATURE OF WATER (DEG F.)	CALIBRATED SOUNDINGS	
											(1)	(2)
1530808W28881	U.S.G.S.	30	1	H	1965	QC51	5	12-66	4	N	4	4
1530808W28882	U.S.G.S.	65	1	H	1965	QC51	6	12-66	4	N	6	4
1530808W11605	E. SMITHSON	65	24	B	1918	QC51	6	6-66	4	4	6	4
1530808W340	C. ERICKSON	40	48	D	1951	QC51	6	6-66	4	4	6	4
1540808W22A	R. KLEIN	50	18	B	1950	TLOC	14	5-47	5	4	11-41	0
1540808W40CC	R. KLEIN	66	4			QC51	100	5-64	4	0	16-33	0
1540808W65CD	B. BERG	65	12	B	1951	QC51	15	6-77	4	0	16-23	0
1540808W65CD	J. KIDDEK	60	9			QC51	60	6-77	4	0	16-23	0
1540808W68BC	A. STRAND	65	18	B	1940	TLOC	40	6-74	5	0	16-51	0
1540808W11603A	R. KLEIN	250	4			QC51	150	6-64	4	0	16-51	7
1540808W11603B	R. WHITFORD	70	14	V	1940	QC51	10	11-63	4	0	15-36	0
1540808W19BC	V. WALTER	70	12			QC51	12	11-63	4	0	15-35	0
1540808W22A	H. ABRAHAMSON	305	4			TLOC	150	6-77	4	0	16-32	0
1540808W35CA	H. TEMPLMAN	60	36	D	1950	QC51	35	6-77	4	0	16-32	0
1540808W45AC	H. HINEY	175	4			TLOC	5	F	11-63	4	16-19	0
1540808W45AC	A. LINNEFTH	225	4			TLOC	60	6-64	4	0	16-18	0
1540808W50CD	D. JOHNSON	60	12	B	1946	QC51	20	7-47	5	0	16-21	0
1540808W50CD	E. KLEIN	365	4			QC51	75	5-64	4	0	16-33	0
1540808W102B	G. FORTES	35	18	B	1940	QC51	5	22-50	4	0	16-17	0
1540808W102B	E. FORTES	50	18	B	1940	QC51	24	6-64	4	0	16-33	0
1540808W11603C	A. SWENSON	44	24	B	1951	QC51	25	8-50	4	0	17-50	0
1540808W11603A	A. SWENSON	30	12			QC51	7	6-77	4	0	16-41	0
1540808W11603B	C. REINHARTS	150	4			TLOC	100	6-47	5	0	16-34	0
1540808W40CC	U.S.G.S.	64	1	H	1965	QC52	11	8-65	4	0	16-27	4
1540808W40CC	U.S.G.S.	96	1	H	1965	QC52	13	8-65	4	0	16-27	4
1540808W43CC	MINNESOTA STATE	92	10	H	1957	QC52	14	65	4	0	16-27	4
1540808W50CD	J. PEARSON	80	3			QC52	14	8-65	4	0	16-27	4
1540808W35CB1	G. GROTHE	80	5			QC52	14	8-65	4	0	16-27	4
1540808W40CC	A. ORNDORFF	23	1	H	1965	QC51	16	8-65	4	0	16-27	4
1540808W40CD	U.S.G.S.	63	1	H	1963	QC51	16	5-60	4	0	16-27	4
1540808W40CD	U.S.G.S.	120	24	B	1963	QC51	12	5-66	4	0	16-34	4
1540808W40CD	A. BEELTER	54	24	B	1963	QC51	45	8-50	4	0	15-34	4
1540808W40CD	P. MAHONEY	8	36	D	1963	QC51	45	8-50	4	0	15-34	4
1540808W40CC	J. PEASLEY	200	4			TLOC	45	8-50	4	0	15-34	4
1540808W40CC	M. GROTHE	20	8	B	1963	QC51	16	8-50	4	0	15-34	4
1540808W40CC	M. GROTHE	95	5			QC51	63	6-61	4	0	17-55	4
1540808W40CD	U.S.G.S.	120	1	H	1966	QC52	8	12	4	0	16-34	4
1540808W40CD	A. ANDSEN	39	24	B	1966	QC51	5	20	4	0	17-74	4
1540808W340	J. CAMERON	29	48	D	1951	QC51	20	5-51	4	0	17-20	0
1540808W340	M. SAUNDSTAD	23	48	D	1951	QC51	25	8-50	4	0	17-20	0
1540808W40A	H. HANSTAD	18	48	D	1951	QC51	15	8-50	4	0	16-32	0
1540808W40A	F. LIGHORN	130	4			QC51	14	8-50	4	0	16-32	0
1540808W40CC	B. LIVSSEN	130	3			QC51	40	50	4	0	17-55	0
1540808W40CC	R. HELDOW	20	12	B	1951	QC51	18	6-61	4	0	17-55	0
1540808W40CD	F. ELLIOTT	60	3			QC51	7	17-74	4	0	17-74	0
1540808W40CD	J. FOLEY	74	24	B	1930	QC51	20	6-64	4	0	17-20	0
1540808W340	L. BEEFER	63	24	B	1951	QC51	13	6-50	4	0	17-17	0
1540808W340	E. BEEFER	28	19	B	1951	QC51	12	8-50	4	0	17-17	0
1540808W445	E. BEEFER	60	1	H	1963	QC51	8	12	4	0	16-34	4
1540808W445	E. BEEFER	26	18	B	1963	QC51	8	12	4	0	16-34	4
1540808W445	E. BEEFER	200	4			TLOC	15	8-50	4	0	16-34	4
1540808W445	E. BEEFER	15	24	B	1951	QC51	8	12	4	0	16-34	4

154003242530	A HUNWEL	50	24	8	Q651	R	10	8-60	H	P 1	0
154003242530	H JÖRTHE	106	18	8	Q651	R	14	9-61	U	P 1	0
154003242530	H LÄRSÖN	160	3	8	Q651	S	35	6-64	T	P 1	6
154003242530	H LÄRSÖN	160	4	8	Q651	S	35	6-64	T	P 1	6
154003242530	C ABELSTAD	110	18	8	TLOC	21	14	8-50	S	P 5	0
154003242530	B MØREFY	190	5	8	TLOC	21	40	6-64	K	P 5	0
154003242530	VALLY MØTE	400	4	8	TLOC	21	F	5-66	H	P 5	0
154003242530	M PÖTER	35	18	8	Q651	S	16	8-50	H	P 1	0
154003242530	A MÖTER	430	3	8	TLOC	180	4	6-64	K	P 5	6
154003242530	U SÖS	80	4	8	TLOC	195	180	8-50	K	N	6
154003242530	H JÖRHL	70	3	8	Q651	S	10	8-50	U	P 1	0
154003242530	C SCHMIDT	70	4	8	TLOC	56	56	8-50	U	P 1	0
154003242530	I ZIEFLER	190	4	8	TLOC	71	56	8-50	K	P 6	45
154003242530	H WESTPHAL	100	3	8	TLOC	66	6	8-50	S	N	0
154003242530	N GENTEXP STA	32	24	0	Q651	X	100	6-64	K	P 1	6
154003242530	J SCAMMILT	26	10	6	Q651	G	16	8-50	K	P 3	0
154003242530	H F-4551	167	3	8	TLOC	5	16	8-50	K	N	0
154003242530	H F-4551	160	3	8	TLOC	90	F	8-50	K	N	0
154003242530	E CORAYA	665	150	3	TLOC	90	90	8-50	K	N	0
154003242530	E SCHAEFER	97	3	8	TLOC	90	8-50	K	N	0	45
154003242530	C SAND	174	3	8	TLOC	90	8-50	K	N	0	45
154003242530	C CHARLESFRAN	205	3	8	TLOC	90	8-50	K	N	0	45
154003242530	K LÄRSÖN	120	3	8	TLOC	90	8-50	K	N	0	45
154003242530	L NEFERTAT	190	3	8	TLOC	90	8-50	K	N	0	45
154003242530	H SCHÄFER	168	3	8	TLOC	90	8-50	K	N	0	45
154003242530	I THORESSIN	199	3	8	TLOC	90	8-50	K	N	0	45
154003242530	H LAWSON	504	4	8	TLOC	60	6-64	K	N	0	45
154003242530	H LAWSON	460	4	8	TLOC	60	6-64	K	N	0	45
154003242530	H LÄRSÖN	34	24	8	Q651	R	9	50	S	P 1	0
154003242530	F ADVAK	240	3	8	TLOC	5	14	4-64	K	P 5	58
154003242530	H WARNEK	214	3	8	TLOC	5	150	4-64	S	P 5	0
154003242530	V PETERSEN	270	4	8	TLOC	21	170	4-64	K	P 5	43
154003242530	O DÖRSCHAU	265	4	8	TLOC	21	100	4-64	S	P 5	19
154003242530	R LÄRSÖN	120	4	8	TLOC	21	10	5-66	K	P 5	48
154003242530	H WILCKAAN	300	4	8	TLOC	21	100	5-66	K	P 5	0
154003242530	A HARDAHL	711	4	8	TLOC	21	100	5-66	K	P 5	2042
154003242530	H DUSTIN	225	2	8	TLOC	5	50	4-64	S	P 5	45
154003242530	F WILLIAMS	200	4	8	TLOC	21	80	4-64	U	N	7
154003242530	D ECKER	305	4	8	TLOC	21	1965	4-64	K	P 5	0
154003242530	H SUNDSKÅK	300	4	8	TLOC	5	40	4-64	U	N	7
154003242530	H SUNDSKÅK	214	4	8	TLOC	5	40	4-64	U	J	5
154003242530	H SUNDSKÅK	360	4	8	TLOC	1965	1965	4-64	U	N	0
154003242530	R NÖTHÉA	25	24	8	Q651	S	180	4-64	S	P 5	54
154003242530	C HÄNSÖN	344	4	8	TLOC	21	18	5-66	H	J	5
154003242530	F NÖTHÉA	32	24	8	Q651	S	18	5-66	U	N	6
154003242530	U SÖS	320	4	8	TLOC	21	125	4-64	K	P 5	59
154003242530	L OPILAND	342	4	8	TLOC	21	121	4-64	K	P 5	6
154003242530	H SUNDSKÅK	300	3	8	TLOC	1940	1964	5-66	K	P 5	5
154003242530	R NIENH	25	6	2	Q651	S	13	5-66	K	P 5	3
154003242530	J HIRPT	60	8	2	Q651	R	15	5-66	H	P 1	5
154003242530	V HÄLGEN	20	8	8	Q651	R	15	5-66	H	P 1	44
154003242530	H JÄRNSV	14	24	8	Q651	R	15	5-66	H	P 1	45
154003242530	J JOHNSTV	18	18	8	Q651	R	15	5-66	U	P 1	5
154003242530	L QVIST	20	48	0	Q651	R	15	5-66	U	P 1	5

TABLE E-2, CONTINUED.

LOCATION NUMBER	OWNER OR NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL (INCHES)	METHOD OF DRILLING-ED	DATE OF DRILLING	AQUIFER	LITHOLOGY	DEPTH TO WATER BELOW LOW LAND SURFACE (FEET)	DATE OF MEASURE-OF-WATER	LIFT TO SURFACE (FEET)	SPECIAL CONDUCTANCE AND PERMEABILITY	REMARKS		
												(1)	(2)	(3)
154084W25AB	B BONKU	273	4	H	1959	TLOC	T	70	5-64	K	P S	7	E 6	4 3
154084W25ADA	U S G S	271	1	H	1965	QG	6	8	8-65	U	N	5	E 6	4
154084W25ADG	G FLOM	12	24	H	1958	QG	31	6	5-66	K	P S	5	E 6	4 3
154084W25ADG	A U L B E R G	206	4	H	1957	TLOC	T	110	5-64	K	P S	6	E 6	4
154084W25ADG	U S G S	80	1	H	1965	QG	51	45	5-64	U	N	5	E 6	4
154084W25ADG	G	68	24	H	1950	QG	31	5	5-64	K	P S	5	E 6	4
154084W25ADG	D KRAHY	97	4	H	1943	QG	31	5	5-64	K	P S	5	E 6	4
154084W25ADG	D DYKE	26	48	D	1921	TLOC	T	100	5-64	K	P S	5	E 6	4
154084W25ADG	M DYKE	225	3	H	1957	QG	51	9	5-64	U	P S	5	E 6	4
154084W25ADG	M DYKE	170	4	H	1961	QG	41	61	5-64	U	N	4	E 6	4
154084W25ADG	U S A F	100	3	H	1961	QG	41	69	5-64	U	N	4	E 6	4
154084W25ADG	R FYLLSVOLD	50	36	H	1947	QG	31	5	5-64	U	N	4	E 6	4
154084W25ADG	C SMARTWOOD	25	36	D	1951	QG	31	5	5-47	K	P S	5	E 6	4
154084W25ADG	H DICKENSON	65	20	D	1944	QG	51	34	5-47	K	P I	5	E 6	4
154084W25ADG	K BISCHKE	20	48	D	1951	QG	51	10	7-65	K	P I	5	E 6	4
154084W25ADG	14	14	8	H	1963	TLOC	P	7	4-51	S	P I	2	E 6	4
154084W25ADG	N D S W C	63	5	H	1963	TLOC	S	14	4-53	U	P I	1573	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	15	4-63	U	P I	1593	E 6	0
154084W25ADG	N D S W C	63	5	H	1963	TLOC	S	6	4-47	K	P F	1593	E 6	0
154084W25ADG	M ELKER	15	36	D	1963	TLOC	S	1	4-63	U	P I	1573	E 6	0
154084W25ADG	N D S W C	15	5	H	1963	TLOC	S	6	4-47	K	P I	1573	E 6	0
154084W25ADG	R ELKER	15	60	D	1963	QG	31	6	11-63	S	P I	5	E 6	4
154084W25ADG	N D S W C	63	5	H	1963	TLOC	S	3	4-63	U	P I	1563	E 6	0
154084W25ADG	L EATON	100	24	B	1947	QG	51	50	5-47	K	P I	1573	E 6	0
154084W25ADG	L ELKER	111	48	D	1947	QG	31	4-63	K	P I	1593	E 6	0	
154084W25ADG	U S G S	106	4	H	1947	TLOC	S	50	7-64	U	P I	1573	E 6	0
154084W25ADG	C JUNG	326	6	H	1958	TLOC	S	14	4-63	U	P I	1573	E 6	0
154084W25ADG	U S R K	40	40	H	1955	TLOC	S	1	4-63	U	P I	1573	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	17	4-63	U	P I	1573	E 6	0
154084W25ADG	L ANDRE	135	4	H	1963	TLOC	S	3	4-63	U	P I	1573	E 6	0
154084W25ADG	N D S W C	74	5	H	1963	TLOC	S	22	4-63	U	P I	1563	E 6	0
154084W25ADG	D BENELI	365	4	H	1942	QG	51	27	4-63	K	P I	6	E 6	4
154084W25ADG	C KEITH	65	4	H	1942	QG	51	14	4-63	U	P I	1615	E 6	0
154084W25ADG	N S W C	84	5	H	1963	TLOC	S	14	4-63	U	P I	1573	E 6	0
154084W25ADG	M DUCKHARD	500	24	H	1955	TLOC	S	12	4-63	U	P I	1573	E 6	0
154084W25ADG	SURREY WELL 1	26	26	H	1963	QG	51	14	4-63	U	P I	1573	E 6	0
154084W25ADG	N D S W C	588	5	H	1963	TLOC	T	11	4-63	U	P I	1615	E 6	0
154084W25ADG	SURREY SCHOOL	135	135	H	1963	TLOC	S	3	4-63	U	P I	1615	E 6	0
154084W25ADG	O HUNTER	84	4	H	1942	QG	51	22	4-63	H	P I	1583	E 6	0
154084W25ADG	T ZOOK	174	4	H	1963	TLOC	S	32	4-63	H	P I	1625	E 6	0
154084W25ADG	SURREY WELL 3	130	4	H	1963	TLOC	S	30	4-63	H	P I	1625	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	13	4-63	U	P I	1614	E 6	0
154084W25ADG	SURREY SCHOOL	133	2	H	1963	TLOC	S	21	4-63	H	P I	1617	E 6	0
154084W25ADG	R THOM	1000	4	H	1963	QG	51	14	4-63	U	P I	1615	E 6	0
154084W25ADG	G N R K TEST 1	20	12	B	1955	QG	51	16	6-47	K	P I	1623	E 6	0
154084W25ADG	G N R K TEST 3	180	4	H	1955	TLOC	P	6	4-63	K	P I	1633	E 6	0
154084W25ADG	G N R K TEST 4	180	6	C	1955	TLOC	S	22	7-61	H	P I	1629	E 6	0
154084W25ADG	154084W25ADG	174	4	H	1963	TLOC	S	32	4-63	H	P I	1625	E 6	0
154084W25ADG	154084W25ADG	130	4	H	1963	TLOC	S	30	4-63	H	P I	1625	E 6	0
154084W25ADG	F KAUFMAN	112	3	H	1963	TLOC	S	13	4-63	U	P I	1614	E 6	0
154084W25ADG	N D S W C	74	5	H	1963	TLOC	S	21	4-63	H	P I	1617	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	154084W25ADG	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0
154084W25ADG	N D S W C	84	5	H	1963	TLOC	S	16	4-63	H	P I	1615	E 6	0

122K05114000	N U S A C	54	H	1963	TLOC	S	10	4-63	G E
122N05120000	N U S A C	38	H	1963	TLOC	S	10	4-63	G E
122N05122000	U S A C	40	H	1955	TLOC	S	70	7-64	G N N
122N05123000	U S A C	255	G	1941	TLOC	S	150	6-47	P S
122N05123000	F ALLEN	40	H	1955	TLOC	S	30	7-64	P S
122N05123000	F ALLEN	200	G	1914	TLOC	S	150	6-47	P S
122N05123000	LHN BAILEY	130	G	1914	TLOC	S	30	7-64	P S
122N05124000	F KLEIN	200	G	1944	TLOC	S	20	6-47	P S
122N05126000	P KAUFF	165	G	1944	TLOC	S	12	6-47	P S
122N05127000	P BLAY	55	G	1961	Q651	24	6-47	P 1	
122N05127000	J HEDMAN	60	H	1963	TLOC	S	11	6-47	P 1
122N05127000	J HEDMAN	84	S	1963	TLOC	S	9	4-63	G
122N05127000	J THOMPINS	96	G	1963	TLOC	S	11	30	4
122N05132000	T ANDERSON	39	G	1963	TLOC	S	14	6-47	P 6
122N05132000	C FUDMAN	72	G	1943	Q651	14	6-47	P 1	
122N05132000	K TRAPP	45	G	1963	Q651	17	5-47	P 1	
122N05132000	B NYAK	18	G	1963	Q651	22	6-47	P 6	
122N05132000	M PAGA	60	G	1963	Q651	15	6-47	P 5	
122N05132000	O JONES	35	D	1963	Q651	11	6-47	P 6	
122N05132000	L FOLEY	25	D	1963	Q651	20	6-47	P 6	
122N05132000	N DUGAN	63	H	1963	TLOC	S	5	6-47	P 1
122N05132000	M SWANSON	250	H	1963	TLOC	S	10	4-63	G E
122N05132000	I SWANSON	47	H	1963	Q651	60	6-47	K	
122N05132000	L ELSEBECK	26	H	1963	Q651	6	6-47	K	
122N05132000	GIL TEST	7300	H	1954	Q651	20	6-47	P 5	
122N05132000	N U S W C	84	H	1963	TLOC	S	6	4-63	G E
122N05132000	J BAERD	120	H	1958	TLOC	S	39	8-51	G N
122N05132000	O PETERSON	95	H	1958	Q651	29	6-47	S P 1	
122N05132000	U S U S	35	H	1947	TLOC	S	20	6-47	S P 1
122N05132000	UKAT NORTHEM	160	H	1963	Q651	7	4-63	N	
122N05132000	U S U S	107	H	1963	Q651	33	6-6	N	
122N05132000	CITY OF MINTON	128	H	1952	TLOC	S	6	4-63	G E
122N05132000	CITY OF MINTON	220	H	1952	TLOC	S	11	6-47	S P S
122N05132000	G RANDALL	142	A	1955	TLOC	S	21	6-47	H J S
122N05132000	T NORBY	35	G	1955	TLOC	S	21	6-47	H J S
122N05132000	L ENGER	65	H	1958	TLOC	S	20	6-47	H J S
122N05132000	U S G S	33	H	1958	TLOC	S	8P	6-47	H J S
122N05132000	U S G S	105	H	1958	TLOC	S	65	6-47	G E
122N05132000	N O S C	84	H	1963	TLOC	S	7	4-63	G E
122N05132000	G N R K TEST 2	410	H	1955	TLOC	S	65	6-47	G E
122N05132000	G N R K TEST 1	12	H	1954	Q651	19	8-50	S P S	
122N05132000	E EHRS	390	H	1954	Q651	19	8-50	S P S	
122N05132000	O KAUFFMAN	32	B	1954	Q651	28	6-47	K P S	
122N05132000	E MARTIN	120	G	1954	Q651	9	7-46	K P S	
122N05132000	E MARTIN	90	H	1963	Q651	24	5-66	K P S	
122N05132000	U S G S	105	L	1963	Q651	24	8-50	K P S	
122N05132000	L SCHMIDT	50	D	1963	Q651	12	8-50	K P S	
122N05132000	T ANDERSON	40	R	1963	Q651	12	8-50	K P S	
122N05132000	F EHR	410	H	1955	Q651	12	8-50	K P S	
122N05132000	F EHR	390	H	1954	Q651	12	8-50	K P S	
122N05132000	E KENNEDY	75	G	1963	Q651	30	6-47	K P 6	
122N05132000	E KENNEDY	40	G	1963	Q651	33	8-50	K P 6	
122N05132000	U S G S	24	H	1963	Q651	1	8-50	H P 1	
122N05132000	J WOLF	10	D	1963	Q651	1	8-50	H P 1	

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155N084W070DC1	W	WEBSON	510	4		TLOC	1920	90	> S	P S	
155N084W070DC1	W	WEBSON	315	3		TLOC	1900	15	K	P S	1750
155N084W070DC1	W	WEBSON	300	5	B	TLOC	1933	19	K	P S	1750
155N084W070DC1	W	WEBSON	27	24	C	TLOC	1960	56	K	J 3	1750
155N084W070DC1	W	WEBSON	640	4	C	TLOC	1912	137	K	J 3	1750
155N084W070DC1	W	WEBSON	329	5	C	TLOC	1912	21	K	P T	1750
155N084W070DC1	W	WEBSON	220	4	C	TLOC	1919	30	K	P T	1750
155N084W070DC1	W	WEBSON	200	4	C	TLOC	1950	21	K	S S	1750
155N084W070DC1	W	WEBSON	217	4	H	TLOC	1965	15	K	P S	1750
155N084W070DC1	W	WEBSON	220	4	C	TLOC	1915	21	J	N	1750
155N084W070DC1	W	WEBSON	200	4	C	TLOC	1915	21	J	S	1750
155N084W070DC1	W	WEBSON	140	5	C	TLOC	1915	25	J	S	1750
155N084W070DC1	W	WEBSON	145	5	C	TLOC	1915	21	J	S	1750
155N084W070DC1	W	WEBSON	230	4	C	TLOC	1900	30	K	P S	1750
155N084W070DC1	W	WEBSON	230	4	C	TLOC	1900	21	K	P S	1750
155N084W070DC1	W	WEBSON	130	4	C	TLOC	1925	21	F	P S	1750
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1956	60	J	P	1750
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1956	71	K	P S	1750
155N084W070DC1	W	WEBSON	245	5	C	TLOC	1952	5	K	P S	1750
155N084W070DC1	W	WEBSON	250	4	C	TLOC	1952	5	K	P S	1750
155N084W070DC1	W	WEBSON	24	0	B	TLOC	1964	50	J	P S	1750
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P S	1750
155N084W070DC1	W	WEBSON	178	5	C	TLOC	1958	17	K	P S	1750
155N084W070DC1	W	WEBSON	50	1	H	TLOC	1965	6	K	P S	1750
155N084W070DC1	W	WEBSON	275	4	C	TLOC	1942	55	R	P S	1750
155N084W070DC1	W	WEBSON	160	4	C	TLOC	1942	31	S	P S	1750
155N084W070DC1	W	WEBSON	160	4	C	TLOC	1964	21	S	S	1750
155N084W070DC1	W	WEBSON	260	4	C	TLOC	1957	21	S	S	1750
155N084W070DC1	W	WEBSON	100	5	C	TLOC	1965	55	S	S	1750
155N084W070DC1	W	WEBSON	36	1	H	TLOC	1965	55	G	S	1750
155N084W070DC1	W	WEBSON	100	1	H	TLOC	1965	55	R	S	1750
155N084W070DC1	W	WEBSON	24	8	B	TLOC	1956	251	R	S	1750
155N084W070DC1	W	WEBSON	120	4	H	TLOC	1965	251	R	S	1750
155N084W070DC1	W	WEBSON	165	5	C	TLOC	1965	40	J	P	1750
155N084W070DC1	W	WEBSON	280	4	C	TLOC	1964	90	J	P	1750
155N084W070DC1	W	WEBSON	140	4	C	TLOC	1957	21	110	S S	1750
155N084W070DC1	W	WEBSON	176	6	C	TLOC	1965	55	J	S	1750
155N084W070DC1	W	WEBSON	380	4	C	TLOC	1965	55	J	S	1750
155N084W070DC1	W	WEBSON	275	5	H	TLOC	1965	55	J	S	1750
155N084W070DC1	W	WEBSON	140	4	H	TLOC	1965	55	J	S	1750
155N084W070DC1	W	WEBSON	250	5	H	TLOC	1965	70	J	P	1750
155N084W070DC1	W	WEBSON	258	5	H	TLOC	1942	140	J	P	1750
155N084W070DC1	W	WEBSON	235	5	H	TLOC	1965	30	J	P	1750
155N084W070DC1	W	WEBSON	20	8	D	TLOC	1951	9	K	P	1750
155N084W070DC1	W	WEBSON	200	5	D	TLOC	1960	50	K	P	1750
155N084W070DC1	W	WEBSON	226	6	H	TLOC	1947	120	K	P	1750
155N084W070DC1	W	WEBSON	138	4	H	TLOC	1947	95	K	P	1750
155N084W070DC1	W	WEBSON	40	24	B	TLOC	1951	35	K	P	1750
155N084W070DC1	W	WEBSON	20	20	D	TLOC	1951	50	K	P	1750
155N084W070DC1	W	WEBSON	250	4	H	TLOC	1951	10	K	P	1750
155N084W070DC1	W	WEBSON	27	5	B	TLOC	1951	15	K	P	1750
155N084W070DC1	W	WEBSON	365	6	B	TLOC	1951	4	K	P	1750
155N084W070DC1	W	WEBSON	12	36	D	TLOC	1951	7	K	P	1750
155N084W070DC1	W	WEBSON	11	48	D	TLOC	1951	2	K	P	1750
155N084W070DC1	W	WEBSON	5	36	D	TLOC	1951	2	K	P	1750

155N084W070DC1	W	WEBSON	510	4		TLOC	1920	90	> S	P S	
155N084W070DC1	W	WEBSON	315	3	B	TLOC	1900	15	K	P S	
155N084W070DC1	W	WEBSON	300	5	C	TLOC	1933	19	K	P S	
155N084W070DC1	W	WEBSON	27	24	C	TLOC	1960	56	K	P S	
155N084W070DC1	W	WEBSON	640	4	C	TLOC	1912	137	K	P S	
155N084W070DC1	W	WEBSON	329	5	C	TLOC	1912	21	K	P S	
155N084W070DC1	W	WEBSON	220	4	C	TLOC	1919	30	K	P S	
155N084W070DC1	W	WEBSON	200	4	C	TLOC	1950	21	K	P S	
155N084W070DC1	W	WEBSON	217	4	H	TLOC	1950	15	K	P S	
155N084W070DC1	W	WEBSON	220	4	H	TLOC	1965	21	J	N	
155N084W070DC1	W	WEBSON	200	4	C	TLOC	1965	21	J	S	
155N084W070DC1	W	WEBSON	140	5	C	TLOC	1915	25	J	S	
155N084W070DC1	W	WEBSON	145	5	C	TLOC	1915	21	J	S	
155N084W070DC1	W	WEBSON	230	4	C	TLOC	1900	30	K	P S	
155N084W070DC1	W	WEBSON	230	4	C	TLOC	1900	21	K	P S	
155N084W070DC1	W	WEBSON	130	4	C	TLOC	1925	21	F	P	
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1912	60	J	P	
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1912	71	K	P	
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1919	60	K	P	
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1950	17	K	P	
155N084W070DC1	W	WEBSON	189	5	H	TLOC	1965	17	K	P	
155N084W070DC1	W	WEBSON	178	5	H	TLOC	1958	17	K	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1951	5	K	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1951	5	K	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	50	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964	51	J	P	
155N084W070DC1	W	WEBSON	50	51	C	TLOC	1964				

Table 2, CONTINUED.

LOCATION NUMBER	OWNER OR NAME	DEPTH OF WELL (FEET)	DIAM. OF WELL DRILL-ED (INCHES)	METHOD OF DRILLING	AQUIFER ED	DEPTH TO LAYER SURFACE (FEET)	LITHOLOGY	WATER REACHING SURFACE	DATE OF MEASUREMENT	USL OF WATER	SUSPENDED SOLIDS	SPECIFIC CONDUCTANCE	ELEVATION OF LAND SURFACE	REMARKS	(1) - (2)		(3) - (4)	
															(1)	(2)	(3)	(4)
156N082W04AAA	U S G S	158	4	H	1958	QC51	A	50	U	S	P b	N	1615	G	N	N	N	
156N082W04ABA	R HELSETH	60	48	D		TLOE	80	6-47	K	2	b	0	1613					
156N082W04BDC	O LINDESTRØM	132	4	B		QC51	13	6-47	U	P 1		1631						
156N082W04BDC	M SOLBERG	40	24	B		TLOE	130	6-47	K	P 6	b	1615						
156N082H10CB	G MILLER	330	4			TLOE	6-47	U	P 6	b	1604							
156N082H12BC						TLOE	6-47	K	P 6	b	1601							
156N082H12AB	T ANDERSON	350	4			2051	12	5-47	S	P 6	b	1611						
156N082H13BA	G SOLBERG	41	32	B	1958	TLOE	50	6-47	U	N		1625	G	N	N	N		
156N082H13AA1	U S G S	158	4	H	1958	TLOE	200	6-47	K	P 6	b	1621						
156N082H13AA2	U S G S	137	4	H	1958	TLOE	10	6-47	K	P 6	b	1638						
156N082H13AC	L PRAZIK	380	4			TLOE	100	6-47	K	P 6	b	1631						
156N082H13BB	E VOLMER	550	4			TLOD	29	6-47	K	P 6	b	1627						
156N082H17CC	E KOTASEK	360	4			TLOD	100	6-47	K	P 6	b	1606						
156N082H19CC	M HAMBICK	401	4	B	1928	0651	6	6-47	K	P 6	b	1602						
156N082H25GDD	M FINBERG	35	24	B		TLOD	100	6-47	K	P 6	b	1602						
156N082H25GDD	C HAMBICK	350	4			0651	10	5-50	S	P 1	b	1635						
156N082H22AA4	C HAMBICK	25	48	D		TLOE	50	5-47	K	P 6	b	1623						
156N082H22DC1	S LASLAWSKI	300	4			TLOE	100	5-47	K	P 5	b	1623						
156N082H22DC2	S LASLAWSKI	300	3			TLOE	80	5-47	K	P 5	b	1623						
156N082H23DDC	F LARSON	199	4	H	1958	QC51	25	6-47	K	P 6	b	1638						
156N082H23DDC	U S G S	199	4	H	1958	QC51	10	6-47	K	P 6	b	1631						
156N082H23DDC	C KENDALL	216	8	B		QC51	27	6-47	K	P 6	b	1627						
156N082H23DDC	M KEMER	46	18	B		QC51	10	6-47	K	P 6	b	1606						
156N082H23DDC	M HAMILTON	52	18	B		QC51	27	6-47	K	P 6	b	1602						
156N082H23GAB	M HAMILTON	52	18	B		QC51	10	6-47	K	P 6	b	1602						
156N082H23GCG	U S G S	116	4	H	1958	TLOE	100	6-47	K	P 6	b	1635						
156N082H23GCG	U S G S	126	4	H	1947	TLOE	80	6-56	S	P 5	b	1610						
156N082H23GCG	M KURGEL	220	5			TLOE	80	6-47	K	P 5	b	1620						
156N082H23GCG	M KURGEL	300	4			TLOE	80	6-47	K	P 5	b	1611						
156N082H23GCG	A SOLBERG	325	4	V		TLOE	80	6-47	K	P 5	b	1641						
156N082H23GCG	A SOLBERG	158	4	H	1958	QC51	25	6-47	K	P 6	b	1636						
156N082H30AAA	U S G S	179	4	H	1953	QC51	10	6-47	K	P 6	b	1624						
156N082H30CCC	E WERNER	25	16	B	1930	0631	G	20	4-64	S	P 5	b	1635					
156N082H30CCC	E WERNER	525	2			TLOE	100	4-64	S	P 5	b	1690						
156N082H30CCC	N LIVINGSTON	40	24	B	1944	0631	G	10	4-64	S	P 5	b	1618					
156N082H30CCC	N LIVINGSTON	40	24	B	1962	0631	G	10	4-64	S	P 5	b	1610					
156N082H30CCC	E REID	30	18	B	1952	0631	G	29	4-64	S	P 5	b	1620					
156N082H30LCA	A KURGEL	52	24	B	1952	0631	G	10	4-64	H	P 5	b	1642					
156N082H30LCA	L DAGST	24	18	B	1953	0631	G	10	4-64	H	P 5	b	1598					
156N082H30LCA	N LIVINGSTON	43	24	B	1953	0631	G	38	4-64	H	J 5	b	1756					
156N082H30LCA	U S G S	82	1	H	1965	QC51	R	12-65	U	N	J 5	b	1623					
156N082H30LCA	U S G S	90	4	H	1965	TLOE	8	4-64	S	P 5	b	1625						
156N082H30LCA	SUNSET MINE	90	4	C	1954	0641	G	18	4-64	S	P 5	b	1613					
156N082H30LCA	C LINNERTZ	75	4	H	1957	0651	G	29	4-64	S	P 5	b	1741					
156N082H30LCA	C LINNERTZ	707	4	H	1932	TLOE	21	4-64	S	P 5	b	1741						
156N082H30LCA	U S G S	300	4	C	1966	0652	R	200	8-66	S	P 5	b	1753					
156N082H30LCA	R LINNERTZ	320	3	C	1963	TLOE	10	6-64	S	63		1753						
156N082H30LCA	T WILSON	193	4	H	1959	TLOE	38	4-64	S	63		1753						
156N082H30LCA	U S G S	147	4	H	1959	TLOE	8	4-64	S	63		1753						
156N082H30LCA	U S G S	42	4	H	1959	TLOE	12-65	U	N	N		1753						
156N082H30LCA	U S G S	63	4	H	1959	TLOE	8	4-64	S	63		1753						
156N082H30LCA	R PRITCHET	150	2		1962	TLOE	21	62	K	P 5	b	1549						
156N082H30LCA	R POLITCHET	40	36		1962	QC51	S	63	K	P 5	b	1549						
156N082H30LCA	L NYGARD	30	36		1963	QC51	S	63	K	P 5	b	1549						

TABLE I

ITEM NUMBER	OWNER OR NAME	DEPTH TO GROUT LINE	DIAM. OF HOLE	DATE OF METHOD	AUGERER	LITHO.	SOIL TEST NUMBER	TEST METHOD	MEASURED DEPTH	COURSE	ELEVATION	FEET MARKS	(EFFECT)		
													(INCHES)	(FEET)	
00089153AAA	B PUMARLIS	33	24	6-66	1950	0651	5	21	6-66	U	PL1	7		(1)	(2)
00089153BBB	U S 6 S	60	4	6	1953					L				(3)	(4)
00089153CCL	L BAKER	140	3	4	1950					N					
00089153DAA	U S 6 S	70	4	4	1950					N					
00089153DDC	U S 6 S	70	4	4	1950					N					
00089153EEL	A HANSON	23	8	4	1951	0651	8	18	6-66	U	PL1	4			
00089153FBB	U S 6 S	150	5	5	1953	0652	8	27	12-65	9					
00089153GAB	U S 6 S	110	5	5	1950					U	PL1				
00089153HAB	U S 6 S	650	3	6	1951	0651	6	90	6-66	U	PL1				
00089153IAB	U S 6 S	14	24	6	1950	1100	21	1100	6-66	K					
00089153JAB	G JONESON	650	3	6	1951	0651	6	90	6-66	U	PL1				
00089153KAB	U S 6 S	110	5	5	1950					U	PL1				
00089153LAD	U S 6 S	250	5	5	1950					U	PL1				
00089153MAB	U S 6 S	110	5	5	1950					U	PL1				
00089153NAB	U S 6 S	110	5	5	1950					U	PL1				
00089153OAB	U S 6 S	110	5	5	1950					U	PL1				
00089153PAB	U S 6 S	110	5	5	1950					U	PL1				
00089153QAB	U S 6 S	110	5	5	1950					U	PL1				
00089153RAB	U S 6 S	110	5	5	1950					U	PL1				
00089153SAB	U S 6 S	110	5	5	1950					U	PL1				
00089153TAB	U S 6 S	110	5	5	1950					U	PL1				
00089153UAB	U S 6 S	110	5	5	1950					U	PL1				
00089153VAB	U S 6 S	110	5	5	1950					U	PL1				
00089153WAB	U S 6 S	110	5	5	1950					U	PL1				
00089153XAB	U S 6 S	110	5	5	1950					U	PL1				
00089153YAB	U S 6 S	110	5	5	1950					U	PL1				
00089153ZAB	U S 6 S	110	5	5	1950					U	PL1				
00089153AAB	U S 6 S	110	5	5	1950					U	PL1				
00089153BAB	U S 6 S	110	5	5	1950					U	PL1				
00089153CAB	U S 6 S	110	5	5	1950					U	PL1				
00089153DAB	U S 6 S	110	5	5	1950					U	PL1				
00089153EAB	U S 6 S	110	5	5	1950					U	PL1				
00089153FAB	U S 6 S	110	5	5	1950					U	PL1				
00089153GAB	U S 6 S	110	5	5	1950					U	PL1				
00089153HAB	U S 6 S	110	5	5	1950					U	PL1				
00089153IAB	U S 6 S	110	5	5	1950					U	PL1				
00089153JAB	U S 6 S	110	5	5	1950					U	PL1				
00089153KAB	U S 6 S	110	5	5	1950					U	PL1				
00089153LAB	U S 6 S	110	5	5	1950					U	PL1				
00089153MAB	U S 6 S	110	5	5	1950					U	PL1				
00089153NAB	U S 6 S	110	5	5	1950					U	PL1				
00089153OAB	U S 6 S	110	5	5	1950					U	PL1				
00089153PAB	U S 6 S	110	5	5	1950					U	PL1				
00089153QAB	U S 6 S	110	5	5	1950					U	PL1				
00089153RAB	U S 6 S	110	5	5	1950					U	PL1				
00089153SAB	U S 6 S	110	5	5	1950					U	PL1				
00089153TAB	U S 6 S	110	5	5	1950					U	PL1				
00089153UAB	U S 6 S	110	5	5	1950					U	PL1				
00089153VAB	U S 6 S	110	5	5	1950					U	PL1				
00089153WAB	U S 6 S	110	5	5	1950					U	PL1				
00089153XAB	U S 6 S	110	5	5	1950					U	PL1				
00089153YAB	U S 6 S	110	5	5	1950					U	PL1				
00089153ZAB	U S 6 S	110	5	5	1950					U	PL1				
00089153AAB	U S 6 S	110	5	5	1950					U	PL1				
00089153BAB	U S 6 S	110	5	5	1950					U	PL1				
00089153CAB	U S 6 S	110	5	5	1950					U	PL1				
00089153DAB	U S 6 S	110	5	5	1950					U	PL1				
00089153EAB	U S 6 S	110	5	5	1950					U	PL1				
00089153FAB	U S 6 S	110	5	5	1950					U	PL1				
00089153GAB	U S 6 S	110	5	5	1950					U	PL1				
00089153HAB	U S 6 S	110	5	5	1950					U	PL1				
00089153IAB	U S 6 S	110	5	5	1950					U	PL1				
00089153JAB	U S 6 S	110	5	5	1950					U	PL1				
00089153KAB	U S 6 S	110	5	5	1950					U	PL1				
00089153LAB	U S 6 S	110	5	5	1950					U	PL1				
00089153MAB	U S 6 S	110	5	5	1950					U	PL1				
00089153NAB	U S 6 S	110	5	5	1950					U	PL1				
00089153OAB	U S 6 S	110	5	5	1950					U	PL1				
00089153PAB	U S 6 S	110	5	5	1950					U	PL1				
00089153QAB	U S 6 S	110	5	5	1950					U	PL1				
00089153RAB	U S 6 S	110	5	5	1950					U	PL1				
00089153SAB	U S 6 S	110	5	5	1950					U	PL1				
00089153TAB	U S 6 S	110	5	5	1950					U	PL1				
00089153UAB	U S 6 S	110	5	5	1950					U	PL1				
00089153VAB	U S 6 S	110	5	5	1950					U	PL1				
00089153WAB	U S 6 S	110	5	5	1950					U	PL1				
00089153XAB	U S 6 S	110	5	5	1950					U	PL1				
00089153YAB	U S 6 S	110	5	5	1950					U	PL1				
00089153ZAB	U S 6 S	110	5	5	1950					U	PL1				
00089153AAB	U S 6 S	110	5	5	1950					U	PL1				
00089153BAB	U S 6 S	110	5	5	1950					U	PL1				
00089153CAB	U S 6 S	110	5	5	1950					U	PL1				
00089153DAB	U S 6 S	110	5	5	1950					U	PL1				
00089153EAB	U S 6 S	110	5	5	1950					U	PL1				
00089153FAB	U S 6 S	110	5	5	1950					U	PL1				
00089153GAB	U S 6 S	110	5	5	1950					U	PL1				
00089153HAB	U S 6 S	110	5	5	1950					U	PL1				
00089153IAB	U S 6 S	110	5	5	1950					U	PL1				
00089153JAB	U S 6 S	110	5	5	1950					U	PL1				
00089153KAB	U S 6 S	110	5	5	1950					U	PL1				
00089153LAB	U S 6 S	110	5	5	1950					U	PL1				
00089153MAB	U S 6 S	110	5	5	1950					U	PL1				
00089153NAB	U S 6 S	110	5	5	1950					U	PL1				
00089153OAB	U S 6 S	110	5	5	1950					U	PL1				
00089153PAB	U S 6 S	110	5	5	1950					U	PL1				
00089153QAB	U S 6 S	110	5	5	1950					U	PL1				
00089153RAB	U S 6 S	110	5	5	1950					U	PL1				
00089153SAB	U S 6 S	110	5	5	1950					U	PL1				
00089153TAB	U S 6 S	110	5	5	1950					U	PL1				
00089153UAB	U S 6 S	110	5	5	1950					U	PL1				
00089153VAB	U S 6 S	110	5	5	1950					U	PL1				
00089153WAB	U S 6 S	110	5	5	1950					U	PL1				
00089153XAB	U S 6 S	110	5	5	1950					U	PL1				
00089153YAB	U S 6 S	110	5	5	1950					U	PL1				
00089153ZAB	U S 6 S	110	5	5	1950					U	PL1				
00089153AAB	U S 6 S	110	5	5	1950					U	PL1				
00089153BAB	U S 6 S	110	5	5	1950					U	PL1				
00089153CAB	U S 6 S	110	5	5	1950					U	PL1				
00089153DAB	U S 6 S	110	5	5	1950					U	PL1				
00089153EAB	U S 6 S	110	5	5	1950					U	PL1				
00089153FAB	U S 6 S	110	5	5	1950					U	PL1				
00089153GAB	U S 6 S	110	5</td												

TABLE 3.--Water levels in selected wells

Water levels are referred to land surface datum (lsd). MP means measuring point.

151-83-26bab. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 90 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 19, 1965	8.69	Dec. 30, 1965	9.98	May 11, 1966	10.90
Sept. 13	8.83	Jan. 31, 1966	10.45	June 6	10.82
Oct. 23	9.00	Mar. 14	11.06	Aug. 3	11.10
Nov. 23	9.66				

151-83-35cdc. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 111 ft, plastic casing. MP - top of plastic pipe 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 6, 1966	92.00	July 7, 1966	92.13	Aug. 3, 1966	92.18

151-84-6ddc. Test hole. Water-table observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 75 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	2.00	Nov. 23, 1965	2.01	May 11, 1966	2.10
Aug. 19	2.00	Dec. 30	2.87	June 6	2.31
Sept. 13	2.11	Jan. 31, 1966	Frozen	Aug. 3	2.96
Oct. 23	2.25	Mar. 14	Frozen		

151-84-29ddd. Test hole. Water-table observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 28 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	19.55	Nov. 23, 1965	19.53	May 11, 1966	19.98
Aug. 4	18.02	Dec. 30	19.96	June 6	20.50
Aug. 19	19.97	Jan. 31, 1966	19.83	Aug. 3	20.79
Sept. 13	19.75	Mar. 14	Frozen	Aug. 10	20.17
Oct. 23	19.68				

151-86-5ccb. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 90 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 9, 1966	20.75	Sept. 14, 1966	27.31	Oct. 12, 1966	27.25

152-85-2bcb. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 100 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	46.01	Nov. 23, 1965	45.15	May 11, 1966	45.08
Aug. 19	45.22	Dec. 30	45.25	June 6	44.50
Sept. 13	45.20	Jan. 31, 1966	45.08	Aug. 3	45.10
Oct. 23	45.25	Mar. 14	45.05	Oct. 4	45.29

152-85-35ddal. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 65 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	7.90	Oct. 23, 1965	6.63	Mar. 14, 1966	6.36
Aug. 11	6.17	Nov. 23	7.32	May 11	6.25
Aug. 19	6.36	Dec. 30	7.59	June 6	6.30
Sept. 13	6.31	Jan. 31, 1966	Frozen	Aug. 3	6.92

152-85-35dda2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 108 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	8.29	Nov. 23, 1965	6.32	May 11, 1966	4.05
Aug. 11	7.22	Dec. 30	6.76	June 6	5.68
Aug. 19	7.36	Jan. 31, 1966	Frozen	Aug. 3	6.00
Sept. 13	7.38	Mar. 14	5.45		

152-87-16aaa. Test hole. Water-table observation well in glaciofluvial material; diam 1½ in, depth 17 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
July 26, 1966	9.06	Aug. 4, 1966	9.13	Oct. 5, 1966	10.00

152-87-17ccc. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 117 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	40.40	Nov. 23, 1965	36.59	May 11, 1966	36.50
Aug. 19	37.12	Dec. 30	36.73	June 6	36.39
Sept. 13	36.98	Jan. 31, 1966	36.62	Aug. 3	39.52
Oct. 23	36.68	Mar. 14	36.76		

152-87-29add. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 150 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	29.02	Nov. 23, 1965	25.75	May 11, 1966	25.40
Aug. 19	26.22	Dec. 30	26.40	June 6	25.35
Sept. 13	26.10	Jan. 31, 1966	25.66	Aug. 3	26.57
Oct. 23	26.00	Mar. 14	25.69		

153-81-3cbc. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 54 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 9, 1966	10.38	Sept. 14, 1966	10.47	Oct. 12, 1966	10.35

153-83-13bbb. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 96 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	59.93	Nov. 23, 1965	59.06	May 11, 1966	59.31
Aug. 19	59.35	Dec. 30	59.13	June 6	59.28
Sept. 14	59.27	Jan. 31, 1966	59.16	Aug. 3	59.38
Oct. 28	59.15	Mar. 14	59.20		

153-84-7abal. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 40 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	6.15	Nov. 23, 1965	6.23	May 24, 1966	5.10
Aug. 19	6.73	Dec. 30	6.31	June 6	6.01
Sept. 14	6.25	Jan. 31, 1966	7.25	Aug. 3	6.84
Oct. 23	6.16	Mar. 14	7.84		

153-84-7aba2. Test hole. Artesian observation well in glaciofluvial material; diam $1\frac{1}{4}$ in, depth 210 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	36.39	Nov. 23, 1965	33.53	May 24, 1966	35.24
Aug. 19	33.99	Dec. 30	35.56	June 6	35.31
Sept. 14	33.37	Jan. 31, 1966	35.35	Aug. 11	35.29
Oct. 23	33.50	Mar. 14	35.26		

153-85-24dcd. Test hole. Water-table observation well in glaciofluvial material; diam 1½ in, depth 13 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 3, 1966	4.03	Sept. 14, 1966	5.31	Oct. 4, 1966	6.15

153-86-34cdd1. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 38 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	2.19	Nov. 23, 1965	2.68	May 11, 1966	0.77
Aug. 19	2.73	Dec. 30	2.72	June 6	1.17
Sept. 13	2.75	Jan. 31, 1966	Frozen	Aug. 3	2.21
Oct. 23	2.58	Mar. 14	Frozen		

153-86-34cdd2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 193 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	+2	Nov. 23, 1965	+2	May 11, 1966	+2
Aug. 19	+2	Dec. 30	+2	June 6	+2
Sept. 13	+2	Jan. 31, 1966	+2	Aug. 3	+2
Oct. 23	+2	Mar. 14	+2		

153-87-28bbb1. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 30 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	2.29	Nov. 23, 1965	4.92	May 11, 1966	6.19
Aug. 19	3.62	Dec. 30	4.99	June 6	4.43
Sept. 13	3.92	Jan. 31, 1966	6.28	Aug. 3	4.09
Oct. 23	4.00	Mar. 14	7.10		

153-87-28bbb2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 65 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	6.26	Nov. 23, 1965	6.11	May 11, 1966	6.39
Aug. 19	5.66	Dec. 30	6.13	June 6	4.52
Sept. 13	6.06	Jan. 31, 1966	8.08	Aug. 3	5.30
Oct. 23	6.02	Mar. 14	8.99		

154-82-3cac. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 84 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Sept. 15, 1965	11.01	Dec. 30, 1965	11.09	May 5, 1966	11.12
Oct. 6	11.20	Jan. 31, 1966	11.13	June 6	11.21
Nov. 23	11.18	Mar. 15	11.09	Aug. 3	11.19

154-32-3cba. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 96 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Sept. 15, 1965	11.75	Dec. 30, 1965	11.71	May 5, 1966	11.59
Oct. 6	11.68	Jan. 31, 1966	11.62	June 6	11.64
Nov. 23	11.65	Mar. 15	11.73	Aug. 3	11.71

154-32-3cdb1. Test hole. Artesian observation well in glaciofluvial material; diam 3 in, depth 30 ft, plastic casing. MP - top of concrete base at lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
1965	14.08	Dec. 30, 1965	13.37	May 5, 1966	12.47
Sept. 15, 1965	14.10	Jan. 31, 1966	11.93	June 6	12.31
Oct. 6	13.78	Mar. 15	10.65	Aug. 3	13.23
Nov. 23	13.31				

154-32-3cdb2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 30 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Sept. 15, 1965	13.44	Dec. 30, 1965	13.53	May 5, 1966	13.58
Oct. 6	13.64	Jan. 31, 1966	13.60	June 6	13.83
Nov. 23	13.61	Mar. 15	13.65	Aug. 3	13.71

154-82-4aad. Test hole. Water-table observation well in glaciofluvial material; diam 1½ in, depth 233 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Nov. 19, 1963	15.80	Sept. 14, 1964	15.50	May 12, 1965	14.94
Jan. 8, 1964	15.65	Oct. 9	15.40	June 17	14.41
Mar. 4	16.58	Nov. 6	15.38	Aug. 11	14.37
Apr. 7	16.67	Dec. 10	15.32	Sept. 15	14.53
May 5	16.47	Jan. 11, 1965	15.48	Nov. 22	14.63
June 12	14.87	Feb. 17	15.42	Jan. 31, 1966	14.69
July 2	15.48	Mar. 16	15.27	Mar. 15	14.56
Aug. 5	15.33	Apr. 12	15.16	May 5	14.30

154-82-4aba. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 120 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Nov. 15, 1963	13.27	Sept. 14, 1964	13.79	June 17, 1965	12.20
Jan. 9, 1964	13.67	Oct. 9	13.72	Aug. 11	12.74
Feb. 4	13.67	Nov. 6	13.62	Sept. 15	12.57
Mar. 4	15.65	Dec. 6	13.45	Nov. 22	12.63
Apr. 7	14.93	Jan. 11, 1965	13.79	Jan. 31, 1966	12.74
May 5	13.98	Feb. 17	13.64	Mar. 15	12.48
June 12	13.36	Mar. 16	13.49	May 5	12.05
July 2	13.20	Apr. 12	13.19		
Aug. 5	13.58	May 12	13.06		

154-82-10bbb. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in., depth 120 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 6, 1966	17.01	Aug. 3, 1966	17.51	Sept. 4, 1966	Well destroyed
July 15	17.34				

154-82-24aba. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{2}$ in., depth 40 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 9, 1964	13.44	Nov. 6, 1964	12.37	Sept. 15, 1965	11.67
Feb. 4	13.40	Dec. 10	12.27	Oct. 22	11.53
Mar. 4	13.69	Jan. 11, 1965	12.34	Nov. 23	11.50
May 5	12.94	Feb. 17	12.36	Dec. 30	11.46
June 12	12.90	Mar. 16	12.23	Jan. 31, 1966	11.48
July 2	12.63	Apr. 12	11.72	Mar. 15	11.14
Aug. 5	12.07	May 12	11.47	May 5	10.93
Sept. 14	12.53	June 17	10.84		
Oct. 9	12.46	Aug. 11	12.47		

154-86-28ada. Test hole. Water-table observation well in glaciofluvial material; diam 1 $\frac{1}{2}$ in., depth 27 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 19, 1965	8.01	Dec. 30, 1965	8.28	May 11, 1966	8.13
Sept. 13	8.11	Jan. 31, 1966	8.31	June 6	7.98
Oct. 23	8.03	Mar. 14	8.29	Aug. 3	8.13
Nov. 23	8.21				

154-87-14ddd. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{2}$ in., depth 80 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	50.61	Nov. 23, 1965	44.70	May 11, 1966	45.61
Aug. 19	43.48	Dec. 30	44.75	June 6	45.41
Sept. 13	44.35	Jan. 31, 1966	45.80	Aug. 3	45.12
Oct. 23	44.52	Mar. 14	45.92		

155-82-19dbd. Test hole. Artesian observation well in glaciofluvial material; diam 4 $\frac{1}{2}$ in., depth 107 ft, plastic casing. MP - top of plastic casing 1.40 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Nov. 21, 1963	34.16	Sept. 14, 1964	38.34	Sept. 15, 1965	35.94
Jan. 8, 1964	37.75	Oct. 9	37.91	Nov. 22	35.48
Feb. 3	38.00	Jan. 11, 1965	38.03	Feb. 1, 1966	32.86
Mar. 4	38.28	Feb. 17	38.02	Mar. 15	32.21
Apr. 7	39.56	Mar. 16	37.72	May 5	31.78
May 5	38.20	Apr. 12	37.26	Oct. 5	32.51
June 12	38.44	May 12	37.30		
July 2	38.62	June 17	36.84		
Aug. 5	39.20	Aug. 11	36.82		

155-82-29bcb. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 105 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Nov. 19, 1963	27.58	Sept. 14, 1964	28.40	May 12, 1965	27.61
Jan. 9, 1964	27.85	Oct. 9	28.15	June 17	27.13
Feb. 3	28.15	Nov. 6	28.02	Aug. 11	27.22
Mar. 4	28.53	Dec. 10	27.87	Sept. 15	26.48
Apr. 7	28.72	Jan. 11, 1965	27.99	Nov. 22	25.96
May 5	28.43	Feb. 17	28.19	Jan. 31, 1966	24.90
June 12	28.05	Mar. 16	27.98	Mar. 15	24.35
July 2	28.17	Apr. 12	27.65	May 5	24.12
Aug. 5	29.22				

155-83-1ccc. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 30 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Aug. 13, 1965	8.29	Nov. 22, 1965	2.90	May 12, 1966	4.13
Aug. 19	3.30	Dec. 30	2.98	June 6	4.24
Sept. 15	3.42	Jan. 31, 1966	3.05	Aug. 3	4.76
Oct. 27	2.63	Mar. 14	3.78	Oct. 5	4.91

155-83-4aaa. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 420 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 17, 1966	219.48	Sept. 15, 1966	218.46	Oct. 5, 1966	217.82
Aug. 4	219.53				

155-83-9aaal. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 50 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Sept. 15, 1965	5.68	Dec. 30, 1965	6.43	May 12, 1966	7.62
Oct. 6	6.12	Jan. 31, 1966	7.12	June 6	7.13
Nov. 23	5.97	Mar. 15	7.43	Aug. 3	6.73

155-83-9aaa2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 260 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Sept. 15, 1965	219.63	Dec. 30, 1965	218.48	May 12, 1966	31.82
Oct. 6	219.64	Jan. 31, 1966	218.31		
Nov. 23	219.04	Mar. 15	218.25		

155-33-12cccc1. Test hole. Artesian observation well in glaciofluvial material; diam 4½ in, depth 80 ft, plastic casing. MP - top of plastic casing 0.65 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 9, 1964	37.04	Sept. 12, 1964	36.22	May 12, 1965	36.58
Mar. 4	37.20	Oct. 9	35.95	June 16	36.72
Apr. 7	37.25	Nov. 6	35.92	Aug. 19	36.05
May 5	36.90	Dec. 10	35.67	Oct. 27	35.57
June 12	37.18	Jan. 11, 1965	36.02	Nov. 22	35.35
July 2	37.15	Feb. 17	36.26	Jan. 31, 1966	36.29
July 22	36.55	Mar. 16	36.36	Mar. 15	35.72
Aug. 5	36.05	Apr. 12	36.52	May 6	35.36

155-33-12cccc2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 326 ft, plastic casing. MP - top of plastic casing 1.30 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Feb. 14, 1964	217.50	Sept. 14, 1964	218.21	May 12, 1965	217.81
Mar. 4	215.54	Nov. 6	217.75	June 16	218.20
Apr. 7	215.45	Dec. 10	217.16	Aug. 19	213.95
May 5	207.70	Jan. 11, 1965	217.52	Oct. 28	217.86
June 12	214.90	Feb. 17	217.67	Jan. 31, 1966	217.64
July 2	216.03	Mar. 16	217.85	Mar. 15	217.13
Aug. 5	216.70	Apr. 12	217.83	May 6	216.87

155-33-14cda. Minot municipal well 10. Artesian production well in glaciofluvial material; diam 12 in, depth 139 ft, steel casing. MP - center of air-line gage 4.29 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 30, 1963	57.0	June 1, 1964	62.0	Aug. 2, 1965	59.5
Mar. 30	56.5	July 1	65.0	Sept. 1	60.5
May 1	42.5	Sept. 1	60.5	Oct. 1	58.5
June 1	57.5	Oct. 1	60.5	Nov. 1	58.5
July 1	56.5	Nov. 1	58.5	Dec. 1	58.5
July 29	58.5	Dec. 1	58.5	Jan. 1, 1966	56.5
Aug. 30	58.5	Jan. 1, 1965	58.5	Feb. 1	58.5
Sept. 30	58.5	Feb. 2	60.5	Feb. 28	55.5
Oct. 30	58.5	Mar. 1	58.5	Apr. 1	55.5
Jan. 2, 1964	60.5	Apr. 1	58.5	May 1	54.5
Feb. 1	62.5	May 1	60.5	June 1	50.5
Mar. 2	62.5	June 1	60.5	July 1	50.5
Apr. 1	62.0	July 1	59.5	Aug. 1	52.5
May 1	62.0				

155-83-14dca. Minot municipal well 9. Artesian production well in glaciofluvial material; diam 12 in, depth 152 ft, steel casing. MP - center of air-line gage 4.30 ft above lsd. Measurements from air-line gage reported to nearest ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Jan. 30, 1963	56	July 1, 1964	66	Oct. 1, 1965	60
May 1	53	Sept. 1	64	Nov. 1	58
June 1	53	Oct. 1	62	Dec. 1	58
July 1	58	Nov. 1	62	Jan. 1, 1966	56
July 29	61	Dec. 1	62	Feb. 1	56
Aug. 30	63	Jan. 1, 1965	63	Feb. 28	54
Sept. 30	62	Feb. 2	66	Apr. 1	54
Oct. 30	60	Mar. 1	62	May 1	53
Jan. 2, 1964	62	Apr. 1	62	June 1	49
Feb. 1	64	May 1	62	July 1	50
Mar. 2	63	June 1	62	Aug. 1	52
Apr. 1	64	July 1	59		
May 1	64	Aug. 1	59		
June 1	64	Sept. 1	60		

155-83-14dcc. Minot municipal well 4. Artesian production well in glaciofluvial material; diam 14 in, depth 155 ft, steel casing. MP - center of air-line gage 4.60 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 27, 1963	65.0	Nov. 2, 1964	72.0	Oct. 1, 1965	65.5
Oct. 30	68.5	Dec. 1	70.0	Dec. 1	65.0
Jan. 2, 1964	70.0	Jan. 1, 1965	70.0	Jan. 1, 1966	63.0
Feb. 3	71.0	Feb. 2	71.0	Feb. 28	63.0
Mar. 7	70.5	Mar. 1	70.0	Apr. 1	62.0
May 1	71.0	Apr. 1	70.0	May 1	61.0
June 1	72.0	June 1	70.0	June 1	58.0
July 1	70.0	Aug. 1	67.0	July 1	57.0
Sept. 1	72.0	Sept. 1	66.5	Aug. 1	60.0
Oct. 1	71.0				

155-83-14dddl. Minot municipal well 5. Artesian production well in glaciofluvial material; diam 12 in, depth 147 ft, steel casing. MP - center of air-line gage 4.65 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Jan. 30, 1963	58.0	June 1, 1964	65.0	Aug. 2, 1965	60.0
Mar. 31	58.0	July 1	63.5	Sept. 1	60.0
May 1	59.0	July 31	64.5	Oct. 1	62.5
June 1	59.5	Sept. 1	64.5	Nov. 1	61.5
July 1	59.5	Oct. 1	64.5	Dec. 1	61.0
July 29	61.5	Nov. 2	63.5	Dec. 29	59.0
Aug. 30	62.5	Dec. 1	62.0	Jan. 1, 1966	58.0
Sept. 30	62.5	Jan. 1, 1965	62.0	Feb. 28	58.0
Oct. 30	62.5	Feb. 2	64.5	Apr. 1	59.0
Jan. 2, 1964	62.0	Mar. 1	63.5	May 1	57.0
Feb. 1	64.0	Apr. 1	63.5	June 1	54.0
Mar. 2	64.5	May 1	63.5	July 1	53.0
Apr. 1	64.5	June 1	62.5	Aug. 1	56.5
May 1	64.5	July 1	62.0		

155-83-14ddd2. Minot municipal well 6. Artesian production well in glaciofluvial material; diam 16 in, depth 139 ft, steel casing. MP - center of air-line gage 5.15 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 30, 1963	53.0	June 1, 1964	65.0	Aug. 2, 1965	60.0
Mar. 31	58.5	July 1	64.0	Sept. 1	61.0
May 1	57.5	July 31	65.0	Oct. 1	60.0
June 1	59.0	Sept. 1	64.0	Nov. 1	60.0
July 1	59.0	Oct. 1	64.0	Dec. 1	59.0
July 29	61.0	Nov. 2	64.0	Dec. 29	57.0
Aug. 30	62.0	Dec. 1	63.0	Feb. 1, 1966	56.0
Sept. 30	62.0	Jan. 1, 1965	63.0	Feb. 28	56.0
Oct. 30	62.0	Feb. 2	65.0	Apr. 1	56.0
Jan. 2, 1964	63.0	Mar. 1	64.0	May 1	55.0
Feb. 1	64.5	Apr. 1	63.0	June 1	52.0
Mar. 2	64.5	May 1	63.0	July 1	51.0
Apr. 1	64.0	June 1	62.0	Aug. 1	54.5
May 1	64.0	July 1	61.0		

155-83-21daa. Minot municipal well 18. Artesian production well in glaciofluvial material; diam 12 in, depth 99 ft, steel casing. MP - center of air-line gage 5.03 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Nov. 30, 1961	43.0	Aug. 30, 1963	62.5	May 1, 1964	63.0
Jan. 30, 1963	57.0	Sept. 30	63.5	June 1	63.5
Mar. 30	59.0	Oct. 30	64.0	July 1	63.5
May 1	58.0	Jan. 2, 1964	64.0	July 31	63.0
June 1	60.5	Feb. 1	63.0	Sept. 1	64.0
July 1	62.0	Mar. 2	62.5		Well destroyed
July 29	62.0	Apr. 1	63.0		

155-83-22abc. Minot municipal well 15. Water-table production well in glaciofluvial material; diam 12 in, depth 115 ft, steel casing. MP - center of air-line gage 4.74 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 30, 1961	43.0	June 1, 1964	69.0	Aug. 2, 1965	62.5
Jan. 30, 1963	59.0	July 1	69.0	Sept. 1	64.0
Mar. 30	59.0	July 31	70.0	Oct. 1	63.5
June 1	61.5	Sept. 1	69.0	Nov. 1	64.0
July 1	62.0	Oct. 1	69.0	Dec. 1	61.0
July 29	64.5	Nov. 2	69.0	Jan. 1, 1966	57.0
Aug. 30	65.0	Dec. 1	68.0	Feb. 1	54.0
Sept. 30	66.0	Jan. 1, 1965	67.0	Feb. 28	53.0
Oct. 30	66.5	Feb. 2	67.0	Apr. 1	51.0
Jan. 2, 1964	65.5	Mar. 1	68.0	May 1	50.0
Feb. 1	64.5	Apr. 1	68.0	June 1	51.0
Mar. 2	66.0	May 1	68.0	July 1	53.0
Apr. 1	66.0	June 1	65.0	Aug. 1	55.0
May 1	67.0	July 1	63.0		

155-83-22acc. Minot municipal well 14. Artesian production well in glaciofluvial material; diam 12 in, depth 105 ft, steel casing. MP - center of air-line gage 4.83 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 30, 1961	44.0	May 1, 1964	65.0	July 1, 1965	60.0
Jan. 30, 1963	57.5	June 1	66.0	Aug. 2	60.0
Mar. 30	58.5	July 1	66.0	Sept. 1	61.5
May 1	58.5	July 31	66.0	Oct. 1	62.0
June 1	59.5	Sept. 1	67.0	Nov. 1	62.0
July 1	61.5	Oct. 1	66.5	Dec. 1	57.0
July 29	63.5	Nov. 1	66.0	Jan. 1, 1966	52.0
Aug. 30	64.5	Dec. 1	66.0	Feb. 1	50.0
Sept. 30	65.0	Jan. 1, 1965	65.0	Feb. 28	49.0
Oct. 30	64.5	Feb. 2	65.0	Apr. 1	48.0
Jan. 2, 1964	65.0	Mar. 1	66.0	May 1	47.0
Feb. 1	64.0	Apr. 1	66.0	June 1	48.0
Mar. 2	64.0	May 1	66.0	July 1	50.0
Apr. 1	65.0	June 1	62.0	Aug. 1	53.0

155-83-22ada. Minot municipal well 12. Artesian production well in glaciofluvial material; diam 12 in, depth 120 ft, steel casing. MP - center of air-line gage 5.20 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Nov. 30, 1961	49.0	May 1, 1964	69.0	July 1, 1965	65.0
Jan. 30, 1963	59.0	June 1	71.0	Aug. 2	65.5
Mar. 30	60.0	July 1	70.0	Sept. 1	65.0
May 1	60.0	July 31	72.0	Oct. 1	64.0
June 1	62.5	Sept. 1	71.0	Nov. 1	64.0
July 1	62.5	Oct. 1	70.5	Dec. 1	63.0
Aug. 1	63.0	Nov. 2	68.5	Jan. 1, 1966	60.0
Aug. 30	67.0	Dec. 1	67.0	Feb. 1	56.5
Sept. 30	67.5	Jan. 1, 1965	67.0	Feb. 28	55.0
Oct. 30	68.5	Feb. 2	68.5	Apr. 1	53.5
Jan. 2, 1964	67.5	Mar. 1	68.0	May 1	53.0
Feb. 1	68.0	Apr. 1	68.0	June 1	53.0
Mar. 2	68.0	May 1	69.5	July 1	54.0
Apr. 1	68.0	June 1	68.0	Aug. 1	55.5

155-83-22adc. Minot municipal well 13. Artesian production well in glaciofluvial material; diam 12 in, depth 115 ft, steel casing. MP - center of air-line gage 4.50 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Jan. 30, 1961	45.5	May 1, 1964	68.0	July 1, 1965	63.5
Jan. 30, 1963	58.5	June 1	69.0	Aug. 2	64.5
Mar. 30	59.5	July 1	69.5	Sept. 1	64.0
May 1	59.5	July 31	69.5	Oct. 1	64.5
June 1	61.5	Sept. 1	70.0	Nov. 1	65.5
July 1	62.5	Oct. 1	69.5	Dec. 1	61.5
July 29	64.5	Nov. 2	68.5	Jan. 1, 1966	58.5
Aug. 30	67.0	Dec. 1	67.5	Feb. 1	56.5
Sept. 30	68.0	Jan. 1, 1965	66.5	Feb. 28	56.5
Oct. 30	68.0	Feb. 2	67.5	Apr. 1	52.5
Nov. 30	67.0	Mar. 1	67.5	May 1	52.5
Jan. 2, 1964	66.5	Apr. 1	67.5	June 1	51.5
Feb. 1	66.5	May 1	68.0	July 1	54.5
Mar. 2	67.0	June 1	66.5	Aug. 1	55.5
Apr. 1	67.5				

155-83-22bcd. Minot municipal well 17. Artesian production well in glaciofluvial material; diam 12 in, depth 67 ft, steel casing. MP - center of air-line gage 4.75 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Jan. 30, 1961	41.0	Sept. 30, 1963	63.0	July 1, 1964	63.5
Jan. 30, 1963	56.0	Oct. 30	63.0	July 31	63.0
Mar. 30	57.0	Jan. 2, 1964	63.0	Sept. 1	63.5
May 1	57.0	Feb. 3	62.5	Oct. 1	64.0
June 1	60.0	Mar. 2	62.5	Nov. 2	63.5
July 1	60.0	Apr. 1	62.5	Dec. 1	64.0
July 29	61.0	May 1	63.0		
Aug. 30	62.0	June 1	63.5		

155-83-22bdc. Minot municipal well 16. Artesian production well in glaciofluvial material; diam 12 in, depth 111 ft, steel casing. MP - center of air-line gage 4.71 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Jan. 30, 1961	42.0	Oct. 30, 1963	66.5	Sept. 1, 1964	67.0
Jan. 30, 1963	58.5	Jan. 2, 1964	65.0	Jan. 1, 1966	56.0
Mar. 30	62.0	Feb. 1	64.5	Feb. 1	48.0
May 1	59.0	Mar. 2	64.5	Feb. 26	48.0
June 1	58.5	Apr. 1	65.5	Apr. 1	43.0
July 1	62.0	May 1	65.5	May 1	47.0
July 29	65.0	June 1	66.5	June 1	50.0
Aug. 30	65.0	July 1	66.5	July 1	51.0
Sept. 30	66.0	July 31	66.5	Aug. 1	54.0

155-83-23bab. Minot municipal well 8. Artesian production well in glaciofluvial material; diam 16 in, depth 132.5 ft, steel casing. MP - center of air-line gage 5.46 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Jan. 30, 1963	58.5	May 1, 1964	67.0	July 1, 1965	63.0
Mar. 31	64.5	June 1	69.0	Aug. 2	62.0
May 1	64.5	July 1	66.5	Sept. 1	64.5
June 1	60.0	July 31	68.5	Oct. 1	62.5
July 1	61.0	Sept. 1	68.5	Nov. 1	62.5
Aug. 1	61.5	Oct. 1	67.5	Dec. 1	61.5
Aug. 30	63.5	Nov. 2	67.5	Dec. 29	60.5
Sept. 30	64.5	Dec. 1	65.5	Feb. 1, 1966	58.5
Oct. 30	65.5	Jan. 1, 1965	65.5	Feb. 28	58.5
Nov. 30	65.5	Feb. 2	67.5	Apr. 1	56.5
Jan. 2, 1964	65.5	Mar. 1	66.5	May 1	56.5
Feb. 1	67.0	Apr. 1	65.5	June 1	52.5
Mar. 2	67.0	May 1	66.0	July 1	52.5
Apr. 1	67.0	June 1	65.0	Aug. 1	54.5

155-33-23bbd. Minot municipal well 11. Artesian production well in glaciofluvial material; diam 12 in, depth 130 ft, steel casing. MP - center of air-line gage 4.75 ft above lsd. Measurements from air-line gage reported to nearest 0.5 ft.

<u>Date</u>	Water level	<u>Date</u>	Water level	<u>Date</u>	Water level
Jan. 30, 1961	48.0	Mar. 2, 1964	63.0	Sept. 1, 1965	62.0
Jan. 30, 1963	55.0	Apr. 1	63.0	Oct. 1	62.0
Mar. 30	57.0	May 1	63.0	Nov. 1	62.0
May 1	56.0	June 1	66.0	Dec. 1	60.0
June 1	56.0	July 1	a/71.05	Jan. 1, 1966	57.0
July 1	57.0	Aug. 1	a/72.25	Feb. 1	55.0
July 29	57.0	Mar. 1, 1965	64.0	Feb. 28	54.0
Aug. 30	60.0	Apr. 1	62.5	Apr. 1	53.0
Sept. 30	62.0	May 1	62.5	May 1	53.0
Oct. 30	62.5	June 1	62.0	June 1	50.0
Jan. 2, 1964	62.0	July 1	62.5	July 1	50.0
Feb. 1	62.5	Aug. 2	55.5	Aug. 1	52.0

155-86-24bbb. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 50 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water level	<u>Date</u>	Water level	<u>Date</u>	Water level
Aug. 19, 1965	6.49	Dec. 30, 1965	6.13	May 5, 1966	8.63
Oct. 28	6.03	Jan. 31, 1966	3.78	June 6	8.51
Nov. 22	6.07	Mar. 14	8.87	Aug. 3	8.61

155-87-17bab1. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 38 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water level	<u>Date</u>	Water level	<u>Date</u>	Water level
Aug. 19, 1965	18.83	Dec. 30, 1965	19.25	May 5, 1966	19.15
Oct. 27	19.06	Jan. 31, 1966	Frozen	June 6	19.06
Nov. 23	19.19	Mar. 14	Frozen	Aug. 3	18.97

155-87-17bab2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 100 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water level	<u>Date</u>	Water level	<u>Date</u>	Water level
Aug. 19, 1965	12.20	Dec. 30, 1965	12.20	May 5, 1966	12.13
Sept. 27	12.06	Jan. 31, 1966	Frozen	June 6	12.28
Oct. 23	12.07	Mar. 14	Frozen	Aug. 3	12.31
Nov. 23	12.07				

156-83-25bbc. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 82 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water level	<u>Date</u>	Water level	<u>Date</u>	Water level
Sep. 15, 1965	7.47	Dec. 30, 1965	7.79	May 12, 1966	8.48
Oct. 27	7.40	Feb. 1, 1966	8.53	June 6	8.42
Nov. 24	7.66	Mar. 15	9.34	Aug. 3	8.49

a/ Measured with steel tape

156-87-15cdd. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 70 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 17, 1965	6.77	Dec. 30, 1965	5.12	May 5, 1966	5.09
Aug. 19	6.12	Jan. 31, 1966	5.26	June 6	5.13
Oct. 23	5.12	Mar. 14	5.17	Aug. 3	5.12
Nov. 23	5.09				

157-82-14bbb. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 71 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 20, 1965	4.39	Dec. 30, 1965	5.51	May 12, 1966	4.22
Sept. 15	4.46	Feb. 1, 1966	8.11	June 6	5.01
Oct. 27	5.01	Mar. 15	9.31	Aug. 3	5.31
Nov. 24	5.47				

158-81-36bbb. Test hole. Water-table observation well in glaciofluvial material; diam 1½ in, depth 13 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 20, 1965	7.89	Dec. 30, 1965	7.15	May 12, 1966	7.23
Sept. 15	7.09	Feb. 1, 1966	7.90	June 6	7.15
Oct. 27	6.87	Mar. 15	7.80	Aug. 3	7.23
Nov. 24	6.97				

158-82-10aad1. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 34 ft, plastic casing. MP - top of plastic casing 2.3 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Oct. 23, 1964	13.30	May 12, 1965	12.93	Feb. 1, 1966	11.39
Dec. 11	14.09	June 13	11.79	Mar. 15	9.11
Jan. 12, 1965	14.76	Aug. 18	11.57	May 12	7.74
Feb. 18	15.13	Sept. 14	12.02	June 6	7.68
Mar. 17	15.58	Oct. 27	11.37	Aug. 3	8.21
Apr. 13	15.65	Dec. 30	11.72		

158-82-10aad2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 240 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Oct. 23, 1964	15.64	May 12, 1965	15.20	Feb. 1, 1966	15.19
Dec. 11	15.44	June 16	15.23	Mar. 15	15.13
Jan. 12, 1965	15.46	Aug. 18	15.45	May 12	15.19
Feb. 18	15.41	Sept. 14	15.39	June 6	15.23
Mar. 17	15.44	Oct. 27	15.36	Aug. 3	15.32
Apr. 13	15.32	Dec. 30	15.42		

158-82-26ccc. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 40 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 20, 1965	5.43	Dec. 30, 1965	5.30	May 12, 1966	2.96
Sept. 15	5.32	Feb. 1, 1966	6.78	June 6	4.06
Oct. 27	5.06	Mar. 15	7.60	Aug. 3	5.13
Nov. 24	5.28				

158-82-34cccd. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 165 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Aug. 20, 1965	38.52	Dec. 30, 1965	33.0	May 12, 1966	32.15
Sept. 15	37.16	Feb. 1, 1966	Frozen	June 6	32.98
Oct. 27	30.02	Mar. 15	Frozen	Aug. 3	33.65
Nov. 24	32.03				

158-86-1aaa. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 60 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 6, 1966	13.25	Aug. 3, 1966	13.31	Sept. 15, 1966	13.30

158-86-30add. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 25 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
June 6, 1966	8.05	Sept. 15, 1966	7.98	Oct. 5, 1966	8.00
Aug. 3	7.97				

159-84-6bbb. Test hole. Water-table observation well in glacial drift; diam 1½ in, depth 20 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Dec. 11, 1964	14.17	Aug. 20, 1965	14.01	Feb. 1, 1966	12.29
Mar. 17, 1965	14.26	Sept. 15	13.16	Mar. 15	12.30
Apr. 13	14.22	Oct. 27	12.67	May 5	12.49
May 12	14.26	Nov. 23	13.29	June 6	12.33
June 16	14.16	Dec. 30	13.82	Aug. 3	13.15

160-87-17ddd. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in, depth 220 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>	<u>Date</u>	Water <u>level</u>
Oct. 28, 1965	33.03	Feb. 1, 1966	32.93	June 6, 1966	32.71
Nov. 23	33.00	Mar. 15	32.75	Aug. 3	32.78
Dec. 30	33.07	May 5	32.68		

160-33-19add. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 330 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 6, 1966	20.93	Sept. 15, 1966	21.03	Oct. 5, 1966	20.98
Aug. 3	20.91				

160-33-20caa. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 340 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 6, 1966	47.52	Sept. 15, 1966	47.61	Oct. 5, 1966	47.57
Aug. 3	47.58				

160-33-20dec. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 310 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 6, 1966	19.93	Sept. 15, 1966	19.30	Oct. 5, 1966	21.65
Aug. 3	19.39				

161-35-14add. Test hole. Water-table observation well in glacial drift; diam 1½ in., depth 40 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	10.52	Apr. 13, 1965	Frozen	Aug. 13, 1965	3.02
Jan. 20, 1965	10.99	May 12	5.64	Oct. 27	3.62
Feb. 18	11.51	June 16	3.39		Well destroyed
Mar. 17	Frozen				

161-36-33abb. Test hole. Water-table observation well in glacial drift; diam 1½ in., depth 20 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	9.13	Sept. 15, 1965	4.63	Mar. 15, 1966	7.62
Apr. 13, 1965	3.63	Sept. 27	1.59	May 12	3.11
May 13	1.60	Nov. 23	1.78	June 6	2.01
June 16	1.07	Dec. 30	1.91	Aug. 3	3.39
Aug. 18	4.61	Feb. 1, 1966	6.78		

161-37-215bb. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 34 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	7.33	Aug. 18, 1965	5.52	Feb. 1, 1966	7.43
Jan. 20, 1965	3.36	Sept. 15	5.56	Mar. 15	8.50
Feb. 18	9.22	Oct. 27	5.50	May 12	3.60
Mar. 17	9.46	Nov. 23	5.52	June 6	4.98
Apr. 13	9.52	Dec. 30	5.53	Aug. 3	6.23
May 13	Plugged				

161-30-11bbb. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in, depth 150 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Oct. 20, 1965	26.53	Feb. 1, 1966	26.12	June 6, 1966	25.93
Nov. 23	26.77	Mar. 15	26.00	Aug. 3	26.03
Dec. 30	26.86	May 12	25.98		

162-34-3ddc. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in, depth 76 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	3.19	May 12, 1965	+1.51	Nov. 23, 1965	2.93
Jan. 20, 1965	4.93	June 16	+1.78	Dec. 30	3.13
Feb. 18	4.53	Aug. 20	3.79	Feb. 1, 1966	5.23
Mar. 17	4.53	Sept. 15	3.13	Mar. 5	5.20
Apr. 13	5.05	Oct. 27	2.45	May 12	0.03

162-37-22aaa. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in, depth 340 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
June 6, 1965	36.07	Aug. 3, 1965	37.01	Oct. 5, 1965	36.12

162-37-32ddd1. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in, depth 51 ft, plastic casing. MP - top of plastic casing 1.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	3.13	Aug. 18, 1965	2.37	Feb. 1, 1966	5.17
Jan. 20, 1965	Frozen	Sept. 15	2.29	Mar. 15	5.11
Mar. 16	Frozen	Sept. 27	2.20	May 15	4.01
Apr. 13	Frozen	Nov. 23	2.30	June 6	4.23
May 13	1.45	Dec. 30	3.02	Aug. 3	4.84
June 16	1.42				

162-87-32ddd2. Test hole. Artesian observation well in glaciofluvial material; diam 1 $\frac{1}{4}$ in, depth 73 ft, plastic casing. MP - top of plastic casing 1.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	4.26	Aug. 18, 1965	4.47	Feb. 1, 1966	5.24
Jan. 20, 1965	Frozen	Sept. 15	4.59	Mar. 15	5.13
Mar. 16	Frozen	Sept. 27	4.65	May 15	3.26
Apr. 13	Frozen	Nov. 23	4.72	June 6	3.41
May 13	2.61	Dec. 30	4.75	Aug. 3	4.06
June 16	2.54				

163-34-7ccc. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 20 ft, plastic casing. MP - top of metal casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	7.93	June 16, 1965	4.37	Feb. 1, 1966	6.36
Jan. 20, 1965	8.59	Aug. 20	5.69	Mar. 15	7.27
Feb. 17	9.17	Sept. 15	5.30	May 12	5.85
Mar. 17	9.59	Oct. 27	4.36	June 6	5.41
Apr. 13	9.65	Dec. 30	5.01	Aug. 3	5.98
May 12	8.49				

163-37-7aaa1. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 19 ft, plastic casing. MP - top of plastic casing 2.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	8.34	Aug. 18, 1965	6.65	Feb. 1, 1966	7.85
Jan. 20, 1965	8.99	Sept. 15	7.21	Mar. 15	6.79
Mar. 17	9.87	Sept. 27	7.57	May 12	7.01
Apr. 13	8.53	Nov. 23	7.78	June 6	5.03
May 13	7.93	Dec. 30	7.82	Aug. 3	6.71
June 16	8.60				

163-37-7aaa2. Test hole. Artesian observation well in glaciofluvial material; diam 1½ in., depth 40 ft, plastic casing. MP - top of plastic casing 1.00 ft above lsd.

<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>	<u>Date</u>	<u>Water level</u>
Dec. 11, 1964	9.10	Aug. 18, 1965	7.40	Feb. 1, 1966	8.84
Jan. 20, 1965	9.75	Sept. 15	7.79	Mar. 15	7.71
Mar. 17	10.07	Sept. 27	8.17	May 12	6.03
Apr. 13	9.23	Nov. 23	8.25	June 6	6.61
May 13	8.63	Dec. 30	8.31	Aug. 3	7.13
June 16	4.39				

LOCATION: Ward County
151-81-19ad

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

ELEVATION: 2,156 feet
above sea level

DEPTH: 100 feet

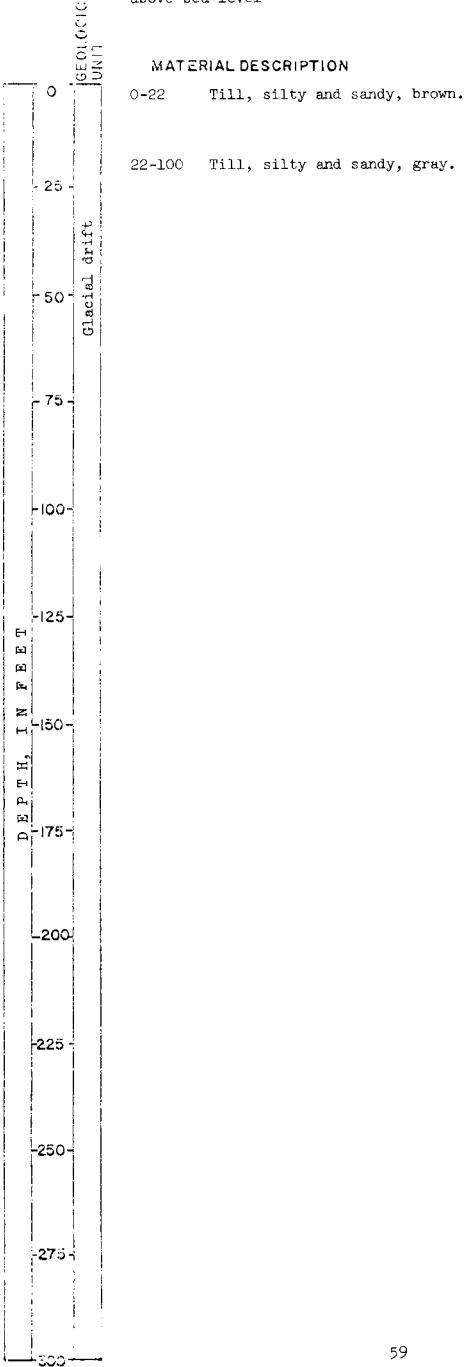


TABLE 4.--Logs of selected test holes and wells

Explanation of lithologic symbols

Sand



Till



Gravel



Boulders



Silt



Shale



Clay



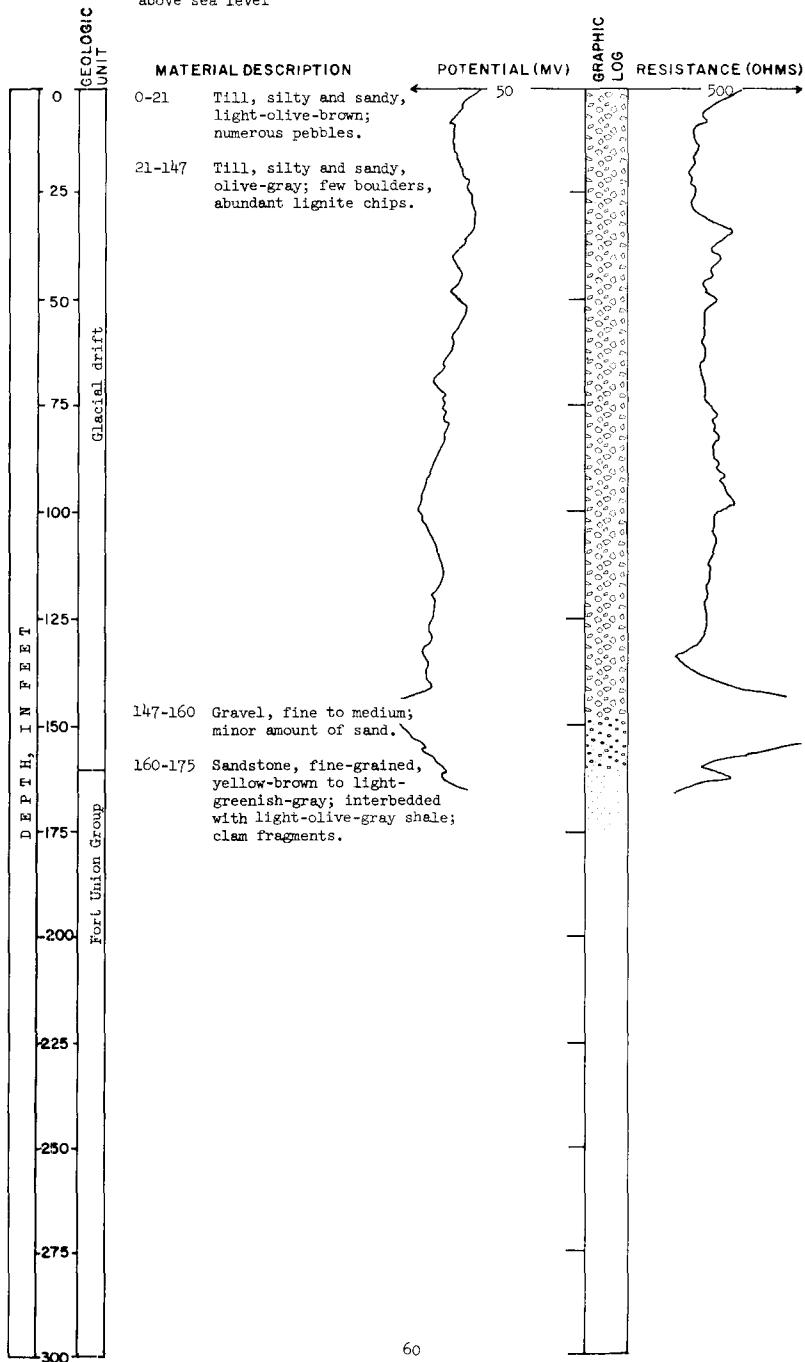
Lignite



LOCATION: Ward County
151-81-33ccc
ELEVATION: 2,133 feet
above sea level

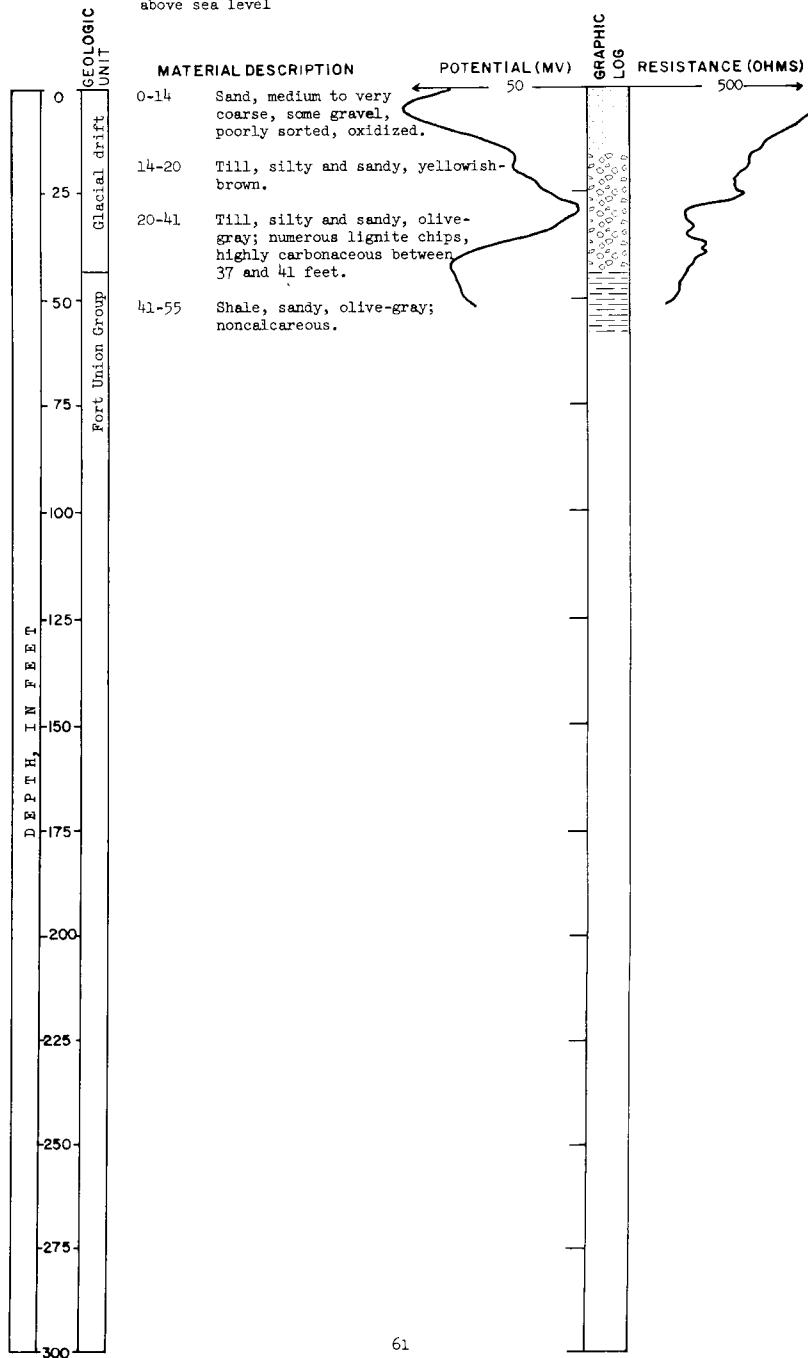
TEST HOLE 3190

DATE DRILLED: May 11, 1965
DEPTH: 175 feet



Ward County
LOCATION: 151-81-36cbb
ELEVATION: 2,100 feet above sea level

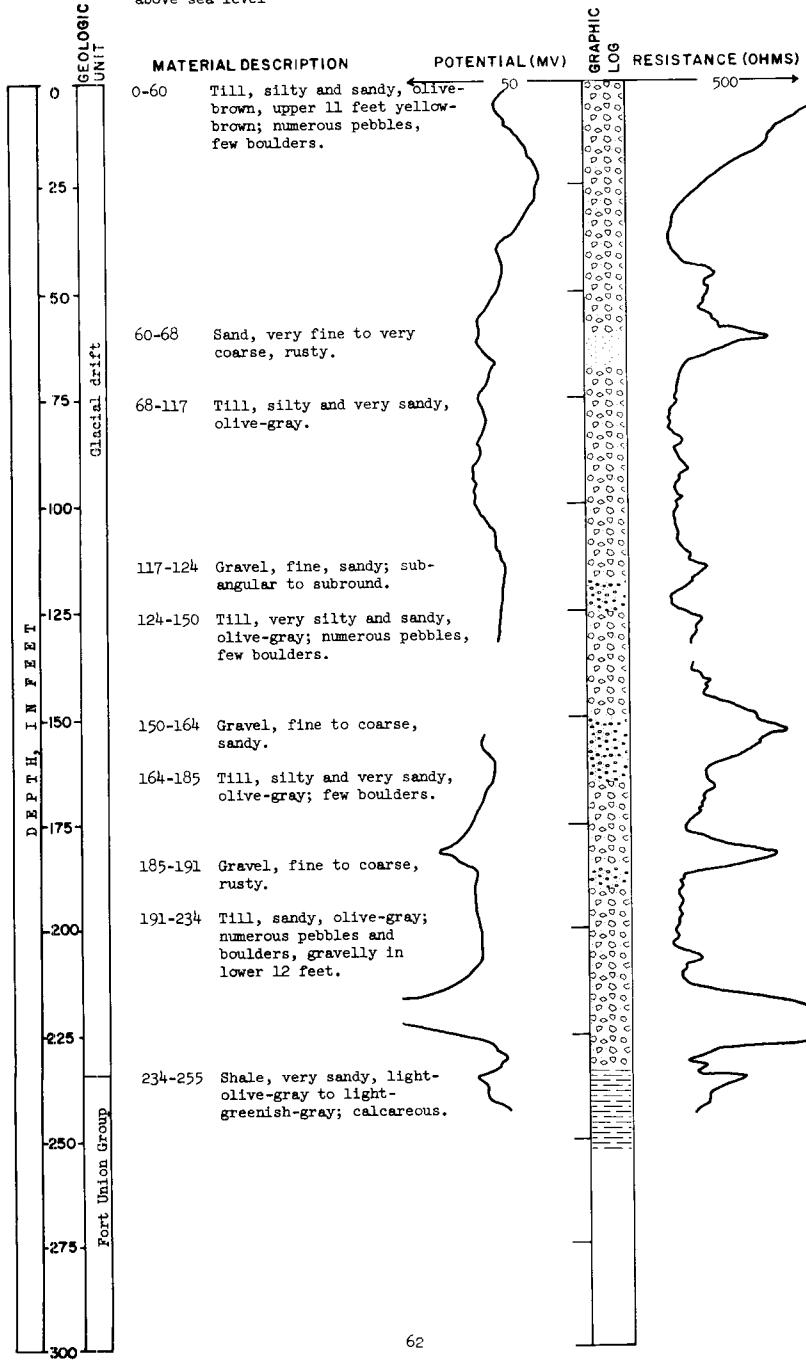
TEST HOLE 3189
DATE DRILLED: May 11, 1965
DEPTH: 55 feet



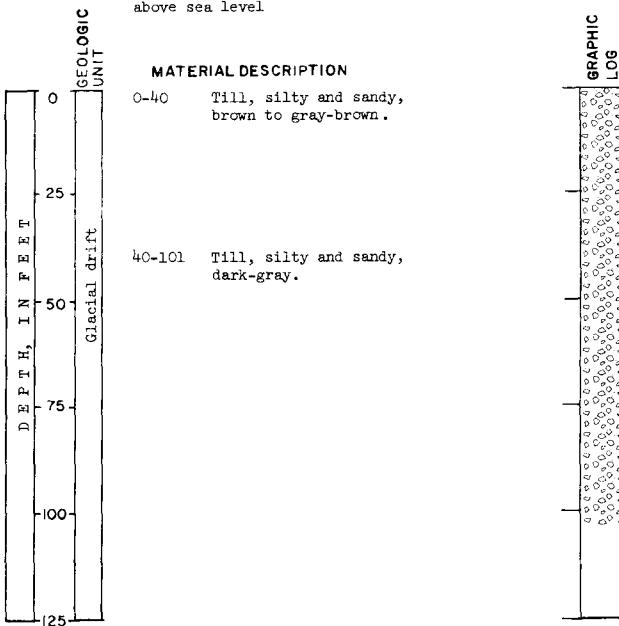
LOCATION: Ward County
151-82-15ddd
ELEVATION: 2,097 feet
above sea level

TEST HOLE 3191

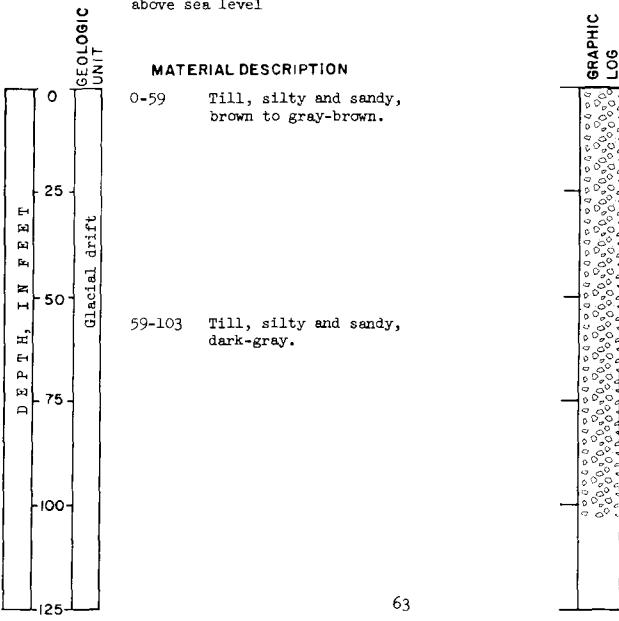
DATE DRILLED: May 11, 1965
DEPTH: 255 feet



LOCATION: Ward County
151-82-30aa TEST HOLE
U.S. Air Force
ELEVATION: 2,165 feet DATE DRILLED: 1961
above sea level DEPTH: 101 feet



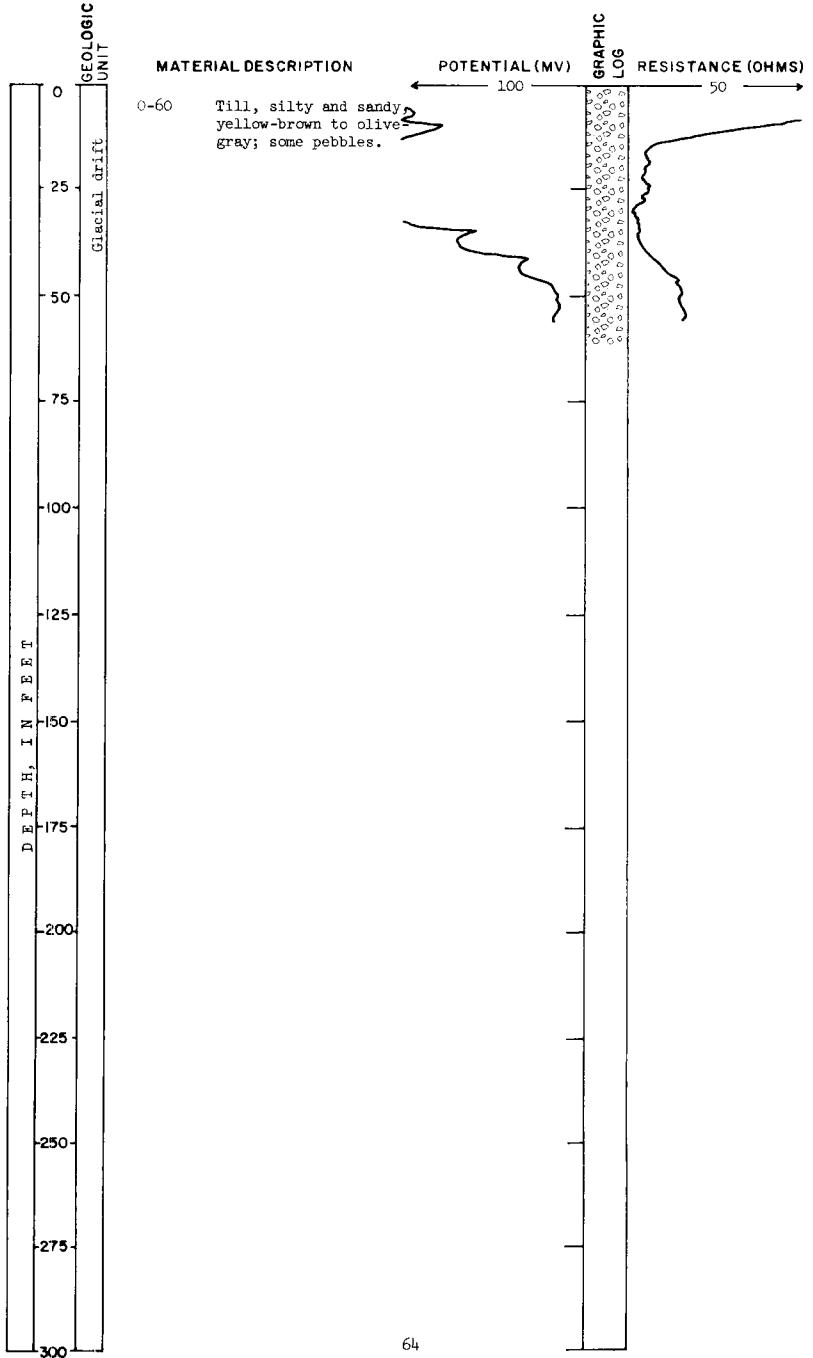
LOCATION: Ward County TEST HOLE
151-83-9ad U.S. Air Force DATE DRILLED: 1961
ELEVATION: 2,232 feet DEPTH: 103 feet
above sea level



LOCATION: Ward County
151-83-10aaa
ELEVATION:

TEST HOLE 3324

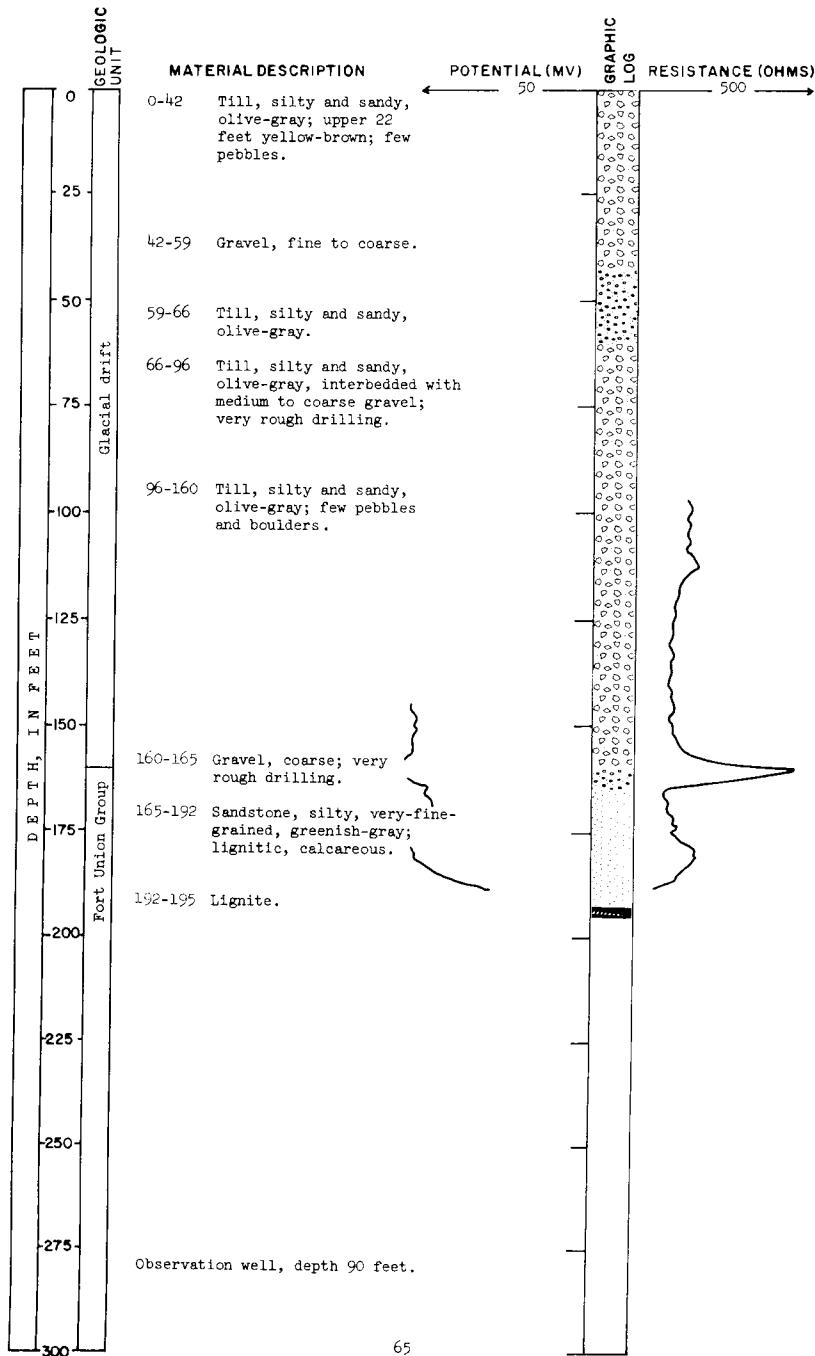
DATE DRILLED: May 27, 1966
DEPTH: 60 feet



Ward County
LOCATION: 151-83-26bab
ELEVATION:

TEST HOLE 3192

DATE DRILLED: May 12, 1965
DEPTH: 195 feet



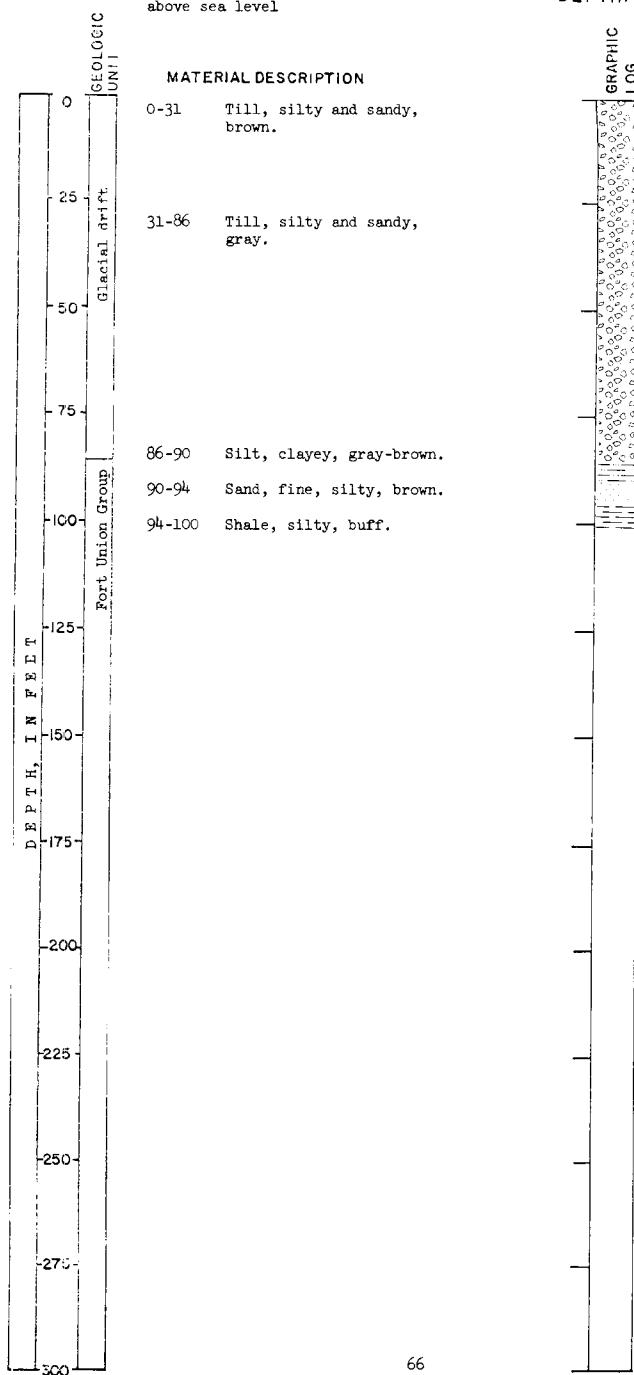
LOCATION: Ward County
151-83-30cd

TEST HOLE
U.S. Air Force

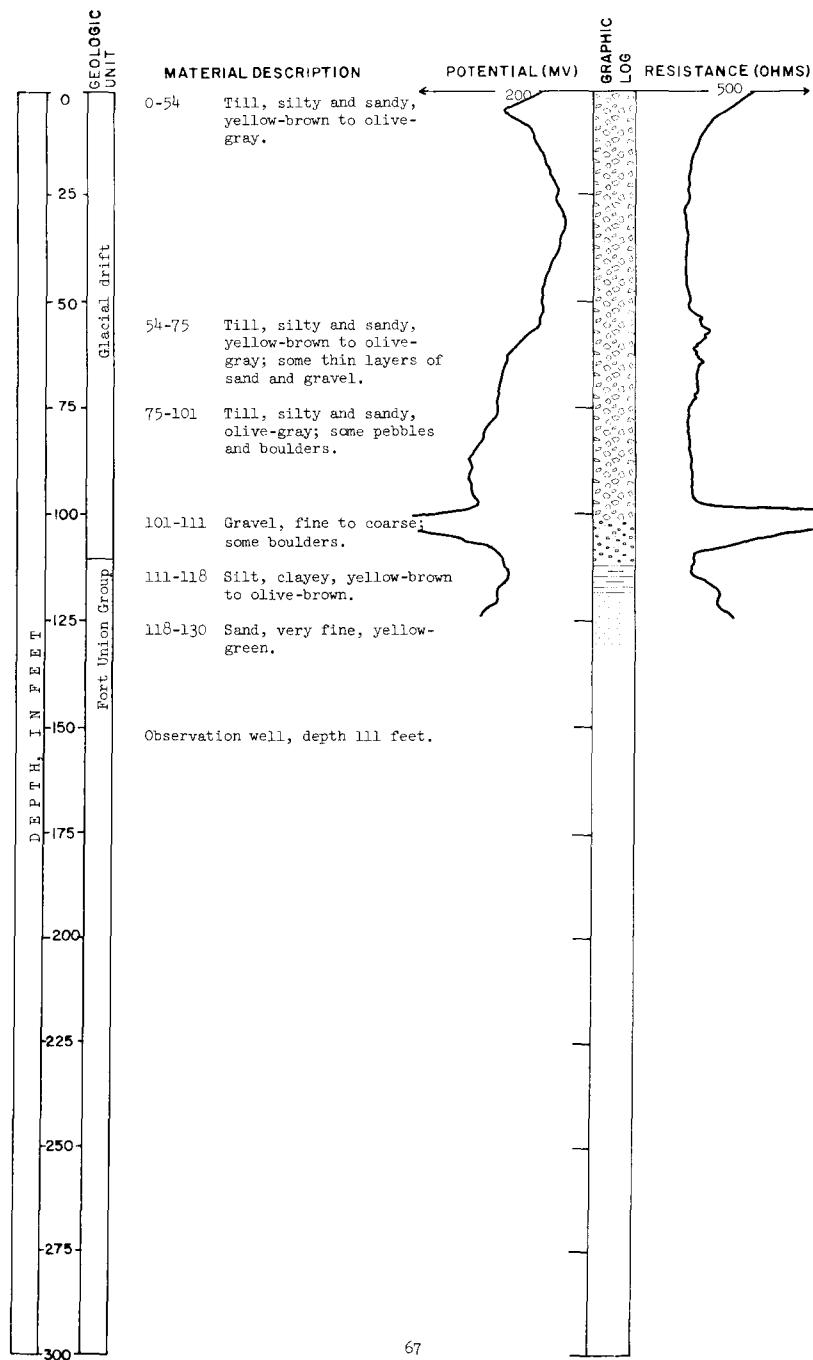
DATE DRILLED: 1961

ELEVATION: 2,141 feet
above sea level

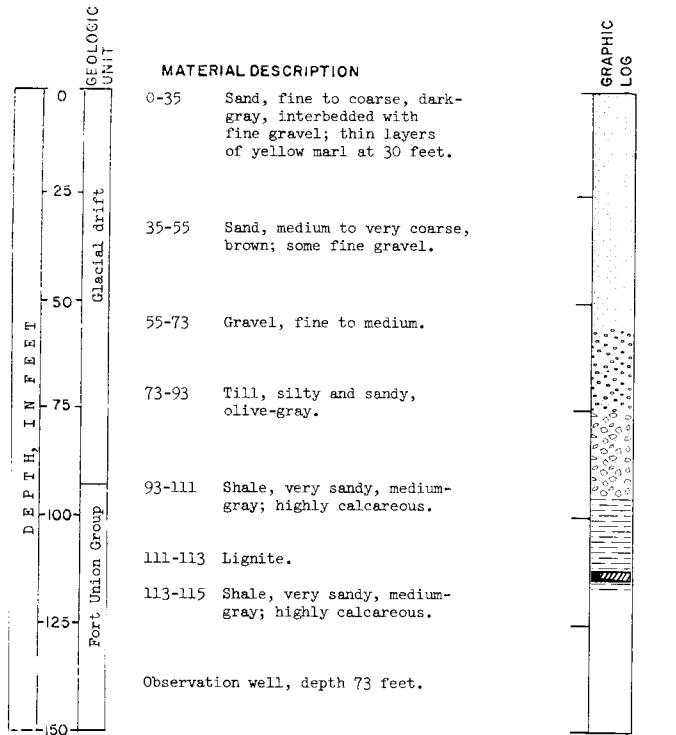
DEPTH: 100 feet



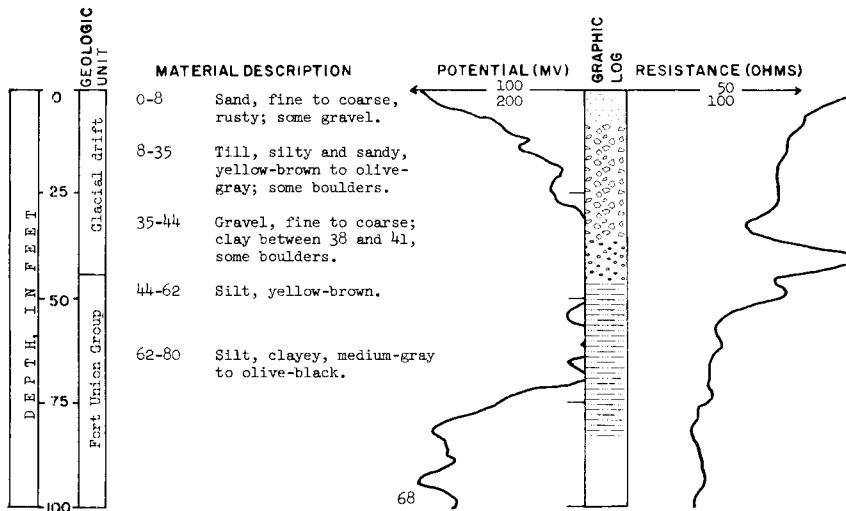
TEST HOLE 3323
 LOCATION: Ward County
 151-83-35cdc
 ELEVATION:
 DATE DRILLED: May 26, 1966
 DEPTH: 130 feet



LOCATION: Ward County
TEST HOLE 3202
ELEVATION: 151-84-6ddc
DATE DRILLED: May 19, 1965
DEPTH: 115 feet



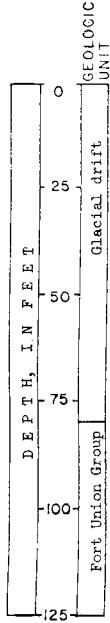
LOCATION: Ward County
TEST HOLE 3322
ELEVATION: 151-84-22bbb
DATE DRILLED: May 26, 1966
DEPTH: 80 feet



LOCATION: Ward County
151-84-29cdd
ELEVATION:

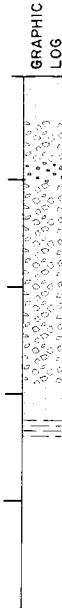
TEST HOLE 3194

DATE DRILLED: May 13, 1965
DEPTH: 95 feet



MATERIAL DESCRIPTION

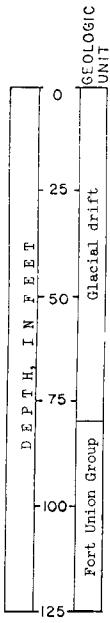
- 0-10 Sand, fine to coarse, rusty; some gravel.
- 10-21 Till, silty, olive-gray.
- 21-25 Gravel, fine to medium.
- 25-73 Till, silty and sandy, olive-gray; few pebbles.
- 73-80 Sand, very fine to medium, gray.
- 80-95 Shale, dark gray.



LOCATION: Ward County
151-84-29ddd
ELEVATION:

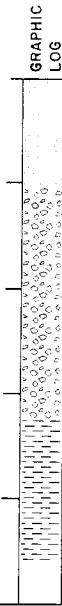
TEST HOLE 3193

DATE DRILLED: May 13, 1965
DEPTH: 115 feet



MATERIAL DESCRIPTION

- 0-25 Sand, medium to coarse, rusty; some gravel.
- 25-80 Till, silty and sandy, olive-gray; upper 15 feet yellow-brown.
- 80-115 Clay, light-greenish-gray; upper 10 feet yellow-brown.



Observation well, depth 30 feet.

Ward County
LOCATION: 151-84-32bb

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

ELEVATION: 2,096 feet
above sea level

DEPTH: 100 feet

</div

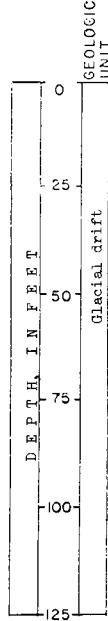
LOCATION: Ward County
151-85-2cd

TEST HOLE
U.S. Air Force

ELEVATION: 2,080 feet
above sea level

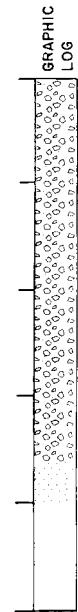
DATE DRILLED: 1961

DEPTH: 99 feet



MATERIAL DESCRIPTION

- 0-18 Till, silty and sandy, brown.
18-50 Till, silty and sandy, dark-gray.
50-78 Till, silty and sandy, gray-brown.
78-89 Till, silty and sandy, dark-gray.
89-99 Sand, fine, silty.



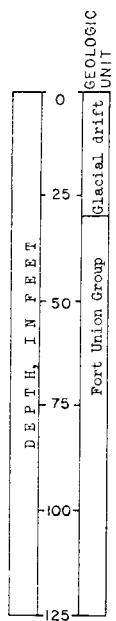
LOCATION: Ward County
151-85-30ccd

TEST HOLE 3195

ELEVATION: 2,135 feet
above sea level

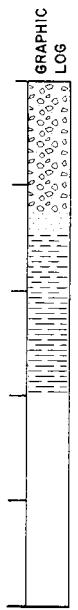
DATE DRILLED: May 13, 1965

DEPTH: 75 feet



MATERIAL DESCRIPTION

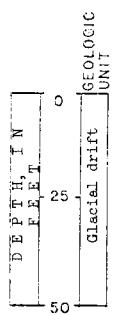
- 0-30 Till, silty and very sandy, yellow-brown to light-gray; few pebbles.
30-35 Sand, very fine, yellow-gray.
35-50 Clay, silty and sandy, yellow-brown.
50-75 Shale, light-olive-gray to greenish-gray.



LOCATION: Ward County
151-86-2ddd
ELEVATION:

TEST HOLE
U.S. Geol. Survey

DATE DRILLED: October 16, 1965
DEPTH: 30 feet



MATERIAL DESCRIPTION

- 0-14 Sand, very fine to fine, yellow-brown.
- 14-30 Till, very silty and sandy, yellow-brown; sandy layers between 21 and 27 feet.

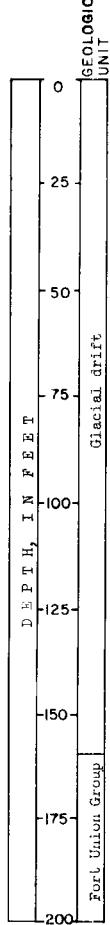
Observation well, depth 27 feet.

GRAPHIC LOG

LOCATION: Ward County
151-86-5cbb
ELEVATION: 2,160 feet
above sea level

TEST HOLE 3317

DATE DRILLED: May 24, 1966
DEPTH: 165 feet



MATERIAL DESCRIPTION

- 0-46 Till, silty and sandy, yellow-brown to olive-gray; some pebbles.
- 46-73 Sand, very fine to medium.
- 73-78 Till, silty and sandy, olive-gray.
- 78-85 Sand, very fine to fine.
- 85-106 Gravel, fine, and coarse sand.
- 106-159 Till, silty and very sandy, light-olive-gray; some pebbles and boulders.
- 159-165 Sand, fine, light-greenish-gray, and black siltstone.

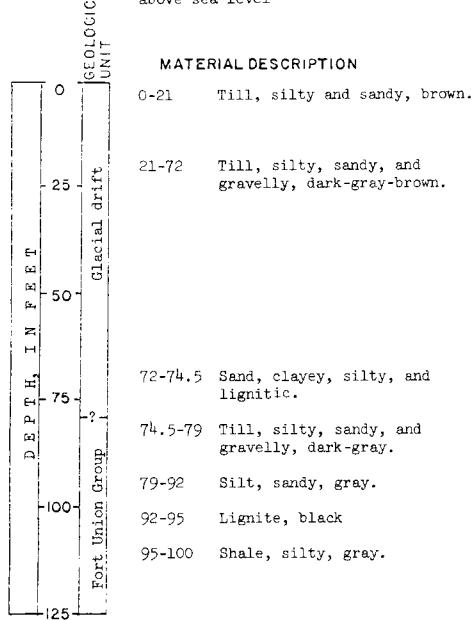
Observation well, depth 90 feet.

POTENTIAL (MV)

GRAPHIC LOG

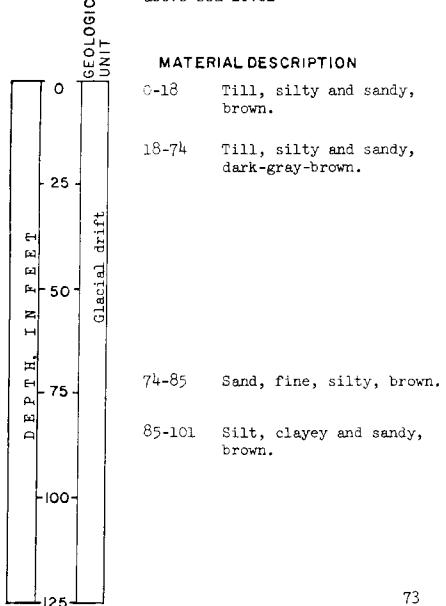
RESISTANCE (OHMS)

LOCATION: Ward County
151-86-15cb TEST HOLE
U.S. Air Force
ELEVATION: 2,031 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet



GRAPHIC LOG

LOCATION: Ward County TEST HOLE
151-87-8bb U.S. Air Force
ELEVATION: 2,126 feet DATE DRILLED: 1961
above sea level DEPTH: 101 feet

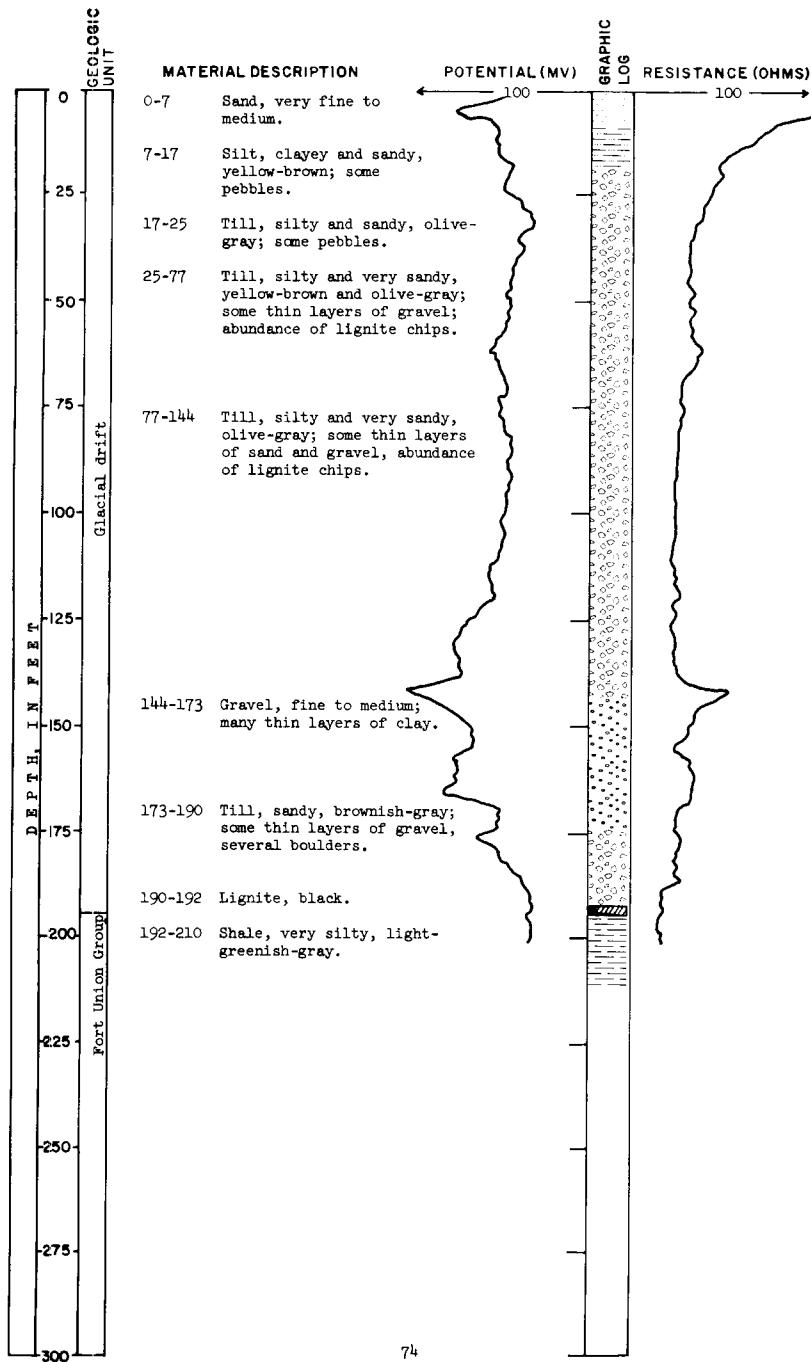


GRAPHIC LOG

Ward County
LOCATION: 151-87-15baa
ELEVATION:

TEST HOLE 3314

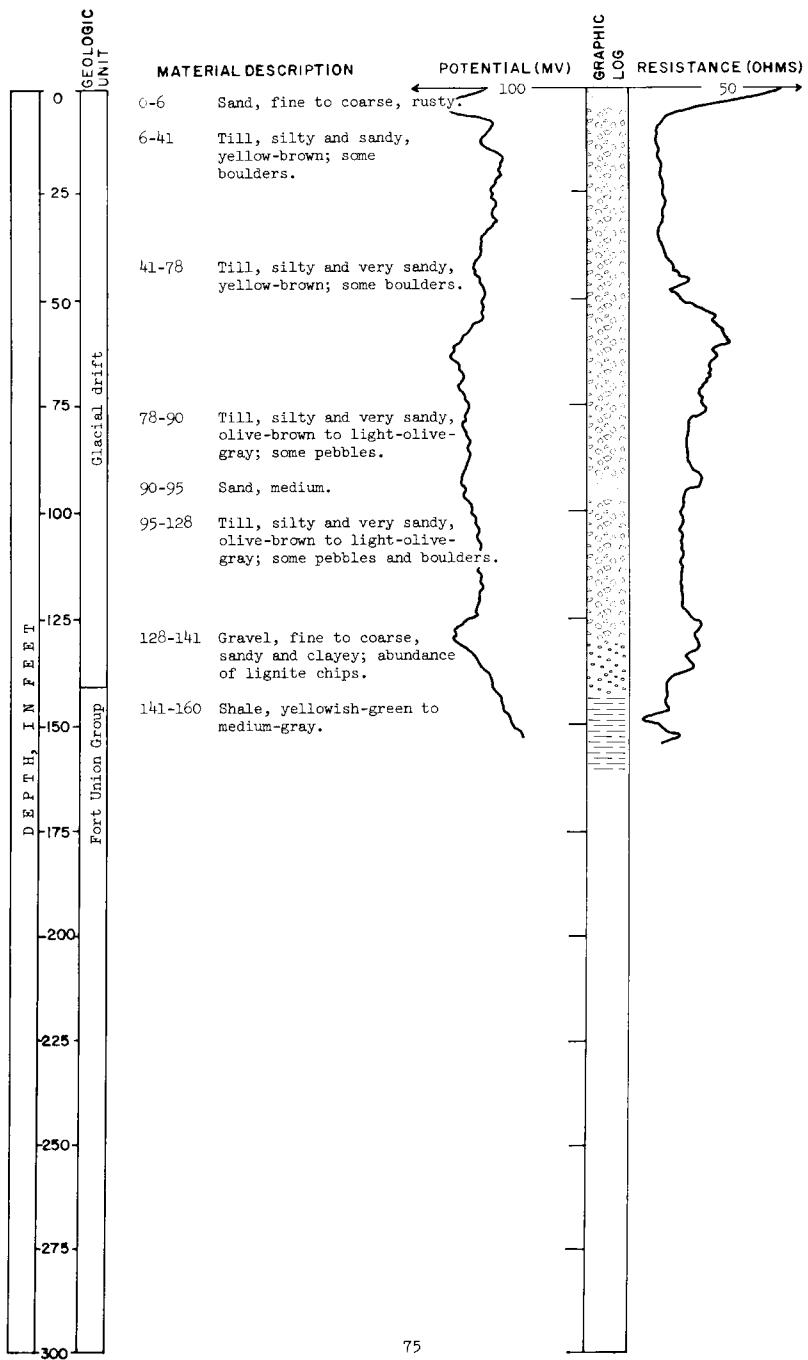
DATE DRILLED: May 20, 1966
DEPTH: 210 feet



LOCATION: Ward County
151-87-15cdd
ELEVATION:

TEST HOLE 3316

DATE DRILLED: May 23, 1966
DEPTH: 160 feet



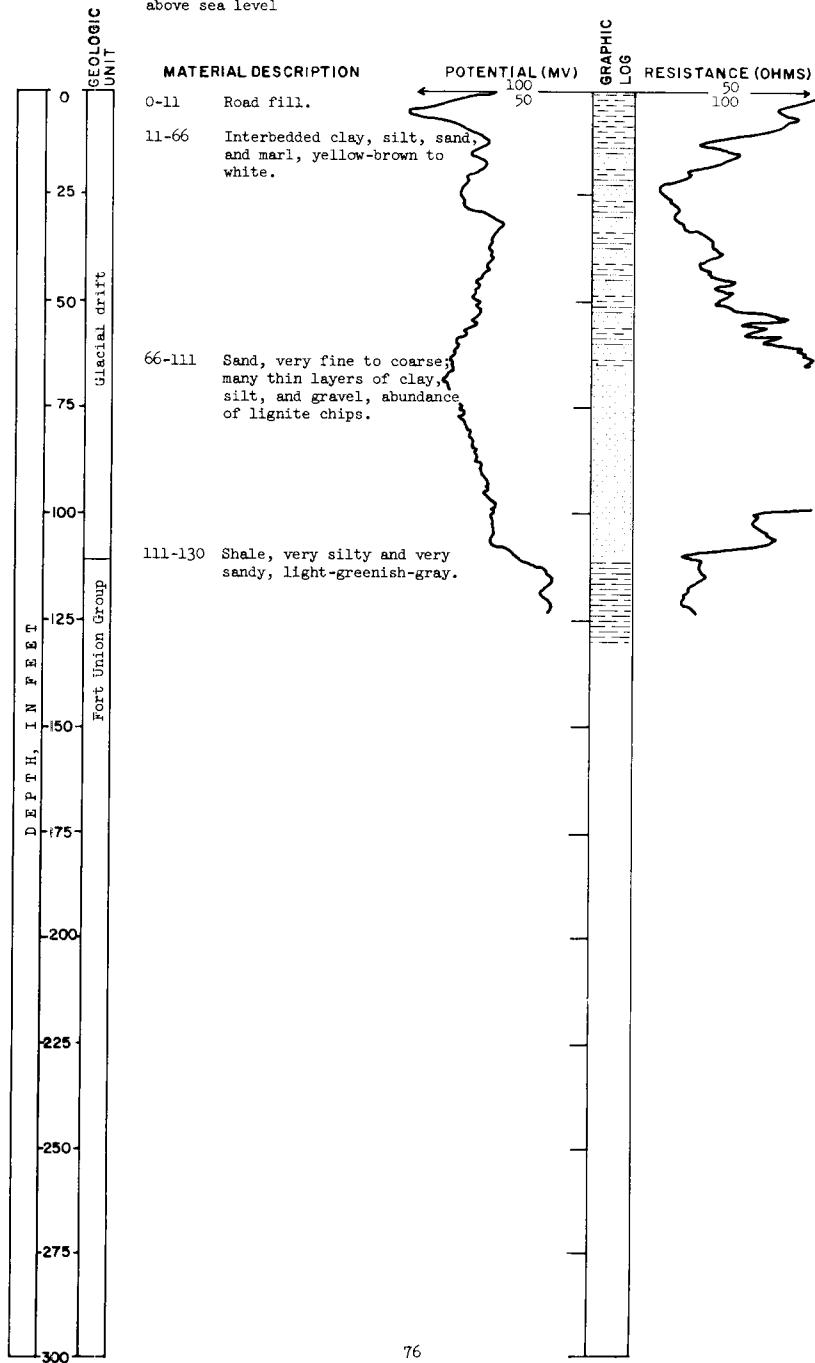
LOCATION: Ward County
151-87-33daa

TEST HOLE 3315

ELEVATION: 2,130 feet
above sea level

DATE DRILLED: May 23, 1966

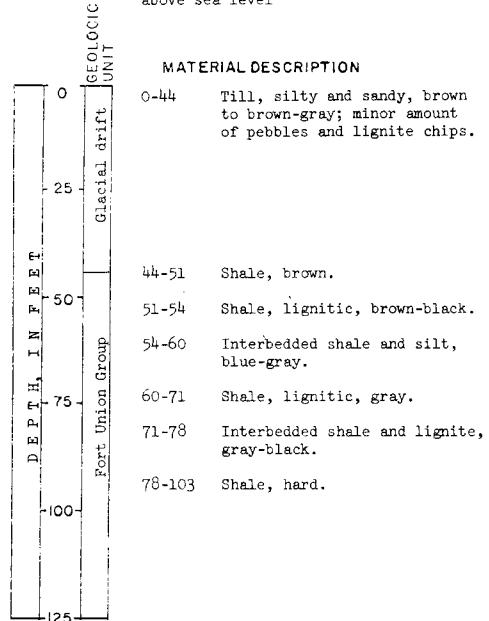
DEPTH: 130 feet



LOCATION: Ward County
151-87-36bb
ELEVATION: 2,142 feet
above sea level

TEST HOLE
U.S. Air Force

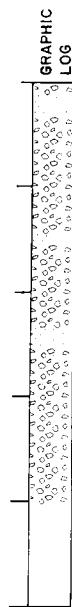
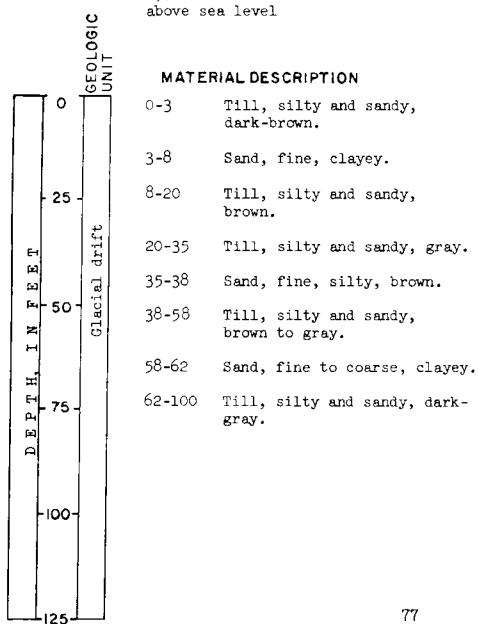
DATE DRILLED: 1961
DEPTH: 103 feet



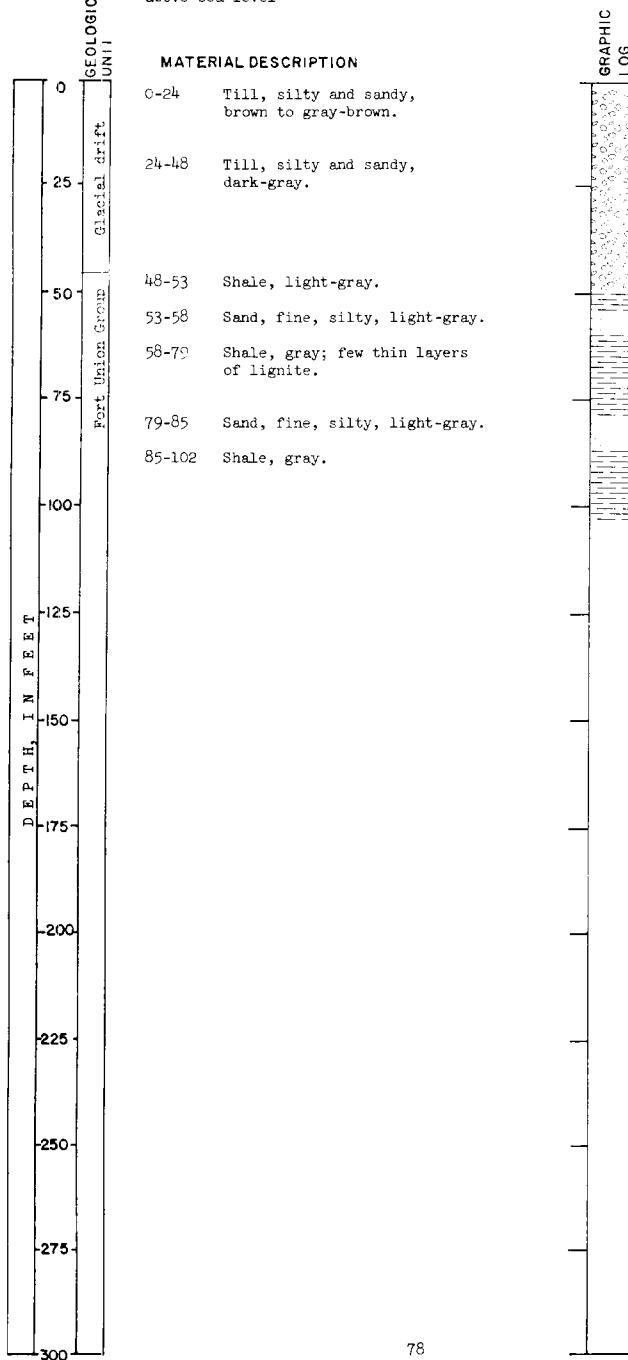
LOCATION: Ward County
152-81-13dc
ELEVATION: 1,760 feet
above sea level

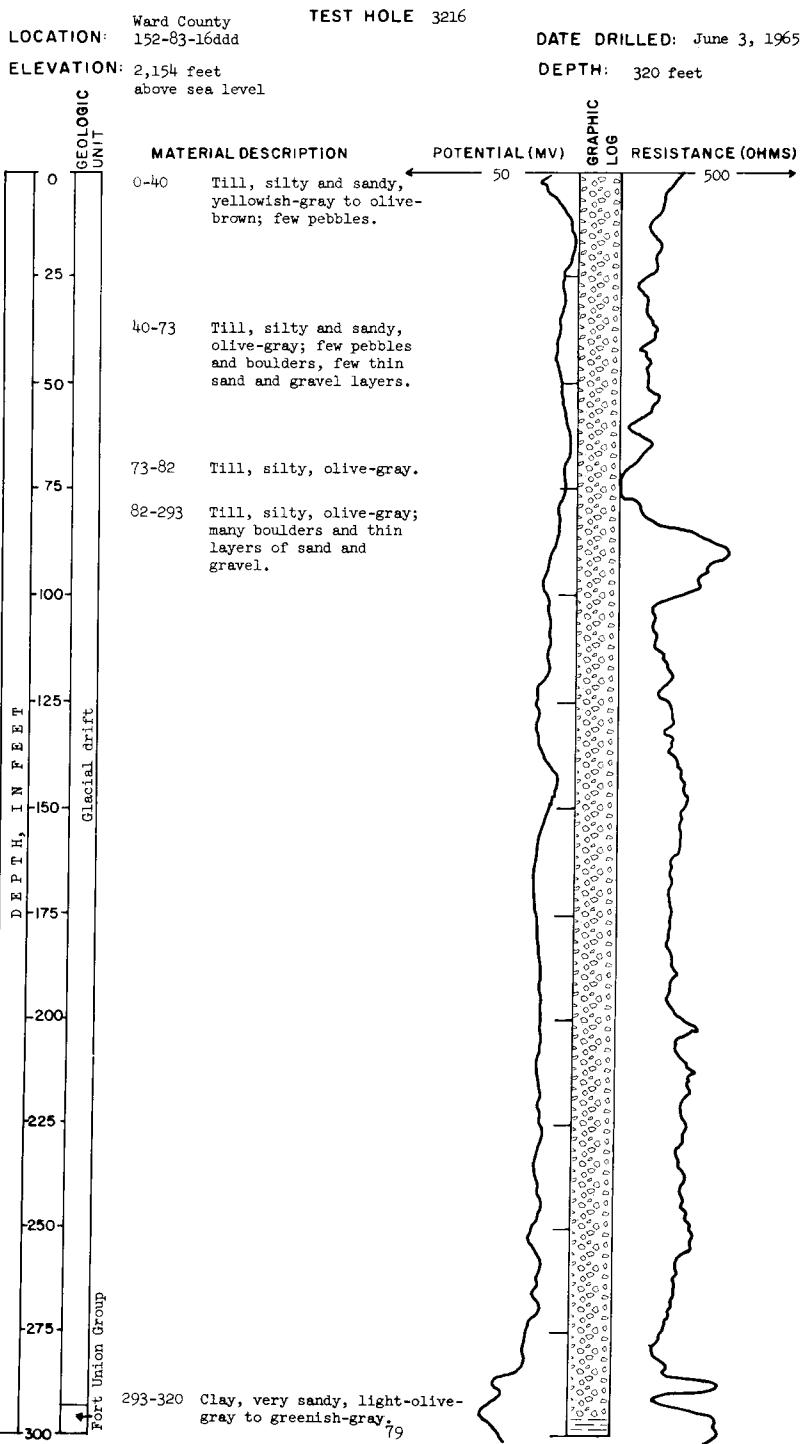
TEST HOLE
U.S. Air Force

DATE DRILLED: 1961
DEPTH: 100 feet



LOCATION: Ward County
152-81-29cd TEST HOLE
ELEVATION: 1,964 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 102 feet





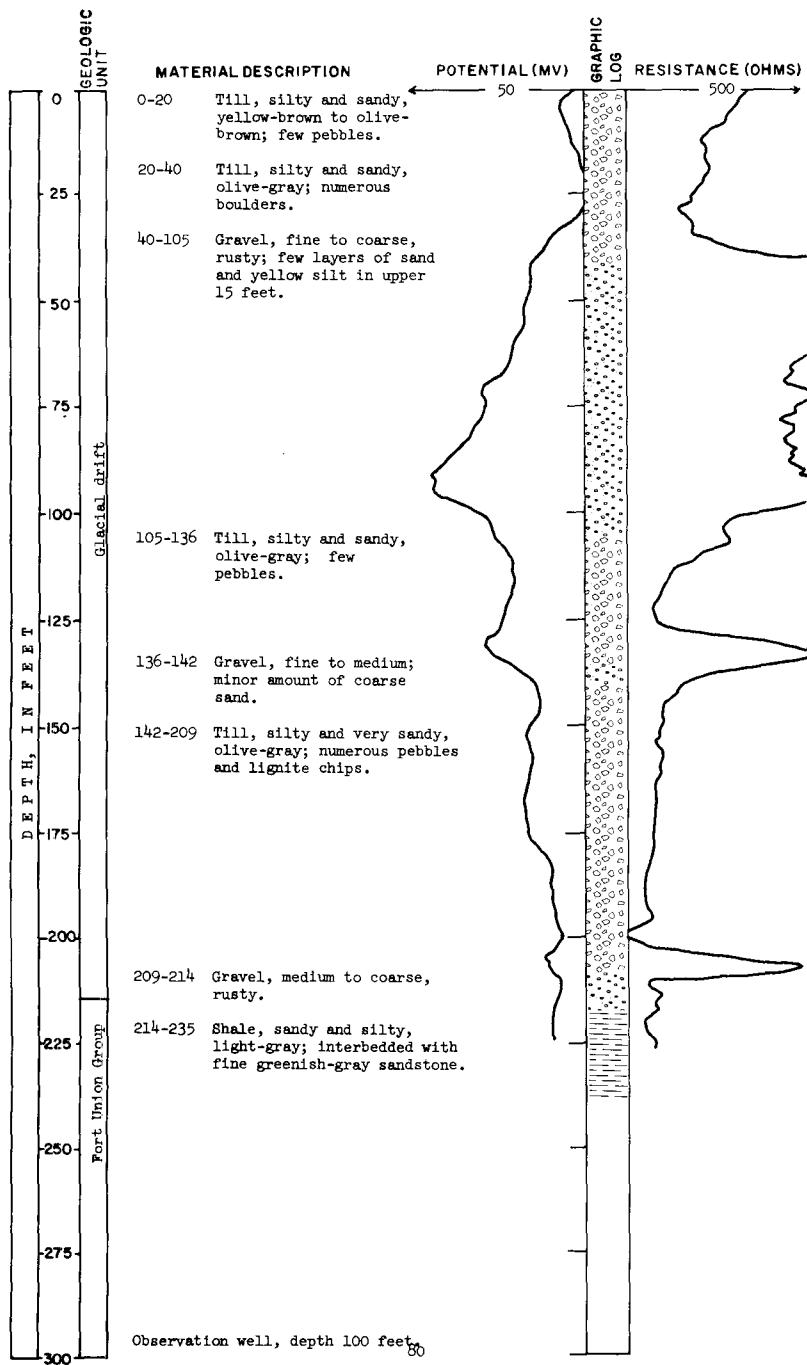
LOCATION: Ward County
152-85-2bcb

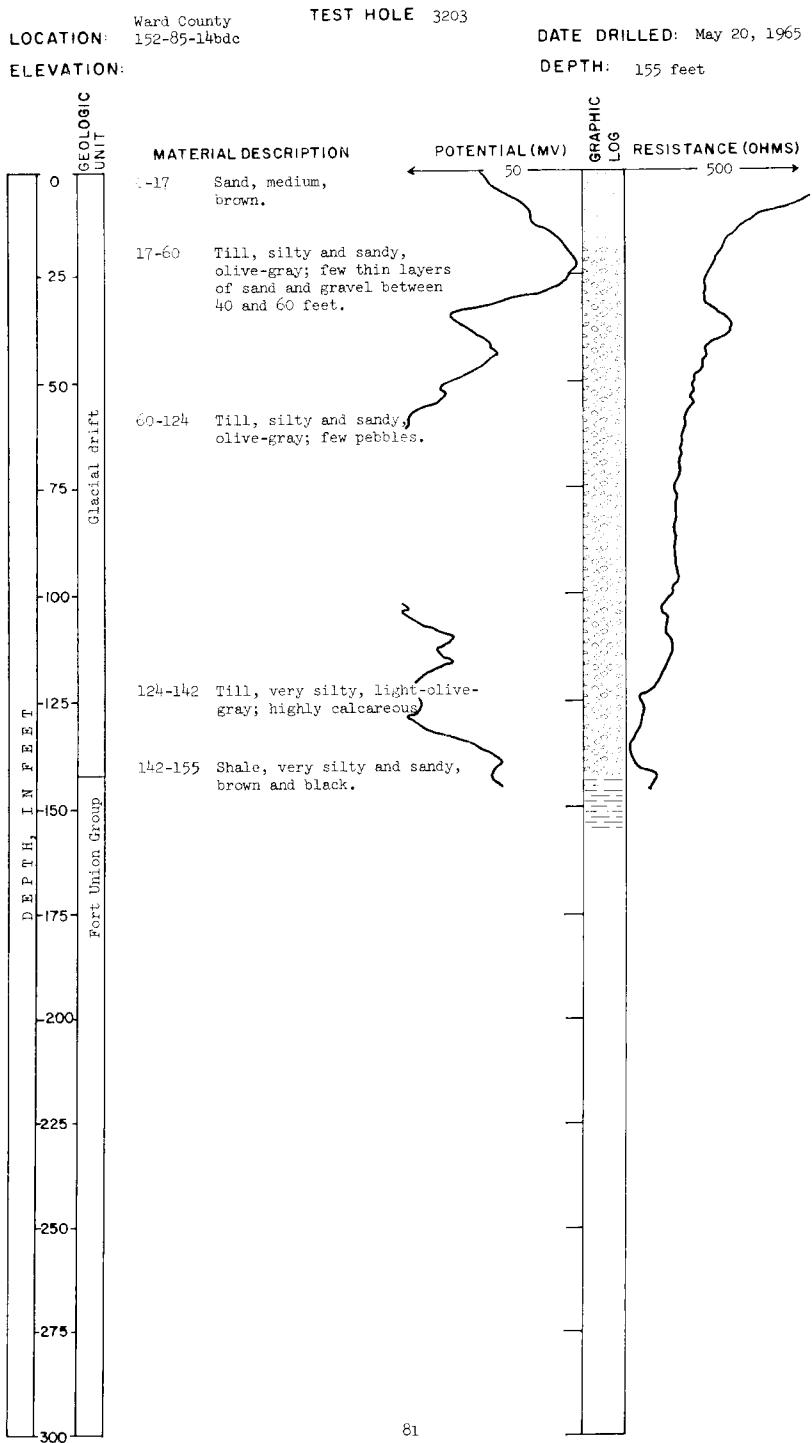
TEST HOLE 3204

ELEVATION:

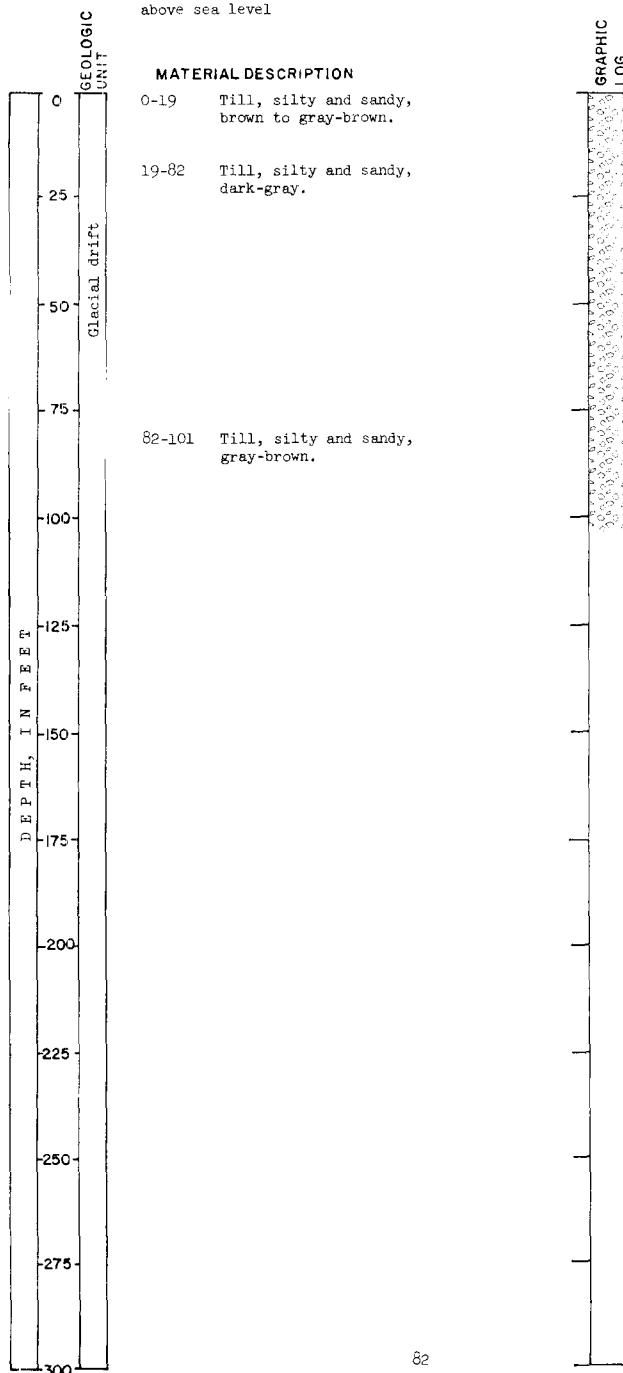
DATE DRILLED: May 20, 1965

DEPTH: 235 feet





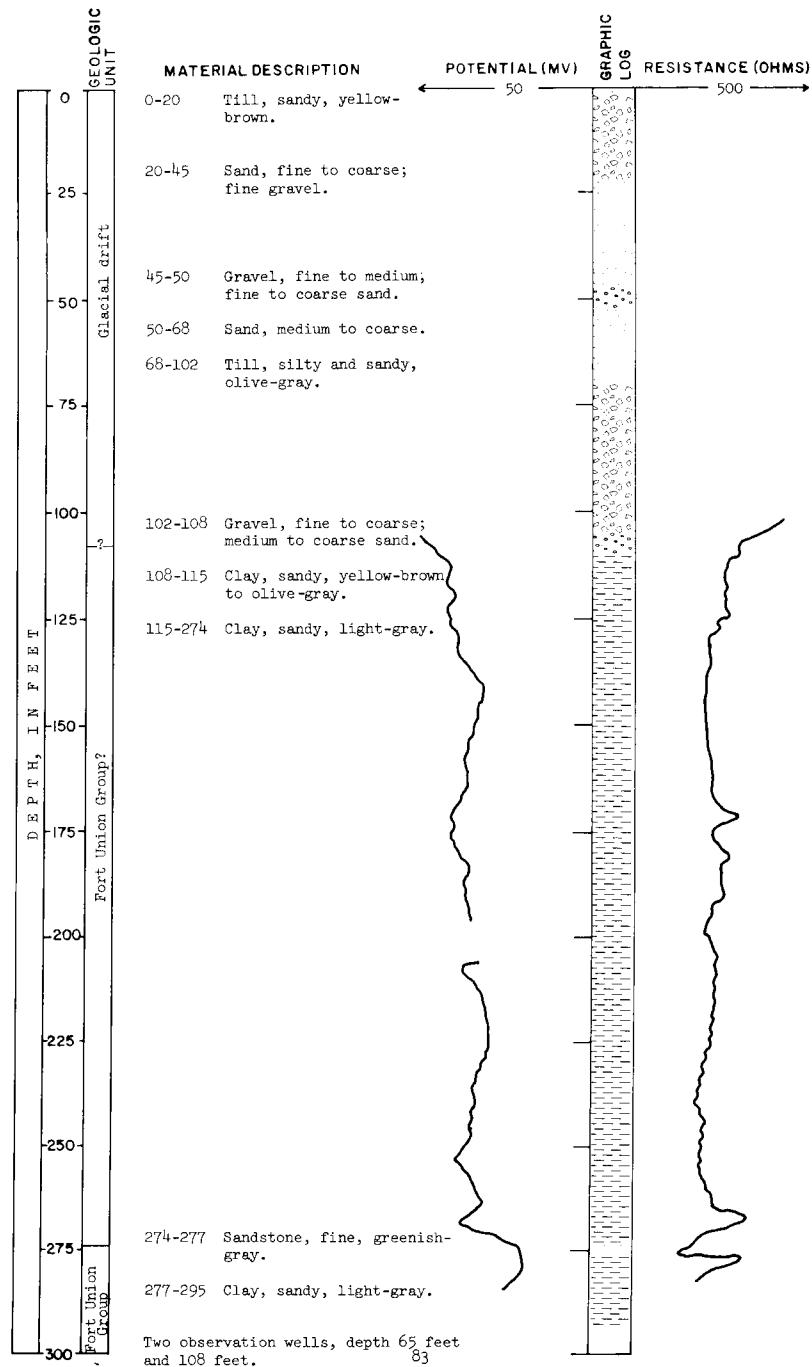
Ward County
LOCATION: 152-85-17dd TEST HOLE
U.S. Air Force
ELEVATION: 2,104 feet DATE DRILLED: 1961
above sea level DEPTH: 101 feet



LOCATION: Ward County
152-85-35ada
ELEVATION:

TEST HOLE 3201

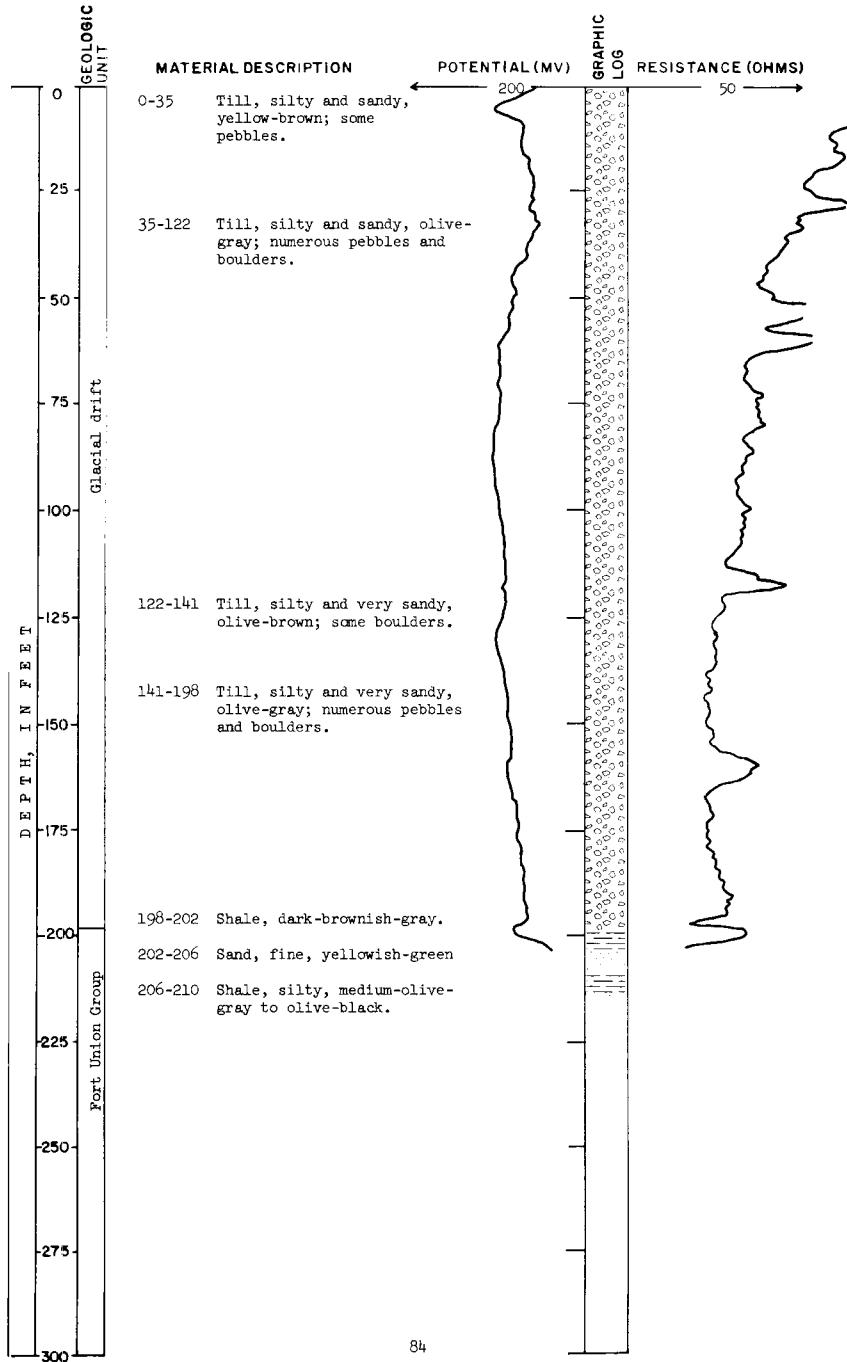
DATE DRILLED: May 19, 1965
DEPTH: 295 feet



LOCATION: Ward County
152-86-10bcb
ELEVATION:

TEST HOLE 3319

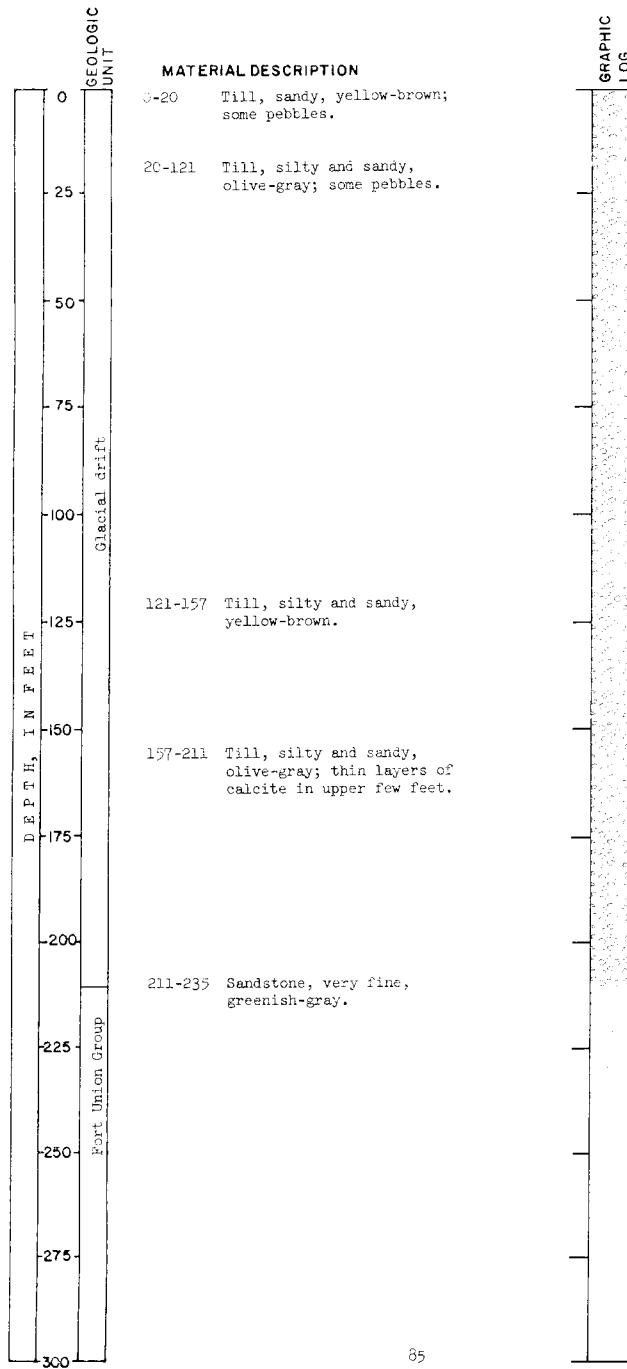
DATE DRILLED: May 24, 1966
DEPTH: 210 feet



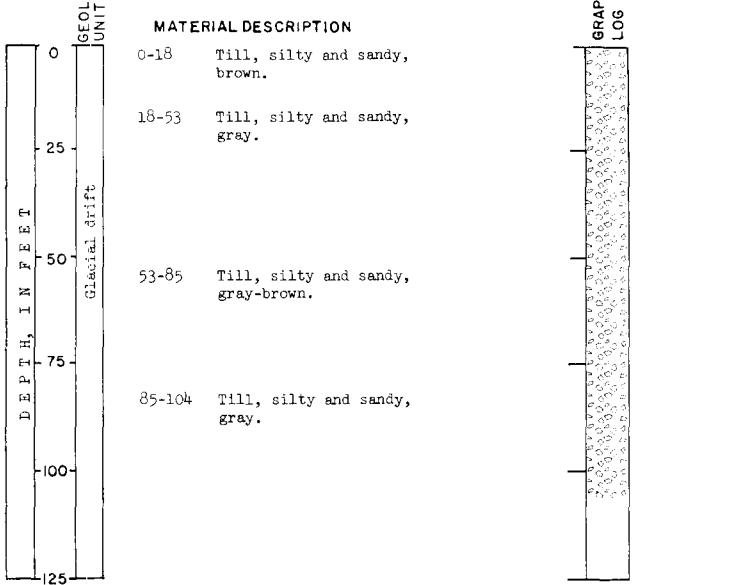
LOCATION: Ward County
152-86-16add
ELEVATION:

TEST HOLE 3200

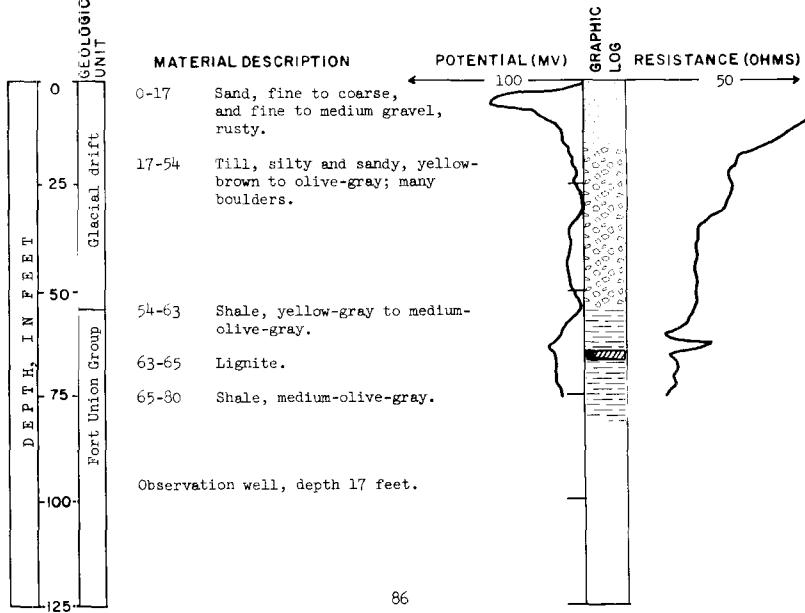
DATE DRILLED: May 18, 1965
DEPTH: 235 feet



LOCATION: Ward County
 152-86-22cc **TEST HOLE**
 U.S. Air Force
ELEVATION: 2,100 feet
 above sea level



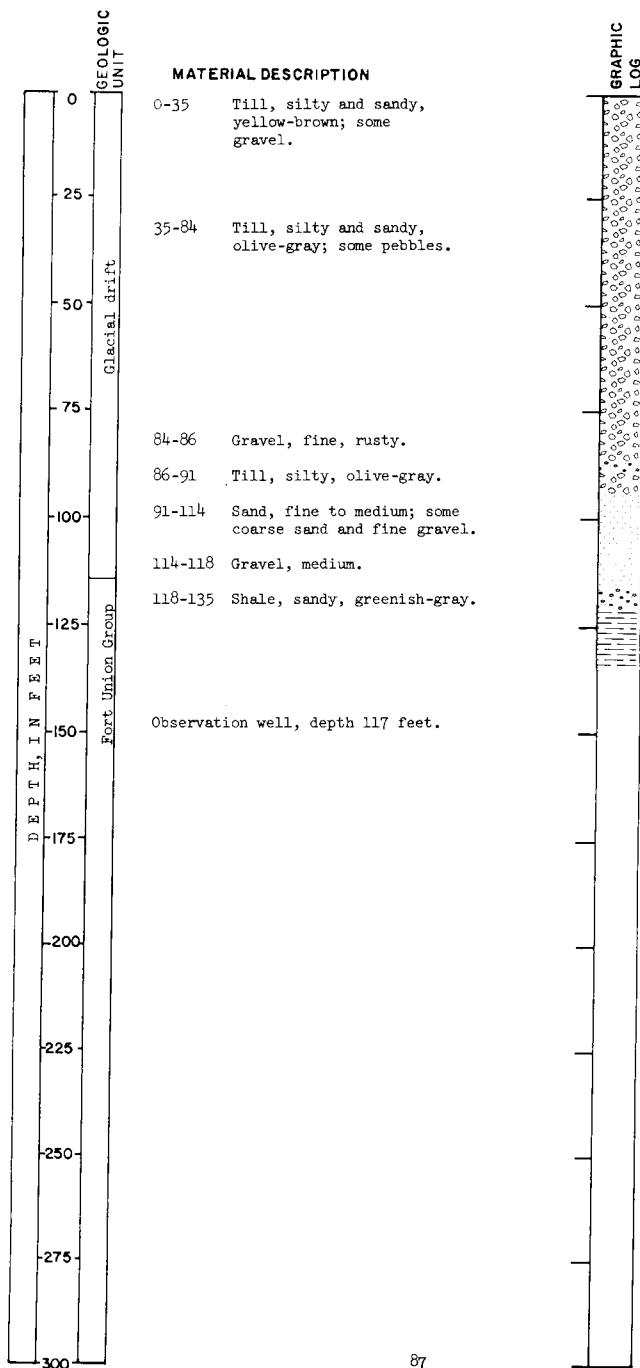
TEST HOLE 3318
LOCATION: Ward County
 152-87-16aaa
ELEVATION:



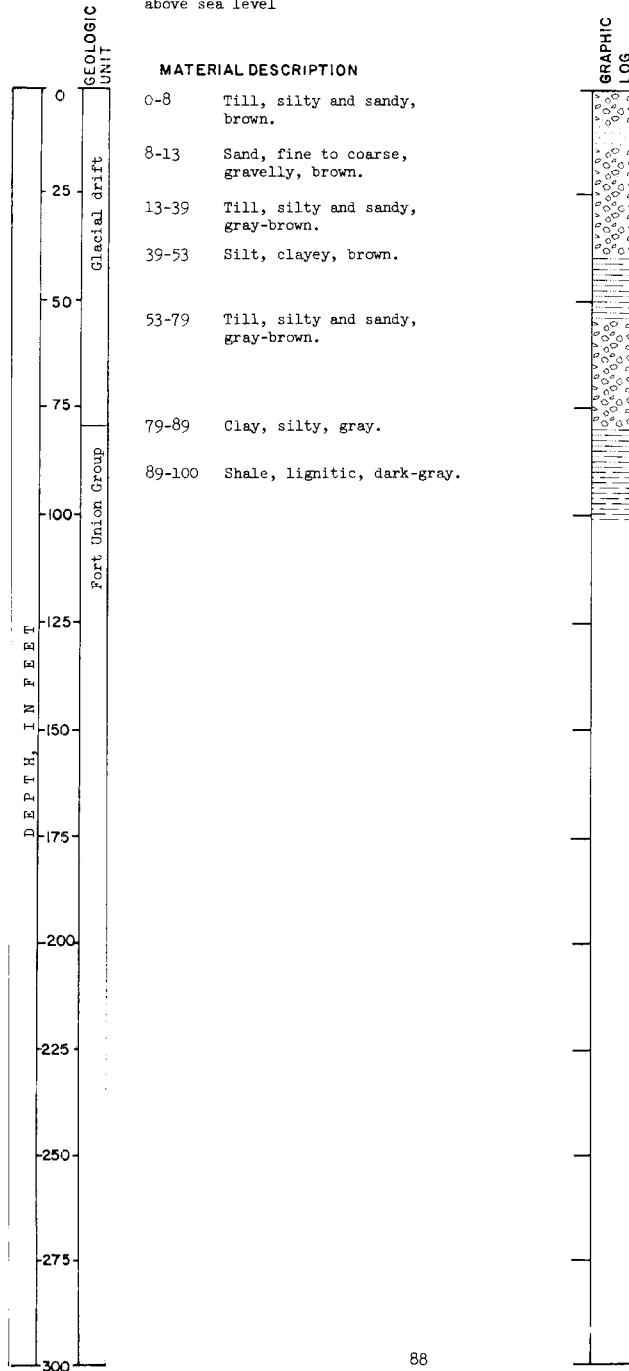
LOCATION: Ward County
152-87-17ccc
ELEVATION:

TEST HOLE 3197

DATE DRILLED: May 13, 1965
DEPTH: 135 feet



LOCATION: Ward County
 152-87-23ab **TEST HOLE**
 U.S. Air Force
ELEVATION: 2,077 feet
 above sea level **DATE DRILLED:** 1961
DEPTH: 100 feet

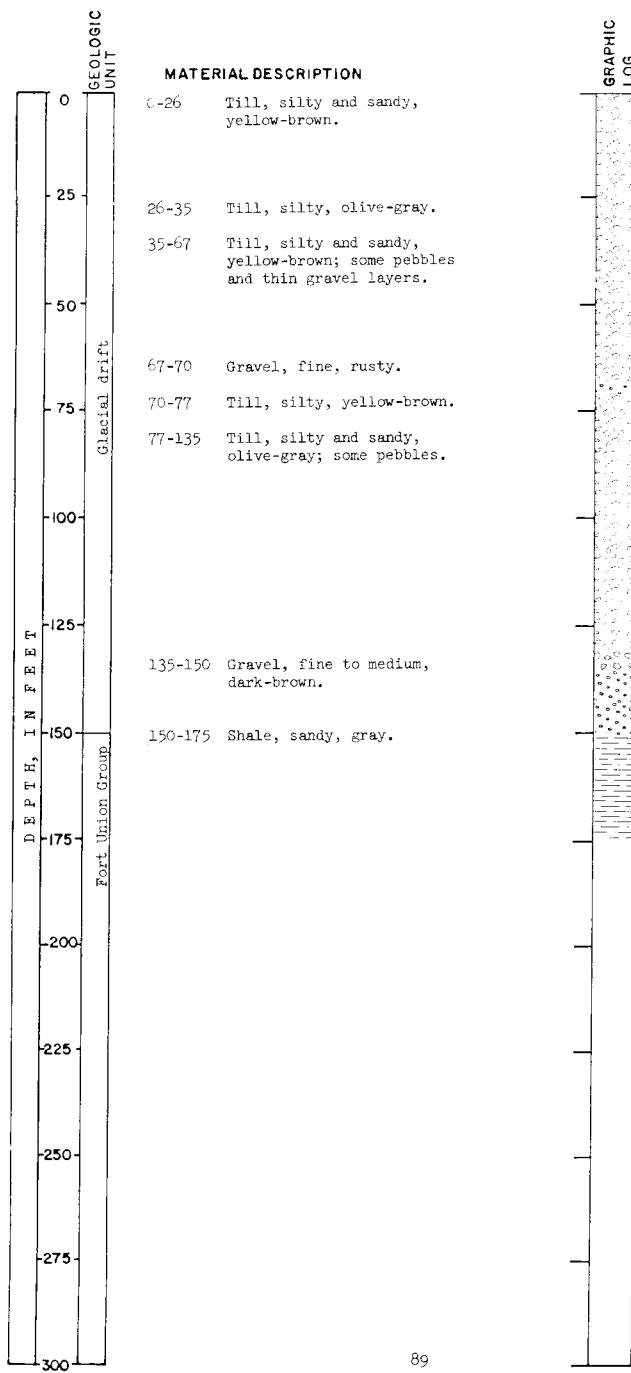


LOCATION: Ward County
152-87-27bbc

TEST HOLE 3196A

DATE DRILLED: May 17, 1965
DEPTH: 175 feet

ELEVATION:



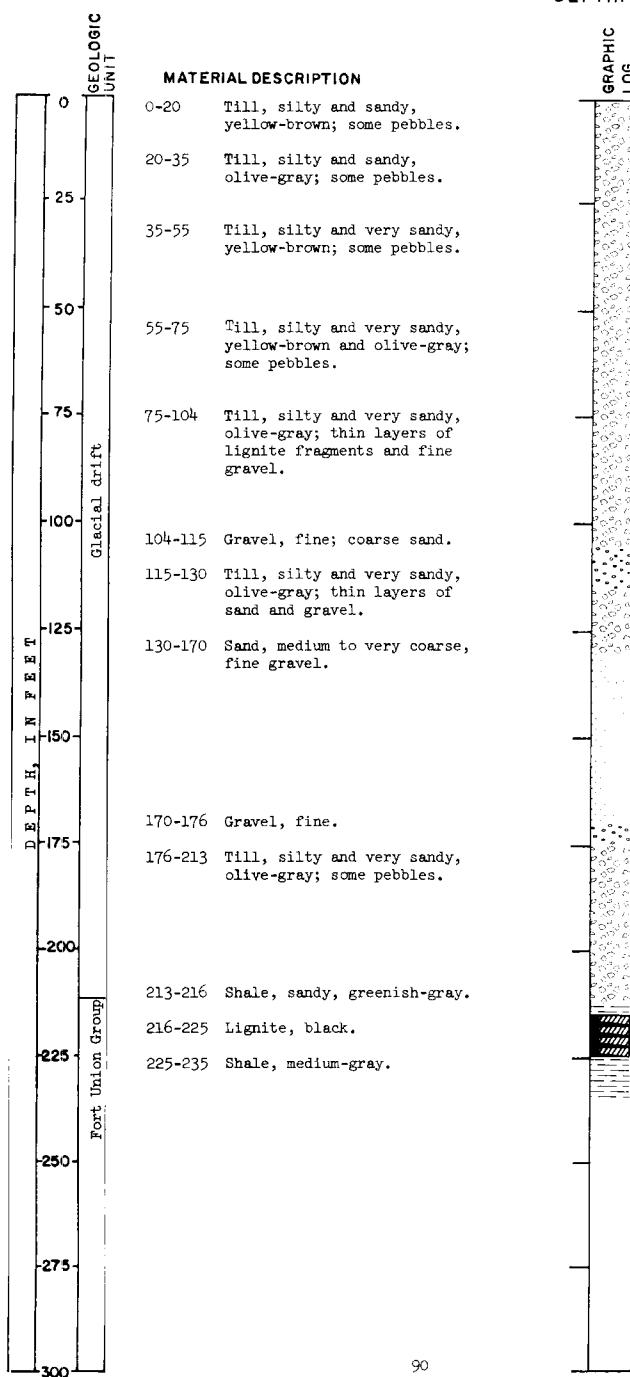
LOCATION: Ward County
152-87-27cbb

TEST HOLE 3196

ELEVATION:

DATE DRILLED: May 13, 1965

DEPTH: 235 feet



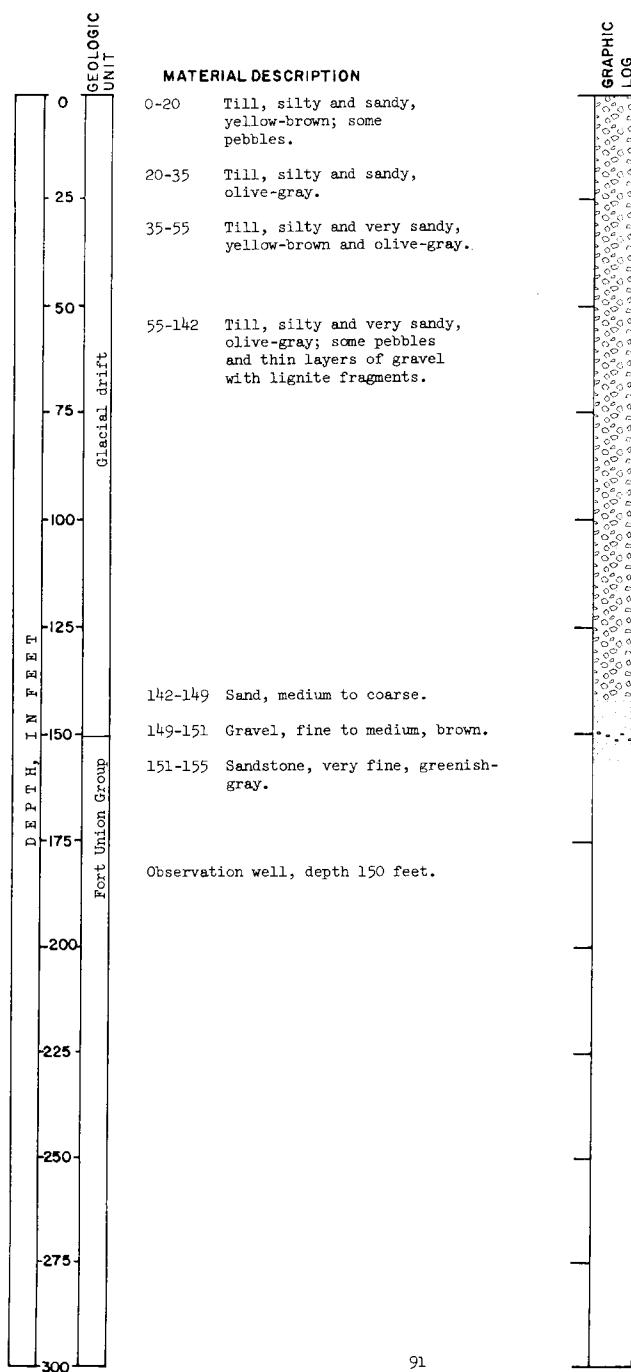
LOCATION: Ward County
152-87-28daa

Makoti test hole

DATE DRILLED: May 18, 1965

ELEVATION:

DEPTH: 155 feet



LOCATION: Ward County
153-81-1aaa

TEST HOLE
U.S. Geol. Survey^{1/}

DATE DRILLED: August 5, 1947

ELEVATION: 1,613 feet
above sea level

DEPTH: 304 feet

GEOLOGIC
UNIT

GRAPHIC
LOG

MATERIAL DESCRIPTION

0		
-25	Glacial drift	
-50		
-75		
-100		
-125		
-150		
-175	Fort Union Group	
-200		
-225		
-250		
-275		
300		

0-2 Soil.
2-26 Clay, yellow, with some gravel.
26-33 Clay, brown, with some gravel.
33-49 Sand and gravel, coarse, clean.
49-79 Clay, sandy, gray, with some gravel.

79-88 Clay, gray, with some brown clay.
88-95 Clay, sandy, silty, gray.
95-110 Clay, gray.
110-111 Sandstone, gray.
111-170 Clay, silty, sandy, gray.

170-179 Clay, sandy, green.
179-180 Sandstone, hard.
180-235 Clay, silty, sandy, gray,
with some brown clay.

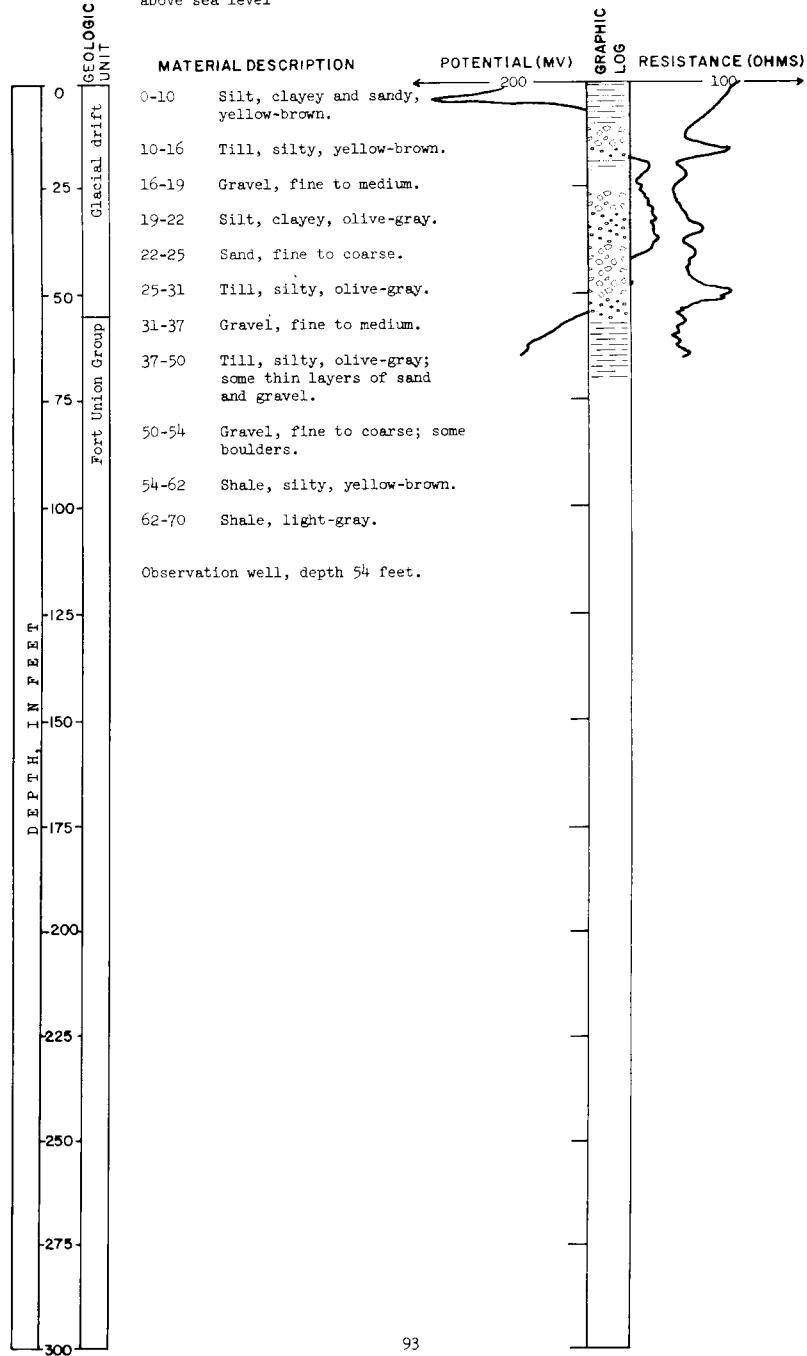
235-270 Clay, sandy, gray.

270-271 Sandstone, brown, hard.
271-304 Clay, sandy, gray, with some lignite fragments.

^{1/} From LaRocque and others, 1963.

TEST HOLE 3325
 LOCATION: Ward County
 153-81-3cbc
 ELEVATION: 1,527 feet
 above sea level

DATE DRILLED: May 31, 1966
 DEPTH: 70 feet

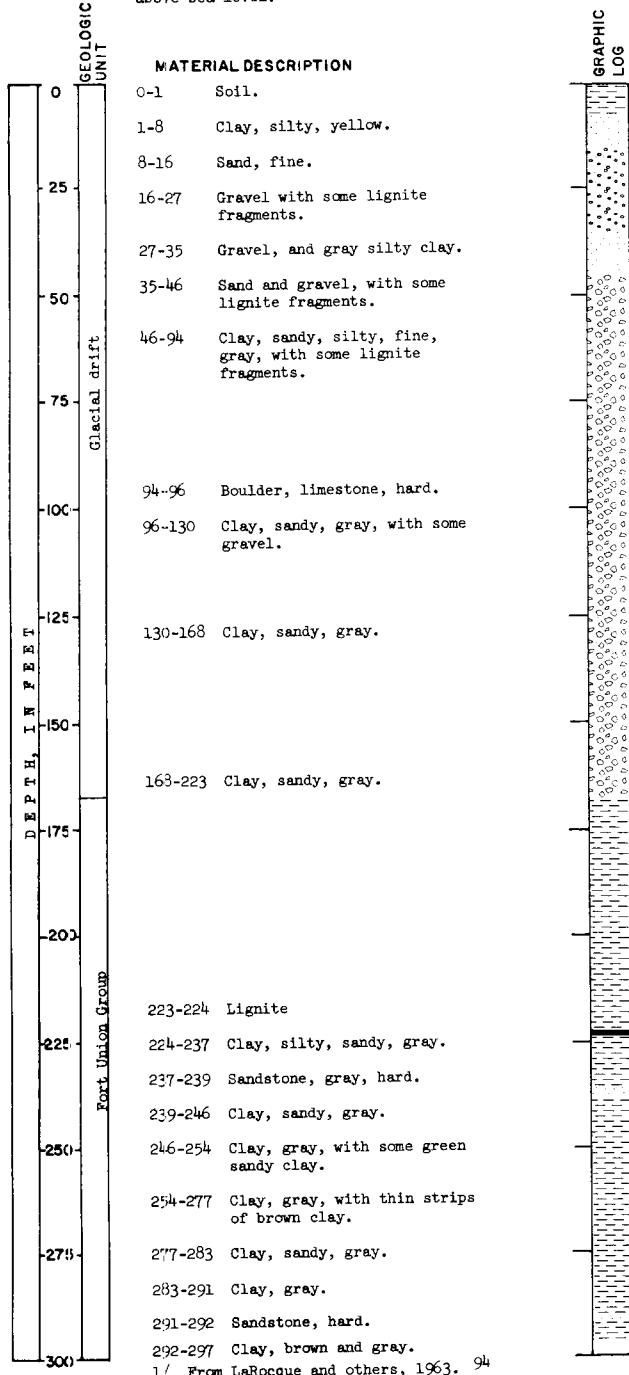


Ward County
153-81-11baa **TEST HOLE**
U.S. Geol. Survey^{1/}

ELEVATION: 1,523 feet
above sea level.

DATE DRILLED: August 6, 1947

DEPTH: 297 feet

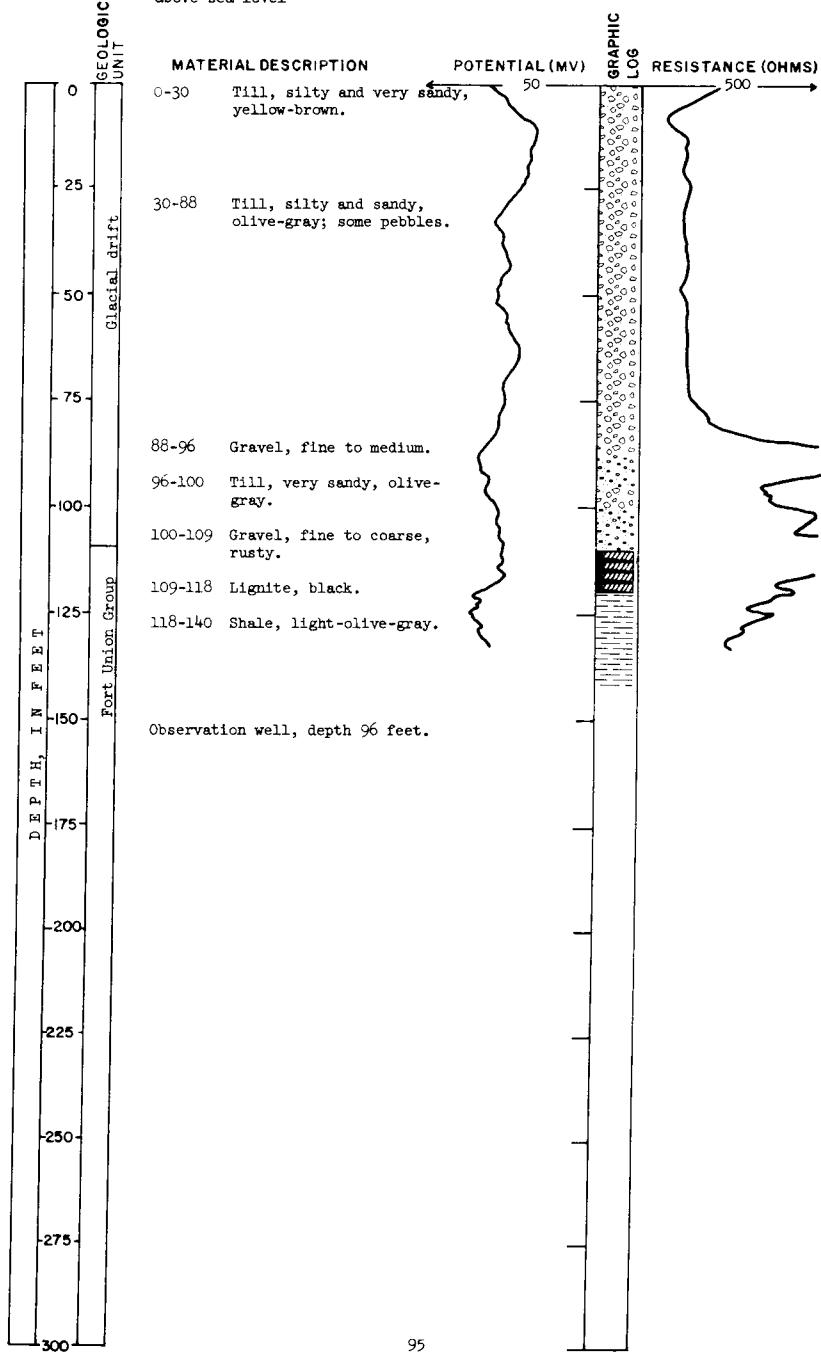


^{1/} From LaRocque and others, 1963. 94

LOCATION: Ward County
153-83-13bbb
ELEVATION: 1,883 feet
above sea level

TEST HOLE 3217

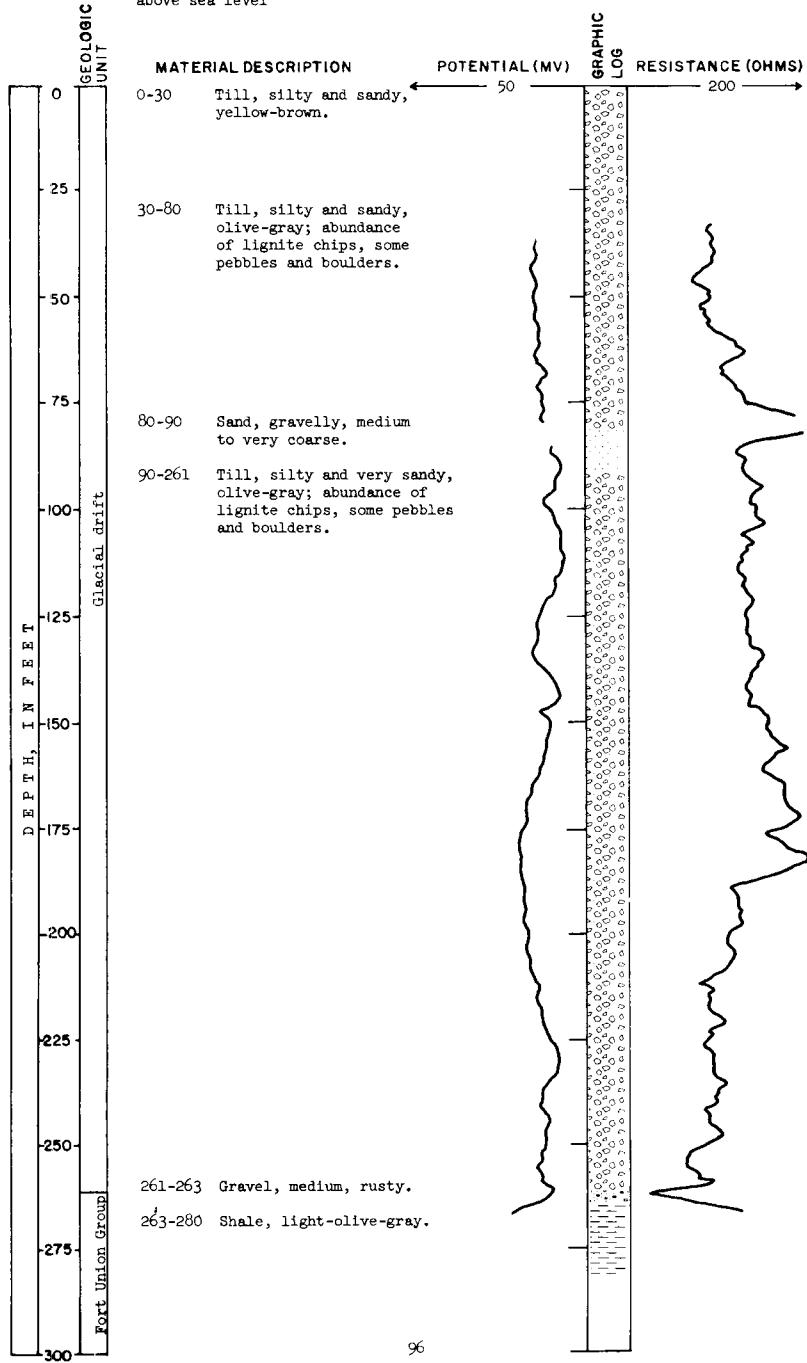
DATE DRILLED: June 3, 1965
DEPTH: 140 feet



LOCATION: Ward County
153-83-20cbc
ELEVATION: 2,105 feet
above sea level

TEST HOLE 3215

DATE DRILLED: June 3, 1965
DEPTH: 280 feet



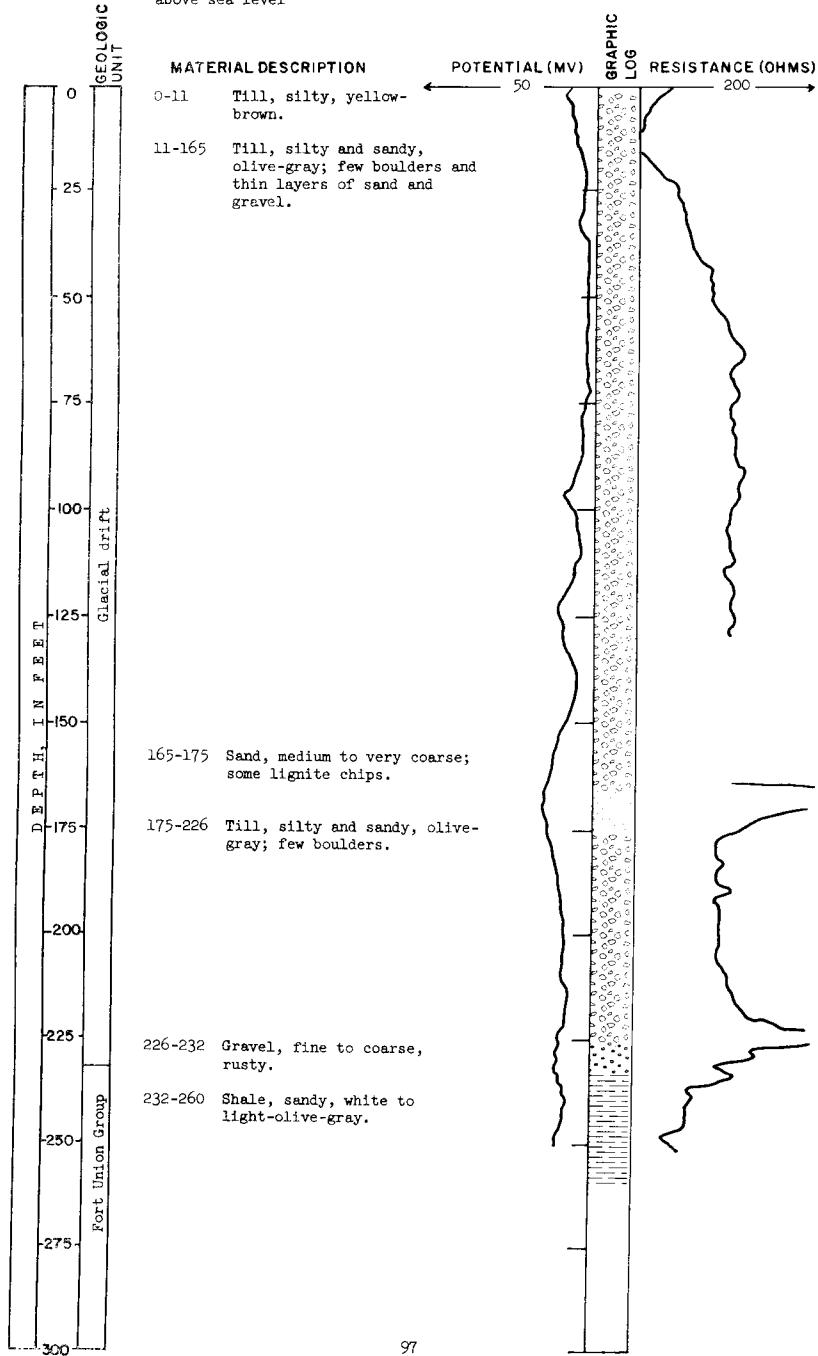
LOCATION: Ward County
153-84-3bbb

TEST HOLE 3214

ELEVATION: 2,020 feet
above sea level

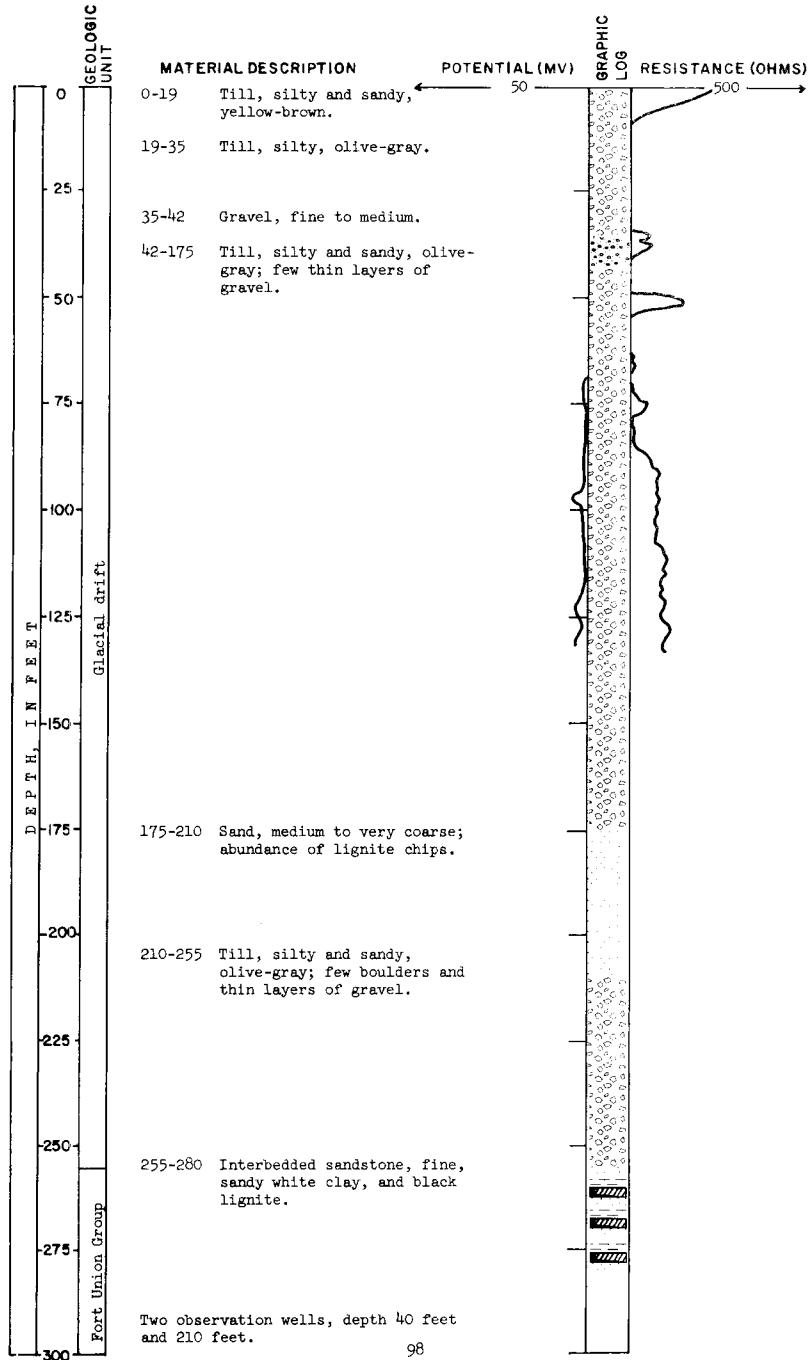
DATE DRILLED: June 2, 1965

DEPTH: 260 feet

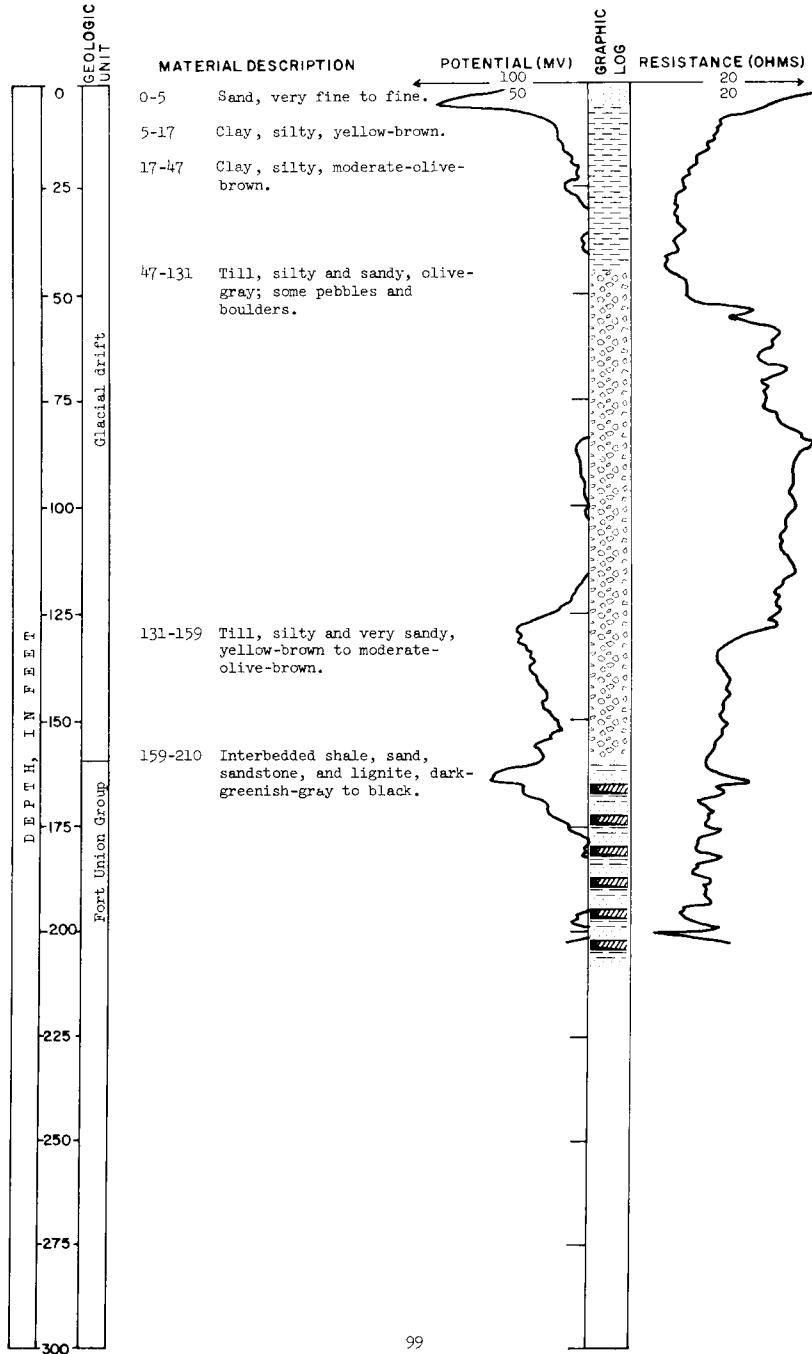


LOCATION: Ward County
153-84-7aba TEST HOLE 3213
ELEVATION:

DATE DRILLED: June 2, 1965
DEPTH: 280 feet



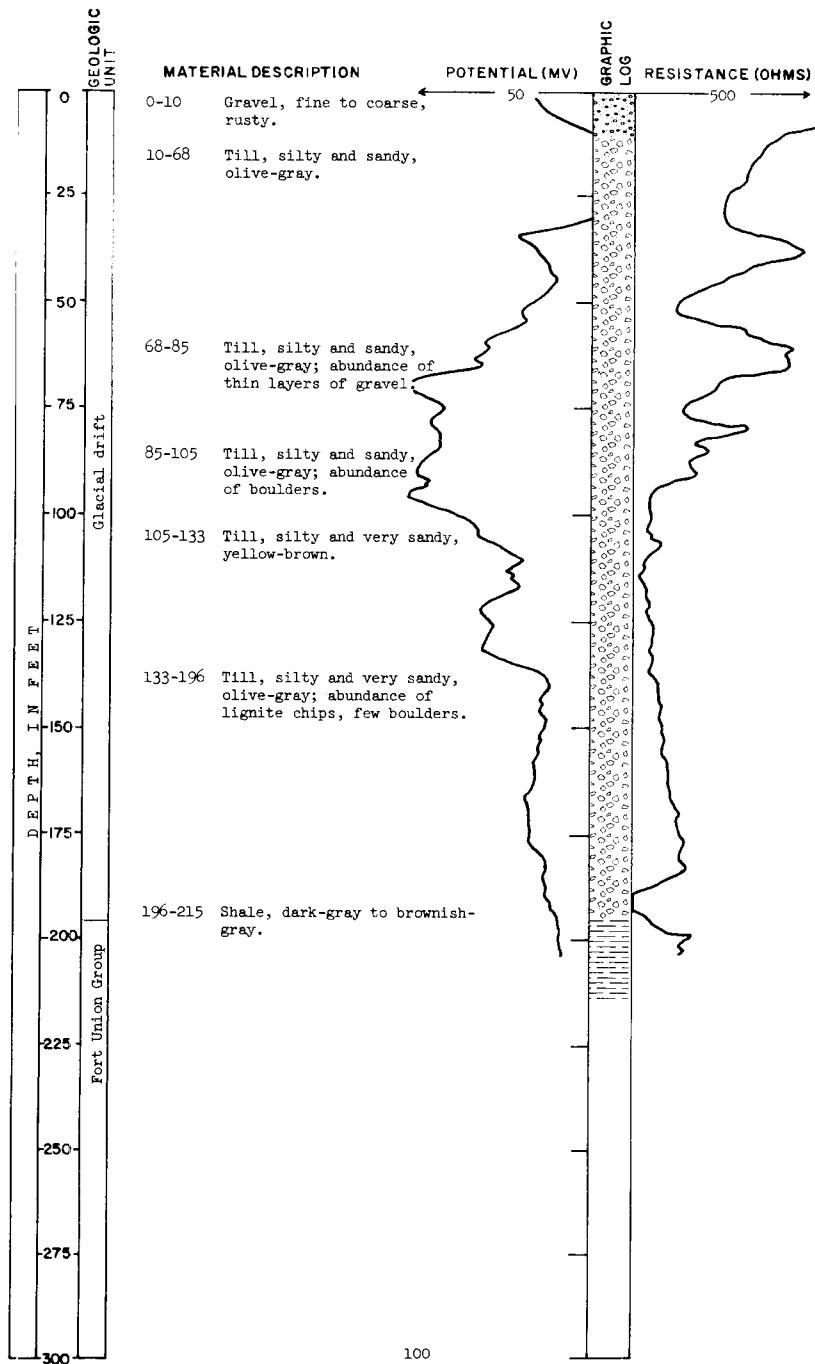
TEST HOLE 3320
 LOCATION: Ward County
 153-85-2bbb
 ELEVATION:



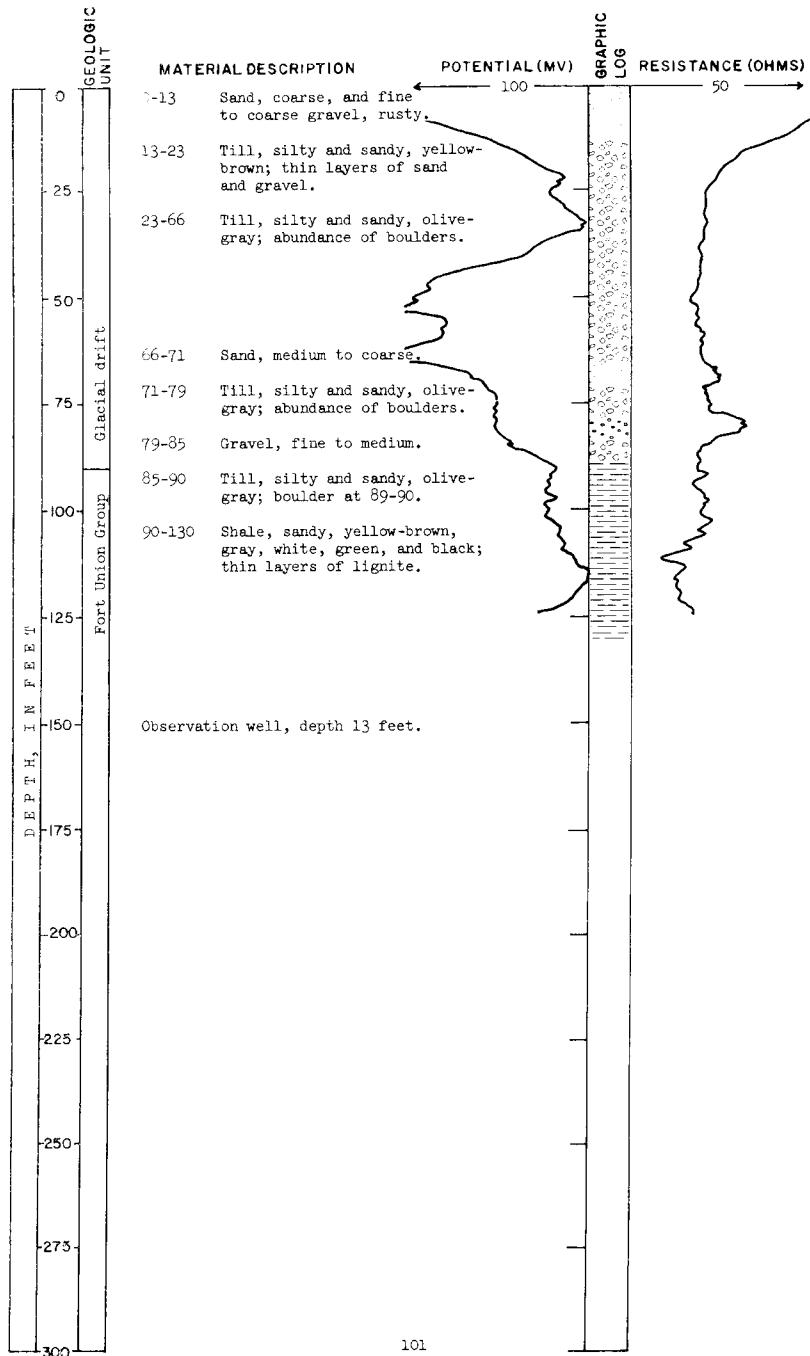
LOCATION: Ward County
ELEVATION: 153-85-19ddb

TEST HOLE 3205

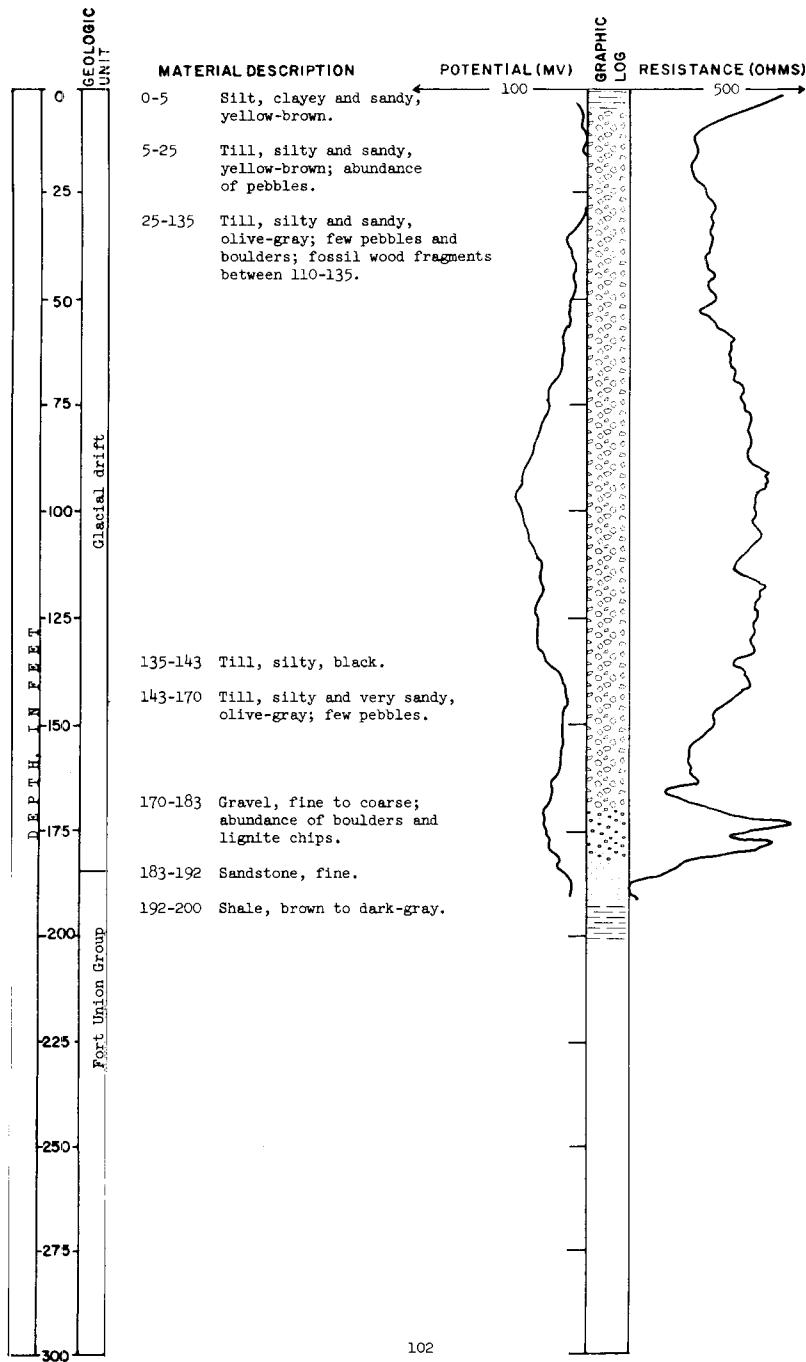
DATE DRILLED: May 20, 1965
DEPTH: 215 feet



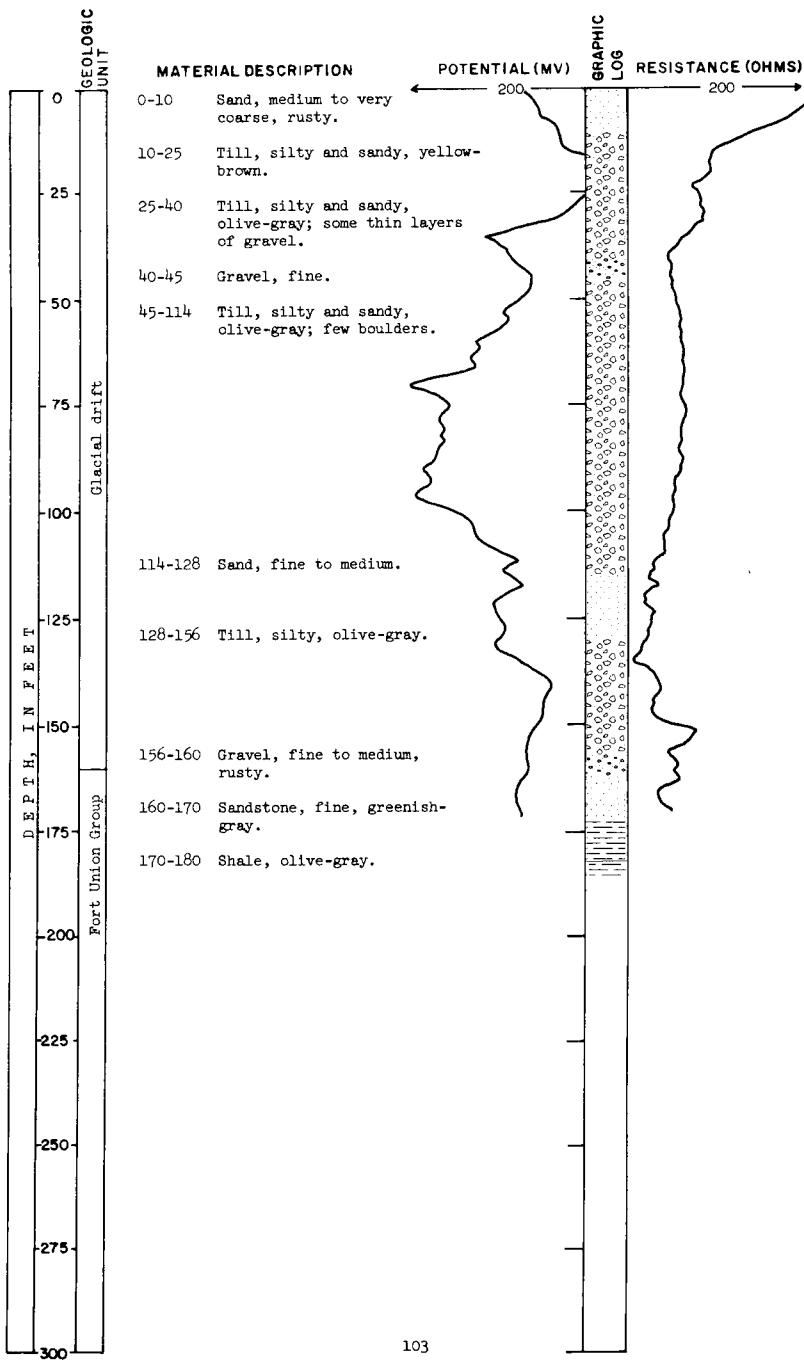
LOCATION: Ward County
TEST HOLE 3321
ELEVATION: 153-85-24ded
DATE DRILLED: May 25, 1966
DEPTH: 130 feet



LOCATION: Ward County
TEST HOLE 3206
ELEVATION: 153-86-3dab
DATE DRILLED: May 21, 1965
DEPTH: 200 feet



TEST HOLE 3207
 LOCATION: Ward County
 153-86-7bab
 ELEVATION:
 DATE DRILLED: May 21, 1965
 DEPTH: 180 feet



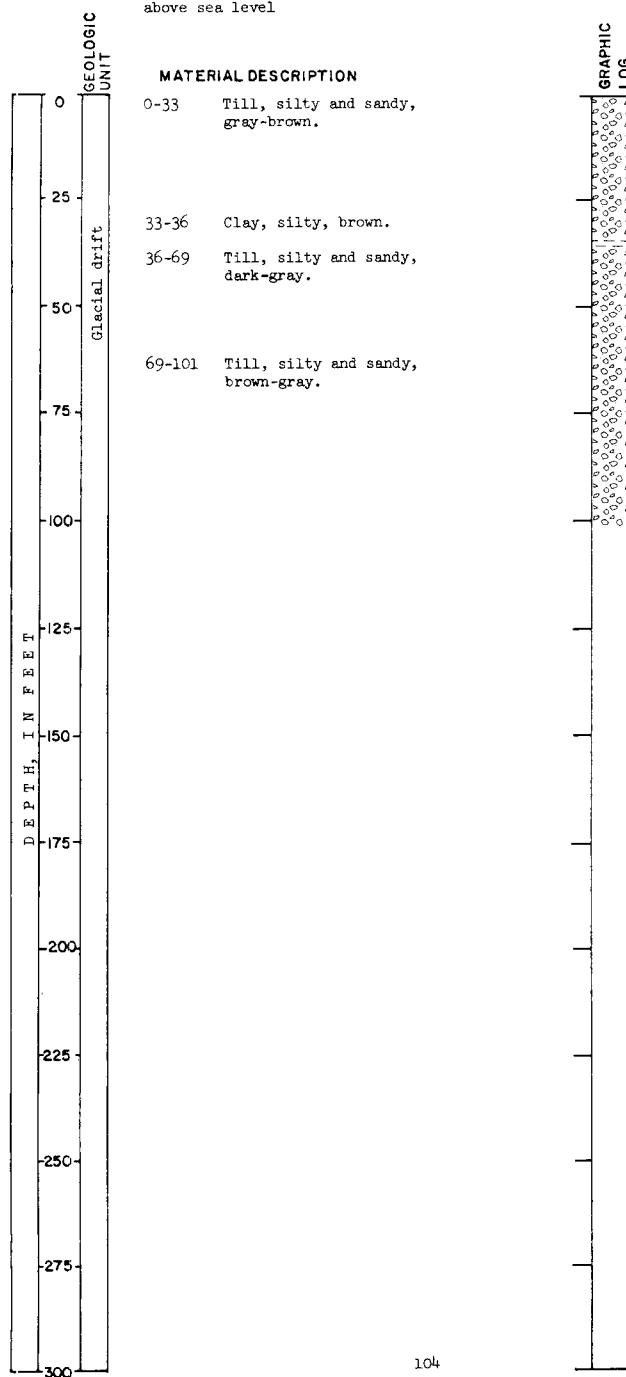
LOCATION: Ward County
153-86-21cd

TEST HOLE
U.S. Air Force

ELEVATION: 2,093 feet
above sea level

DATE DRILLED: 1961

DEPTH: 101 feet



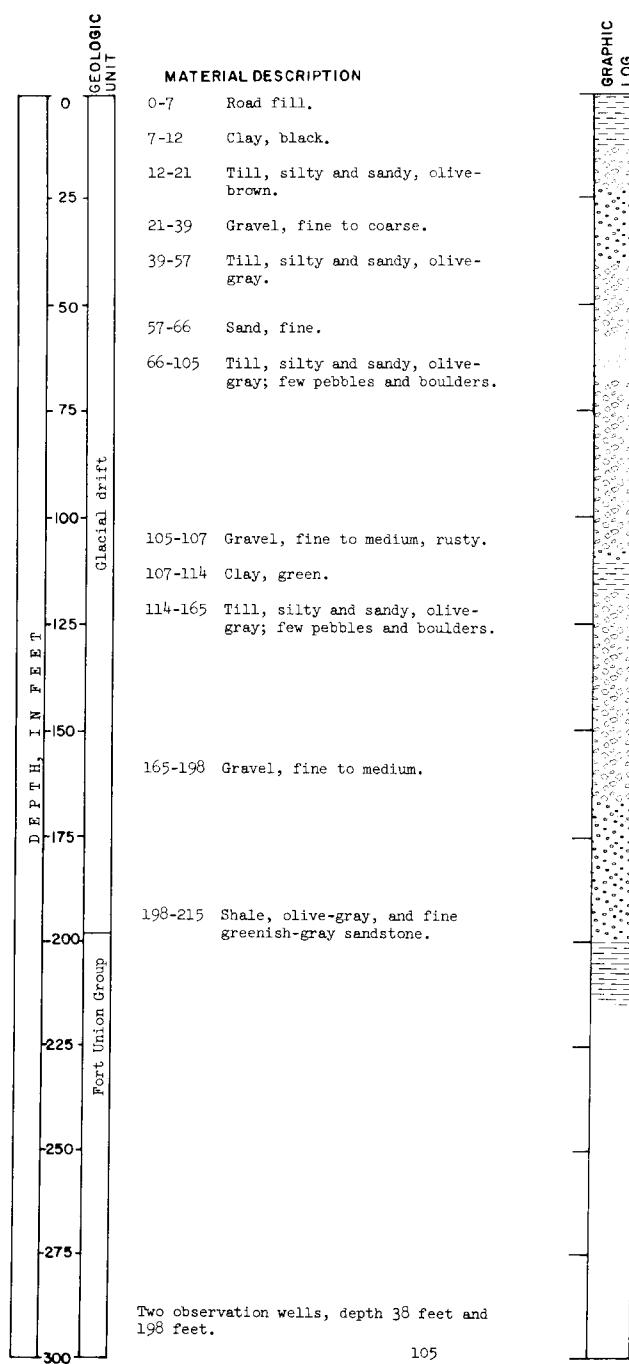
LOCATION: Ward County
153-86-34e dd

TEST HOLE 3199

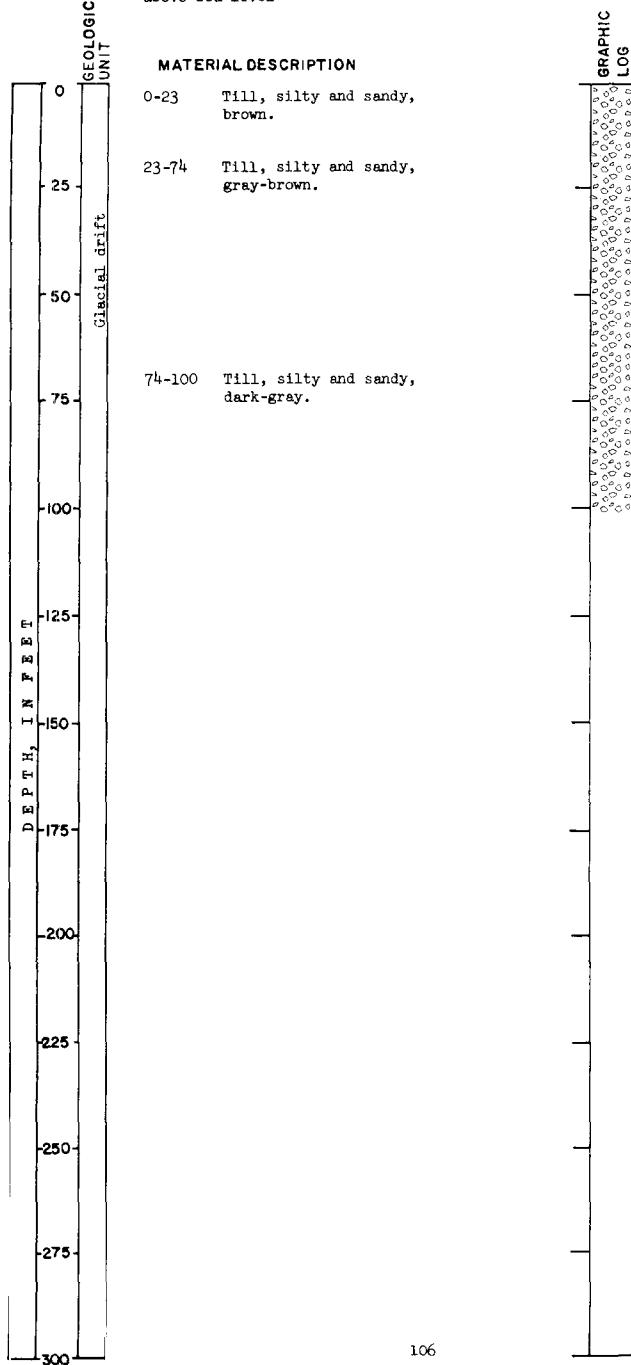
ELEVATION:

DATE DRILLED: May 18, 1965

DEPTH: 215 feet



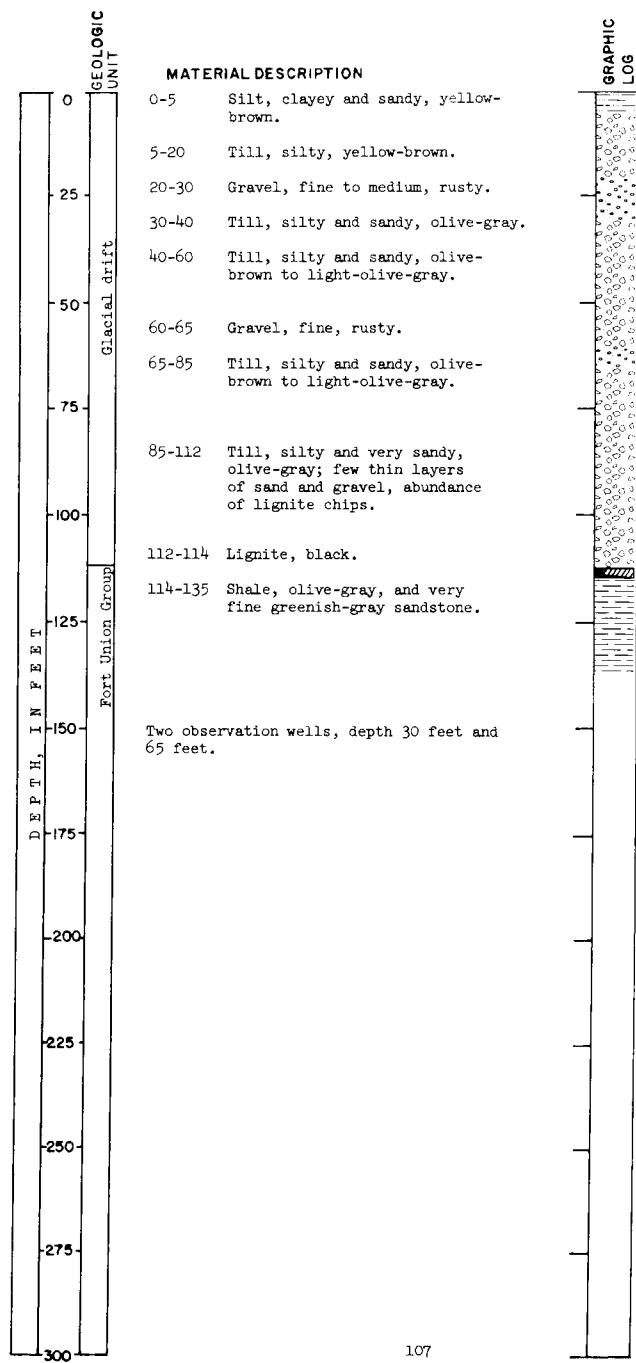
LOCATION: Ward County
153-87-27bb TEST HOLE
ELEVATION: 2,089 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 100 feet



LOCATION: Ward County
153-87-28bbb
ELEVATION:

TEST HOLE 3198

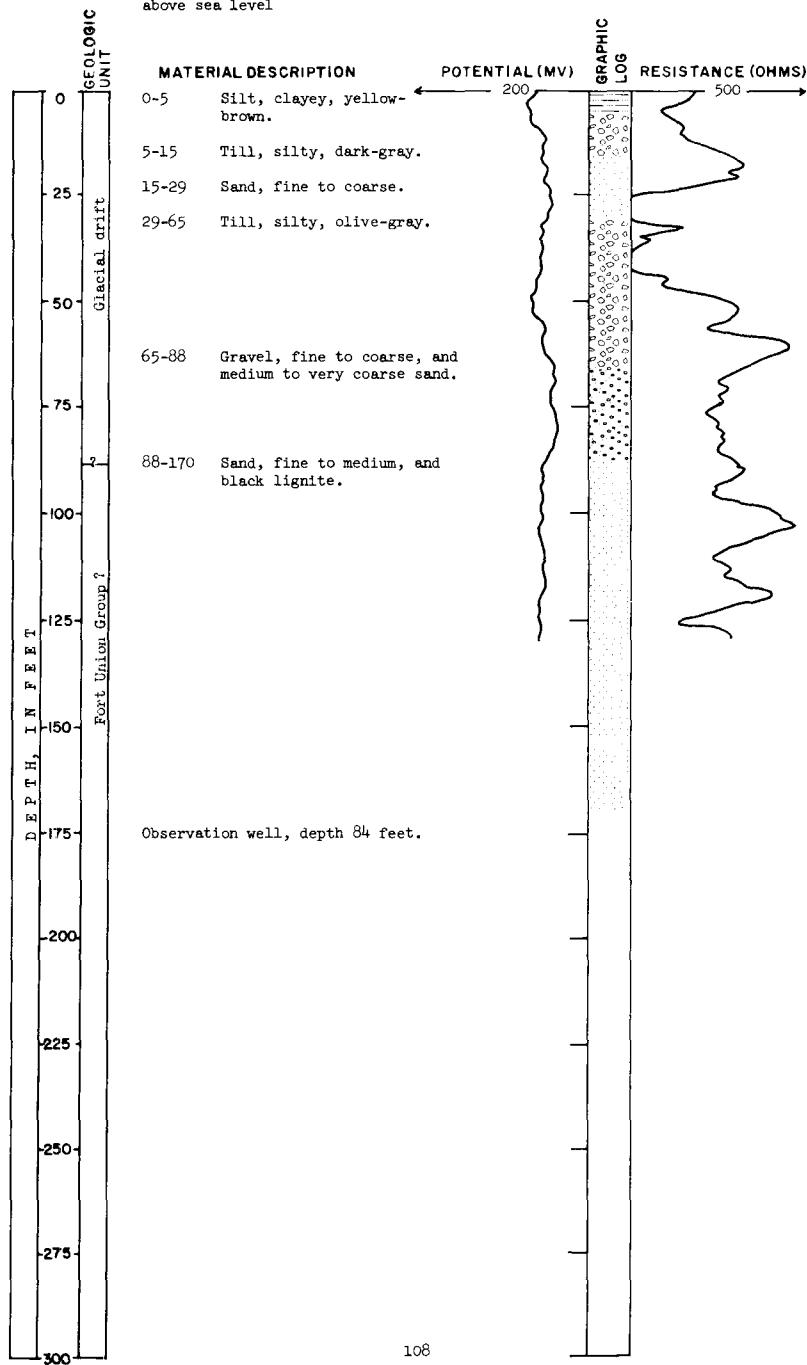
DATE DRILLED: May 17, 1965
DEPTH: 135 feet



LOCATION: Ward County
 154-82-3csc
ELEVATION: 1,527 feet
 above sea level

TEST HOLE
 Bison Plant
 No. 3

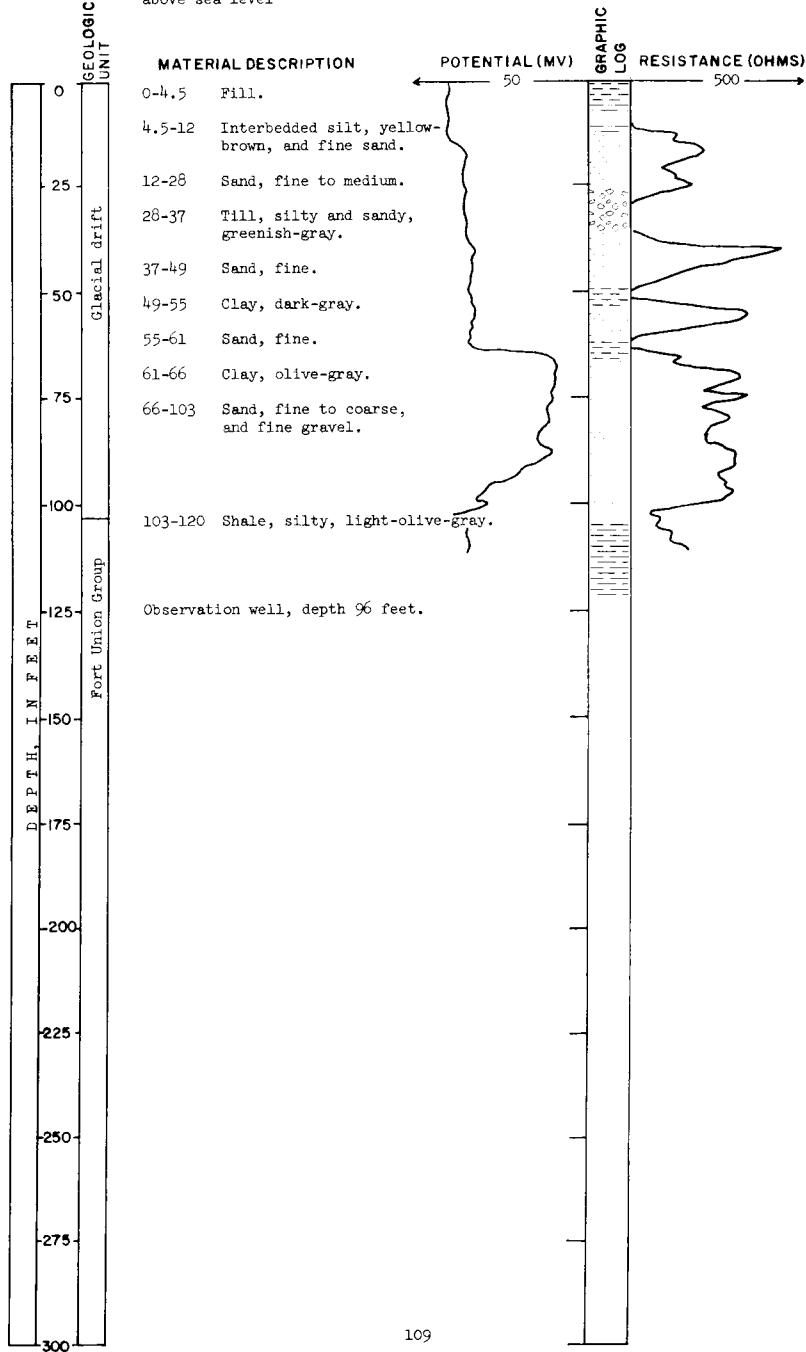
DATE DRILLED: August 25, 1965
DEPTH: 170 feet



LOCATION: Ward County
154-82-3cba
ELEVATION: 1,527 feet
above sea level

TEST HOLE
Bison Plant
No. 4

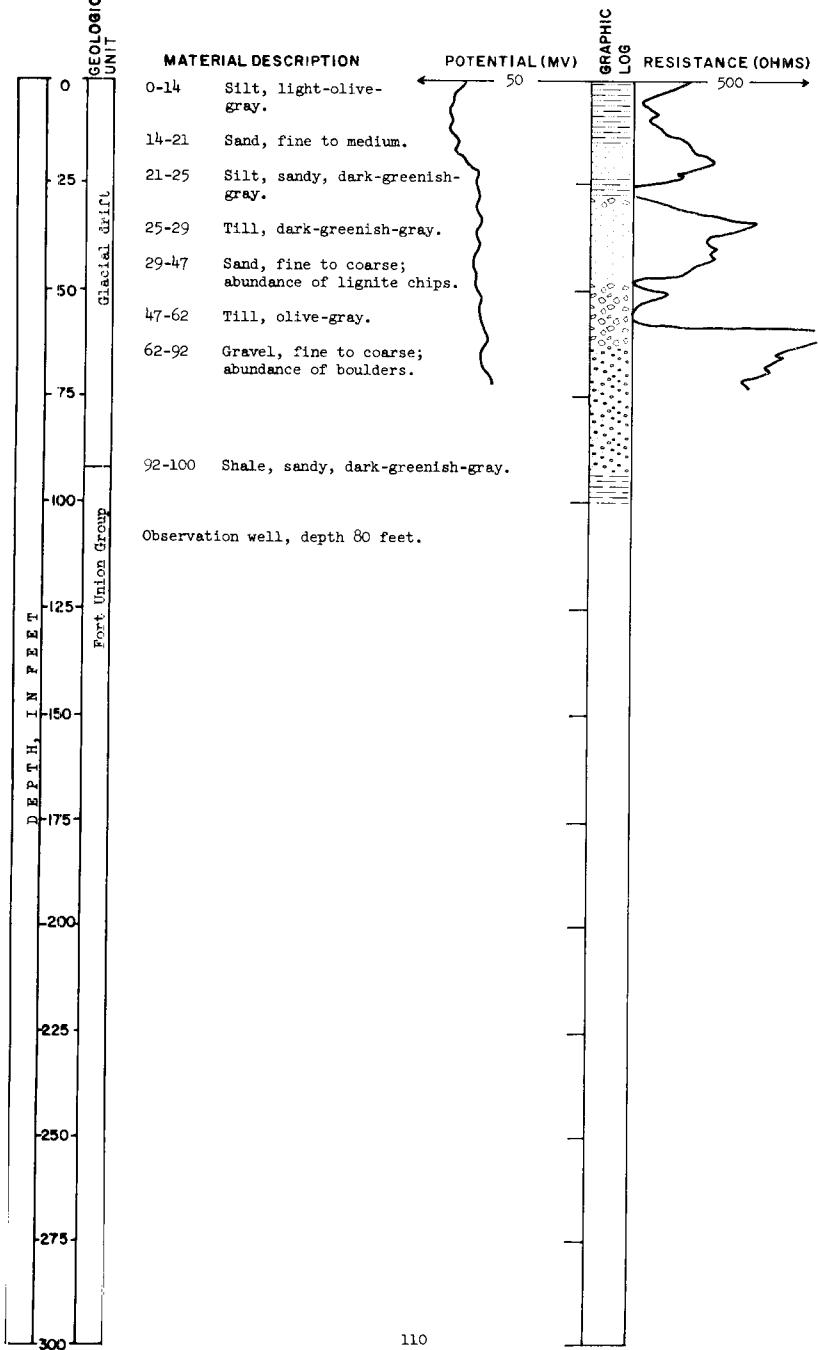
DATE DRILLED: August 26, 1965
DEPTH: 120 feet



LOCATION: Ward County
 154-82-3cdbl
ELEVATION: 1,527 feet
 above sea level

TEST HOLE
 Bison Plant
 No. 1

DATE DRILLED: August 26, 1965
DEPTH: 100 feet



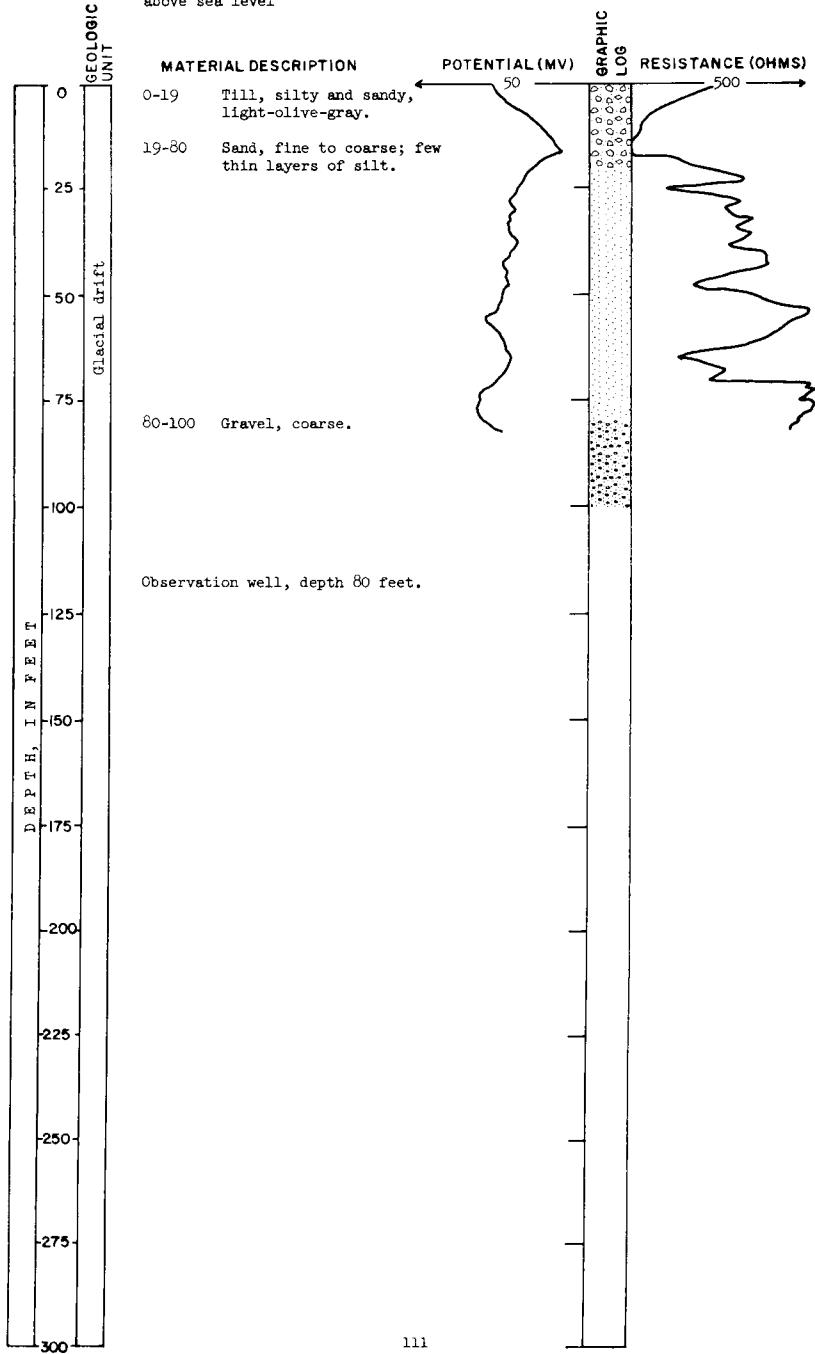
LOCATION: Ward County
154-82-3cdb2

EL E V A T I O N: 1,527 feet
above sea level

TEST HOLE
Bison Plant
No. 2

DATE DRILLED: July 25, 1965

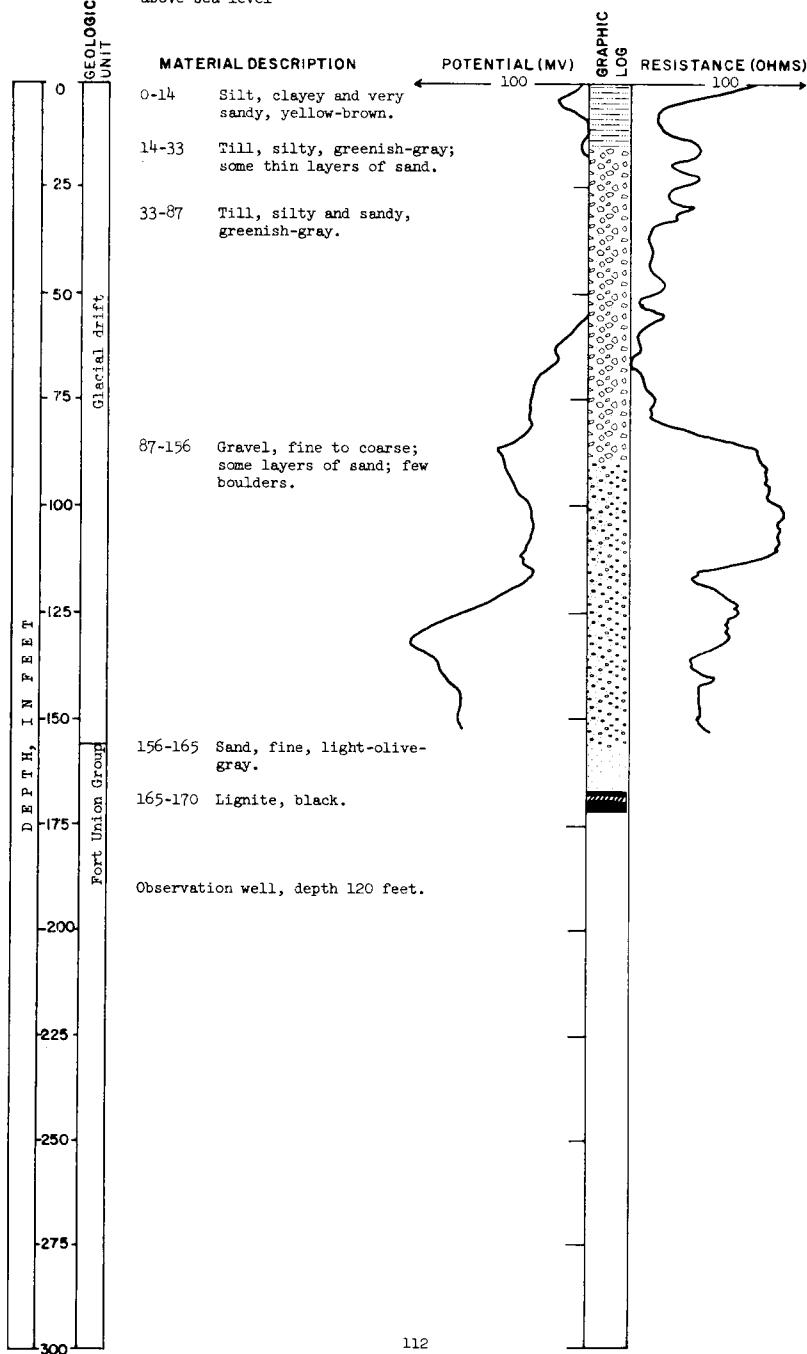
DEPTH: 100 feet



LOCATION: Ward County
154-82-10bbb
ELEVATION: 1,543 feet
above sea level

TEST HOLE 3326

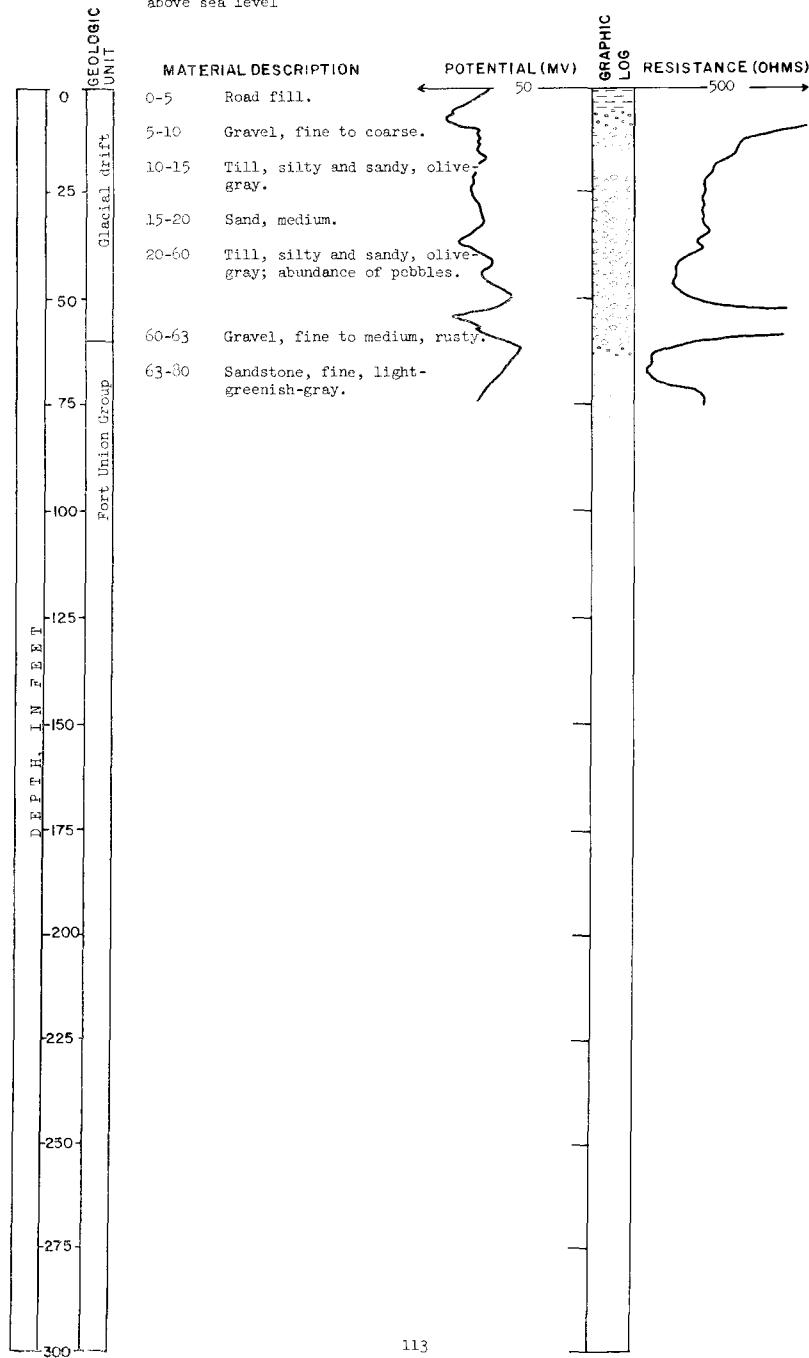
DATE DRILLED: May 31, 1966
DEPTH: 170 feet



LOCATION: Ward County
154-83-2daa
ELEVATION: 1,690 feet
above sea level

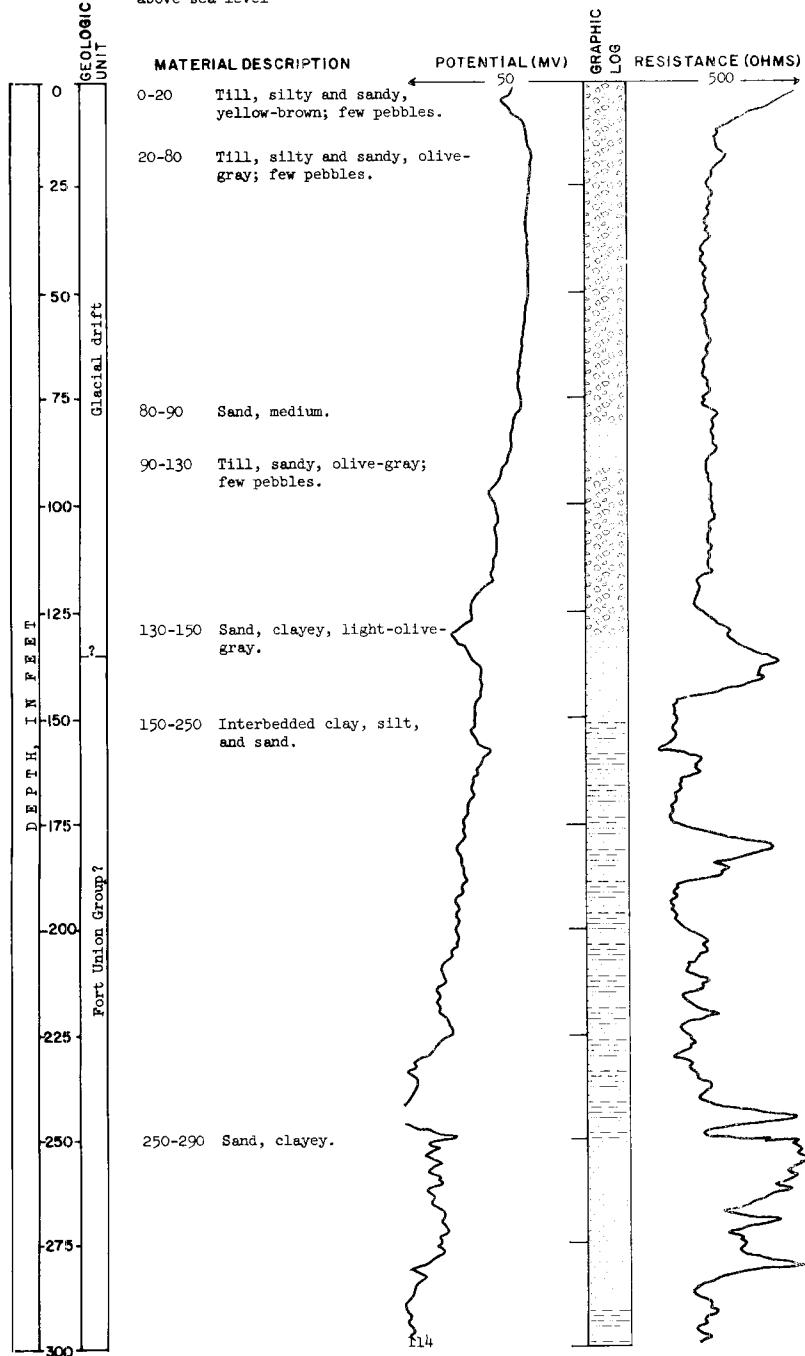
TEST HOLE 3219

DATE DRILLED: June 4, 1965
DEPTH: 80 feet

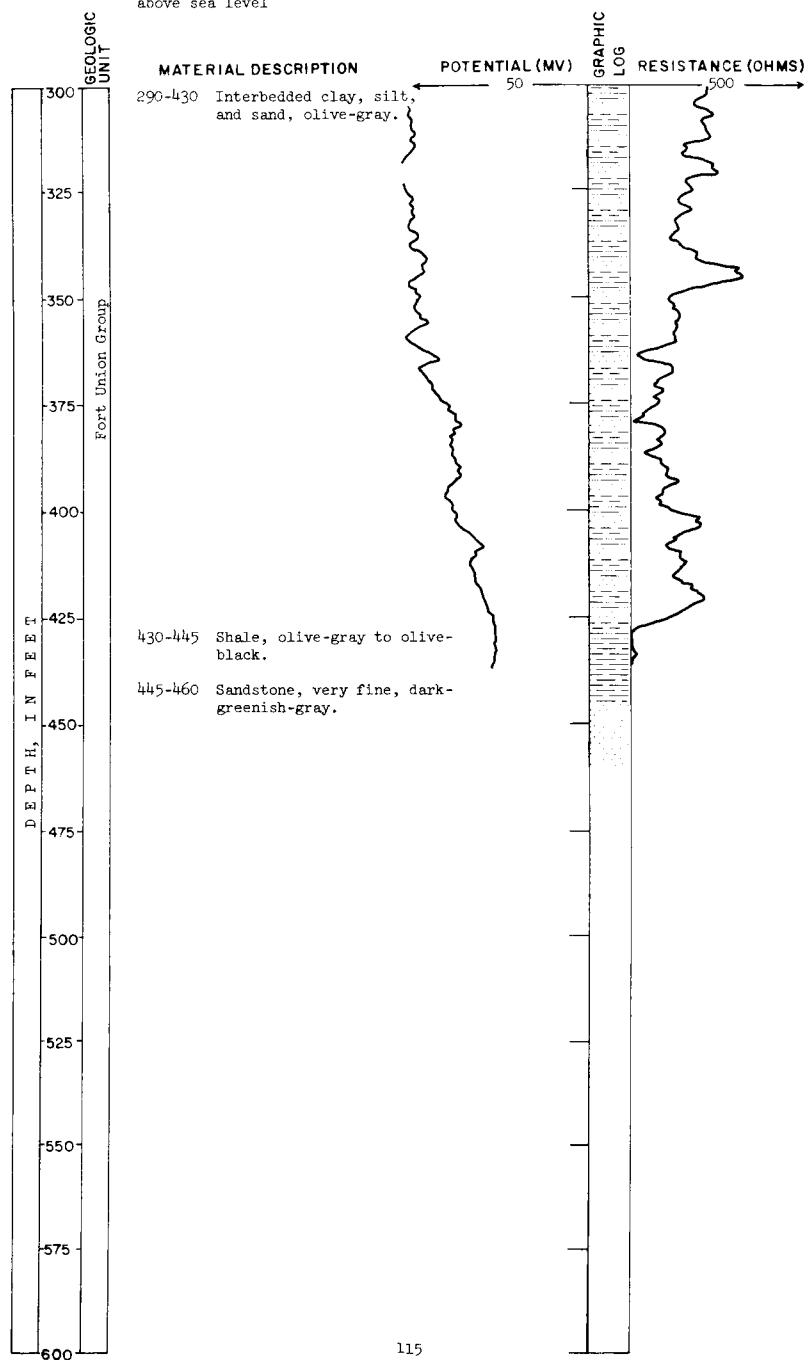


TEST HOLE 3218
 LOCATION: Ward County
 154-83-35add
 ELEVATION: 1,780 feet
 above sea level

DATE DRILLED: June 3, 1965
 DEPTH: 460 feet



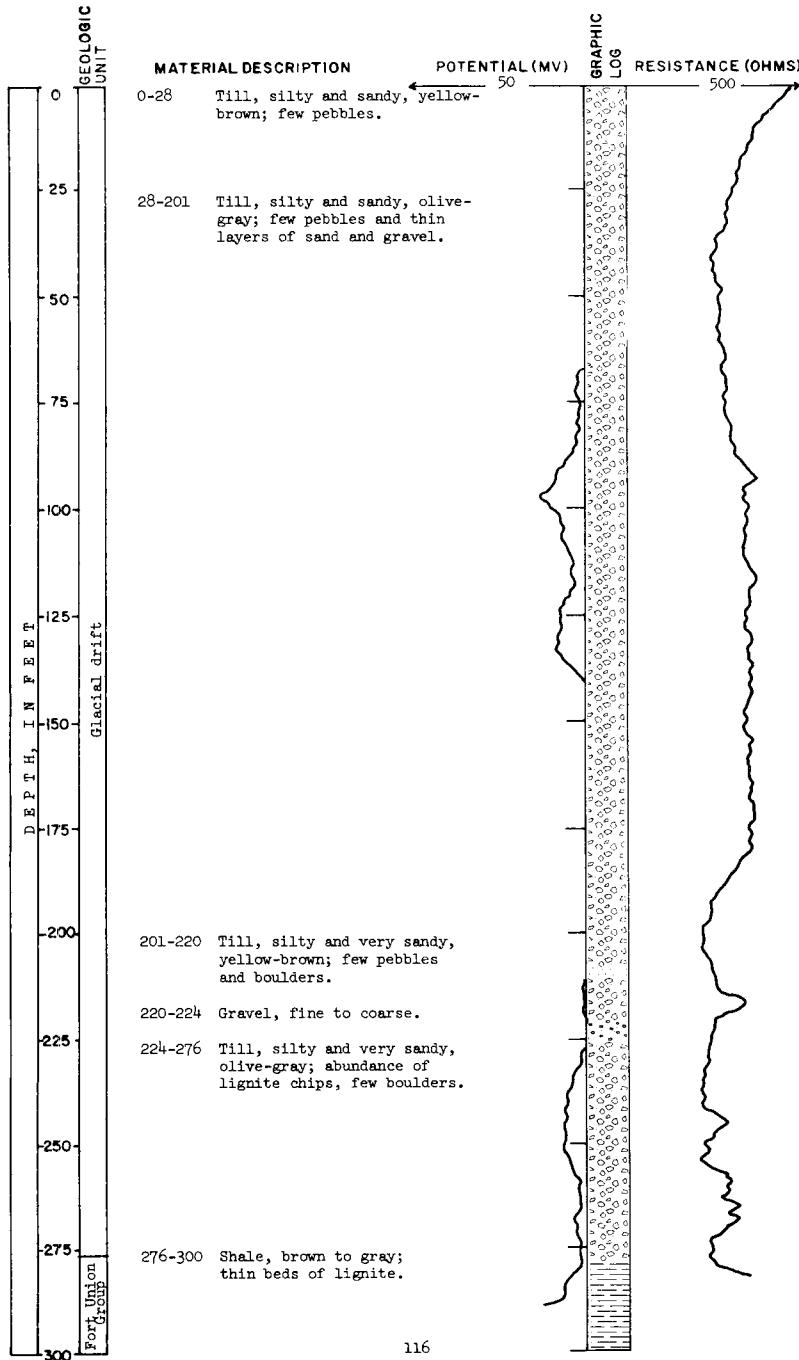
LOCATION: Ward County
TEST HOLE
154-83-35add (Continued) 3218
ELEVATION: 1,780 feet DATE DRILLED: June 3, 1965
above sea level DEPTH: 460 feet



LOCATION: Ward County
154-85-8bba
ELEVATION:

TEST HOLE 3210

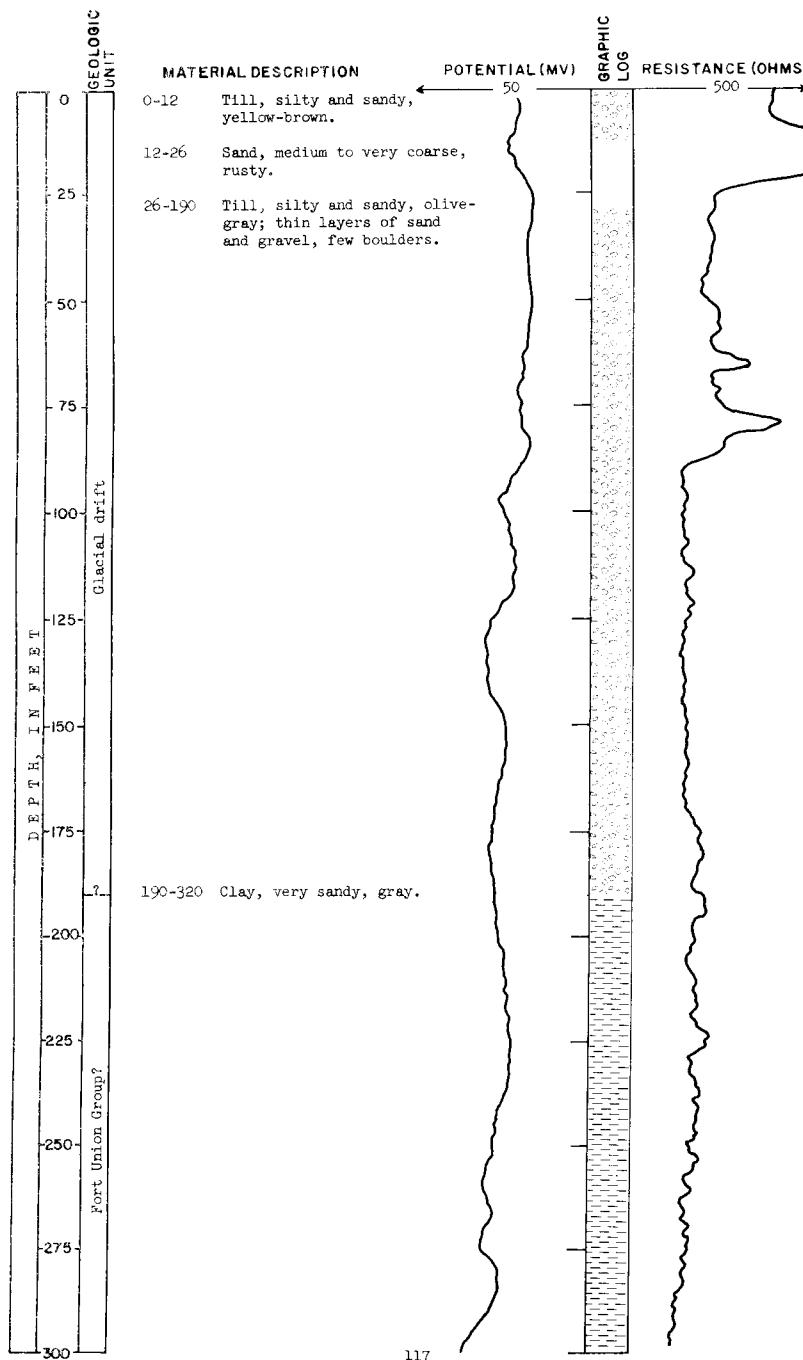
DATE DRILLED: May 22, 1965
DEPTH: 300 feet



LOCATION: Ward County
154-85-13cbc
ELEVATION:

TEST HOLE 3212

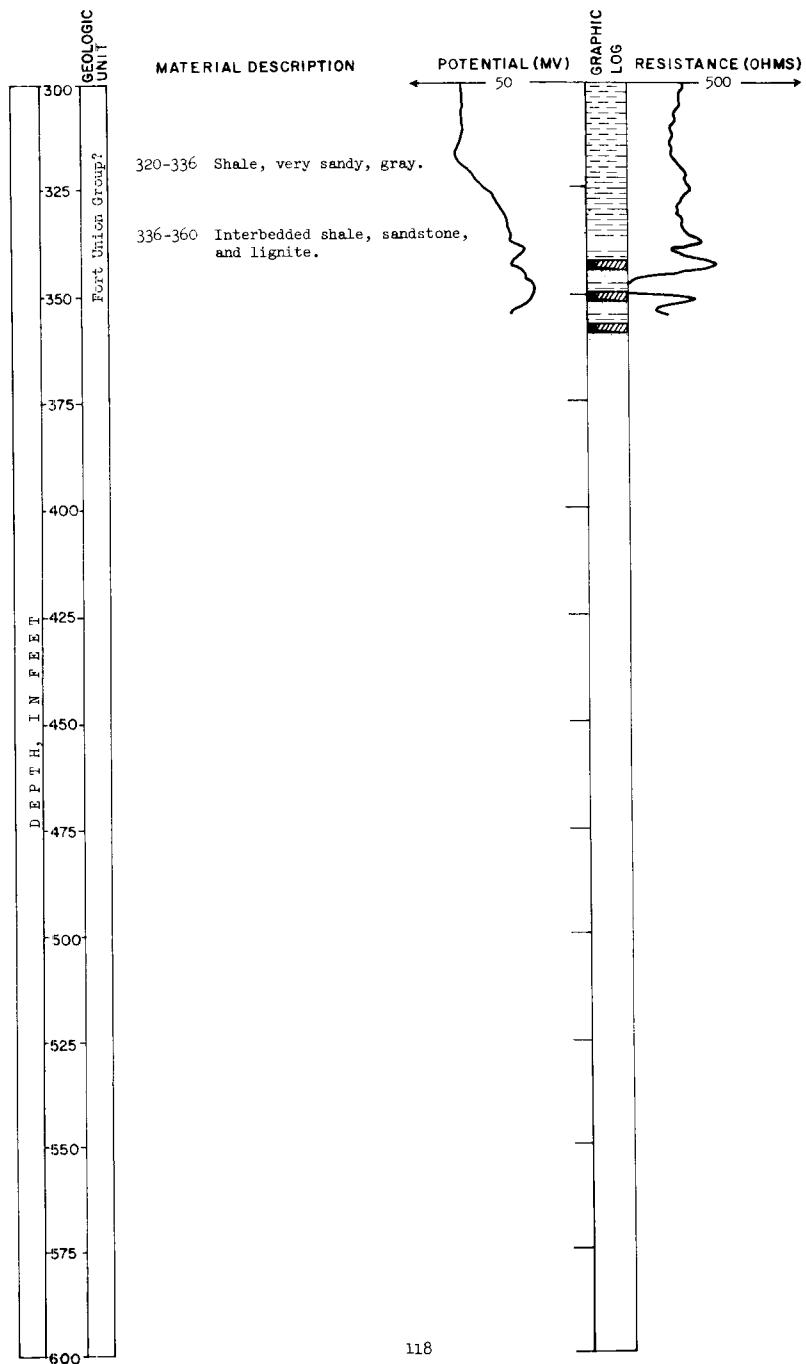
DATE DRILLED: June 1, 1965
DEPTH: 360 feet



LOCATION: Ward County
154-85-13cbc
ELEVATION:

TEST HOLE
(Continued) 3212

DATE DRILLED: June 1, 1965
DEPTH: 360 feet



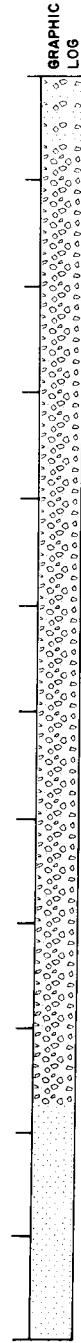
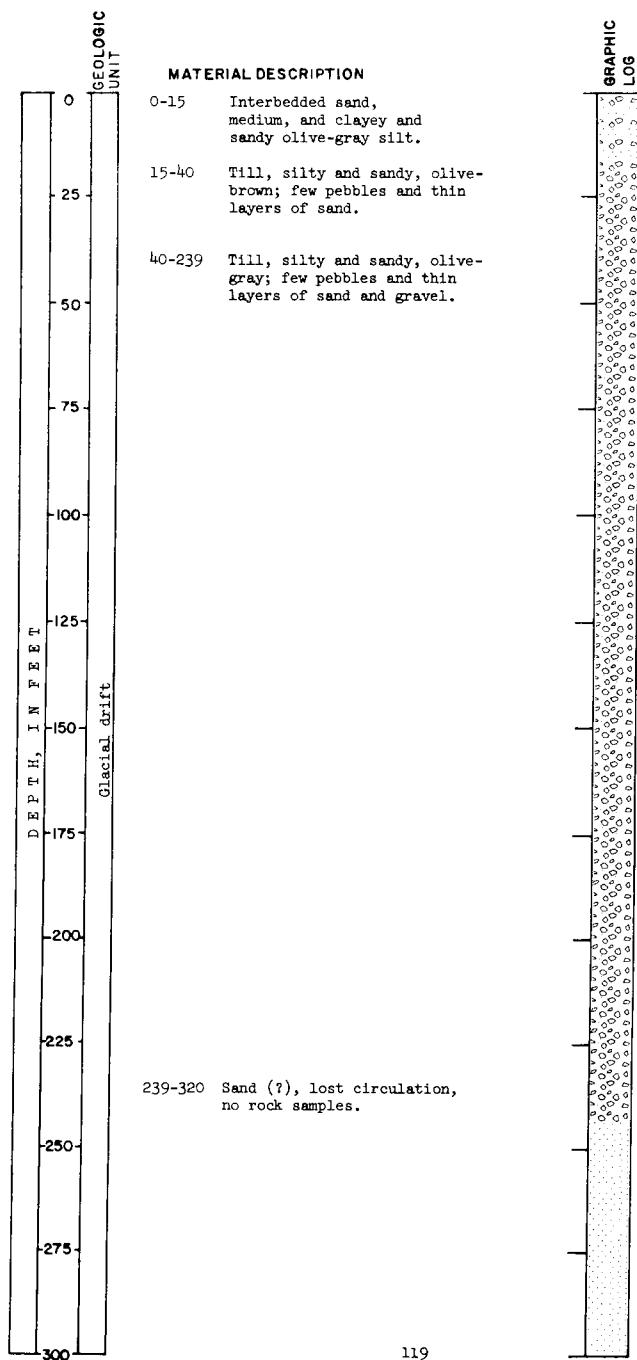
LOCATION: Ward County
154-85-26bbd

TEST HOLE 3211

ELEVATION:

DATE DRILLED: May 24, 1965

DEPTH: 320 feet



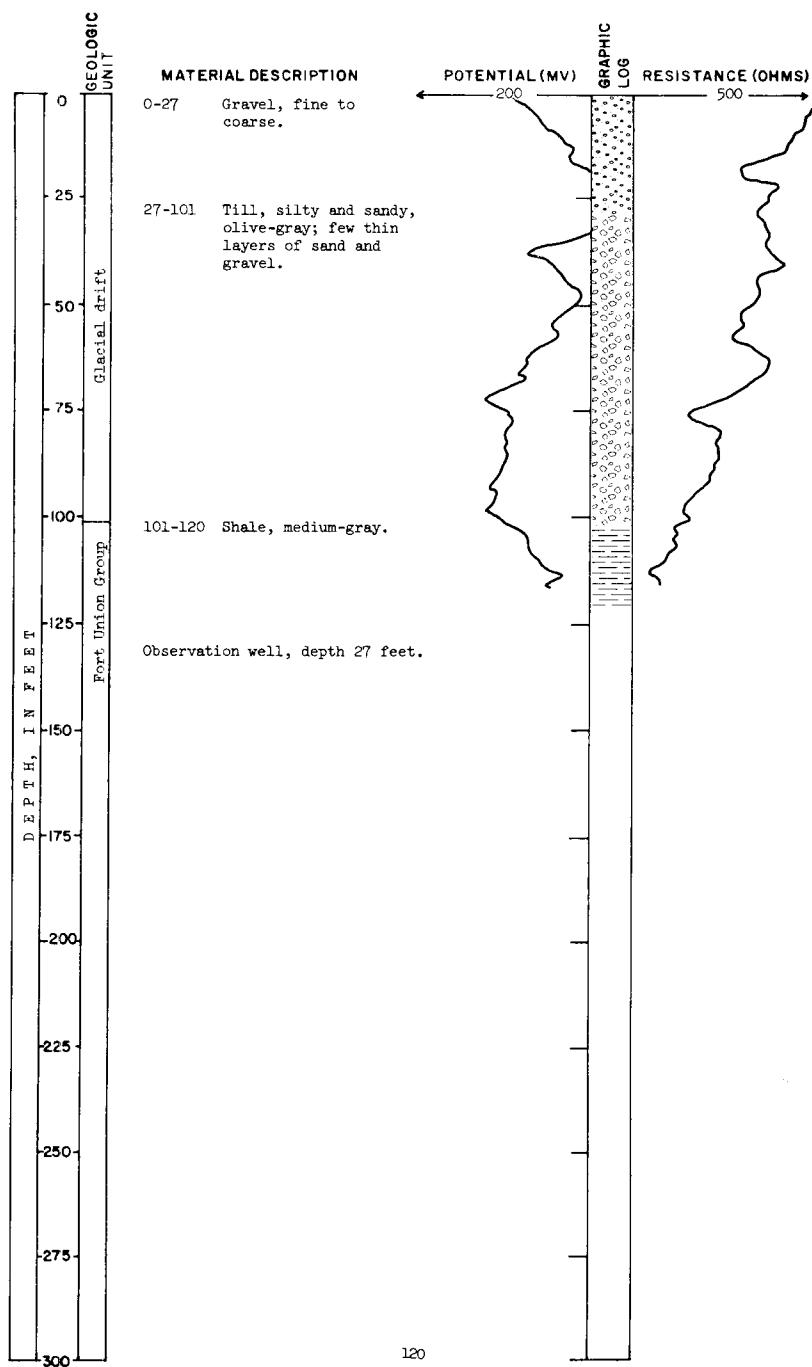
LOCATION: Ward County
154-86-28ada

TEST HOLE 3208

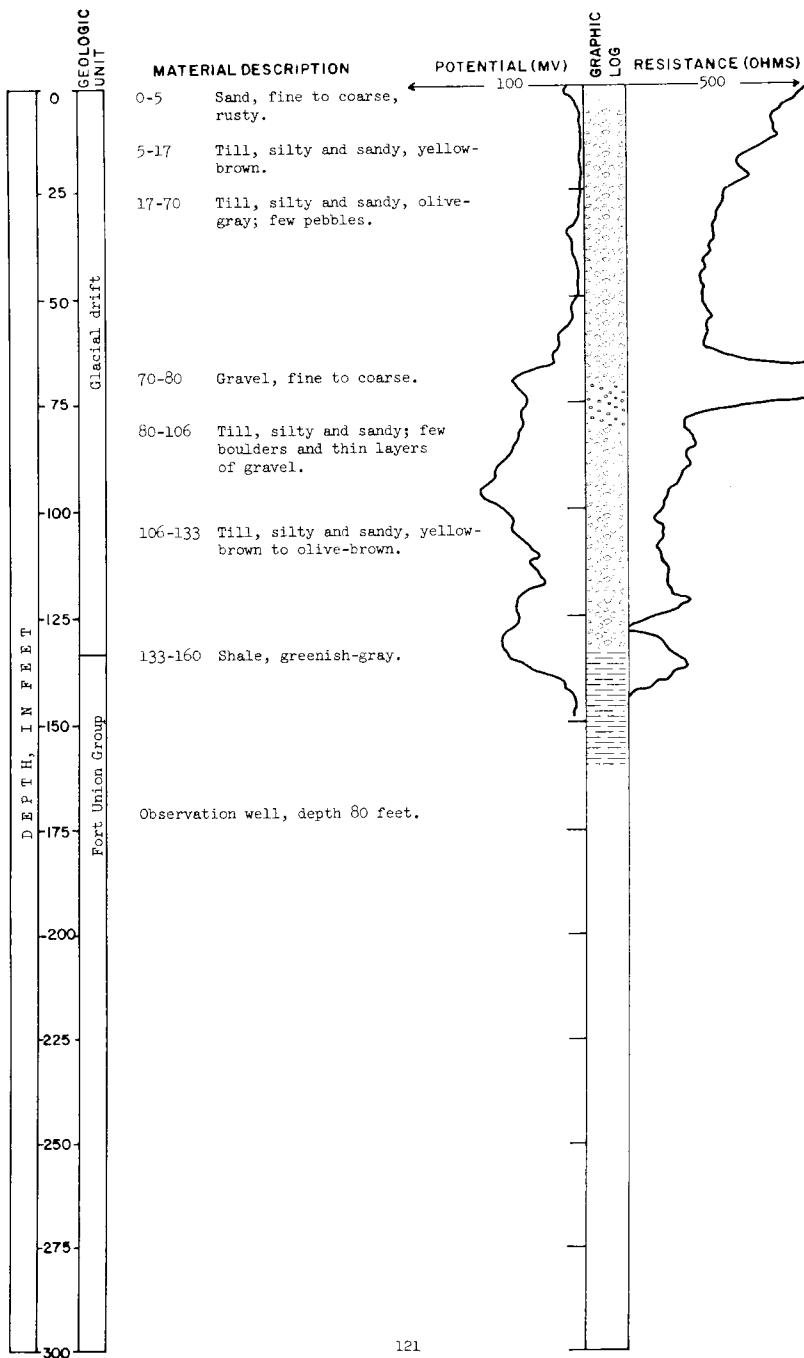
DATE DRILLED: May 21, 1965

ELEVATION:

DEPTH: 120 feet



LOCATION: Ward County
154-87-14ddd TEST HOLE 3209
ELEVATION: DATE DRILLED: May 22, 1965
DEPTH: 160 feet

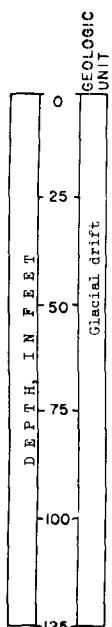


LOCATION: Ward County
154-87-33ad TEST HOLE
U.S. Air Force

ELEVATION: 2,116 feet
above sea level

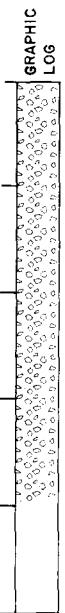
DATE DRILLED: 1961

DEPTH: 100 feet



MATERIAL DESCRIPTION

- 0-19 Till, silty and sandy, brown-gray.
19-100 Till, silty and sandy, dark-gray.

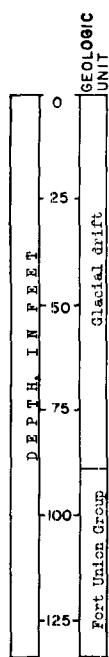


LOCATION: Ward County
155-81-13aaa TEST HOLE
U.S. Geol. Survey^{1/}

ELEVATION: 1,574 feet
above sea level

DATE DRILLED: August 2, 1947

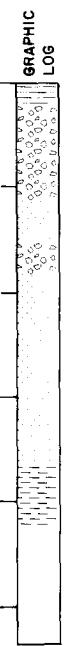
DEPTH: 106 feet



MATERIAL DESCRIPTION

- 0-1 Soil.
1-6 Silt, fine, and sandy clay.
6-27 Clay, yellow, with some gravel.
27-36 Sand and gravel.
36-43 Clay, sandy, gray.
43-87 Sand, coarse, and gravel, coarse.

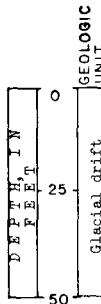
87-89 Boulder, granite.
89-106 Clay, gray.



^{1/} From LaRocque and others, 1963.

Ward County U.S. Bureau of Reclamation
LOCATION: 155-81-15ddc test hole

ELEVATION: 1,580 feet
above sea level



MATERIAL DESCRIPTION

0-20 Clay, sandy, brown.
20-40 Clay, sandy, gray.

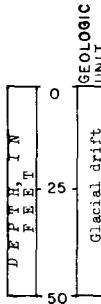
DATE DRILLED: August 29, 1955

DEPTH: 40 feet



Ward County U.S. Bureau of Reclamation
LOCATION: 155-81-22aaa test hole

ELEVATION: 1,573 feet
above sea level



MATERIAL DESCRIPTION

0-6.5 Clay, silty and sandy,
brown.
6.5-12 Sand, coarse, gravelly and
clayey.
12-19 Clay, sandy, gray.
19-40 Sand, fine, silty.

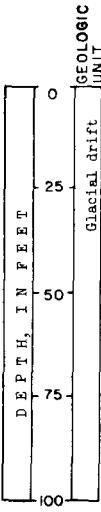
DATE DRILLED: August 29, 1955

DEPTH: 40 feet



Ward County U.S. Bureau of Reclamation
LOCATION: 155-81-23daa test hole

ELEVATION: 1,564 feet
above sea level



MATERIAL DESCRIPTION

0-11 Sand, coarse, gravelly and
clayey.
11-40 Clay, sandy, gray.

DATE DRILLED: August 26, 1955

DEPTH: 40 feet

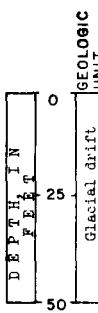


LOCATION: Ward County U.S. Bureau of Reclamation
155-81-23dad test hole

ELEVATION: 1,564 feet
above sea level

DATE DRILLED: August 25, 1955

DEPTH: 40 feet



MATERIAL DESCRIPTION

- 0-8 Sand, very fine to coarse.
8-17 Clay, sandy and gravelly,
brown.
17-26 Clay, sandy and gravelly,
gray.
26-30 Sand, coarse.
30-40 Clay, silty, gray.

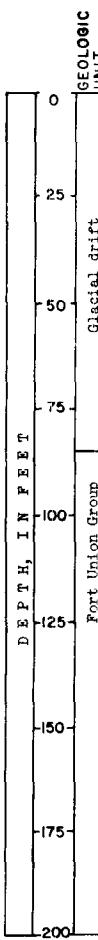


LOCATION: Ward County TEST HOLE 1394
155-82-15bbb

ELEVATION: 1,643 feet
above sea level

DATE DRILLED: 1958

DEPTH: 94.5 feet



MATERIAL DESCRIPTION

- 0-22 Till, yellow-brown; fine
pebbles.
22-32 Till, sandy, dark-gray.
32-85 Till, sandy and gravelly,
gray.

85-94.5 Clay, sandy, gray.



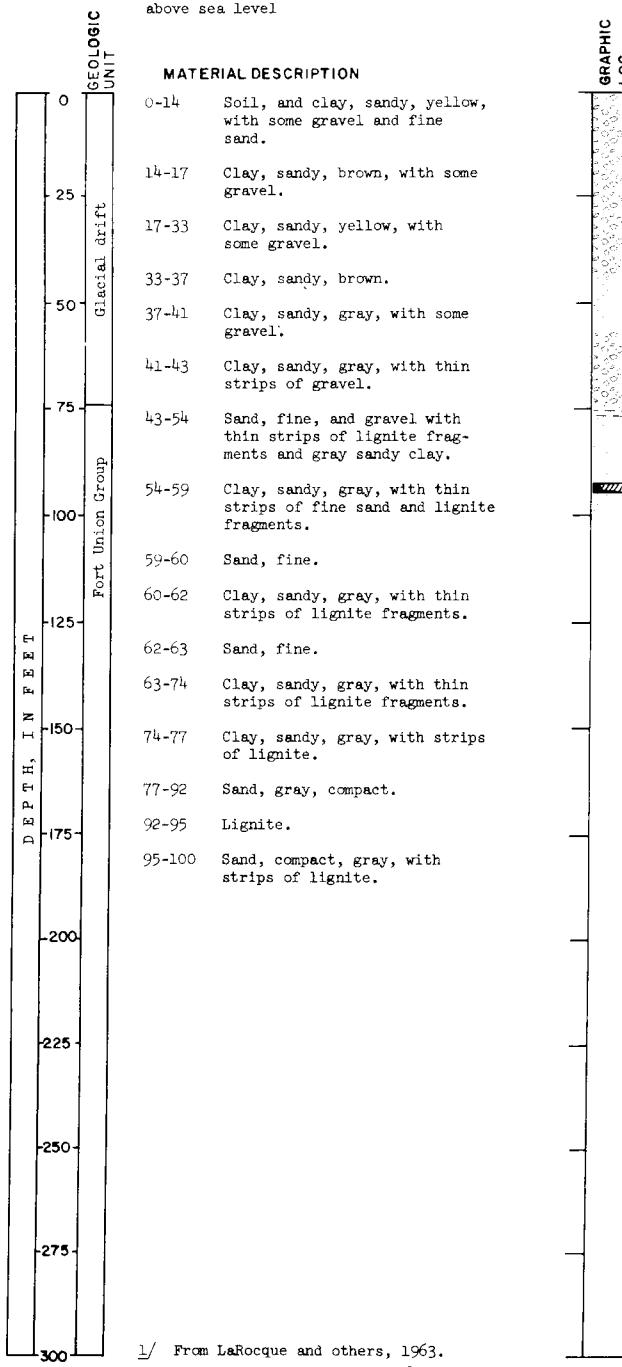
LOCATION: Ward County
155-82-19aaa

TEST HOLE
U.S. Geol. Survey^{1/}

DATE DRILLED: August 2, 1947

ELEVATION: 1,636 feet
above sea level

DEPTH: 100 feet



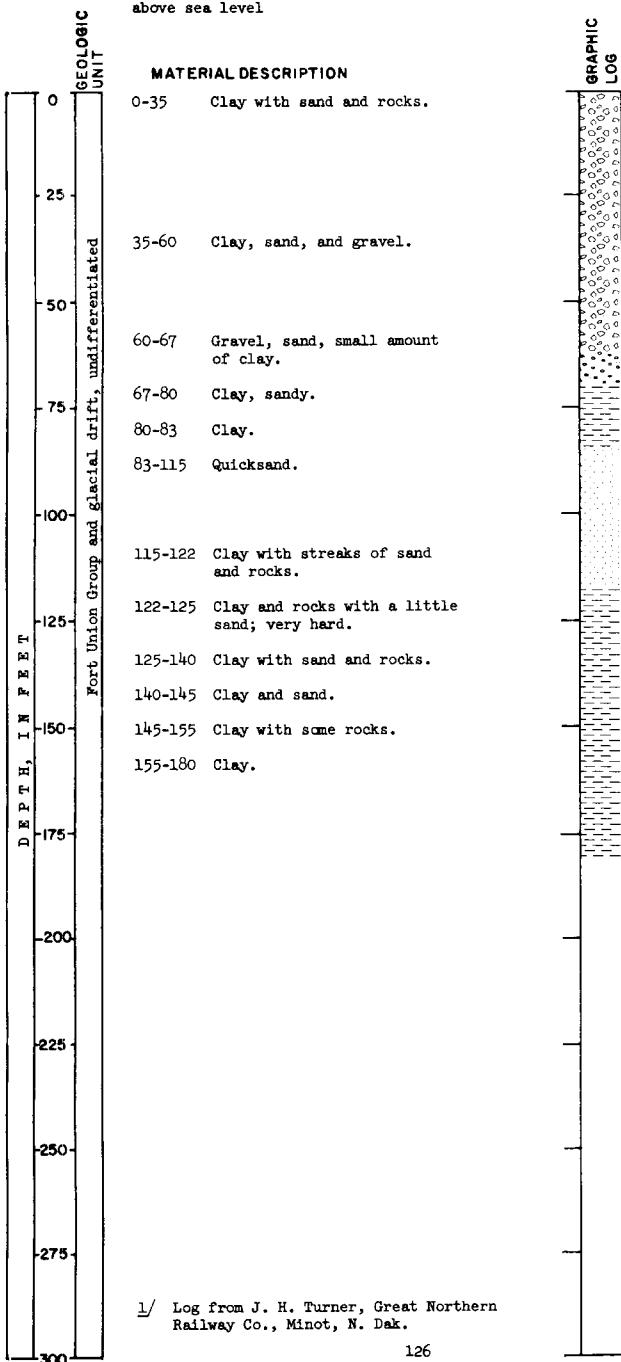
^{1/} From LaRocque and others, 1963.

LOCATION: Ward County Great Northern Railway Co.
 155-82-19bb test hole^{1/}

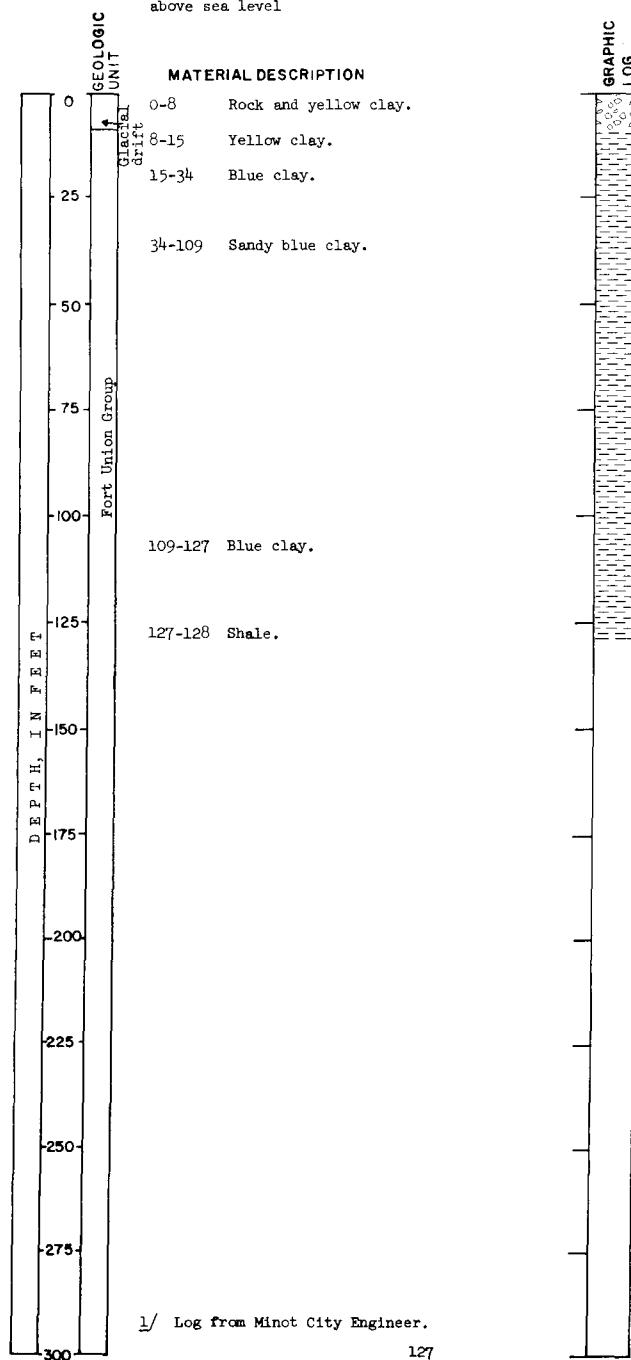
ELEVATION: 1,555 feet
 above sea level

DATE DRILLED:

DEPTH: 180 feet



LOCATION: Ward County
155-82-20cc1 City of Minot
test hole¹
ELEVATION: 1,558 feet
above sea level DATE DRILLED: 1952
DEPTH: 128 feet



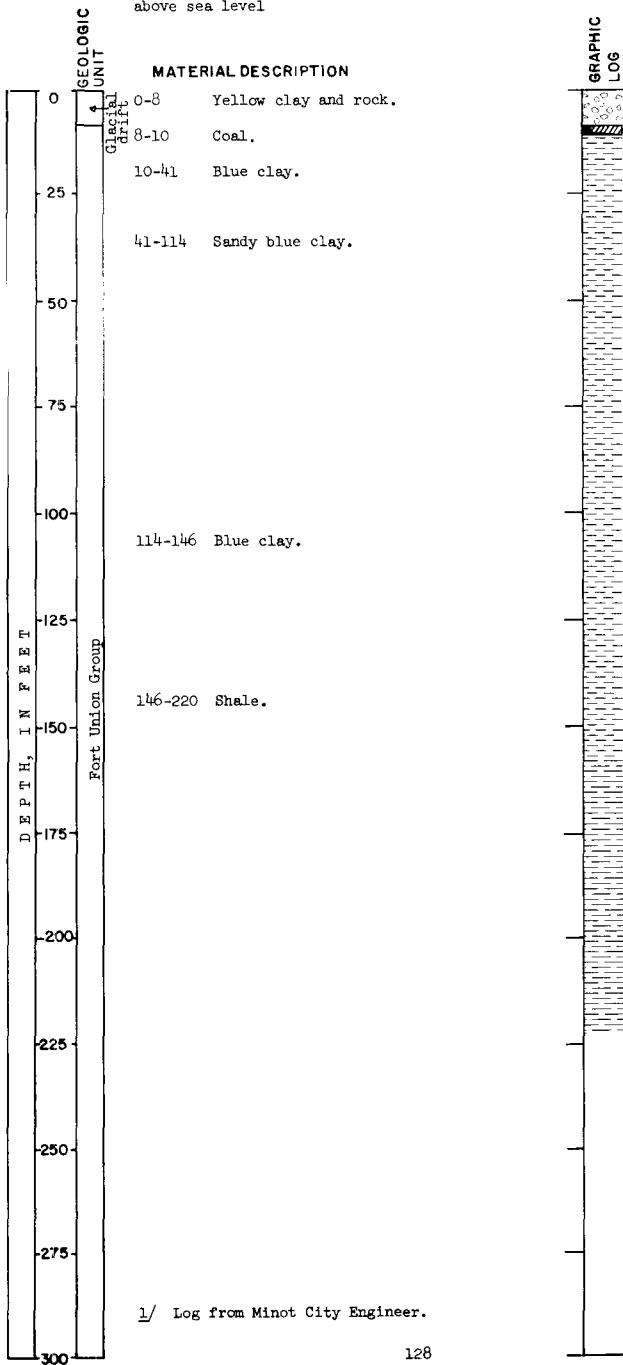
LOCATION: Ward County
155-82-20cc2

CITY OF MINOT
test hole¹

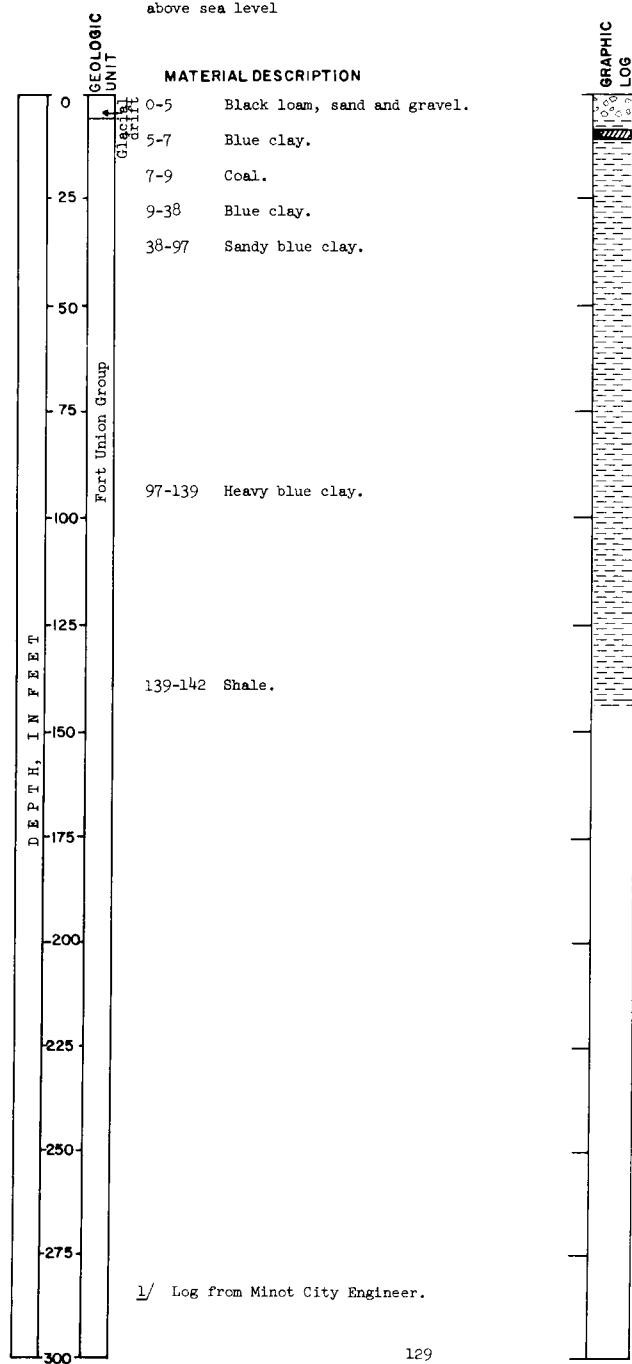
DATE DRILLED: 1952

ELEVATION: 1,360 feet
above sea level

DEPTH: 220 feet



LOCATION: Ward County
155-82-20cc3 City of Minot
test hole^{1/}
ELEVATION: 1,549 feet
above sea level DATE DRILLED: 1952
DEPTH: 142 feet



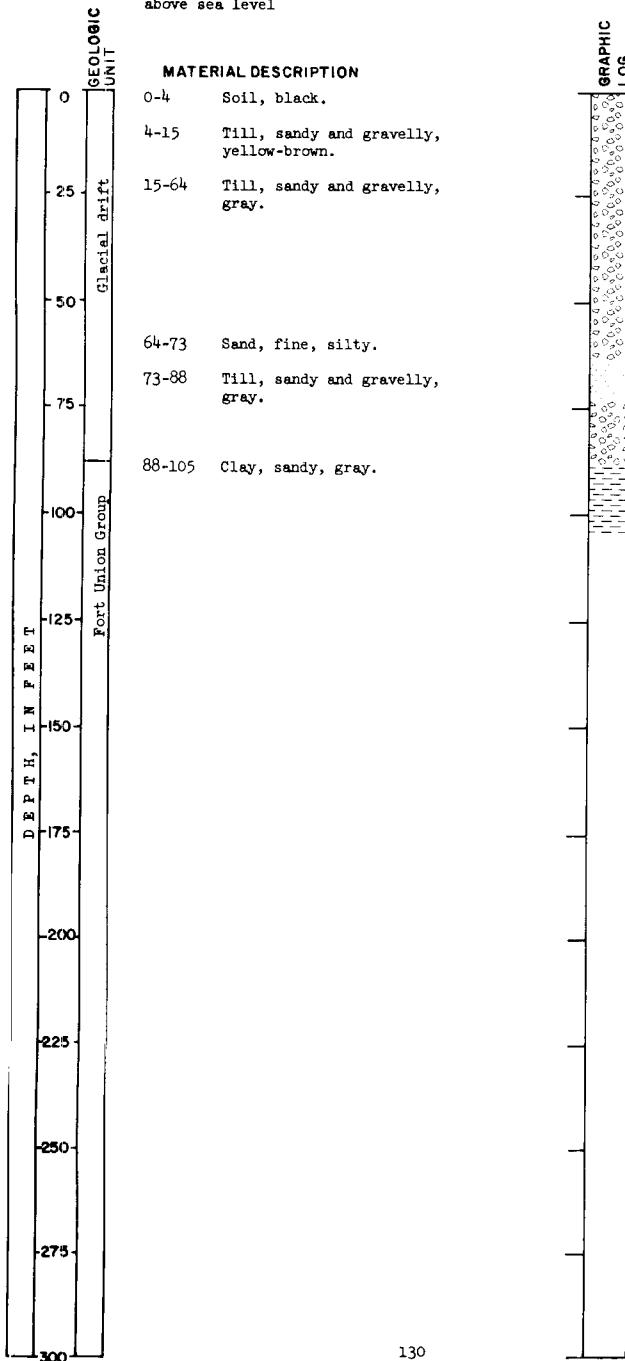
LOCATION: Ward County
155-82-22ccb

TEST HOLE 1393

ELEVATION: 1,628 feet
above sea level

DATE DRILLED: 1958

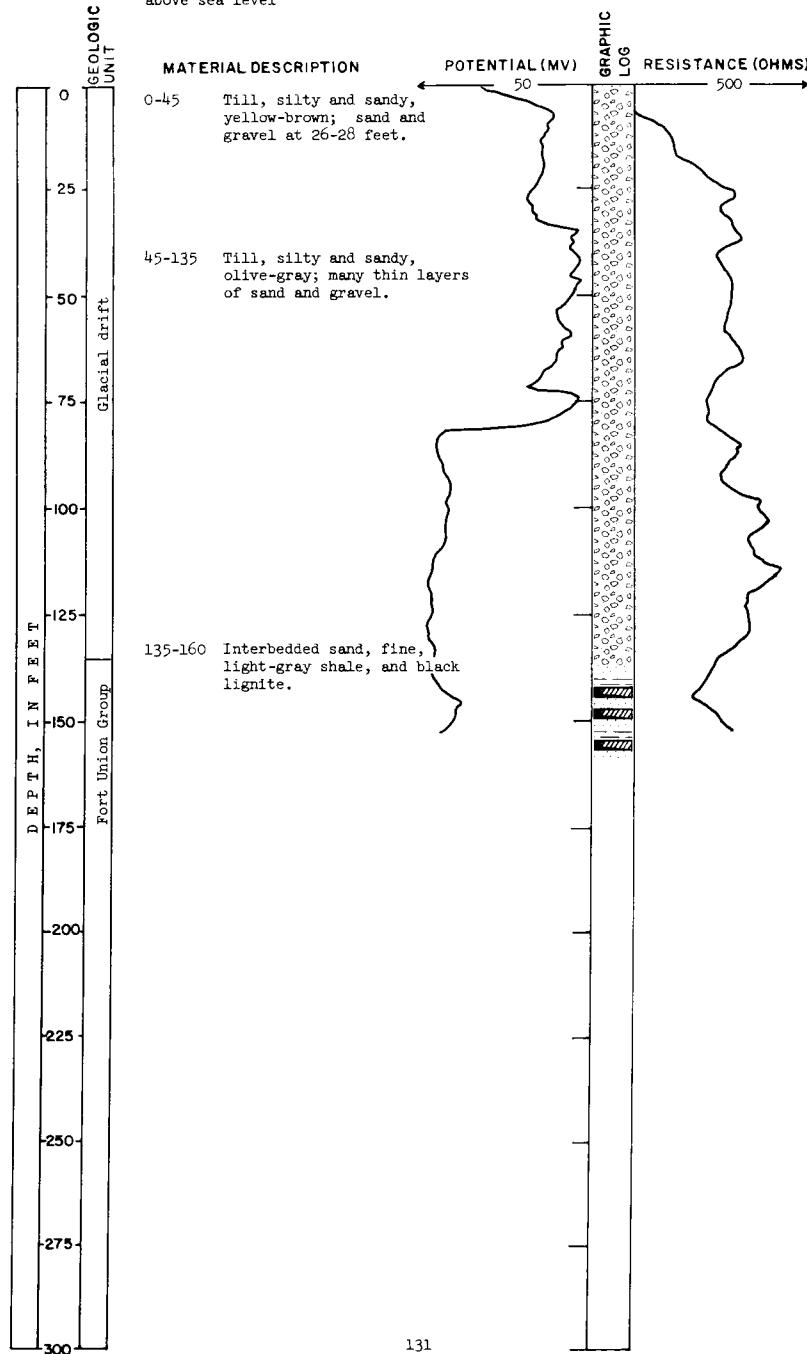
DEPTH: 105 feet



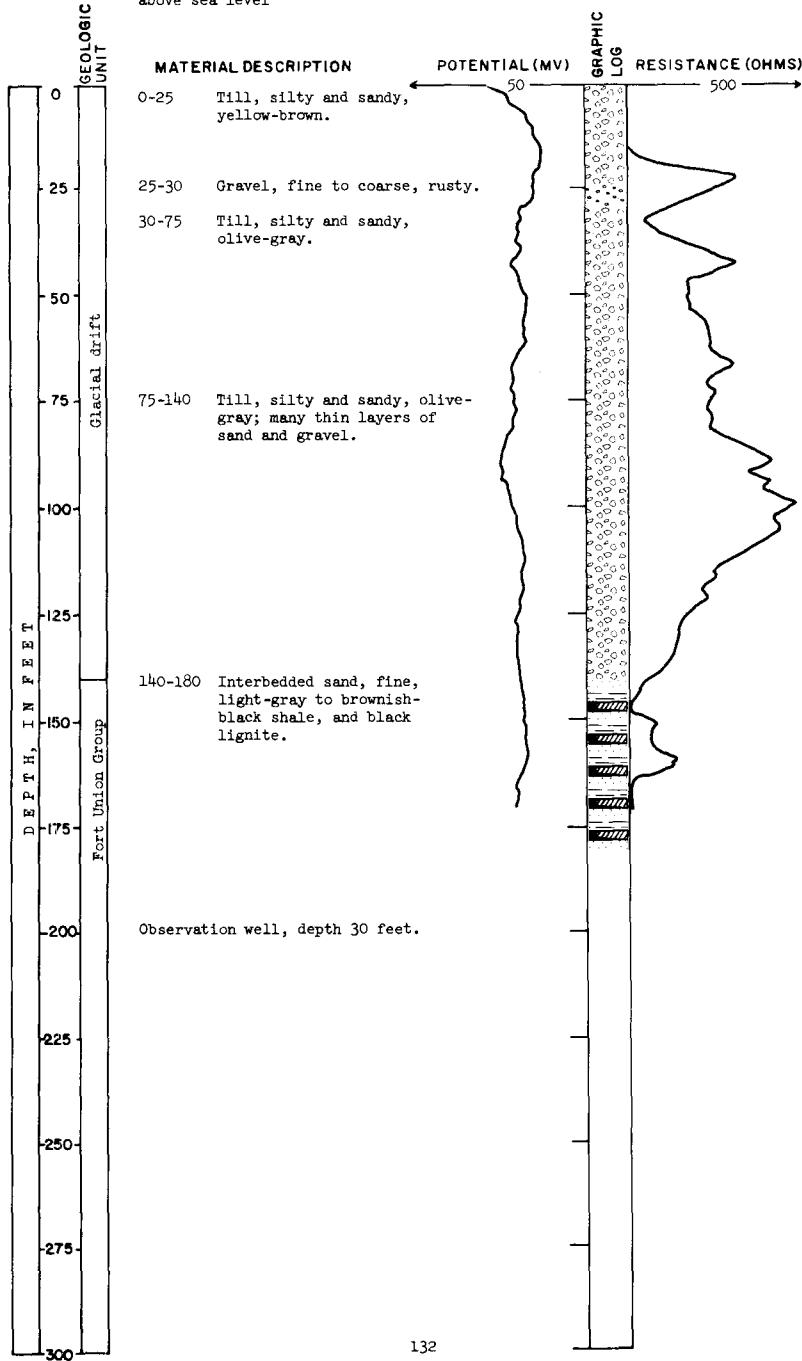
Ward County
LOCATION: 155-83-1cccd
ELEVATION: 1,703 feet
above sea level

TEST HOLE 3238

DATE DRILLED: July 27, 1965
DEPTH: 160 feet



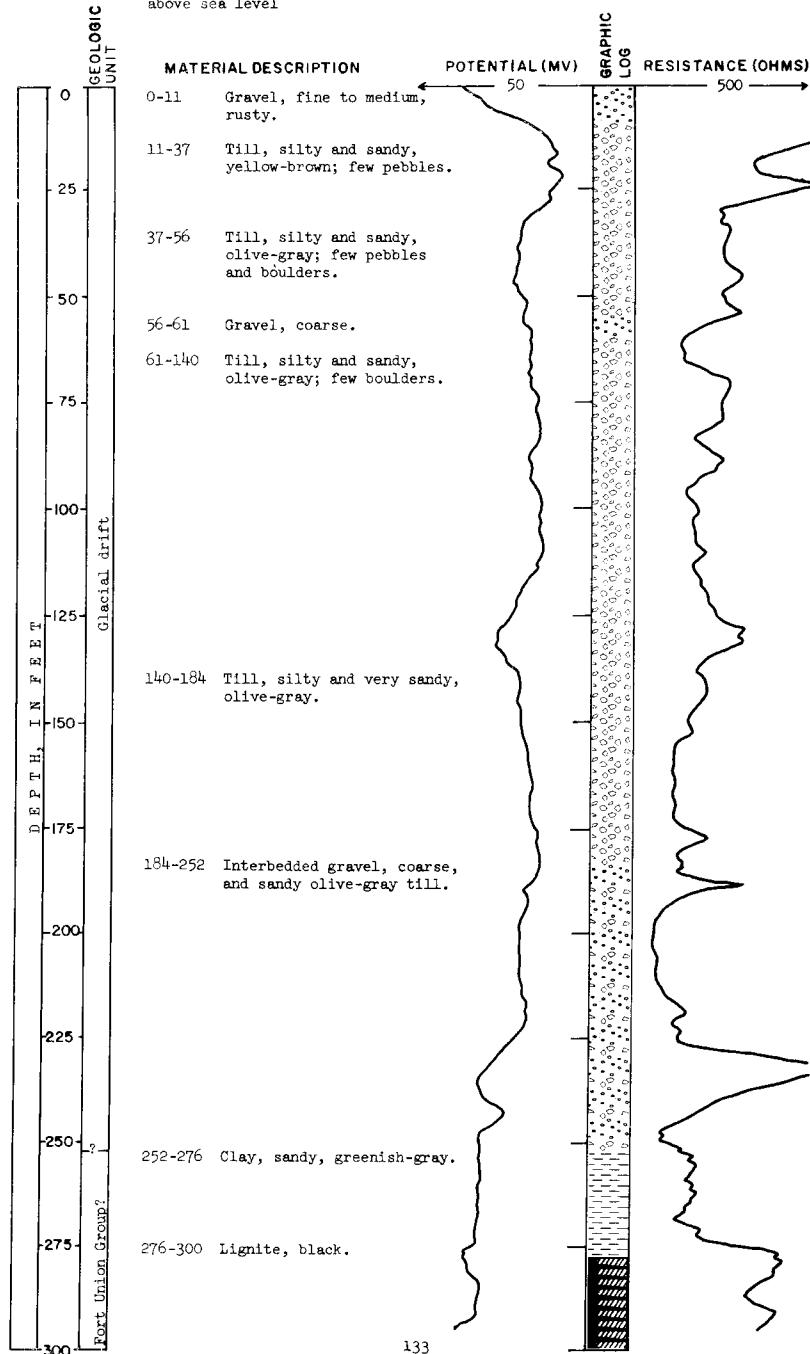
Ward County
LOCATION: 155-83-1ccc
TEST HOLE 3237
ELEVATION: 1,716 feet
above sea level
DATE DRILLED: July 26, 1965
DEPTH: 180 feet



LOCATION: Ward County
155-83-3adda
ELEVATION: 1,747 feet
above sea level

TEST HOLE 3236A

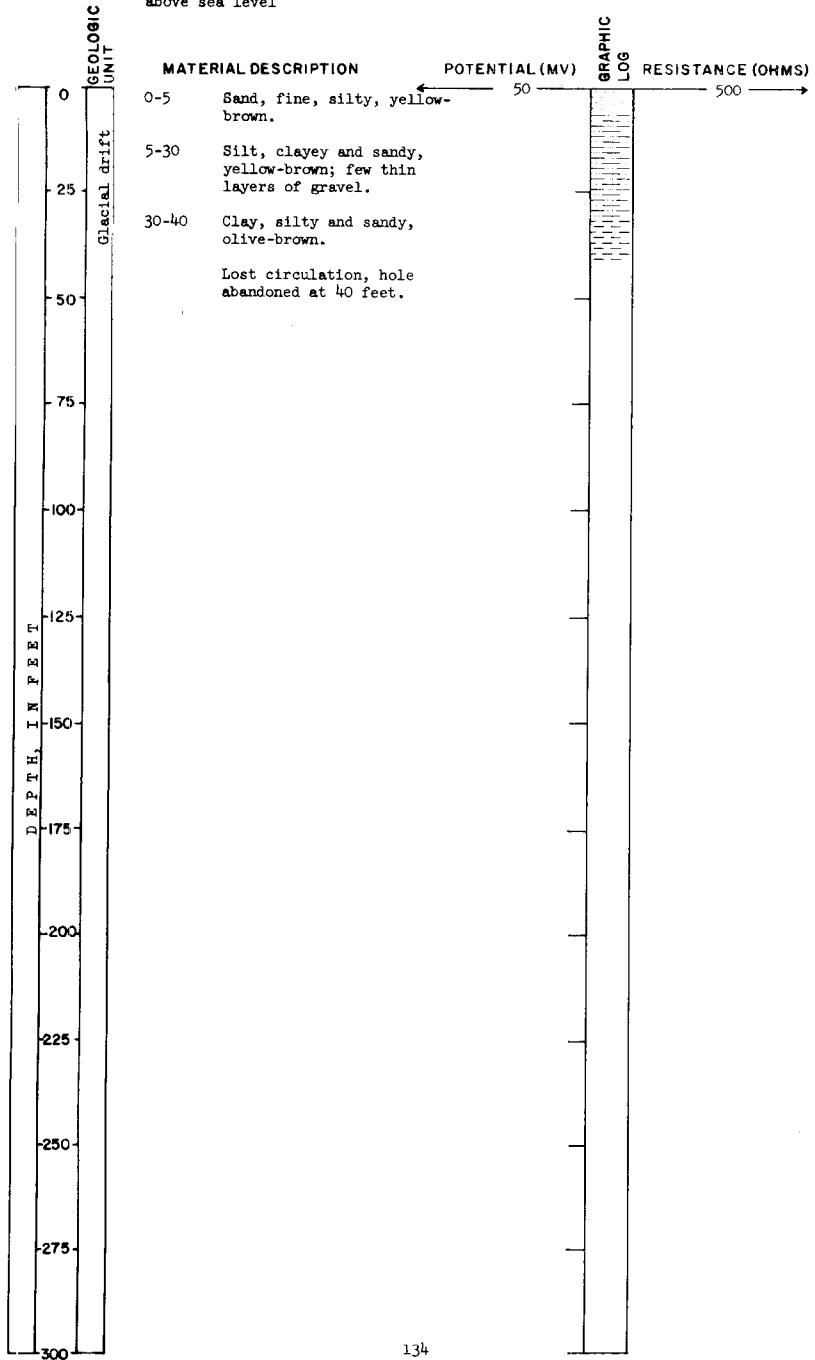
DATE DRILLED: July 23, 1965
DEPTH: 300 feet



LOCATION: Ward County
155-83-3ddd
ELEVATION: 1,733 feet
above sea level

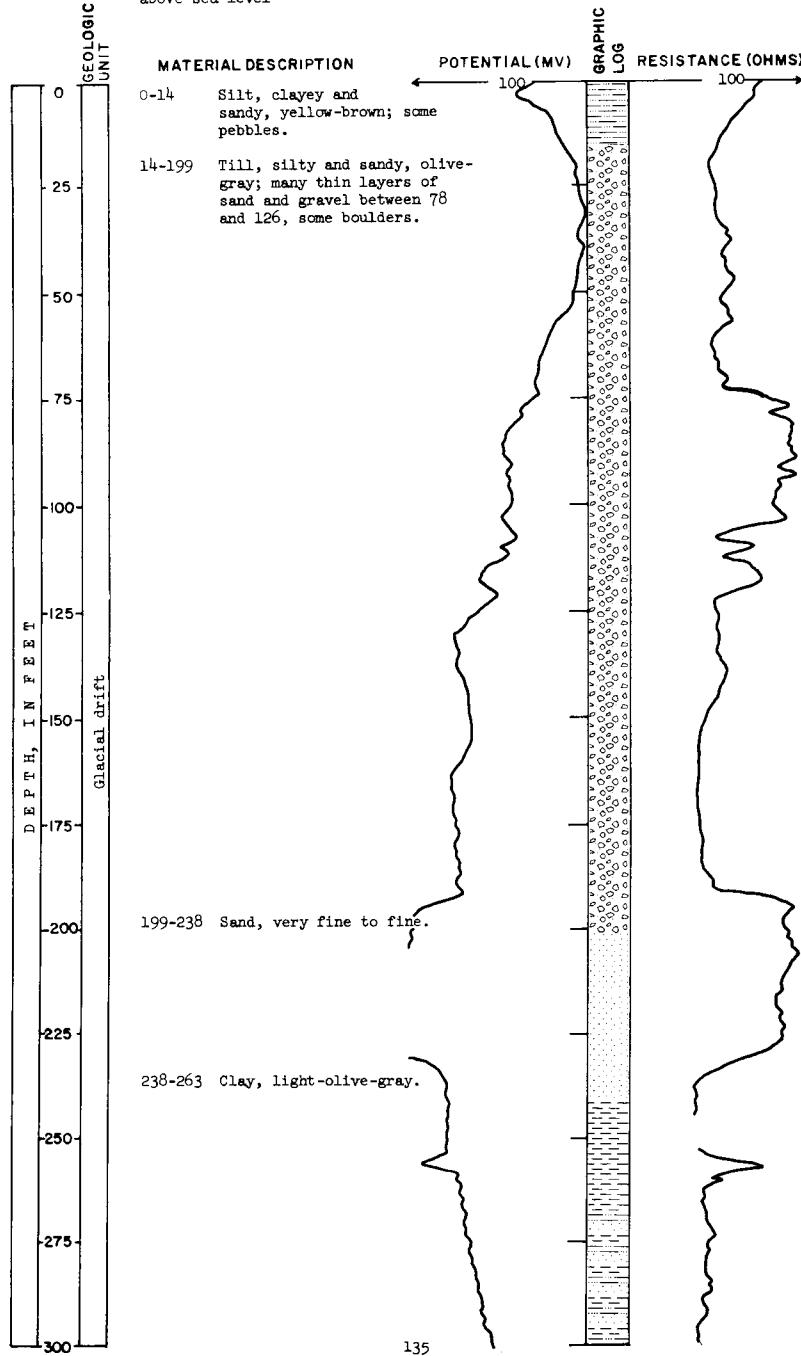
TEST HOLE 3236

DATE DRILLED: July 23, 1965
DEPTH: 40 feet



TEST HOLE 3327
LOCATION: Ward County
155-83-4aaa
ELEVATION: 1,748 feet
above sea level

DATE DRILLED: June 1, 1966
DEPTH: 465 feet



LOCATION: Ward County
155-83-4aaa

TEST HOLE 3327
(Continued)

DATE DRILLED: June 1, 1966

ELEVATION: 1,748 feet
above sea level

DEPTH: 465 feet

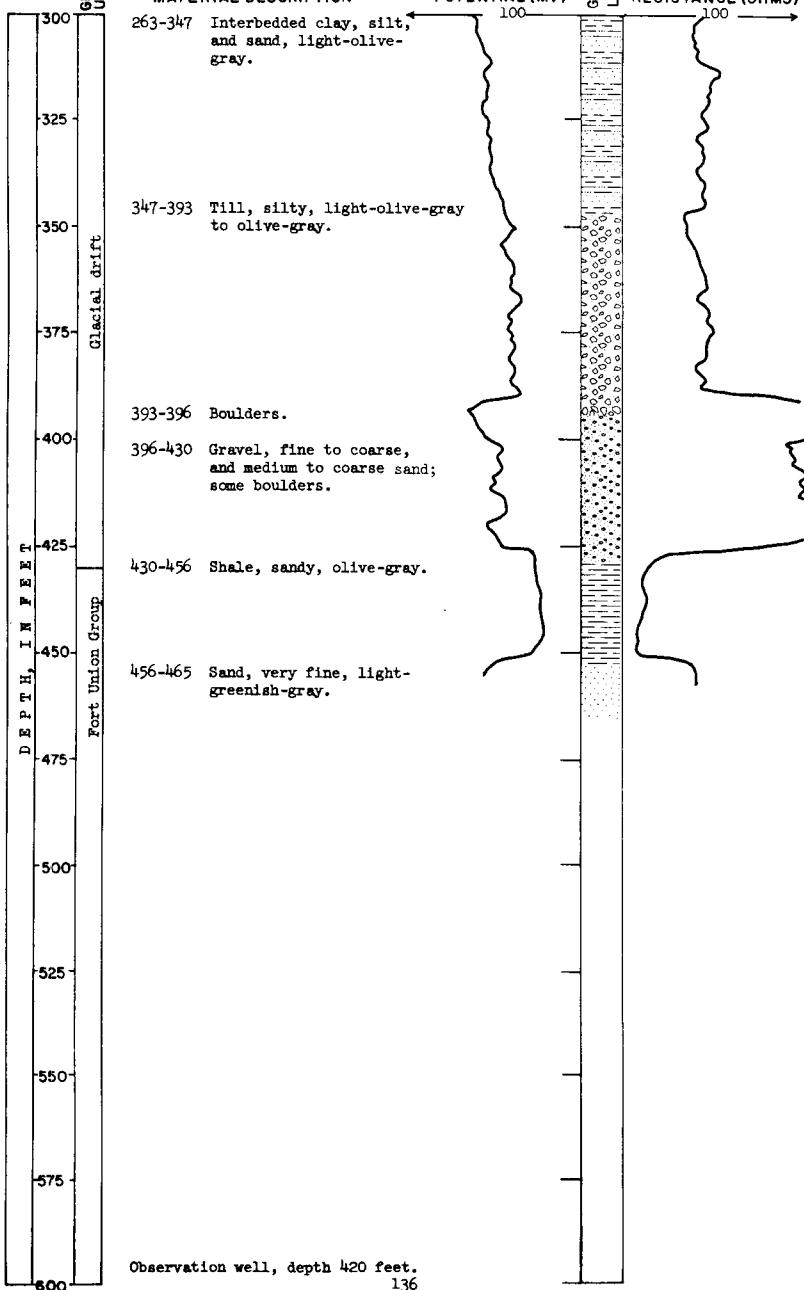
GEOLOGIC
UNIT

MATERIAL DESCRIPTION

POTENTIAL (MV)

GRAPHIC
LOG

RESISTANCE (OHMS)



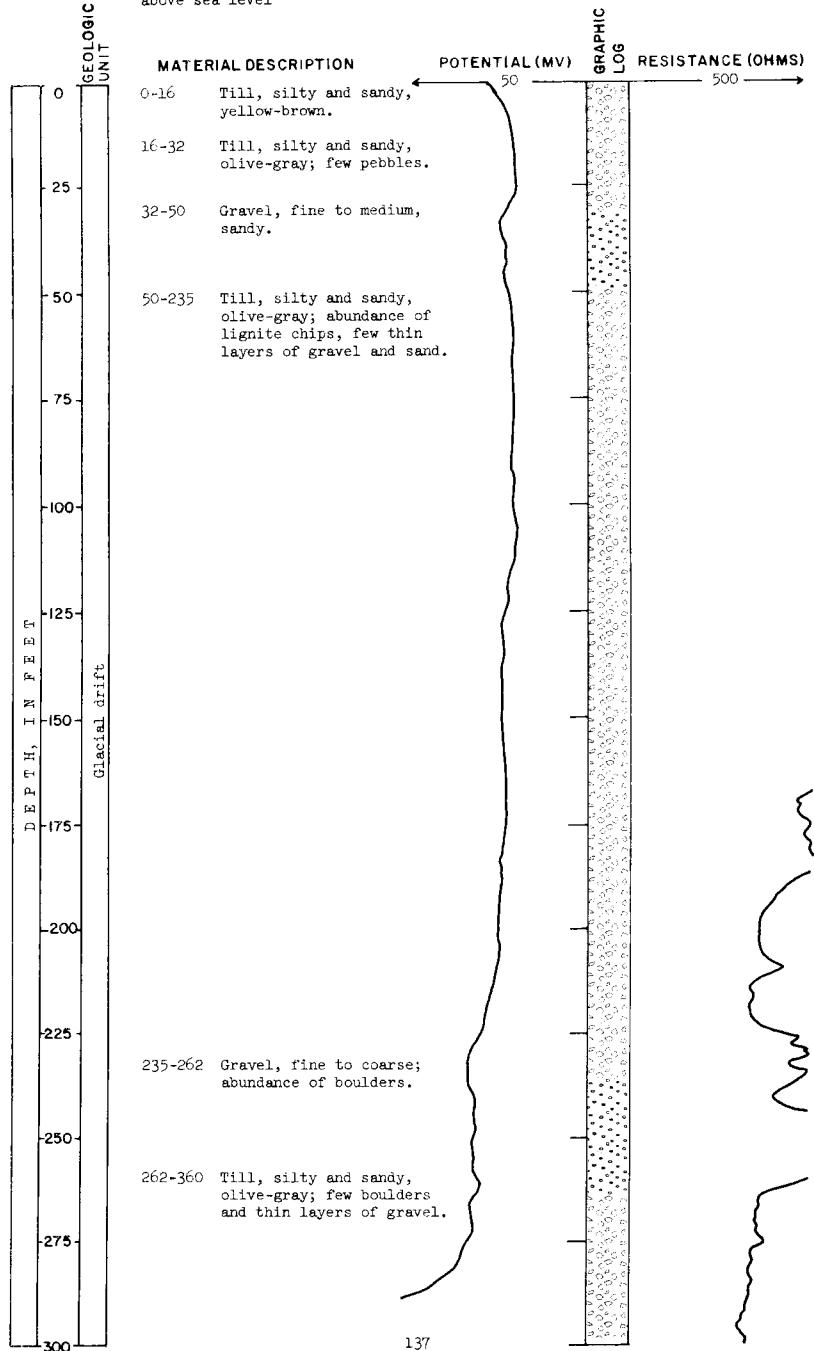
TEST HOLE 2367

LOCATION: Ward County
155-83-9aaa

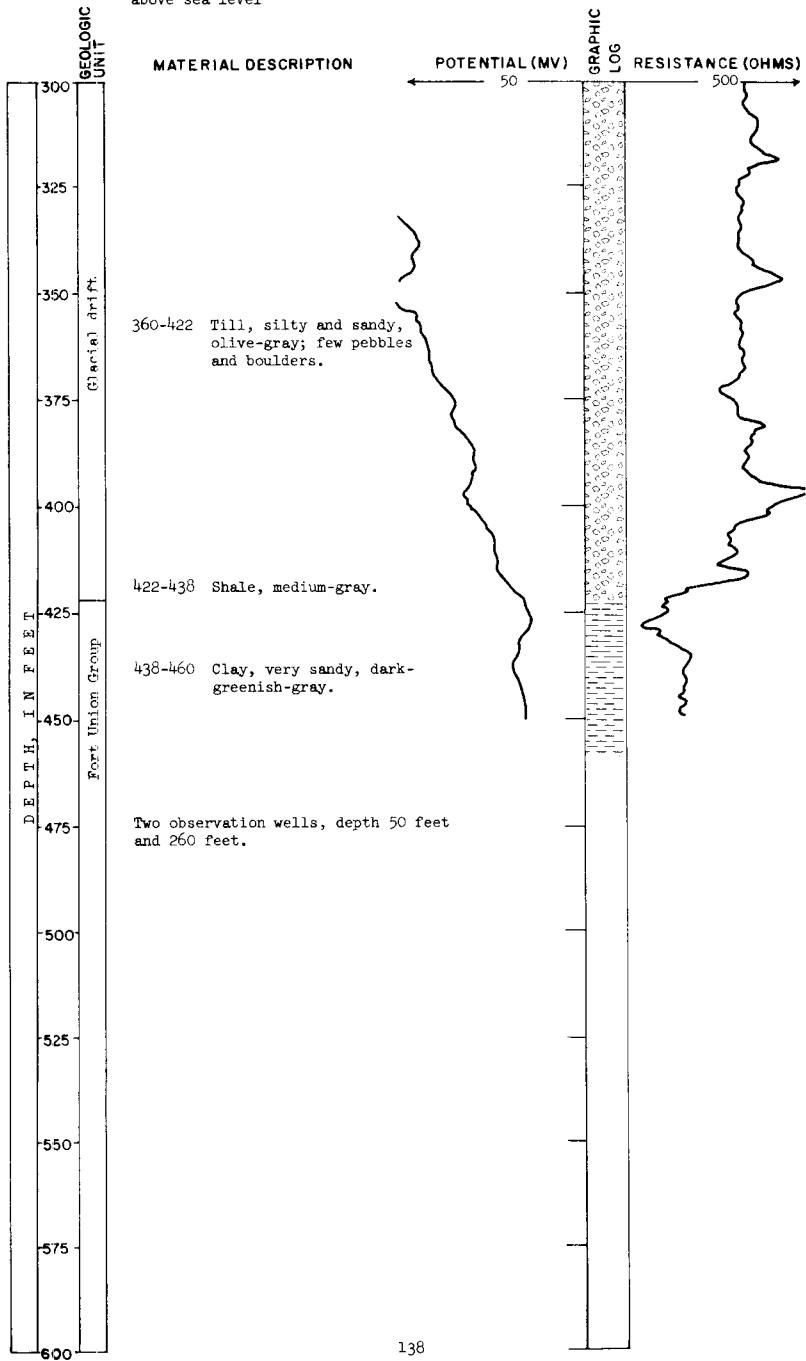
ELEVATION: 1,793 feet
above sea level

DATE DRILLED: July 16, 1965

DEPTH: 460 feet



Ward County
LOCATION: 155-83-9aaa TEST HOLE (Continued) 2367
ELEVATION: 1,793 feet DATE DRILLED: July 16, 1965
above sea level DEPTH: 460 feet



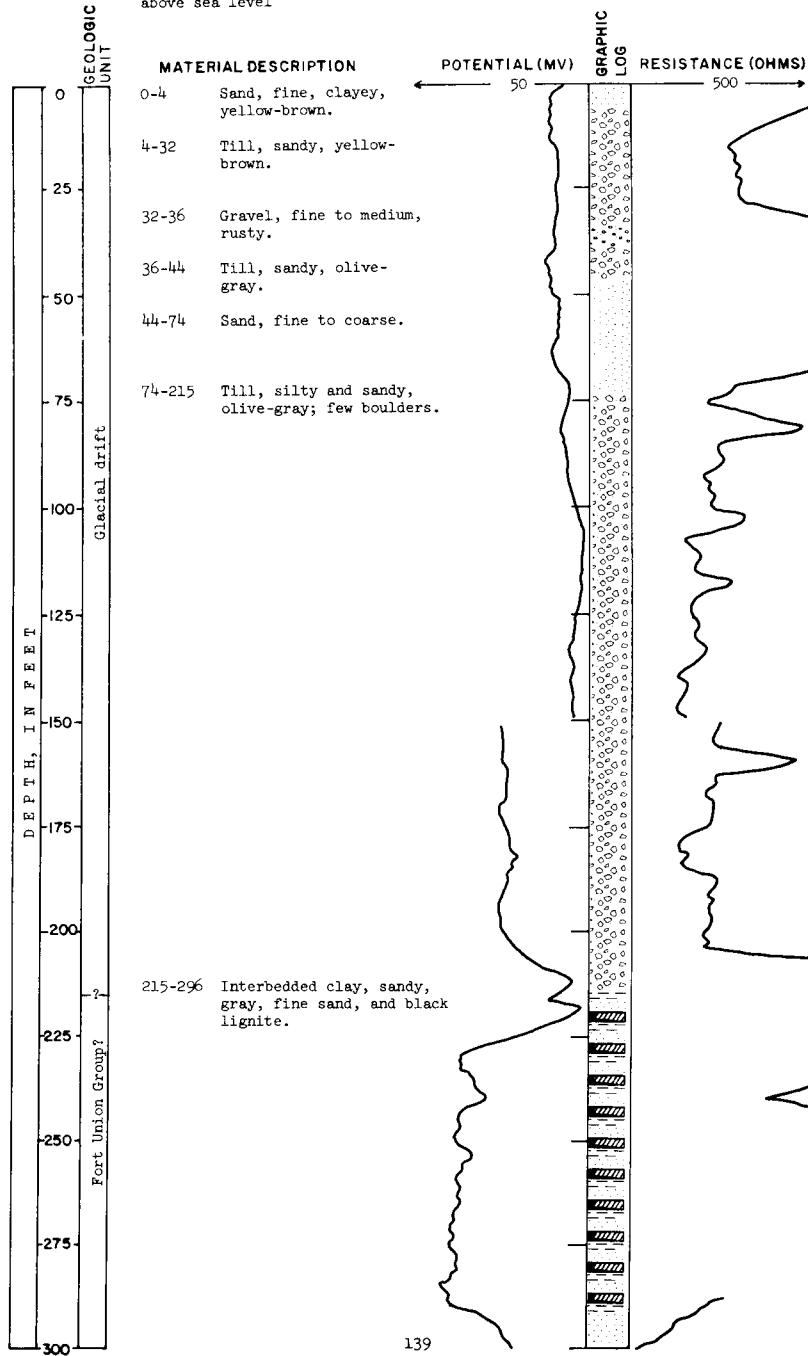
LOCATION: Ward County
155-83-11abb

TEST HOLE 3239

ELEVATION: 1,739 feet
above sea level

DATE DRILLED: July 27, 1965

DEPTH: 320 feet



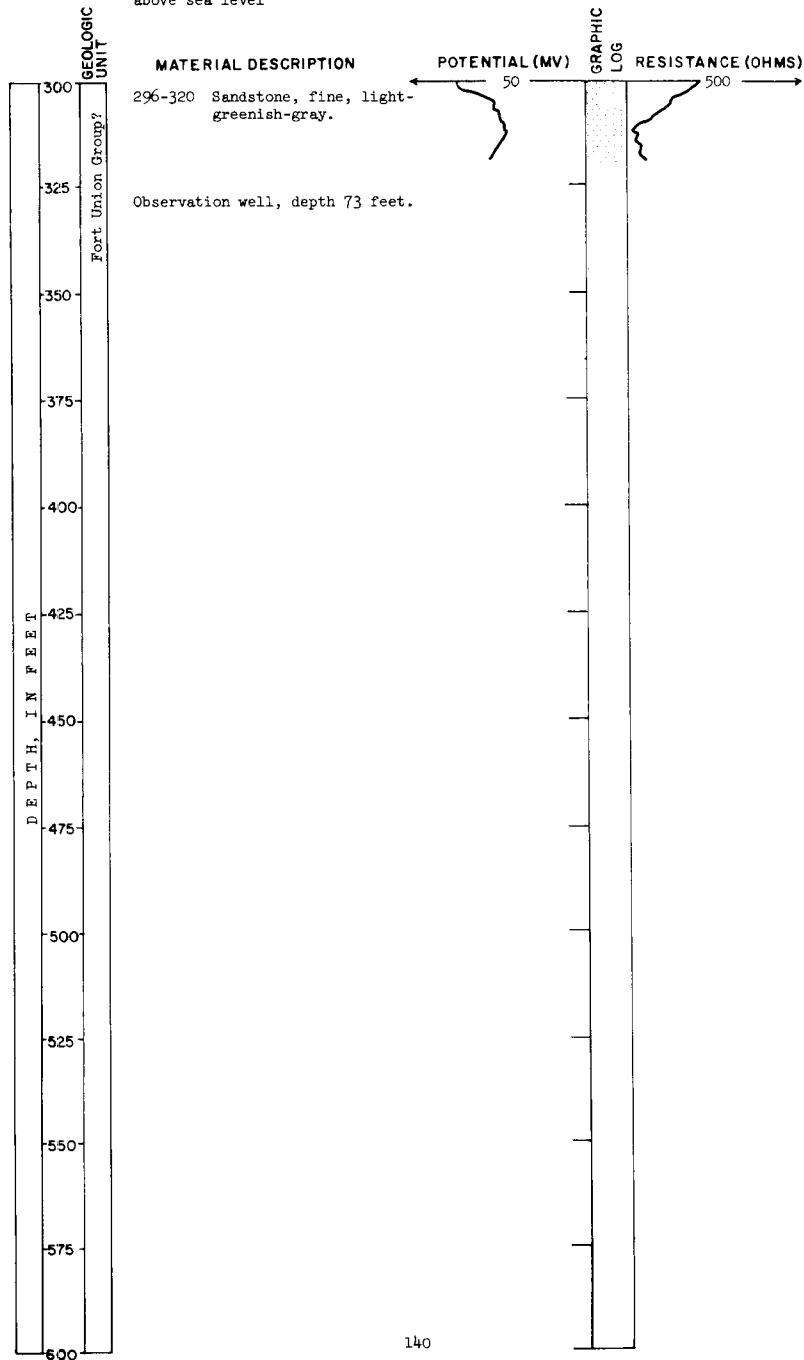
LOCATION: Ward County
155-83-11ab

TEST HOLE 3239
(Continued)

DATE DRILLED: July 27, 1965

ELEVATION: 1,739 feet
above sea level

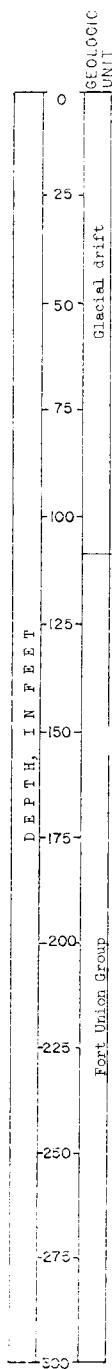
DEPTH: 320 feet



LOCATION: Ward County
155-83-18ab
ELEVATION: 1,570 feet
above sea level

TEST HOLE
U.S. Geol. Survey^{1/}

DATE DRILLED: 1947
DEPTH: 500 feet



MATERIAL DESCRIPTION

0-108 Sand and gravel; water.

108-120 Lignite and lignitic shale.

120-160 Shale, blue.

160-166 Lignite.

166-175 Shale, gray.

175-178 Lignite.

178-243 Shale, gray, and sand; water.

243-244 Shale, hard, black.

244-246 Shale, sandy, black; water
and gas under pressure.

246-280 Shale, gray.

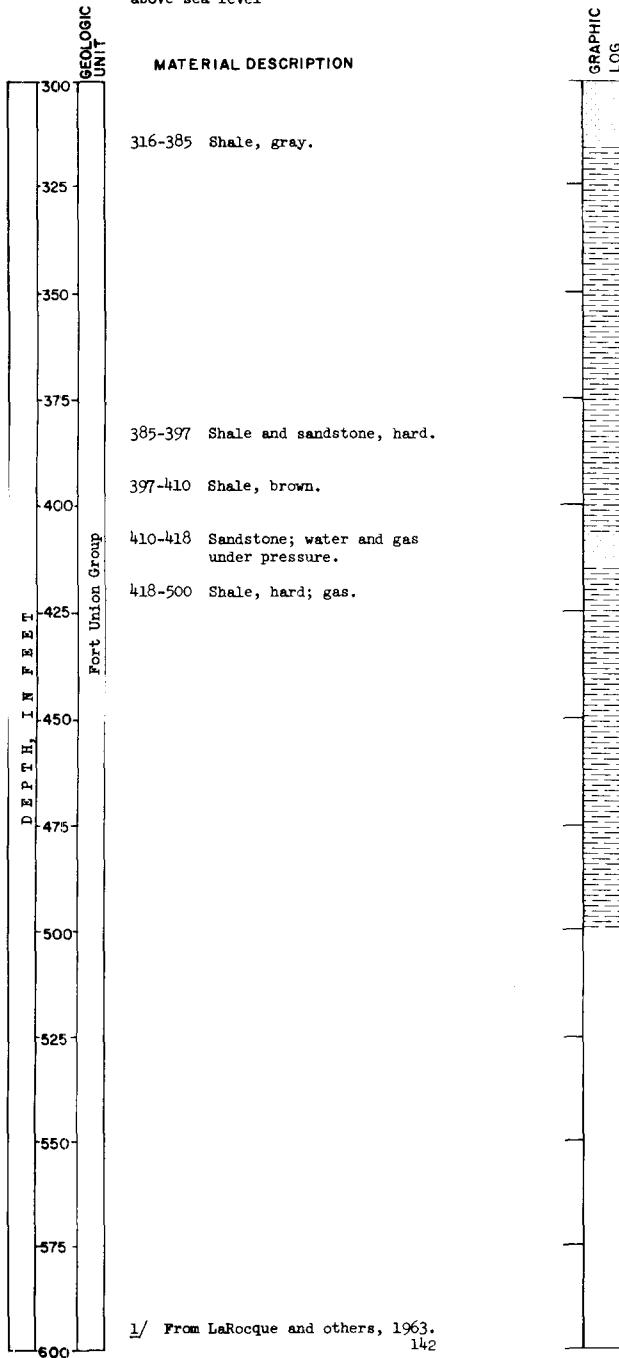
280-290 Sandstone and shale.

290-316 Sandstone; water.

GRAPHIC LOG



LOCATION: Ward County 155-83-18ab TEST HOLE 1/
U.S. Geol. Survey (Continued)
ELEVATION: 1,570 feet DATE DRILLED: 1947
above sea level DEPTH: 500 feet



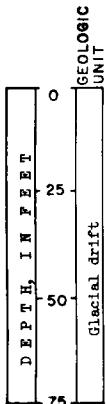
LOCATION: Ward County
155-84-1bcd

TEST HOLE 1405

ELEVATION: 1,578 feet
above sea level

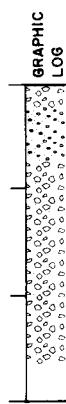
DATE DRILLED: 1958

DEPTH: 63 feet



MATERIAL DESCRIPTION

- 0-4 Till, sandy, yellow-brown.
- 4-16 Gravel, fine to coarse.
- 16-21 Till, yellow-gray.
- 21-47 Till, sandy, yellow-gray.
- 47-63 Till, sandy, greenish-gray to brown.



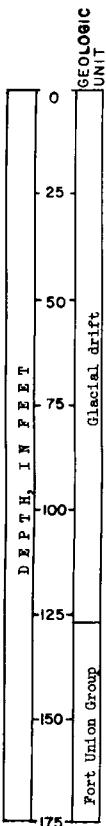
LOCATION: Ward County
155-84-1bcd

TEST HOLE 1404

ELEVATION: 1,578 feet
above sea level

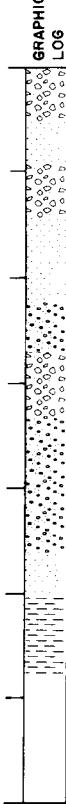
DATE DRILLED: 1958

DEPTH: 147 feet



MATERIAL DESCRIPTION

- 0-12 Till, sandy, brown.
- 12-23 Sand, medium to coarse.
- 23-35 Till, silty, green.
- 35-56 Sand, fine to medium.
- 56-68 Gravel, fine, and coarse sand.
- 68-83 Till, silty, green.
- 83-116 Gravel, fine to medium, and coarse sand.
- 116-127 Sand, fine to coarse.
- 127-147 Clay, sandy, gray.



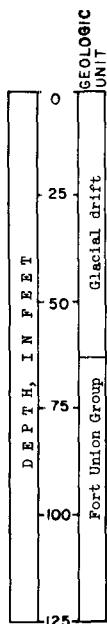
Ward County TEST HOLE 1403

LOCATION: 155-84-1bdd1

ELEVATION: 1,574 feet
above sea level

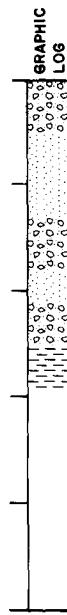
DATE DRILLED: 1958

DEPTH: 73.5 feet



MATERIAL DESCRIPTION

- 0-13 Till, yellowish-gray, and fine gravel.
- 13-31 Sand, fine to medium.
- 31-34 Sand, coarse.
- 34-46 Till, olive-gray; abundance of lignite chips, thin layers of sand.
- 46-52 Sand, coarse; abundance of lignite chips.
- 52-63 Till, sandy and gravelly, olive-gray.
- 63-73.5 Clay, silty, gray.



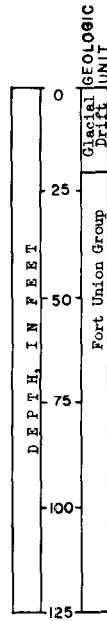
TEST HOLE 3329

Ward County
155-84-1bdd2

ELEVATION: 1,565 feet
above sea level

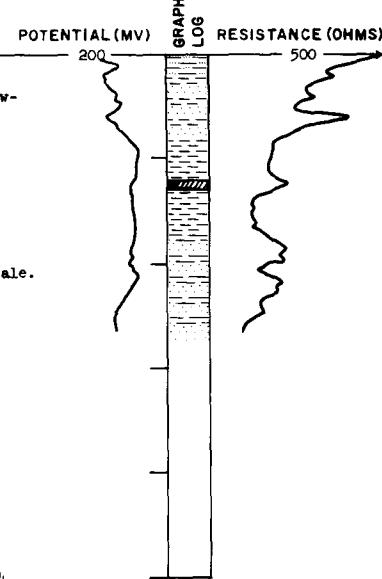
DATE DRILLED: June 3, 1966

DEPTH: 70 feet



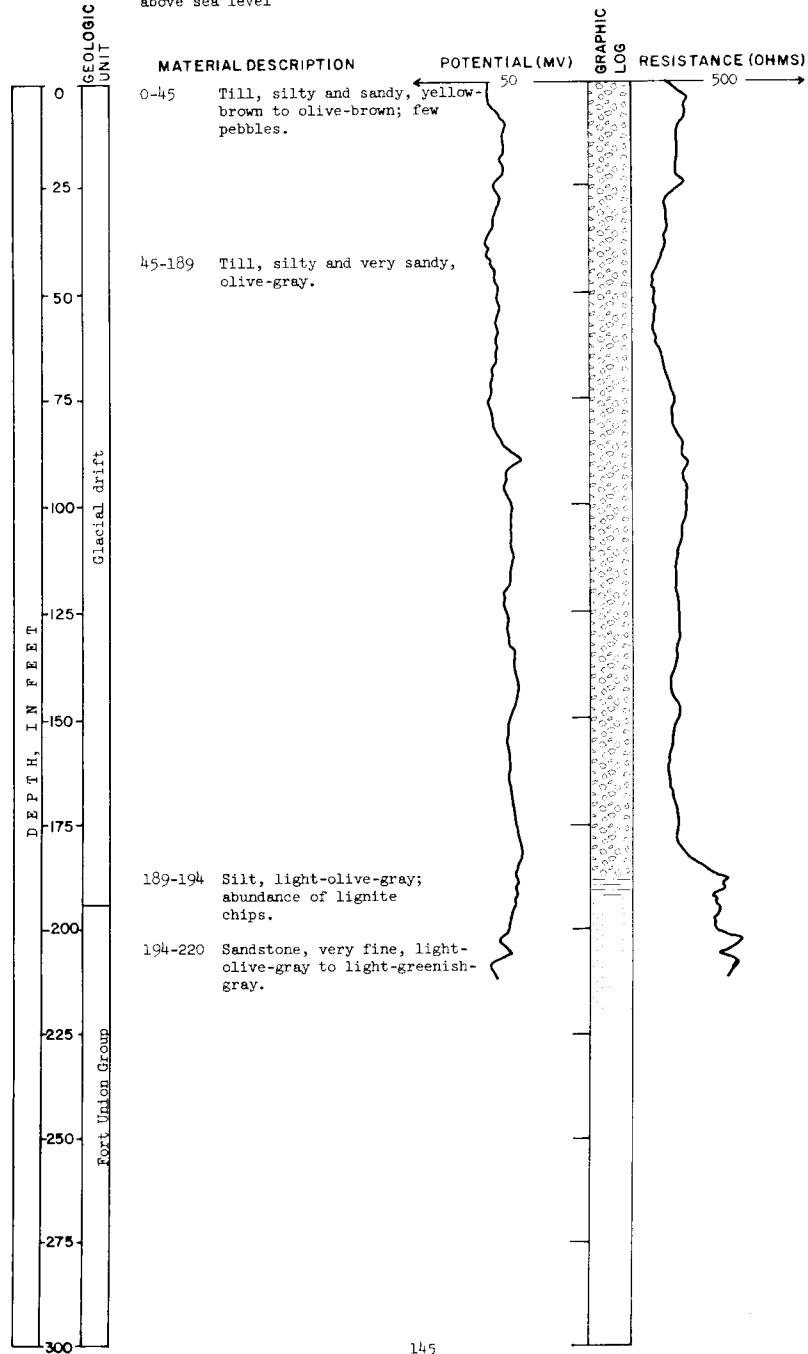
MATERIAL DESCRIPTION

- 0-5 Silt, yellow-brown.
- 5-21 Interbedded clay, yellow-brown, and fine sand.
- 21-31 Clay, black.
- 31-34 Lignite, black.
- 34-45 Clay, silty, black.
- 45-70 Interbedded sand, fine, and light-olive-gray shale.



Ward County
LOCATION: 155-85-11cdd
ELEVATION: 1,941 feet
above sea level

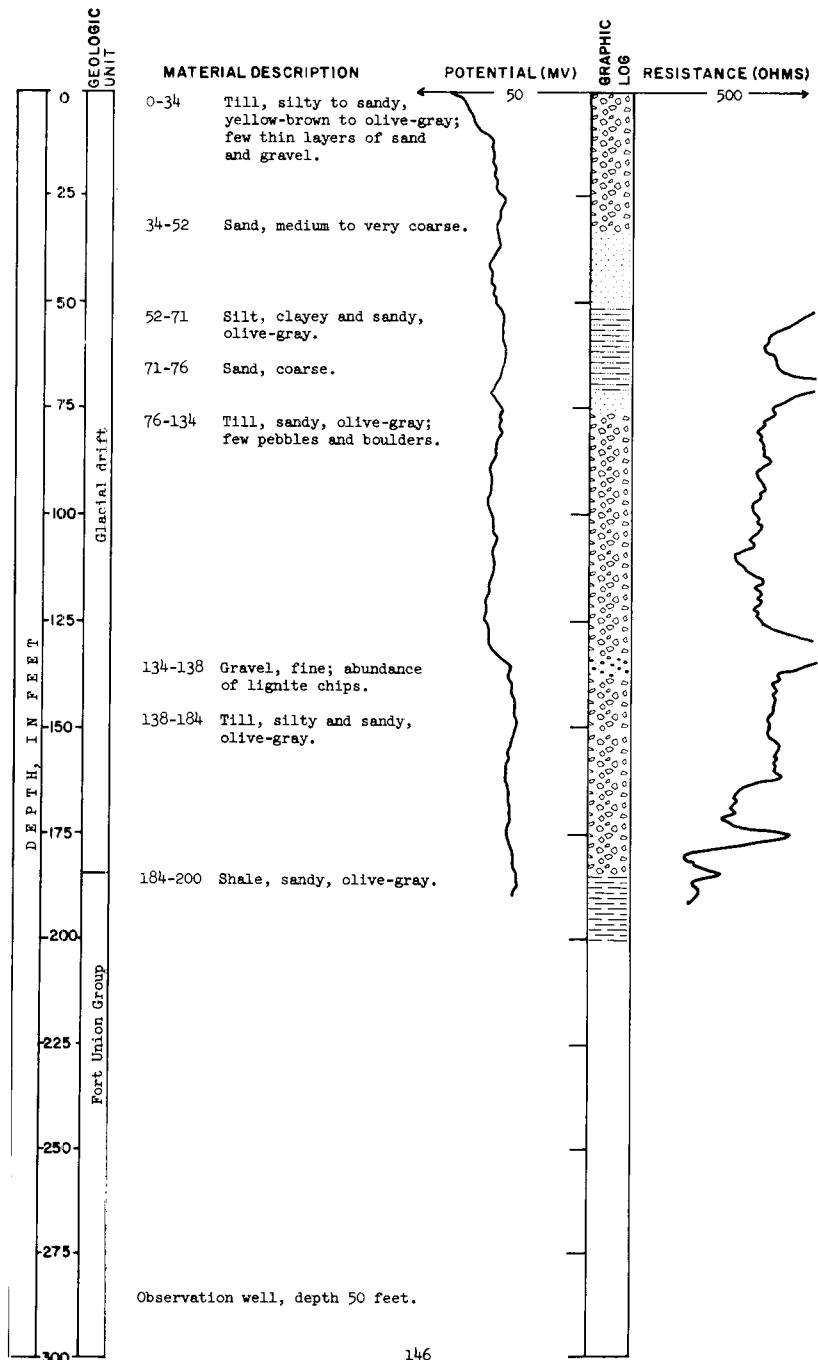
TEST HOLE 3220
DATE DRILLED: June 4, 1965
DEPTH: 220 feet



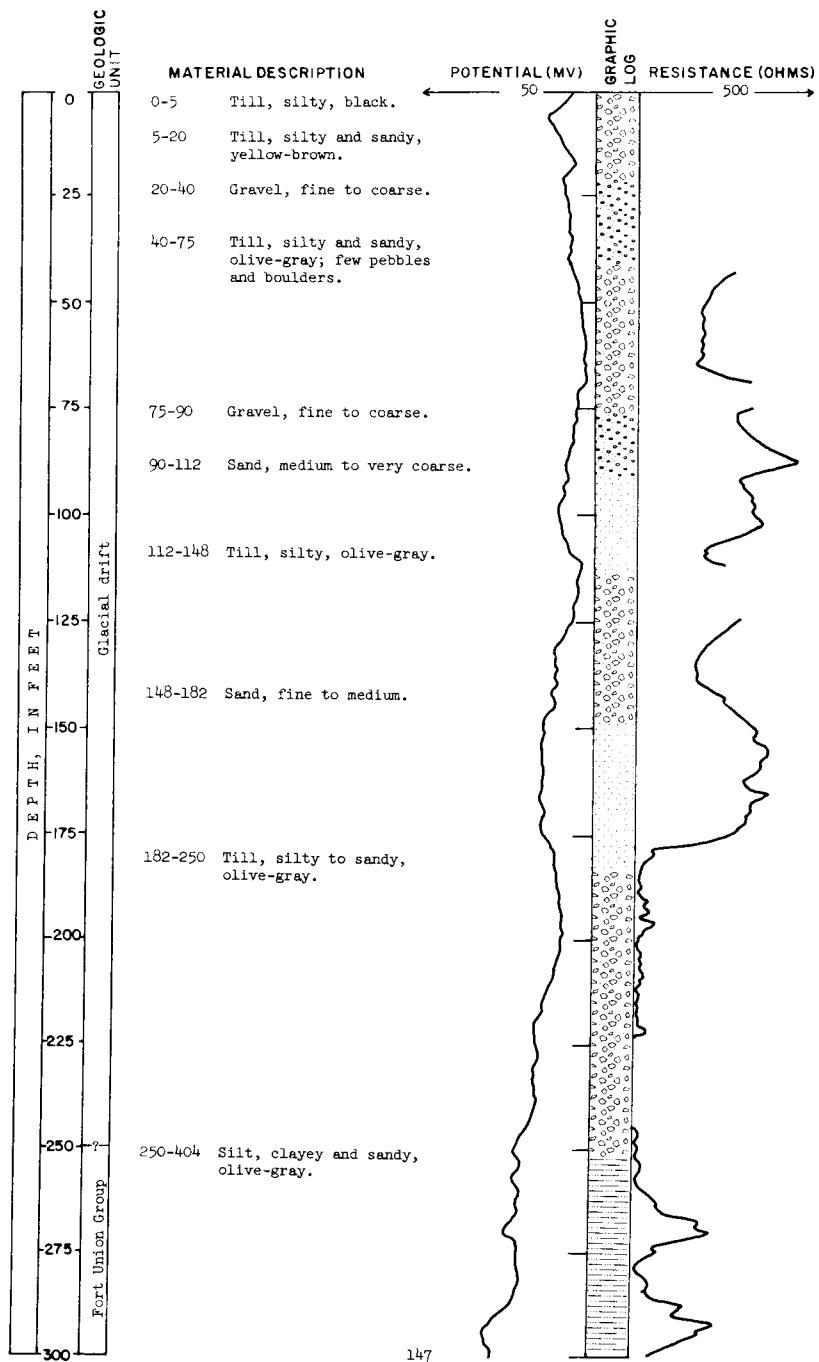
LOCATION: Ward County
155-86-24bbb
ELEVATION:

TEST HOLE 3222

DATE DRILLED: June 5, 1965
DEPTH: 200 feet



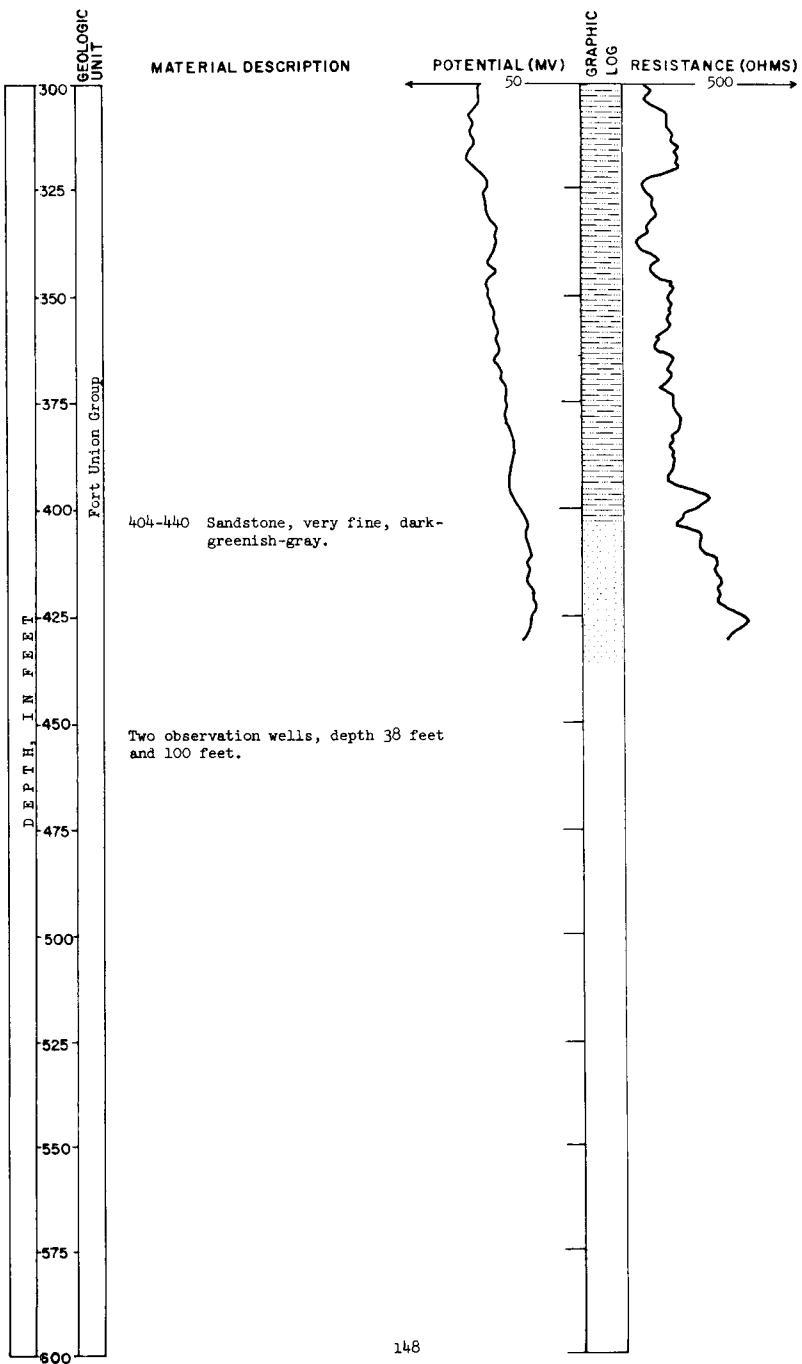
LOCATION: Ward County
155-87-17bab TEST HOLE 3224
ELEVATION: DATE DRILLED: June 7, 1965
DEPTH: 440 feet



Ward County
LOCATION: 155-87-17bab
ELEVATION:

TEST HOLE
(Continued) 3224

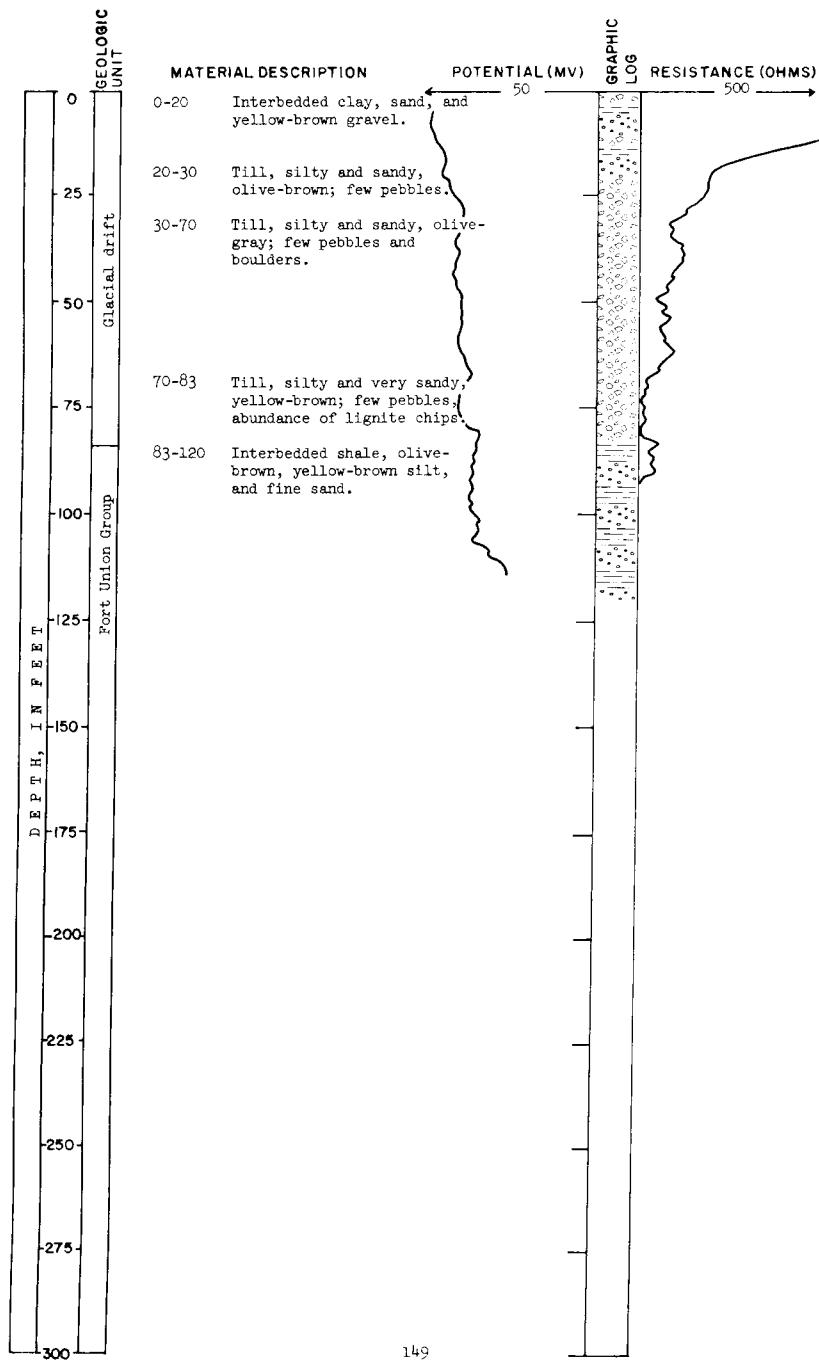
DATE DRILLED: June 7, 1965
DEPTH: 440 feet



Ward County
LOCATION: 155-87-28ccc
ELEVATION:

TEST HOLE 3223

DATE DRILLED: June 7, 1965
DEPTH: 120 feet



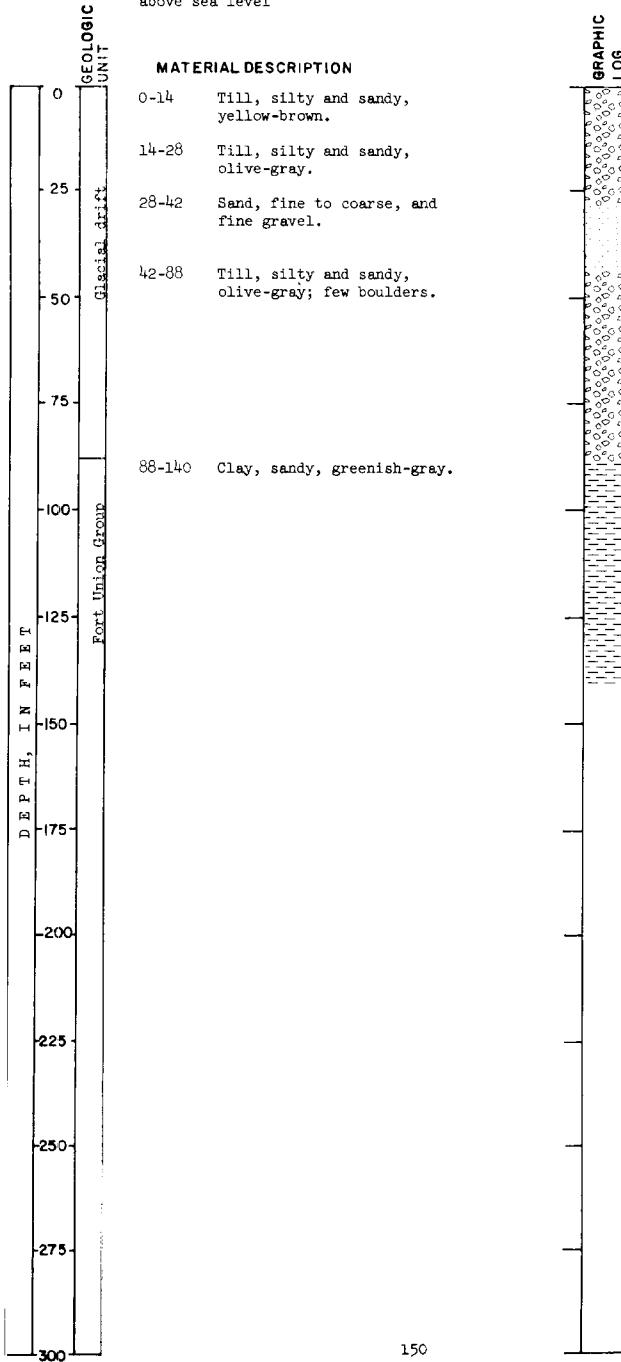
LOCATION: Ward County
156-81-5bbb

TEST HOLE 2365

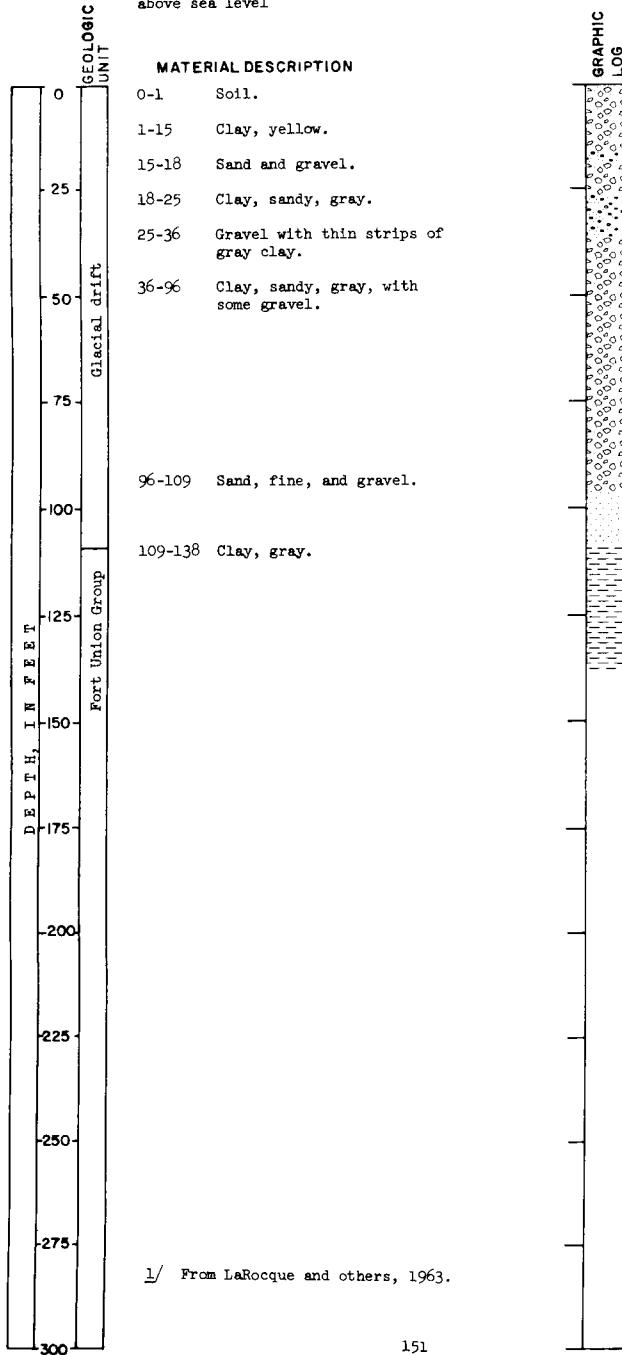
ELEVATION: 1,555 feet
above sea level

DATE DRILLED: July 15, 1965

DEPTH: 140 feet



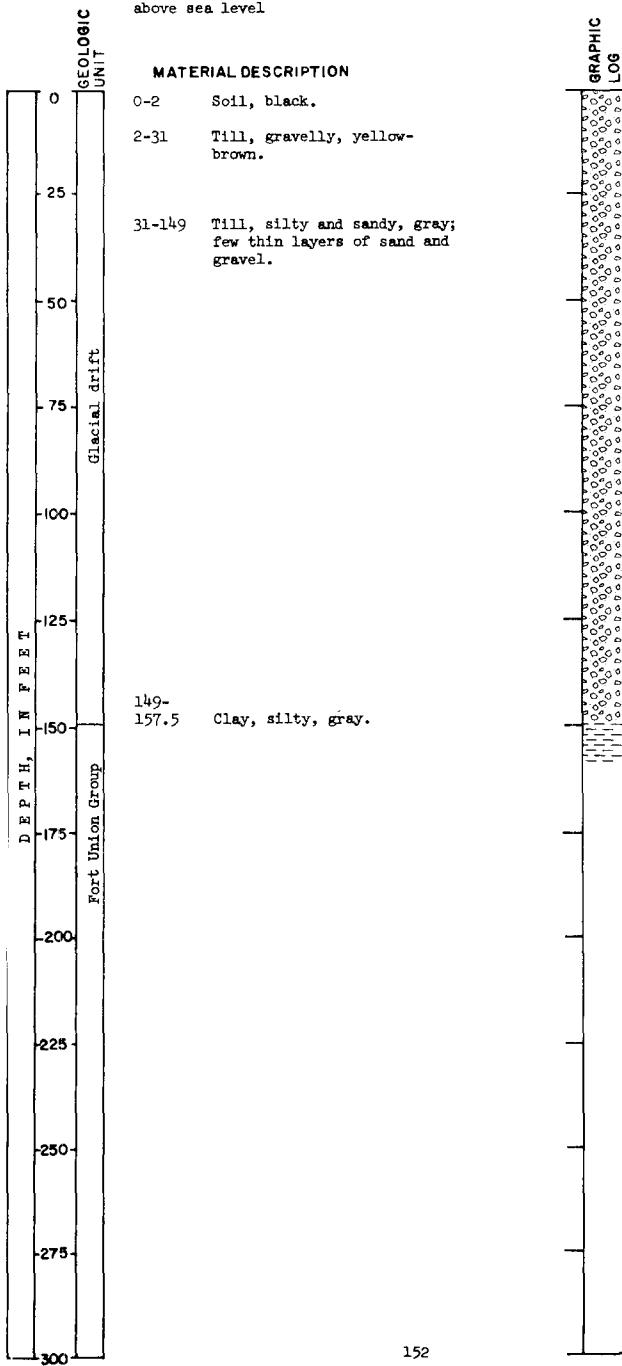
LOCATION: Ward County
156-81-17ccc TEST HOLE
U.S. Geol. Survey^{1/}
ELEVATION: 1,583 feet DATE DRILLED: August 1, 1947
above sea level DEPTH: 138 feet



LOCATION: Ward County
TEST HOLE 1398
156-82-4aaa

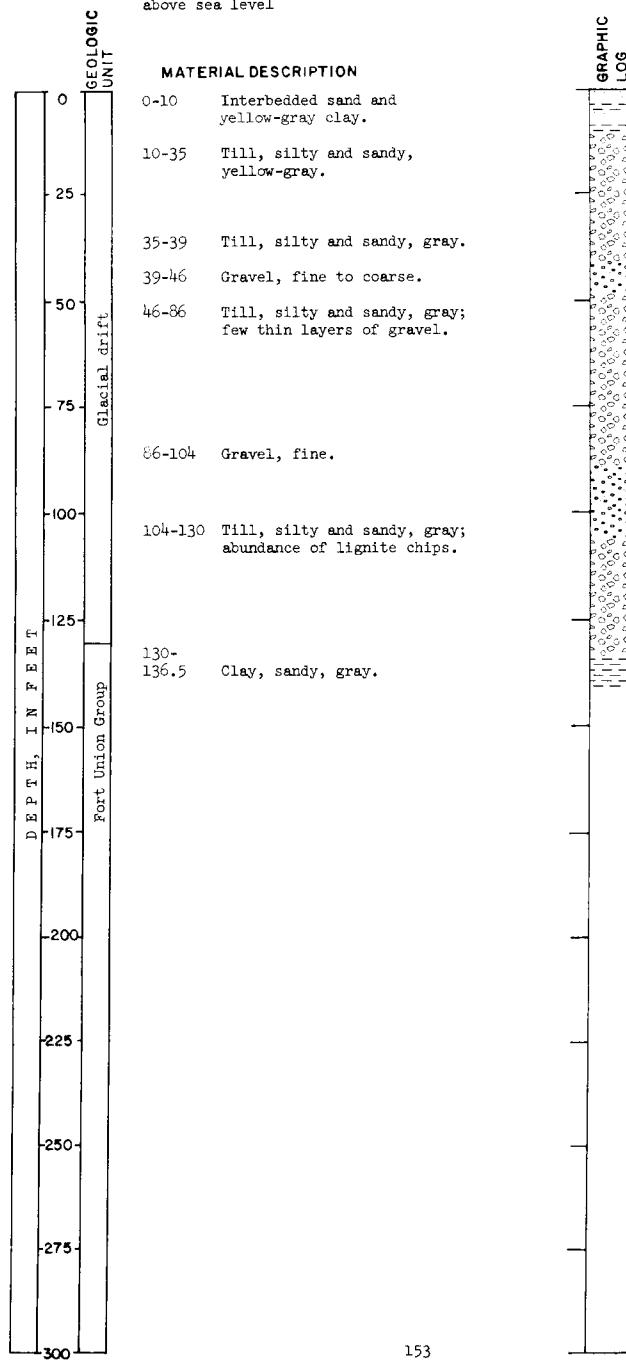
ELEVATION: 1,615 feet
above sea level

DATE DRILLED: 1958
DEPTH: 157.5 feet



LOCATION: Ward County
 156-82-16aaal
 ELEVATION: 1,625 feet
 above sea level

TEST HOLE 1396
 DATE DRILLED: 1958
 DEPTH: 136.5 feet



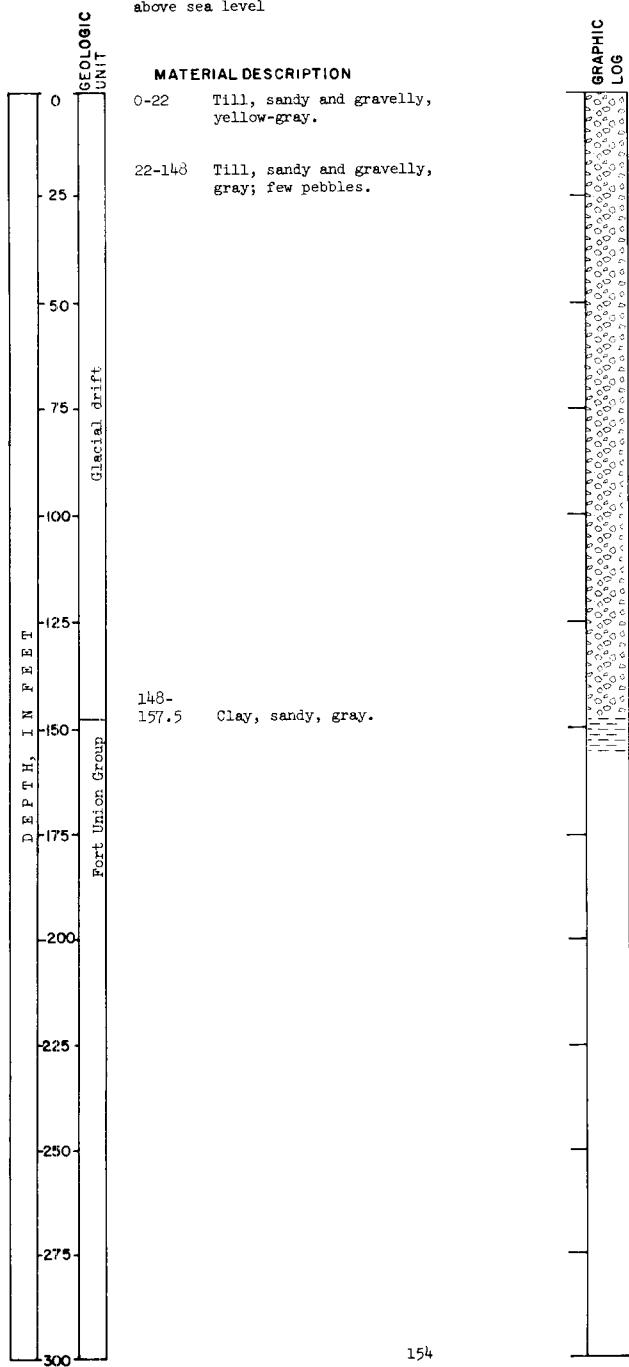
LOCATION: Ward County
156-82-16aa2

TEST HOLE 1397

ELEVATION: 1,625 feet
above sea level

DATE DRILLED: 1958

DEPTH: 157.5 feet



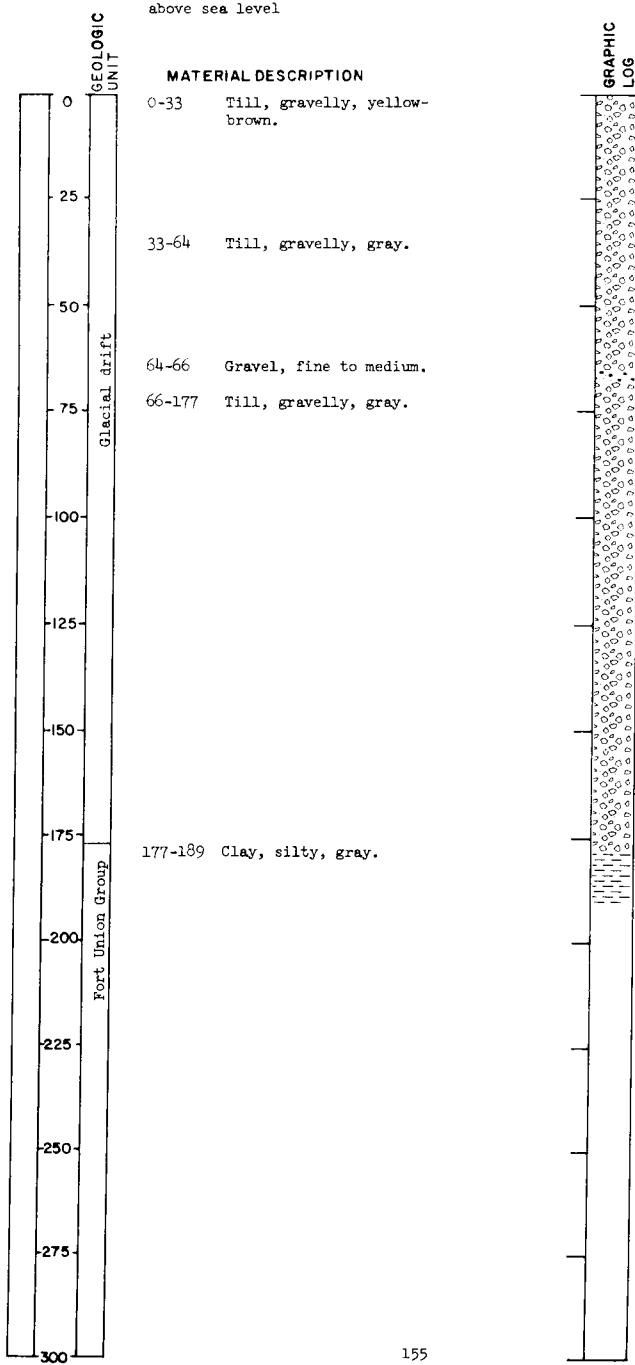
LOCATION: Ward County
156-82-31ddd

TEST HOLE 1400

ELEVATION: 1,623 feet
above sea level

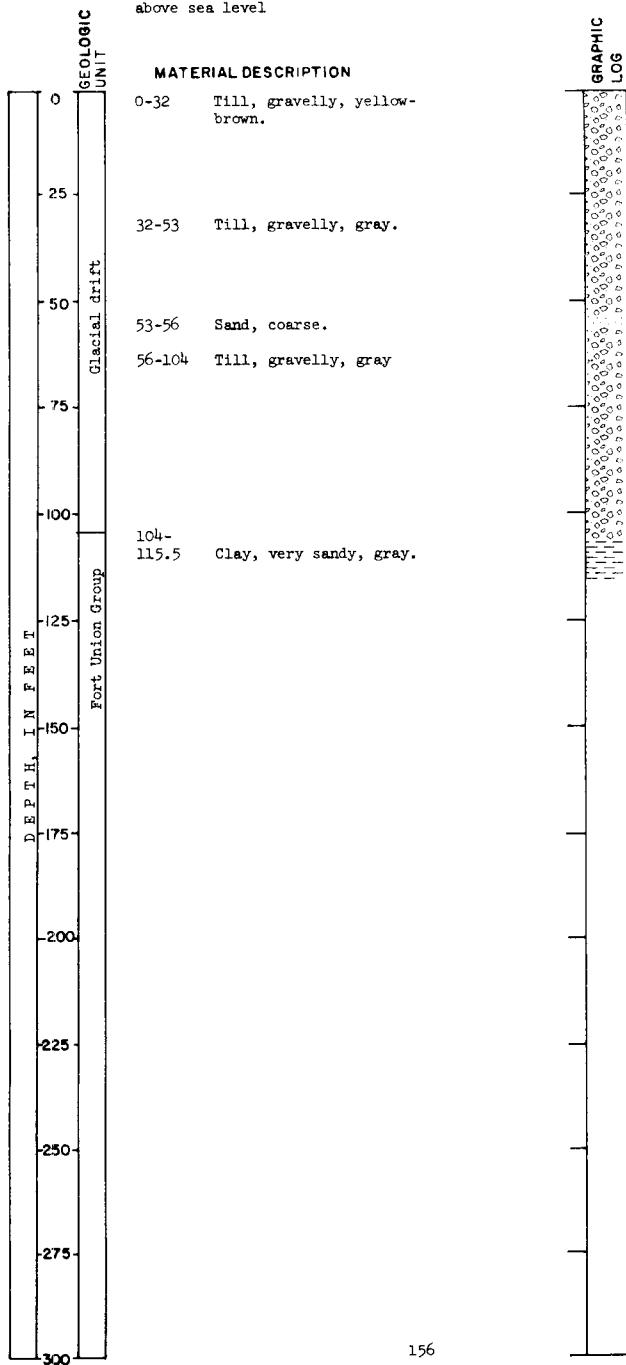
DATE DRILLED: 1958

DEPTH: 189 feet



Ward County
LOCATION: 156-82-34ccc
ELEVATION: 1,636 feet
above sea level

TEST HOLE 1395
DATE DRILLED: 1958
DEPTH: 115.5 feet



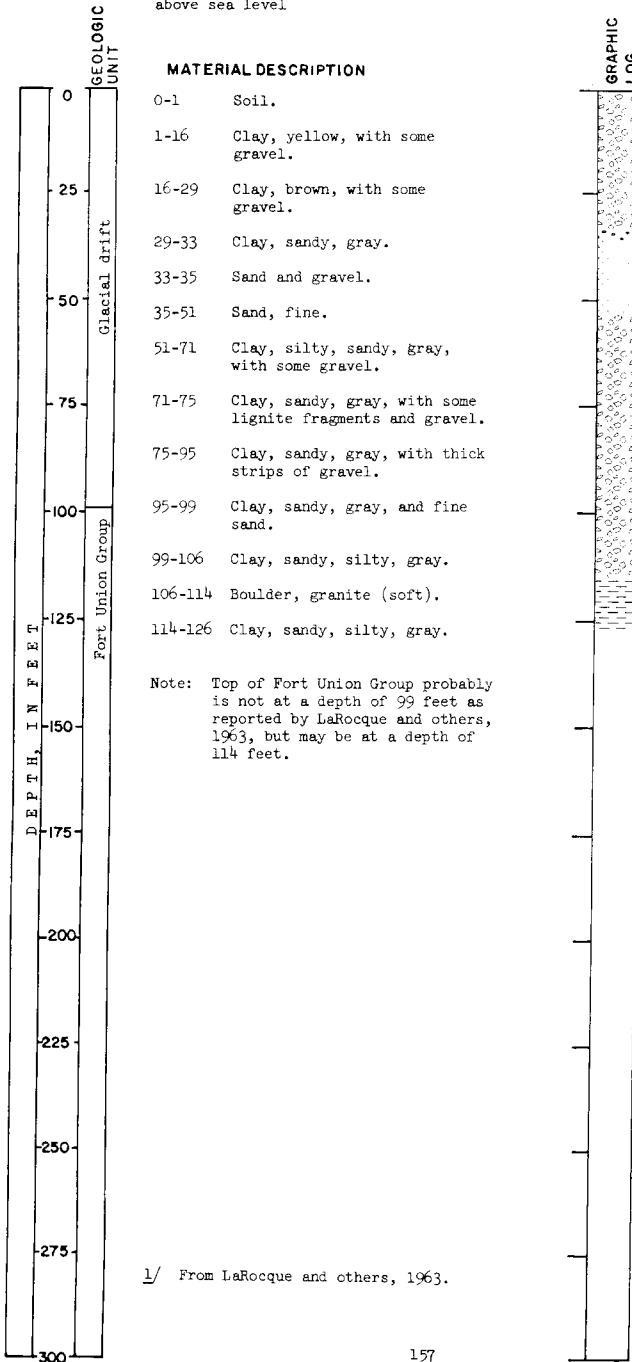
LOCATION: Ward County
156-82-34ddd

TEST HOLE
U.S. Geol. Survey^{1/}

ELEVATION: 1,618 feet
above sea level

DATE DRILLED: August 2, 1947

DEPTH: 126 feet



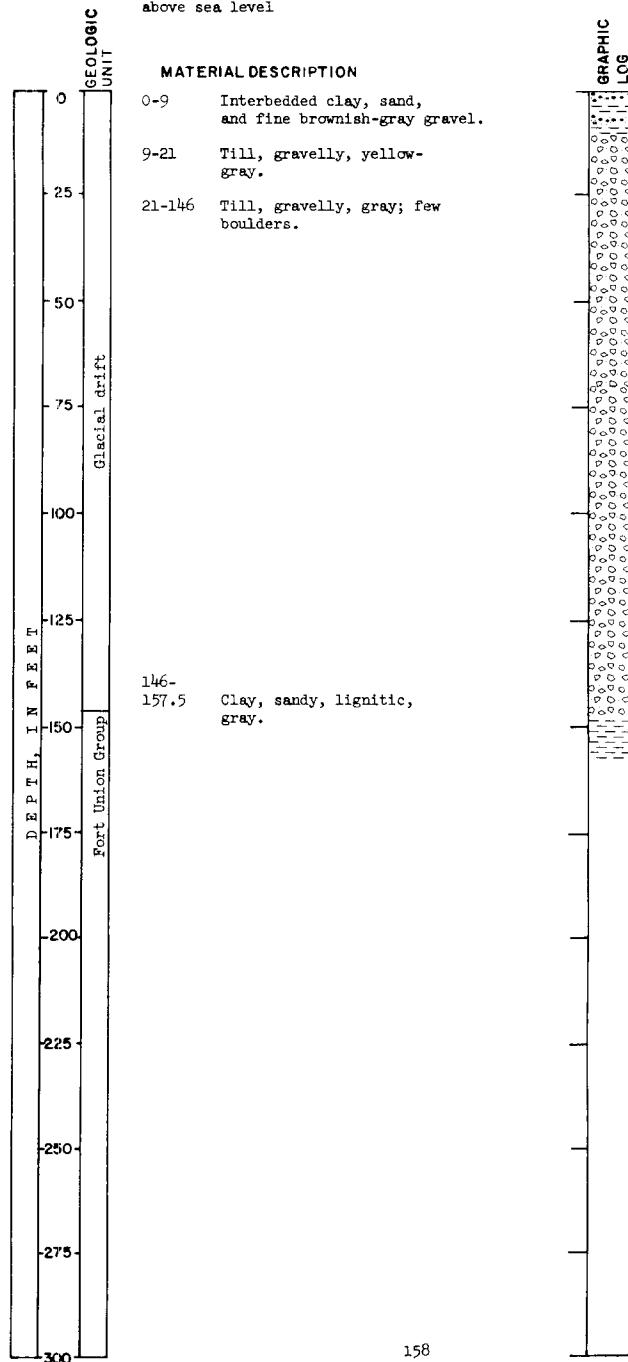
LOCATION: Ward County
156-83-4aaa

TEST HOLE 1401

ELEVATION: 1,642 feet
above sea level

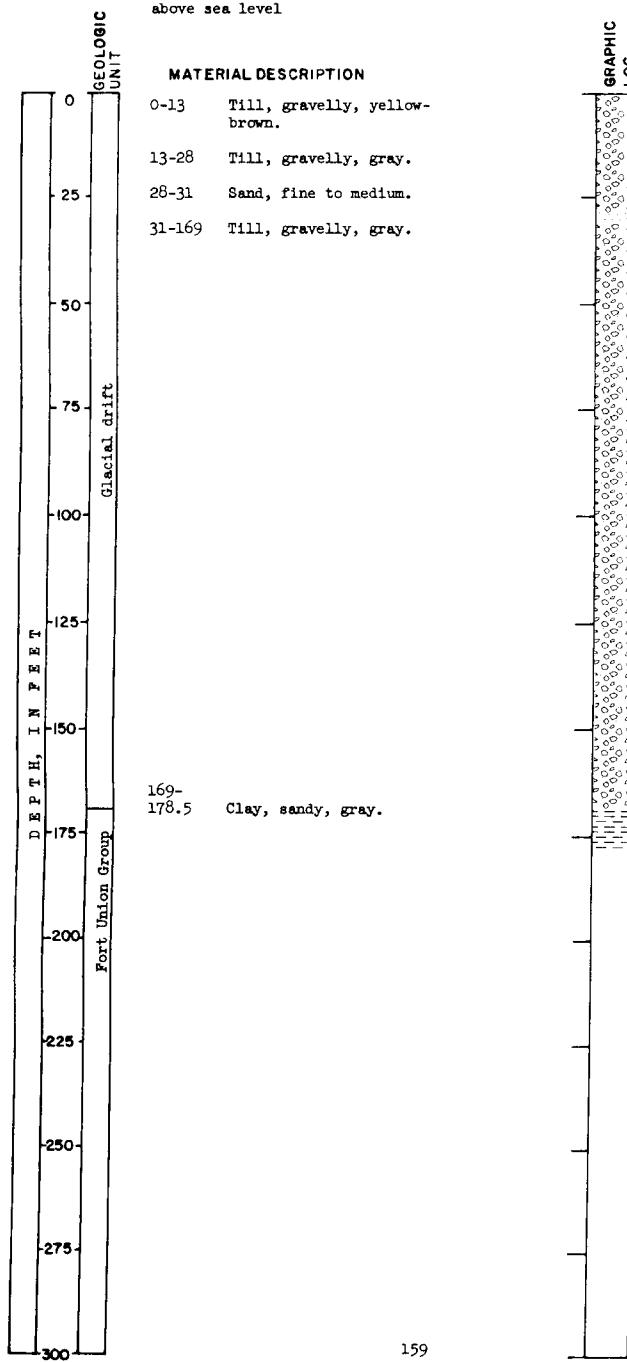
DATE DRILLED: 1958

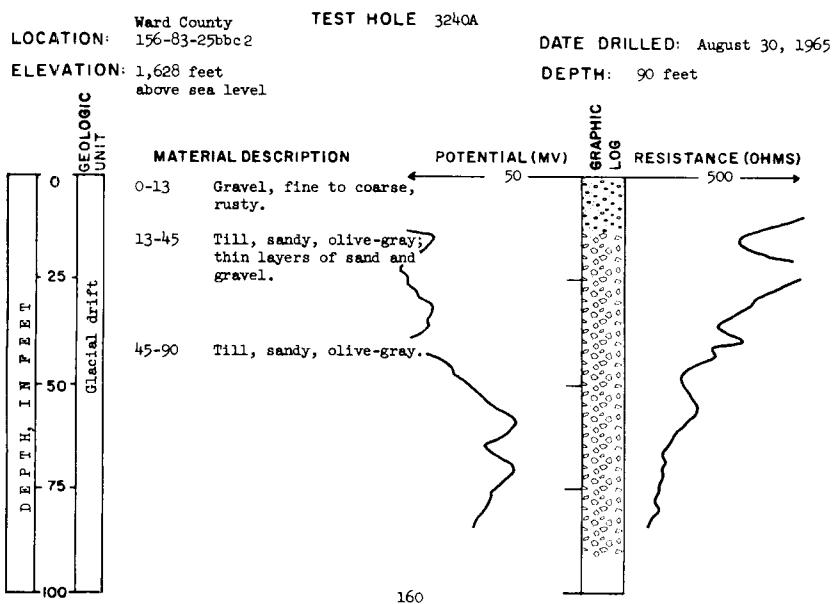
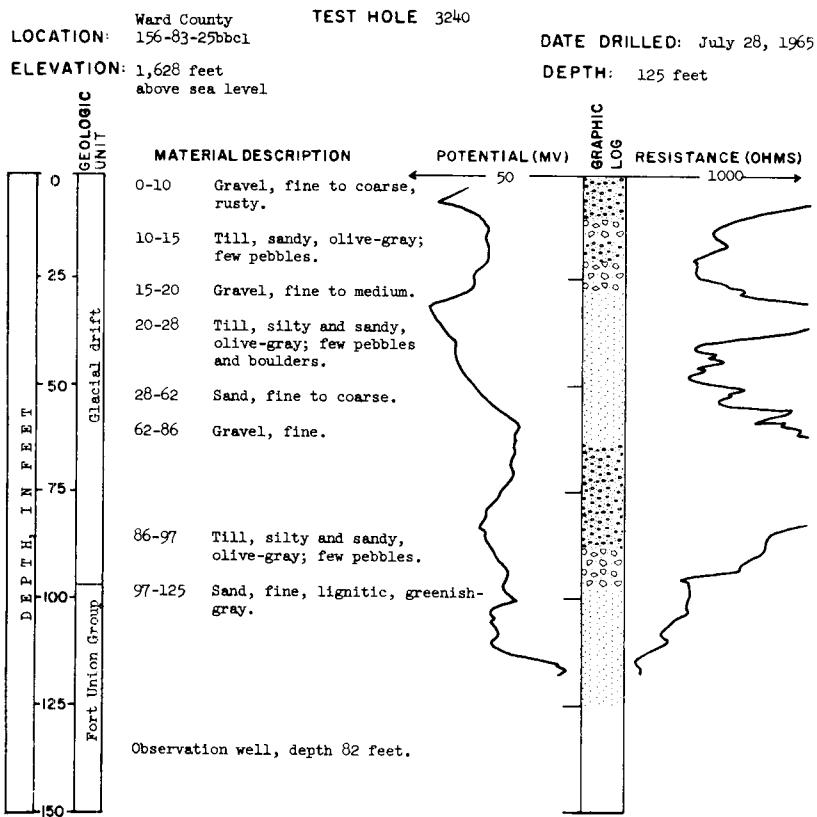
DEPTH: 157.5 feet



Ward County
LOCATION: 156-83-6aaa
ELEVATION: 1,698 feet
above sea level

TEST HOLE 1402
DATE DRILLED: 1958
DEPTH: 178.5 feet





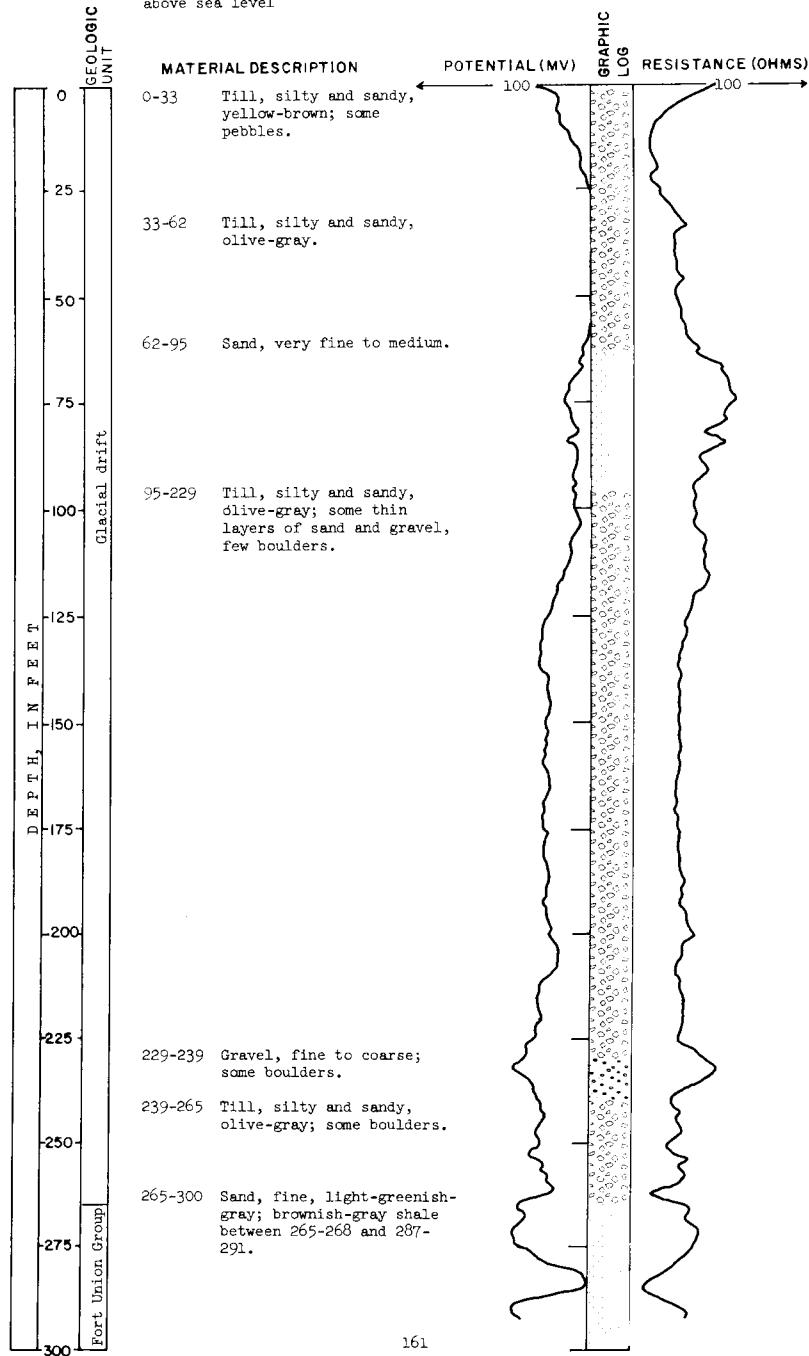
TEST HOLE 3328

LOCATION: Ward County
156-83-29dd

ELEVATION: 1,753 feet
above sea level

DATE DRILLED: June 3, 1966

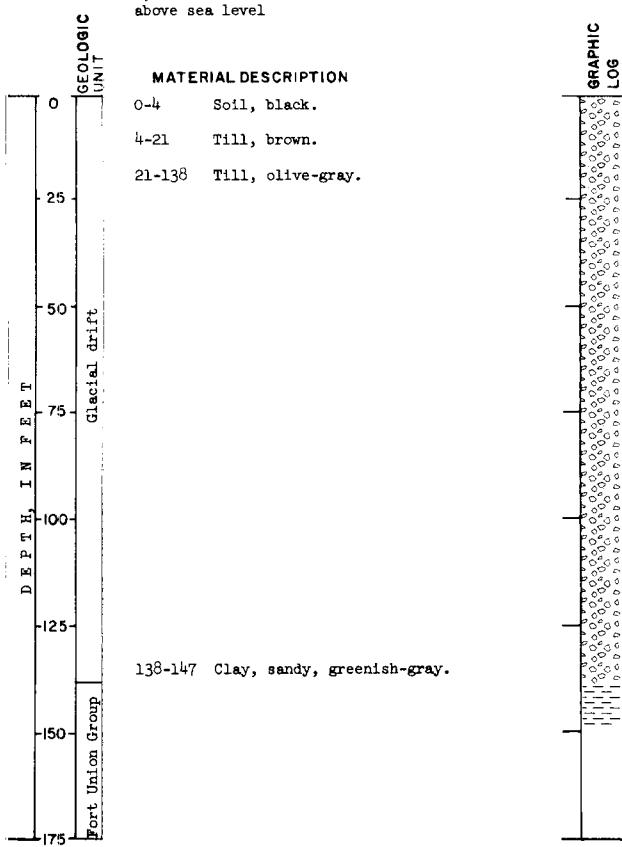
DEPTH: 300 feet



LOCATION: Ward County
TEST HOLE 1512
156-84-5acc

ELEVATION: 1,572 feet
above sea level

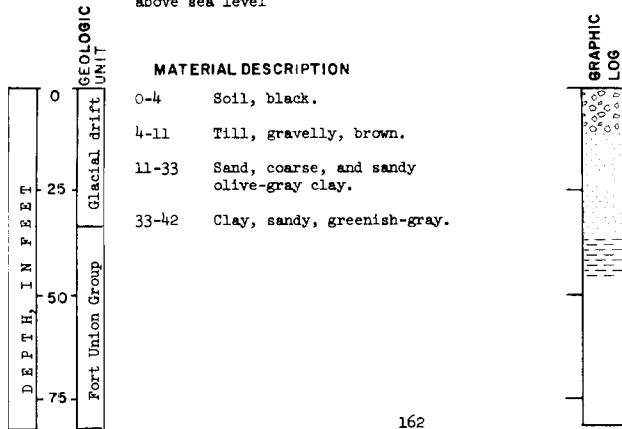
DATE DRILLED: 1959
DEPTH: 147 feet



LOCATION: Ward County
TEST HOLE 1511
156-84-5adc

ELEVATION: 1,575 feet
above sea level

DATE DRILLED: 1959
DEPTH: 42 feet



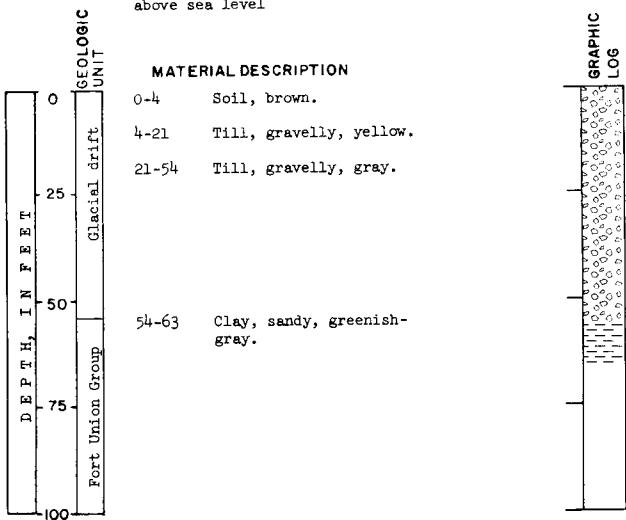
TEST HOLE 1513

LOCATION: Ward County
156-84-5bdc

ELEVATION: 1,772 feet
above sea level

DATE DRILLED: 1959

DEPTH: 63 feet



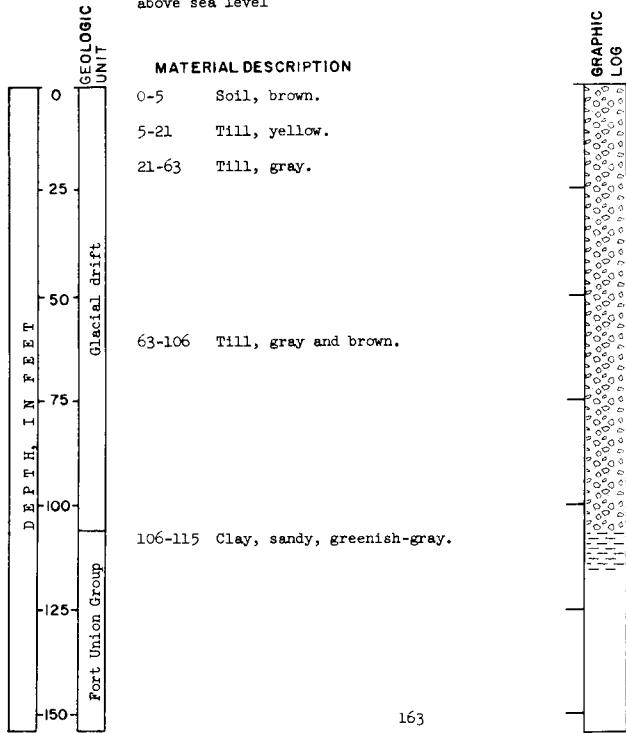
TEST HOLE 1508

LOCATION: Ward County
156-84-23cdc

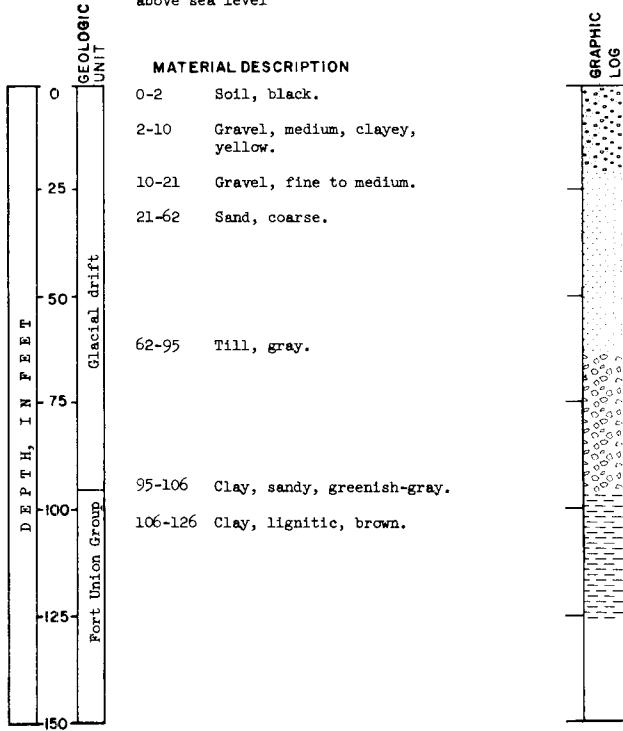
ELEVATION: 1,578 feet
above sea level

DATE DRILLED: 1959

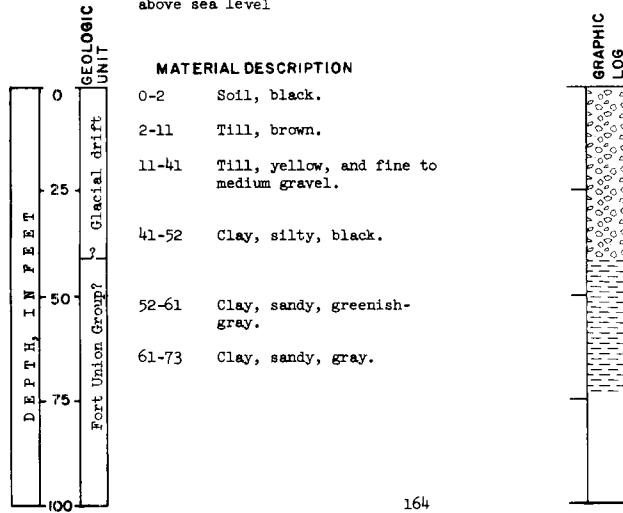
DEPTH: 115 feet



LOCATION: Ward County
 156-84-23ddc **TEST HOLE** 1509
ELEVATION: 1,568 feet
 above sea level **DATE DRILLED:** 1959
DEPTH: 126 feet



LOCATION: Ward County
 156-84-23ddc **TEST HOLE** 1510
ELEVATION: 1,572 feet
 above sea level **DATE DRILLED:** 1958
DEPTH: 73 feet



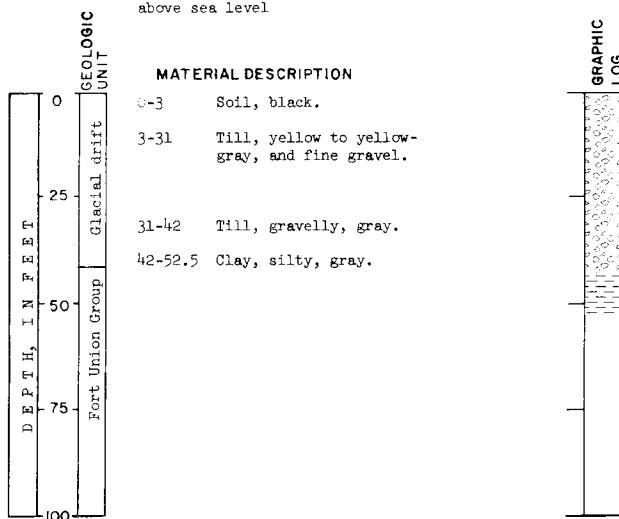
TEST HOLE 1408

LOCATION: Ward County
156-85-2abb

ELEVATION: 1,650 feet
above sea level

DATE DRILLED: 1958

DEPTH: 52.5 feet



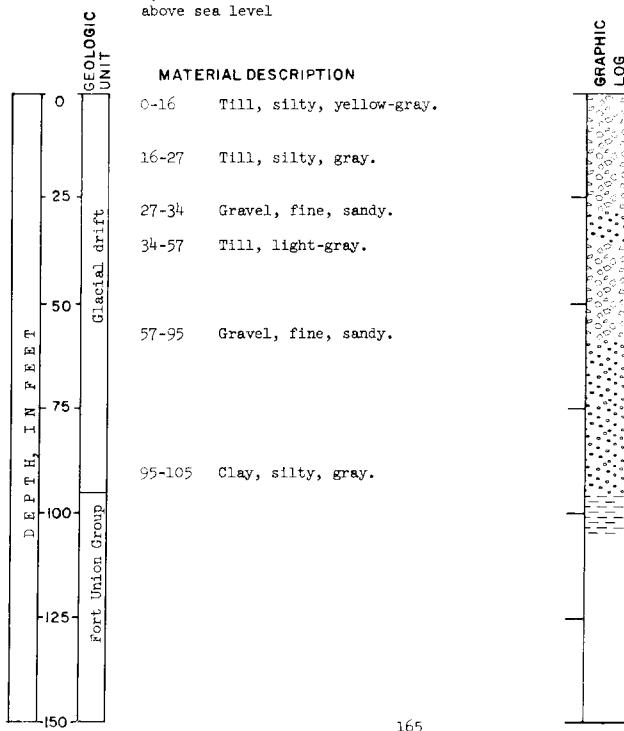
TEST HOLE 1407

LOCATION: Ward County
156-85-2bab

ELEVATION: 1,652 feet
above sea level

DATE DRILLED: 1958

DEPTH: 105 feet



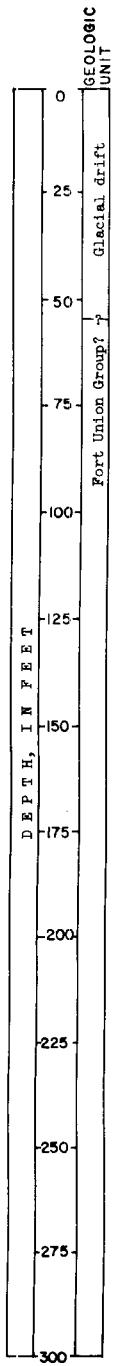
LOCATION: Ward County
156-85-2bbb

TEST HOLE 1406

ELEVATION: 1,652 feet
above sea level

DATE DRILLED: 1958

DEPTH: 63 feet



MATERIAL DESCRIPTION

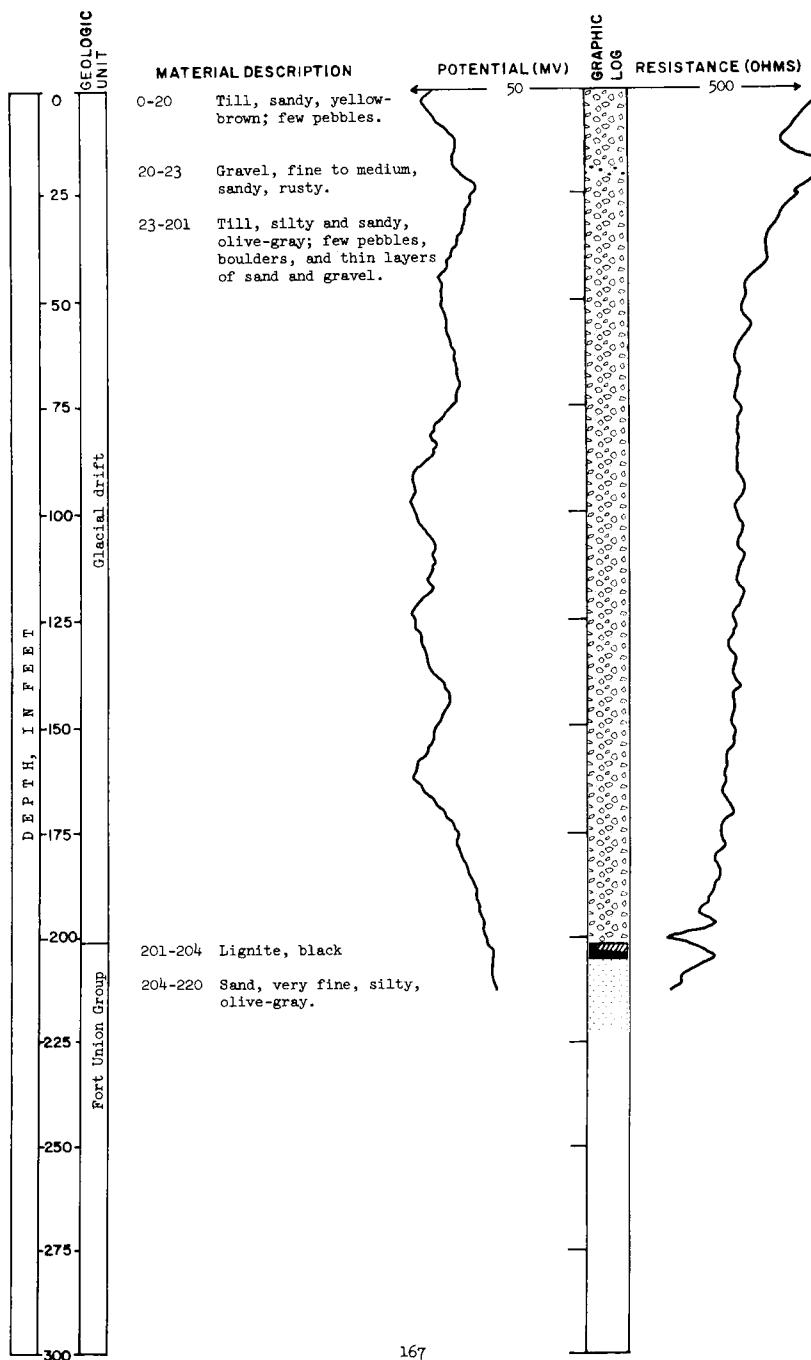
- 0-23 Till, sandy and gravelly,
 yellow to brown.
- 23-32 Till, bluish-green.
- 32-43 Gravel, fine to medium.
- 43-54 Sand, coarse.
- 54-63 Clay, very sandy, gray.

GRAPHIC LOG



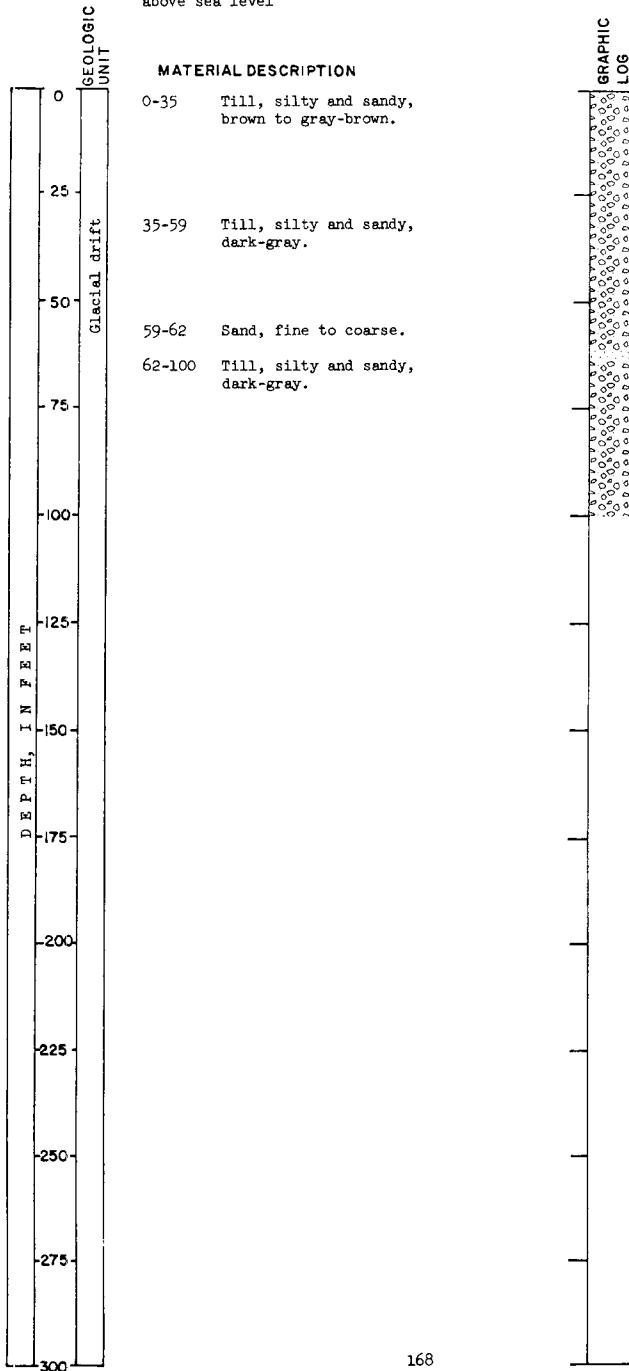
LOCATION: Ward County
156-85-31ddd TEST HOLE 3221
ELEVATION:

DATE DRILLED: June 4, 1965
DEPTH: 220 feet



LOCATION: Ward County
156-86-20bb TEST HOLE
ELEVATION: 2,148 feet U.S. Air Force
above sea level

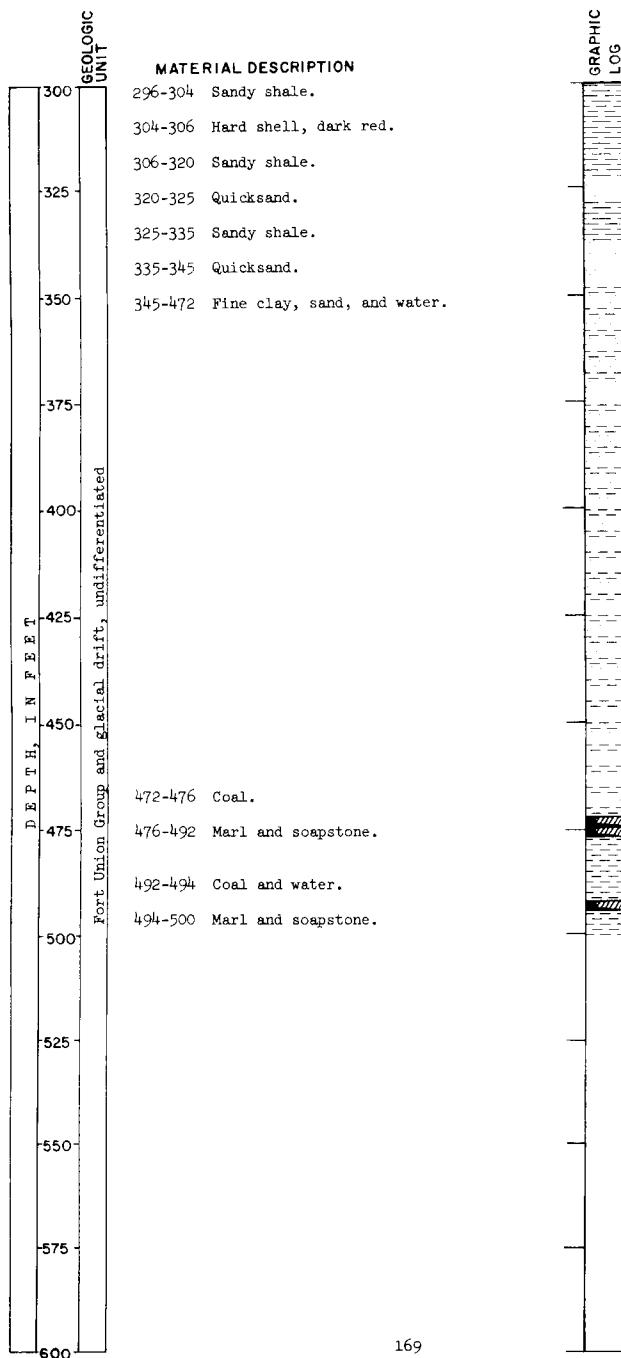
DATE DRILLED: 1961
DEPTH: 101 feet



Ward County
LOCATION: 156-86-21ccl
ELEVATION:

Great Northern Railway
Berthold test 2
(Continued)

DATE DRILLED: 1927
DEPTH: 500 feet



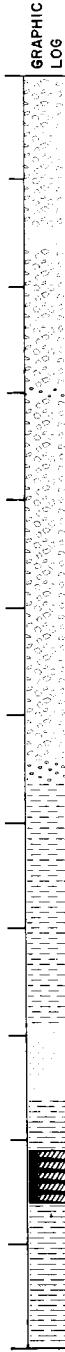
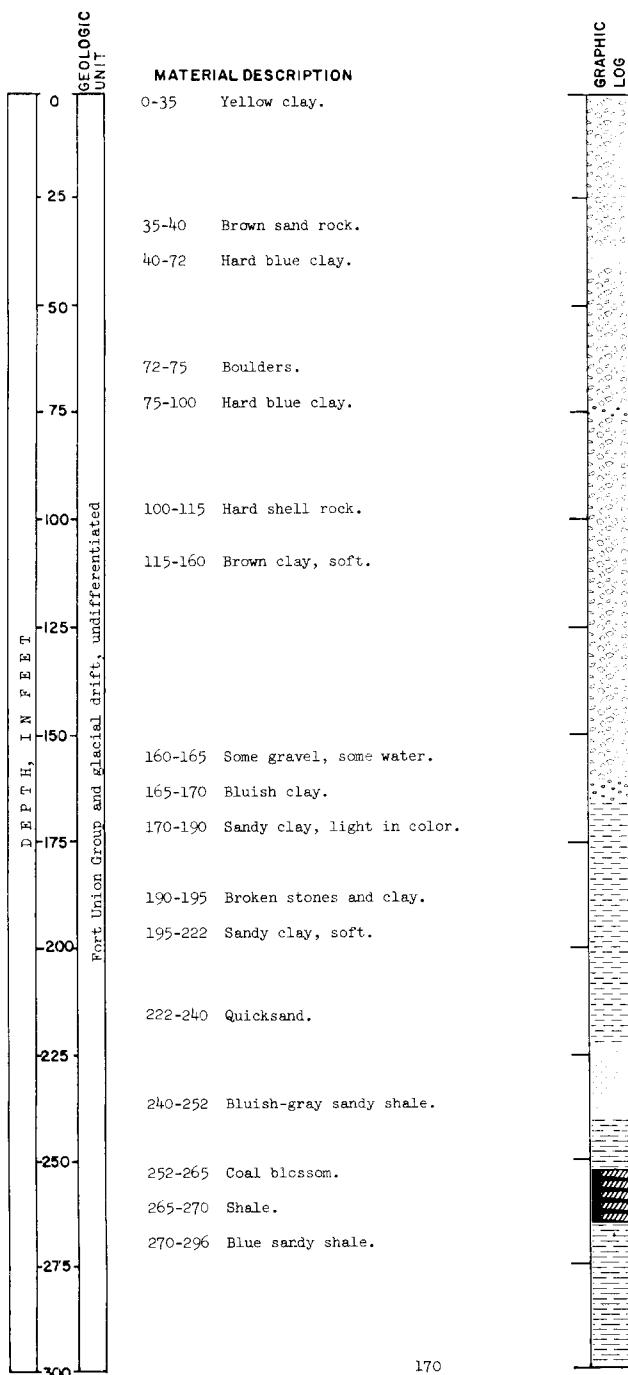
LOCATION: Ward County
156-86-21cc1 Great Northern Railway

Berthold test 2

ELEVATION:

DATE DRILLED: 1927

DEPTH: 500 feet



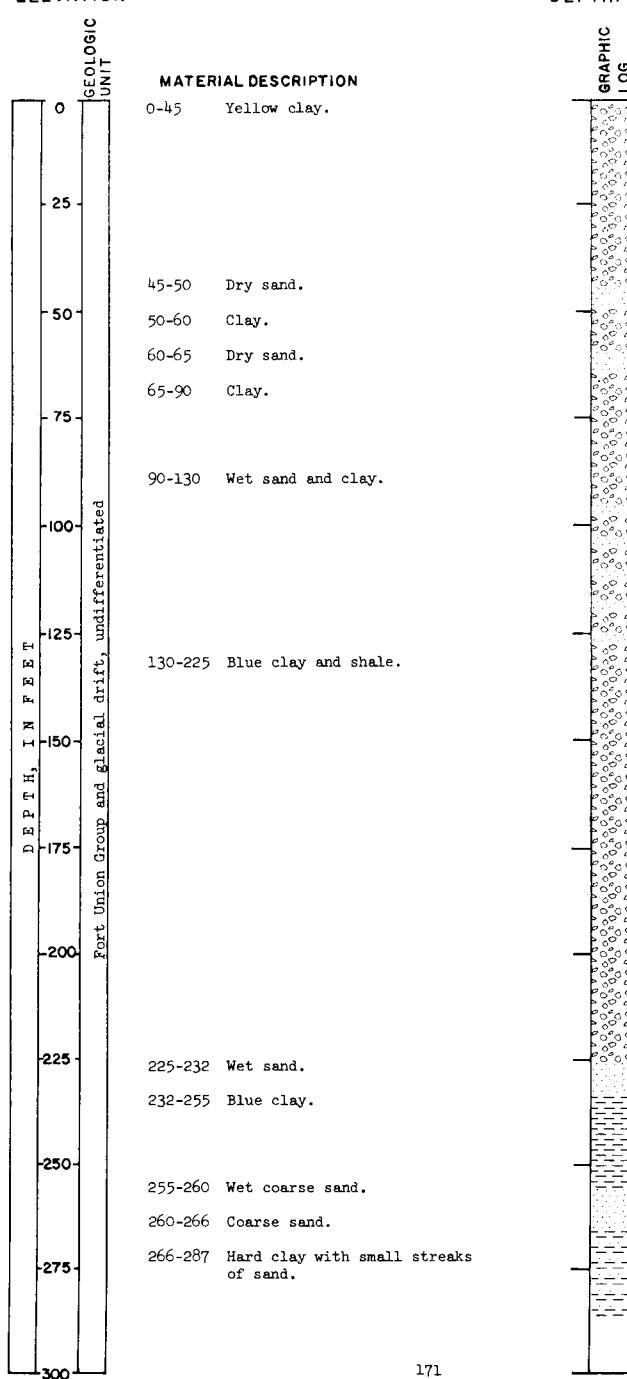
LOCATION: Ward County 156-86-21cc 2 Great Northern Railway

Berthold test 1

ELEVATION:

DATE DRILLED: 1918

DEPTH: 287 feet



LOCATION:

Ward County
156-87-9cb

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

ELEVATION:

2,231 feet
above sea level

DEPTH: 104 feet

Glacial drift

MATERIAL DESCRIPTION

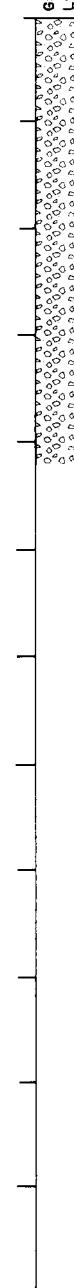
0-26 Till, silty and sandy,
brown.

26-104 Till, silty and sandy, gray
to dark-gray.

DEPTH, IN FEET

0
25
50
75
100
125
150
175
200
225
250
275
300

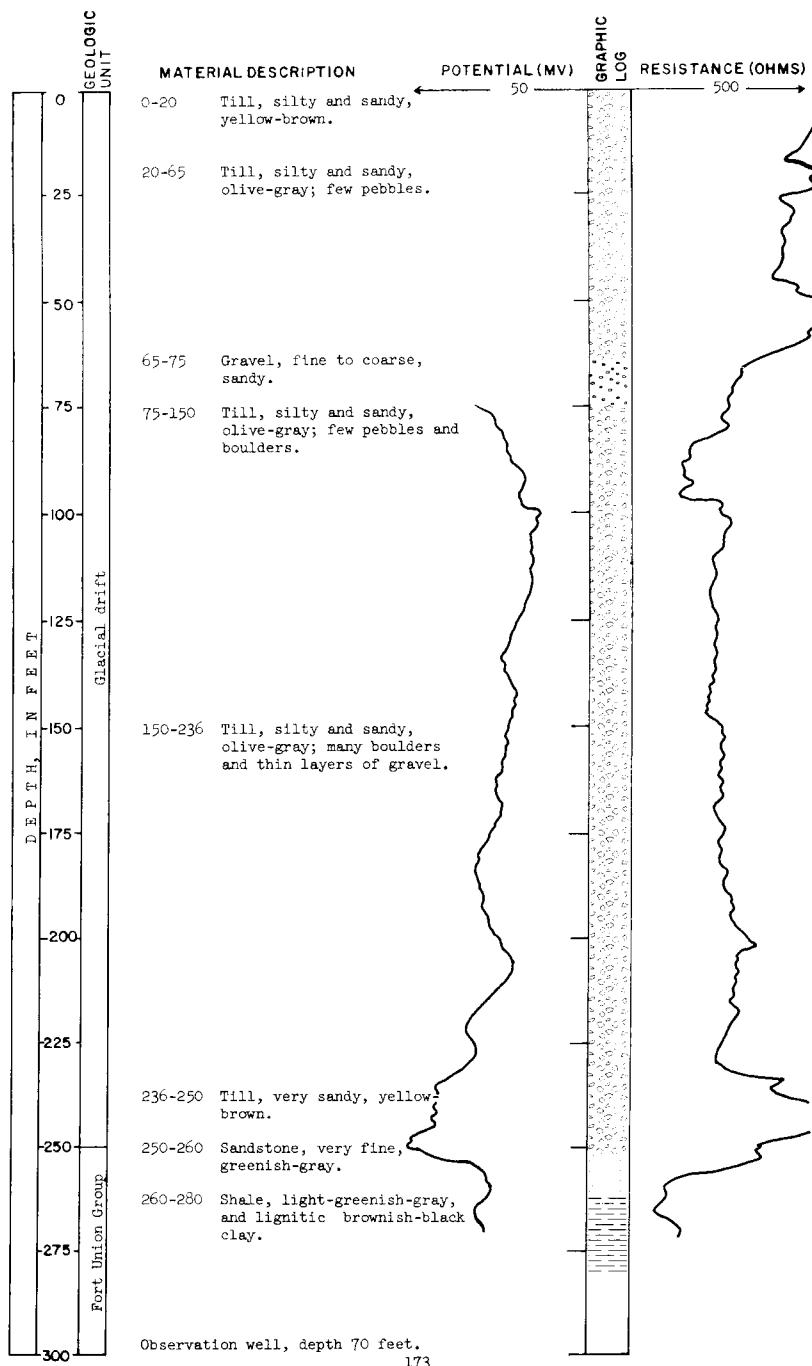
GRAPHIC
LOG



LOCATION: Ward County
156-87-15cdd
ELEVATION:

TEST HOLE 3226

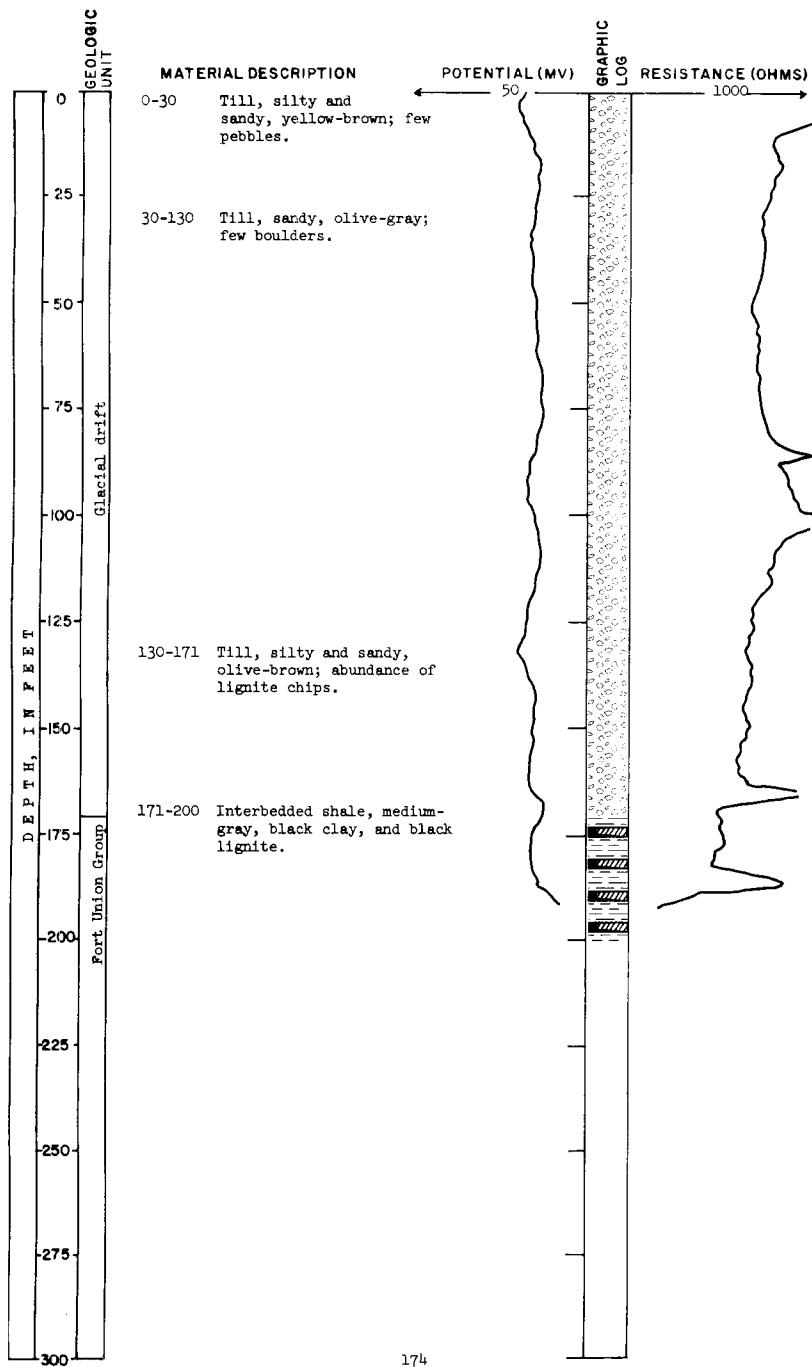
DATE DRILLED: June 8, 1965
DEPTH: 280 feet



LOCATION: Ward County
156-87-34ccd
ELEVATION:

TEST HOLE 3225

DATE DRILLED: June 8, 1965
DEPTH: 200 feet



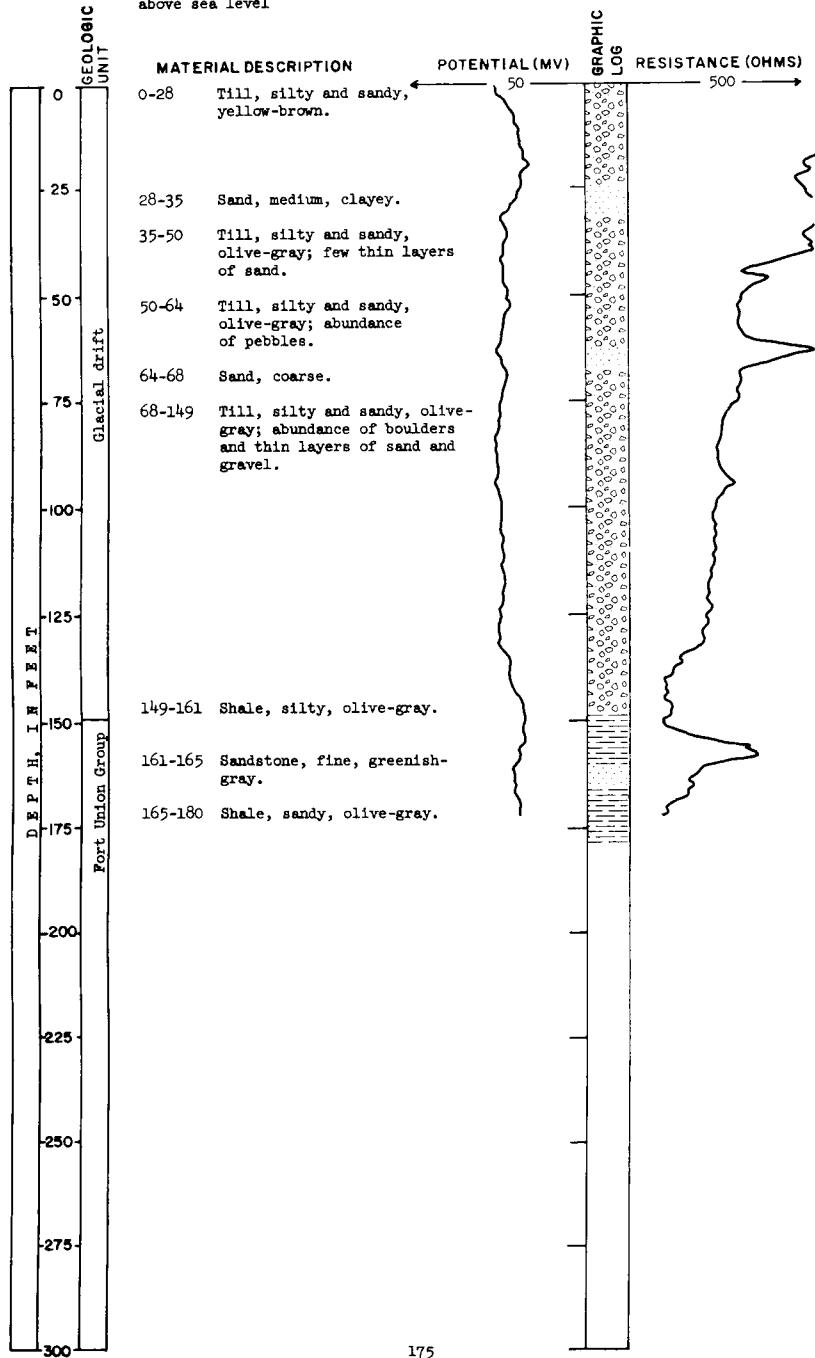
LOCATION: Ward County
157-81-5abb

TEST HOLE 3246

DATE DRILLED: August 4, 1965

ELEVATION: 1,557 feet
above sea level

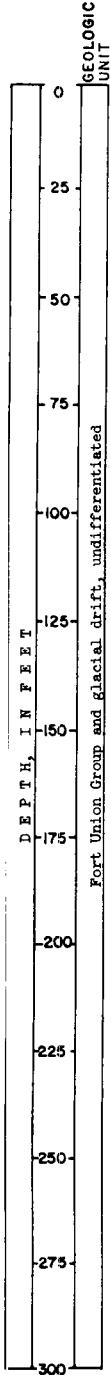
DEPTH: 180 feet



LOCATION: Ward County
157-82-3bbb
ELEVATION: 1,611 feet
above sea level

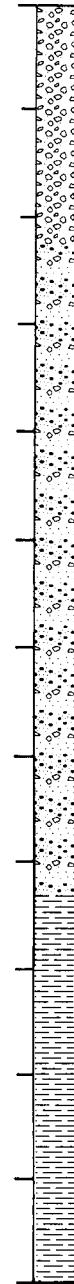
Seismograph
shot point
Driller's log

DATE DRILLED: August 3, 1965
DEPTH: 300 feet



MATERIAL DESCRIPTION

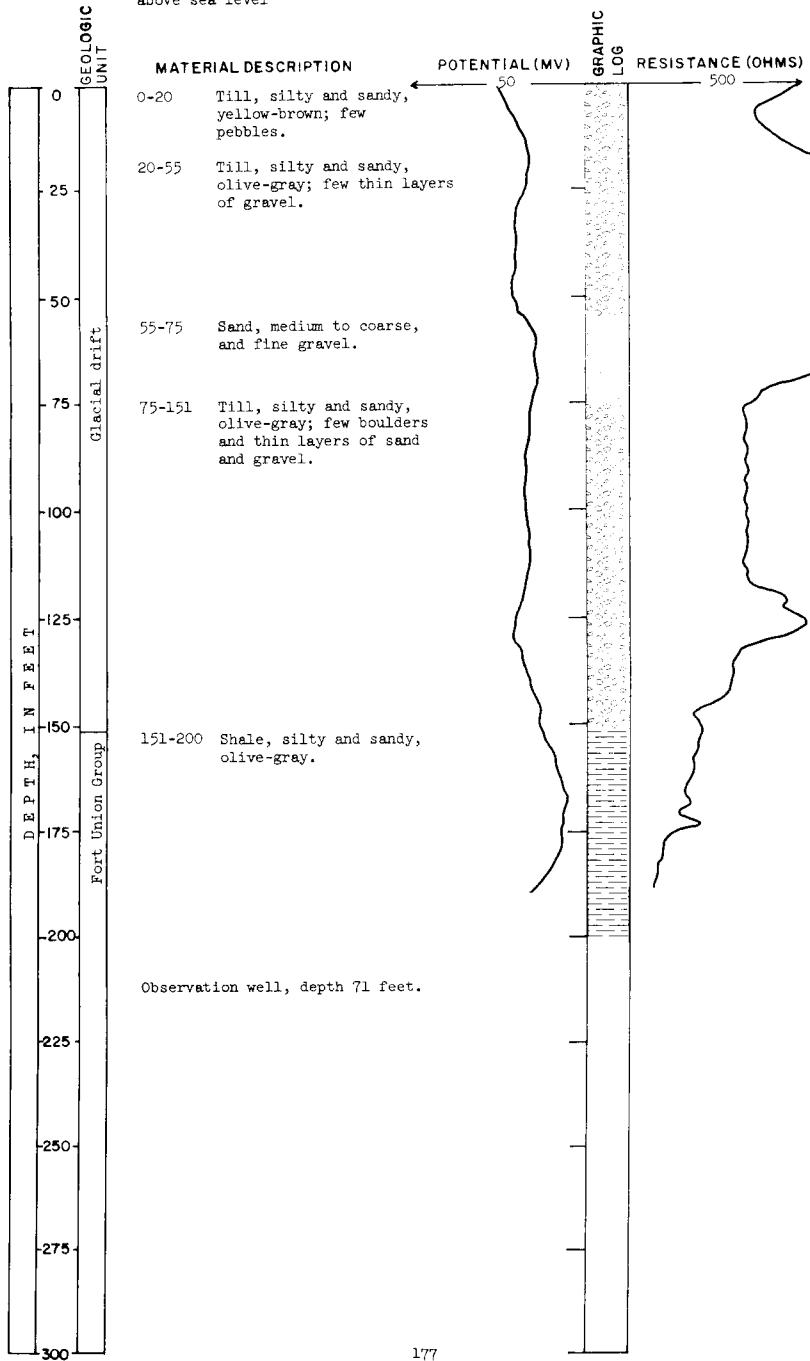
GRAPHIC LOG



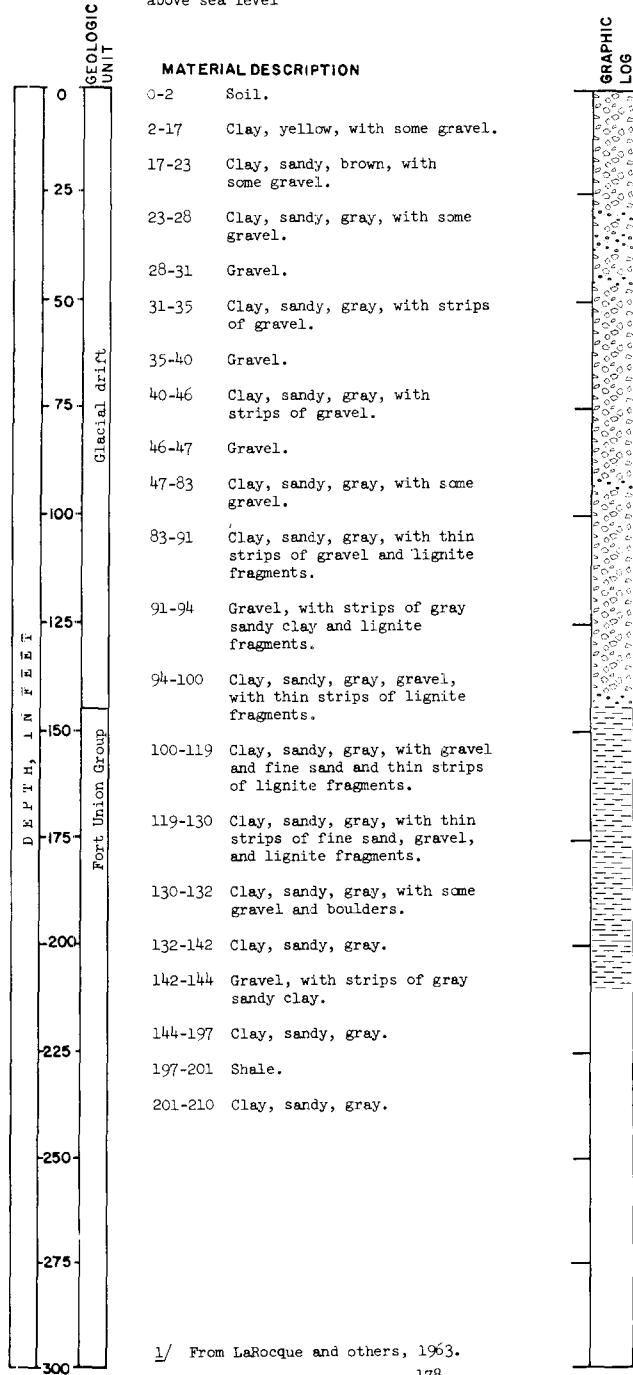
LOCATION: Ward County
157-82-14bbb
ELEVATION: 1,602 feet
above sea level

TEST HOLE 3241

DATE DRILLED: July 29, 1965
DEPTH: 200 feet



LOCATION: Ward County
 157-82-28ddd TEST HOLE ^{1/}
 U.S. Geol. Survey
 ELEVATION: 1,619 feet DATE DRILLED: August 1, 1947
 above sea level DEPTH: 210 feet



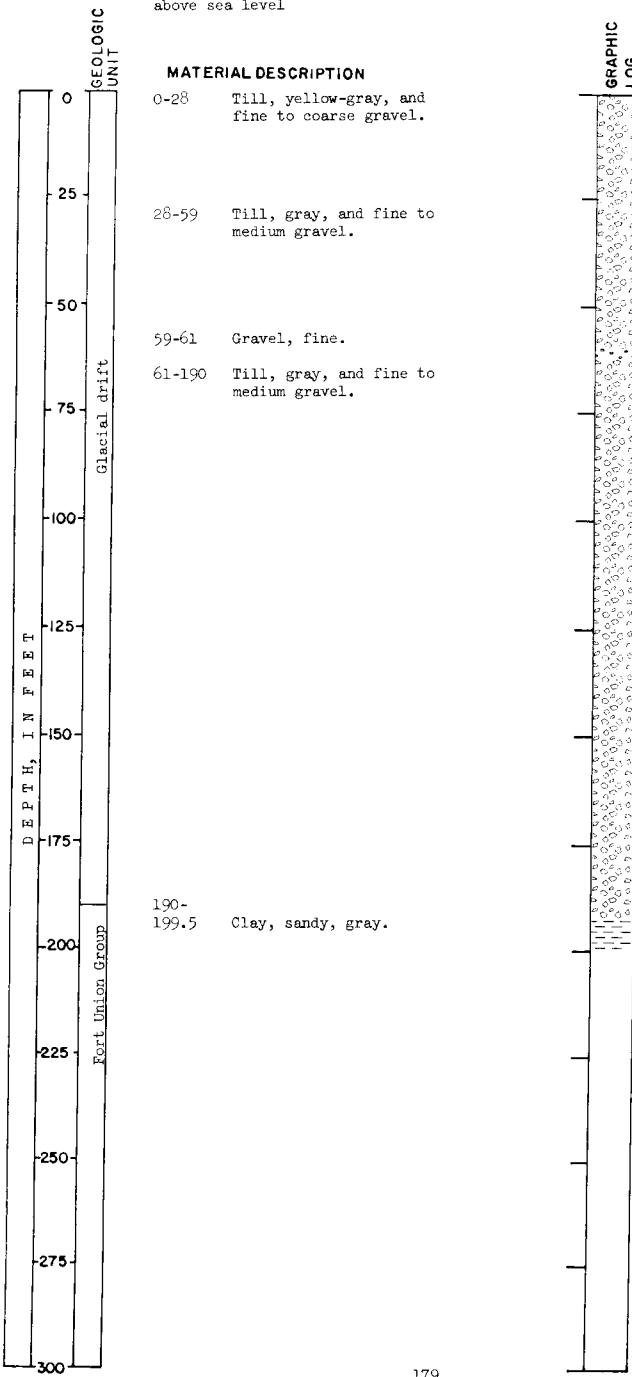
1/ From LaRocque and others, 1963.

LOCATION: Ward County
157-82-33ccc TEST HOLE 1399

ELEVATION: 1,645 feet
above sea level

DATE DRILLED: September 22, 1958

DEPTH: 199.5 feet



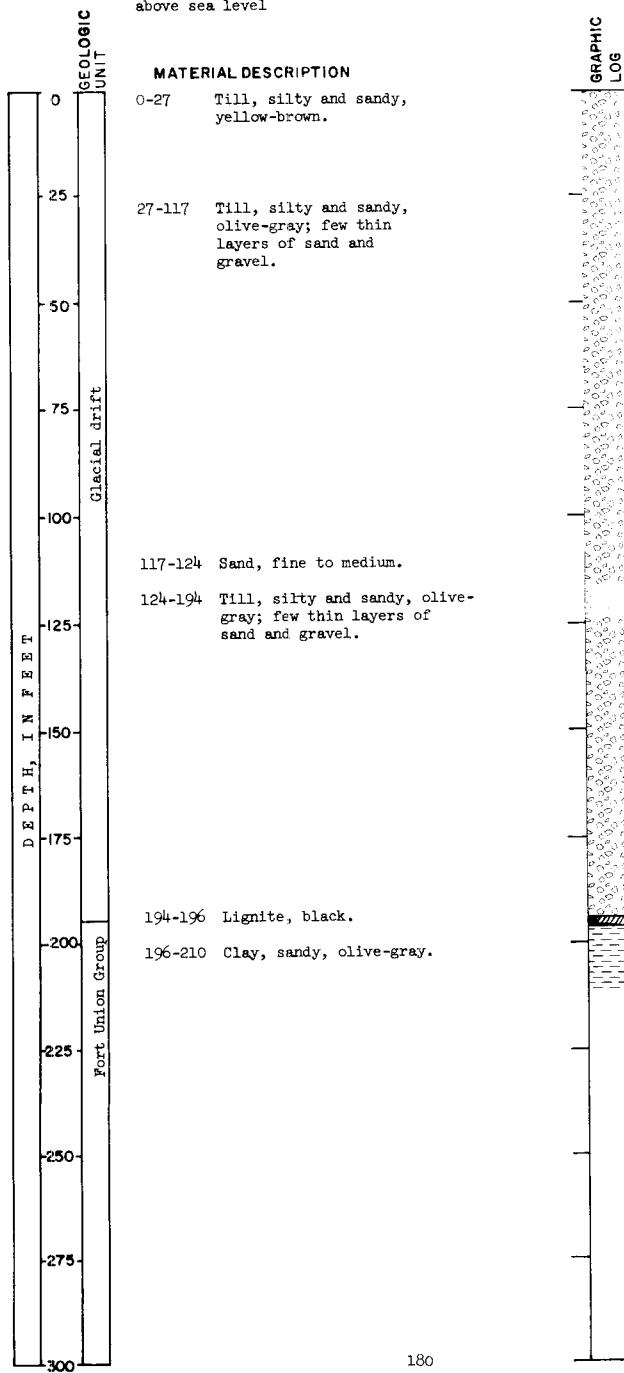
LOCATION: Ward County
157-83-8ccc

TEST HOLE 2366

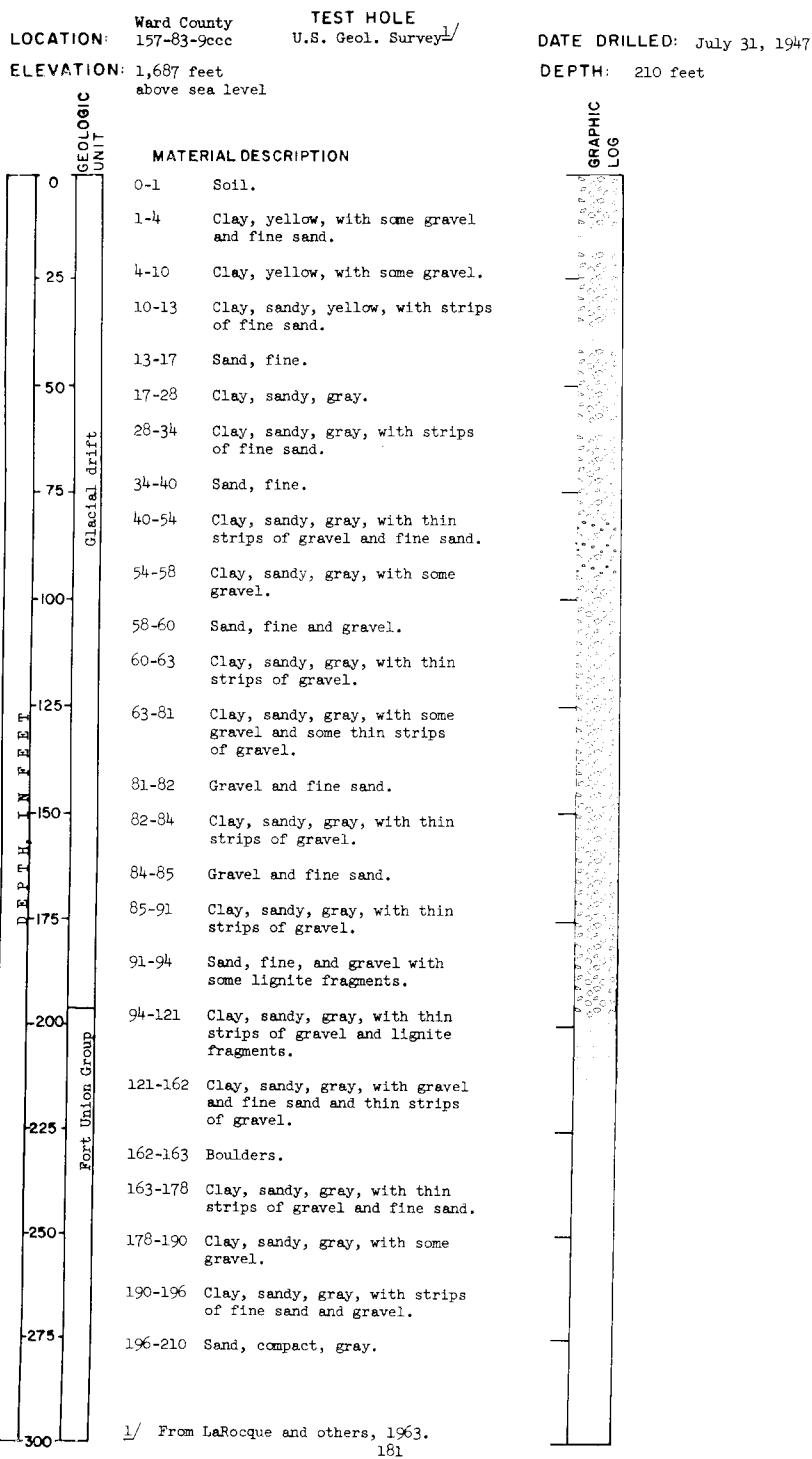
ELEVATION: 1,710 feet
above sea level

DATE DRILLED: July 15, 1965

DEPTH: 210 feet



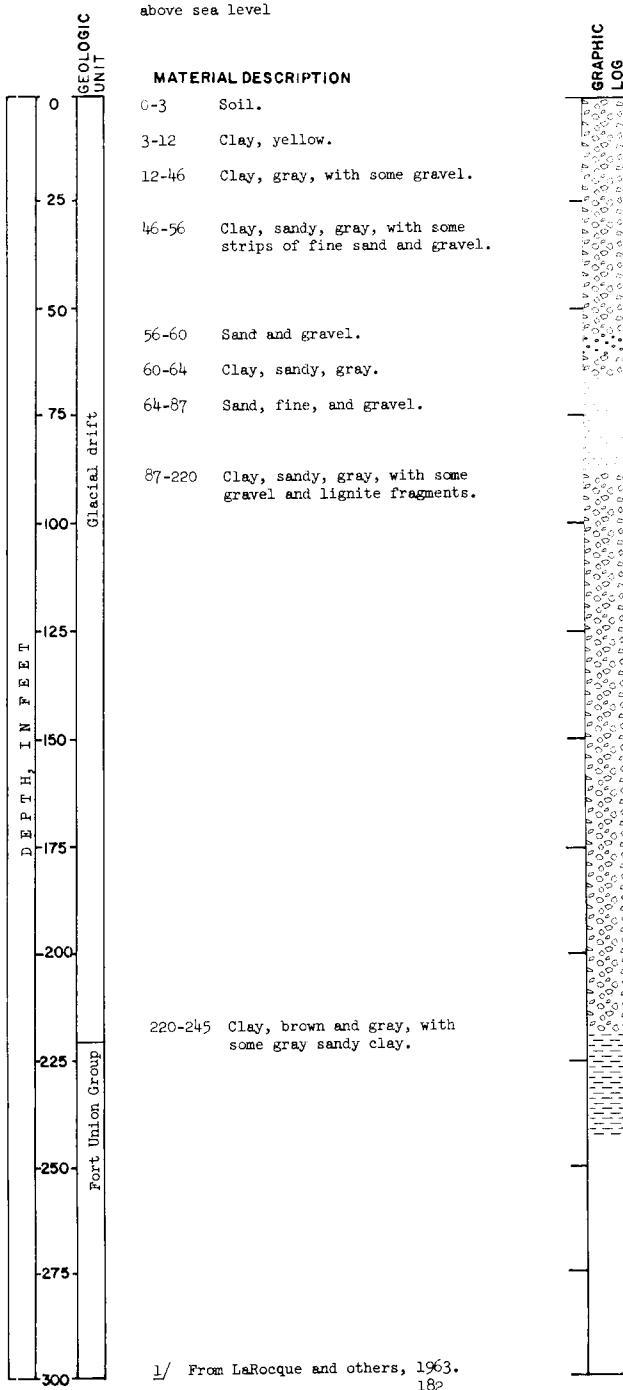
GRAPHIC LOG



LOCATION: Ward County
 157-83-30bbb **TEST HOLE**
 U.S. Geol. Survey^{1/}
ELEVATION: 1,760 feet
 above sea level

DATE DRILLED: July 31, 1947

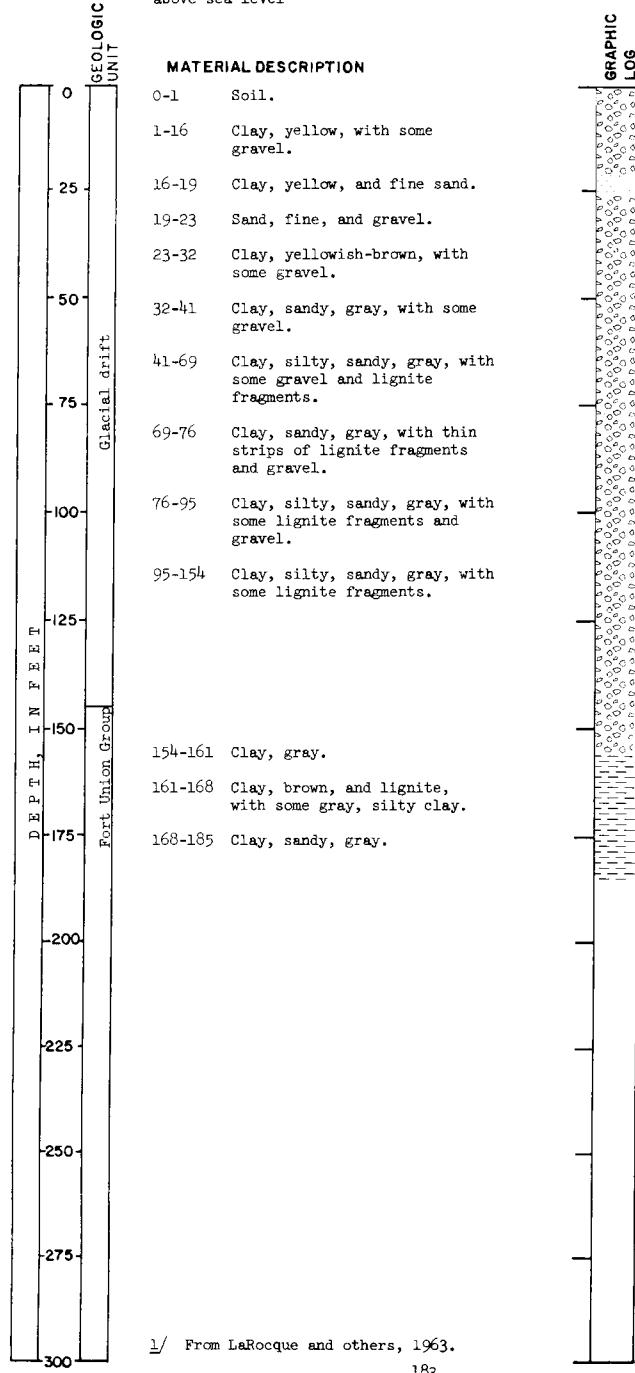
DEPTH: 245 feet



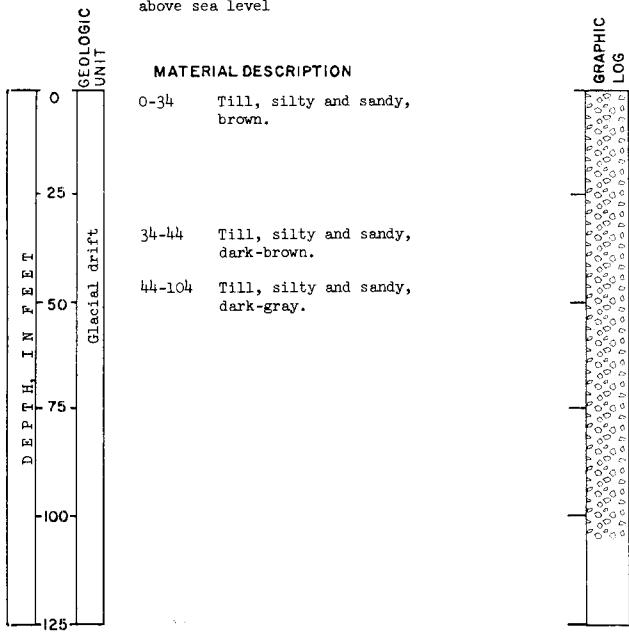
1/ From LaRocque and others, 1963.
 182

GRAPHIC LOG

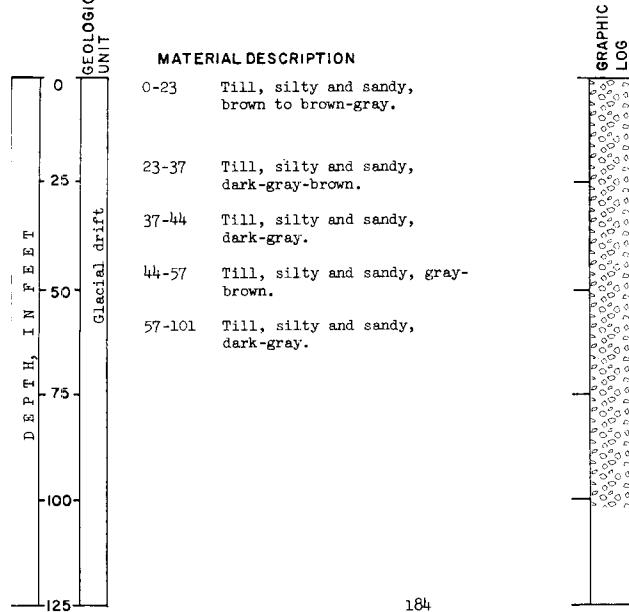
LOCATION: Ward County
 157-84-35cdc **TEST HOLE**
ELEVATION: U.S. Geol. Survey
 1,730 feet **DATE DRILLED:** July 31, 1947
 above sea level **DEPTH:** 185 feet



LOCATION: Ward County
157-86-5bb TEST HOLE
ELEVATION: 1,990 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 104 feet



LOCATION: Ward County TEST HOLE
157-86-25cc U.S. Air Force
ELEVATION: 2,144 feet DATE DRILLED: 1961
above sea level DEPTH: 101 feet



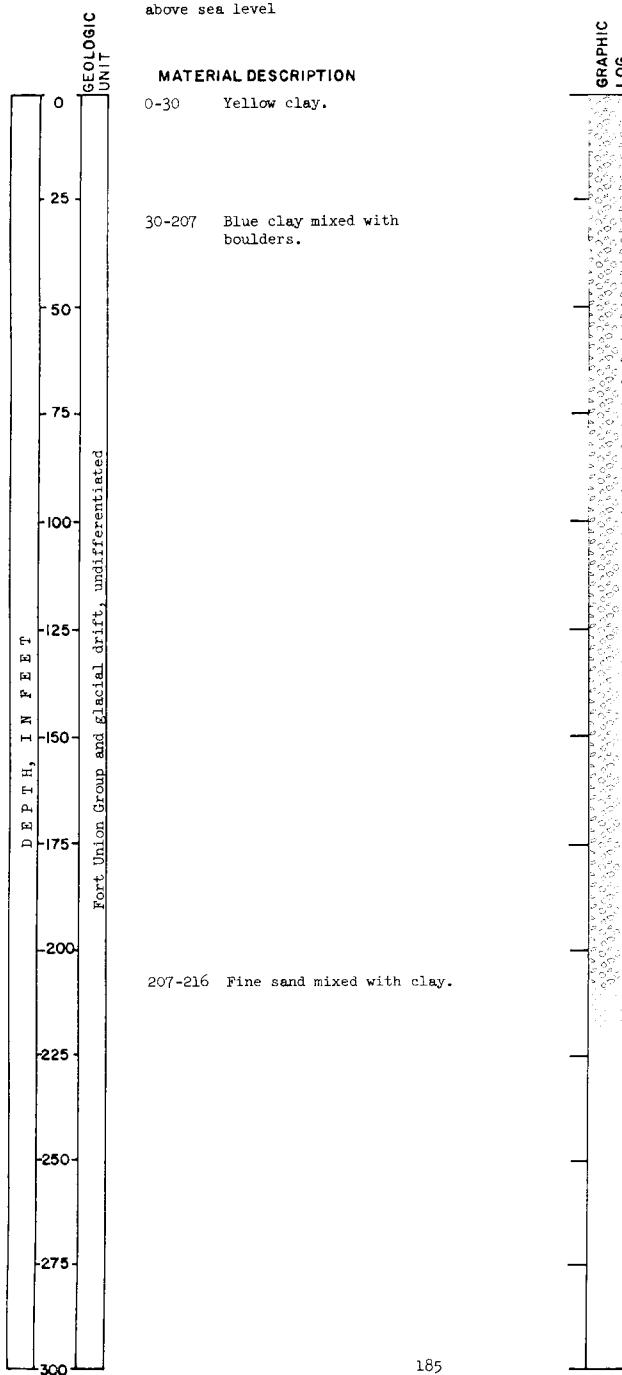
LOCATION: Ward County
157-86-30add

Great Northern Railway
well

ELEVATION: 2,093 feet
above sea level

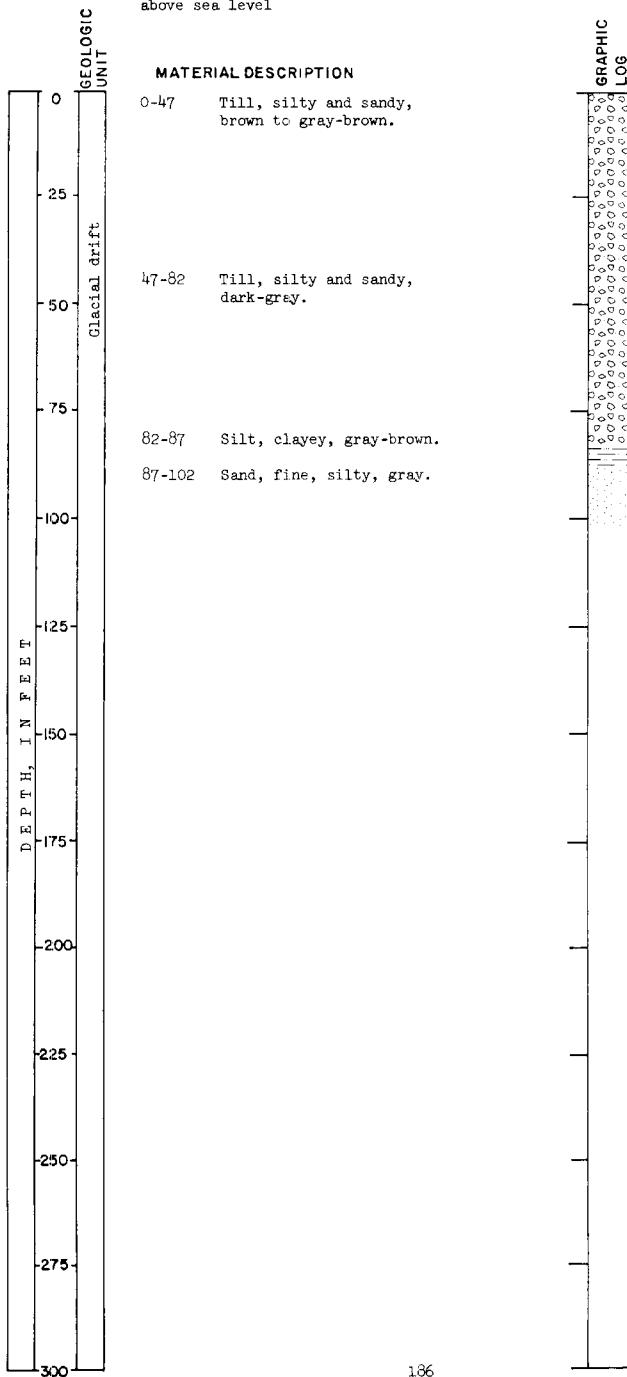
DATE DRILLED: 1932

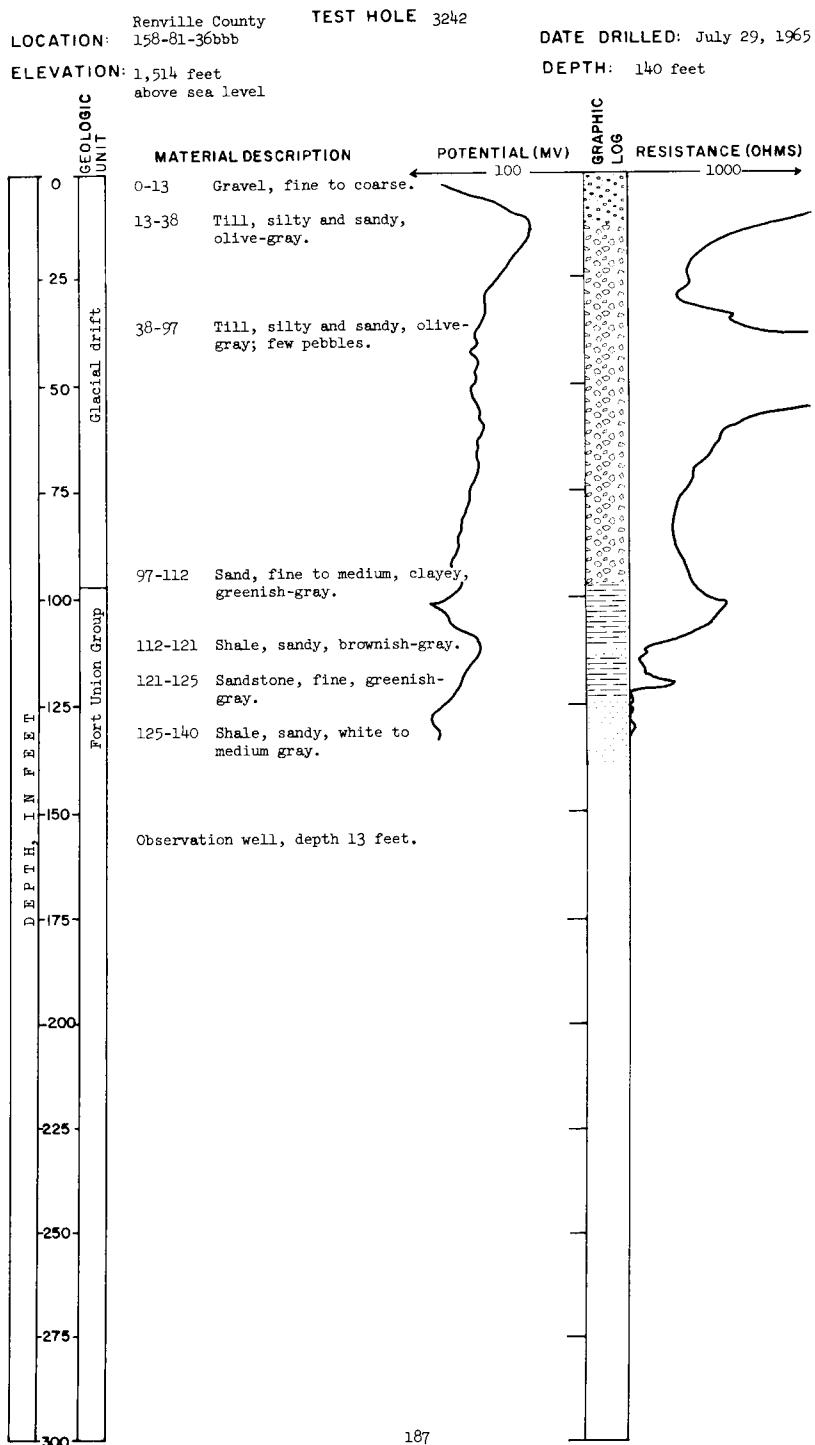
DEPTH: 216 feet



LOCATION: Ward County
157-87-22aa **TEST HOLE**
ELEVATION: 2,209 feet
 above sea level

DATE DRILLED: 1961
DEPTH: 102 feet



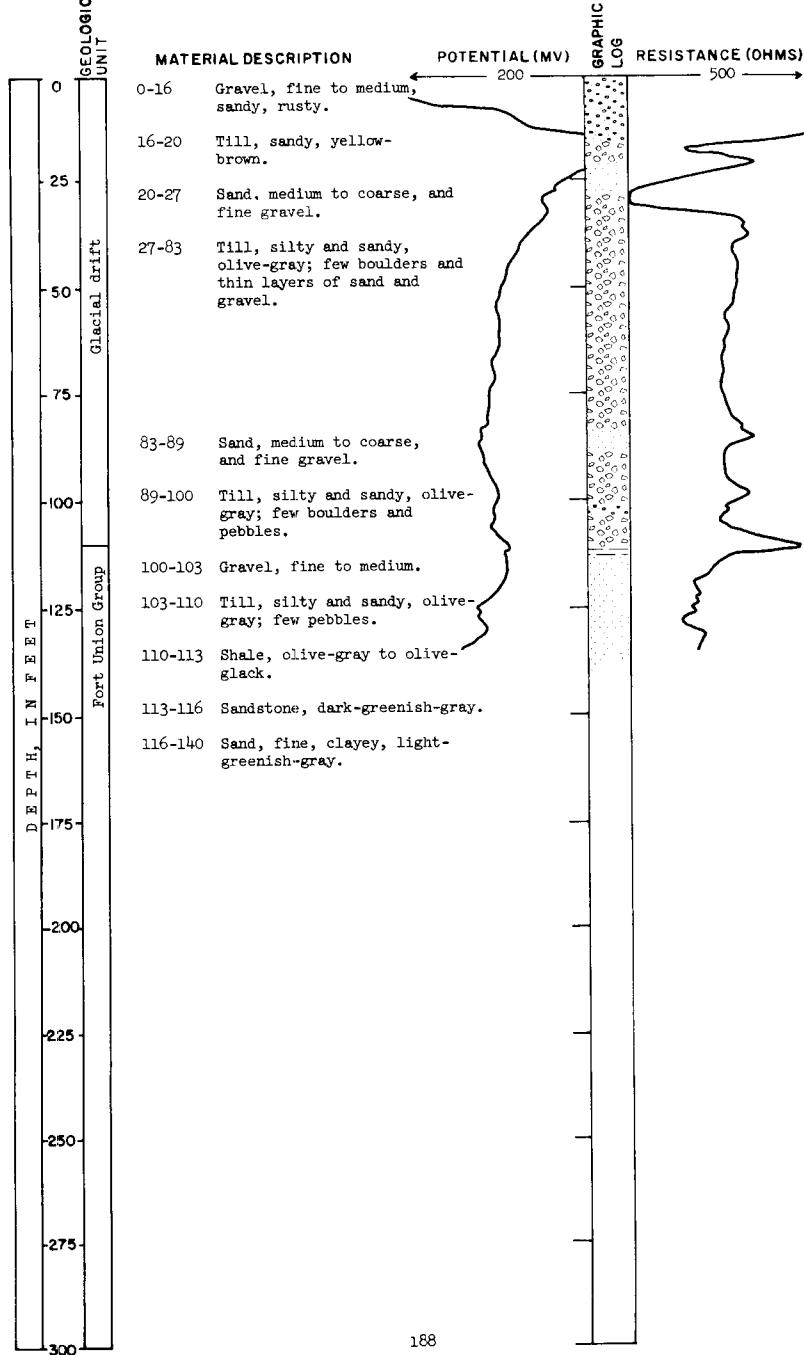


LOCATION: Renville County
TEST HOLE 3250
158-82-2aab

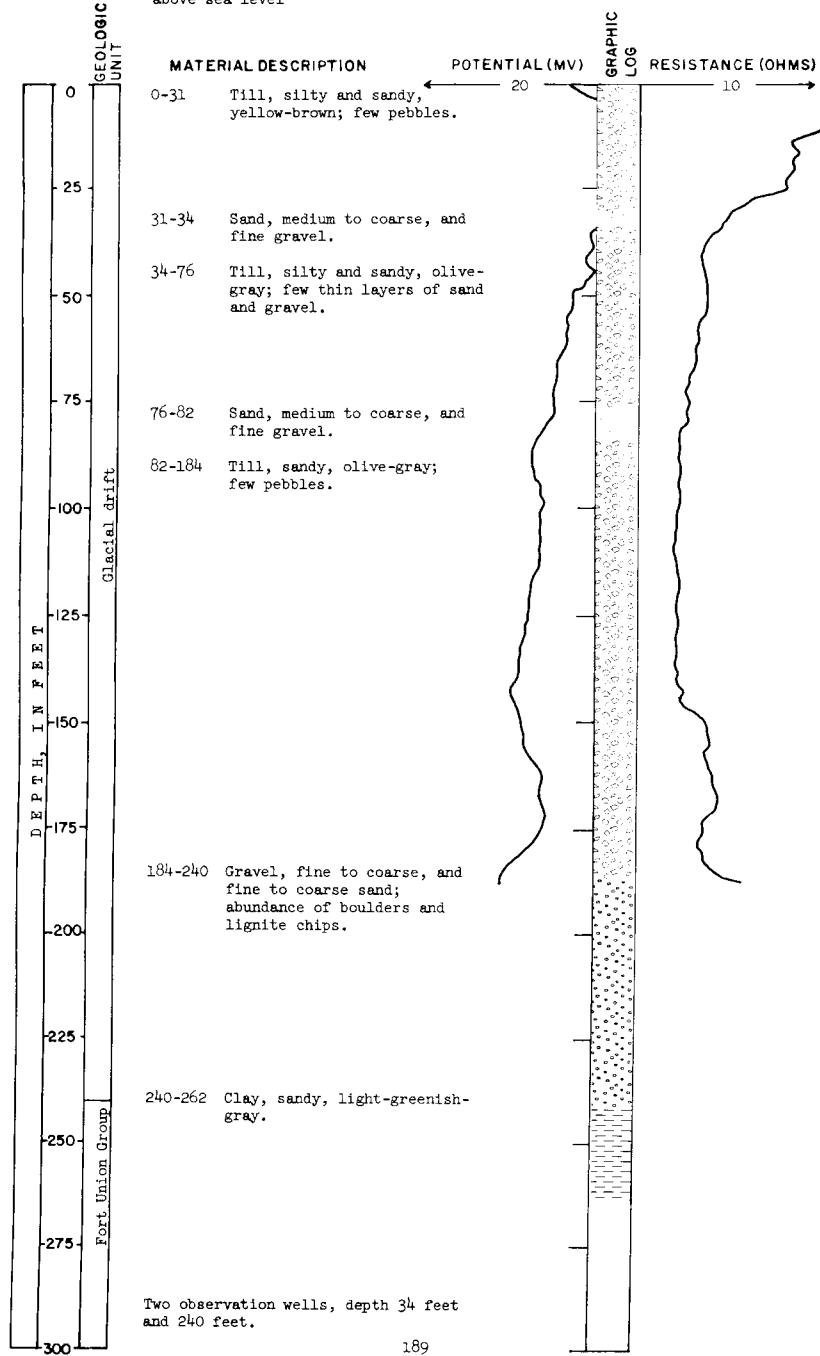
ELEVATION: 1,530 feet
above sea level

DATE DRILLED: August 5, 1965

DEPTH: 140 feet



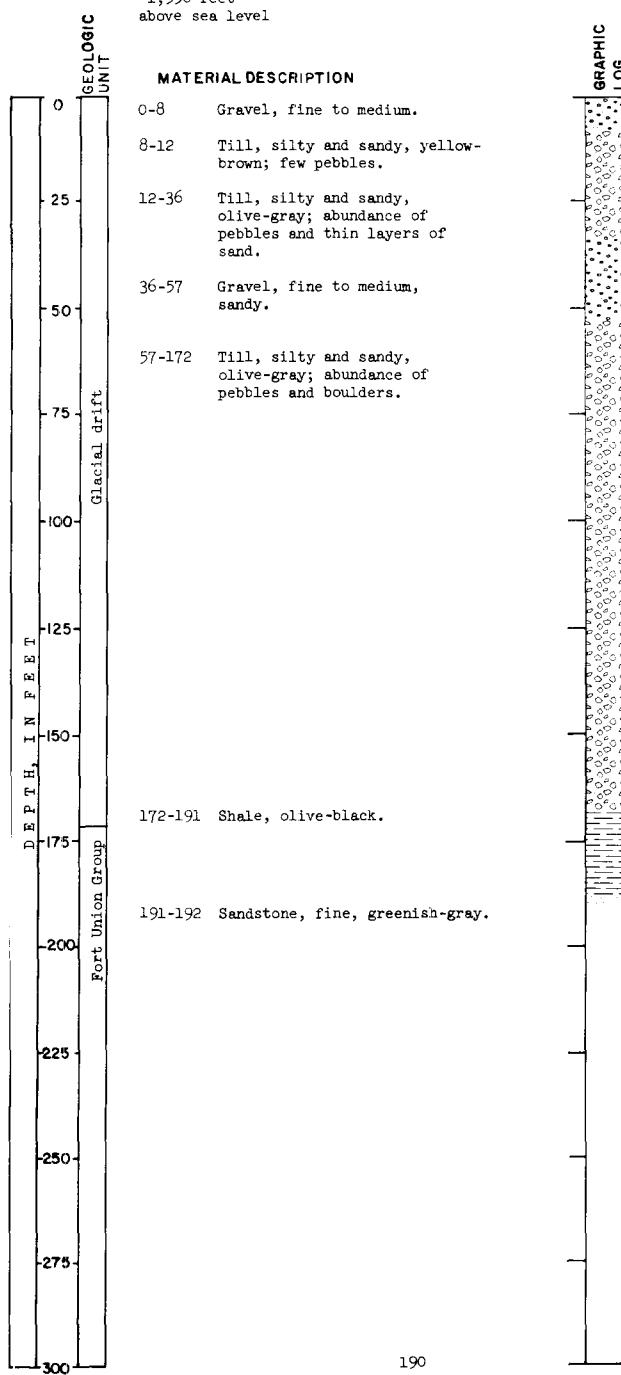
LOCATION: Renville County TEST HOLE 2317
 158-82-10~~aa~~d
 ELEVATION: 1,550 feet DATE DRILLED: October 19, 1964
 above sea level DEPTH: 262 feet



LOCATION: Renville County
158-82-10bbb TEST HOLE 3249

ELEVATION: 1,550 feet
above sea level

DATE DRILLED: August 4, 1965
DEPTH: 192 feet



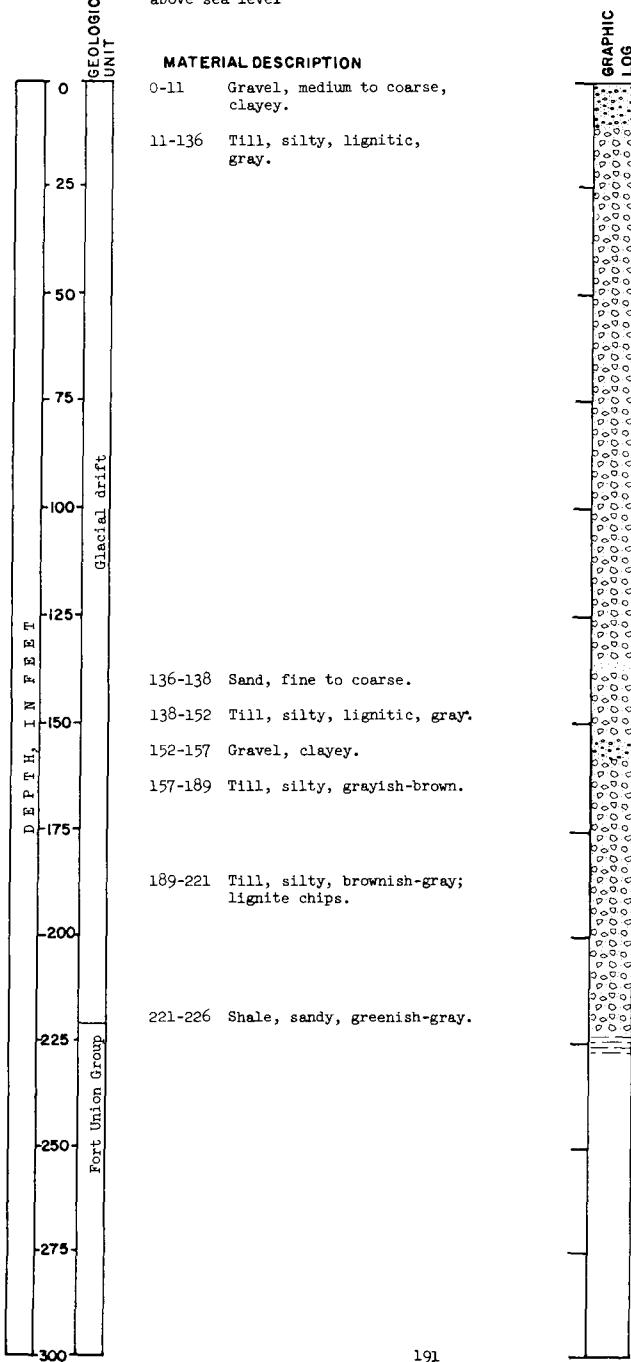
LOCATION: Renville County
158-82-14abc

ELEVATION: 1,565 feet
above sea level

North Dakota State
Water Commission
test hole

DATE DRILLED: March 11, 1961

DEPTH: 226 feet

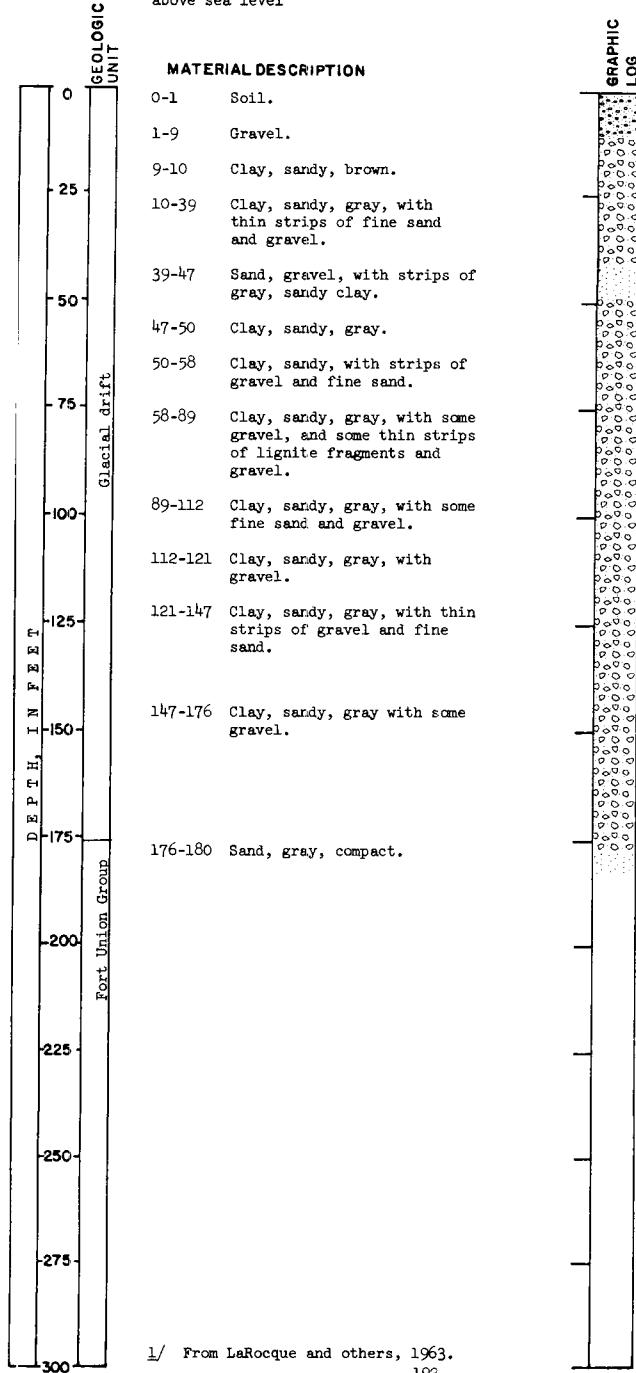


LOCATION: Renville County TEST HOLE
158-82-17ccc U.S. Geol. Survey^{1/}

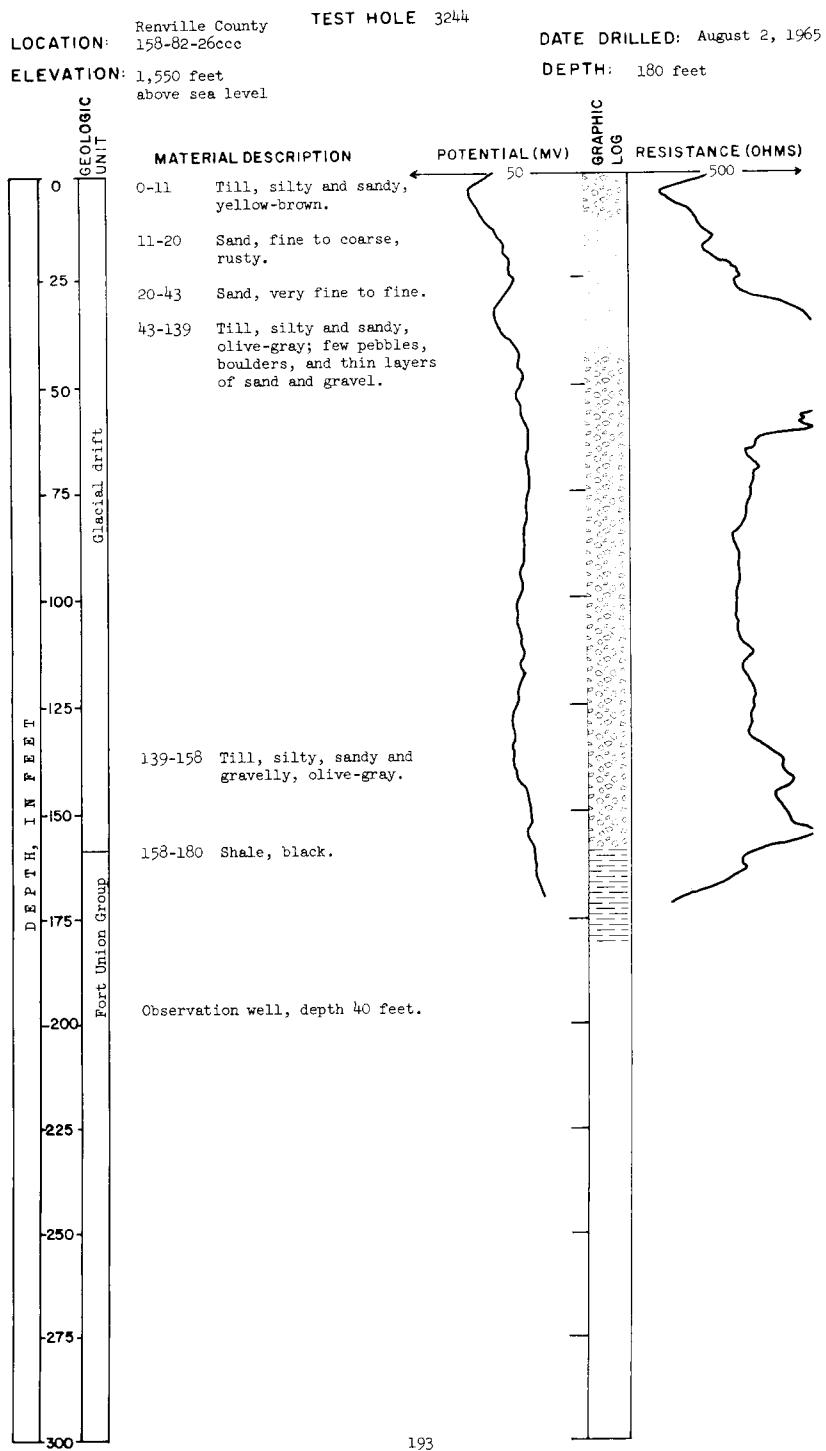
ELEVATION: 1,579 feet
above sea level

DATE DRILLED: 1947

DEPTH: 180 feet



^{1/} From LaRocque and others, 1963.



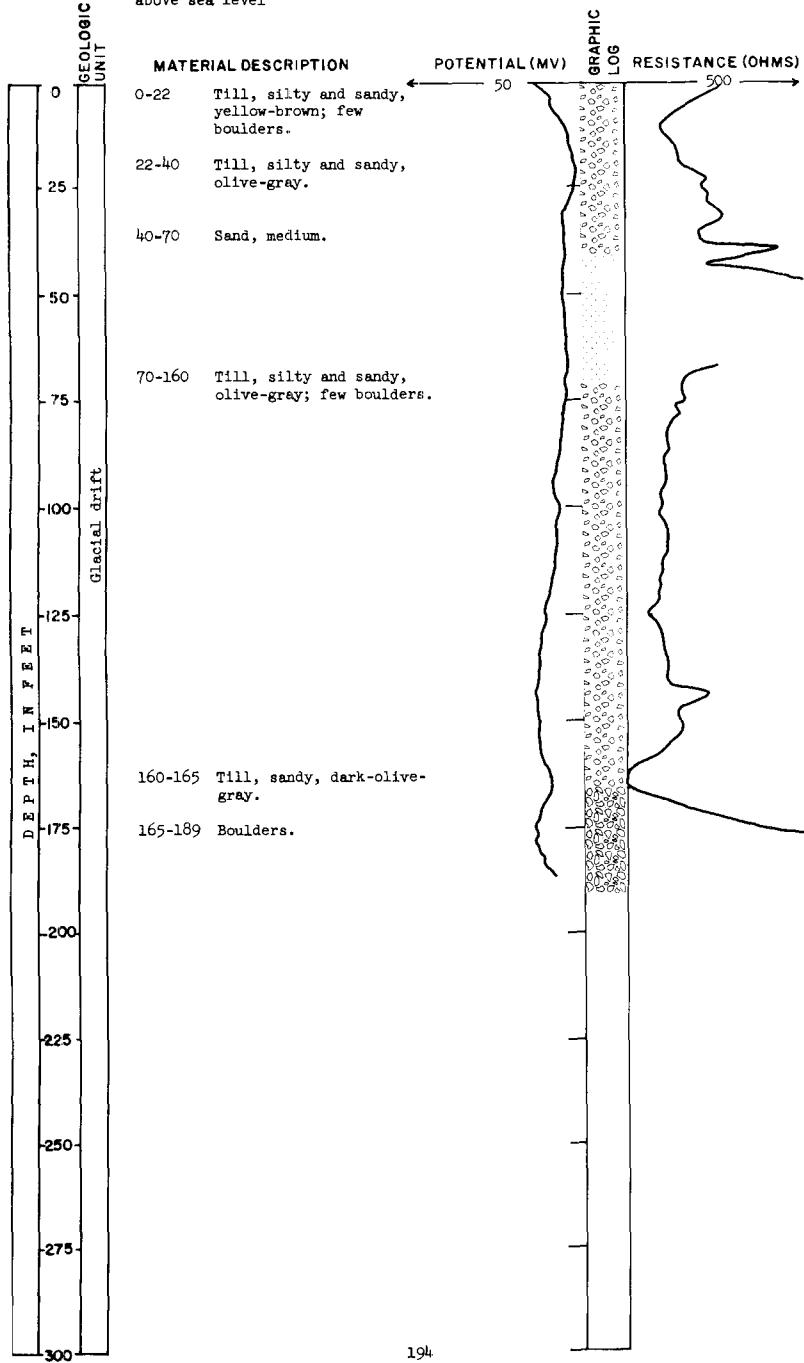
TEST HOLE 3243

LOCATION: Renville County
158-82-27aaa

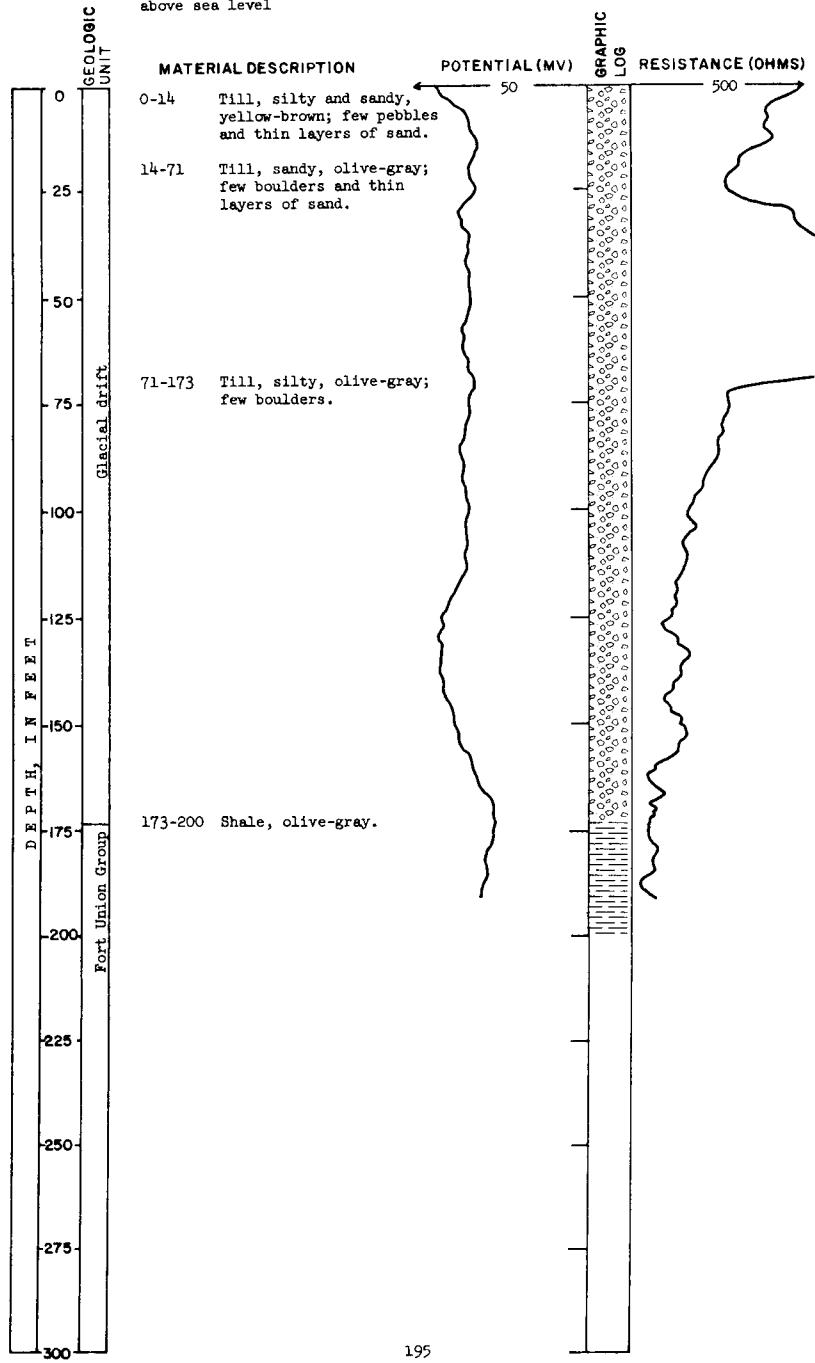
ELEVATION: 1,570 feet
above sea level

DATE DRILLED: July 30, 1965

DEPTH: 187 feet



Renville County TEST HOLE 3245
LOCATION: 158-82-34ccc
ELEVATION: 1,611 feet DATE DRILLED: August 3, 1965
above sea level DEPTH: 200 feet

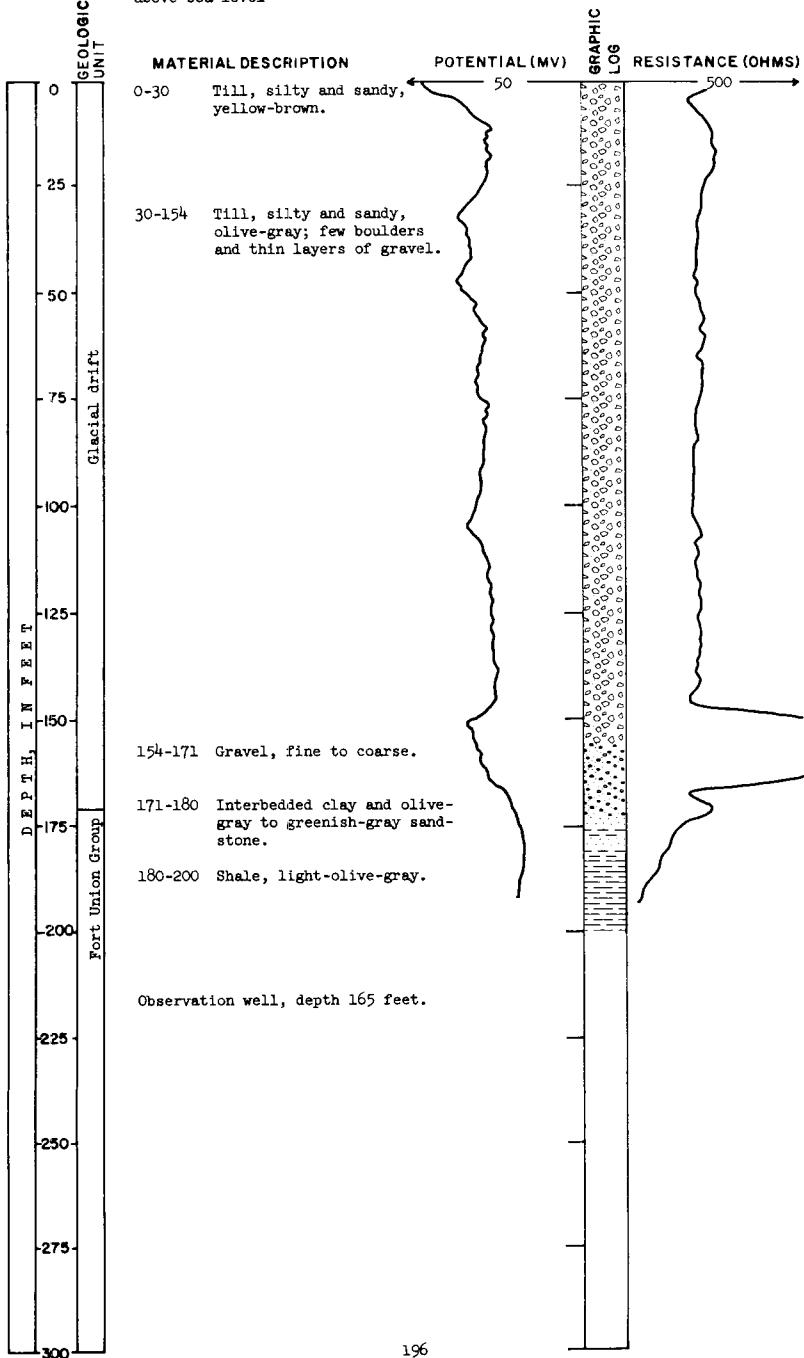


LOCATION: Renville County
TEST HOLE 3247
158-82-34ccd

ELEVATION: 1,610 feet
above sea level

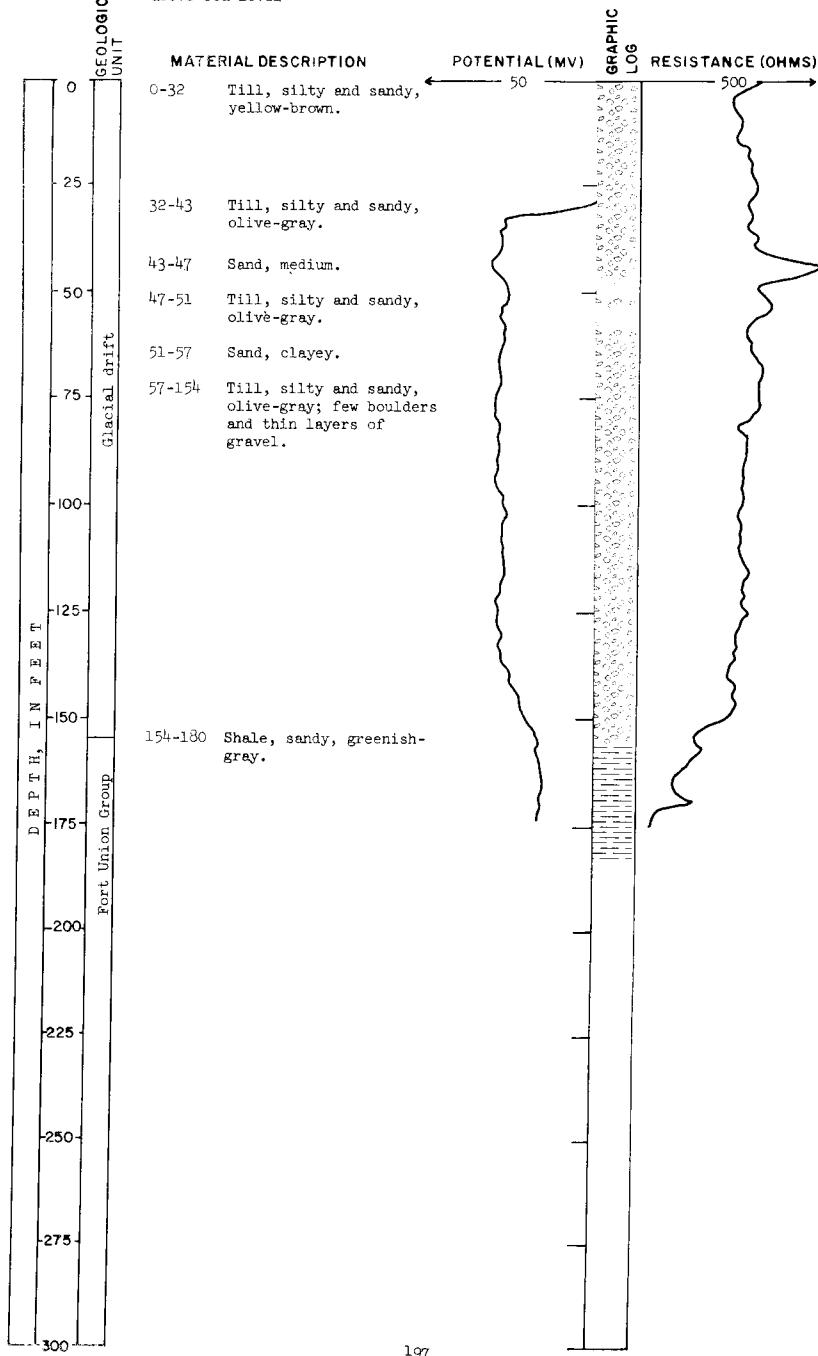
DATE DRILLED: August 4, 1965

DEPTH: 200 feet



LOCATION: Renville County
158-82-35ccc TEST HOLE 3248
ELEVATION: 1,593 feet
above sea level

DATE DRILLED: August 4, 1965
DEPTH: 180 feet



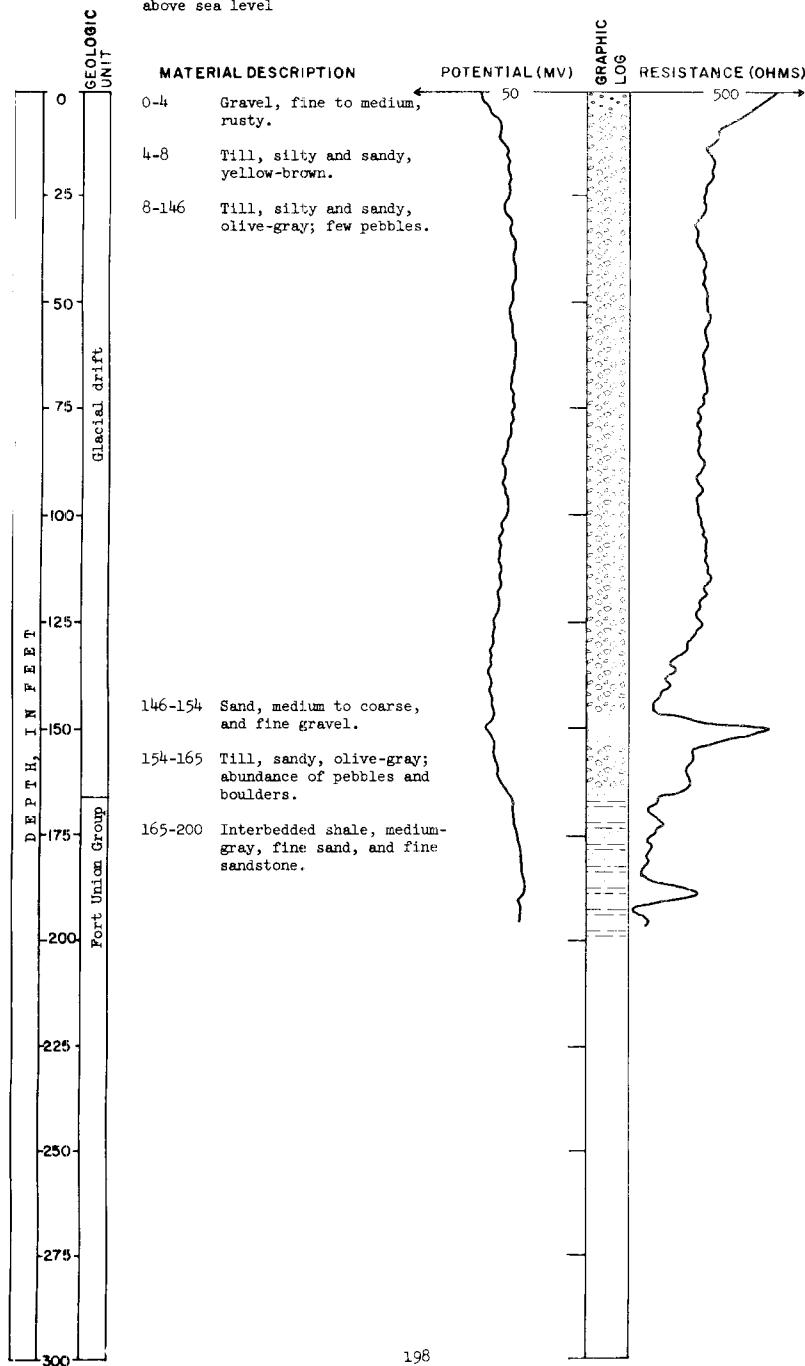
LOCATION: Renville County
158-83-17dcd

TEST HOLE 3251

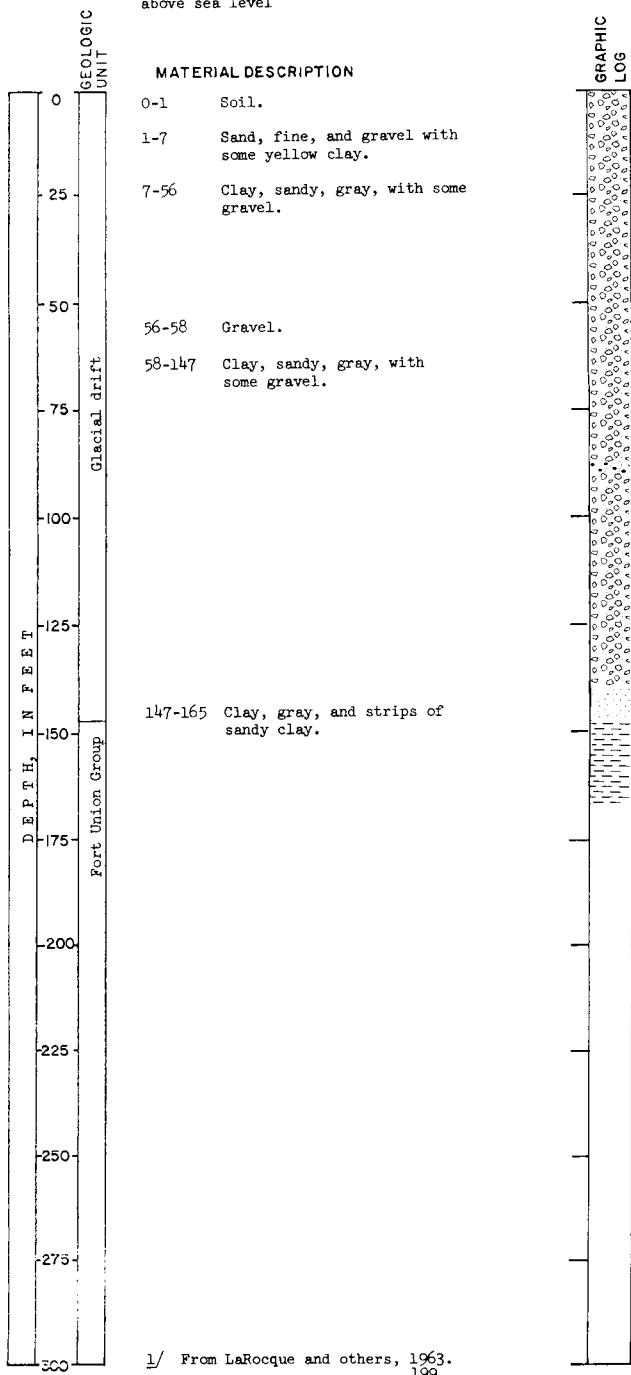
ELEVATION: 1,638 feet
above sea level

DATE DRILLED: August 5, 1965

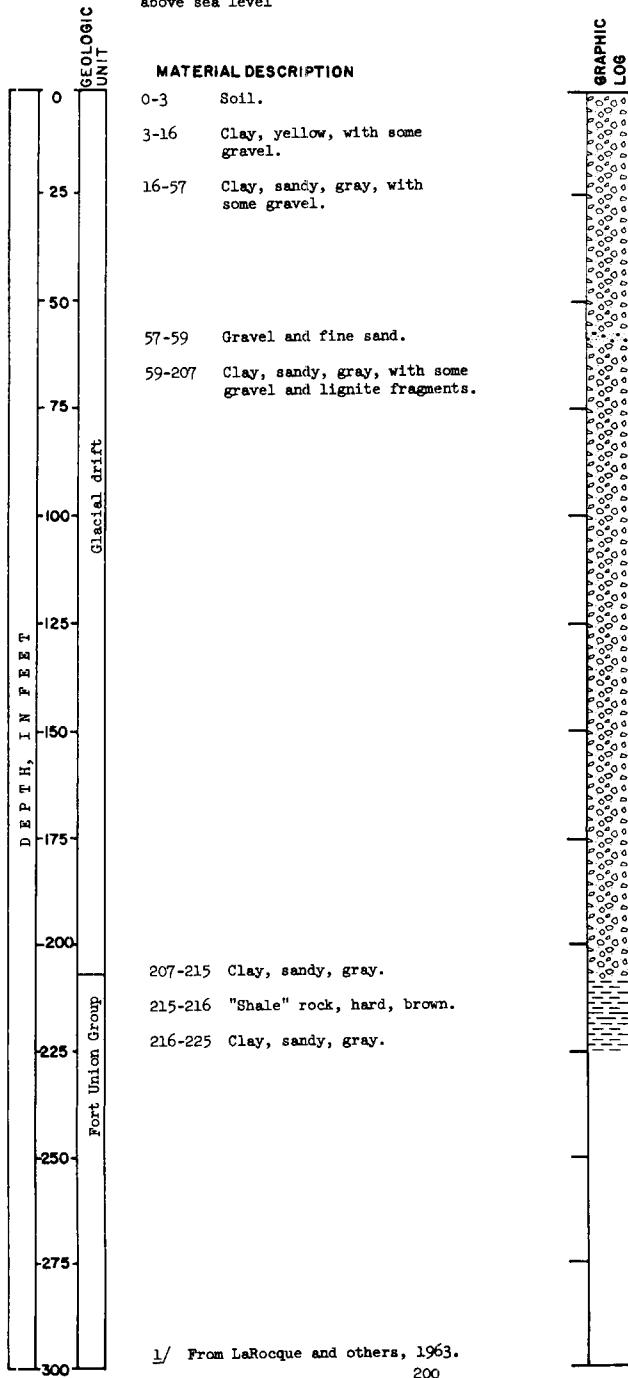
DEPTH: 200 feet



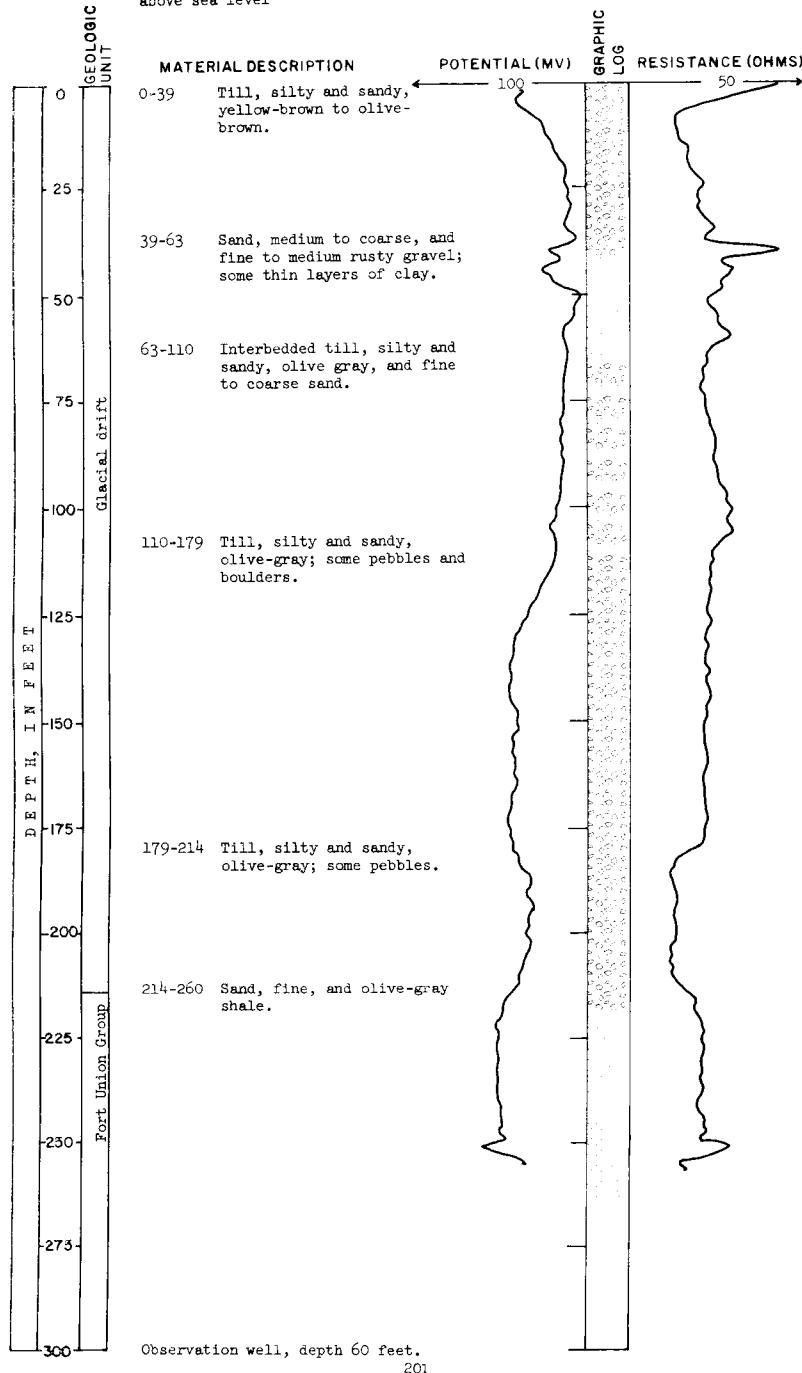
LOCATION: Renville County TEST HOLE
158-83-35ad U.S. Geol. Survey^{1/}
ELEVATION: 1,610 feet DATE DRILLED: 1947
above sea level DEPTH: 165 feet



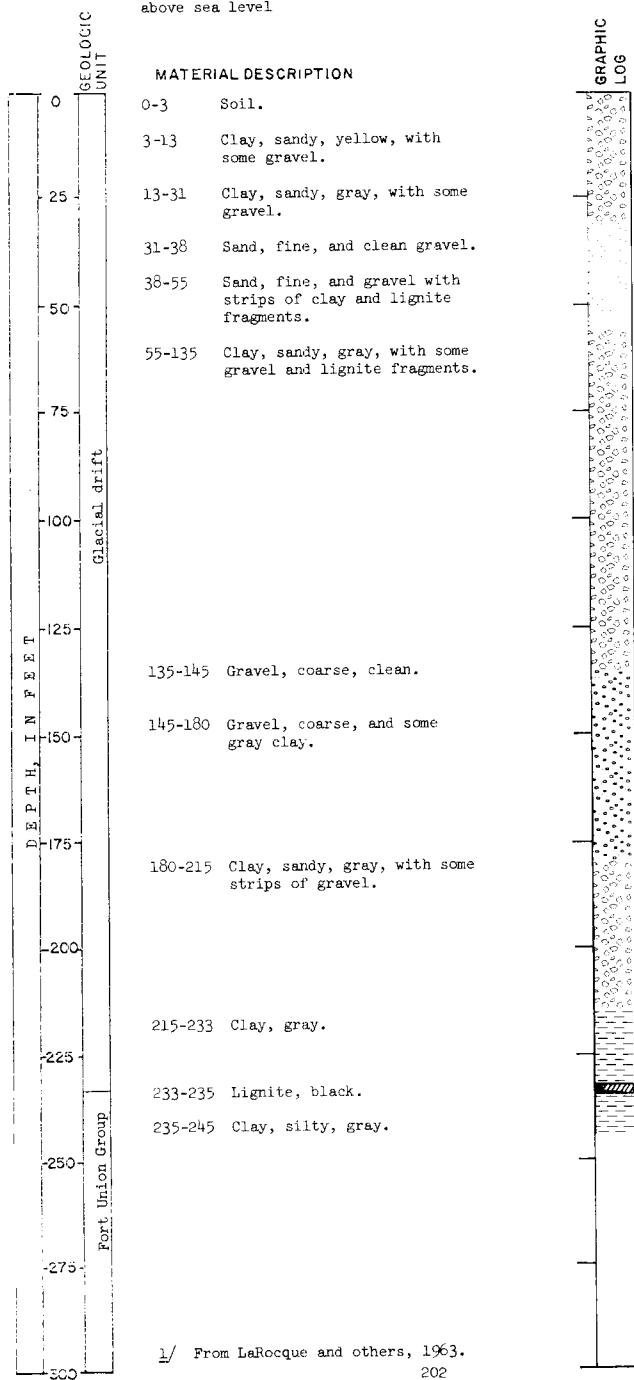
LOCATION: Renville County TEST HOLE
158-84-3aaa U.S. Geol. Survey^{1/}
ELEVATION: 1,695 feet DATE DRILLED: 1947
above sea level DEPTH: 225 feet



LOCATION: Renville County
158-86-1aaa TEST HOLE 3330
ELEVATION: 1,837 feet
above sea level DATE DRILLED: June 6, 1966
DEPTH: 260 feet

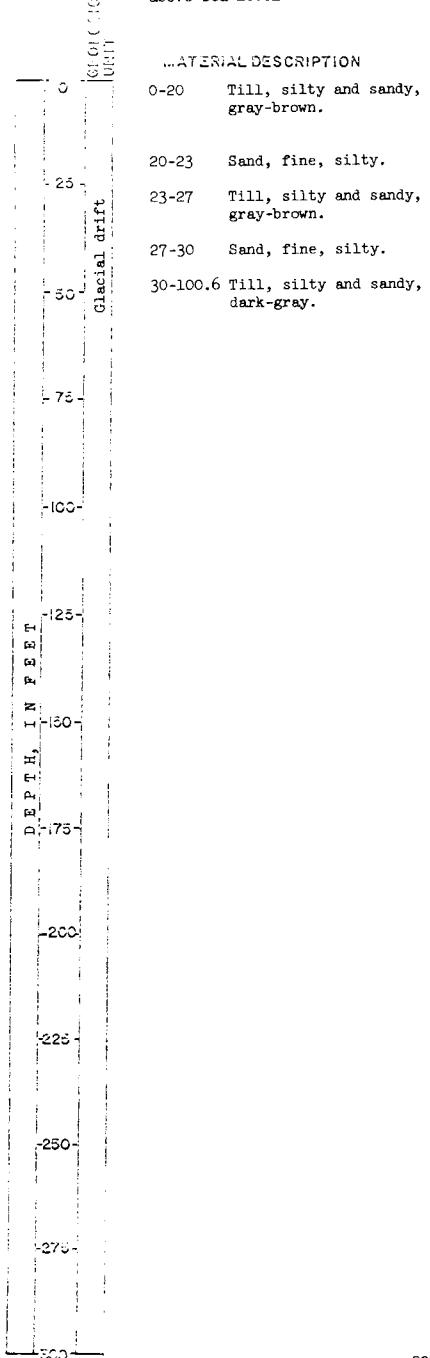


LOCATION: Renville County TEST HOLE
 158-86-11bb U.S. Geol. Survey^{1/}
 ELEVATION: 1,868 feet DATE DRILLED: 1947
 above sea level DEPTH: 245 feet



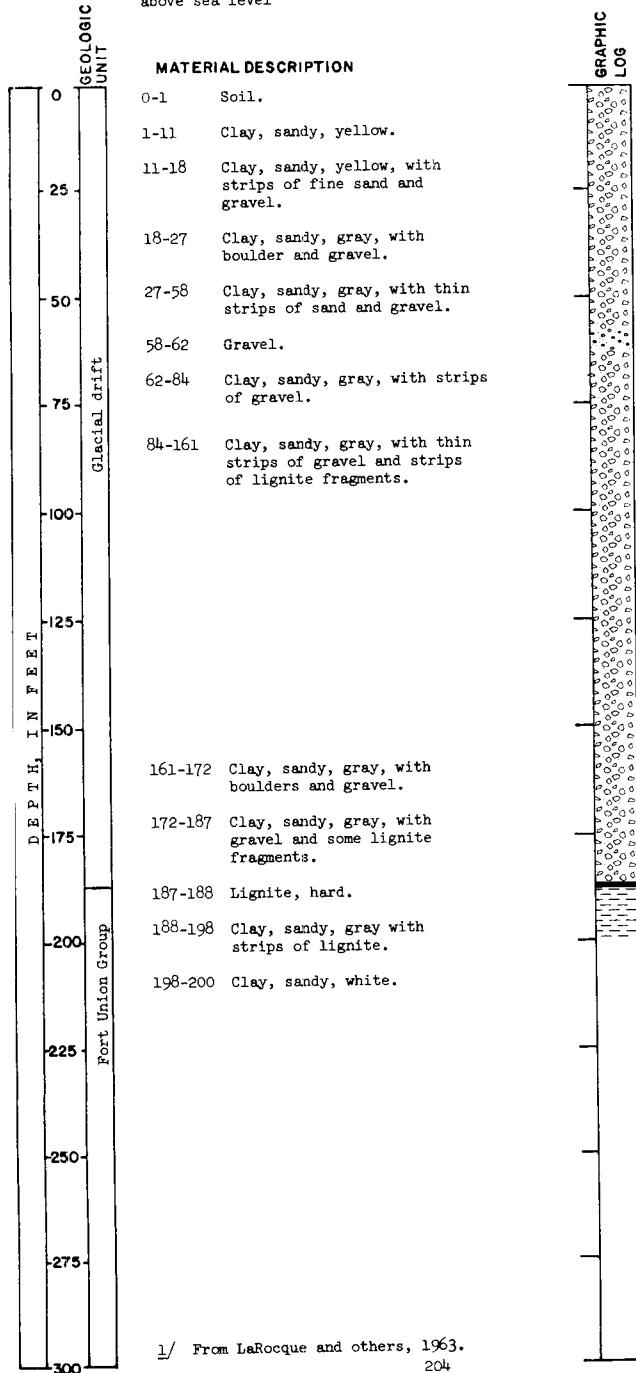
^{1/} From LaRocque and others, 1963.

LOCATION: Renville County
 158-86-14cc TEST HOLE
 U. S. Air Force
 ELEVATION: 1,864 feet DATE DRILLED: 1961
 above sea level DEPTH: 100.6 feet



LOCATION: Renville County
158-86-20aaa TEST HOLE
U.S. Geol. Survey^{1/}
ELEVATION: 1,916 feet
above sea level

DATE DRILLED: 1947
DEPTH: 200 feet



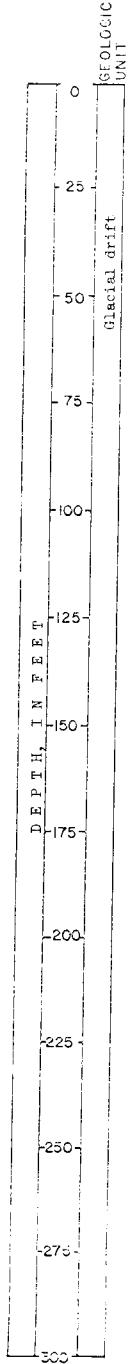
LOCATION: Ward County
158-87-22cc

ELEVATION: 2,029 feet
above sea level

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

DEPTH: 100 feet



MATERIAL DESCRIPTION

0-31 Till, silty and sandy, brown.

31-34 Sand, fine, silty.

34-62 Till, silty and sandy, dark-gray.

62-72 Sand, fine to medium.

72-100 Till, silty and sandy, gray.

GRAPHIC LOG



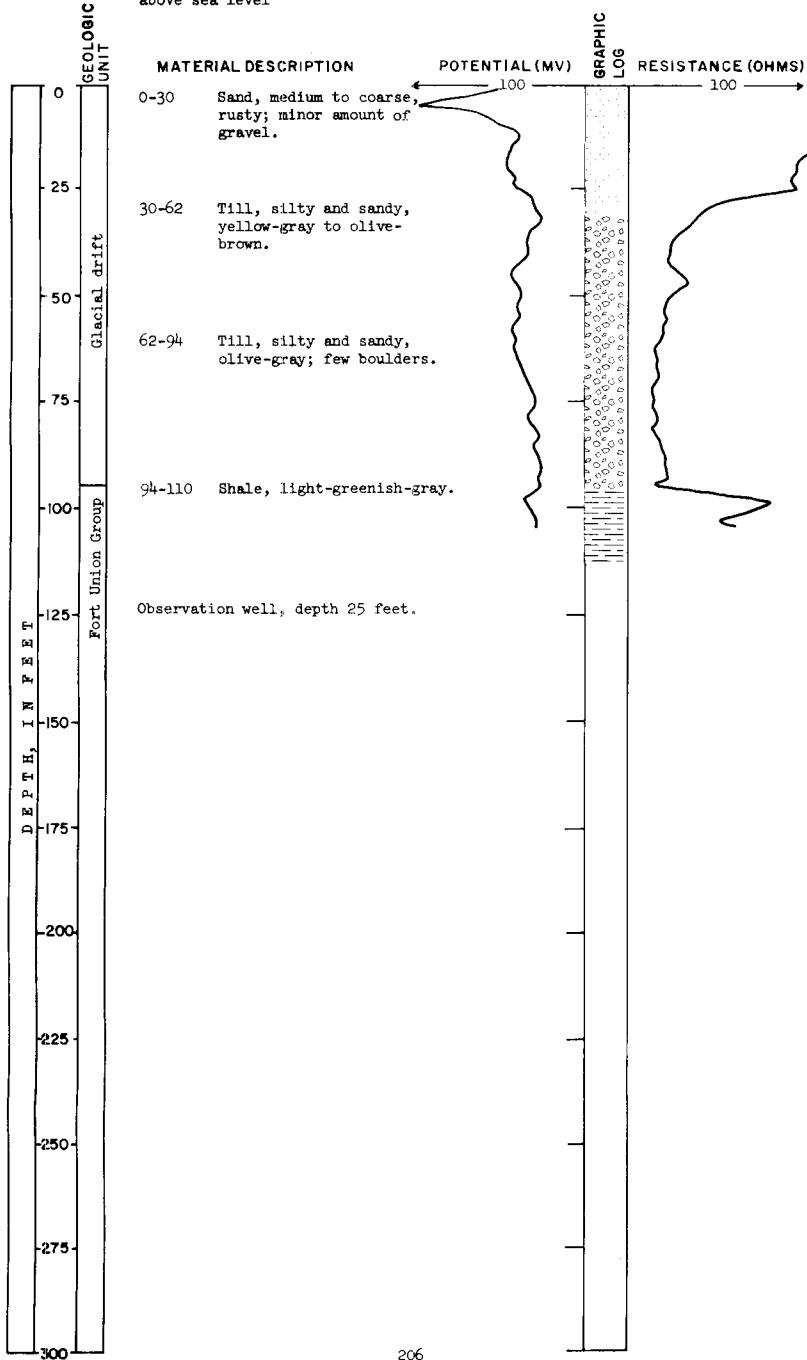
LOCATION: Renville County
158-86-30add

TEST HOLE 3331

ELEVATION: 1,730 feet
above sea level

DATE DRILLED: June 7, 1966

DEPTH: 110 feet



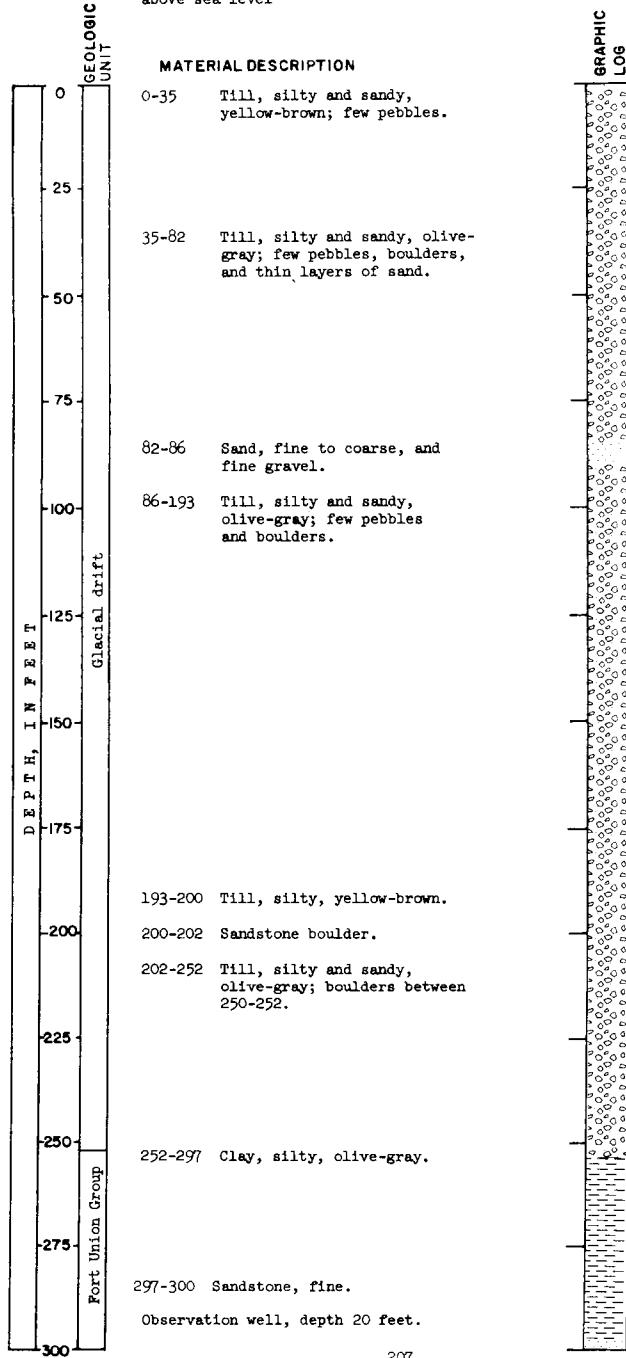
LOCATION: Renville County
159-84-6bbb

ELEVATION: 1,729 feet
above sea level

TEST HOLE 2318

DATE DRILLED: October 20, 1964

DEPTH: 300 feet



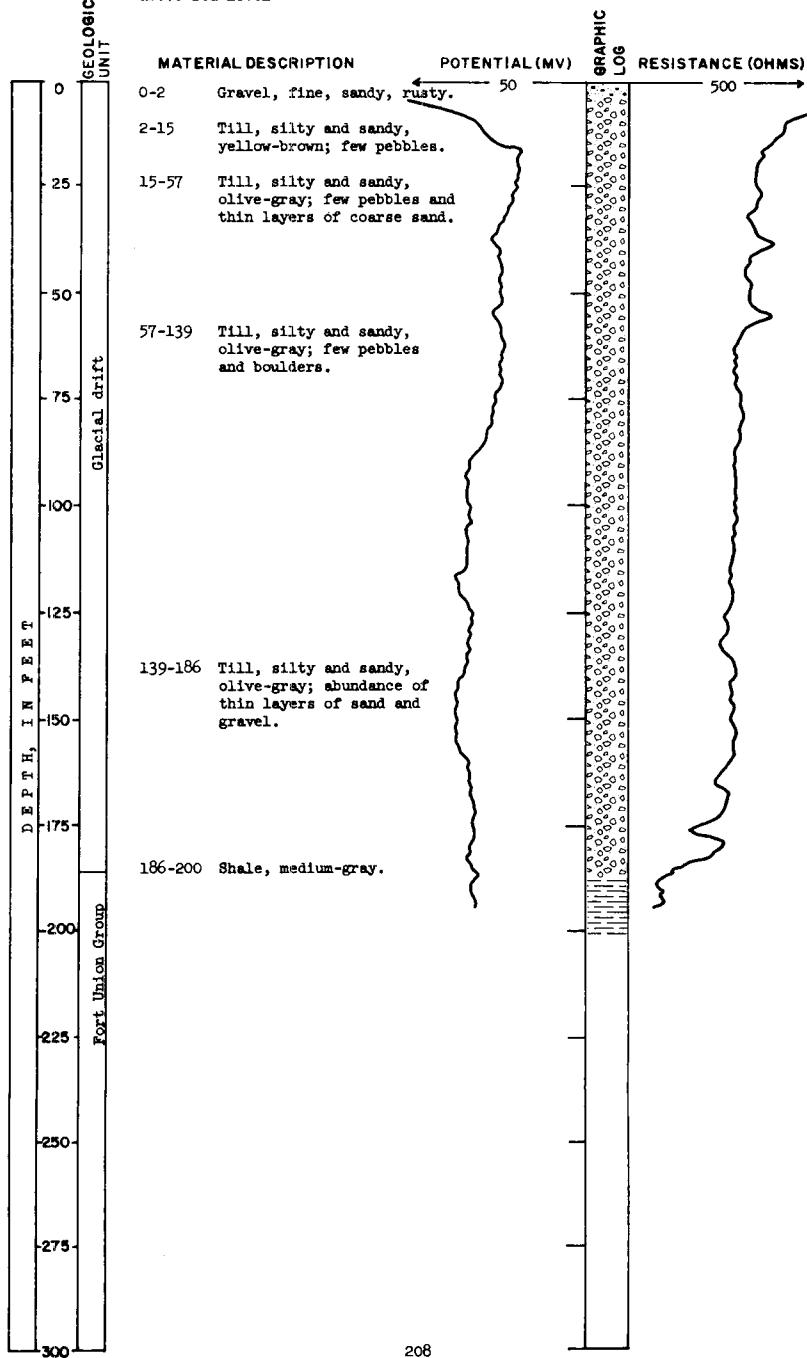
TEST HOLE 3252

LOCATION: Renville County
159-84-24aa

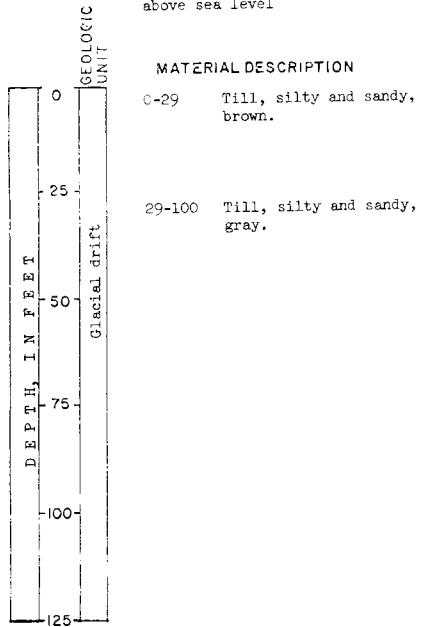
ELEVATION: 1,632 feet
above sea level

DATE DRILLED: August 5, 1965

DEPTH: 200 feet

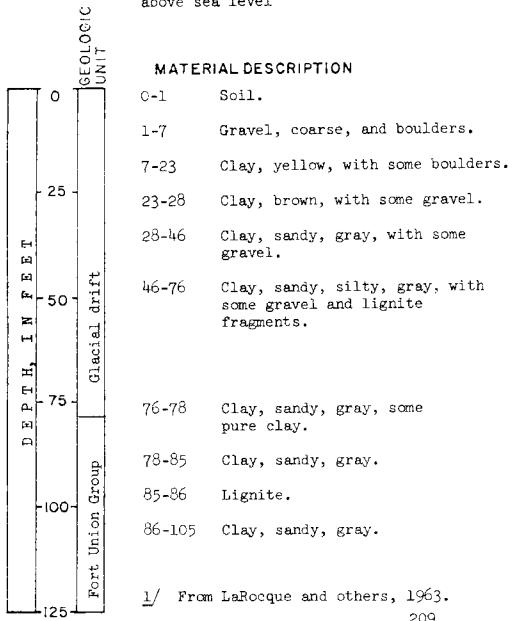


LOCATION: Renville County TEST HOLE
159-85-1cc U.S. Air Force
ELEVATION: 1,725 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet



GRAPHIC LOG

LOCATION: Renville County TEST HOLE
159-85-10ac U.S. Geol. Survey^{1/}
ELEVATION: 1,712 feet DATE DRILLED: 1947
above sea level DEPTH: 105 feet

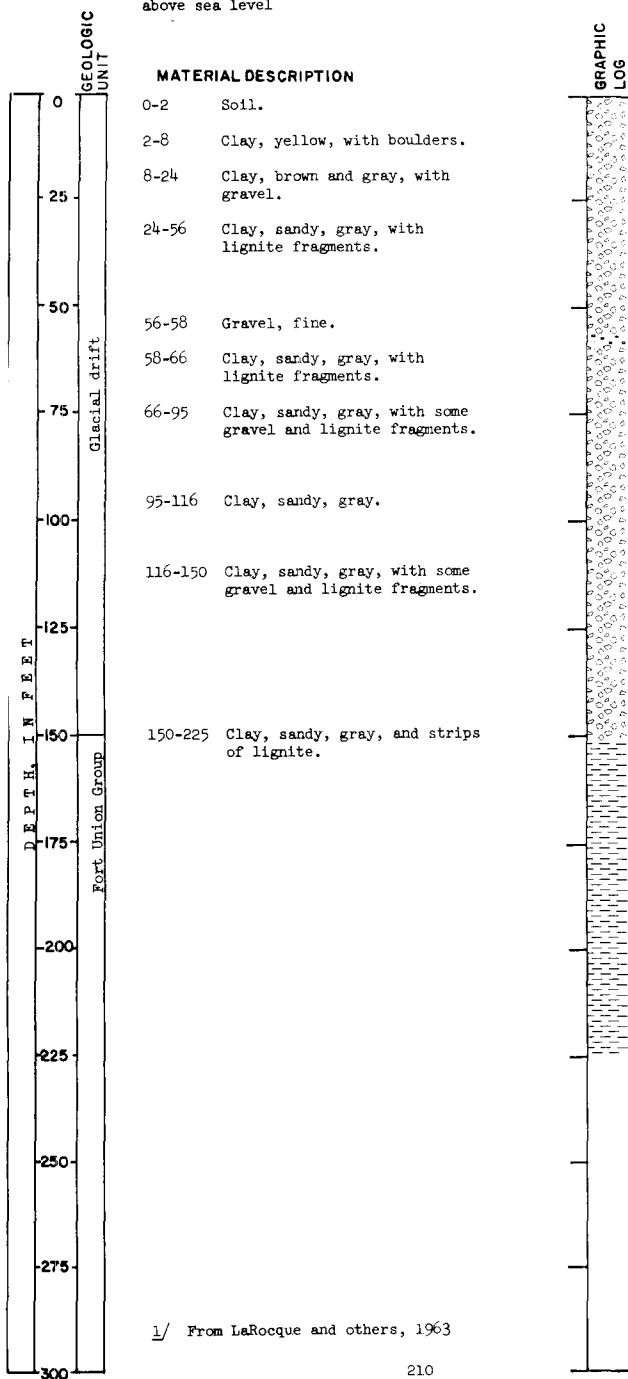


GRAPHIC LOG

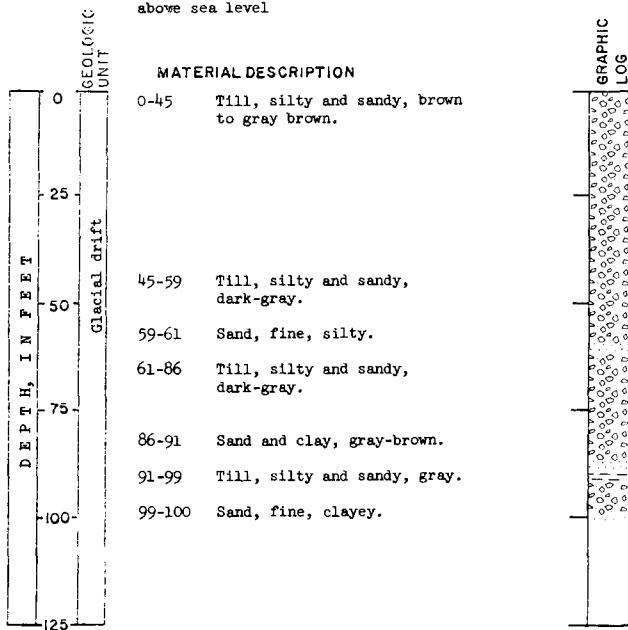
^{1/} From LaRocque and others, 1963.
209

LOCATION: Renville County TEST HOLE
159-85-20cc U.S. Geol. Survey^{1/}
ELEVATION: 1,738 feet
above sea level

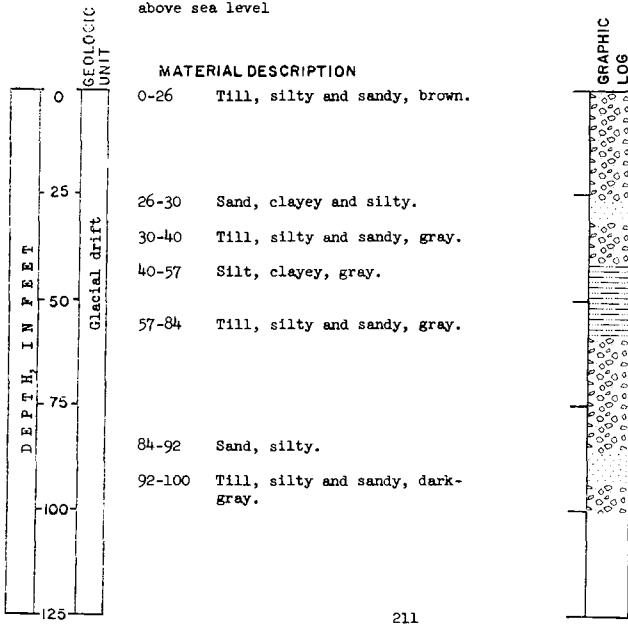
DATE DRILLED: 1947
DEPTH: 225 feet



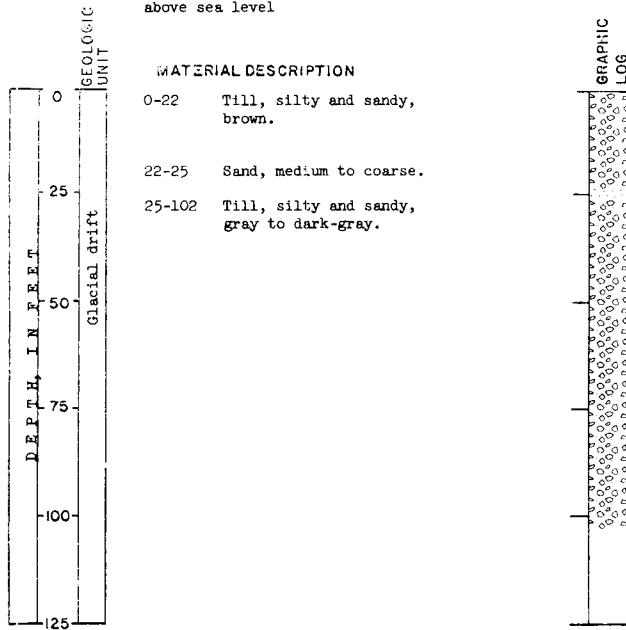
LOCATION: Renville County TEST HOLE
159-86-5cc U.S. Air Force
ELEVATION: 1,880 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet



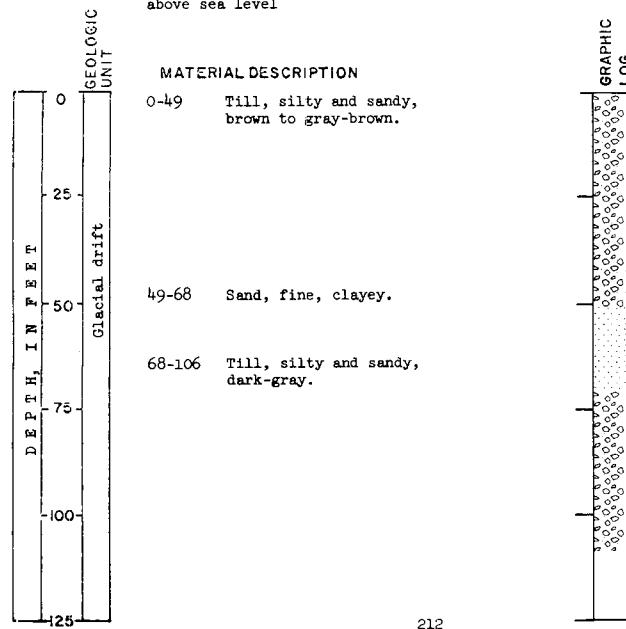
LOCATION: Renville County TEST HOLE
159-86-19cc U.S. Air Force DATE DRILLED: 1961
ELEVATION: 1,828 feet DEPTH: 100 feet
above sea level



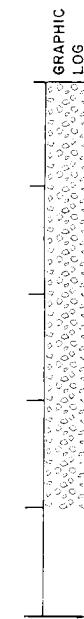
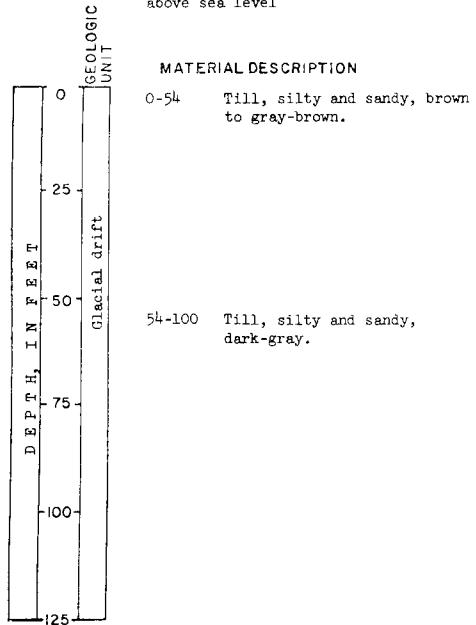
LOCATION: Ward County
 159-87-5cc TEST HOLE
 U.S. Air Force
 ELEVATION: 1,922 feet
 above sea level DATE DRILLED: 1961
 DEPTH: 102 feet



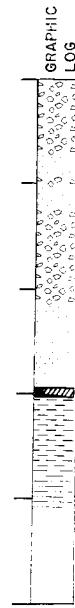
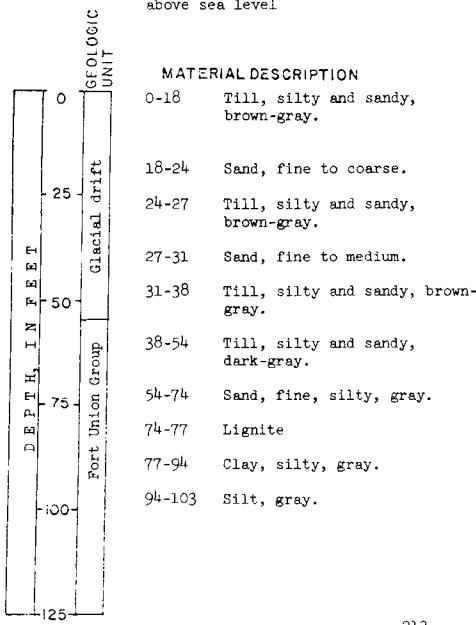
LOCATION: Ward County
 159-87-36dd TEST HOLE
 U.S. Air Force
 ELEVATION: 1,945 feet
 above sea level DATE DRILLED: 1961
 DEPTH: 106 feet



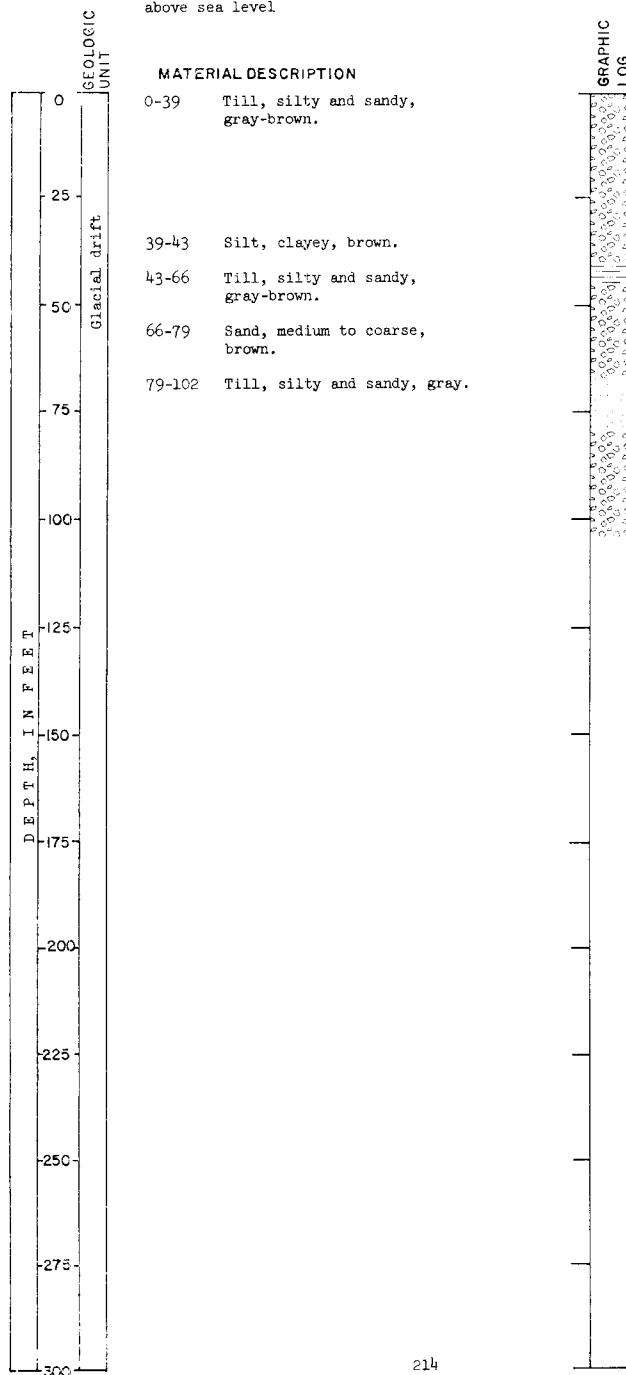
LOCATION: Ward County
 159-88-35bb TEST HOLE
 U.S. Air Force
 ELEVATION: 2,099 feet DATE DRILLED: 1961
 above sea level DEPTH: 100 feet



LOCATION: Ward County TEST HOLE
 159-89-1dd U.S. Air Force DATE DRILLED: 1961
 ELEVATION: 2,042 feet DEPTH: 103 feet
 above sea level



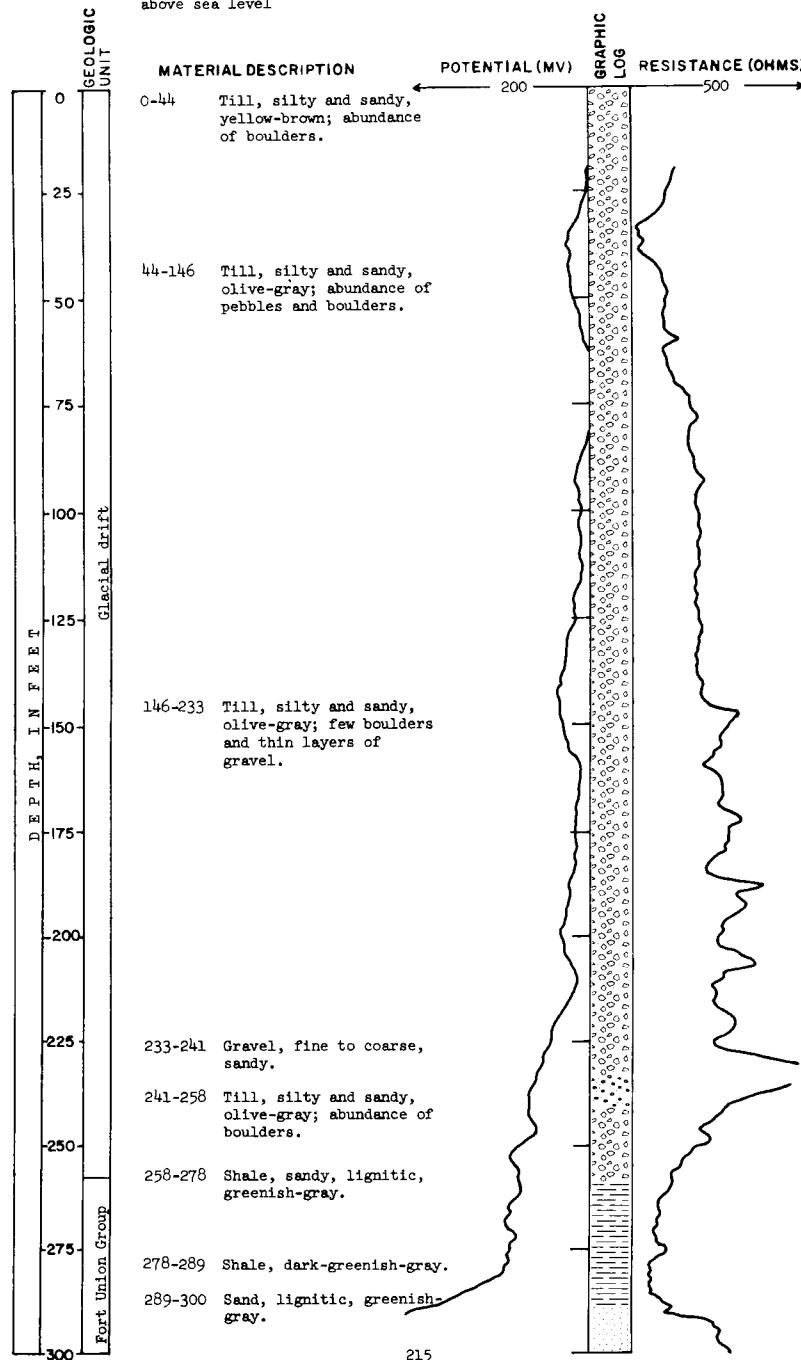
LOCATION: Ward County
159-89-8bb TEST HOLE
ELEVATION: 2,166 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 102 feet



LOCATION: Ward County
159-89-19ddd
ELEVATION: 2,307 feet
above sea level

TEST HOLE 3259

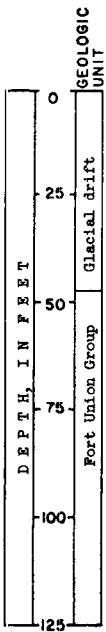
DATE DRILLED: August 20, 1965
DEPTH: 300 feet



LOCATION: Ward County
159-89-24aaa
ELEVATION: 2,092 feet
above sea level

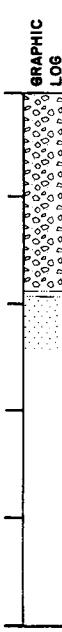
TEST HOLE 3260

DATE DRILLED: August 20, 1965
DEPTH: 60 feet



MATERIAL DESCRIPTION

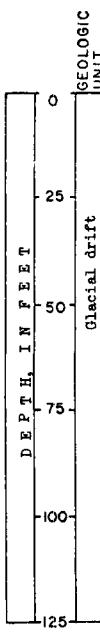
- 0-5 Till, very sandy, yellow-gray.
5-20 Till, silty and sandy, yellow-gray; few pebbles.
20-44 Till, silty, olive-gray; few boulders.
44-47 Silt, clayey, yellow-brown.
47-60 Sand, very fine to fine, greenish-gray; lignite between 55-57.



LOCATION: Ward County
159-89-36cb
ELEVATION: 2,274 feet
above sea level

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961
DEPTH: 101 feet



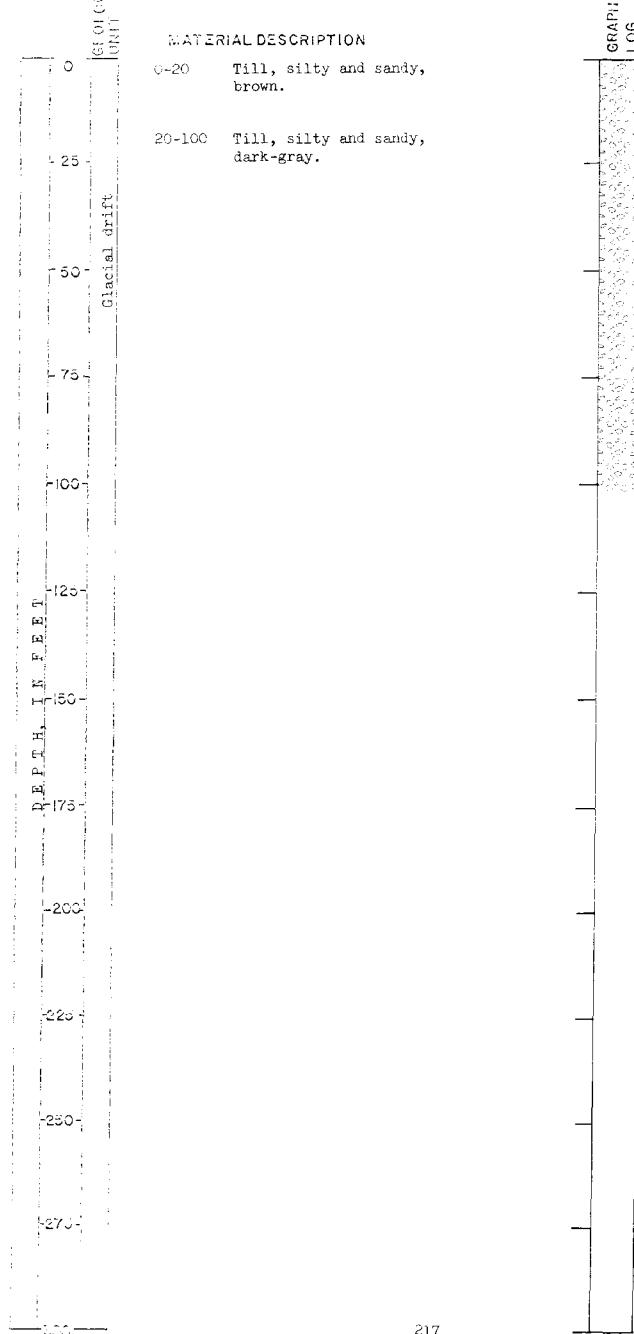
MATERIAL DESCRIPTION

- 0-27 Till, silty and sandy, brown to brown-gray.
27-31 Silt, clayey, brown.
31-33 Silt, clayey, gray.
33-101 Till, silty and sandy, dark-gray.

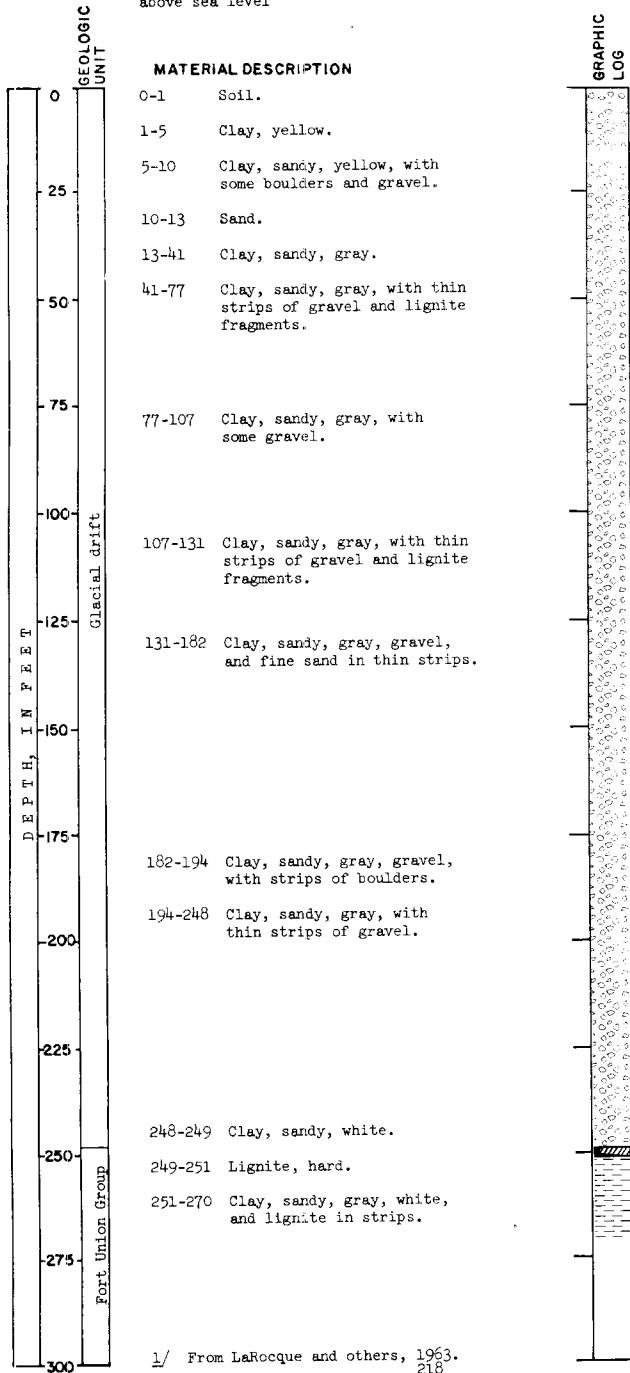


LOCATION: Renville County
160-84-9aa TEST HOLE
ELEVATION: 1,661 feet U.S. Air Force
above sea level

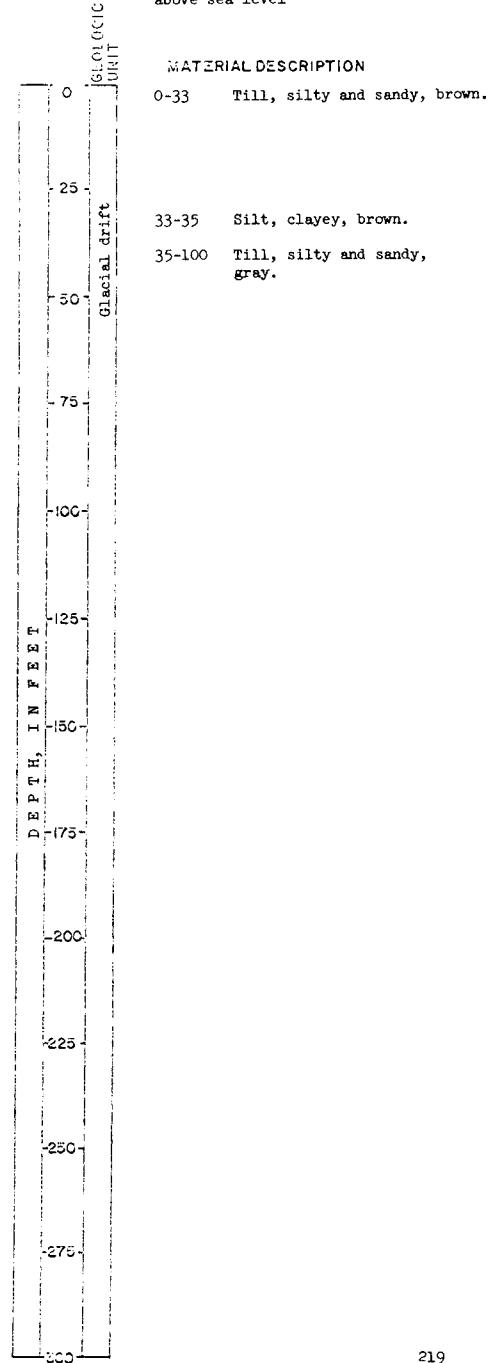
DATE DRILLED: 1961
DEPTH: 100 feet



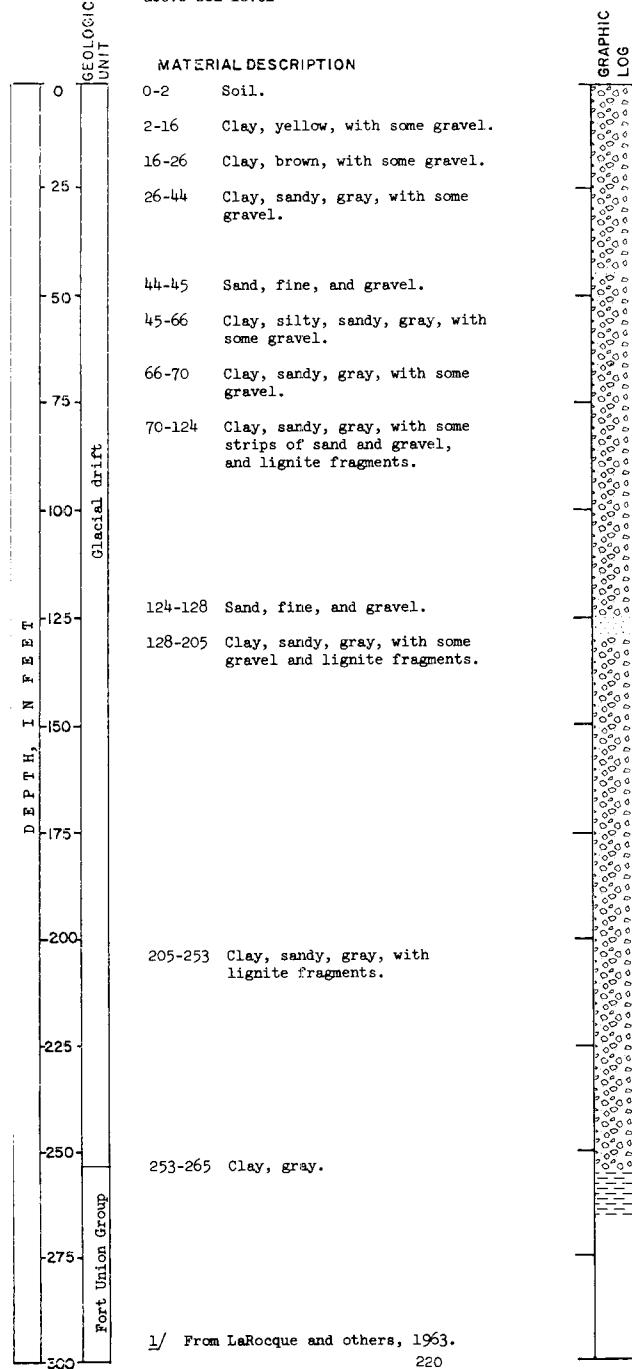
LOCATION: Renville County TEST HOLE
 160-84-16daa U.S. Geol. Survey^{1/}
 ELEVATION: 1,629 feet DATE DRILLED: 1947
 above sea level DEPTH: 270 feet



LOCATION: Renville County TEST HOLE
160-85-10dc U.S. Air Force DATE DRILLED: 1961
ELEVATION: 1,753 feet DEPTH: 100 feet
above sea level

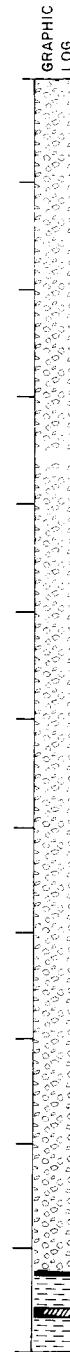
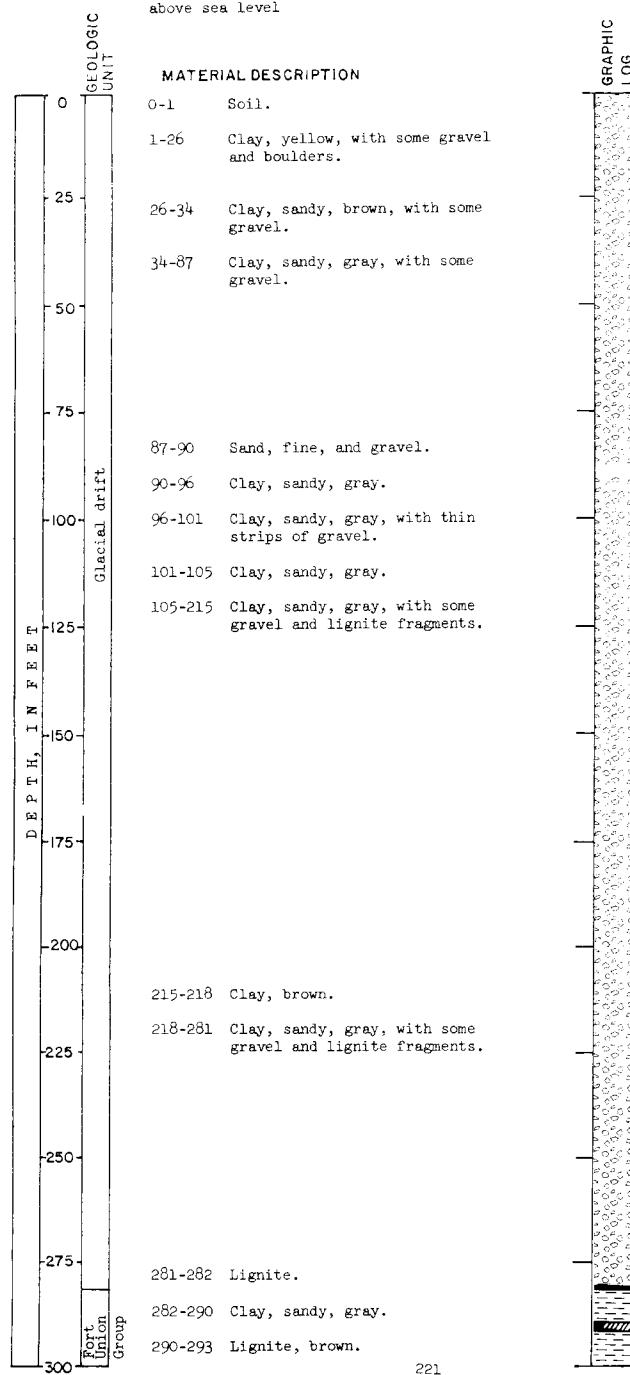


LOCATION: Renville County TEST HOLE
160-85-36aa U.S. Geol. Survey^{1/}
ELEVATION: 1,742 feet DATE DRILLED: 1947
above sea level DEPTH: 265 feet



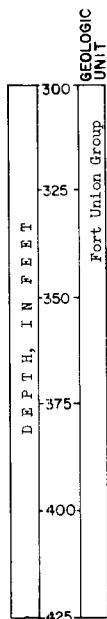
1/ From LaRocque and others, 1963.
220

LOCATION: Renville County TEST HOLE
 160-86-10cc U.S. Geol. Survey^{1/}
 ELEVATION: 1,828 feet DATE DRILLED: 1947
 above sea level DEPTH: 317 feet



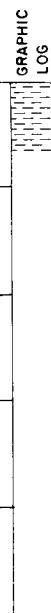
Renville County TEST HOLE
LOCATION: 160-86-10cc U.S. Geol. Survey^{1/}
(Continued)
ELEVATION: 1,828 feet
above sea level

DATE DRILLED: 1947
DEPTH: 317 feet



MATERIAL DESCRIPTION

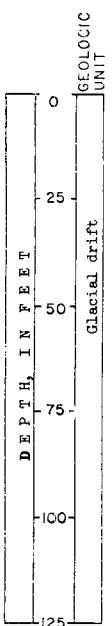
293-317 Clay, sandy, gray, with
lignite fragments.



^{1/} From LaRocque and others, 1963

Renville County TEST HOLE
U.S. Air Force
LOCATION: 160-86-25d
ELEVATION: 1,774 feet
above sea level

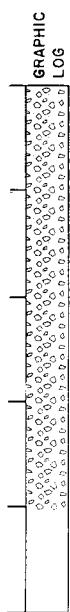
DATE DRILLED: 1961
DEPTH: 100 feet



MATERIAL DESCRIPTION

0-40 Till, silty and sandy, brown.

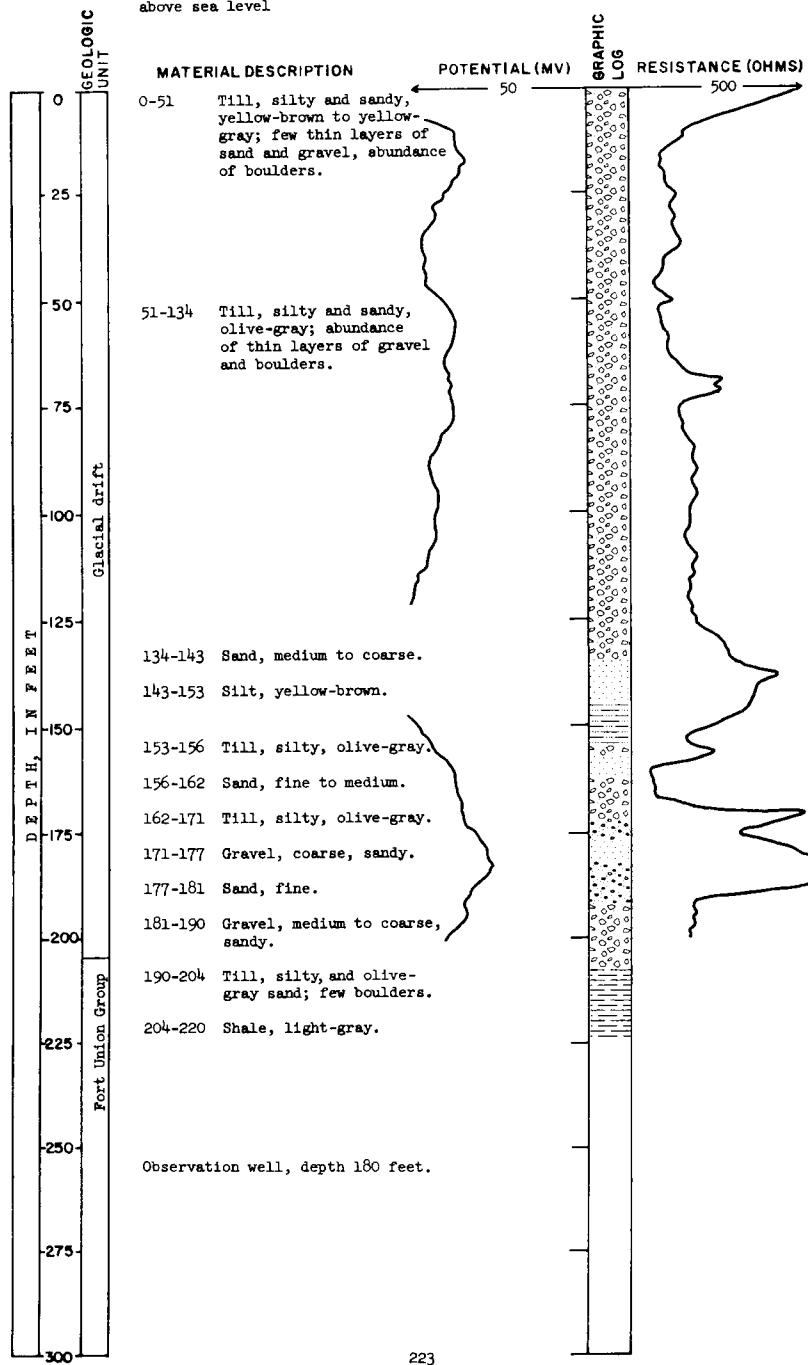
40-100 Till, silty and sandy,
dark-gray.



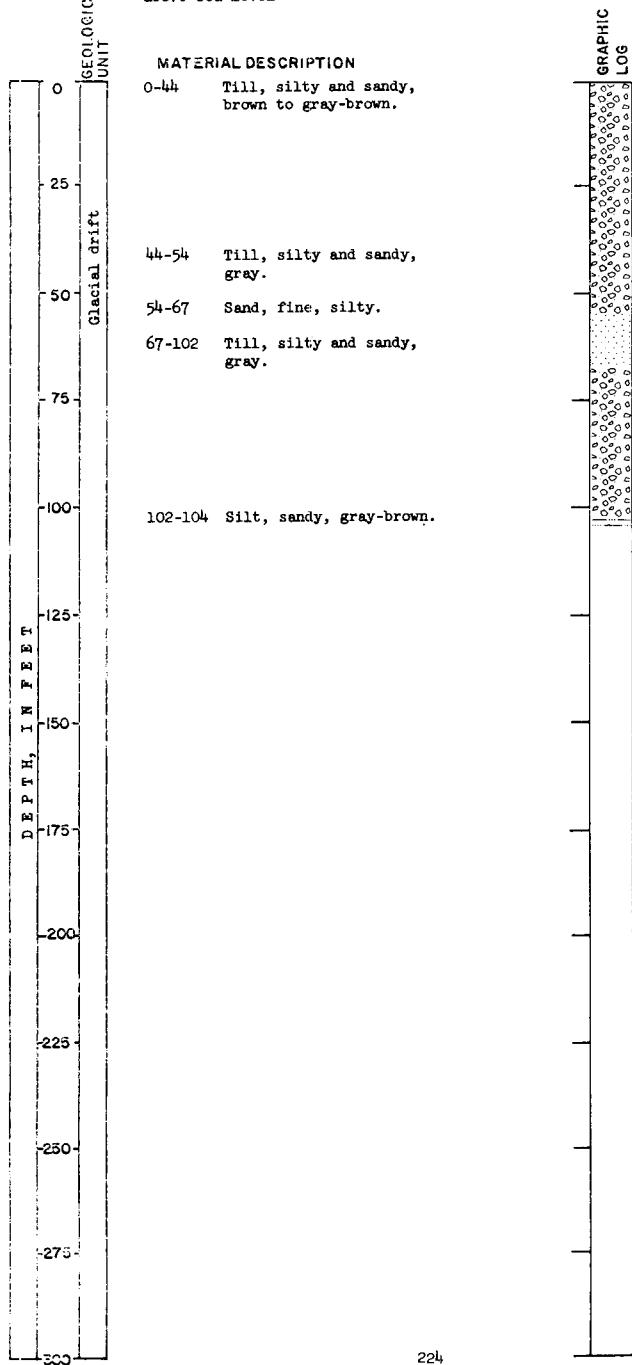
LOCATION: Ward County
160-87-17ddd
ELEVATION: 1,904 feet
above sea level

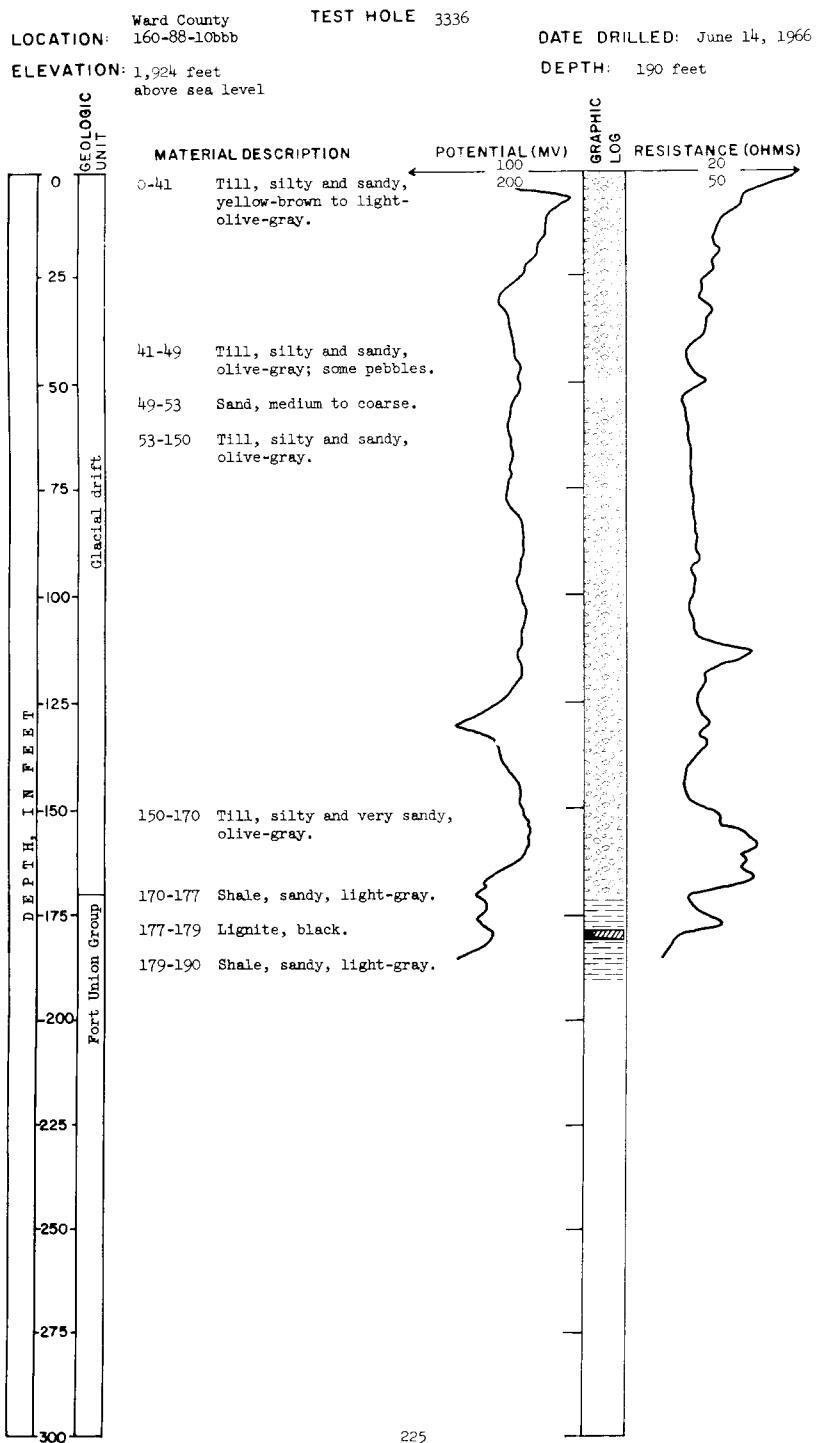
TEST HOLE 3257

DATE DRILLED: August 19, 1965
DEPTH: 220 feet

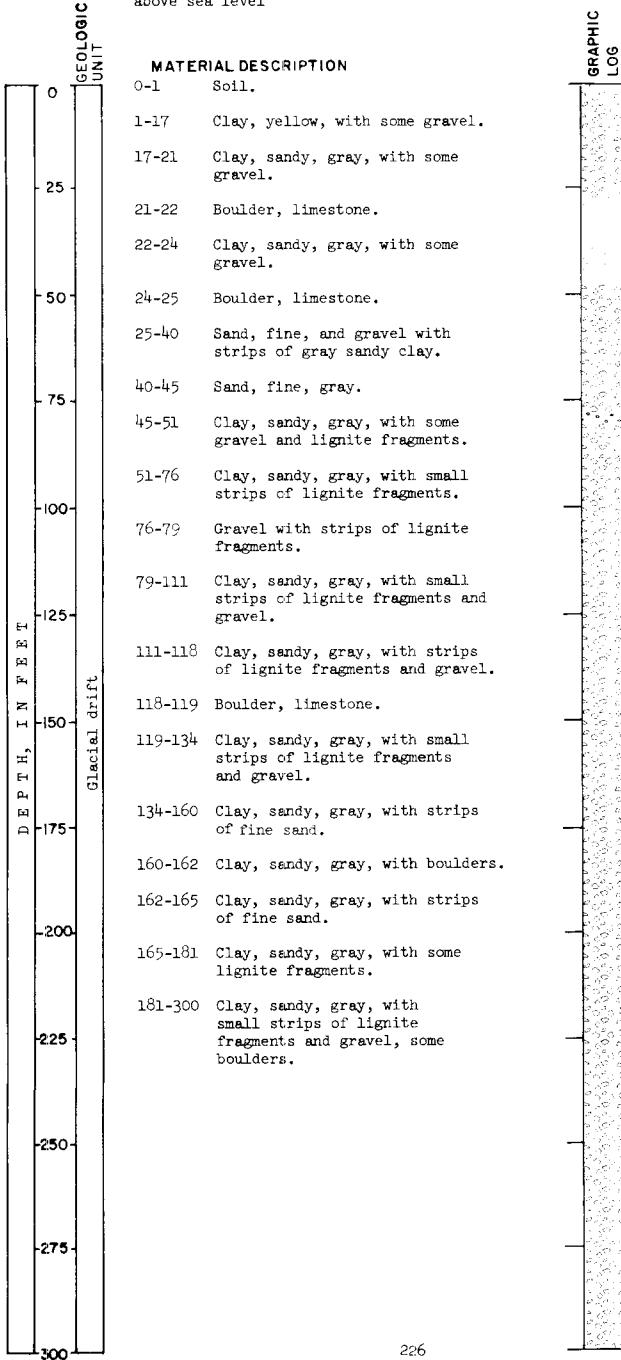


LOCATION: Ward County
160-87-23dd TEST HOLE
ELEVATION: 1,866 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 104 feet



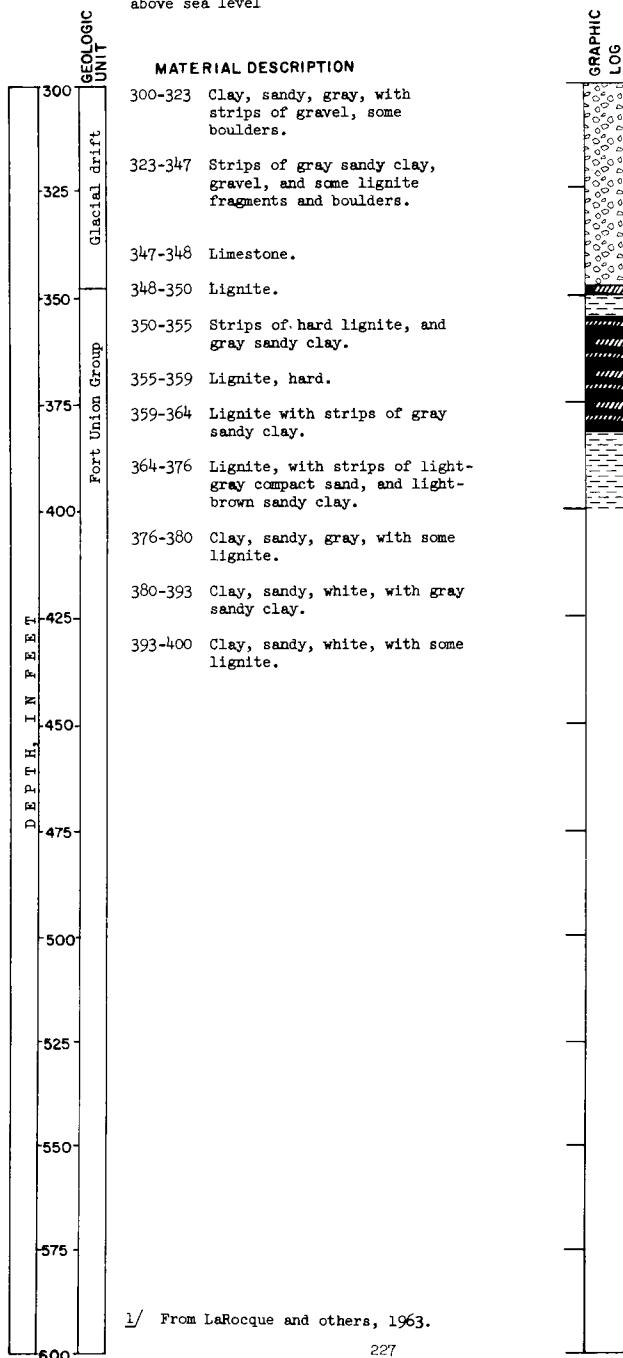


LOCATION: Ward County
 160-88-10ccc **TEST HOLE**
 U.S. Geol. Survey /
ELEVATION: 1,932 feet
 above sea level **DATE DRILLED:** July 18, 1947
DEPTH: 400 feet



LOCATION: Ward County U.S. Geol. Survey
160-88-10ccc (Continued)
ELEVATION: 1,932 feet
above sea level

DATE DRILLED: July 18, 1947
DEPTH: 400 feet



LOCATION: Ward County
160-88-14cc

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

ELEVATION: 1,936 feet
above sea level

DEPTH: 100 feet

GLACIAL

MATERIAL DESCRIPTION

- 0-37 Till, silty and sandy,
brown to gray-brown.
- 37-41 Sand, fine to medium, silty,
gray-brown.
- 41-58 Till, silty and sandy,
brown to gray.
- 58-100 Till, silty and sandy, gray.

Glacial drift

25

50

75

100

125

150

175

200

225

250

275

300

DEPTH IN FEET

0

25

50

75

100

125

150

175

200

225

250

275

300

GRAPHIC

LOG

GRAPHIC

LOG

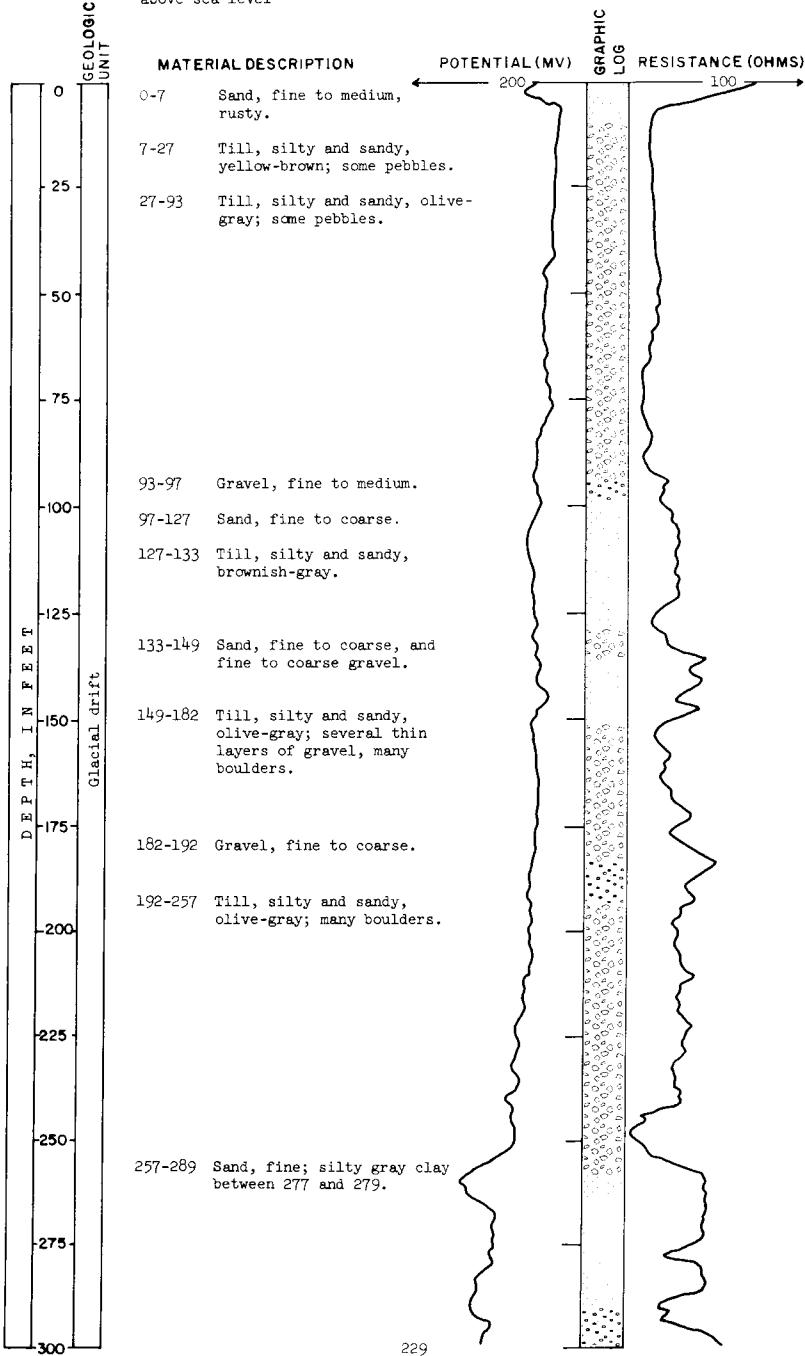
TEST HOLE 3341

LOCATION: Ward County
160-88-19add

ELEVATION: 1,795 feet
above sea level

DATE DRILLED: June 21, 1966

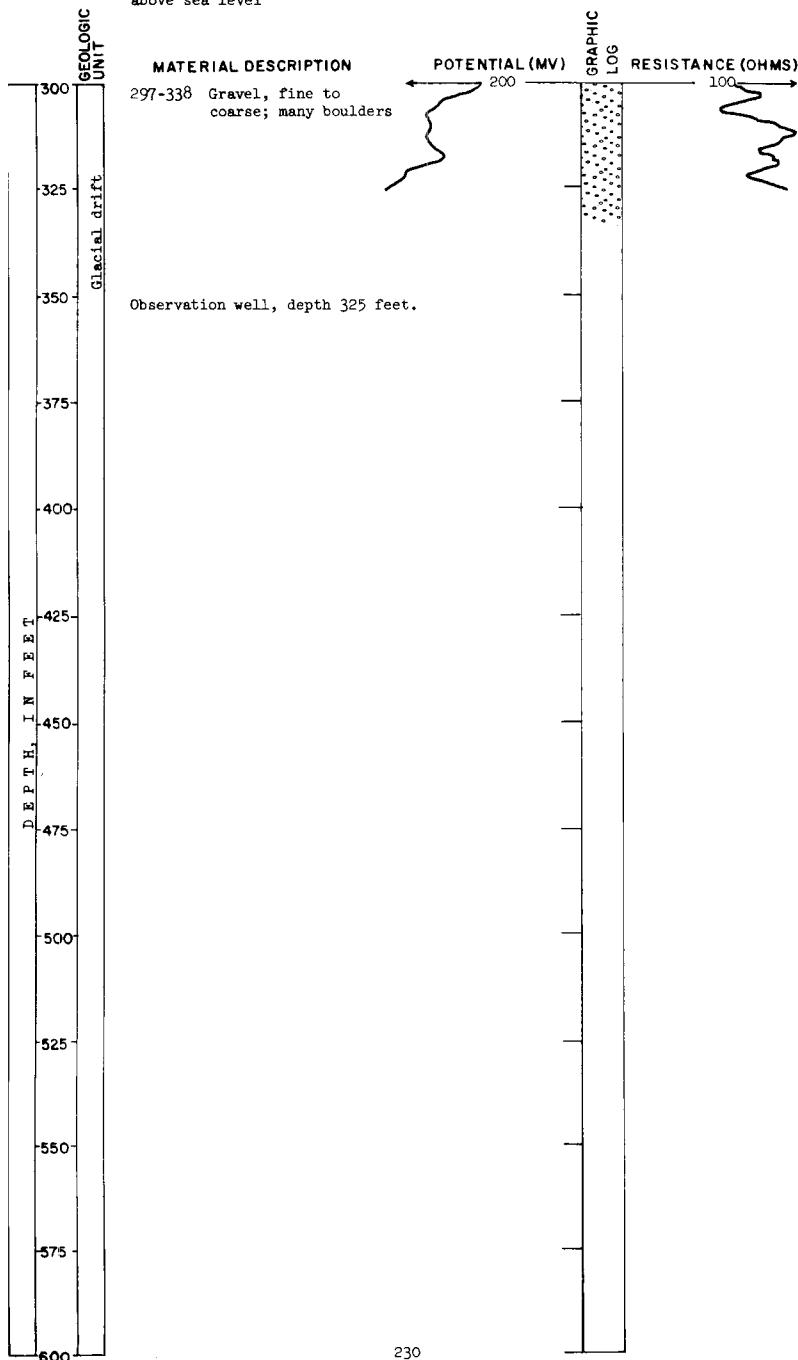
DEPTH: 338 feet



LOCATION: Ward County
160-88-19add
ELEVATION: 1,795 feet
above sea level

TEST HOLE 3341
(Continued)

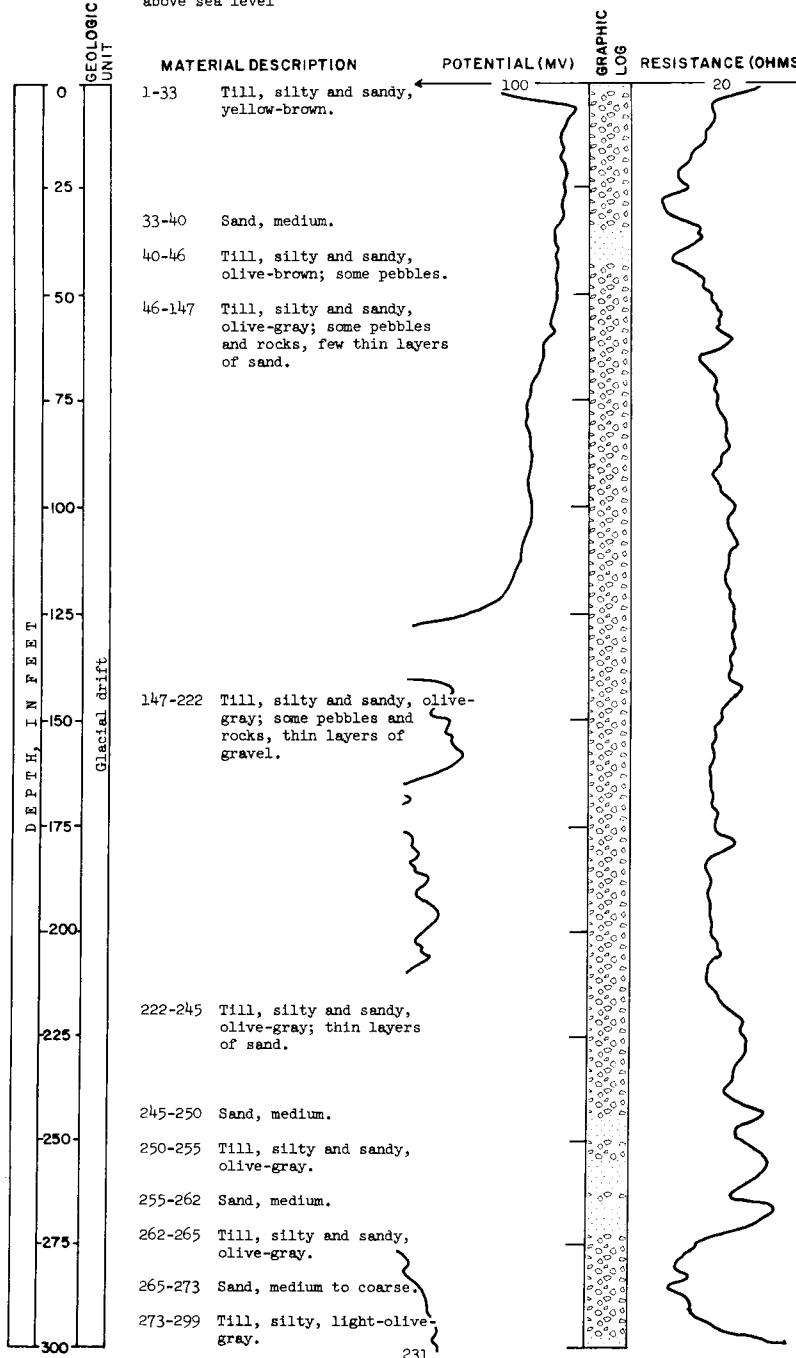
DATE DRILLED: June 21, 1966
DEPTH: 338 feet



LOCATION: Ward County
160-88-19ccc
ELEVATION: 1,950 feet
above sea level

TEST HOLE 3335

DATE DRILLED: June 13, 1966
DEPTH: 470 feet



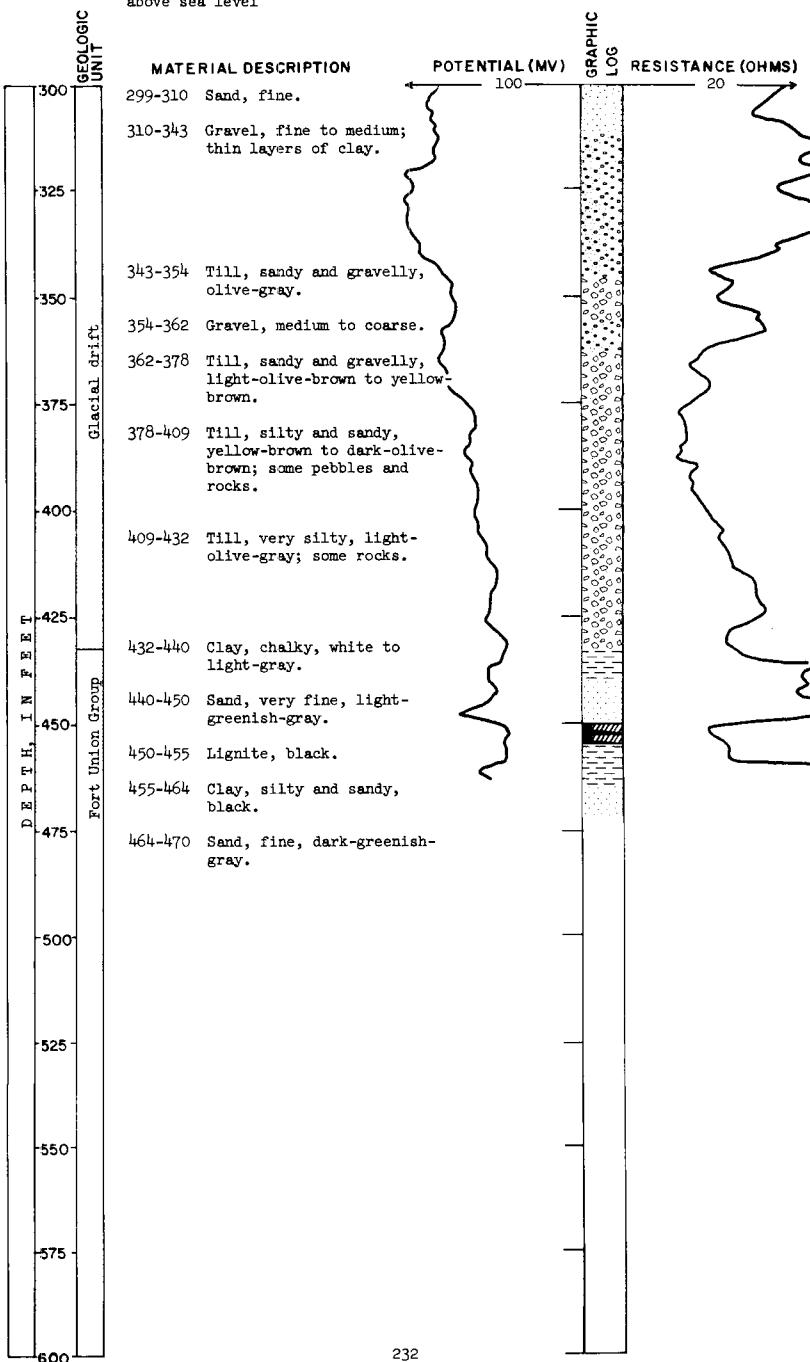
LOCATION: Ward County
160-88-19ccc

TEST HOLE
(Continued) 3335

DATE DRILLED: June 13, 1966

ELEVATION: 1,950 feet
above sea level

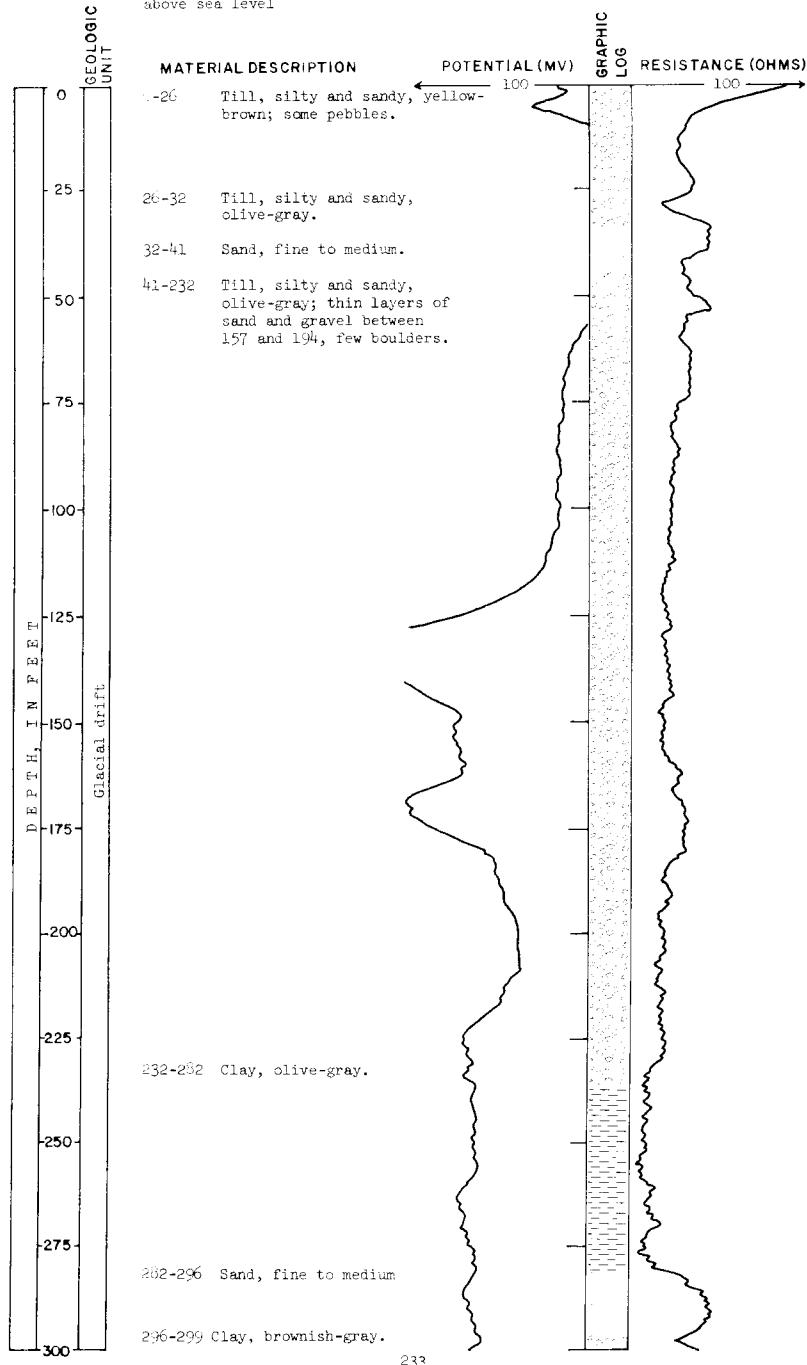
DEPTH: 470 feet



LOCATION: Ward County
160-38-20caa
ELEVATION: 1,820 feet
above sea level

TEST HOLE 3332

DATE DRILLED: June 7, 1966
DEPTH: 365 feet



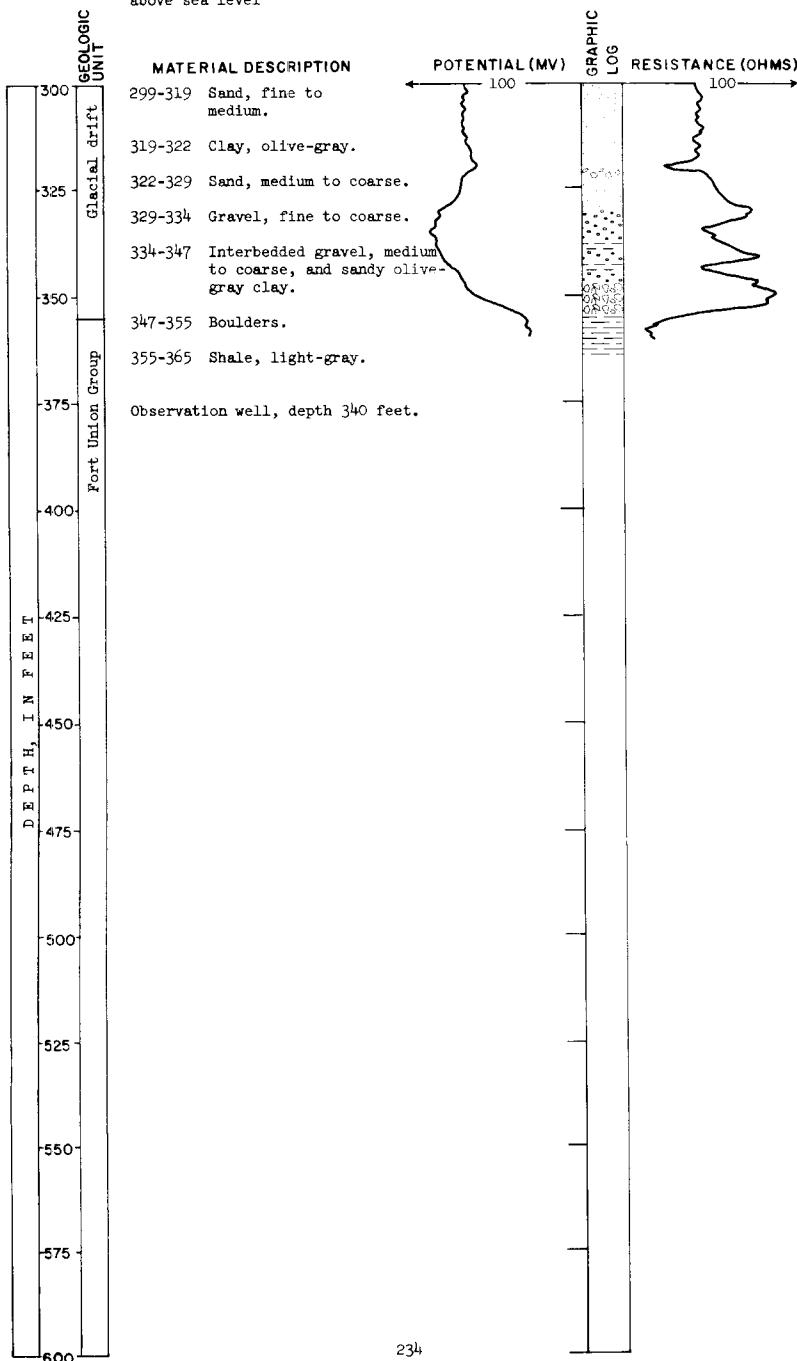
Ward County
LOCATION: 160-88-20caa

TEST HOLE 3332
(Continued)

DATE DRILLED: June 7, 1966

ELEVATION: 1,820 feet
above sea level

DEPTH: 365 feet



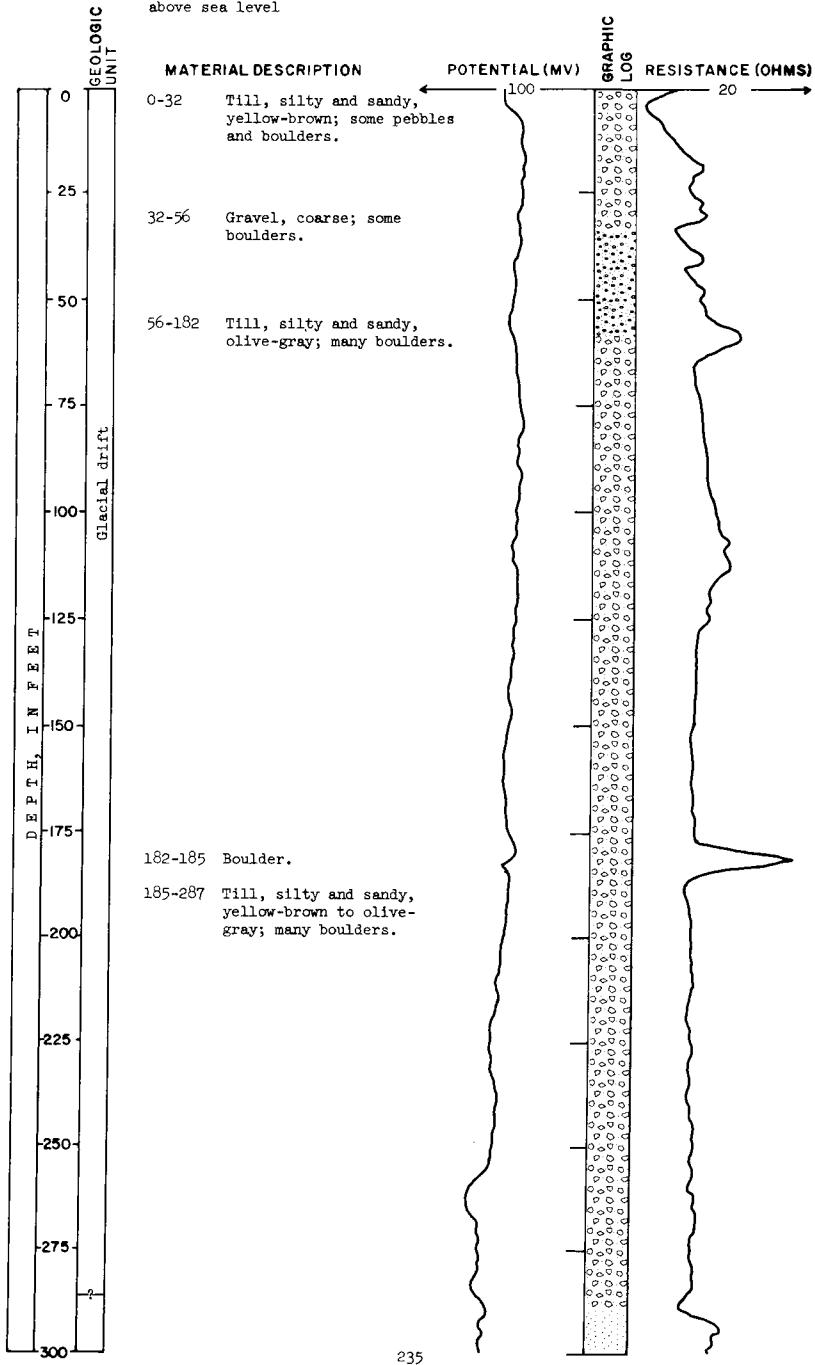
LOCATION: Ward County
160-88-20d ea

TEST HOLE 3342

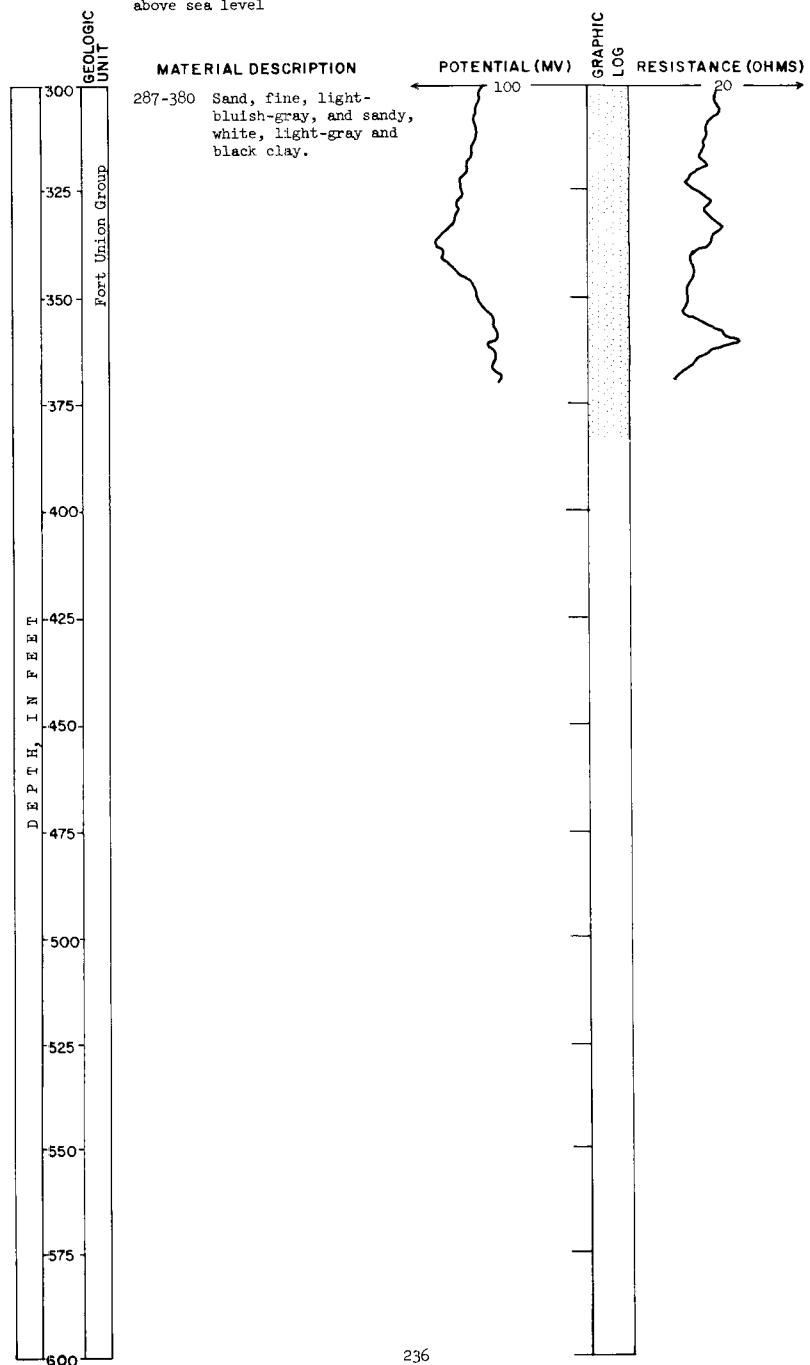
ELEVATION: 1,964 feet
above sea level

DATE DRILLED: June 22, 1966

DEPTH: 380 feet



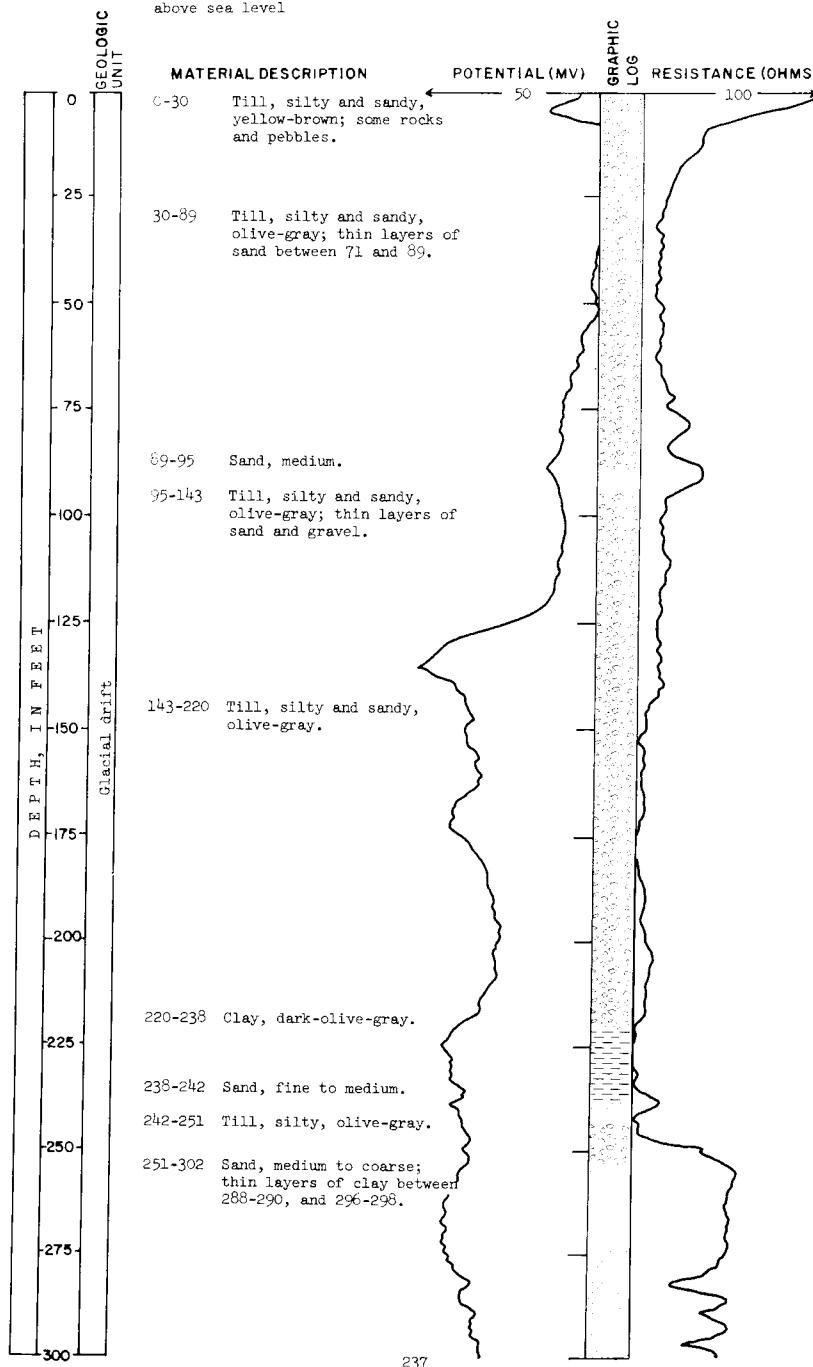
LOCATION: Ward County 160-88-20daa TEST HOLE 3342
(Continued) DATE DRILLED: June 22, 1966
ELEVATION: 1,964 feet DEPTH: 380 feet
above sea level



LOCATION: Ward County
160-88-20dcc
ELEVATION: 1,798 feet
above sea level

TEST HOLE 3333

DATE DRILLED: June 9, 1966
DEPTH: 325 feet

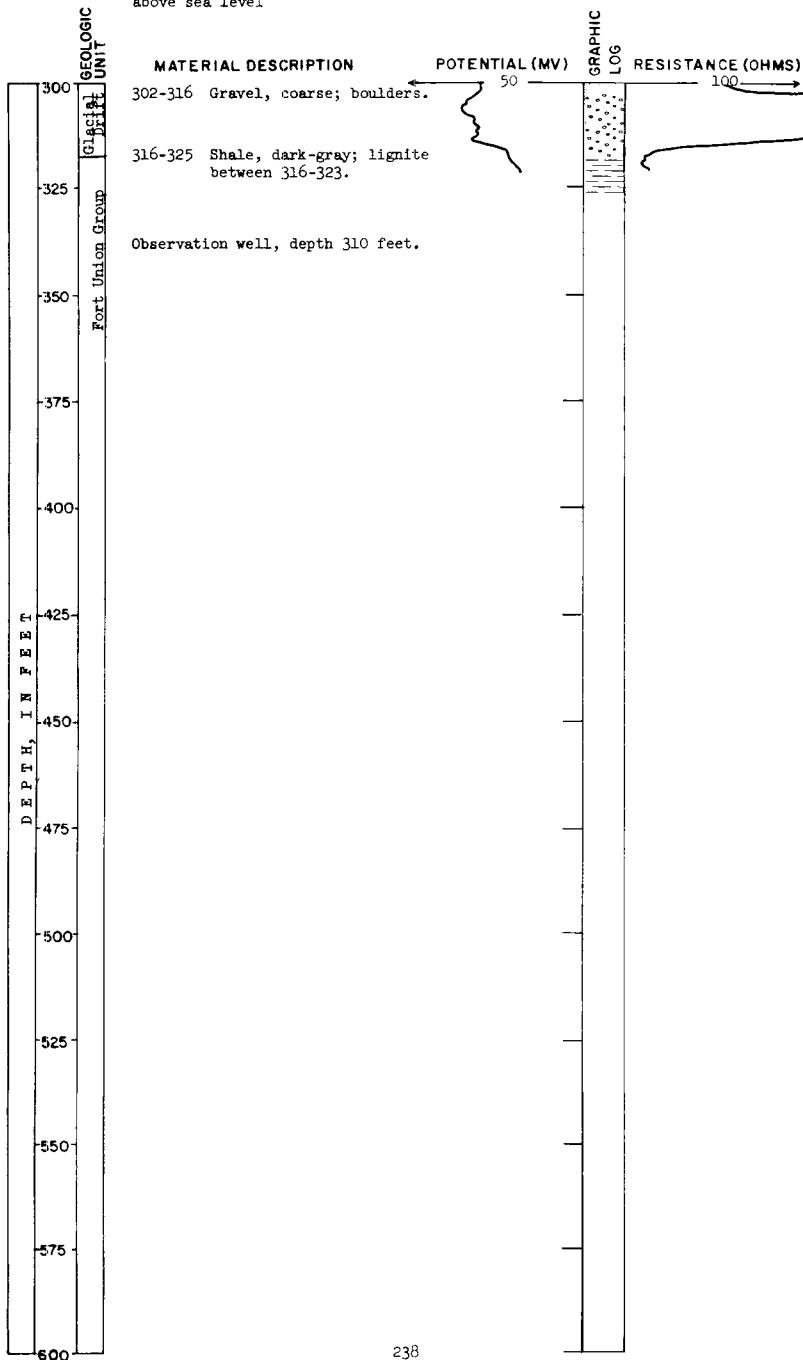


LOCATION: Ward County 160-88-20dcc TEST HOLE 3333
(Continued)

ELEVATION: 1,798 feet
above sea level

DATE DRILLED: June 9, 1966

DEPTH: 325 feet



LOCATION: Ward County
160-89-9aca

B. Mortensen
Irrigation well
Test hole

ELEVATION: 1,988 feet
above sea level

DATE DRILLED: May 16, 1962

DEPTH: 200 feet

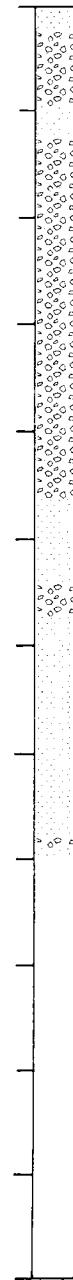
GEOLOGIC
UNIT

MATERIAL DESCRIPTION

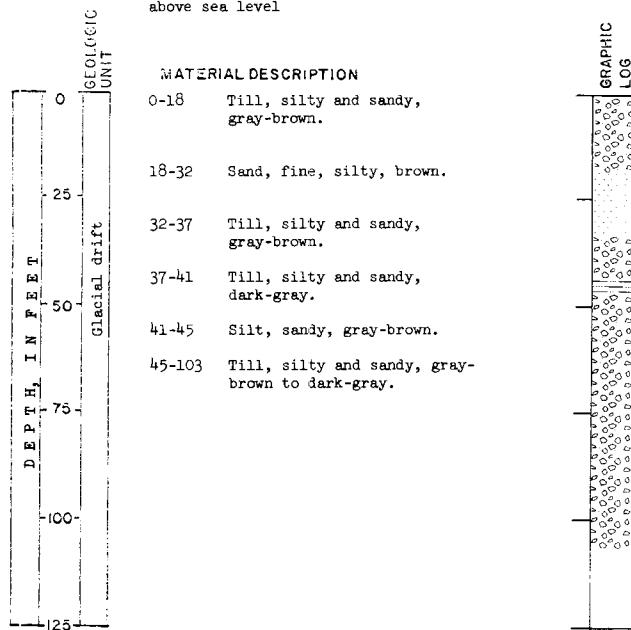
0	Sand.
4-22	Clay.
22-30	Sand.
30-115	Clay.
115-135	Coarse sand.
135-143	Clay.
143-195	Coarse sand.
195-200	Clay.

DEPTH, IN FEET

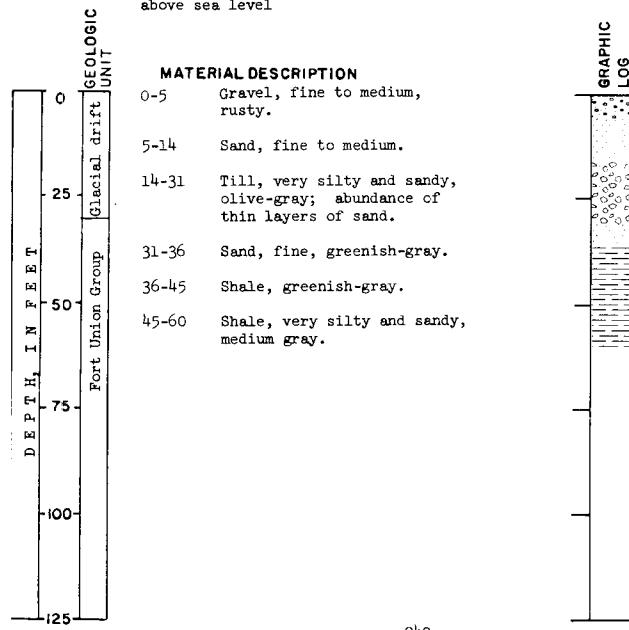
GRAPHIC
LOG



LOCATION: Ward County
 160-89-12cc TEST HOLE
 U.S. Air Force
 ELEVATION: 1,972 feet
 above sea level
 DATE DRILLED: 1961
 DEPTH: 103 feet



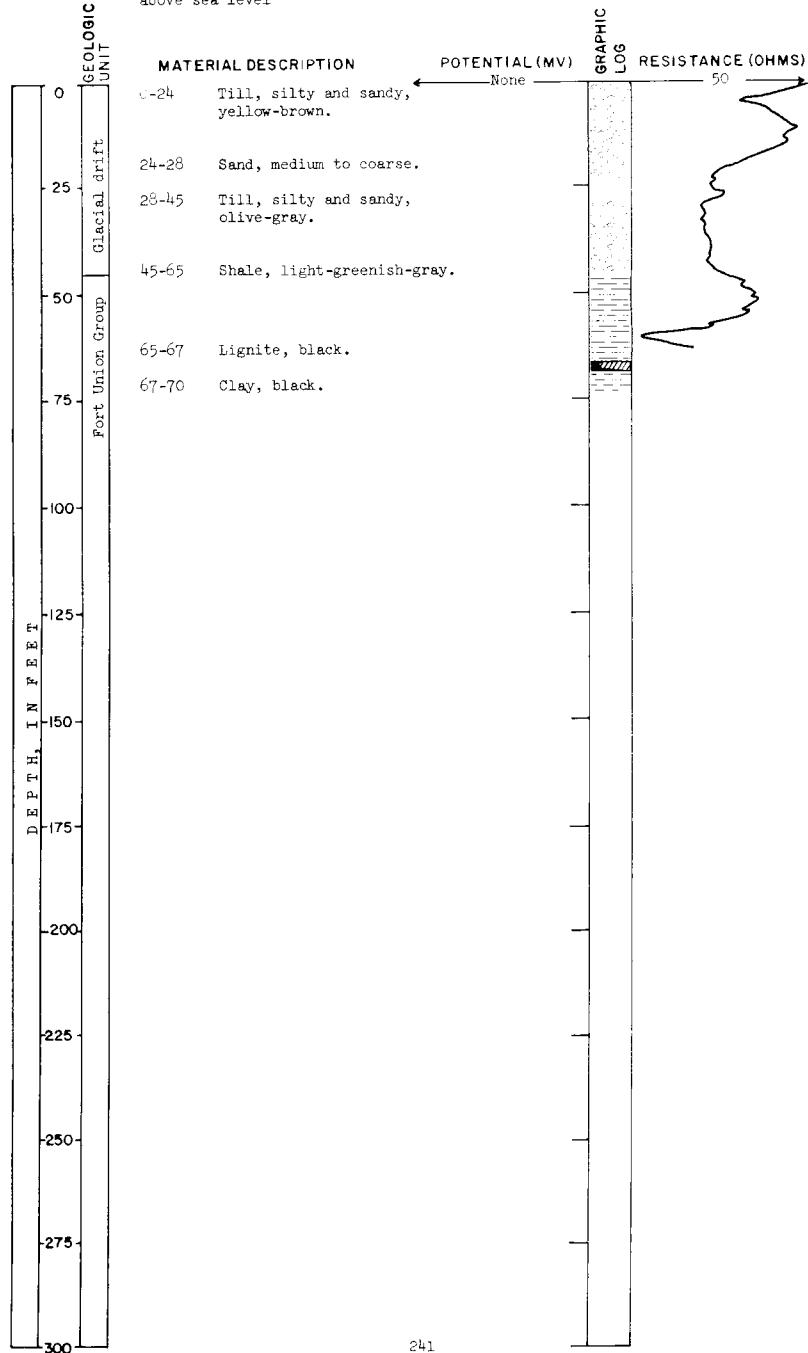
LOCATION: Ward County
 160-89-17bbb TEST HOLE 3258
 ELEVATION: 2,011 feet
 above sea level
 DATE DRILLED: August 20, 1965
 DEPTH: 60 feet



LOCATION: Ward County
160-89-26ddd
ELEVATION: 2,014 feet
above sea level

TEST HOLE 333⁴

DATE DRILLED: June 13, 1966
DEPTH: 70 feet



LOCATION: Renville County
161-84-17ba

Gas test
Driller's log^{1/}

DATE DRILLED: November 19, 1953

ELEVATION: 1,665 feet
above sea level

DEPTH: 325 feet

GEOLOGIC
UNIT

MATERIAL DESCRIPTION

0	Surface and yellow clay.
10-20	Yellow clay and gravel.
20-30	Clay and gravel
30-38	Gravel.
38-70	Clay and gravel.
70-90	Sandy shale.
90-118	Sandy shale and gravel.
118-135	Sand.
135-140	Sandy shale.
140-220	Shale and gravel.
220-255	Clay and gravel.
255-268	Bentonite clay and gravel.
268-270	Bentonite and sand.
270-280	Bentonite and gravel.
280-282	Sand.
282-293	Bentonite and gravel.
293-295	Fine sand, water, small show of gas.
295-310	Clay and gravel.

GRAPHIC
LOG



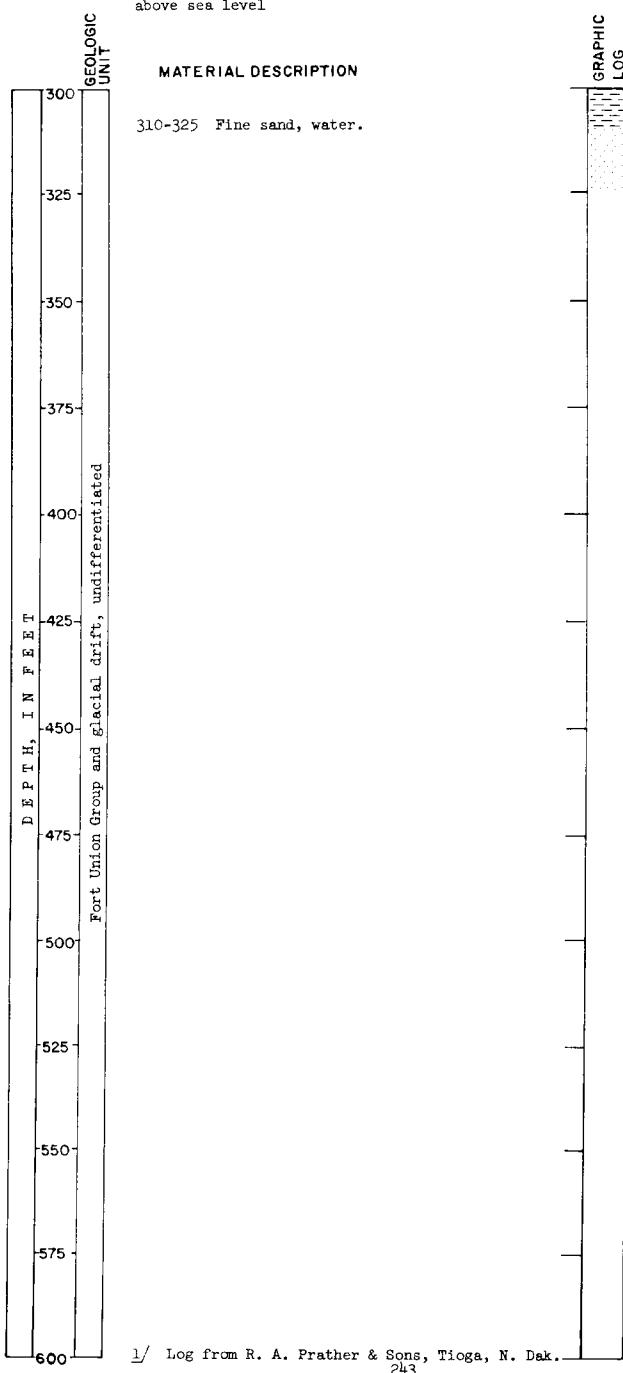
LOCATION: Renville County
161-84-17ba

ELEVATION: 1,665 feet
above sea level

Gas test
Driller's log^{1/}
(Continued)

DATE DRILLED: November 19, 1953

DEPTH: 325 feet



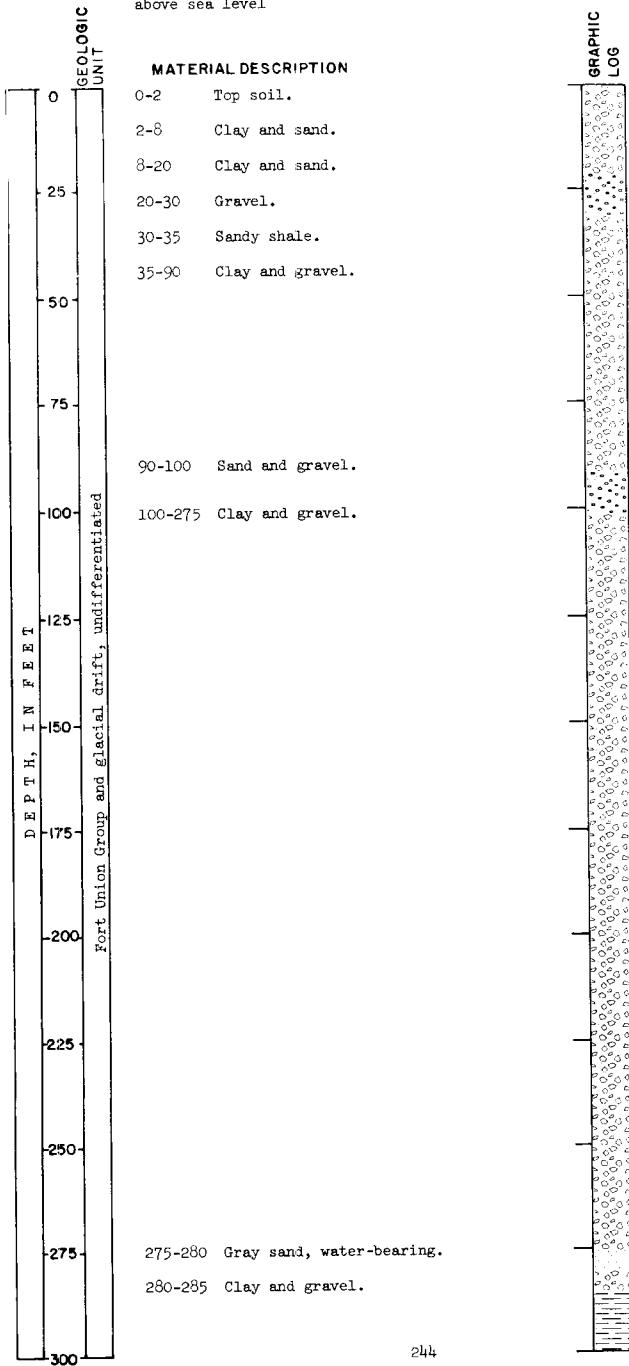
LOCATION: Renville County
161-84-17cd

Gas test
Driller's log 1/

DATE DRILLED: October 30, 1953

ELEVATION: 1,675 feet
above sea level

DEPTH: 325 feet

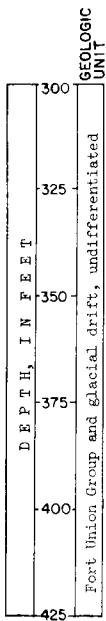


244



LOCATION: Renville County
 161-84-17cd **Gas test**
ELEVATION: 1,675 feet Driller's log^{1/}
 above sea level (Continued)

DATE DRILLED: October 30, 1953
DEPTH: 325 feet



MATERIAL DESCRIPTION

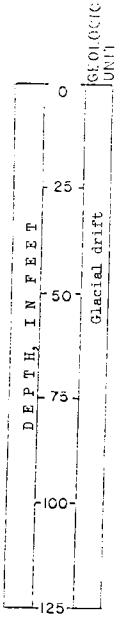
285-325 Gray bentonitic shale.



1/ Log from R. A. Prather & Sons, Tioga, N. Dak.

LOCATION: Renville County **TEST HOLE**
 161-84-20ac U.S. Air Force

ELEVATION: 1,693 feet **DATE DRILLED:** 1961
 above sea level **DEPTH:** 101 feet



MATERIAL DESCRIPTION

0-8 Till, silty and sandy, brown.
 8-13 Sand, fine to coarse.
 13-23 Till, silty and sandy, brown.
 23-101 Till, silty and sandy, dark-gray.



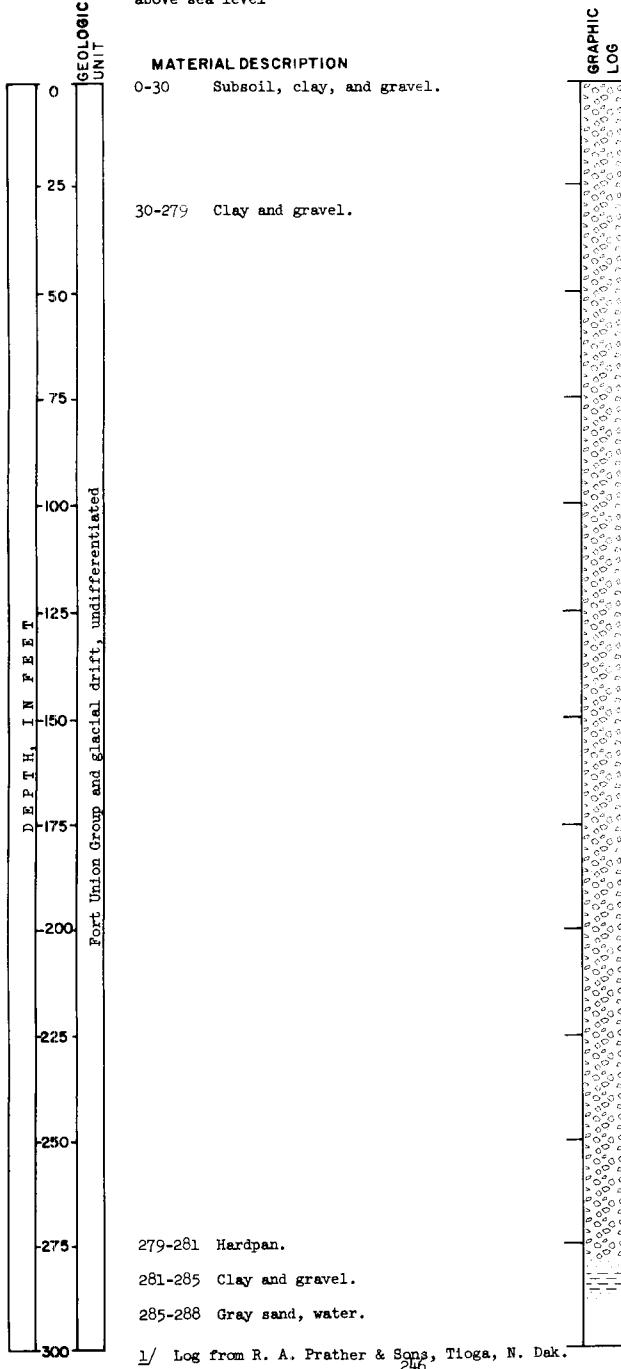
LOCATION: Renville County
161-84-21aa

ELEVATION: 1,665 feet
above sea level

Gas test
Driller's log
1/

DATE DRILLED: November 7, 1953

DEPTH: 288 feet



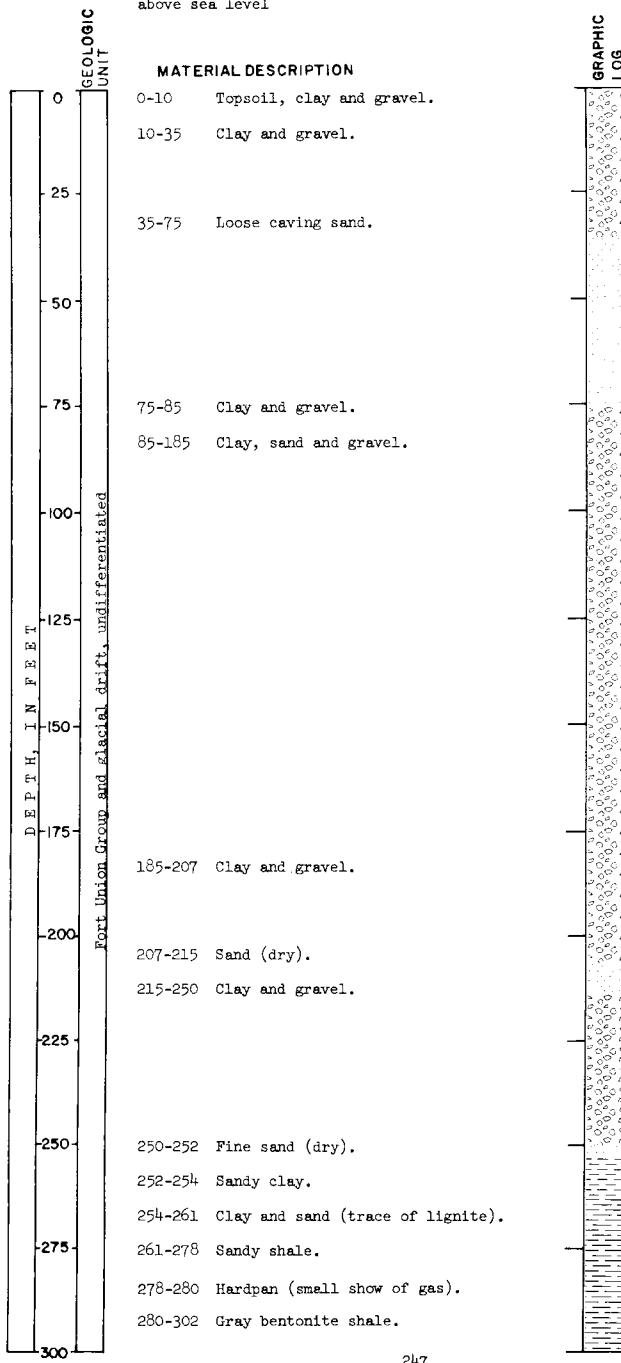
LOCATION: Renville County
161-84-21cd

Gas test
Driller's log^{1/}

DATE DRILLED: November 3, 1953

ELEVATION: 1,660 feet
above sea level

DEPTH: 303 feet



LOCATION: Renville County
161-84-21cd
ELEVATION: 1,660 feet
above sea level

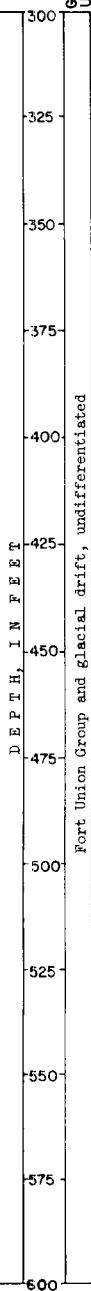
Gas test
Driller's log^{1/}
(Continued)

DATE DRILLED: November 3, 1953
DEPTH: 303 feet

GEOLOGIC
UNIT

MATERIAL DESCRIPTION

302-303 Fine gray-green sand (gas
increased, water-bearing).



GRAPHIC
LOG

1/ Log from R. A. Frather & Sons, Tioga, N. Dak.
248

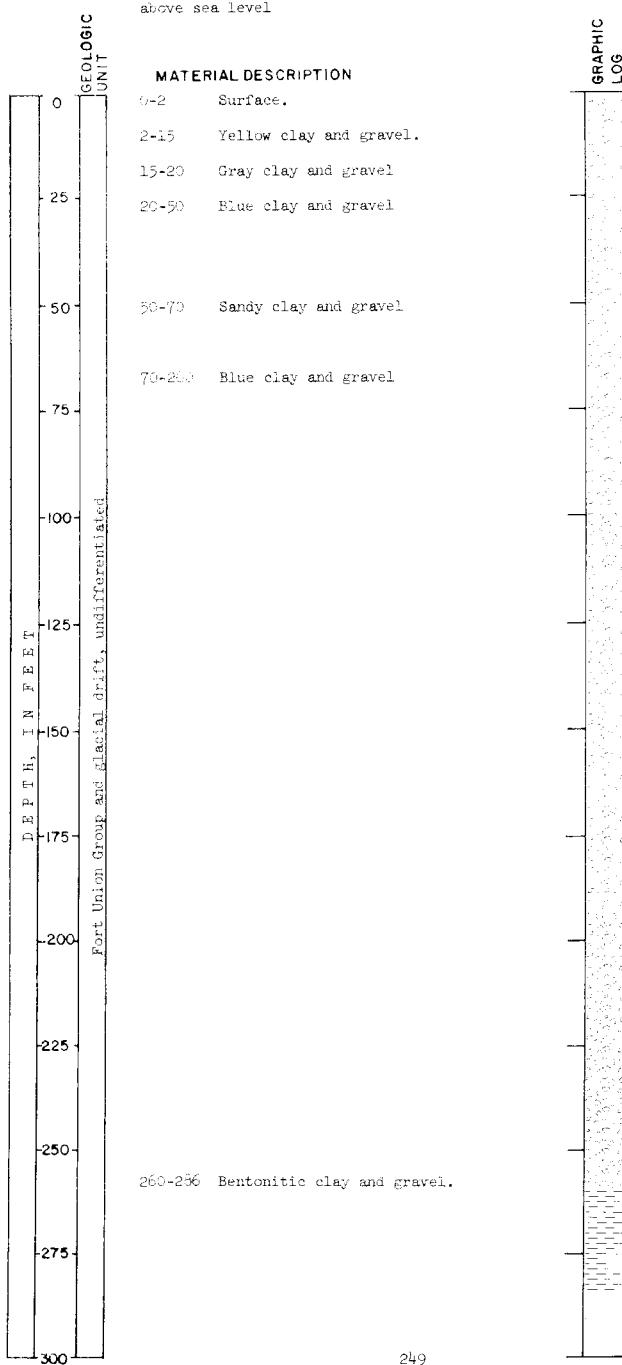
LOCATION: Renville County
161-84-21dd

Gas test
Driller's log^{1/}

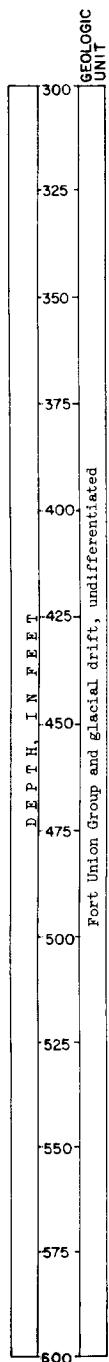
ELEVATION: 1,665 feet
above sea level

DATE DRILLED: November 15, 1963

DEPTH: 320 feet



Renfrew County
LOCATION: 161-84-21dd Gas test log^{1/}
(Continued)
ELEVATION: 1,665 feet DEPTH: 320 feet
above sea level

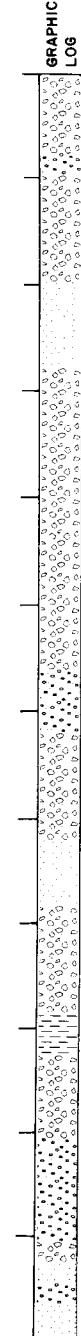
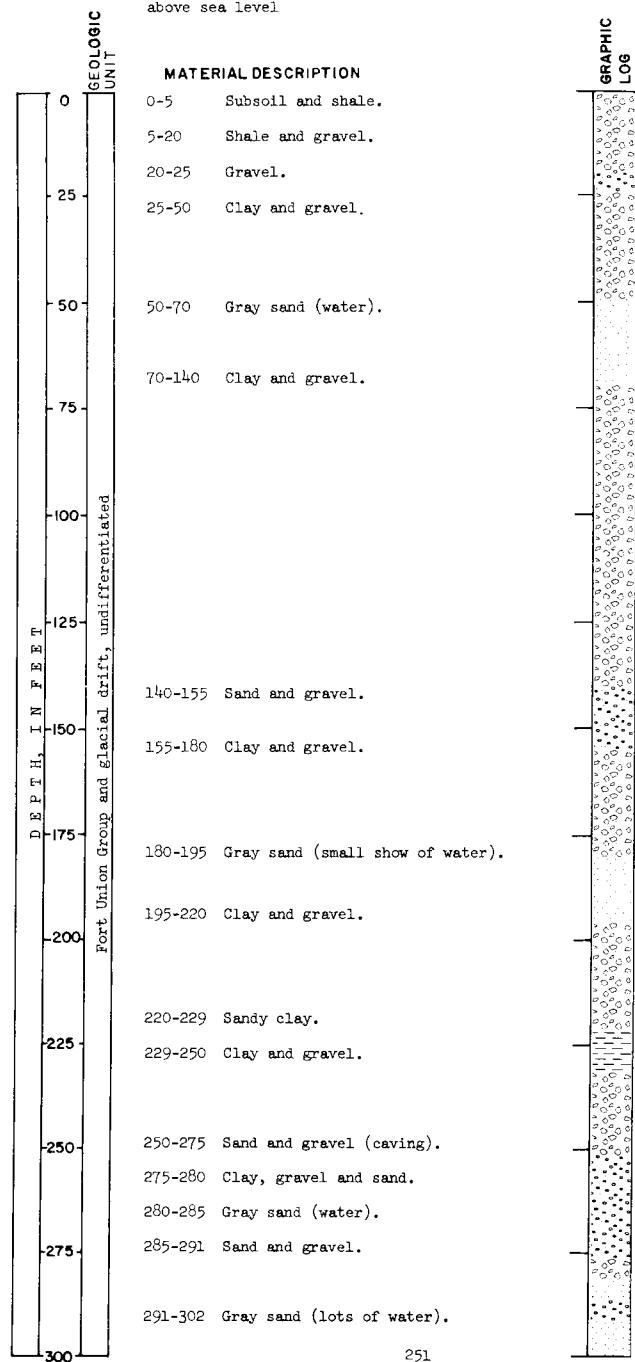


MATERIAL DESCRIPTION
286-310 Gray sand (water).
310-320 Brown sandy shale.



^{1/} Log from R. A. Prather & Sons, Tioga, N. Dak.
250

LOCATION: Renville County
 161-84-22ab Gas test
 Driller's log^{1/}
 ELEVATION: 1,663 feet
 above sea level DATE DRILLED: November 11, 1953
 DEPTH: 325 feet



LOCATION: Renville County
161-84-22ab
ELEVATION: 1,663 feet
above sea level

Gas test
Driller's log^{1/}
(Continued)

DATE DRILLED: November 11, 1953
DEPTH: 325 feet

GEOLOGIC
UNIT

MATERIAL DESCRIPTION

302-320 Brown sandy shale.

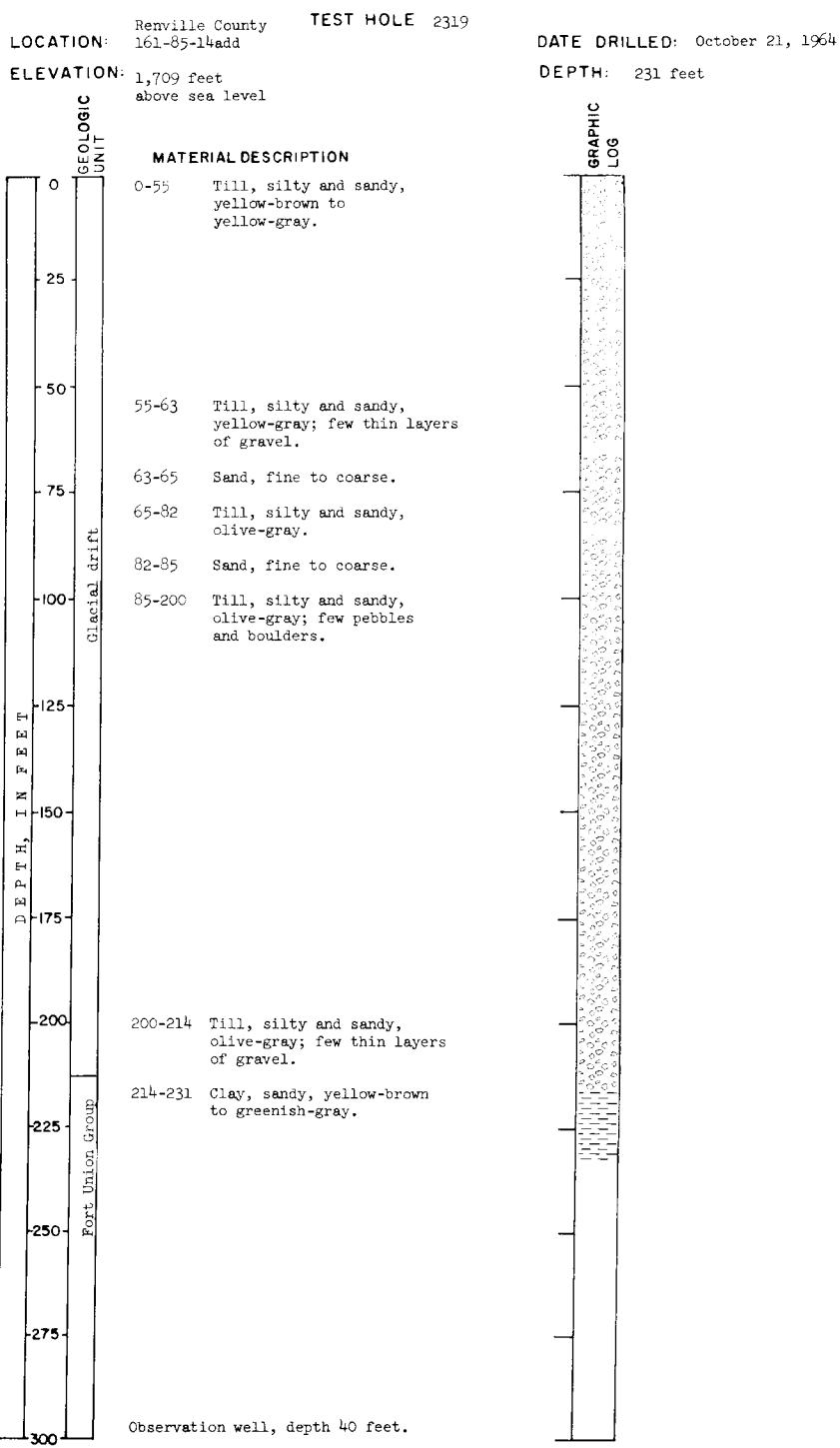
320-325 Gray sand (small show of lignite).

DEPTH, IN FEET
300
325
350
375
400
425
450
475
500
525
550
575
600

Fort Union Group and glacial drift, undifferentiated

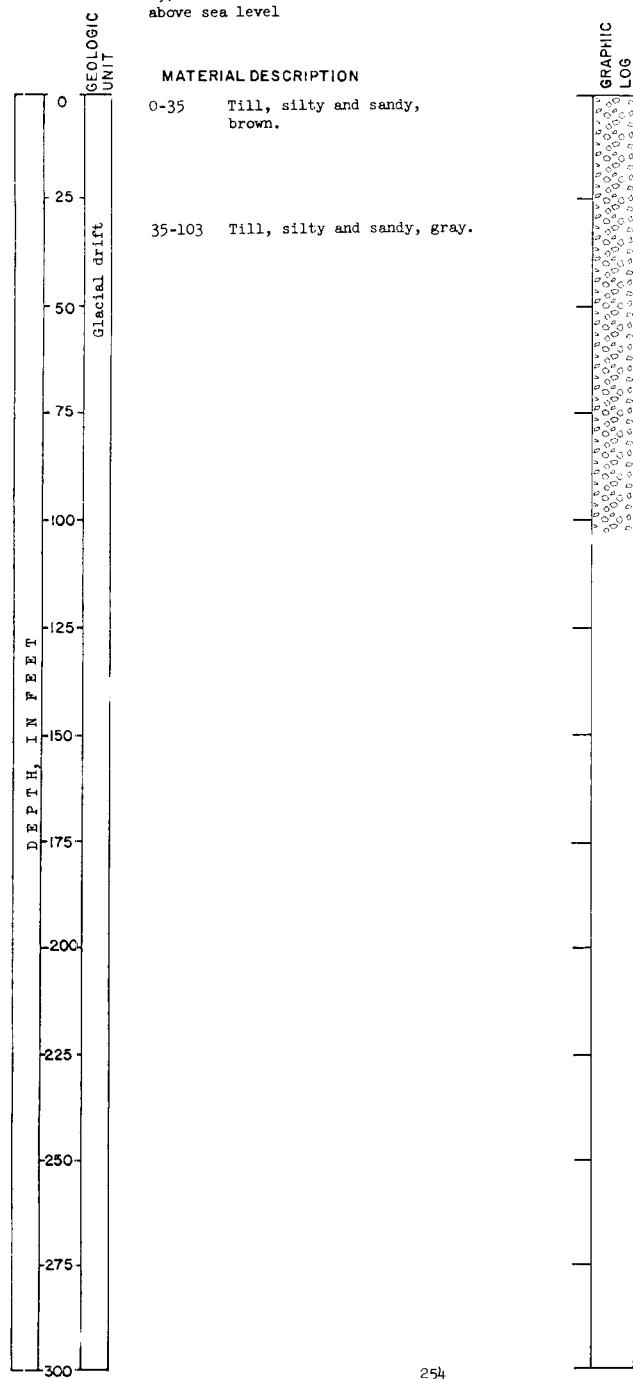
GRAPHIC
LOG

1/ Log from R. A. Prather & Sons, Tioga, N. Dak.



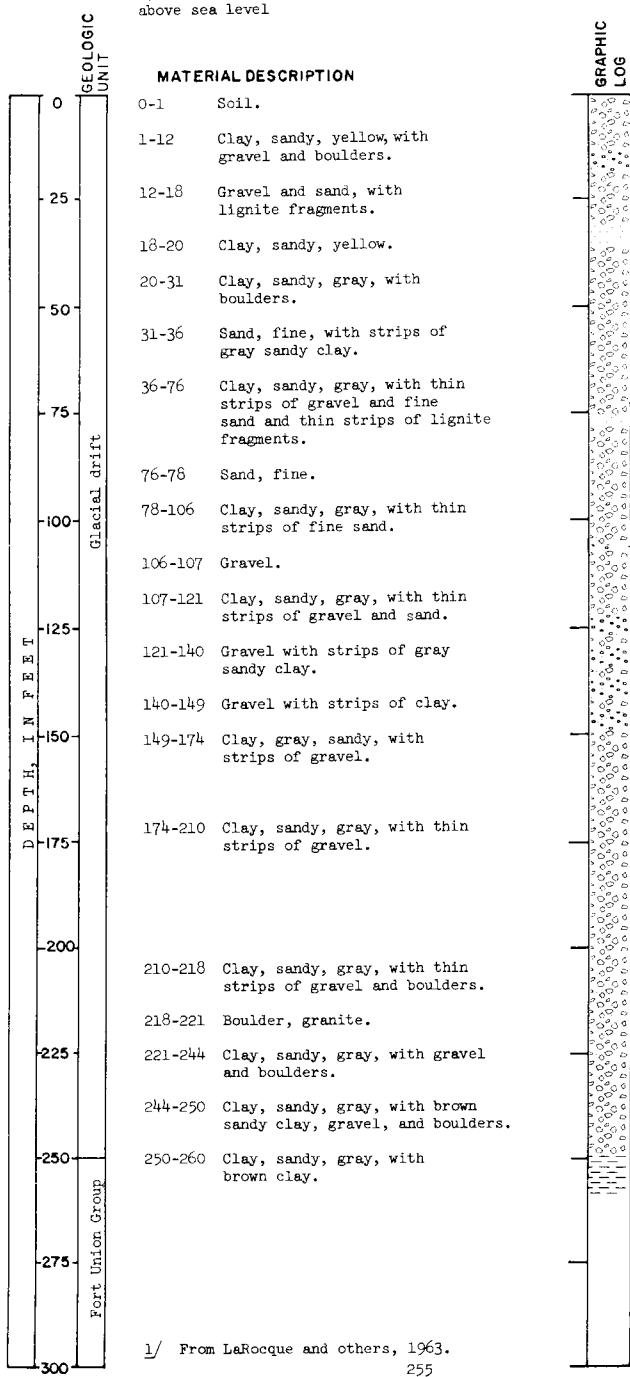
LOCATION: Renville County
161-85-16cc TEST HOLE
U.S. Air Force
ELEVATION: 1,768 feet
above sea level

DATE DRILLED: 1961
DEPTH: 103 feet



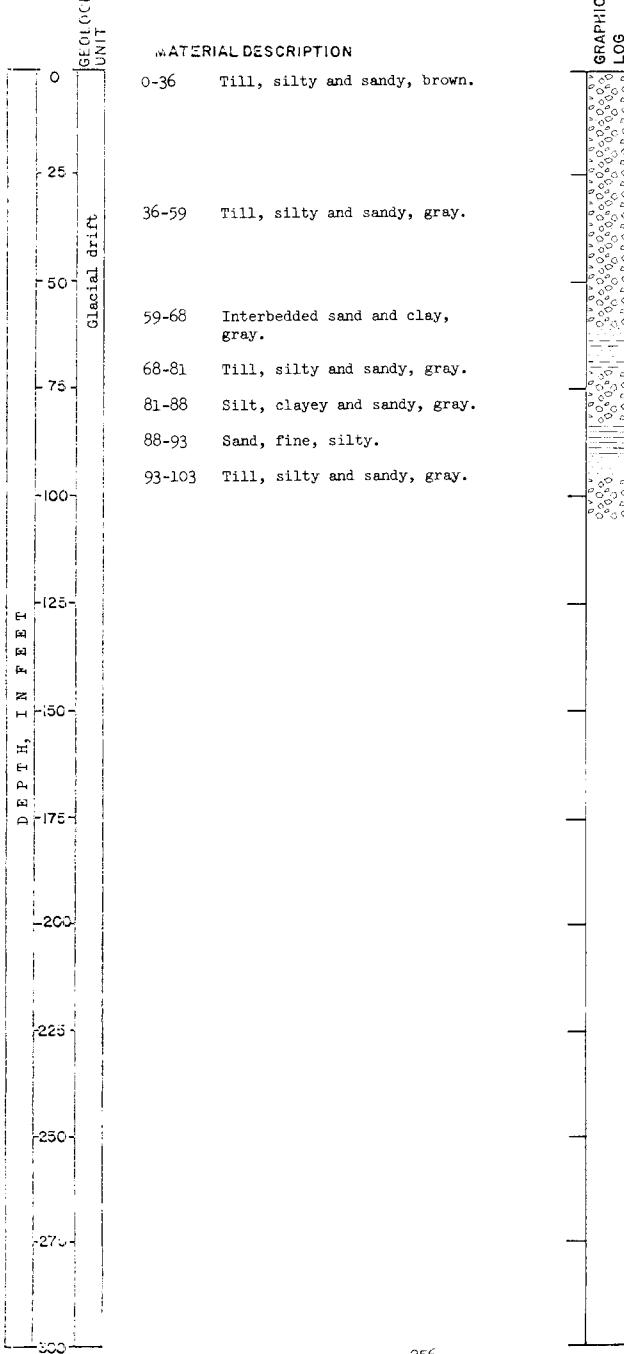
LOCATION: Renville County
 161-85-24aaa **TEST HOLE**
 U.S. Geol. Survey^{1/}
ELEVATION: 1,690 feet
 above sea level

DATE DRILLED: 1947
DEPTH: 260 feet

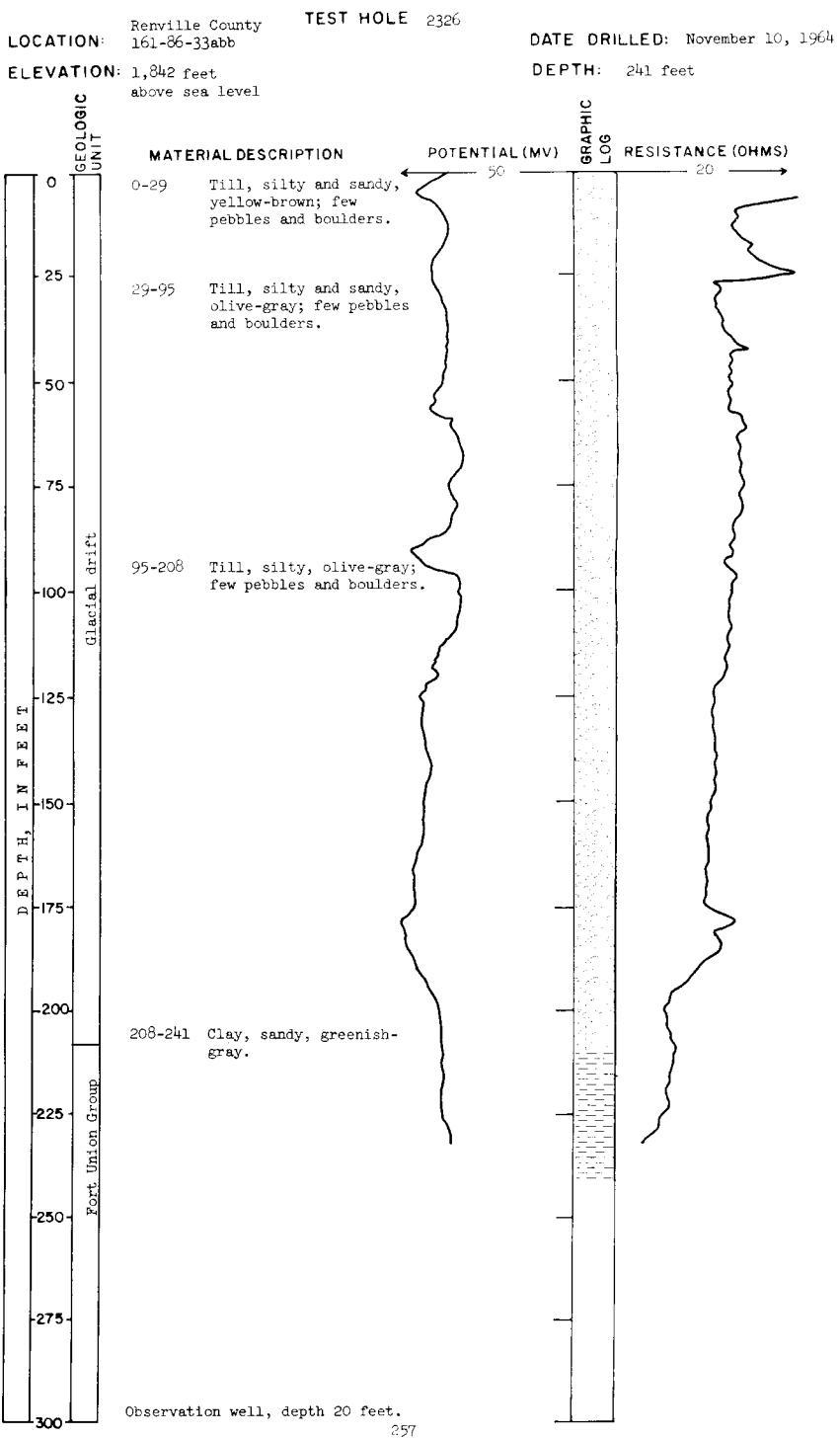


^{1/} From LaRocque and others, 1963.

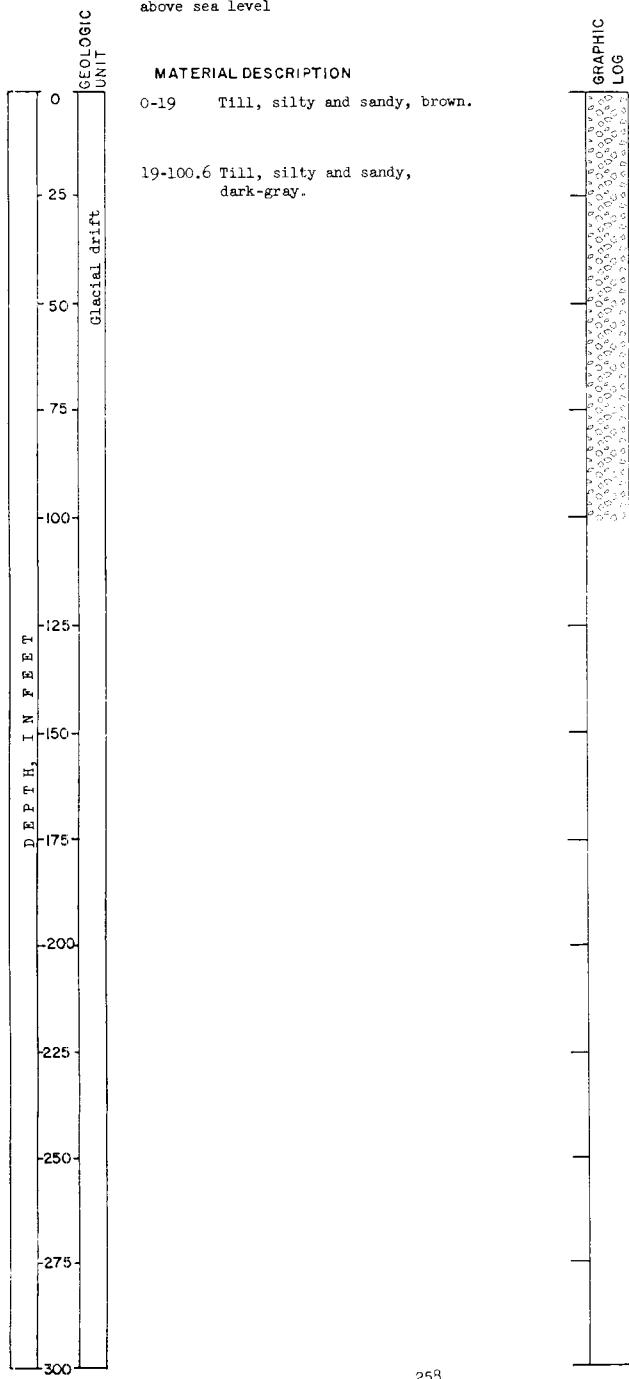
LOCATION: Renville County
161-86-28ad TEST HOLE
ELEVATION: 1,841 feet U.S. Air Force
above sea level DATE DRILLED: 1961
DEPTH: 103 feet



GRAPHIC LOG

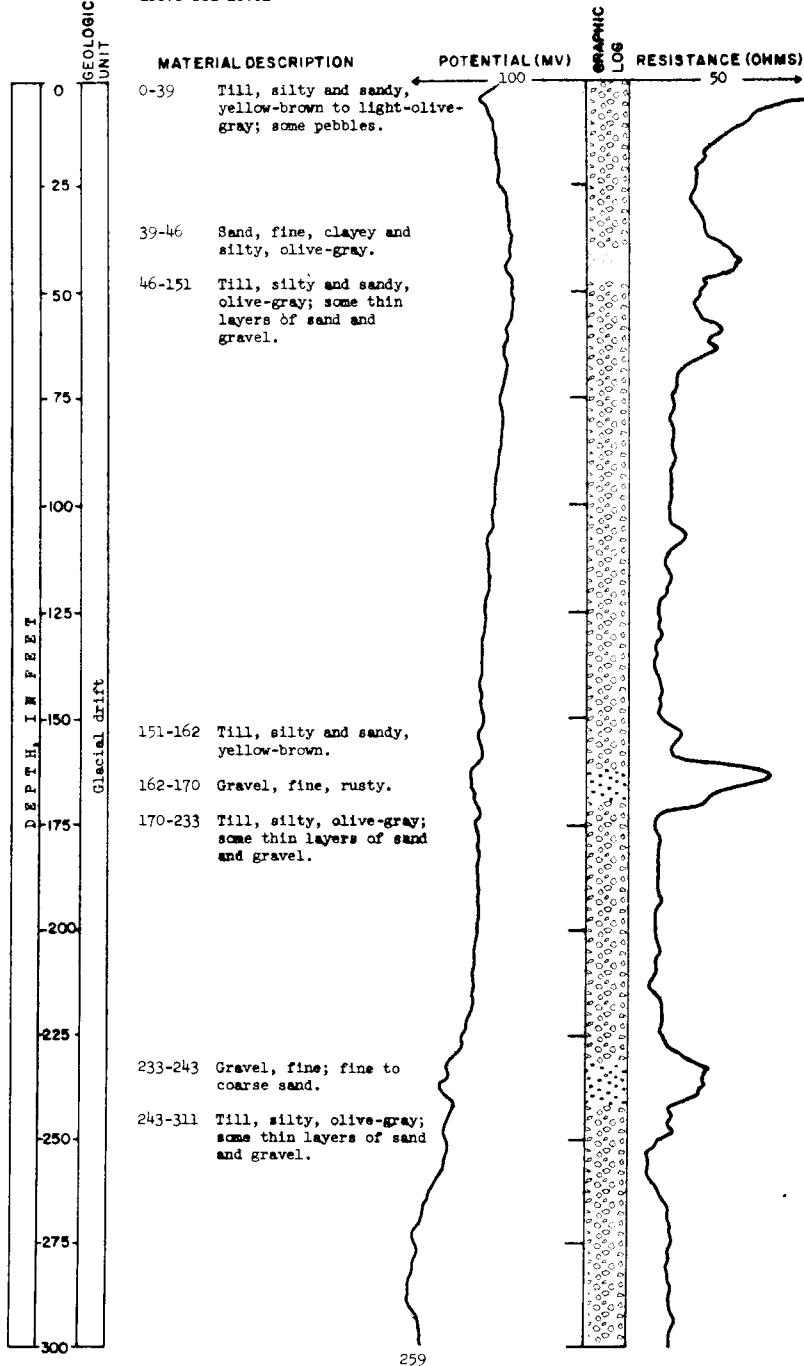


LOCATION: Renville County
161-87-2aa TEST HOLE
U.S. Air Force
ELEVATION: 1,841 feet DATE DRILLED: 1961
above sea level DEPTH: 100.6 feet

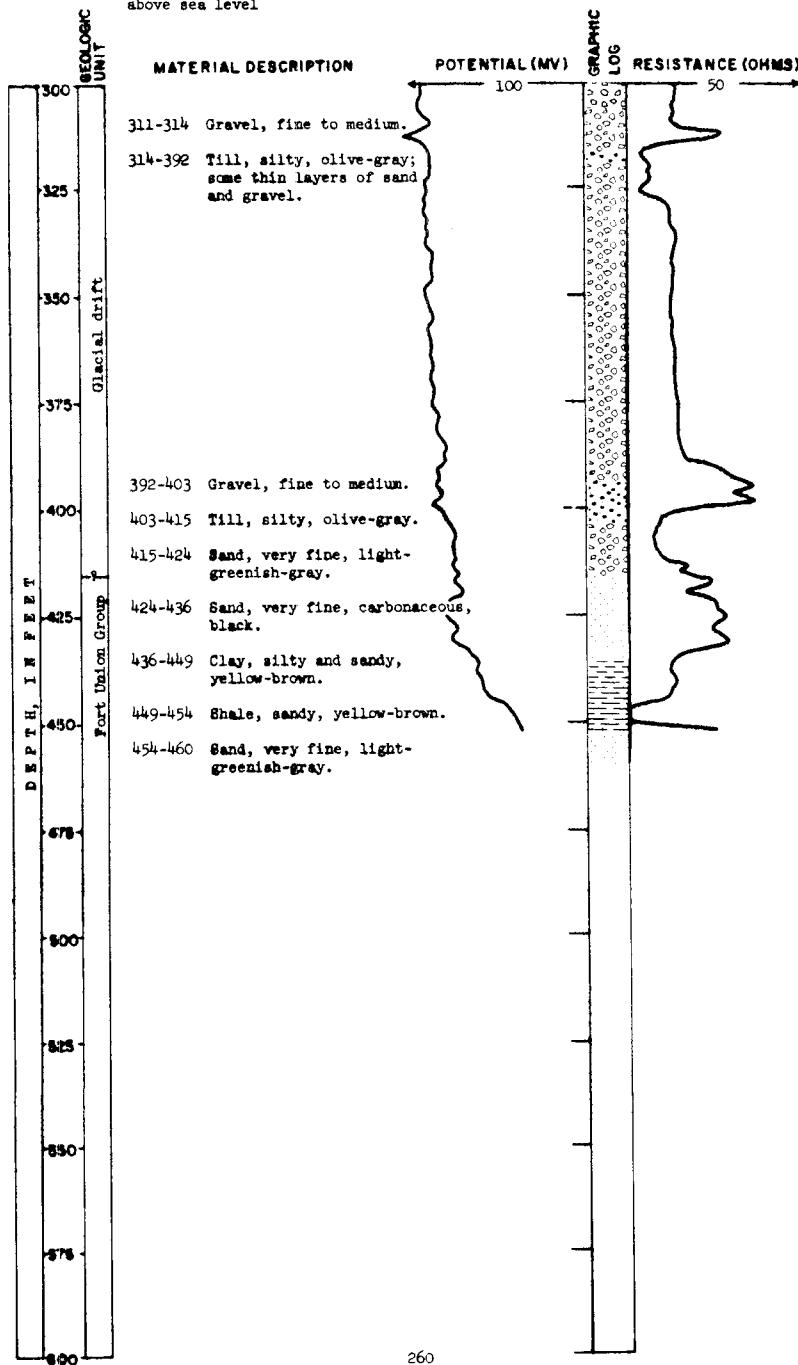


LOCATION: Renville County
TEST HOLE 3337
ELEVATION: 1,870 feet
above sea level

DATE DRILLED: June 15, 1966
DEPTH: 460 feet

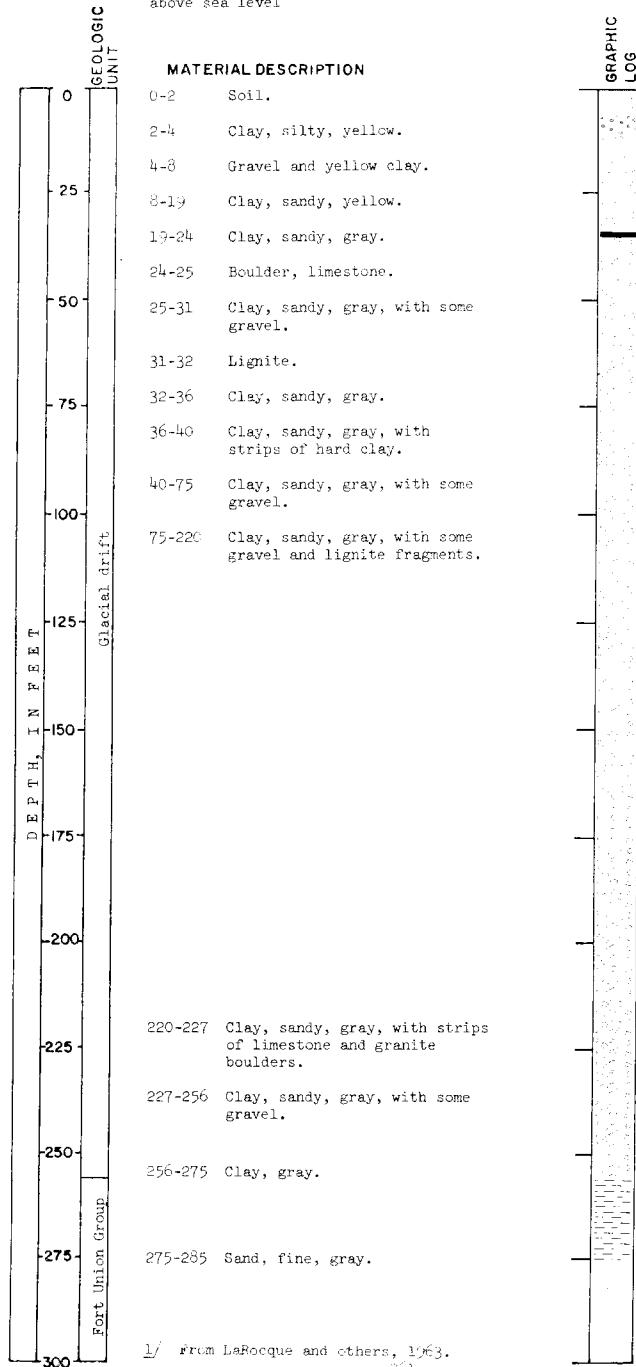


Renville County TEST HOLE 3337
 LOCATION: 161-87-5aaa (Continued)
 ELEVATION: 1,870 feet above sea level
 DATE DRILLED: June 15, 1966
 DEPTH: 460 feet



LOCATION: Renville County
161-87-12ddd TEST HOLE
ELEVATION: 1837 feet U.S. Geol. Survey^{1/}
above sea level

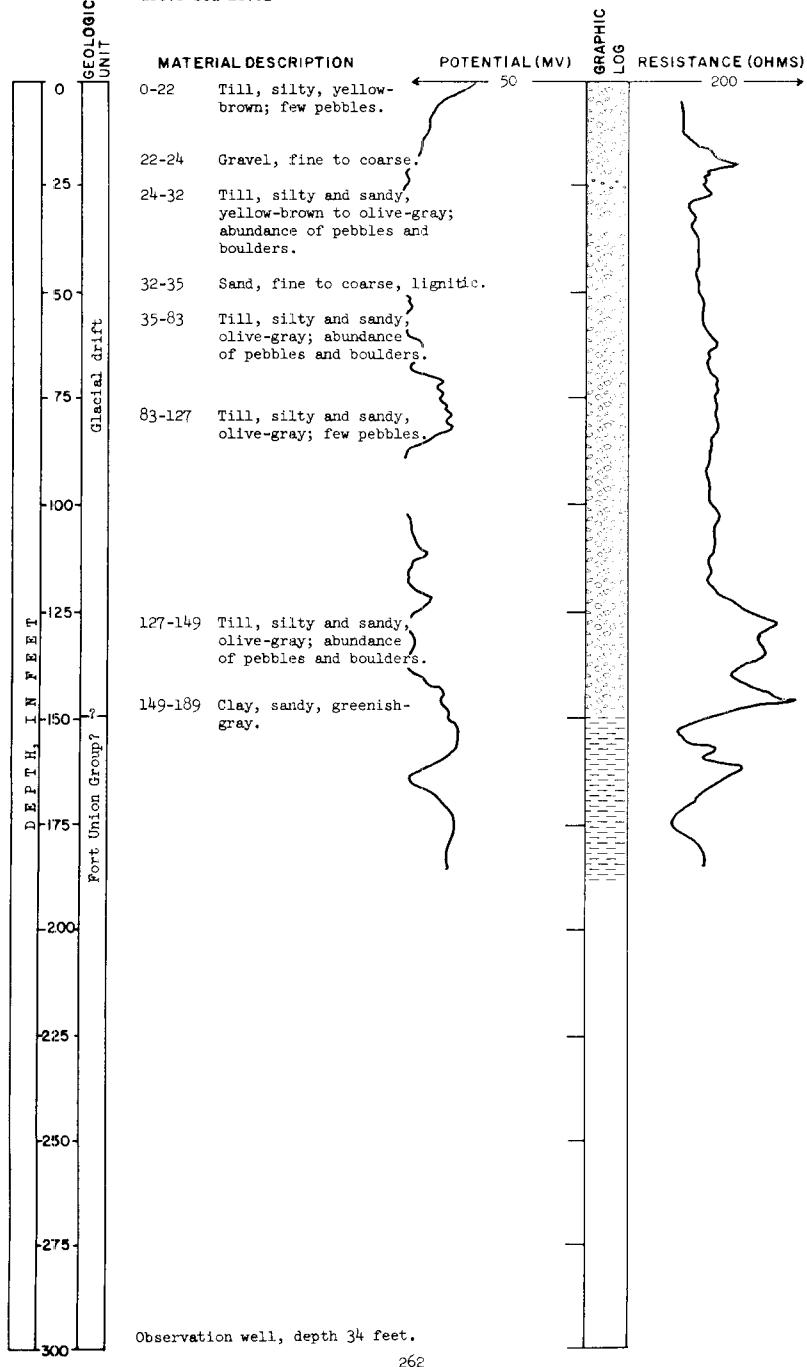
DATE DRILLED: 1947
DEPTH: 285 feet



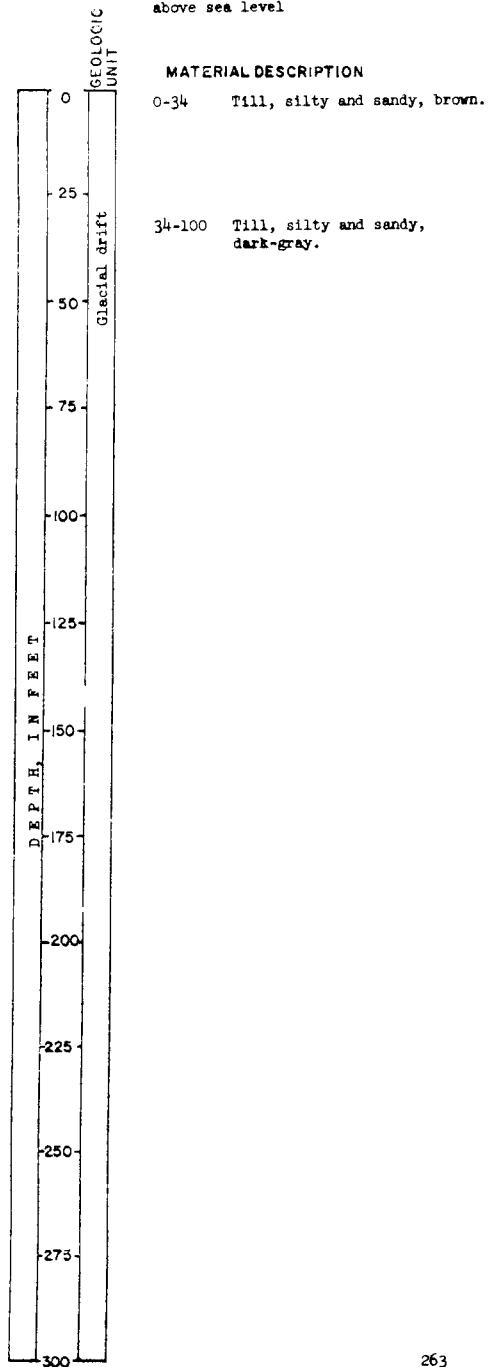
^{1/} From LaRocque and others, 1963.

TEST HOLE 2325
 LOCATION: Renville County
 161-87-21bbb
 ELEVATION: 1,870 feet
 above sea level

DATE DRILLED: November 10, 1964
 DEPTH: 189 feet



LOCATION: Renville County 161-87-28bb TEST HOLE
U.S. Air Force
ELEVATION: 1,081 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet

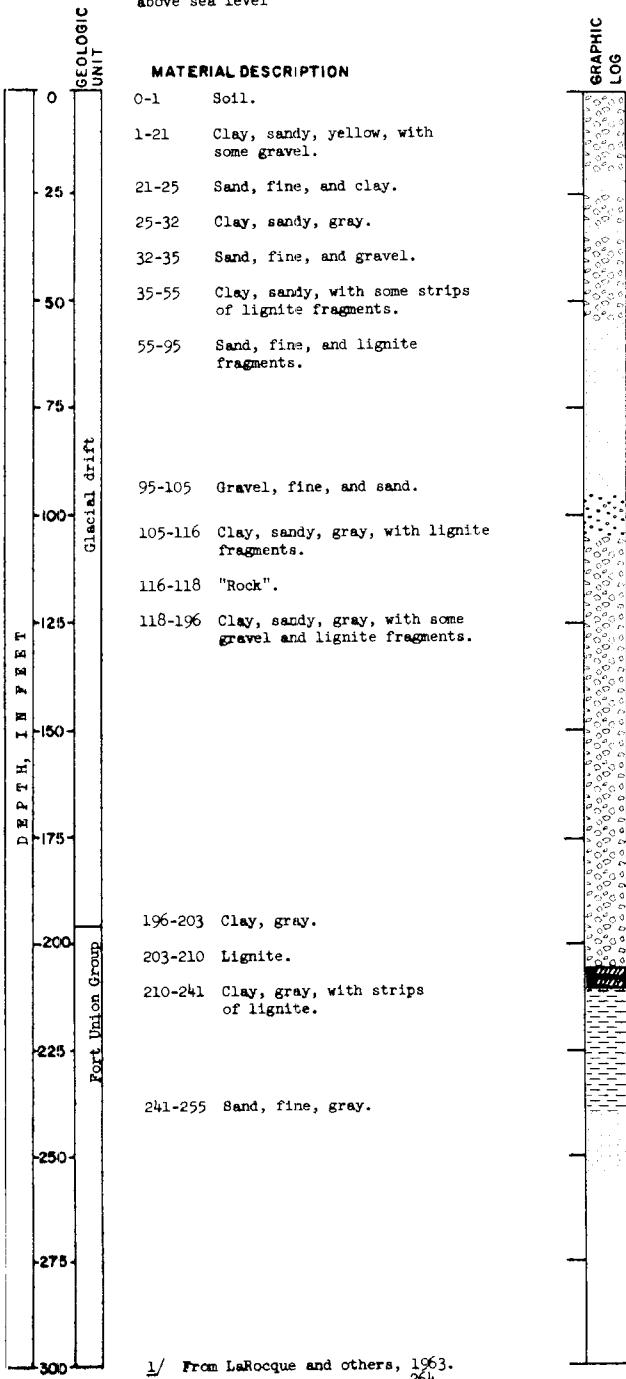


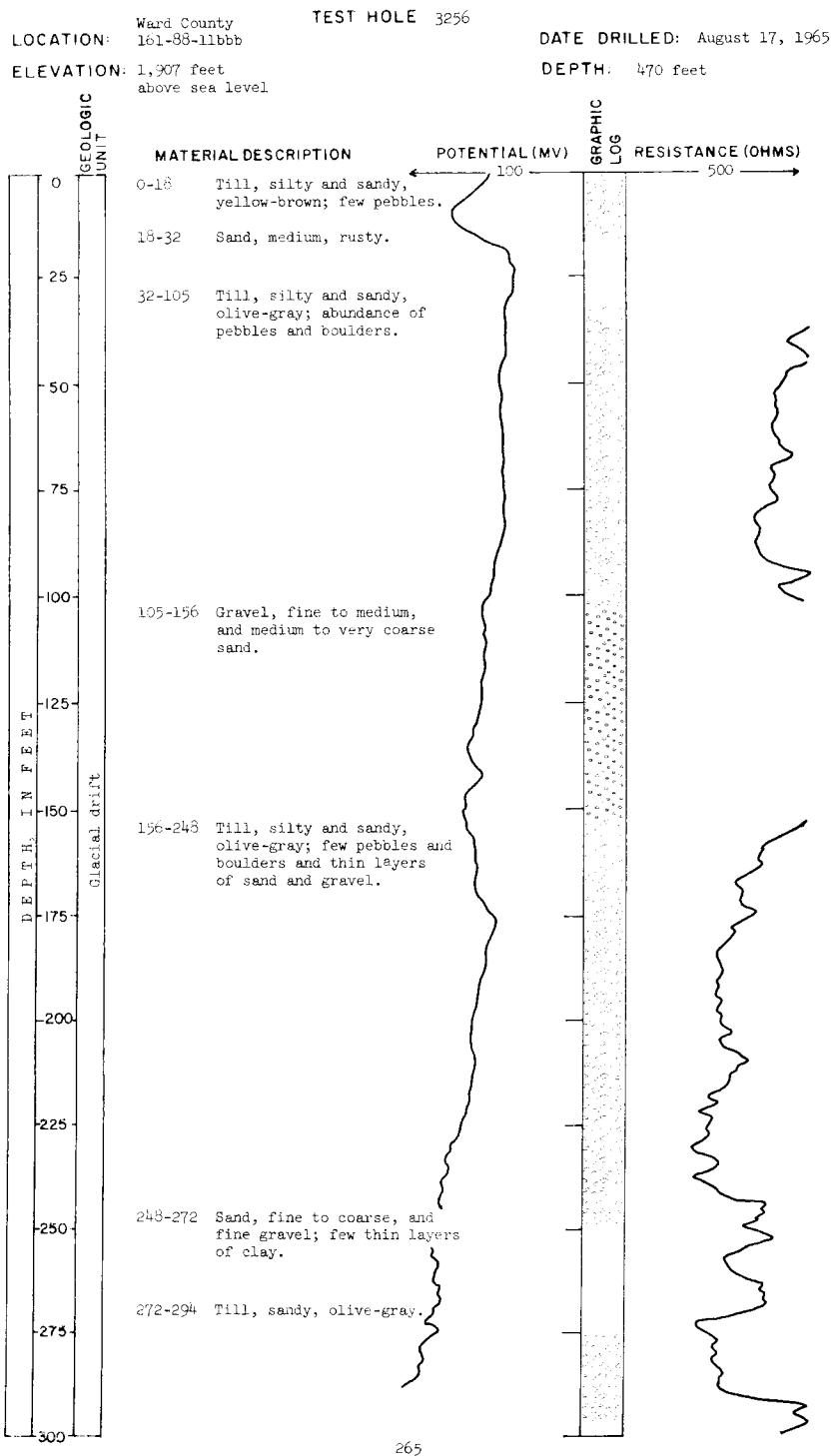
263



LOCATION: Renville County
 161-87-32 ^{sec} TEST HOLE
 U.S. Geol. Survey^{1/}
 ELEVATION: 1,890 feet
 above sea level

DATE DRILLED: 1947
 DEPTH: 255 feet





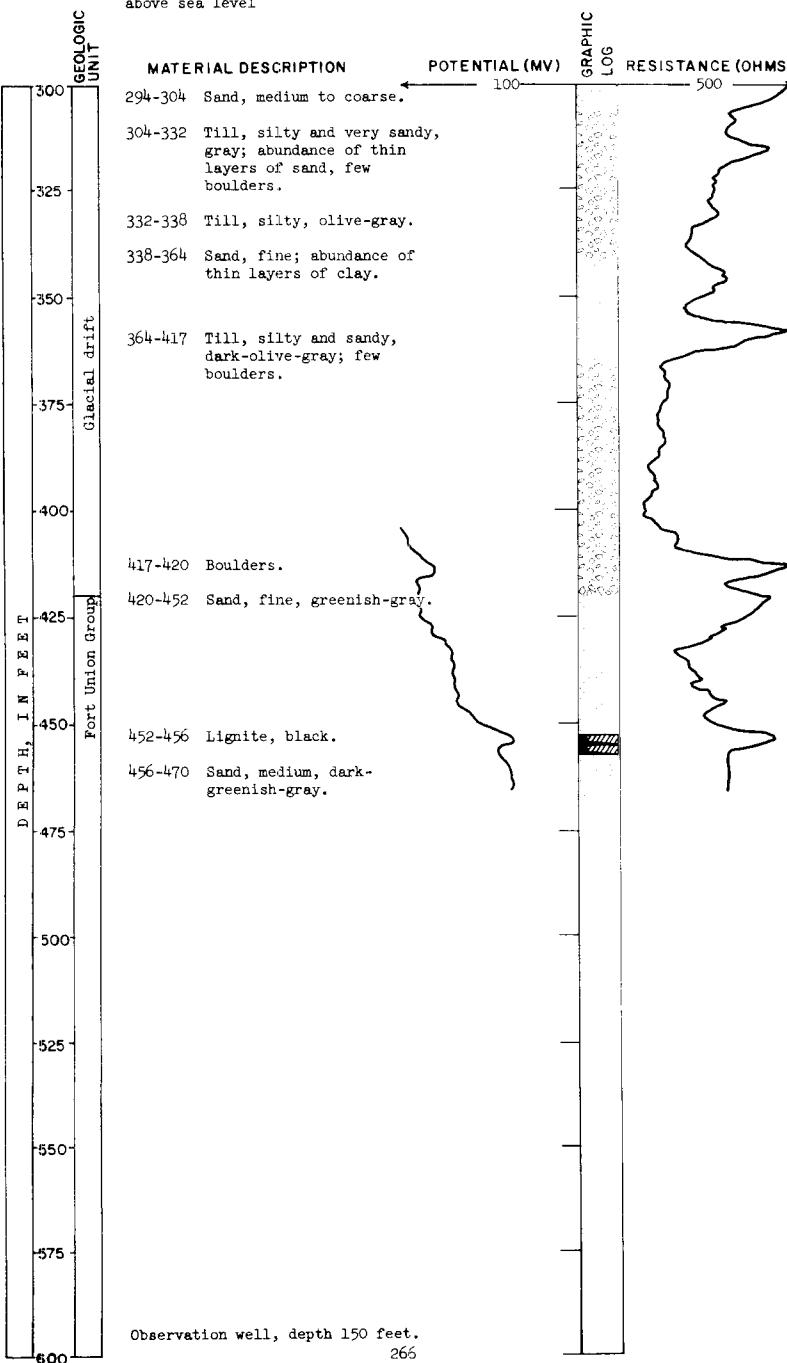
LOCATION: Ward County
161-88-11bbb TEST HOLE (Continued)

3256

ELEVATION: 1,907 feet
above sea level

DATE DRILLED: August 17, 1965

DEPTH: 470 feet



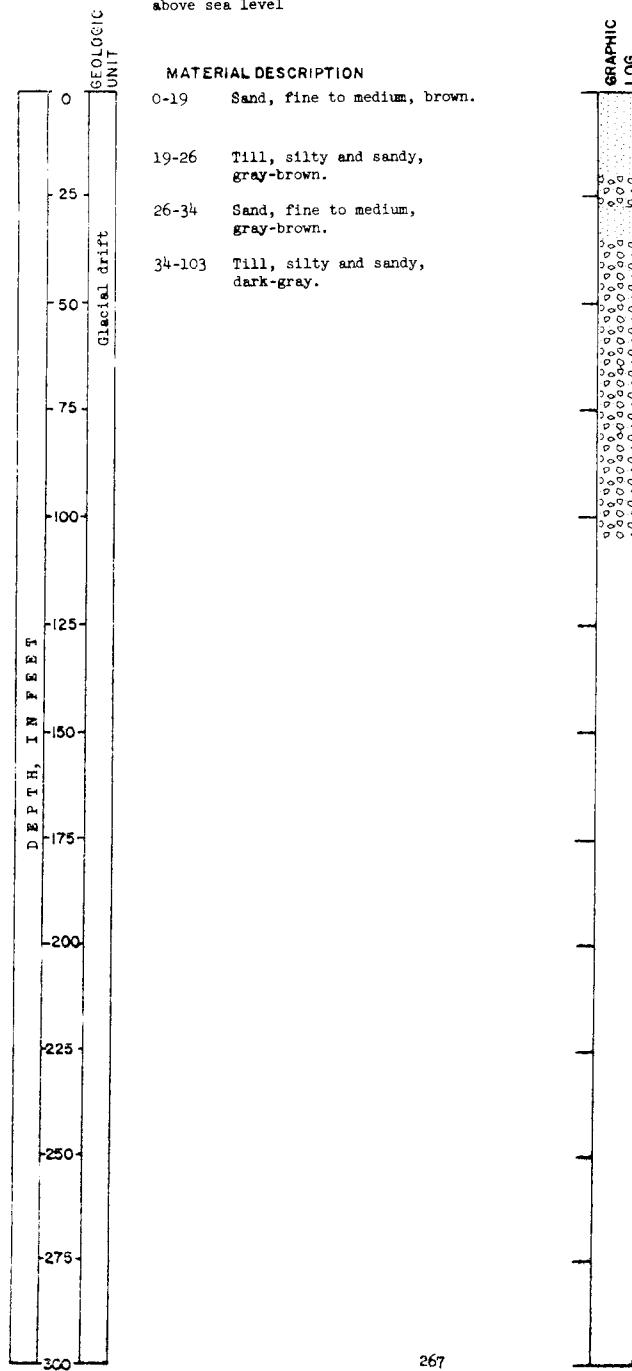
Ward County
LOCATION: 161-88-22ab TEST HOLE
U.S. Air Force

ELEVATION: 1,923 feet
above sea level

TEST HOLE
U.S. Air Force

DATE DRILLED: 1961

DEPTH: 103 feet

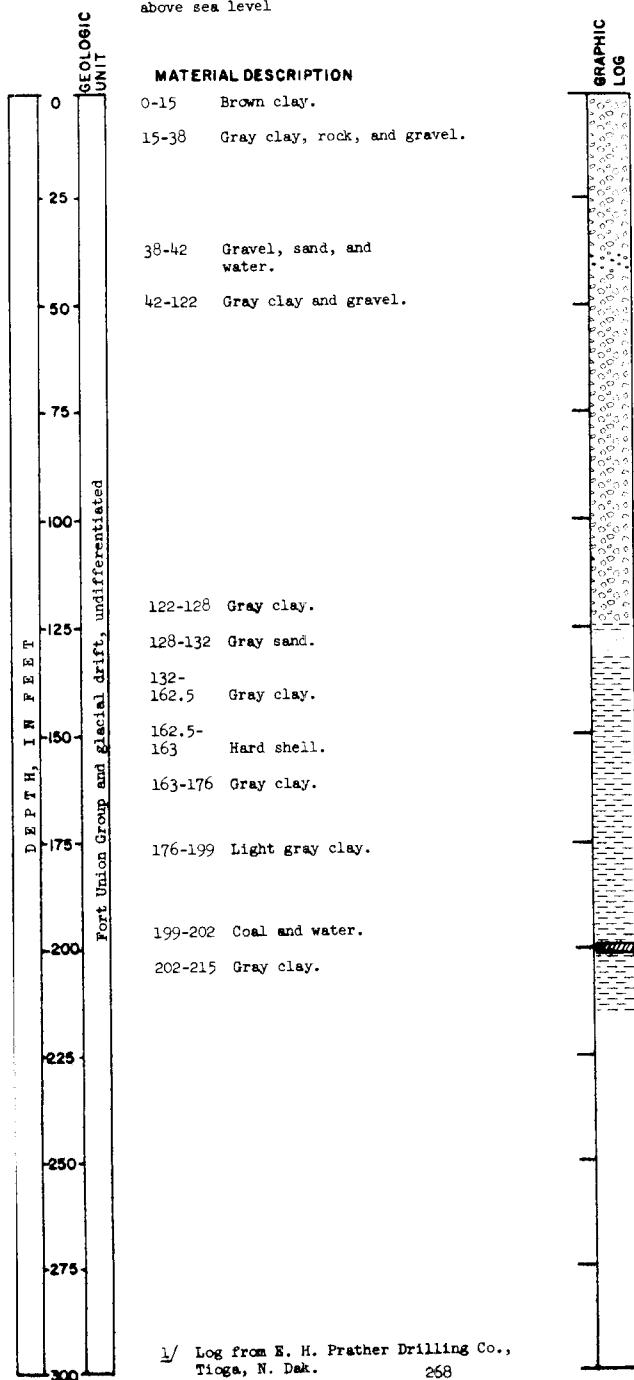


LOCATION: Ward County
161-88-26bbb **Dale Byrd**^{1/}

ELEVATION: 1,909 feet
above sea level

DATE DRILLED: June 6, 1965

DEPTH: 215 feet

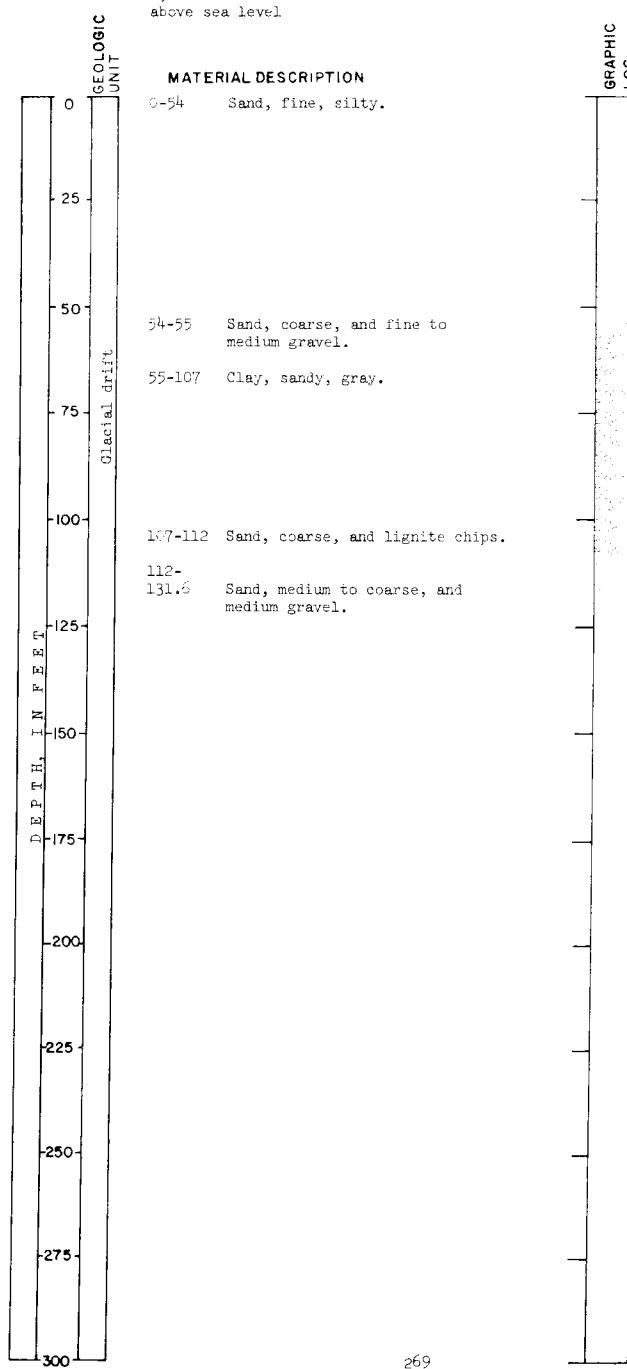


LOCATION: Ward County U.S. Bureau of Reclamation
161-58-31da test hole

ELEVATION: 1,800 feet above sea level

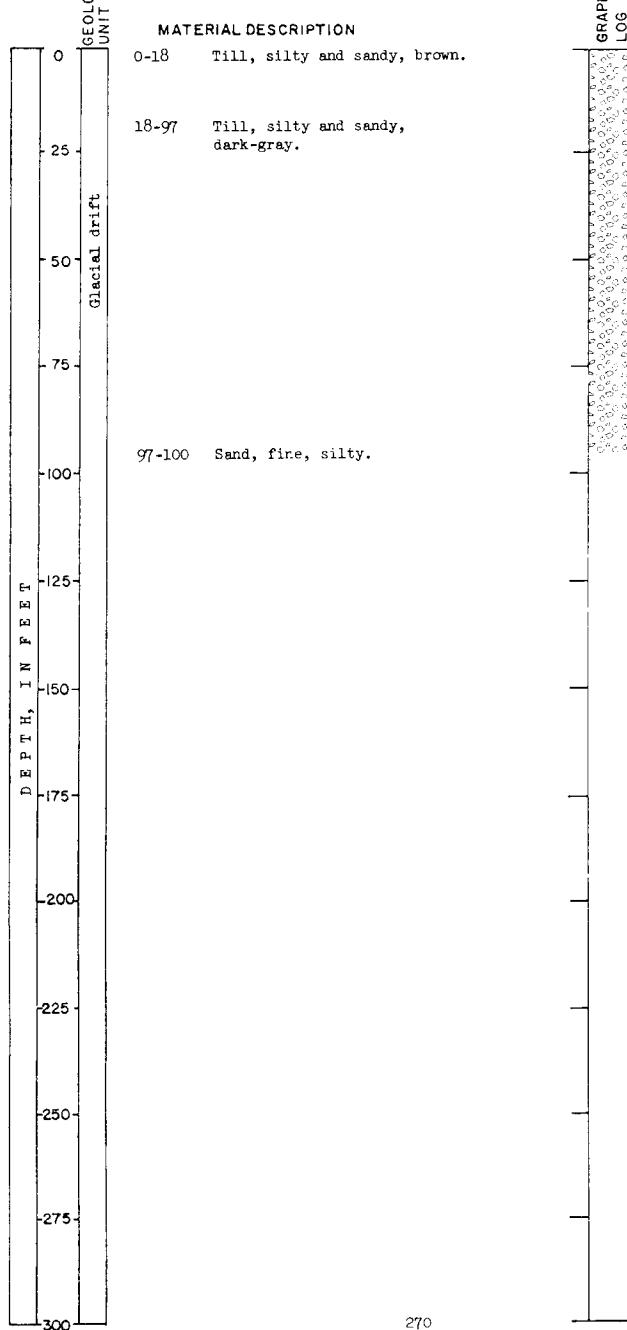
DATE DRILLED: January 14, 1949

DEPTH: 130.6 feet



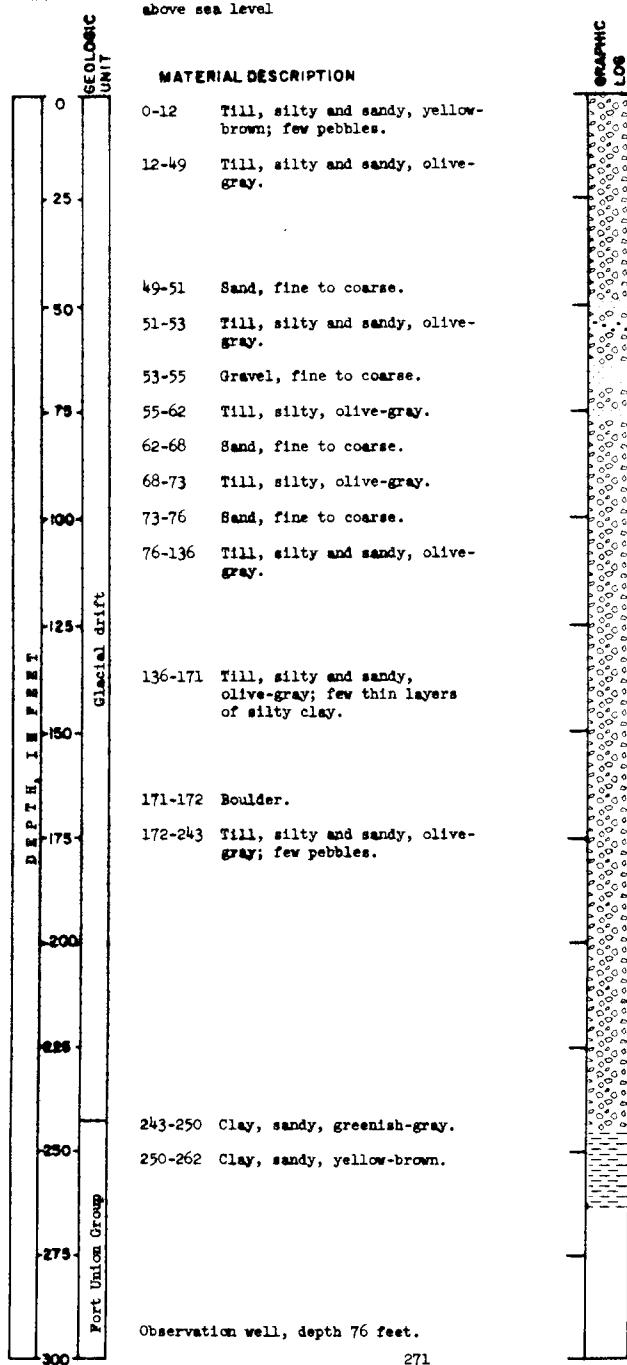
GRAPHIC LOG

LOCATION: Renville County 162-84-4ad TEST HOLE
U.S. Air Force
ELEVATION: 1,631 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet

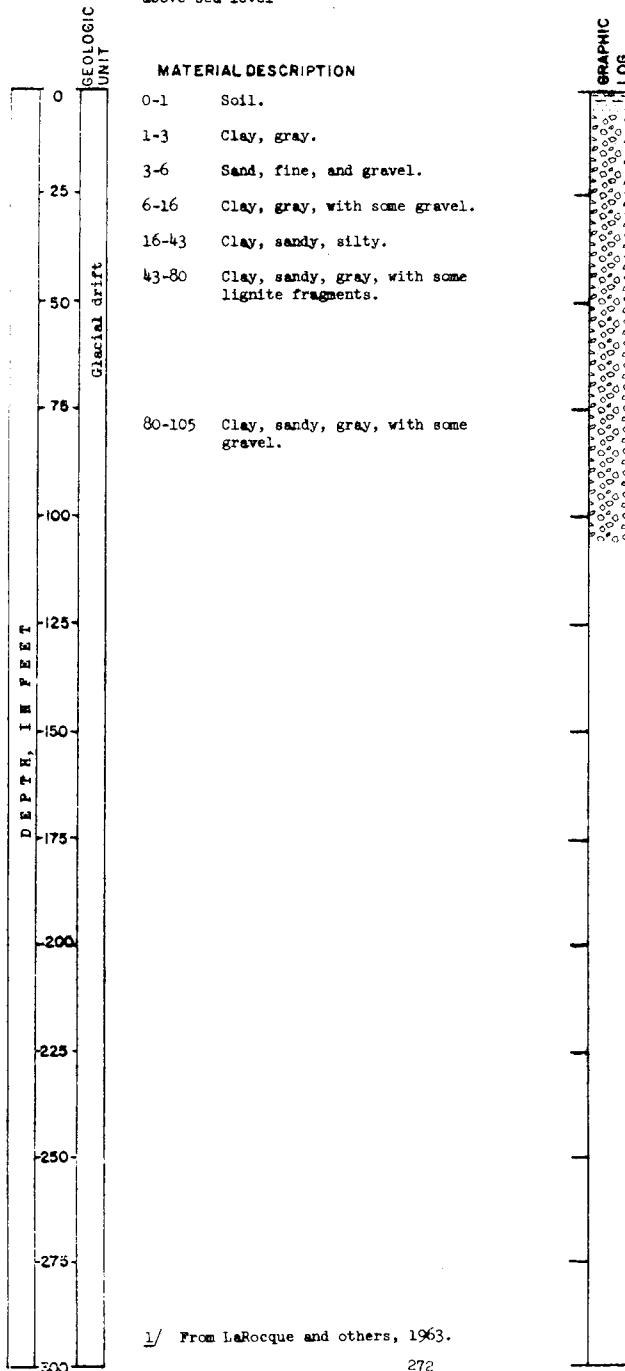


LOCATION: Renville County TEST HOLE 2320
162-84-8ddc
ELEVATION: 1,626 feet
above sea level

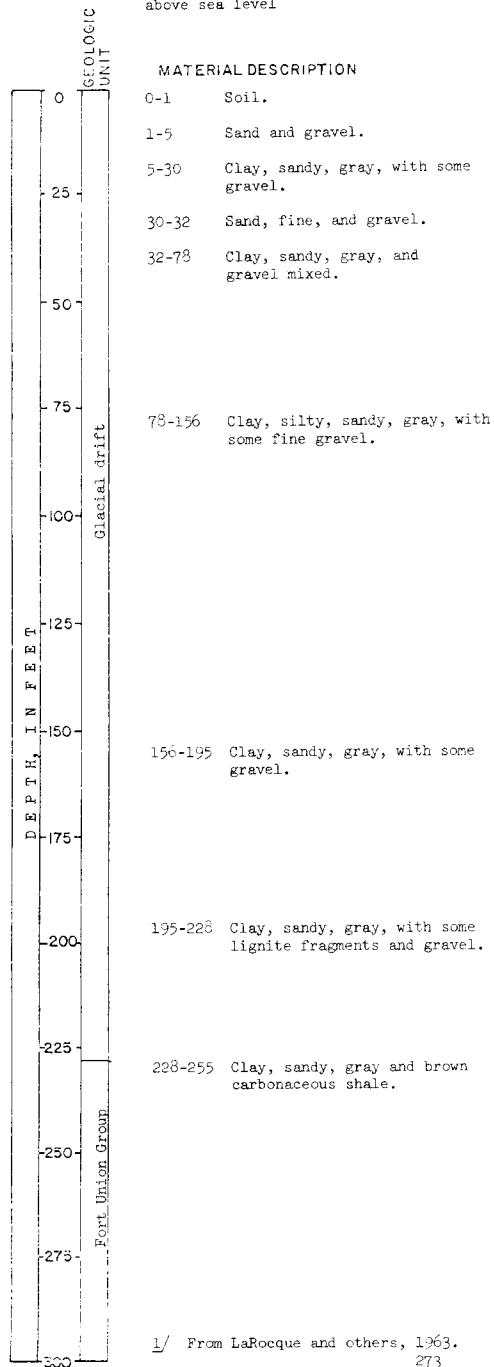
DATE DRILLED: October 22, 1964
DEPTH: 262 feet



LOCATION: Renville County TEST HOLE
162-84-25dd1 U.S. Geol. Survey^{1/}
ELEVATION: 1,636 feet DATE DRILLED: 1947
above sea level DEPTH: 105 feet



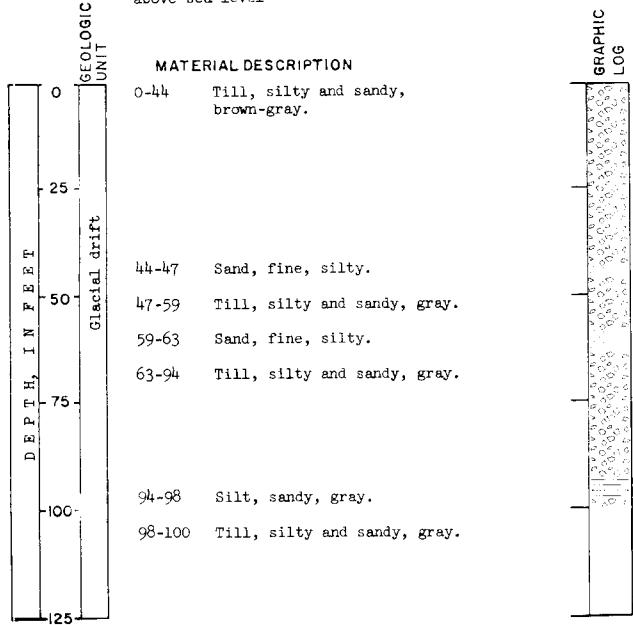
LOCATION: Renville County TEST HOLE
162-84-25dd2 U.S. Geol. Survey^{1/}
ELEVATION: 1,636 feet DATE DRILLED: 1947
above sea level DEPTH: 255 feet



1/ From LaRocque and others, 1963.
273

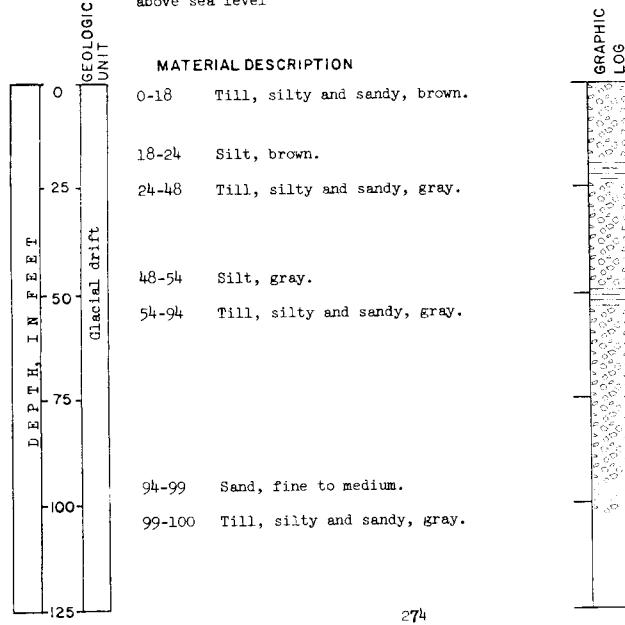
LOCATION: Renville County TEST HOLE
162-84-26da U.S. Air Force

ELEVATION: 1,617 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet

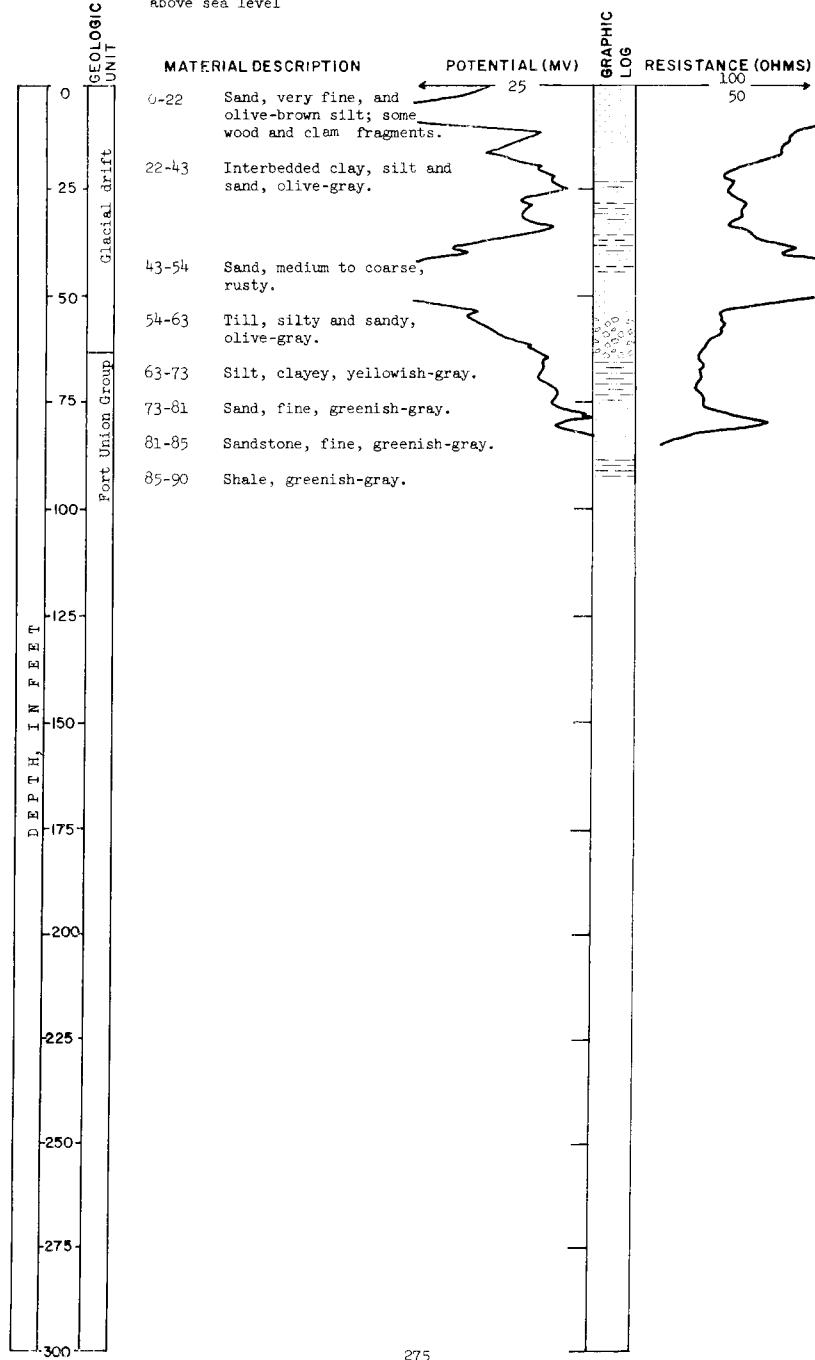


LOCATION: Renville County TEST HOLE
162-85-25da U.S. Air Force

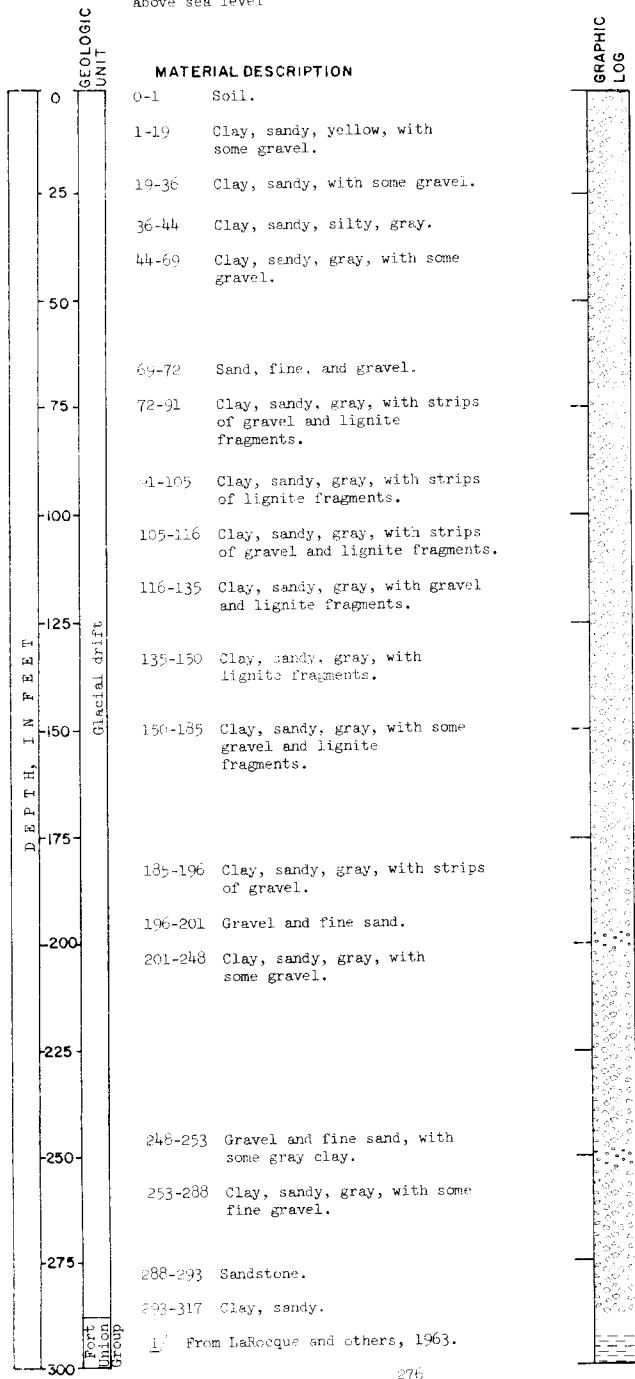
ELEVATION: 1,684 feet DATE DRILLED: 1961
above sea level DEPTH: 100 feet



LOCATION: Renville County
 162-86-6ddd TEST HOLE 3339
 ELEVATION: 1,609 feet DATE DRILLED: June 17, 1966
 above sea level DEPTH: 90 feet



LOCATION: Renville County 162-86-12ddd TEST HOLE U.S. Geol. Survey^{1/}
ELEVATION: 1,757 feet DATE DRILLED: 1947
above sea level DEPTH: 317 feet

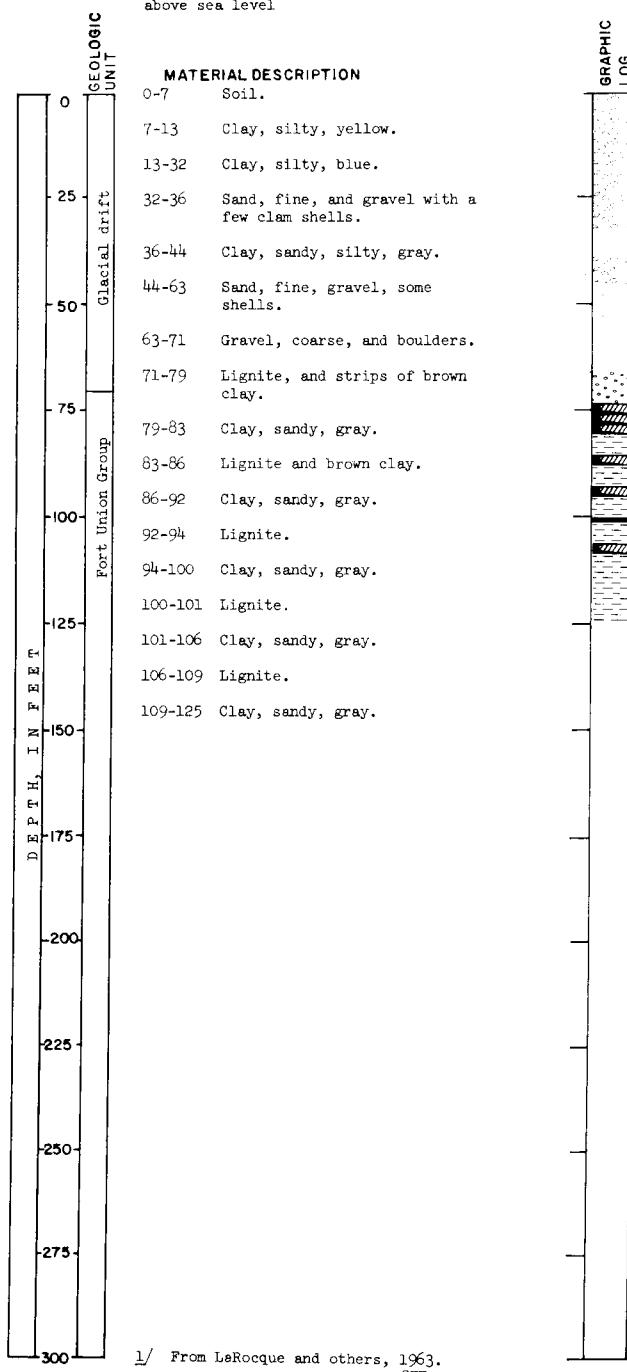


LOCATION: Renville County TEST HOLE
 162-86-28ccd U.S. Geol. Survey^{1/}

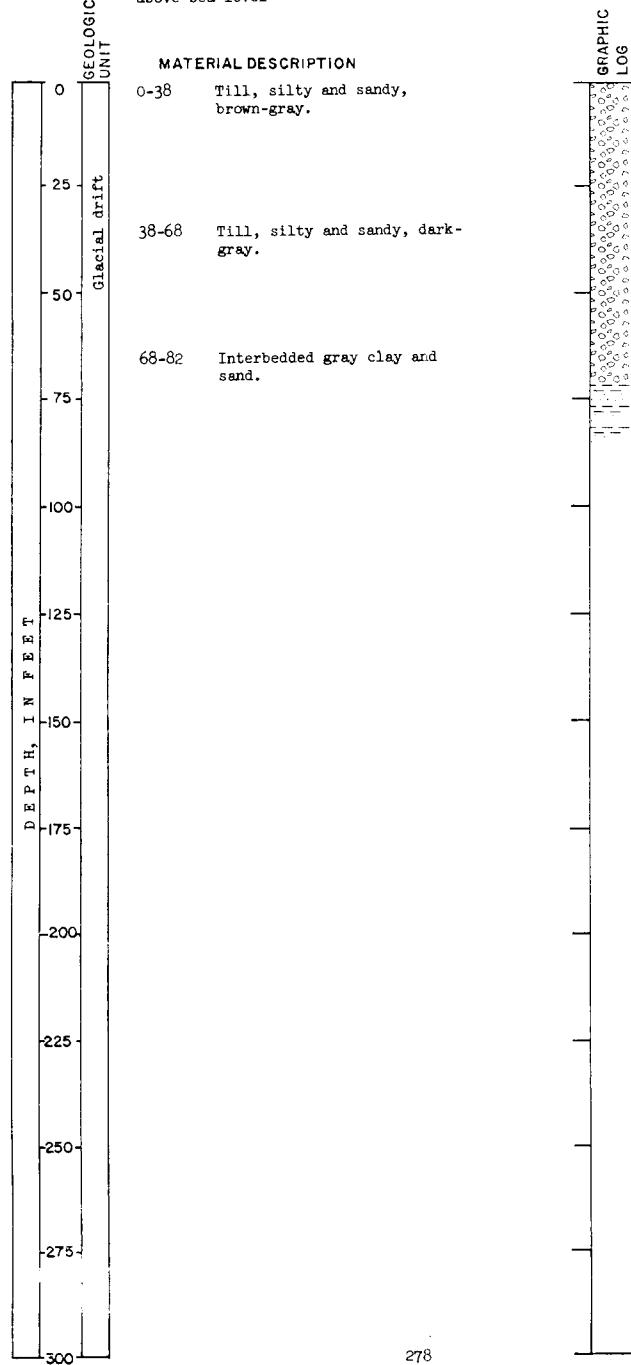
ELEVATION: 1,601 feet
 above sea level

DATE DRILLED: 1947

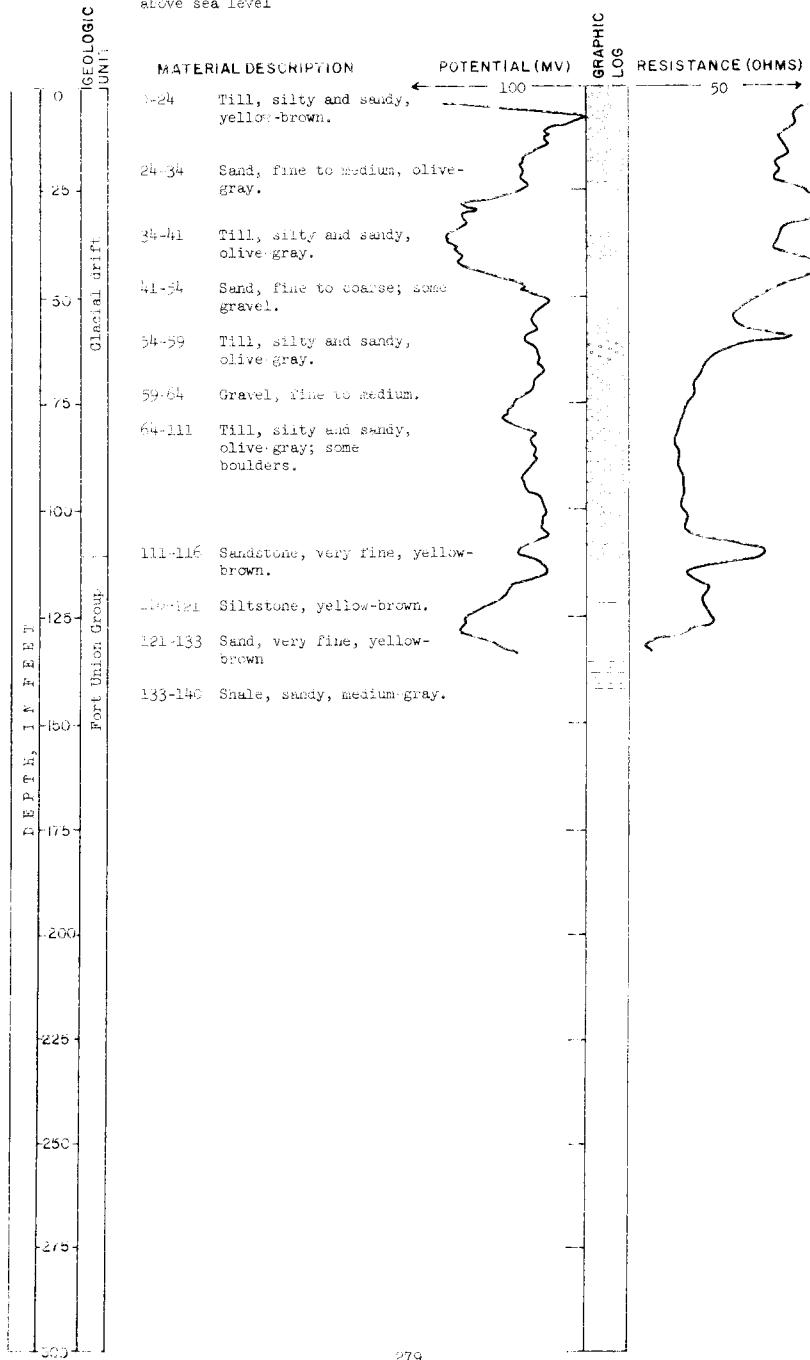
DEPTH: 125 feet



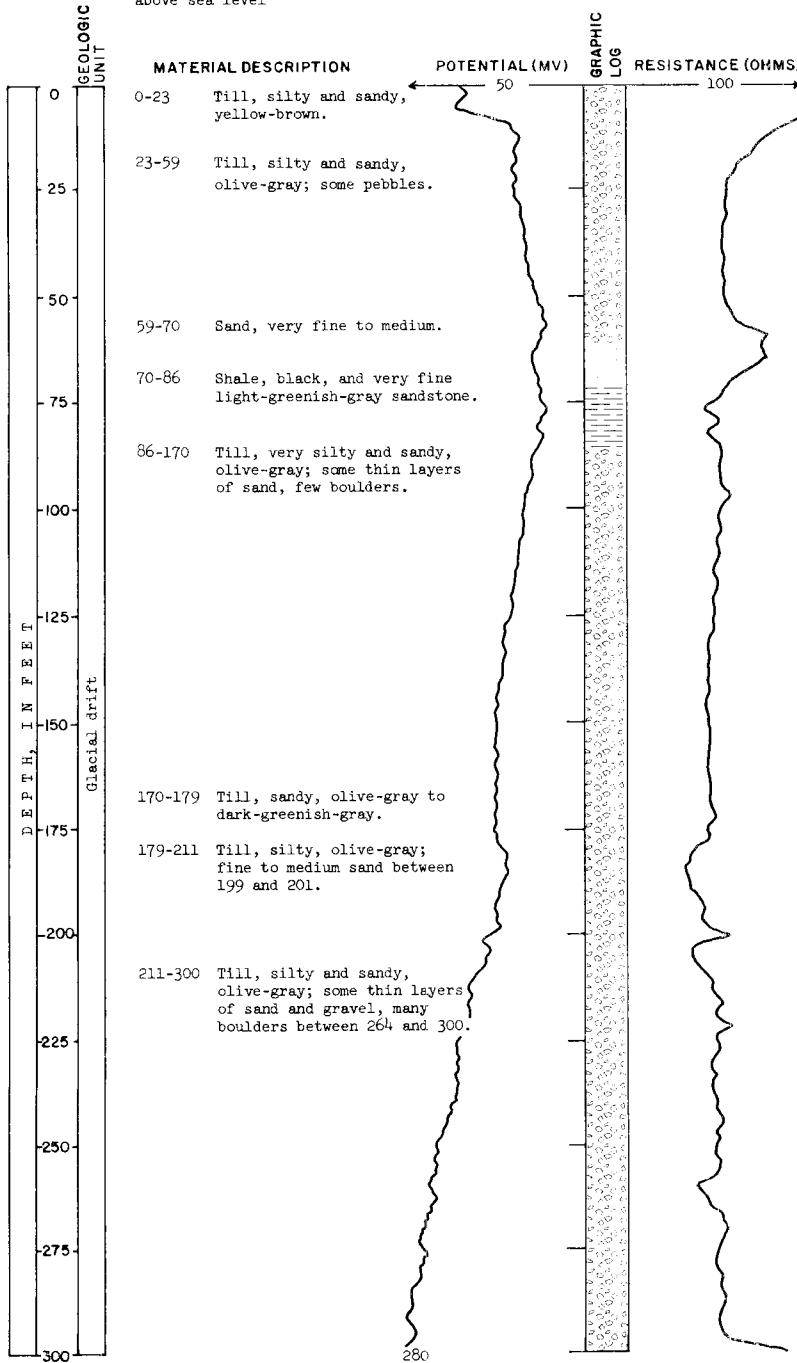
LOCATION: Renville County 162-86-36bb TEST HOLE
U.S. Air Force
ELEVATION: 1,777 feet DATE DRILLED: 1961
above sea level DEPTH: 82 feet



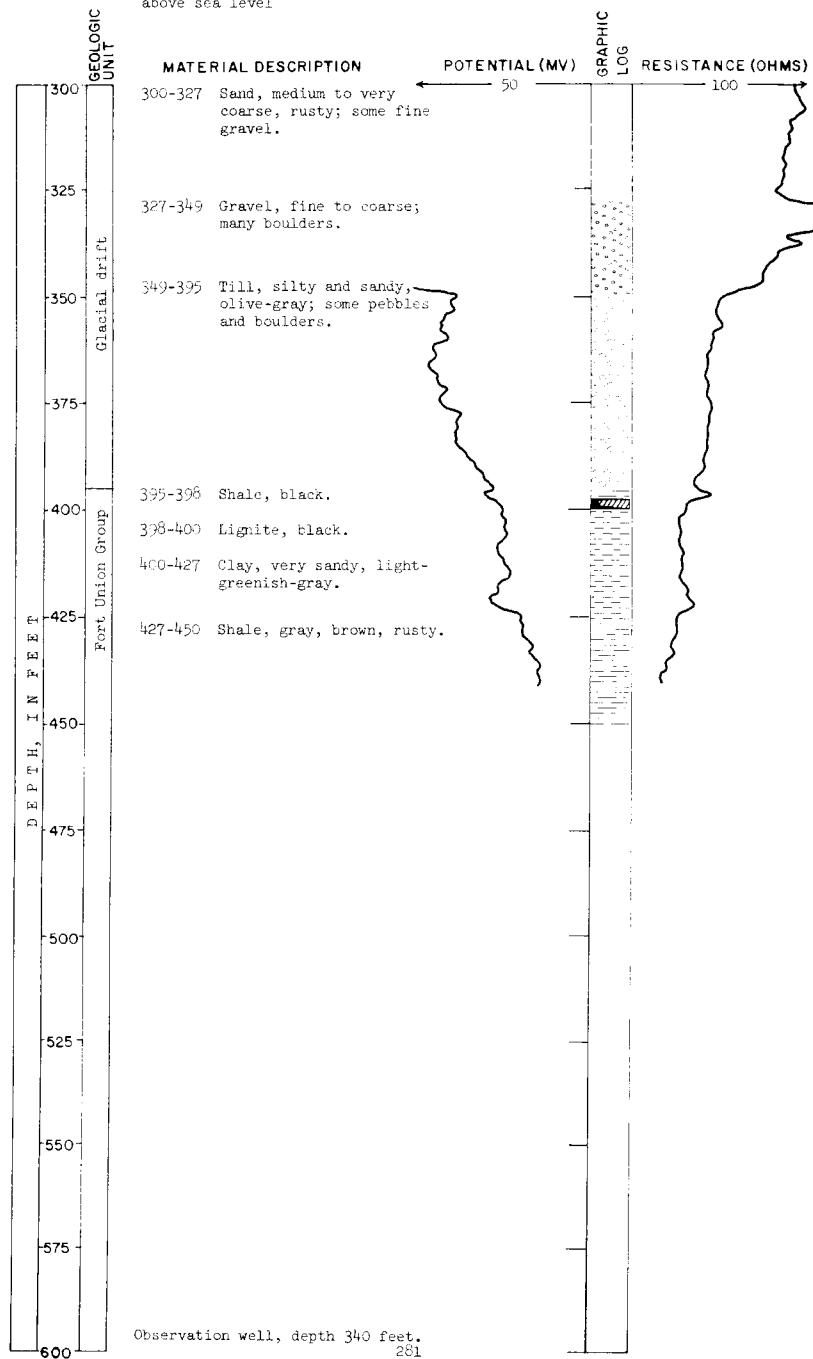
LOCATION: Renville County TEST HOLE 3338
 162-87-2ddd
 ELEVATION: 1,799 feet DATE DRILLED: June 16, 1966
 above sea level DEPTH: 140 feet



Renville County TEST HOLE 3340
 LOCATION: 162-87-22aaa DATE DRILLED: June 17, 1966
 ELEVATION: 1,850 feet DEPTH: 450 feet
 above sea level

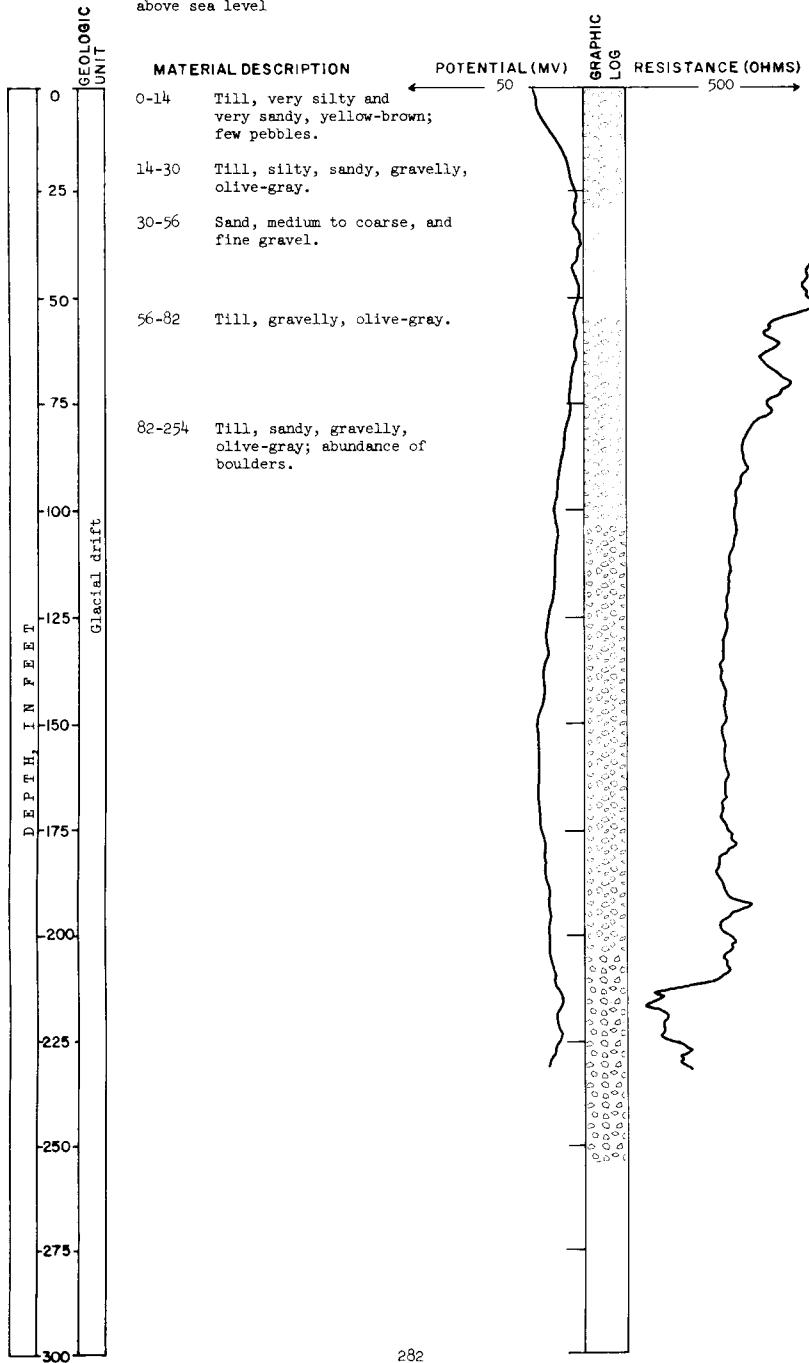


Renville County TEST HOLE 3340
 LOCATION: 162-87-22aaa (Continued)
 DATE DRILLED: June 17, 1966
 ELEVATION: 1,850 feet DEPTH: 450 feet
 above sea level



Renville County
LOCATION: 162-87-27~~basal~~
ELEVATION: 1,844 feet
 above sea level

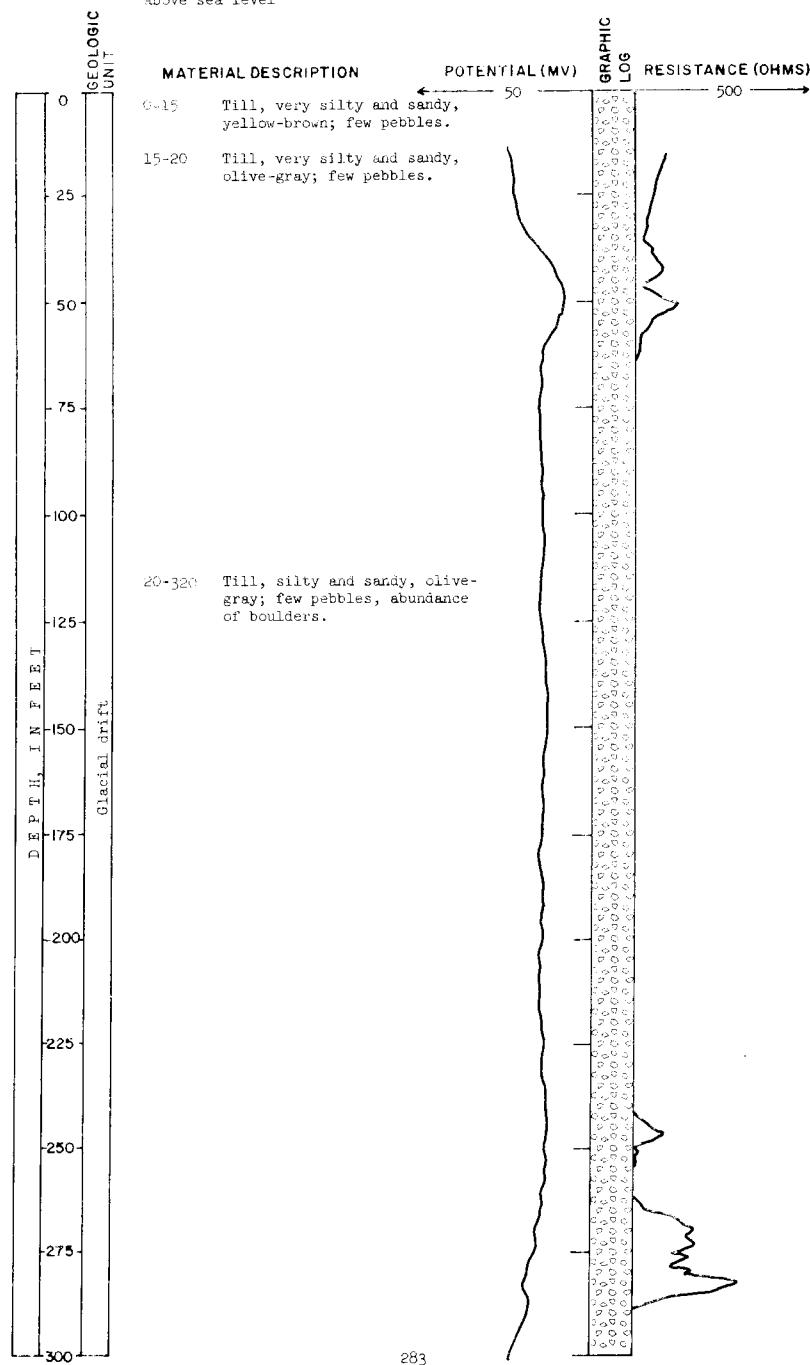
TEST HOLE 3254
DATE DRILLED: August 9, 1965
DEPTH: 254 feet



Renville County
LOCATION: 162-87-27baa2
ELEVATION: 1,344 feet
above sea level

TEST HOLE 325HA

DATE DRILLED: August 9, 1965
DEPTH: 705 feet

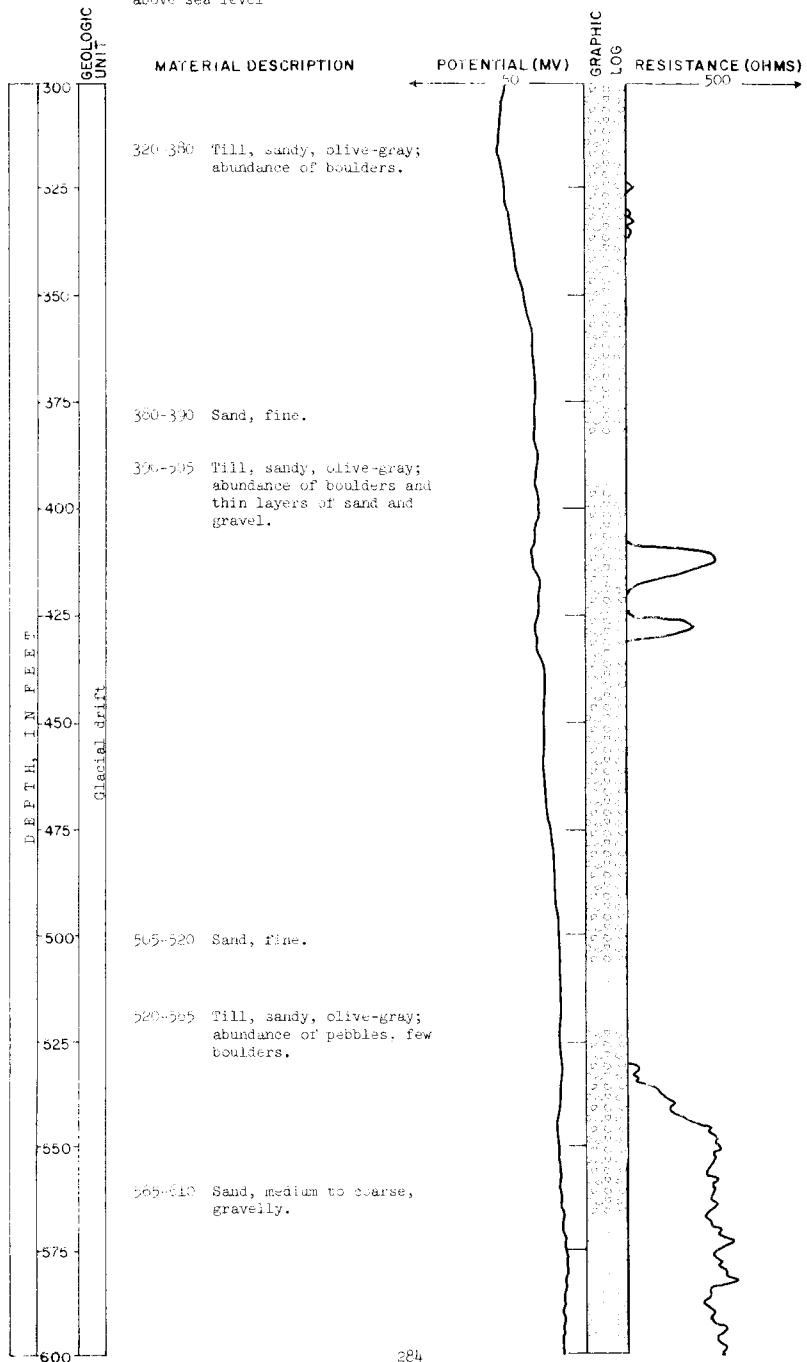


Renville County TEST HOLE 3254A
LOCATION: 162-87-2/baa2 (Continued)

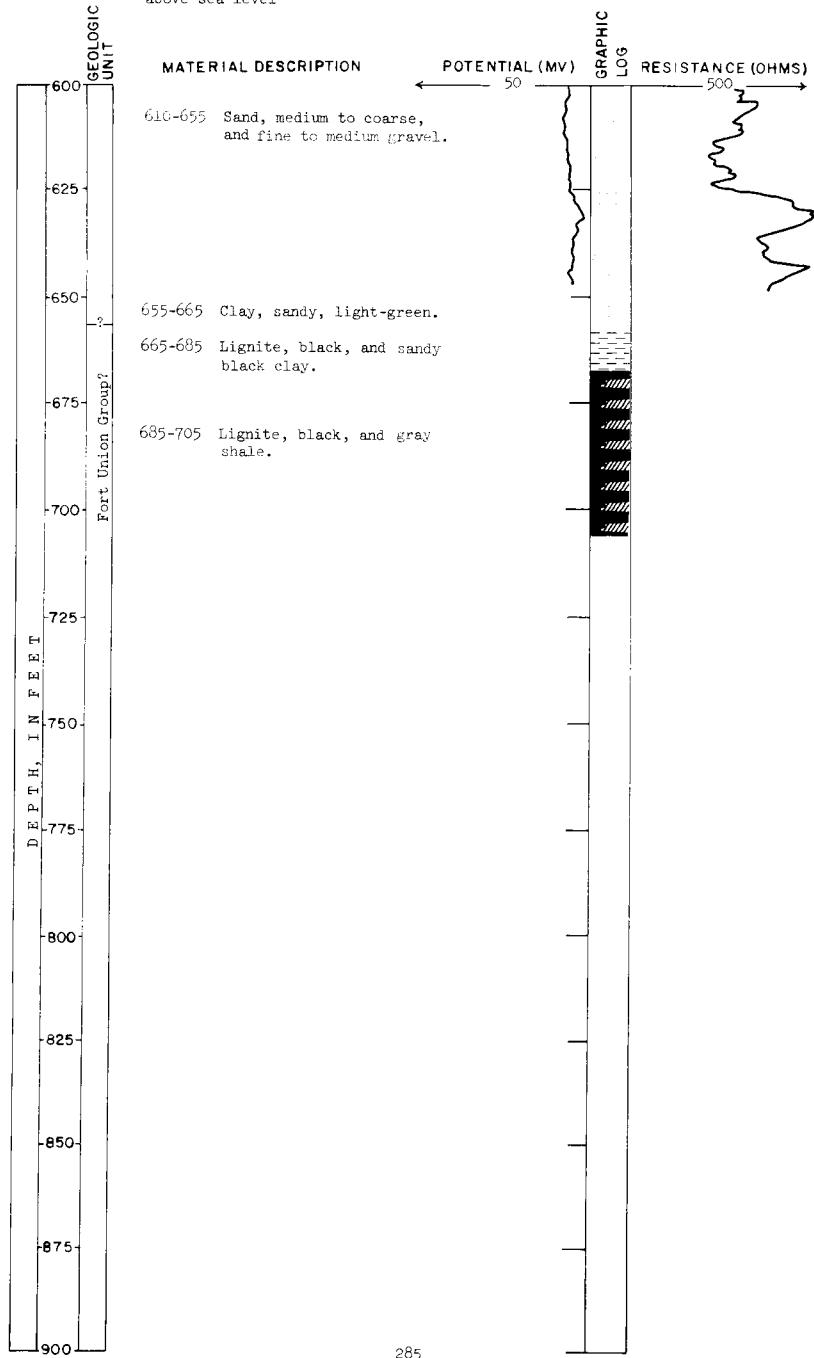
ELEVATION: 1,844 feet
above sea level

DATE DRILLED: August 9, 1965

DEPTH: 705 feet



Renville County TEST HOLE 3254A
LOCATION: 162-87-27baa2 (Continued)
ELEVATION: 1,844 feet above sea level
DATE DRILLED: August 9, 1965
DEPTH: 705 feet



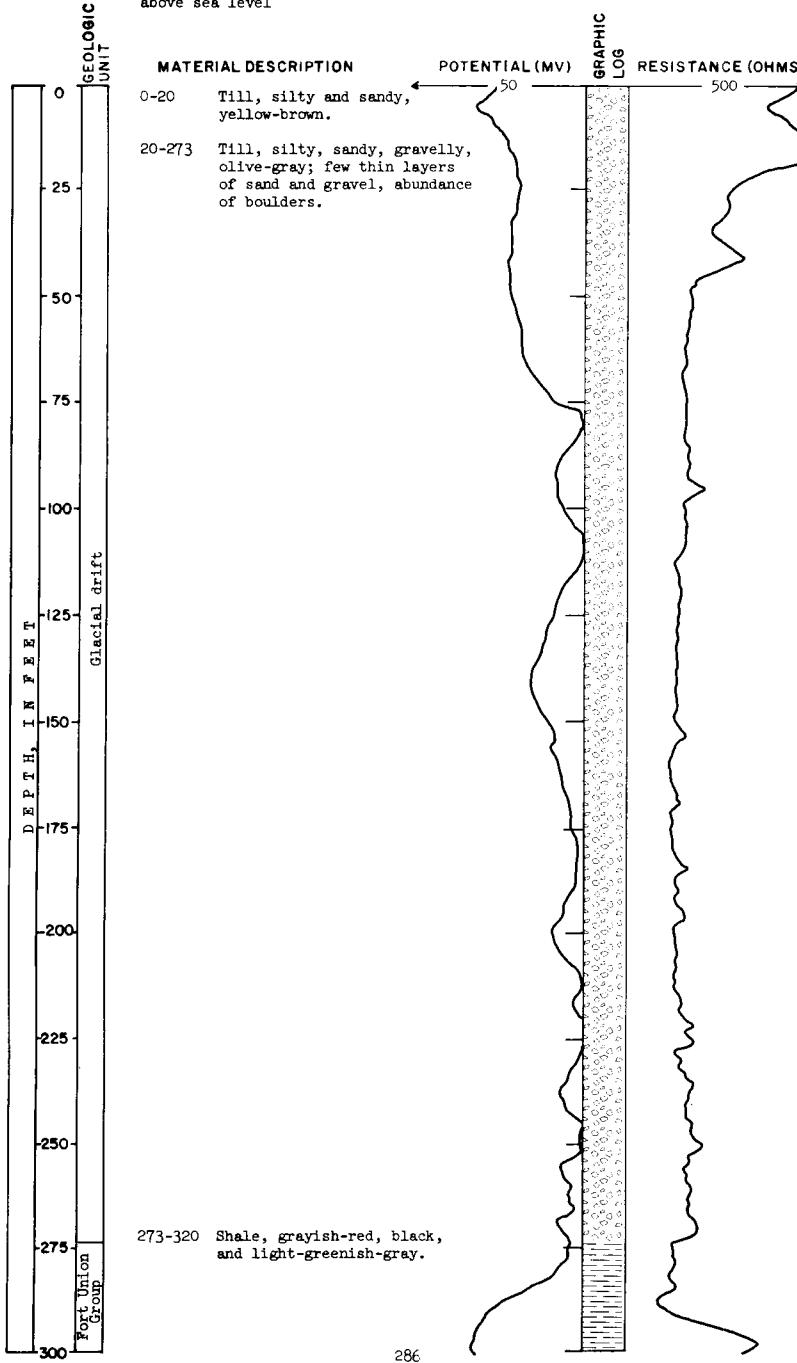
TEST HOLE 3255

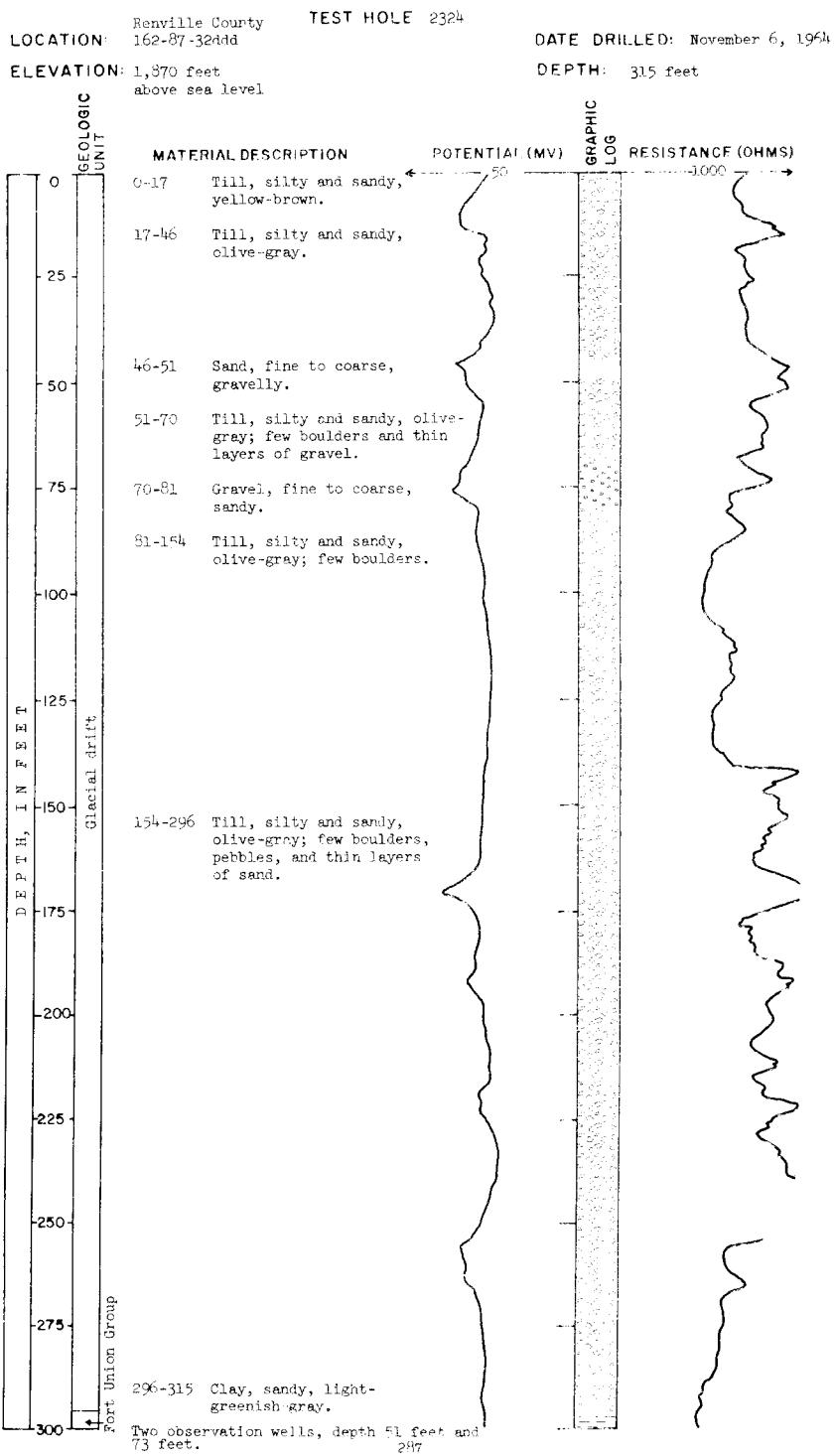
LOCATION: Renville County
162-87-27ddd

ELEVATION: 1,844 feet
above sea level

DATE DRILLED: August 17, 1965

DEPTH: 320 feet





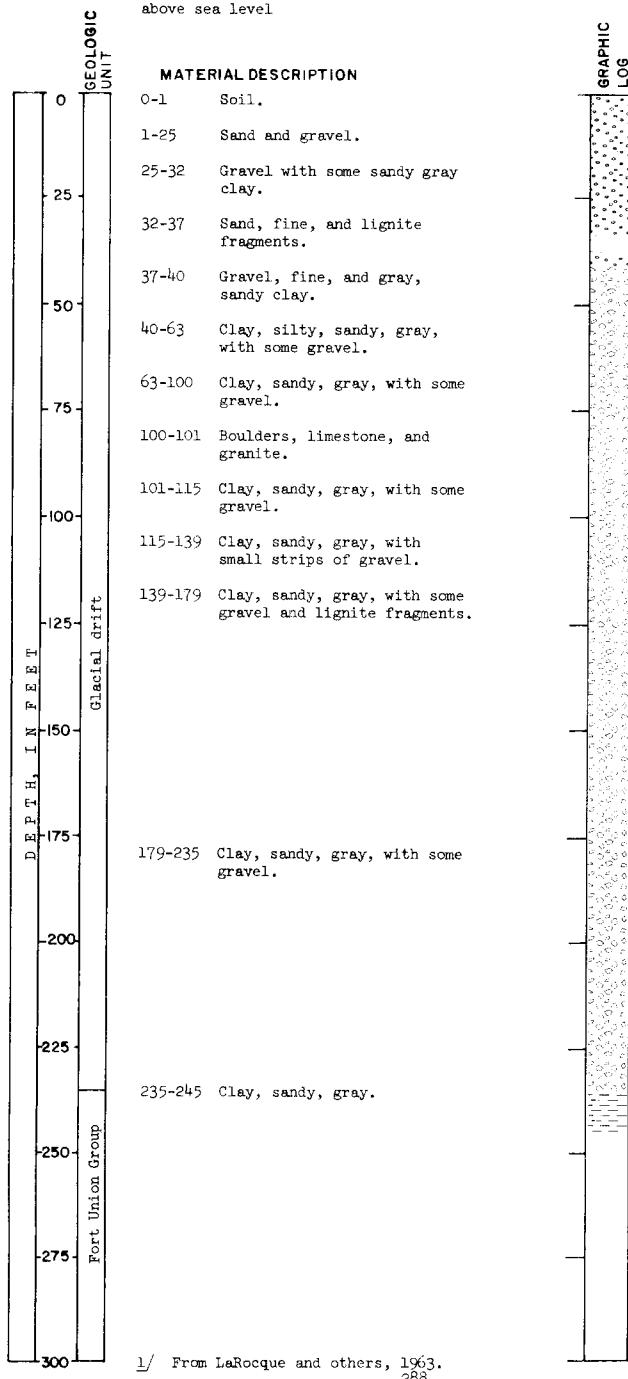
LOCATION: Renville County
163-84-5baa

TEST HOLE
U.S. Geol. Survey^{1/}

DATE DRILLED: 1947

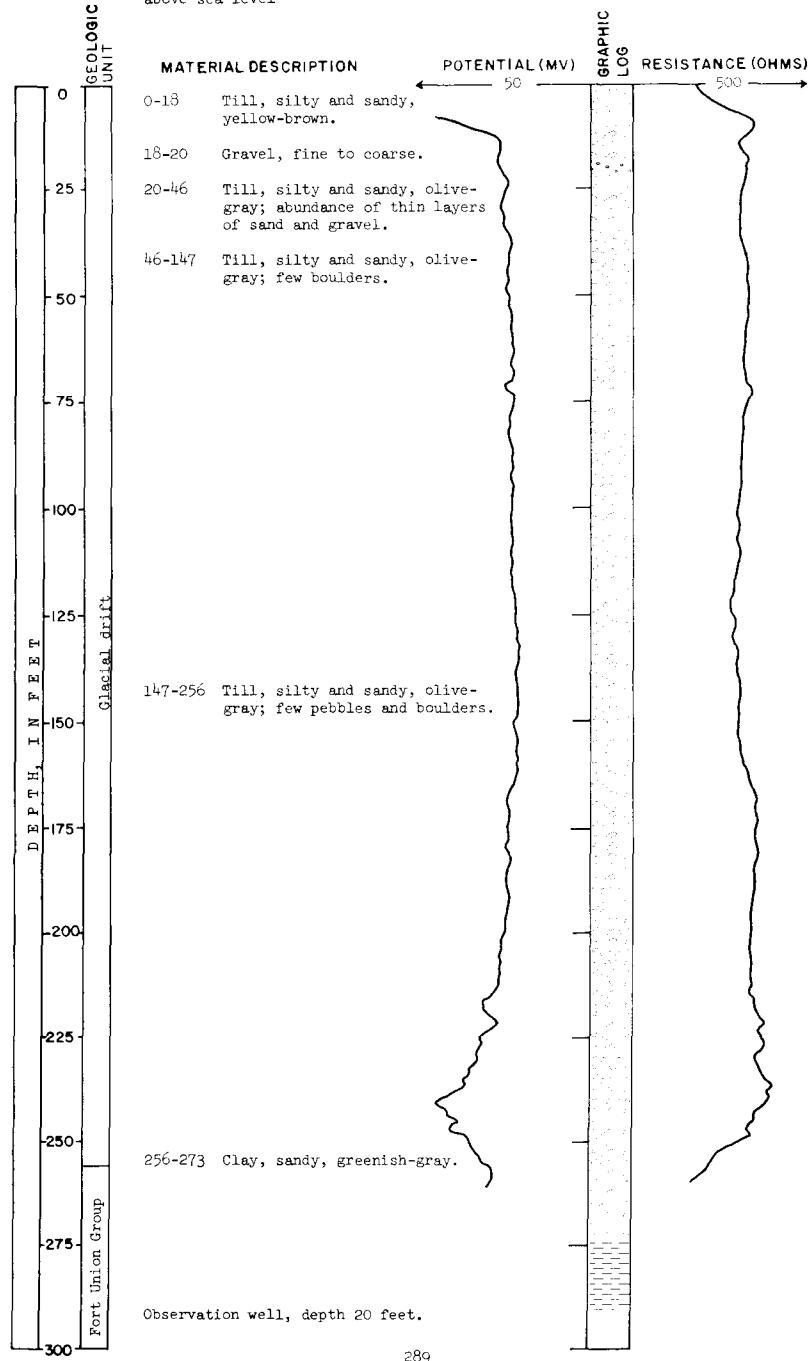
ELEVATION: 1,617 feet
above sea level

DEPTH: 245 feet

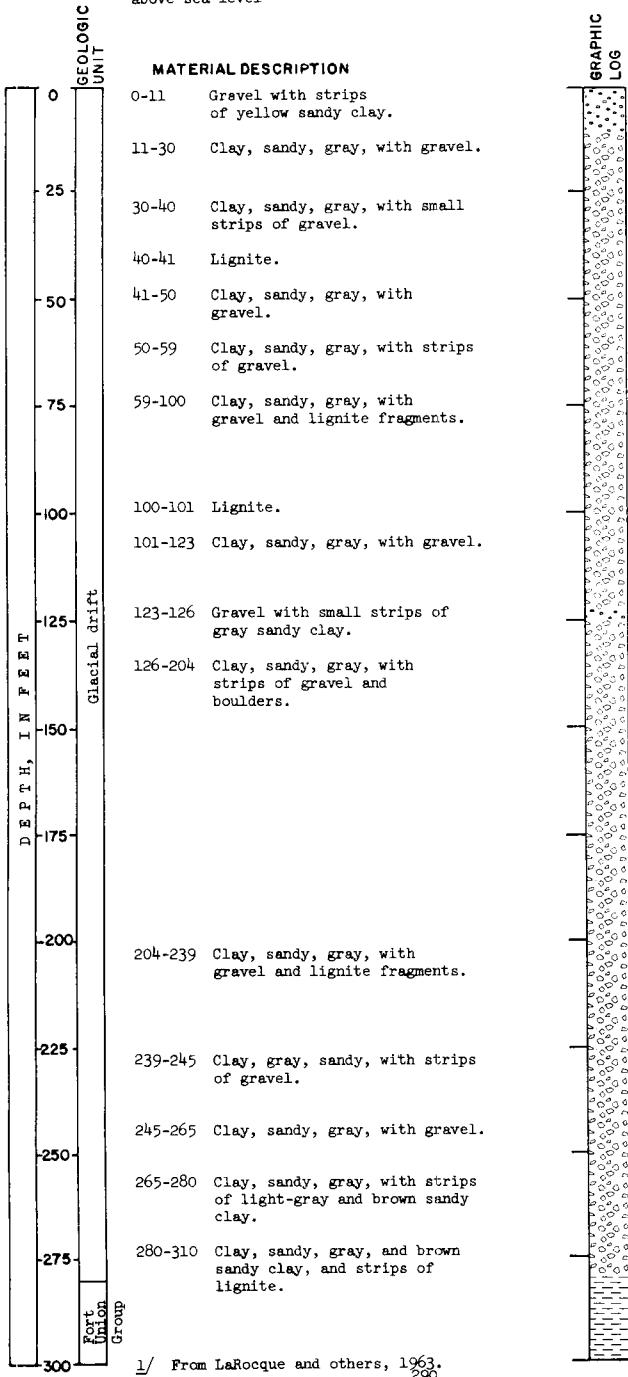


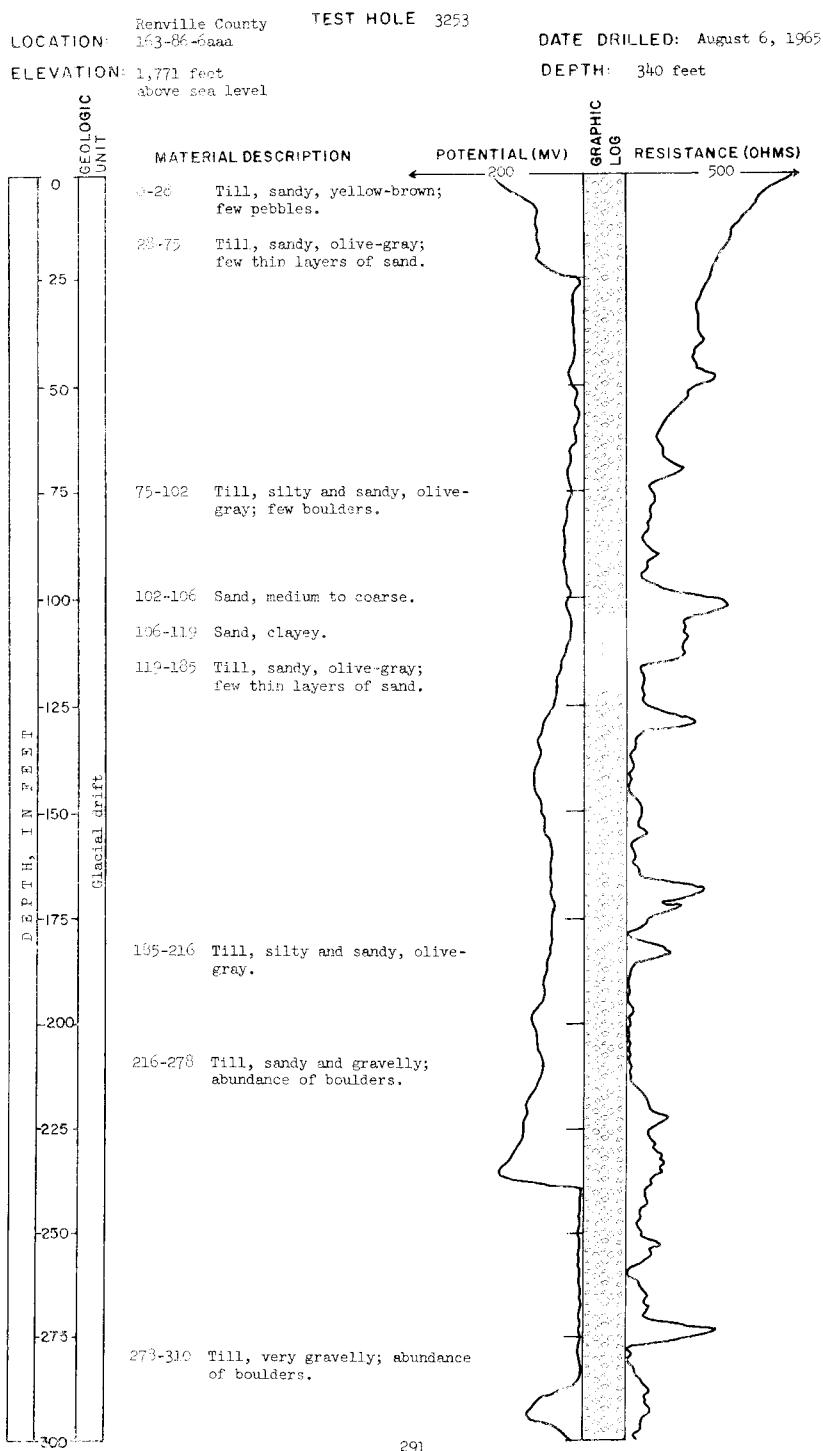
^{1/} From LaRocque and others, 1963.

LOCATION: Renville County
163-84-7ccc TEST HOLE 2321
ELEVATION: 1,635 feet DATE DRILLED: October 23, 1964
above sea level DEPTH: 273 feet



LOCATION: Renville County 163-85-26bbb TEST HOLE
 U.S. Geol. Survey^{1/}
 ELEVATION: 1,669 feet DATE DRILLED: 1947
 above sea level DEPTH: 310 feet

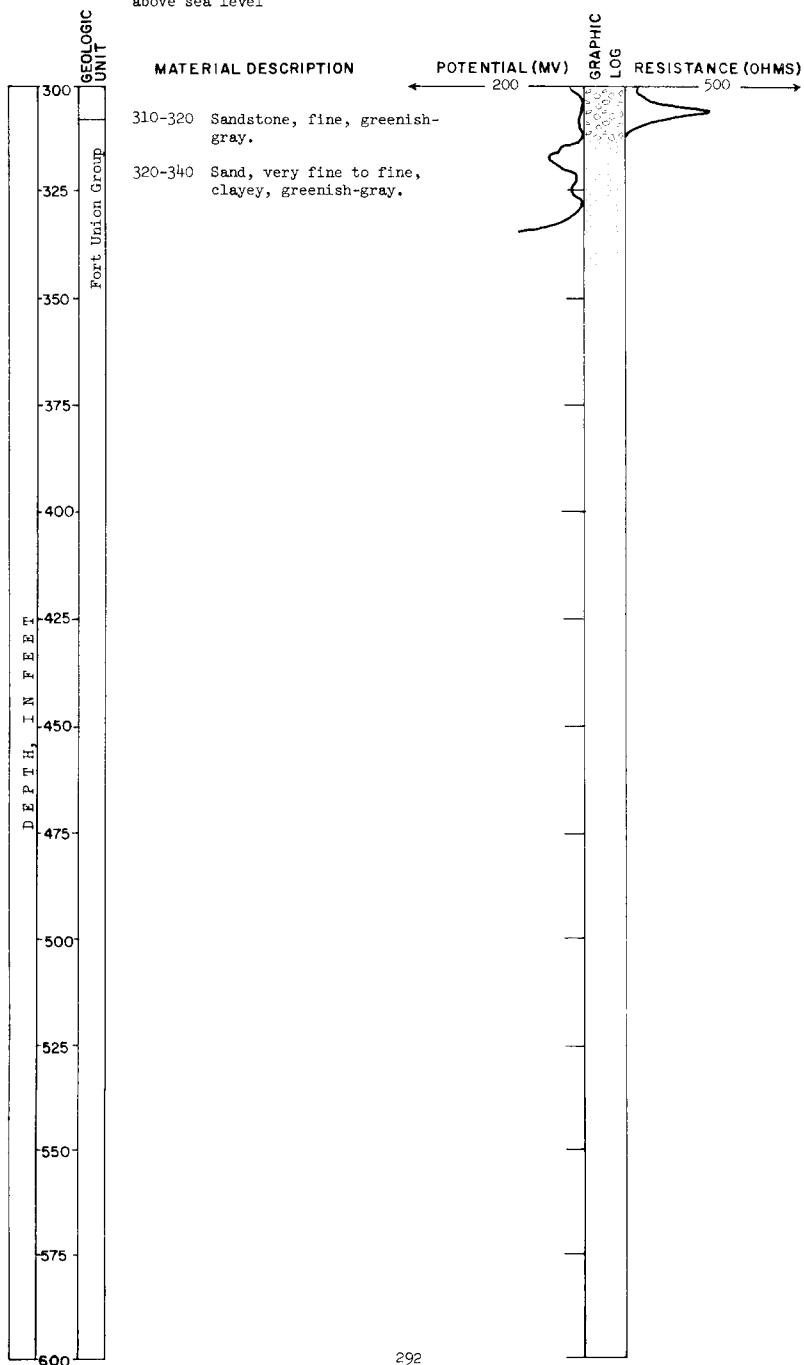


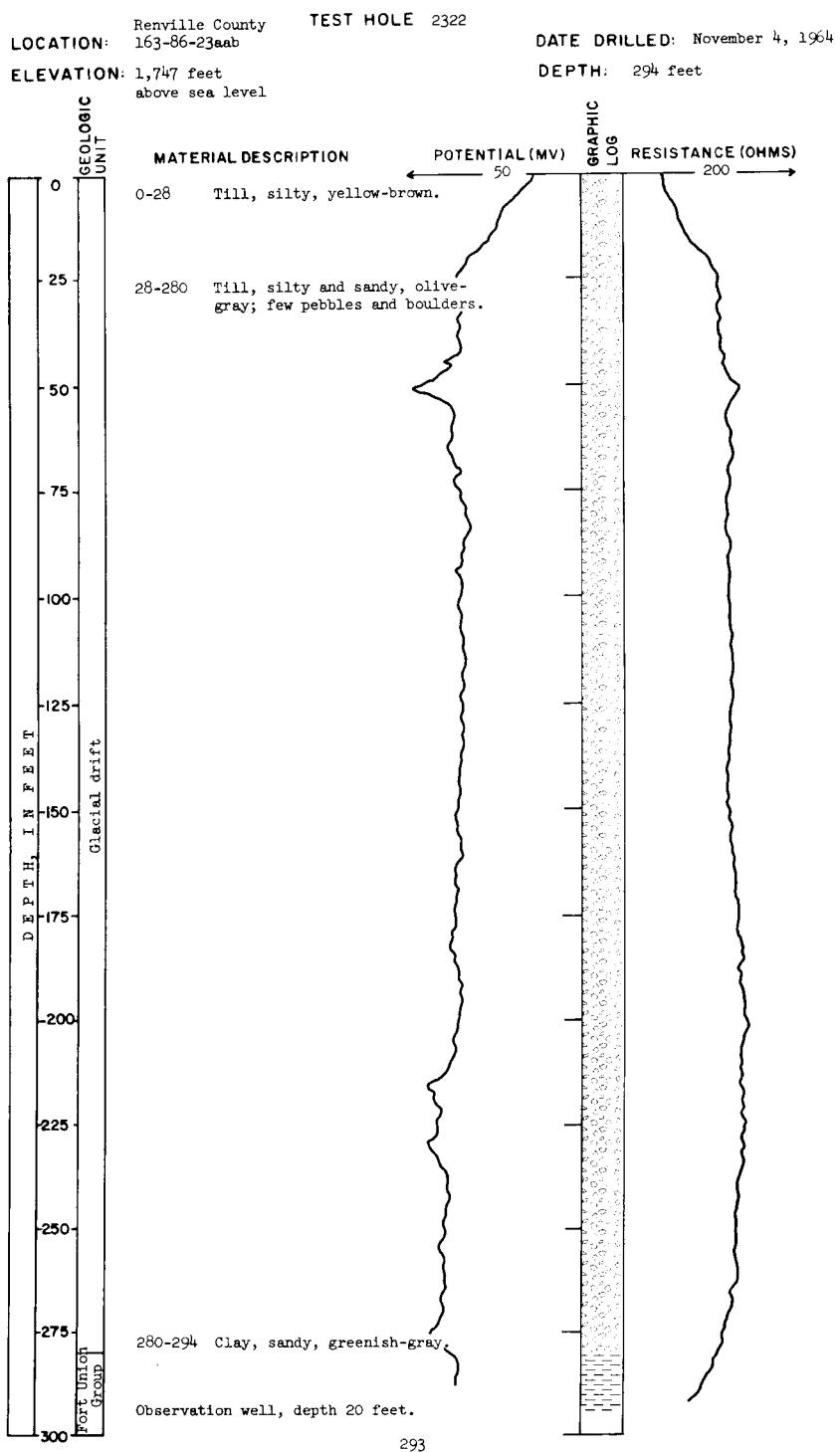


Renville County TEST HOLE 3253
LOCATION: 163-86-6aa (Continued)

DATE DRILLED: August 6, 1965
DEPTH: 340 feet

ELEVATION: 1,771 feet
above sea level





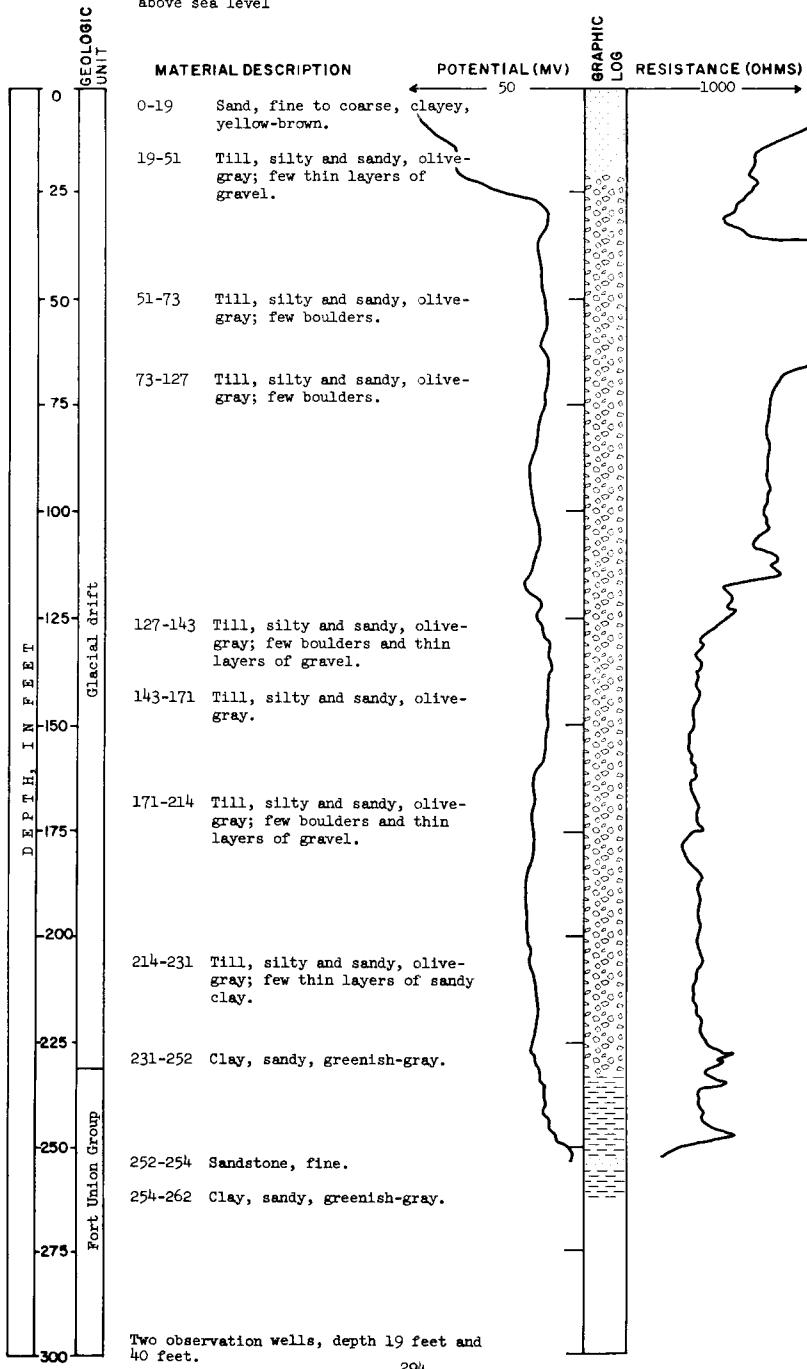
LOCATION: Renville County
163-87-7aaa

TEST HOLE 2323

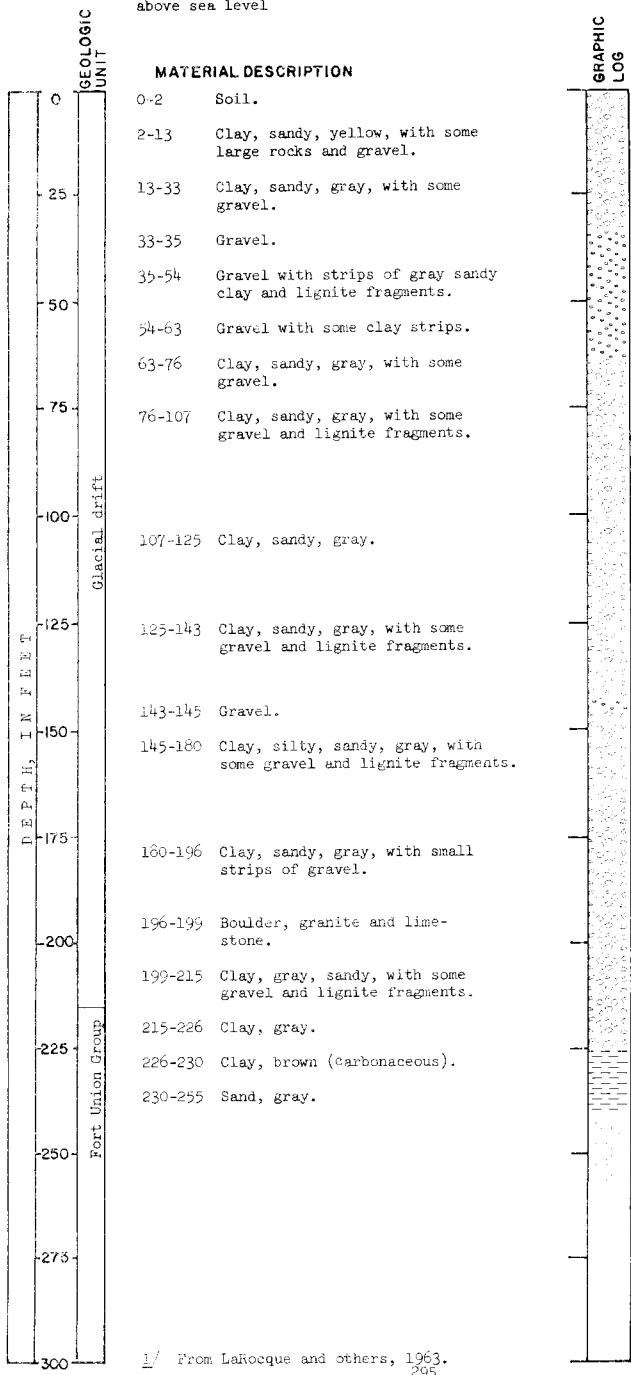
ELEVATION: 1,823 feet
above sea level

DATE DRILLED: November 5, 1964

DEPTH: 262 feet



LOCATION: Renville County 163-87-31ddd TEST HOLE
 U.S. Geol. Survey^{1/}
 ELEVATION: 1,855 feet DATE DRILLED: 1947
 above sea level DEPTH: 255 feet



^{1/} From LaRocque and others, 1963.
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TABLE 5.--Chemical analyses of selected water samples, Renville County

Analytical results are in parts per million, except where indicated.

Use of Water

H, domestic; I, irrigation; K, domestic and stock; N, industrial; P, public supply; S, stock watering; U, unused.

TABLE 5.—Chemical analyses of selected water samples, Bonneville County

TABLE 4. Estimated mean values of selected water quality variables, Keweenaw Bay

(See headnotes for table 5, page 204.)

TABLE 6.—Continued

156N085W31AAB	S	233	09	24	56	.8	.0	32	780	61.0	1290	1400	.59	163	1.6	.4	.3	1950	.32	3000	8.6	46	
156N085W32CCC	H	30	05	66																	3200		
156N085W1DCCB	K	180	09	23	58	4.4	.0	18	840	6.5	508	4300	775	4.0	2.0	.8	.3	2330	14	3500	9.5	44	
156N085W1ECCB	K	180	09	23	58	5.6	153	280	18	31.0	309	0	152	5.0	2.4	1.4	2.2	413	537	8.0	50		
156N085W21AAB	P	277	09	07	58	2.5	6.0	858	1600	912	11									3970	8.4		
156N085W21LCCB	P	570	02	05	63	5.8	6.0	.0	1010	9.0	1900	48	.0	390	1.3	.5	.1	2610	17	3910	8.2	47	
156N085W30DC1	H	400	03	10	66	.68					1050	52	1920	43							4050	4.1	
156N085W30DC2	H	400	03	10	66															560	8.4		
156N085W715CDC	U	70	06	14	65	25	.08	141	40	100	11	469	0	341	.4	.2	.0	.00	871	895	115	131	.2
156N085W719B8B	K	137	05	66																1280	7.9	46	
156N085W71DCCD	U	10	04	59		.16	136	146	8.0	4.0	207	0	62	1.6	.5	6.7		386	262			8.2	
156N085W71ECCB	K	80	05	66																1210			
156N085W732ACB	S	260	05	66																3300			
157N081W05AD1	K	170	08	25	47															4800			
157N081W21AD1	S	250	08	22	47															5400			
157N081W21AD2	S	250	08	22	47															3450			
157N081W05AD2	K	170	08	25	47															2950			
157N081W09UDC	K	200	05	66																1950			
157N081W14AD1	K	250	05	66																2400			
157N081W14AD2	S	250	05	66																2910			
157N081W22XAA	K	350	05	66																2500			
157N081W04SAA	K	195	05	28	66															1900			
157N081W04AAA	K	300	11	02		1.2														1600			
157N081W04DCC	S	300	05	66																1100			
157N081W22DDC	H	16	05	96																1800			
157N081W29BCB	K	175	05	66																1400			
158N086W04CDC	H	252	06	66																3400			
158N086W04ECCB	H	252	06	66																1120			
158N086W27CCB	K	250	05	66																3000			
158N086W27CCD	K	90	06	66																3000			
158N087W29CDC	K	600	06	66																2210			
158N087W31B8B	K	310	05	66																3450			
159N086W09GCC	K	360	06	66																2100			
159N086W20CCC	S	210	06	66																2150			
159N086W33EAA	K	120	06	66																3300			
159N086W33EAB	K	120	06	66																2110			
159N086W11AAB	H	120	06	66																2300			
159N086W13CDC	H	25	06	66																2090			
159N086W16AAA	H	25	06	66																1870			
159N086W16AAB	H	25	06	66																1770			
159N086W18CDC	U	150	06	23	55	18	.24	248	102	357	516	0	1270	50	.4	1.5	.12	2210	2300	1340	618	.5	
159N087W23B8C	K	330	09	11	47															3330			
160N086W09CDC	K	25	06	66																480			
160N086W15B8D	H	36	06	66																300			
160N086W15B8C	H	24	06	66																1080			
163N085W19ADC	U	438	06	73	66	27	.22	28	12	516	5.3	1150	0	89	138	1.4	.7	1470	1390	140	0	2.0	
160N086W20CDC	U	510	06	22	66	27	.36	44	17	491	5.5	1170	0	114	122	1.4	.7	1690	1400	180	0	1.6	
160N086W20CDC	U	510	06	22	66	27	1.4	59	23	482	6.2	1230	0	70	140	1.2	.4	1500	1420	142	0	1.3	
160N086W09ACA	U	200	06	66																2500			
160N086W15AAC	U	33	06	66																2058			
160N086W15AAC	U	33	06	66																5100			
160N086W20BAA	H	140	06	66																1700			
160N086W20BAA	H	410	06	66																2000			
160N086W35000	K	06	66																	1980			
161N086W11B8B	U	150	08	24	65	13	.5	232	83	500	512	0	1440	62	.2	1.2	.92	2530	2580	920	501	.7	
161N086W20B8B	U	23	06	66																3170	7.8	46	