

GROUND-WATER BASIC DATA

for

MORTON COUNTY, NORTH DAKOTA

by

**D. J. Ackerman
U.S. Geological Survey**

COUNTY GROUND-WATER STUDIES 27 — PART II

North Dakota State Water Commission

Vernon Fahy, State Engineer

BULLETIN 72 — PART II

North Dakota Geological Survey

Lee Gerhard, Acting State Geologist

Prepared by the U.S. Geological Survey
in cooperation with the North Dakota Geological Survey,
North Dakota State Water Commission,
and Morton County
Water Management
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INTRODUCTION

The ground-water investigation in Morton County, North Dakota (fig. 1), was made cooperatively by the U.S. Geological Survey (USGS), North Dakota State Water Commission (NDSWC), North Dakota Geological Survey (NDGS), and the Morton County Water Management District. The results of the investigation are published in three separate parts. Part 1 is an interpretive report describing the geology of the county; part 2 is a compilation of the ground-water basic data; and part 3 is an interpretive report describing the ground-water resources. Part 2 (this report) makes available hydrologic and geologic data collected during the investigation and is a reference for the other reports.

The purpose of the investigation was to determine the quantity and quality of ground water available for municipal, domestic, livestock, industrial, and irrigation uses. Specifically, the objectives were: (1) determine the location, extent, and nature of the major aquifers; (2) evaluate the occurrence and movement of ground water, including the sources of recharge and discharge; (3) estimate the quantities of water stored in the aquifers; (4) estimate the potential yields to wells tapping the aquifers; and (5) determine the chemical quality of the ground water.

Most data in this report were collected between 1972 and 1975. All data-collection points are shown on plate 1 (in pocket). The data consist of the following: (1) Geologic and hydrologic data for 1,209 wells, test holes, and springs; (2) water-level measurements for 148 observation wells; (3) lithologic and geophysical logs for 247 test holes and wells; (4) chemical analyses of 353 water samples; and (5) analyses of physical properties of 42 core samples. These data are useful for estimating geologic and ground-water conditions when considering the construction of a new well. Use of these data as a guide to conditions at a place some distance from the data-collection point should be done with caution due to the discontinuous nature of the water-bearing rocks and irregular nature of water chemistry in some aquifers.

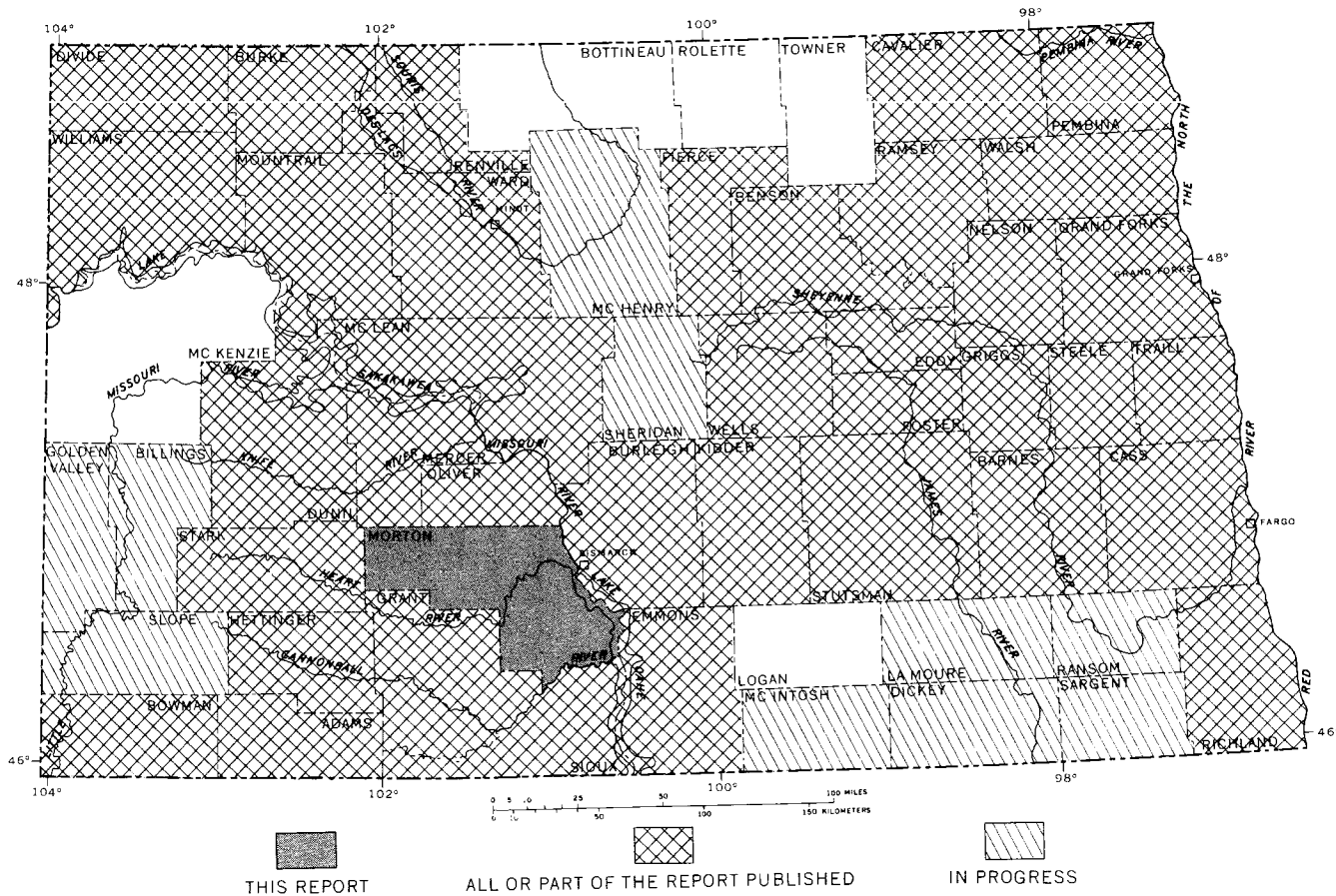


FIGURE 1.—County ground-water studies in North Dakota.

The stratigraphic nomenclature used in this report is that of the North Dakota Geological Survey (Scott, 1972) and does not necessarily follow the usage of the U.S. Geological Survey.

Temperatures given in the tables are expressed in degrees Celsius (Centigrade). Degrees Celsius (°C) and the equivalent temperature in degrees Fahrenheit (°F) are given in the following table. Temperatures are reported to nearest 0.5 °C.

Degrees Celsius (°C) ¹	Degrees Fahrenheit (°F)	Degrees Celsius (°C)	Degrees Fahrenheit (°F)	Degrees Celsius (°C)	Degrees Fahrenheit (°F)
0.0	32	10.0	50	20.0	68
0.5	33	10.5	51	20.5	69
1.0	34	11.0	52	21.0	70
1.5	35	11.5	53	21.5	71
2.0	36	12.0	54	22.0	72
2.5	36	12.5	54	22.5	72
3.0	37	13.0	55	23.0	73
3.5	38	13.5	56	23.5	74
4.0	39	14.0	57	24.0	75
4.5	40	14.5	58	24.5	76
5.0	41	15.0	59	25.0	77
5.5	42	15.5	60	25.5	78
6.0	43	16.0	61	26.0	79
6.5	44	16.5	62	26.5	80
7.0	45	17.0	63	27.0	81
7.5	45	17.5	63	27.5	81
8.0	46	18.0	64	28.0	82
8.5	47	18.5	65	28.5	83
9.0	48	19.0	66	29.0	84
9.5	49	19.5	67	29.5	85

¹°C = 5/9 (°F-32) or °F = 9/5 (°C+32).

The following table may be used to convert English units used in this report to International System (SI) units.

<u>Multiply English units</u>	<u>By</u>	<u>To obtain SI units</u>
Inches (in)	25.4	millimeters (mm)
	.0254	meters (m)
Feet (ft)	.3048	meters (m)
Acres	4,047	square meters (m ²)
	.4047	hectares (ha)

LOCATION-NUMBERING SYSTEM

The data-collection sites in the tables are numbered according to a system of land survey in use by the U.S. Bureau of Land Management. The system 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

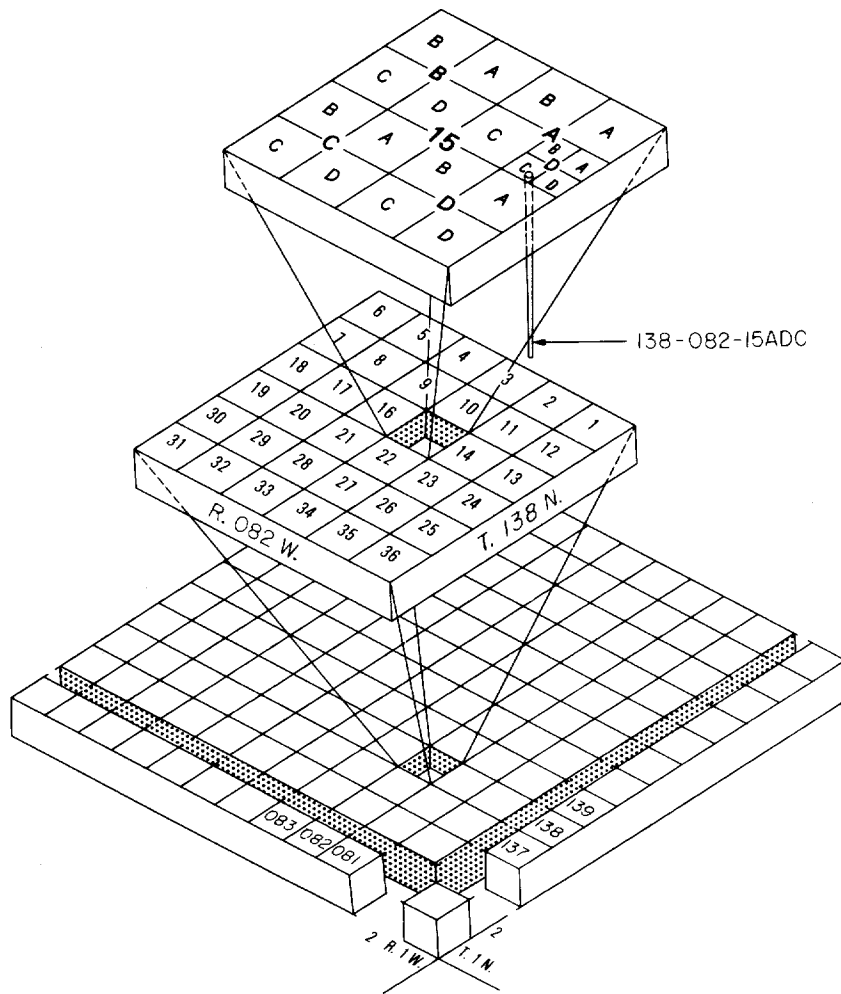


FIGURE 2.—System of numbering data-collection sites

fifth principal meridian, and the third numeral denotes the section in which the site is located. The letters A, B, C, and D designate, respectively, the northeast, northwest, southwest, and southeast quarter section, quarter-quarter section, and quarter-quarter-quarter section (10-acre or 4-ha tract). For example, well 138-082-15ADC is in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 15, T. 138 N., R. 082 W. Consecutive terminal numerals are added if more than one well, test hole, or spring is recorded within a 10-acre tract.

ACKNOWLEDGMENTS

The collection of data for this report was made possible by the cooperation of residents and officials of Morton County, who gave information on wells, permitted measurements to be made, and allowed samples to be taken. Recognition is due the following personnel of the North Dakota State Water Commission: L. L. Froelich, C. E. Naplin, L. D. Smith, G. L. Sunderland, and L. M. Knutson for drilling and logging test holes and for contributions to the understanding of the stratigraphy; G. O. Muri for chemical analyses of water samples; R. W. Schmid for hydrologic testing; and M. O. Lindvig for scheduling of drilling activities. Recognition is also due C. G. Carlson of the North Dakota Geological Survey for his contributions to the understanding of the geology of the county. Thanks are due to the many local water-well contractors for furnishing drillers' logs.

EXPLANATION OF TABLES AND METHODS OF DATA COLLECTION

Records of Wells, Test Holes, and Springs

Records of wells, test holes, and springs are given in table 1. Most data concerning privately owned wells and springs were obtained from personal interviews, although some data were obtained from well-completion records filed with the North Dakota State Water Commission. Water samples for the field determination of specific conductance and temperature were secured using the existing pumps from privately owned wells. The laboratory value of specific conductance is given for samples submitted for analysis.

Most test holes were converted to observation wells for periodic water-level measurements and water-quality sampling. At some sites, more than one hole was drilled and observation wells were installed in different

aquifers or at different intervals within the same aquifer. Observation wells installed in glacial-drift or alluvial aquifers were constructed of 1½-inch (32-mm) diameter plastic casing with 3- or 6-foot (1- or 2-m) length screens. Aquifer material was collapsed around the screens by blowing compressed air into the wells. Observation wells in bedrock aquifers were constructed of 1½-inch (32-mm) diameter plastic casing with screens 6 feet (12-m) long or 2-inch (51-mm) diameter steel casing with screens 6, 12, or 18 feet (2, 4, or 6 m) long. Coarse sand or gravel was placed around the screens of the 1½-inch (32-mm) bedrock wells. Rubber shale catchers were placed immediately above and, again, 20 to 40 feet (6.1 to 12.2 m) above the screen of the 2-inch (51-mm) diameter bedrock wells. Observation wells were backwashed either with water, water and detergent, or the deflocculant trisodium phosphate. All observation wells were developed by airlift pumping for a minimum of 6 hours before collection of water samples.

Water-Level Measurements in Selected Observation Wells

Table 2 gives monthly or intermittent water levels, in feet below or (+) above land surface, in selected observation wells in major aquifers. Those wells which did not show a rapid recovery following development were not included in table 2. Measurements of water levels were made with a chalked steel tape or, in the case of wells which would flow, a pressure gage. The wells are arranged in the table by location number. Water levels in selected wells will continue to be measured as part of the statewide observation-well network to monitor changes as the ground-water resources of the area are developed.

Logs of Wells and Test Holes

Logs collected from water-well drillers or other sources and logs of test holes drilled as part of this project are shown in table 3. Minor changes in word order have been made in some of the drillers' logs. Geophysical logs, which generally are useful for correlation purposes, have been obtained for most test holes drilled during this project and some municipal, public supply, and private wells or test holes. Grain sizes were referenced to the Wentworth (1922) scale and colors were referenced to the Geological Society of America (1963) rock-color chart.

Chemical Analyses of Ground Water

The chemical quality of water from selected wells and springs is given in tables 4 and 5. The analyses in tables 4 and 5 are arranged according to the location number. If more than one analysis exists for a well, the analyses are arranged according to the time of sampling. Analyses in table 4 for which additional trace constituents are given in table 5 are noted. These analyses were made by the USGS laboratory, Salt Lake City, Utah. All other analyses were made by the NDSWC laboratory, Bismarck, N. Dak. The methods of analyses were generally those described by Brown and others (1970).

Water samples for the chemical analyses in tables 4 and 5 were secured using the existing pumps in private wells or by airlift from NDSWC wells. Usually enough water to clear the well column and plumbing was pumped before sampling private wells. NDSWC wells were sampled after development of the well was complete. Samples for constituents that are not stable in solution after sampling were filtered or preserved, or both.

Some terms useful in the interpretation of the data in tables 4 and 5 are defined below.

Chemical quality includes concentration of solutes (any substance dissolved in water) and certain properties or characteristics such as hardness, sodium-adsorption ratio, percent sodium, and specific conductance.

Hardness is the concentration of calcium and magnesium expressed as equivalent calcium carbonate.

Micrograms per liter ($\mu\text{g/L}$, UG/L) is a unit expressing the concentration of a chemical constituent in solution as weight (micrograms) of solute per unit volume (liter) of water.

Milligrams per liter (mg/L , MG/L) is a unit expressing the concentration of a chemical constituent in solution as weight (milligrams) of solute per unit volume (liter) of water. 1 mg/L equals 1,000 $\mu\text{g/L}$.

Percent sodium (% Na) is the percentage of total cations made up by sodium (concentrations in equivalents per liter).

Sodium-adsorption ratio (SAR) is the expression of relative activity

of sodium ions in exchange reactions with soil. The formula used for the computation of SAR is

$$SAR = \frac{(Na^+)}{\sqrt{\frac{(Ca^{+2}) + (Mg^{+2})}{2}}}$$

where solute concentrations are expressed in milliequivalents per liter.

Specific conductance is a measure of the ability of water to conduct an electrical current and is expressed in micromhos per centimeter (μ mhos/cm) at 25°C.

Drinking-Water Standards

Drinking-water standards were established for interstate carriers by the U.S. Public Health Service in 1946. These standards were amended in 1956 and in 1962 the standards were again changed and published (U.S. Public Health Service, 1962) in the Federal Register, effective date April 5, 1962. These are generally accepted by the North Dakota State Department of Health as guidelines applicable to public water supplies. These standards are:

"Drinking water shall not contain impurities in concentrations which may be hazardous to the health of the consumers. It should not be excessively corrosive to the water supply system. Substances used in its treatment shall not remain in the water in concentrations greater than required by good practice. Substances which may have deleterious physiological effect, or for which physiological effects are not known, shall not be introduced into the system in a manner which would permit them to reach the consumer.

"The following chemical substances should not be present in a water supply in excess of the listed concentrations where, in the judgment of the Reporting Agency and Certifying Authority, other more suitable supplies are or can be made available.

<u>Substance</u>	<u>Concentrations in mg/L</u>
Alkyl Benzene Sulfonate (ABS)-----	0.5
Arsenic (As)-----	0.01
Chloride (Cl)-----	250.
Copper (Cu)-----	1.
Carbon Chloroform Extract (CCE)-----	0.2
Cyanide (CN)-----	0.01
Fluoride (F)-----	(See 5.23)
Iron (Fe)-----	0.3
Manganese (Mn)-----	0.05
Nitrate ¹ (NO ₃)-----	45.
Phenols-----	0.001
Sulfate (SO ₄)-----	250.
Total Dissolved Solids-----	500.
Zinc (Zn)-----	5.

¹In areas in which the nitrate content of water is known to be in excess of the listed concentration, the public should be warned of the potential dangers of using the water for infant feeding.

"The presence of the following substances in excess of the concentrations listed shall constitute grounds for rejection of the supply:

<u>Substance</u>	<u>Concentrations in mg/L</u>
Arsenic (As)-----	0.05
Barium (Ba)-----	1.0
Cadmium (Cd)-----	0.01
Chromium (Hexavalent) (Cr ⁺⁶)-----	0.05
Cyanide (CN)-----	0.2
Fluoride (F)-----	(See 5.23)
Lead (Pb)-----	0.05
Selenium (Se)-----	0.01
Silver (Ag)-----	0.05

"5.23 Fluoride.--When fluoride is naturally present in drinking water, the concentration should not average more than the appropriate upper limit shown in the following table. Presence of fluoride in average concentrations greater than two times the optimum values listed shall constitute grounds for rejection of the supply.

"Where fluoridation (supplementation of fluoride in drinking water) is practiced, the average fluoride concentration shall be kept within the upper and lower control limits listed below.

<u>Annual average of maximum daily air temperatures¹</u>	<u>Recommended control limits-- Fluoride concentrations in mg/L</u>		
	<u>Lower</u>	<u>Optimum</u>	<u>Upper</u>
50.0 - 53.7-----	0.9	1.2	1.7
53.8 - 58.3-----	0.8	1.1	1.5
58.4 - 63.8-----	0.8	1.0	1.3
63.9 - 70.6-----	0.7	0.9	1.2
70.7 - 79.2-----	0.7	0.8	1.0
79.3 - 90.5-----	0.6	0.7	0.8

¹Based on [Fahrenheit] temperature data obtained for a minimum of five years."

Water-Quality Parameters and Their Practical Significance

The practical significance of several water-quality parameters is given below. These explanations were compiled from Durfor and Becker (1964), Environmental Protection Agency (1973), and Hem (1970).

Solutes

Bicarbonate (HCO₃) and Carbonate (CO₃) can contribute to scale in hot water heaters and cooking utensils. Relatively high concentrations may have an unpleasant taste.

Boron (B) is an essential element for the growth of plants. However, concentrations of more than 3.0 mg/L are of doubtful suitability for tolerant crops.

Calcium (Ca) and Magnesium (Mg) cause water hardness, and with bicarbonate, carbonate, sulfate, and silica can form scale in hot water heaters and cooking utensils. See *Hardness*.

Chloride (Cl) in excess of about 100 mg/L imparts a salty taste.

Fluoride (F) may have a helpful effect on the structure and resistance to decay of children's teeth. The optimum concentration of fluoride in water depends on the climate of the area. This is because the amount of water drunk by children (and as a result the amount of fluoride) is related to the air temperature. See drinking-water standards section.

Iron (Fe) in excess of 300 µg/L stains plumbing fixtures, laundry, and cooking utensils, and may affect the taste of food and drinks.

Manganese (Mn) in excess of 500 µg/L causes undesirable tastes, spotting of laundered clothes, and an accumulation of deposits in plumbing systems.

Nitrate (NO₃), reported as *Nitrogen (N)*, in excess of 10 mg/L may cause methemoglobinemia in infants and may impart a bitter taste. High nitrate concentrations in water from wells are often the result of inadequate protection from barnyard drainage and septic tanks.

pH is the negative logarithm of the hydrogen-ion concentration in moles per liter. pH indicates the degree of acidity or alkalinity of water. pH values progressively lower than 7.0 indicate increasing acidity, values progressively higher than 7.0 indicate increasing alkalinity, and a pH of 7.0 indicates that the water is neither acid nor alkaline.

Silica (SiO_2) with calcium and magnesium may form scale in water heaters and cooking utensils.

Sodium (Na) intake restrictions are recommended by physicians for a significant portion of the population. The presence of relatively high concentrations of sodium in irrigation water produces adverse effects. See *Percent Sodium and Sodium-Adsorption Ratio*.

Sulfate (SO_4) in excess of 750 mg/L may have a laxative effect. Less than 600 mg/L does not usually cause a laxative effect. If a person is not used to these waters or if magnesium concentrations are higher than 200 mg/L, laxative effects will occur at lower concentrations.

Properties and Characteristics of Water

Hardness of water is related to the requirement for soap. Hard water requires more soap and other detergents in cleaning processes. Hard water will also leave scale deposits when heated.

Percent Sodium (% Na) and Sodium-Adsorption Ratio (SAR) are characteristics used to judge the suitability of water for irrigation purposes. The greater the value the greater the hazard for irrigation purposes.

Specific Conductance is a measure of the ability of water to conduct electricity. As the concentration of solutes such as sodium, calcium, chloride, sulfate, etc., increases in water, the specific conductance increases. Multiplying specific conductance by 0.55 to 0.75 will give an estimate of the dissolved solids. The relation is not constant and may range from about 0.54 to 0.96 depending on the chemical composition of water.

Temperature may influence the taste or odor of water. As temperature increases, taste and odor become more noticeable. The temperature of water is an important factor in evaluating usability of water as an industrial coolant.

Physical Properties of Core Samples

Various physical properties of cores from selected test holes are given in table 6. Cores from NDSWC test holes were obtained with a Christensen core barrel. Cores from USGS test holes were taken from fresh outcrops of bedrock with hand-driven 1½-inch (32-mm) metal tubes.

Analyses to determine hydraulic conductivity and porosity were made by Core Laboratories, Inc., Williston, N. Dak., and particle-size analyses were made by the USGS sediment laboratory, Worland, Wyo., for test holes 137-086-03AAD1 and 139-088-34BCC1. All other analyses were made by the USGS hydrologic laboratory, Denver, Colo. The statistical characteristics given were computed by the Denver hydrologic laboratory according to formulas given in Pettijohn (1949). Data are arranged by location number and depth within the test hole.

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TABLE 1.--Records of wells, test holes, and springs

EXPLANATION

<u>Local well (spring) number</u>	<u>Major aquifer</u>
Location of well or data-collection site. Refer to page 5 for additional information.	112, Pleistocene 125, Paleocene 211, Upper Cretaceous
<u>Owner</u>	CBLD, Cannonball-Ludlow Formations, undifferentiated
NDSWC 4569, North Dakota State Water Commission test hole number 4569	EMCK, Elm Creek aquifer FXHL, Fox Hills Formation HLCK, Hell Creek Formation HTRV, Heart River aquifer KLDR, Killdeer aquifer LTHR, Little Heart aquifer SIMS, Sims aquifer SJMS, St. James aquifer SLDS, Shields aquifer SNLB, Sentinel Butte Formation SQBC, Square Butte Creek aquifer TGRV, Tongue River Formation
USGS CORE SITE, United States Geological Survey core site	
USGS CON DIV 19, United States Geological Survey Conservation Division test hole 19	
<u>Water level (feet)</u>	<u>Altitude of LSD</u>
Water level, in feet below or (+) above land surface	Altitude of Land Surface Datum (LSD) is given in feet above mean sea level.
F, well flows	
<u>Use of water</u>	
H, domestic K, domestic and stock P, public supply S, stock supply U, unused	

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
133-082-02AA	J.FLECK		16	--	--	1944	12	--	K	--	2200	7.0	--
133-082-05AA	N.SCHMIDT		32	--	10	--	22	--	U	--	--	--	--
133-082-05AAC	N.SCHMIDT		14	--	10	--	8	--	U	--	--	--	--
133-082-05ABC	N.SCHMIDT	320	320	200	2	1971	F	--	S	211FXHL	2300	9.5	1740
133-082-05DBA	NDSWC 4569	240	174	168	1	1973	4	12-73	U	112EMCK	2120	9.0	1742
133-082-07CC	ANMAR OIL-GAS	4713	3563	--	--	--	--	--	U	--	--	--	1806
133-082-08BAA1	N.SCHMIDT		60	--	4	1966	18	--	S	--	1200	11.0	--
133-082-08BAA2	N.SCHMIDT		200	--	2	1948	20	--	H	--	1970	10.0	--
133-082-15ACB	G.WEINBERGER		40	--	4	--	30	--	S	--	1720	8.0	--
133-082-15ACD1	G.WEINBERGER	128	128	--	4	1971	1	--	U	--	--	--	--
133-082-15ACD2	G.WEINBERGER	260	260	--	2	1971	+5	--	S	211FXHL	2730	10.0	--
133-082-29CDD1	J.MEYER	280	280	--	3	1971	F	--	K	211FXHL	2240	10.5	--
133-082-29CDD2	J.MEYER		50	--	4	--	--	--	--	--	1920	10.5	--
133-082-31DDA	J.MEYER	280	280	--	4	1971	F	--	K	211FXHL	2150	10.0	--
133-082-32BAD	J.MEYER		200	--	4	--	+16	--	S	211FXHL	2270	10.0	--
14 134-079-04CAD	G.PIPER		165	--	2	1965	--	--	K	--	1420	9.5	--
134-079-07BCB	NDSWC 4572	140	79	73	1	1973	12	10-73	U	112LTHR	1750	8.5	1650
134-079-09DCC1	J.SULLIVAN		120	100	--	--	--	--	S	--	1700	10.0	--
134-079-09DCC2	J.SULLIVAN		60	--	--	--	--	--	H	--	1820	13.0	--
134-079-17ADB	NDSWC 9296	80	--	--	--	1975	--	--	U	--	--	--	1616
134-079-20AAB	NDSWC 9295	120	71	68	1	1975	5	9-75	U	--	1150	12.0	1618
134-080-08CAB	S.SCHWARTZ		135	--	2	1941	--	--	K	--	1650	11.0	--
134-080-10BCC	L.BARNHARDT		92	--	--	--	--	--	K	--	1800	9.0	--
134-080-11DBC1	R.GRUBE		220	--	4	1971	170	--	K	--	1900	11.0	--
134-080-11DBC2	R.GRUBE		220	--	2	1914	170	--	K	--	--	--	--
134-080-12DBC1	C.HATZENBELER		150	--	2	1959	100	--	S	--	1900	10.0	--
134-080-12DBC2	C.HATZENBELER		110	--	2	--	100	--	K	--	1670	13.0	--
134-080-14CBD	P.MONZELOWSKY		59	--	4	1967	20	--	S	112SJMS	1780	8.0	--
134-080-14DDA	P.MONZELOWSKY		150	--	4	1969	--	--	S	--	3350	9.0	--
134-080-15DCC	P.MONZELOWSKY		220	--	4	1961	150	--	K	--	1790	10.0	--
134-080-16DAA	NDSWC 4571	200	169	163	1	1973	42	10-73	U	112SJMS	1930	8.5	1672
134-080-17CCB	NDSWC 9292	60	--	--	--	1975	--	--	U	--	--	--	1736
134-080-17DDD	NDSWC 8992	230	204	198	1	1974	62	7-74	U	112SJMS	1940	10.0	1699
134-080-19DAA	NDSWC 9293	140	--	--	--	1975	--	--	U	--	--	--	--
134-080-20CCC	NDSWC 9294	175	--	--	--	1975	--	--	U	--	--	--	1731
134-080-21DAB1	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1810
134-080-21DAB2	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1810
134-080-21DDD	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1656
134-080-23BAA	NDSWC 8994	60	--	--	--	1974	--	--	U	--	--	--	1645

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (μ MHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
134-080-23BAB	NDSWC 8993	120	59	53	1	1974	21	12-74	U	--	1940	9.5	1647
134-080-30AAA	J.HATZENBUHLER		152	--	4	1961	40	--	K	--	1700	13.0	--
134-081-06DAB1	H.SCHMIDT		286	--	--	--	--	--	S	211HLCK	3180	8.0	--
134-081-06DAB2	H.SCHMIDT		360	--	4	1968	--	--	H	211FXHL	2700	12.0	--
134-081-07BBD	F.BREWSTER		160	--	4	1959	--	--	S	--	1920	8.5	--
134-081-08DAD1	N.HEINRICH		365	--	3	--	--	--	S	211FXHL	2540	9.0	--
134-081-08DAD2	N.HEINRICH		375	--	2	--	--	--	H	211FXHL	2520	8.0	--
134-081-10BC	J.KAUTZMAN		200	--	4	1961	120	--	K	--	1870	11.0	--
134-081-12ABD1	S.HAIDER		140	135	3	1936	--	--	K	--	2400	9.0	--
134-081-12ABD2	S.HAIDER		180	170	4	1969	--	--	K	--	2400	12.0	--
134-081-12DCB	R.VOGEL		120	--	2	1910	20	--	K	--	1800	11.5	--
134-081-13CBB	P.BERGER		160	--	4	1964	--	--	K	--	2320	11.0	--
134-081-14BBD	F.VOGEL, JR.		190	--	2	1946	150	--	K	--	2120	12.0	--
134-081-18BBB	F.BREWSTER		165	--	4	--	--	--	K	--	1970	11.0	--
134-081-20CCA1	J.TSCHIDER		100	--	4	1953	30	--	H	--	2270	13.0	--
134-081-20CCA2	J.TSCHIDER		100	100	2	1950	30	--	S	--	2180	9.0	--
134-081-24AAA	NDSWC 8991	100	--	--	--	1974	--	--	U	--	--	--	1735
134-081-24ADD	NDSWC 8995	200	--	--	--	1974	--	--	U	--	--	--	1733
134-081-25DAB	NDSWC 8990	40	--	--	--	1974	--	--	U	--	--	--	1649
134-081-30BCD1	S.HENDERSON		125	110	2	1950	17	--	H	--	2400	12.0	--
134-081-30BCD2	S.HENDERSON		200	--	4	--	F	--	S	211FXHL	2490	10.0	--
134-082-01AAC	C.FLECK		289	269	4	1969	40	--	S	211HLCK	1800	9.5	--
134-082-01ACA	C.FLECK		289	269	4	1969	40	--	K	211HLCK	1420	10.0	--
134-082-25CDD	NDSWC 8988	160	--	--	--	1974	--	--	U	--	--	--	1695
134-082-28ACC1	R.SCHMIDT		160	--	2	1957	15	--	K	--	3700	11.0	--
134-082-28ACC2	R.SCHMIDT		80	--	24	1969	28	--	S	--	1850	12.0	--
134-082-32DCD	D.VOGEL		40	--	36	--	--	--	K	--	3100	9.0	--
134-082-35DAA	NDSWC 4570	140	119	113	1	1973	4	12-73	U	112EMCK	2370	9.0	1697
134-082-36BCC	N.PEDERSON		210	--	2	1955	6	--	H	--	2100	13.0	--
134-082-36BDA	NDSWC 8989	100	--	--	--	1974	--	--	U	--	--	--	1695
134-083-01DBC	T.GALSTER		55	--	36	--	15	--	S	--	<500	10.0	--
134-083-02DCA	T.GALSTER		120	--	6	1962	--	--	S	--	<500	9.5	--
134-083-03DCA	H.MEYER		70	--	24	1960	35	--	S	--	520	10.0	--
134-083-05CCD1	M.STEGMILLER		277	--	--	1958	--	--	K	211HLCK	1530	12.0	--
134-083-05CCD2	M.STEGMILLER		277	--	--	1971	--	--	S	211HLCK	1640	11.0	--
134-083-05DCC	NDSWC 4561	320	114	108	1	1973	1	12-73	U	112EMCK	1610	8.5	1835
134-083-06ABD	NDSWC 8965	200	--	--	--	1974	--	--	U	--	--	--	--
134-083-06BAB	NDSWC 8964	180	--	--	--	1974	--	--	U	--	--	--	--
134-083-06BBC	NDSWC 8966	220	--	--	--	1974	--	--	U	--	--	--	--
134-083-10AAA1	H.MEYER		90	--	24	1969	45	--	S	--	2220	12.0	--

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LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (μ MHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
134-083-10AAA2	H. MEYER		170	--	4	1943	60	--	K	--	1670	12.0	--
134-083-11DAB	G. BERGER		48	--	24	1970	14	--	S	--	1220	8.0	--
134-083-11DAC1	G. BERGER		180	--	2	1950	--	--	S	--	2100	10.0	--
134-083-11DAC2	G. BERGER		130	--	2	1950	--	--	H	--	2470	10.0	--
134-083-17CCC	NDSWC 4565	300	244	238	1	1973	5	12-73	U	112SLDS	1600	9.0	1830
134-083-17DBD	J. HOFF		325	--	--	1959	--	--	K	112SLDS	1610	12.0	--
134-083-17DDB1	NDSWC 4566	300	244	238	1	1973	4	12-73	U	112SLDS	1950	9.0	1819
134-083-17DDB2	NDSWC 4566A	60	56	50	1	1973	11	12-73	U	112SLDS	1530	8.5	1819
134-083-22DDD	F. GIFFORD		32	--	18	1959	--	--	K	--	2600	10.0	--
134-083-23CAD	G. GIFFORD		135	--	6	1970	--	--	H	112EMCK	1410	11.5	--
134-083-26BBA	NDSWC 4568	260	144	138	1	1973	10	12-73	U	112EMCK	2110	9.0	1785
134-083-26B8C	W. GIFFORD		35	--	24	1963	--	--	K	--	1700	10.0	--
134-083-32AAA1	NDSWC 4567	360	276	270	1	1973	51	12-73	U	112SLDS	2280	9.0	1863
134-083-32AAA2	NDSWC 4567A	100	99	93	1	1973	32	12-73	U	112SLDS	1790	8.5	1863
134-083-33D8C	H. BARNHOEFT	270	270	--	4	1964	--	--	S	211FXHL	1800	11.0	--
134-084-01CCD1	J. JOCHIM		100	--	3	--	30	--	H	112SLDS	900	10.0	--
134-084-01CCD2	J. JOCHIM		100	70	6	1962	30	--	S	112SLDS	900	10.0	--
134-084-01CDC1	NDSWC 4562	380	214	208	1	1973	40	12-73	U	112SLDS	773	9.0	1895
134-084-01CDC2	NDSWC 4562A	100	94	88	1	1973	37	12-73	U	112SLDS	862	8.0	1895
134-084-02ABC1	D. KRAUSE		250	230	4	1970	--	--	S	--	1900	12.0	--
134-084-02ABC2	D. KRAUSE		230	--	2	--	--	--	K	--	1900	12.0	--
134-084-02DCD	D. KRAUSE		113	--	4	1968	--	--	S	--	1100	8.5	--
134-084-03AAD	J. ALLEN	200	200	174	4	1971	67	--	K	211HLCK	2020	11.5	--
134-084-03ADC	FLASHER NO. 1		426	--	8	--	--	--	P	211FXHL	2240	11.0	1916
134-084-03ADD	NDSWC 4563	100	24	18	1	1973	16	11-73	U	112SLDS	--	--	1900
134-084-03CBA	FLASHER NO. 2	150	140	120	6	1973	--	--	P	211HLCK	2090	10.0	--
134-084-07BCC	J. VETTER		120	--	4	1967	20	--	S	--	1580	9.0	--
134-084-08BAC	G. ERHARDT		82	--	24	1971	70	--	S	--	2900	7.5	--
134-084-11BBD	J. JOCHIM		100	70	4	1957	30	--	S	--	925	8.5	--
134-084-11DDD	NDSWC 4564	320	159	153	1	1973	15	12-73	U	112SLDS	730	8.5	1869
134-084-12CBD	A. BERNHARDT		42	42	2	--	--	--	K	--	975	8.0	--
134-084-13B8C	NDSWC 8967	200	--	--	--	1974	--	--	U	--	--	--	1866
134-084-13C8B	NDSWC 8968	320	--	--	--	1974	--	--	U	--	--	--	1866
134-084-14DAD	J. LAWSON	101	101	63	4	1970	22	--	S	--	870	8.5	--
134-084-17DBA1	M. FLECK		180	150	5	--	40	--	S	--	2020	10.0	--
134-084-17DBA2	M. FLECK		180	150	4	--	--	--	K	--	2000	10.0	--
134-084-18AAA1	G. ERHARDT		250	240	4	1960	140	--	K	--	2020	10.5	--
134-084-18AAA2	G. ERHARDT		200	--	3	--	90	--	S	--	1720	8.5	--
134-084-19BBD	B. VANDENBURG		180	--	--	1961	100	--	H	--	2500	9.0	--
134-084-20DCC1	F. SCHAFF		47	--	24	1969	20	--	H	--	875	7.0	--

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134-084-20DCC2	F.SCHAFF		47	--	24	1969	20	--	S	--	1520	7.0	--
134-084-21BBD	J.VETTER		60	--	--	--	30	--	K	--	--	8.0	--
134-084-22DBD	R.WENGER		180	120	6	--	100	--	K	--	2400	15.0	--
134-084-24BBB	NDSWC 8969	100	--	--	--	1974	--	--	U	--	--	--	1904
134-084-26CCB	W.FISCHER		185	185	4	--	--	--	K	--	1620	--	--
134-084-28ABA	P.GUSTIN		240	--	--	1941	--	--	K	--	2900	10.0	--
134-084-29BAA	F.SCHAFF		260	--	2	1961	--	--	S	--	1500	10.0	--
134-084-32DDA	L.ROSSOW		140	60	6	--	--	--	K	--	1620	9.0	--
134-084-33BCD1	L.ROSSOW		100	--	--	--	12	--	H	--	1070	8.0	--
134-084-33BCD2	L.ROSSOW		150	120	4	1964	--	--	S	--	2750	8.0	--
135-079-04DAC1	L.REBENITSCH		185	--	4	1970	--	--	K	--	2300	9.5	--
135-079-04DAC2	L.REBENITSCH		165	--	2	--	--	--	S	--	2250	11.0	--
135-079-06CBD	C.BALLING		130	--	--	1968	20	--	S	--	2300	9.0	--
135-079-10AAB1	NDSWC 4769	260	180	174	2	1974	38	2-75	U	211FXHL	2900	9.5	1665
135-079-10AAB2	NDSWC 4769A	100	99	93	1	1974	49	2-75	U	211FXHL	2670	8.5	1665
135-079-22BDD	J.LOCKNER		140	130	6	1963	--	--	K	--	2450	9.5	--
135-079-22CAD	J.LOCKNER		120	100	4	1959	105	--	S	--	950	9.0	--
135-079-28ACD	S.METZNER		165	--	2	--	145	--	K	--	2800	13.0	--
135-080-18ABC1	A.WETSCH		102	--	2	1956	20	--	S	--	1050	8.5	--
135-080-18ABC2	A.WETSCH		80	--	2	1942	20	--	K	--	870	13.0	--
135-080-20BBC1	A.HATZENBUHLER		120	--	2	--	80	--	S	--	1500	9.0	--
135-080-20BBC2	A.HATZENBUHLER		120	--	4	1966	80	--	K	--	830	11.0	--
135-080-23CBD	K.ONEILL		225	--	--	1944	--	--	H	--	1090	--	--
135-080-28BDD1	P.SCHAFF		140	--	2	--	60	--	S	--	1020	8.0	--
135-080-28BDD2	P.SCHAFF		200	--	2	1967	--	--	K	--	1500	10.0	--
135-080-28DAA	J.RESSLER		125	--	4	1892	75	--	K	--	2200	10.0	--
135-080-30AAB	NDSWC 4575	300	224	218	1	1973	80	12-73	U	112LTHR	1310	8.5	1777
135-080-30AAD	J.SCHMIDT		240	--	2	1960	--	--	K	--	1320	10.0	--
135-080-30ADA	J.SCHMIDT		240	240	2	1961	--	--	S	--	1350	10.0	--
135-080-32DD 1	M.HOWIATOW		120	--	4	1960	30	--	S	--	1600	--	--
135-080-32DD 2	M.HOWIATOW		130	--	2	1954	20	--	K	--	3300	--	--
135-080-32DD 3	M.HOWIATOW		30	--	24	--	20	--	S	--	2400	7.0	--
135-080-32DDA	M.HOWIATOW	630	330	--	4	1971	20	--	S	211FXHL	1770	--	--
135-080-33DDA	NDSWC 4574	200	169	163	1	1973	52	12-73	U	112LTHR	2080	8.5	1725
135-080-34CCC	J.ZUEGER		125	--	2	1957	17	--	K	--	1200	11.0	--
135-080-36AAA	NDSWC 4573	60	--	--	--	1973	--	--	U	--	--	--	1725
135-081-02CCD	NDSWC 4576	260	179	173	1	1973	41	12-73	U	112LTHR	--	--	1896
135-081-03BCC	NDSWC 8996	342	284	278	1	1974	91	8-74	U	112LTHR	1070	9.0	1887
135-081-03CBB	NDSWC 8997	240	--	--	--	1974	--	--	U	--	--	--	1885

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135-081-04AAA	NDSWC 8999	290	--	--	--	1974	--	--	U	--	--	--	1886
135-081-04AAD	NDSWC 8998	260	--	--	--	1974	--	--	U	--	--	--	1886
135-081-04BAB	NDSWC 4578	297	264	258	1	1973	57	12-73	U	112LTHR	998	8.5	1847
135-081-04BCC	J.HELFRICH		60	--	4	1927	30	--	H	--	1800	7.0	--
135-081-06DAB1	J.GANGL		26	--	24	1952	--	--	S	--	4100	7.0	--
135-081-06DAB2	J.GANGL		24	--	24	1952	12	--	H	--	2700	7.0	--
135-081-11ABA	NDSWC 4577	240	130	124	1	1973	84	12-73	U	112LTHR	--	--	1914
135-081-110DD	NDSWC 9289	200	--	--	--	1975	--	--	U	--	--	--	1873
135-081-12CDD	NDSWC 9291	340	--	--	--	1975	--	--	U	--	--	--	1878
135-081-13DD 1	M.HATZENBUHLER		40	--	24	1930	18	--	S	--	2000	6.5	--
135-081-13DD 2	M.HATZENBUHLER		40	--	--	1962	18	--	H	--	1400	9.0	--
135-081-14AAC	NDSWC 9290	60	--	--	--	1975	--	--	U	--	--	--	1882
135-081-14CCC1	F.SCHAFF		49	--	24	--	--	--	S	--	1800	7.5	--
135-081-14CCC2	F.SCHAFF		205	--	4	1969	--	--	H	--	1400	10.0	--
135-081-14CCC3	F.SCHAFF		175	--	--	1948	--	--	S	--	950	10.0	--
135-081-18AAB	M.MORRELL		65	--	4	1970	--	--	S	--	2700	8.0	--
135-081-18CAD	F.LEINGANG		120	--	2	1966	30	--	S	--	575	9.0	--
135-081-20BA	J.THOMAS		185	185	4	1970	--	--	K	--	2900	9.5	--
135-081-24ADA	J.HATZENBUHLER		60	60	4	1967	20	--	K	--	1800	10.0	--
135-081-24DD	NDSWC 9328	480	291	273	2	1975	130	8-75	U	211FXHL	1760	10.5	1844
135-081-26DD81	G.THOMAS		60	--	4	1948	--	--	S	--	1700	8.5	--
135-081-26DD82	G.THOMAS		60	--	2	1950	--	--	H	--	650	11.0	--
135-081-28ABB	R.LEINGANG		120	120	2	1950	--	--	S	--	2320	8.5	--
135-081-28CDD1	R.LEINGANG		120	--	2	1942	--	--	H	--	2220	12.0	--
135-081-28CDD2	R.LEINGANG		120	--	2	1950	--	--	S	--	720	7.0	--
135-081-32DDC1	L.HEINERT		250	--	4	1943	--	--	K	--	2950	9.0	--
135-081-32DDC2	L.HEINERT		300	250	4	1954	--	--	K	--	2200	9.0	--
135-082-048CC	A.FISHER		170	--	2	--	--	--	H	--	1520	10.0	--
135-082-048CD	A.FISHER		210	--	2	1970	--	--	S	--	925	7.0	--
135-082-04CDA	W.MILDENBERGER		30	--	36	--	20	--	S	--	1400	7.5	--
135-082-07DBA	L.BOHL	260	260	200	4	1971	178	--	K	--	1580	9.0	--
135-082-08DBD1	G.SCHMIDT		100	--	--	1965	80	--	S	--	620	7.0	--
135-082-08DBD2	G.SCHMIDT		100	--	--	1928	80	--	H	--	1420	11.0	--
135-082-09DDC	W.MILDENBERGER		170	--	4	1964	90	--	K	--	820	10.5	--
135-082-10DAB1	G.WETZSTEIN		180	--	4	1962	--	--	H	--	950	9.0	--
135-082-10DAB2	G.WETZSTEIN		45	--	--	--	30	--	S	--	> 7000	7.0	--
135-082-11AC	ANSCHULTZ CORP.	4045	--	--	--	1954	--	--	U	--	--	--	2091
135-082-11BB	DEEP ROCK CORP.	5345	--	--	--	1953	--	--	U	--	--	--	2124
135-082-12DD	F.LEINGANG		180	--	4	1968	50	--	H	--	1520	9.0	--
135-082-14AAA	A.GANGLE		110	100	2	--	--	--	S	--	900	9.0	--

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135-082-14AAD1	A. GANGLE		120	105	4	1970	--	--	K	--	3750	10.0	--
135-082-14AAD2	A. GANGLE		36	--	24	1947	5	--	S	--	2700	7.5	--
135-082-15AAA	NDSWC 8987	100	--	--	--	1974	--	--	U	--	--	--	--
135-082-20ARC	R. FERDERER		130	--	--	1944	--	--	S	--	1480	10.5	--
135-082-20BDD	R. FERDERER		120	--	--	--	--	--	H	--	800	12.0	--
135-082-20DDA	P. SCHMIDT		118	--	3	1954	--	--	K	--	880	10.0	--
135-082-20DDD	P. SCHMIDT		170	--	4	1970	70	--	S	--	1220	8.5	--
135-082-22BCB	NDSWC 8986	200	--	--	--	1974	--	--	U	--	--	--	--
135-082-25DCC1	E. FLECK		47	--	24	1967	37	--	S	--	1330	7.0	--
135-082-25DCC2	E. FLECK		80	--	24	1969	55	--	K	--	<500	10.0	--
135-082-26CDC	E. FLECK		115	110	4	1964	65	--	S	--	1220	8.5	--
135-082-26DCC	A. FLECK		50	--	24	1958	9	--	K	--	2400	11.5	--
135-082-29CDA1	J. DWORSHAK		32	--	24	1971	10	--	H	--	1450	10.0	--
135-082-29CDA2	J. DWORSHAK	190	60	--	--	1971	10	--	S	--	950	8.0	--
135-082-29CDA3	J. DWORSHAK	201	201	180	4	1972	9	--	U	--	--	--	--
135-082-30ABC	R. SCHMIDT		177	170	4	--	112	--	S	--	--	--	--
135-082-30CBB	NDSWC 4560	220	164	158	1	1973	10	12-73	U	112EMCK	1310	7.0	1957
135-082-32BDA	J. DOLL		145	--	3	1952	18	--	K	--	630	10.5	--
135-082-35CAA1	J. FLECK		30	--	5	1964	--	--	H	--	550	12.0	--
135-082-35CAA2	J. FLECK		30	--	24	--	--	--	S	--	1650	21.0	--
135-082-35CAA3	J. FLECK		30	--	24	--	--	--	S	--	580	7.5	--
135-083-04ABC1	V. GERHARDT		180	--	2	1942	--	--	K	--	1620	15.0	--
135-083-04ABC2	V. GERHARDT		180	--	2	1964	--	--	K	--	1550	9.0	--
135-083-04ABC3	V. GERHARDT		50	--	24	--	8	--	S	--	1080	7.0	--
135-083-09DDA1	E. SCHMIDT		42	--	24	1918	--	--	S	--	2850	8.0	--
135-083-09DDA2	E. SCHMIDT		45	--	24	1967	--	--	S	--	1050	8.0	--
135-083-09DDA3	E. SCHMIDT		80	--	24	1968	--	--	K	--	1080	10.0	--
135-083-10ADB	F. JOCHIM		104	--	--	1945	20	--	S	--	1080	7.5	--
135-083-10BAC	F. JOCHIM		100	--	6	1970	--	--	K	--	920	10.5	--
135-083-12ABB1	M. BOHL		245	210	6	1956	--	--	S	--	1880	7.5	--
135-083-12ABB2	M. BOHL		245	210	2	1966	--	--	K	--	3150	19.0	--
135-083-12CC 1	L. SCHMIDT		80	--	--	--	--	--	K	--	1650	10.0	--
135-083-12CC 2	L. SCHMIDT		30	--	--	--	--	--	S	--	2320	8.5	--
135-083-18BCD	L. ECKROTH		120	--	4	--	80	--	K	--	750	8.0	--
135-083-19ADB1	J. GUSTIN		90	85	4	1949	30	--	H	--	750	10.5	--
135-083-19ADB2	J. GUSTIN		85	--	2	1960	30	--	S	--	750	10.5	--
135-083-19ADB3	J. GUSTIN		90	--	2	1951	30	--	S	--	1120	9.5	--
135-083-20CCB	NDSWC 4559	240	--	--	--	1973	--	--	U	--	--	--	1884
135-083-20BDD1	L. STEGMILLER		70	--	2	1943	20	--	H	--	1000	14.0	--
135-083-20BDD2	L. STEGMILLER		70	--	4	1970	20	--	S	--	900	10.0	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
135-083-21C8B	J.HATZENBUHLER		153	--	2	1942	21	--	K	--	1120	9.5	--
135-083-22C8C	R.SCHMIDT		110	--	2	1967	45	--	S	--	920	8.0	--
135-083-22C8B	R.SCHMIDT	80	80	50	6	1970	30	--	H	112EMCK	1050	10.5	--
135-083-26AAA	G.SCHMIDT		35	34	24	--	30	--	K	--	720	8.0	--
135-083-26AAB	G.SCHMIDT		12	--	--	--	--	--	S	--	2450	6.0	--
135-083-31BCD	S.MILLER		500	--	4	1952	--	--	K	--	1450	10.5	--
135-083-32BCA	H.STEGMILLER		145	--	2	1956	20	--	H	--	1300	10.0	--
135-083-32BDB	H.STEGMILLER		85	--	2	1946	20	--	S	--	1000	9.0	--
135-083-32CB1	NDSWC 4768	660	466	454	2	1974	54	2-75	U	211FXHL	3110	10.0	1884
135-083-32CB2	NDSWC 4768A	380	370	358	2	1974	52	2-75	U	211HLCK	3870	11.0	1884
135-083-34AD	AMERADA PET.	8230	--	--	--	--	--	--	U	--	--	--	2116
135-084-04DCC	NDSWC 4556	320	254	248	1	1973	41	12-73	U	112EMCK	1930	9.5	1875
135-084-04DDD	H.KELSTROM		80	--	4	1965	--	--	K	--	650	15.0	--
135-084-05ABA	O.WANG		100	--	4	1966	--	--	S	--	750	9.0	--
135-084-09CCD	NDSWC 8978	320	104	98	1	1974	28	--	U	112EMCK	2330	--	1883
135-084-11ADD1	W.KELLER		42	--	24	--	--	--	S	--	3100	9.5	--
135-084-11ADD2	W.KELLER		42	30	4	1951	--	--	H	--	2380	10.0	--
135-084-15BBA	NDSWC 8977	220	--	--	--	1974	--	--	U	--	--	--	--
135-084-16AAA1	NDSWC 8971	360	283	277	1	1974	52	12-74	U	112EMCK	919	9.5	1893
135-084-16AAA2	NDSWC 8979	180	174	168	1	1974	42	8-74	U	112EMCK	889	--	1892
135-084-16AAA3	NDSWC 8980	200	169	163	1	1974	42	8-74	U	112EMCK	933	--	1890
135-084-16AAA4	NDSWC 8981	340	304	298	1	1974	49	8-74	U	112EMCK	1480	--	1888
135-084-16AAA5	NDSWC 8981A	220	214	208	1	1974	--	8-74	U	112EMCK	990	--	1888
135-084-16AAA6	NDSWC 8981B	180	164	158	1	1974	40	8-74	U	112EMCK	969	--	1888
135-084-16AAA7	NDSWC 8981C	120	94	88	1	1974	34	8-74	U	112EMCK	995	--	1889
135-084-16AAA8	NDSWC 8983	340	264	258	1	1974	49	8-74	U	112EMCK	904	--	1888
135-084-16AAA9	NDSWC 8985	340	306	254	16	1974	50	8-74	U	112EMCK	995	--	1888
135-084-16AAB	NDSWC 8984	295	294	288	1	1974	47	12-74	U	112EMCK	1320	--	1891
135-084-16AAD	NDSWC 8982	300	269	263	1	1974	46	2-75	U	112EMCK	1540	--	1887
135-084-16ABA	NDSWC 8973	315	296	290	1	1974	58	12-74	U	112EMCK	1950	--	1899
135-084-16ABB	NDSWC 8972	300	164	158	1	1974	31	12-74	U	112EMCK	1620	--	1880
135-084-18CDD	M.MEYERS		200	--	--	1955	--	--	S	--	1820	15.0	--
135-084-21DDD1	C.PULLEY		50	--	4	1961	20	--	S	--	1420	8.5	--
135-084-21DDD2	NDSWC 4557	320	264	258	1	1973	21	12-73	U	112EMCK	1920	9.0	1866
135-084-21DDD3	NDSWC 4557A	70	70	64	1	1973	8	12-73	U	112EMCK	1040	8.0	1866
135-084-22CDA1	C.PULLEY		50	--	4	1958	30	--	S	--	700	--	--
135-084-22CDA2	C.PULLEY		50	--	2	1956	30	--	H	--	1120	14.0	--
135-084-22DA	A.FISHER		140	135	2	1969	--	--	H	--	700	10.0	--
135-084-22DAA	A.FISHER		36	--	24	1930	16	--	S	--	<500	7.5	--
135-084-23AAB	E.ZIMMERMAN		310	--	2	--	245	--	K	211HLCK	2170	10.0	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
135-084-24DDC	L.MILLER		110	--	--	--	60	--	K	--	1720	9.5	--
135-084-26ADA	NDSWC 4767	60	--	--	--	--	--	--	U	--	--	--	--
135-084-26DAA1	NDSWC 4558	300	264	258	1	1973	13	12-73	U	112EMCK	1880	9.0	1857
135-084-26DAA2	NDSWC 4558A	180	164	158	1	1973	8	12-73	U	112EMCK	1700	8.5	1856
135-084-26DAA3	NDSWC 4558B	80	74	68	1	1973	5	12-73	U	112EMCK	1270	8.0	1857
135-084-27ABC	C.PULLEY		50	--	4	1961	25	--	S	--	820	7.5	--
135-084-30BAB	J.HINTZ		200	--	4	--	--	--	K	--	1820	10.0	--
135-084-32ADC	A.TERNES		260	--	--	--	--	--	K	--	1880	9.5	--
135-084-35CCB1	R.MONSON		250	--	4	--	--	--	S	--	2180	10.5	--
135-084-35CCB2	R.MONSON		220	--	4	1970	--	--	K	--	2620	10.0	--
135-084-36DAC	NDSWC 8970	312	--	--	--	1974	--	--	U	--	--	--	--
135-084-36DCD	NDSWC 8962	200	--	--	--	1974	--	--	U	--	--	--	--
135-084-36DDA	NDSWC 8963	280	--	--	--	1974	--	--	U	--	--	--	--
136-079-05CCC	NDSWC 4770	380	200	188	2	1974	40	12-74	U	211FXHL	2990	9.5	1670
136-079-07BAD1	M.GRANER		217	--	2	1928	75	--	K	211FXHL	2070	9.5	--
136-079-07BAD2	M.GRANER		90	--	4	1970	25	--	S	--	2650	8.0	--
136-079-07CD	M.GRANER		350	--	2	1969	70	--	S	--	1900	10.0	--
136-079-08BAC	B.SCHREINER		235	--	2	1963	--	--	H	--	2600	10.0	--
136-079-08C8C1	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1950
136-079-08C8C2	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1950
136-079-08C8D1	USGS CORE SITE		--	--	--	1974	--	--	U	--	--	--	1760
136-079-08C8D2	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1760
136-079-16AC	A.SMITH		135	--	--	--	15	--	H	--	2220	8.0	--
136-079-16DAD	L.TSCHIDA		140	--	2	--	50	--	K	--	2300	9.0	--
136-079-16DDA	L.TSCHIDA		150	--	4	1970	45	--	S	--	2350	--	--
136-079-27DCC	R.CHASE		100	--	2	1965	--	--	S	--	2250	8.5	--
136-079-34DDD	R.CHASE		100	--	2	--	--	--	K	--	>7000	9.0	--
136-080-08CDA1	P.HEINRICH		33	--	24	--	6	--	S	--	1080	7.0	--
136-080-08CDA2	P.HEINRICH		150	--	3	1959	--	--	K	--	1050	9.0	--
136-080-10BDA	S.BRIGL		125	100	4	1925	--	--	K	--	1650	9.0	--
136-080-13CAD	J.ROETHLISBERGER		160	--	3	1960	40	--	K	--	1750	10.0	--
136-080-17CAA	E.ZINTEL		36	--	24	1967	20	--	H	--	1280	7.0	--
136-080-22DCB	A.HOWARTH		90	--	24	--	--	--	K	--	1400	8.0	--
136-080-26DDD1	L.BAUER, JR.		80	--	2	1960	--	--	H	--	1350	8.0	--
136-080-26DDD2	L.BAUER, JR.		110	--	4	--	--	--	S	--	950	9.0	--
136-080-35DAD	C.BALLING		160	140	--	1970	10	--	K	--	1450	9.0	--
136-080-36DAD1	J.BAUER		150	--	4	1968	55	--	S	--	1020	10.0	--
136-080-36DAD2	J.BAUER		100	--	3	1931	40	--	H	--	500	10.0	--
136-081-04DDC1	R.MUTH		165	--	2	1961	--	--	H	--	1750	10.0	--
136-081-04DDC2	R.MUTH		185	--	2	1967	--	--	S	--	1820	10.0	--

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136-081-05CCA	N.WORONIECKI		200	--	2	1955	120	--	S	--	700	8.5	--
136-081-05CCD	N.WORONIECKI		47	--	24	1971	20	--	H	--	2100	10.5	--
136-081-0688B	NDSWC 4590	340	269	263	1	1973	2	12-73	U	112LTHR	2570	9.5	1742
136-081-07AAA	NDSWC 9286	520	294	288	1	1975	23	8-75	U	112LTHR	878	11.0	1779
136-081-0788B	NDSWC 4591	220	144	138	1	1973	28	12-73	U	112LTHR	2640	9.0	1776
136-081-07DDC1	NDSWC 4771	560	457	445	2	1974	53	2-75	U	211FXHL	1620	10.0	1813
136-081-07DDC2	NDSWC 4771A	380	369	357	2	1974	55	2-75	U	211HLCK	2230	9.5	1813
136-081-1288A1	M.TOKACH		275	--	4	1970	--	--	S	--	2500	9.0	--
136-081-1288A2	M.TOKACH		100	--	4	--	98	--	S	--	2420	8.5	--
136-081-1288B	M.TOKACH		250	225	2	1967	190	--	S	--	2420	9.0	--
136-081-1308D	M.TOKACH		330	300	2	1961	--	--	S	125CBLD	2420	7.5	--
136-081-130CC	KXMB.TV. INC.		130	--	6	--	--	--	H	--	2850	--	--
136-081-1408D1	W.MILLER		260	--	4	--	--	--	K	--	2200	8.0	--
136-081-1408D2	W.MILLER		90	--	24	1966	--	--	S	--	2400	8.0	--
136-081-1688B	NDSWC 4592	360	244	238	1	1973	31	12-73	U	112LTHR	1800	--	1784
136-081-16CCC	NDSWC 4595	500	114	108	1	1973	24	12-73	U	112LTHR	1070	8.5	1785
136-081-16CDD	NDSWC 4593	500	500	435	4	1973	54	10-73	H	211FXHL	1350	9.5	1820
136-081-19AD	ROSEBUD ROYALTY	5180	--	--	--	1971	--	--	U	--	--	--	2005
136-081-20AB	NATL BULK CARR	5009	--	--	--	1954	--	--	U	--	--	--	1915
136-081-21CCD	NDSWC 9288	460	284	278	1	1975	35	8-75	U	112LTHR	1070	--	1819
136-081-28BAD	C.MILLER		188	--	2	1963	--	--	K	--	725	9.0	--
136-081-16CCD	NDSWC 4594	473	456	441	2	1973	36	12-73	U	112LTHR	931	8.5	1795
136-081-29BA	PHILLIPS PET.	4500	--	--	--	1951	--	--	U	--	--	--	1995
136-081-31ABB	NDSWC 4579	340	262	256	1	1973	32	12-73	U	112LTHR	1420	--	1844
136-081-32AAA	NDSWC 9287	300	--	--	--	1975	--	--	U	--	--	--	1839
136-081-32ABD	A.KLEIN		280	--	2	1967	--	--	K	112LTHR	1050	8.0	--
136-081-3288B	F.BARTELS		80	--	4	1970	25	--	K	--	1880	12.0	--
136-081-33AD	L.HUNT	4963	--	--	--	1972	--	--	U	--	--	--	1919
136-081-34DDC	R.WETCH		227	--	2	1966	--	--	K	--	4150	9.0	--
136-082-02BAA	E.THOMAS		190	--	2	1964	30	--	K	--	2320	11.0	--
136-082-02CDD	G.KNOLL		200	--	--	1962	--	--	H	--	2320	--	--
136-082-04AAA	NDSWC 4582	180	--	--	--	1973	--	--	U	--	--	--	1757
136-082-07CCC1	NDSWC 9305	720	517	505	2	1975	72	8-75	U	211FXHL	2840	13.0	1850
136-082-07CCC2	NDSWC 9305A	340	249	237	2	1975	25	8-75	U	211HLCK	2130	11.0	1850
136-082-08AAB	W.MISKA		300	--	2	1939	60	--	K	211HLCK	2560	9.0	--
136-082-08DDD	NDSWC 4588	320	--	--	--	1973	--	--	U	--	--	--	1809
136-082-09AAA	NDSWC 9000	500	--	--	--	1974	--	--	U	--	--	--	1767
136-082-09ARB	NDSWC 9001	420	--	--	--	1974	--	--	U	--	--	--	1768
136-082-10AAB	R.KNOLL		185	--	3	1945	F	--	K	--	2320	13.5	--
136-082-16CBA	J.TOMANEK		165	--	2	--	--	--	S	--	1900	8.5	--
136-082-16CBA	J.TOMANEK		168	--	2	1950	15	--	K	--	2050	9.5	--
136-082-18DAC	J.LEINGANG		300	--	2	--	--	--	K	--	1900	8.5	--

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136-082-21DCD1	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1920
136-082-21DCD2	USGS CORE SITE	1	--	--	--	1974	--	--	U	--	--	--	1920
136-082-21DCD3	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1920
136-082-22B8C	E.MORRELL		300	--	2	1935	F	--	K	211HLCK	1980	5.0	--
136-082-22CCC	M.BENDER		250	--	2	--	40	--	K	--	1820	10.0	--
136-082-22DAA	NDSWC 4580	400	204	198	1	1973	15	3-74	U	112LTHR	1450	9.0	1814
136-082-24CAB	W.MORRELL		25	--	12	1947	--	--	H	--	875	14.0	--
136-082-24CAD1	W.MORRELL		60	--	6	1958	--	--	S	--	1520	8.0	--
136-082-24CAD2	W.MORRELL		80	--	6	1954	--	--	S	--	2520	8.0	--
136-082-32BAC	E.FISCHER		210	200	2	1969	--	--	K	--	2180	9.0	--
136-083-01A8B	F.GARTNER		240	--	2	--	--	--	S	--	1920	9.0	--
136-083-01CCC	NDSWC 4586	220	214	208	1	1973	9	12-73	U	211HLCK	2170	9.5	1820
136-083-08BC	E.THORSON		160	--	2	1951	--	--	H	--	1380	12.0	--
136-083-08BCA	E.THORSON		160	--	2	1950	--	--	S	--	1700	9.0	--
136-083-08BCB	E.THORSON		40	--	2	--	--	--	S	--	3300	7.5	--
136-083-08DCB1	G.TOMAN		140	--	4	1952	--	--	H	--	1020	12.0	--
136-083-08DCB2	G.TOMAN		70	--	24	--	--	--	S	--	1220	7.0	--
136-083-10CDA	L.DAWSON		400	--	--	1903	--	--	K	125CBLD	2190	8.5	--
136-083-10CDB	L.DAWSON		400	--	--	--	--	--	K	125CBLD	421	8.0	--
136-083-12DDC	L.MORRELL		120	--	22	1930	--	--	K	--	1920	10.0	--
136-083-14CDD	J.FRIESZ		90	--	4	1967	30	--	H	--	1220	10.0	--
136-083-178A1	J.BURES		65	--	36	1925	--	--	H	--	3950	15.0	--
136-083-178A2	L.BURES		75	--	36	1928	--	--	S	--	4880	7.5	--
136-083-18ADD	J.TOMAN		16	--	24	1946	7	--	S	--	580	6.0	--
136-083-18BDC1	J.TOMAN		100	--	4	1936	60	--	H	--	4200	12.0	--
136-083-18BDC2	J.TOMAN		65	--	--	1926	60	--	K	--	5200	7.5	--
136-083-18BDC3	J.TOMAN		100	--	26	1936	60	--	K	--	5100	9.5	--
136-083-19ADB1	R.ECKROTH	500	500	250	2	1967	--	--	H	125CBLD	2150	10.5	--
136-083-19ADB2	R.ECKROTH		45	--	24	--	--	--	S	--	1120	7.5	--
136-083-22BDD1	P.ECKROTH		286	--	2	1935	--	--	S	125CBLD	2160	--	--
136-083-22BDD2	P.ECKROTH		290	--	2	1951	--	--	S	125CBLD	2110	4.5	--
136-083-22BDD3	P.ECKROTH		284	--	2	1921	--	--	S	125CBLD	2980	9.0	--
136-083-22CAA	P.ECKROTH		246	--	2	1967	--	--	H	--	1400	14.0	--
136-083-22CCB	P.ECKROTH		315	--	2	--	--	--	S	125CBLD	1760	9.0	--
136-083-26DCA	V.FLECK		215	--	2	1961	20	--	H	--	1480	10.0	--
136-083-26DDC	V.FLECK		105	--	36	1945	45	--	S	125CBLD	9090	7.0	--
136-083-28BAD1	J.HOPFAUF		180	--	3	1964	--	--	K	--	1650	9.0	--
136-083-28BAD2	J.HOPFAUF		180	--	3	--	--	--	S	--	--	--	--
136-083-32CDD1	L.FRIESZ		550	--	2	1962	--	--	H	125CBLD	2310	11.0	--
136-083-32CDD2	P.FRIESZ		240	--	2	1968	--	--	S	--	1800	8.5	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
136-083-32DAD	P.FRIESZ		34	--	24	--	14	--	K	--	1050	7.0	--
136-083-34DCB1	R.FRIESZ		20	--	24	1926	12	--	S	--	620	6.0	--
136-083-34DCB2	R.FRIESZ		100	--	6	1961	12	--	K	--	620	9.0	--
136-084-12BBA1	A.LUNDGREN		60	48	24	1920	50	--	S	--	2280	7.0	--
136-084-12BBA2	A.LUNDGREN		48	--	24	1940	40	--	S	--	--	40	--
136-084-12BBB	A.LUNDGREN		220	--	4	1960	--	--	H	--	1920	9.0	--
136-084-17DCA1	E.JONSON		22	--	--	1966	--	--	H	112HTRV	1300	--	--
136-084-17DCA2	E.JONSON		22	--	--	1966	--	--	S	112HTRV	1280	10.0	--
136-084-17DCA3	E.JONSON		22	--	--	1966	--	--	S	112HTRV	1650	8.0	--
136-084-20DBA	NDSWC 4553	180	84	78	1	1973	20	12-73	U	112HTRV	1240	8.0	1795
136-084-20DCA	D.LAWSON		12	--	--	1930	--	--	K	112HTRV	1780	7.5	--
136-084-21BDC	G.PLETAN		400	--	3	--	100	--	K	211HLCK	2350	--	--
136-084-24ADC	E.WRIGHT		109	--	24	1905	--	--	S	--	1820	9.0	--
136-084-24ADD1	E.WRIGHT		111	--	24	1968	41	--	K	--	680	9.0	--
136-084-24ADD2	E.WRIGHT		109	--	24	1905	--	--	S	--	2620	9.0	--
136-084-26BAD	H.LUNDSTROM		90	--	2	--	85	--	K	--	1800	7.5	--
136-084-28CCD	W.BAHM		250	--	4	1962	F	--	S	--	1420	9.0	--
136-084-30DAA	NDSWC 4554	60	38	18	1	1973	3	10-73	U	112EMCK	1220	8.5	1793
136-084-31ADD1	NDSWC 4555	220	184	178	1	1973	8	12-73	U	112EMCK	2120	9.0	1806
136-084-31ADD2	NDSWC 4555A	40	38	18	1	1973	18	12-73	U	112EMCK	1160	8.5	1806
136-084-32BDD1	W.BAHM		38	--	4	--	25	--	K	--	1180	12.0	--
136-084-32BDD2	W.BAHM	261	261	252	4	1972	26	6-72	U	--	--	--	--
136-084-33DDD	D.LAWSON		360	--	4	1968	246	--	S	125CBLD	1500	9.0	--
136-084-34DCC1	O.WANG		250	--	2	1960	150	--	S	--	1300	8.5	--
136-084-34DCC2	O.WANG		60	--	24	--	--	--	H	--	3120	7.5	--
137-080-07CAD	L.BAUER		275	--	2	--	F	--	S	211FXHL	2490	9.0	--
137-080-08CDC	NDSWC 9011	100	--	--	--	1974	--	--	U	--	--	--	1635
137-080-16DBB	NDSWC 9010	100	--	--	--	1974	--	--	U	--	--	--	1625
137-080-18BAB1	J.BELOHLAVEK		150	--	2	1955	F	--	H	--	2400	1.5	--
137-080-18BAB2	J.BELOHLAVEK		30	--	1	1930	8	--	S	--	2600	.9	--
137-081-01ADA	E.KELLER		150	115	2	1970	--	--	K	--	2180	.9	--
137-081-01BDD1	A.KELLER		80	--	24	1924	60	--	H	--	925	2.0	--
137-081-01BDD2	A.KELLER		246	--	2	1937	--	--	S	--	2200	7.0	--
137-081-03ACD	C.SUCHY		210	--	2	1928	35	--	K	--	2050	.9	--
137-081-04ABA	J.GUSTIN		230	--	2	--	--	--	S	--	2100	9.5	--
137-081-04DDA	J.GUSTIN		210	--	4	1970	--	--	K	--	3300	10.5	--
137-081-08CDC	W.SMITH		120	--	1	1945	--	--	H	--	1600	10.0	--
137-081-08DAB	E.STASTNY, JR.		220	127	--	1925	--	--	K	--	3500	9.0	--

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137-081-10BAA	NDSWC 9007	360	204	198	1	1974	38	12-74	U	112LTHR	957	9.5	1744
137-081-10CCD1	R.SMITH		90		2	--	65	--	H	--	2000	9.0	--
137-081-10CCD2	R.SMITH		90	--	2	--	65	--	S	--	--	--	--
137-081-13AA	E.MATTSON		14	--	2	1952	--	--	H	--	--	--	--
137-081-13AAB	E.MATTSON		120	--	2	1966	--	--	S	--	2380	8.0	--
137-081-14CDC1	LEHTO BROS.		73	--	2	1958	--	--	H	--	2130	14.0	--
137-081-14CDC2	LEHTO BROS.		22	--	20	1943	18	--	S	--	--	--	--
137-081-15CCD	M.MRNAK		160	--	2	1943	--	--	H	--	1300	11.5	--
137-081-16AAA	NDSWC 9006	160	--	--	--	1974	--	--	U	--	--	--	1732
137-081-16DDD	E.BONDESON		180	--	2	1947	20	--	H	--	1300	12.0	--
137-081-18CCA	C.JERABEK		175	150	--	1925	--	--	K	--	2200	9.0	--
137-081-20BCD	J.SVIHLA		210	--	2	--	--	--	S	--	--	--	--
137-081-21ACA	NDSWC 9329	280	--	--	--	1975	--	--	U	--	--	--	1708
137-081-23DAA	E.MATTSON		90	--	2	1960	--	--	H	--	2220	12.0	--
137-081-23DAC	E.MATTSON		90	--	2	1943	--	--	S	--	2400	8.0	--
137-081-24ADB	M.HILLE		290	--	--	--	--	--	K	211HLCK	2310	9.0	--
137-081-25CAB	M.HILLE		305	--	4	--	--	--	S	211HLCK	2500	12.0	--
137-081-28BDD	W.GRANER		120	--	2	1961	--	--	S	--	--	--	--
137-081-28CBA	J.BARTH		20	--	24	--	12	--	S	--	1320	6.5	--
137-081-28C8C1	W.GRANER		86	--	2	1962	--	--	S	--	920	8.0	--
137-081-28C8C2	W.GRANER		486	--	3	1969	--	--	K	211FXHL	1220	4.0	--
137-081-28CBD	J.BARTH		20	--	24	--	12	--	H	--	1780	--	--
137-081-28CCD	NDSWC 9283	360	276	273	1	1975	15	8-75	U	112LTHR	1810	9.0	1747
137-081-29DD8	R.WEBER		60	--	3	--	--	--	S	--	2120	9.0	52
137-081-30ABA	T.KNOLL		60	--	1	--	--	--	S	--	3400	9.0	--
137-081-30BCC	T.KNOLL		260	--	2	1938	--	--	K	--	2000	9.0	--
137-081-31DDD	NDSWC 4589	280	--	--	--	1973	--	--	U	--	--	--	1740
137-081-32BAA	NDSWC 9284	280	--	--	--	1975	--	--	U	--	--	--	1739
137-081-32BBB	NDSWC 9285	180	--	--	--	1975	--	--	U	--	--	--	1731
137-082-0688C	R.HOGAN		240	--	3	1947	190	--	K	--	1720	10.0	--
137-082-0688D	R.HOGAN		280	--	4	1969	--	--	S	--	--	--	--
137-082-08AAC	J.UNKENHOLZ		40	--	60	1888	37	--	K	--	2380	10.0	--
137-082-168DC	J.UNKENHOLZ		50	--	24	1967	15	--	S	--	580	7.0	--
137-082-17ADC	J.HELBLING		30	--	24	1967	15	--	H	--	1520	11.5	--
137-082-17DA	ANMAR OIL-GAS	5086	--	--	--	--	--	--	U	--	--	--	1726
137-082-17DAB1	J.HELBLING		40	--	24	1966	20	--	S	--	1520	5.5	--
137-082-17DAB2	J.HELBLING		80	--	24	1967	40	--	S	--	1300	8.0	--
137-082-18BBA1	K.HAUGEN		36	--	24	1966	9	--	K	--	1900	--	--
137-082-18BBA2	K.HAUGEN		200	160	2	1953	--	--	S	--	3250	7.5	--
137-082-18CBD	G.HOGAN		175	--	2	1933	80	--	K	--	2050	7.5	--

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137-082-20DAA	NDSWC 9003	140	--	--	--	1974	--	--	U	--	--	--	--
137-082-21CCC	NDSWC 9002	140	--	--	--	1974	--	--	U	--	--	--	--
137-082-22AAB	M.GRIFFIN		179	--	1	--	--	--	K	--	1780	9.0	--
137-082-22BAD	A.SHIMEK		214	--	2	1953	60	--	S	--	2720	8.0	--
137-082-24ADA	J.SVIHLA		180	--	2	1962	120	--	K	--	3500	9.0	--
137-082-260DB1	R.RESSLER		220	--	2	1944	F	--	S	--	2080	9.0	--
137-082-260DB2	R.RESSLER		220	--	--	1968	--	--	K	--	2120	11.5	--
137-082-32BAD	L.LEINGANG		200	--	2	--	--	--	K	--	2300	9.0	--
137-082-32BCA	L.LEINGANG		8	--	18	1967	4	--	U	--	1020	4.0	--
137-082-32DCC1	F.GARTNER		240	--	2	--	18	--	K	--	2180	11.5	--
137-082-32DCC2	NDSWC 4585	120	--	--	--	1973	--	--	U	--	--	--	1801
137-082-33DAD	A.LEINGANG		260	--	2	1910	75	--	K	--	2020	8.5	--
137-082-33DCC	NDSWC 4584	120	--	--	--	1973	--	--	U	--	--	--	1789
137-082-34BAC	L.STECKLER		50	--	24	1940	25	--	K	--	2480	6.0	--
137-082-35CCC	NDSWC 4583	160	--	--	--	1973	--	--	U	--	--	--	1769
137-082-360DD	NDSWC 4581	200	164	158	1	1973	2	12-73	U	112LTHR	2580	9.0	1752
137-083-040BD	L.KOPP		260	--	4	1970	200	--	K	--	4100	10.0	--
137-083-06CDD1	NDSWC 4763		760	589	577	1974	42	2-75	U	211FXHL	3800	12.0	1816
137-083-06CDD2	NDSWC 4763A		460	435	423	1974	43	2-75	U	211HLCK	3400	11.5	1816
137-083-06CDD3	NDSWC 4763B		300	284	278	1974	80	2-75	U	211HLCK	2500	10.5	1816
137-083-07BBA	NDSWC 4552B	60	34	14	1	1973	16	12-73	U	112HTRV	--	--	1742
137-083-07BBB1	NDSWC 4552	60	44	38	1	1973	12	12-73	U	112HTRV	2610	9.5	1740
137-083-07BBB2	NDSWC 4552A	40	--	--	--	1973	--	--	U	--	--	--	1740
137-083-10CDD	K.CARLSON		290	--	--	1961	--	--	K	--	2020	--	--
137-083-10DCA1	C.RASK		25	--	24	1960	10	--	S	--	4200	12.0	--
137-083-10DCA2	C.RASK		25	--	24	1960	10	--	H	--	2400	7.0	--
137-083-14ABA1	A.RASK		250	--	2	1940	50	--	K	--	5200	--	--
137-083-14ABA2	A.RASK		65	--	24	--	53	--	S	--	6000	7.5	--
137-083-21AAA	A.JOHNSON		250	--	4	1967	--	--	S	--	2600	8.5	--
137-083-21AAB	A.JOHNSON		212	--	2	1929	--	--	H	--	1920	--	--
137-083-248CA	T.RASK		28	--	72	--	20	--	S	--	2300	7.5	--
137-083-248CD	T.RASK		166	--	4	--	106	--	K	--	2300	9.0	--
137-083-24DDA	NDSWC 4587	180	--	--	--	1973	--	--	U	--	--	--	1861
137-083-328DB1	W.BREUER		230	--	2	1964	212	--	K	--	3400	9.0	--
137-083-328DB2	W.BREUER		110	--	2	1962	--	--	S	--	3250	8.5	--
137-083-348D	AUSTRAL OIL CO.	7600	--	--	--	1965	--	--	U	--	--	--	2270
137-083-35BAD	J.LEINGANG		200	--	2	--	--	--	H	--	2250	9.0	--
137-084-01DDB	L.STARCK		110	--	4	--	32	--	K	--	2300	--	--
137-084-06CAC1	H.RITZ		112	--	6	--	--	--	K	--	700	9.0	--
137-084-06CAC2	H.RITZ		145	126	4	1972	80	--	S	--	950	8.5	--

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137-084-14BAC	E. INGALLS		90	--	4	--	--	--	S	--	2100	9.5	--	
137-084-14CAA	E. INGALLS		40	--	6	--	20	--	K	--	1890	8.5	--	
137-084-18BAD1	R. RITZ		100	80	2	1944	--	--	K	--	2400	8.0	--	
137-084-18BAD2	R. RITZ	101	101	71	4	1970	--	--	S	--	--	--	--	
137-084-18CCB	E. Kaelberer		40	--	6	1935	20	--	H	--	2800	--	--	
137-084-20DCC1	A. Kitzmann		50	--	6	1938	--	--	H	--	1800	9.0	--	
137-084-20DCC2	A. Kitzmann		25	--	48	--	15	--	S	--	780	8.0	--	
137-084-20DCC3	A. Kitzmann		20	--	24	--	14	--	H	--	1120	7.5	--	
137-084-22ACD1	W. Slavick		295	--	4	1961	120	--	S	125CBLD	2190	9.0	--	
137-084-22ACD2	W. Slavick		72	--	24	1958	47	--	H	--	2400	--	--	
137-084-22CCD	C. Slavick		60	--	36	--	45	--	H	--	2200	8.0	--	
137-084-28BDD1	R. Slavick		196	--	4	1928	60	--	S	--	2700	9.0	--	
137-084-28BDD2	R. Slavick		30	--	48	1910	18	--	H	--	1850	--	--	
137-084-30ACD1	G. Ormiston		90	--	36	1965	46	--	S	--	980	8.0	--	
137-084-30ADD	G. Ormiston		85	--	36	1968	27	--	H	--	700	--	--	
137-084-30ACD2	G. Ormiston		80	--	36	1950	50	--	S	--	--	8.5	--	
137-085-06CCD	NDSWC 4551	260	150	144	1	1973	24	12-73	U	112EMCK	2900	8.5	1901	
137-085-08AAA	H. Keller, Jr.		100	100	2	1946	--	--	K	--	1150	8.5	--	
137-085-10ADA	D. Kaelberer		200	--	--	1957	--	--	K	--	900	9.0	--	
137-085-10BBC1	L. Keller		110	--	2	1950	95	--	H	--	1400	9.0	--	
137-085-10BBC2	L. Keller		100	--	4	1938	--	--	S	--	6500	9.0	--	
137-085-11BDC	C. Benishek		15	--	24	1921	12	--	H	--	1020	7.5	--	
137-085-17CDB	NDSWC 9304	283	121	118	1	1975	17	8-75	U	112EMCK	2490	--	1860	
137-085-20ABB1	W. Bond		140	--	2	1968	30	--	H	--	2100	--	--	
137-085-20ABB2	W. Bond		68	--	2	1950	25	--	S	--	1150	--	--	
137-085-24CDA1	H. Held		40	--	24	1962	14	--	H	--	2050	--	--	
137-085-24CDA2	H. Held		40	--	24	1918	14	--	S	--	3250	--	--	
137-085-28DA	C. Ritz		160	--	2	--	--	--	K	--	1520	9.0	--	
137-086-02AAB	A. Feland		184	--	2	1919	14	--	K	--	3100	12.0	--	
137-086-03AAD1	NDSWC 4752	1022	734	716	2	1974	80	10-74	U	211FXHL	2600	10.5	1948	
137-086-03AAD2	NDSWC 4752A		682	672	654	2	1974	79	10-74	U	211HLCK	2400	10.5	1948
137-086-03AAD3	NDSWC 4752B	322	314	308	1	1974	54	2-75	U	--	--	--	1948	
137-086-03AAD4	NDSWC 4752C	122	104	98	1	1974	28	10-74	U	125TGRV	2250	8.5	1948	
137-086-09BDC	V. Kary		173	--	2	1944	120	--	H	--	3600	9.0	--	
137-086-14BAD	R. Peterson		60	--	24	--	45	--	K	--	2060	17.0	--	
137-086-18ABC	W. Bethke		65	--	24	1958	48	--	K	--	1650	12.0	--	
137-086-26CAB1	M. Ritz		180	--	2	1955	--	--	S	--	1250	14.0	--	
137-086-26CAB2	M. Ritz		50	--	24	1950	--	--	H	--	4150	10.0	--	
137-086-28CCD	R. Peterson	154	154	125	4	1963	120	--	U	--	--	--	--	
137-086-28DCD	D. Hoovestol		240	--	4	1963	--	--	H	125TGRV	733	10.0	--	
137-086-33AAC	L. Feland		70	--	6	1973	45	--	S	--	1600	9.0	--	

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137-086-33DDC	L.FELAND		210	--	4	1973	170	--	S	--	1750	--	--
137-086-34BAB	L.PETERSON		260	--	2	1952	170	--	H	125TGRV	1550	11.0	--
137-087-02ADB	J.LARSON		15	--	48	--	3	--	H	--	1580	13.0	--
137-087-06CDD1	F.HERTZ		37	--	6	--	--	--	H	--	2600	8.0	--
137-087-06CDD2	M.HERTZ		43	--	6	1945	20	--	H	--	2250	12.0	--
137-087-12BCA	W.DOLL		112	--	4	1920	90	--	K	--	1080	8.5	--
137-087-12CDA	NDSWC 4757	320	304	298	1	1974	211	2-75	U	125TGRV	2230	10.0	2210
137-087-12DDD	E.THIEL		40	--	24	1958	15	--	H	--	1360	10.5	--
137-087-17ACC	R.FITTERER		40	--	4	1963	--	--	H	--	500	10.0	--
137-087-18ADA	P.MEACHEL		55	--	4	--	40	--	K	--	800	8.0	--
137-087-20DDC	C.DOLL		40	--	24	--	24	7-73	H	--	2700	--	--
137-087-228CB	J.NEIBAUER		50	--	4	1955	--	--	H	--	1200	9.0	--
137-087-23AAB	E.BACHLER		28	--	24	1972	--	--	K	--	540	10.0	--
137-087-25DA	ANMAR OIL-GAS	5843	--	--	--	1970	--	--	U	--	--	--	2180
137-087-26CCC	J.DIETZ		40	--	24	1941	30	--	H	--	850	--	--
137-087-288CB	L.KOLLER		50	--	24	1973	22	--	H	--	1800	12.0	--
137-087-30DDD	E.BARTH		165	--	4	1963	--	--	H	--	2250	13.0	--
137-087-32DAA	L.EMTER		40	--	24	1967	10	7-73	H	--	1600	10.0	--
138-080-06ADD	E.RICKER		40	--	2	1960	--	--	H	112HTRV	830	10.0	--
138-080-06BCA1	G.BORDEN		28	--	2	1966	20	--	K	112HTRV	1880	11.5	--
138-080-06BCA2	G.BORDEN		360	--	4	1940	12	--	K	211FXHL	2750	12.0	--
138-080-06BCC	NDSWC 2908	140	90	87	1	1968	8	12-74	U	112HTRV	1540	8.5	1634
138-080-30CCC	NDSWC 2909	20	--	--	--	1968	--	--	U	--	--	--	1650
138-080-30CDD	J.SUCHY		130	--	2	1965	--	--	H	--	1860	13.0	--
138-080-31DRB	C.SUCHY		90	--	4	1930	--	--	S	125CBLD	2200	12.0	--
138-081-01CRD	A.NELSON		150	--	4	1955	+9	8-73	S	211HLCK	1350	10.0	1650
138-081-01CCA	STEWART DAIRY		149	--	4	--	F	--	S	211HLCK	1230	12.0	--
138-081-02ADA	A.NELSON		90	--	4	1953	--	--	K	--	1800	--	--
138-081-070CD	J.KALVODA		345	--	4	1970	--	--	K	125CBLD	2500	10.0	--
138-081-09ABB1	NDSWC 4750	762	537	525	2	1974	81	12-74	U	211FXHL	3800	9.0	1780
138-081-09ABB2	NDSWC 4750A	362	348	336	2	1974	98	12-74	U	211HLCK	2300	7.5	1780
138-081-09ABB3	NDSWC 4750B	272	264	258	1	1974	95	12-74	U	211HLCK	--	--	1780
138-081-09ABB4	NDSWC 4750C	162	159	153	1	1975	106	8-75	U	125CBLD	2230	9.0	1780
138-081-12DAB	NDSWC 9014	100	61	58	1	1974	6	12-74	U	112HTRV	1310	9.0	1630
138-081-15DDC	R.DUGAN		430	--	2	1958	--	--	K	211HLCK	1710	12.0	--
138-081-17BBA	R.NELSON		300	--	2	1940	--	--	K	--	2020	10.5	--
138-081-17DDA	J.TAGHON		432	--	4	1913	325	--	K	211HLCK	2170	10.0	--
138-081-20BAA	E.KALVODA		365	--	4	1967	265	--	K	211HLCK	2050	11.0	--
138-081-22BCB	J.CHARVAT		336	--	4	1968	280	--	K	--	2200	11.0	--
138-081-24DCD	NDSWC 9012	260	--	--	--	1974	--	--	U	--	--	--	1630

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (μ MHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
138-081-25AAD	D.HELLMANN		120	--	4	1972	8	--	K	--	2600	11.0	--
138-081-25ADB	L.BENDER		60	--	4	1971	--	--	H	112LTHR	1540	12.0	--
138-081-26ADB	F.SCHMIDT		150	--	4	1970	130	--	K	--	1650	12.0	--
138-081-28ABD	R.STASTNEY	110	110	--	4	--	--	--	H	--	1180	11.0	--
138-081-28DDD	E.KEIDEL		170	--	4	--	--	--	H	--	--	15.0	--
138-081-30ABB	G.TAYLOR		34	--	4	1970	18	--	K	--	726	8.0	--
138-081-30DCC	J.KLESALAK		160	--	2	1949	119	--	S	--	1930	12.5	--
138-081-32ADA	F.SMITH		350	--	4	1969	--	--	K	211HLCK	2260	12.0	--
138-081-33DAA	E.KEIDEL		236	--	4	1940	80	--	S	--	2000	12.0	--
138-081-34ABC	A.PDPELKA		170	--	4	--	--	--	K	--	2350	12.0	--
138-081-35ABA	NDSWC 9009	300	224	218	1	1974	+17	2-75	U	112LTHR	2180	9.5	1682
138-081-35RAA	NDSWC 9008	180	--	--	--	1974	--	--	U	--	--	--	1705
138-081-35CBC	M.LAUBNER		160	--	4	1969	--	--	K	--	1900	1.0	--
138-082-048DD1	C.HENDRICKSON		183	--	2	1940	F	--	K	211HLCK	2800	13.0	--
138-082-048DD2	C.HENDRICKSON		65	--	4	1967	15	--	S	--	1600	8.5	--
138-082-058CA	G.CARLSON		198	--	4	1953	+2	8-73	K	211HLCK	2830	14.0	1690
138-082-050BC	O.LARSON		70	--	2	1951	+8	8-73	K	211HLCK	2860	10.0	1685
138-082-08DDD	E.ELLISEN		210	--	2	1950	+12	8-73	K	211HLCK	2920	9.0	1695
138-082-15ADC	L.RESSLER		40	--	36	1930	--	--	K	--	1400	13.5	--
138-082-15DDD	NDSWC 9004	100	--	--	--	1974	--	--	U	--	--	--	--
138-082-20DDD	D.JOHNSON		300	--	3	1928	100	--	K	125CBLD	2440	14.0	--
138-082-21AB	ANMAR OIL-GAS	5210	--	--	--	1971	--	--	U	--	--	--	1886
138-082-22AAD	D.PULKRABEK		25	--	36	--	12	8-73	H	--	1300	9.0	1865
138-082-25ADD	H.SEEMAN		150	--	4	1970	--	--	K	--	2700	--	--
138-082-25DDC	NDSWC 9005	100	--	--	--	1974	--	--	U	--	--	--	--
138-082-30CBD	F.CHYLE		420	--	2	1967	220	--	K	125CBLD	2340	9.0	--
138-082-32DDA	M.HELBLING		80	--	4	1963	--	--	K	--	2150	10.0	--
138-082-34DAB	N.RENNER		265	--	3	1966	--	--	H	125CBLD	2620	14.0	--
138-082-35DDD	G.PULKRABEK		125	--	4	1913	30	--	K	--	3900	--	--
138-083-02DDD	M.SYVRUD		23	--	4	1950	--	--	H	--	2250	12.0	--
138-083-04ACA	R.SEIFERTH		195	--	2	1929	--	--	H	--	2200	--	--
138-083-05AB	CAMPBELL -PARTNR	8000	--	--	--	1974	--	--	U	--	--	--	1969
138-083-14ABB	M.NELSON		175	--	24	--	+14	7-73	U	211HLCK	2850	9.5	1700
138-083-22ABA	D.INGALLS		285	--	4	1971	2	--	H	211HLCK	2900	10.0	--
138-083-228DB	D.INGALLS		185	--	4	1970	+10	7-73	S	211HLCK	3100	10.0	1705
138-083-20ACC	C.NELSON		180	168	4	1968	+9	7-73	S	211HLCK	2680	8.5	1720
138-083-26CDB	C.NELSON		404	--	4	1971	--	--	K	125CBLD	2340	9.0	--
138-083-310BB	K.TUFTELAND		65	--	2	1943	30	--	K	--	3200	--	--
138-083-32DCA	G.KDPP		12	--	4	--	--	--	K	--	1500	9.0	--
138-084-01ABC	A.MEUCHEL		250	--	6	1968	50	--	K	125CBLD	4300	9.0	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (UMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
138-084-03BC8	W.NICKEL		90	--	36	1910	14	--	K	--	1250	9.0	--
138-084-04ABB1	B.TOEPKE		300	--	6	1971	260	--	H	125CBLD	1590	12.0	--
138-084-04ABB2	A.TOEPKE		60	--	4	1926	--	--	K	--	820	7.0	--
138-084-10ABB	H.THIEL		505	--	4	1952	--	--	K	125CBLD	2520	12.0	--
138-084-14ABD	E.KAUTZMAN		90	--	4	--	70	--	H	--	800	--	--
138-084-15AAA	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	1920
138-084-19BAA	O.BETH		100	--	18	1905	90	--	H	--	2100	8.0	--
138-084-25AAA	W.KULLER		275	--	2	1953	--	--	K	125CBLD	3350	15.0	--
138-084-27AAB	M.KARCH		50	--	36	1930	20	--	H	--	720	8.5	--
138-084-27CBB	T.GEISE		60	--	4	1968	--	--	H	--	530	9.0	--
138-084-27CCC1	NDSWC 4761	280	214	208	1	1974	204	12-74	U	125CBLD	--	--	2093
138-084-27CCC2	NDSWC 4761A	100	89	83	1	1974	42	12-74	S	125TGRV	1250	8.0	2093
138-084-29BBA	A.KAELBERER		130	--	4	1935	115	--	K	--	2220	--	--
138-084-31BDC	C.KAELBERER		90	--	6	1920	72	--	K	--	850	8.0	--
138-084-33CAC	F.THIEL		60	--	30	--	48	--	H	--	2580	--	--
138-084-34CAD	R.BATEMAN		60	--	6	1942	10	--	K	--	1050	10.0	--
138-085-01CAA	C.HARTMANN		550	--	4	1953	--	--	K	125CBLD	2340	12.0	--
138-085-03BAA	J.ZARNDT		120	--	6	1960	110	--	K	--	2750	--	--
138-085-06BCC1	M.KARCH		50	--	24	1920	40	--	K	--	2100	8.0	--
138-085-06BCC2	M.KARCH		180	--	4	1973	82	--	K	--	2300	9.0	--
138-085-08CBC	USGS CON DIV 19	301	--	--	--	1966	--	--	U	--	--	--	2115
138-085-10CAB	R.KUNKEL		300	--	4	1963	--	--	H	125TGRV	1920	10.5	--
138-085-20BBD	O.OLIN		135	--	4	1961	75	--	K	125TGRV	2320	11.0	--
138-085-22BAD	D.KUNKEL		260	--	4	--	--	--	K	125TGRV	1790	10.0	--
138-085-24ADD	W.BOPP		172	--	4	1967	125	--	K	--	1500	15.0	--
138-085-26ACD	F.BOPP		165	--	4	1972	110	--	K	--	1100	10.0	--
138-085-26BAA	G.BOPP		35	--	6	1945	26	--	H	--	900	--	--
138-085-26CDD	NDSWC 4762	260	204	198	1	1974	124	12-74	U	125TGRV	1470	--	2149
138-085-33BBD	R.KAELBERER		194	--	4	1957	--	--	K	--	1820	--	--
138-085-34AAC	J.KAELBERER		24	--	4	1932	19	--	K	--	1090	11.0	--
138-086-02BCB	NDSWC 4656	40	--	--	--	1974	--	--	U	--	--	--	2015
138-086-11ACC	NDSWC 4649	80	--	--	--	1974	--	--	U	--	--	--	1965
138-086-11DDB	NDSWC 4657	160	70	67	1	1974	8	10-74	U	112SIMS	1460	8.5	1960
138-086-13CCC	NDSWC 9303	60	46	43	1	1975	6	8-75	U	112SIMS	1560	9.0	1935
138-086-14ABC	NDSWC 4650	60	--	--	--	1974	--	--	U	--	--	--	1950
138-086-14CBB	NDSWC 9302	60	--	--	--	1975	--	--	U	--	--	--	1940
138-086-17CDD	NDSWC 4547	320	60	54	1	1973	14	12-73	U	112EMCK	1600	8.0	1947
138-086-17DDC	NDSWC 4548	220	84	78	1	1973	30	12-73	U	112EMCK	826	7.0	1967
138-086-18BBB	F.CHRISTIANSON		32	20	24	1972	18	--	H	--	2550	--	--
138-086-18DCD	NDSWC 4546	100	--	--	--	1973	--	--	U	--	--	--	1955

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
138-086-20BAB	NDSWC 4544	240	184	178	1	1973	18	12-73	U	112EMCK	2740	8.0	1942
138-086-20BBB	NDSWC 4545	220	74	68	1	1973	15	12-73	U	112EMCK	2150	8.0	1942
138-086-20DCC	M.OLSON		50	--	4	1930	--	--	K	--	1650	--	--
138-086-21BCB	R.OLSON		250	--	4	1945	--	--	H	112EMCK	1640	13.0	--
138-086-22CCD	M.OLSON		40	--	24	1905	--	--	H	--	1120	15.0	--
138-086-24BAB	E.JACOBSON		70	--	4	1953	60	--	H	--	1630	12.0	--
138-086-26CCC	NDSWC 4549	251	164	158	1	1973	16	12-73	U	112EMCK	3020	8.5	1914
138-086-26CDD1	CITY OF ALMONT		60	--	36	1958	--	--	P	112EMCK	2140	10.0	--
138-086-26CDD2	CITY OF ALMONT		34	--	36	1974	--	--	P	--	--	--	--
138-086-28CAD	J.KILEN		40	--	24	1958	--	--	H	--	3500	9.0	--
138-086-30BAB	E.THORSON		100	--	4	1962	50	--	K	--	2400	9.0	--
138-086-33DDC	H.HOOVESTOL		26	--	48	1952	21	--	H	--	880	10.0	--
138-086-34DDC	W.HOOVESTOL		12	--	6	1950	9	--	H	--	1800	20.0	--
138-086-35BBC	NDSWC 4550	350	164	158	1	1973	15	12-73	U	112EMCK	3020	9.0	1912
138-086-36AAB1	S.PETERSON		360	--	2	1953	100	--	H	125CBLD	2510	14.0	--
138-086-36AAB2	S.PETERSON		--	--	--	--	--	--	S	--	1750	--	--
138-086-36DC	ANMAR OIL-GAS	5440	--	--	--	1971	--	--	U	--	--	--	1920
138-086-36DCC	C.KNUDSON		55	--	24	1964	--	--	K	--	1030	--	--
138-087-02BCB1	M.GECK		55	55	6	1969	--	--	S	--	1920	8.0	--
138-087-02BCB2	M.GECK		55	55	4	1959	--	--	S	--	2250	8.0	--
138-087-02BCB3	M.GECK		55	--	24	1971	35	--	H	--	1880	8.0	--
138-087-03DBB	NDSWC 4543	260	213	207	1	1973	5	12-73	U	112EMCK	3120	9.0	1975
138-087-04BDD	J.HUBER		37	--	24	--	--	--	S	--	2180	7.5	--
138-087-05BAA	H.BAHR		180	--	4	--	--	--	H	--	2050	10.0	--
138-087-05BAB	H.BAHR		60	--	24	--	30	--	S	--	2600	8.0	--
138-087-10DAD1	O.MONSON		105	--	2	1944	55	--	S	--	2450	9.0	--
138-087-10DAD2	O.MONSON		85	--	2	1959	--	--	K	--	3100	8.0	--
138-087-12BDB1	C.WANSTROM		105	100	2	1953	20	--	H	--	3050	9.0	--
138-087-12BDB2	C.WANSTROM		33	--	36	--	30	--	S	--	1250	7.5	--
138-087-18BBA	R.BAHR		240	--	--	1967	--	--	K	--	2050	10.0	--
138-087-20ADD	USGS CON DIV 13	305	--	--	--	1966	--	--	U	--	--	--	2225
138-087-28BBC1	A.FITTERER		240	--	2	--	--	--	S	--	2100	9.0	--
138-087-28BBC2	A.FITTERER		300	--	4	1962	80	--	H	125TGRV	2390	10.0	--
138-087-33CAB	O.SCHAFF		165	--	4	1958	--	--	K	--	2750	9.0	--
138-087-34CBA	P.THIEL		330	--	2	--	150	--	K	125TGRV	2210	10.0	--
138-087-34CDC	O.RAMSLAND		20	--	24	--	8	--	K	--	1200	7.5	--
138-088-02DAD	V.GERVING	210	210	191	6	1872	75	--	S	--	1750	10.0	--
138-088-06BCD1	H.BEAN		90	--	2	1948	84	--	H	--	3150	8.0	--
138-088-06BCD2	H.BEAN		90	--	2	1925	84	--	S	--	2080	8.0	--
138-088-20DAA	USGS CON DIV 12	133	--	--	--	1966	--	--	U	--	--	--	2400

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138-088-23BCA	J.MOSBRUCKER		180	--	2	1926	--	--	K	--	1850	9.0	--
138-088-28DD	USGS CON DIV 11	382	--	--	--	1966	--	--	U	--	--	--	2375
138-088-30CAD1	I.KUNTZ		13	--	24	1970	10	--	H	--	1580	7.0	--
138-088-34BDC	E.OPP		50	--	18	1961	28	--	K	--	3080	--	--
138-089-01CA 1	W.MORMAN		28	--	48	--	--	--	H	--	5200	7.5	--
138-089-01CA 2	W.MORMAN		250	--	4	1948	--	--	K	--	2400	10.0	--
138-089-01CA 3	W.MORMAN		42	--	32	1963	20	--	S	--	2550	8.0	--
138-089-01CA 4	W.MORMAN		38	38	24	1962	20	--	S	--	5150	8.0	--
138-089-02ADB	USGS CORE SITE	2	--	--	--	1974	--	--	U	--	--	--	2170
138-089-09CAB	N.SCHAFFER		25	--	24	1962	15	--	H	--	1580	--	--
138-089-09CAD	N.SCHAFFER		25	--	24	--	20	--	S	--	1650	7.0	--
138-089-12CBC1	F.KRUCKENBURG		250	--	3	--	10	--	K	--	2650	10.0	--
138-089-12CBC2	F.KRUCKENBURG		18	--	8	--	8	--	H	--	>7000	--	--
138-089-13BAD	J.KOLLER		110	--	3	1942	40	--	K	--	3500	10.0	--
138-089-13CBB	F.BLETH		385	--	2	--	40	--	K	125CBLD	2990	16.0	--
138-089-18BDB	J.SCHAFF		64	--	24	1956	54	--	S	--	550	8.0	--
138-089-24DD8	J.KASTNER	211	211	180	4	1972	160	--	S	--	--	--	--
138-089-24DDD	J.KASTNER	210	208	193	4	1964	150	4-63	K	--	--	--	--
138-089-25CBD	E.MILLER		100	--	24	1954	50	--	K	--	2050	9.0	--
138-089-268BC1	J.HELFRICH		79	--	24	1957	--	--	H	--	3250	8.0	--
138-089-268BC2	J.HELFRICH	96	96	--	4	1963	50	10-63	S	--	2180	9.0	--
138-089-268BC3	J.HELFRICH		110	--	24	1967	--	--	S	--	7000	10.0	--
138-089-32CBB1	C.OPP		60	--	24	1958	20	--	K	--	--	--	--
138-089-32CBB2	C.OPP		381	--	6	1968	180	--	K	125TGRV	1940	12.0	--
138-089-35BAA	M.KOBILANSKY		314	--	4	1968	180	--	K	125TGRV	2000	11.0	--
138-090-02AAC	J.SCHANTZ		40	--	24	--	--	--	K	--	1220	10.0	--
138-090-02B	A.SCHMIDT		50	--	24	--	--	--	S	--	2950	8.5	--
138-090-02BCB	A.SCHMIDT		90	--	24	1967	45	--	H	--	1300	9.0	--
138-090-068DD1	E.HEINLE		46	46	18	1952	32	--	S	--	1400	8.5	--
138-090-068DD2	E.HEINLE		60	--	24	1959	35	--	S	--	500	8.5	--
138-090-068DD3	E.HEINLE		56	--	24	1968	34	--	H	--	750	--	--
138-090-06CAA	A.ZIMMERMAN		60	--	24	1945	35	--	K	--	880	7.5	--
138-090-08ABC	S.OPP		70	--	22	1962	30	--	K	--	1350	--	--
138-090-09DAD1	A.HEINLE	202	202	180	4	--	60	--	H	--	2750	12.0	--
138-090-09DAD2	A.HEINLE		197	150	2	--	--	--	S	--	2300	11.5	--
138-090-10AAA	H.SCHMIDT		200	--	--	1927	60	7-34	P	--	--	--	--
138-090-10DD81	W.BUCHLI		110	--	2	1935	60	--	K	--	2400	9.5	--
138-090-10DD82	W.BUCHLI	140	140	118	4	1968	68	--	S	--	2350	9.0	--
138-090-12BDC1	B.JONES		50	--	--	--	--	--	S	--	1250	9.0	--
138-090-12BDC2	B.JONES		51	--	24	--	--	--	H	--	750	8.5	--

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LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
138-090-15AAA	W.BUCHLI		30	--	16	--	8	--	S	--	1850	8.0	--
138-090-20BBA	W.KITZAN		58	--	16	1954	20	--	K	--	4530	8.0	--
138-090-20DCB	R.HEINLE		67	--	4	1958	20	--	K	--	3750	--	--
138-090-21ACD	J.MESSER		140	--	4	--	--	--	K	--	1650	--	--
138-090-22DCC	USGS CON DIV 9	375	--	--	--	1966	--	--	U	--	--	--	2421
138-090-24DBC	M.SCHAAF		85	--	24	1965	55	--	H	--	1000	10.0	--
138-090-26CDA	C.HEINLE		54	--	24	1954	--	--	S	--	1800	7.5	--
138-090-28DCB	E.SAYLER		375	--	2	--	--	--	K	125TGRV	2080	9.0	--
138-090-30BDA	A.SCHATZ		227	--	2	1940	--	--	K	--	1900	10.5	--
138-090-30CDB	E.SCHATZ		250	--	4	1950	--	--	H	--	1950	--	--
138-090-32CBD1	R.SCHNEIDER		54	--	24	1958	--	--	K	--	3250	10.0	--
138-090-32CBD2	R.SCHNEIDER		328	--	4	--	--	--	S	125TGRV	2260	10.0	--
138-090-34CCD	M.KUNTZ		275	--	3	1962	245	--	K	--	1700	--	--
139-080-31CAA	C.TRACY		38	--	2	1972	--	--	H	112HTRV	1140	11.0	--
139-080-31CDD	CENTURY MOTORS		36	--	24	1873	9	8-73	H	112HTRV	910	11.0	--
139-081-04BDA1	DEVELOPERS INC.		240	--	--	--	--	--	P	125CBLD	3650	--	1777
139-081-04BDA2	DEVELOPERS INC.	684	680	600	6	1972	39	9-72	P	211FXHL	3390	11.5	1777
139-081-09AAA1	NDSWC 4766	700	538	526	2	1974	+18	2-75	U	211FXHL	3250	10.0	1720
139-081-09AAA2	NDSWC 4766A	420	412	400	2	1974	3	11-74	U	211HLCK	3100	7.0	1720
139-081-09AAA3	NDSWC 4766B	280	269	263	2	1974	80	11-74	U	211HLCK	2800	8.0	1720
139-081-09AAA4	NDSWC 4766C	120	109	103	1	1974	66	11-74	U	125CBLD	8000	8.5	1720
139-081-15CBB	L.ZACHMEIER		240	220	4	1972	180	--	H	125CBLD	3020	13.0	--
139-081-16BCC	K.PORSBORG		740	--	4	--	--	--	P	211FXHL	3350	12.5	1940
139-081-16CDB	J.HOPFAUF	520	520	500	4	1972	230	10-72	H	211HLCK	2730	5.5	--
139-081-22ACC	H.ZACHMEIER		220	--	4	1953	162	--	H	125CBLD	2710	12.0	--
139-081-16CCB	ROUGH RIDER EST.		860	--	4	--	--	--	P	211FXHL	3350	13.0	1990
139-081-25CBB	NDSWC 9326	140	96	93	1	1975	9	8-75	U	112HTRV	1920	9.5	1635
139-081-25CCC	WELK STEEL		50	--	4	1972	--	--	H	112HTRV	1690	13.5	--
139-081-26ACA	E.RICHAU		34	--	2	1946	17	--	H	112HTRV	1530	13.0	--
139-081-28CDD	M.WARD		21	--	1	1966	13	--	H	112HTRV	1250	--	--
139-081-30ADA	A.JOHNSON		60	--	4	1973	30	--	H	112HTRV	1680	10.0	--
139-081-30BBB	P.TRAUGER		41	--	2	1963	20	--	K	112HTRV	887	14.0	--
139-081-30DDA	S.MARKEL		270	--	2	1971	1	8-73	H	211HLCK	2520	13.0	1653
139-081-32DDA	F.KAHL		180	--	4	1967	30	--	K	--	2100	10.0	--
139-081-36CCD	NDSWC 9015	140	101	98	1	1974	12	12-74	U	112HTRV	1870	8.9	1635
139-081-36DAB	TRACTOR SUPPLY		15	--	2	1966	--	--	H	112HTRV	1270	13.0	--
139-081-36DDA1	KIST LIVESTOCK		97	93	6	1954	16	--	S	112HTRV	1530	11.0	--
139-081-36DDA2	KIST LIVESTOCK		280	--	6	1970	6	--	S	--	3460	10.0	--
139-082-04AAA	E.LANDEIS		100	--	6	--	--	--	H	--	2050	9.5	--
139-082-05DBA	W.FERDERER		35	--	24	--	20	--	H	--	610	10.0	--
139-082-068DA	A.STEIN		30	--	24	1920	18	--	H	--	1200	11.0	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
139-082-08BCC	L.BOEHM	860	860	720	4	1972	300	--	H	211FXHL	2800	--	--
139-082-11AC	SIGNAL DRILLING	5350	--	--	--	--	--	--	U	--	--	--	1852
139-082-12CDD	W.LANDEIS		90	--	4	1970	--	--	K	--	770	--	--
139-082-14BAC	J.VOGEL		118	--	3	1939	--	--	H	--	1020	--	--
139-082-15ADA	SKELLYTRUCKSTOP		760	--	6	1970	80	--	P	211FXHL	3080	13.5	--
139-082-17BAC	L.BOEHM		85	--	4	1972	--	--	S	--	1200	--	--
139-082-21AAB	C.BERGER		345	--	4	1963	--	--	K	125CBLD	4580	12.0	--
139-082-23B8C	G.BERGER		150	--	3	1970	120	--	H	--	4000	--	--
139-082-23DCB	W.SIEGEL		240	--	4	1972	F	--	K	211HLCK	3060	10.0	--
139-082-24CCA	M.KOFFLER		400	250	4	1971	--	--	K	211HLCK	3200	13.0	--
139-082-25ADD	G.HELLM		30	--	2	--	--	--	H	112HTRV	1170	11.0	--
139-082-25BBD	NDSWC 9013	100	76	73	1	1974	20	12-74	U	112HTRV	1630	8.5	1665
139-082-34CCD	R.HENDRICKSON		120	--	2	1940	40	--	K	--	2300	--	--
139-083-04CCD1	L.BLAICH		27	--	36	1930	12	--	S	--	2350	6.0	--
139-083-04CCD2	L.BLAICH		70	--	2	1950	30	--	H	--	1650	12.0	--
139-083-05AAC	J.HATZENBUHLER		110	--	2	1963	--	--	K	--	1900	9.5	--
139-083-09DCD	P.GRESS		75	--	6	1955	60	--	K	--	2600	--	--
139-083-10DDC	D.MILLER		105	--	6	1971	--	--	K	--	2080	10.0	--
139-083-12AAB	G.ASSEL		32	--	24	1957	15	--	H	--	1130	12.0	--
139-083-12DBA1	NDSWC 4751	1002	789	777	2	1974	184	11-74	U	211FXHL	2800	10.0	1960
139-083-12DBA2	NDSWC 4751A	570	558	546	2	1974	222	11-74	U	211HLCK	2600	10.0	1960
139-083-12DBA3	NDSWC 4751B	330	324	318	1	1974	208	11-74	U	125CBLD	2300	9.5	1960
139-083-18DBD	J.WOLF		165	--	4	1973	85	--	S	--	760	--	--
139-083-22CCC1	M.VOIGT		160	--	6	1953	90	--	H	--	2300	--	--
139-083-22CCC2	M.VOIGT		16	--	4	1968	15	--	S	--	4100	7.0	--
139-083-24DBB	P.MARKEL		260	--	4	1970	--	--	H	125CBLD	4380	13.5	--
139-083-26BAB	A.KOVASH		280	--	4	1950	--	--	S	--	2300	10.0	--
139-083-28DAD	NDSWC 4764	140	109	103	1	1974	28	12-74	U	125CBLD	2550	7.5	1800
139-083-29AAA	H.WOLF		180	--	4	1963	120	--	K	--	2200	--	--
139-084-06CCC	A.OPP		200	--	4	1965	120	--	K	--	2400	--	--
139-084-10ADD	STATE GAME-FISH	90	66	61	4	1971	--	--	P	125TGRV	2020	9.5	--
139-084-10CBA	STATE GAME-FISH	100	66	61	4	1971	--	--	P	125TGRV	2180	--	--
139-084-12BDB	E.KOBS		120	--	2	1950	--	--	K	--	1450	8.5	--
139-084-14DAC	K.SCHULZ		35	--	24	1961	20	--	H	--	2300	12.0	--
139-084-14DCB	E.FERDERER		76	--	4	1957	--	--	K	--	--	10.0	--
139-084-17CAA	J.SCHANER		190	--	6	1965	130	--	K	--	1950	--	--
139-084-20ADB	D.HELD		247	--	6	1969	100	--	K	125CBLD	2220	10.5	--
139-084-24ACD	E.SORGE		75	--	4	1960	--	--	K	--	1300	10.0	--
139-084-26ACB	S.WOLFF		90	--	2	1950	--	--	K	--	2150	10.0	--
139-084-27B8C	NDSWC 4760	300	240	230	1	1974	96	11-74	U	125CBLD	1980	8.5	1960

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139-084-27CBC	G.TOEPEKE		64	--	24	1964	32	--	K	--	860	11.0	--
139-084-30CDD	R.JOHN		90	--	6	1963	--	--	H	--	1300	--	--
139-084-34ADB	M.SCHULZ		60	--	24	1968	--	--	K	--	2350	8.0	--
139-085-02AAB	E.KUKUK		137	--	24	--	--	--	K	--	1980	7.0	--
139-085-030CC	A.GOETZ		320	--	4	1968	--	--	H	125TGRV	2190	9.0	--
139-085-06CDD	M.HOHERZ		120	--	4	1911	--	--	K	125TGRV	2480	7.0	--
139-085-06DDD1	R.GAEBE		56	52	24	1970	38	--	S	125TGRV	1650	9.5	--
139-085-06DDD2	R.GAEBE		60	--	48	--	--	--	K	125TGRV	1020	4.5	--
139-085-07CDB	D.KRAMER		35	--	24	1948	28	--	K	--	2150	10.5	--
139-085-08ABC	H.NEAS		60	--	24	1946	20	--	K	--	3040	7.0	--
139-085-08DDD	S.DOLL		80	--	4	1916	--	--	K	125TGRV	1020	7.0	--
139-085-09CCC	C.KAELBERER		58	--	4	1967	--	--	H	--	910	9.0	--
139-085-13CDD	D.NEIDHARDT		100	--	4	1971	--	--	H	--	990	--	--
139-085-15CCC	F.LEHDE		72	--	24	1918	68	--	S	125SNLB	3510	8.0	--
139-085-16ABB	TEXACO-194	350	350	310	4	1964	130	9-64	P	125TGRV	2390	11.0	2140
139-085-18DCC	NDSWC 4643	40	--	--	--	1974	--	--	U	--	--	--	2015
139-085-18DCD	NDSWC 4641	220	159	153	1	1974	80	12-74	U	112SIMS	1640	8.5	2080
139-085-18DDC	NDSWC 4642	60	--	--	--	1974	--	--	U	--	--	--	2125
139-085-20BBC	W.NEIS		35	--	24	--	20	--	S	--	1680	9.0	--
139-085-21AAD	NEW SALEM 2		360	--	4	1947	--	--	P	125TGRV	2420	10.0	--
139-085-21ADC	NEW SALEM 1		347	307	4	1947	220	9-67	P	125TGRV	2240	10.0	2160
139-085-21BAB	R.SCHWARTING		55	--	18	1965	45	--	H	--	1910	8.5	--
139-085-21BAC	NDSWC 4652	340	324	318	1	1974	197	12-74	U	125TGRV	2800	9.0	2160
139-085-21BDB	NEW SALEM 3		350	--	4	1959	--	--	P	125TGRV	1670	9.0	--
139-085-22BCB	NDSWC 4653	360	344	338	1	1974	213	12-74	U	125TGRV	2740	8.5	2162
139-085-24BAB	J.BRANDT		306	--	4	1968	--	--	K	125TGRV	2190	4.0	--
139-085-26DCC	D.NORTON		365	--	6	1952	250	--	K	125TGRV	2260	9.0	--
139-085-29DAB	A.JUST		50	--	24	1965	45	--	S	--	1310	8.0	--
139-085-30AAB1	NDSWC 4651	1140	962	950	2	1974	246	12-74	U	211FXHL	3450	9.0	2065
139-085-30AAB2	NDSWC 4651A	480	474	462	2	1974	192	12-74	U	125CBLD	2460	9.0	2065
139-085-30AAB3	NDSWC 4651B	280	270	258	1	1974	77	12-74	U	125TGRV	1730	8.5	2065
139-085-32CAD	C.BUMANN		180	--	4	1968	40	--	S	125TGRV	1930	7.5	--
139-085-34CAA	M.NORTON		390	--	3	1958	--	--	K	125TGRV	2110	11.0	--
139-086-02ABA1	E.HOLLE		16	--	24	1936	12	--	K	--	1550	--	--
139-086-02ABA2	E.HOLLE		75	--	24	1965	55	--	K	--	3200	--	--
139-086-02BBC	W.HOLLE		58	--	24	1965	40	6-73	K	--	--	--	--
139-086-06DDD	C.LEACH		70	--	24	1910	35	--	K	--	3750	9.5	--
139-086-07DCA	R.SCHROEDER		255	--	6	1964	130	--	H	125TGRV	1830	8.0	--
139-086-10CCD	G.TOEPEKE		50	--	24	1967	42	6-73	H	125SNLB	3380	8.5	--
139-086-12AAA	R.SCHMIDT		374	--	4	1951	--	--	K	125TGRV	2230	9.5	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
139-086-14CCC1	G.KREIDT		325	--	4	1966	120	--	K	125TGRV	2340	9.5	--
139-086-14CCC2	G.KREIDT		112	--	4	1964	--	--	S	--	1600	9.0	--
139-086-17ACB	F.GRAF		210	--	2	1942	45	--	H	--	1700	9.5	--
139-086-20AAB	M.GRAF		45	--	14	1968	25	--	H	--	2800	8.5	--
139-086-20DDC	P.HOEVERMAN		200	--	2	1965	125	--	H	--	1950	12.5	--
139-086-22CCD1	F.HEID		15	--	48	1913	6	--	K	--	1400	9.0	--
139-086-22CCD2	NDSWC 4659	60	--	--	--	1974	--	--	U	--	--	--	2035
139-086-22CCD3	NDSWC 4660	60	--	--	--	1974	--	--	U	--	--	--	2040
139-086-25DDB	NDSWC 4648	60	--	--	--	1974	--	--	U	--	--	--	2045
139-086-27BAA	NDSWC 4661	100	60	57	1	1974	34	12-74	U	112SIMS	1500	9.0	2045
139-086-27BAB	NDSWC 4658	100	--	--	--	1974	--	--	U	--	--	--	2040
139-086-30CC	DEEP ROCK OIL	8090	--	--	--	1952	--	--	U	--	--	--	2191
139-086-32DAA	E.HOEVERMAN		80	--	3	1951	12	--	H	--	1340	7.5	--
139-086-34ACD	NDSWC 4655	140	--	--	--	1974	--	--	U	--	--	--	2030
139-086-34ADC	NDSWC 4654	180	90	87	1	1974	26	12-74	U	112SIMS	1040	8.5	2010
139-086-34DAA	W.BAKKEN		52	--	8	1947	32	--	H	--	1050	--	--
139-086-35BCC	NDSWC 4646	140	63	57	1	1974	27	12-74	U	112SIMS	1360	7.5	2010
139-086-35BDA	NDSWC 4647	120	79	73	1	1974	29	12-74	U	112SIMS	1500	9.0	2015
139-086-35CBC	NDSWC 4644	180	103	97	1	1974	23	12-74	U	112SIMS	1250	8.0	2005
139-086-35CCC	NDSWC 4645	160	133	127	1	1974	19	12-74	U	112SIMS	1540	7.5	1995
139-087-01BCB	F.GAPPERT		280	--	2	1953	--	--	H	125TGRV	2100	--	--
139-087-08BAB	J.BECHHOLD		320	--	2	1929	75	--	S	125TGRV	2270	9.0	--
139-087-08BBB	P.SCHLATTER		19	--	48	1928	8	--	K	--	2100	--	--
139-087-11DCD	H.FRITZ		325	--	2	1963	--	--	H	125TGRV	2340	14.0	--
139-087-12CAA	E.HIMMELSPACH		226	--	2	1966	165	--	K	--	1400	9.5	2188
139-087-12CCB	USGS CON DIV 17	403	--	--	--	1966	--	--	U	--	--	--	2188
139-087-16CDB	NDSWC 4755	80	63	57	1	1974	15	12-74	U	--	1310	8.0	2045
139-087-18ABC1	A.FESER		160	--	2	1955	110	--	H	--	4400	15.0	--
139-087-18ABC2	A.FESER		300	--	2	1920	165	--	S	125TGRV	2400	9.0	--
139-087-18CCD	USGS CON DIV 16	340	--	--	--	1966	--	--	U	--	--	--	2225
139-087-22BCC1	R.WETZEL		50	--	24	1920	25	--	H	--	2300	11.0	--
139-087-22BCC2	R.WETZEL		100	--	4	1967	50	--	S	--	1900	11.0	--
139-087-23BBB	NDSWC 4756	360	294	288	1	1974	105	12-74	U	125TGRV	2120	12.0	2095
139-087-26ADB	W.WETZEL		356	--	3	1930	100	--	K	125TGRV	2170	10.0	--
139-087-26DAB	B.WETZEL		360	--	2	1930	100	--	K	125TGRV	2210	13.0	--
139-087-27CBD	E.WETZEL		34	--	24	1960	8	--	H	--	2350	10.0	--
139-087-29CDD	H.WETZEL		105	--	4	1961	70	--	K	--	3350	10.0	--
139-087-30CBD1	P.GECK		55	--	24	1965	45	--	K	--	2800	10.0	--
139-087-30CBD2	P.GECK		190	--	4	1968	22	--	K	--	--	--	--
139-088-06CDD	K.SIBLA		30	30	24	1961	--	--	S	--	1930	5.0	--

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139-088-06DAD1	K.SIBLA		36	36	36	1927	--	--	S	--	1920	6.0	--
139-088-06DAD2	K.SIBLA		28	28	24	1967	--	--	H	--	3820	5.0	--
139-088-06DDD	NDSWC 9331	340	328	322	1	1975	40	8-75	U	112EMCK	3790	10.5	2072
139-088-08ACA	J.OPP		270	270	2	1958	--	--	K	--	2220	7.0	--
139-088-08CCC	NDSWC 9298	220	--	--	--	1975	--	--	U	--	--	--	2068
139-088-10BDC	USGS CON DIV 15	102	--	--	--	1966	--	--	U	--	--	--	2165
139-088-11CAB1	J.RICHTER		320	--	--	--	--	--	U	--	--	--	--
139-088-11CAB2	J.RICHTER		400	370	4	1972	200	--	S	--	2020	8.0	--
139-088-11CBA	J.RICHTER		80	80	30	--	20	--	S	--	2020	5.0	--
139-088-15CCC	NDSWC 4540	360	304	298	1	1973	43	12-73	U	112EMCK	3400	8.5	2056
139-088-17CBD	R.OPP		45	--	--	--	--	--	K	--	3300	5.5	--
139-088-17CDA	R.OPP		261	--	6	--	--	--	S	--	1500	9.0	--
139-088-20BCA	A.TAVIS		108	108	--	1969	98	--	K	--	1540	9.0	--
139-088-20BCB	A.TAVIS		362	--	6	1958	125	--	H	125TGRV	2610	13.0	--
139-088-20BCD	A.TAVIS		110	--	--	1962	90	--	S	--	--	--	--
139-088-20DCB1	E.FITTERER		50	50	24	1970	25	--	H	--	3200	--	--
139-088-20DCB2	E.FITTERER		60	60	24	1958	30	--	S	--	1150	--	--
139-088-20DCC	E.FITTERER		40	40	24	1963	20	--	H	--	925	--	--
139-088-22DCB	J.DUPPONG	283	283	280	--	1946	40	9-46	K	112EMCK	3340	3.0	--
139-088-248DD	J.NAVRATIL		35	35	15	--	--	--	K	--	2250	9.5	--
139-088-25BAD	NDSWC 4541	320	224	218	1	1973	34	12-73	U	112EMCK	3330	8.0	2038
139-088-25BCC	NDSWC 4542	315	284	278	1	1973	19	12-73	U	112EMCK	3110	7.5	2018
139-088-28ADB	J.DUPPONG		167	167	6	--	--	--	S	--	2900	8.0	--
139-088-28DDA	NDSWC 4539	420	128	122	1	1973	15	12-73	U	112KLDR	4240	8.0	2052
139-088-298CD	L.DOLL		25	25	24	1969	6	--	S	--	--	--	--
139-088-29BDC	L.DOLL		14	14	24	1967	6	--	H	--	1900	7.0	--
139-088-29DBA	E.KINNISCHTZKE		62	62	24	--	--	--	S	--	6100	--	--
139-088-29DBB	E.KINNISCHTZKE	190	190	--	4	1959	--	--	K	--	3150	8.0	--
139-088-30BCC	L.DOLL		66	66	24	1971	--	--	K	--	2600	6.0	--
139-088-31ADC	J.NAVRATIL	71	71	65	2	1963	40	9-63	H	--	--	--	--
139-088-31B8C1	NDSWC 4538	400	364	358	1	1973	15	12-73	U	112KLDR	2060	9.0	2075
139-088-31B8C2	NDSWC 4538A	100	99	93	1	1973	13	12-73	U	112KLDR	3460	8.0	2075
139-088-31CCC1	G.HORST		140	140	4	1966	30	--	H	--	2920	8.0	--
139-088-31CCC2	G.HORST		70	70	4	--	--	--	S	--	3150	7.0	--
139-088-31D8B	GLEN ULLIN		335	--	12	--	330	4-41	P	125TGRV	3360	10.0	--
139-088-31D8C	GLEN ULLIN		345	--	12	--	32	10-45	P	--	--	--	--
139-088-32AD	USGS CON DIV 14	212	--	--	--	1966	--	--	U	--	--	--	2135
139-088-34BCC1	NDSWC 4753	1302	1062	1044	2	1974	108	12-74	U	211FXHL	2960	9.5	2070
139-088-34BCC2	NDSWC 4753A	862	860	842	2	1974	113	12-74	U	211HLCK	2550	9.0	2070
139-088-34BCC3	NDSWC 4753B	302	294	288	1	1974	34	12-74	U	125TGRV	2500	--	2070

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139-088-348CC4	NDSWC 4753C	82	78	66	1	1974	+7	12-74	U	125TGRV	4700	9.0	2070
139-089-08DDC	NDSWC 4535	380	244	238	1	1973	2	12-73	U	112KLDR	997	8.5	2115
139-089-09CAC1	J.WANNER		25	25	24	1955	11	--	H	--	1000	10.0	--
139-089-09CAC2	J.WANNER		25	25	36	1965	11	--	S	--	1320	7.5	--
139-089-17BA 1	E.WINTEROTH		25	25	24	--	15	--	S	--	4300	7.0	--
139-089-17BA 2	E.WINTEROTH		25	25	24	--	15	--	S	--	4300	7.0	--
139-089-18CBB	DR.SHWAROK		85	--	--	--	60	--	K	--	1050	7.0	--
139-089-21ACC	NDSWC 9300	380	--	--	--	1975	--	--	U	--	--	--	2100
139-089-22ADA	B.SCHATZ		280	--	3	1930	--	--	S	125TGRV	2540	6.0	--
139-089-26CCD1	NDSWC 9299	320	--	--	--	1975	--	--	U	--	--	--	2080
139-089-26CCD2	NDSWC 9299 A	160	141	138	1	1975	15	8-75	U	112KLDR	3990	9.5	2080
139-089-27ACC	NDSWC 8955	300	--	--	--	1974	--	--	U	--	--	--	2095
139-089-27BCC	NDSWC 8959	100	74	68	1	1974	16	12-74	U	112KLDR	1160	8.0	2105
139-089-27BCD	NDSWC 8958	380	--	--	--	1974	--	--	U	--	--	--	2105
139-089-28DAA	NDSWC 8956	260	--	--	--	1974	--	--	U	--	--	--	2105
139-089-28DBA	NDSWC 8957	80	--	--	--	1974	--	--	U	--	--	--	2115
139-089-33DAA	NDSWC 8960	20	--	--	--	1974	--	--	U	--	--	--	2135
139-089-33DDD	NDSWC 8961	80	--	--	--	1974	--	--	U	--	--	--	2145
139-089-36ACA	GLEN ULLIN		60	--	--	--	--	--	--	--	880	7.0	--
139-089-36DA	S.HORST		140	--	4	1962	20	--	K	--	3020	7.0	--
139-090-02AAD	F.TREIBER		50	50	4	1948	24	--	S	--	2720	7.0	--
139-090-02ADA	F.TREIBER		40	40	18	1948	22	--	H	--	3020	--	--
139-090-02CDB1	L.ZIEGLER		30	30	28	1914	22	--	U	--	--	--	--
139-090-02CDB2	L.ZIEGLER		110	110	4	1966	30	--	K	--	2620	10.0	--
139-090-04DDA	E.SCHANTZ		60	60	24	1966	--	--	H	--	4300	10.0	--
139-090-08CDA	W.HANSEN		22	22	48	--	16	--	S	--	2600	7.0	--
139-090-08CDB	W.HANSEN		22	22	48	1968	6	--	S	--	2100	7.0	--
139-090-12DAA	W.HOERAUF		1165	1100	6	1961	80	-72	K	211HLCK	3260	8.0	2130
139-090-12DAD	W.HOERAUF		215	215	4	1967	--	--	U	--	--	--	--
139-090-13ABD	E.SAXOWSKY		250	250	2	1946	--	--	K	--	2720	8.0	--
139-090-148BA	G.TREIBER		50	50	24	1968	30	--	S	--	2820	8.0	--
139-090-148BD	G.TREIBER		350	350	6	--	40	--	K	125TGRV	2060	8.0	--
139-090-20AAD	C.KREIS		18	18	--	1962	9	--	S	--	1050	4.0	--
139-090-20ACC	L.HEINLE		130	--	4	1966	--	--	H	--	3150	--	--
139-090-20ADA	C.KREIS		60	60	18	--	30	--	K	--	1020	7.0	--
139-090-20BDD	L.HEINLE		438	438	4	--	--	--	S	125TGRV	2110	9.5	--
139-090-20CBA	H.MISCHE		240	240	--	1929	80	--	K	--	2550	8.0	--
139-090-22BCD	H.MISCHE		210	210	4	1960	80	--	S	--	2580	8.0	--
139-090-24DCA1	A.DING		34	34	24	1970	19	--	H	--	2050	7.0	--

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139-090-24CA2	A.DING		45	45	24	--	20	--	S	--	3020	7.0	--
139-090-27CA	PAN AMERICAN	11210	--	--	--	--	--	--	U	--	--	--	2412
139-090-27DAC	H.MISCHE		48	48	24	1969	18	--	S	--	--	--	--
139-090-28CCA1	E.BICKMAIER		40	40	36	1900	5	--	S	--	4250	7.0	--
139-090-28CCA2	E.BICKMAIER		150	150	2	1970	--	--	K	--	2100	8.0	--
139-090-32BDC	E.HEINLE		25	25	18	1952	15	--	S	--	<500	7.0	--
139-090-32BDD	E.HEINLE		15	15	60	1920	6	--	H	--	<500	7.0	--
139-090-32DAA	E.HEINLE		35	35	18	1954	20	--	S	--	--	--	--
140-081-06CCC	NDSWC 9016	100	--	--	--	1974	--	--	U	--	--	--	1660
140-081-08CDA	J.WACHTER		330	--	2	1959	F	--	U	--	2600	10.0	--
140-081-16CAA	J.WACHTER		505	--	2	1960	66	--	S	--	--	--	--
140-081-18ABD	NDSWC 9017	100	56	53	1	1974	11	12-74	U	112SQBC	1370	8.5	1645
140-081-21CBC	A.MORK		24	--	2	1958	--	--	K	112SQBC	1870	10.0	--
140-081-29ACC	M.GEISER		390	--	2	1958	330	--	H	211HLCK	2780	11.0	--
140-081-30AAB	M.BOEHM		120	--	4	1968	40	--	H	--	--	--	--
140-081-33BCB	D.SHAW		175	--	2	1958	75	--	K	--	2400	10.0	--
140-081-33DCD	D.ENTZEL		120	--	2	1920	--	--	K	--	2200	--	--
140-082-08CCC	M.VOGEL		84	--	2	1930	40	--	K	--	1330	--	--
140-082-01DAD	NDSWC 9327	60	47	44	1	1975	16	8-75	U	112SQBC	1080	9.0	1655
140-082-09CDD	J.SCHLOSSER		245	--	3	1945	--	--	K	--	2050	9.0	--
140-082-10DAB	W.GEIGER		205	--	3	1968	--	--	S	--	2100	11.0	--
140-082-14AAD	J.FISCHER		200	--	3	1948	--	--	H	--	2200	10.0	--
140-082-15CDC1	MRS. J.BAUER		120	--	2	1920	--	--	S	--	2200	9.0	--
140-082-15CDC2	MRS. J.BAUER		220	--	4	1966	--	--	K	--	2300	10.0	--
140-082-18CBA	R.SCHLOSSER		420	--	4	1960	--	--	H	125CBLD	2060	9.0	--
140-082-20CDD	G.HAGEROTT		100	--	2	1964	--	--	H	--	1800	10.0	--
140-082-22DDD	R.GEIGER		165	--	2	1911	--	--	S	--	2000	9.0	--
140-082-24CCA	H.GRAF		135	--	4	1961	20	--	K	--	2320	--	--
140-082-28BAB	J.FRIED		260	--	2	1934	100	--	K	125CBLD	2110	13.0	--
140-082-32ABA	P.FRIED		240	--	6	1962	60	--	H	--	2000	14.0	--
140-082-34ABA	O. JOHNSON		210	--	4	1971	38	--	H	--	3500	--	--
140-082-36CCB	A.EHLIS		180	--	4	1915	--	--	K	--	2100	14.0	--
140-083-02BCC	L.BERGER		290	--	2	1958	--	--	K	125CBLD	2210	11.5	--
140-083-04CCA	T.ZANDER		35	--	6	1972	9	--	K	--	2050	8.0	--
140-083-06CBB	J.FERDERER		370	--	4	1967	--	--	K	125CBLD	2140	9.5	--
140-083-09DDD	A.HAGEROTT		250	--	6	1962	--	--	S	125TGRV	2440	10.0	--
140-083-14DAA	N.HAGEROTT		80	--	2	1941	--	--	S	--	2600	8.0	--
140-083-16AAA	NDSWC 4765	300	--	--	--	--	--	--	U	--	--	--	2160
140-083-18DDB	J.ZANDER		235	--	2	1965	60	--	K	--	2100	9.5	--
140-083-20CAB	J.BOEHM		82	--	24	1972	42	--	K	--	2250	--	--

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140-083-22DBC	V.SCHLOSSER		280	--	4	1958	--	--	K	125CBLD	2150	10.0	--
140-083-28ADD	A.ZANDER		55	--	24	1966	19	--	S	--	1260	6.5	--
140-083-34ADA	A.FROHLICH		35	--	2	1910	12	--	K	--	900	6.0	--
140-083-35DCC	J.FROHLICH		200	--	2	1918	--	--	K	--	1750	9.5	--
140-084-04CBB	O.SCHULZ		230	--	4	1967	--	--	H	--	2500	12.0	--
140-084-06BCB	A.CHRISTIAN		160	--	6	--	--	--	K	--	1380	10.0	--
140-084-08DCD	G.DOLL		300	--	4	1957	--	--	K	125TGRV	2130	12.0	--
140-084-10BCB	H.HOESEL		160	--	2	1948	146	--	K	--	1450	--	--
140-084-17CDD	C.DOLL		85	--	6	1957	--	--	K	--	7000	10.0	--
140-084-22CBB	L.HOESEL		165	--	4	1935	--	--	K	--	2100	--	--
140-084-24BBA	M.STURN		90	--	24	1930	76	--	K	--	2200	--	--
140-084-26DDA	B.HOOVESTOL		30	--	6	1945	--	--	K	--	1200	12.0	--
140-084-30AAD1	L.FORSTER		30	--	24	1970	4	--	K	--	2300	10.0	--
140-084-30AAD2	L.FORSTER		200	--	2	1958	--	--	K	--	2050	14.0	--
140-084-33CCC	J.DOLL		420	--	4	1952	320	--	K	125CBLD	2460	11.0	--
140-084-35CCC	NDSWC 4759	300	219	213	1	1974	84	2-75	U	125TGRV	1960	--	2030
140-084-36DCB	V.KILEN		27	--	36	--	25	--	K	--	750	--	--
140-085-02AAB	V.RUSCH		90	--	6	--	--	--	K	--	800	10.0	--
140-085-03DDD	W.RUSCH	1040	980	--	4	1965	278	--	K	211FXHL	2630	--	2100
140-085-04ACB	P.SCHMIDT		79	--	4	1957	--	--	K	--	1800	10.5	--
140-085-08BAC	R.KLUSMAN		54	--	24	1967	7	--	K	--	940	10.0	--
140-085-09DBD	T.WILKENS		380	--	4	--	125	--	K	125CBLD	2520	11.5	--
140-085-12ABB1	C.RUSCH		60	--	24	--	55	--	H	--	1400	7.5	--
140-085-12ABB2	C.RUSCH		213	--	5	1926	80	--	K	--	2100	--	--
140-085-14ABD	J.ERHARDT		30	--	24	1954	12	--	K	--	2400	7.0	--
140-085-15BCB	W.HENKE		27	--	48	1963	10	--	H	--	1700	9.5	--
140-085-18BBC	NDSWC 4758	320	304	298	1	1974	114	2-75	U	125TGRV	2630	9.0	2095
140-085-20BDA1	E.KLUSMANN		362	--	4	1967	185	--	H	125TGRV	2490	10.0	--
140-085-20BDA2	E.KLUSMANN		140	--	24	1900	50	--	S	--	2080	9.0	--
140-085-25BBC	NDSWC 4640	40	--	--	--	1974	--	--	U	--	--	--	2012
140-085-25BCB	NDSWC 4639	40	--	--	--	1974	--	--	U	--	--	--	2010
140-085-25BCC	NDSWC 4638	40	--	--	--	1974	--	--	U	--	--	--	2005
140-085-28BCD1	W.TELLMANN		528	--	4	1970	260	--	K	125TGRV	2440	12.0	--
140-085-28BCD2	W.TELLMANN		100	--	24	1910	25	--	K	--	2150	12.0	--
140-085-29ABC	F.SCHMIDT		120	--	24	1949	--	--	K	--	2100	--	--
140-085-30AAA	E.HOLLE		595	--	--	--	--	--	K	211HLCK	2470	10.0	--
140-085-34ABC	R.ENGELTER		60	--	24	1969	--	--	K	--	2850	10.0	--
140-085-34CCB1	K.KUNZ		135	--	4	1958	80	--	H	--	1530	11.0	--
140-085-34CCB2	K.KUNZ		45	--	6	1968	15	--	S	--	1400	8.0	--
140-086-07DCD	G.CONITZ		40	--	2	1950	2	--	H	--	1600	--	--

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140-086-10DAD	J.SORGE		90	--	24	1963	20	--	K	--	1270	--	--
140-086-12BCB	M.DOLL		360	--	4	1949	80	--	K	125TGRV	1690	9.0	--
140-086-17AAA1	M.COMITZ		190	--	6	1965	90	--	K	--	2100	10.0	--
140-086-17AAA2	M.COMITZ		135	--	24	1955	40	--	K	--	2200	12.0	--
140-086-17CCD	L.STAUSS		186	--	4	1966	150	--	K	--	1700	8.0	--
140-086-20C8B	S.TREUDE		97	--	4	1950	--	--	H	--	2420	14.0	--
140-086-20D0B	J.DOLL		150	--	6	1945	147	--	K	--	2330	9.0	--
140-086-22DDB	F.NAGEL		48	--	24	1953	12	--	K	--	2350	9.5	--
140-086-24CDC1	L.MOLTZEN		22	--	--	--	--	--	H	--	--	--	--
140-086-24CDC2	L.MOLTZEN		16	--	48	--	--	--	H	--	2500	12.0	--
140-086-24CDC3	L.MOLTZEN		56	--	24	1972	28	--	S	--	--	--	--
140-086-30DCD	W.COMITZ		49	--	4	1959	12	--	K	--	1000	18.0	--
140-086-34BDA	J.FERDERER		78	--	5	1962	28	--	K	--	2500	7.0	--
140-086-36CB	ANMAR OIL-GAS	5960	--	--	--	1971	--	--	U	--	--	--	2194
140-086-36CCC	R.HOLLE		250	--	2	1954	180	--	K	125TGRV	2340	11.5	--
140-087-02ACA	P.SCHECK		60	60	24	1963	40	--	K	--	3500	8.0	--
140-087-02BDA	P.SCHECK		25	25	24	1958	--	--	S	--	--	--	--
140-087-02CDD1	G.BICKEL		47	47	24	--	27	--	H	--	1900	8.0	--
140-087-02CDD2	G.BICKEL		30	30	48	--	20	--	S	--	2900	8.0	--
140-087-08AAC	A.WINCKLER		40	40	18	--	20	--	K	--	2180	--	--
140-087-08ADB	A.WINCKLER	67	67	67	24	1972	30	--	S	--	--	--	--
140-087-09CCB	M.BECKER		93	93	4	--	--	--	S	--	2000	9.0	--
140-087-17DAA	A.BECKER		30	30	24	1965	28	--	H	--	3700	7.5	--
140-087-19ADB	E.PELTZ		44	44	24	1970	20	--	H	--	850	--	--
140-087-20CAD	C.GITTEL		60	60	2	1955	20	--	S	--	1680	--	--
140-087-22BDA	A.KROH		24	24	36	--	--	--	K	--	1180	7.5	--
140-087-23CC	D.PELTZ		40	40	24	1969	10	--	K	--	2620	--	--
140-087-24ACA	E.SEEGER		76	76	24	1965	30	--	K	--	5900	8.0	--
140-087-26CAC1	A.ROEMMICH		70	70	18	1960	45	--	H	--	2100	--	--
140-087-26CAC2	A.ROEMMICH		90	90	24	1970	45	--	S	--	1400	--	--
140-087-26DDC	H.GAPPERT		93	93	2	1952	12	--	K	--	1020	--	--
140-087-31DCC	P.SCHLATTER		46	46	24	1967	--	--	S	--	>7000	8.0	--
140-087-33ABB1	W.KROH		360	360	4	1971	140	--	K	--	2000	10.0	--
140-087-33ABB2	G.KROH		340	340	2	--	--	--	S	--	--	--	--
140-088-04ADD1	P.WEINHARDT	76	76	76	4	1945	57	9-45	S	--	2300	8.0	--
140-088-04ADD2	E.WEINHARDT	70	70	--	2	1953	--	--	S	--	2150	9.0	--
140-088-04DAA1	E.WEINHARDT		215	--	4	1969	190	9-69	H	--	930	--	--
140-088-04DAA2	E.WEINHARDT		65	--	--	--	--	--	H	--	1580	9.0	--
140-088-04DAA3	T.KOTTRE		136	136	1	1957	--	--	K	--	1950	--	--
140-088-09CCD	J.GERGER		305	--	--	1956	--	--	H	125SNLB	2350	--	--

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
140-088-16ADB1	NDSWC 4754	890	731	719	2	1975	280	2-75	U	125CBLD	2900	9.5	2280
140-088-16ADB2	NDSWC 4754A	400	394	382	2	1975	234	9-75	U	125TGRV	--	--	2280
140-088-22AC	W.CARTER		290	--	4	1946	195	9-46	H	--	--	--	--
140-088-22BDD1	W.CARTER		68	--	24	1966	35	--	H	--	1000	--	--
140-088-22BDD2	W.CARTER		52	52	24	--	38	--	K	--	1050	6.5	--
140-088-27DCB	E.RICHTER		84	84	24	1969	--	--	K	--	1400	7.5	--
140-088-29DAA	M.GIETZEN		50	50	6	1950	--	--	H	--	1150	10.0	--
140-088-29DAB	M.GIETZEN		50	50	12	--	--	--	S	--	--	8.0	--
140-088-35C	E.RICHTER		35	35	18	1969	7	--	U	--	--	--	--
140-089-02BCD	E.QUINTUS		44	44	24	1971	12	--	P	--	2550	10.0	--
140-089-03CCA	B.MORMAN		154	--	4	1966	--	--	K	--	1950	--	--
140-089-05CAB	D.SEBASTIAN		80	80	4	1945	60	--	K	--	1820	3.0	--
140-089-06CAD	L.WEHR		180	180	6	1920	140	--	K	--	1220	7.0	--
140-089-08DAD	F.WEHR		22	22	48	--	11	--	H	--	1750	8.0	--
140-089-08DCA	F.WEHR		28	28	18	1964	5	--	S	--	2300	7.0	--
140-089-09CAA	M.WEHR		210	198	6	1970	180	--	K	--	2020	--	--
140-089-09CAD	M.WEHR		65	65	24	1966	60	--	S	--	5100	8.0	--
140-089-10DCB	C.WEHR		50	50	72	--	--	--	S	--	1800	8.0	--
140-089-10DCC	C.WEHR		50	--	72	--	--	--	H	--	1850	--	--
140-089-11CCA	J.KOTTENBROCK	110	110	110	4	1963	100	--	K	--	1780	5.5	--
140-089-13ADB	W.WEHR		99	99	--	--	--	--	K	--	2930	5.0	--
140-089-14BCA	H.WEHR		80	80	4	1944	30	--	S	--	--	--	--
140-089-14BDC	ST.CLEMENS CH.		60	--	--	--	--	--	P	--	1000	5.0	--
140-089-15DAA1	C.WEHR		65	65	60	1917	58	--	S	--	5200	8.0	--
140-089-15DAA2	G.WEHR		65	65	18	1967	58	--	K	--	1880	10.0	--
140-089-15DCC	NDSWC 4536	380	163	157	1	1973	13	12-73	U	112EMCK	2130	7.0	2103
140-089-22CAC	W.GIETZEN		45	45	24	1969	23	--	K	--	4200	--	--
140-089-22CAD	B.GIETZEN		33	33	36	1885	24	--	U	--	>7000	--	--
140-089-22CDB1	W.GIETZEN		110	--	6	1969	--	--	K	--	6240	--	--
140-089-22CDB2	B.GIETZEN	555	555	--	--	1969	--	--	U	--	--	--	2183
140-089-2688A	M.BROWN		25	--	--	--	20	--	H	--	1820	7.5	--
140-089-2688C1	M.BROWN		93	--	--	--	--	--	S	--	2350	7.0	--
140-089-2688C2	M.BROWN		92	--	--	--	--	--	S	--	--	--	--
140-089-28BAD1	B.DUPPONG		30	30	--	1944	25	--	K	--	920	7.0	--
140-089-28BAD2	B.DUPPONG		486	486	4	1966	--	--	K	--	--	--	--
140-089-31DDB	O.HARTMANN		115	115	--	1959	--	--	K	--	1000	--	--
140-089-32BCC	J.WANNER		78	--	24	1917	78	--	U	--	--	--	--
140-089-32BCD	J.WANNER		100	--	2	1951	--	--	K	--	1580	7.5	--
140-089-36ADD1	NDSWC 4537	400	349	343	1	1973	41	12-73	U	112EMCK	2860	9.0	2085
140-089-36ADD2	NDSWC 4537A	160	144	138	1	1973	21	12-73	U	112EMCK	1720	8.5	2085

LOCAL WELL NUMBER	OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
140-090-05CA	HEBRON BRICK CO.	4155	--	--	--	1952	--	--	U	--	--	--	2375
140-090-12ABC	C.BRANDT		90	90	--	--	20	--	S	--	850	7.0	--
140-090-12BAD	C.BRANDT		30	30	--	1900	26	--	K	--	1320	6.5	--
140-090-12DCC	B.WEHR		30	30	60	--	28	--	K	125SNLB	966	--	--
140-090-14DC	D.ELMER		10	10	--	--	--	--	S	--	520	3.5	--
140-090-14DDC	D.ELMER		200	200	24	1900	--	--	K	--	2280	7.0	--
140-090-15BAA1	T.PETRI		42	42	12	1954	10	--	H	--	2000	--	--
140-090-15BAA2	T.PETRI		32	32	18	1962	10	--	S	--	2100	.5	--
140-090-17ACB	N.UNDERDAHL	1560	1500	1274	4	1969	146	--	K	211FXHL	2680	10.5	2180
140-090-18BCB1	P.KRAENZEL		45	45	60	1915	40	--	S	--	2700	7.0	--
140-090-18BCB2	P.KRAENZEL		45	45	24	1968	40	--	S	--	3420	10.0	--
140-090-18CBC	NDSWC 9297	350	--	--	--	1975	--	--	U	--	--	--	2071
140-090-19CCA	A.REHM		40	40	60	1910	35	--	S	--	2220	7.0	--
140-090-20DBA1	A.REHM	1200	1200	1200	--	1963	10	--	K	211FXHL	2800	12.0	2105
140-090-20DBA2	A.REHM		30	30	--	1918	25	--	S	--	1680	7.0	--
140-090-218BB	NDSWC 4532	220	124	118	1	1973	7	12-73	U	112KLDR	--	--	2105
140-090-21BCB1	NDSWC 4531	440	381	375	1	1973	9	12-73	U	112KLDR	2500	10.0	2103
140-090-21BCB2	H.SAYLER		19	--	24	--	5	5-74	U	112KLDR	9760	--	2106
140-090-21DAB	E.SAYLER		23	23	24	1962	16	--	K	--	850	6.0	--
140-090-22ADA	R.HOERAUF		60	60	--	--	55	--	K	--	2250	8.0	--
140-090-24DCD	M.HOERAUF		145	145	6	1968	30	--	K	--	900	6.0	--
140-090-24DBB	M.HOERAUF		156	156	6	1966	30	--	S	--	--	--	--
140-090-25BCA	C.HOERAUF		90	90	8	1948	40	--	H	--	825	10.0	--
140-090-25DBB	C.HOERAUF		128	128	4	1966	--	--	S	--	900	3.5	--
140-090-25DCA	J.WANNER		123	123	6	--	--	--	H	--	3350	--	--
140-090-25DCB	J.WANNER		100	100	24	1962	60	--	K	--	--	--	--
140-090-26BDB	J.PATZWALD	301	301	301	4	1970	25	--	H	125TGRV	2460	10.0	--
140-090-26CBC	H.CHASE		12	12	20	1940	10	--	H	--	2900	13.0	--
140-090-26CBD	H.CHASE		14	14	60	1900	10	--	S	--	3800	10.0	--
140-090-29DDC1	R.SCHNEIDER		265	265	4	1965	--	--	S	--	2220	8.0	--
140-090-29DDC2	R.SCHNEIDER	282	282	240	4	1969	20	--	H	125TGRV	2710	15.0	2240
140-090-32BDD	NDSWC 4530	280	195	183	1	1973	18	12-73	U	125TGRV	2310	8.5	2180
140-090-33AAC	CITY OF HEBRON	433	427	400	17	1957	100	--	--	405TGRV	2570	9.0	--
140-090-33ACD	CITY OF HEBRON	580	580	560	17	1950	500	--	P	125TGRV	2390	16.0	--
140-090-34AAA	NDSWC 4533	440	204	198	1	1973	11	12-73	U	112KLDR	1830	7.8	2137
140-090-34ADD	NDSWC 4534	260	83	77	1	1973	11	12-73	U	112KLDR	--	--	2140
140-090-34DBB	I.LANGER		60	60	18	1953	45	--	K	--	2020	7.0	--
140-090-3588A	J.ELMER		280	280	4	1964	35	--	K	125TGRV	2970	5.0	--
140-090-36CCD	NDSWC 9301	400	--	--	--	1975	--	--	U	--	--	--	2142
141-089-36DCD	NDSWC 9330	380	338	332	1	1975	26	9-75	U	112EMCK	2930	10.0	2093

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OWNER	DRILLED DEPTH (FT)	WELL DEPTH (FT)	CASING DEPTH (FT)	CASING DIAMETER (IN)	DATE DRILLED (YEAR)	WATER LEVEL (FT)	DATE WATER LEVEL MEASURED	USE OF WATER	MAJOR AQUIFER	SPECIFIC CONDUCTANCE (µMHOS/CM @ 25°C)	TEMPERATURE (°C)	ALTITUDE OF LSD (FT)
<u>LOCAL SPRING NUMBER</u>												
136-081-05BAA		---	---	---	---	F	5-72	S	112LTHR	1700	12.0	---
138-086-11ADD		---	---	---	---	F	7-73	U	125TGRV	1630	8.5	---
138-088-30CAD2		---	---	---	---	F	9-72	S	125SNLB	1650	---	---
138-088-34CBC		---	---	---	---	F	9-72	S	125SNLB	2300	---	---
139-087-06BDB		---	---	---	---	F	10-72	K	125SNLB	2280	8.0	---
139-089-09ABC		---	---	---	---	F	5-72	S	125SNLB	895	7.0	---
139-089-16CDD		---	---	---	---	F	5-72	S	112EMCK	---	---	---
140-088-29DAC		---	---	---	---	F	5-72	S	125SNLB	---	---	---
140-089-03ADD		---	---	---	---	F	5-72	S	125SNLB	1630	8.0	---
140-090-15BAA3		---	---	---	---	F	5-72	S	125SNLB	2220	---	---

TABLE 2.--Water-level measurements in selected observation wells

EXPLANATION

Water levels shown have been adjusted to feet below or (+) above land surface

MP, measuring point lsd, land surface datum msl, mean sea level

Depth to water, in feet below or (+) above land surface

133-082-05DBA NDSWC 4569 Drilled depth 240 ft, cased to 168 ft with 1½-inch plastic pipe, No. 18-slot screen set 168-174 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1742 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 16, 1973..	4.23	May 16.....	4.04	Feb. 7, 1975..	4.10
Nov. 14.....	4.26	Aug. 8.....	4.44	May 5.....	3.44
Dec. 18.....	4.24	Oct. 2.....	4.57	Aug. 18.....	4.09
Mar. 6, 1974..	3.97	Dec. 6.....	4.29		

134-079-07BCB NDSWC 4572 Drilled depth 140 ft, cased to 73 ft with 1½-inch plastic pipe, No. 18-slot screen set 73-79 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1650 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 11, 1973..	11.62	Aug. 8.....	11.78	Feb. 7, 1975..	11.63
Mar. 6, 1974..	11.30	Oct. 3.....	11.99	May 5.....	11.02
May 10.....	11.35	Dec. 4.....	11.78	Aug. 15.....	11.22

134-079-20AAB NDSWC 9295 Drilled depth 120 ft, cased to 68 ft with 1½-inch plastic pipe, No. 18-slot screen set 68-71 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1618 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 6, 1975..	3.68	Aug. 15.....	3.60	Sept. 9.....	4.82
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134-080-16DAA NDSWC 4571 Drilled depth 200 ft, cased to 163 ft with 1½-inch plastic pipe, No. 18-slot screen set 163-169 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1672 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 12, 1973..	41.98	Aug. 8.....	42.36	May 5, 1975..	42.18
Mar. 6, 1974..	42.05	Oct. 3.....	42.49		
May 10.....	42.44	Dec. 4.....	42.32		

134-080-17DDD NDSWC 8992 Drilled depth 230 ft, cased to 198 ft with 1½-inch plastic pipe, No. 12-slot screen set 198-204 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1699 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

July 1, 1974..	62.20	Dec. 4.....	62.35	Aug. 18.....	62.29
Aug. 21.....	62.24	Feb. 7, 1975..	62.32	Sept. 9.....	62.18
Oct. 3.....	62.33	May 5.....	62.15		

Depth to water, in feet below or (+) above land surface

134-080-23BAB NDSWC 8993 Drilled depth 120 ft, cased to 53 ft with 1½-inch plastic pipe, No. 12-slot screen set 53-59 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1647 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 3, 1974..	21.17	May 5, 1975..	19.63	Aug. 18.....	20.60
Dec. 4.....	21.05				

134-082-35DAA NDSWC 4570 Drilled depth 140 ft, cased to 113 ft with 1½-inch plastic pipe, No. 12-slot screen set 113-119 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1697 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1973..	4.18	Aug. 8.....	4.53	May 5.....	3.43
Dec. 18.....	4.17	Oct. 2.....	4.76	Aug. 18.....	4.15
Mar. 6, 1974..	3.84	Dec. 6.....	4.54		
May 16.....	3.93	Feb. 7, 1975..	4.45		

134-083-05DCC NDSWC 4561 Drilled depth 320 ft, cased to 108 ft with 1½-inch plastic pipe, No. 12-slot screen set 108-114 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1835 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 24, 1973..	0.97	May 16, 1974..	0.83	May 5, 1975..	0.47
Oct. 29.....	1.00	Aug. 8.....	1.22	Aug. 18.....	.91
Nov. 14.....	.94	Oct. 2.....	1.48		
Dec. 18.....	1.02	Dec. 6.....	1.40		

134-083-17CCC NDSWC 4565 Drilled depth 300 ft, cased to 238 ft with 1½-inch plastic pipe, No. 18-slot screen set 238-244 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1830 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 25, 1973..	5.10	May 16.....	5.00	Feb. 7, 1975..	5.59
Nov. 14.....	5.10	Aug. 8.....	5.43	May 5.....	5.08
Dec. 18.....	5.14	Oct. 2.....	5.75	Aug. 18.....	4.80
Mar. 6, 1974..	5.11	Dec. 6.....	5.55		

134-083-17DDB1 NDSWC 4566 Drilled depth 300 ft, cased to 238 ft with 1½-inch plastic pipe, No. 18-slot screen set 238-244 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1819 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1973..	4.35	Aug. 8.....	4.59	May 5.....	4.00
Dec. 18.....	4.42	Oct. 2.....	4.80	Aug. 18.....	4.20
Mar. 6, 1974..	4.35	Dec. 6.....	4.70		
May 16.....	4.15	Feb. 7, 1975..	4.69		

Depth to water, in feet below or (+) above land surface

134-083-17DDB2 NDSWC 4566A Drilled depth 60 ft, cased to 50 ft with 1½-inch plastic pipe, No. 12-slot screen set 50-56 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1819 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 24, 1973..	11.43	May 16.....	10.83	Feb. 7, 1975..	11.20
Nov. 14.....	11.48	Aug. 8.....	11.56	May 5.....	8.71
Dec. 18.....	11.48	Oct. 2.....	11.92	Aug. 18.....	10.89
Mar. 6, 1974..	10.62	Dec. 6.....	11.66		

134-083-26BBA NDSWC 4568 Drilled depth 260 ft, cased to 138 ft with 1½-inch plastic pipe, No. 12-slot screen set 138-144 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1785 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 17, 1973..	9.63	May 16.....	9.21	Feb. 7, 1975..	9.34
Nov. 14.....	9.65	Aug. 8.....	9.84	May 5.....	7.64
Dec. 18.....	9.67	Oct. 2.....	10.11	Aug. 18.....	9.80
Mar. 6, 1974..	7.83	Dec. 6.....	9.90		

134-083-32AAA1 NDSWC 4567 Drilled depth 360 ft, cased to 270 ft with 1½-inch plastic pipe, No. 18-slot screen set 270-276 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1863 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1973..	51.24	Aug. 8.....	51.53	May 5.....	51.08
Dec. 18.....	51.38	Oct. 2.....	51.62	Aug. 18.....	51.33
Mar. 6, 1974..	51.22	Dec. 6.....	51.55		
May 16.....	51.10	Feb. 7, 1975..	51.50		

134-083-32AAA2 NDSWC 4567A Drilled depth 100 ft, cased to 93 ft with 1½-inch plastic pipe, No. 18-slot screen set 93-99 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1863 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1973..	31.63	Aug. 8.....	31.42	May 5.....	31.25
Dec. 18.....	31.81	Oct. 2.....	31.51	Aug. 18.....	31.30
Mar. 6, 1974..	31.59	Dec. 6.....	31.45		
May 16.....	31.58	Feb. 7, 1975..	31.16		

134-084-01CDC1 NDSWC 4562 Drilled depth 380 ft, cased to 208 ft with 1½-inch plastic pipe, No. 18-slot screen set 208-214 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1895 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 29, 1973..	39.77	May 17.....	39.19	Feb. 7, 1975..	40.78
Nov. 14.....	39.93	Aug. 8.....	39.82	May 5.....	39.38
Dec. 18.....	40.02	Oct. 2.....	40.38	Aug. 18.....	39.20
Mar. 6, 1974..	39.98	Dec. 6.....	40.64		

Depth to water, in feet below or (+) above land surface

134-084-01CDC2 NDSWC 4562A Drilled depth 100 ft, cased to 88 ft with 1½-inch plastic pipe, No. 12-slot screen set 88-94 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1895 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 14, 1973..	36.21	Aug. 8.....	36.41	May 5.....	36.50
Dec. 18.....	36.59	Oct. 2.....	36.66	Aug. 18.....	36.09
Mar. 6, 1974..	36.52	Dec. 6.....	36.87		
May 17.....	36.62	Feb. 7, 1975..	36.89		

134-084-03ADD NDSWC 4563 Drilled depth 100 ft, cased to 18 ft with 1½-inch plastic pipe, No. 18-slot screen set 18-24 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1900 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 30, 1973..	15.70	May 17.....	14.98	Feb. 7, 1975..	16.51
Nov. 14.....	15.62	Aug. 8.....	17.99	May 5.....	14.53
Dec. 18.....	15.48	Oct. 2.....	16.56	Aug. 18.....	15.19
Mar. 6, 1974..	15.10	Dec. 6.....	16.47		

134-084-11DDD NDSWC 4564 Drilled depth 320 ft, cased to 153 ft with 1½-inch plastic pipe, No. 18-slot screen set 153-159 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1869 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 23, 1973..	15.70	May 17.....	14.04	Feb. 7, 1975..	15.74
Nov. 14.....	14.87	Aug. 8.....	14.77	May 5.....	13.60
Dec. 18.....	15.05	Oct. 2.....	15.40	Aug. 18.....	14.04
Mar. 6, 1974..	14.94	Dec. 6.....	15.59		

135-079-10AAB1 NDSWC 4769 Drilled depth 260 ft, cased to 174 ft with 2-inch steel pipe, No. 12-slot screen set 174-180 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1665 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Dec. 4, 1974..	42.77	May 5.....	28.04	Sept. 9.....	47.57
Feb. 7, 1975..	37.73				

135-079-10AAB2 NDSWC 4769A Drilled depth 100 ft, cased to 93 ft with 1½-inch plastic pipe, No. 12-slot screen set 93-99 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1665 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Dec. 4, 1974..	48.67	May 5.....	48.53	Sept. 9.....	47.86
Feb. 7, 1975..	48.85	Aug. 15.....	48.04		

135-080-30AAB NDSWC 4575 Drilled depth 300 ft, cased to 218 ft with 1½-inch plastic pipe, No. 18-slot screen set 218-224 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1777 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 9, 1973..	79.72	Apr. 26.....	79.75	Dec. 4.....	79.98
Nov. 13.....	79.65	May 10.....	79.70	Feb. 7, 1975..	80.18
Dec. 18.....	79.80	Aug. 8.....	79.97	May 5.....	79.78
Mar. 6, 1974..	79.89	Oct. 3.....	79.97	Aug. 18.....	79.73

Depth to water, in feet below or (+) above land surface

135-080-33DDA NDSWC 4574 Drilled depth 200 ft, cased to 163 ft with 1½-inch plastic pipe, No. 12-slot screen set 163-169 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1725 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 18, 1973..	51.97	Mar. 26.....	51.89	Mar.	Destroyed
Mar. 6, 1974..	51.99				

135-081-02CCD NDSWC 4576 Drilled depth 260 ft, cased to 173 ft with 1½-inch plastic pipe, No. 12-slot screen set 173-179 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1896 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	40.26	May 10.....	42.56	Feb. 6, 1975..	46.57
Dec. 18.....	40.77	Aug. 8.....	43.79	May 5.....	47.78
Mar. 6, 1974..	41.69	Oct. 3.....	43.88	Aug. 18.....	50.95
Apr. 26.....	42.47	Dec. 4.....	45.65	Sept.	Destroyed

135-081-03BCC NDSWC 8996 Drilled depth 342 ft, cased to 278 ft with 1½-inch plastic pipe, No. 12-slot screen set 278-284 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1887 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 1, 1974..	91.45	Feb. 6, 1975..	91.34	Aug. 18.....	91.40
Oct. 3.....	91.12	May 5.....	91.05		
Dec. 4.....	91.21	Aug. 15.....	91.34		

135-081-04BAB NDSWC 4578 Drilled depth 297 ft, cased to 258 ft with 1½-inch plastic pipe, No. 18-slot screen set 258-264 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1847 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	56.68	Aug. 7.....	57.60	May 5.....	56.58
Dec. 18.....	57.15	Oct. 3.....	57.98	Aug. 18.....	55.22
Mar. 6, 1974..	57.44	Dec. 4.....	58.22		
May 10.....	57.24	Feb. 6, 1975..	58.62		

135-081-11ABA NDSWC 4577 Drilled depth 240 ft, cased to 124 ft with 1½-inch plastic pipe, No. 12-slot screen set 124-130 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1914 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	83.25	Aug. 8.....	83.09	July 31.....	82.99
Dec. 18.....	83.65	Oct. 3.....	82.10	Aug. 18.....	82.94
Mar. 6, 1974..	83.35	Dec. 4.....	81.98	Sept.	Destroyed
Apr. 26.....	83.13	Feb. 6, 1975..	82.93		
May 10.....	83.03	May 5.....	82.87		

Depth to water, in feet below or (+) above land surface

135-081-240DD NDSWC 9328 Drilled depth 480 ft, cased to 273 ft with 2-inch steel pipe, No. 12-slot screen set 273-291 ft below lsd; MP top of casing 0 ft above lsd. Lsd 1844 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Aug. 6, 1975..	129.80	Aug. 15.....	130.03		

135-082-30CBB NDSWC 4560 Drilled depth 220 ft, cased to 158 ft with 1½-inch plastic pipe, No. 18-slot screen set 158-164 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1957 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 29, 1973..	11.61	May 17.....	9.20	Feb. 6, 1975..	10.93
Nov. 14.....	10.07	Aug. 8.....	10.69	May 5.....	8.41
Dec. 18.....	10.26	Oct. 2.....	11.32	Aug. 18.....	9.70
Mar. 6, 1974..	9.60	Dec. 6.....	11.00		

135-083-32CBB1 NDSWC 4768 Drilled depth 660 ft, cased to 454 ft with 2-inch steel pipe, No. 12-slot screen set 454-466 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1884 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Dec. 6, 1974..	54.28	Feb. 19.....	54.14	Sept. 9.....	54.27
Feb. 7, 1975..	53.99	May 5.....	53.79		

135-083-32CBB2 NDSWC 4768A Drilled depth 380 ft, cased to 358 ft with 2-inch steel pipe, No. 12-slot screen set 358-370 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1884 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Dec. 6, 1974..	51.53	Feb. 19.....	51.39	Aug. 18.....	49.00
Feb. 7, 1975..	51.54	May 5.....	51.00	Sept. 9.....	52.48

135-084-04DCC NDSWC 4556 Drilled depth 320 ft, cased to 248 ft with 1½-inch plastic pipe, No. 18-slot screen set 248-254 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1875 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 30, 1973..	41.10	May 18.....	41.05	Feb. 6, 1975..	41.73
Nov. 14.....	41.21	Aug. 8.....	42.25	May 5.....	40.84
Dec. 18.....	41.24	Oct. 2.....	42.45	Aug. 18.....	40.98
Mar. 6, 1974..	41.09	Dec. 6.....	41.85		

135-084-16AAA1 NDSWC 8971 Drilled depth 360 ft, cased to 277 ft with 1½-inch plastic pipe, No. 12-slot screen set 277-283 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1893 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

June 7, 1974..	51.38	Dec. 6.....	51.95	May 5.....	51.19
Aug. 1.....	51.71	Feb. 7, 1975..	51.82	Sept. 9.....	51.31

Depth to water, in feet below or (+) above land surface

135-084-16AAA2 NDSWC 8979 Drilled depth 180 ft, cased to 168 ft with 1½-inch plastic pipe, No. 12-slot screen set 168-174 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1892 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Aug. 1, 1974..	42.20	Aug. 13.....	41.75	Sept. 9, 1975..	41.85

135-084-16AAB NDSWC 8984 Drilled depth 295 ft, cased to 288 ft with 1½-inch plastic pipe, No. 12-slot screen set 288-294 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1891 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 1, 1974..	49.65	Dec. 6.....	46.69	Sept. 1975....	Destroyed
Aug. 13.....	51.13				

135-084-16AAD NDSWC 8982 Drilled depth 300 ft, cased to 263 ft with 1½-inch plastic pipe, No. 12-slot screen set 263-269 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1887 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 1, 1974..	45.92	Feb. 7, 1975..	46.19	Aug. 18.....	45.40
Dec. 6.....	46.37	May 5.....	45.59		

135-084-16ABA NDSWC 8973 Drilled depth 315 ft, cased to 290 ft with 1½-inch plastic pipe, No. 12-slot screen set 290-296 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1899 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 1, 1974..	57.62	Dec. 6.....	57.87	Sept. 9, 1975..	57.24
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135-084-16ABB NDSWC 8972 Drilled depth 300 ft, cased to 158 ft with 1½-inch plastic pipe, No. 12-slot screen set 158-164 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1880 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 1, 1974..	31.05	Dec. 6.....	31.18	Sept. 9, 1975..	30.79
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135-084-21DDD2 NDSWC 4557 Drilled depth 320 ft, cased to 258 ft with 1½-inch plastic pipe, No. 18-slot screen set 258-264 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1866 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 1, 1973..	20.88	May 17.....	20.95	Feb. 6, 1975..	21.43
Nov. 14.....	20.93	Aug. 8.....	21.40	May 5.....	20.98
Dec. 18.....	21.01	Oct. 2.....	22.16	Aug. 18.....	21.20
Mar. 6, 1974..	21.00	Dec. 6.....	21.57		

Depth to water, in feet below or (+) above land surface

135-084-21DDD3 NDSWC 4557A Drilled depth 70 ft, cased to 64 ft with 1½-inch plastic pipe, No. 12-slot screen set 64-70 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1866 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	7.90	May 17.....	7.68	Feb. 6, 1975..	8.02
Nov. 14.....	7.91	Aug. 8.....	8.09	May 5.....	7.39
Dec. 18.....	7.92	Oct. 2.....	8.25	Aug. 18.....	7.76
Mar. 6, 1974..	7.78	Dec. 6.....	8.05		

135-084-26DAA1 NDSWC 4558 Drilled depth 300 ft, cased to 258 ft with 1½-inch plastic pipe, No. 18-slot screen set 258-264 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1857 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	12.35	May 17.....	12.33	Feb. 7, 1975..	13.15
Nov. 14.....	12.44	Aug. 8.....	12.81	May 5.....	12.48
Dec. 18.....	12.53	Oct. 2.....	12.20	Sept. 9.....	12.56
Mar. 6, 1974..	12.44	Dec. 6.....	12.90		

135-084-26DAA2 NDSWC 4558A Drilled depth 180 ft, cased to 158 ft with 1½-inch plastic pipe, No. 12-slot screen set 158-164 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1856 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	7.69	May 17.....	7.30	Feb. 7, 1975..	8.29
Nov. 14.....	7.88	Aug. 8.....	7.89	May 5.....	7.56
Dec. 18.....	7.72	Oct. 2.....	8.32	Sept. 9.....	7.43
Mar. 6, 1974..	7.72	Dec. 6.....	8.25		

135-084-26DAA3 NDSWC 4558B Drilled depth 80 ft, cased to 68 ft with 1½-inch plastic pipe, No. 12-slot screen set 68-74 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1857 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	4.50	May 17.....	3.22	Feb. 7, 1975..	5.54
Nov. 14.....	4.46	Aug. 8.....	5.49	May 5.....	2.56
Dec. 18.....	4.57	Oct. 2.....	5.84	Sept. 9.....	3.77
Mar. 6, 1974..	4.44	Dec. 6.....	5.44		

136-079-05CCC NDSWC 4770 Drilled depth 380 ft, cased to 188 ft with 2-inch steel pipe, No. 12-slot screen set 188-200 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1670 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Dec. 4, 1974..	40.07	May 13, 1975..	38.01	Sept. 9.....	37.36

Depth to water, in feet below or (+) above land surface

136-081-06888 NDSWC 4590 Drilled depth 340 ft, cased to 263 ft with 1½-inch plastic pipe, No. 18-slot screen set 263-269 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1742 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 2, 1973..	3.82	May 9, 1974..	1.97	Dec. 4.....	2.65
Nov. 13.....	2.12	Aug. 7.....	2.50	May 13, 1975..	1.96
Dec. 18.....	2.18	Oct. 1.....	2.78	Aug. 18.....	1.59

136-081-07AAA NDSWC 9286 Drilled depth 520 ft, cased to 288 ft with 1½-inch plastic pipe, No. 12-slot screen set 288-294 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1779 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 18, 1975.. 22.98

136-081-07888 NDSWC 4591 Drilled depth 220 ft, cased to 138 ft with 1½-inch plastic pipe, No. 12-slot screen set 138-144 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1776 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	28.08	Aug. 7.....	28.49	May 6.....	28.12
Dec. 18.....	28.17	Oct. 2.....	28.74	Aug. 18.....	28.20
Mar. 6, 1974..	28.15	Dec. 6.....	28.73		
May 9.....	28.02	Feb. 6, 1975..	28.76		

136-081-07DDC1 NDSWC 4771 Drilled depth 560 ft, cased to 445 ft with 2-inch steel pipe, No. 12-slot screen set 445-457 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1813 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Dec. 6, 1974..	53.14	Feb. 19.....	53.22	Aug. 18.....	52.03
Feb. 6, 1975..	53.27	May 27.....	52.19		

136-081-07DDC2 NDSWC 4771A Drilled depth 380 ft, cased to 357 ft with 2-inch steel pipe, No. 12-slot screen set 357-369 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1813 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Dec. 6, 1974..	50.08	Feb. 19.....	54.48	Aug. 18.....	53.12
Feb. 6, 1975..	54.54	May 29.....	53.79		

136-081-16888 NDSWC 4592 Drilled depth 360 ft, cased to 238 ft with 1½-inch plastic pipe, No. 18-slot screen set 238-244 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1784 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 2, 1973..	30.30	May 9.....	30.53	May 6, 1975..	30.44
Nov. 13.....	30.41	Aug. 7.....	31.10	Aug. 18.....	29.63
Dec. 18.....	30.57	Oct. 3.....	31.38		
Mar. 6, 1974..	30.47	Dec. 4.....	31.53		

Depth to water, in feet below or (+) above land surface

136-081-16CCC NDSWC 4595 Drilled depth 500 ft, cased to 108 ft with 1½-inch plastic pipe, No. 18-slot screen set 108-114 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1785 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 2, 1973..	23.97	May 9.....	25.37	Feb. 6, 1975..	26.72
Nov. 13.....	24.78	Aug. 7.....	25.86	May 6.....	24.64
Dec. 18.....	24.03	Oct. 3.....	26.28	Aug. 18.....	24.90
Mar. 6, 1974..	25.17	Dec. 4.....	26.47		

136-081-16CCD NDSWC 4594 Drilled depth 473 ft, cased to 441 ft with 2-inch plastic pipe, No. 18-slot screen set 441-456 ft below lsd; MP top of casing 1.0 ft above lsd. Lsd 1795 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	35.37	Aug. 7.....	35.96	May 6.....	34.96
Dec. 18.....	35.63	Oct. 3.....	36.23	Aug. 18.....	34.64
Mar. 6, 1974..	35.49	Dec. 4.....	36.37		
May 9.....	35.55	Feb. 6, 1975..	36.57		

136-081-21CCD NDSWC 9288 Drilled depth 460 ft, cased to 278 ft with 1½-inch plastic pipe, No. 12-slot screen set 278-284 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1819 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 15, 1975..	34.60	Aug. 18.....	34.70
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136-081-31ABB NDSWC 4579 Drilled depth 340 ft, cased to 256 ft with 1½-inch plastic pipe, No. 18-slot screen set 256-262 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1844 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	31.65	Aug. 7.....	32.51	May 5.....	32.90
Dec. 18.....	31.86	Oct. 3.....	32.94	Aug. 18.....	32.10
Mar. 6, 1974..	32.08	Dec. 6.....	33.15		
May 9.....	32.07	Feb. 6, 1975..	33.44		

136-082-07CCC1 NDSWC 9305 Drilled depth 720 ft, cased to 505 ft with 2-inch steel pipe, No. 12-slot screen set 505-517 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1850 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Aug. 4, 1975..	71.89	Aug. 18.....	72.50
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136-082-07CCC2 NDSWC 9305A Drilled depth 340 ft, cased to 237 ft with 2-inch steel pipe, No. 12-slot screen set 237-249 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1850 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Aug. 4, 1975..	24.55	Aug. 18.....	24.90
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Depth to water, in feet below or (+) above land surface

136-082-22DAA NDSWC 4580 Drilled depth 400 ft, cased to 198 ft with 1½-inch plastic pipe, No. 18-slot screen set 198-204 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1814 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 2, 1973..	15.70	May 9.....	14.74	Feb. 6, 1975..	15.53
Nov. 13.....	15.47	Aug. 7.....	15.84	May 6.....	14.51
Dec. 18.....	15.33	Oct. 2.....	16.17	Aug. 18.....	15.05
Mar. 6, 1974..	14.98	Dec. 6.....	15.81		

136-083-01CCC NDSWC 4586 Drilled depth 220 ft, cased to 208 ft with 1½-inch plastic pipe, No. 12-slot screen set 208-214 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1820 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Oct. 3, 1973..	8.80	May 9.....	8.38	Feb. 6, 1975..	8.69
Nov. 13.....	8.59	Aug. 7.....	8.73	May 6.....	8.32
Dec. 18.....	8.54	Oct. 2.....	8.89	Aug. 18.....	8.50
Mar. 6, 1974..	8.47	Dec. 6.....	8.74		

136-084-20DBA NDSWC 4553 Drilled depth 180 ft, cased to 78 ft with 1½-inch plastic pipe, No. 12-slot screen set 78-84 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1795 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 30, 1973..	19.70	Aug. 8.....	18.87	May 5.....	16.17
Dec. 18.....	19.53	Oct. 2.....	19.65	Aug. 18.....	18.25
Mar. 6, 1974..	18.36	Dec. 6.....	19.89		
May 18.....	19.71	Feb. 6, 1975..	19.38		

136-084-30DAA NDSWC 4554 Drilled depth 60 ft, cased to 38 ft with 1½-inch plastic pipe, slotted 18-38 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1793 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 31, 1973..	3.14	May 18.....	11.86	May 18.....	Destroyed
Mar. 6, 1974..	10.63				

136-084-31ADD1 NDSWC 4555 Drilled depth 220 ft, cased to 178 ft with 1½-inch plastic pipe, No. 18-slot screen set 178-184 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1806 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 1, 1973..	7.90	Aug. 8.....	7.95	May 5.....	6.08
Dec. 18.....	7.83	Oct. 2.....	8.42	Aug. 18.....	7.24
Mar. 6, 1974..	7.29	Dec. 6.....	8.44		
May 18.....	7.88	Feb. 7, 1975..	8.20		

Depth to water, in feet below or (+) above land surface

136-084-31ADD2 NDSWC 4555A Drilled depth 40 ft, cased to 38 ft with 1½-inch plastic pipe, slotted 18-38 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1806 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	17.72	Aug. 8.....	18.02	May 5.....	17.93
Dec. 18.....	17.74	Oct. 2.....	18.22	Aug. 18.....	17.10
Mar. 6, 1974..	17.51	Dec. 6.....	18.14		
May 18.....	17.84	Feb. 7, 1975..	18.09		

137-081-10BAA NDSWC 9007 Drilled depth 360 ft, cased to 198 ft with 1½-inch plastic pipe, No. 12-slot screen set 198-204 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1744 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 2, 1974..	38.35	May 13, 1975..	37.62	Aug. 13.....	39.70
Dec. 4.....	38.31				

137-081-28CCD NDSWC 9283 Drilled depth 360 ft, cased to 273 ft with 1½-inch plastic pipe, No. 12-slot screen set 273-276 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1747 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 18, 1975..	14.66
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137-082-36DDD NDSWC 4581 Drilled depth 200 ft, cased to 158 ft with 1½-inch plastic pipe, No. 18-slot screen set 158-164 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1752 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 13, 1973..	1.71	Aug. 7.....	2.02	May 13, 1975..	1.58
Dec. 18.....	1.80	Oct. 1.....	2.14	Aug. 18.....	1.79
May 9, 1974..	1.78	Dec. 4.....	2.02		

137-083-06CDD1 NDSWC 4763 Drilled depth 760 ft, cased to 577 ft with 2-inch steel pipe, No. 12-slot screen set 577-589 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1816 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Dec. 3, 1974..	42.60	Feb. 19.....	42.04	Aug. 13.....	41.10
Feb. 5, 1975..	42.27	May 13.....	41.43		

137-083-06CDD2 NDSWC 4763A Drilled depth 460 ft, cased to 423 ft with 2-inch steel pipe, No. 12-slot screen set 423-435 ft below lsd; MP top of casing 3.0 ft above lsd. Lsd 1816 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Dec. 3, 1974..	43.07	Feb. 19.....	42.76	May 13.....	41.99
Feb. 5, 1975..	42.98				

Depth to water, in feet below or (+) above land surface

137-083-06CDD3 NDSWC 4763B Drilled depth 300 ft, cased to 278 ft with 1½-inch plastic pipe, No. 12-slot screen set 278-284 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1816 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1974..	79.73	Feb. 19.....	79.53	Aug. 13.....	79.60
Feb. 5, 1975..	79.68	May 13.....	78.68		

137-083-07BBA NDSWC 4552B Drilled depth 60 ft, cased to 34 ft with 1½-inch plastic pipe, slotted 14-34 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1742 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 20, 1973..	16.23	Aug. 8.....	16.25	Feb. 19.....	15.89
Dec. 27.....	15.79	Oct. 1.....	16.45	May 13.....	13.48
Mar. 6, 1974..	14.81	Dec. 3.....	16.33	Aug. 13.....	15.39
May 18.....	15.66	Feb. 5, 1975..	16.01		

137-083-07BBB1 NDSWC 4552 Drilled depth 60 ft, cased to 38 ft with 1½-inch plastic pipe, No. 18-slot screen set 38-44 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1740 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 20, 1973..	12.44	July 2.....	12.23	Feb. 5, 1975..	12.36
Dec. 27.....	12.18	Aug. 8.....	12.44	Feb. 19.....	12.26
Mar. 6, 1974..	11.30	Oct. 1.....	12.76	May 13.....	10.08
May 18.....	12.08	Dec. 3.....	12.66	Aug. 13.....	11.70

137-085-06CCD NDSWC 4551 Drilled depth 260 ft, cased to 144 ft with 1½-inch plastic pipe, No. 18-slot screen set 144-150 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1901 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 31, 1973..	24.07	May 21.....	24.10	Feb. 5, 1975..	24.59
Nov. 14.....	24.06	Aug. 8.....	24.45	May 13.....	29.98
Dec. 27.....	24.14	Oct. 3.....	24.52	Aug. 12.....	23.70
Mar. 6, 1974..	23.88	Dec. 3.....	24.50		

137-085-17CDB NDSWC 9304 Drilled depth 283 ft, cased to 118 ft with 1½-inch plastic pipe, No. 18-slot screen set 118-121 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1860 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 8, 1975..	16.75	Aug. 12.....	16.50
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137-086-03AAD1 NDSWC 4752 Drilled depth 1022 ft, cased to 716 ft with 2-inch steel pipe, No. 12-slot screen set 716-734 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1948 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Oct. 3, 1974..	79.62	Feb. 19.....	79.72	Aug. 12.....	78.00
Feb. 5, 1975..	79.95	May 6.....	79.25		

Depth to water, in feet below or (+) above land surface

137-086-03AAD2 NDSWC 4752A Drilled depth 682 ft, cased to 654 ft with 2-inch steel pipe, No. 12-slot screen set 654-672 ft below lsd; MP top of casing 3.6 ft above lsd. Lsd 1948 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Oct. 3, 1974..	78.58	Feb. 19.....	78.58	Aug. 12.....	77.88
Feb. 5, 1975..	78.37	May 6.....	78.13		

137-086-03AAD4 NDSWC 4752C Drilled depth 122 ft, cased to 98 ft with 1½-inch plastic pipe, No. 12-slot screen set 98-104 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1948 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 3, 1974..	27.90	May 6.....	27.15	Aug. 12.....	27.97
Feb. 19, 1975..	28.10				

137-087-12CDA NDSWC 4757 Drilled depth 320 ft, cased to 298 ft with 1½-inch plastic pipe, No. 12-slot screen set 298-304 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2210 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1974..	211.40	May 6.....	210.79	May 30.....	210.70
Feb. 19, 1975..	211.18				

138-080-06BCC NDSWC 2908 Drilled depth 140 ft, cased to 87 ft with 1½-inch plastic pipe, No. 18-slot screen set 87-90 ft below lsd; MP top of casing 1.90 ft above lsd. Lsd 1634 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

May 31, 1968..	6.96	July 27.....	7.10	Oct. 11.....	8.88
June 19.....	7.92	Sept. 23.....	8.42	Oct. 25.....	8.65
July 19.....	7.72	Oct. 22.....	8.32	Nov. 19.....	8.49
Aug. 1.....	8.73	Dec. 2.....	8.22	Dec. 6.....	8.40
Sept. 16.....	9.16	Dec. 23.....	7.62	Dec. 16.....	8.36
Oct. 15.....	8.87	Jan. 24, 1972..	6.80	Dec. 28.....	8.29
Dec. 11.....	8.50	Feb. 23.....	6.33	Jan. 3, 1975..	8.32
Jan. 16, 1969..	7.43	Mar. 28.....	5.49	Jan. 10.....	8.26
Feb. 10.....	5.74	Apr. 21.....	5.29	Jan. 15.....	8.24
Apr. 24.....	5.71	May 30.....	5.20	Jan. 20.....	7.93
May 21.....	6.48	June 26.....	5.60	Jan. 21.....	7.95
June 18.....	7.26	July 31.....	6.82	Jan. 27.....	7.64
July 24.....	7.32	Aug. 25.....	7.41	Jan. 29.....	7.69
Aug. 18.....	7.86	Sept. 22.....	8.00	Feb. 5.....	7.42
Sept. 12.....	8.33	Oct. 27.....	8.15	Feb. 25.....	6.60
Oct. 7.....	8.55	Dec. 7.....	8.20	Mar. 5.....	6.92
Nov. 6.....	8.53	Feb. 20, 1973..	6.59	Mar. 6.....	6.93
Dec. 9.....	8.37	Mar. 20.....	6.38	Mar. 11.....	6.81
Jan. 6, 1970..	7.61	June 8.....	7.76	Mar. 19.....	6.60
Feb. 18.....	6.59	June 26.....	8.17	Apr. 2.....	6.40
Mar. 3.....	6.38	July 23.....	8.82	Apr. 10.....	6.38
Apr. 20.....	6.60	Aug. 24.....	9.29	Apr. 18.....	5.92
May 18.....	6.21	Sept. 26.....	9.52	May 1.....	5.22
June 17.....	6.20	Oct. 26.....	9.46	May 6.....	5.47
July 15.....	7.11	Dec. 6.....	9.33	May 15.....	5.51
Aug. 13.....	7.93	Jan. 21, 1974..	7.55	May 16.....	5.42
Sept. 23.....	8.57	Mar. 4.....	6.70	June 23.....	5.27
Dec. 1.....	8.27	Mar. 26.....	6.74	Aug. 8.....	5.64
Dec. 30.....	7.81	May 3.....	7.17	Aug. 14.....	5.64
Jan. 28, 1971..	6.80	May 24.....	7.35	Aug. 29.....	5.58
Feb. 22.....	6.40	June 24.....	7.75	Sept. 2.....	5.82
Mar. 24.....	5.83	July 23.....	8.51	Sept. 15.....	6.15
Apr. 29.....	5.85	Aug. 19.....	8.85		
May 25.....	6.14	Sept. 24.....	9.04		

Depth to water, in feet below or (+) above land surface

138-081-09ABB1 NDSWC 4750 Drilled depth 762 ft, cased to 525 ft with 2-inch steel pipe, No. 12-slot screen set 525-537 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1780 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	80.78	Feb. 5, 1975..	79.92	Aug. 13.....	81.20
Dec. 4.....	80.68	May 6.....	80.22		

138-081-09ABB2 NDSWC 4750A Drilled depth 362 ft, cased to 336 ft with 2-inch steel pipe, No. 12-slot screen set 336-348 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1780 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Oct. 11, 1974..	98.48	Feb. 5, 1975..	99.65	Aug. 13.....	98.08
Dec. 4.....	98.48	May 6.....	98.73		

138-081-09ABB4 NDSWC 4750C Drilled depth 162 ft, cased to 153 ft with 1½-inch plastic pipe, No. 12-slot screen set 153-159 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1780 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

May 6, 1975..	106.19	Aug. 13.....	106.46
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138-081-12DAB NDSWC 9014 Drilled depth 100 ft, cased to 58 ft with 1½-inch plastic pipe, No. 12-slot screen set 58-61 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1630 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 10, 1974..	6.59	Jan. 3, 1975..	6.05	Aug. 14.....	3.06
Nov. 19.....	6.08	Mar. 19.....	4.26		
Dec. 16.....	6.01	May 15.....	1.69		

138-081-35ABA NDSWC 9009 Drilled depth 300 ft, cased to 218 ft with 1½-inch plastic pipe, No. 12-slot screen set 218-224 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1682 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 8, 1974..	+16	Dec. 4.....	+18	Nov.	Destroyed
Aug. 20.....	+14	Feb. 5, 1975..	+17		
Oct. 2.....	+16	Aug. 13.....	+21		

138-084-27CCC1 NDSWC 4761 Drilled depth 280 ft, cased to 208 ft with 1½-inch plastic pipe, No. 12-slot screen set 208-214 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2093 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Dec. 3, 1974..	203.88	Feb. 19.....	203.74	Aug. 13.....	204.20
Feb. 5, 1975..	204.07				

Depth to water, in feet below or (+) above land surface

138-084-27CCC2 NDSWC 4761A Drilled depth 100 ft, cased to 83 ft with 1½-inch plastic pipe, No. 12-slot screen set 83-89 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2093 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1974..	42.38	May 7, 1975..	41.73	Aug. 12.....	41.30

138-085-26CDD NDSWC 4762 Drilled depth 260 ft, cased to 198 ft with 1½-inch plastic pipe, No. 12-slot screen set 198-204 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2149 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Dec. 3, 1974..	123.64	May 13, 1975..	122.14	May 29.....	122.19
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138-086-11DDB NDSWC 4657 Drilled depth 160 ft, cased to 67 ft with 1½-inch plastic pipe, No. 18-slot screen set 67-70 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1960 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 3, 1974..	8.37	Feb. 4, 1975..	8.33	Sept. 8.....	7.90
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138-086-13CCC NDSWC 9303 Drilled depth 60 ft, cased to 43 ft with 1½-inch plastic pipe, No. 18-slot screen set 43-46 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1935 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 12, 1975..	6.48
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138-086-17CDD NDSWC 4547 Drilled depth 320 ft, cased to 54 ft with 1½-inch plastic pipe, No. 18-slot screen set 54-60 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1947 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Dec. 27, 1973..	13.82	Aug. 9.....	14.33	Feb. 5, 1975..	14.37
Mar. 6, 1974..	13.65	Oct. 3.....	14.54	May 6.....	12.34
May 21.....	13.78	Dec. 2.....	14.43	Aug. 12.....	12.98

138-086-17DDC NDSWC 4548 Drilled depth 220 ft, cased to 78 ft with 1½-inch plastic pipe, No. 12-slot screen set 78-84 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1967 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 5, 1973..	29.80	Aug. 9.....	30.16	May 5.....	29.01
Dec. 27.....	29.77	Oct. 3.....	29.70	Aug. 12.....	29.07
Mar. 6, 1974..	29.66	Dec. 2.....	30.35		
May 21.....	29.73	Feb. 5, 1975..	30.35		

Depth to water, in feet below or (+) above land surface

138-086-20BAB NDSWC 4544 Drilled depth 240 ft, cased to 178 ft with 1½-inch plastic pipe, No. 18-slot screen set 178-184 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1942 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	18.46	Aug. 9.....	17.99	May 6.....	17.07
Dec. 27.....	17.59	Oct. 4.....	18.14	Aug. 12.....	17.20
Mar. 6, 1974..	17.54	Dec. 2.....	18.06		
May 21.....	17.57	Feb. 5, 1975..	18.07		

138-086-20BEB NDSWC 4545 Drilled depth 220 ft, cased to 68 ft with 1½-inch plastic pipe, No. 12-slot screen set 68-74 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1942 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	14.98	Aug. 9.....	15.42	May 6.....	13.47
Dec. 27.....	14.90	Oct. 3.....	15.62	Aug. 12.....	14.20
Mar. 6, 1974..	14.61	Dec. 2.....	15.45		
May 21.....	14.84	Feb. 5, 1975..	15.39		

138-086-26CCC NDSWC 4549 Drilled depth 251 ft, cased to 158 ft with 1½-inch plastic pipe, No. 18-slot screen set 158-164 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1914 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 1, 1973..	15.88	May 21.....	15.83	Feb. 5, 1975..	16.27
Nov. 14.....	15.96	Aug. 8.....	16.29	Feb. 19.....	16.23
Dec. 27.....	15.91	Oct. 3.....	16.33	May 6.....	15.13
Mar. 6, 1974..	15.69	Dec. 3.....	16.27	Aug. 11.....	15.78

138-086-35BBC NDSWC 4550 Drilled depth 350 ft, cased to 158 ft with 1½-inch plastic pipe, No. 18-slot screen set 158-164 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1912 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 31, 1973..	15.58	May 21.....	15.32	Feb. 5, 1975..	15.69
Nov. 14.....	15.37	Aug. 8.....	15.70	May 6.....	14.50
Dec. 27.....	15.34	Oct. 3.....	15.82	Aug. 12.....	15.15
Mar. 6, 1974..	15.06	Dec. 3.....	15.67		

138-087-03DBB NDSWC 4543 Drilled depth 260 ft, cased to 207 ft with 1½-inch plastic pipe, No. 18-slot screen set 207-213 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 1975 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 2, 1973..	5.80	Aug. 9.....	5.67	May 6.....	4.48
Dec. 27.....	5.40	Oct. 4.....	5.80	Aug. 12.....	4.72
Mar. 6, 1974..	5.01	Dec. 2.....	5.78		
May 21.....	5.16	Feb. 5, 1975..	5.72		

Depth to water, in feet below or (+) above land surface

139-081-09AAA1 NDSWC 4766 Drilled depth 700 ft, cased to 526 ft with 2-inch steel pipe, No. 12-slot screen set 526-538 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1720 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Oct. 27, 1974..	+15	Nov. 25.....	+14	Aug. 13, 1975..	+15
Nov. 24.....	+14	Feb. 5, 1975..	+18		

139-081-09AAA2 NDSWC 4766A Drilled depth 420 ft, cased to 400 ft with 2-inch steel pipe, No. 12-slot screen set 400-412 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1720 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Nov. 21, 1974..	3.27	Aug. 10.....	10.82	Sept. 24.....	11.90
Feb. 5, 1975..	3.93	Aug. 13.....	11.18		
May 14.....	6.70	Sept. 14.....	11.43		

139-081-09AAA3 NDSWC 4766B Drilled depth 280 ft, cased to 263 ft with 2-inch steel pipe, No. 12-slot screen set 263-269 ft below lsd; MP top of casing 3.1 ft above lsd. Lsd 1720 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Nov. 21, 1974..	80.36	May 14.....	78.63	Aug. 13.....	78.19
Feb. 5, 1975..	79.11				

139-081-09AAA4 NDSWC 4766C Drilled depth 120 ft, cased to 103 ft with 1½-inch plastic pipe, No. 12-slot screen set 103-109 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1720 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 21, 1974..	66.27	May 14, 1975..	61.23	Aug. 13.....	65.09

139-081-25CBB NDSWC 9326 Drilled depth 140 ft, cased to 93 ft with 1½-inch plastic pipe, No. 25-slot screen set 93-96 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1635 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level
Aug. 13, 1975..	8.80	Sept. 4.....	11.03

139-081-36CCD NDSWC 9015 Drilled depth 140 ft, cased to 98 ft with 1½-inch plastic pipe, No. 18-slot screen set 98-101 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1635 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	12.73	Dec. 16.....	12.40	Aug. 14.....	9.02
Dec. 6.....	12.39	May 16, 1975..	8.62	Sept. 4.....	9.70

139-082-25BBD NDSWC 9013 Drilled depth 100 ft, cased to 73 ft with 1½-inch plastic pipe, No. 18-slot screen set 73-76 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1665 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	20.29	Feb. 5, 1975..	19.77	Aug. 13.....	19.16
Dec. 4.....	20.28	May 6.....	16.52		

Depth to water, in feet below or (+) above land surface

139-083-12DBA1 NDSWC 4751 Drilled depth 1002 ft, cased to 777 ft with 2-inch steel pipe, No. 12-slot screen set 777-789 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1960 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	183.73	Feb. 5, 1975..	184.40	Aug. 13.....	184.57
Nov. 20.....	183.80	May 14.....	184.29		

139-083-12DBA2 NDSWC 4751A Drilled depth 570 ft, cased to 546 ft with 2-inch steel pipe, No. 12-slot screen set 546-558 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 1960 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	221.70	Feb. 5, 1975..	221.55	Aug. 13.....	222.05
Nov. 20.....	221.70	May 14.....	221.73		

139-083-12DBA3 NDSWC 4751B Drilled depth 330 ft, cased to 318 ft with 1½-inch plastic pipe, No. 12-slot screen set 318-324 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1960 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 11, 1974..	210.11	Feb. 5, 1975..	208.60	Aug. 13.....	212.90
Nov. 18.....	208.34	May 14.....	211.69		

139-083-28DAD NDSWC 4764 Drilled depth 140 ft, cased to 103 ft with 1½-inch plastic pipe, No. 12-slot screen set 103-109 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1800 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1974..	28.33	May 13.....	26.85	Sept. 10.....	27.34
Feb. 5, 1975..	28.12	Aug. 13.....	27.18		

139-084-27BBC NDSWC 4760 Drilled depth 300 ft, cased to 230 ft with 1½-inch plastic pipe, slotted 230-240 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1960 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 21, 1974..	95.67	May 7.....	95.30	Aug. 13.....	95.35
Feb. 5, 1975..	95.04				

139-085-18DCD NDSWC 4641 Drilled depth 220 ft, cased to 153 ft with 1½-inch plastic pipe, No. 12-slot screen set 153-159 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2080 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 4, 1974..	80.23	Feb. 4, 1975..	80.07	Aug. 12.....	80.10
Dec. 3.....	79.88	May 7.....	80.01		

Depth to water, in feet below or (+) above land surface

139-085-21BAC NDSWC 4652 Drilled depth 340 ft, cased to 318 ft with 1½-inch plastic pipe, No. 12-slot screen set 318-324 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2160 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

	Date	Water level		Date	Water level		Date	Water level
Oct.	4, 1974..	197.25	Feb.	4, 1975..	195.08	Aug.	12.....	202.50
Dec.	3.....	197.24	May	7.....	194.17			

139-085-22BCB NDSWC 4653 Drilled depth 360 ft, cased to 338 ft with 1½-inch plastic pipe, No. 12-slot screen set 338-344 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2162 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Oct.	4, 1974..	213.10	Feb.	4, 1975..	210.49	Aug.	12.....	208.40
Dec.	3.....	212.70	May	7.....	209.19			

139-085-30AAB1 NDSWC 4651 Drilled depth 1140 ft, cased to 950 ft with 2-inch steel pipe, No. 12-slot screen set 950-962 ft below lsd; MP top of casing 3.30 ft above lsd. Lsd 2065 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

June	3, 1974..	246.15	Dec.	3.....	245.72	Sept.	8, 1975..	245.56
Oct.	4.....	247.70						

139-085-30AAB2 NDSWC 4651A Drilled depth 480 ft, cased to 462 ft with 2-inch steel pipe, No. 12-slot screen set 462-474 ft below lsd; MP top of casing 3.2 ft above lsd. Lsd 2065 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Oct.	4, 1974..	191.90	Feb.	4, 1975..	192.73	Sept.	8.....	191.86
Dec.	3.....	191.93	May	7.....	191.43			

139-085-30AAB3 NDSWC 4651B Drilled depth 280 ft, cased to 258 ft with 1½-inch plastic pipe, No. 12-slot screen set 258-270 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2065 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Oct.	4, 1974..	77.00	Feb.	4, 1975..	77.11	Sept.	8.....	77.22
Dec.	3.....	77.05	May	7.....	77.22			

139-086-27BAA NDSWC 4661 Drilled depth 100 ft, cased to 57 ft with 1½-inch plastic pipe, No. 18-slot screen set 57-60 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2045 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Dec.	3, 1974..	34.04	May	7.....	34.94	Sept.	8.....	32.34
Feb.	4, 1975..	34.82						

Depth to water, in feet below or (+) above land surface

139-086-34ADC NDSWC 4654 Drilled depth 180 ft, cased to 87 ft with 1½-inch plastic pipe, No. 18-slot screen set 87-90 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2010 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 4, 1974..	25.85	Feb. 4, 1975..	26.58	Aug. 12.....	23.45
Dec. 3.....	26.20	May 7.....	24.42	Sept. 8.....	23.80

139-086-35BCC NDSWC 4646 Drilled depth 140 ft, cased to 57 ft with 1½-inch plastic pipe, No. 12-slot screen set 57-63 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2010 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 4, 1974..	27.59	Feb. 4, 1975..	26.98	Aug. 12.....	23.72
Dec. 3.....	26.73	May 7.....	24.89		

139-086-35BDA NDSWC 4647 Drilled depth 120 ft, cased to 73 ft with 1½-inch plastic pipe, No. 12-slot screen set 73-79 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2015 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 4, 1974..	28.50	Feb. 4, 1975..	29.06	Sept. 8.....	27.48
Dec. 3.....	28.79	May 13.....	28.33		

139-086-35CBC NDSWC 4644 Drilled depth 180 ft, cased to 97 ft with 1½-inch plastic pipe, No. 12-slot screen set 97-103 ft below lsd; MP top of casing 1.8 ft above lsd. Lsd 2005 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 4, 1974..	22.45	Feb. 4, 1975..	22.85	Aug. 20.....	20.25
Dec. 3.....	22.65	May 7.....	20.61		

139-086-35CCC NDSWC 4645 Drilled depth 160 ft, cased to 127 ft with 1½-inch plastic pipe, No. 12-slot screen set 127-133 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1995 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 4, 1974..	19.35	Feb. 4, 1975..	19.57	Aug. 12.....	17.67
Dec. 3.....	19.46	May 7.....	17.95		

139-087-16CDB NDSWC 4755 Drilled depth 80 ft, cased to 57 ft with 1½-inch plastic pipe, No. 12-slot screen set 57-63 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2045 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Dec. 2, 1974..	14.74	May 6.....	10.54	Aug. 12.....	11.95
Feb. 4, 1975..	14.97				

Depth to water, in feet below or (+) above land surface

139-087-23BBB NDSWC 4756 Drilled depth 360 ft, cased to 288 ft with 1½-inch plastic pipe, No. 12-slot screen set 288-294 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2095 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 2, 1974..	104.89	May 6, 1975..	104.25	Aug. 12.....	103.25

139-088-06DDD NDSWC 9331 Drilled depth 340 ft, cased to 322 ft with 1½-inch plastic pipe, No. 12-slot screen set 322-328 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2072 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 4, 1975..	39.73	Aug. 11.....	40.41
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139-088-15CCC NDSWC 4540 Drilled depth 360 ft, cased to 298 ft with 1½-inch plastic pipe, No. 18-slot screen set 298-304 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2056 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 5, 1973..	44.09	Aug. 9.....	44.51	May	43.83
Dec. 27.....	43.32	Oct. 2.....	44.82	Sept. 8.....	43.94
Mar. 6, 1974..	44.22	Dec. 2.....	44.80		
May 22.....	44.13	Feb. 4, 1975..	44.82		

139-088-25BAD NDSWC 4541 Drilled depth 320 ft, cased to 218 ft with 1½-inch plastic pipe, No. 18-slot screen set 218-224 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2038 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 8, 1973..	33.69	Aug. 9.....	34.22	May 6.....	32.71
Dec. 27.....	33.76	Oct. 4.....	34.47	Sept. 8.....	33.26
Mar. 6, 1974..	33.59	Dec. 2.....	34.35		
May 21.....	33.59	Feb. 4, 1975..	34.42		

139-088-25BCC NDSWC 4542 Drilled depth 315 ft, cased to 278 ft with 1½-inch plastic pipe, No. 12-slot screen set 278-284 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2018 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 6, 1973..	18.61	Aug. 8.....	19.14	May 6.....	17.73
Dec. 27.....	18.70	Oct. 4.....	19.35	Aug. 12.....	18.16
Mar. 6, 1974..	18.56	Dec. 2.....	19.29		
May 21.....	18.53	Feb. 4, 1975..	19.36		

139-088-28DDA NDSWC 4539 Drilled depth 420 ft, cased to 122 ft with 1½-inch plastic pipe, No. 12-slot screen set 122-128 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2052 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 27, 1973..	14.52	May 22.....	14.68	Feb. 4, 1975..	15.14
Nov. 8.....	14.60	Aug. 9.....	14.99	May 6.....	14.67
Dec. 27.....	14.67	Oct. 4.....	15.10	Aug. 11.....	14.51
Mar. 6, 1974..	14.69	Dec. 2.....	15.12		

Depth to water, in feet below or (+) above land surface

139-088-31BBC1 NDSWC 4538 Drilled depth 400 ft, cased to 358 ft with 1½-inch plastic pipe, No. 18-slot screen set 358-364 ft below lsd; MP top of casing 1.0 ft above lsd. Lsd 2075 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 5, 1973..	14.96	Aug. 9.....	14.93	May 6.....	14.66
Dec. 27.....	14.57	Oct. 2.....	15.15	Aug. 11.....	14.88
Mar. 6, 1974..	14.63	Dec. 2.....	15.07		
May 22.....	14.59	Feb. 4, 1975..	15.06		

139-088-31BBC2 NDSWC 4538A Drilled depth 100 ft, cased to 93 ft with 1½-inch plastic pipe, No. 12-slot screen set 93-99 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 2075 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 5, 1973..	13.10	Aug. 9.....	13.23	May 6.....	13.25
Dec. 27.....	13.11	Oct. 4.....	13.55	Aug. 11.....	12.87
Mar. 6, 1974..	13.09	Dec. 2.....	13.63		
May 22.....	12.91	Feb. 4, 1975..	13.68		

139-088-34BCC1 NDSWC 4753 Drilled depth 1302 ft, cased to 1044 ft with 2-inch steel pipe, No. 12-slot screen set 1044-1062 ft below lsd; MP top of casing 4.0 ft above lsd. Lsd 2070 ft above msl. Aquifer: Sandstone in Fox Hills Formation of Cretaceous age.

Oct. 4, 1974..	107.70	Feb. 5, 1975..	107.54	Sept. 8.....	107.40
Dec. 2.....	107.96	May 6.....	107.79		

139-088-34BCC2 NDSWC 4753A Drilled depth 862 ft, cased to 842 ft with 2-inch steel pipe, No. 12-slot screen set 842-860 ft below lsd; MP top of casing 3.4 ft above lsd. Lsd 2070 ft above msl. Aquifer: Sandstone in Hell Creek Formation of Cretaceous age.

Oct. 4, 1974..	112.60	Feb. 5, 1975..	112.66	Aug. 11.....	112.30
Dec. 2.....	112.67	May 6.....	111.96		

139-088-34BCC3 NDSWC 4753B Drilled depth 302 ft, cased to 288 ft with 1½-inch plastic pipe, No. 12-slot screen set 288-294 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2070 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Oct. 4, 1974..	34.62	Feb. 5, 1975..	33.75	Aug. 11.....	34.10
Dec. 2.....	33.96	May 6.....	33.13		

139-088-34BCC4 NDSWC 4753C Drilled depth 82 ft, cased to 66 ft with 1½-inch plastic pipe, No. 12-slot screen set 66-78 ft below lsd; MP top of casing 1.0 ft above lsd. Lsd 2070 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Oct. 4, 1974..	+2	Dec. 2.....	+7	Aug. 11.....	+4
Nov. 22.....	+6	Feb. 5, 1975..	+7	Nov.	Destroyed

Depth to water, in feet below or (+) above land surface

139-089-08DDC NDSWC 4535 Drilled depth 380 ft, cased to 238 ft with 1½-inch plastic pipe, No. 12-slot screen set 238-244 ft below lsd; MP top of casing 2.5 ft above lsd. Lsd 2115 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Aug. 23, 1973..	2.32	Mar. 6, 1974..	1.64	Oct. 4.....	2.65
Oct. 24.....	1.90	May 22.....	.97	Dec. 2.....	2.44
Dec. 27.....	1.73	Aug. 9.....	2.05	Aug. 11, 1975..	1.00

139-089-26CCD2 NDSWC 9299A Drilled depth 160 ft, cased to 138 ft with 1½-inch plastic pipe, No. 12-slot screen set 138-141 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2080 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 11, 1975.. 14.86

139-089-27BCC NDSWC 8959 Drilled depth 100 ft, cased to 68 ft with 1½-inch plastic pipe, No. 12-slot screen set 68-74 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2105 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

June 13, 1974..	15.82	Dec. 2.....	15.95	Sept. 8.....	15.62
Aug. 9.....	15.82	Feb. 5, 1975..	16.05		
Oct. 4.....	16.00	May 6.....	15.79		

140-081-18ABD NDSWC 9017 Drilled depth 100 ft, cased to 53 ft with 1½-inch plastic pipe, No. 18-slot screen set 53-56 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1645 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Oct. 11, 1974.. 10.65 Dec. 4..... 10.52 Sept. 10, 1975.. 9.43

140-082-01DAD NDSWC 9327 Drilled depth 60 ft, cased to 44 ft with 1½-inch plastic pipe, No. 25-slot screen set 44-47 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 1655 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 4, 1975.. 16.22 Aug. 13..... 16.40

140-084-35CCC NDSWC 4759 Drilled depth 300 ft, cased to 213 ft with 1½-inch plastic pipe, No. 12-slot screen set 213-219 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2030 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Nov. 21, 1974..	84.83	May 7.....	82.74	Aug. 13.....	82.96
Feb. 5, 1975..	83.52	May 21.....	82.61		

Depth to water, in feet below or (+) above land surface

140-085-18BEC NDSWC 4758 Drilled depth 320 ft, cased to 298 ft with 1½-inch plastic pipe, No. 12-slot screen set 298-304 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2095 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Dec. 3, 1974..	113.93	May 30.....	113.25	Aug. 12.....	117.60
Feb. 4, 1975..	113.87				

140-088-16ADB1 NDSWC 4754 Drilled depth 890 ft, cased to 719 ft with 2-inch steel pipe, No. 12-slot screen set 719-731 ft below lsd; MP top of casing 3.5 ft above lsd. Lsd 2280 ft above msl. Aquifer: Sandstone in Cannonball-Ludlow Formations undifferentiated of Tertiary age.

Feb. 4, 1975..	279.50	May 6.....	278.98	Sept. 8.....	282.03
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140-088-16ADB2 NDSWC 4754A Drilled depth 400 ft, cased to 382 ft with 2-inch steel pipe, No. 12-slot screen set 382-394 ft below lsd; MP top of casing 2.5 ft above lsd. Lsd 2280 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Sept. 8, 1975..	233.65
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140-089-15DCC NDSWC 4536 Drilled depth 380 ft, cased to 157 ft with 1½-inch plastic pipe, No. 12-slot screen set 157-163 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 2103 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Aug. 23, 1973..	13.20	July 22.....	12.83	Feb. 4, 1975..	14.68
Nov. 8.....	13.46	Aug. 9.....	13.59	Aug. 11.....	13.85
Dec. 27.....	13.46	Oct. 4.....	14.15		
Mar. 6, 1974..	13.69	Dec. 2.....	14.42		

140-089-36ADD1 NDSWC 4537 Drilled depth 400 ft, cased to 343 ft with 1½-inch plastic pipe, No. 18-slot screen set 343-349 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2085 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 6, 1973..	41.38	Aug. 9.....	41.45	May 6.....	41.25
Dec. 27.....	41.23	Oct. 4.....	41.58	Aug. 11.....	41.02
Mar. 6, 1974..	41.34	Dec. 2.....	41.75		
May 23.....	41.20	Feb. 4, 1975..	41.74		

140-089-36ADD2 NDSWC 4537A Drilled depth 160 ft, cased to 138 ft with 1½-inch plastic pipe, No. 12-slot screen set 138-144 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2085 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Nov. 6, 1973..	19.95	Aug. 9.....	20.92	May 6.....	21.00
Dec. 27.....	20.79	Oct. 4.....	21.12	Aug. 11.....	20.76
Mar. 6, 1974..	20.86	Dec. 2.....	21.20		
May 23.....	20.69	Feb. 4, 1975..	21.24		

Depth to water, in feet below or (+) above land surface

140-090-21BBB NDSWC 4532 Drilled depth 220 ft, cased to 118 ft with 1½-inch plastic pipe, No. 18-slot screen set 118-124 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2105 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 27, 1973..	7.16	July 11.....	7.19	Feb. 4, 1975..	7.89
Dec. 27.....	7.08	Aug. 9.....	7.93	May 6.....	6.18
Mar. 6, 1974..	6.78	Oct. 4.....	8.38	Aug. 11.....	6.38
May 22.....	6.64	Dec. 2.....	8.05		

140-090-21BCB1 NDSWC 4531 Drilled depth 440 ft, cased to 375 ft with 1½-inch plastic pipe, No. 18-slot screen set 375-381 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2103 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Nov. 27, 1973..	9.48	July 8.....	9.31	Feb. 4, 1975..	9.36
Dec. 27.....	9.20	Aug. 9.....	11.12	May 6.....	7.55
Mar. 6, 1974..	8.90	Oct. 4.....	10.80	Aug. 11.....	7.97
May 22.....	8.70	Dec. 2.....	9.98		

140-090-32BDD NDSWC 4530 Drilled depth 280 ft, cased to 183 ft with 1½-inch plastic pipe, No. 12-slot screen set 183-195 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 2180 ft above msl. Aquifer: Sandstone in Tongue River Formation of Tertiary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 23, 1973..	15.53	May 22.....	16.16	Feb. 4, 1975..	17.07
Nov. 27.....	17.75	Aug. 9.....	16.87	May 6.....	15.27
Dec. 27.....	17.58	Oct. 4.....	17.29	Aug. 11.....	15.65
Mar. 6, 1974..	16.68	Dec. 2.....	17.10		

140-090-34AAA NDSWC 4533 Drilled depth 440 ft, cased to 198 ft with 1½-inch plastic pipe, No. 18-slot screen set 198-204 ft below lsd; MP top of casing 1.5 ft above lsd. Lsd 2137 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Oct. 24, 1973..	11.20	May 22.....	10.77	Feb. 4, 1975..	12.11
Nov. 27.....	11.20	Aug. 9.....	11.68	May 6.....	9.79
Dec. 27.....	11.17	Oct. 2.....	12.09	Aug. 11.....	9.65
Mar. 6, 1974..	10.84	Dec. 2.....	12.10		

140-090-34ADD NDSWC 4534 Drilled depth 260 ft, cased to 77 ft with 1½-inch plastic pipe, No. 12-slot screen set 77-83 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2140 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Aug. 24, 1973..	11.08	Mar. 6, 1974..	11.46	Dec. 2.....	12.56
Oct. 23.....	11.26	May 22.....	11.50	Feb. 4, 1975..	12.70
Nov. 27.....	11.34	Aug. 9.....	12.98	May 6.....	11.68
Dec. 27.....	11.40	Oct. 9.....	12.37	Aug. 11.....	10.40

141-089-36DCD NDSWC 9330 Drilled depth 380 ft, cased to 332 ft with 1½-inch plastic pipe, No. 12-slot screen set 332-338 ft below lsd; MP top of casing 2.0 ft above lsd. Lsd 2093 ft above msl. Aquifer: Buried sand and gravel of Quaternary age.

Date	Water level	Date	Water level	Date	Water level
Aug. 4, 1975..	29.22	Aug. 11.....	26.35	Sept. 8.....	26.28

TABLE 3.--Logs of wells and test holes

EXPLANATION

Electric logs are uncalibrated
except where designated. Depths shown are in feet below
land surface.

Potential given in millivolts
(MV). Natural-gamma logs (T.C. 4)
(Time Constant 4).

Resistance in ohms. Bulk density in grams/cc.

133-082-05ABC
N. Schmidt
(Log from M & R Drilling Company)

Altitude: 1740 feet

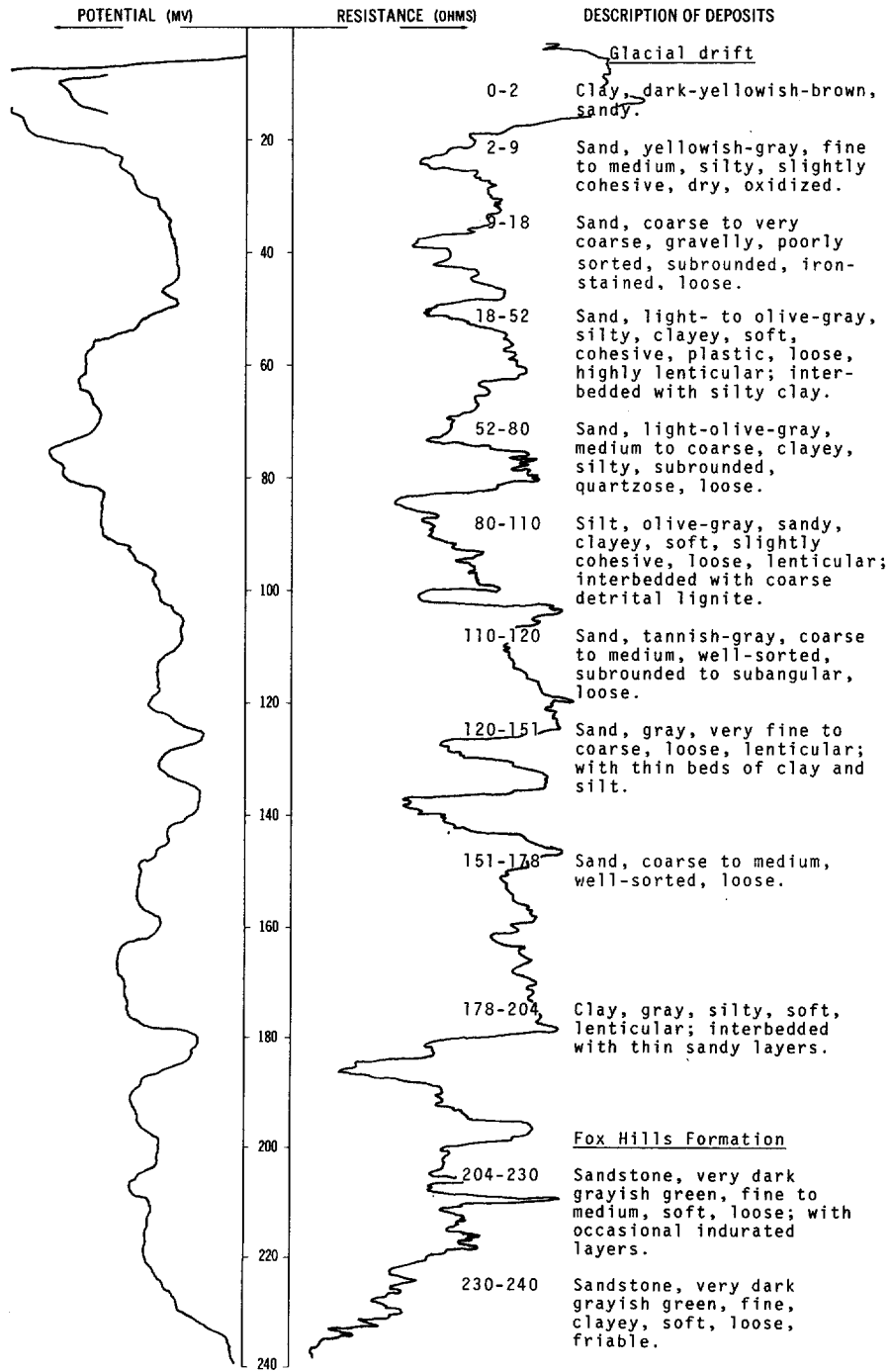
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:			
	Topsoil-----	4	4
	Sand and gravel, brown-----	11	15
	Sand and gravel, brownish-gray-----	5	20
	Clay, gray, sandy-----	15	35
	Sand and gravel, brown-----	1	36
Hell Creek Formation (?)			
	Shale, gray, sandy-----	6	42
	Sand, brown-----	10	52
	Shale, gray, sandy-----	3	55
	Sand, brownish-gray-----	62	117
	Shale, gray, sandy-----	2	119
	Lignite-----	1	120
	Sand, grayish-blue-----	20	140
	Shale, gray, sandy-----	1	141
	Sand, brown-----	5	146
	Shale, gray-----	11	157
	Sand, grayish-brown-----	25	182
	Shale, gray, sandy-----	8	190
Fox Hills Formation (?)			
	Sand, bluish, coarse-----	27	217
	Sandstone-----	3	220
	Sand, blue-----	5	225
	Sandstone-----	2	227
	Sand, blue-----	6	233
	Shale, gray-----	47	280
	Shale, gray; with sand streaks-----	6	286
	Shale, gray-----	34	320

LOCATION: 133-082-05DBA

DATE DRILLED: September 1973

ALTITUDE: 1742
(FT, MSU)

DEPTH: 240
(FT)



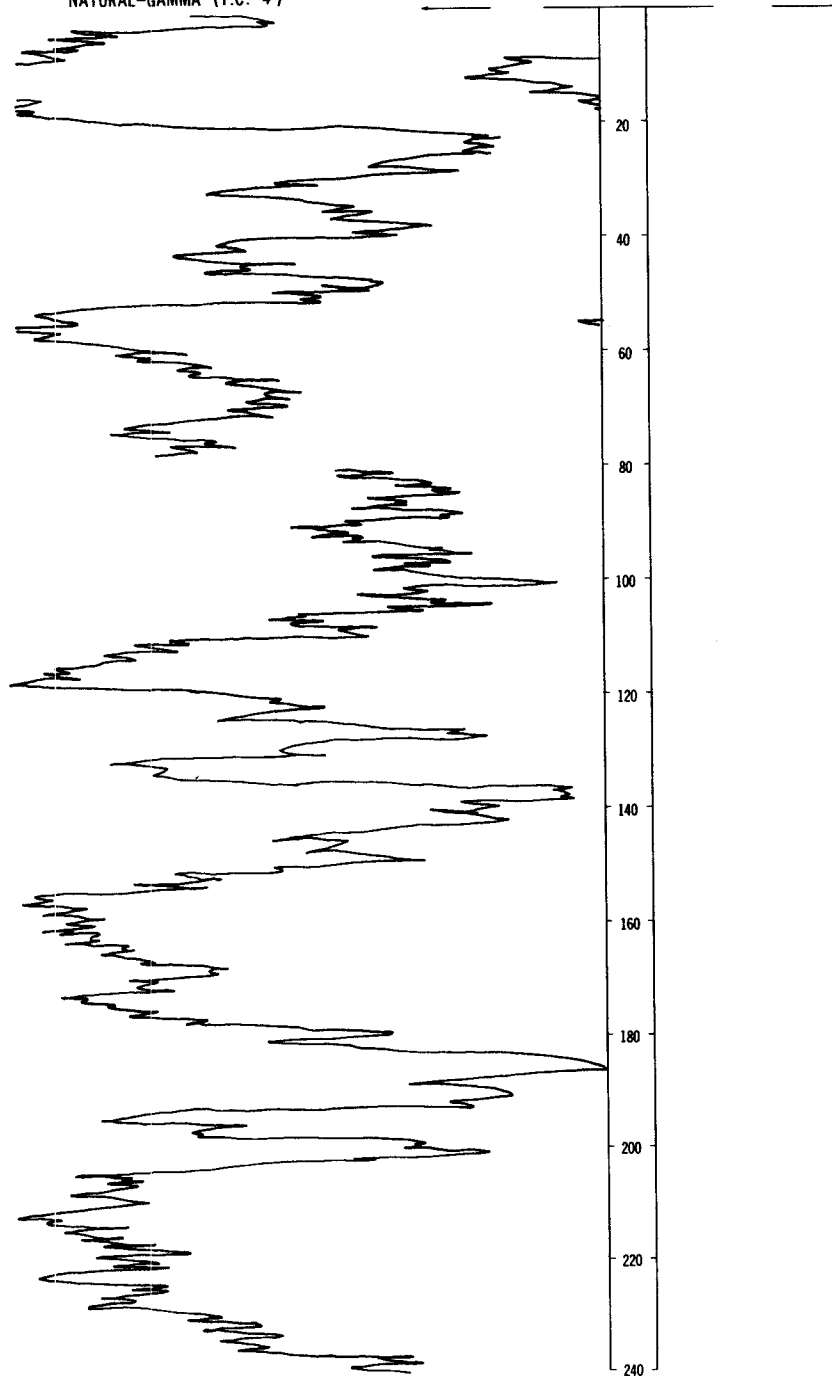
LOCATION: 133-082-05DBA

DATE DRILLED: September 1973

ALTITUDE: 1742
(FT, MSL)

DEPTH: 240
(FT)

NATURAL-GAMMA (T.C. 4)



133-082-15ACD1
G. Weinberger
(Log from M & R Drilling Company)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Topsoil, sandy-----	4	4
	Sand and gravel-----	11	15
	Shale, gray, sandy-----	5	20
	Sand and gravel-----	5	25
Hell Creek Formation (?):	Shale, grayish, sandy-----	60	85
	Shale, bluish-green, sandy-----	8	93
	Shale, gray-----	11	104
	Shale, bluish-green, sandy-----	4	108
Fox Hills Formation (?):	Sand, light-grayish-green; with black specks-----	7	115
	Shale, grayish-green; with sand streaks-----	6	121
	Shale, gray-----	7	128

133-082-15ACD2
G. Weinberger
(Log from M & R Drilling Company)

Alluvium:	Sand and gravel-----	26	26
Hell Creek Formation (?):	Shale, bluish-green, sandy-----	14	40
	Shale, gray, sandy-----	6	46
	Shale, gray-----	40	86
	Sand, bluish-gray-----	4	90
	Shale, light-gray-----	3	93
Fox Hills Formation (?):	Shale, gray, sandy; with streaks of sandstone-----	16	109
	Sandstone; with limestone-----	2	111
	Sand, bluish-green, shaly; with black specks-----	42	153
	Sandstone-----	3	156
	Sand, blue; with black specks-----	38	194
	Sandstone-----	3	197
	Sand, blue; with streaks of shale-----	5	202
	Sandstone-----	3	205
	Sand, blue-----	8	213
	Shale, gray, sandy-----	3	216
	Sand, blue-----	7	223
	Shale, gray-----	8	231
	Limestone-----	1	232
	Sand, greenish-blue-----	13	245
	Shale, gray-----	15	260

133-082-29CDD1
J. Meyer
(Log from M & R Drilling Company)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Surface material-----	7	7
	Sand and gravel, brownish-----	21	28
Hell Creek Formation (?):	Shale, grayish-blue-----	2	30
	Shale, blue-----	5	35
	Shale, brown-----	12	47
	Sand, bluish-black-----	31	78
	Bentonite-----	2	80
	Shale, gray-----	51	131
Fox Hills Formation (?):	Sand, bluish; with streaks of sandstone-----	120	260
	Shale, gray, sandy-----	20	280

133-082-31DDA
J. Meyer
(Log from M & R Drilling Company)

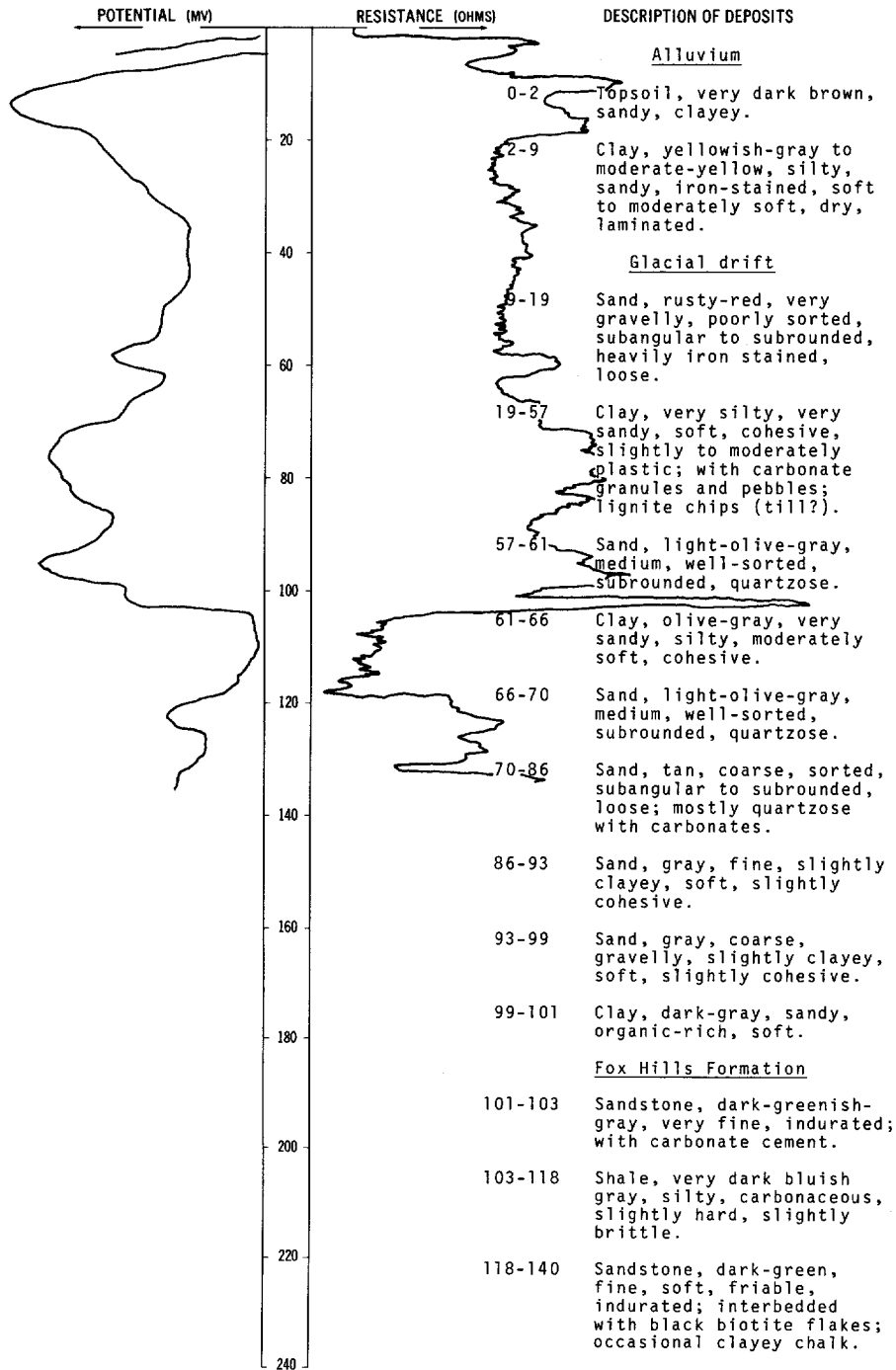
Alluvium:	Surface material-----	5	5
	Sand and gravel-----	14	19
Hell Creek Formation (?):	Shale, brown and gray-----	12	31
	Sand, bluish-black-----	9	40
	Sandstone-----	1	41
	Shale, gray, sandy-----	19	60
	Shale, gray-----	60	120
Fox Hills Formation (?):	Sandstone-----	1	121
	Shale, gray; with streaks of sand-----	10	131
	Sandstone-----	1	132
	Shale, gray; with streaks of sandstone-----	4	136
	Sand, bluish-black, semiconsolidated-----	84	220
	Sandstone-----	2	222
	Sand, gray; interbedded with shale-----	13	235
	Shale, gray, sandy-----	25	260
	Sand, blue-----	11	271
Shale, gray, sandy-----	9	280	

LOCATION: 134-079-07BCB

DATE DRILLED: September 1973

ALTITUDE: 1650
(FT, MSL)

DEPTH: 140
(FT)



NDSWC 4572, Continued

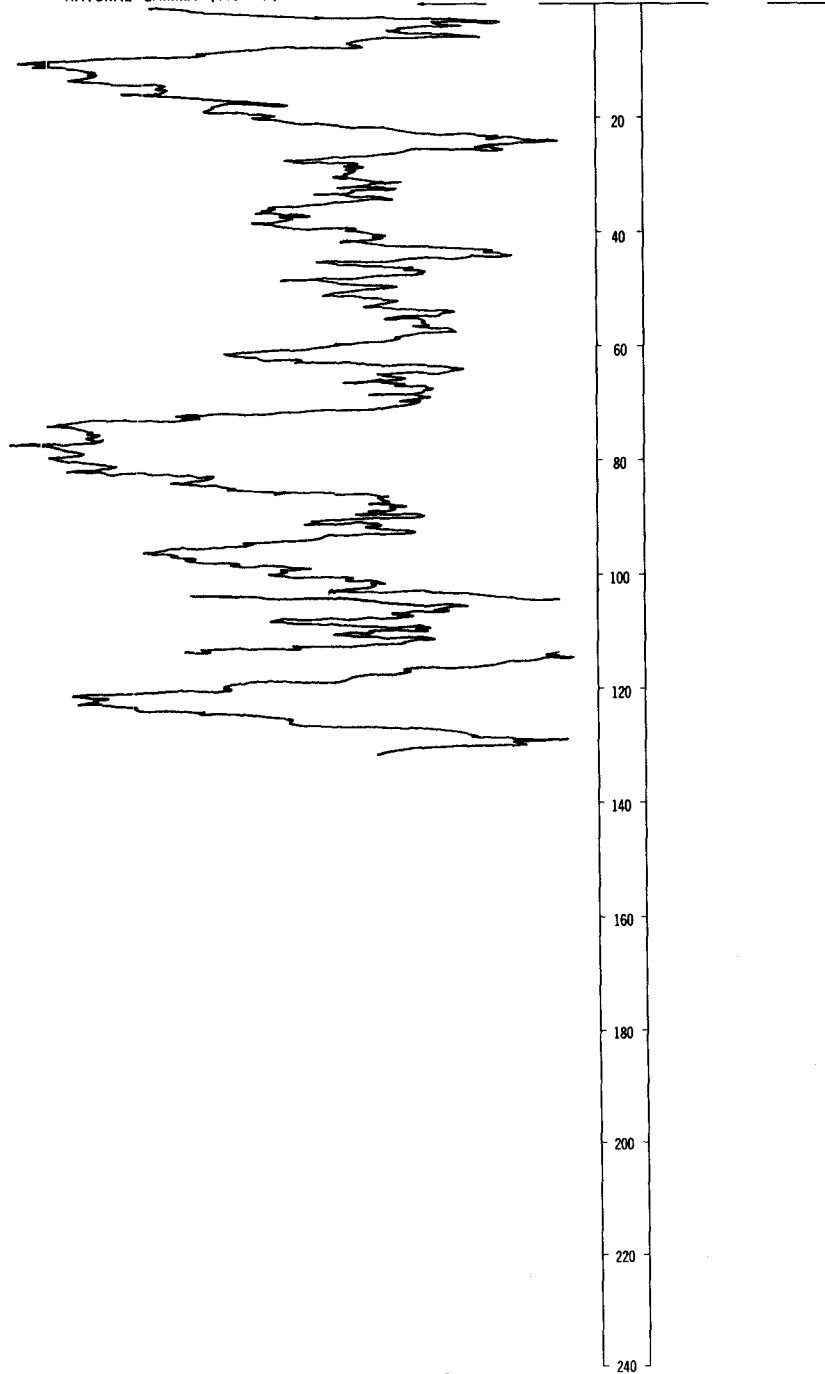
LOCATION: 134-079-07BCB

DATE DRILLED: September 1973

ALTITUDE: 1650
(FT, MSL)

DEPTH: 140
(FT)

NATURAL-GAMMA (T.C. 4)



134-079-17ADB
NDSWC 9296

Altitude: 1616 feet

Geologic source	Material	Thickness (feet)	Depth (feet)
Alluvium:	Clay, moderate-yellowish-brown, iron-stained, oxidized-----	18	18
Glacial drift:	Sand, very fine to very coarse, angular to subrounded, quartzose; predominantly fine to medium-----	13	31
	Gravel, medium to coarse, poorly sorted, angular to subangular; mostly granitics-----	46	77
Fox Hills Formation:	Siltstone, medium-black, clayey, noncalcareous-----	3	80

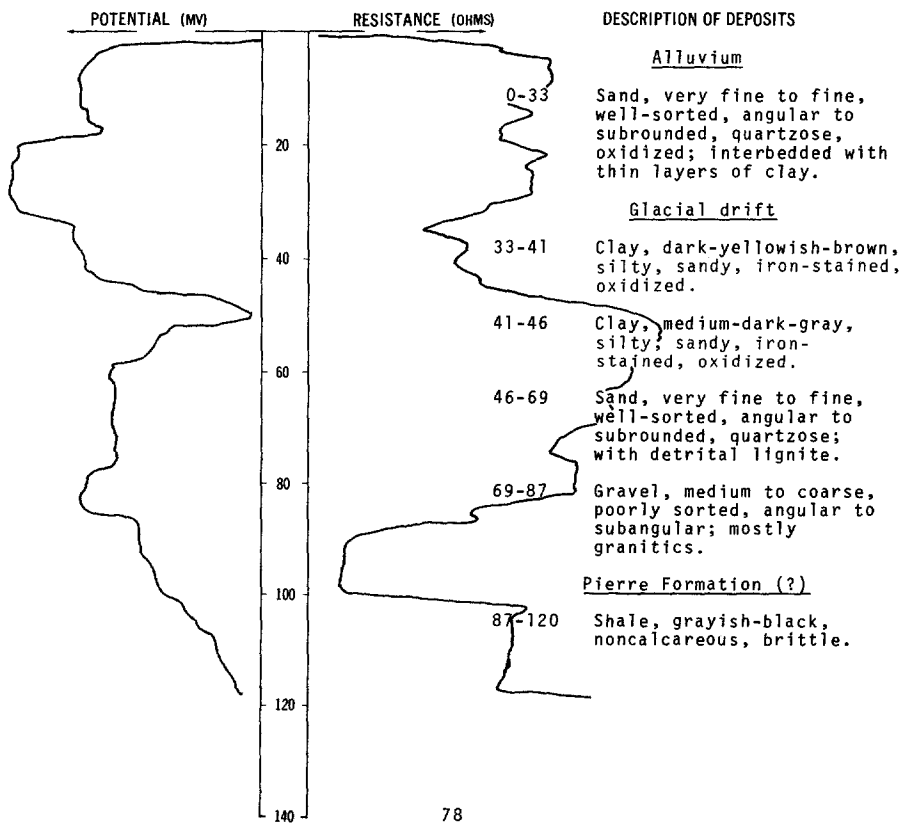
NDSWC 9295

LOCATION: 134-079-20AAB

DATE DRILLED: June 1975

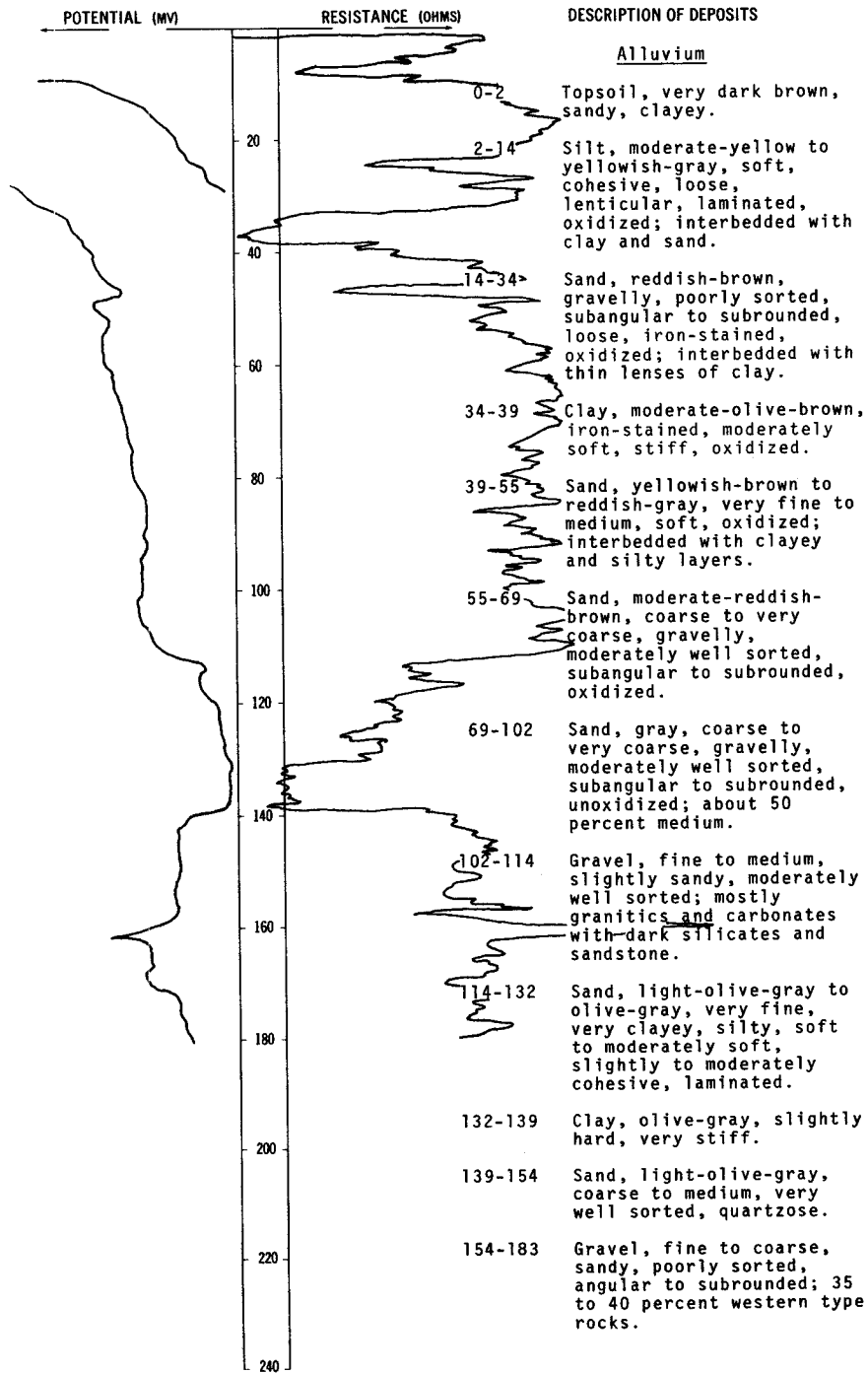
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(FT, MSL)

DEPTH: 120
(FT)



LOCATION: 134-080-16DAA
 ALTITUDE: 1672
 (FT, MSL)

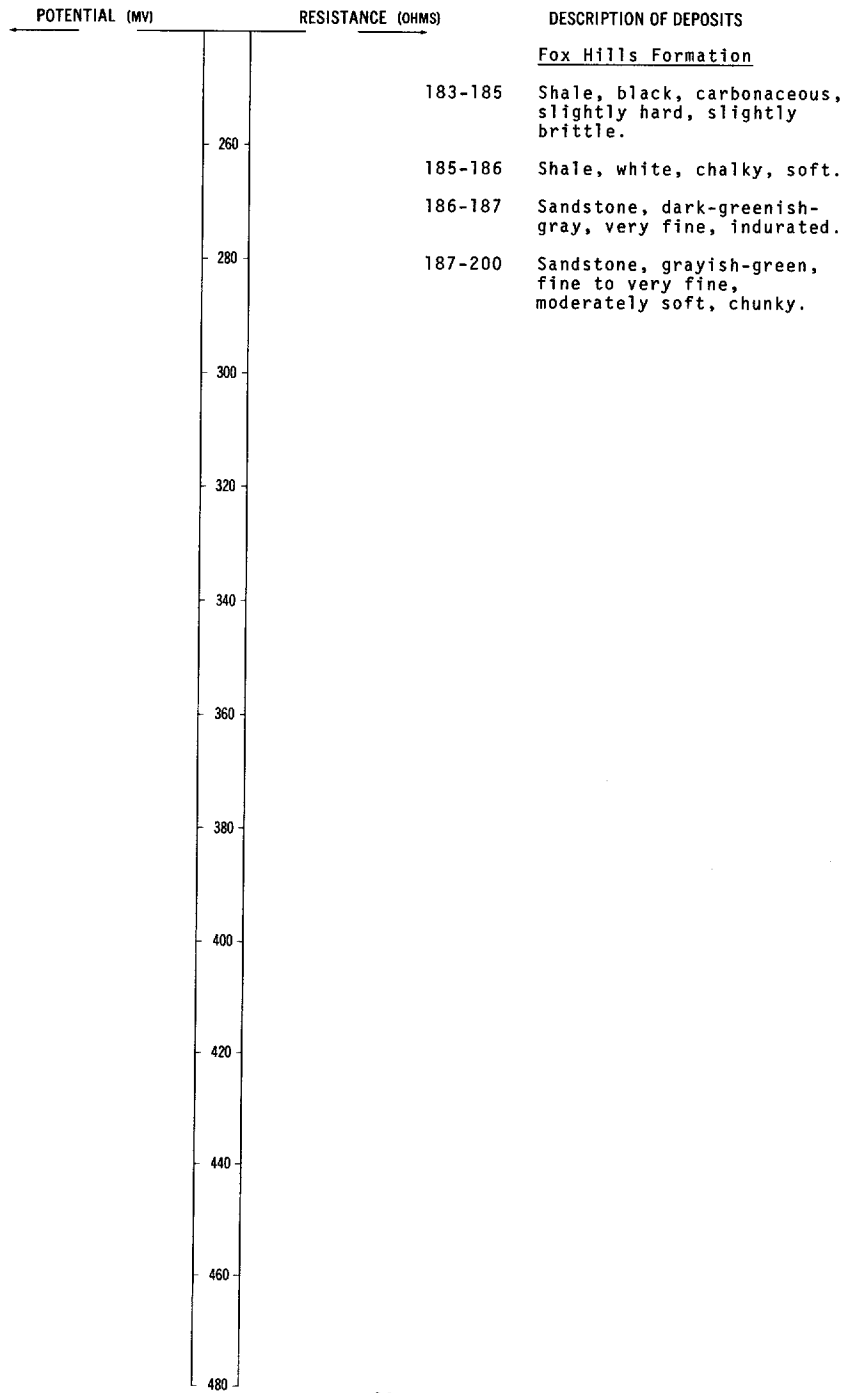
DATE DRILLED: September 1973
 DEPTH: 200
 (FT)



NDSWC 4571, Continued

LOCATION: 134-080-16DAA
 ALTITUDE: 1672
 (FT, MSL)

DATE DRILLED: September 1973
 DEPTH: 200
 (FT)



NDSWC 4571, Continued

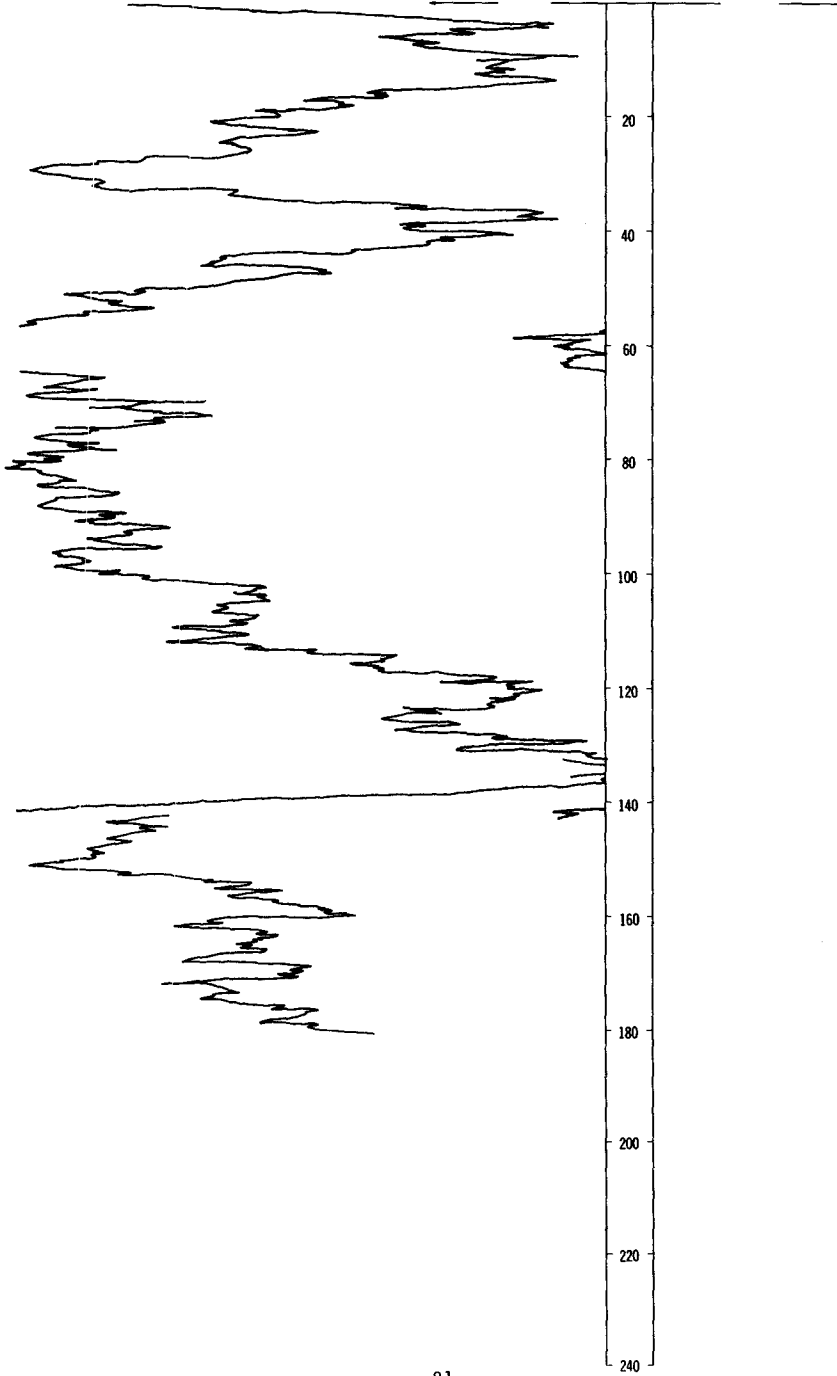
LOCATION: 134-080-16DAA

DATE DRILLED: September 1973

ALTITUDE: 1672
(FT, MSL)

DEPTH: 200
(FT)

NATURAL-GAMMA (T.C. 4)



134-080-17CCB
NDSWC 9292

Altitude: 1736 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Gravel, medium to coarse, very sandy, poorly sorted, oxidized; mostly shale and granitics-----	9	9
	Clay, moderate-yellowish-brown, silty, sandy, oxidized-----	11	20
Hell Creek Formation:			
	Shale, moderate-yellowish-brown, silty, sandy-----	25	45
	Shale, medium-dark-gray, silty, sandy-----	15	60

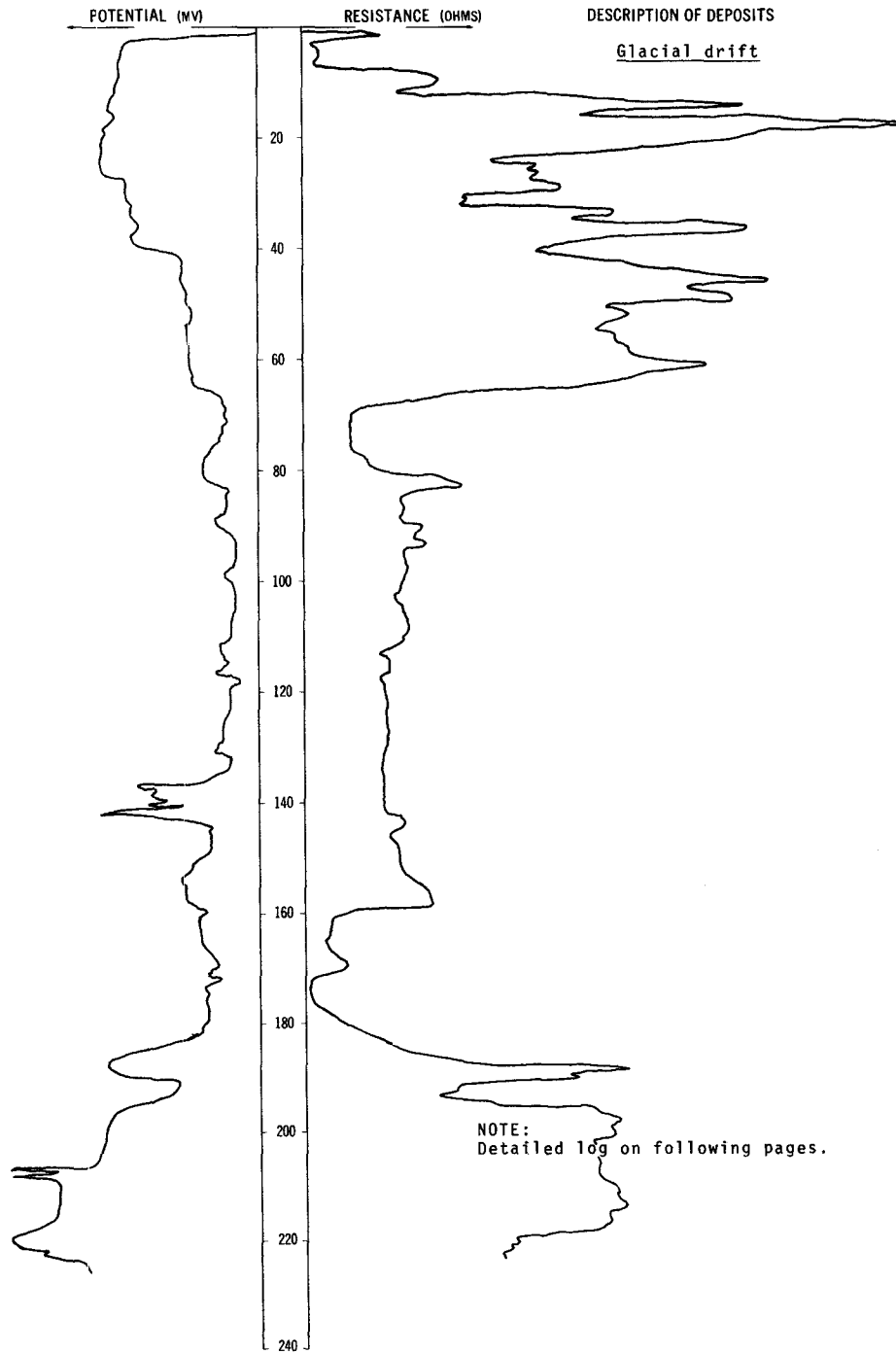
NDSWC 8992

LOCATION: 134-080-17DDD

DATE DRILLED: July 1974

ALTITUDE: 1699
(FT, MSL)

DEPTH: 230
(FT)



134-080-17DDD, Continued
NDSWC 8992

Altitude: 1699 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Silt, dark-yellow-brown, clayey, tight, oxidized-----	16	16
	Sand, dark-yellow-brown, fine, angular to subrounded, oxidized-----	6	22
	Silt, clayey, sticky, oxidized; carbonaceous zones; sand lenses-----	10	32
	Sand, dark-yellow-brown, fine to medium, micaceous, oxidized; occasional carbonaceous gravel and limonite hardpan as thin layers; 80 percent quartz, 10 percent western siliceous rocks, 5 percent igneous rocks, and 5 percent carbonaceous sandstone-----	28	60
	Gravel, fine to very coarse, angular to well-rounded, oxidized; predominantly coarse; detrital lignite fragments; 80 percent carbonates, 10 percent igneous rocks, and 10 percent quartz and western siliceous rocks-----	5	65
	Silt, medium-gray to olive-gray, slightly siliceous, micaceous, tight; detrital lignite-----	15	80
	Sand, medium-dark-gray, very fine to fine, subangular to subrounded-----	3	83
	Silt, medium-gray to olive-gray, slightly siliceous, micaceous, tight; numerous thin sand beds 2 to 4 feet thick-----	105	188
	Sand, medium-dark-gray, very fine to fine, subangular to subrounded-----	20	208
	Sand and silt; interbedded-----	15	223
	Gravel and boulders (?); no sample return-----	7	230

134-080-19DAA
NDSWC 9293

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellowish-brown, silty, slightly sandy, oxidized-----	20	20
	Sand, moderate- to dark-yellowish-brown, very fine to fine, quartzose-----	50	70
	Sand, dark-gray, very fine to fine, quartzose; with detrital lignite-----	10	80
	Gravel, medium to coarse, sandy, angular to subangular-----	15	95
	Clay, dark-gray, silty, sandy, slightly plastic-----	15	110
Fox Hills Formation:			
	Sandstone, grayish-green, very fine to medium, angular to subrounded-----	30	140

134-080-20CCC
NDSWC 9294

Altitude: 1731 feet

Glacial drift:			
	Clay, moderate-yellowish-brown, very sandy, silty, iron-stained, slightly plastic, oxidized-----	10	10
	Sand, very fine to medium, quartzose, oxidized-----	5	15
	Clay, moderate-yellowish-brown, very sandy, silty, iron-stained, slightly plastic, oxidized-----	27	42
	Clay, medium-dark-gray, very sandy, silty, iron-stained, micaceous, slightly plastic, unoxidized-----	50	92
	Clay, medium-dark-gray, very sandy, silty, brittle; with detrital lignite-----	77	169
Fox Hills Formation:			
	Sandstone, cemented, and shale-----	6	175

134-080-23BAA
NDSWC 8994

Altitude: 1645 feet

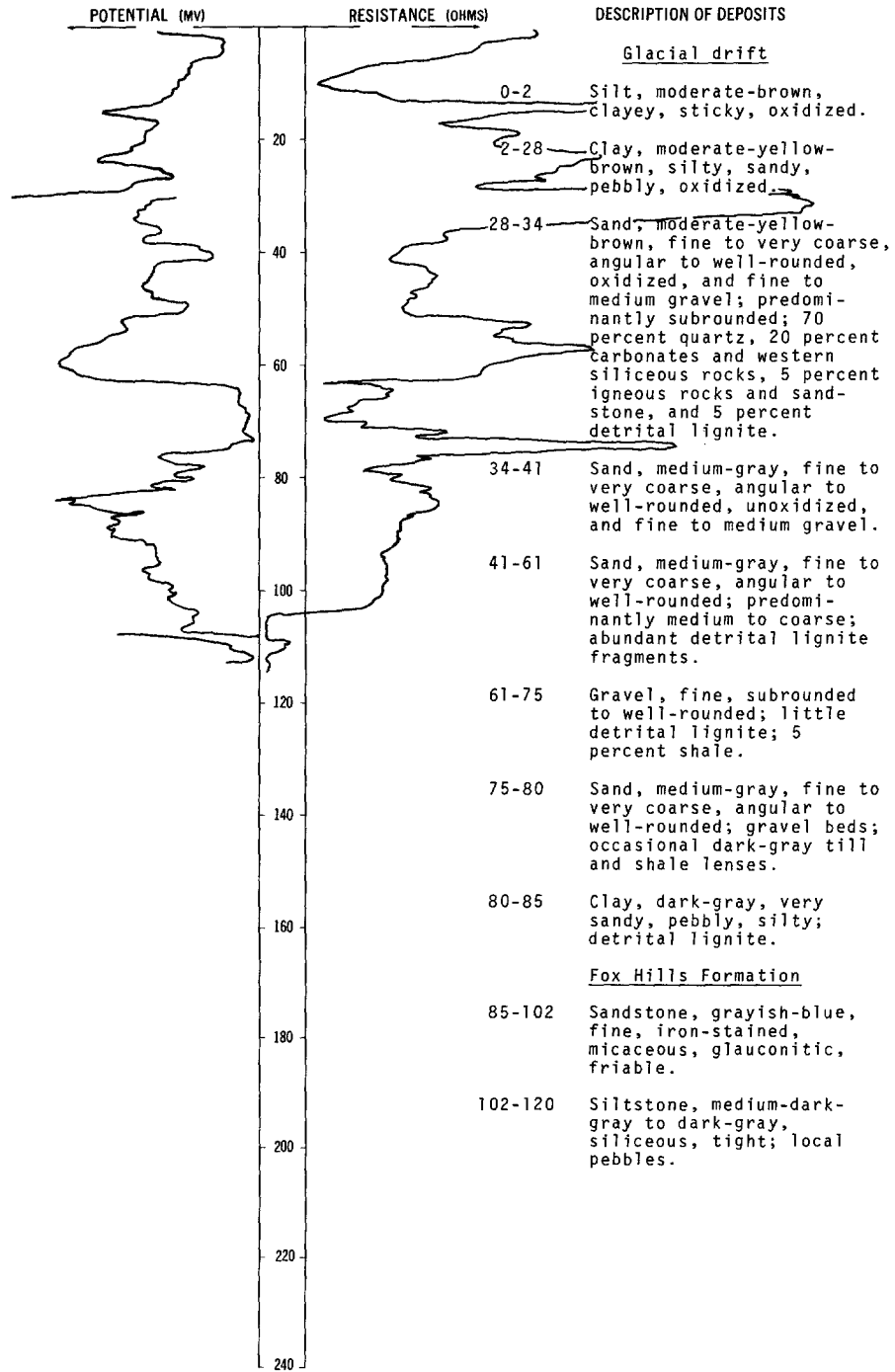
Glacial drift:			
	Silt, dusky-brown, clayey, oxidized-----	1	1
	Clay, moderate-yellow-brown, silty, sandy, pebbly, oxidized-----	23	24
	Sand, medium-dark-gray, fine to medium, subangular to subrounded, quartzose, micaceous, lignitic-----	16	40
	Gravel, fine to medium, subrounded to rounded, quartzose; with detrital lignite-----	9	49
Fox Hills Formation:			
	Sandstone, grayish-blue, fine, micaceous, glauconitic, friable-----	11	60

LOCATION: 134-080-23BAB

DATE DRILLED: July 1974

ALTITUDE: 1647
(FT, MSL)

DEPTH: 120
(FT)



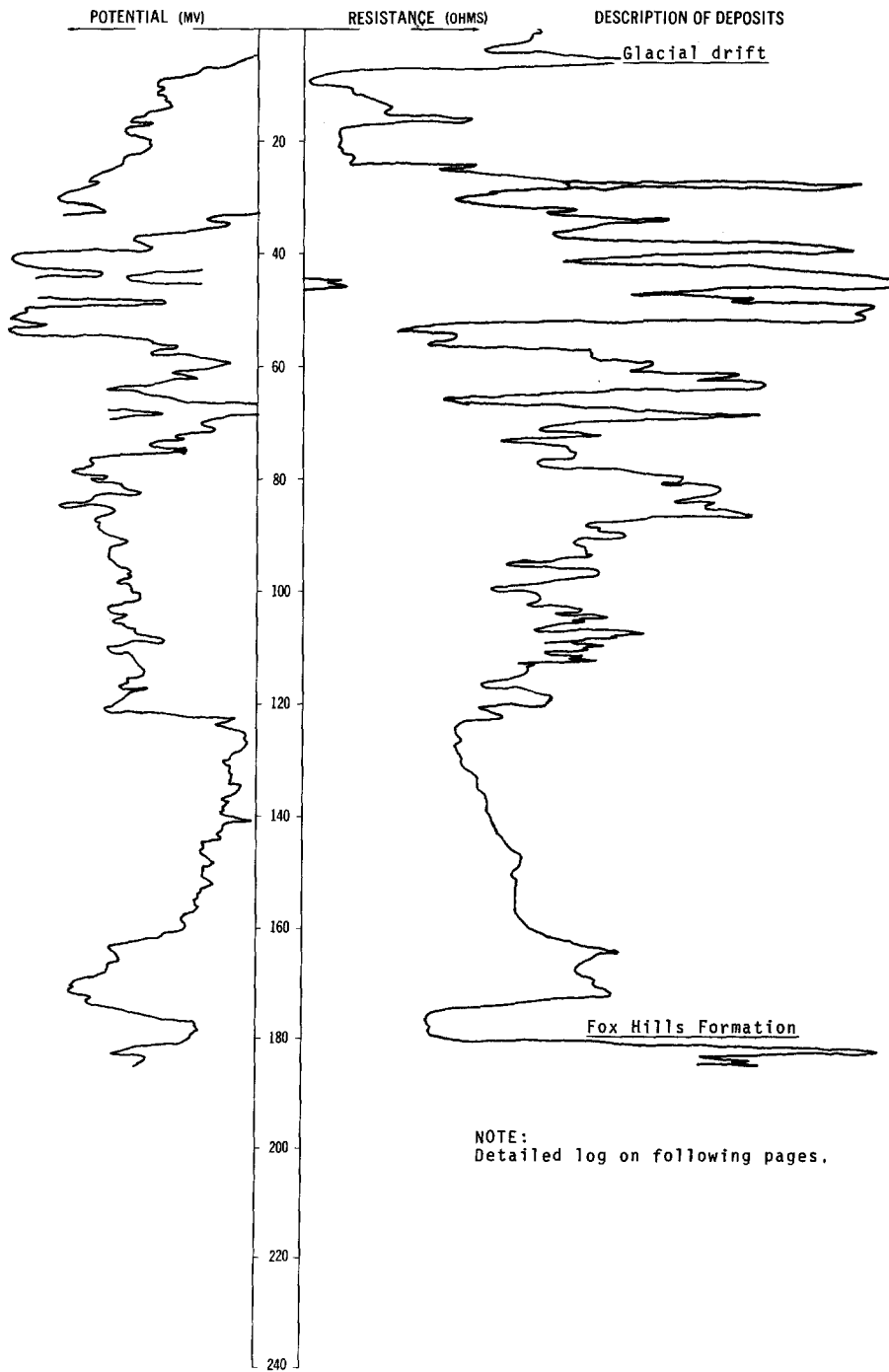
134-081-24AAA
 NDSWC 8991

Altitude: 1735 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Silt, moderate-yellow-brown, clayey, sandy, iron-stained, oxidized; carbonaceous inclusions-----	3	3
	Sand, dark-yellow-brown, very fine to fine, subangular to subrounded, oxidized-----	72	75
Fox Hills Formation:			
	Sandstone and siltstone, bluish-gray to dark-gray; thin cemented sections-----	25	100

LOCATION: 134-081-24ADD
ALTITUDE: 1733
(FT, MSL)

DATE DRILLED: July 1974
DEPTH: 200
(FT)



NOTE:
Detailed log on following pages.

134-081-24ADD, Continued
NDSWC 8995

Altitude: 1733 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Sand, dark-yellow-brown, very fine to fine, silty, oxidized-----	6	6
	Silt, medium-gray to moderate-yellow-brown, iron-stained, siliceous, tight, partly oxidized; variable coloring; detrital lignite-----	31	37
	Sand, moderate-yellow-brown, very fine to fine, subangular to subrounded, micaceous; limonite hardpan; thin oxidized gravel at bottom of interval-----	14	51
	Silt, dark-yellow-brown to moderate-yellow-brown, tight; locally olive gray to dark gray near bottom; detrital lignite-----	27	78
	Sand, medium-dark-gray, fine, subangular to subrounded, micaceous; thin gravel lenses and silt; detrital lignite-----	42	120
	Sand and silt; interbedded; mostly limestone and quartz; some gravel; gravel zone at bottom of interval-----	40	160
	Sand, medium-dark-gray, fine, subangular to subrounded, micaceous-----	14	174
	Silt, dark-yellow-brown to moderate-yellow-brown, tight-----	6	180
Fox Hills Formation:			
	Sandstone, grayish-blue, fine to medium, hard, cemented-----	8	188
	Sandstone, grayish-blue, fine to medium, glauconitic, friable, hard, cemented-----	12	200

134-081-25DAB
NDSWC 8990

Altitude: 1649 feet

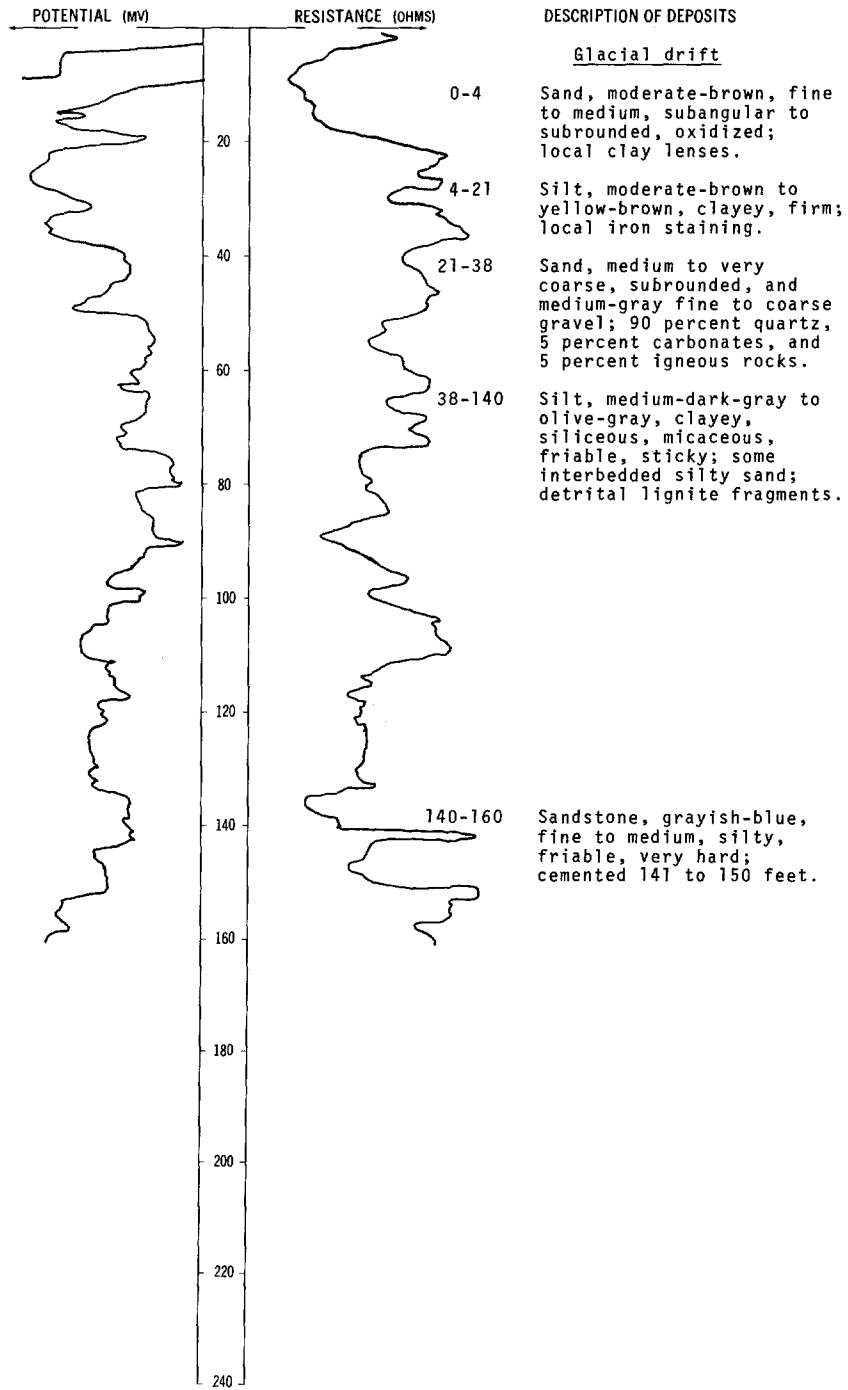
Glacial drift:			
	Sand, moderate-brown, fine to medium, silty, angular to subrounded, oxidized-----	5	5
	Sand, moderate-brown, fine to coarse, angular to subrounded, oxidized; predominantly medium-----	10	15
	Gravel, fine to medium, subangular to subrounded, and very coarse oxidized sand-----	5	20
Fox Hills Formation:			
	Sand, yellow-brown to medium-gray, fine to medium, subangular to subrounded; limonite hardpan-----	20	40

LOCATION: 134-082-25CDD

DATE DRILLED: July 1974

ALTITUDE: 1695
(FT, MSL)

DEPTH: 160
(FT)

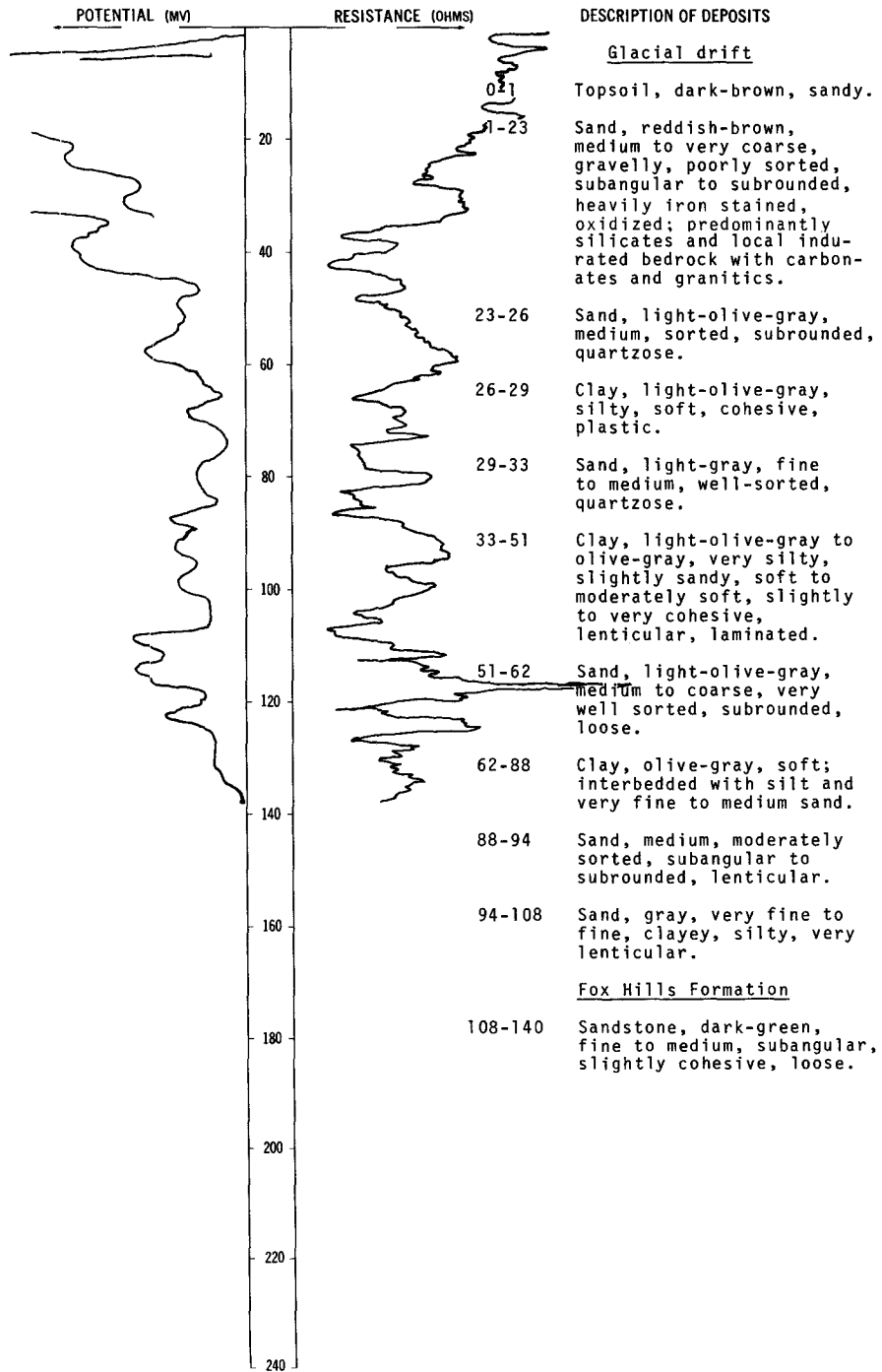


LOCATION: 134-082-35DAA

DATE DRILLED: September 1973

ALTITUDE: 1697
(FT, MSL)

DEPTH: 140
(FT)



NDSWC 4570, Continued

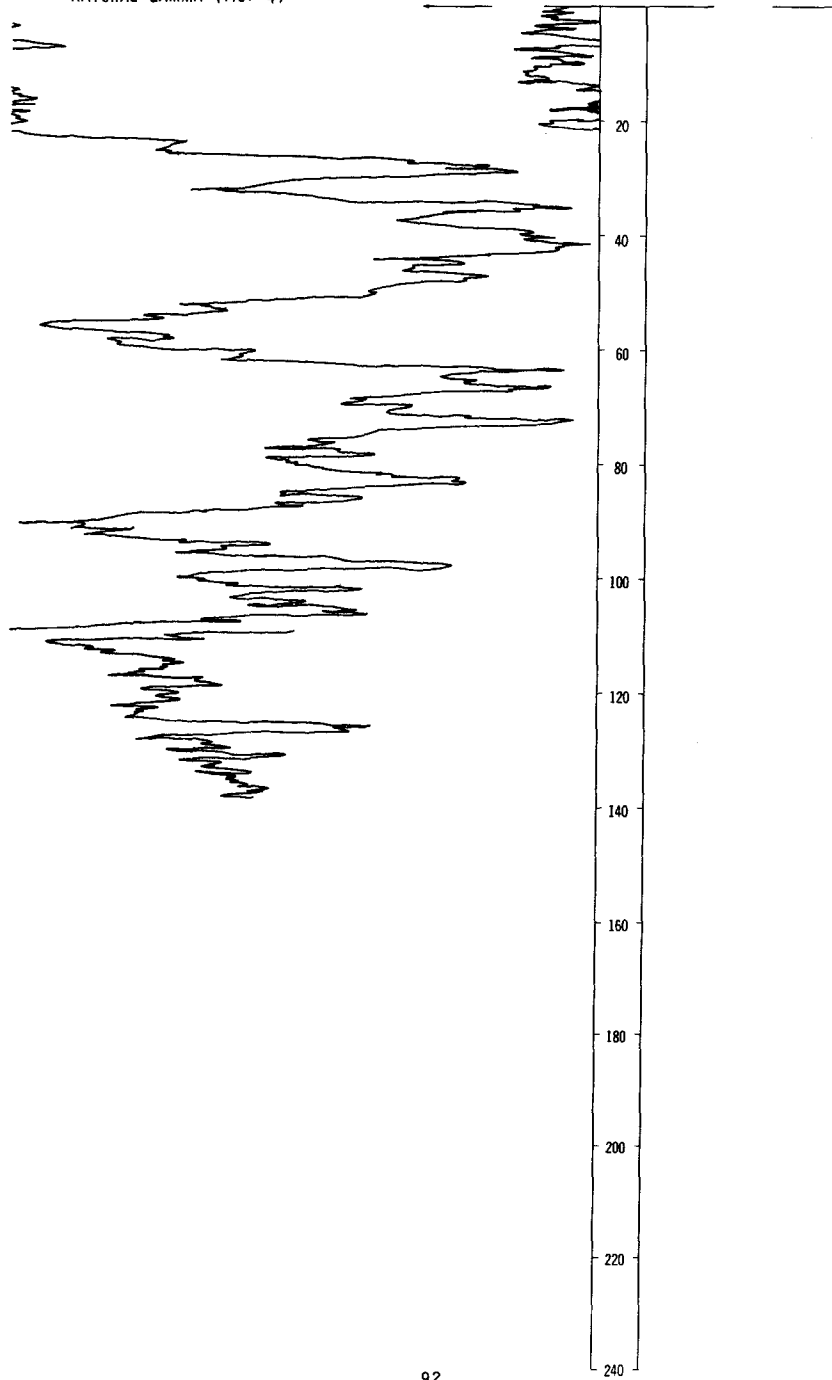
LOCATION: 134-082-35DAA

DATE DRILLED: September 1973

ALTITUDE: 1697
(FT, MSL)

DEPTH: 140
(FT)

NATURAL-GAMMA (T.C. 4)

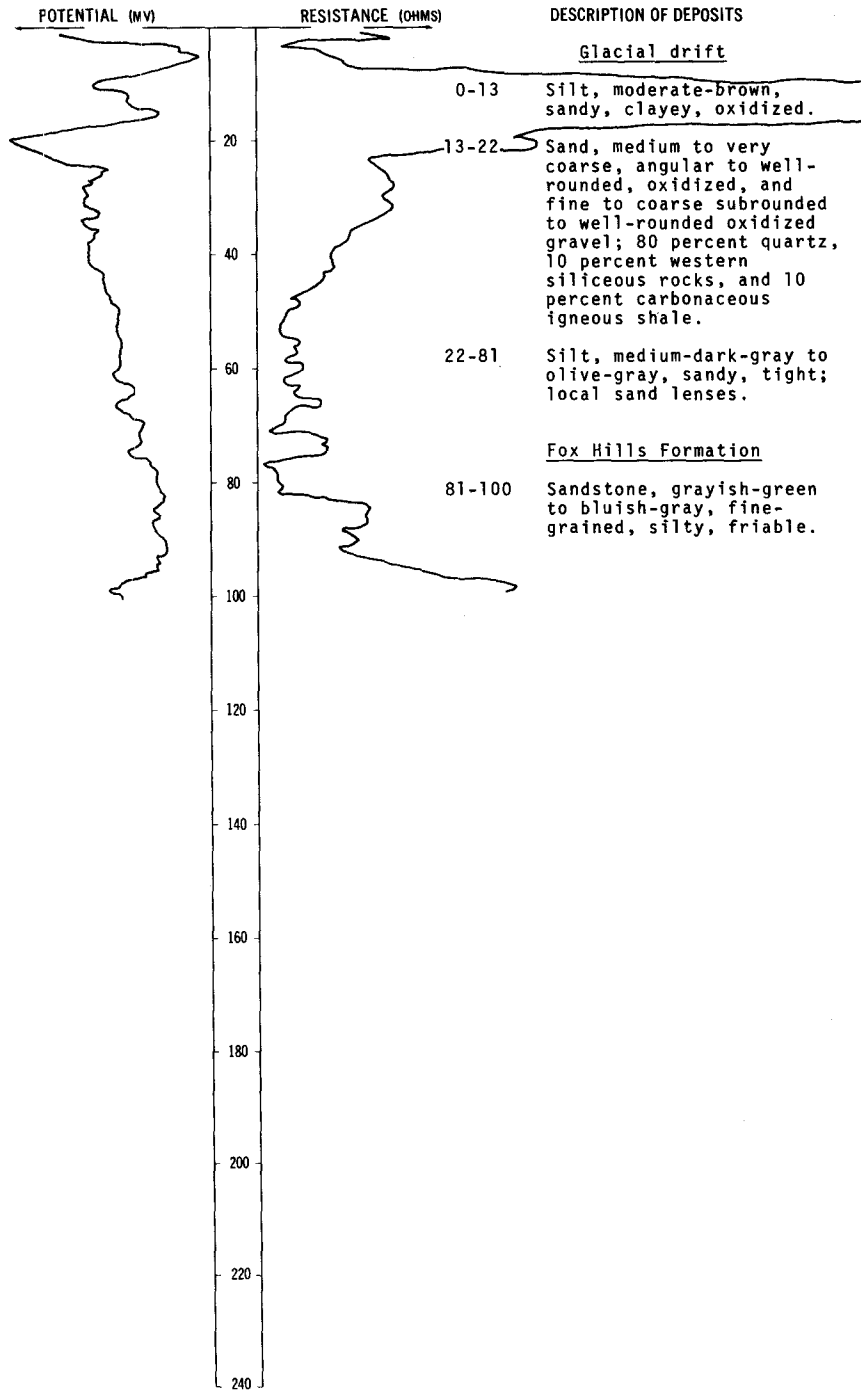


LOCATION: 134-082-36BDA

DATE DRILLED: July 1974

ALTITUDE: 1695
(FT, MSL)

DEPTH: 100
(FT)

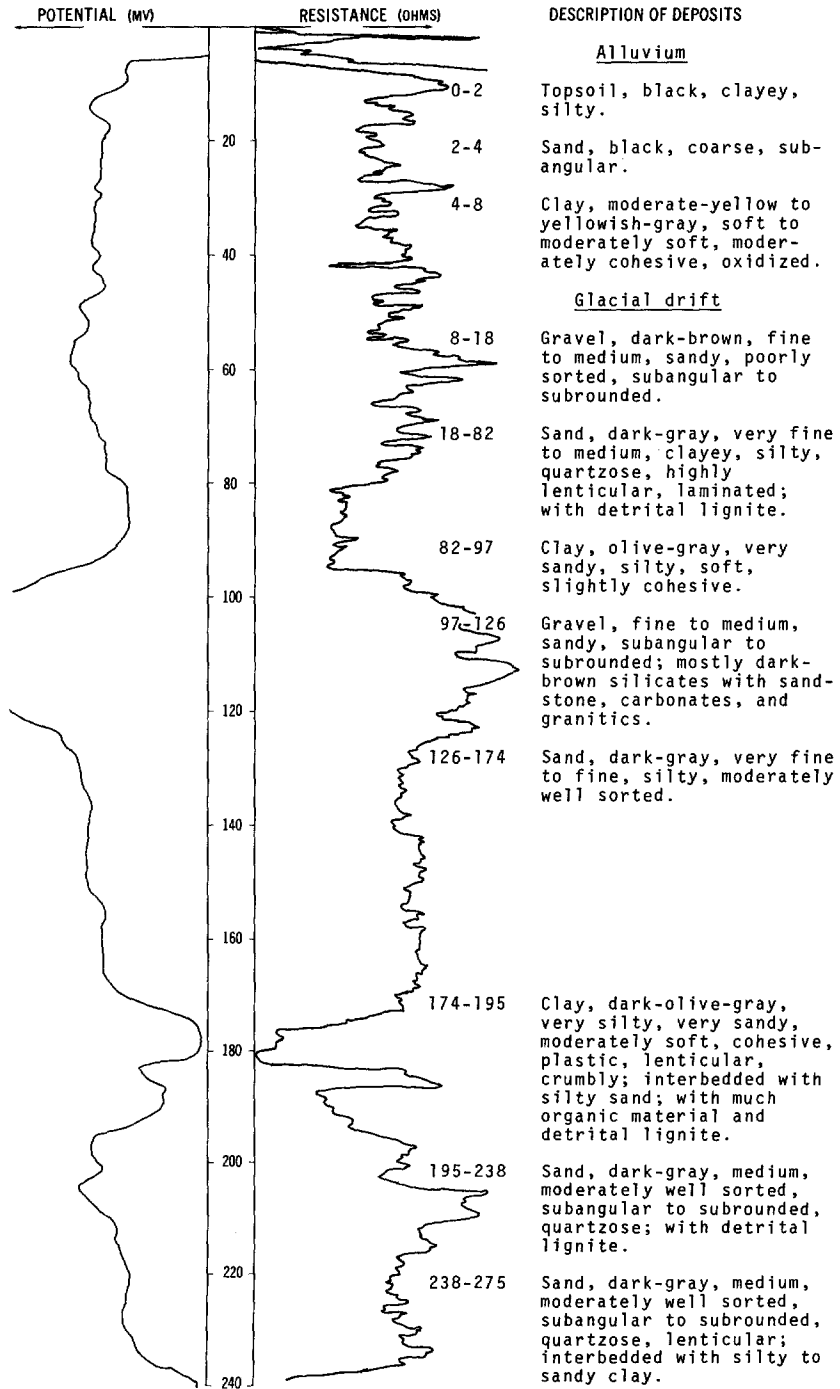


LOCATION: 134-083-05DCC

DATE DRILLED: September 1973

ALTITUDE: 1835
(FT, MSL)

DEPTH: 320
(FT)



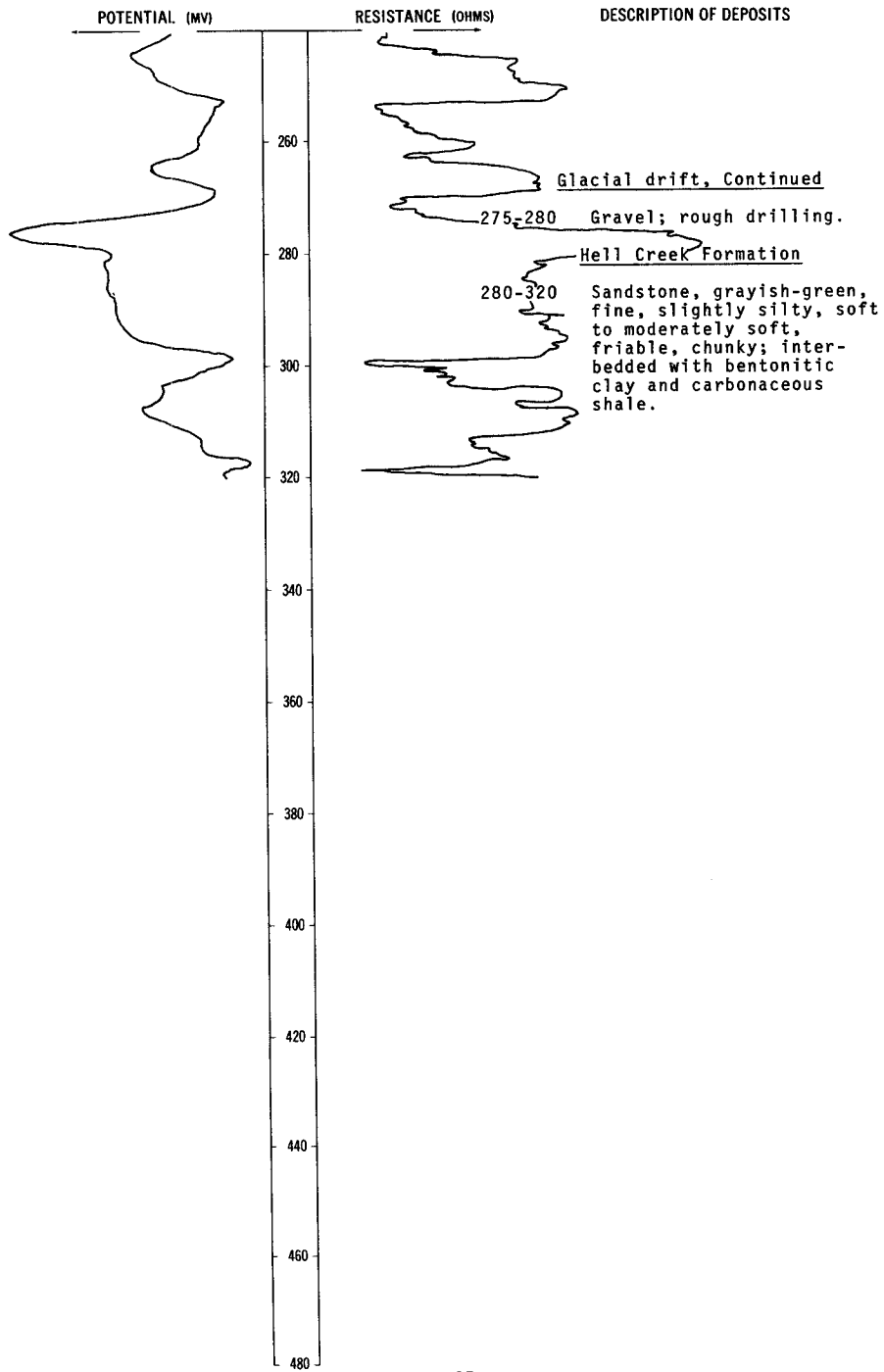
NDSWC 4561, Continued

LOCATION: 134-083-05DCC

DATE DRILLED: September 1973

ALTITUDE: 1835
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4561, Continued

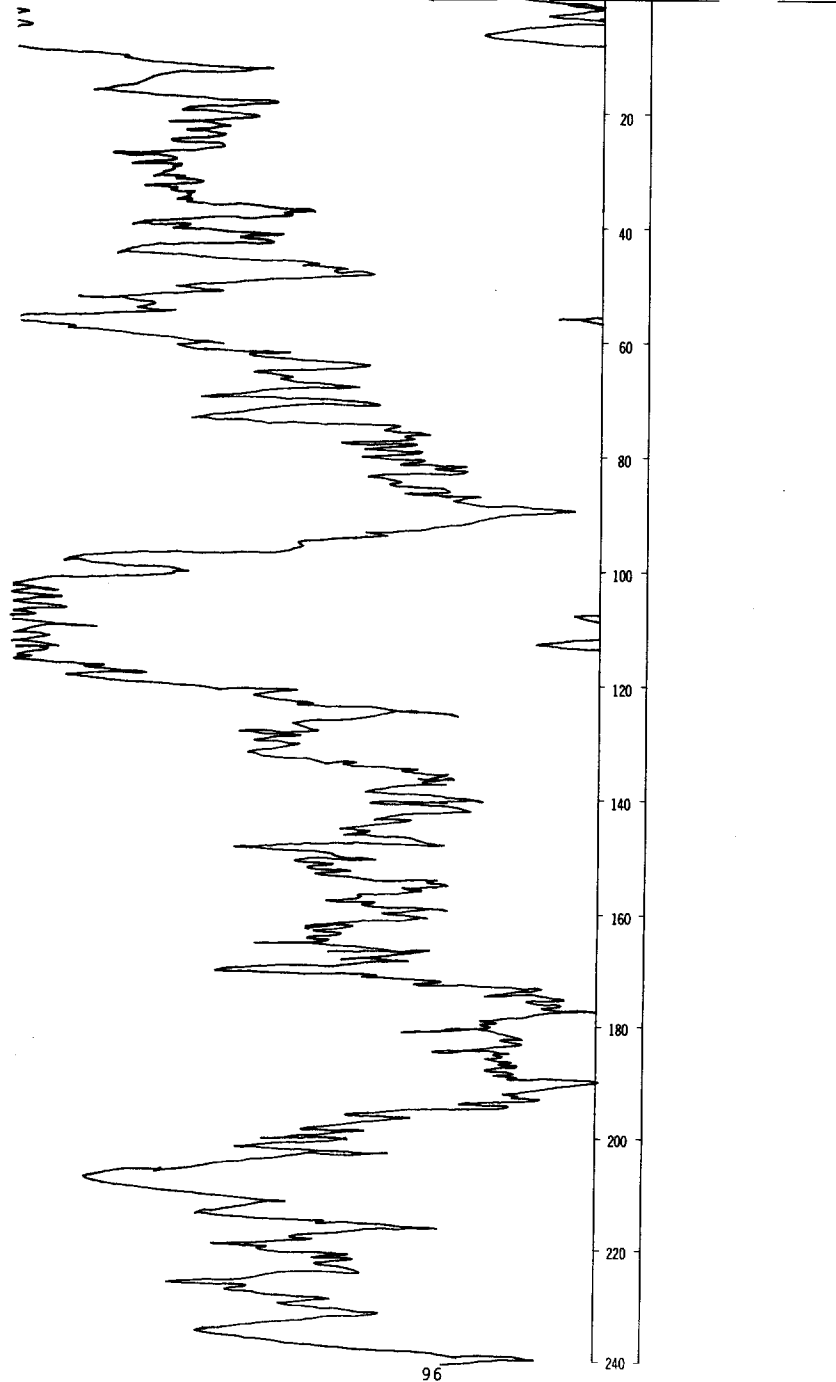
LOCATION: 134-083-05DCC

DATE DRILLED: September 1973

ALTITUDE: 1835
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4561, Continued

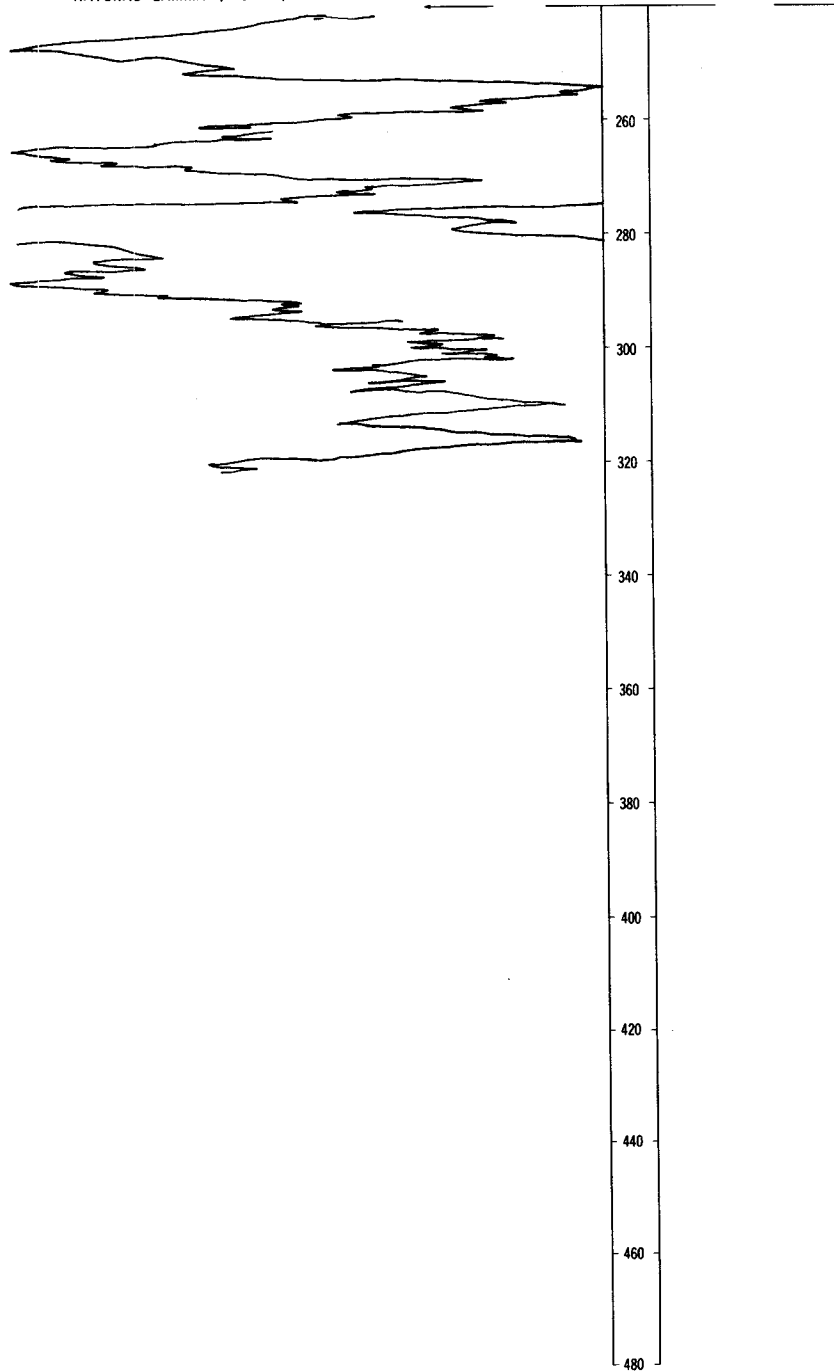
LOCATION: 134-083-05DCC

DATE DRILLED: September 1973

ALTITUDE: 1835
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)

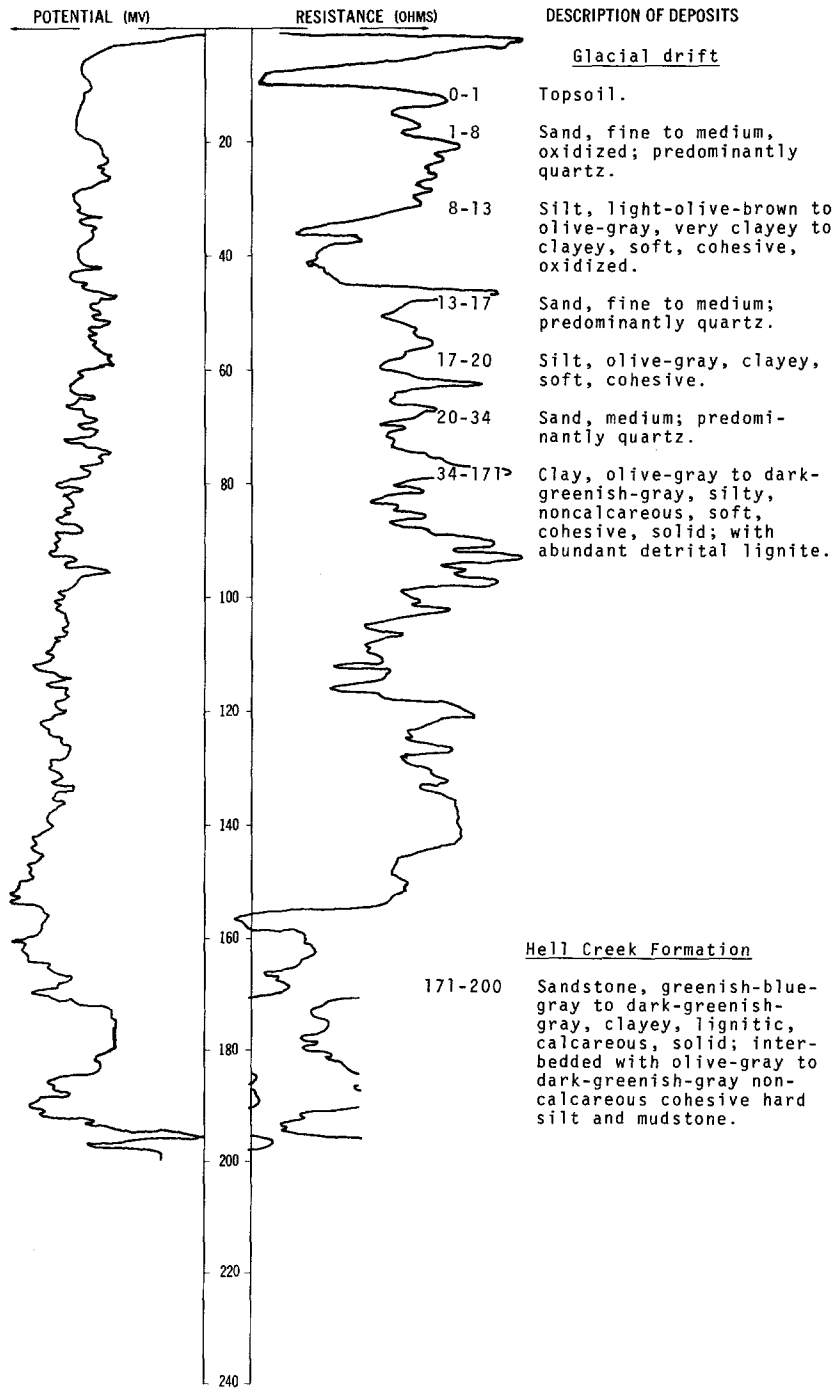


LOCATION: 134-083-06ABD

DATE DRILLED: June 1974

ALTITUDE:
(FT, MSL)

DEPTH: 200
(FT)

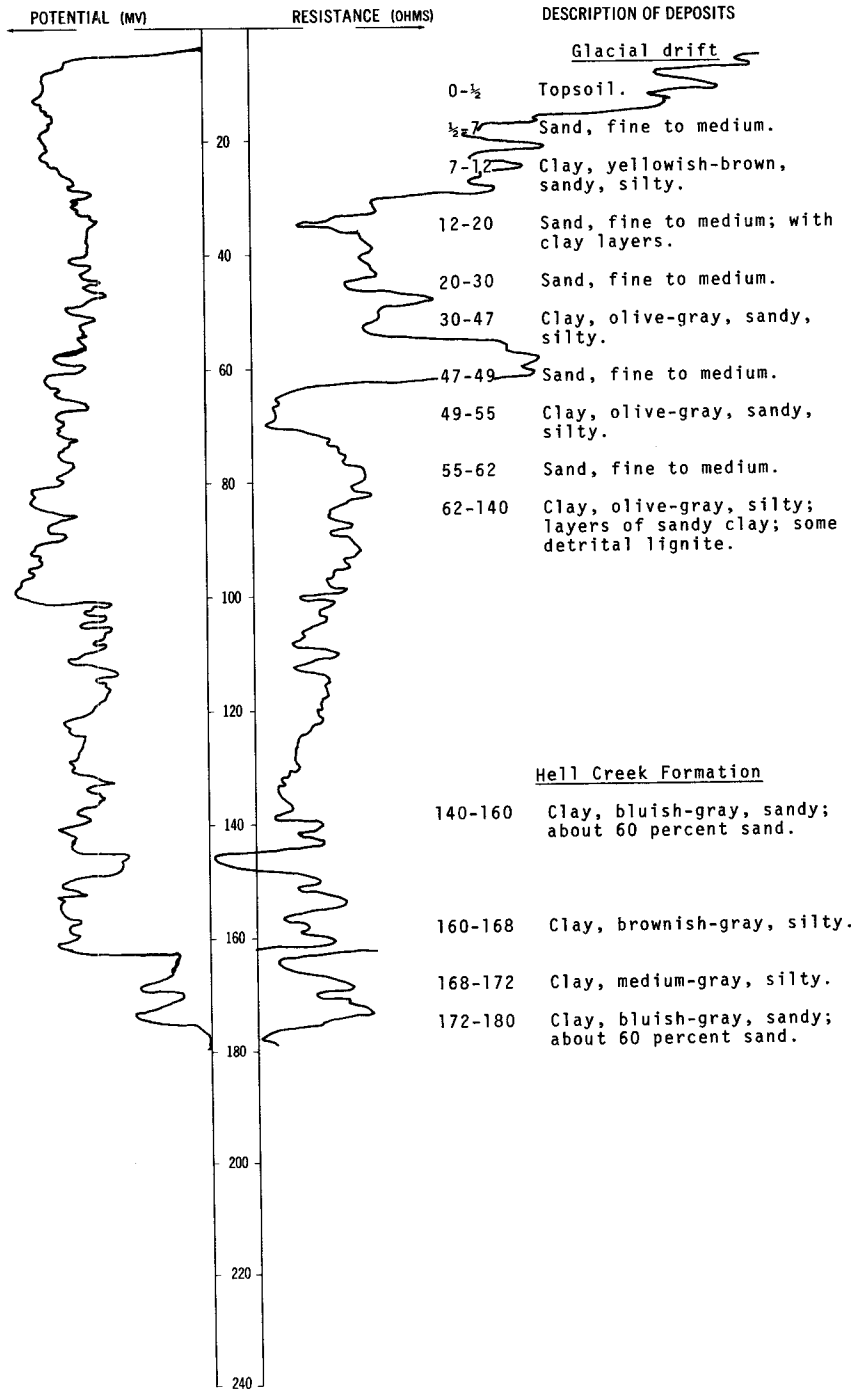


LOCATION: 134-083-06BAB

DATE DRILLED: June 1974

ALTITUDE:
(FT, MSL)

DEPTH: 180
(FT)

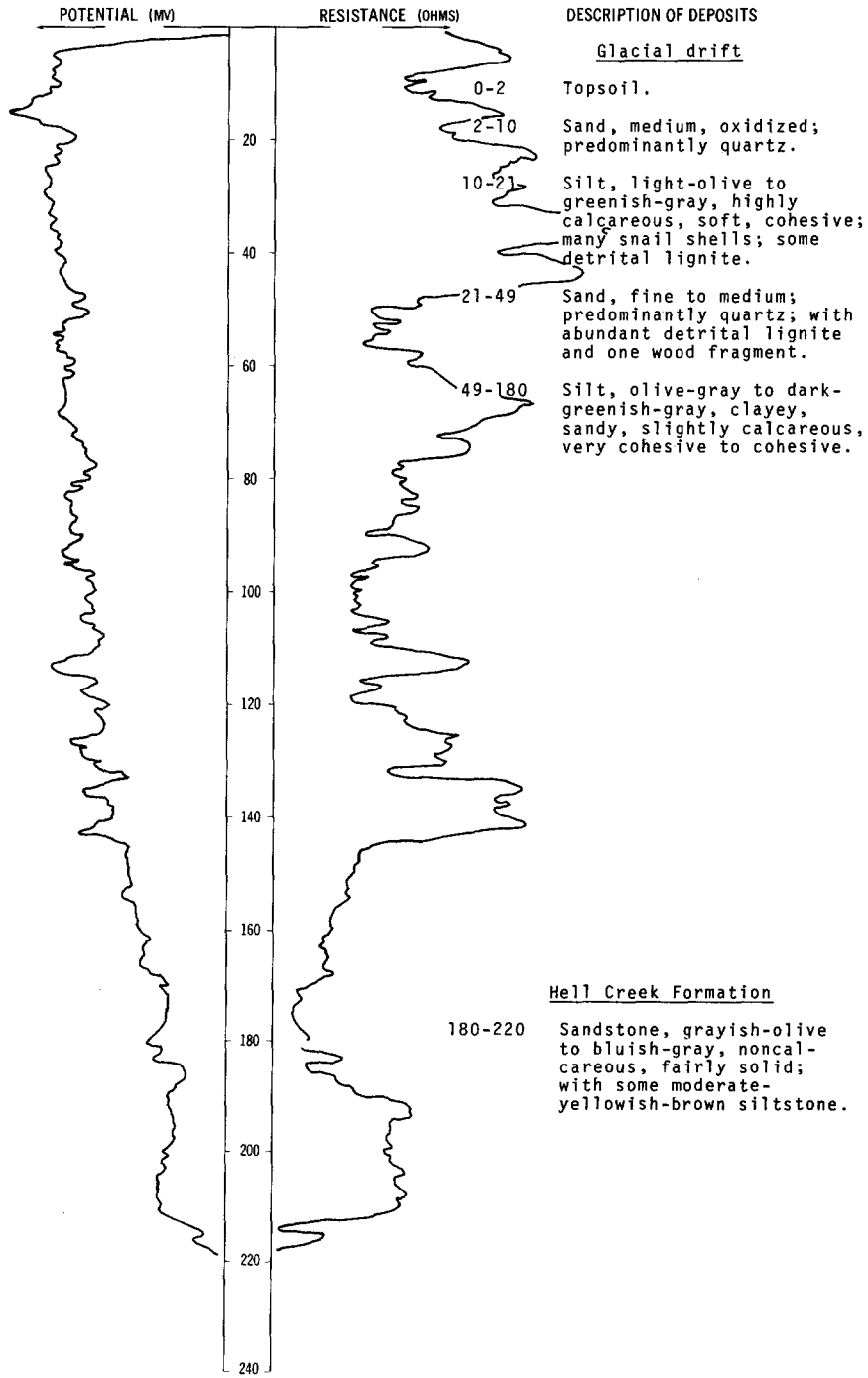


LOCATION: 134-083-06BBC

DATE DRILLED: June 1974

ALTITUDE:
(FT, MSL)

DEPTH: 220
(FT)

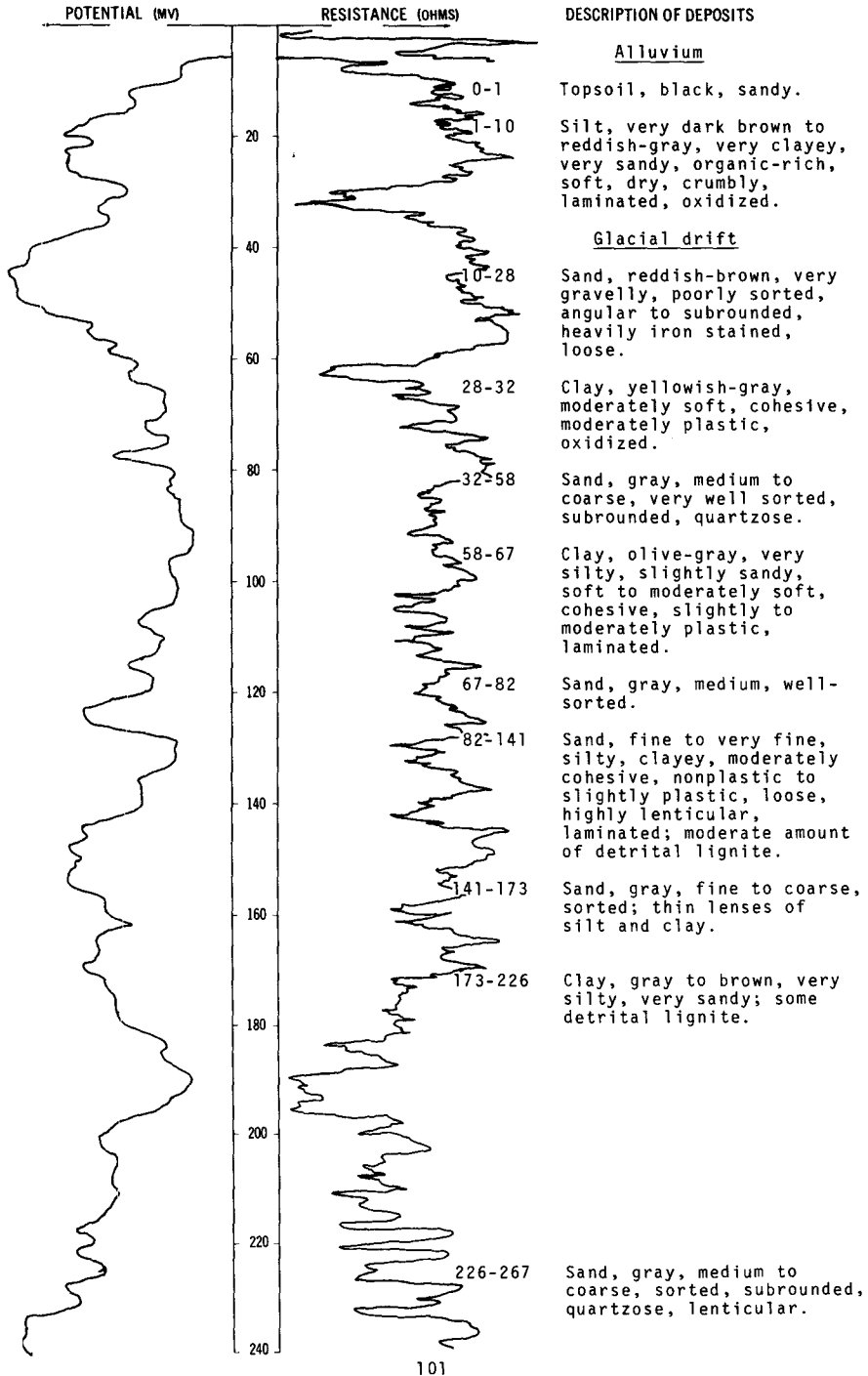


LOCATION: 134-083-17CCC

DATE DRILLED: September 1973

ALTITUDE: 1830
(FT, MSL)

DEPTH: 300
(FT)



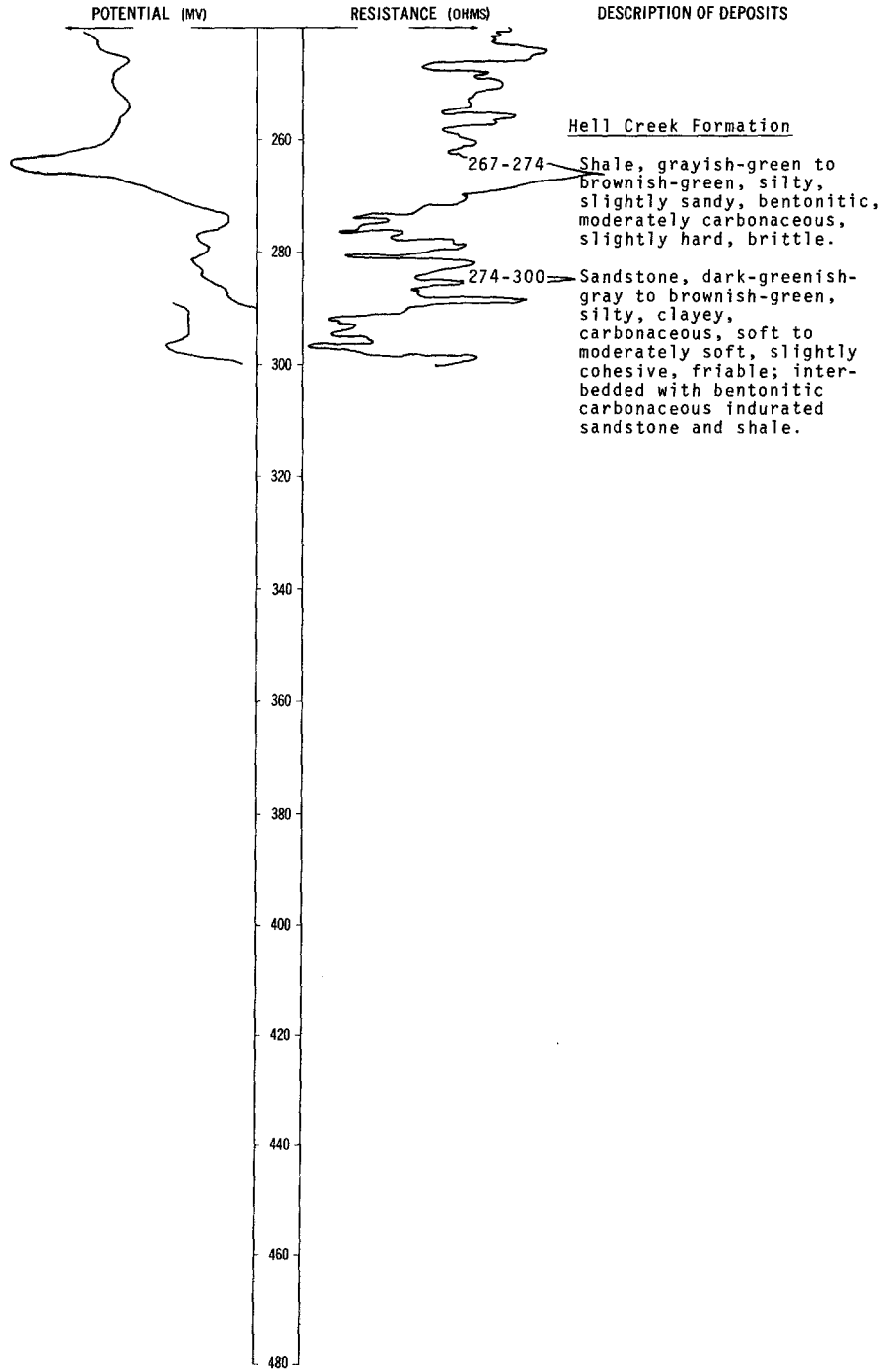
NDSWC 4565, Continued

LOCATION: 134-083-17CCC

DATE DRILLED: September 1973

ALTITUDE: 1830
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4565, Continued

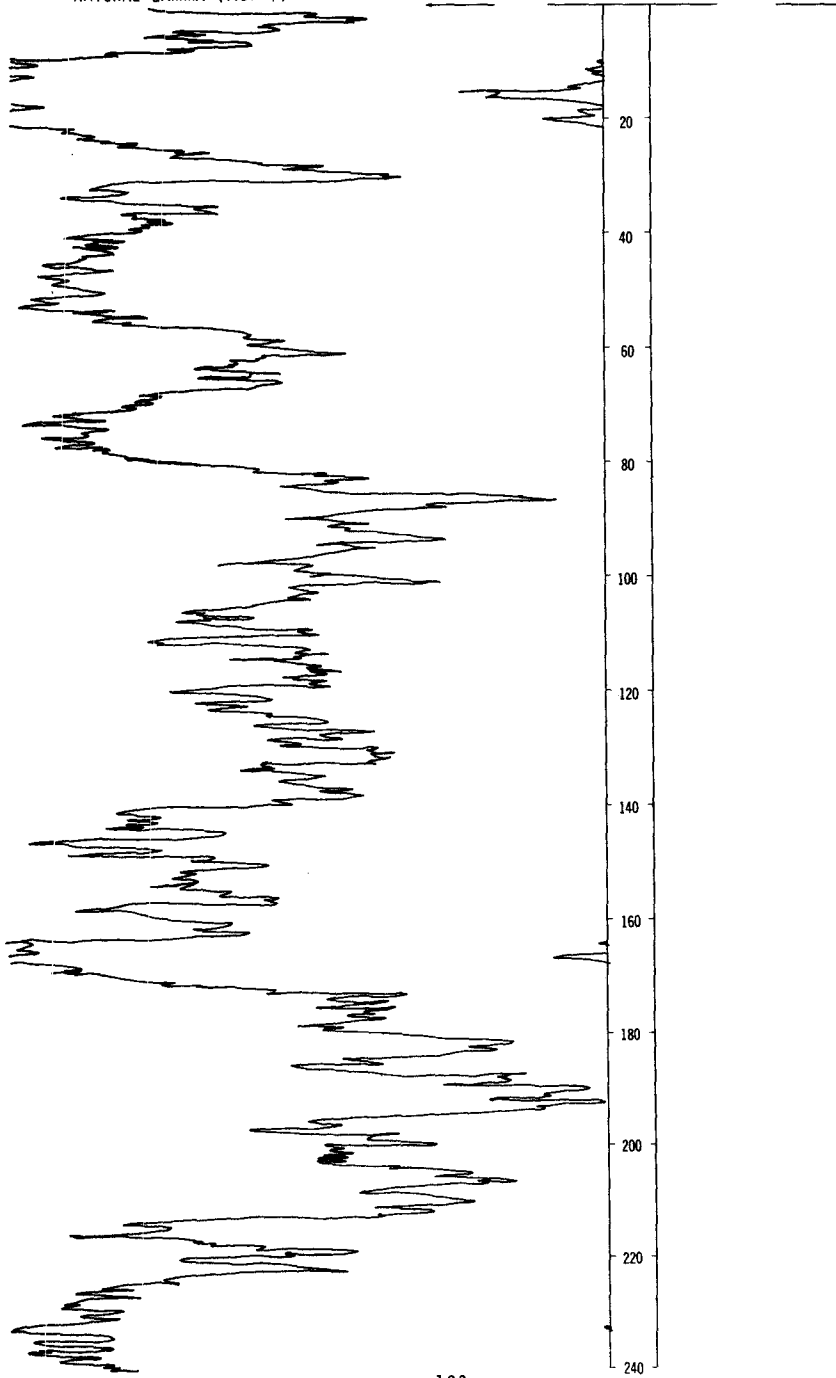
LOCATION: 134-083-17CCC

DATE DRILLED: September 1973

ALTITUDE: 1830
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4565, Continued

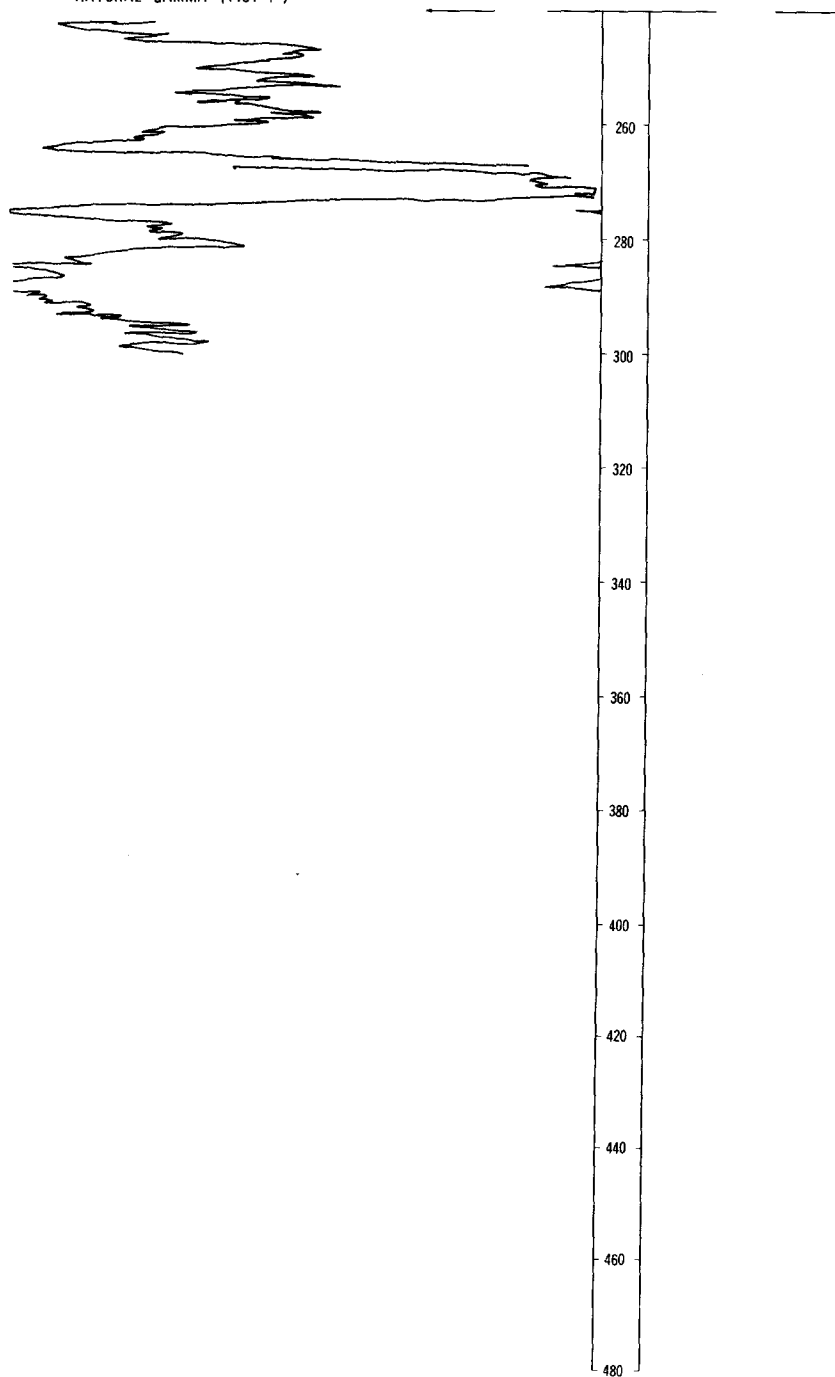
LOCATION: 134-083-17CCC

DATE DRILLED: September 1973

ALTITUDE: 1830
(FT. MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



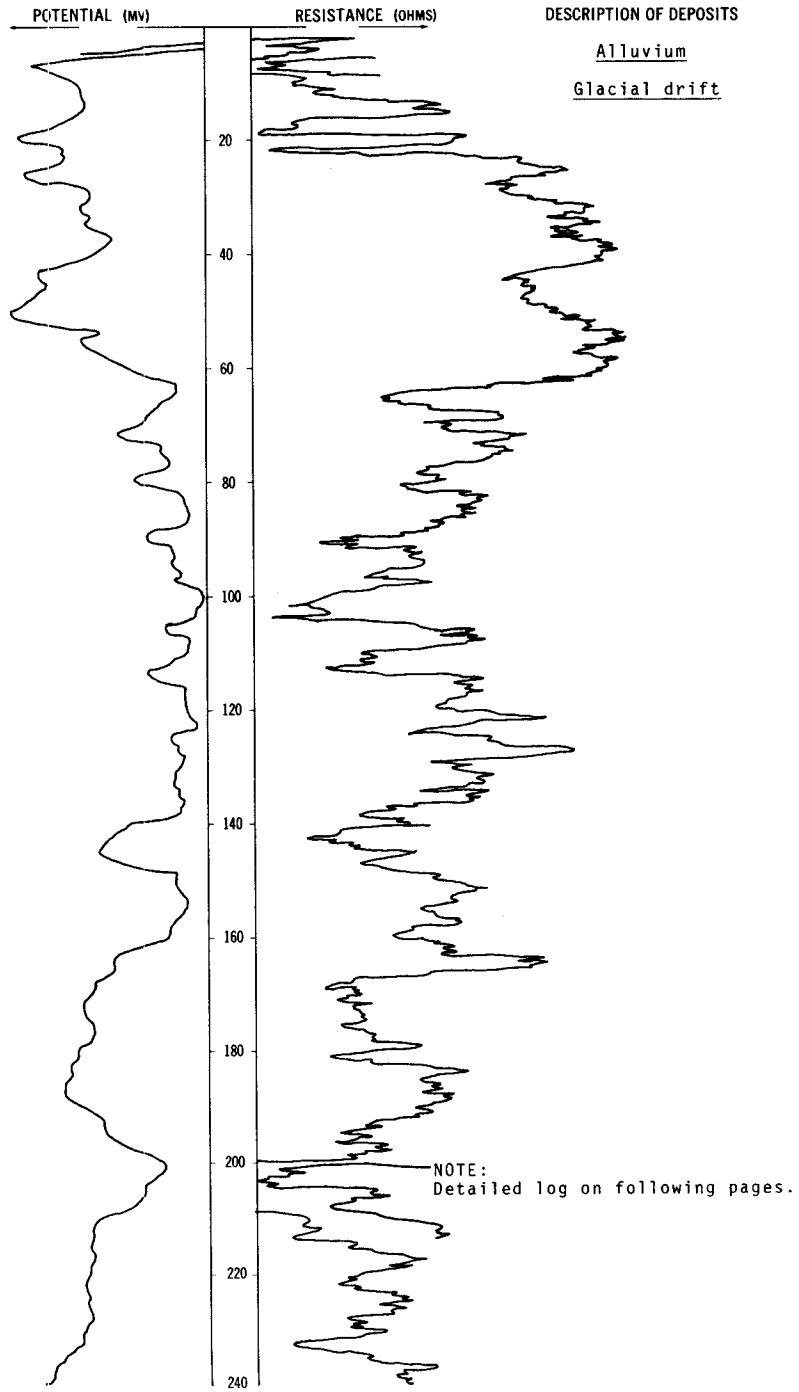
NDSWC 4566, 4566A

LOCATION: 134-083-17DDB1, 2

DATE DRILLED: September 1973

ALTITUDE: 1819
(FT MSL)

DEPTH: 300
(FT)



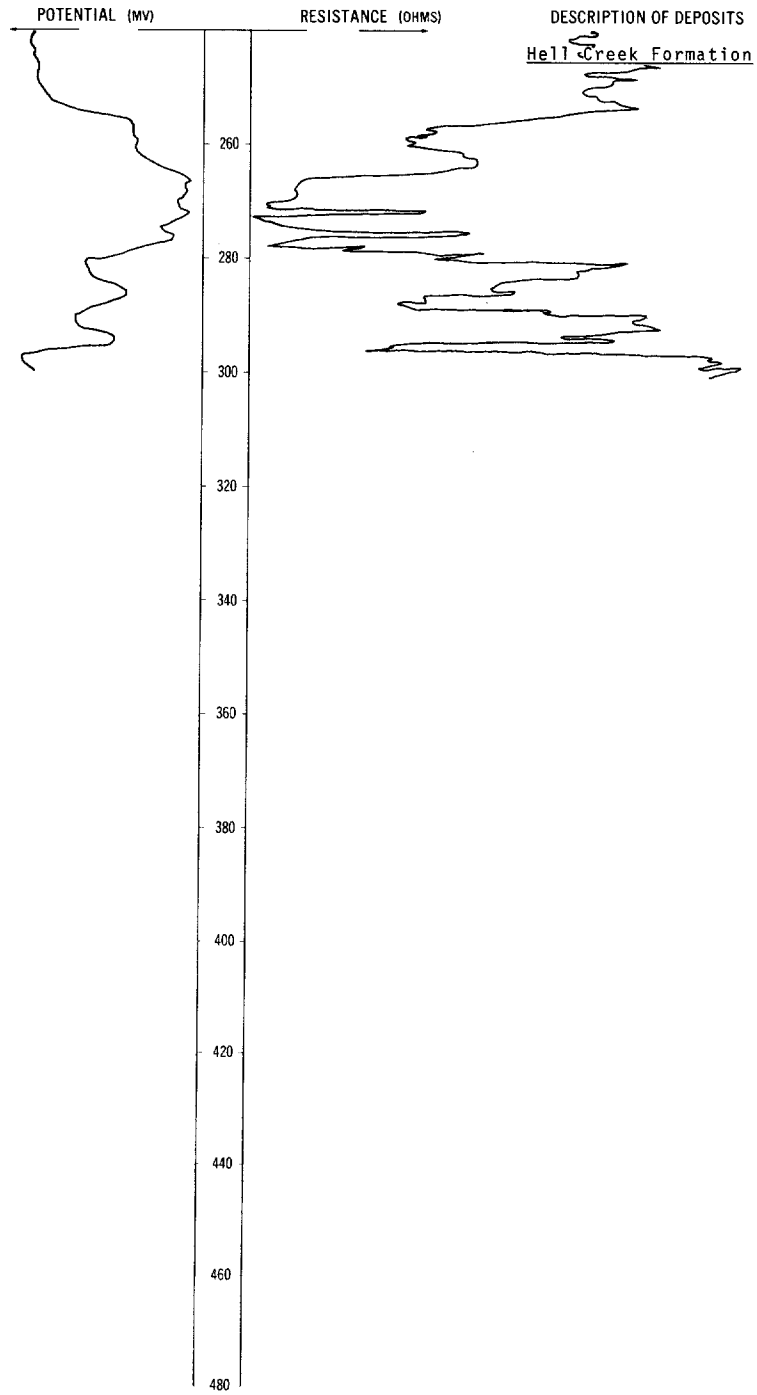
NDSWC 4566, 4566A, Continued

LOCATION: 134-083-17DDB1, 2

DATE DRILLED: September 1973

ALTITUDE: 1819
(FT, MSL)

DEPTH: 300
(FT)



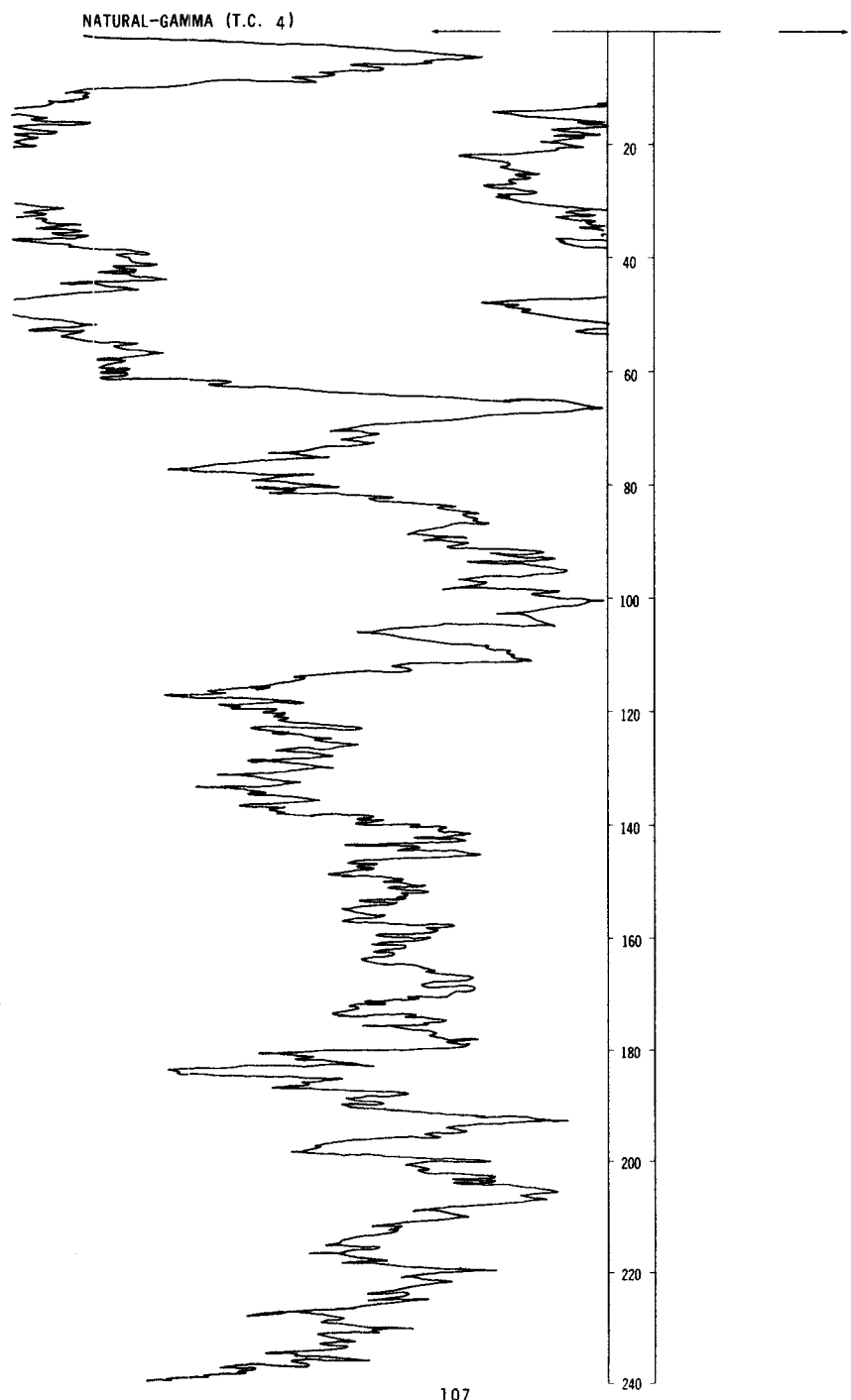
NDSWC 4566, 4566A, Continued

LOCATION: 134-083-17DDB1, 2

DATE DRILLED: September 1973

ALTITUDE: 1819
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4566, 4566A, Continued

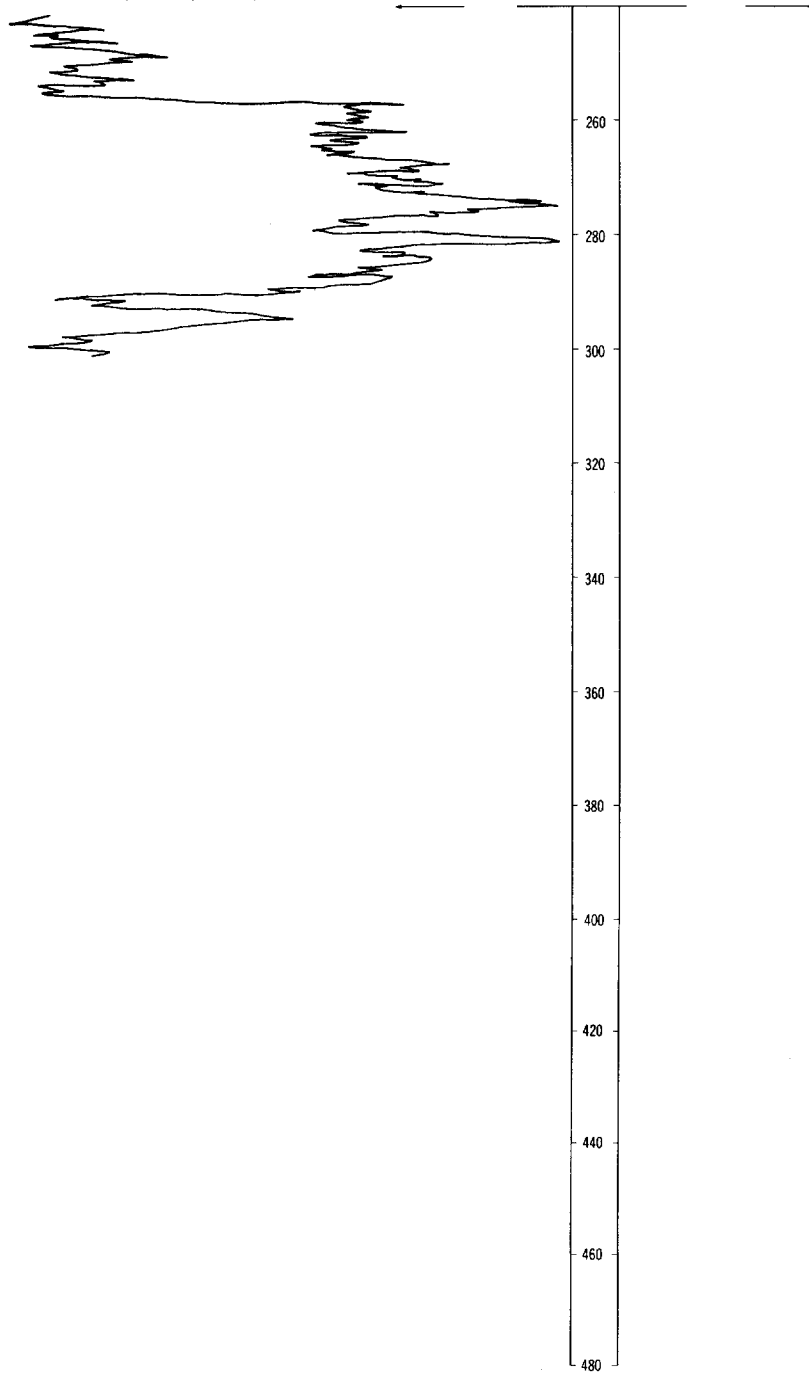
LOCATION: 134-083-17DDB1, 2

DATE DRILLED: September 1973

ALTITUDE: 1819
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



134-083-17DDB1, 2, Continued
 NDSWC 4566, 4566A

Altitude: 1819 feet

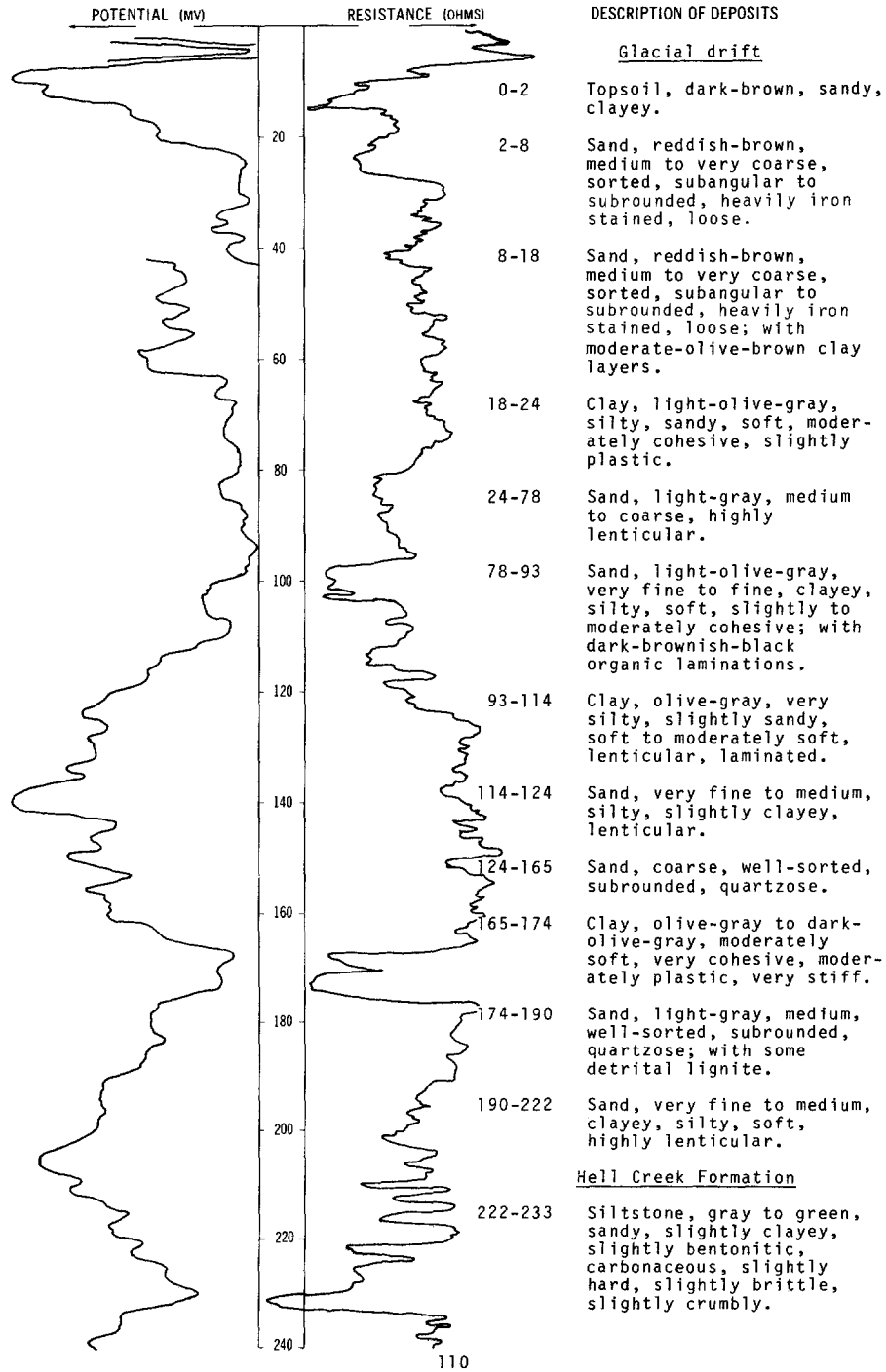
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Topsoil, dark-brown, sandy-----	2	2
	Sand, moderate-olive-brown to reddish-brown, very fine to fine, very clayey, very silty, soft, slightly cohesive, loose, lenticular, dry, oxidized-----	8	10
Glacial drift:	Sand, fine to very coarse, gravelly, poorly sorted, angular to subrounded, iron-stained, loose, oxidized-----	20	30
	Sand, fine to very coarse, gravelly, poorly sorted, angular to subrounded, iron-stained, loose, unoxidized-----	8	38
	Sand, light-olive-gray, medium to coarse, sorted, subrounded, quartzose, loose-----	26	64
	Clay, olive-gray, moderately soft, cohesive, moderately plastic, stiff-----	4	68
	Sand, gray, very fine to medium, slightly silty, quartzose, loose, lenticular; with detrital lignite-----	14	82
	Silt, olive-gray, clayey, sandy, soft, slightly to moderately cohesive, nonplastic to very slightly plastic, laminated-----	32	114
	Sand, brownish, coarse to very coarse, gravelly, well-sorted, lenticular-----	24	138
	Clay, olive-gray, very sandy, soft, cohesive, slightly hard-----	99	237
	Sand, gray, coarse to medium, gravelly, well-sorted, subangular to subrounded, quartzose-----	19	256
Hell Creek Formation:	Shale, green to gray, silty, sandy, bentonitic, carbonaceous, moderately soft to moderately hard; interbedded with siltstone and sandstone-----	33	289
	Sandstone, dark-green, fine, soft, slightly cohesive; interbedded with carbonaceous shale-----	11	300

LOCATION: 134-083-26BBA

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 260
(FT)



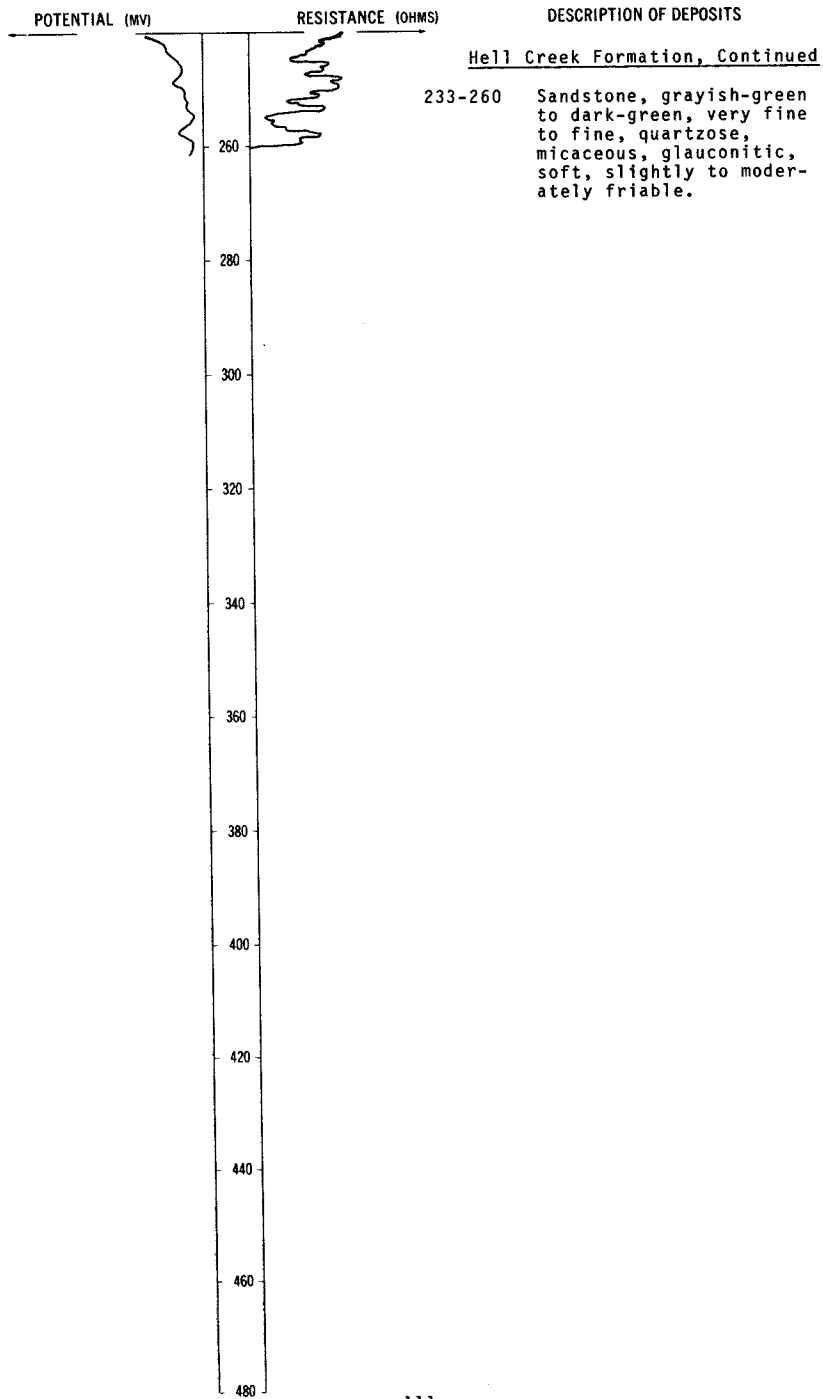
NDSWC 4568, Continued

LOCATION: 134-083-26BBA

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4568, Continued

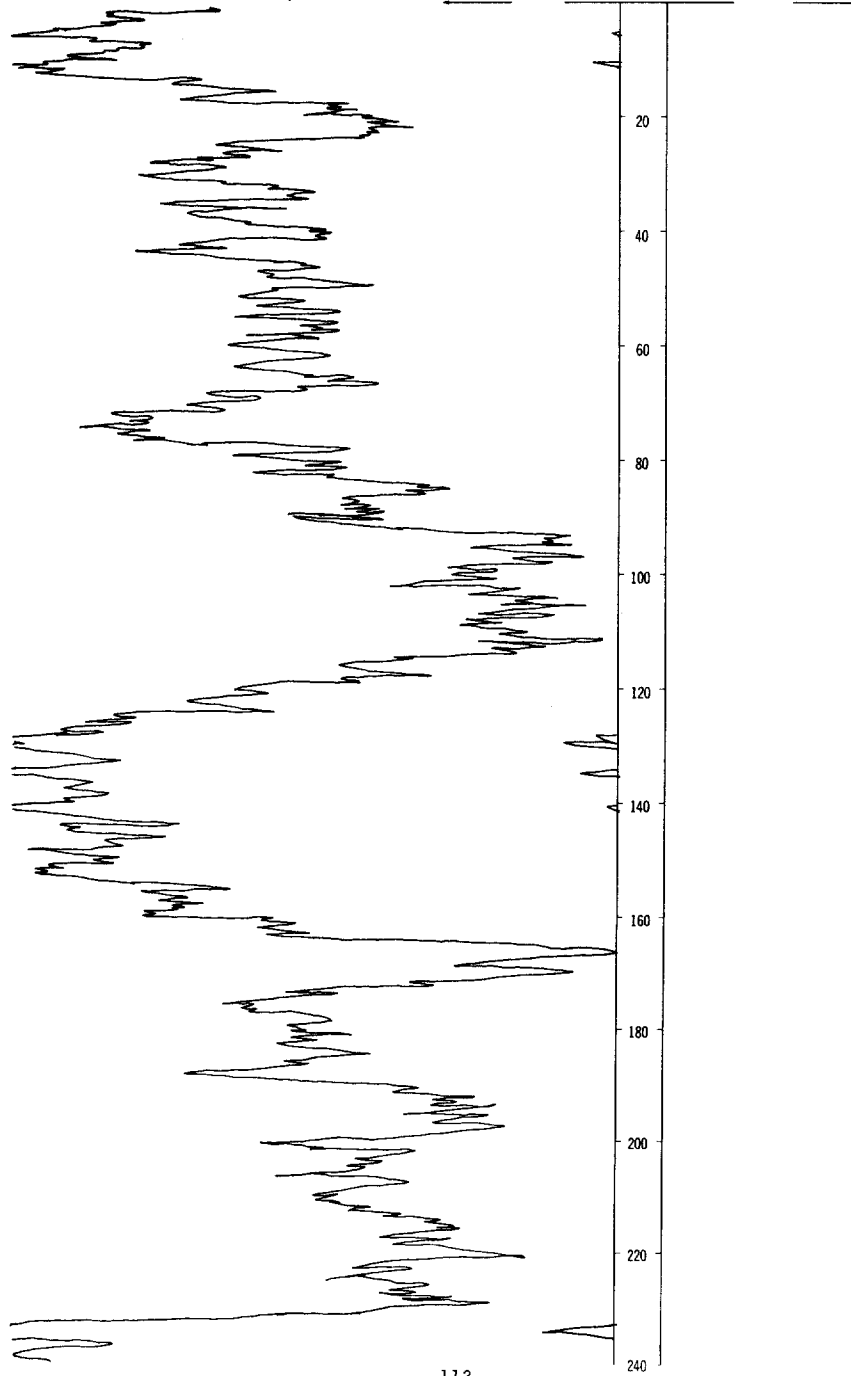
LOCATION: 134-083-26BBA

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4568, Continued

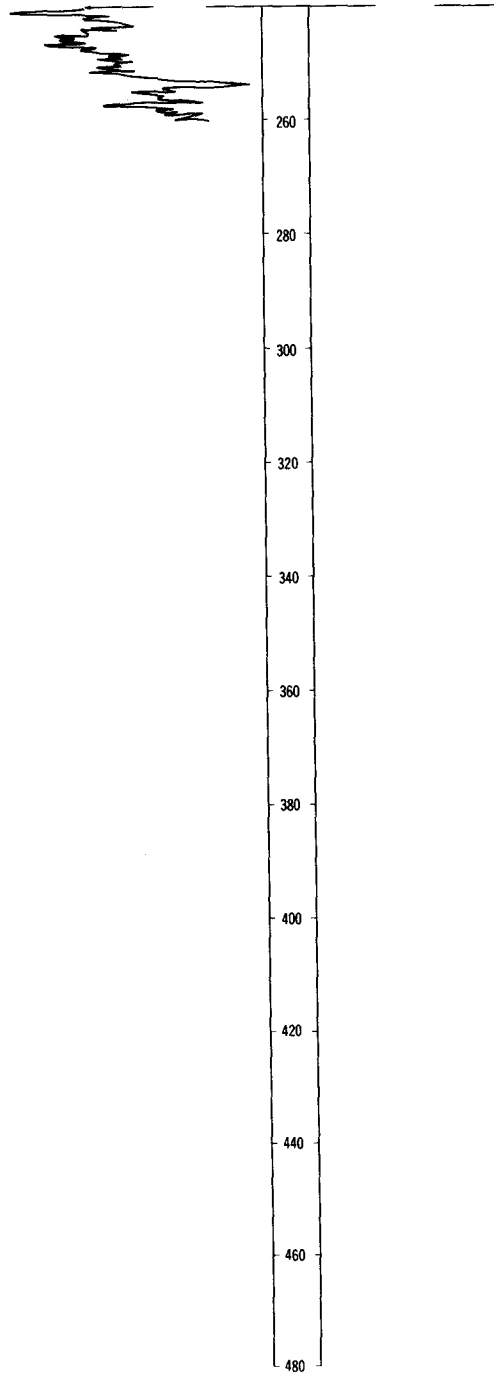
LOCATION: 134-083-26BBA

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)

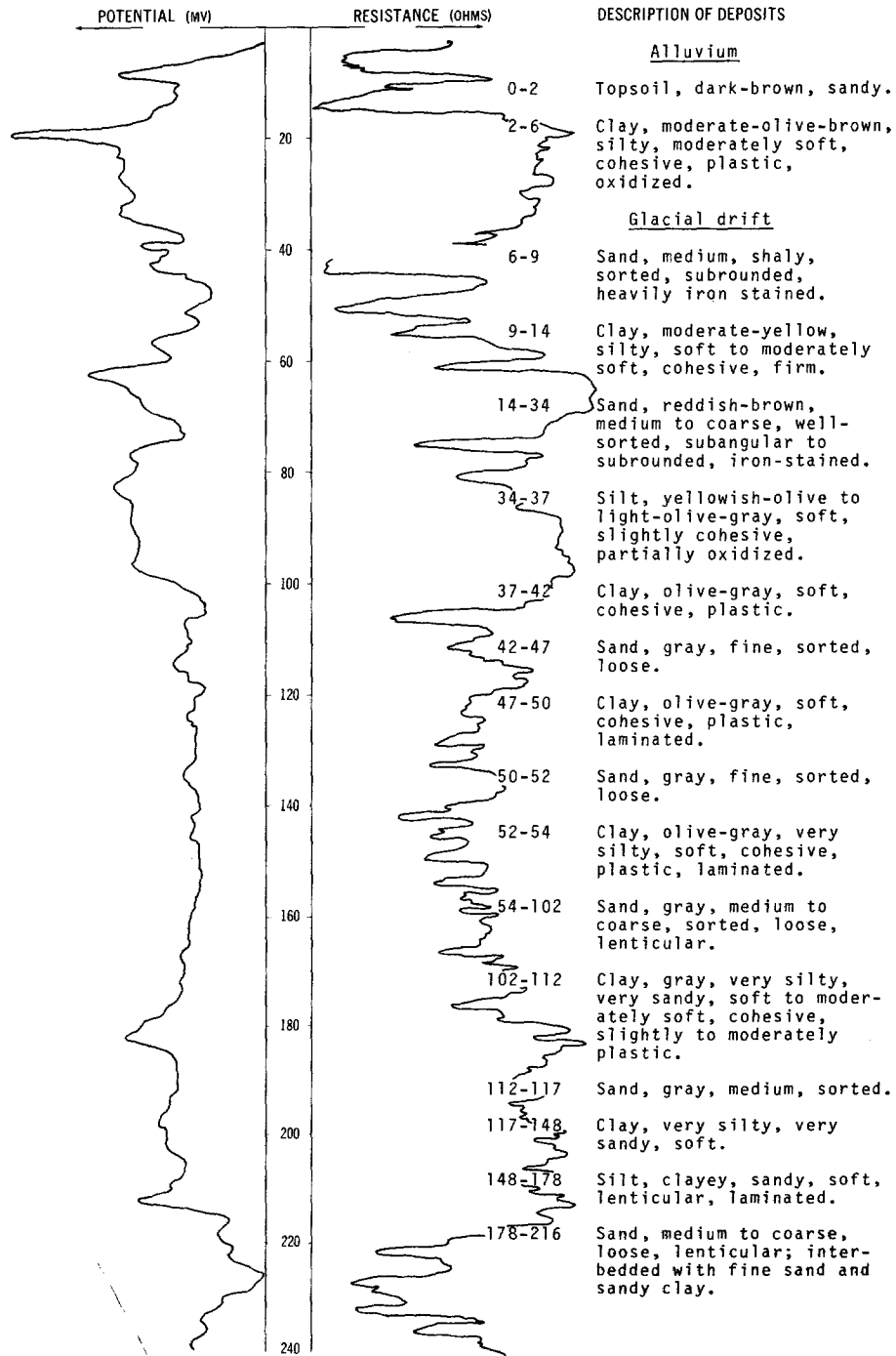


LOCATION: 134-083-32AAA1, 2

DATE DRILLED: September 1973

ALTITUDE: 1863
(FT, MSL)

DEPTH: 360
(FT)



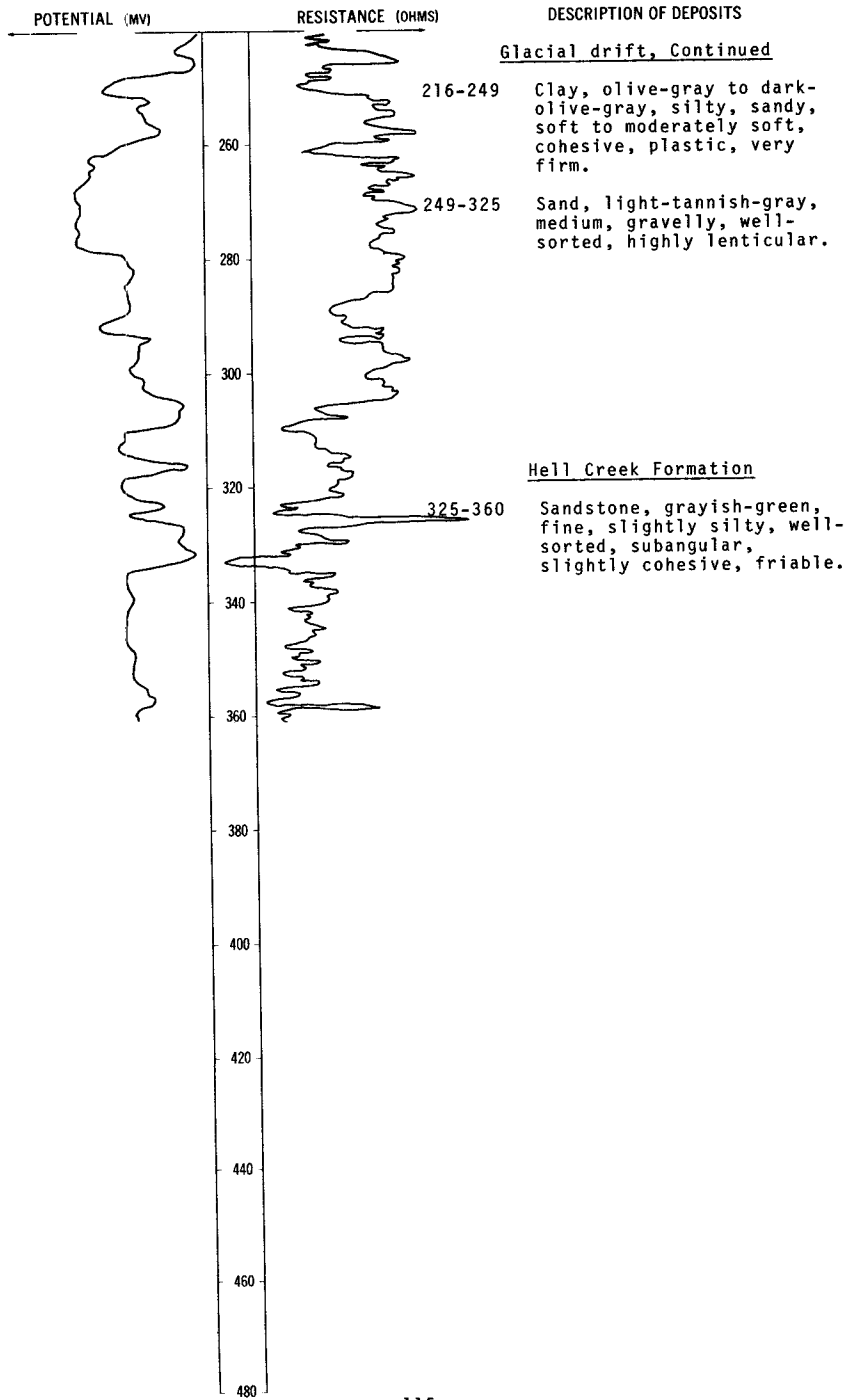
NDSWC 4567, 4567A, Continued

LOCATION: 134-083-32AAA1, 2

DATE DRILLED: September 1973

ALTITUDE: 1863
(FT, MSL)

DEPTH: 360
(FT)



NDSWC 4567, 4567A, Continued

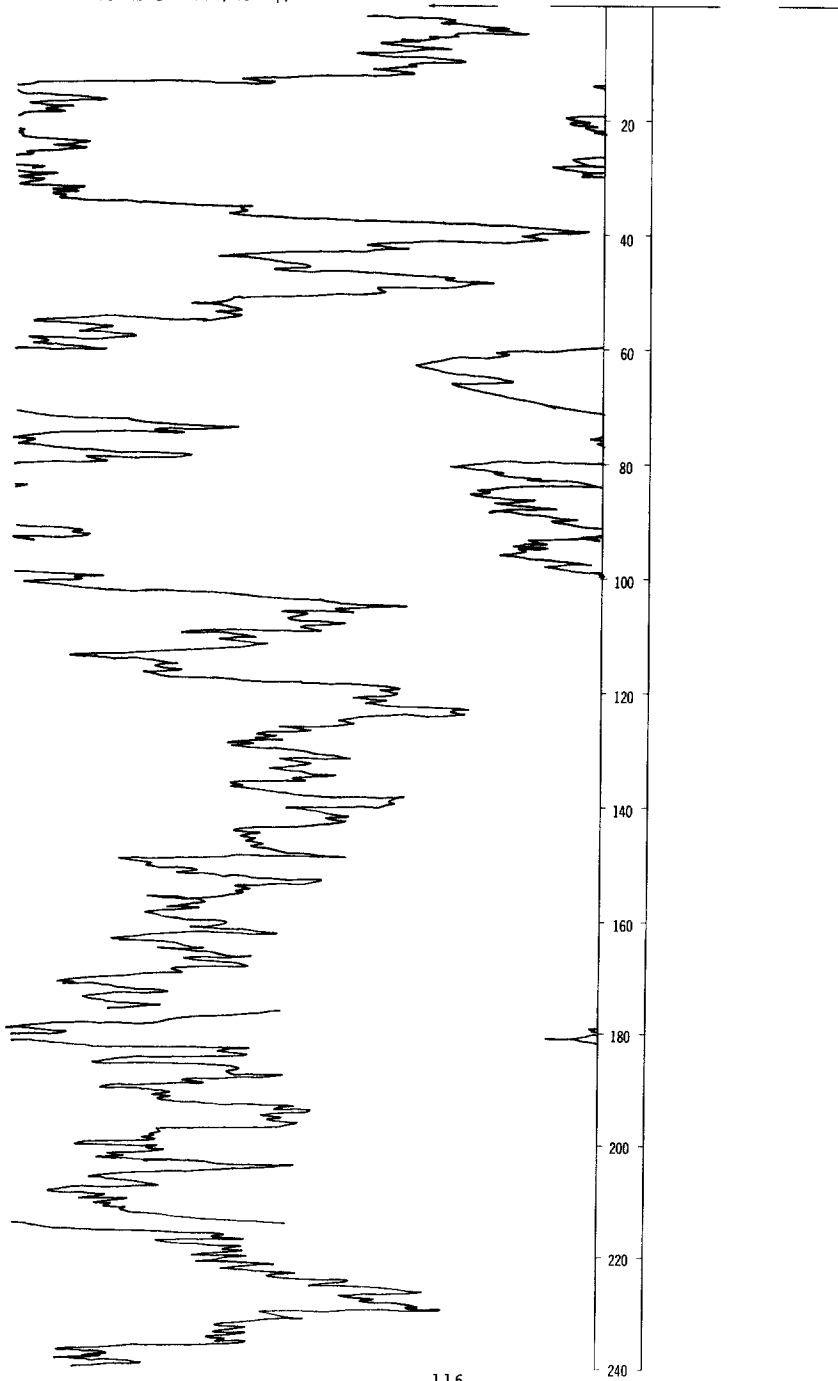
LOCATION: 134-083-32AAA1, 2

DATE DRILLED: September 1973

ALTITUDE: 1863
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4567, 4567A, Continued

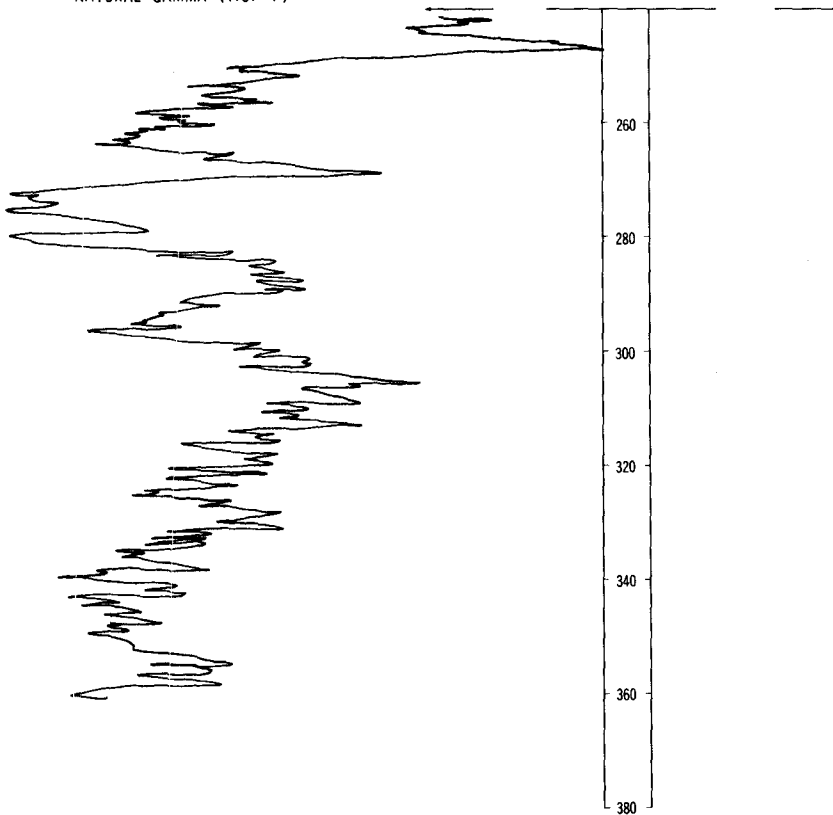
LOCATION: 134-083-32AAA1, 2

DATE DRILLED: September 1973

ALTITUDE: 1863
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



134-083-33DBC
H. Barnhoeft
(Log from Wetch Drilling)

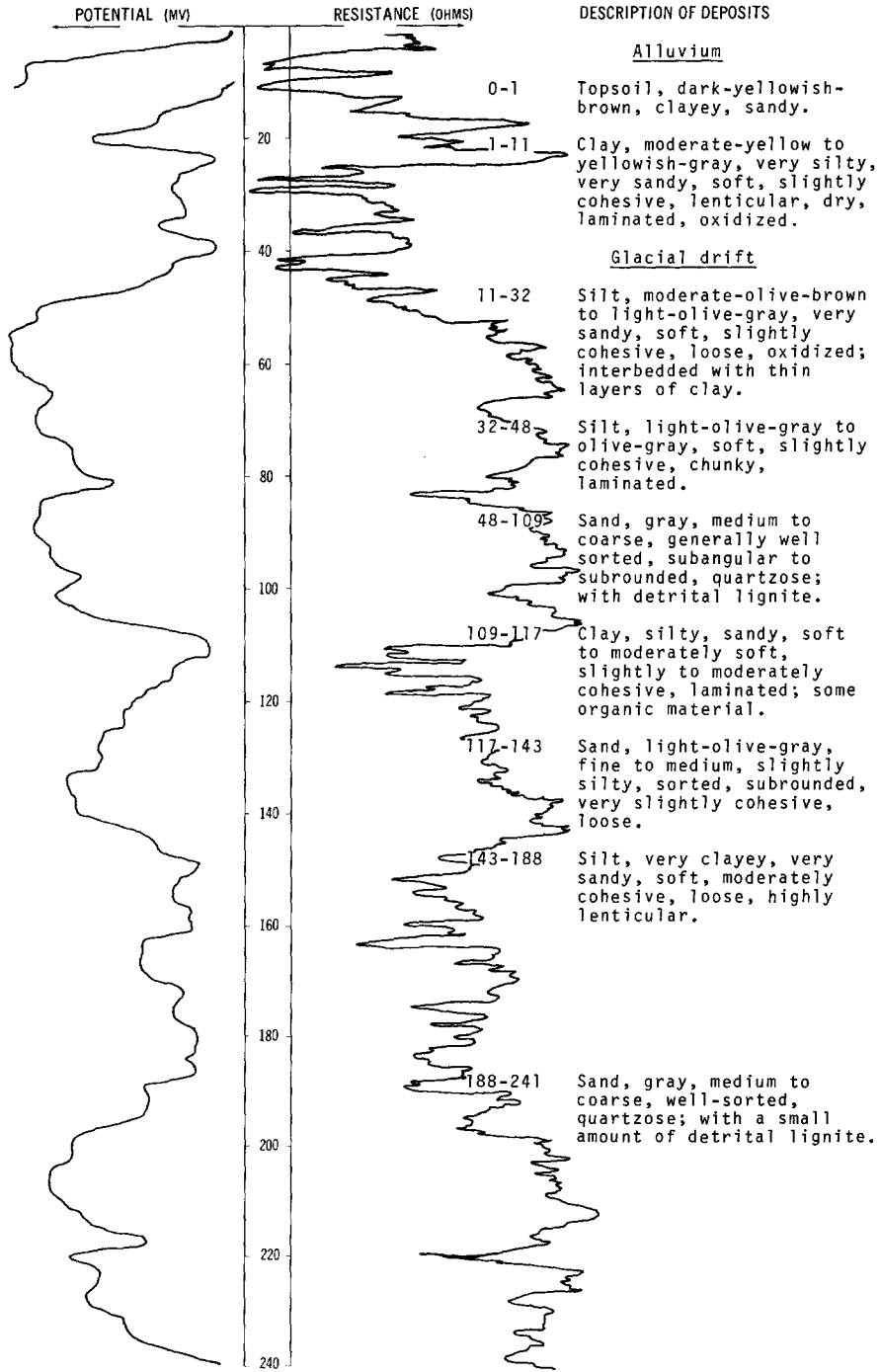
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Hell Creek Formation:			
	Topsoil-----	2	2
	Sand, brown-----	43	45
	Clay, blue, soft-----	60	105
	Sand, blue, dry-----	5	110
	Lignite-----	1	111
	Clay, blue-----	99	210
Fox Hills Formation (?):			
	Sand, gray, very fine to medium-----	30	240
	Sandstone-----	1	241
	Sand, blue-----	29	270

LOCATION: 134-084-01CDC1, 2

DATE DRILLED: September 1973

ALTITUDE: 1895
(FT, MSL)

DEPTH: 380
(FT)



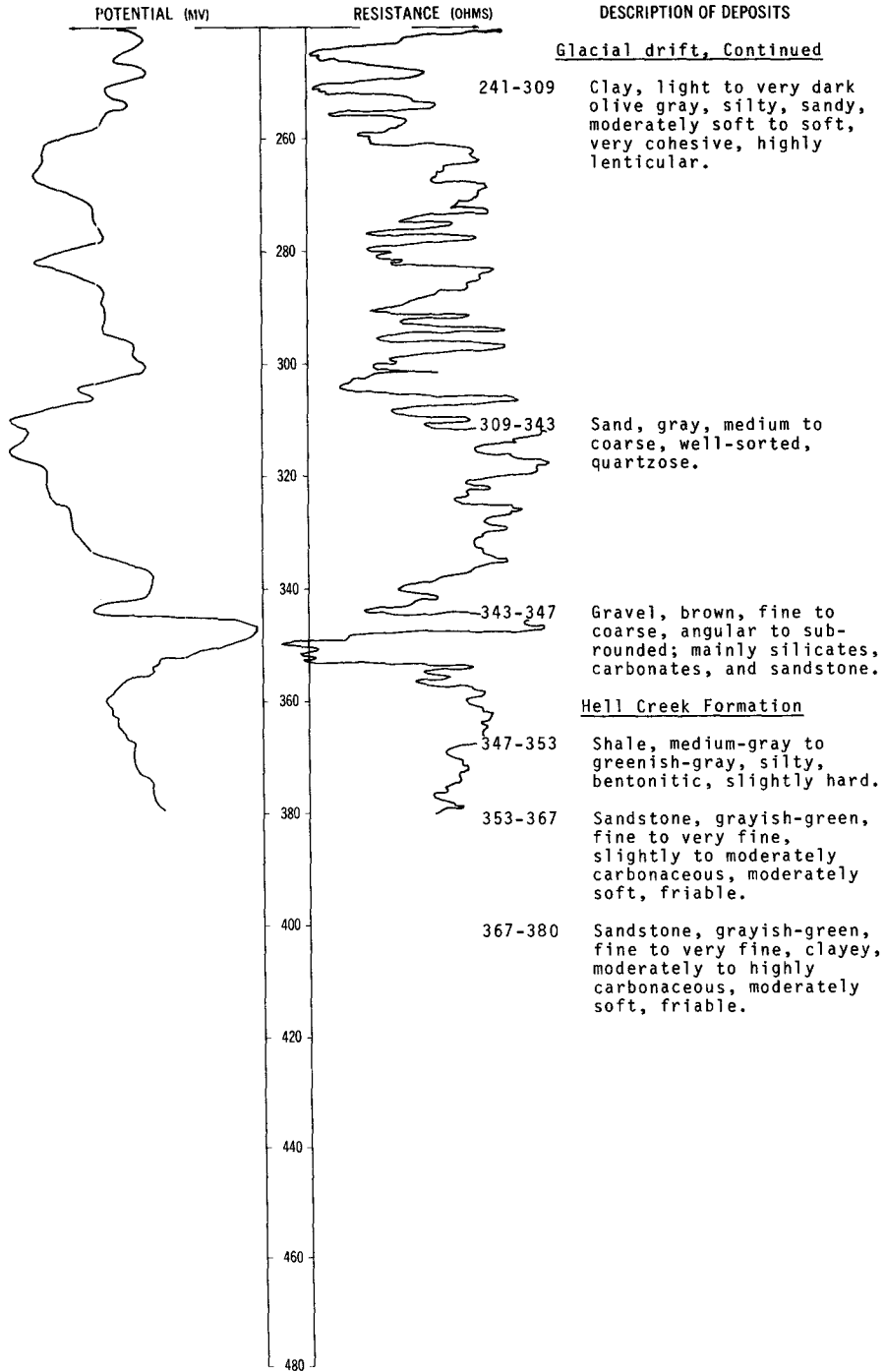
NDSWC 4562, 4562A, Continued

LOCATION: 134-084-01CDC1, 2

DATE DRILLED: September 1973

ALTITUDE: 1895
(FT, MSL)

DEPTH: 380
(FT)



NDSWC 4562, 4562A, Continued

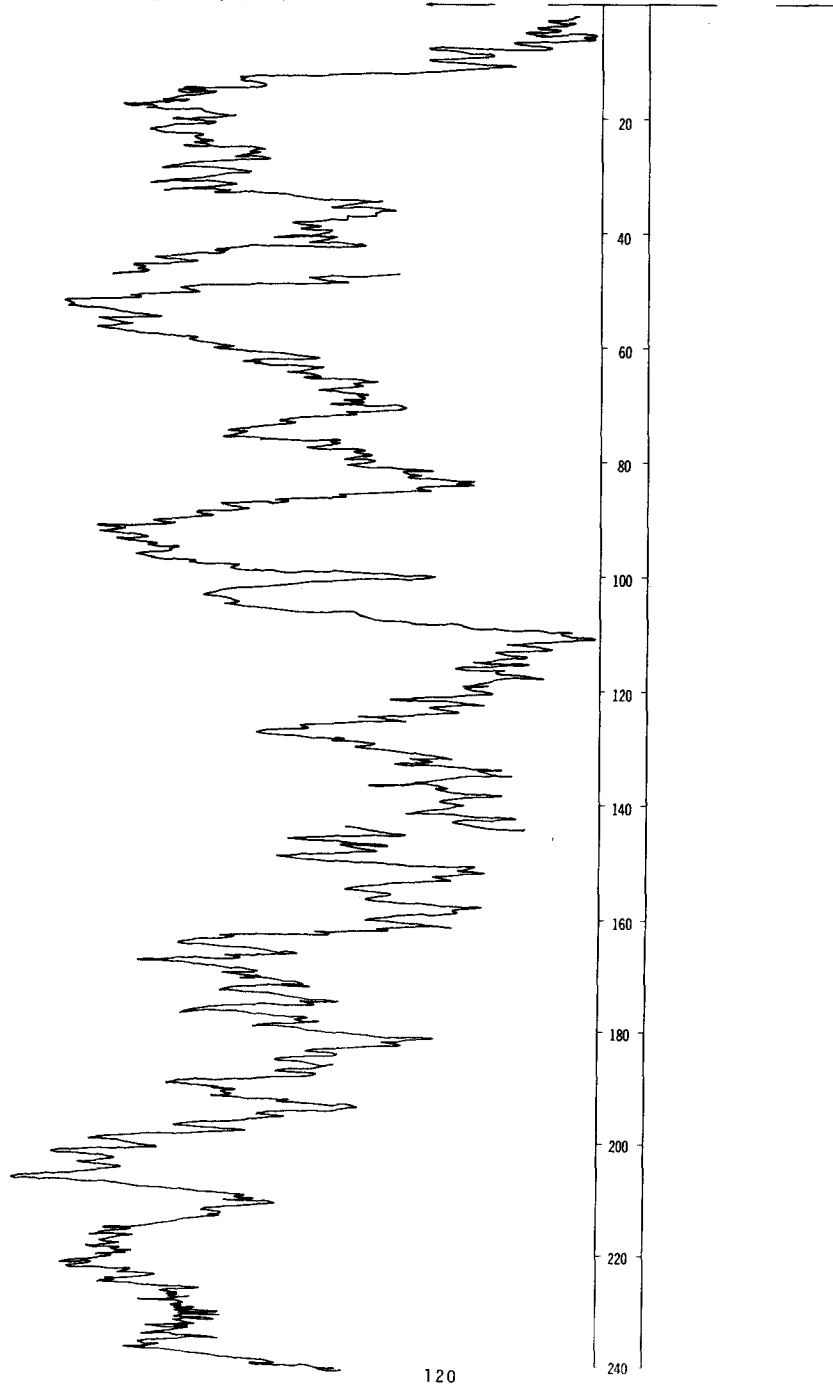
LOCATION: 134-084-01CDC1, 2

DATE DRILLED: September 1973

ALTITUDE: 1895
(FT. MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4562, 4562A, Continued

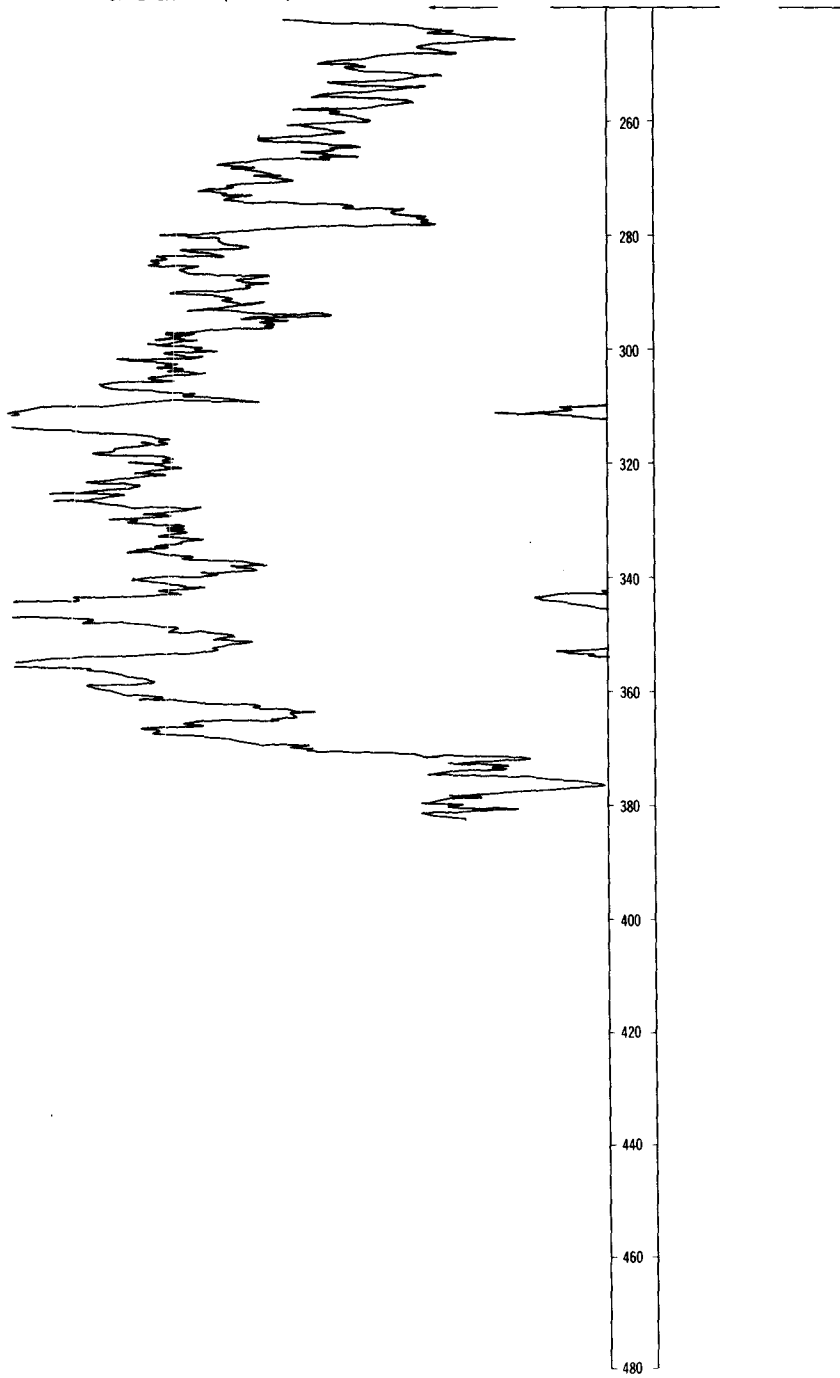
LOCATION: 134-084-01CDC1, 2

DATE DRILLED: September 1973

ALTITUDE: 1895
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



134-084-03AAD
 J. Allen
 (Log from Bandy Well Drilling)

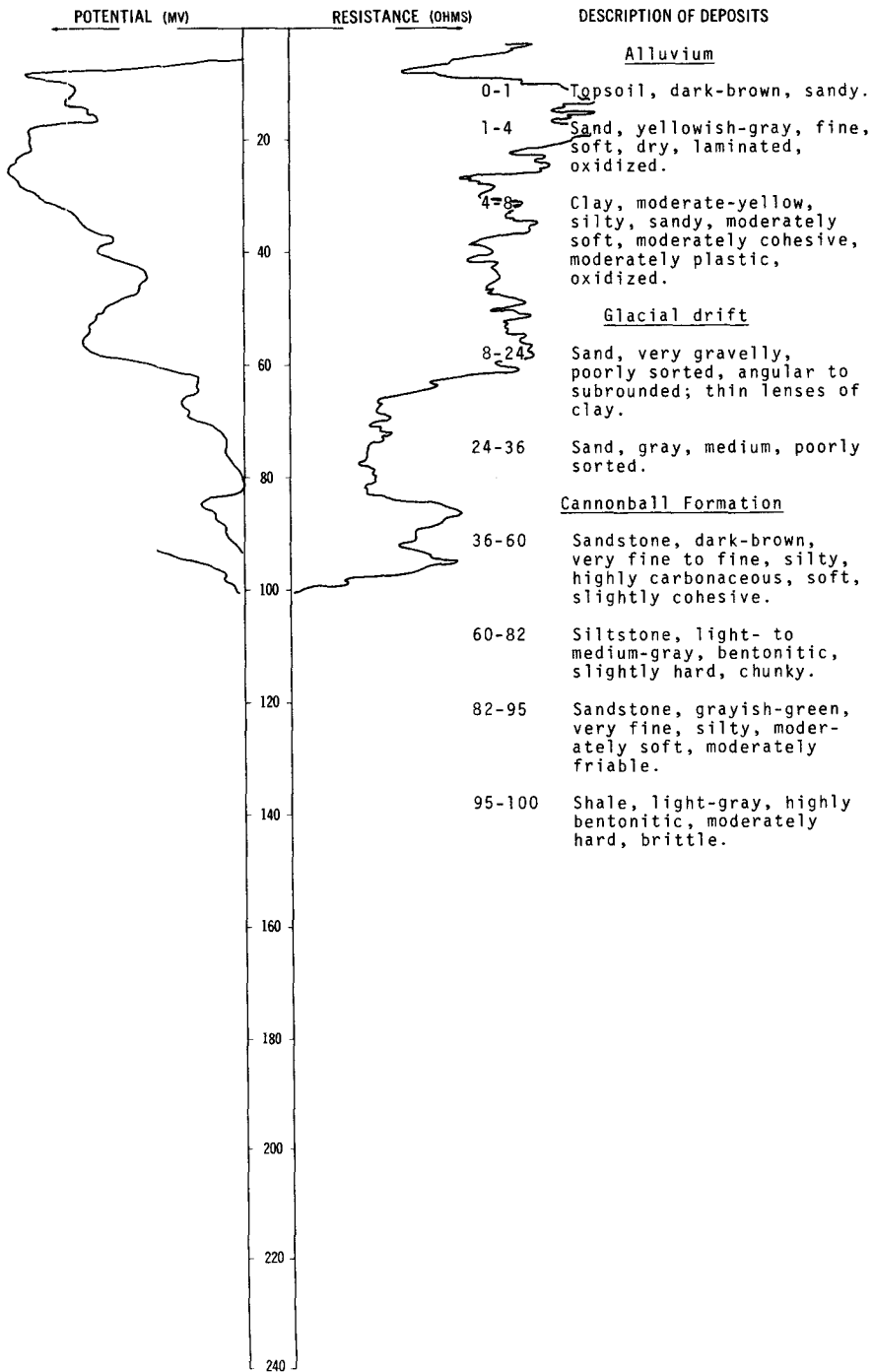
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Cannonball	Formation (?):		
	Topsoil-----	2	2
	Clay, brownish-black, sandy-----	14	16
	Shale, yellowish-brown-----	21	37
	Shale, gray-----	5	42
	Shale, bluish-gray, sandy-----	12	54
	Shale, gray-----	7	61
	Shale, light-bluish-gray, sandy-----	11	72
	Sand, light-bluish-gray-----	3	75
	Shale, brown, lignitic-----	6	81
	Sand, bluish-gray-----	3	84
	Shale, brownish-gray; intermittent lignite seams-----	26	110
	Shale, light-gray, sandy-----	21	131
Hell Creek	Formation (?):		
	Sand, bluish-gray; interbedded with shale-----	29	160
	Sand, bluish-gray-----	5	165
	Shale, gray-----	21	186
	Sand, blue-green-----	9	195
	Shale, blue-gray-----	5	200

LOCATION: 134-084-03ADD

DATE DRILLED: September 1973

ALTITUDE: 1900
(FT, MSL)

DEPTH: 100
(FT)



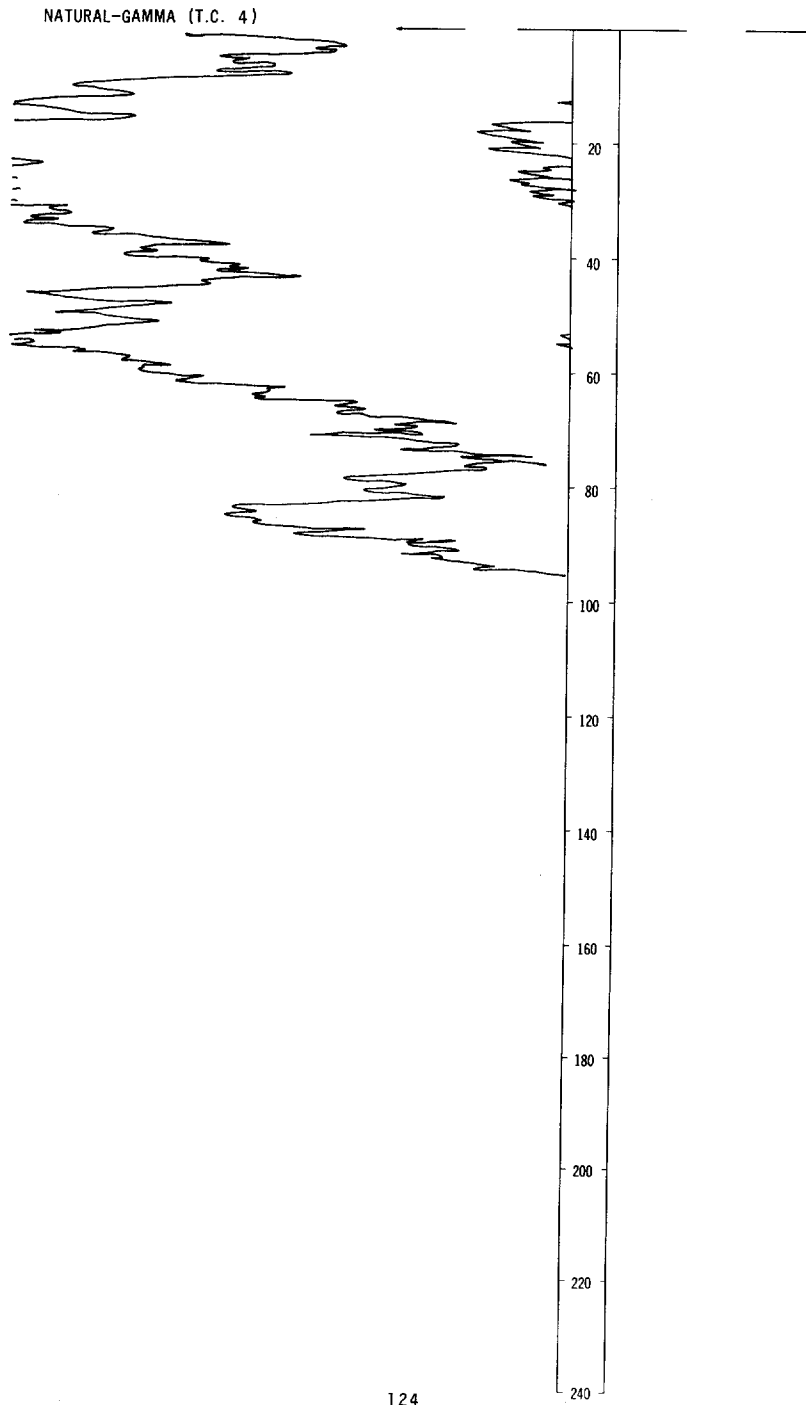
NDSWC 4563, Continued

LOCATION: 134-084-03ADD

DATE DRILLED: September 1973

ALTITUDE: 1900
(FT. MSL)

DEPTH: 100
(FT)

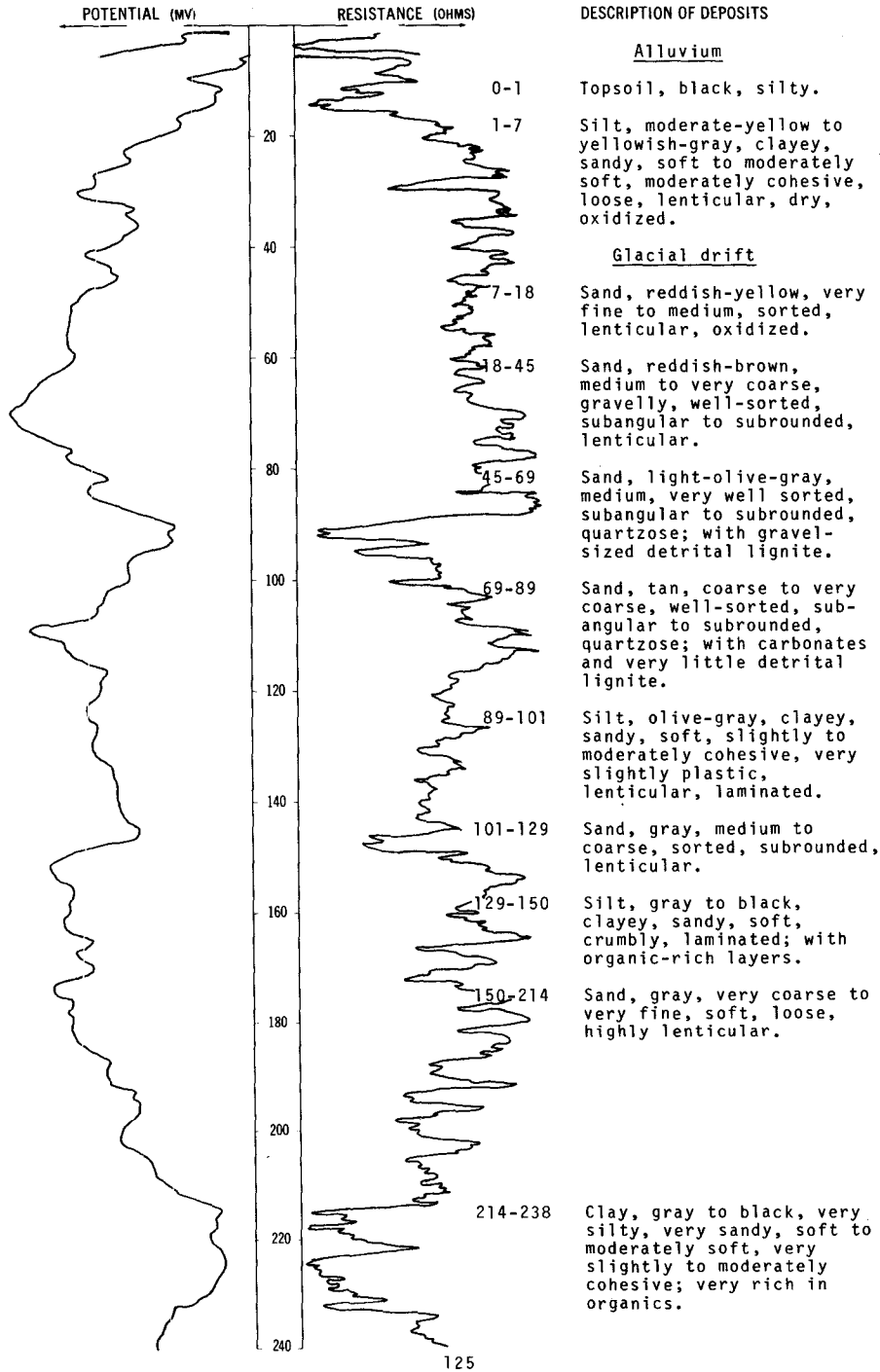


LOCATION: 134-084-11DDD

DATE DRILLED: September 1973

ALTITUDE: 1869
(FT, MSL)

DEPTH: 320
(FT)



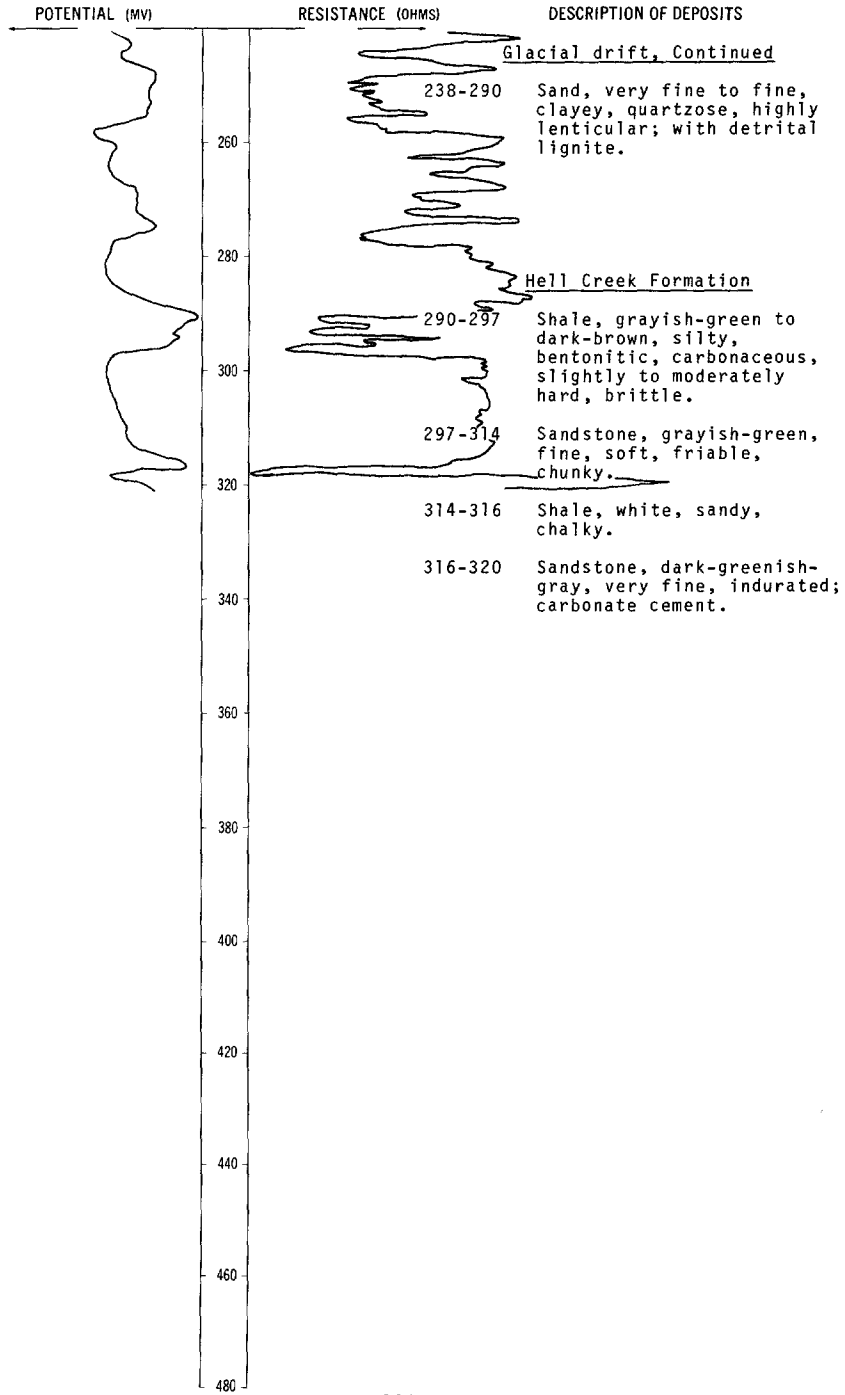
NDSWC 4564, Continued

LOCATION: 134-084-11DDD

DATE DRILLED: September 1973

ALTITUDE: 1869
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4564, Continued

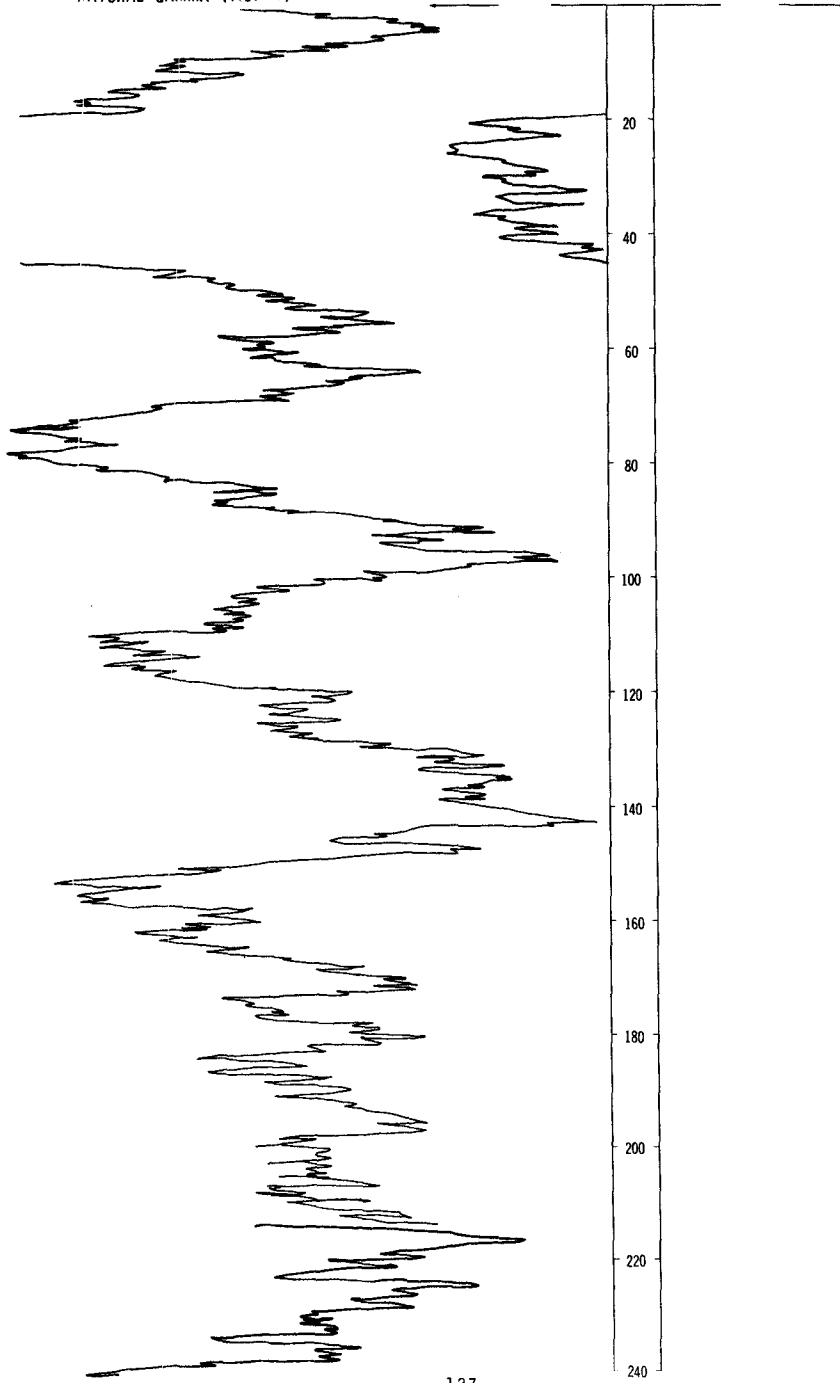
LOCATION: 134-084-11DDD

DATE DRILLED: September 1973

ALTITUDE: 1869
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4564, Continued

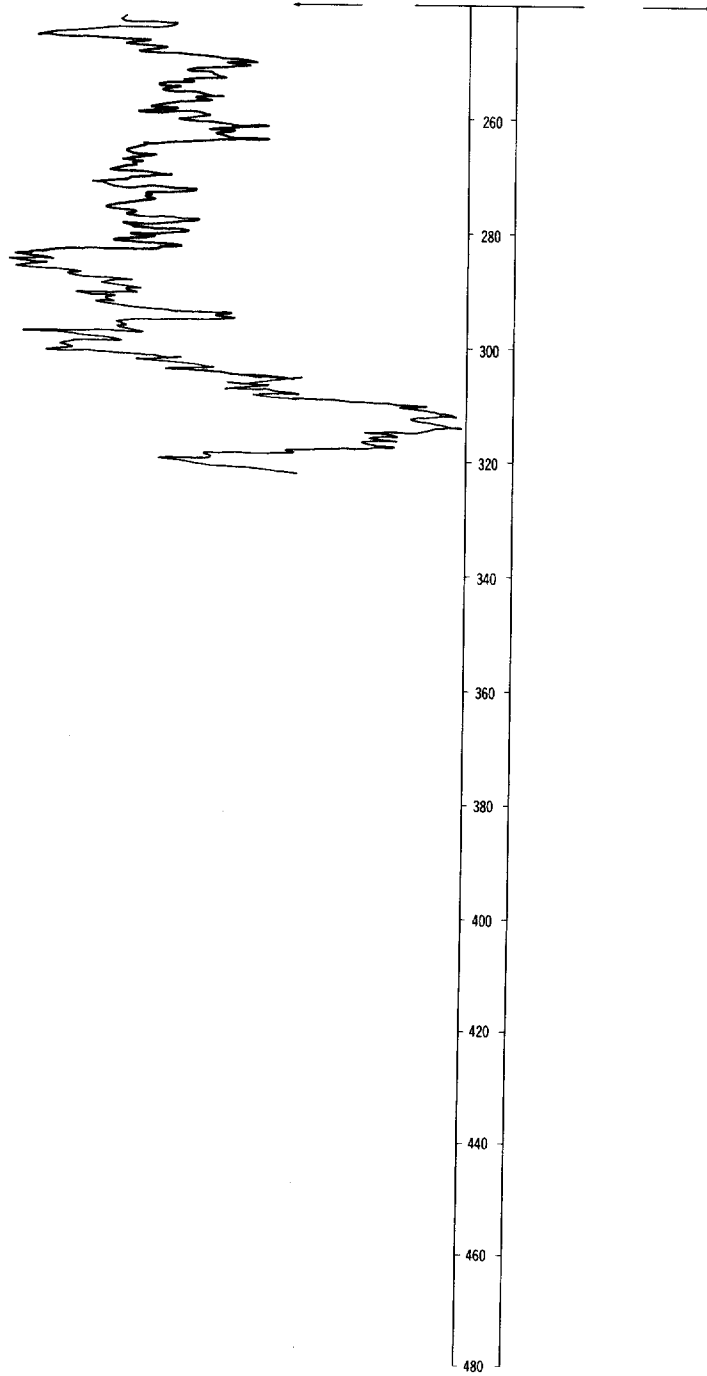
LOCATION: 134-084-11DDD

DATE DRILLED: September 1973

ALTITUDE: 1869
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



LOCATION: 134-084-13BBC

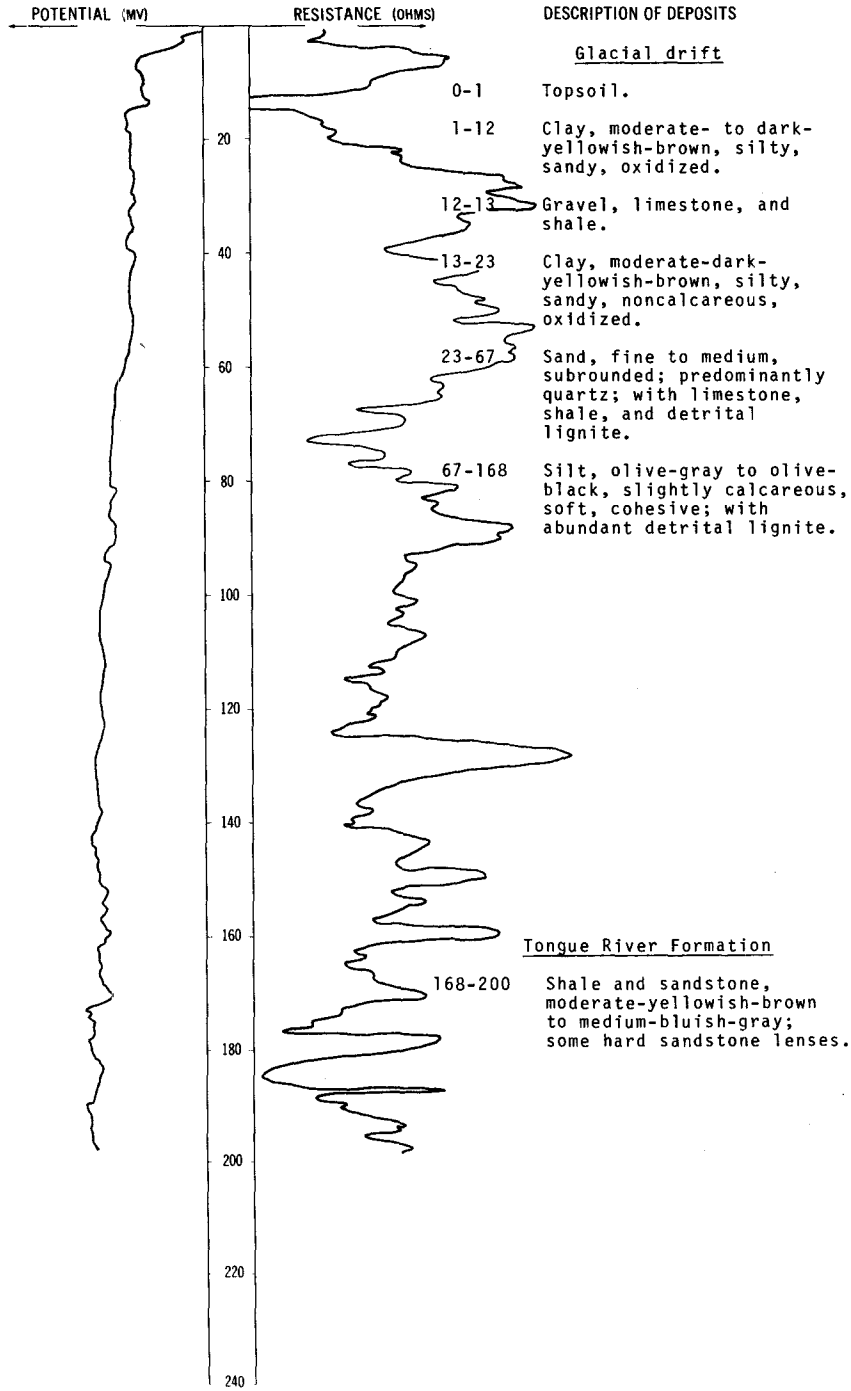
DATE DRILLED: June 1974

ALTITUDE: 1866

DEPTH: 200

(FT, MSL)

(FT)



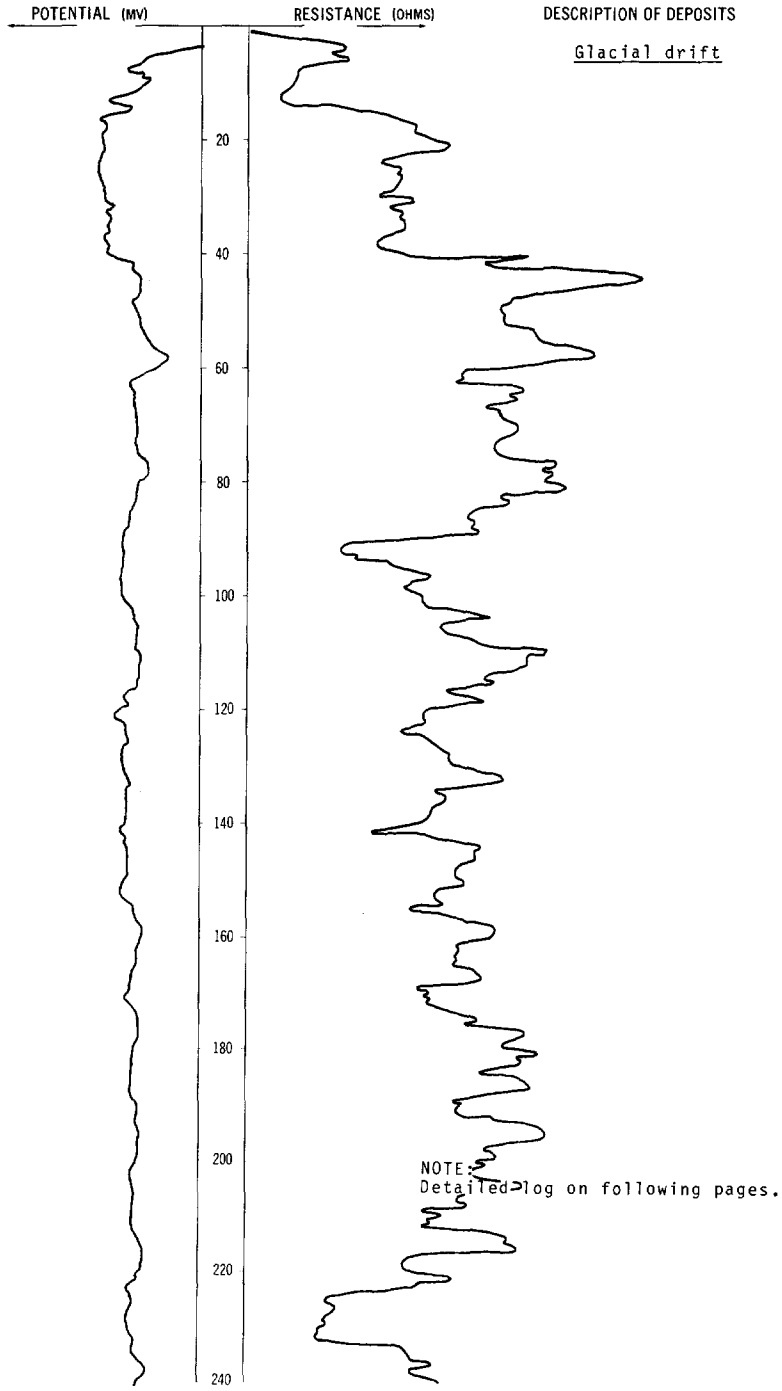
NDSWC 8968

LOCATION: 134-084-13CBB

DATE DRILLED: June 1974

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)



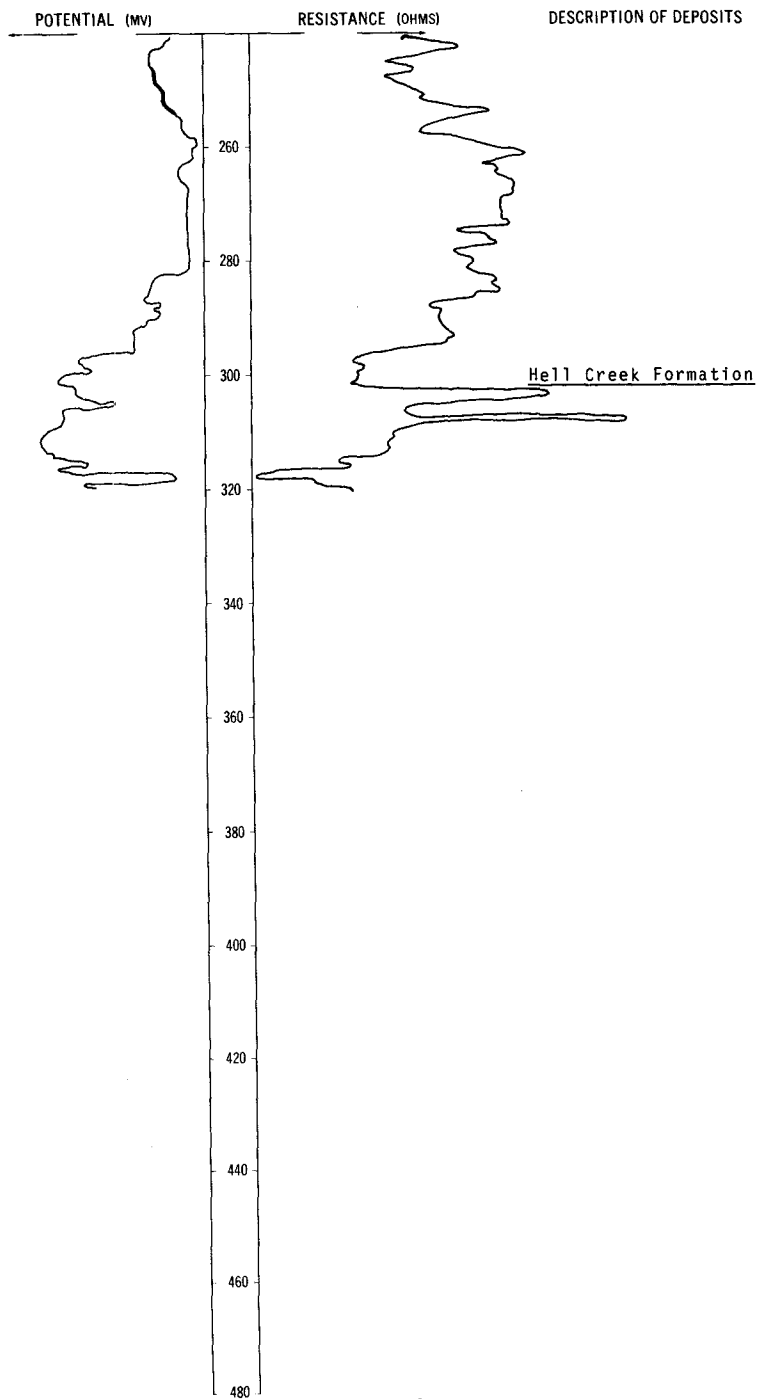
NDSWC 8968, Continued

LOCATION: 134-084-13CBB

DATE DRILLED: June 1974

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)



134-084-13CBB, Continued
NDSWC 8968

Altitude: 1866 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Topsoil-----	1	1
	Clay, light- to moderate-olive-brown, silty, calcareous, cohesive, solid, oxidized-----	29	30
	Silt, olive-black, clayey, calcareous; a few snail shells; with abundant detrital lignite-----	11	41
	Sand, fine to coarse, subrounded; predominantly quartz; with detrital lignite and shale-----	20	61
	Silt, light-olive-gray, slightly calcareous, soft, cohesive-----	8	69
	Sand, fine to very coarse, gravelly; predominantly quartz; with silt stringers; abundant granules and pebbles of limestone-----	21	90
	Silt, olive-gray, clayey, sandstone, and olive-black very fine slightly calcareous to calcareous soft solid lignite; some laminations; lenses of detrital lignite from 235 to 255 feet-----	165	255
	Silt, gravelly; detrital lignite with shale and sandstone gravel-----	45	300
Hell Creek Formation:			
	Shale and sandstone, brown, very hard-----	3	303
	Sandstone, grayish-blue-green, friable, very hard-----	17	320

134-084-14DAD
J. Lawson
(Log from Moe Drilling Company)

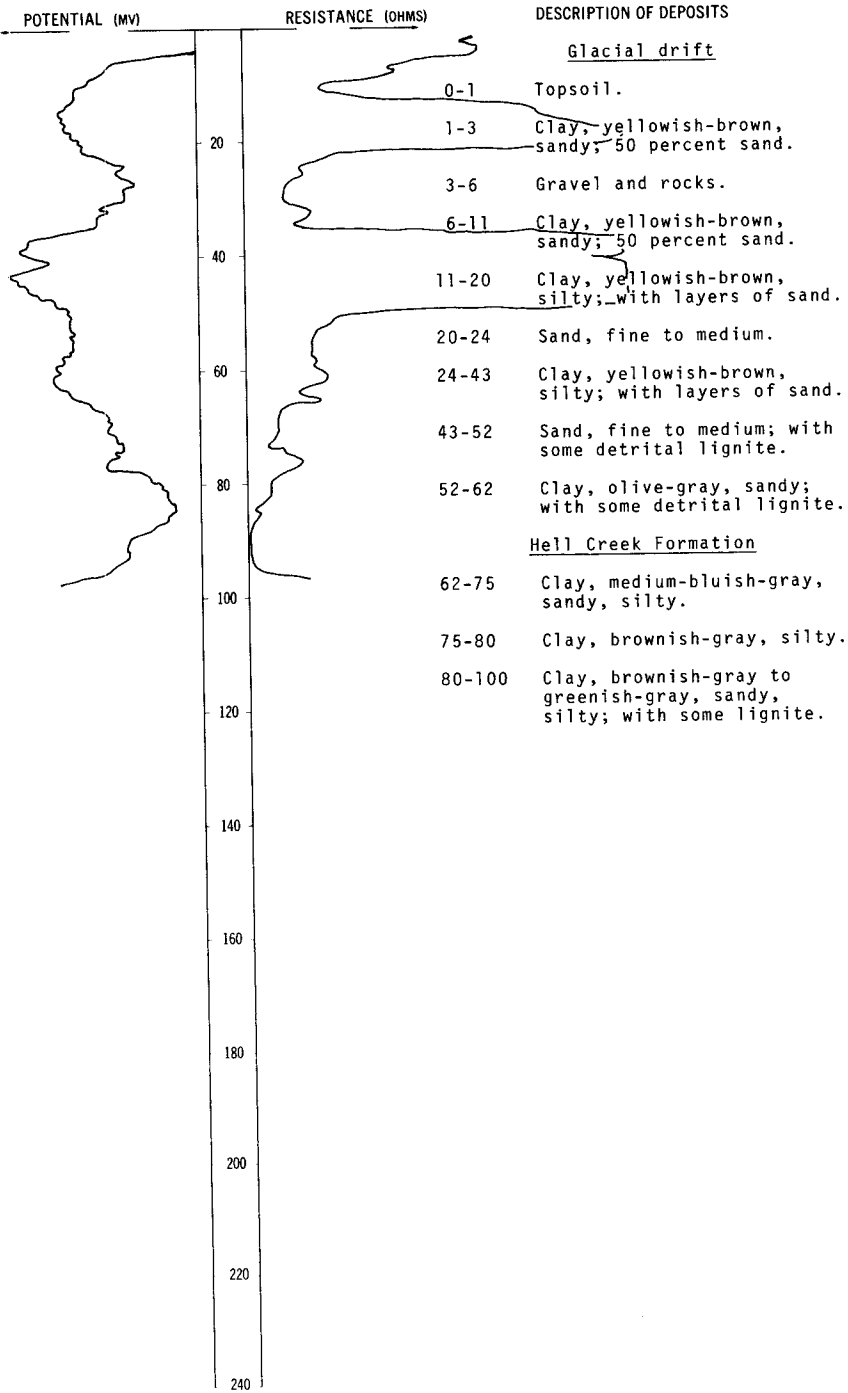
Glacial drift:			
	Till, yellow, oxidized-----	22	22
	Sand and gravel-----	10	32
	Till, gray-----	19	51
	Sand and gravel-----	20	71
	Gravel-----	2	73
	Sand and fine gravel-----	28	101

LOCATION: 134-084-24BBB

DATE DRILLED: June 1974

ALTITUDE: 1904
(FT, MSL)

DEPTH: 100
(FT)

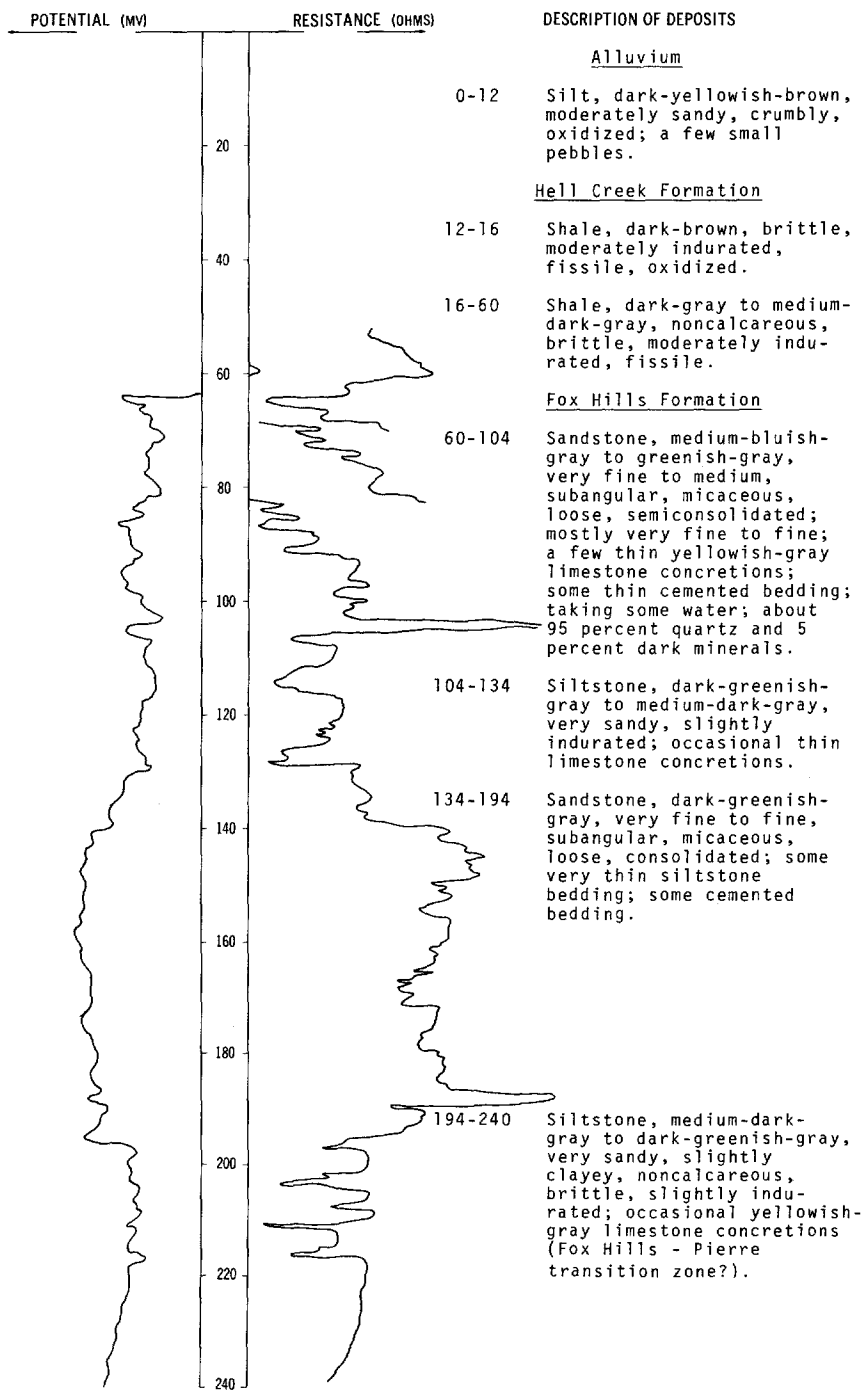


LOCATION: 135-079-10AAB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1665
(FT, MSL)

DEPTH: 260
(FT)



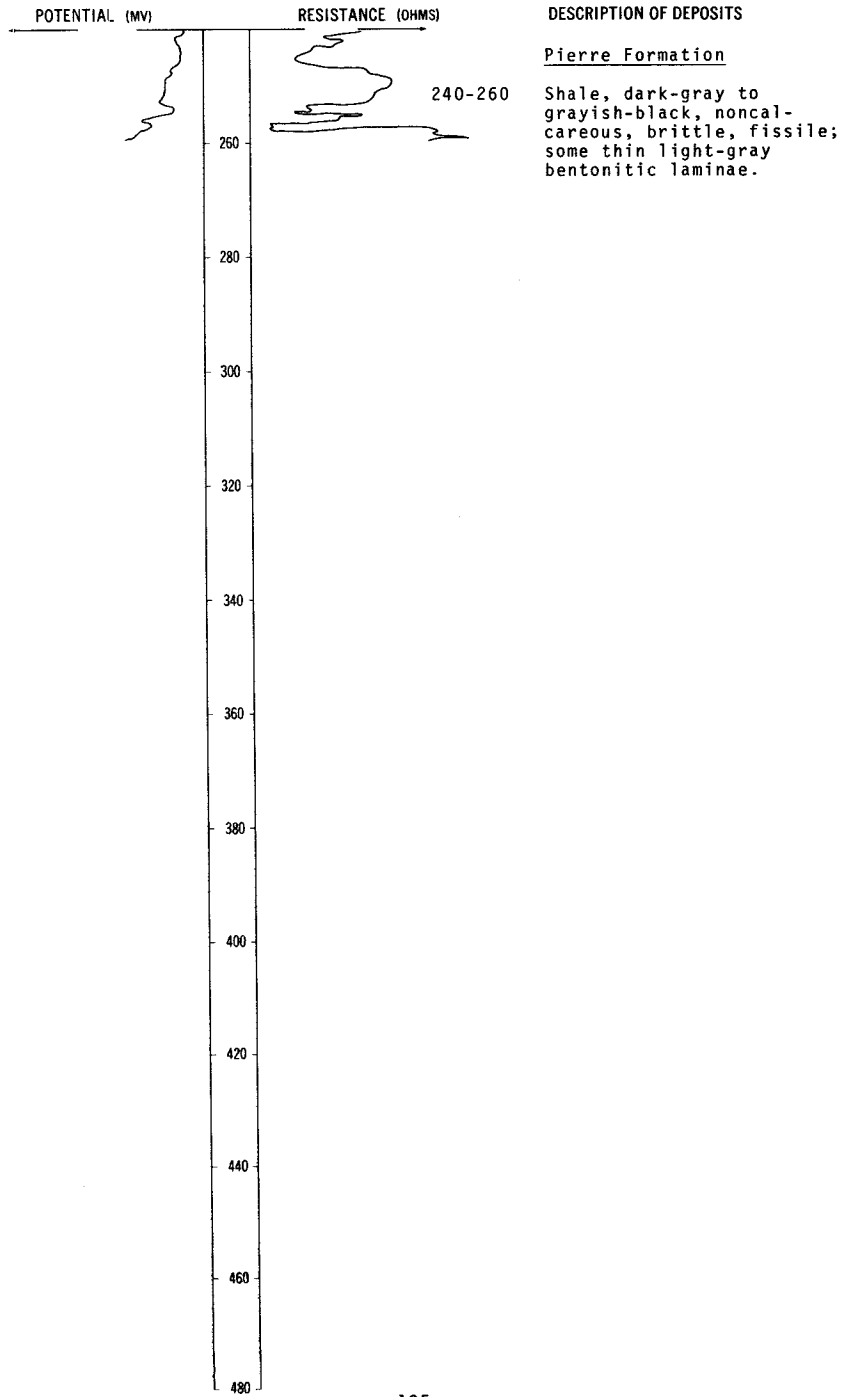
NDSWC 4769, 4769A, Continued

LOCATION: 135-079-10AAB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1665
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4769, 4769A, Continued

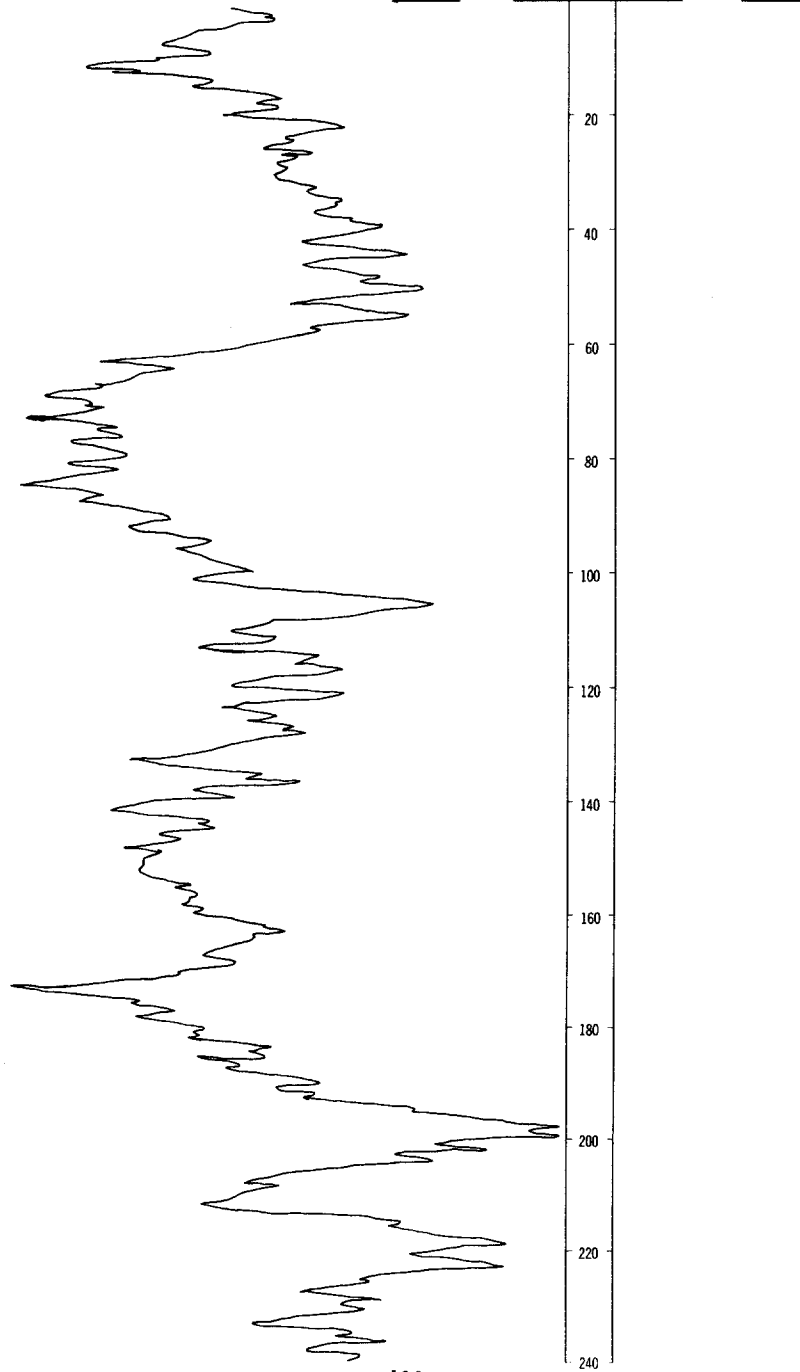
LOCATION: 135-079-10AAB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1665
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4769, 4769A, Continued

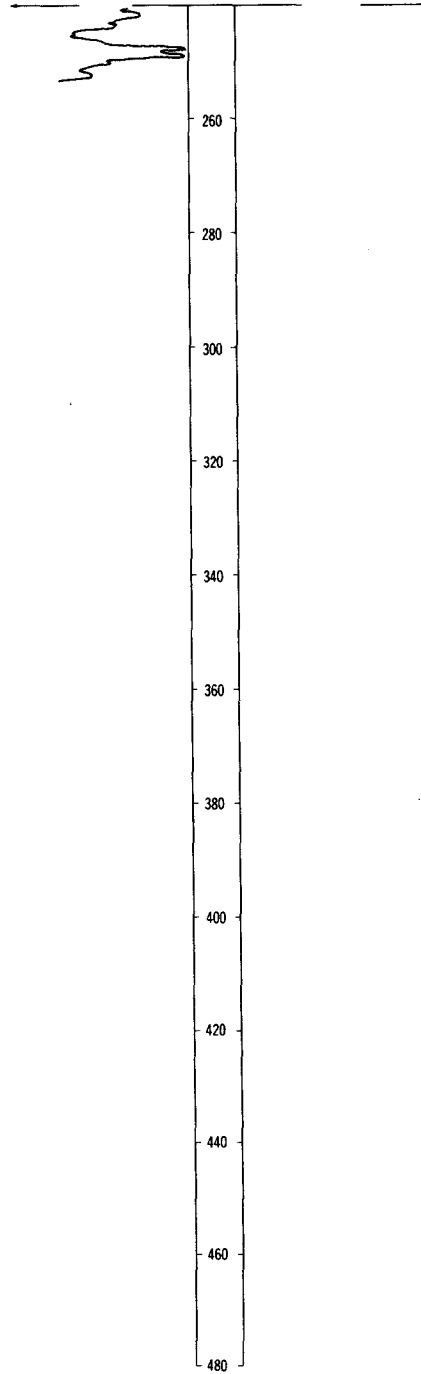
LOCATION: 135-079-10AAB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1665
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



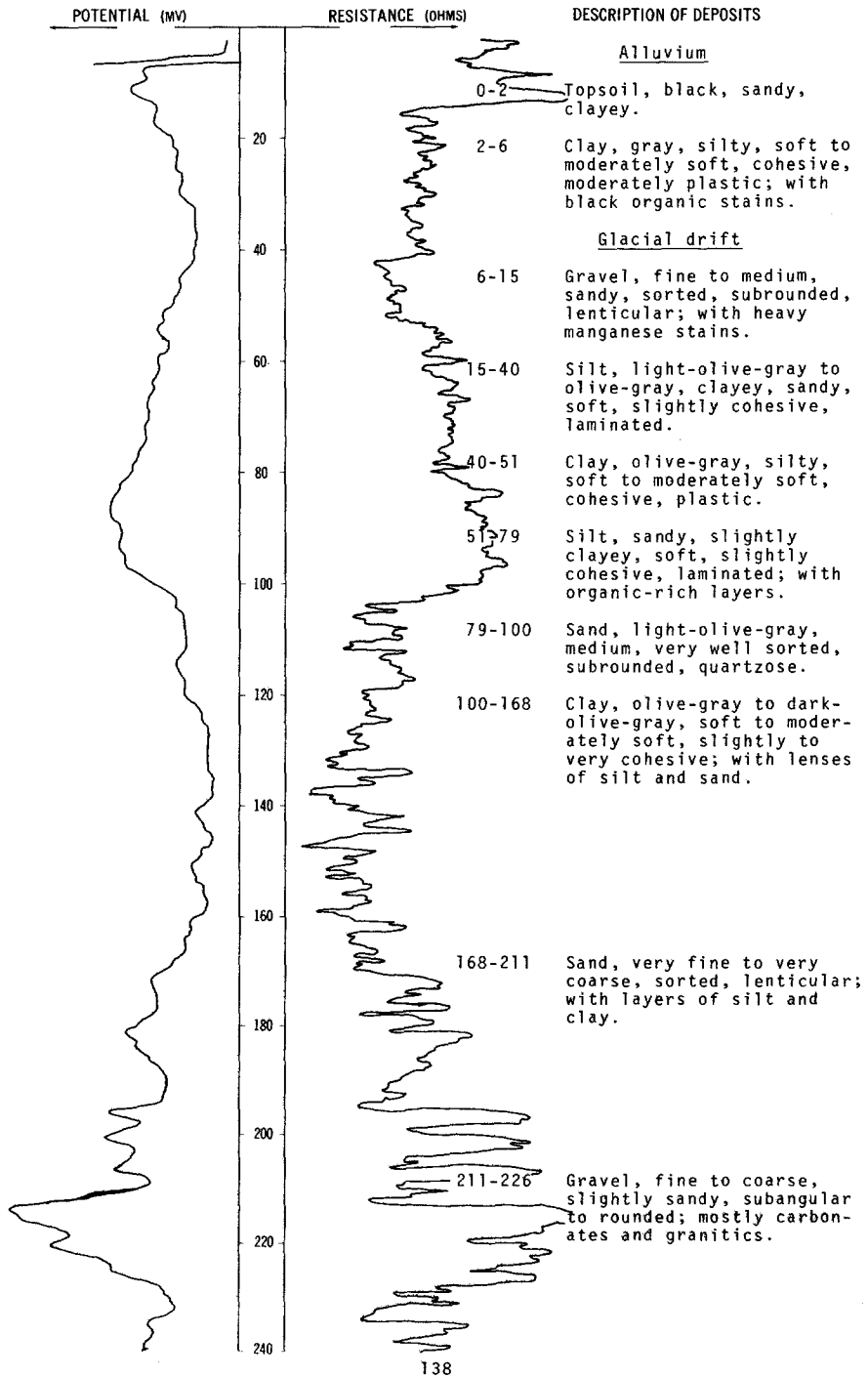
NDSWC 4575

LOCATION: 135-080-30AAB

DATE DRILLED: September 1973

ALTITUDE: 1777
(FT. MSL)

DEPTH: 300
(FT)

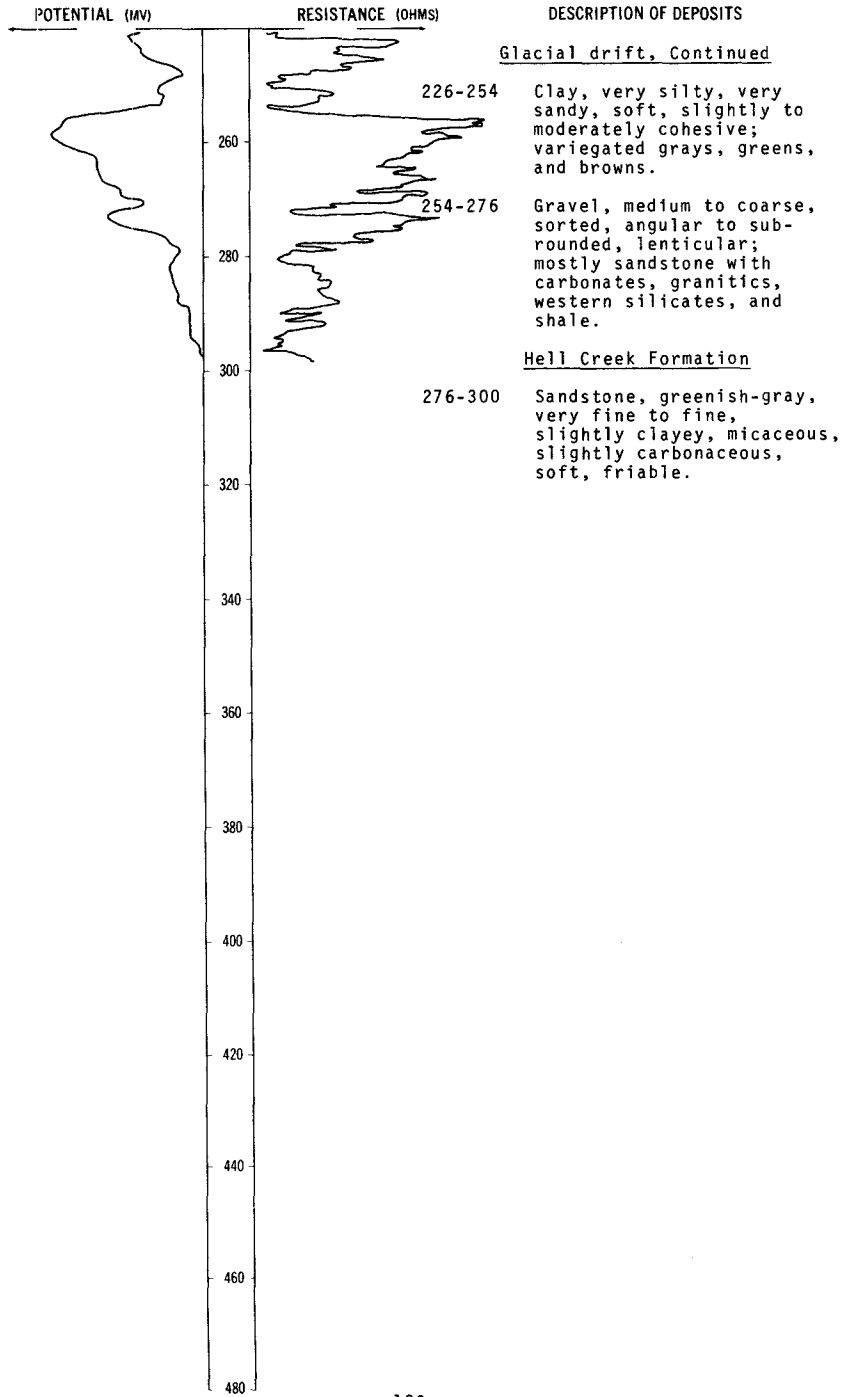


LOCATION: 135-080-30AAB

DATE DRILLED: September 1973

ALTITUDE: 1777
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4575, Continued

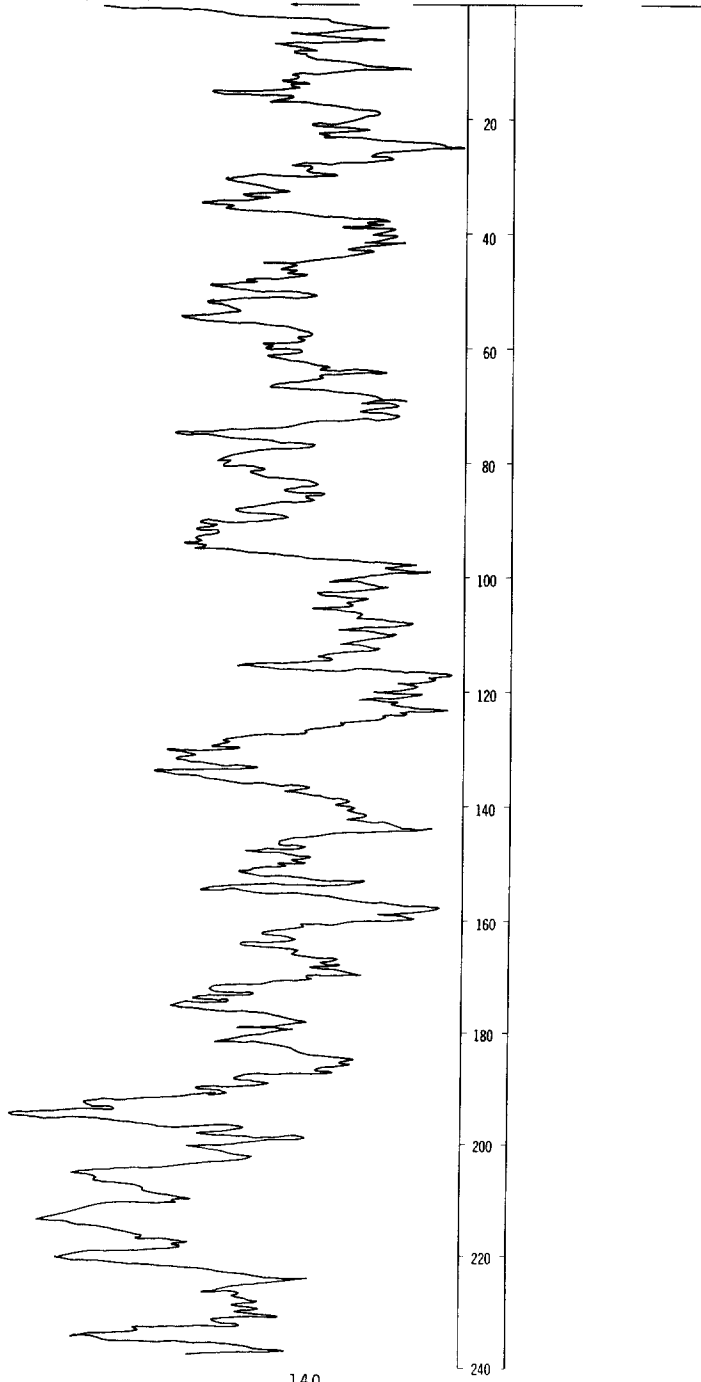
LOCATION: 135-080-30AAB

DATE DRILLED: September 1973

ALTITUDE: 1777
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4575, Continued

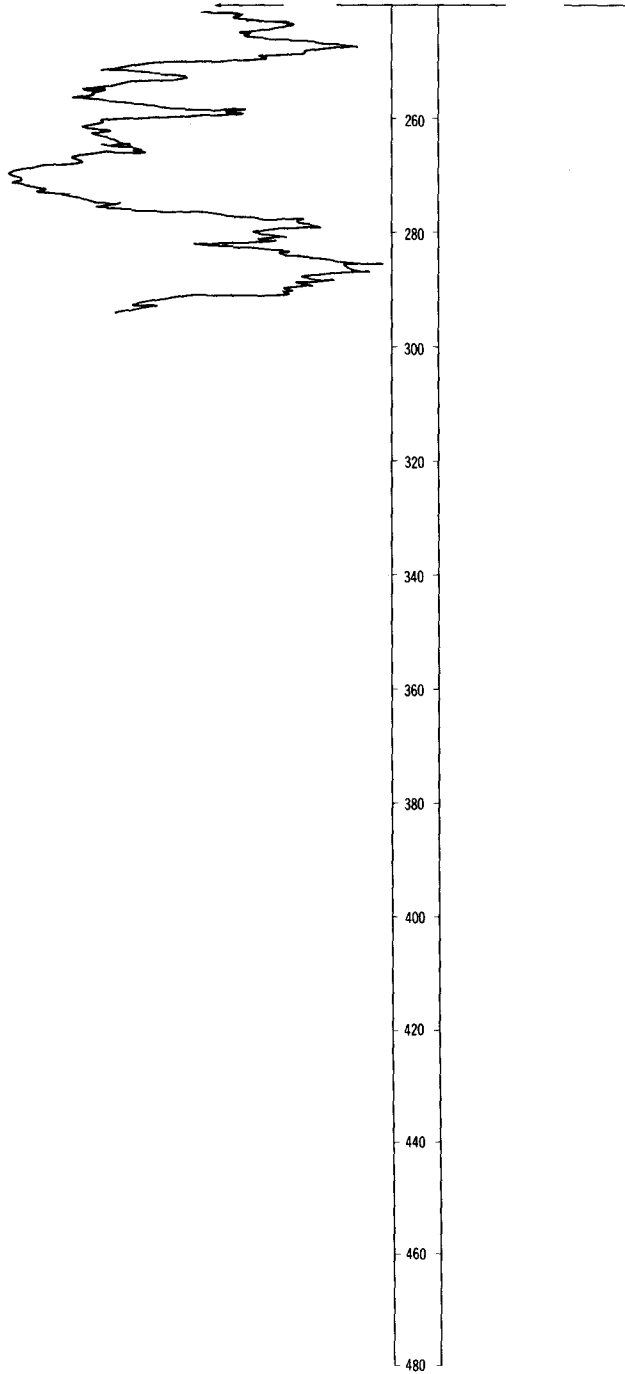
LOCATION: 135-080-30AAB

DATE DRILLED: September 1973

ALTITUDE: 1777
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



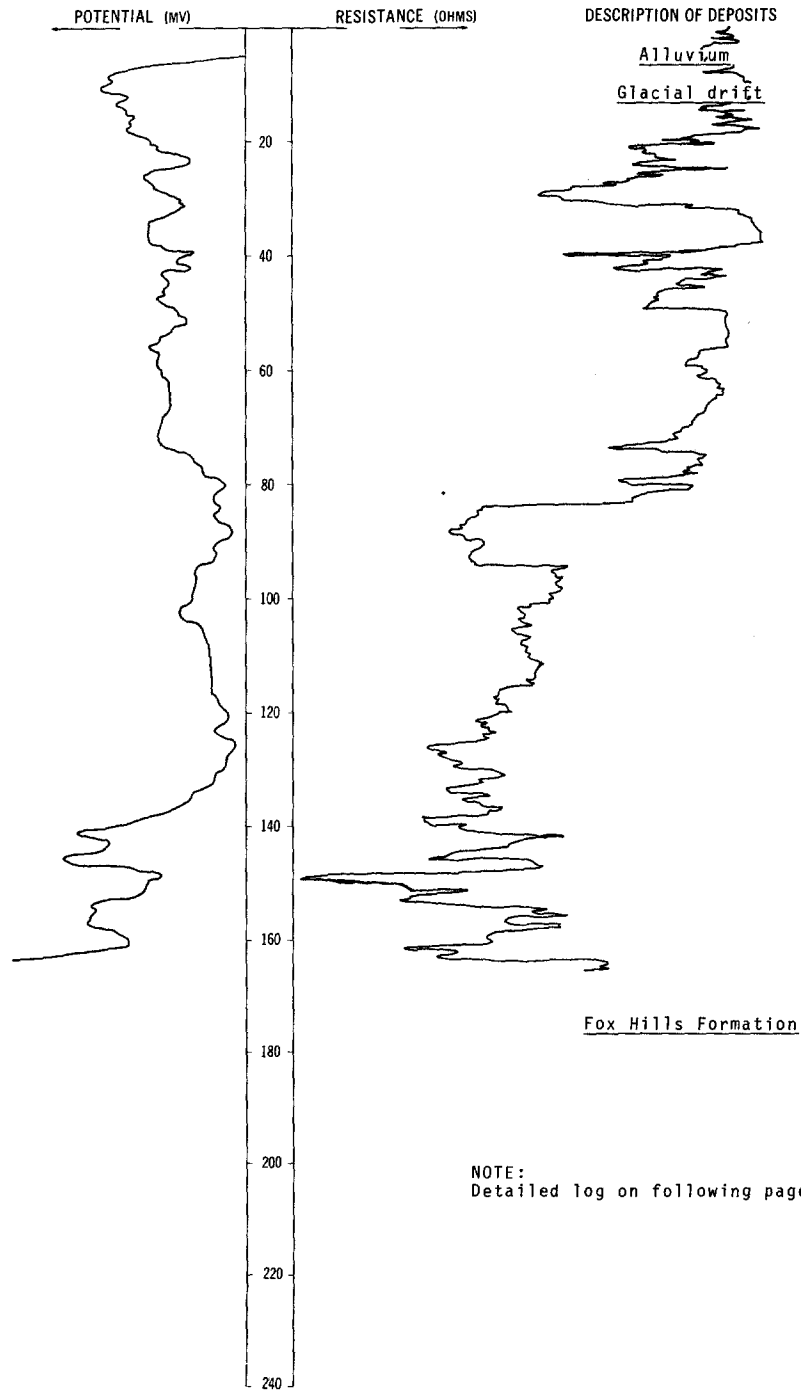
NDSWC 4574

LOCATION: 135-080-33DDA

DATE DRILLED: September 1973

ALTITUDE: 1725
(FT, MSL)

DEPTH: 200
(FT)



NDSWC 4574, Continued

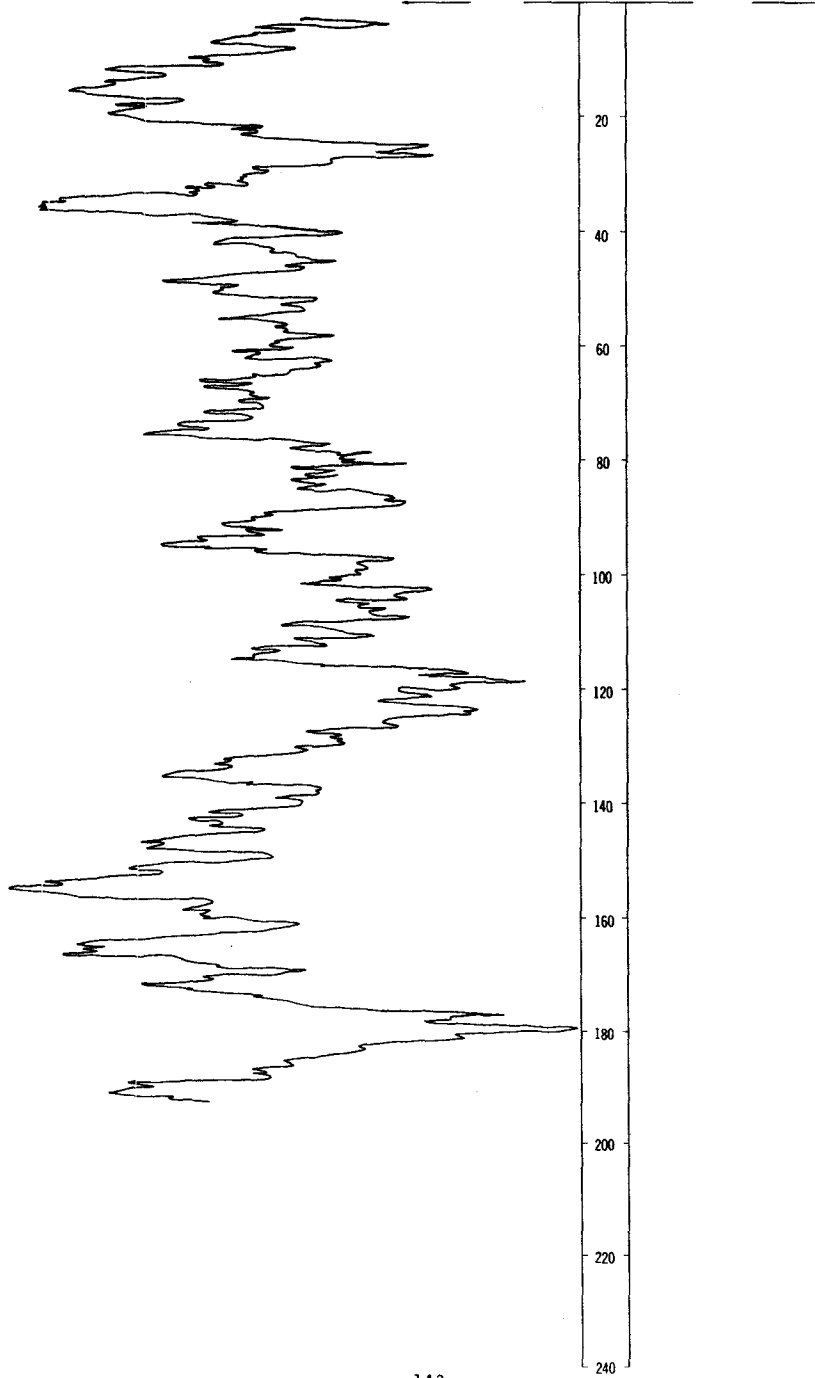
LOCATION: 135-080-33DDA

DATE DRILLED: September 1973

ALTITUDE: 1725
(FT, MSL)

DEPTH: 200
(FT)

NATURAL-GAMMA (T.C. 4)



135-080-33DDA, Continued
NDSWC 4574

Altitude: 1725 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Topsoil, dark-brown, sandy, clayey-----	2	2
	Sand, moderate-yellow to olive-brown, very fine to fine, silty, clayey, soft, slightly cohesive, loose, lenticular, dry, oxidized-----	8	10
Glacial drift:	Sand, rusty-brown, medium to very coarse, gravelly, sorted, subrounded to subangular, iron-stained, lenticular, oxidized-----	11	21
	Silt, light-olive-gray, clayey, sandy, soft, slightly to moderately cohesive, lenticular-----	11	32
	Gravel, fine, sandy, well-sorted, subrounded, clean, loose-----	7	39
	Silt, olive-gray, clayey, sandy, soft, slightly to moderately cohesive; interbedded with moderately soft plastic clay and noncohesive loose sand-----	45	84
	Clay, dark-olive-gray, moderately soft, cohesive, plastic-----	10	94
	Silt, light-olive-gray, soft, crumbly-----	22	116
	Clay, dark-olive-gray, moderately soft, cohesive, plastic, and light-olive-gray soft crumbly silt; interbedded-----	25	141
	Sand, very fine to very coarse, highly lenticular; interbedded with layers of silt and clay-----	23	164
	Gravel, sandy, poorly sorted, lenticular-----	13	177
Fox Hills Formation:	Shale, medium-gray to dark-bluish-gray, silty, carbonaceous, hard, brittle, chunky, slightly crumbly-----	7	184
	Sandstone, light-greenish-gray to dark-green, very fine, clayey, semiconsolidated; with thin concretions-----	16	200

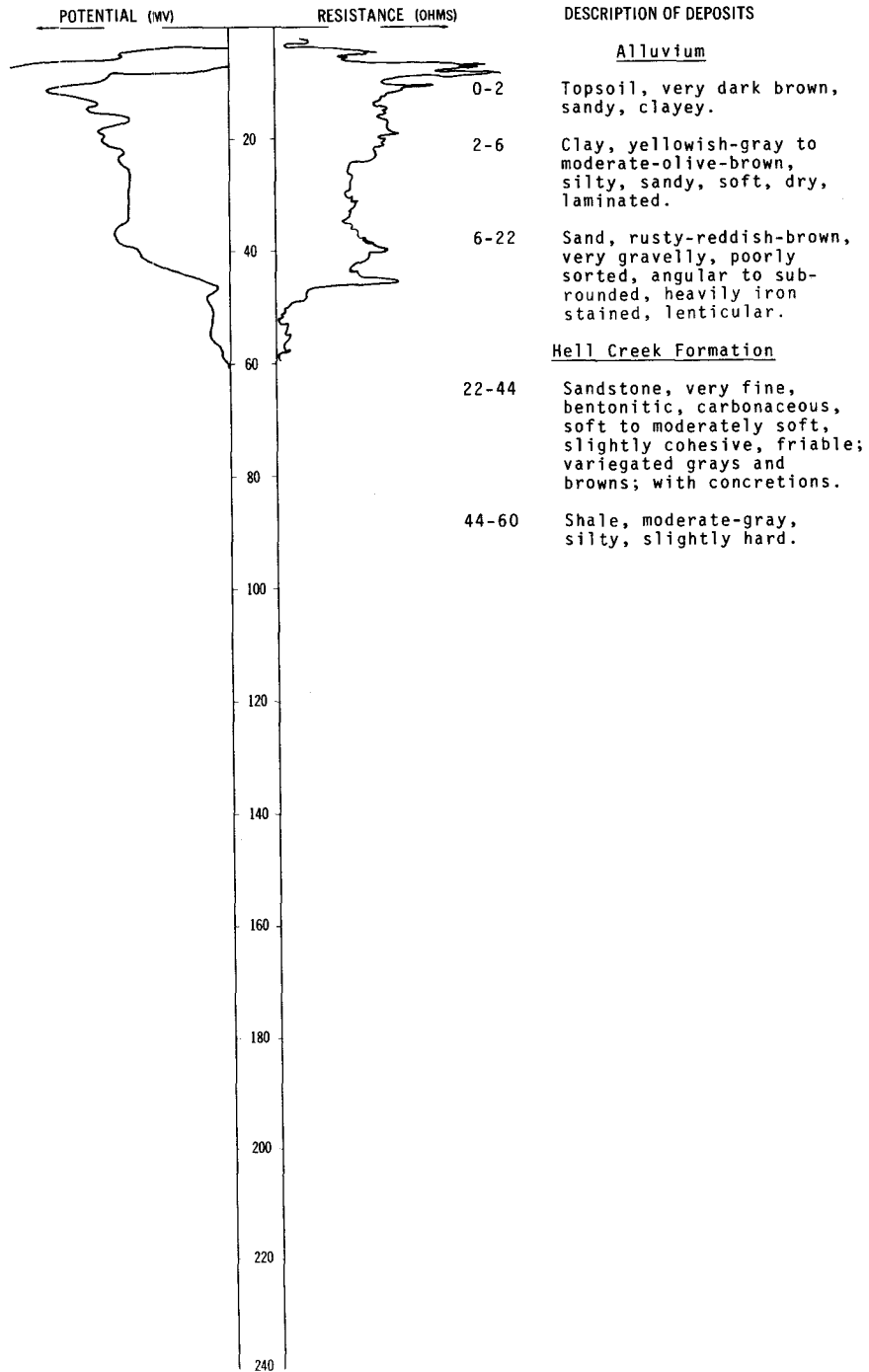
NDSWC 4573

LOCATION: 135-080-36AAA

ALTITUDE: 1725
(±T, MSL)

DATE DRILLED: September 1973

DEPTH: 60
(FT)

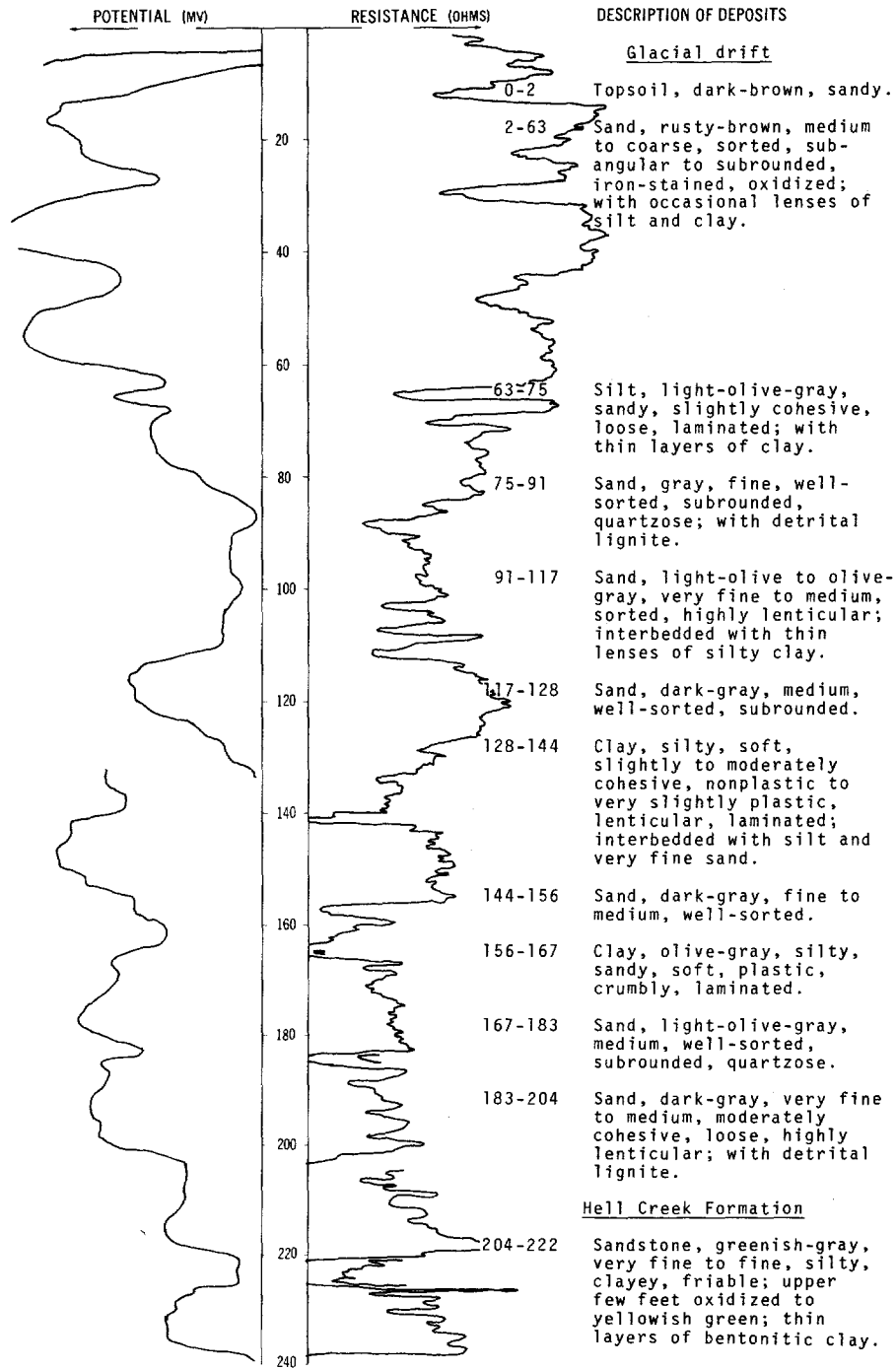


LOCATION: 135-081-02CCD

DATE DRILLED: September 1973

ALTITUDE: 1896
(FT, MSL)

DEPTH: 260
(FT)



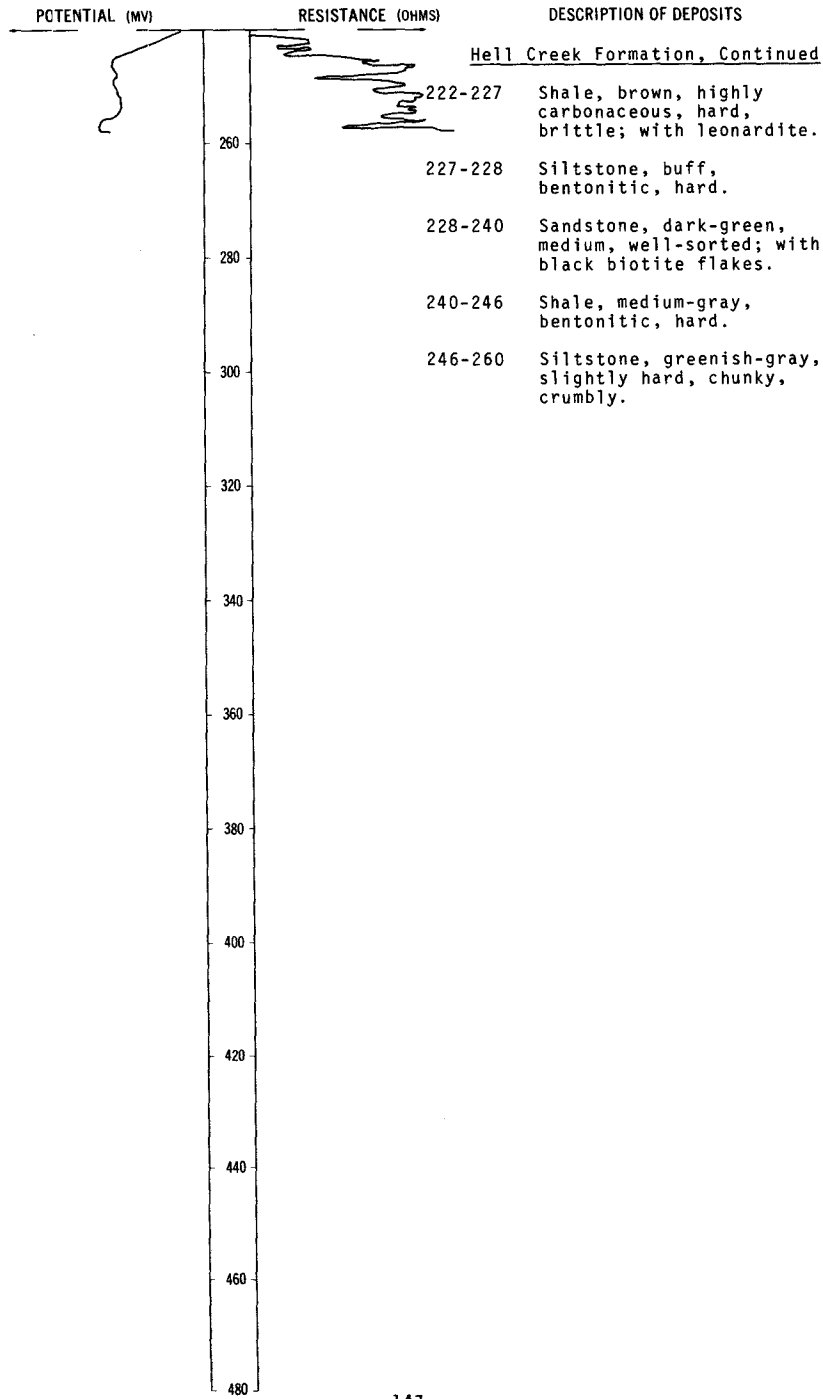
NDSWC 4576, Continued

LOCATION: 135-081-02CCD

DATE DRILLED: September 1973

ALTITUDE: 1896
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4576, Continued

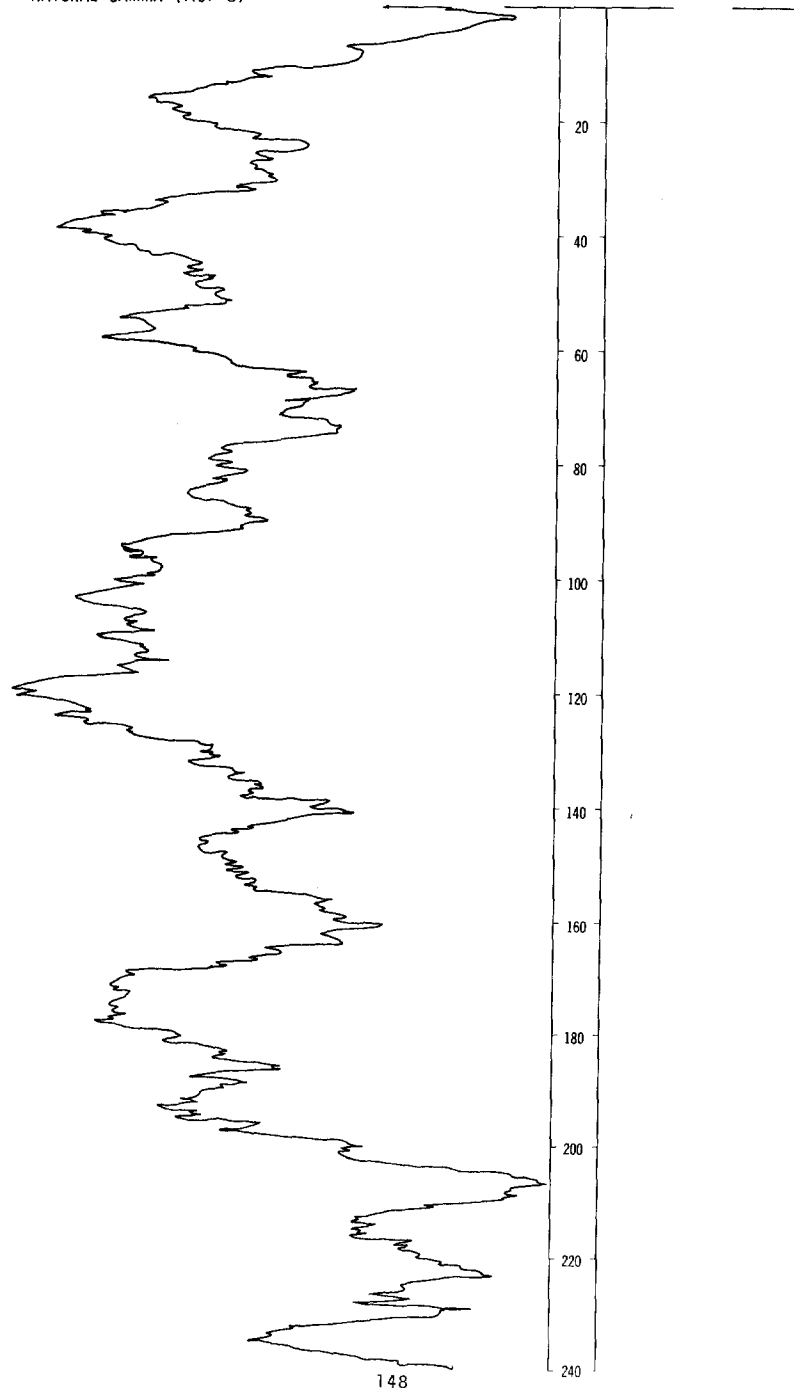
LOCATION: 135-081-02CCD

DATE DRILLED: September 1973

ALTITUDE: 1896
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4576, Continued

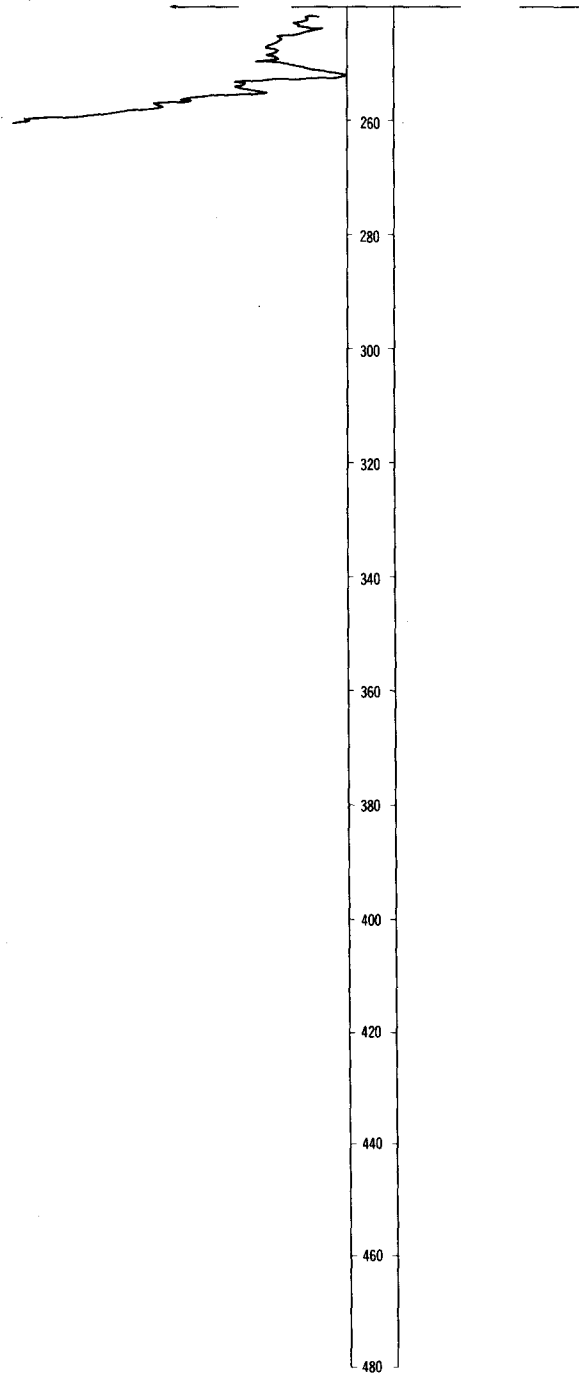
LOCATION: 135-081-02CCD

DATE DRILLED: September 1973

ALTITUDE: 1896
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 8)



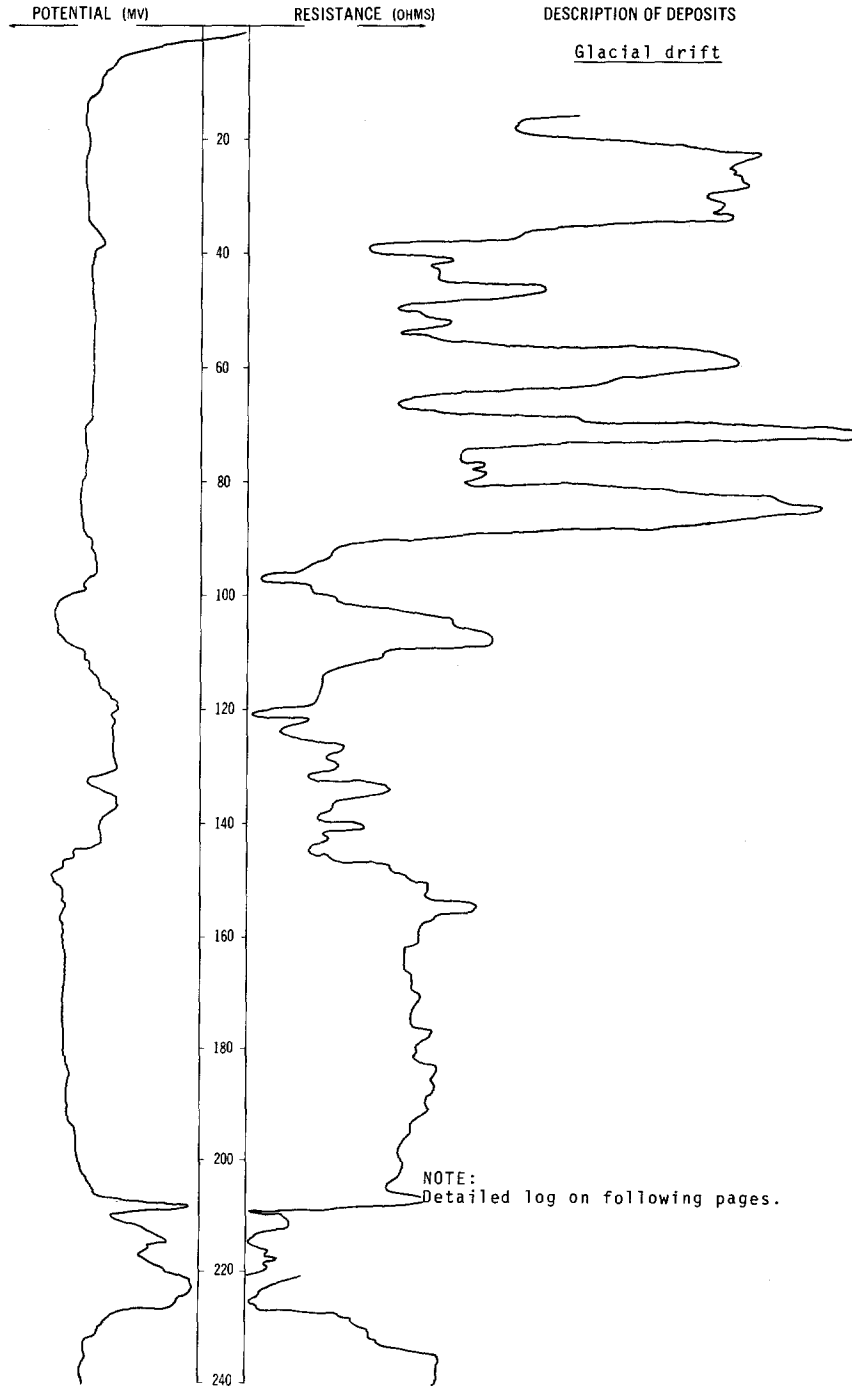
NDSWC 8996

LOCATION: 135-081-03BCC

DATE DRILLED: July 1974

ALTITUDE: 1887
(FT, MSL)

DEPTH: 342
(FT)



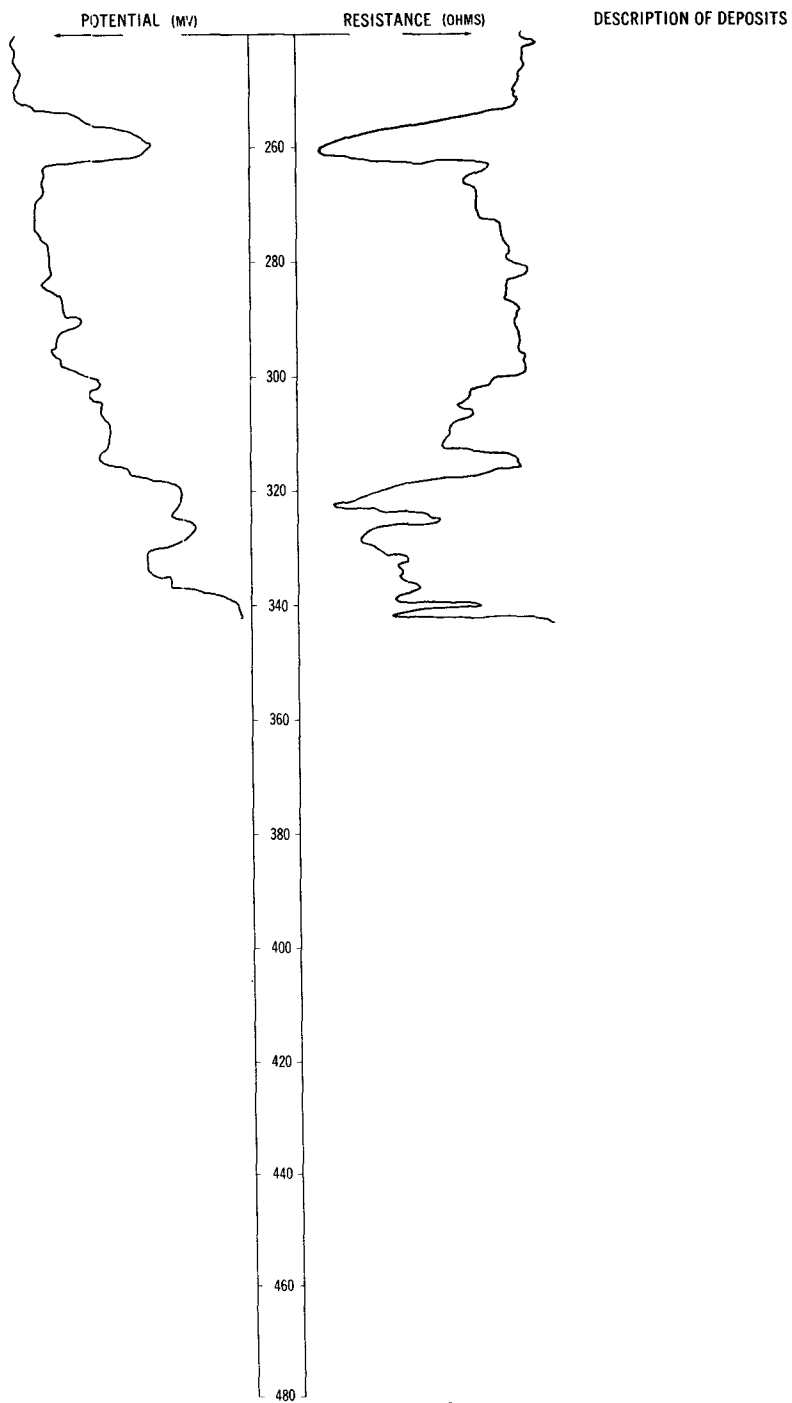
NDSWC 8996, Continued

LOCATION: 135-081-03BCC

DATE DRILLED: July 1974

ALTITUDE: 1887
(FT, MSL)

DEPTH: 342
(FT)



DESCRIPTION OF DEPOSITS

135-081-03BCC, Continued
NDSWC 8996

Altitude: 1887 feet

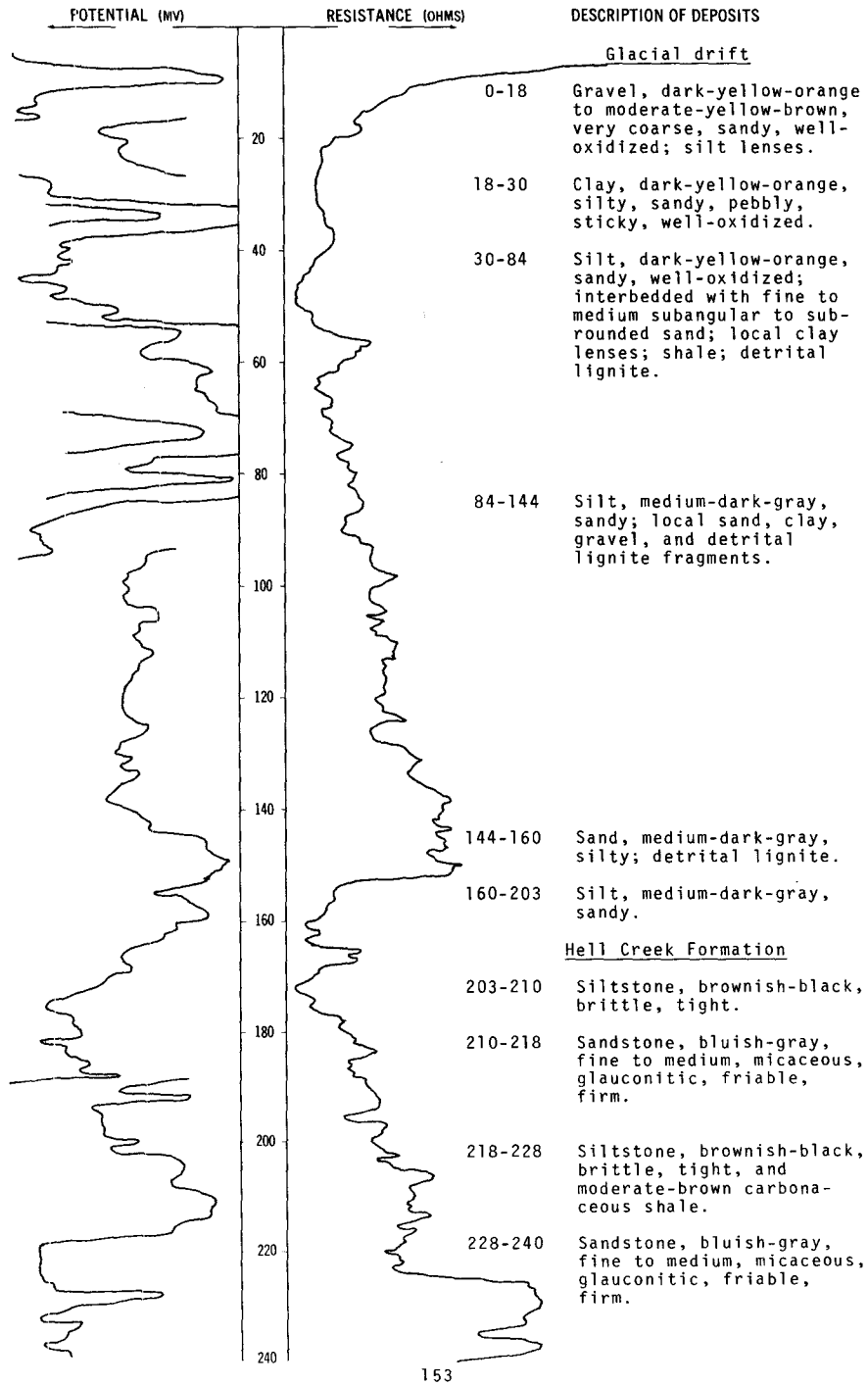
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, dark-yellow-brown, silty, sandy, gravelly, very sticky, highly oxidized-----	20	20
	Sand, moderate-yellow-brown, fine to medium, subrounded, oxidized-----	14	34
	Silt, dark-yellow-orange, clayey, sticky, oxidized; with moderate-yellow-brown mottling; local sand lenses; occasional detrital lignite-----	55	89
	Clay, dark-gray, silty, sandy, pebbly, brittle-----	13	102
	Silt, dark-gray, clayey, brittle, sticky; interbedded with much medium-dark-gray fine to medium subrounded sand; detrital lignite-----	45	147
	Sand, moderate-yellow-brown, medium to very coarse, subrounded; interbedded silt to about 160 feet; some very coarse local shale in coarse sand-----	59	206
	Gravel, fine to medium, subangular to well-rounded; quartz, igneous rocks, shale, carbonates, sandstone, and western siliceous rocks; local medium-dark-gray hard silt lenses-----	2	208
	Silt, dark-gray, clayey, brittle, sticky; with sand lenses-----	26	234
	Sand, moderate-yellow-brown, medium to very coarse, subrounded; with gravel lenses-----	20	254
	Silt, dark-gray, clayey, brittle, sticky-----	8	262
	Silt; sand interbeds-----	74	336
	Gravel, sand, silt, and cobbles (?)-----	6	342

LOCATION: 135-081-03CBB

DATE DRILLED: August 1974

ALTITUDE: 1885
(FT, MSL)

DEPTH: 240
(FT)



135-081-04AAA
NDSWC 8999

Altitude: 1886 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Gravel, moderate-yellow-brown, very coarse, sandy, oxidized; 50 percent igneous rocks, 40 percent carbonates, and 10 percent quartz and western siliceous rocks-----	9	9
	Sand, medium to very coarse, oxidized-----	4	13
	Clay, dark-yellow-orange, silty, sandy, pebbly, well-oxidized-----	12	25
	Gravel, sandy, oxidized-----	4	29
	Silt, moderate-dark-yellow-brown to dark-yellow-brown, clayey, sandy, sticky, and very fine to medium sand; interbedded-----	91	120
	Sand and silt, medium-gray to dark-gray; interbedded; variable detrital lignite as sand and fragments-----	160	280
	Gravel; lost circulation-----	10	290

135-081-04AAD
NDSWC 8998

Altitude: 1886 feet

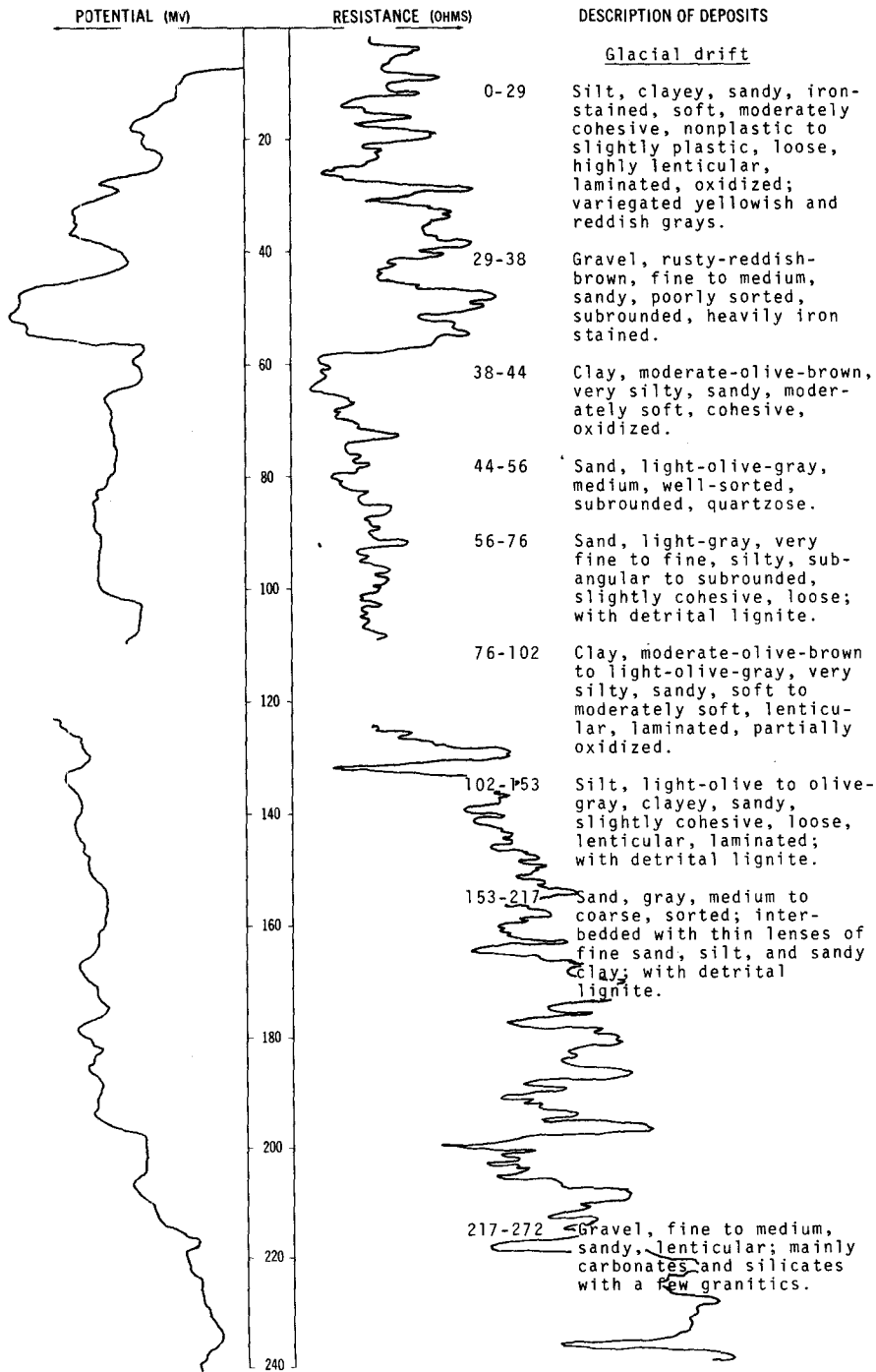
Glacial drift:			
	Sand, medium to very coarse, and moderate-yellow-brown fine to medium oxidized gravel; igneous rocks, carbonates, quartz, and western siliceous rocks-----	9	9
	Clay, dark-yellow-orange, silty, sandy, pebbly, well-oxidized-----	14	23
	Sand, medium to very coarse, and fine to coarse gravel-----	4	27
	Silt, dark-yellow-brown to light-brown, very sandy, sticky, oxidized; interbedded; some gravel lenses-----	88	115
	Silt, medium-dark-gray to dark-gray, very sandy, sticky, oxidized; local carbonaceous inclusions; much detrital lignite as sand and fragments-----	85	200
	Gravel, fine to medium, and very coarse sand; 40 percent carbonates, 10 percent western siliceous rocks, 5 percent shale, and 5 percent quartz, sandstone, and detrital lignite fragments-----	40	240
	Silt, medium-dark-gray to dark-gray, sandy; occasionally gravelly-----	9	249
	Silt, dark-gray, siliceous, firm; sand beds; local clay; detrital lignite-----	11	260

LOCATION: 135-081-04BAB

DATE DRILLED: September 1973

ALTITUDE: 1847
(FT, MSL)

DEPTH: 297
(FT)



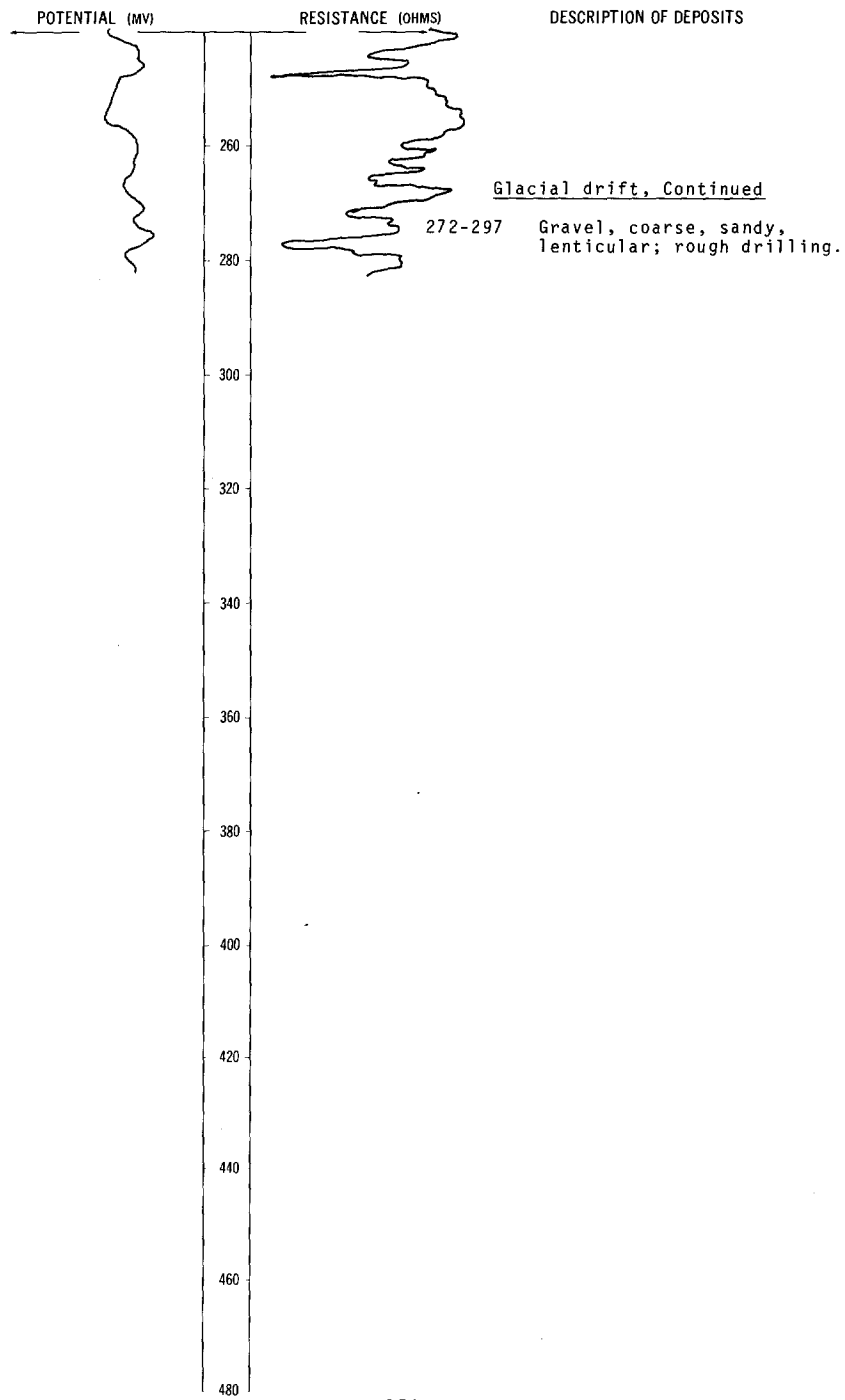
NDSWC 4578, Continued

LOCATION: 135-081-04BAB

DATE DRILLED: September 1973

ALTITUDE: 1847
(FT, MSL)

DEPTH: 297
(FT)



NDSWC 4578, Continued

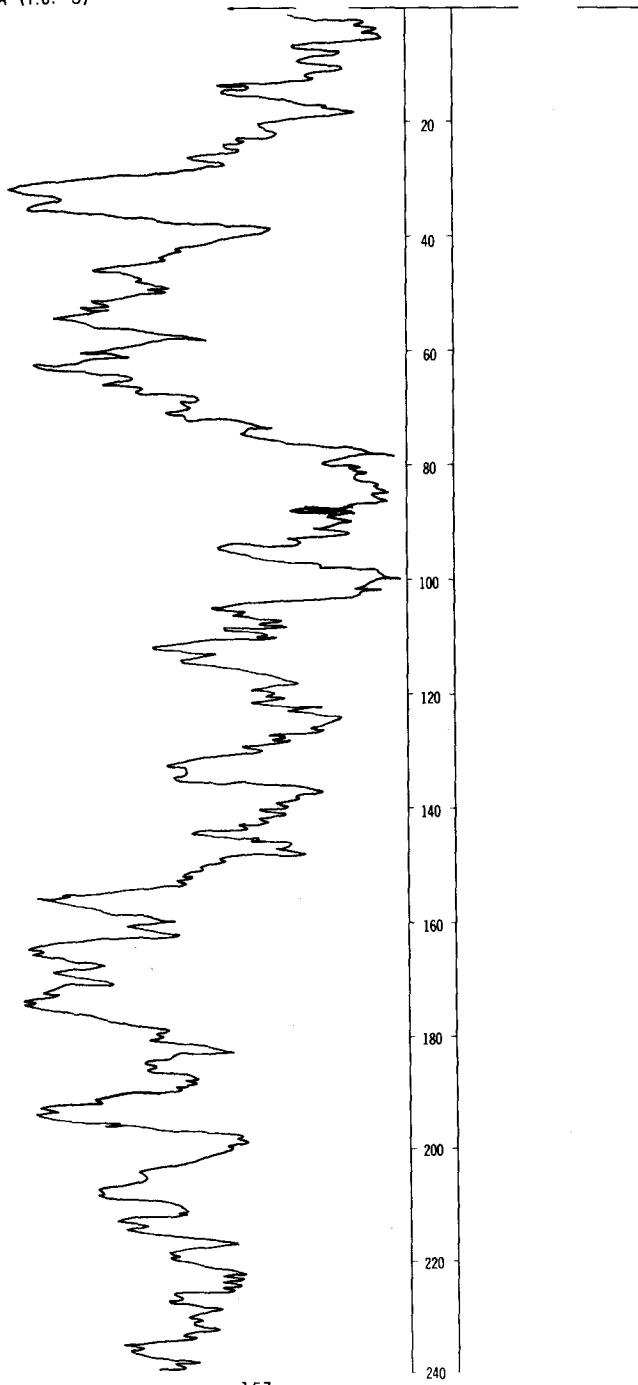
LOCATION: 135-081-04BAB

DATE DRILLED: September 1973

ALTITUDE: 1847
(FT, MSL)

DEPTH: 297
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4578, Continued

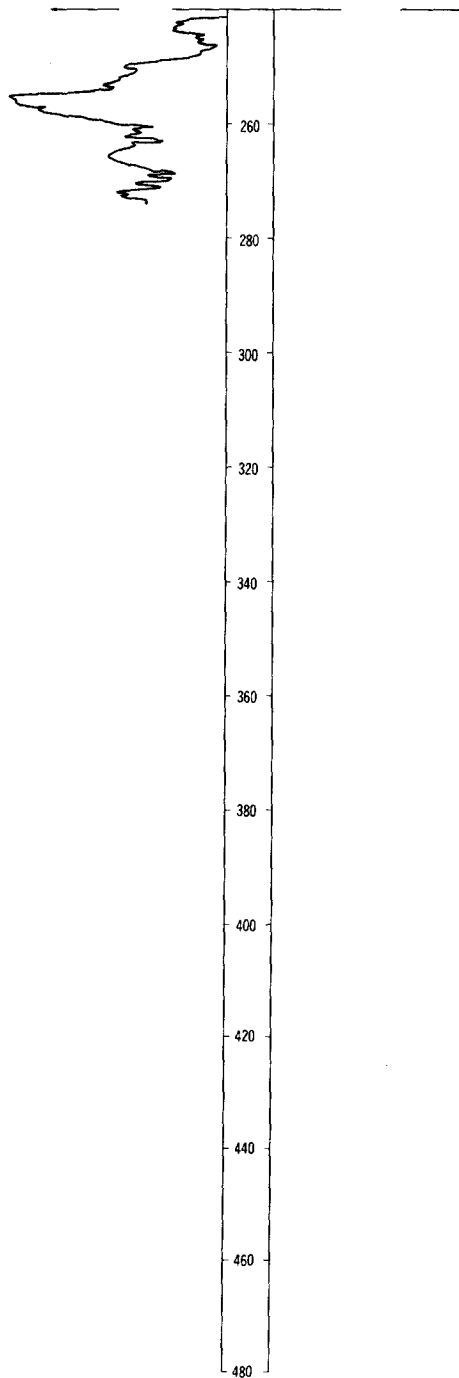
LOCATION: 135-081-04BAB

DATE DRILLED: September 1973

ALTITUDE: 1847
(FT, MSL)

DEPTH: 297
(FT)

NATURAL-GAMMA (T.C. 8)

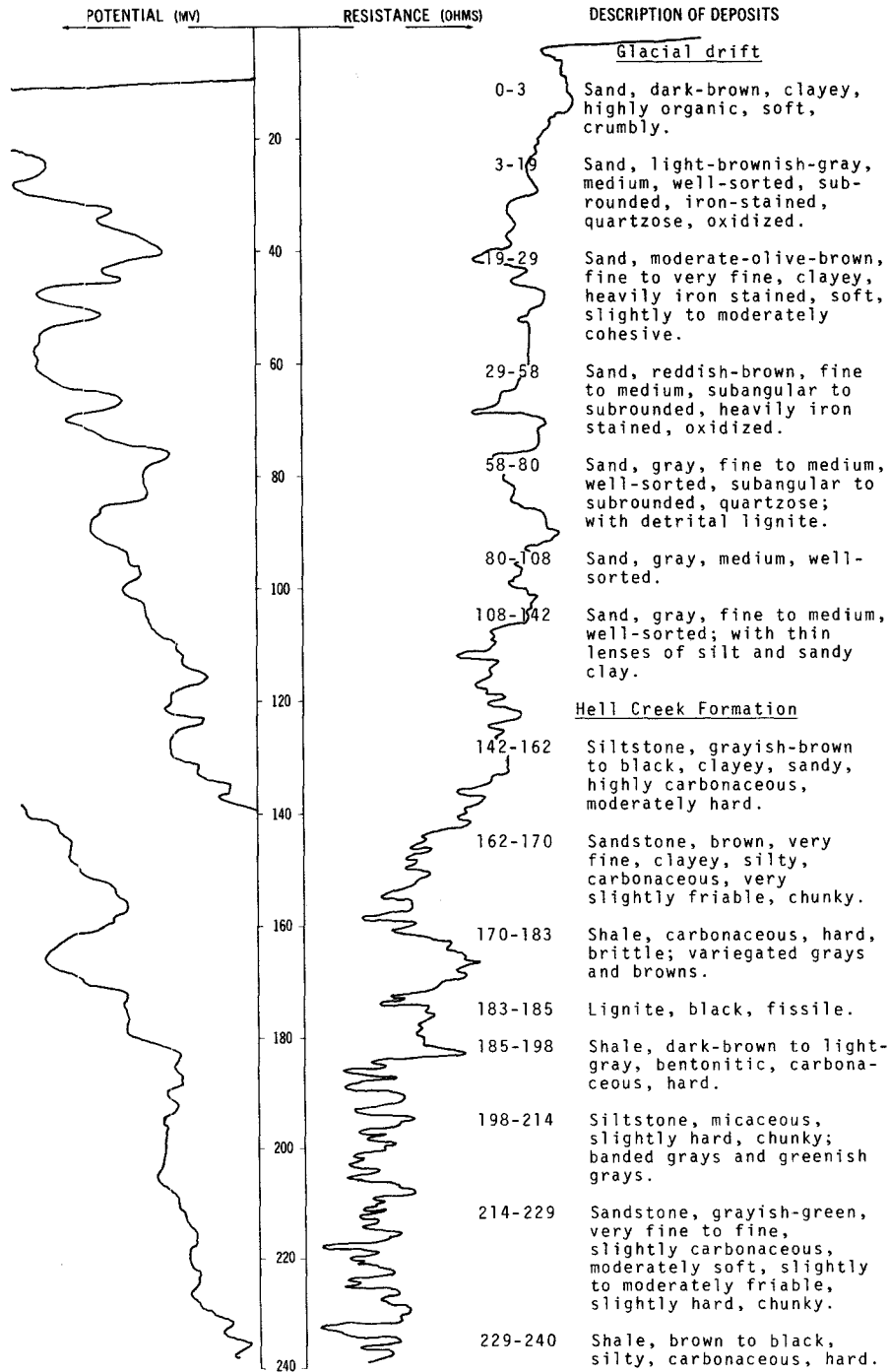


LOCATION: 135-081-11ABA

DATE DRILLED: September 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 240
(FT)



NDSWC 4577, Continued

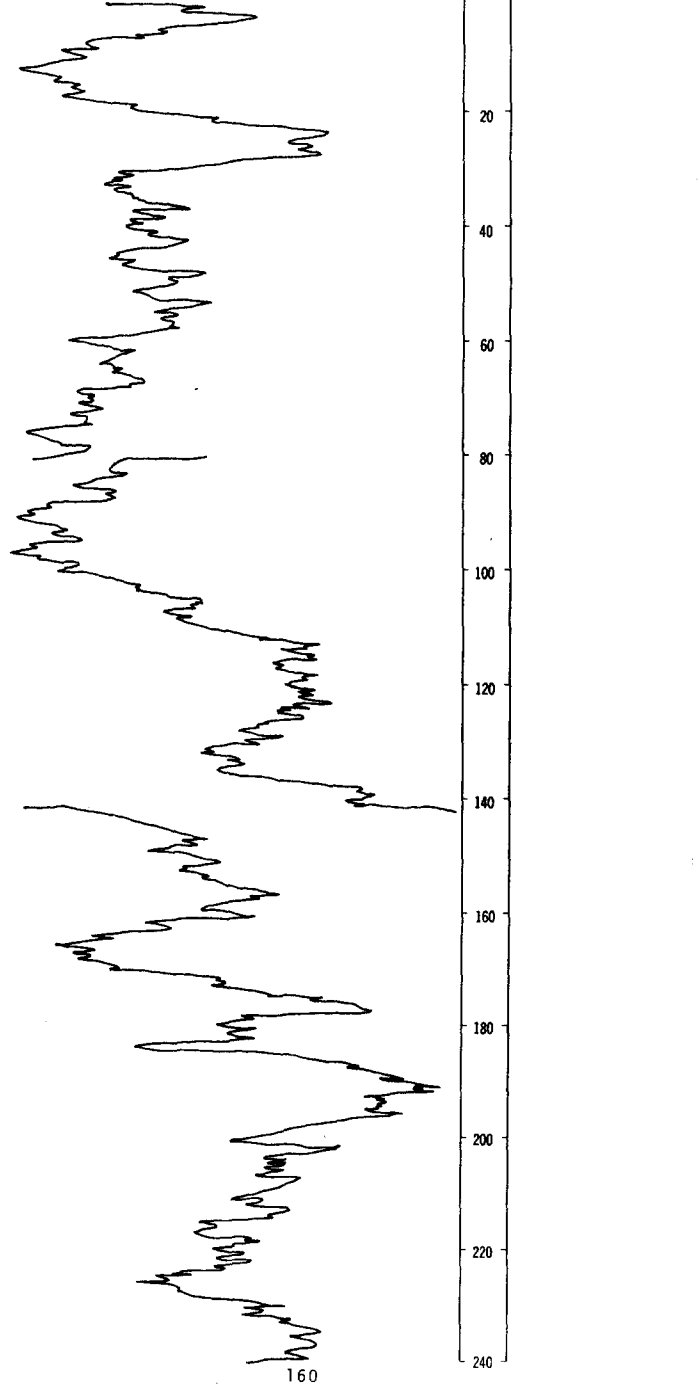
LOCATION: 135-081-11ABA

DATE DRILLED: September 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 240
(FT)

NATURAL-GAMMA (T.C. 8)

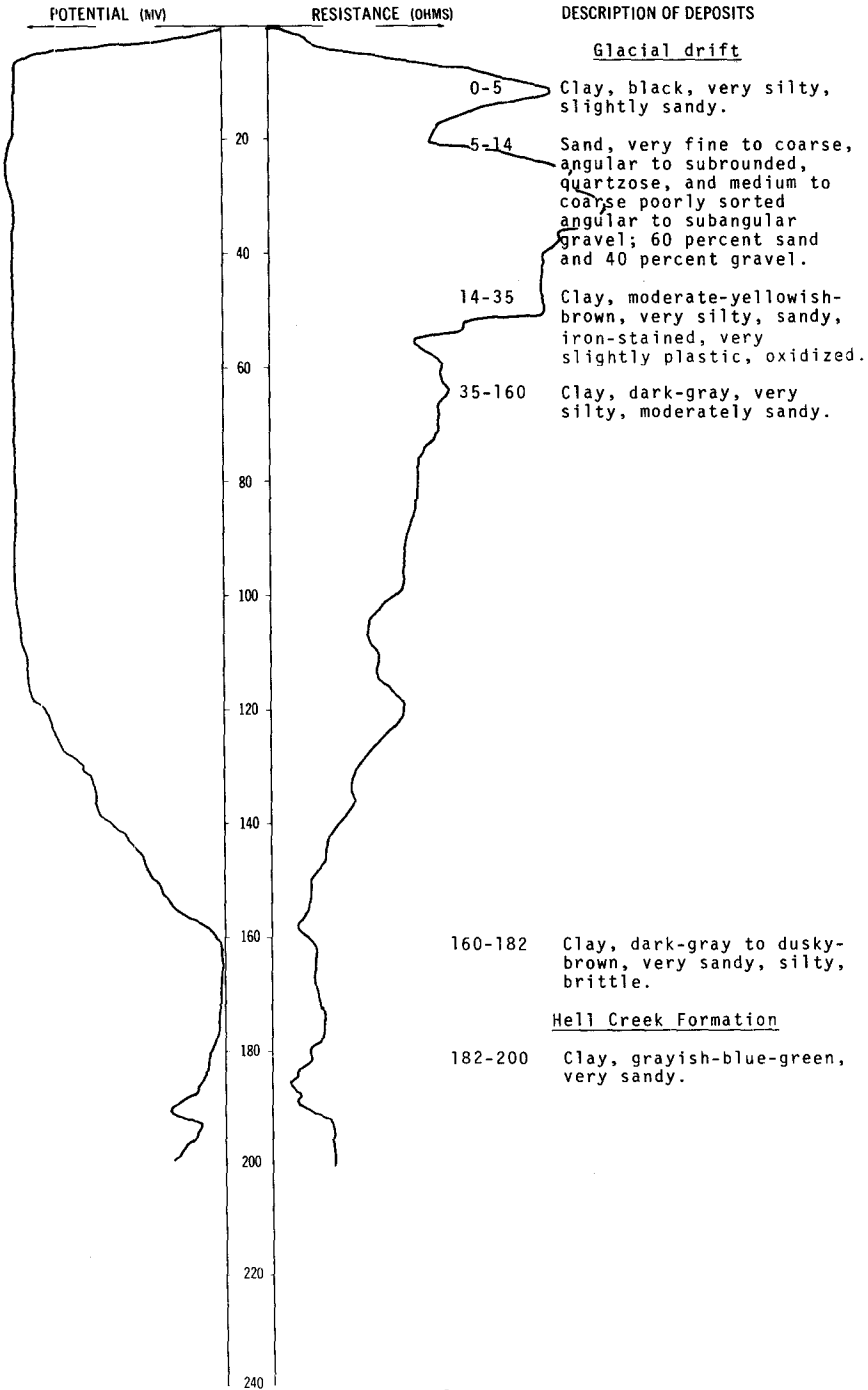


LOCATION: 135-081-11DDD

ALTITUDE: 1873
(FT, MSL)

DATE DRILLED: June 1975

DEPTH: 200
(FT)



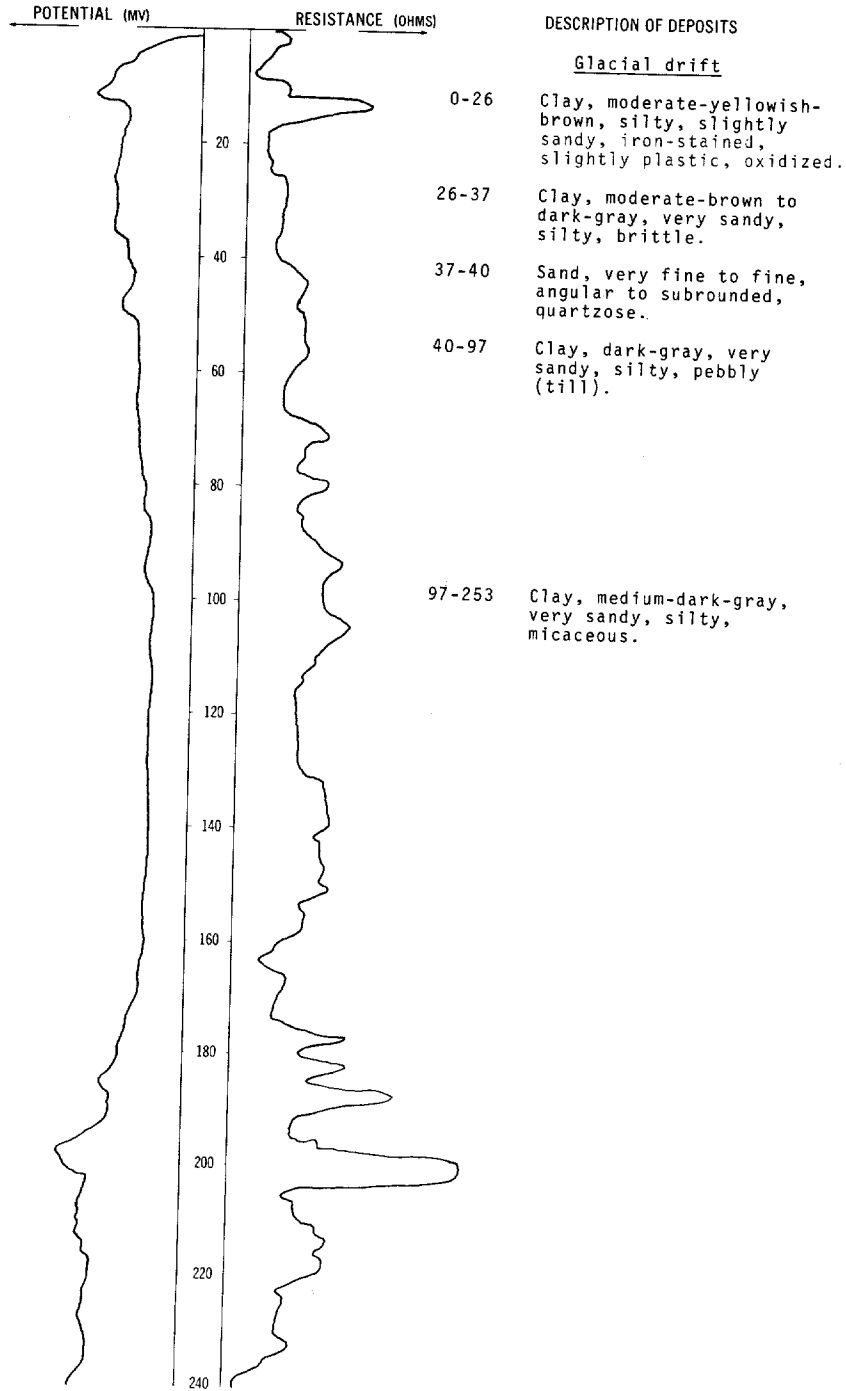
NDSWC 9291

LOCATION: 135-081-12CDD

ALTITUDE: 1878
(FT, MSL)

DATE DRILLED: June 1975

DEPTH: 340
(FT)



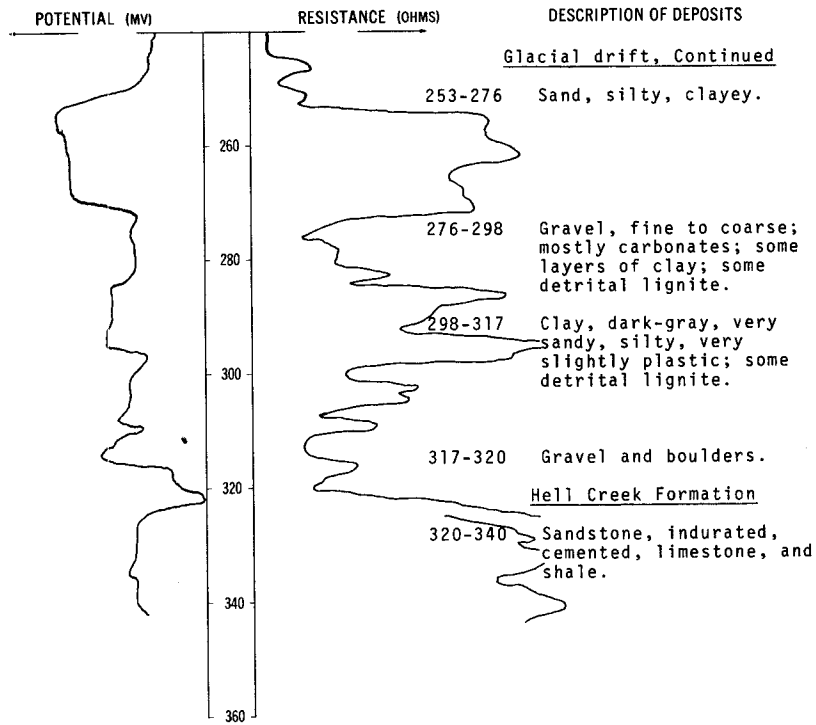
NDSWC 9291, Continued

LOCATION: 135-081-12CDD

DATE DRILLED: June 1975

ALTITUDE: 1878
(FT, MSL)

DEPTH: 340
(FT)



135-081-14AAC
NDSWC 9290

Altitude: 1882

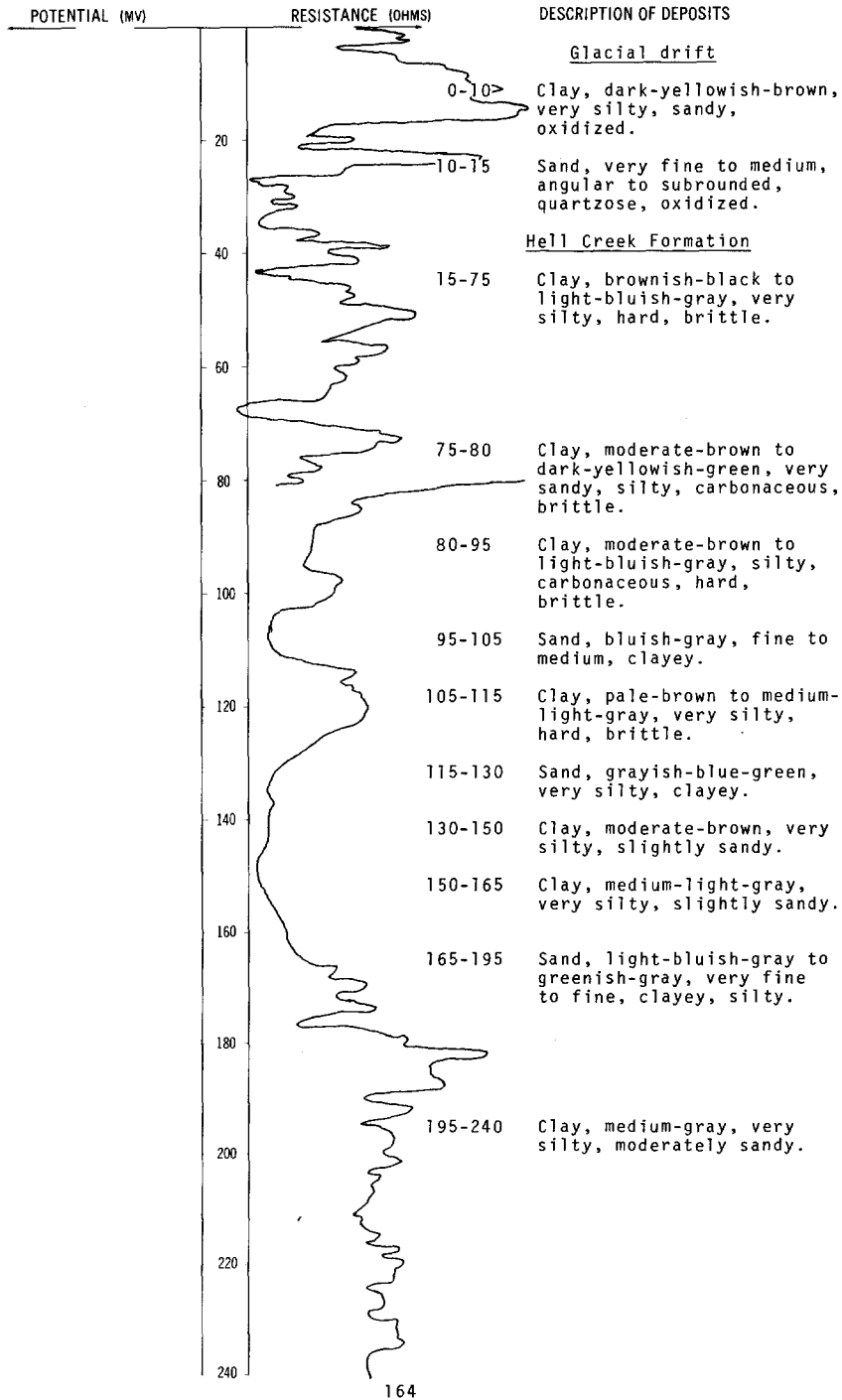
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:	Clay, dark-yellowish-brown, silty, slightly sandy-----	15	15
Cannonball Formation:	Clay, moderate-yellowish-brown, very silty, bentonitic-----	15	30
	Shale, dark-brown to grayish-blue-green, slightly oxidized-----	30	60

LOCATION: 135-081-24DDD

DATE DRILLED: July 1975

ALTITUDE: 1844
(FT, MSL)

DEPTH: 480
(FT)



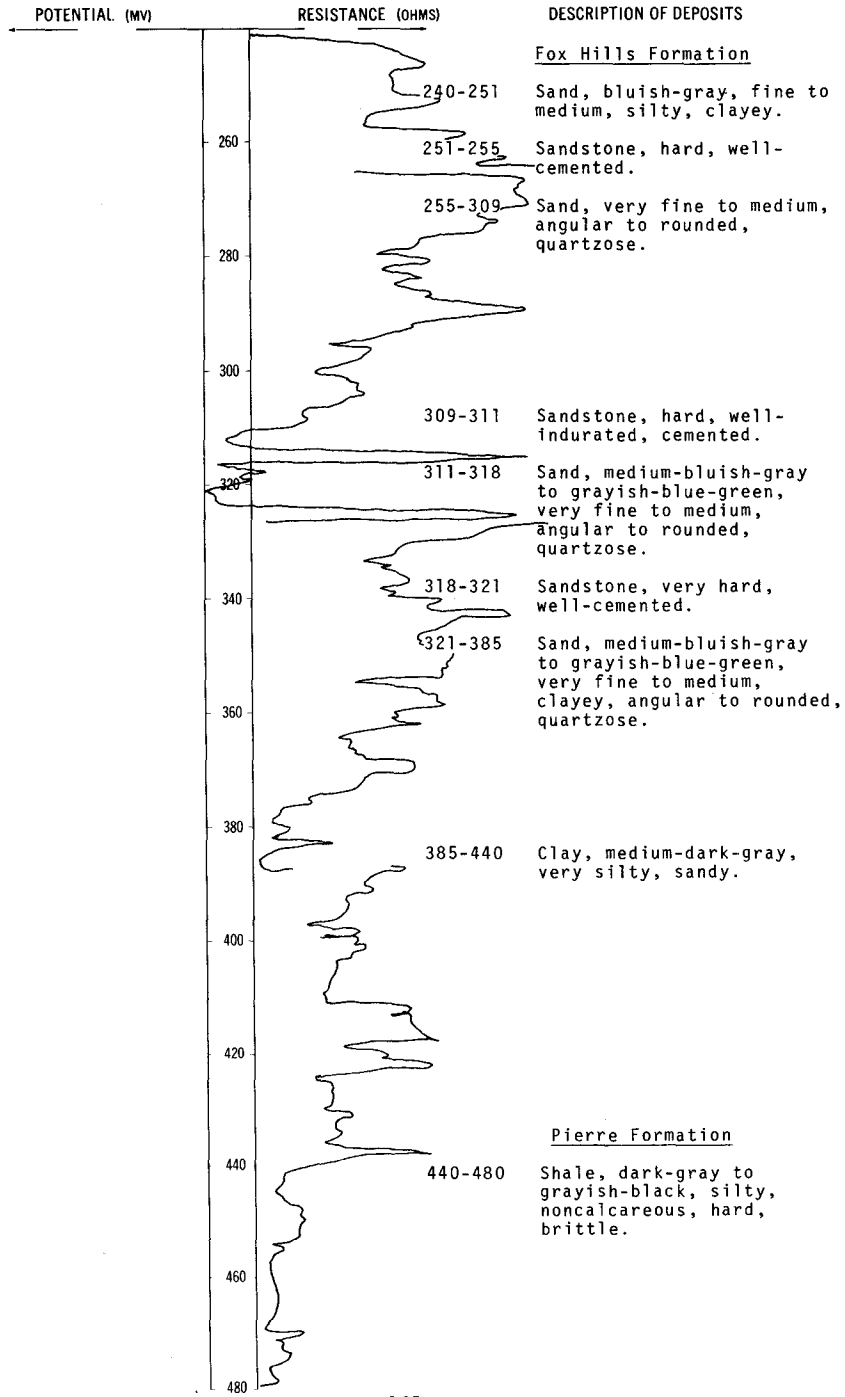
NDSWC 9328, Continued

LOCATION: 135-081-24DDD

DATE DRILLED: July 1975

ALTITUDE: 1844
(FT, MSL)

DEPTH: 480
(FT)



135-082-07DBA
L. Bohl
(Log from M & R Drilling Company)

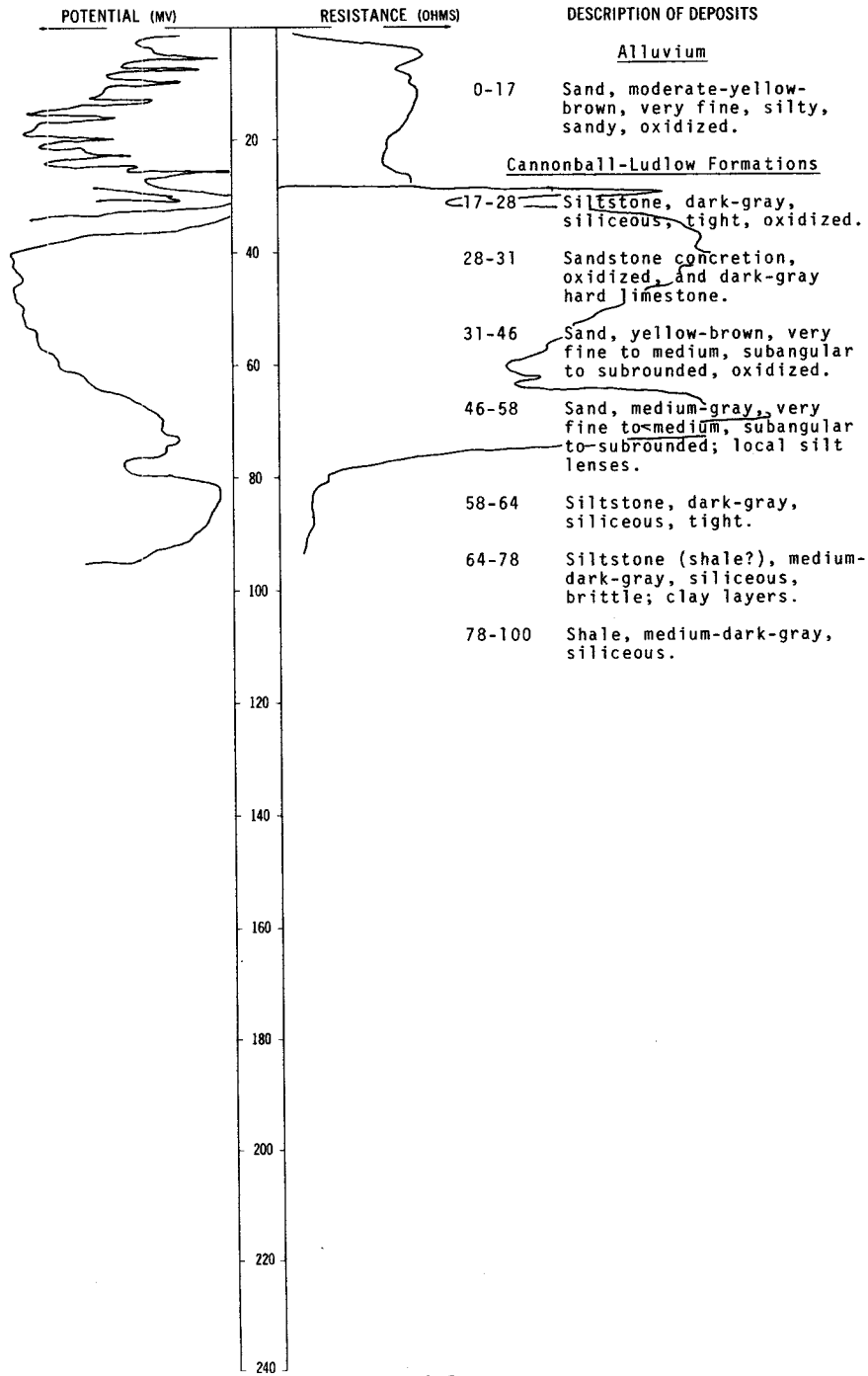
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Cannonball	Formation (?):		
	Surface material-----	7	7
	Shale, yellowish-gray-----	20	27
	Shale, bluish-gray-----	5	32
	Sand, bluish-green, silty-----	7	39
	Shale, bluish-gray, sandy-----	45	84
	Shale, gray-----	37	121
	Sandstone, hard-----	2	123
Hell Creek	Formation (?):		
	Sand, yellowish-gray; with black specks-----	17	140
	Shale, greenish-gray, sandy; with streaks of siltstone-----	61	201
	Sandstone-----	1	202
	Sand, light-blue; with black specks-----	11	213
	Sandstone, friable-----	2	215
	Sand, light-blue; with black specks-----	26	241
	Shale, gray, sandy; with streaks of brown shale-----	12	253
	Shale, gray-----	7	260

LOCATION: 135-082-15AAA

DATE DRILLED: July 1974

ALTITUDE:
(FT, MSL)

DEPTH: 100
(FT)

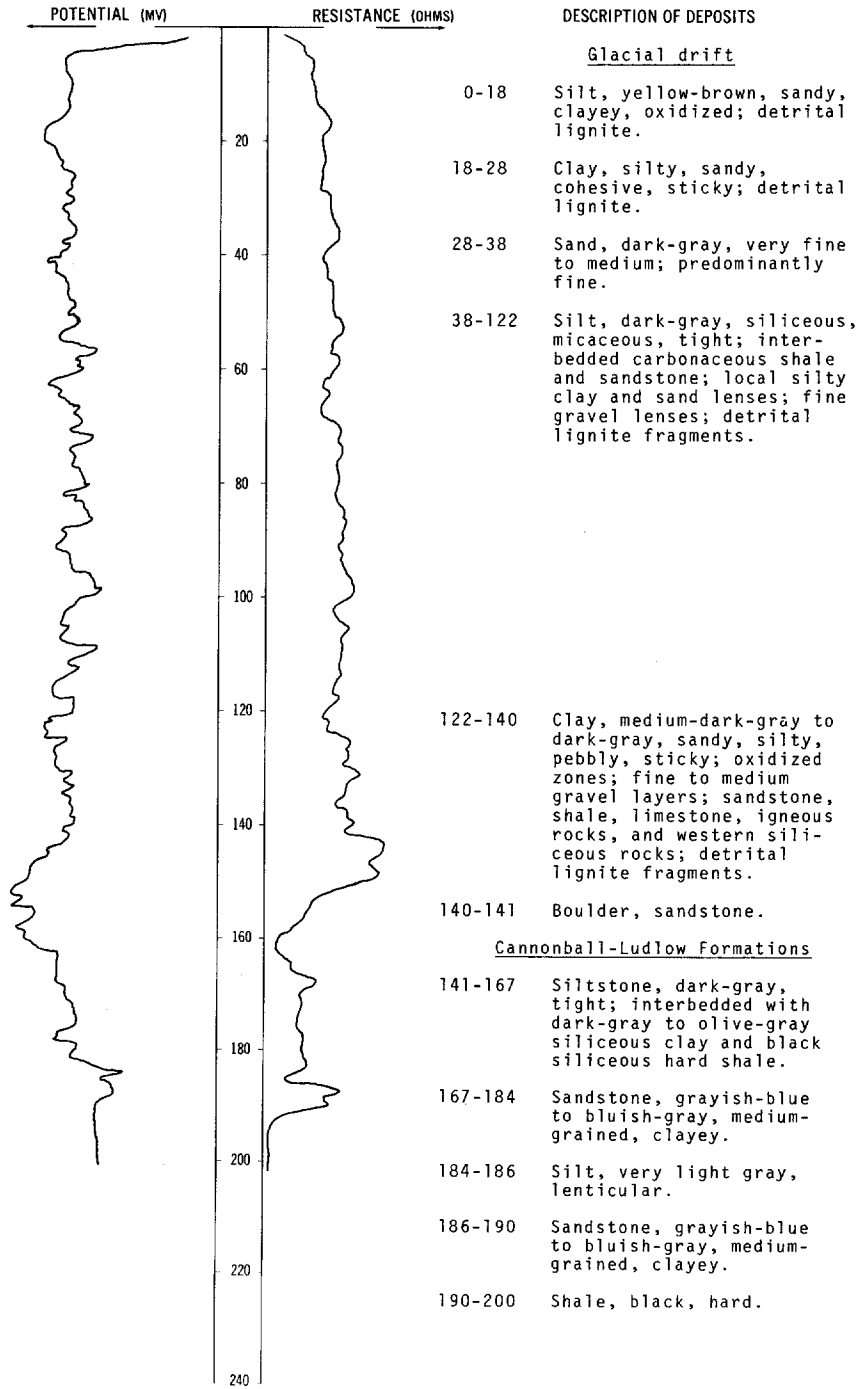


LOCATION: 135-082-22BCB

DATE DRILLED: July 1974

ALTITUDE:
(FT, MSL)

DEPTH: 200
(FT)



135-082-29CDA3
 J. Dworshak
 (Log from Moe Drilling Company)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Till, yellow-----	12	12
	Sand and gravel, fine-----	5	17
	Till, dark-brown-----	118	135
	Gravel, fine to coarse-----	53	188
	Till, brown-----	4	192
	Gravel, coarse-----	6	198
	Till, gray-----	3	201

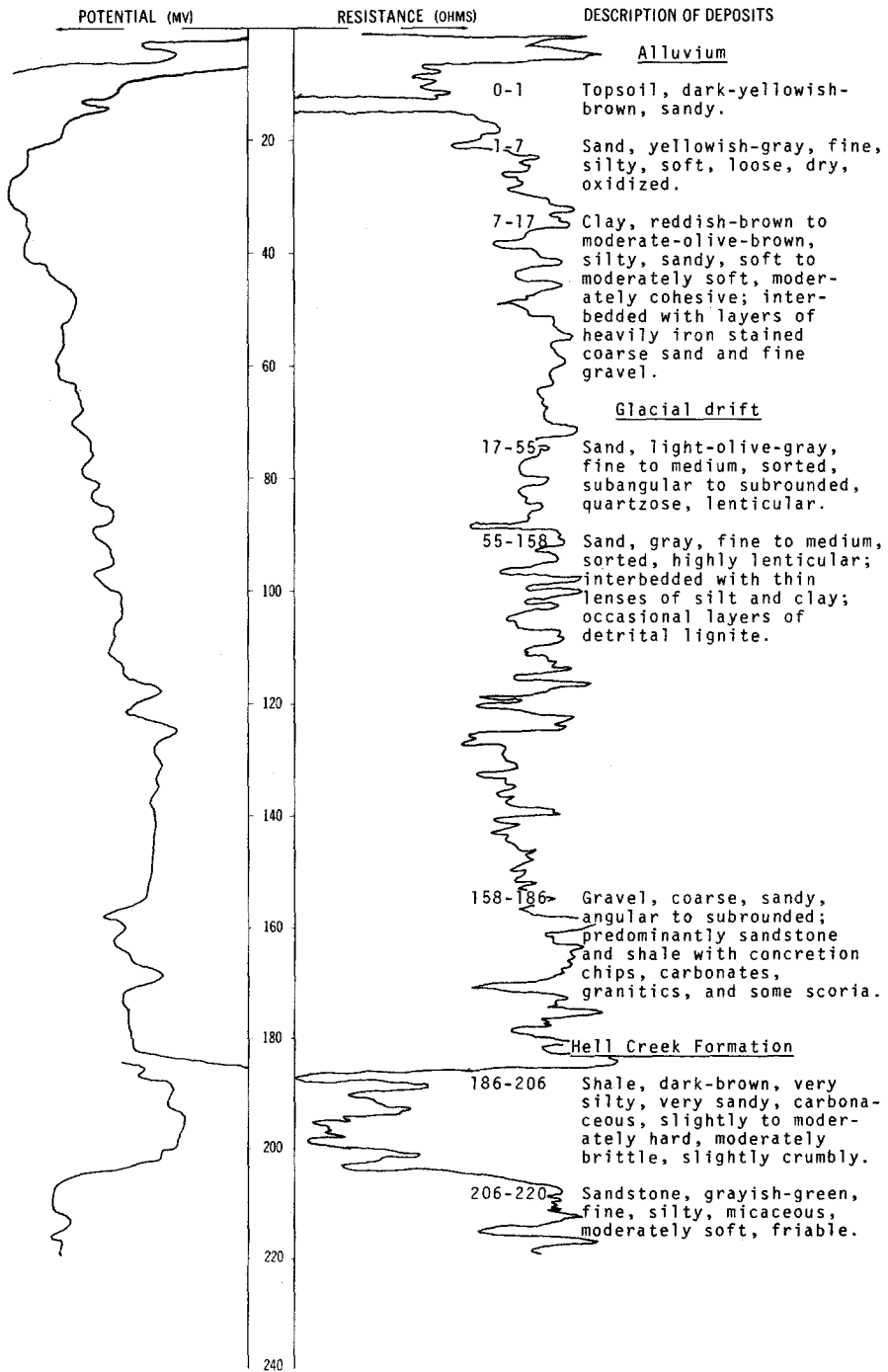
NDSWC 4560

LOCATION: 135-082-30CBB

DATE DRILLED: September 1973

ALTITUDE: 1957
(FT, MSL)

DEPTH: 220
(FT)



NDSWC 4560, Continued

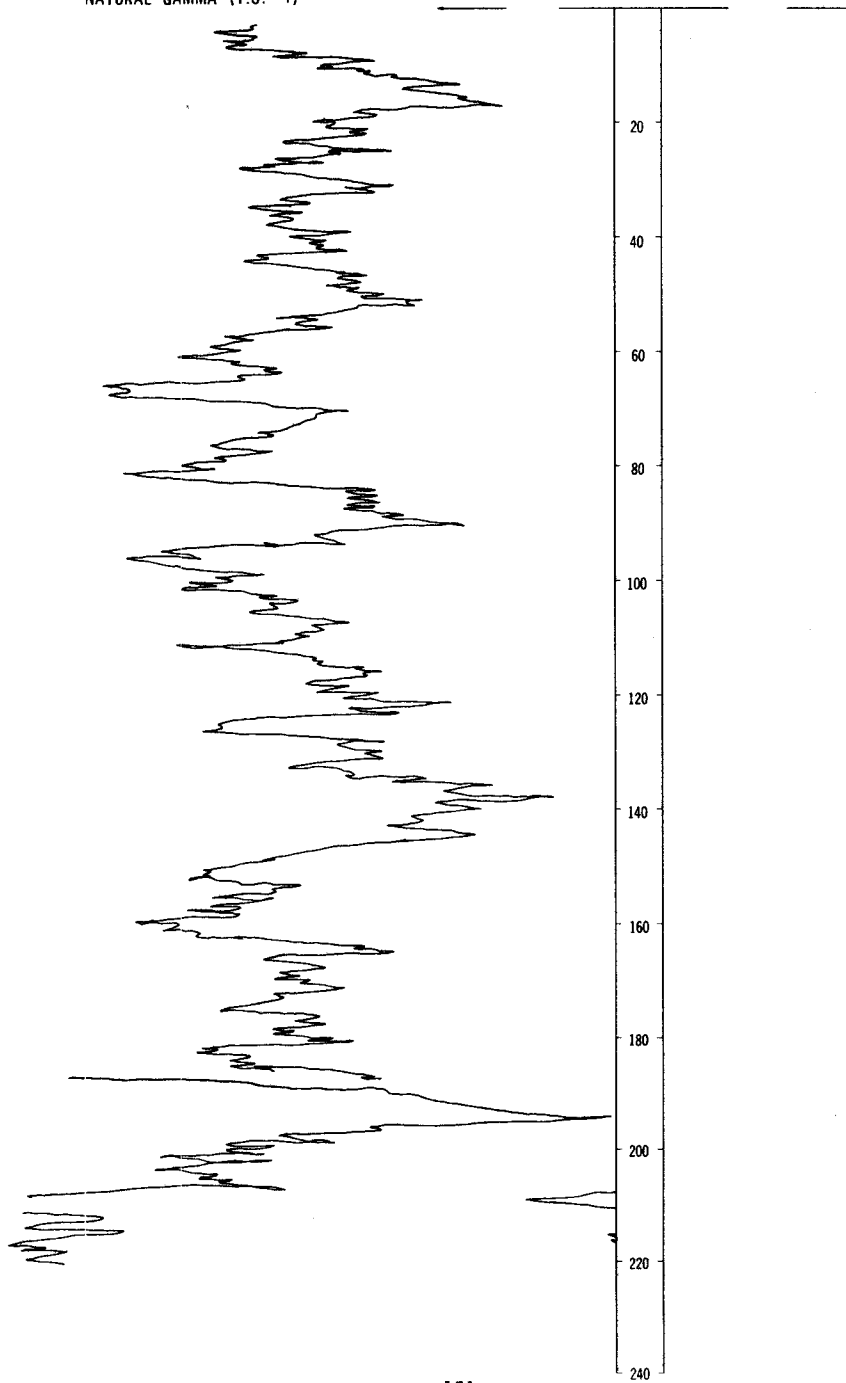
LOCATION: 135-082-30CBB

DATE DRILLED: September 1973

ALTITUDE: 1957
(FT. MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 4)

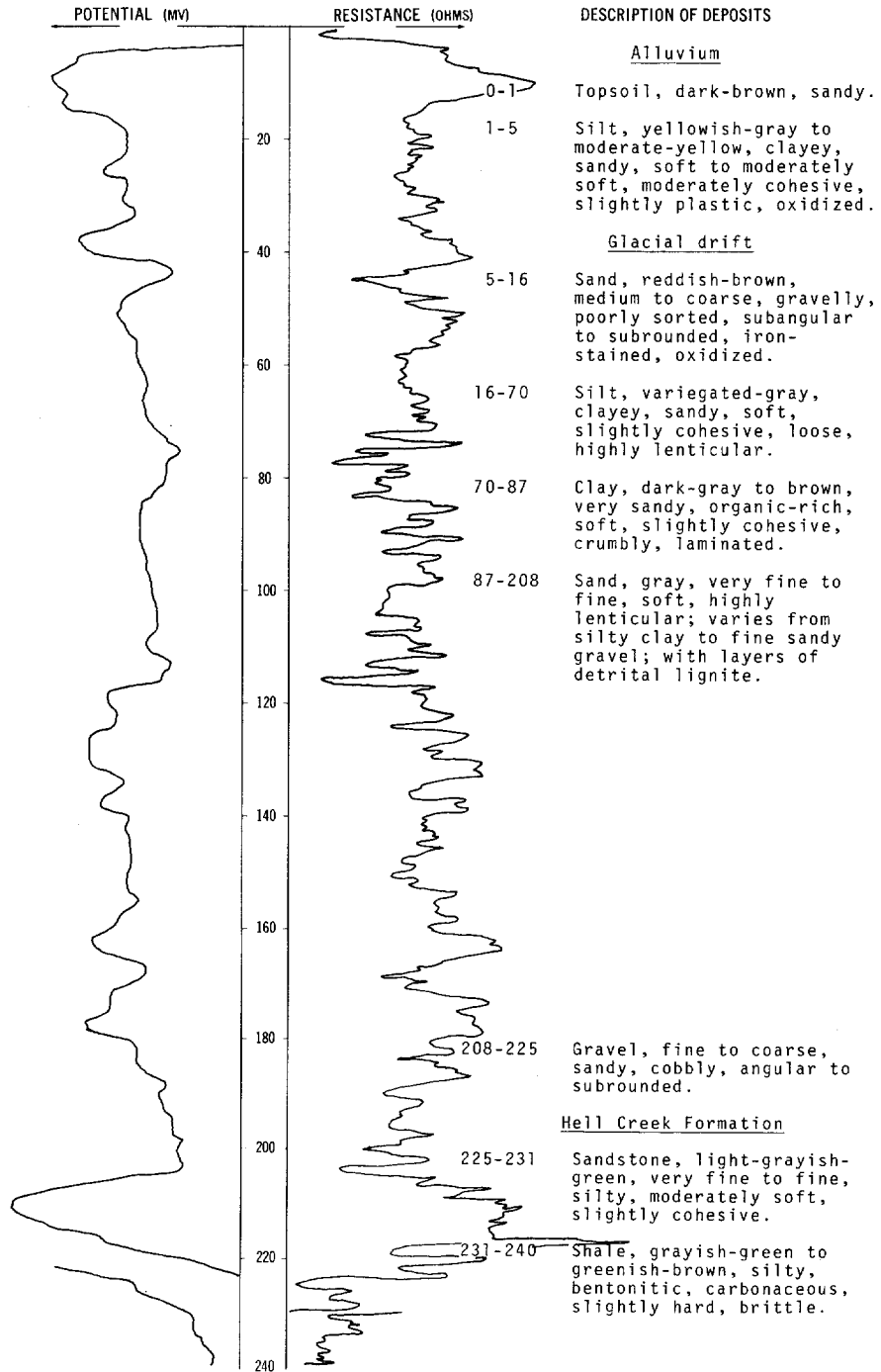


LOCATION: 135-083-20CCB

DATE DRILLED: September 1973

ALTITUDE: 1884
(FT, MSL)

DEPTH: 240
(FT)



NDSWC 4559, Continued

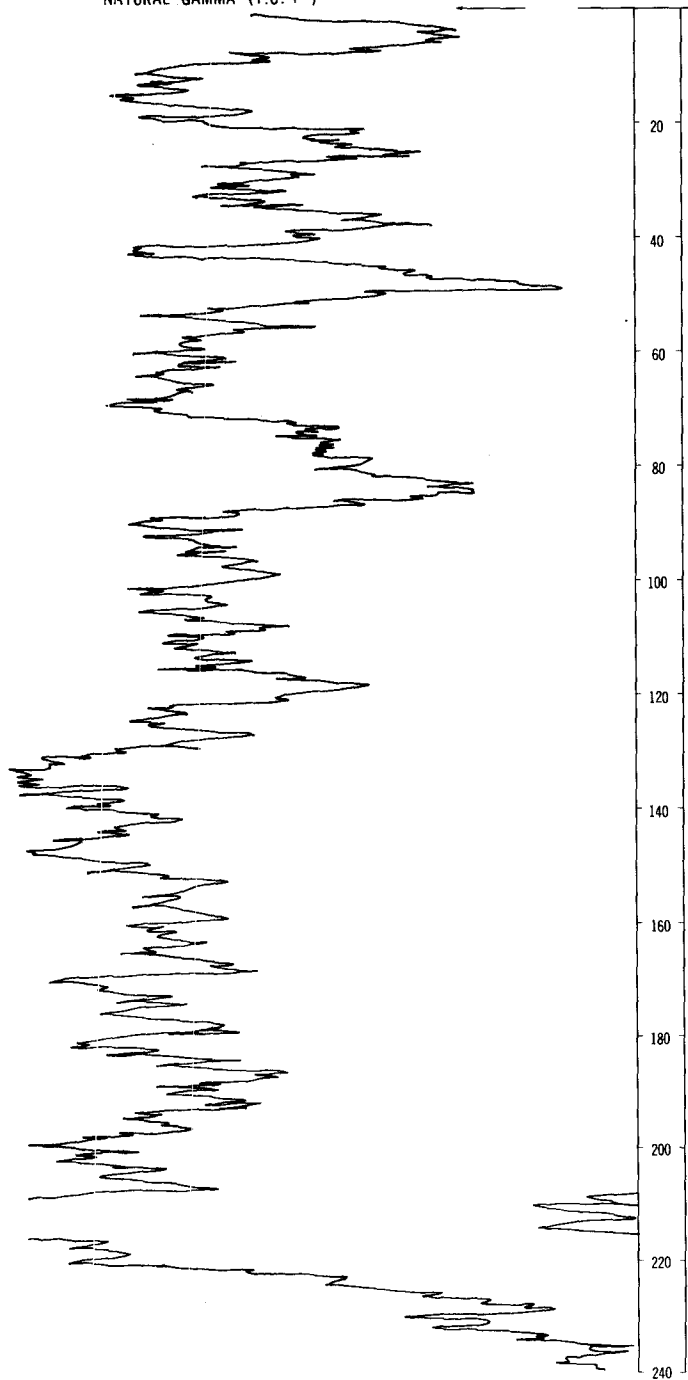
LOCATION: 135-083-20CCB

DATE DRILLED: September 1973

ALTITUDE: 1884
(FT, MSL)

DEPTH: 240
(FT)

NATURAL-GAMMA (T.C. 4)



135-083-22CCB
R. Schmidt
(Log from Moe Drilling Company)

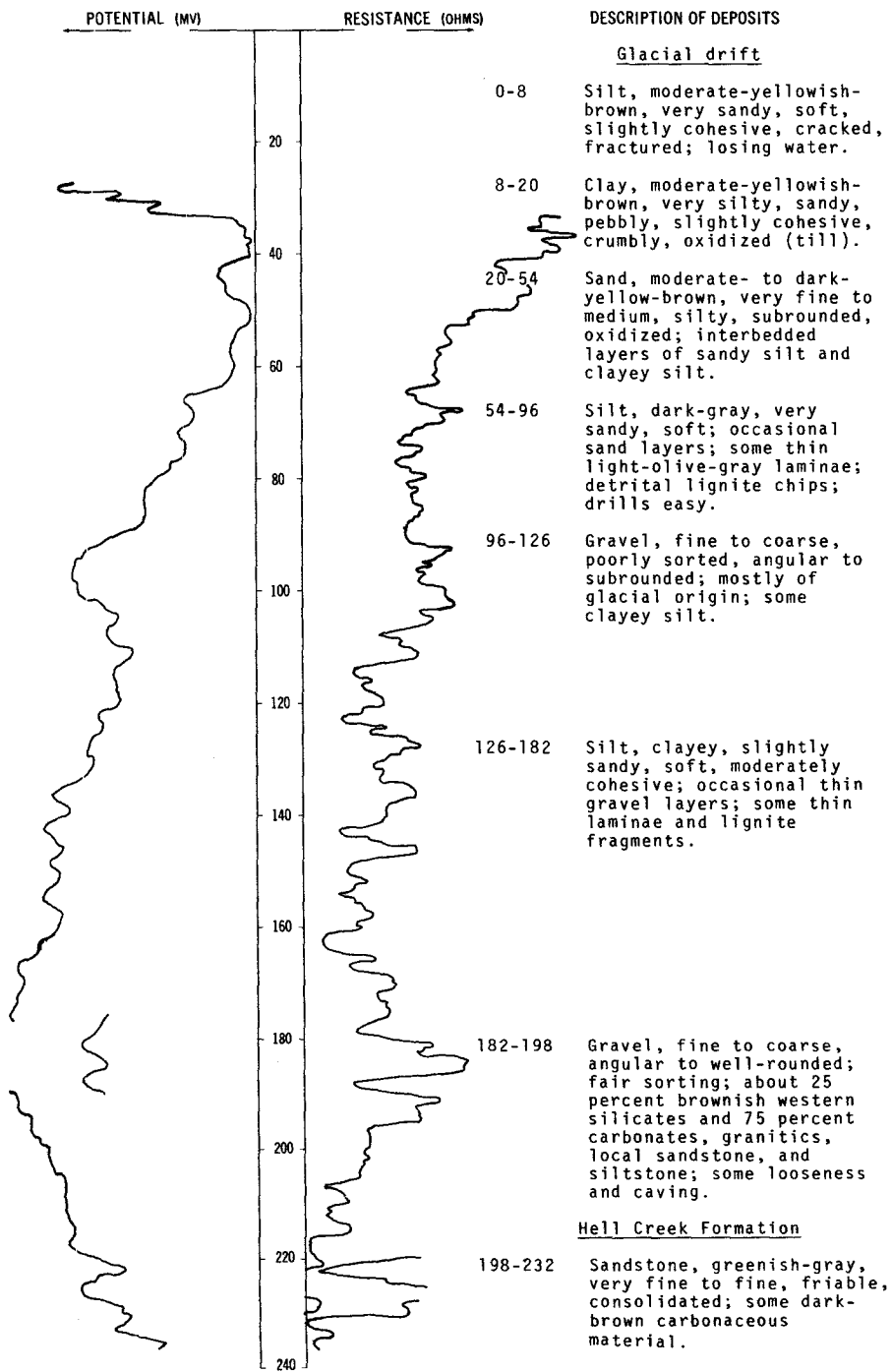
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Sand, yellowish-brown-----	12	12
	Sand-----	50	62
	Gravel, fine, silty-----	2	64
	Sand; with detrital lignite-----	16	80

LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(F., MSL)

DEPTH: 660
(FT)



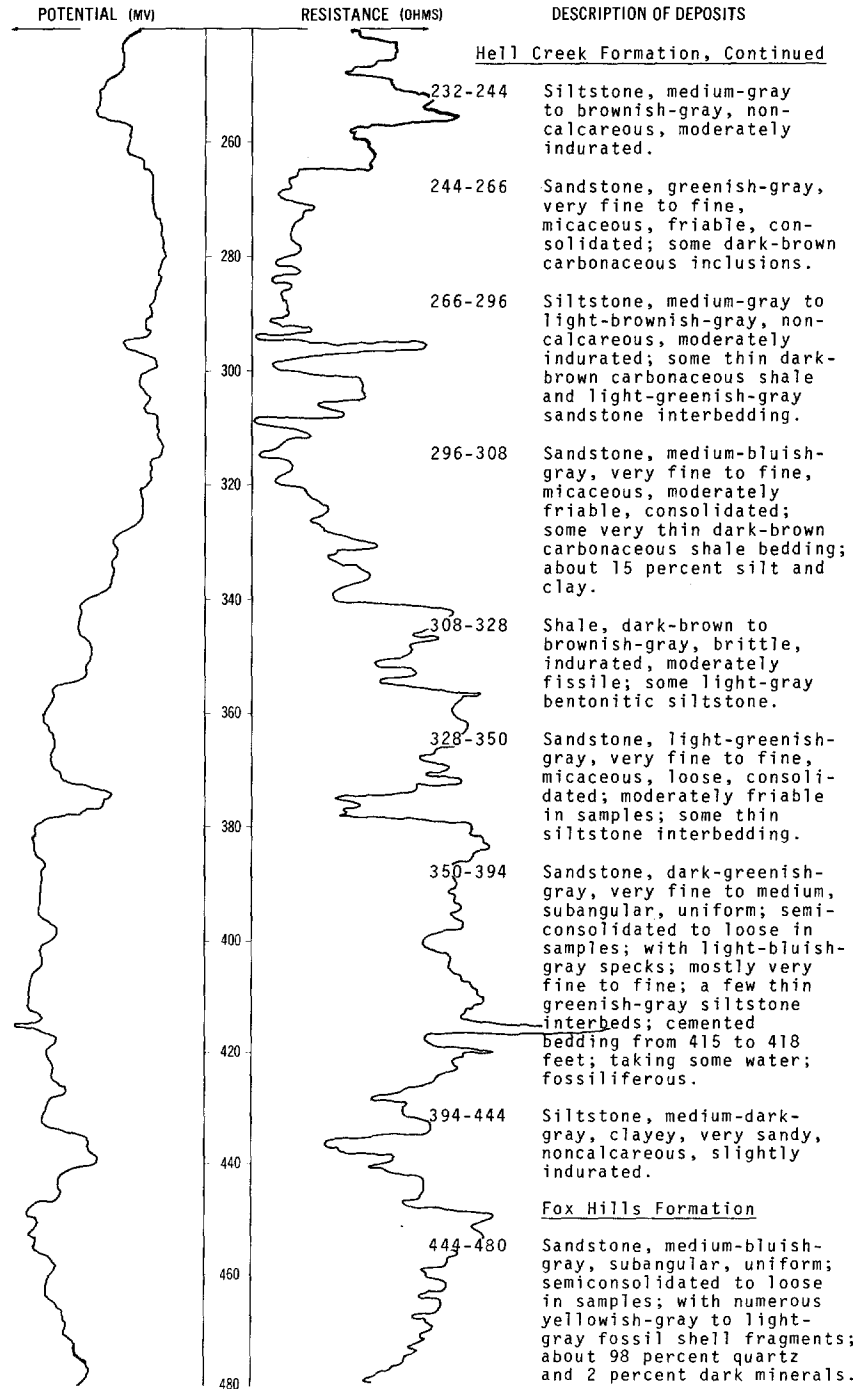
NDSWC 4768, 4768A, Continued

LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(FT. MSL)

DEPTH: 660
(FT)



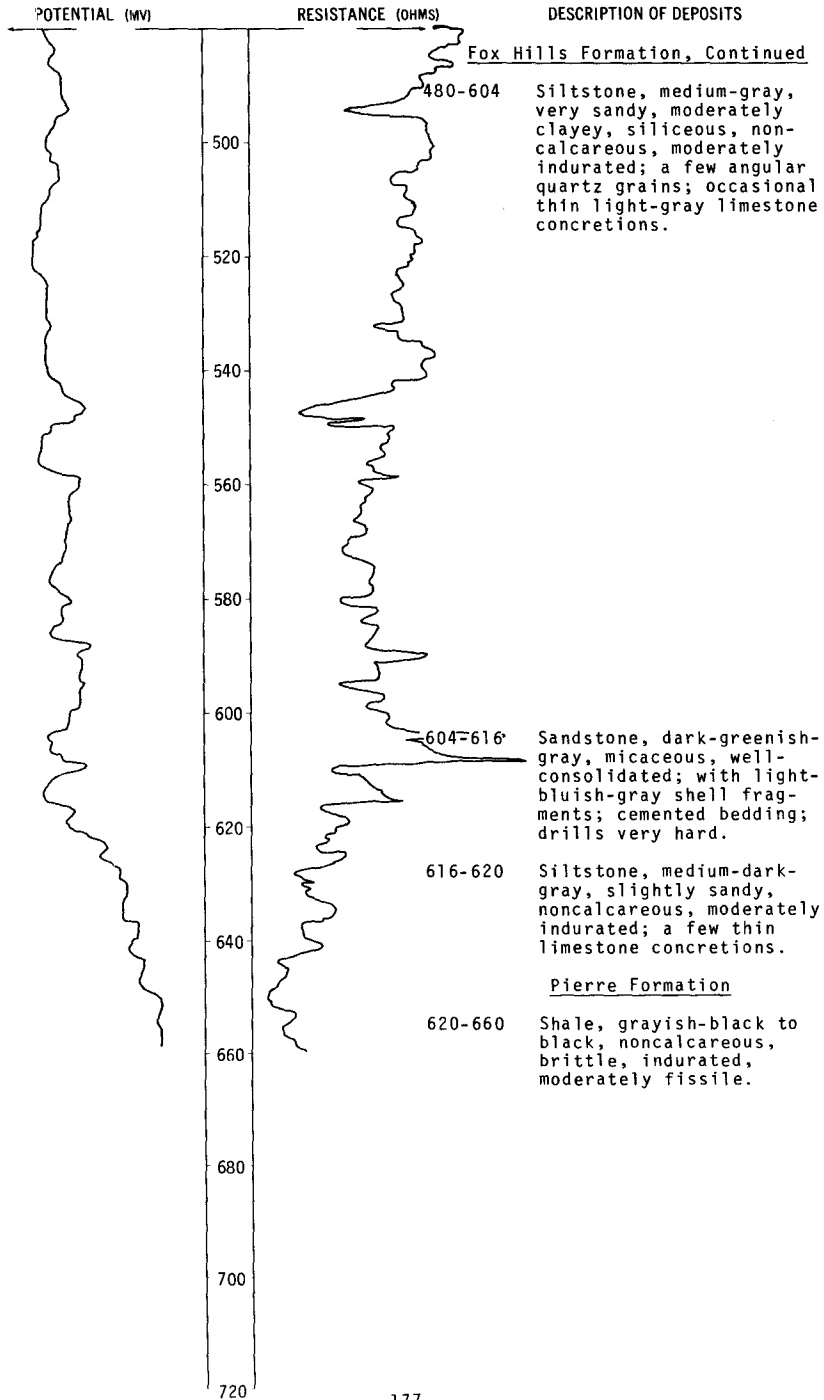
NDSWC 4768, 4768A, Continued

LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(FT, MSL)

DEPTH: 660
(FT)



NDSWC 4768, 4768A, Continued

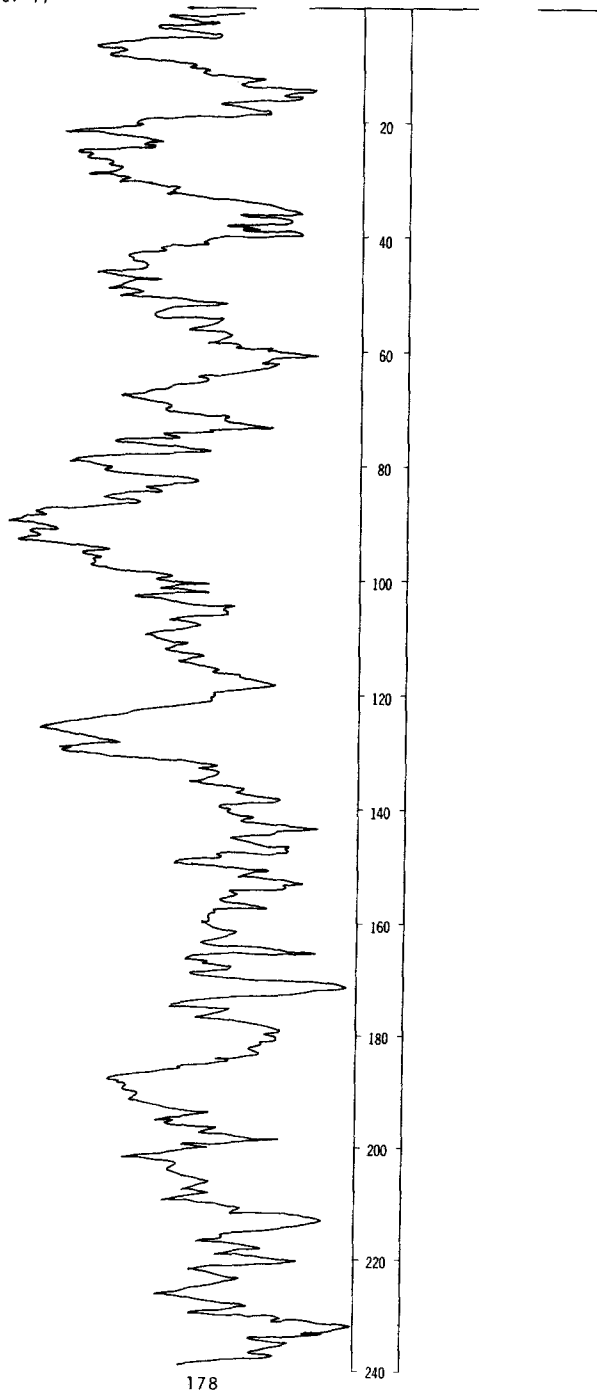
LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(FT, MSL)

DEPTH: 660
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4768, 4768A, Continued

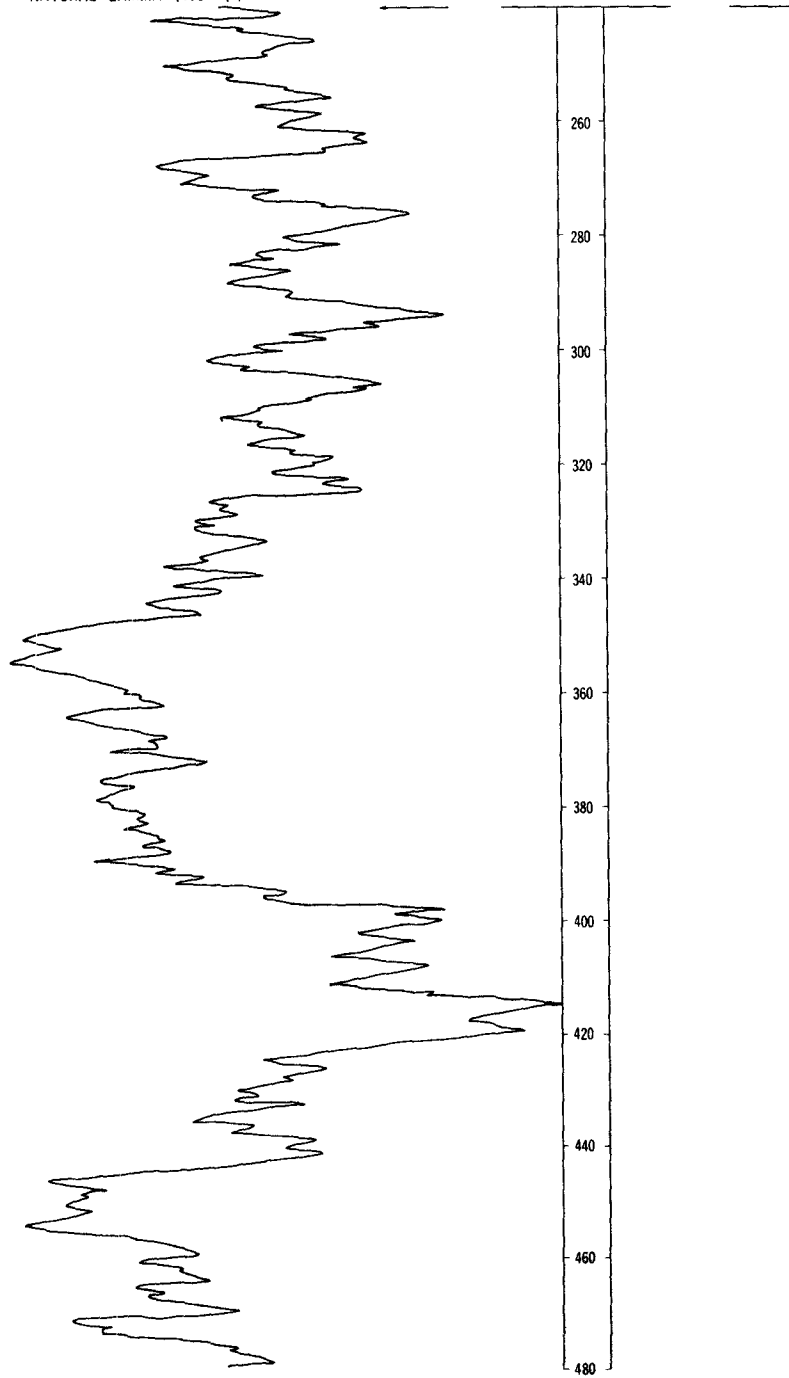
LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(FT, MSL)

DEPTH: 660
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4768, 4768A, Continued

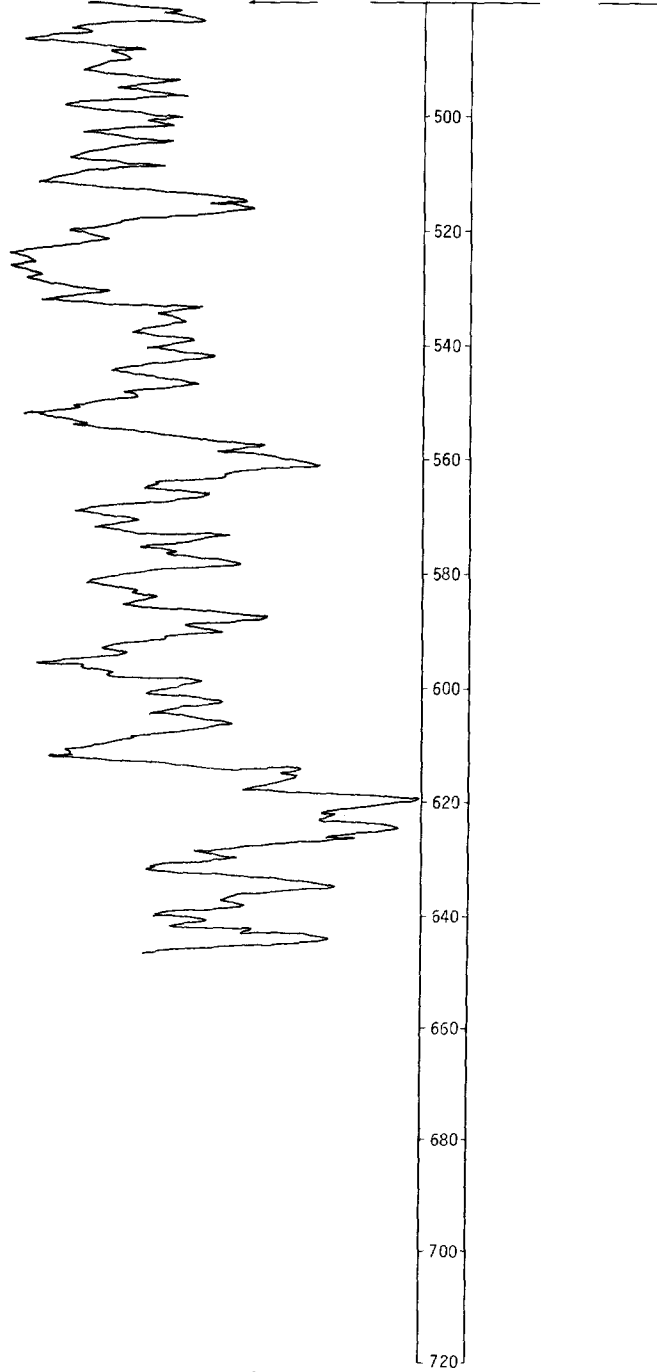
LOCATION: 135-083-32CBB1, 2

DATE DRILLED: October 1974

ALTITUDE: 1884
(FT, MSL)

DEPTH: 660
(FT)

NATURAL-GAMMA (T.C. 4)

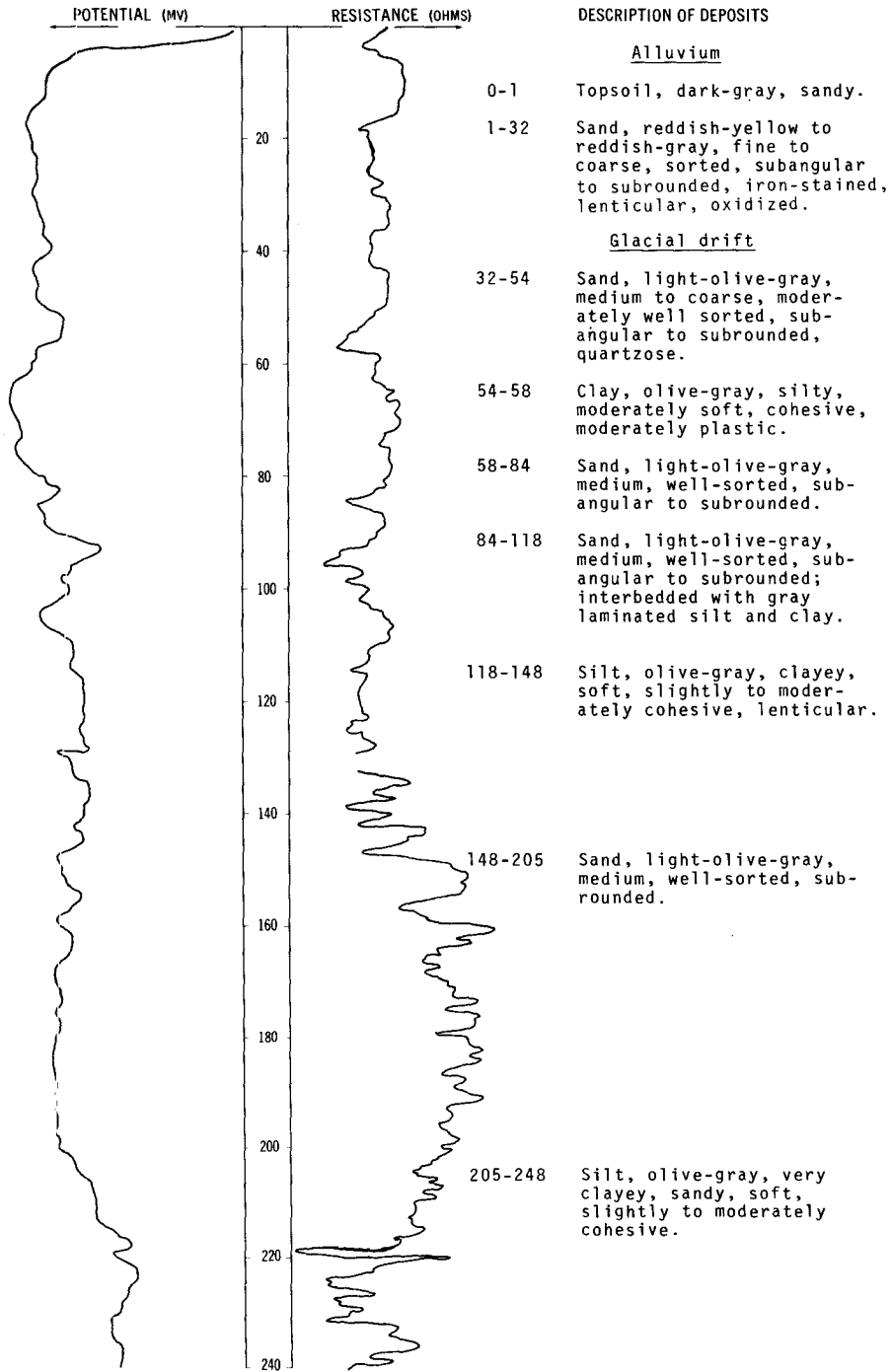


LOCATION: 135-084-04DCC

DATE DRILLED: September 1973

ALTITUDE: 1875
(FT, MSL)

DEPTH: 320
(FT)



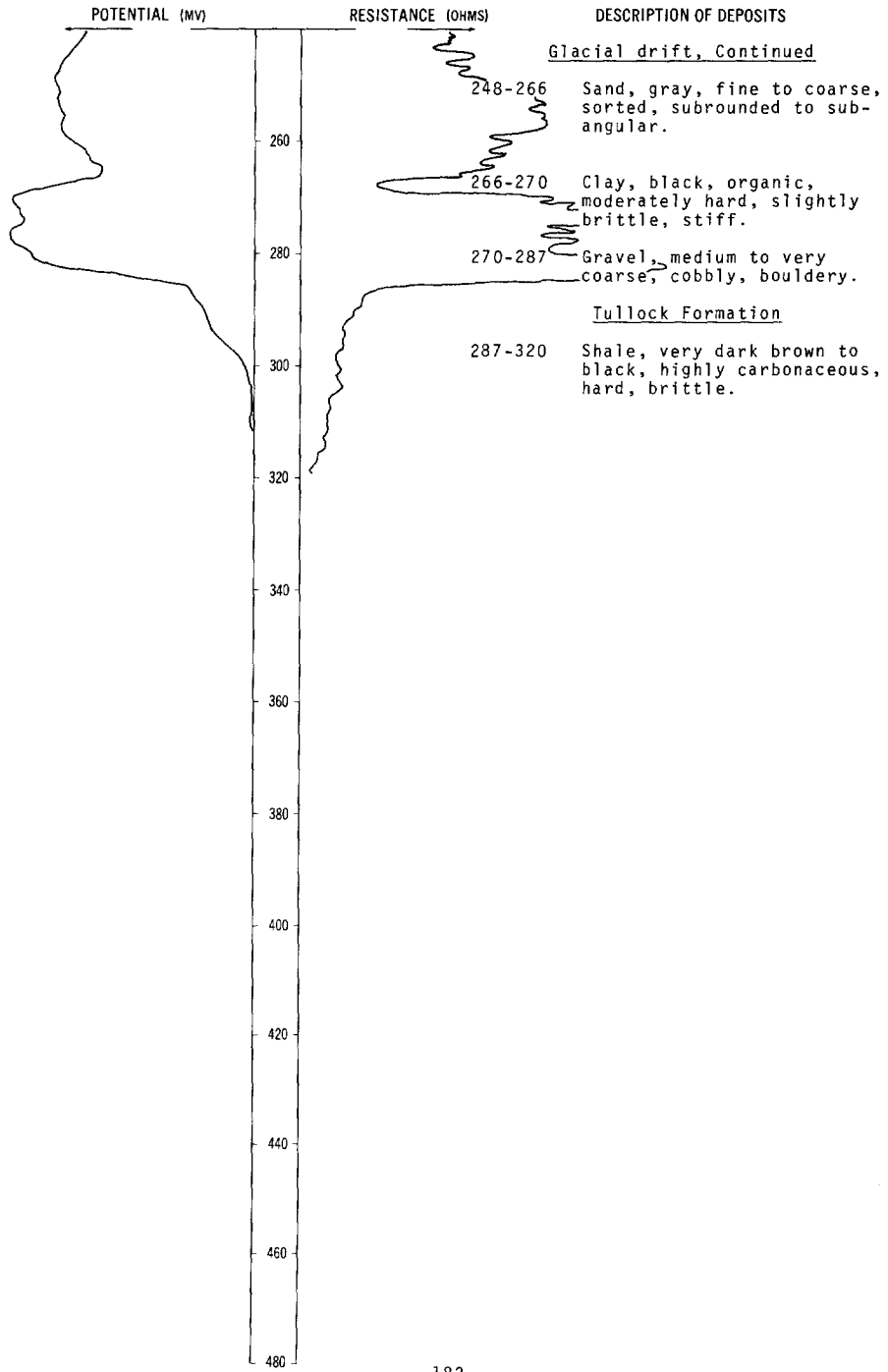
NDSWC 4556, Continued

LOCATION: 135-084-04DCC

DATE DRILLED: September 1973

ALTITUDE: 1875
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4556, Continued

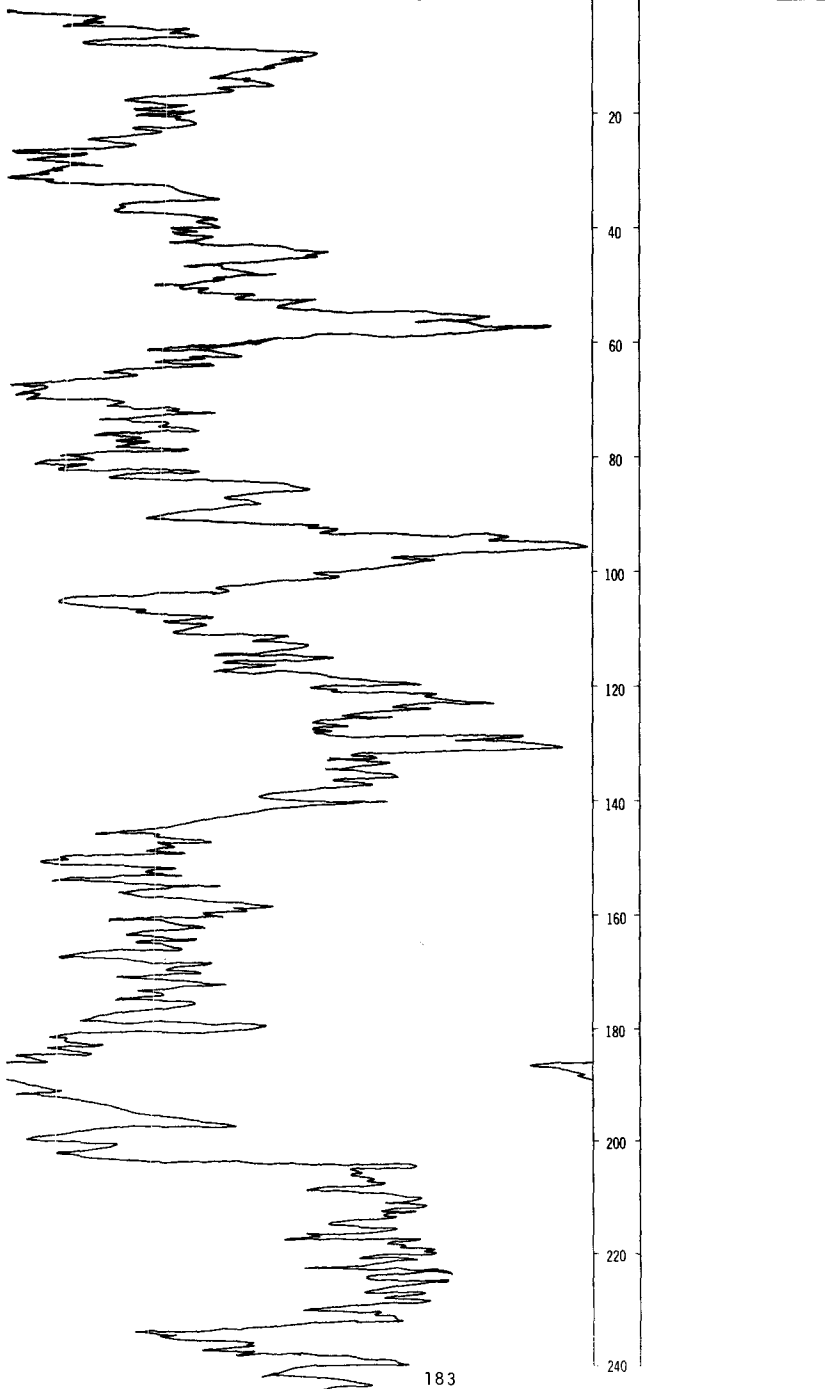
LOCATION: 135-084-04DCC

DATE DRILLED: September 1973

ALTITUDE: 1875
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4556, Continued

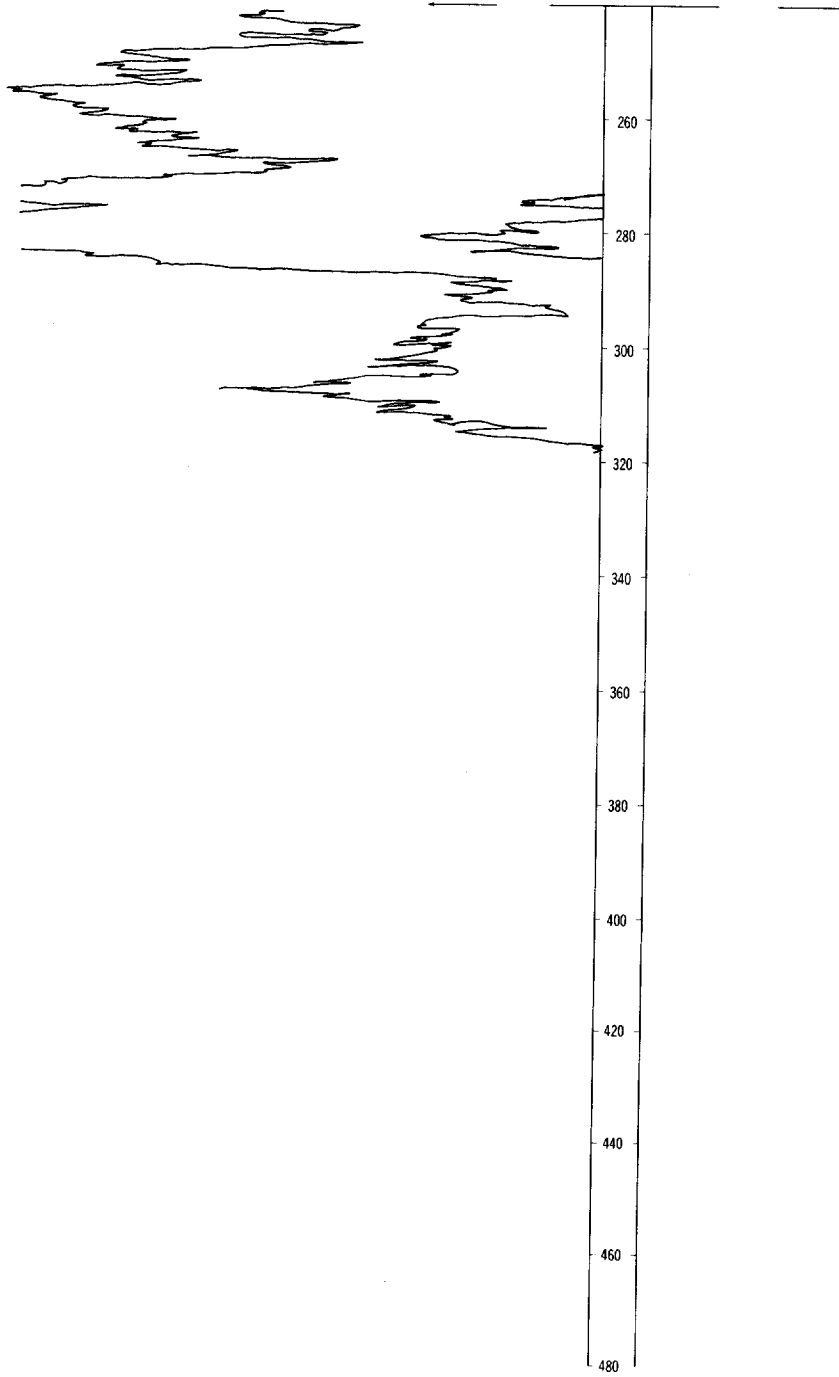
LOCATION: 135-084-04DCC

DATE DRILLED: September 1973

ALTITUDE: 1875
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



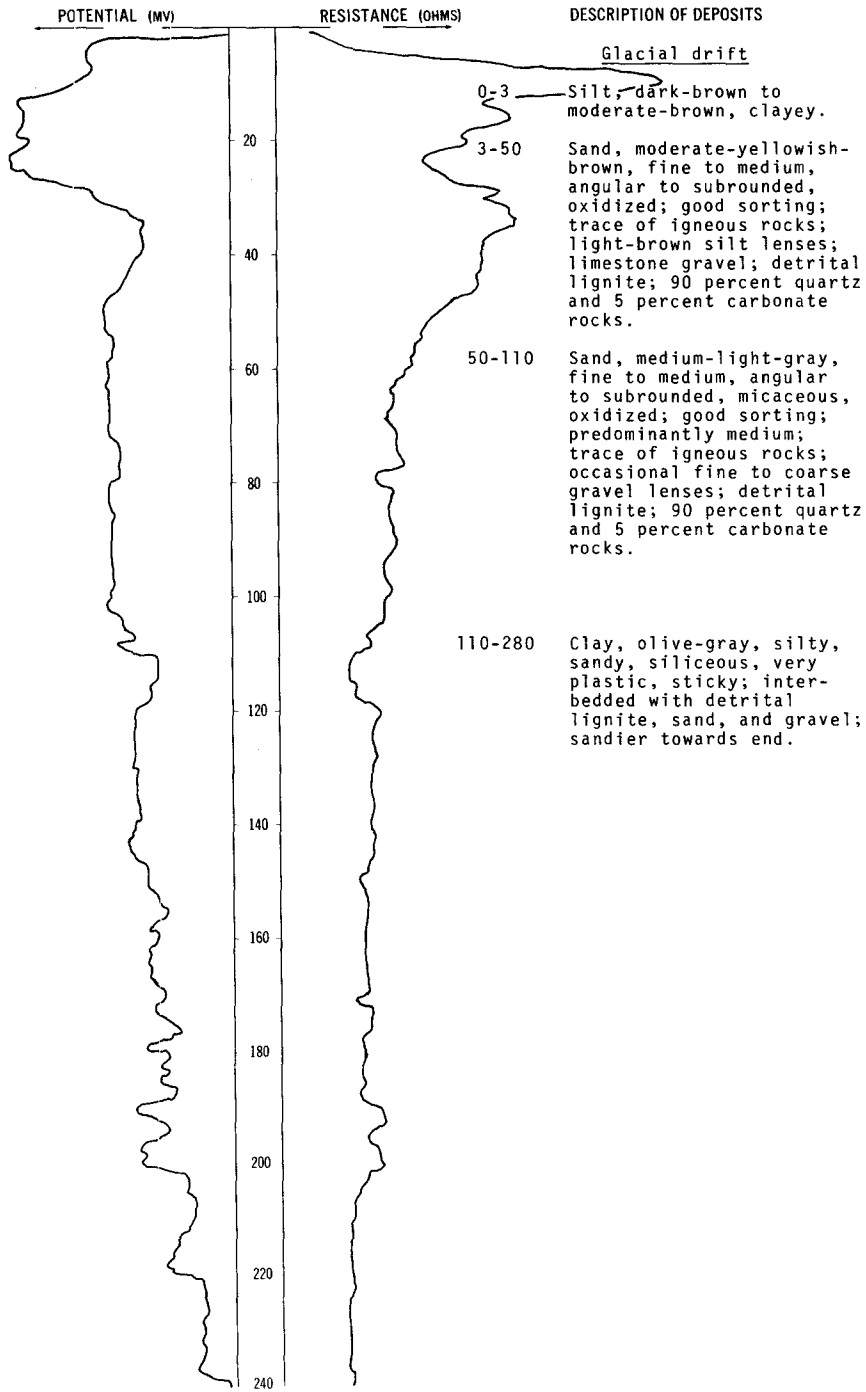
NDSWC 8978

LOCATION: 135-084-09CCD

DATE DRILLED: July 1974

ALTITUDE: 1883
(FT, MSL)

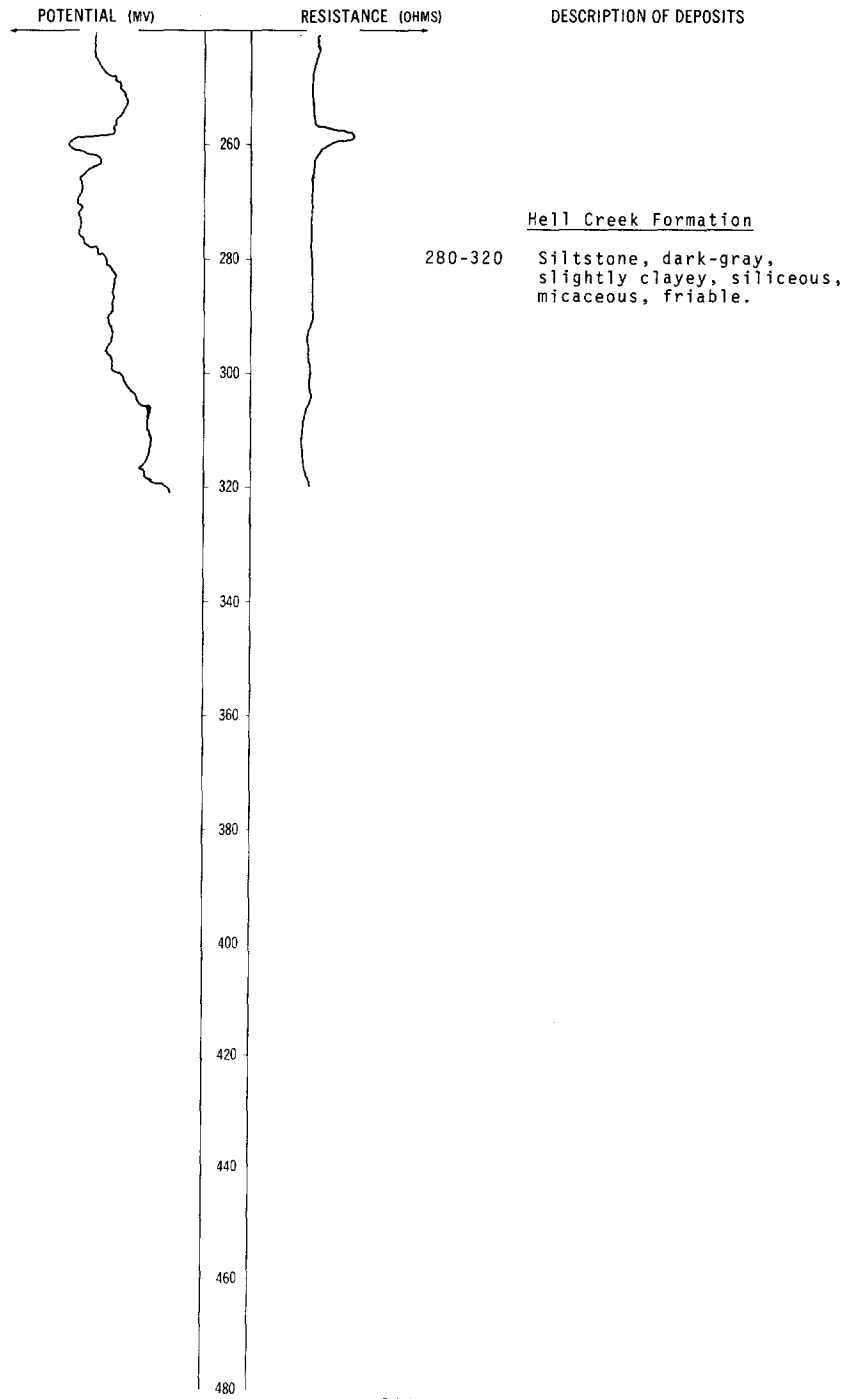
DEPTH: 320
(FT)



NDSWC 8978, Continued

LOCATION: 135-084-09CCD
ALTITUDE: 1883
(FT, MSL)

DATE DRILLED: July 1974
DEPTH: 320
(FT)

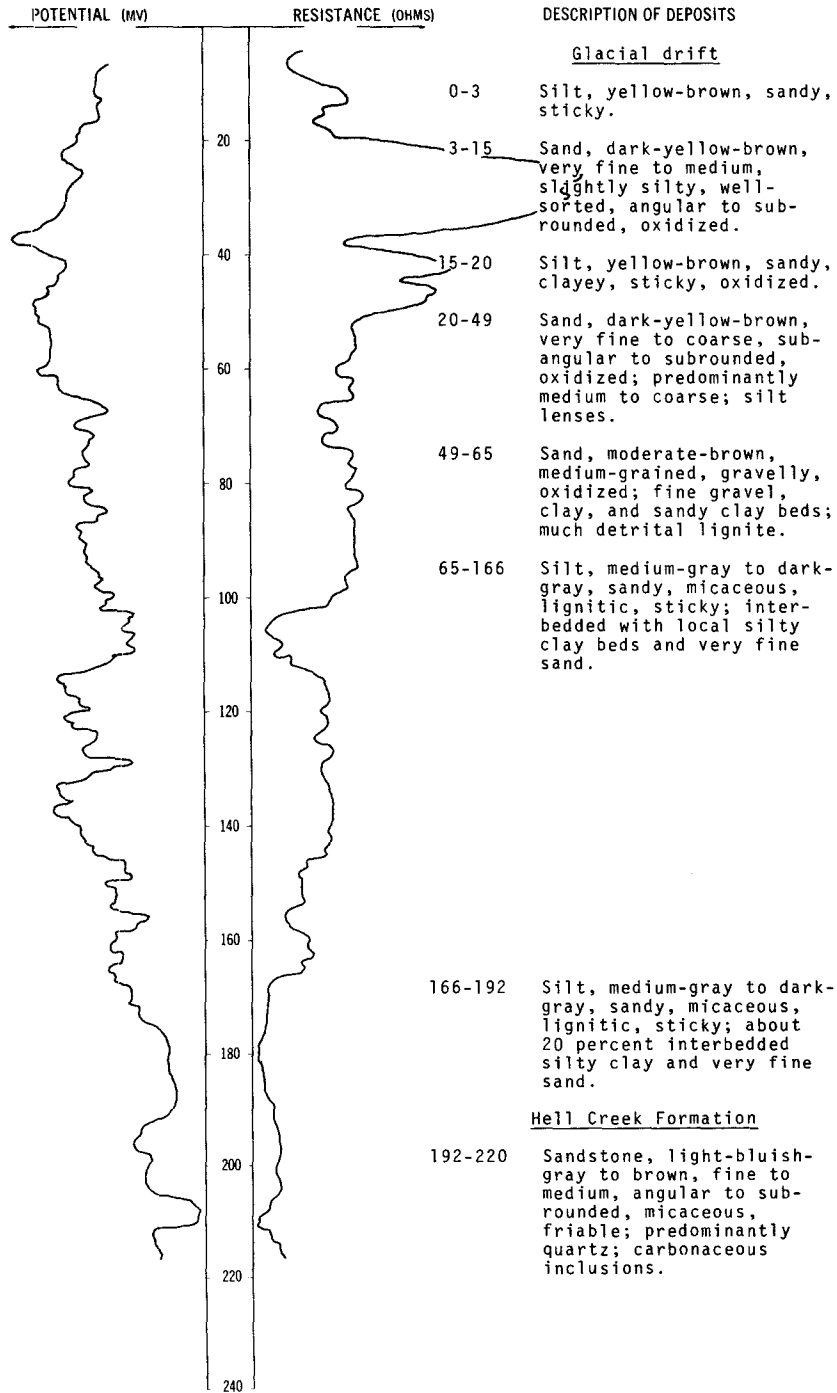


LOCATION: 135-084-15BBA

DATE DRILLED: July 1974

ALTITUDE:
(FT, MSL)

DEPTH: 220
(FT)

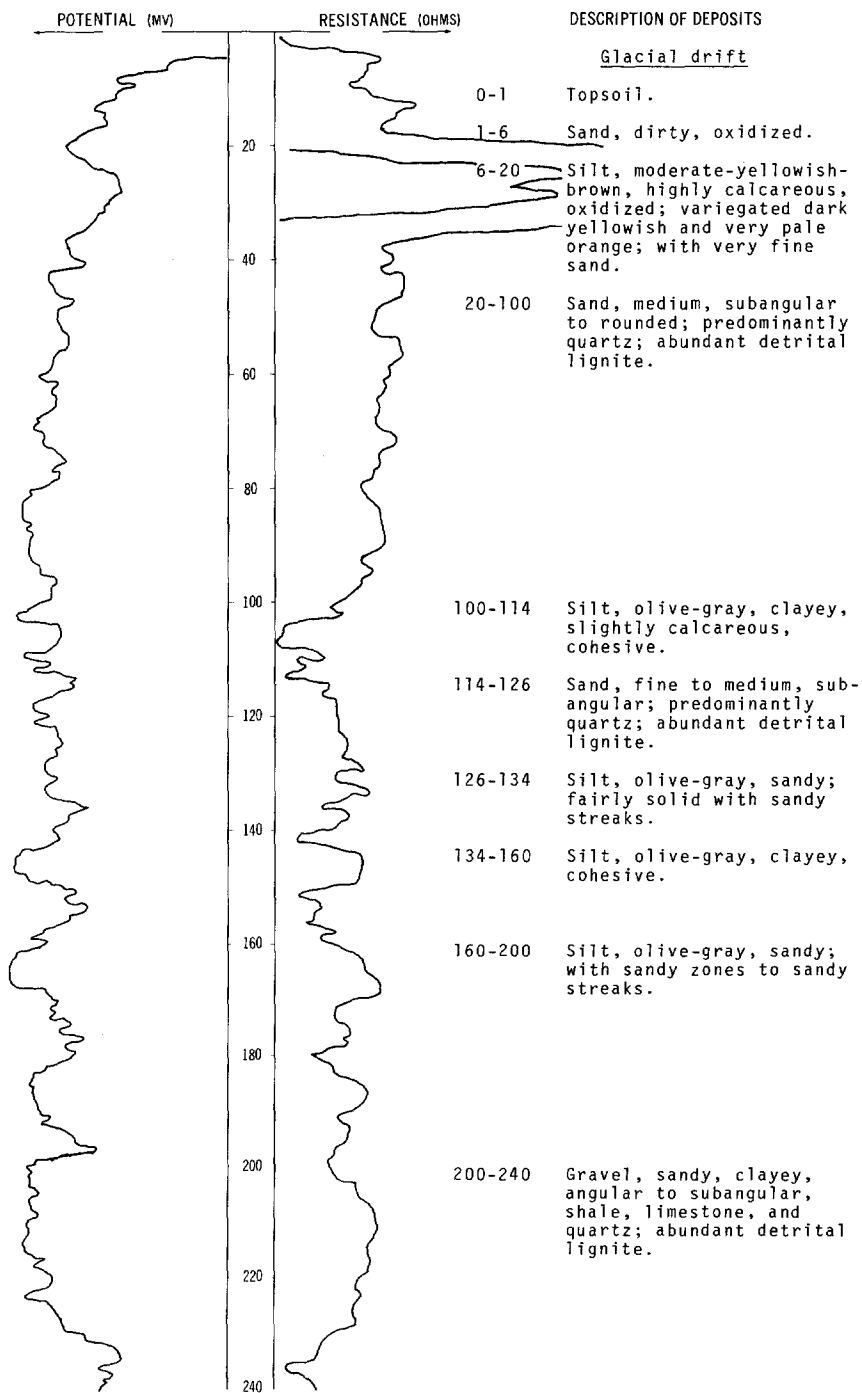


LOCATION: 135-084-16AAA1, 2, 3

DATE DRILLED: June 1974

ALTITUDE: 1893
(FT, MSL)

DEPTH: 360
(FT)



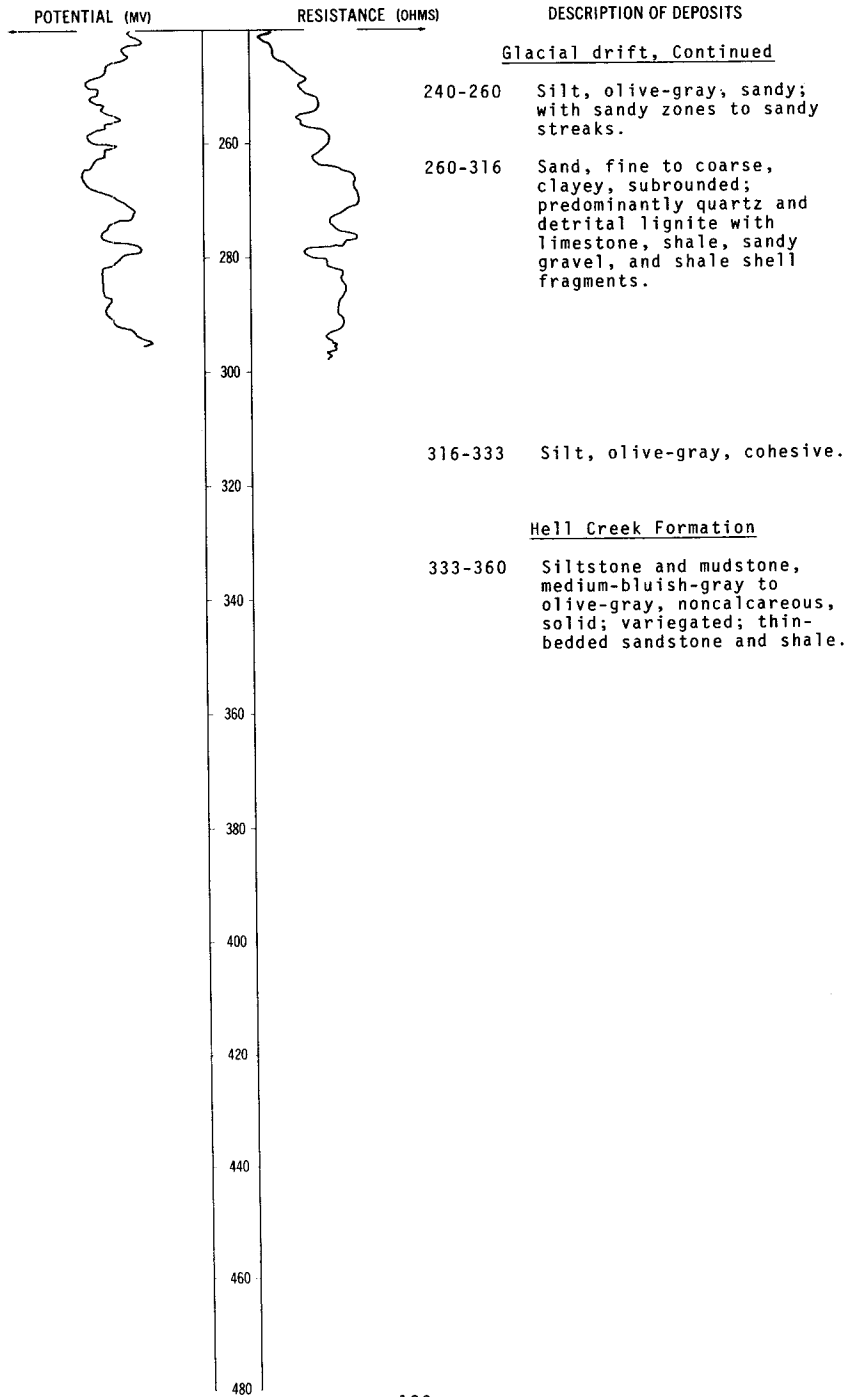
NDSWC 8971, 8979, 8980, Continued

LOCATION: 135-084-16AAA1, 2, 3

DATE DRILLED: June 1974

ALTITUDE: 1893
(FT, MSL)

DEPTH: 360
(FT)



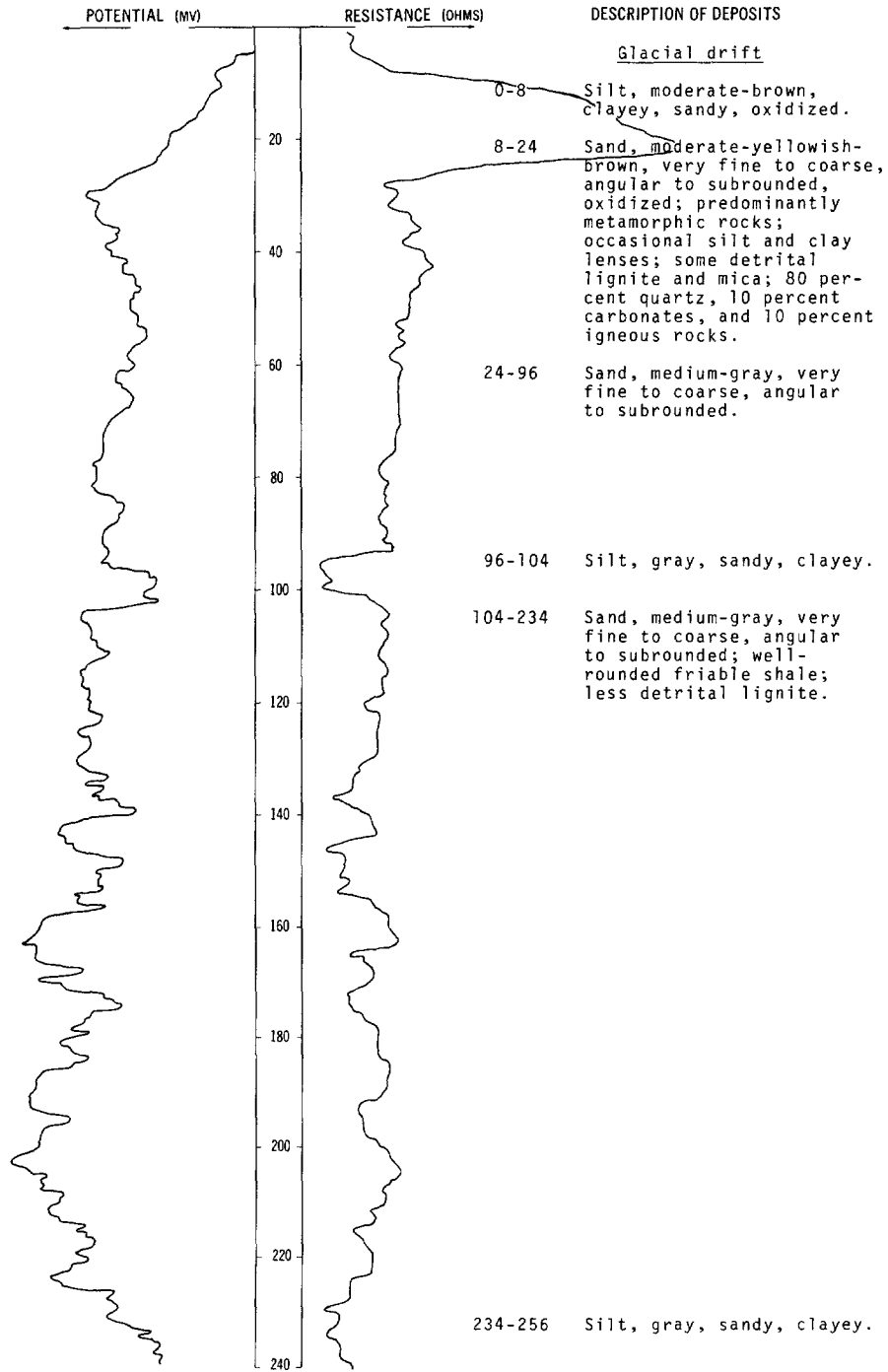
NDSWC 8981, 8981A, 8981B, 8981C

LOCATION: 135-084-16AAA4, 5, 6, 7

DATE DRILLED: July 1974

ALTITUDE: 1888
(FT. MSL)

DEPTH: 340
(FT)



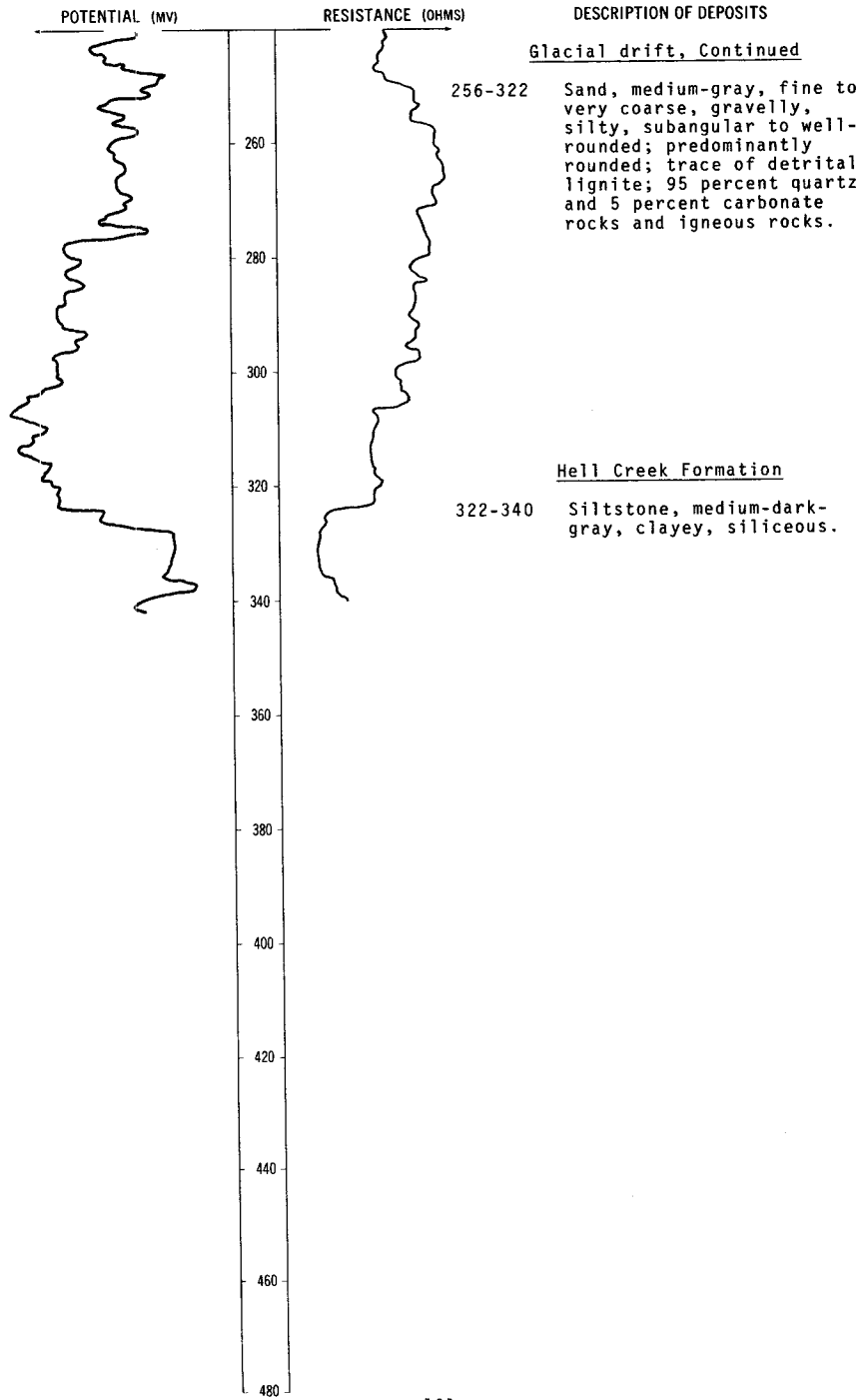
NDSWC 8981, 8981A, 8981B, 8981C, Continued

LOCATION: 135-084-16AAA4, 5, 6, 7

DATE DRILLED: July 1974

ALTITUDE: 1888
(FT, MSL)

DEPTH: 340
(FT)

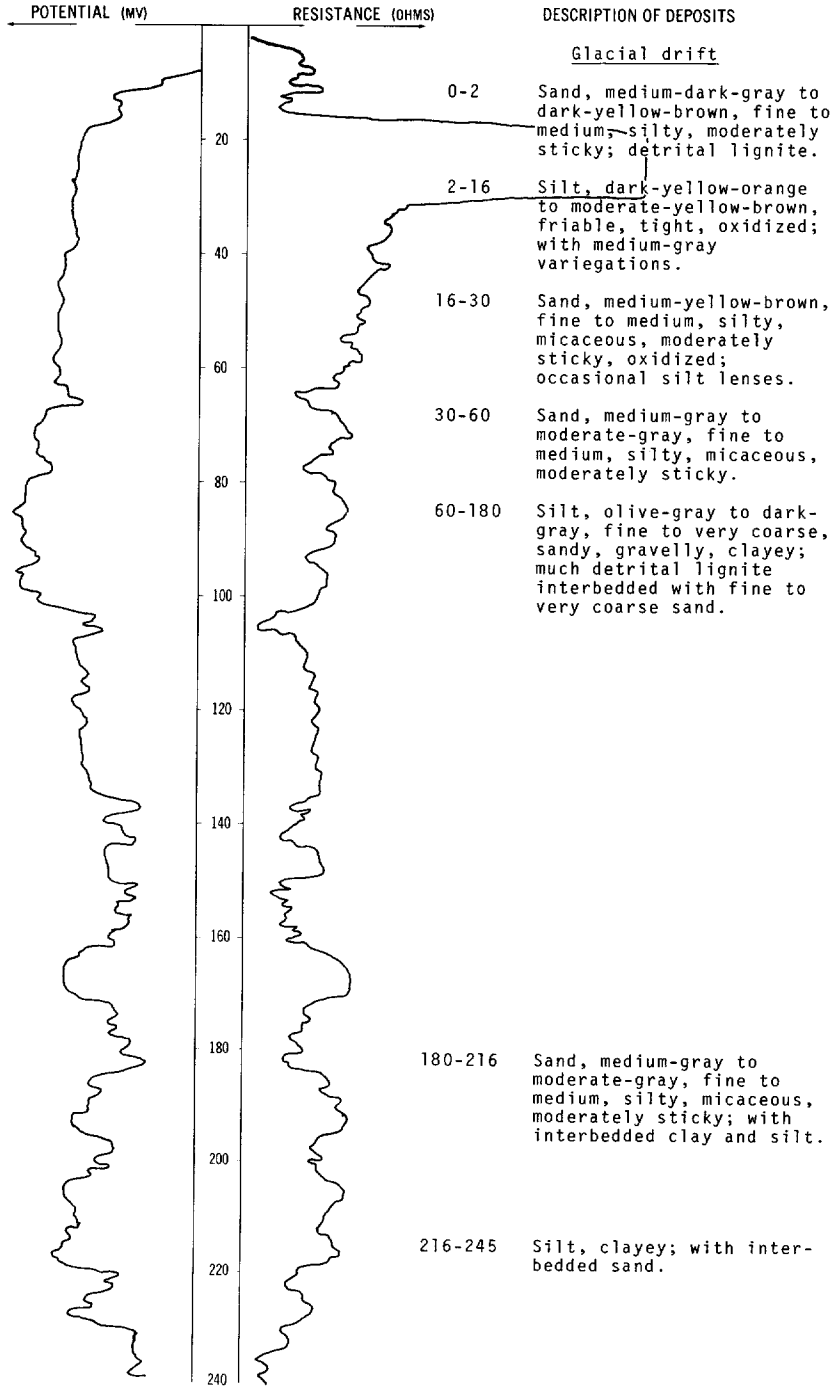


LOCATION: 135-084-16AAA8

DATE DRILLED: July 1974

ALTITUDE: 1888
(FT, MSL)

DEPTH: 340
(FT)



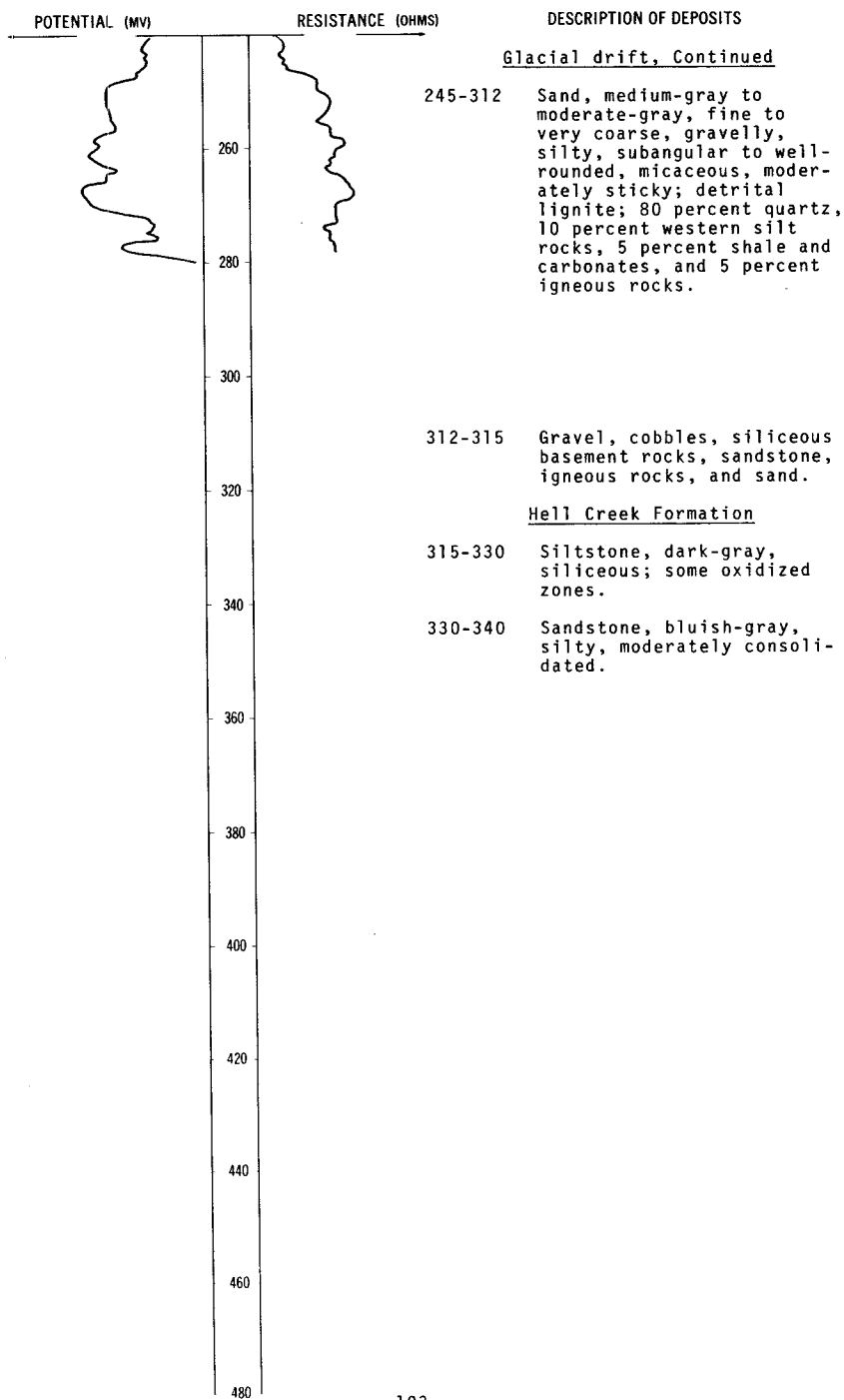
NDSWC 8983, Continued

LOCATION: 135-084-16AAA8

DATE DRILLED: July 1974

ALTITUDE: 1888
(FT, MSL)

DEPTH: 340
(FT)

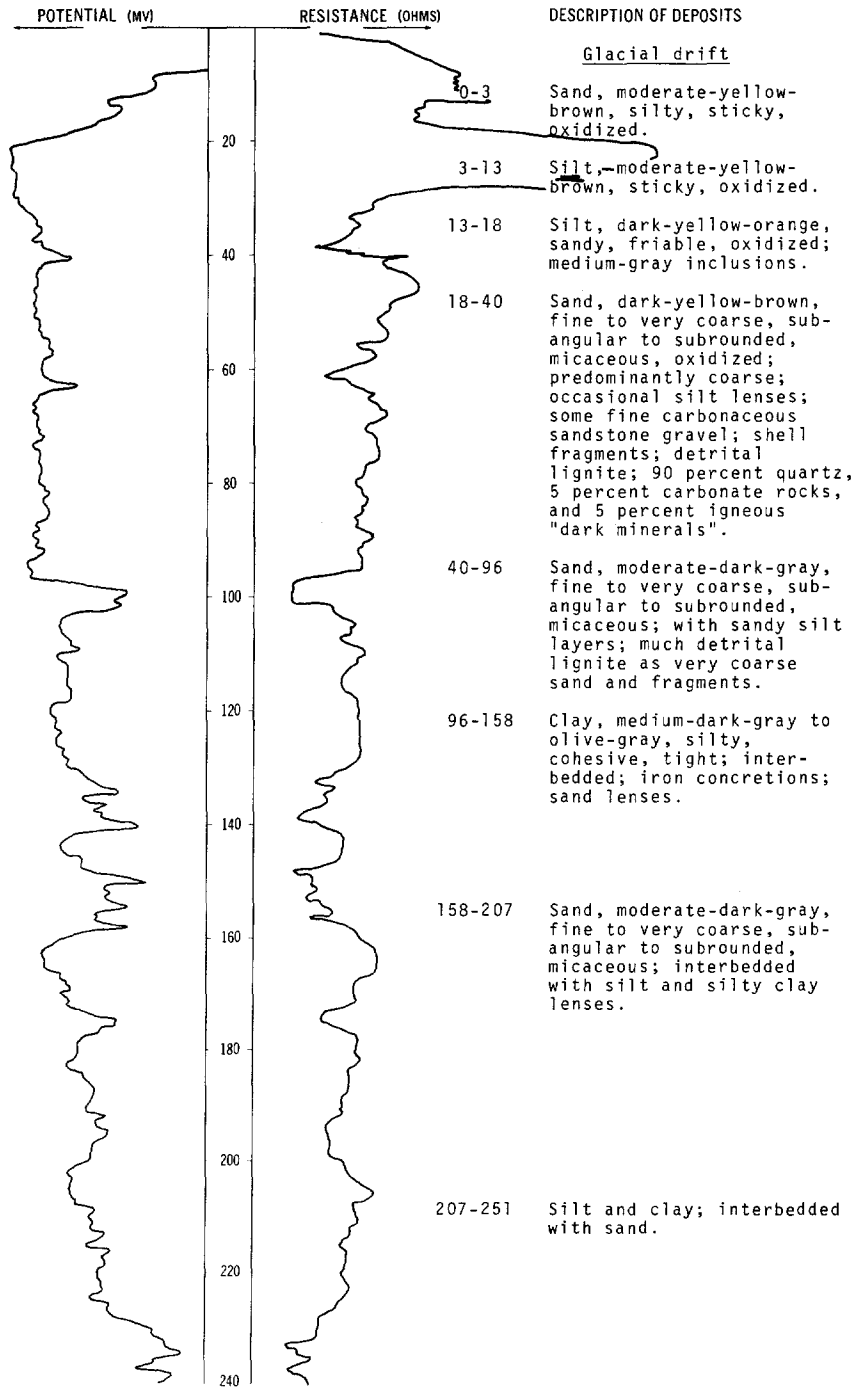


LOCATION: 135-084-16AAA9

DATE DRILLED: July 1975

ALTITUDE: 1888
(FT, MSL)

DEPTH: 340
(FT)



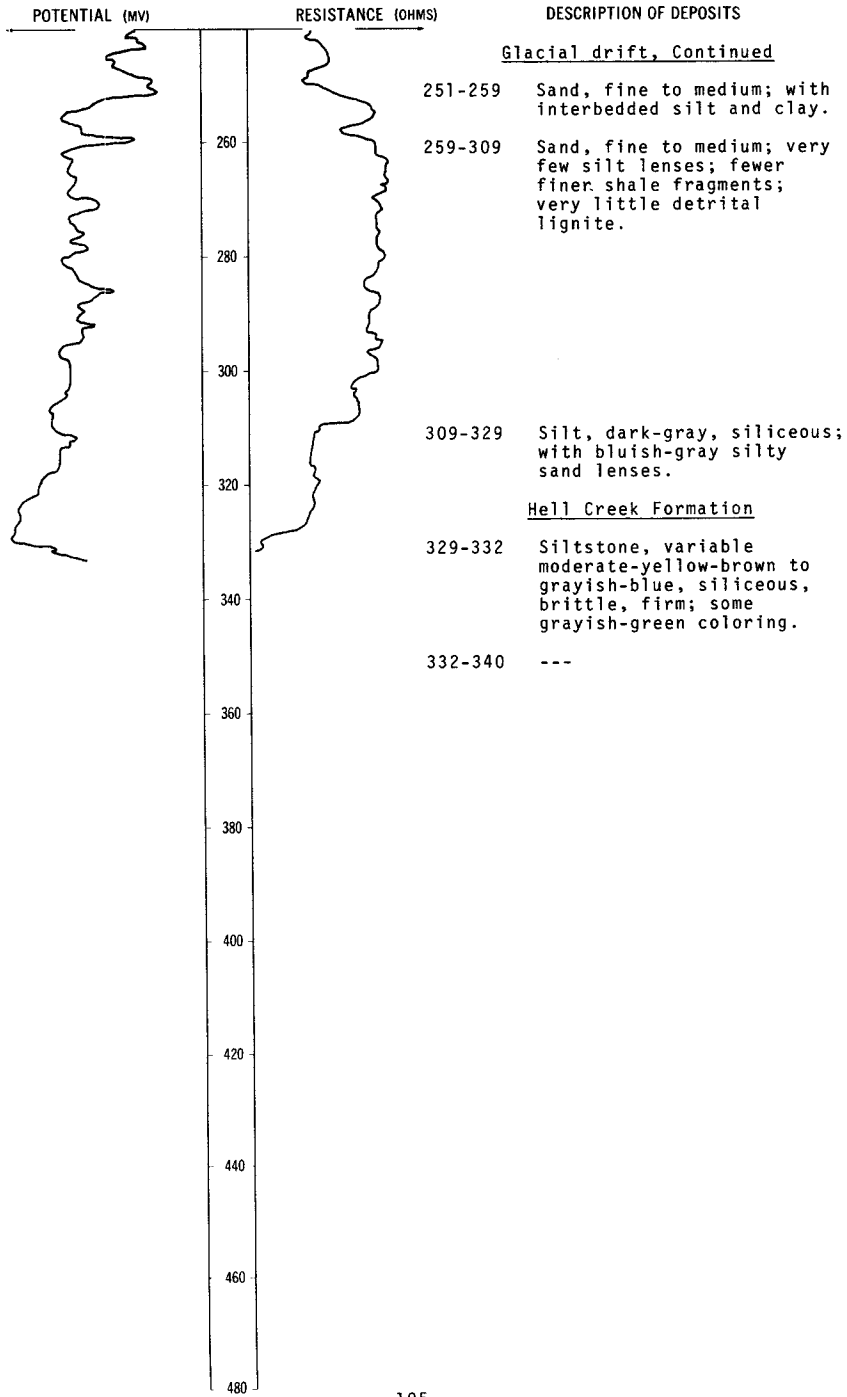
NDSWC 8985, Continued

LOCATION: 135-084-16AAA9

DATE DRILLED: July 1975

ALTITUDE: 1888
(FT, MSL)

DEPTH: 340
(FT)

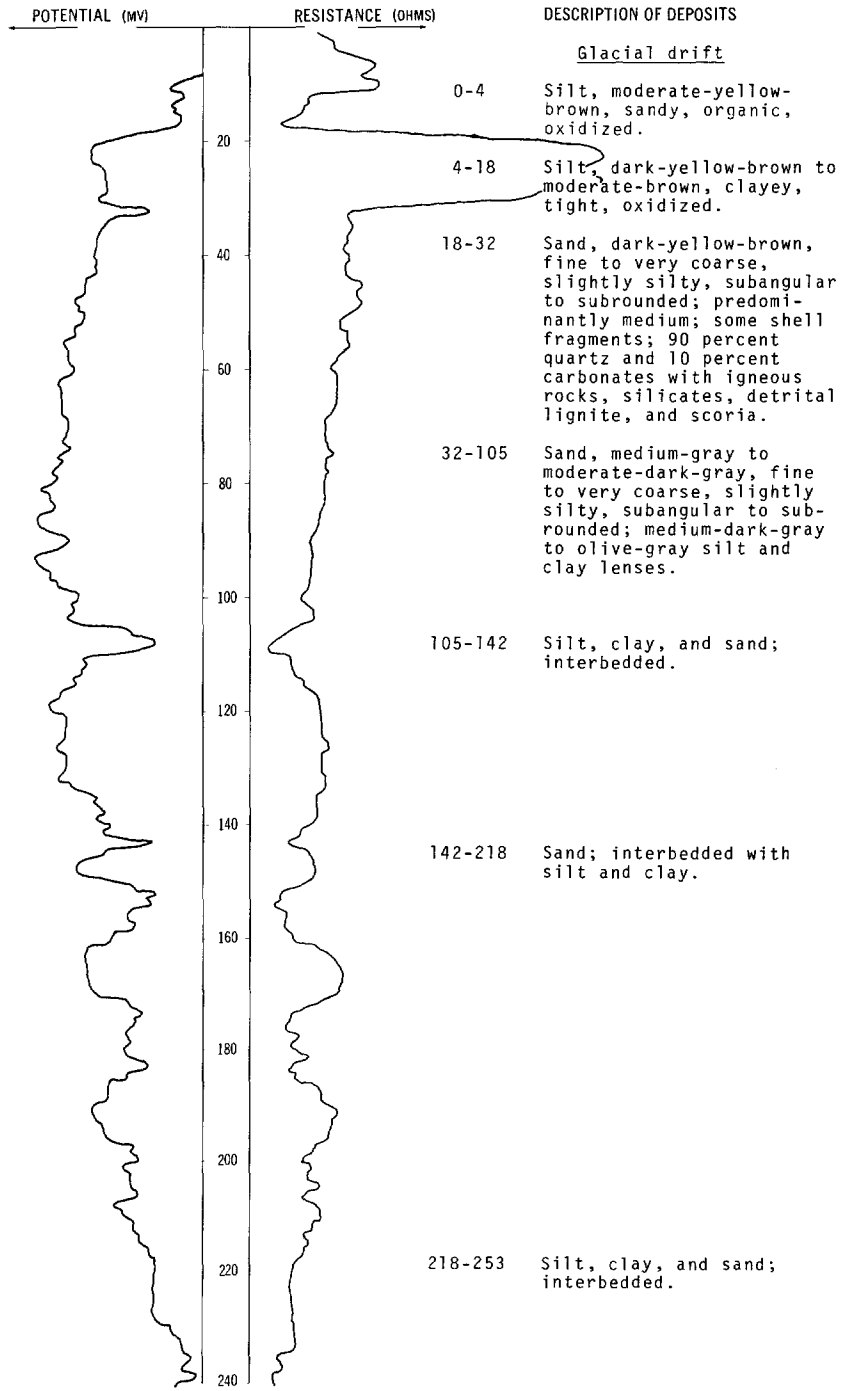


LOCATION: 135-084-16AAB

DATE DRILLED: July 1974

ALTITUDE: 1891
(FT, MSL)

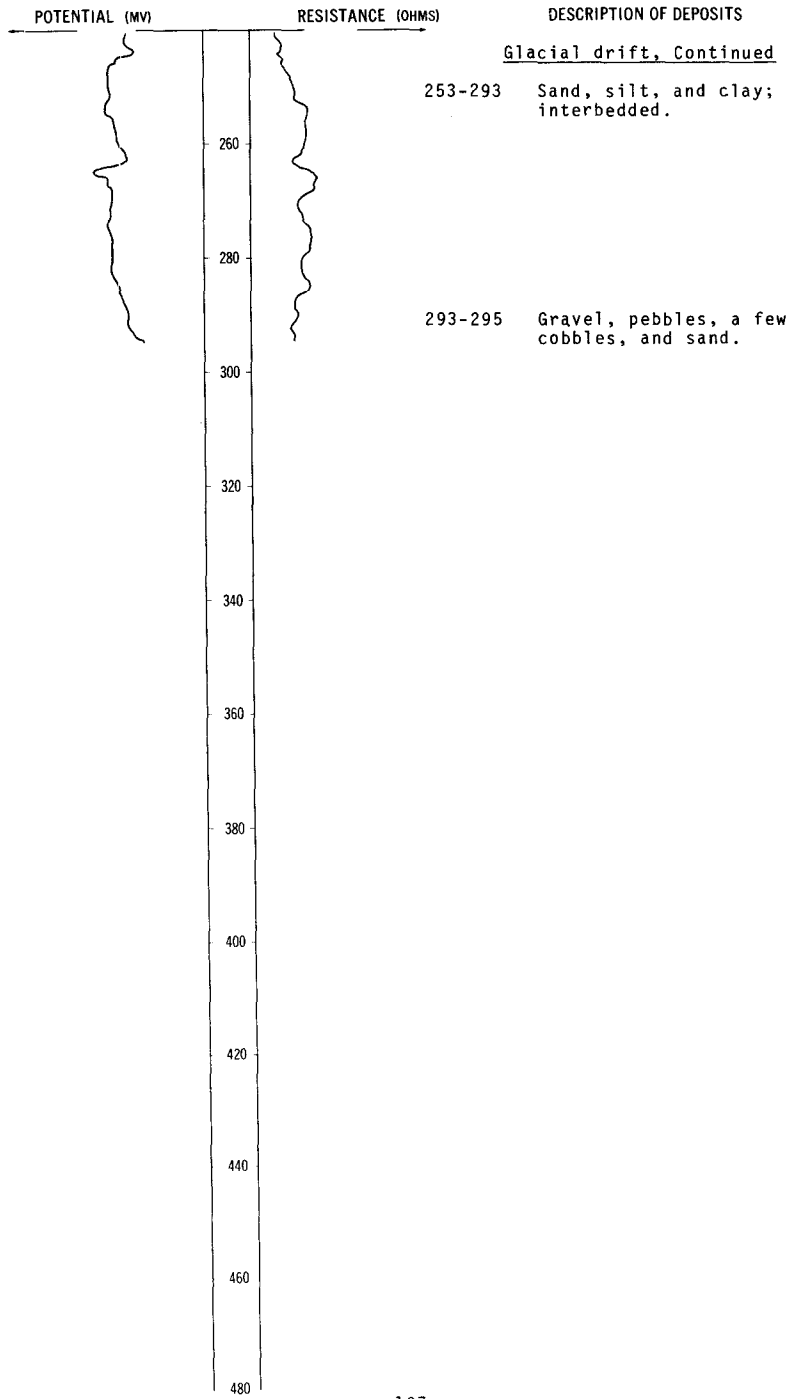
DEPTH: 295
(FT)



NDSWC 8984, Continued

LOCATION: 135-084-16AAB
ALTITUDE: 1891
(FT, MSL)

DATE DRILLED: July 1974
DEPTH: 295
(FT)

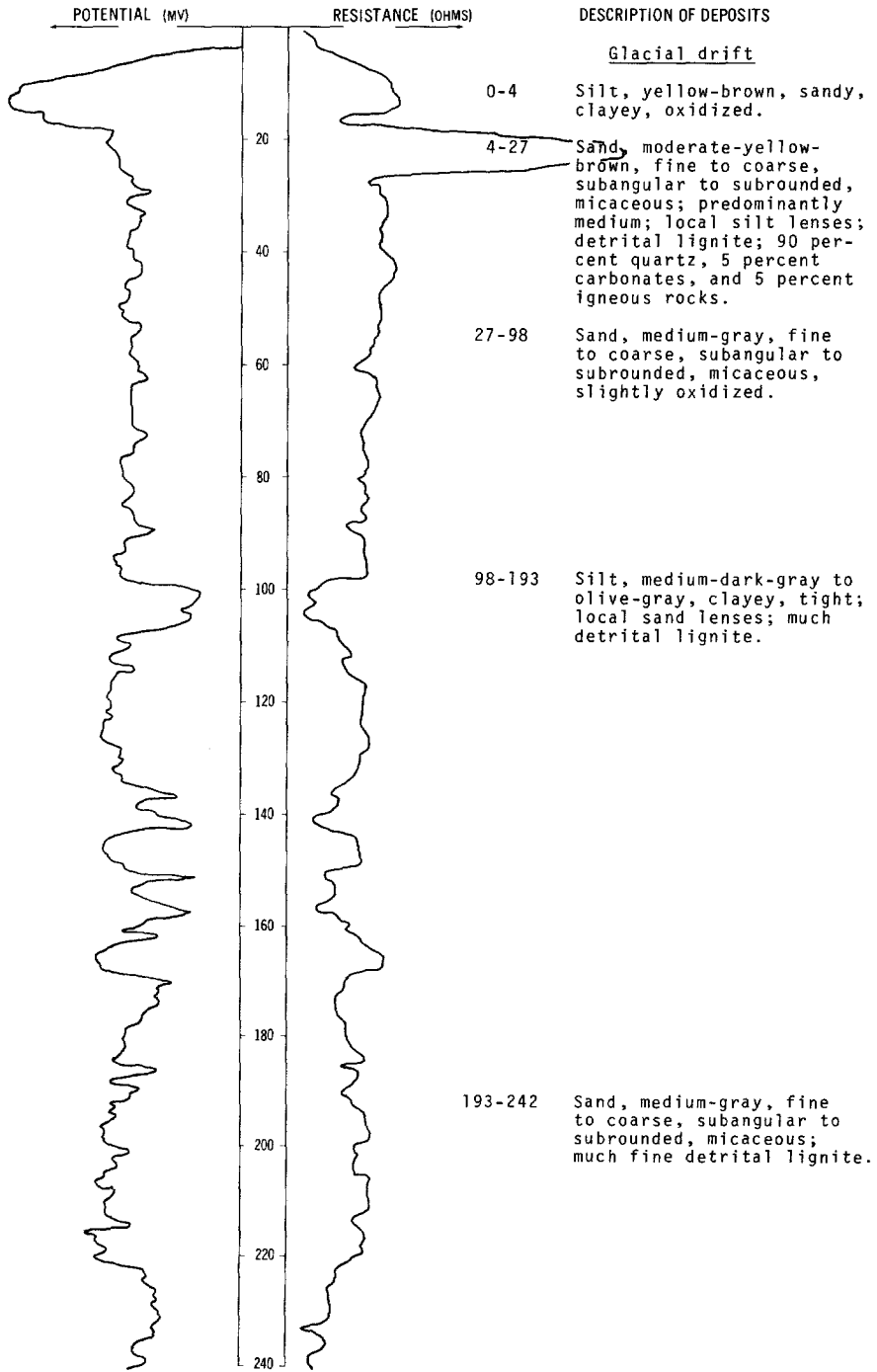


LOCATION: 135-084-16AAD

DATE DRILLED: July 1974

ALTITUDE: 1887
(FT, MSL)

DEPTH: 300
(FT)



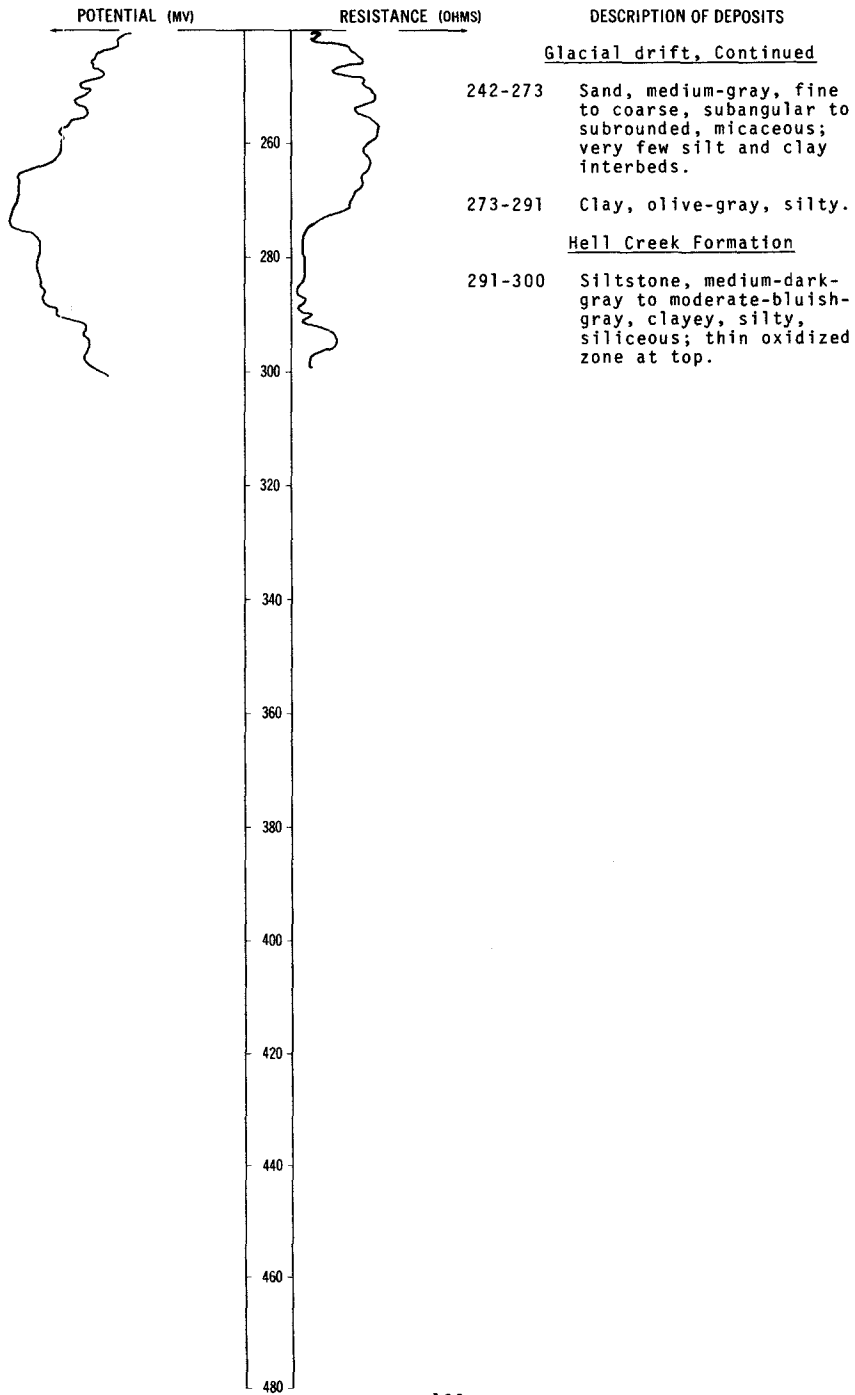
NDSWC 8982, Continued

LOCATION: 135-084-16AAD

DATE DRILLED: July 1974

ALTITUDE: 1887
(FT, MSL)

DEPTH: 300
(FT)

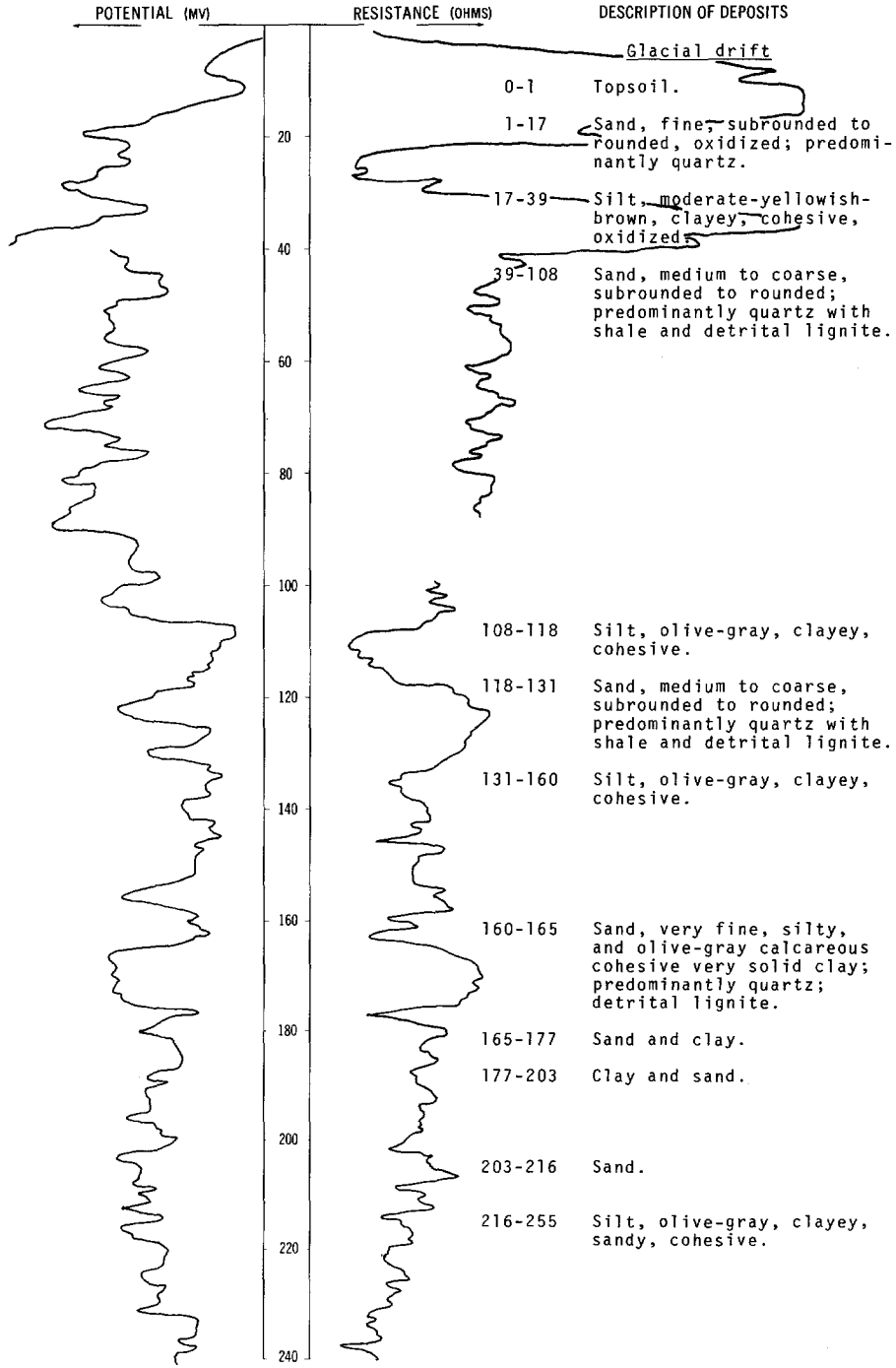


LOCATION: 135-084-16ABA

DATE DRILLED: June 1974

ALTITUDE: 1899
(FT, MSL)

DEPTH: 315
(FT)



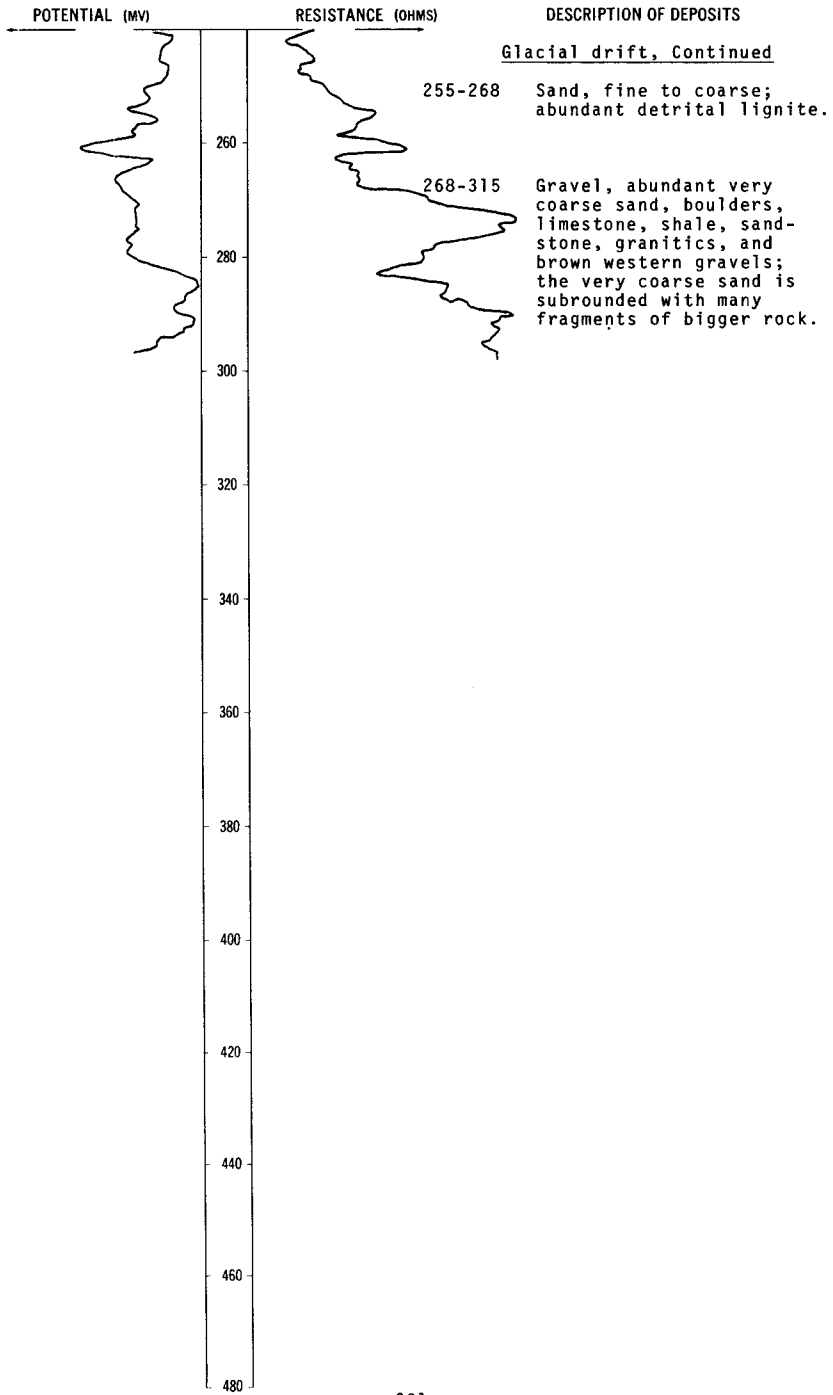
NDSWC 8973, Continued

LOCATION: 135-084-16ABA

DATE DRILLED: June 1974

ALTITUDE: 1899
(FT, MSL)

DEPTH: 315
(FT)

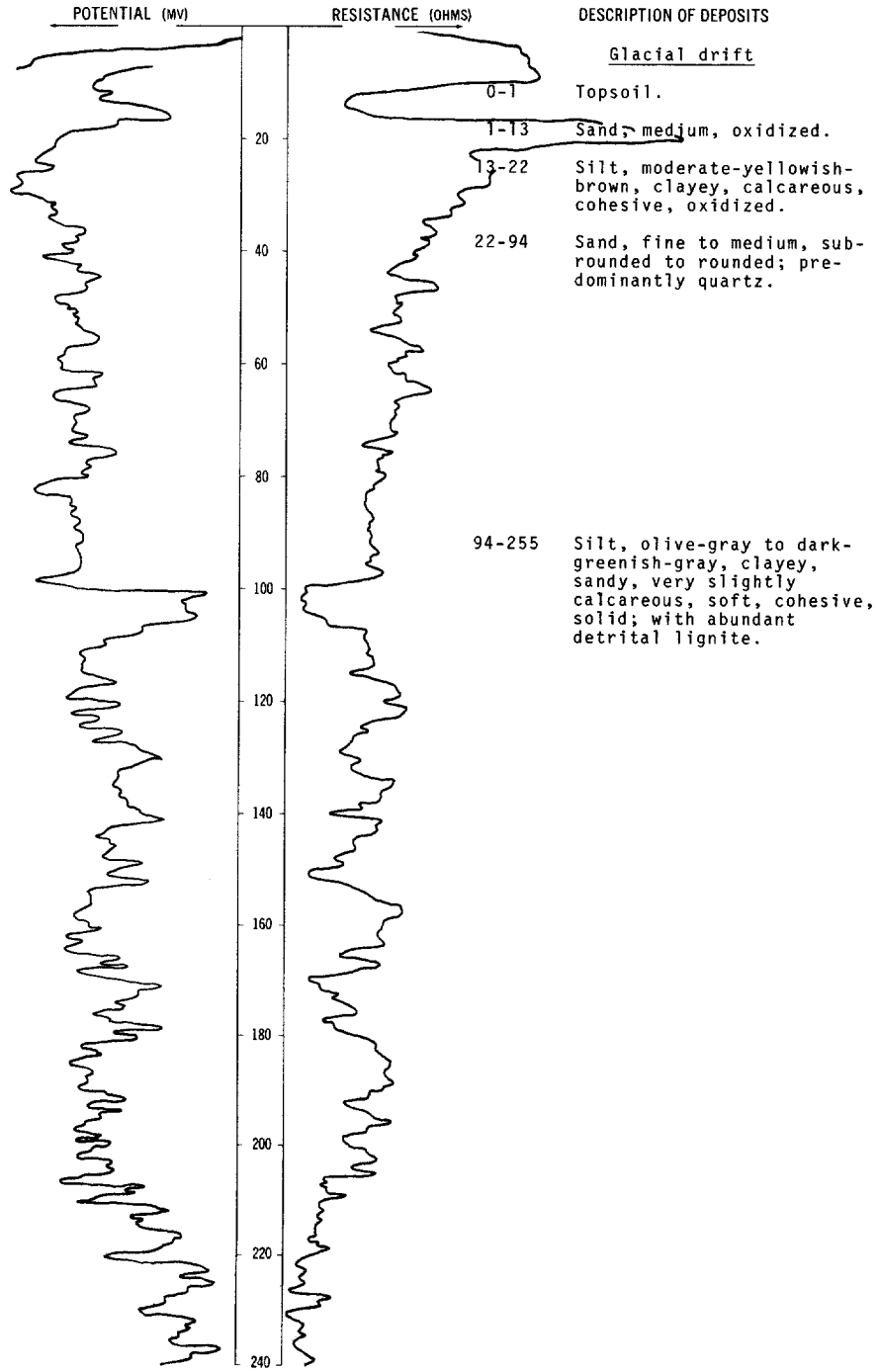


LOCATION: 135-084-16ABB

DATE DRILLED: June 1974

ALTITUDE: 1880
(FT, MSL)

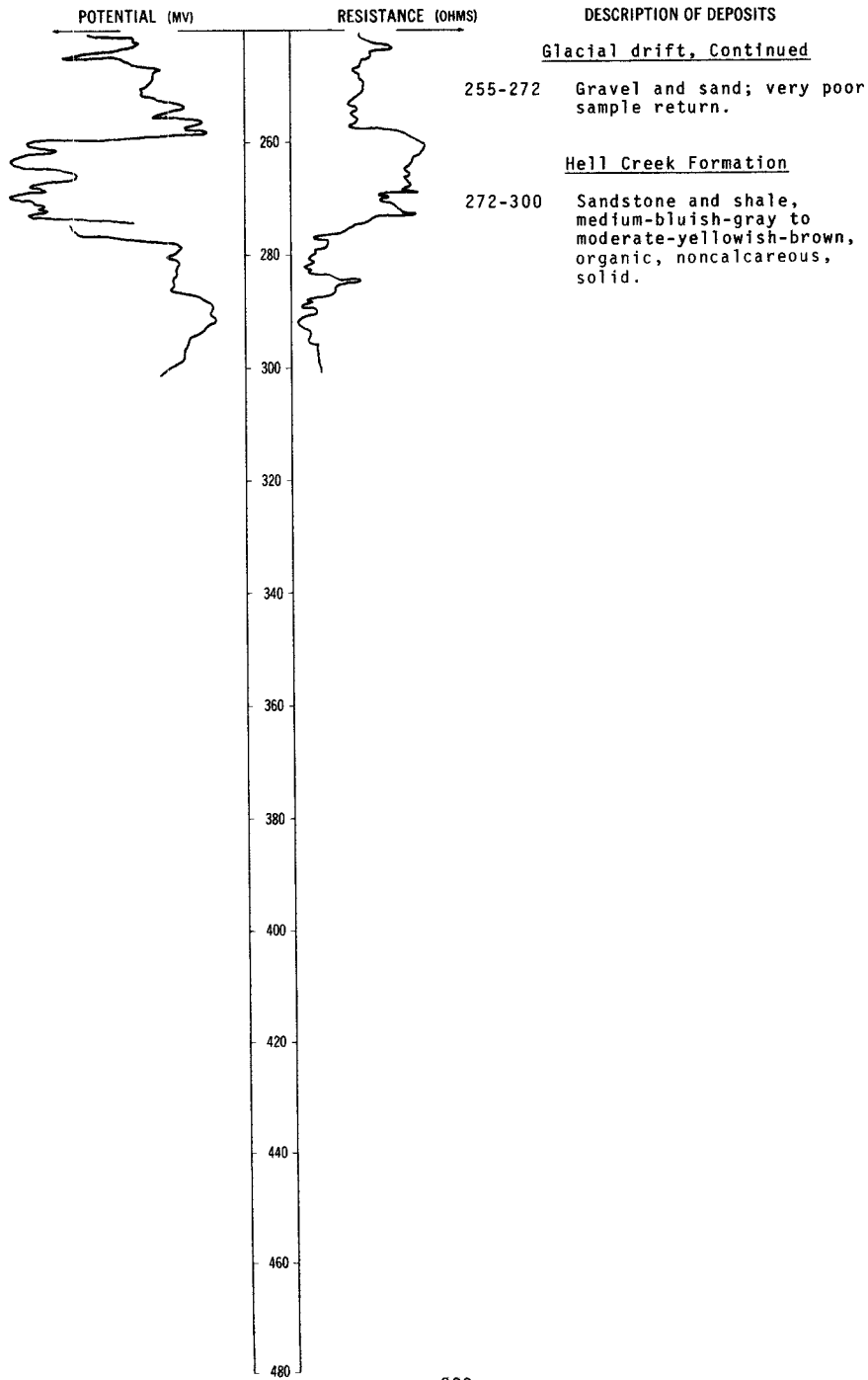
DEPTH: 300
(FT)



NDSWC 8972, Continued

LOCATION: 135-084-16ABB
ALTITUDE: 1880
(FT, MSL)

DATE DRILLED: June 1974
DEPTH: 300
(FT)

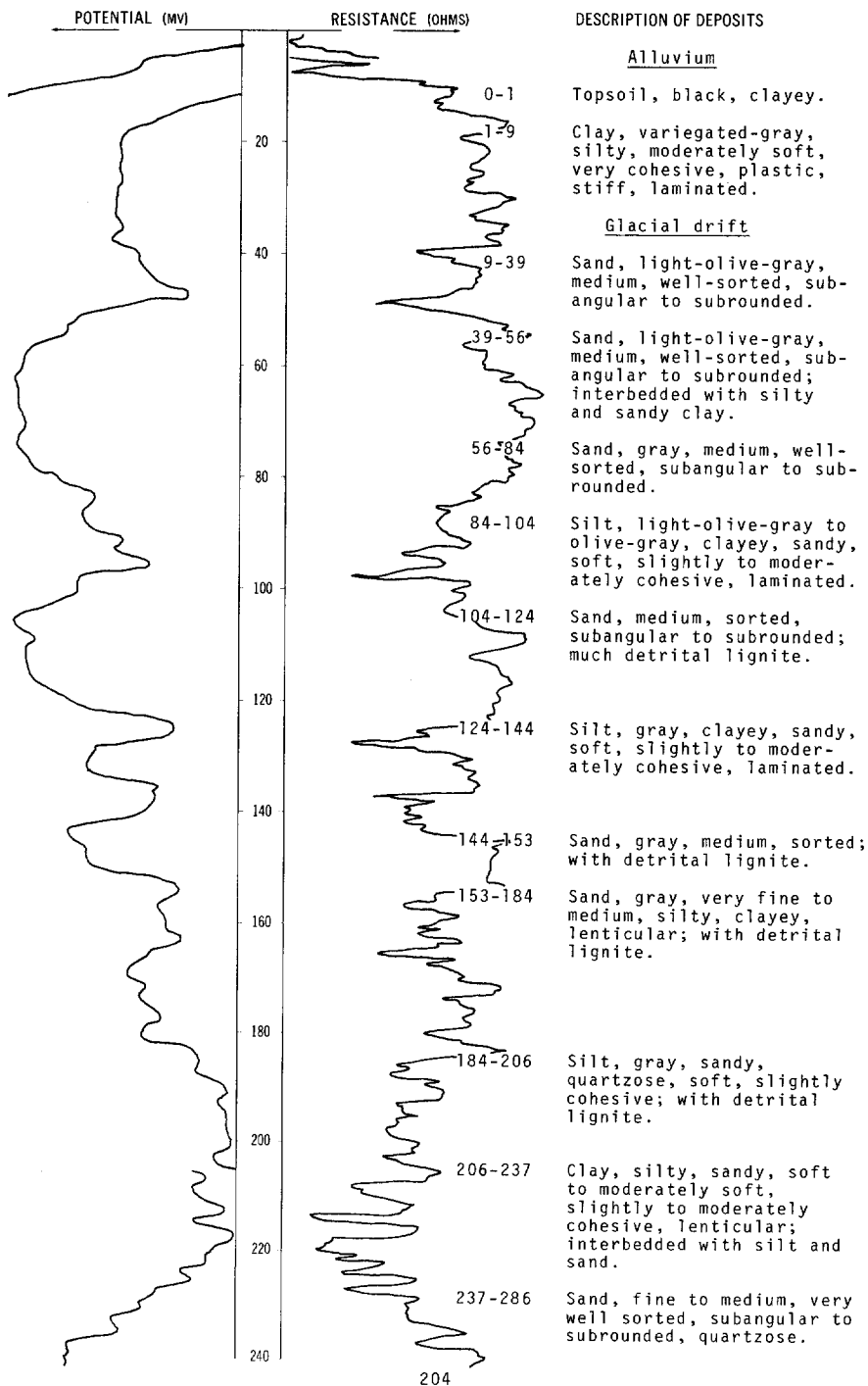


LOCATION: 135-084-21DDD2, 3

DATE DRILLED: September 1973

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)



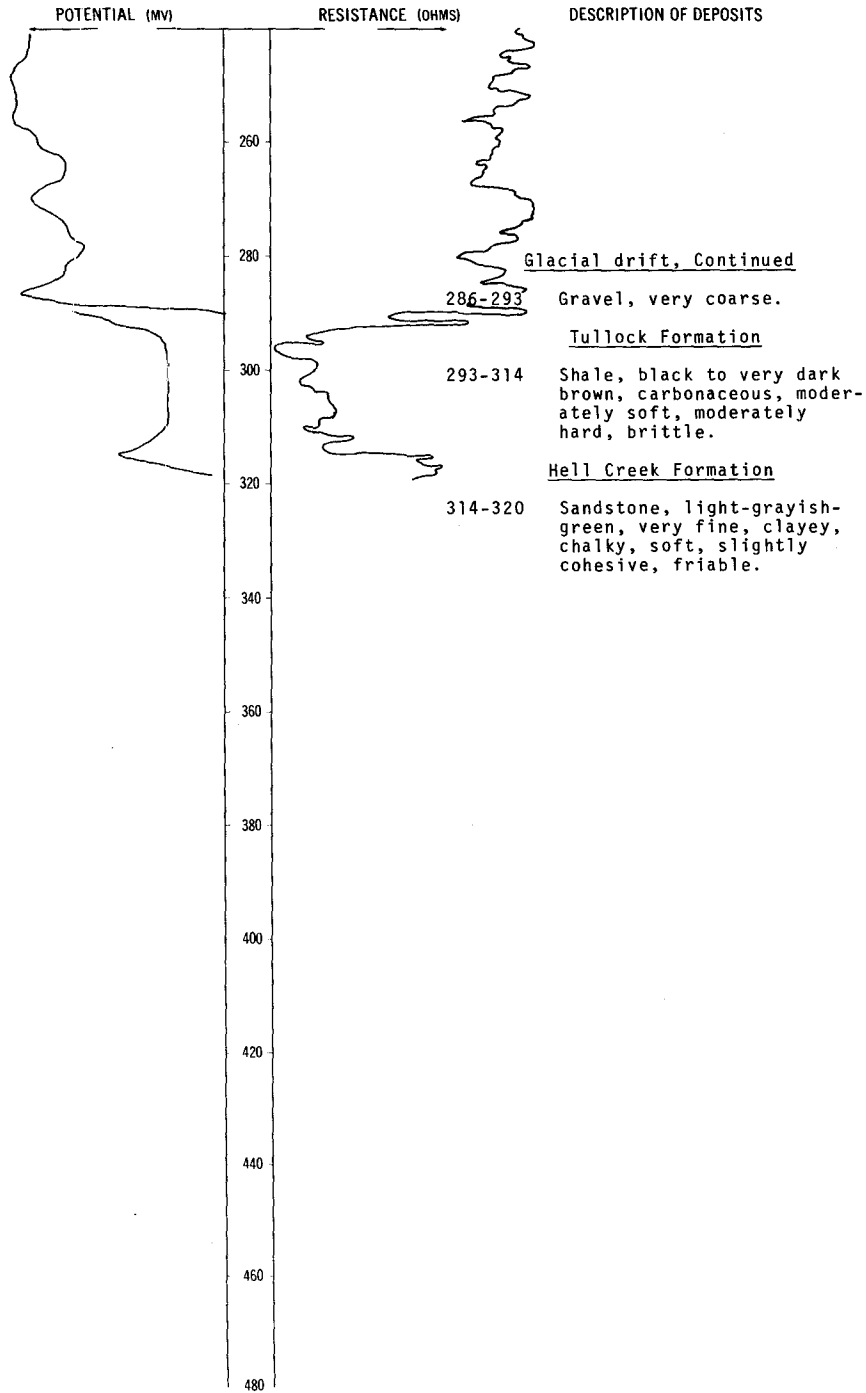
NDSWC 4557, 4557A, Continued

LOCATION: 135-084-21DDD2, 3

DATE DRILLED: September 1973

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4557, 4557A, Continued

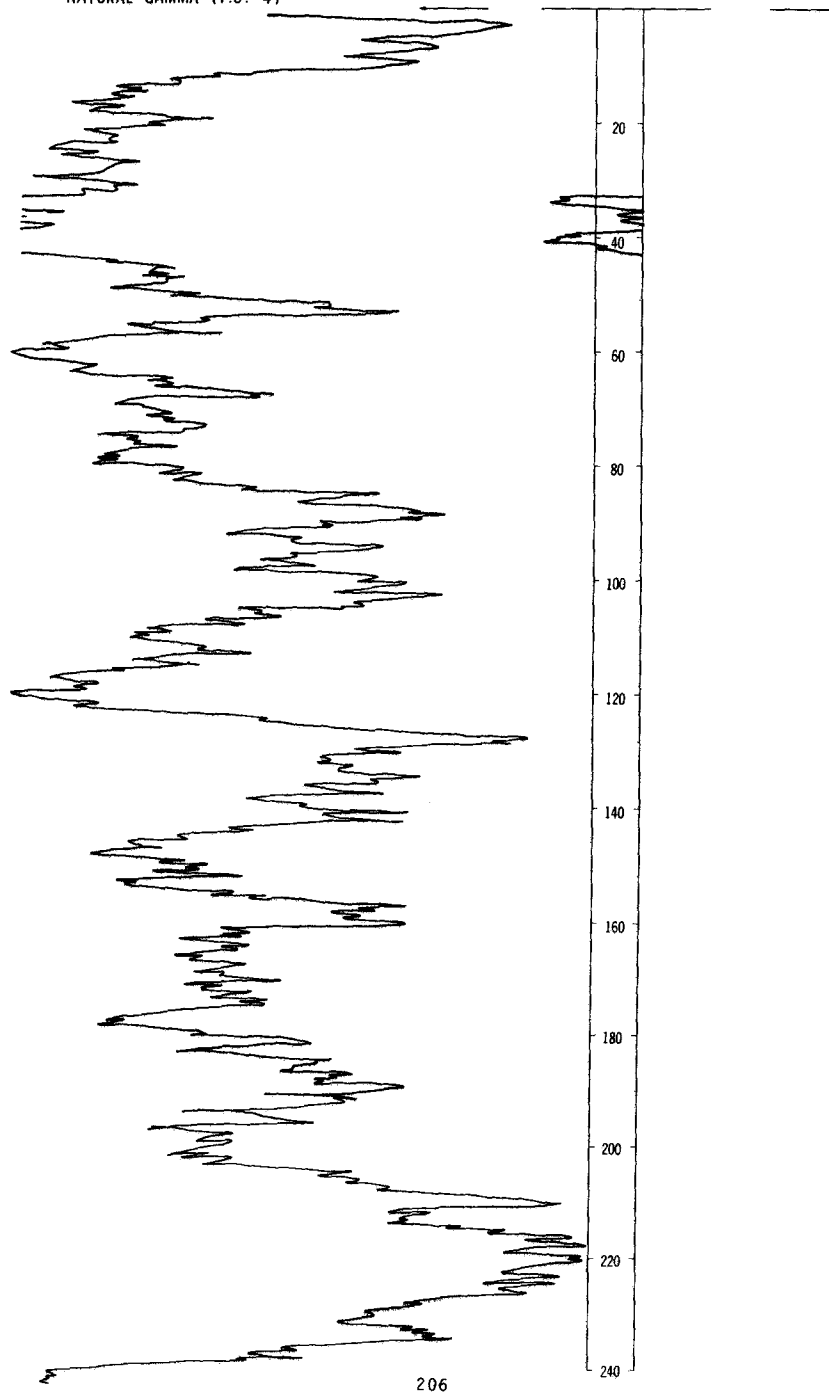
LOCATION: 135-084-21DDD2, 3

DATE DRILLED: September 1973

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4557, 4557A, Continued

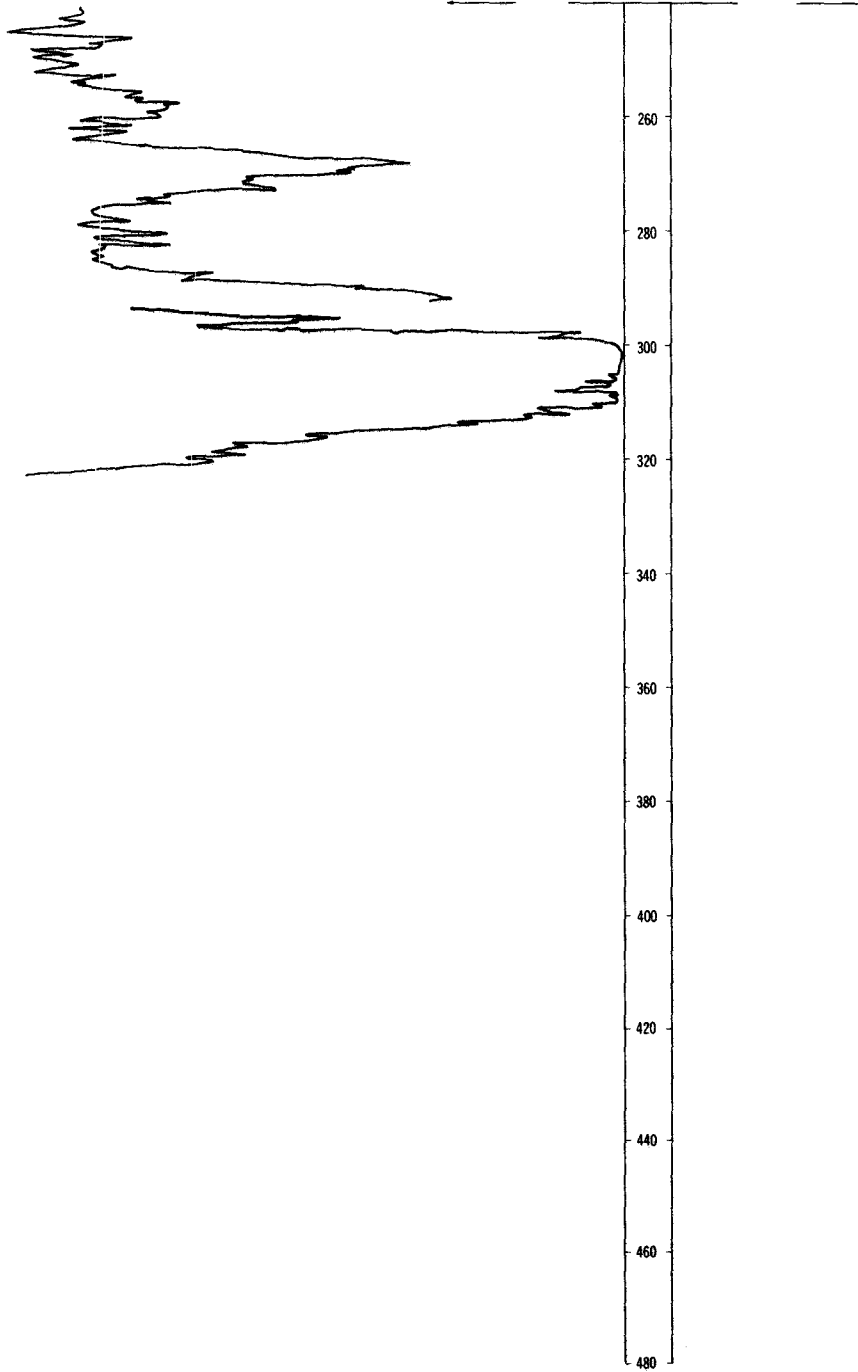
LOCATION: 135-084-21DDD2, 3

DATE DRILLED: September 1973

ALTITUDE: 1866
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)

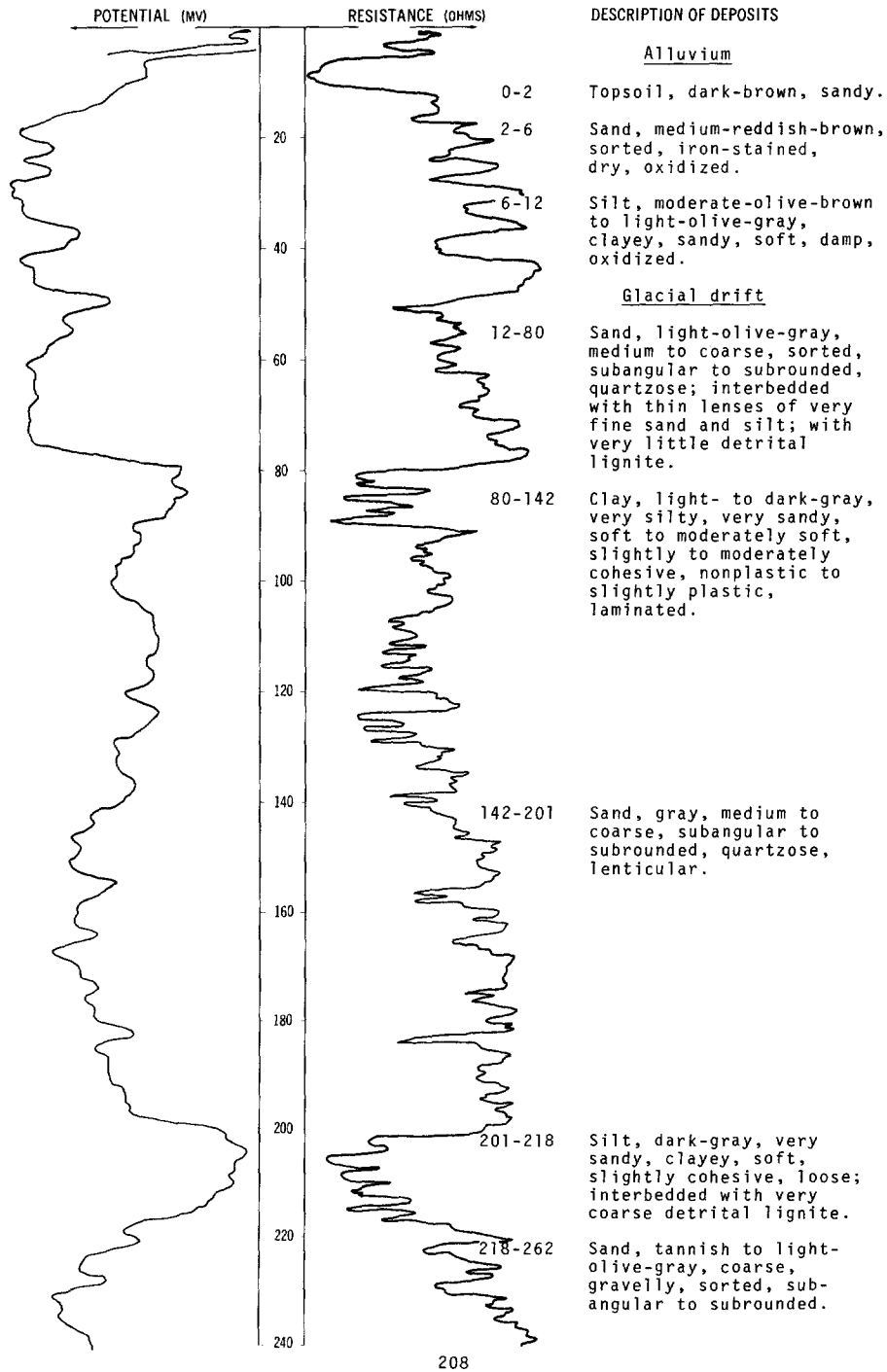


LOCATION: 135-084-260AA1, 2, 3

DATE DRILLED: September 1973

ALTITUDE: 1857
(FT, MSL)

DEPTH: 300
(FT)



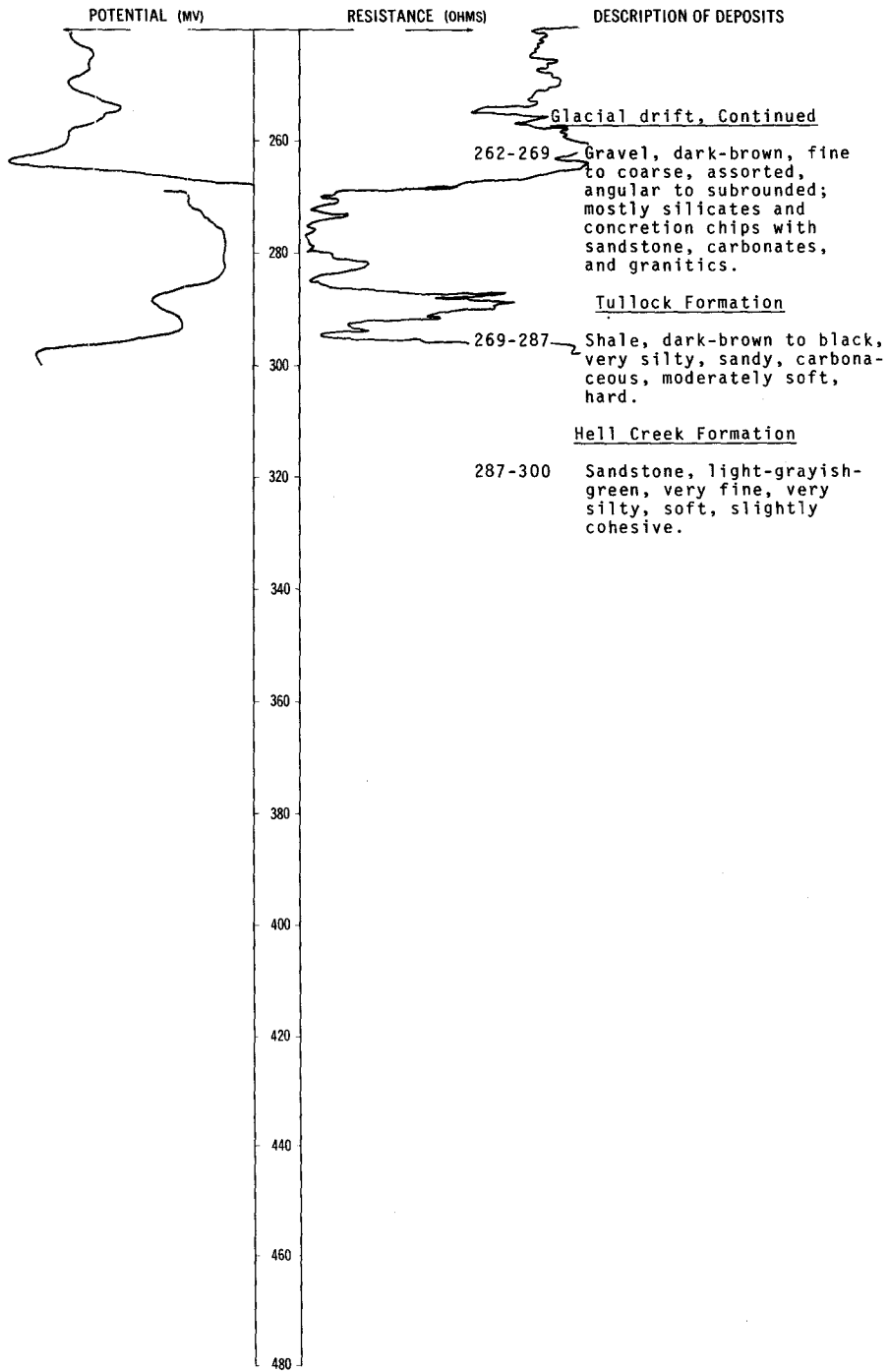
NDSWC 4558, 4558A, 4558B, Continued

LOCATION: 135-084-26DAA1, 2, 3

DATE DRILLED: September 1973

ALTITUDE: 1857
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4558, 4558A, 4558B, Continued

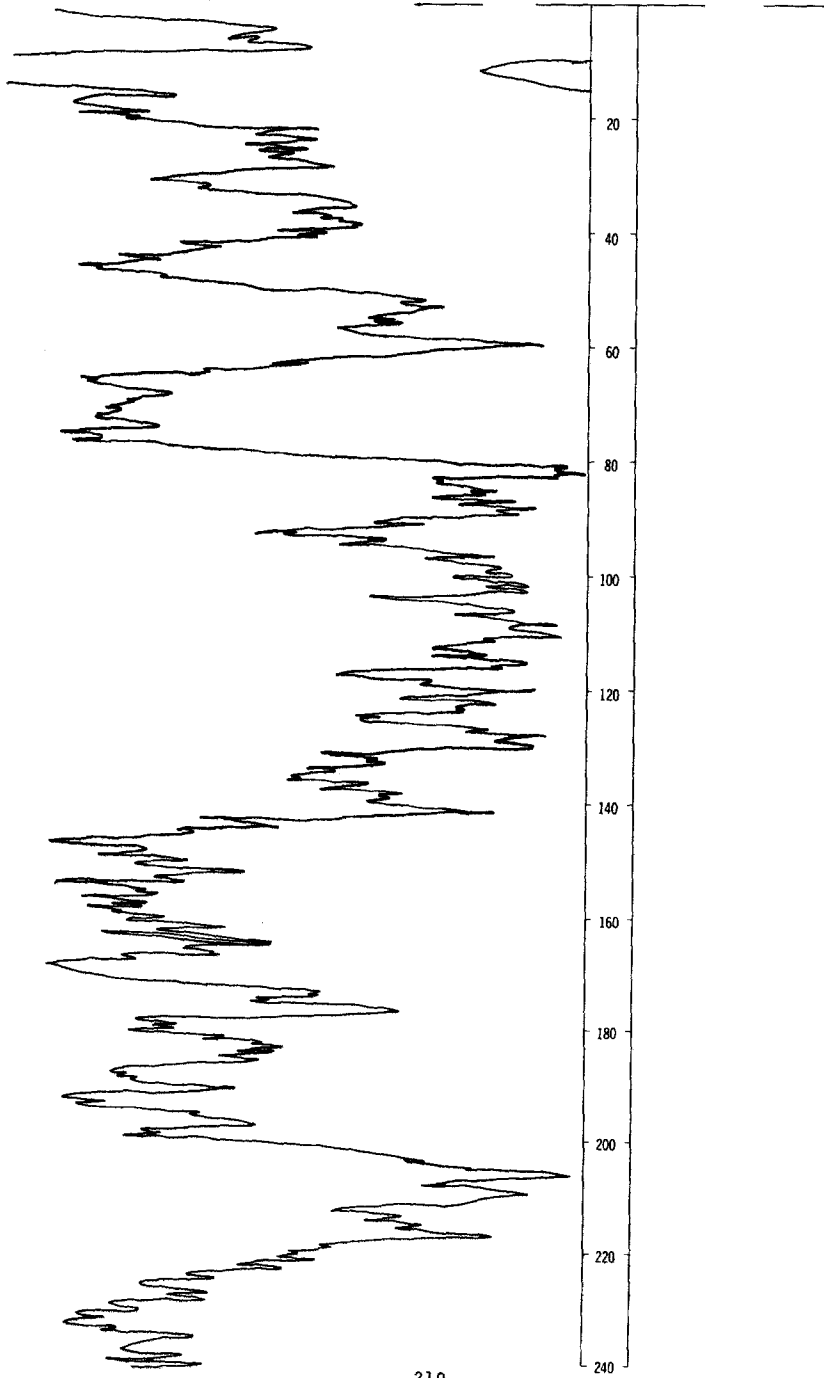
LOCATION: 135-084-260AA1, 2, 3

DATE DRILLED: September 1973

ALTITUDE: 1857
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4558, 4558A, 4558B, Continued

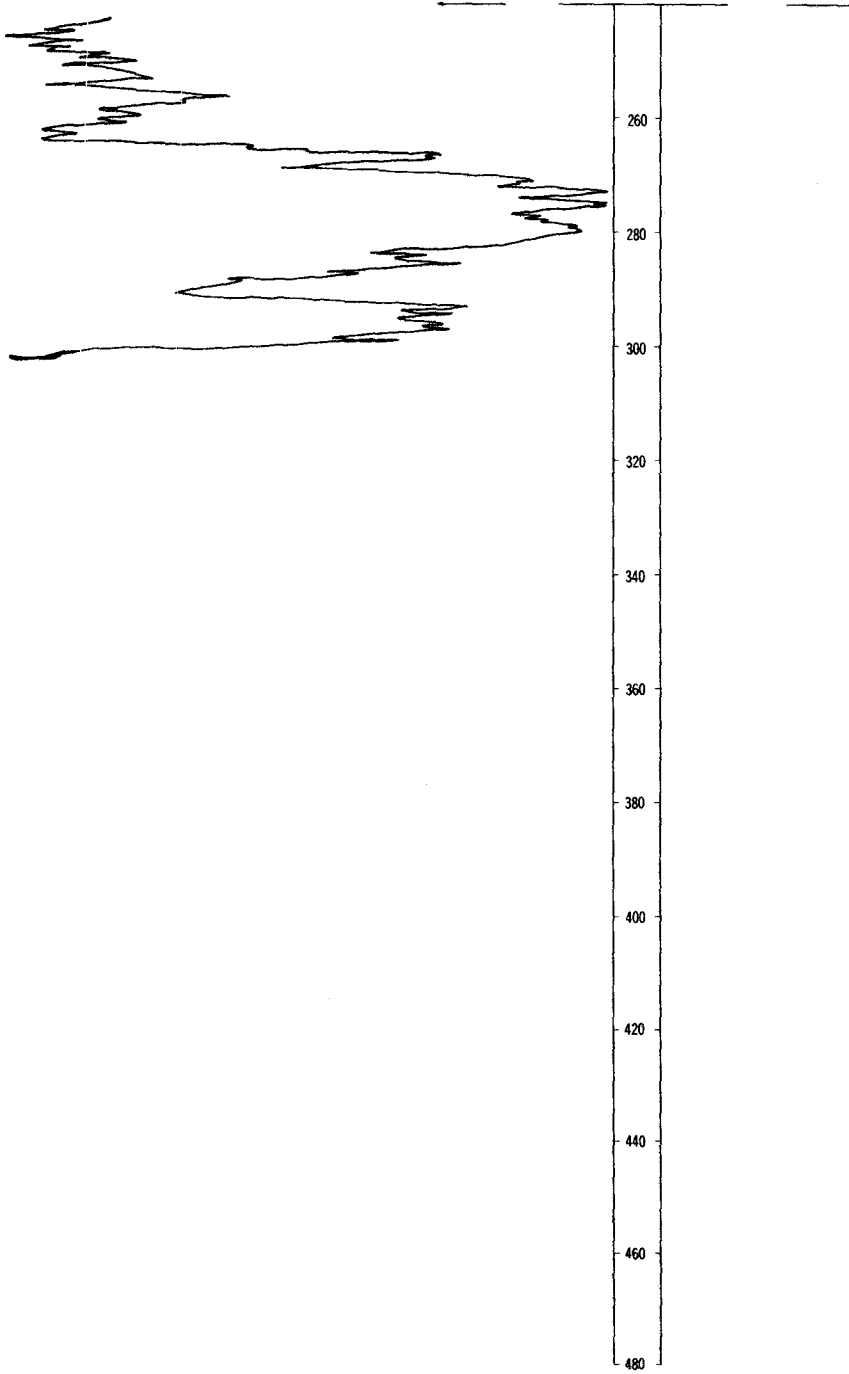
LOCATION: 135-084-26DAA1, 2, 3

DATE DRILLED: September 1973

ALTITUDE: 1857
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)

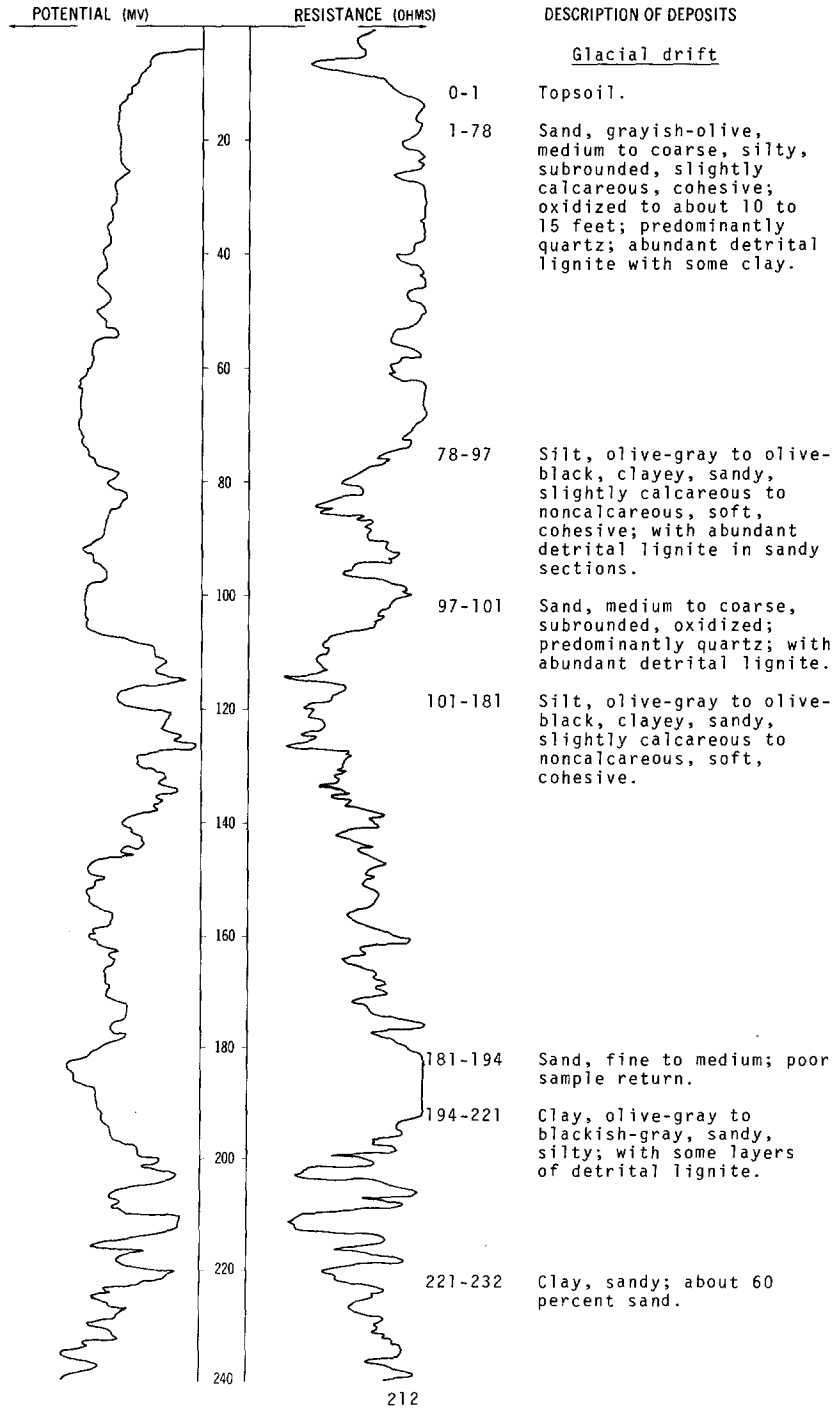


LOCATION: 135-084-36DAC

DATE DRILLED: June 1974

ALTITUDE:
(FT, MSL)

DEPTH: 312
(FT)



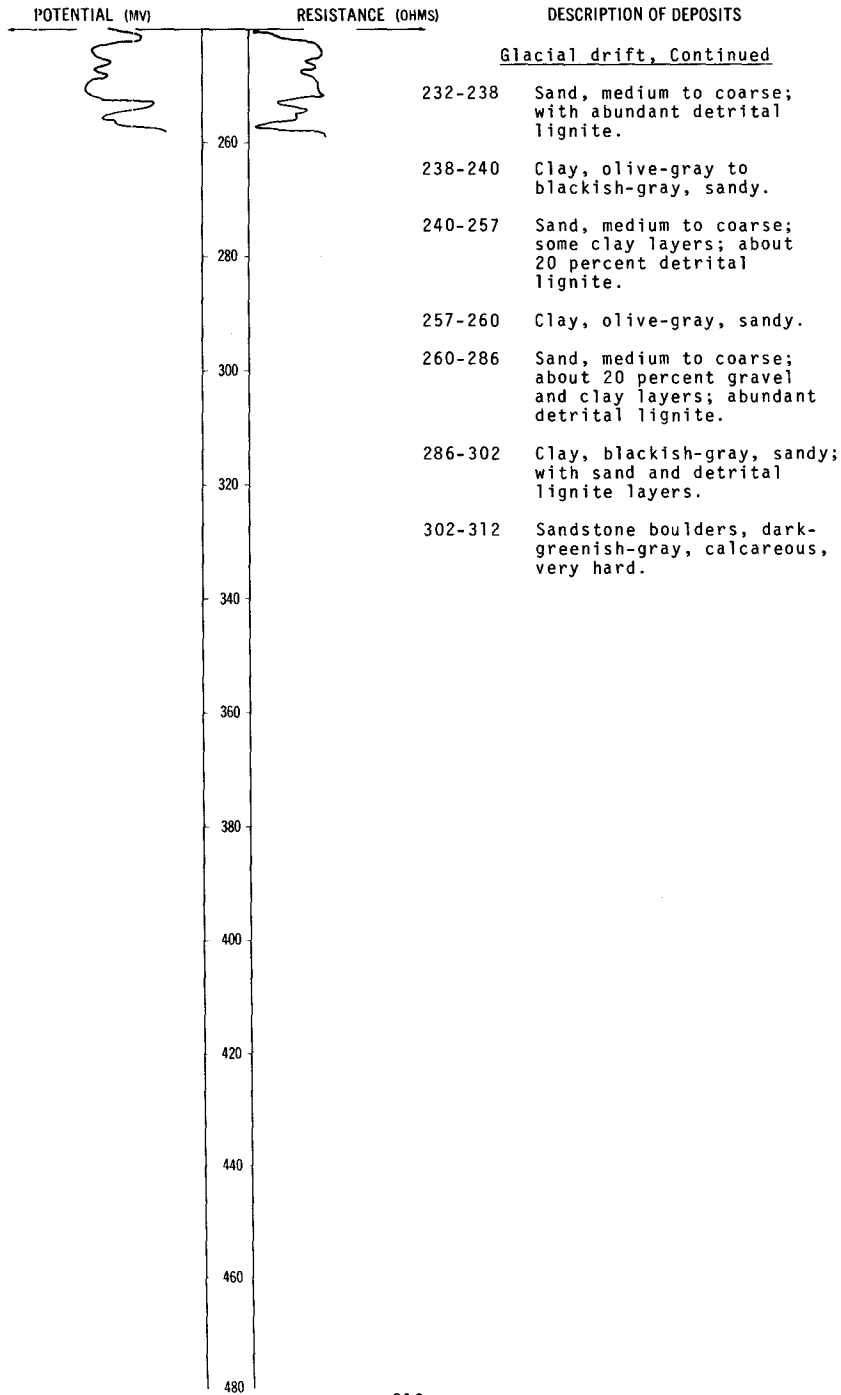
NDSWC 8970, Continued

LOCATION: 135-084-36DAC

DATE DRILLED: June 1974

ALTITUDE:
(FT, MSL)

DEPTH: 312
(FT)

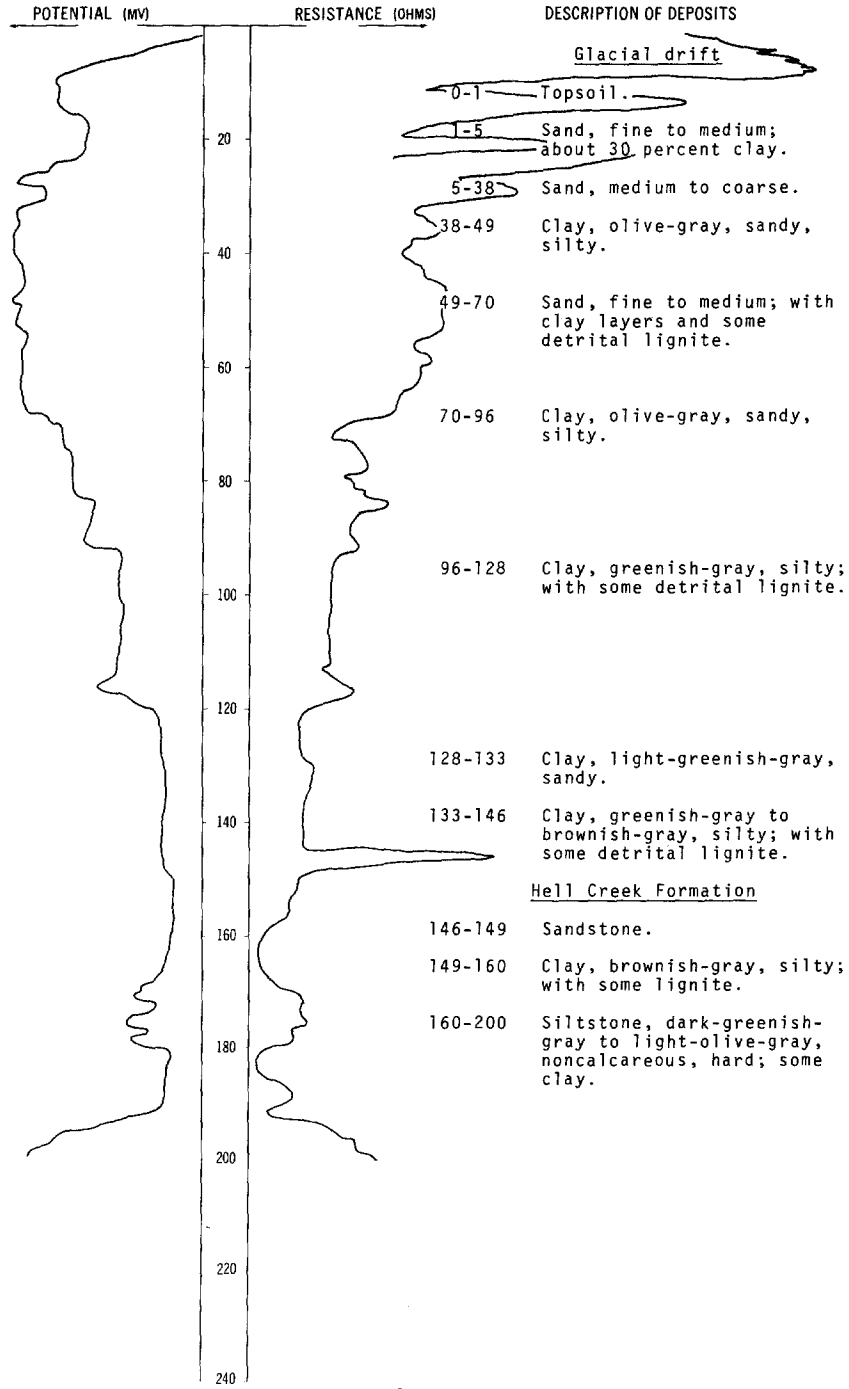


LOCATION: 135-084-36DCD

DATE DRILLED: May 1974

ALTITUDE:
(FT. MSL)

DEPTH: 200
(FT)



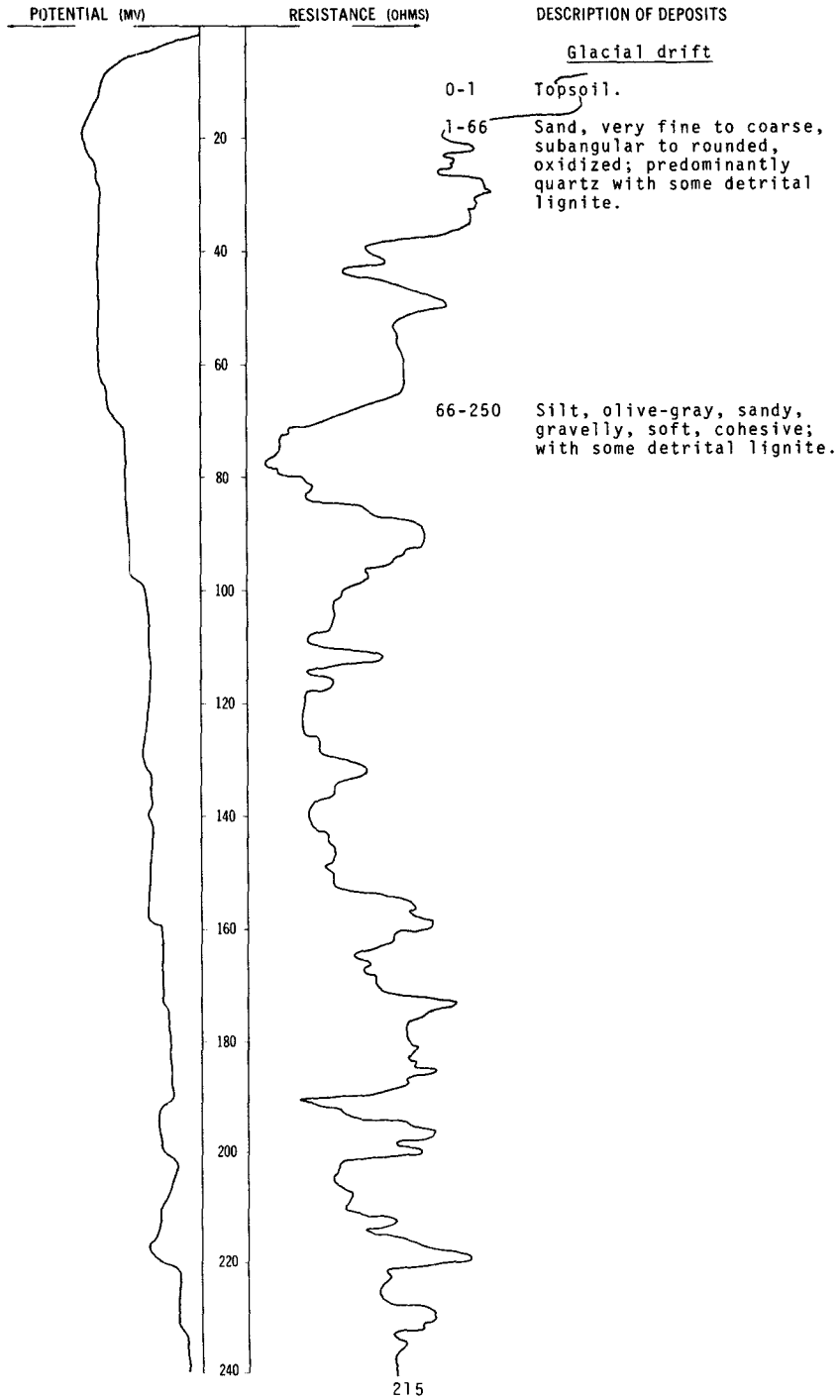
NDSWC 8963

LOCATION: 135-084-36DDA

DATE DRILLED: May 1974

ALTITUDE:
(FT, MSL)

DEPTH: 280
(FT)



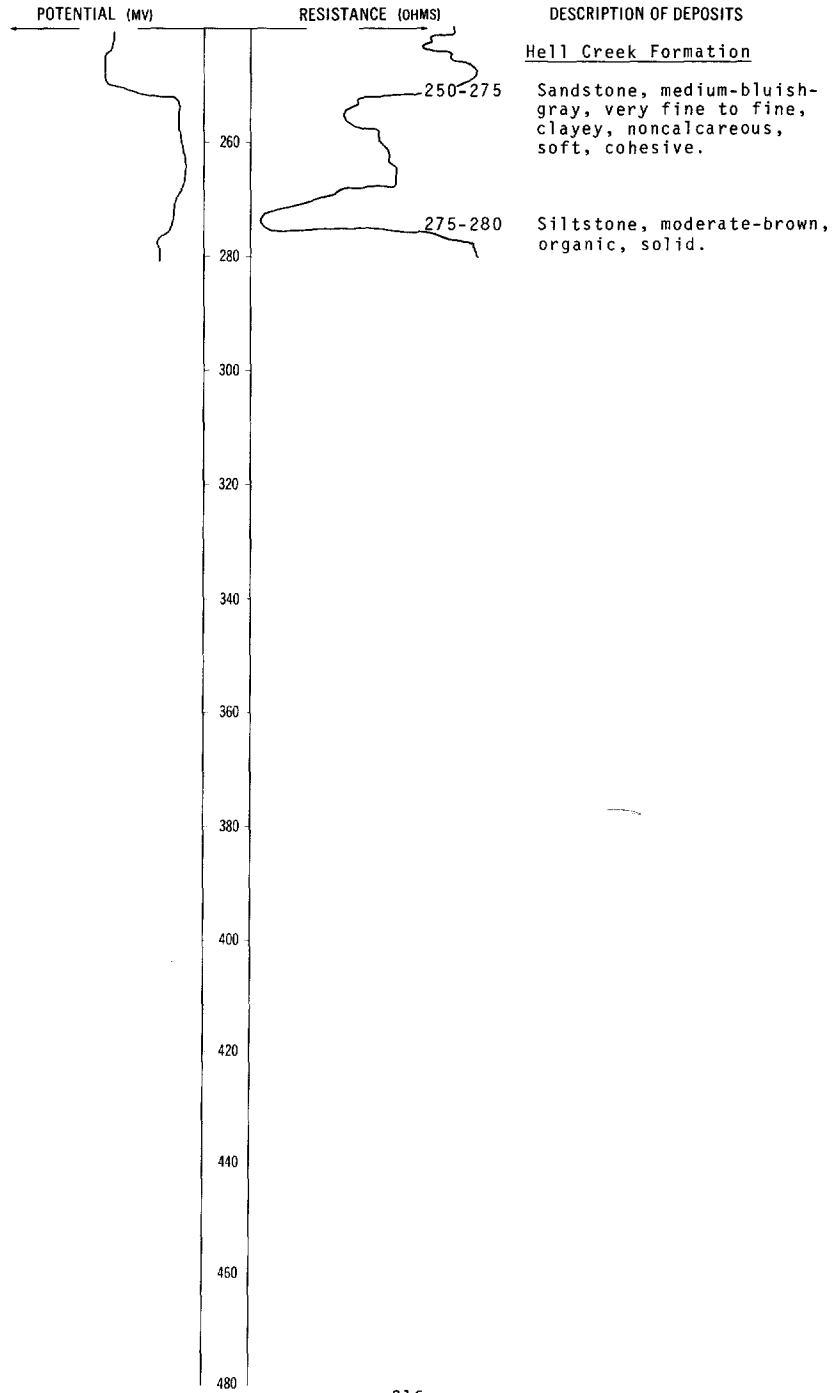
NDSWC 8963, Continued

LOCATION: 135-084-36DDA

DATE DRILLED: May 1974

ALTITUDE:
(FT, MSL)

DEPTH: 280
(FT)

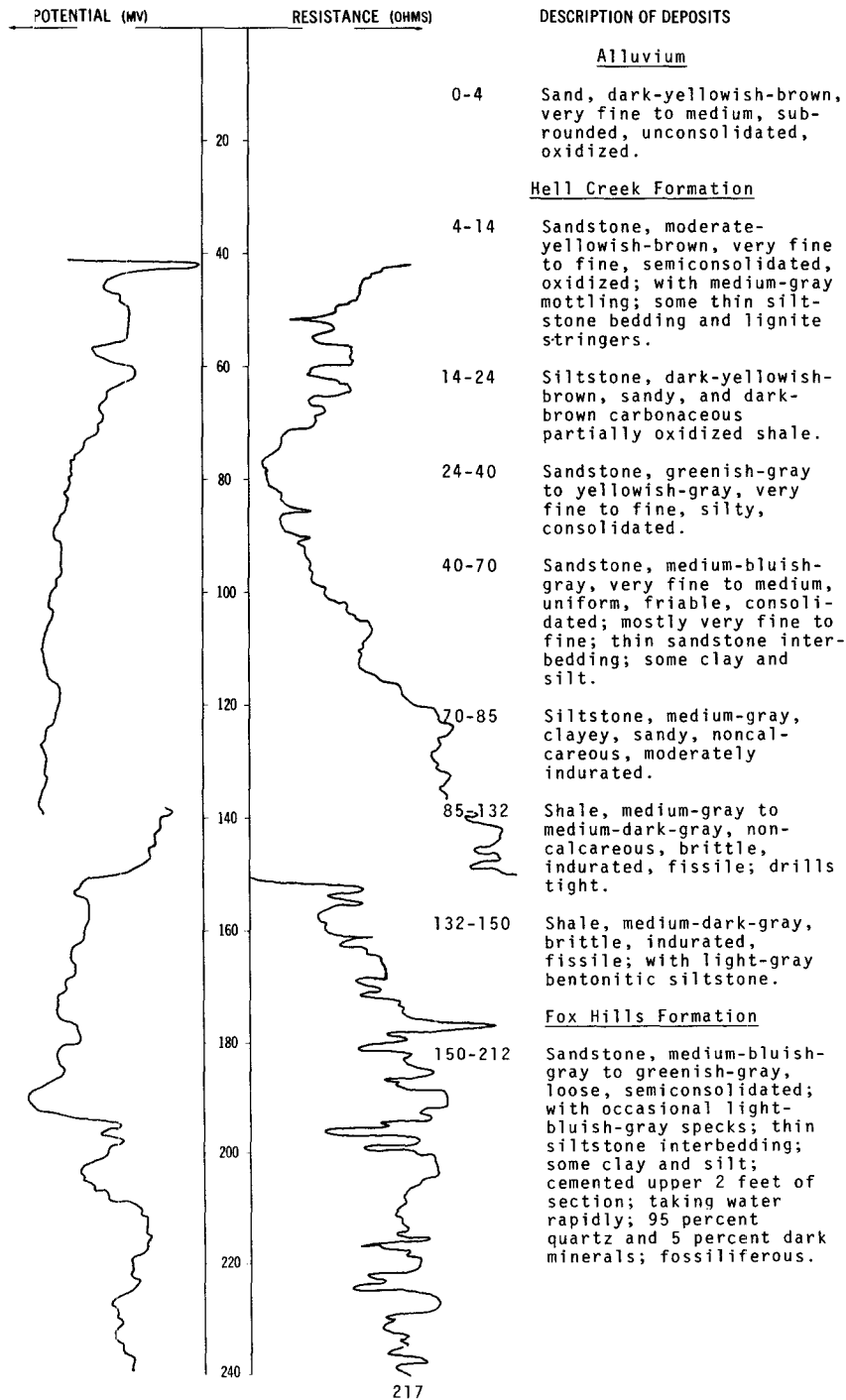


LOCATION: 136-079-05CCC

DATE DRILLED: October 1974

ALTITUDE: 1670
(FT, MSL)

DEPTH: 380
(FT)



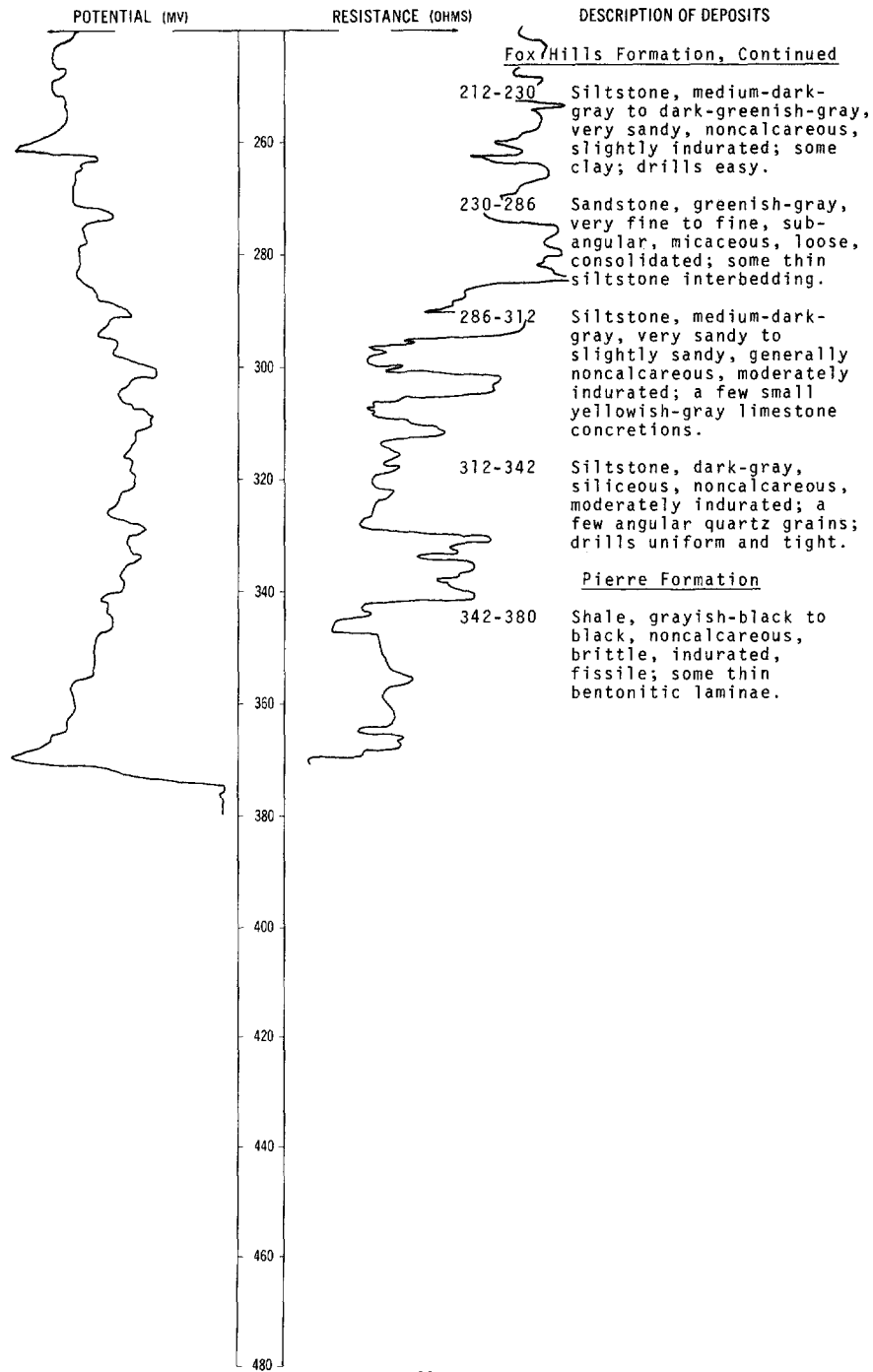
NDSWC 4770, Continued

LOCATION: 136-079-05CCC

DATE DRILLED: October 1974

ALTITUDE: 1670
(FT, MSL)

DEPTH: 380
(FT)



NDSWC 4770, Continued

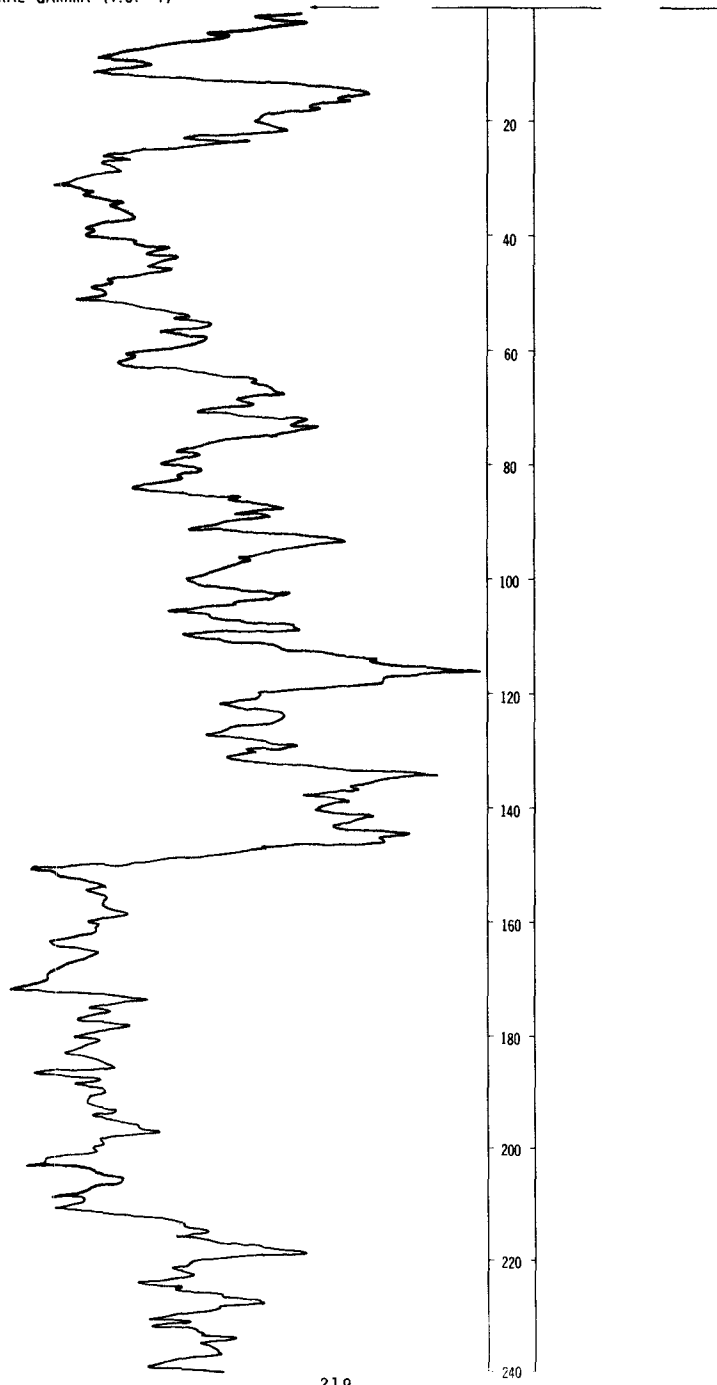
LOCATION: 136-079-05CCC

DATE DRILLED: October 1974

ALTITUDE: 1670
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4770, Continued

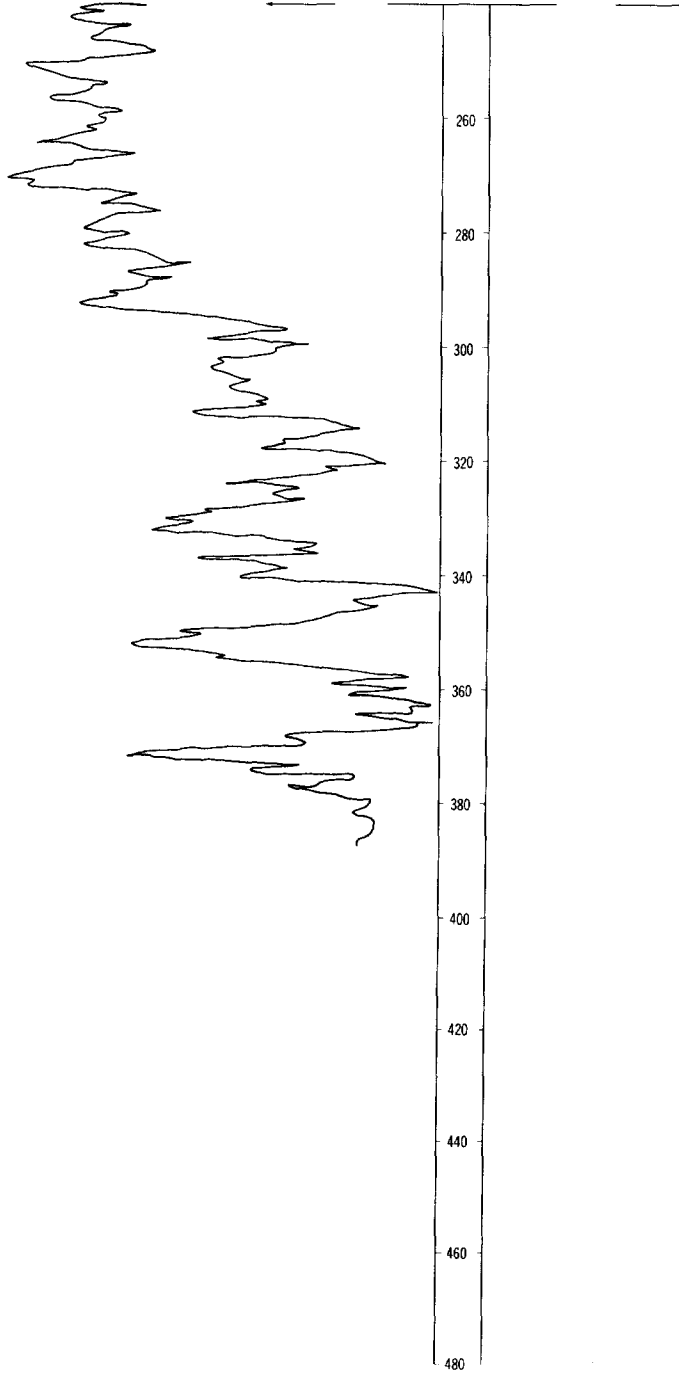
LOCATION: 136-079-05CCC

DATE DRILLED: October 1974

ALTITUDE: 1670
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)

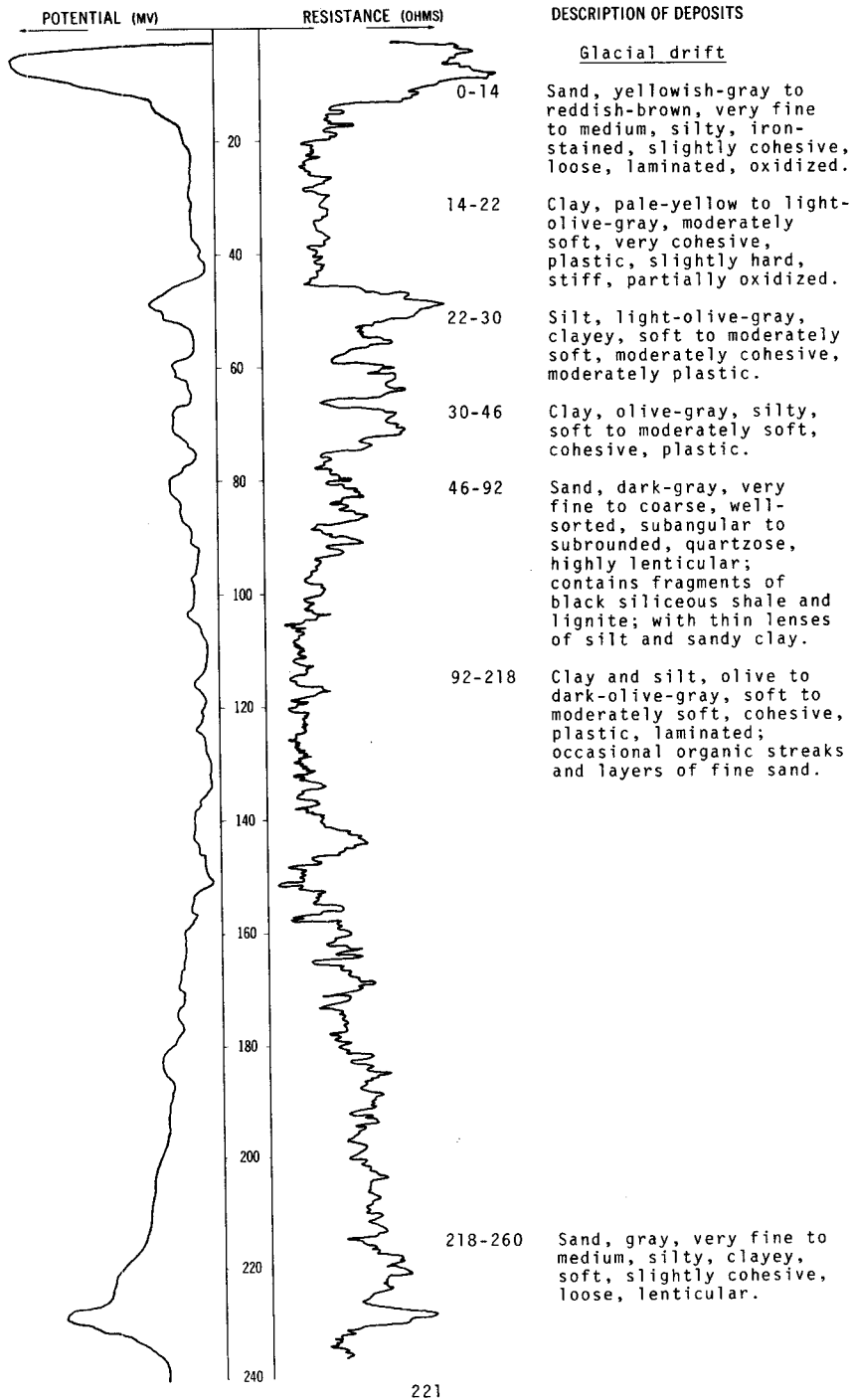


LOCATION: 136-081-06BBB

ALTITUDE: 1742
(FT, MSL)

DATE DRILLED: September 1973

DEPTH: 340
(FT)



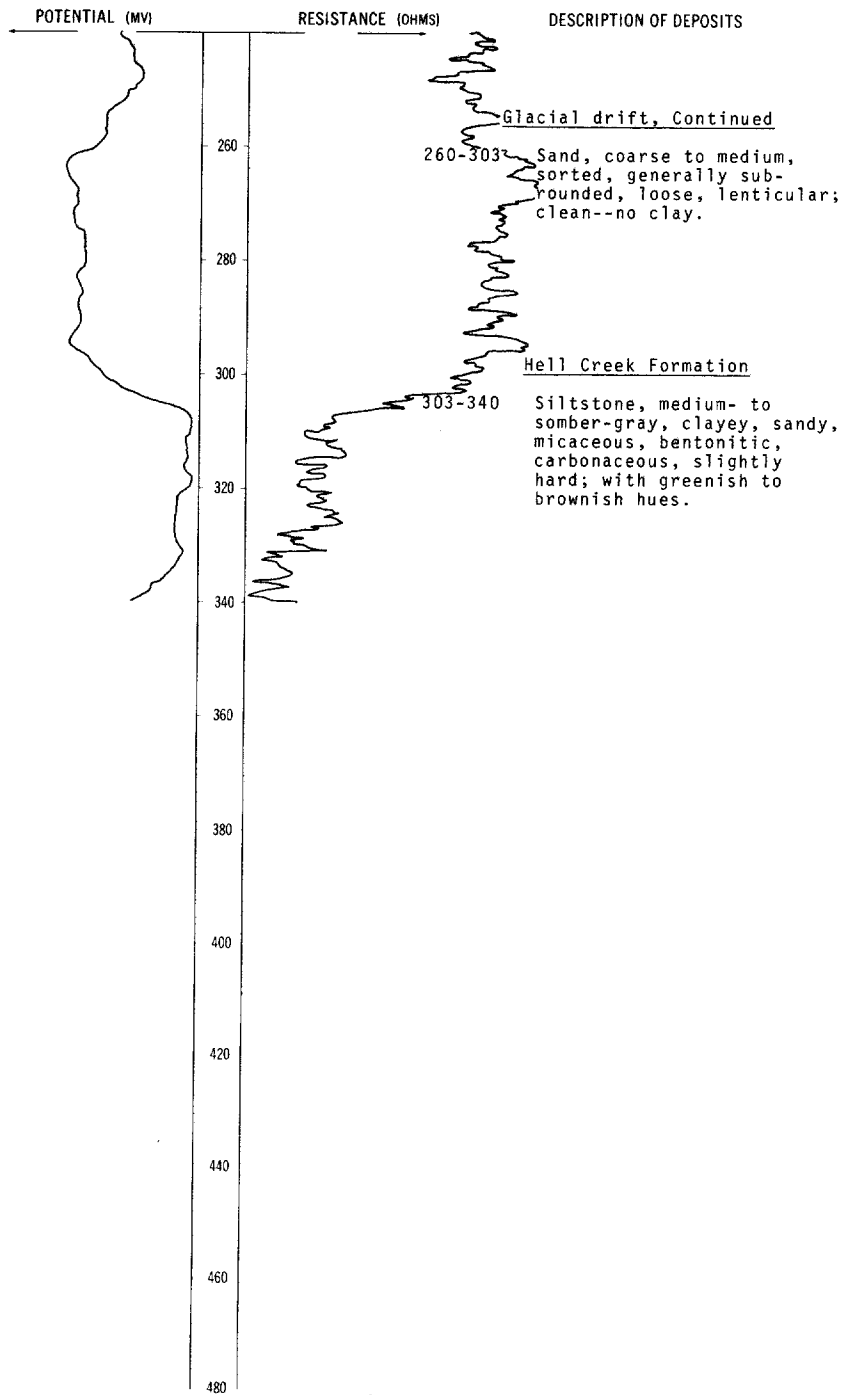
NDSWC 4590, Continued

LOCATION: 136-081-06BBB

DATE DRILLED: September 1973

ALTITUDE: 1742
(FT, MSL)

DEPTH: 340
(FT)



NDSWC 4590, Continued

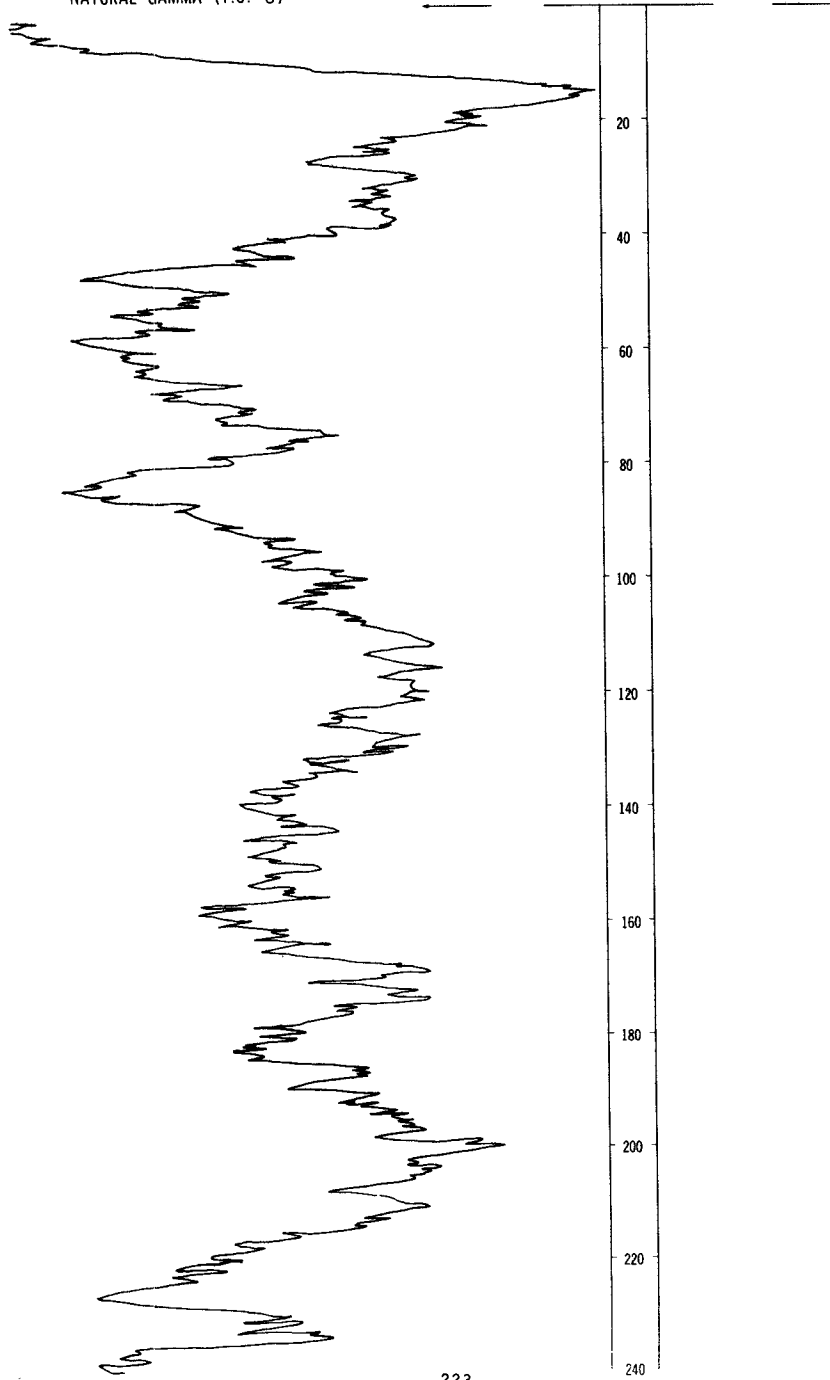
LOCATION: 136-081-06BBB

DATE DRILLED: September 1973

ALTITUDE: 1742
(FT, MSL)

DEPTH: 340
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4590, Continued

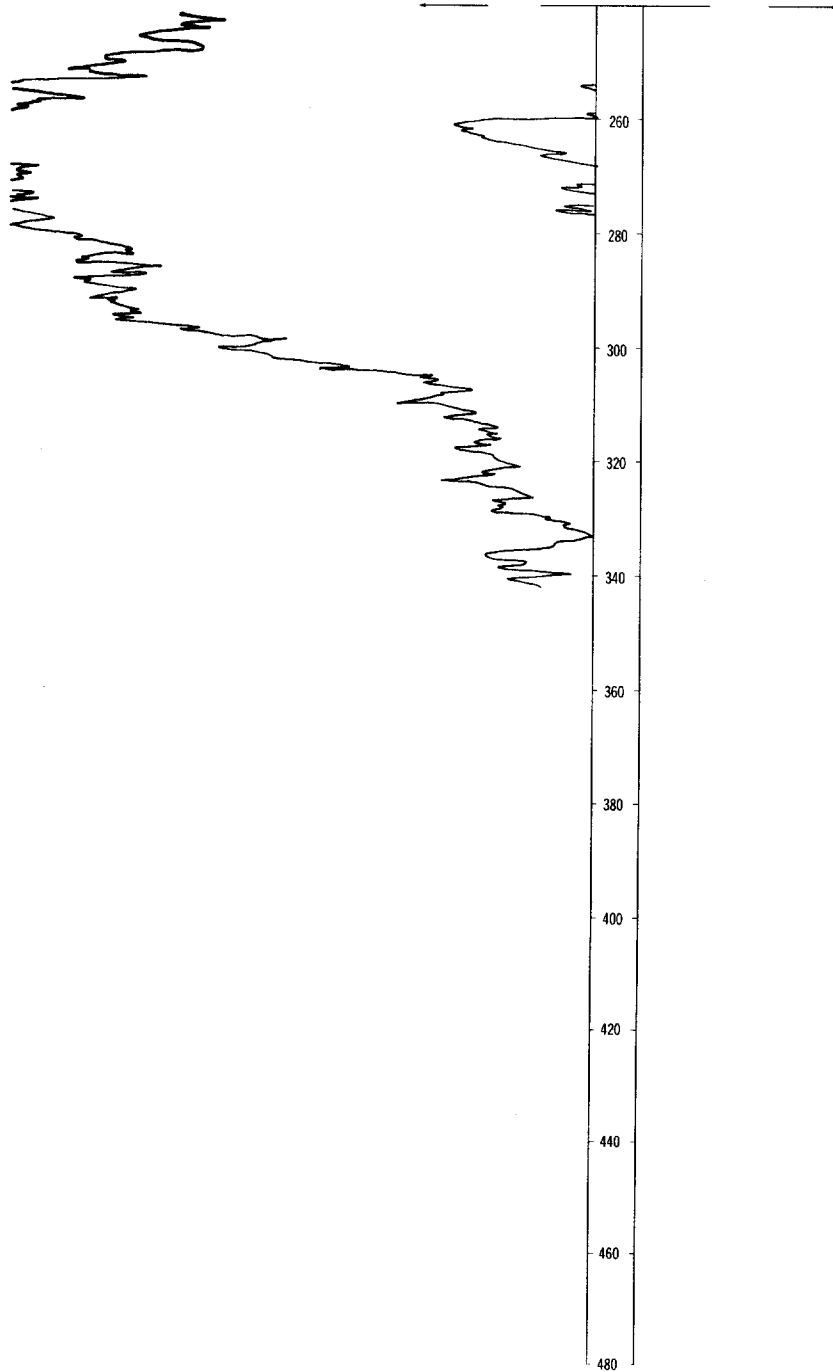
LOCATION: 136-081-06BBB

DATE DRILLED: September 1973

ALTITUDE: 1742
(FT, MSL)

DEPTH: 340
(FT)

NATURAL-GAMMA (T.C. 8)



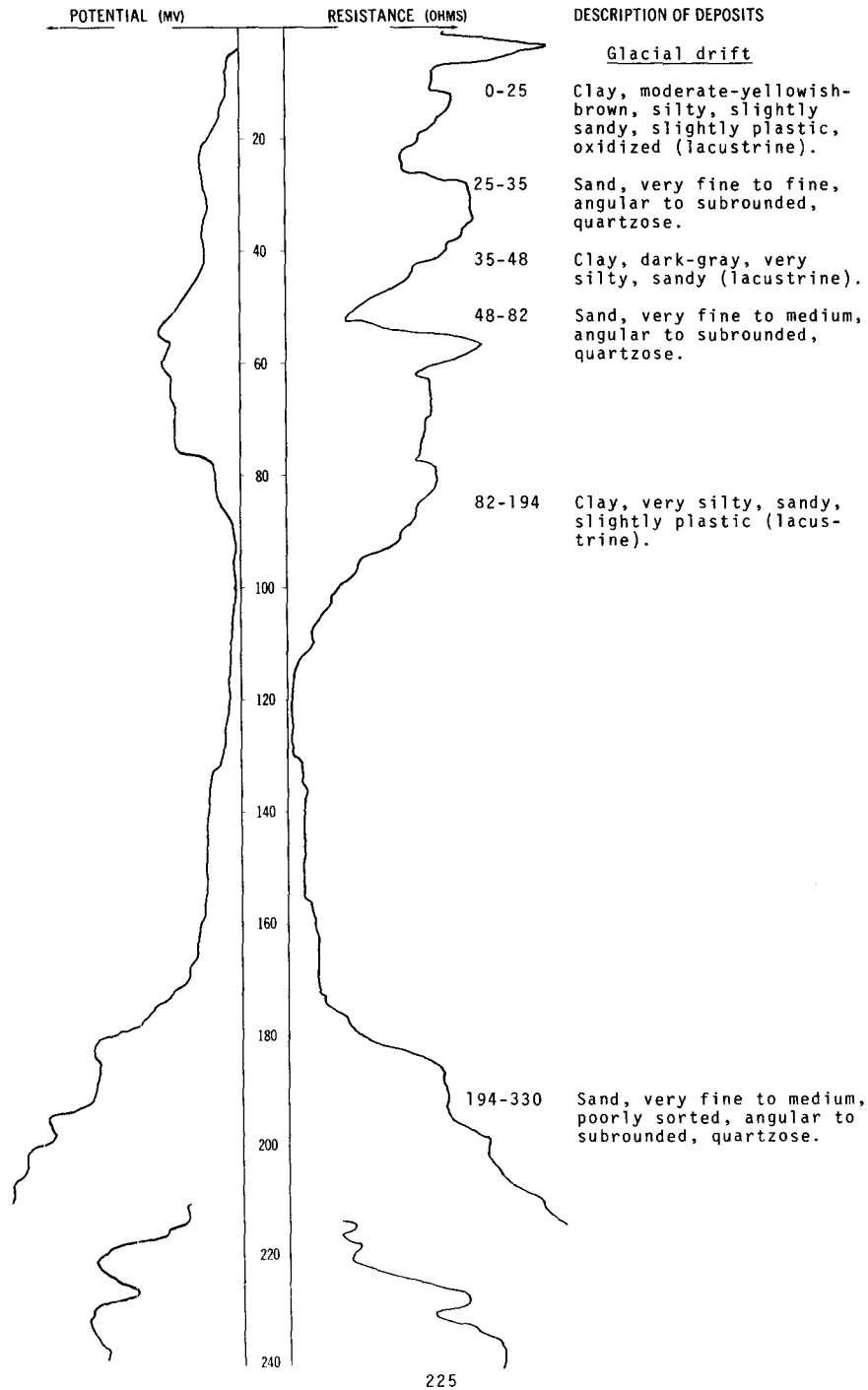
NDSWC 9286

LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT, MSL)

DEPTH: 520
(FT)



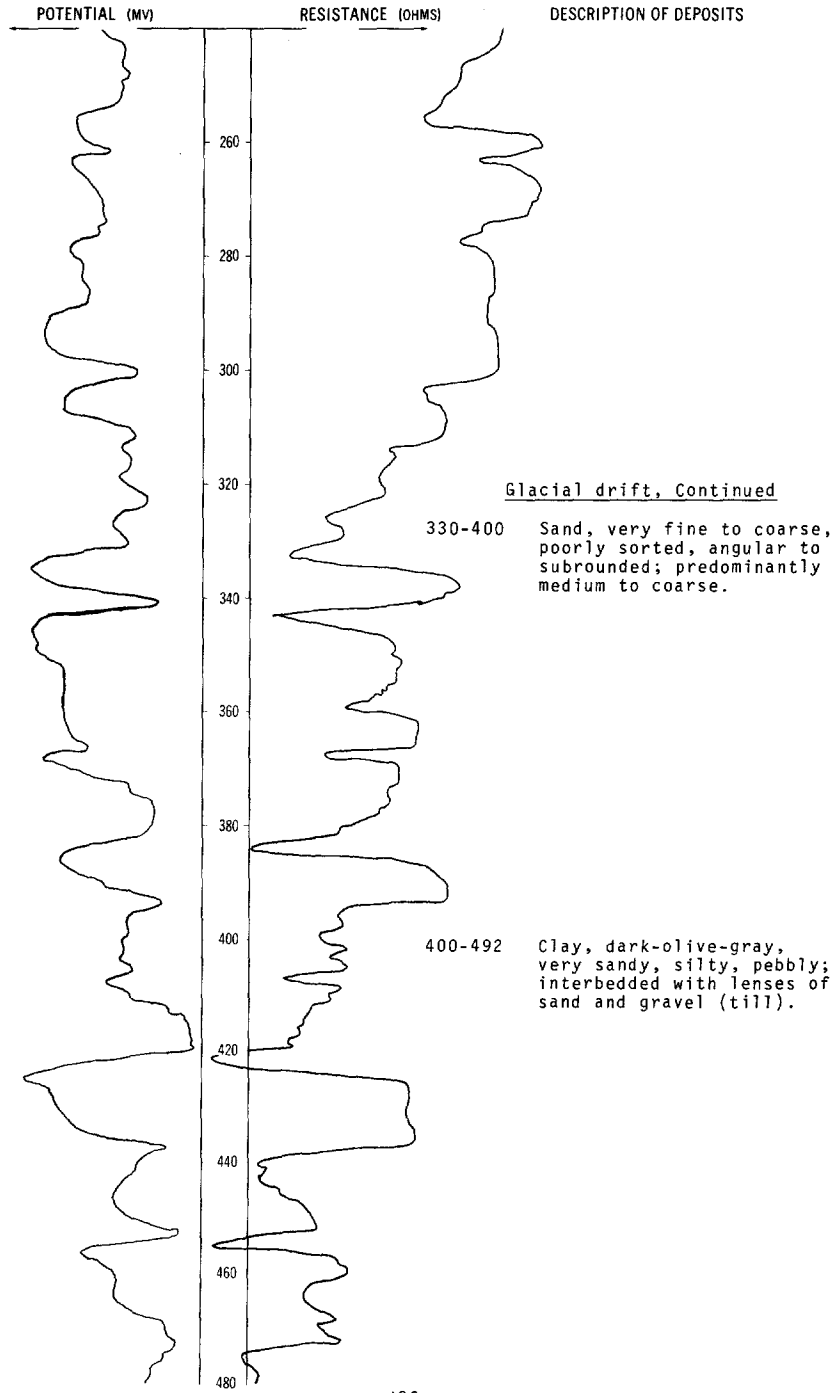
NDSWC 9286, Continued

LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT, MSL)

DEPTH: 520
(FT)



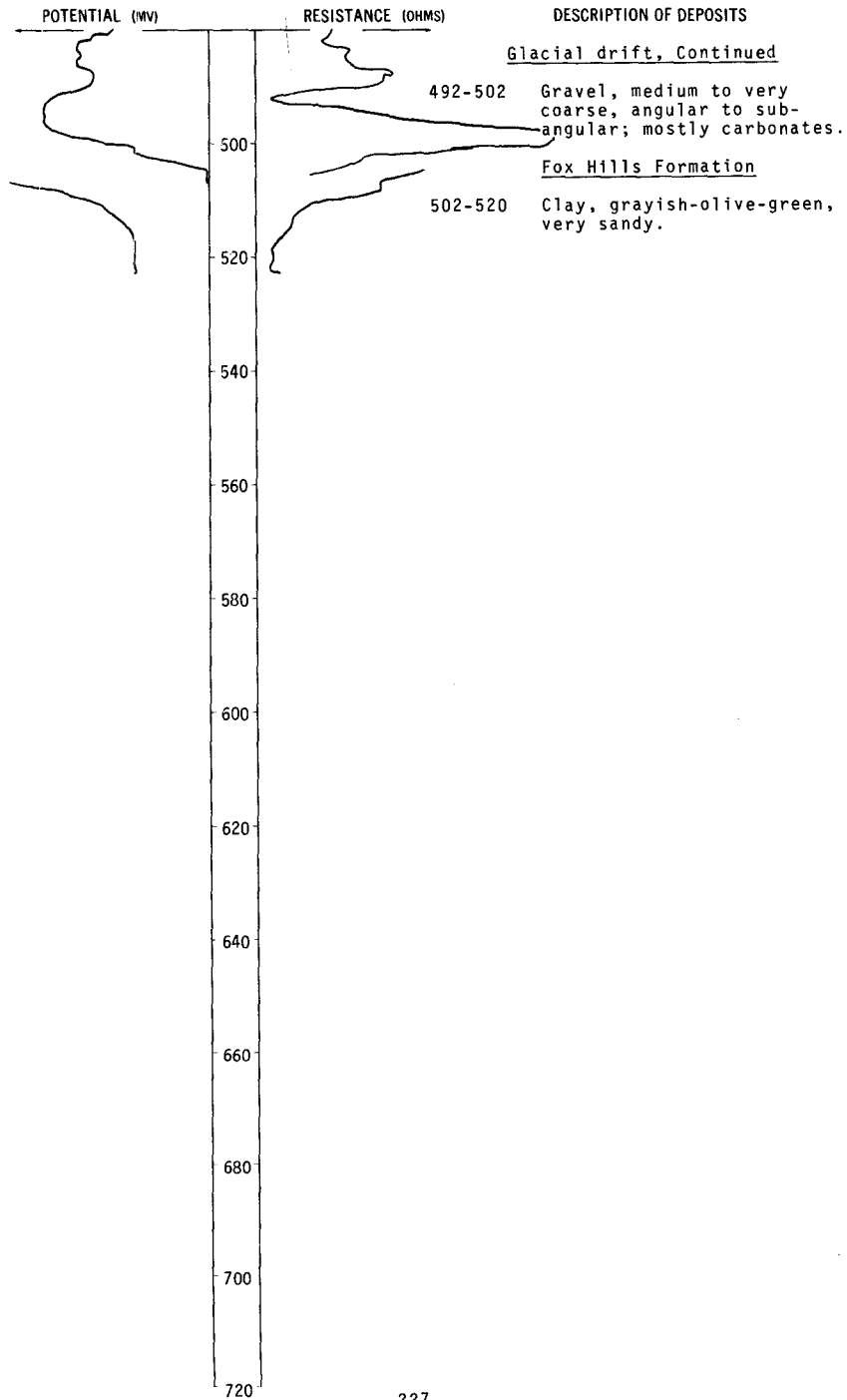
NDSWC 9286, Continued

LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT, MSL)

DEPTH: 520
(FT)



NDSWC 9286, Continued

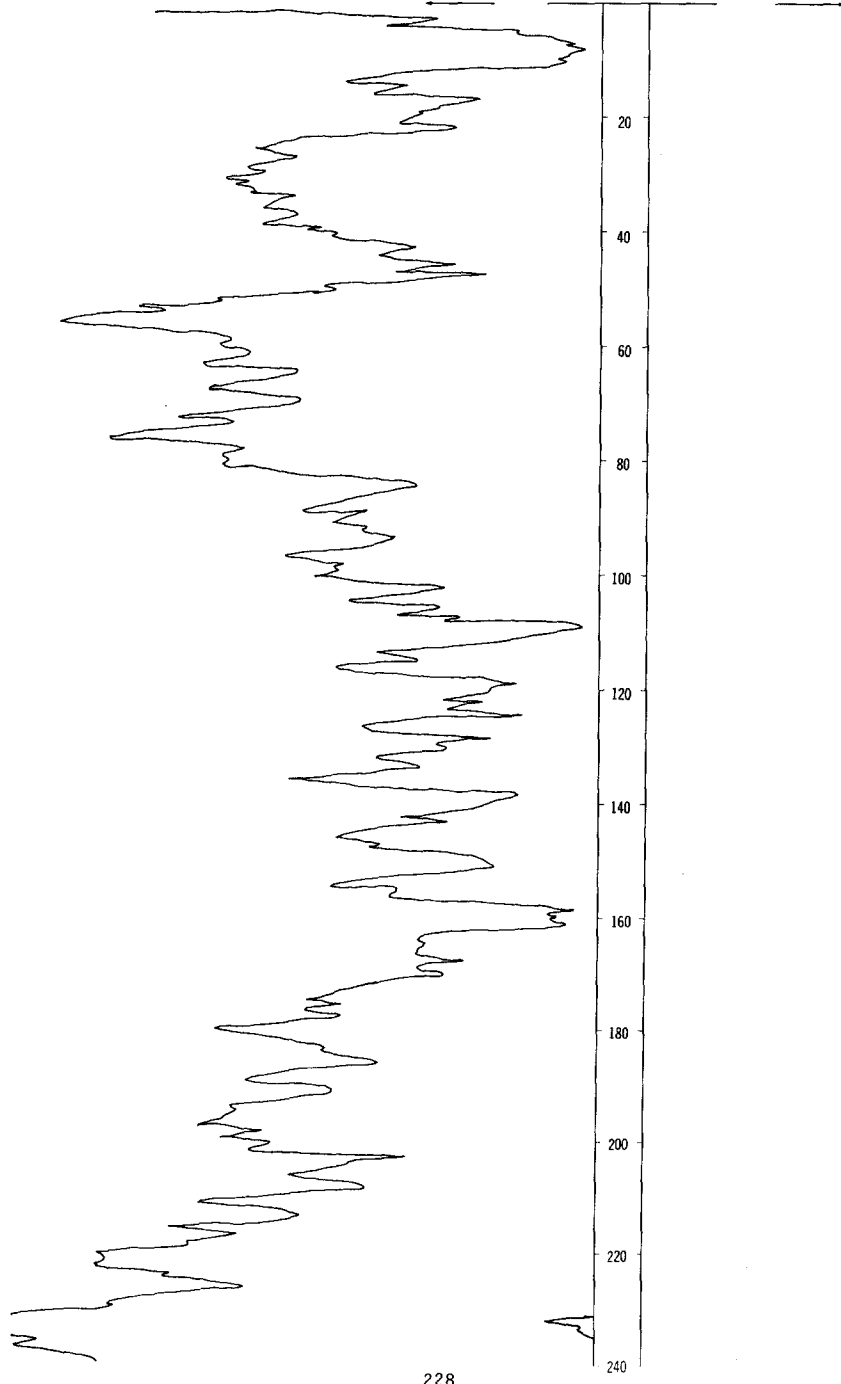
LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT, MSL)

DEPTH: 520
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 9286, Continued

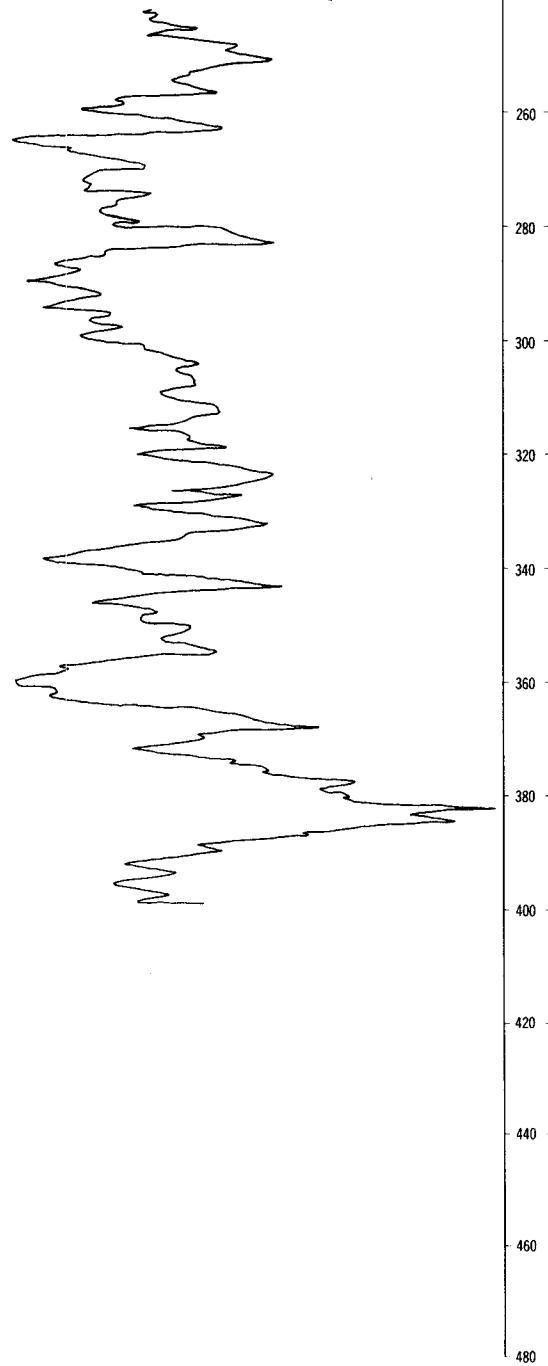
LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT. MSL)

DEPTH: 520
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 9286, Continued

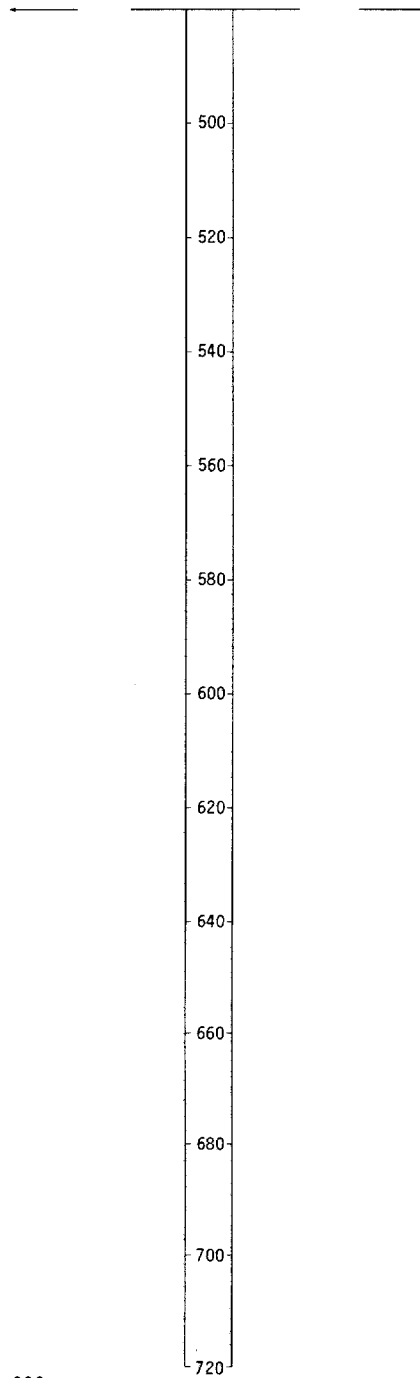
LOCATION: 136-081-07AAA

DATE DRILLED: June 1975

ALTITUDE: 1779
(FT. MSL)

DEPTH: 520
(FT)

NATURAL-GAMMA (T.C. 4)

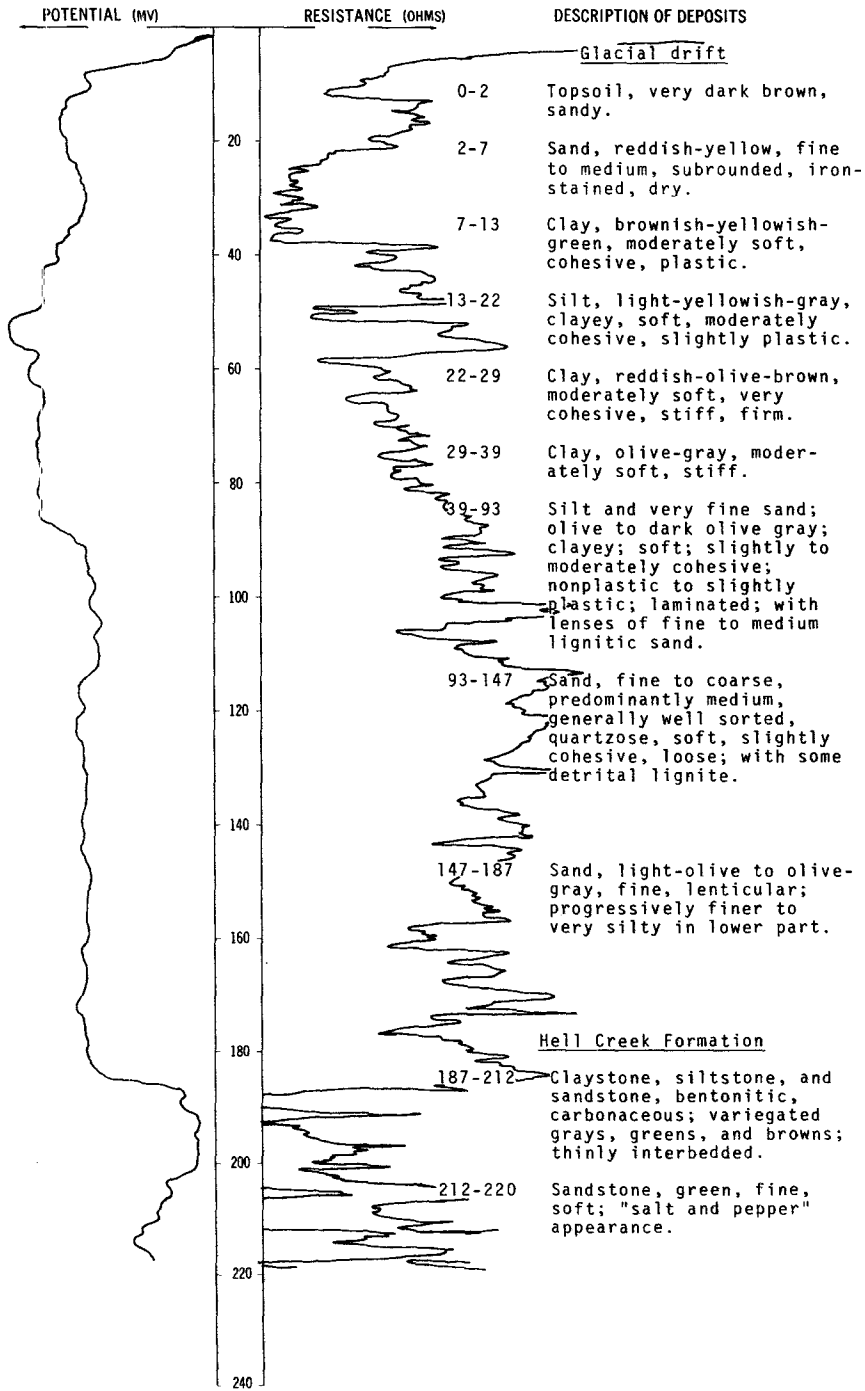


LOCATION: 136-081-07BBB

DATE DRILLED: September 1973

ALTITUDE: 1776
(FT. MSL)

DEPTH: 220
(FT)

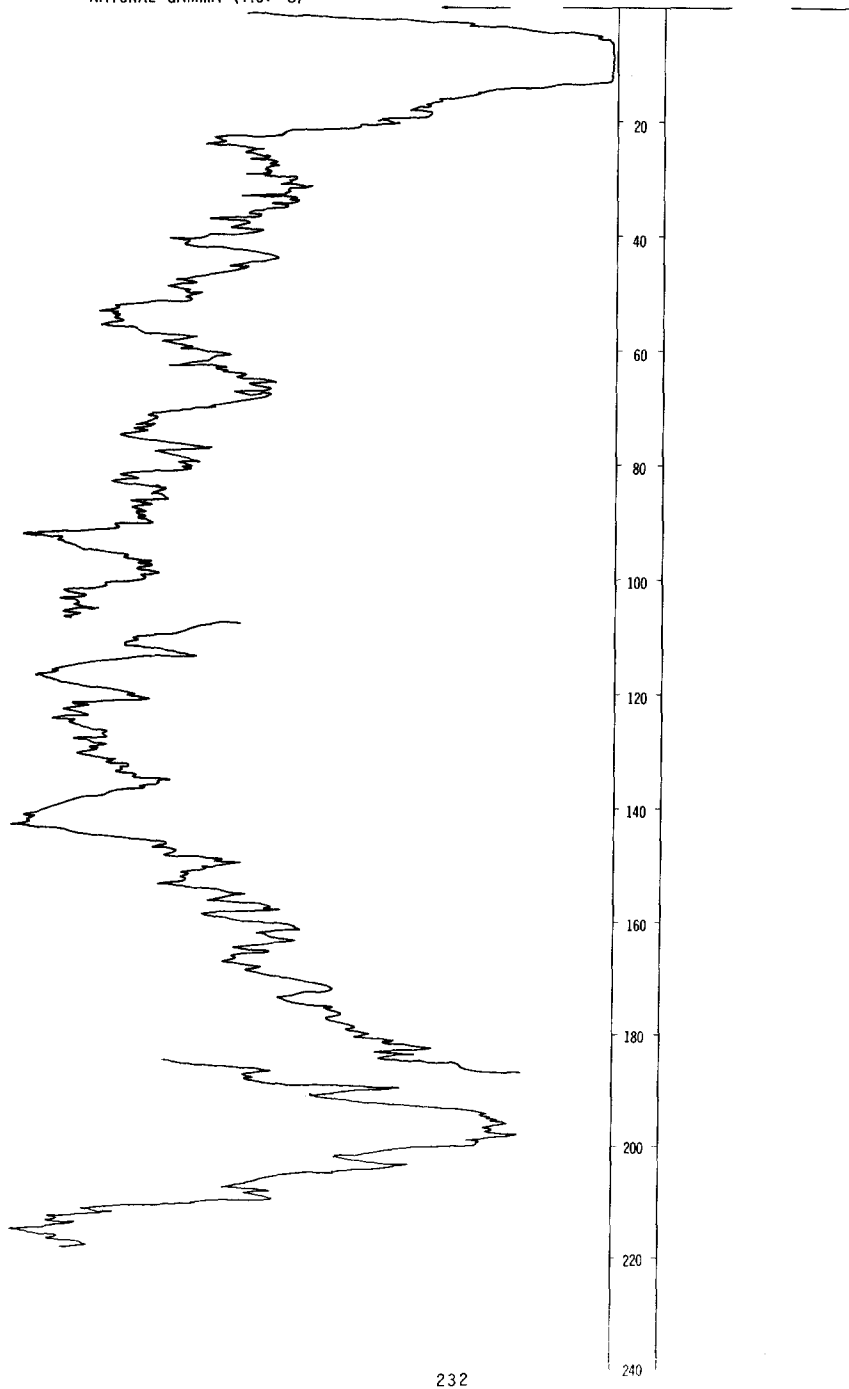


NDSWC 4591, Continued

LOCATION: 136-081-07BBB
ALTITUDE: 1776
(FT, MSL)

DATE DRILLED: September 1973
DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4771, 4771A

LOCATION: 136-081-07DDC1, 2

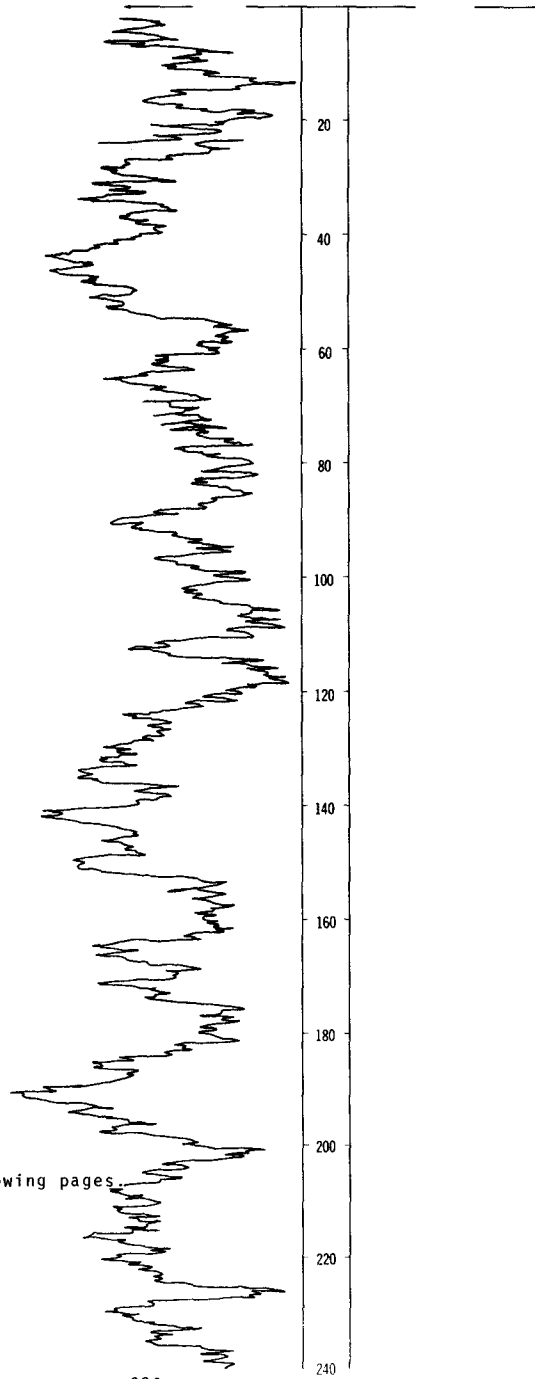
DATE DRILLED: October 1974

ALTITUDE: 1813
(FT. MSL)

DEPTH: 560
(FT)

NATURAL-GAMMA (T.C. 4)

Glacial drift



NOTE:
Detailed log on following pages

NDSWC 4771, 4771A, Continued

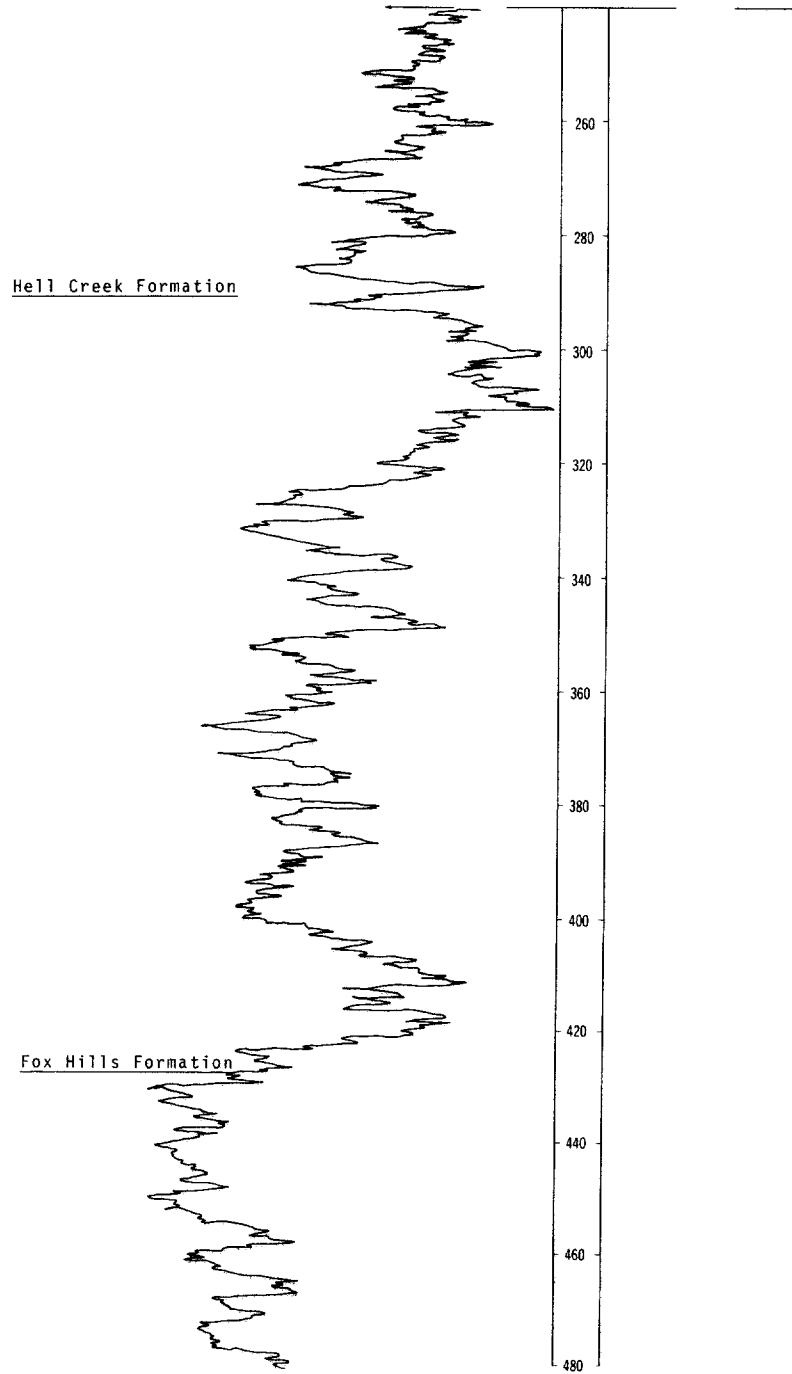
LOCATION: 136-081-07DDC1, 2

DATE DRILLED: October 1974

ALTITUDE: 1813
(FT. MSL)

DEPTH: 560
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4771, 4771A, Continued

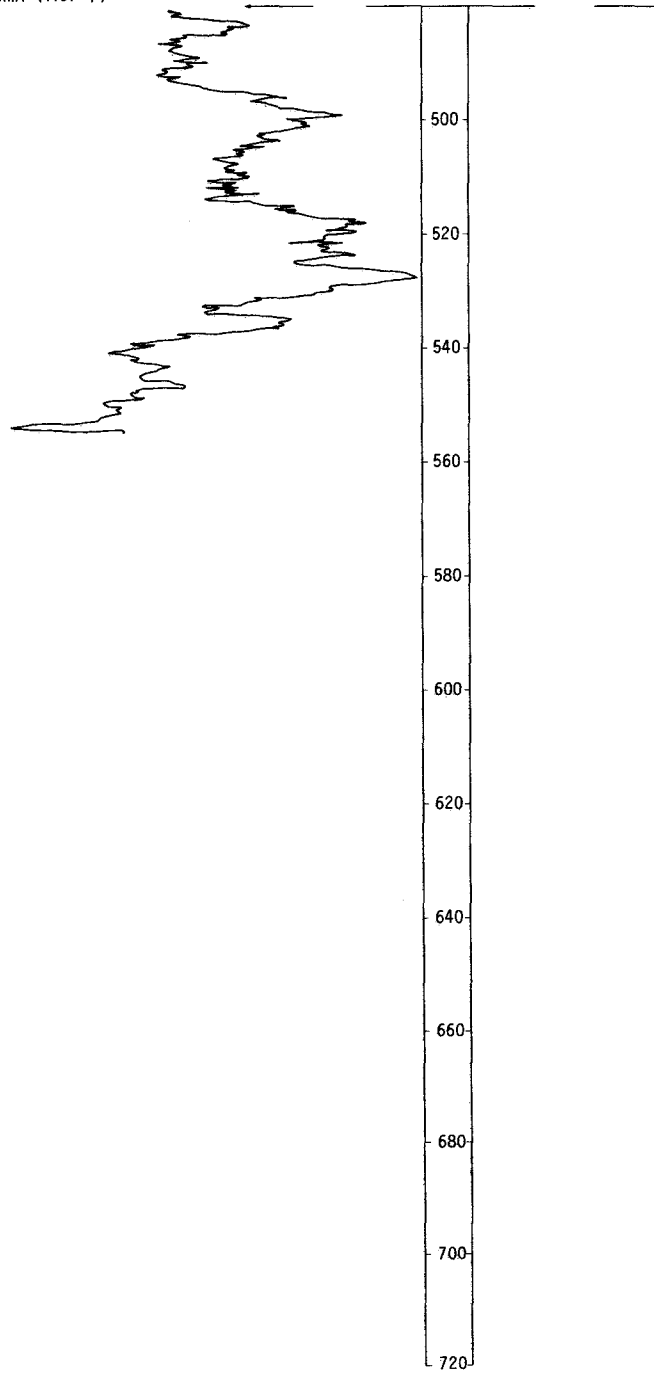
LOCATION: 136-081-07DDC1, 2

DATE DRILLED: October 1974

ALTITUDE: 1813
(FT, MSL)

DEPTH: 560
(FT)

NATURAL-GAMMA (T.C. 4)



136-081-07DDC1, 2, Continued
 NDSWC 4771, 4771A

Altitude: 1813 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, dark-yellowish-brown, very silty, highly calcareous, cohesive, moderately plastic; with medium-dark-gray mottling; a few pebbles (glacial lake sediment)-----	24	24
	Clay, moderate-yellowish-brown, moderately sandy, silty, moderately cohesive, plastic, oxidized (glacial lake sediment)-----	30	54
	Clay, olive-gray, very silty, slightly sandy, highly calcareous, moderately cohesive, sticky; with some dark-yellowish-brown mottling; occasional thin sand lenses and angular lignite chips (glacial lake sediment)-----	70	124
	Clay, olive-gray, very silty, highly calcareous, cohesive, plastic, sticky; with light-olive-gray laminae; numerous sandy silt lenses throughout section (glacial lake sediment)-----	144	268
	Silt, medium-gray, very sandy, soft, slightly plastic; sand lenses; sand from 280 to 288 feet; washing out and caving in; losing circulation; drills easy-----	20	288
Hell Creek Formation:			
	Sandstone, greenish-gray, silty, micaceous, subangular, consolidated; some brownish-gray mottling-----	4	292
	Siltstone, medium-dark-gray to dark-greenish-gray, very sandy, non-calcareous, moderately indurated; some brownish-gray mottling and dark-brown carbonaceous shale-----	32	324
	Sandstone, greenish-gray to light-bluish-gray, very fine to fine, subangular, micaceous, lignitic, limy, friable, consolidated; with light-gray mottling; some thin siltstone bedding-----	76	400
	Siltstone, medium-gray to medium-dark-gray, slightly sandy, non-calcareous, moderately indurated; some bentonite-----	25	425
Fox Hills Formation:			
	Sandstone, medium-bluish-gray to greenish-gray, very fine to medium, subangular, micaceous; some light-bluish-gray specks; mostly very fine to fine; occasional cemented concretions; some light-brownish-gray siltstone bedding; about 95 percent quartz and 5 percent dark minerals; fossiliferous shell fragments-----	69	494

136-081-07DDC1, 2, Continued
 NDSWC 4771, 4771A

Altitude: 1813 feet

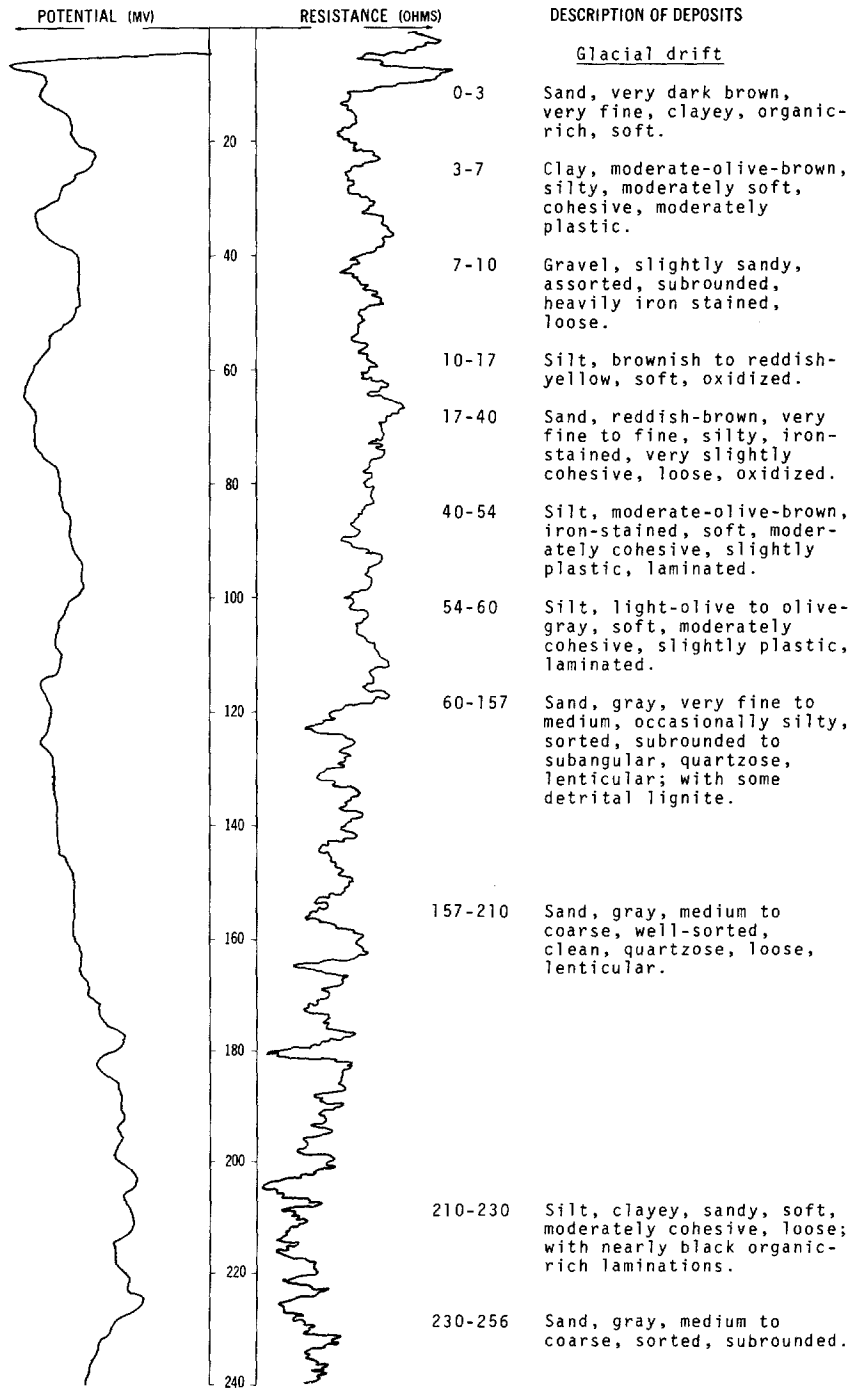
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Fox Hills	Formation, Continued: Siltstone, light-brownish-gray to medium-gray, very sandy, slightly bentonitic, noncalcareous, moderately indurated; a few thin yellowish-gray limestone concretions and thin sandstone interbeds-----	22	516
	Shale, medium-dark-gray, non-calcareous, moderately indurated, sticky; some light-olive-gray mottling; a few angular quartz grains; some bentonite-----	20	536
	Siltstone, medium-dark-gray, very sandy, clayey, bentonitic, noncalcareous, moderately indurated; lower 40 feet of hole booted up; poor sample return-----	24	560

LOCATION: 136-081-16BBB

ALTITUDE: 1784
(FT, MSL)

DATE DRILLED: September 1973

DEPTH: 360
(FT)



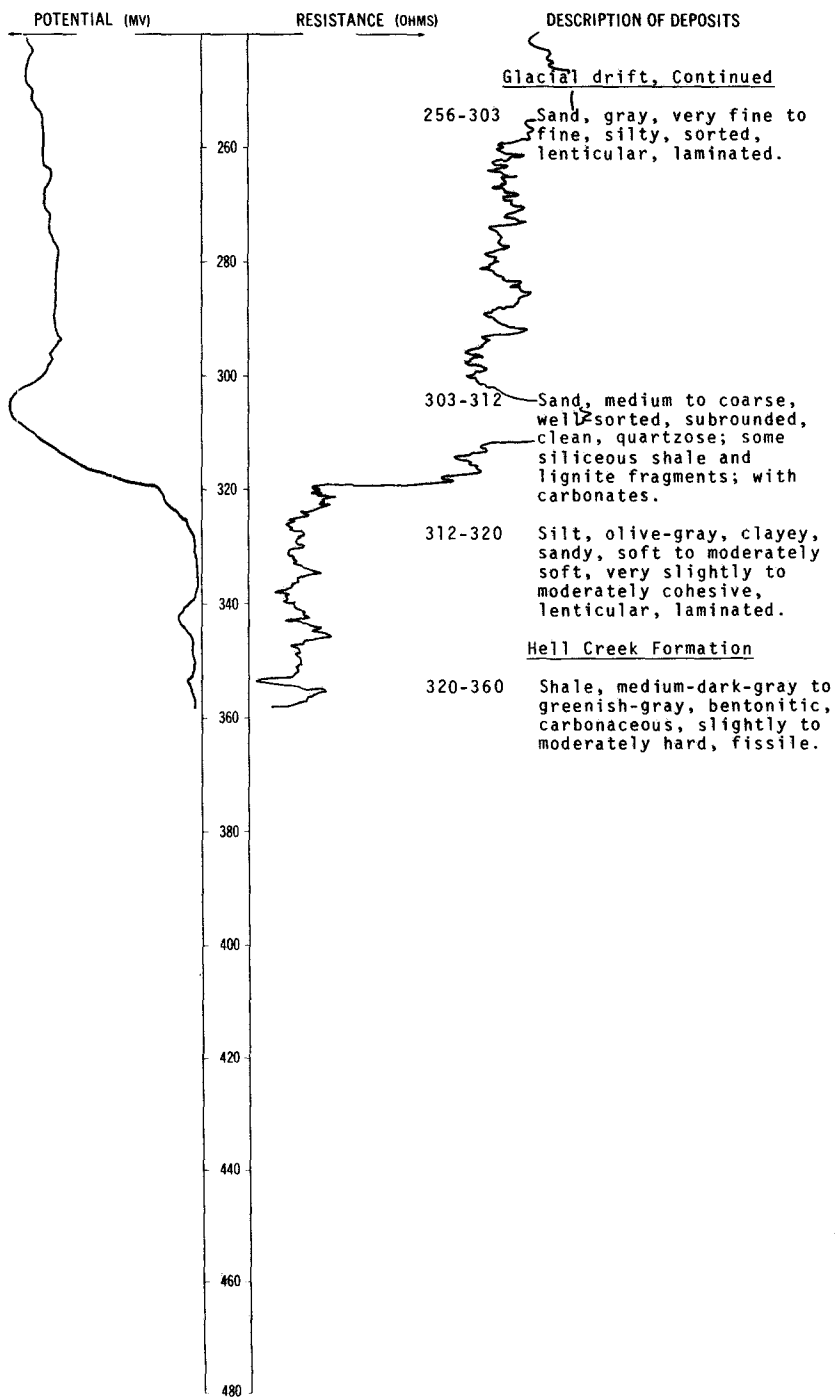
NDSWC 4592, Continued

LOCATION: 136-081-16BBB

DATE DRILLED: September 1973

ALTITUDE: 1784
(FT, MSL)

DEPTH: 360
(FT)



NDSWC 4592, Continued

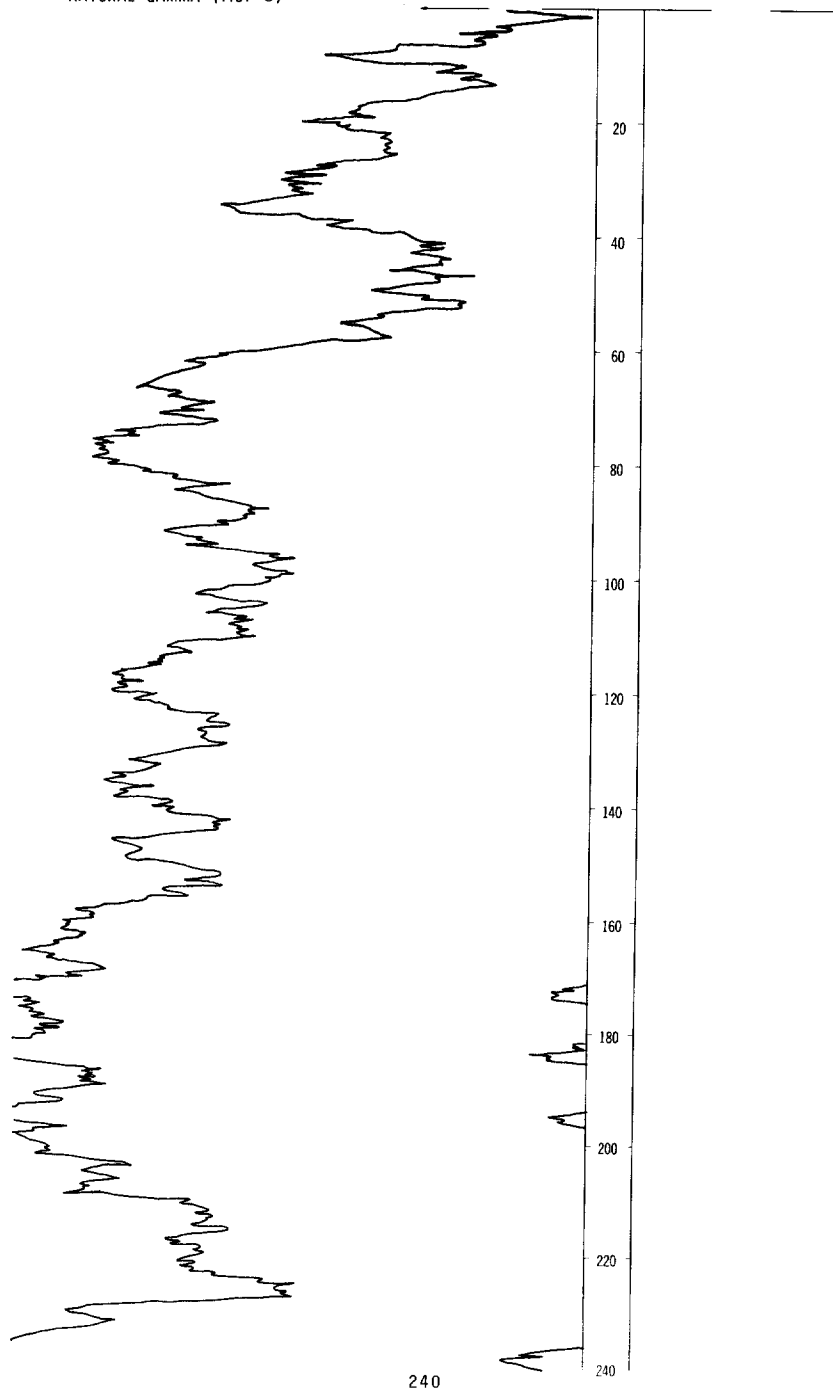
LOCATION: 136-081-16BBB

DATE DRILLED: September 1973

ALTITUDE: 1784
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4592, Continued

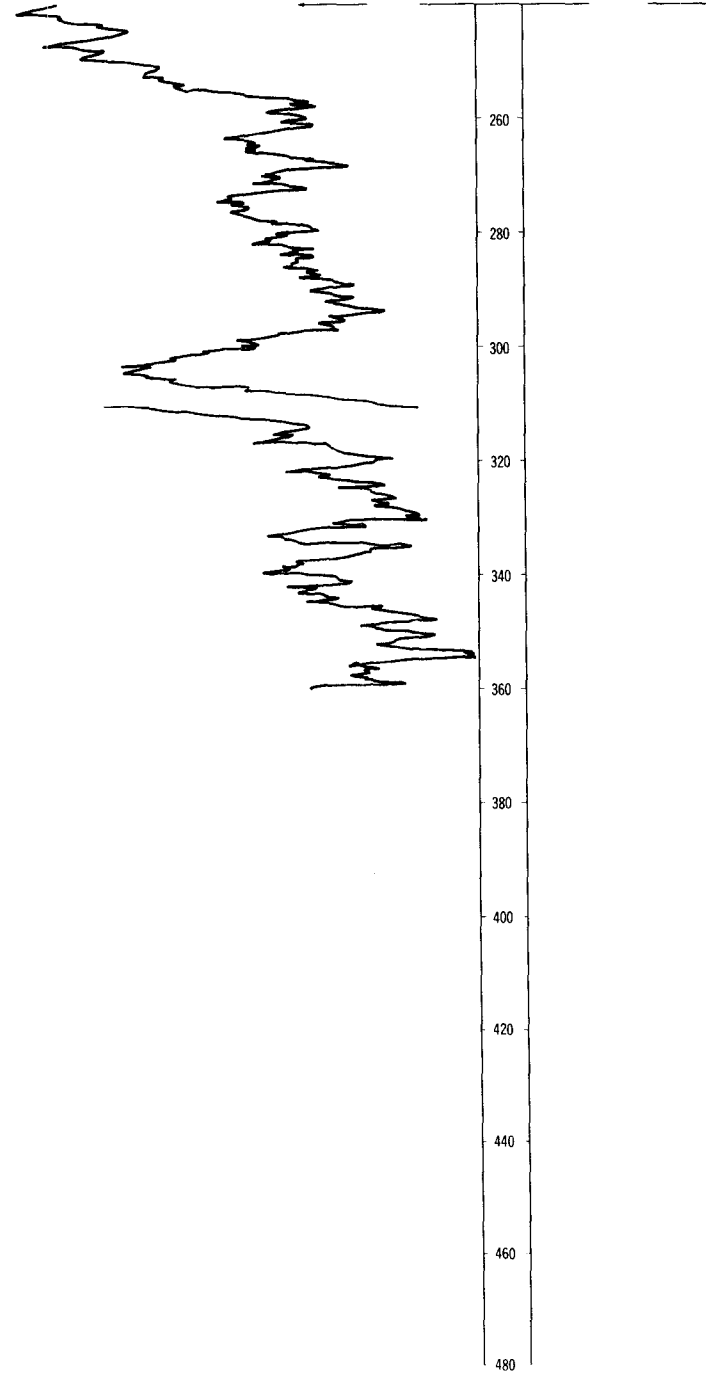
LOCATION: 136-081-16BBB

DATE DRILLED: September 1973

ALTITUDE: 1784
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 8)

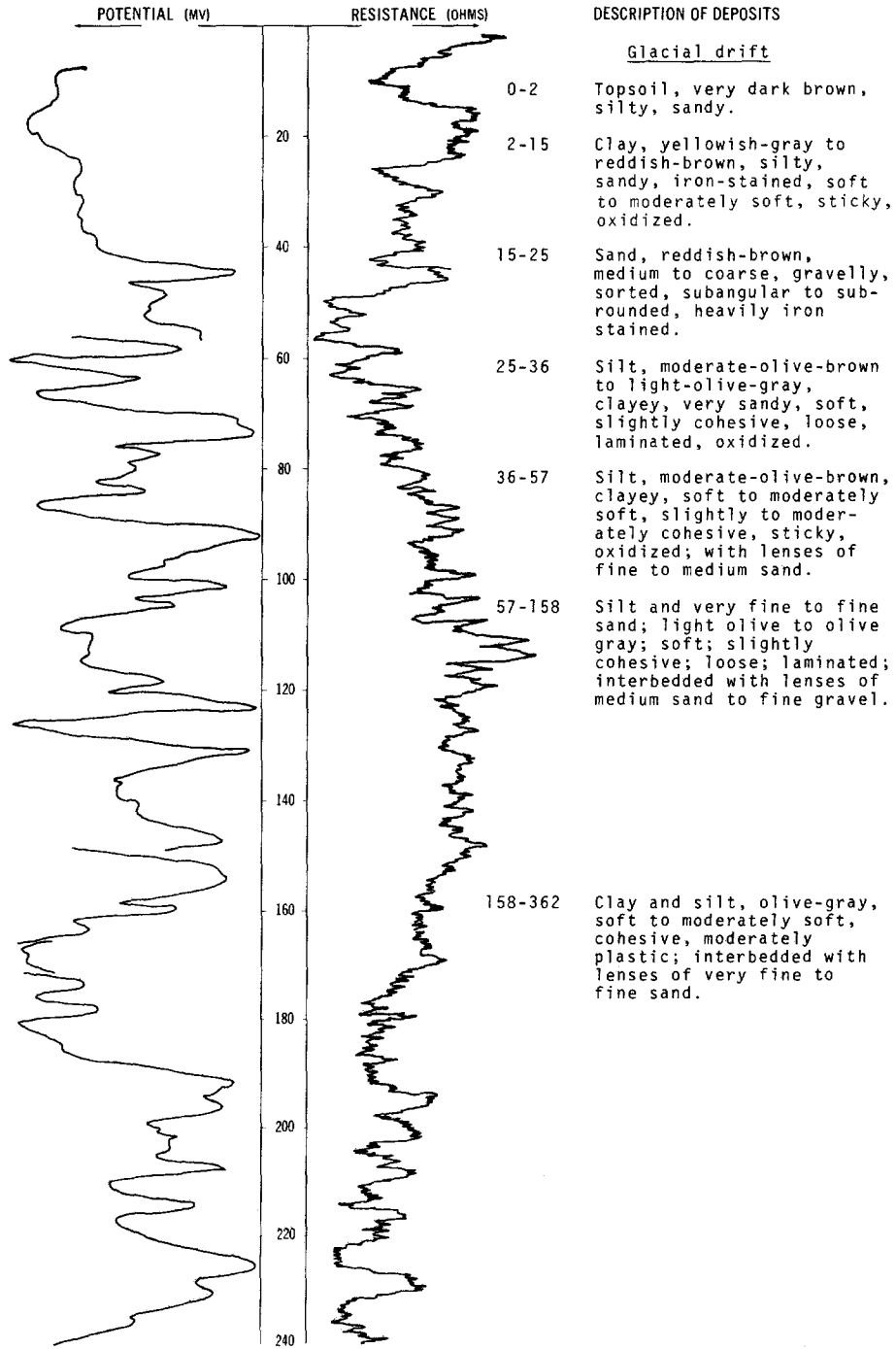


LOCATION: 136-081-16CCC

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 500
(FT)



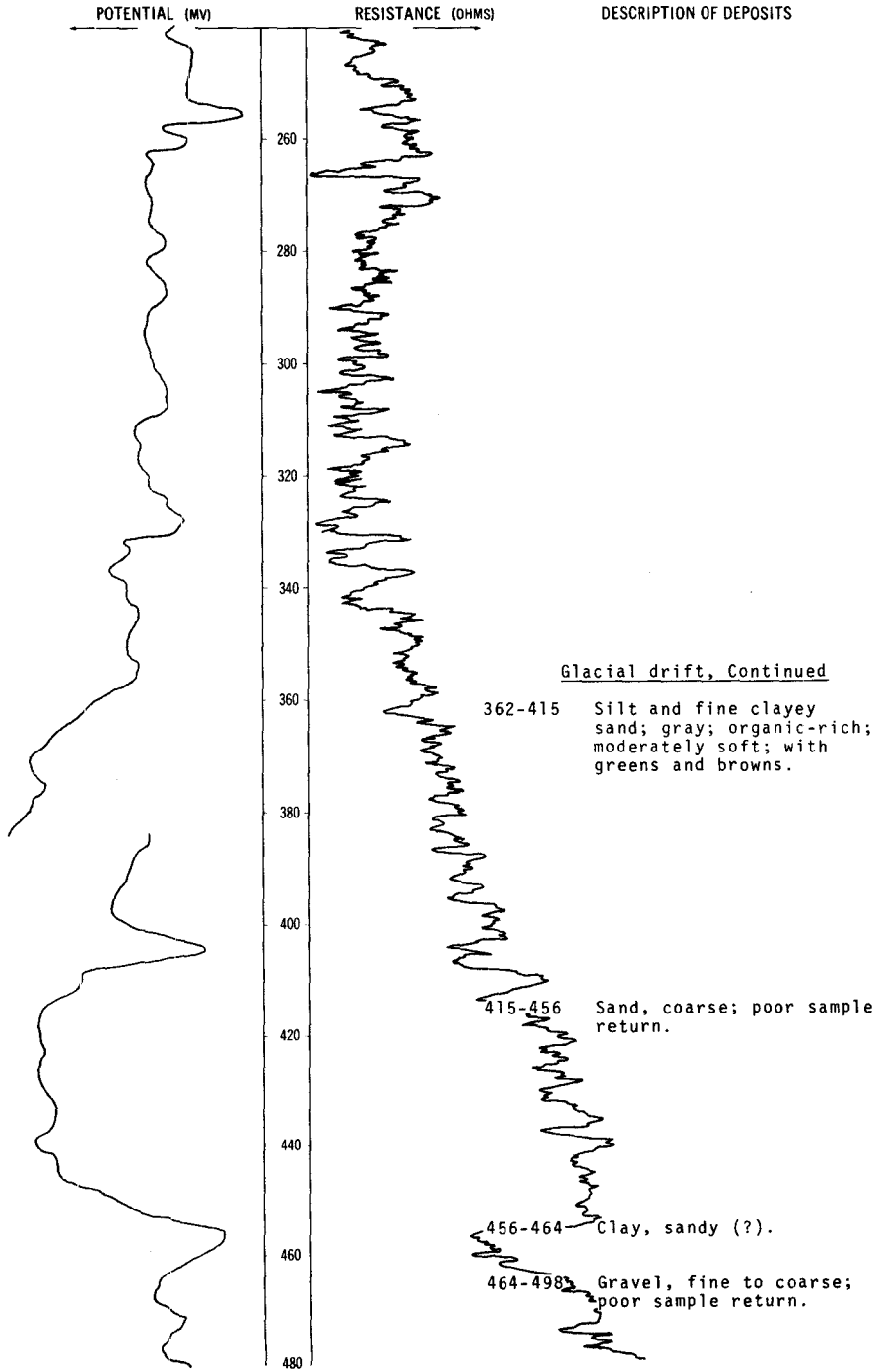
NDSWC 4595, Continued

LOCATION: 136-081-16CCC

DATE DRILLED: September 1973

ELEVATION: 1785
(FT, MSL)

DEPTH: 500
(FT)



NDSWC 4595, Continued

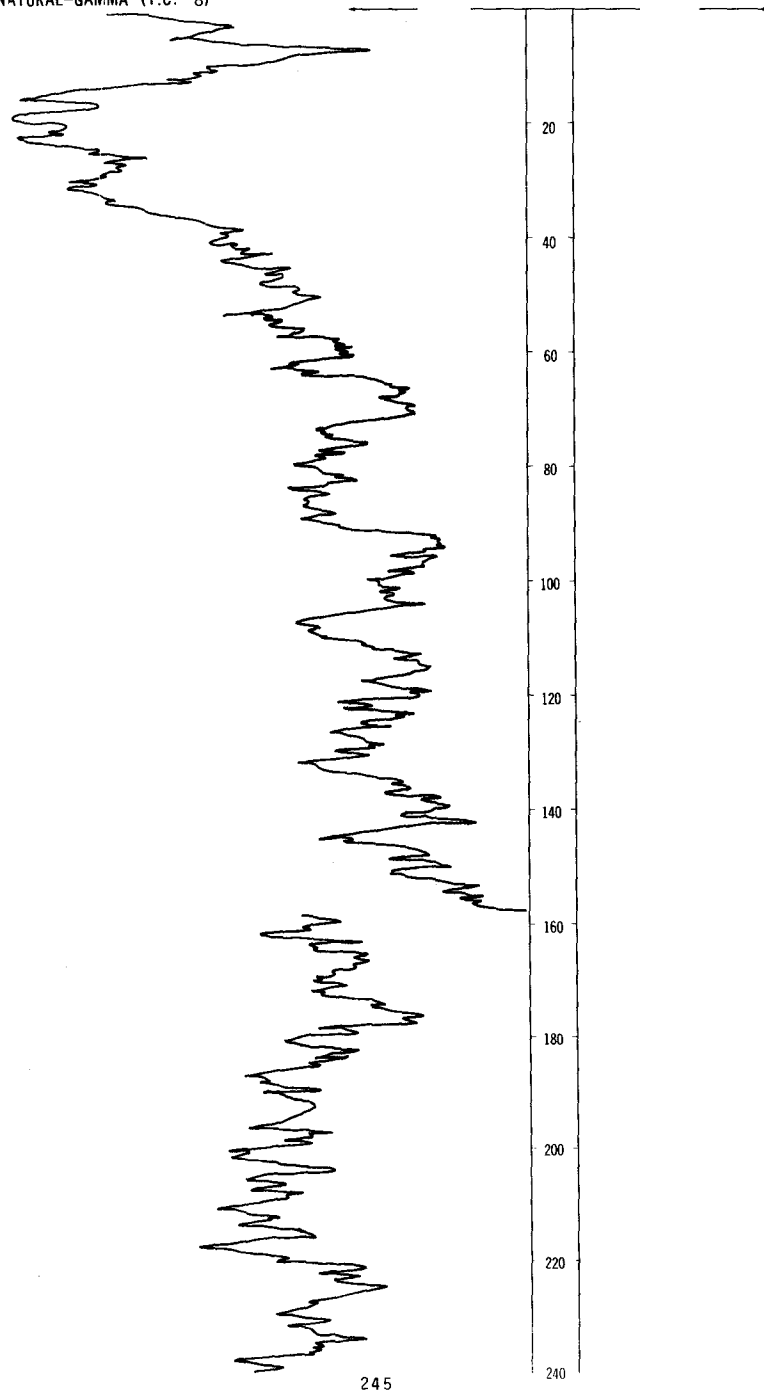
LOCATION: 136-081-16CCC

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4595, Continued

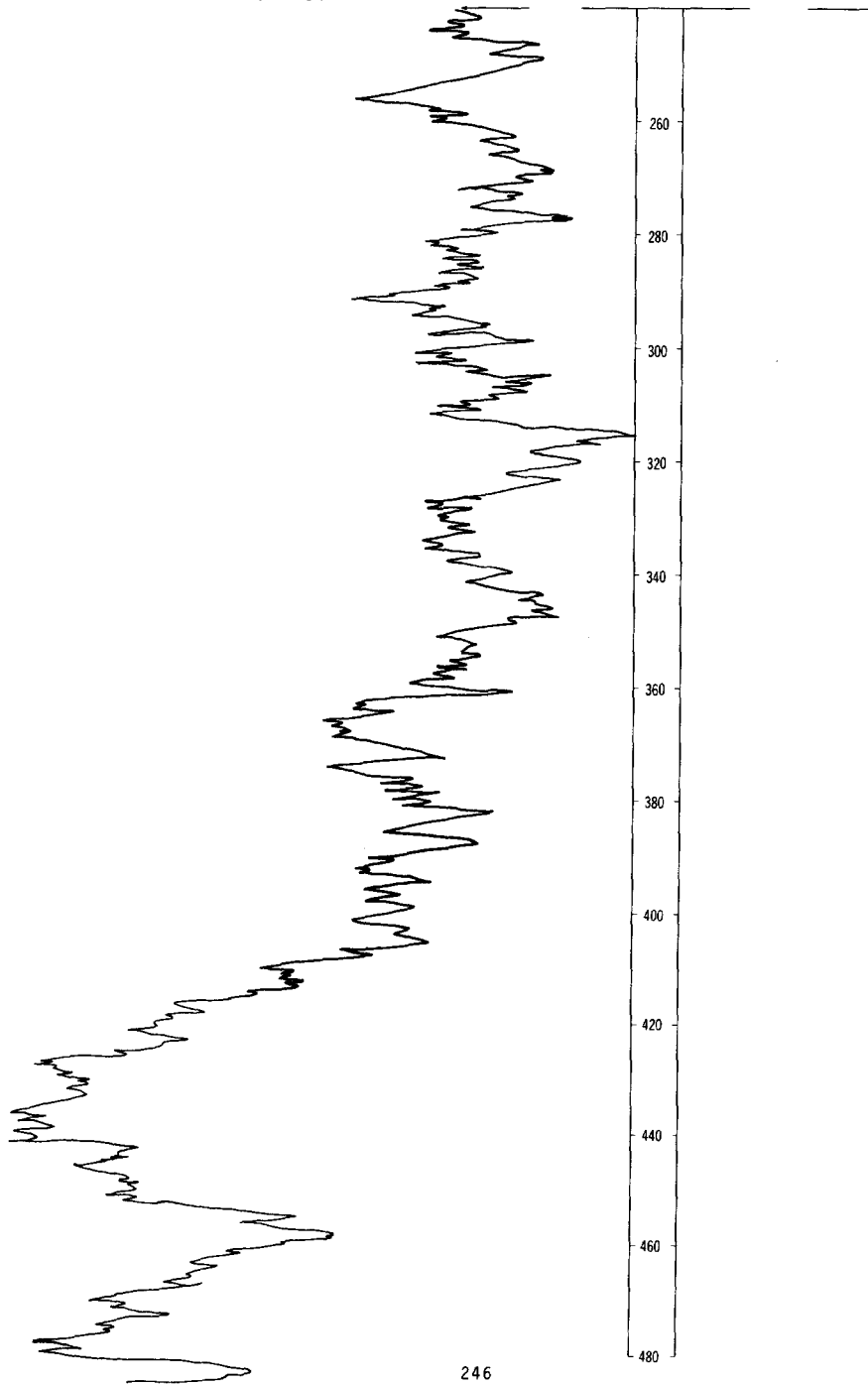
LOCATION: 136-081-16CCC

DATE DRILLED: September 1973

ALTITUDE: 1785
(FT, MSL)

DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)

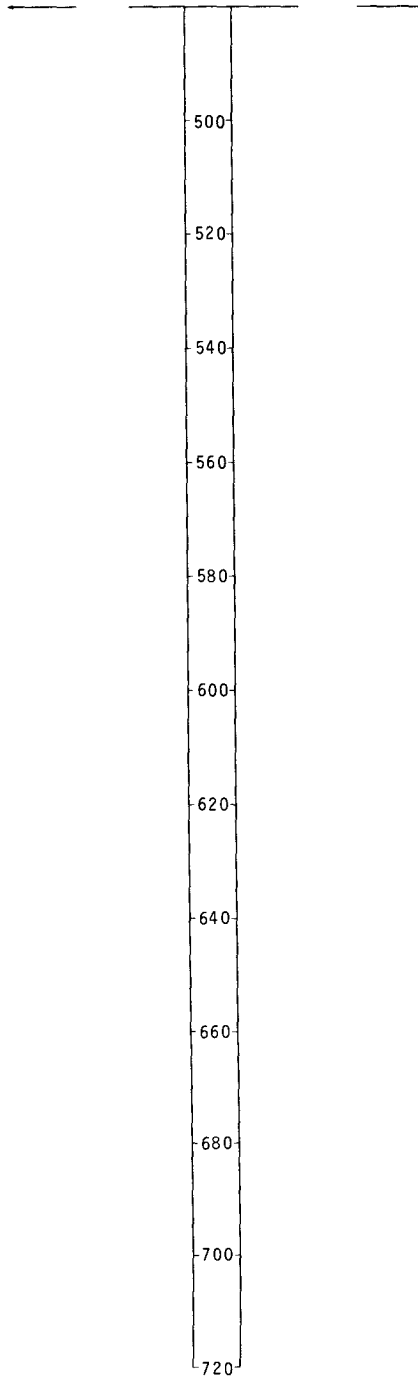


NDSWC 4595, Continued

LOCATION: 136-081-16CCC
ALTITUDE: 1785
(FT, MSL)

DATE DRILLED: September 1973
DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)



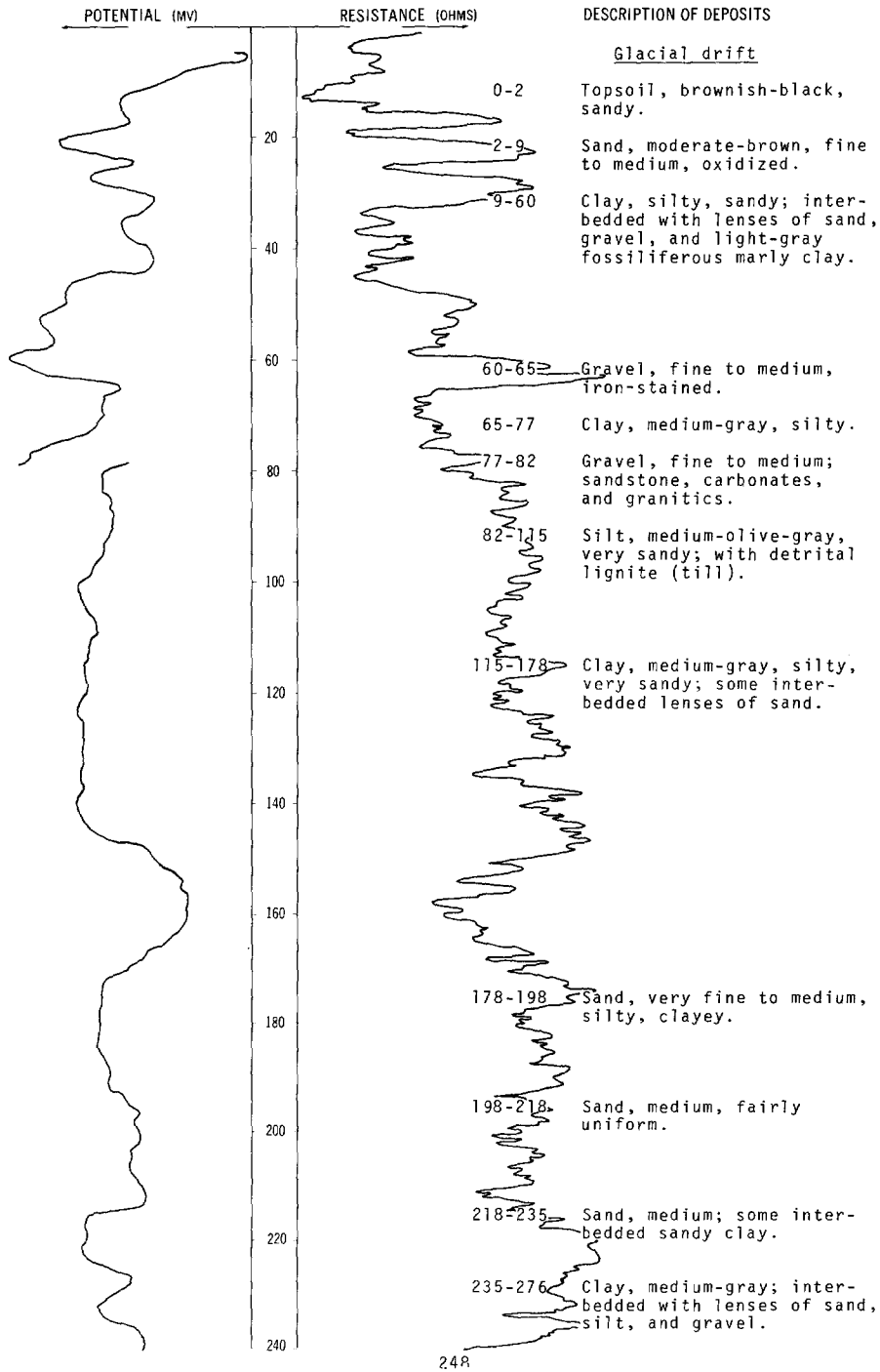
NDSWC 4594

LOCATION: 136-081-16CCD

DATE DRILLED: September 1973

ALTITUDE: 1795
(FT, MSL)

DEPTH: 473
(FT)

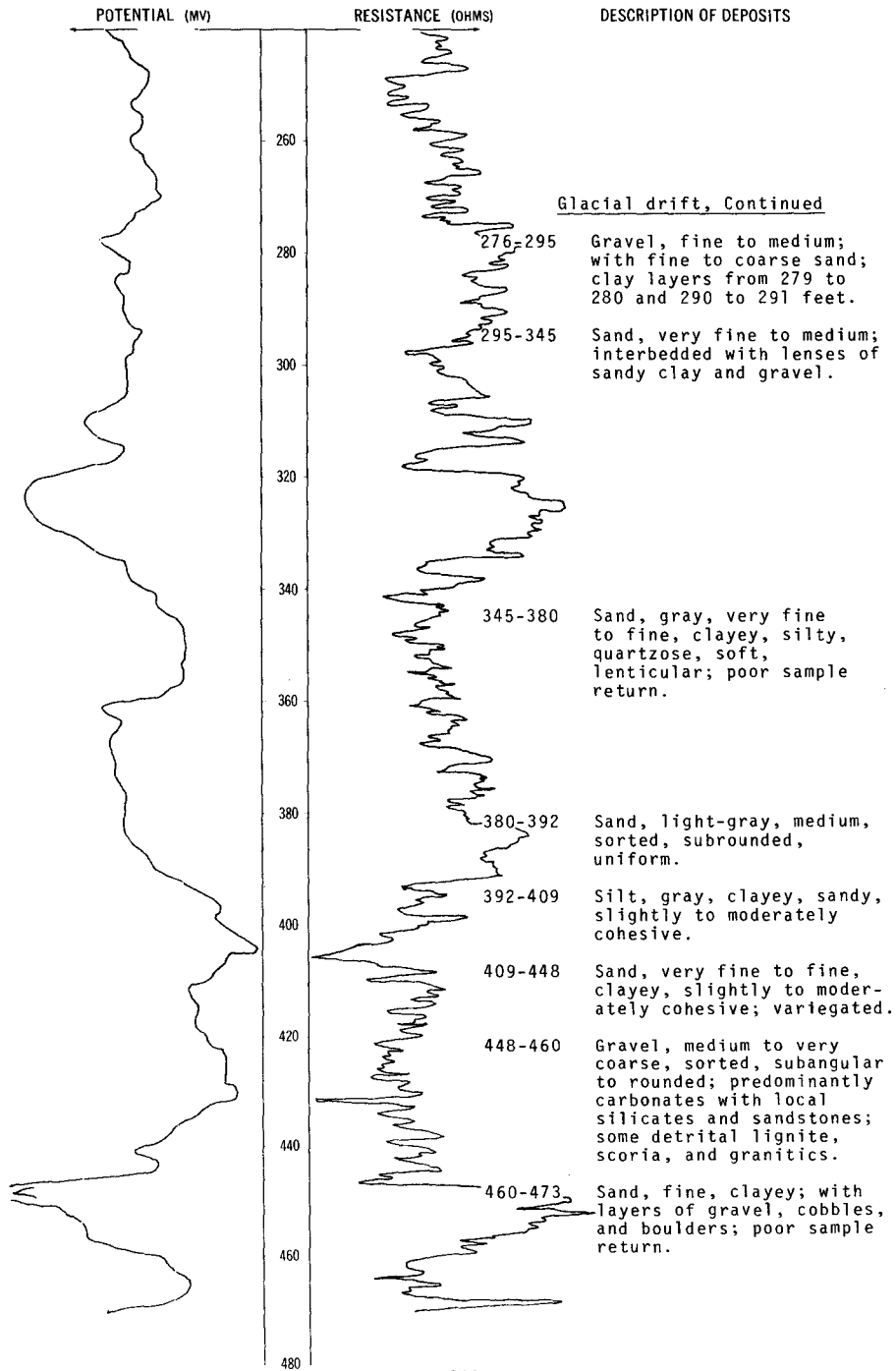


LOCATION: 136-081-16CCD

DATE DRILLED: September 1973

ALTITUDE: 1795
(F, MSL)

DEPTH: 473
(FT)



NDSWC 4594, Continued

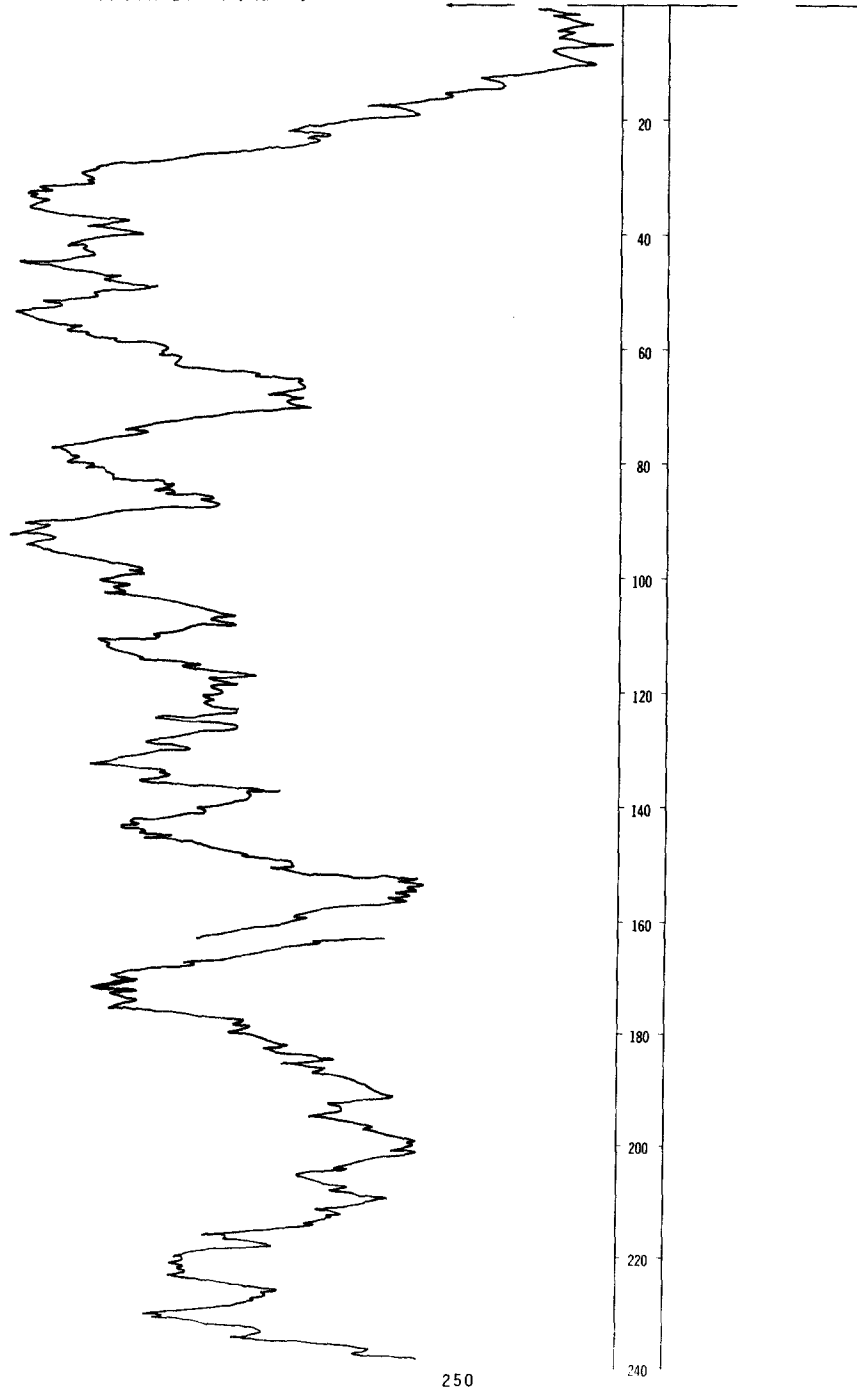
LOCATION: 136-081-16CCD

DATE DRILLED: September 1973

ALTITUDE: 1795
(FT. MSL)

DEPTH: 473
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4594, Continued

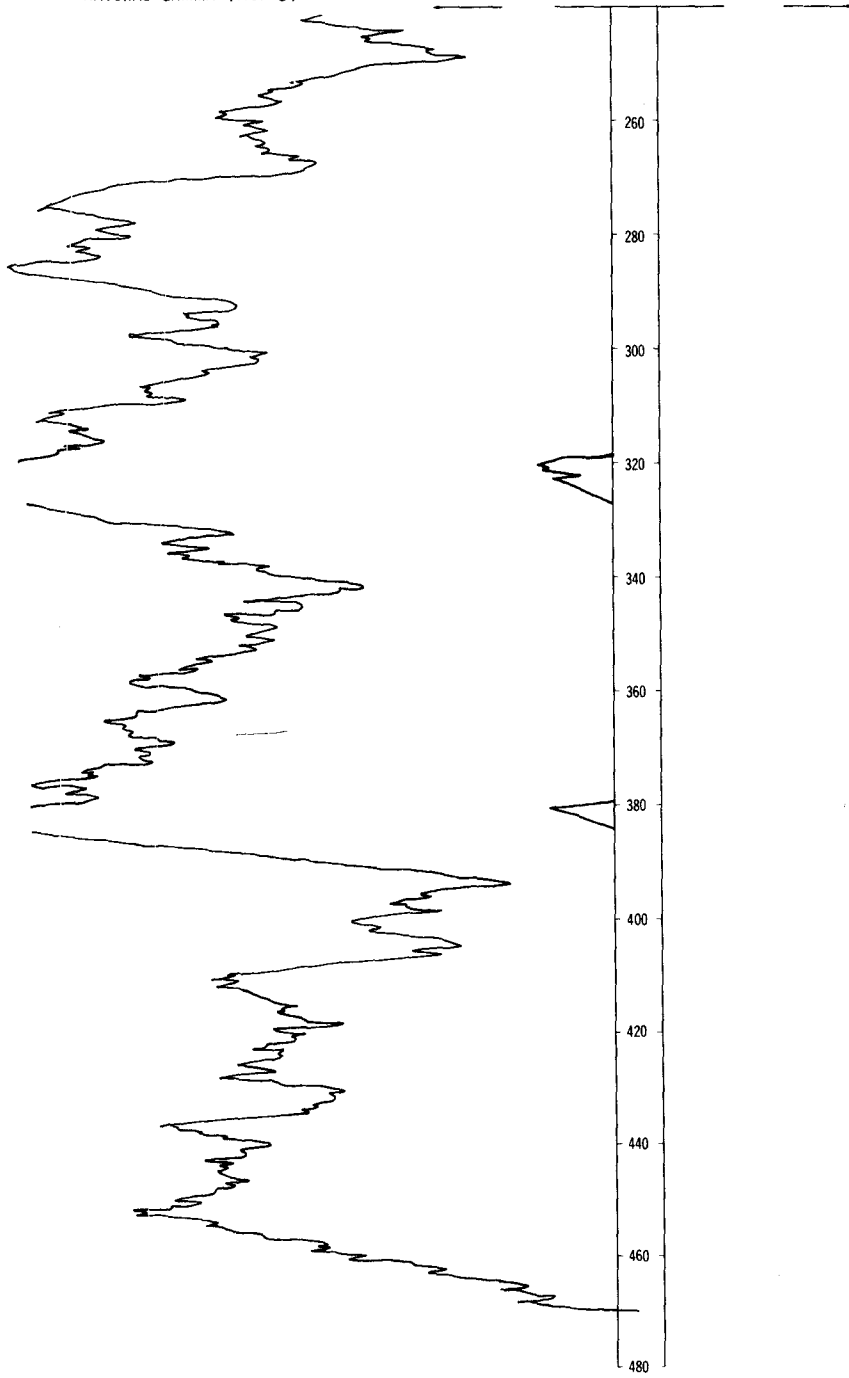
LOCATION: 136-081-16CCD

DATE DRILLED: September 1973

ALTITUDE: 1795
(FT. MSL)

DEPTH: 473
(FT)

NATURAL-GAMMA (T.C. 8)

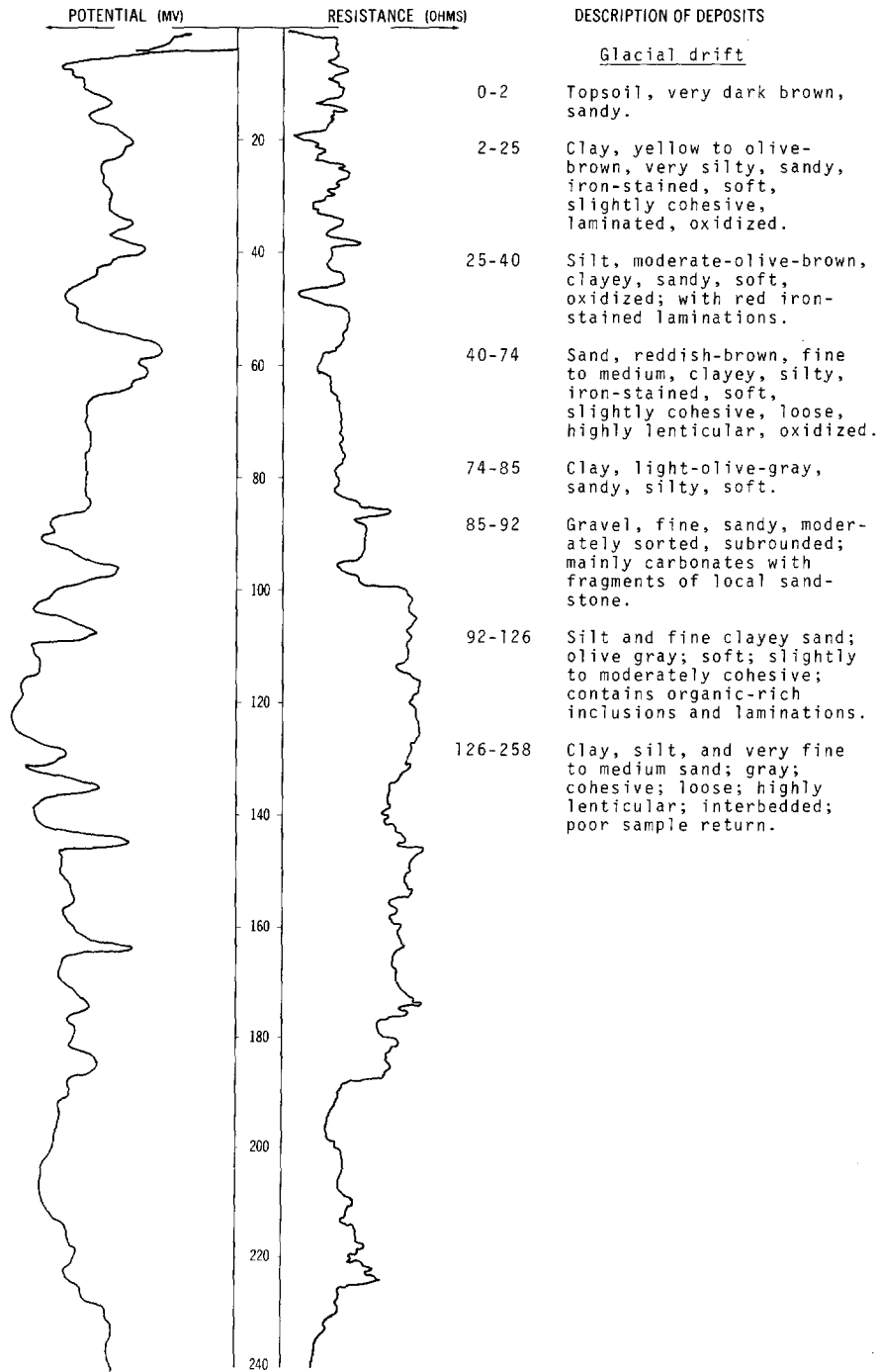


LOCATION: 136-081-16CDD

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 500
(FT)



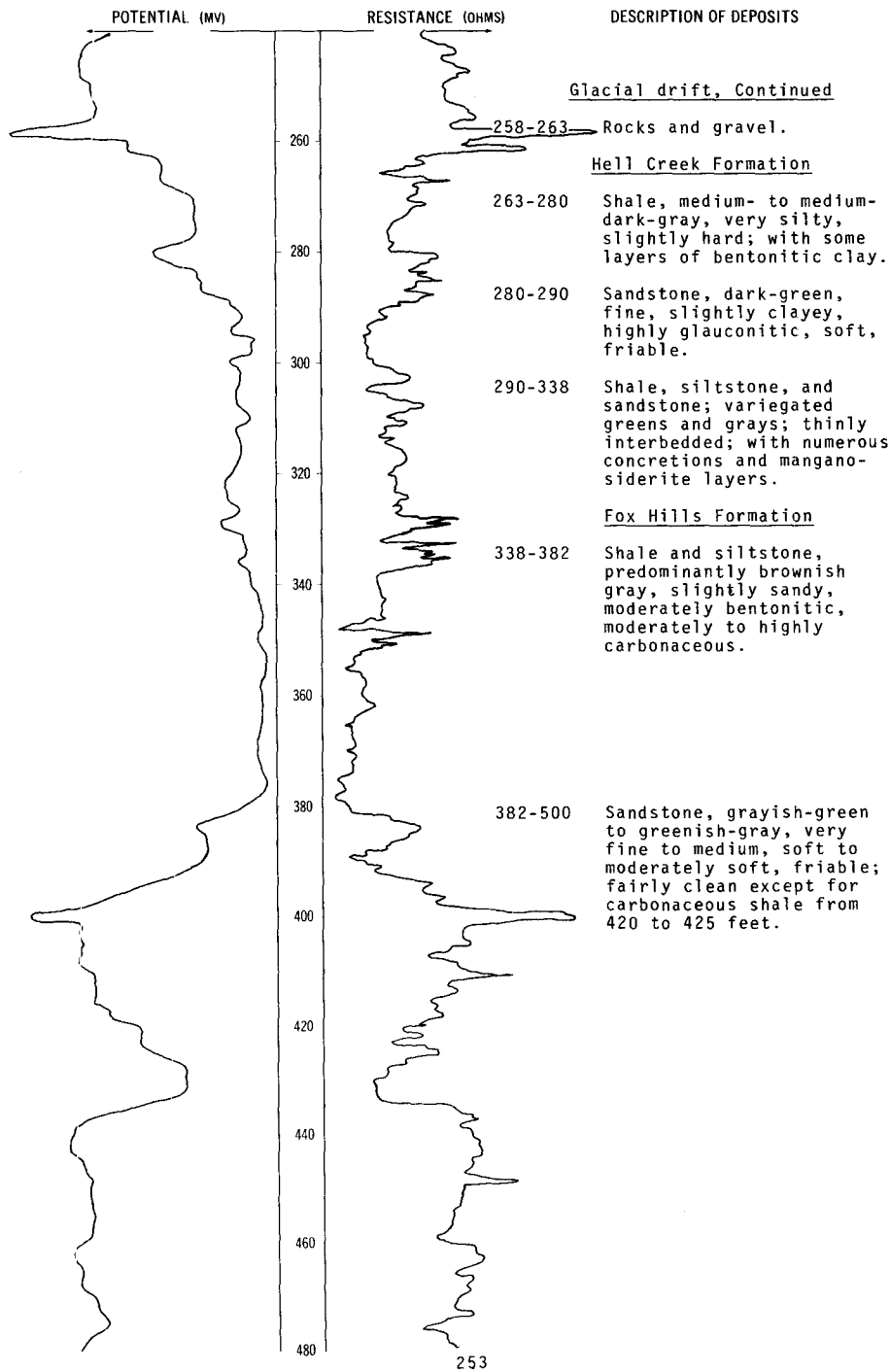
NDSWC 4593, Continued

LOCATION: 136-081-16CDD

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

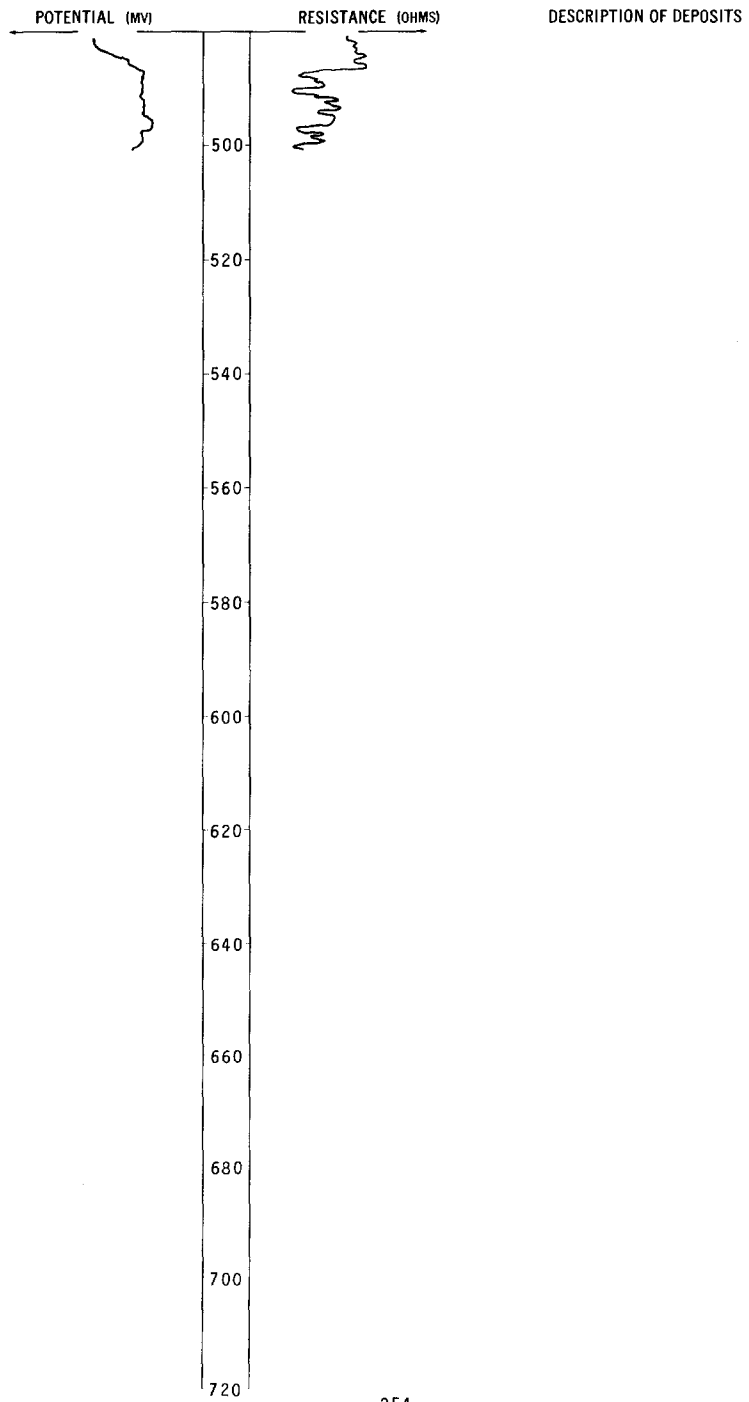
DEPTH: 500
(FT)



NDSWC 4593, Continued

LOCATION: 136-081-16CDD
ALTITUDE: 1820
(FT, MSL)

DATE DRILLED: September 1973
DEPTH: 500
(FT)



NDSWC 4593, Continued

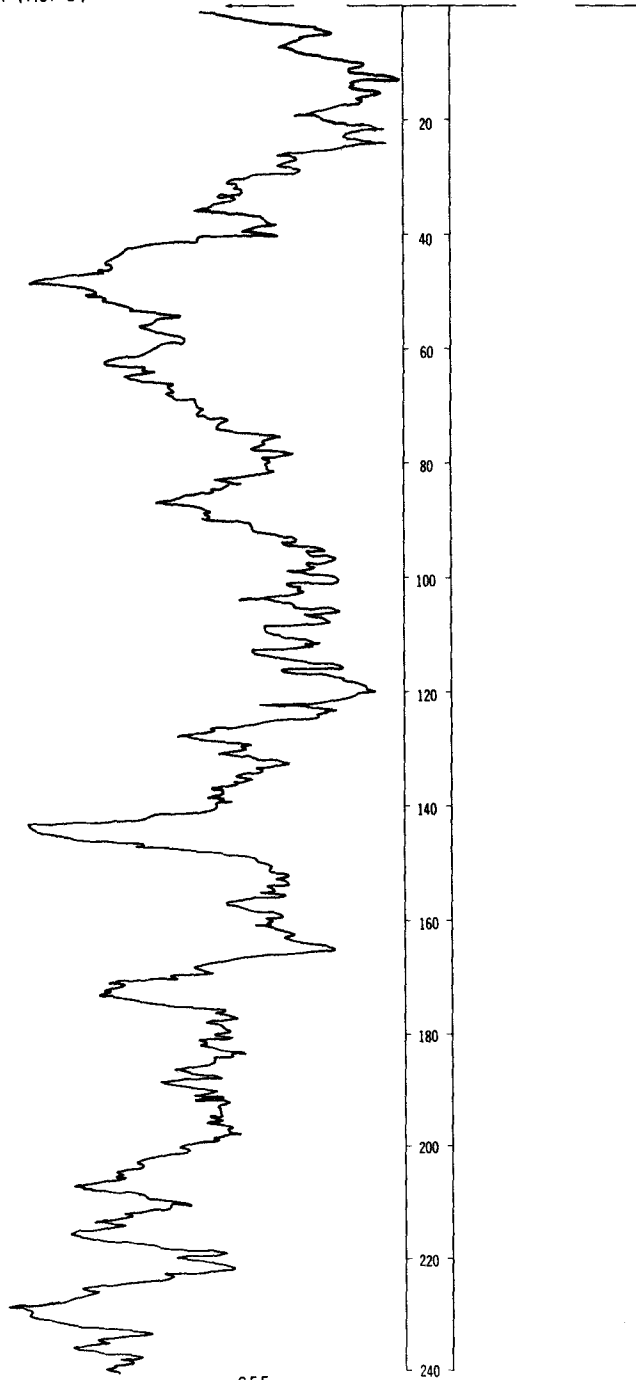
LOCATION: 136-081-16CDD

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4593, Continued

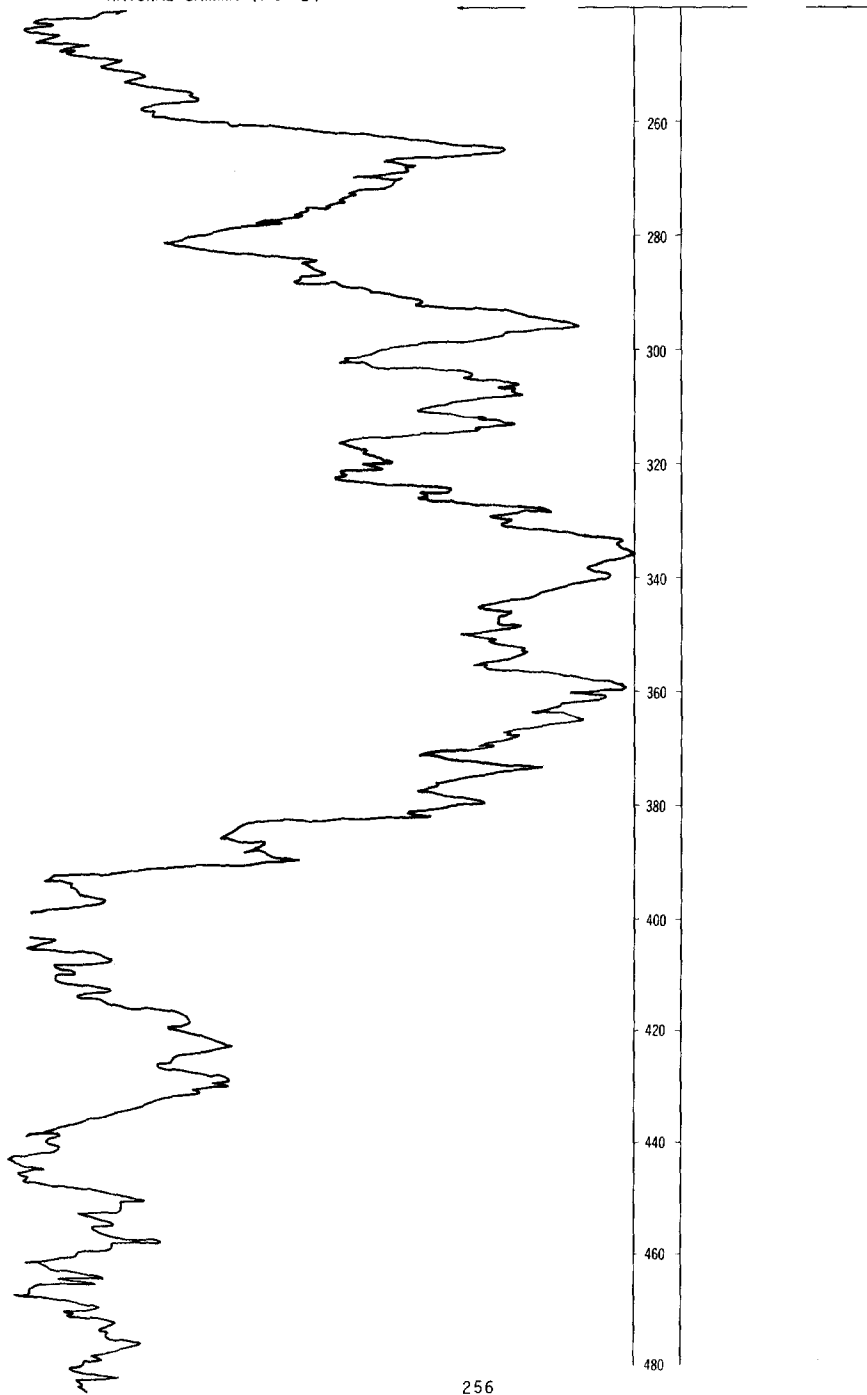
LOCATION: 136-081-16CDD

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4593, Continued

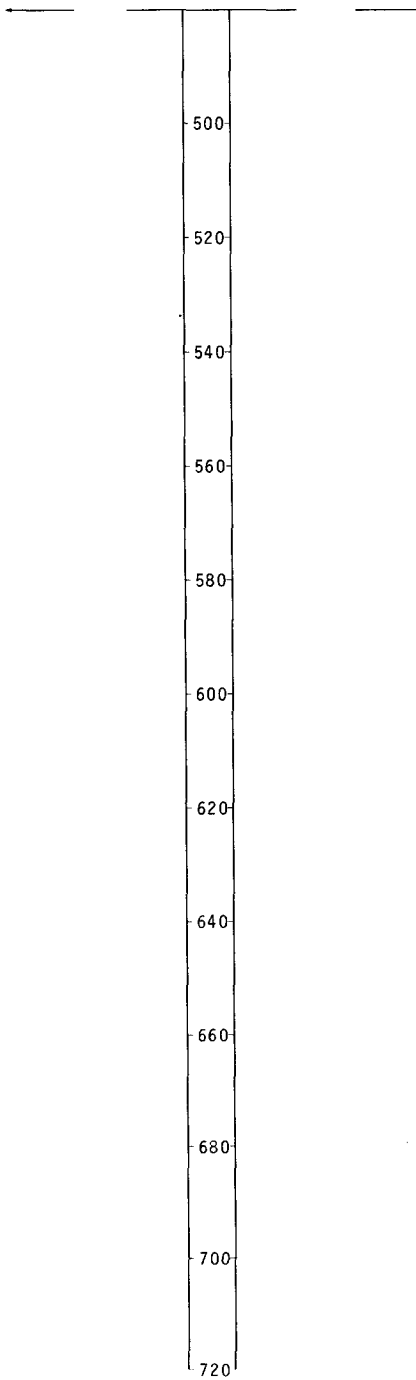
LOCATION: 136-081-16CDD

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 500
(FT)

NATURAL-GAMMA (T.C. 8)



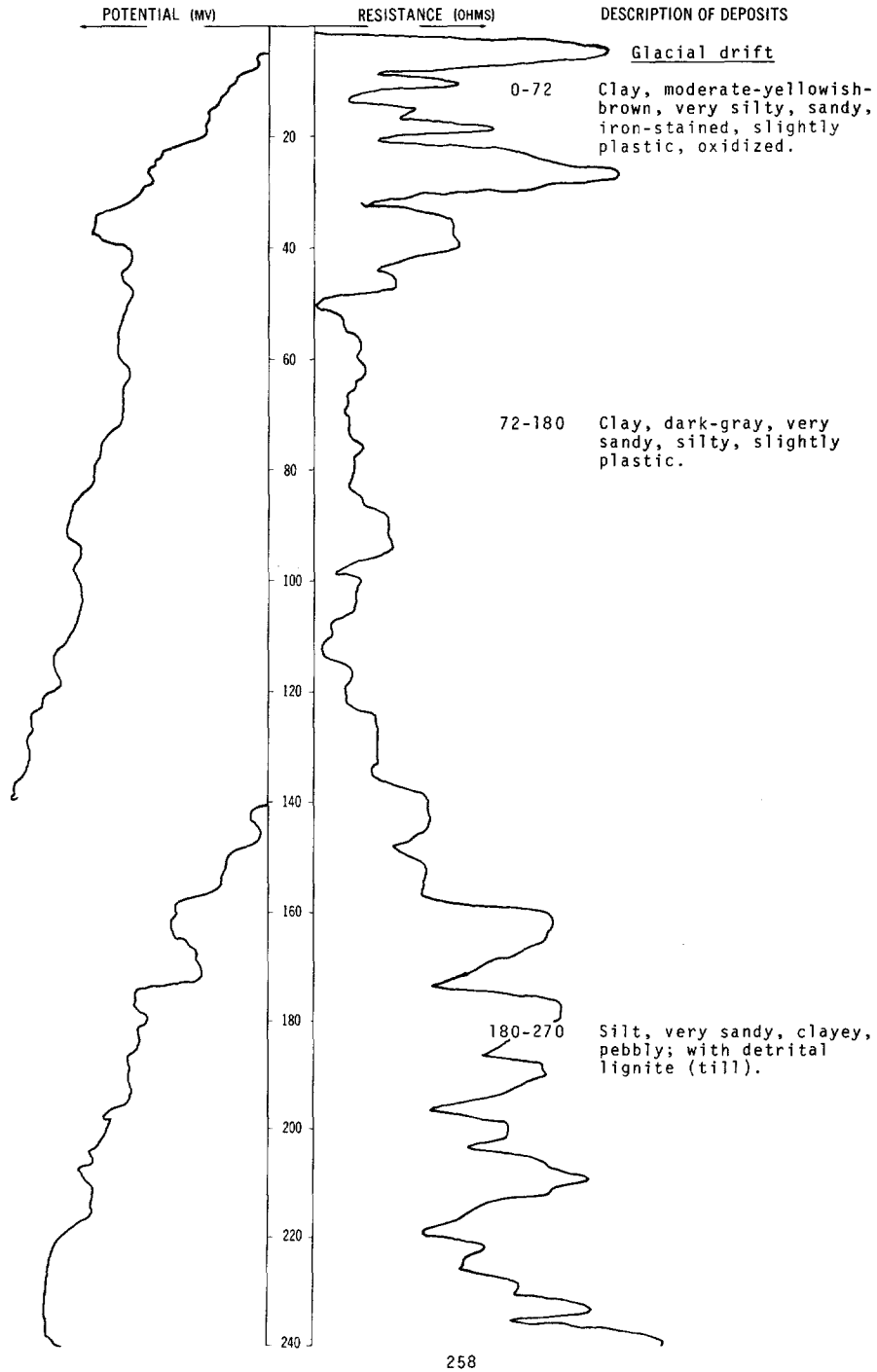
NDSWC 9288

LOCATION: 136-081-21CCD

DATE DRILLED: June 1975

ALTITUDE: 1819
(FT. MSL)

DEPTH: 460
(FT)



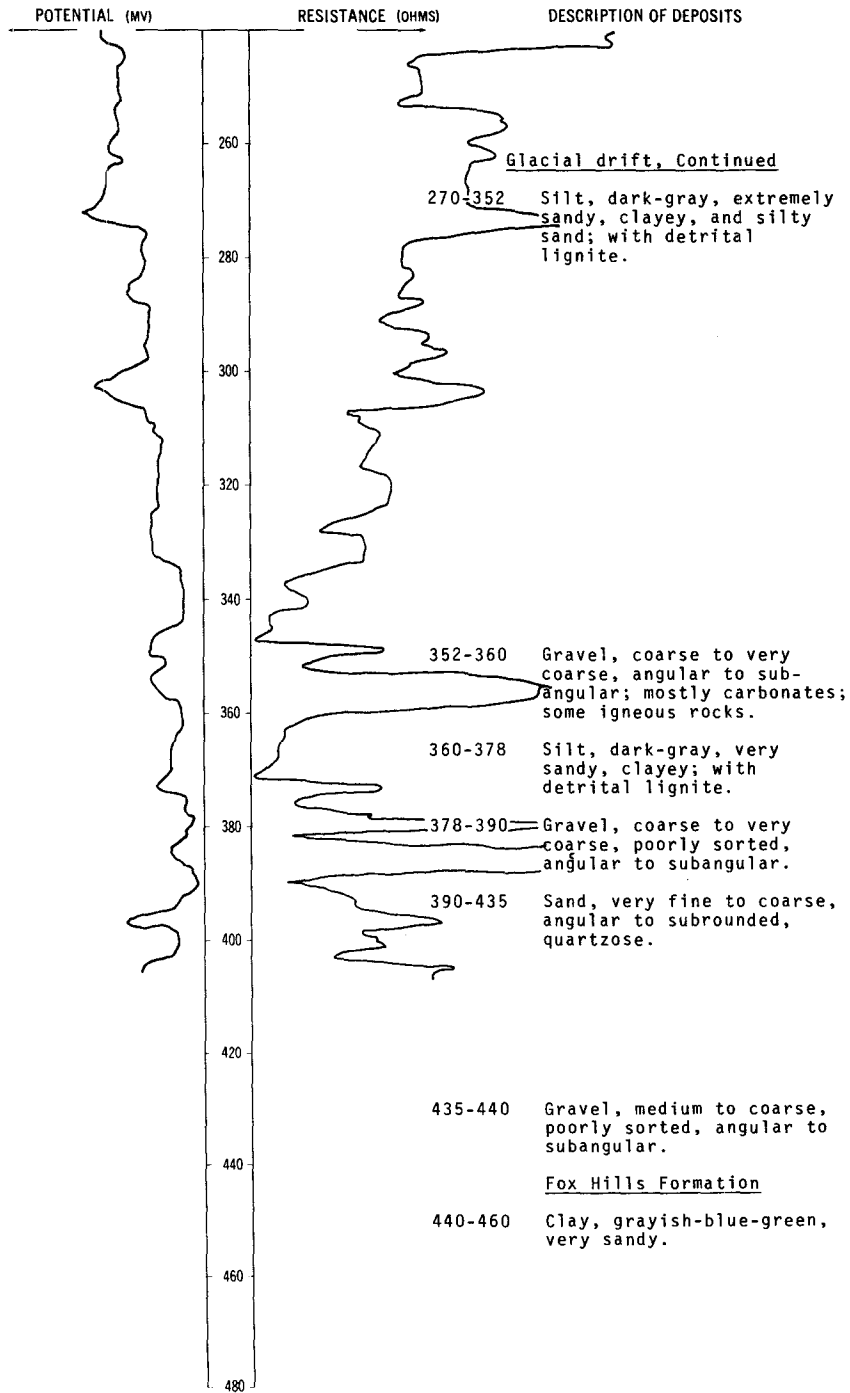
NDSWC 9288, Continued

LOCATION: 136-081-21CCD

DATE DRILLED: June 1975

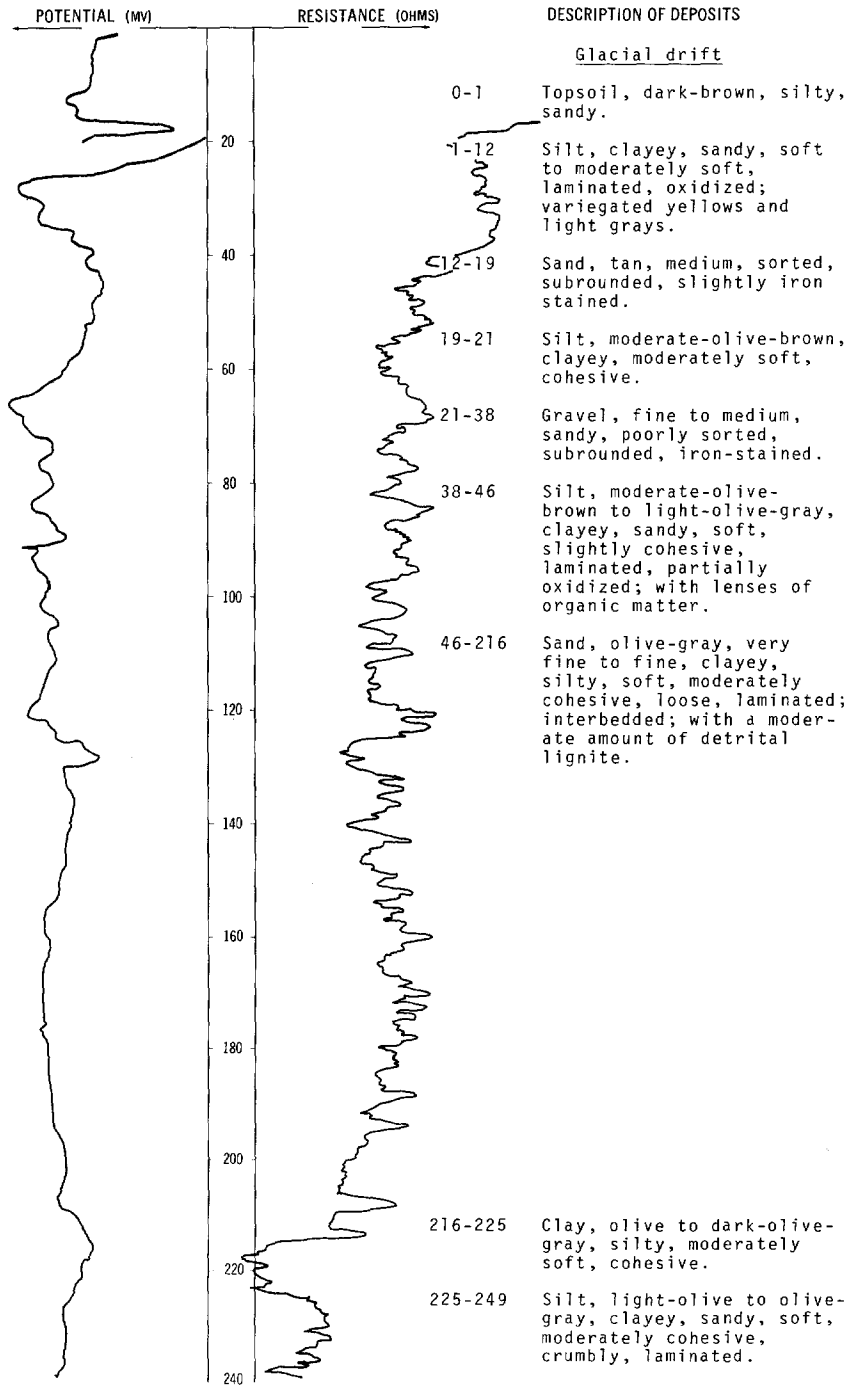
ALTITUDE: 1819
(FT, MSL)

DEPTH: 460
(FT)



LOCATION: 136-081-31ABB
 ALTITUDE: 1844
 (FT, MSL)

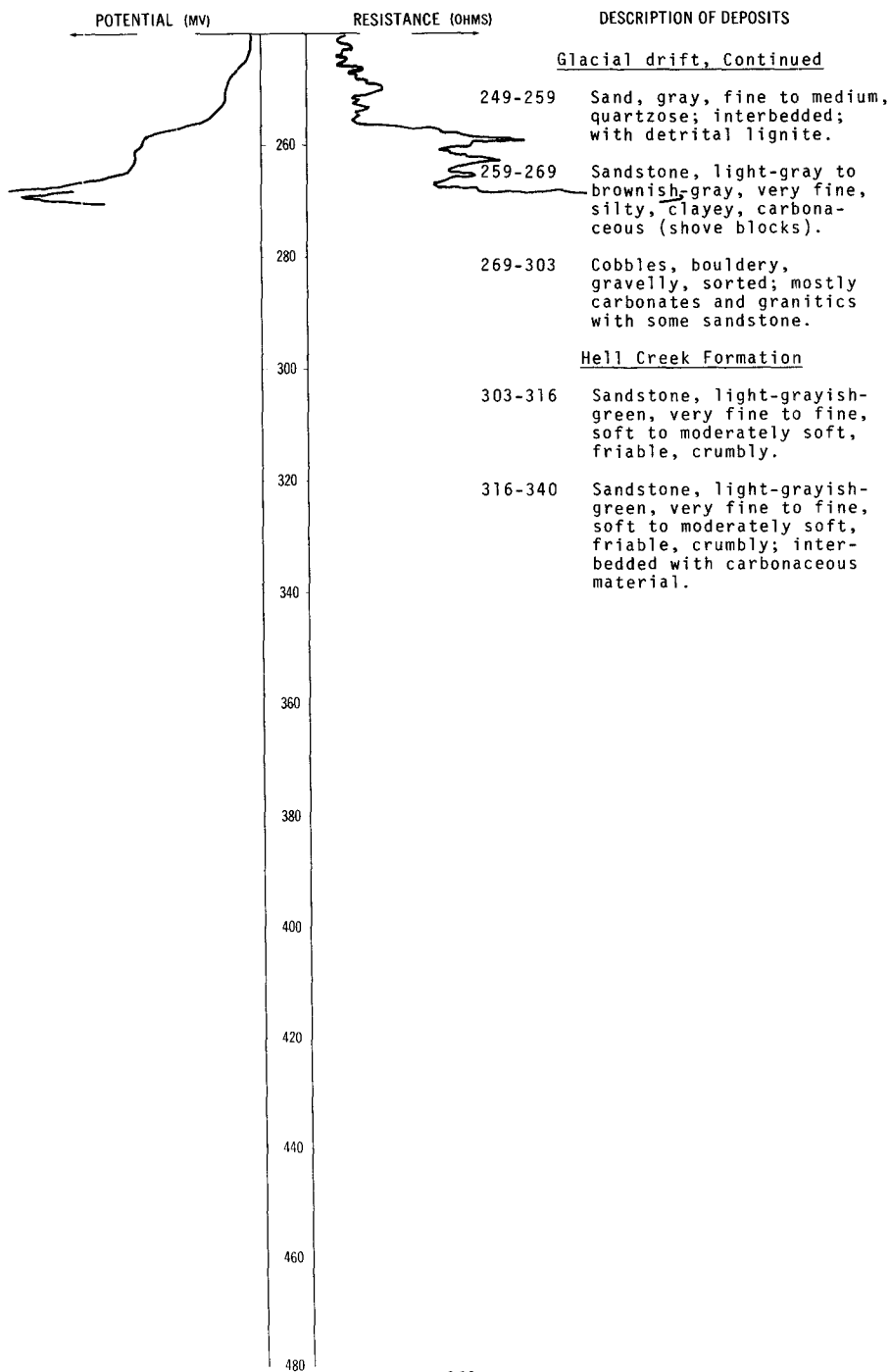
DATE DRILLED: September 1973
 DEPTH: 340
 (FT)



NDSWC 4579, Continued

LOCATION: 136-081-31ABB
 ALTITUDE: 1844
 (FT, MSL)

DATE DRILLED: September 1973
 DEPTH: 340
 (FT)



NDSWC 4579, Continued

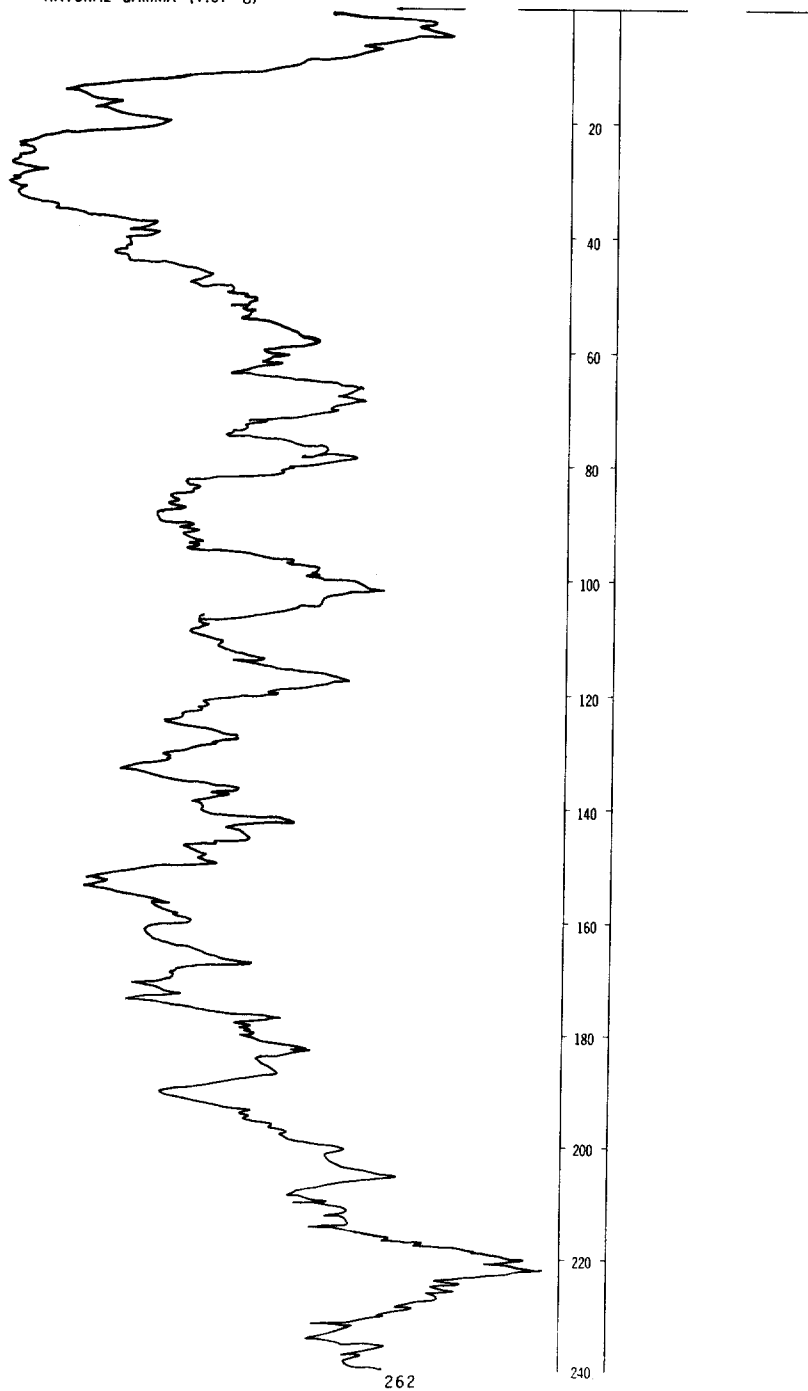
LOCATION: 136-081-31ABB

DATE DRILLED: September 1973

ALTITUDE: 1844
(FT. MSL)

DEPTH: 340
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4579, Continued

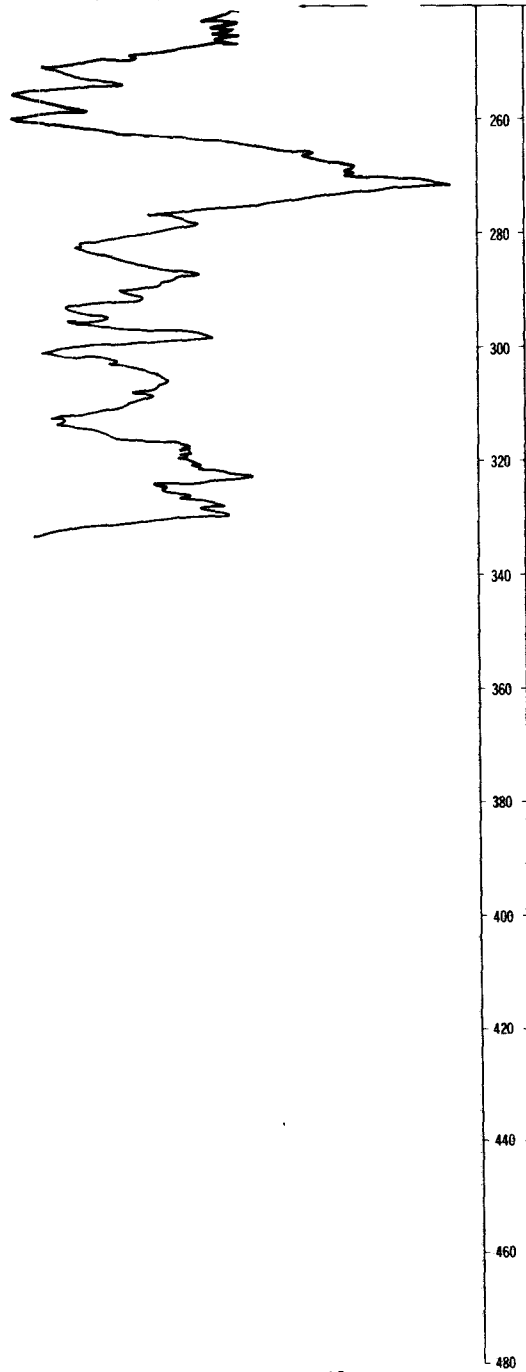
LOCATION: 136-081-31ABB

DATE DRILLED: September 1973

ALTITUDE: 1844
(FT, MSL)

DEPTH: 340
(FT)

NATURAL-GAMMA (T.C. 8)



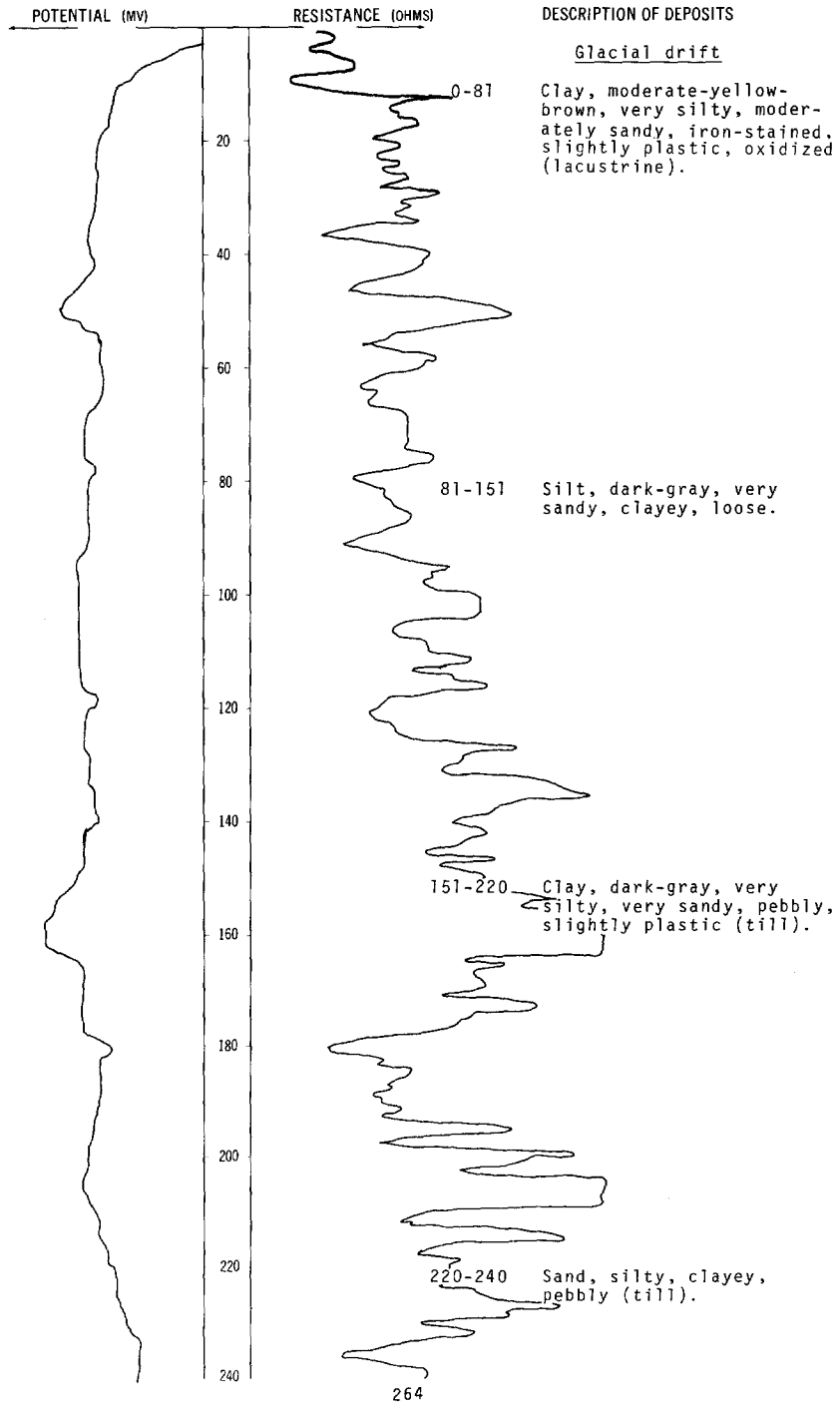
NDSWC 9287

LOCATION: 136-081-32AAA

DATE DRILLED: June 1975

ALTITUDE: 1839
(FT, MSL)

DEPTH: 300
(FT)



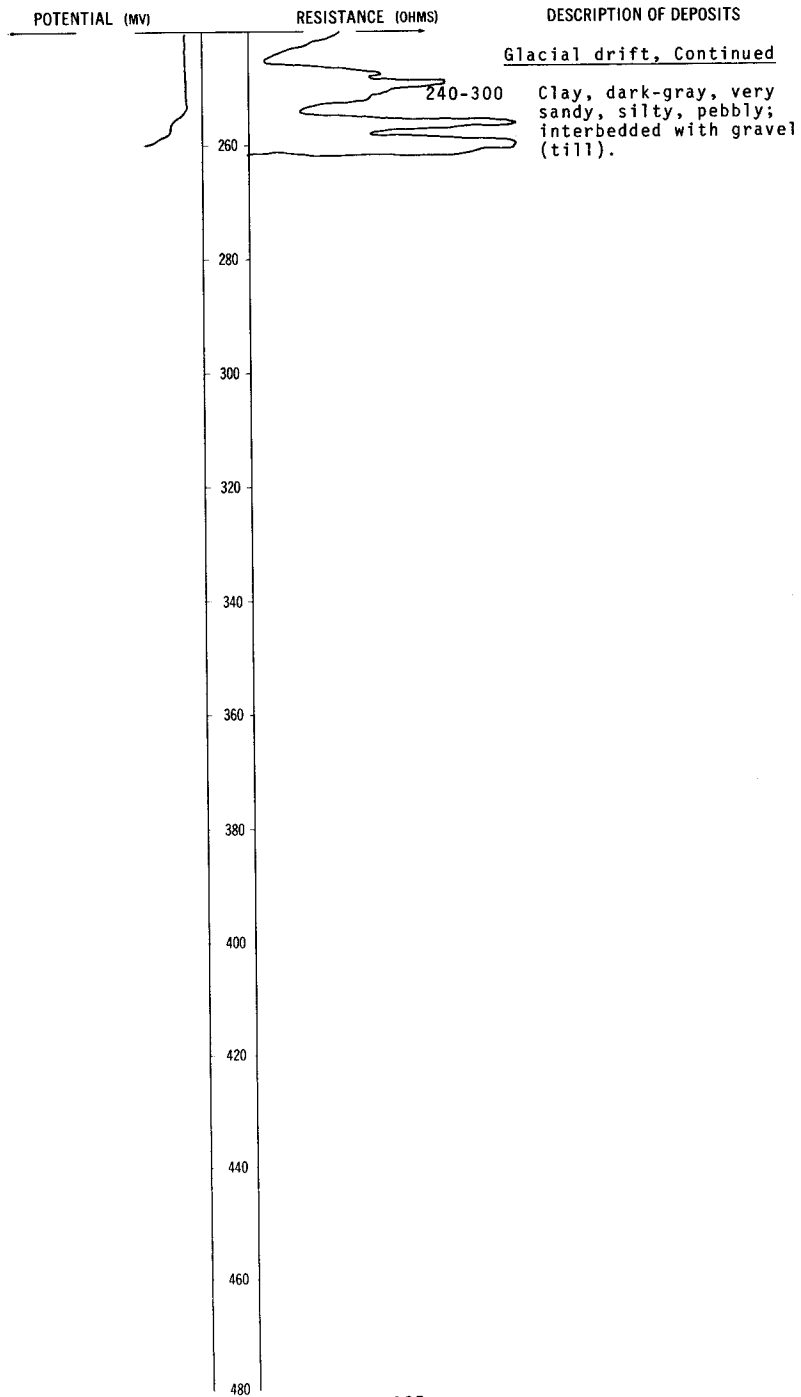
NDSWC 9287, Continued

LOCATION: 136-081-32AAA

DATE DRILLED: June 1975

ALTITUDE: 1839
(FT, MSL)

DEPTH: 300
(FT)

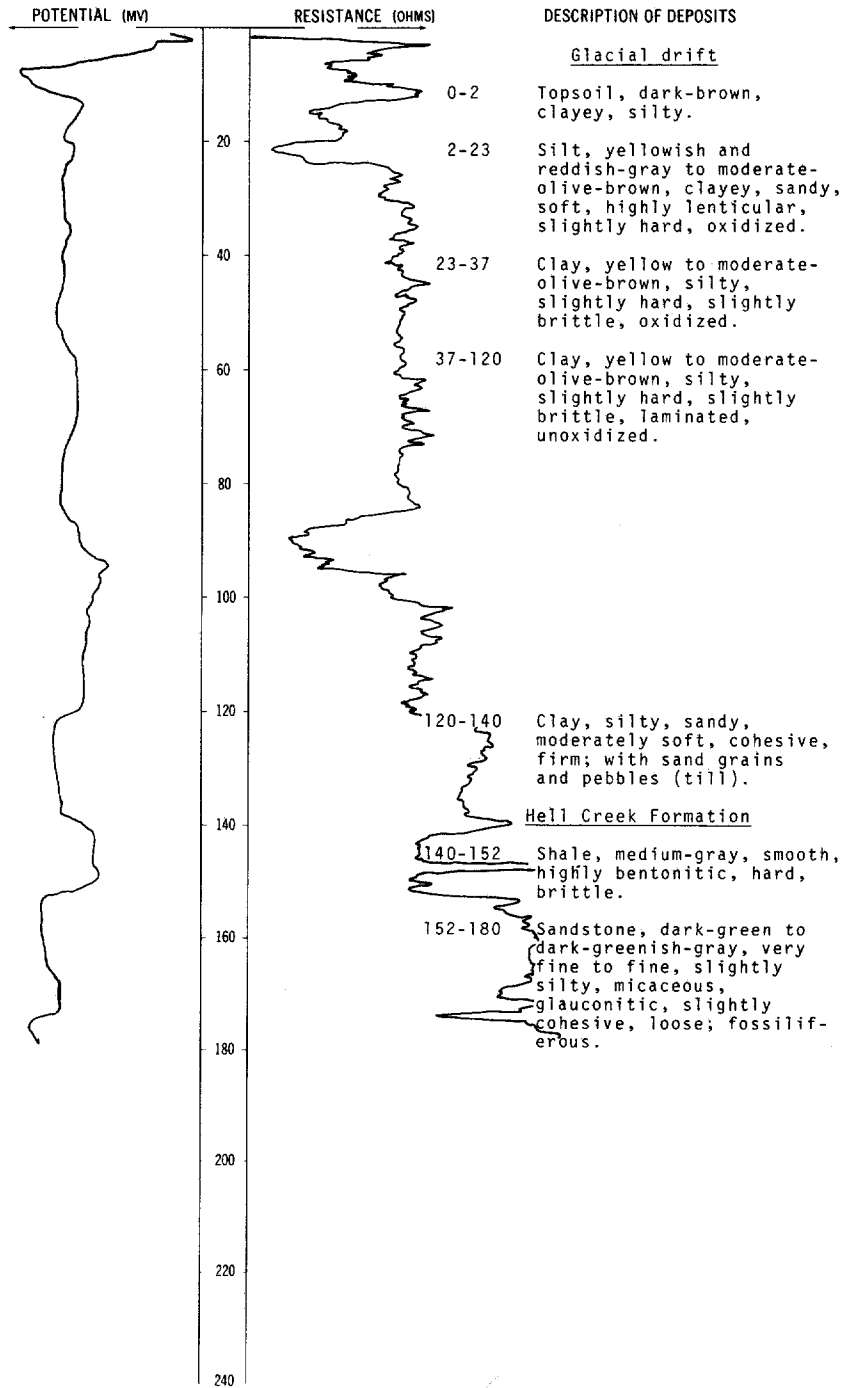


LOCATION: 136-082-04AAA

DATE DRILLED: September 1973

ALTITUDE: 1757
(FT, MSL)

DEPTH: 180
(FT)



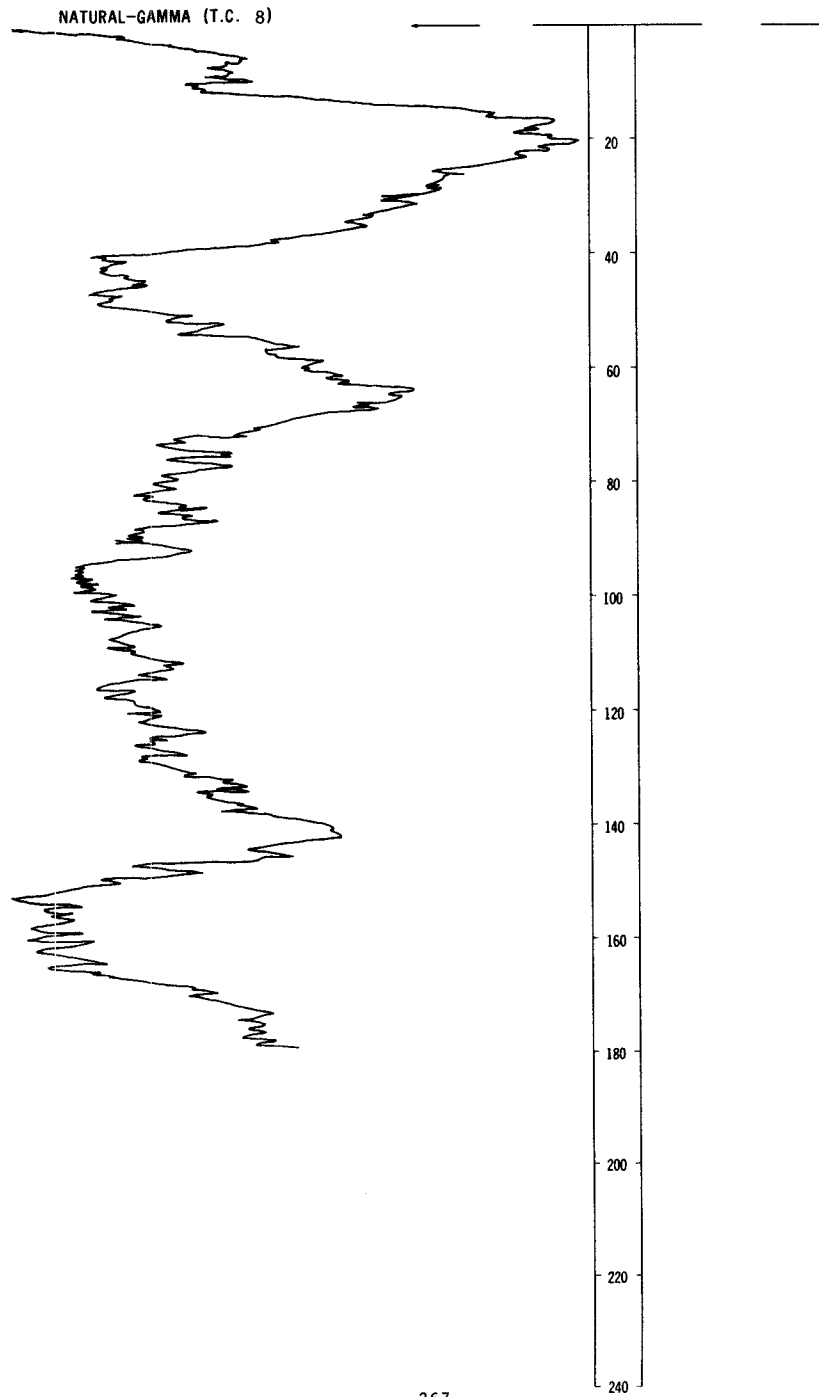
NDSWC 4582, Continued

LOCATION: 136-082-04AAA

DATE DRILLED: September 1973

ALTITUDE: 1757
(FT, MSL)

DEPTH: 180
(FT)



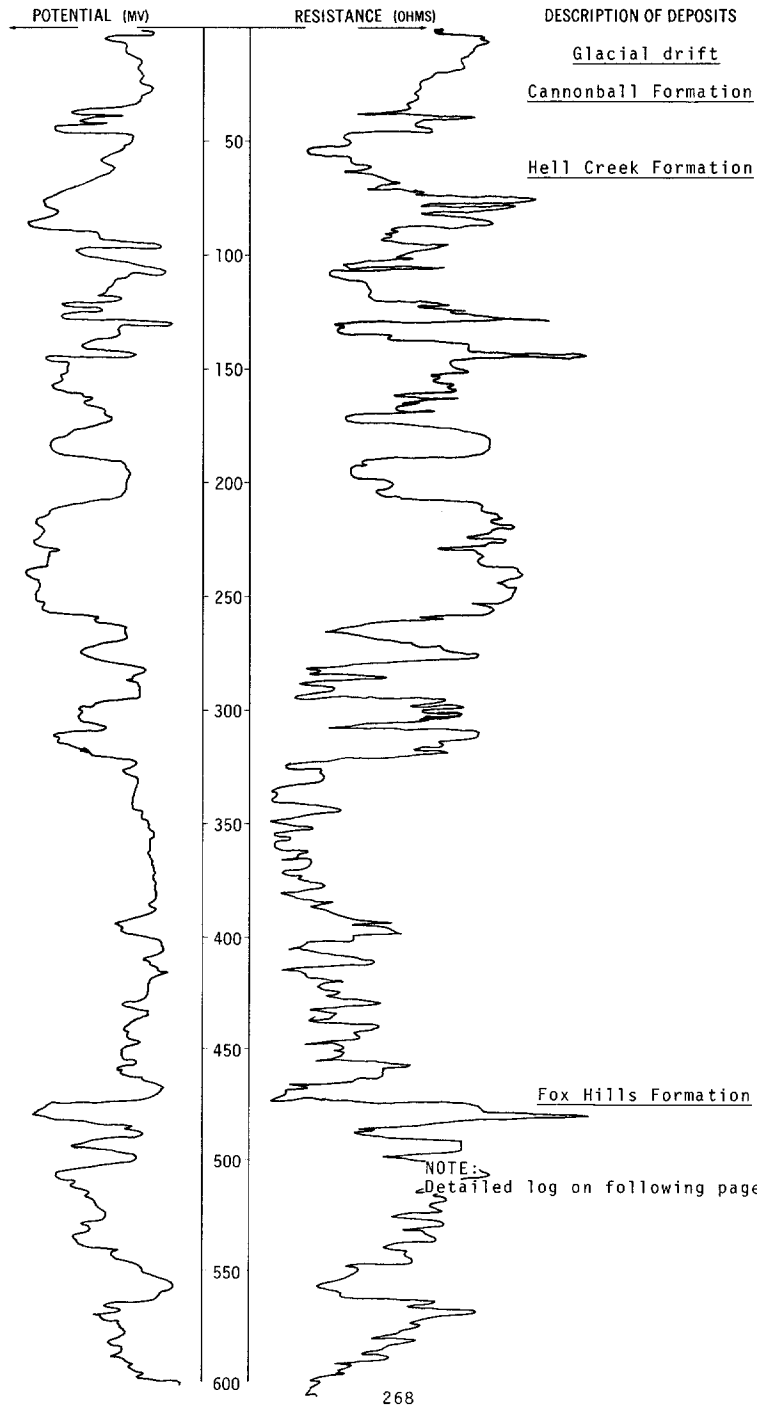
NDSWC 9305, 9305A

LOCATION: 136-082-07CCC1, 2

DATE DRILLED: June 1975

ALTITUDE: 1850
(FT, MSL)

DEPTH: 720
(FT)



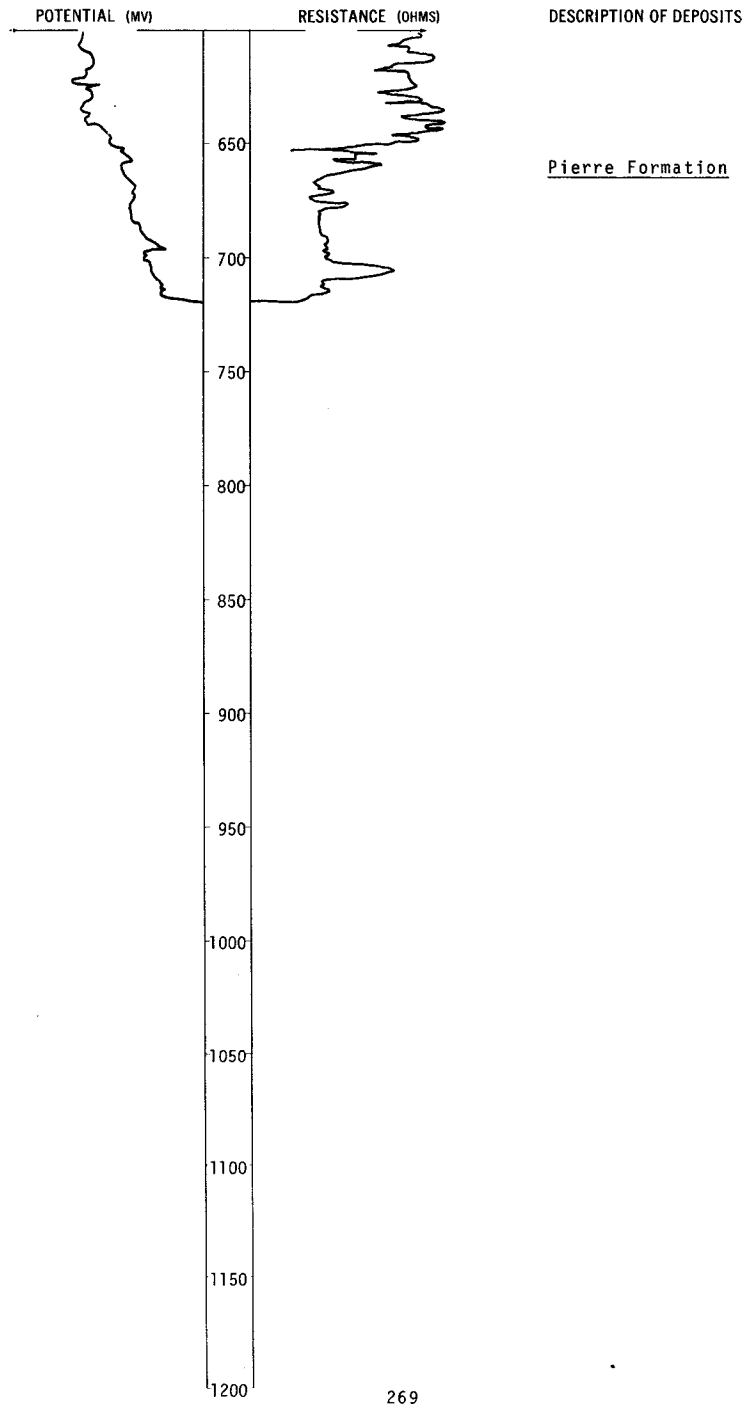
NDSWC 9305, 9305A, Continued

LOCATION: 136-082-07CCC1, 2

DATE DRILLED: June 1975

ALTITUDE: 1850
(FT, MSL)

DEPTH: 720
(FT)



NDSWC 9305, 9305A, Continued

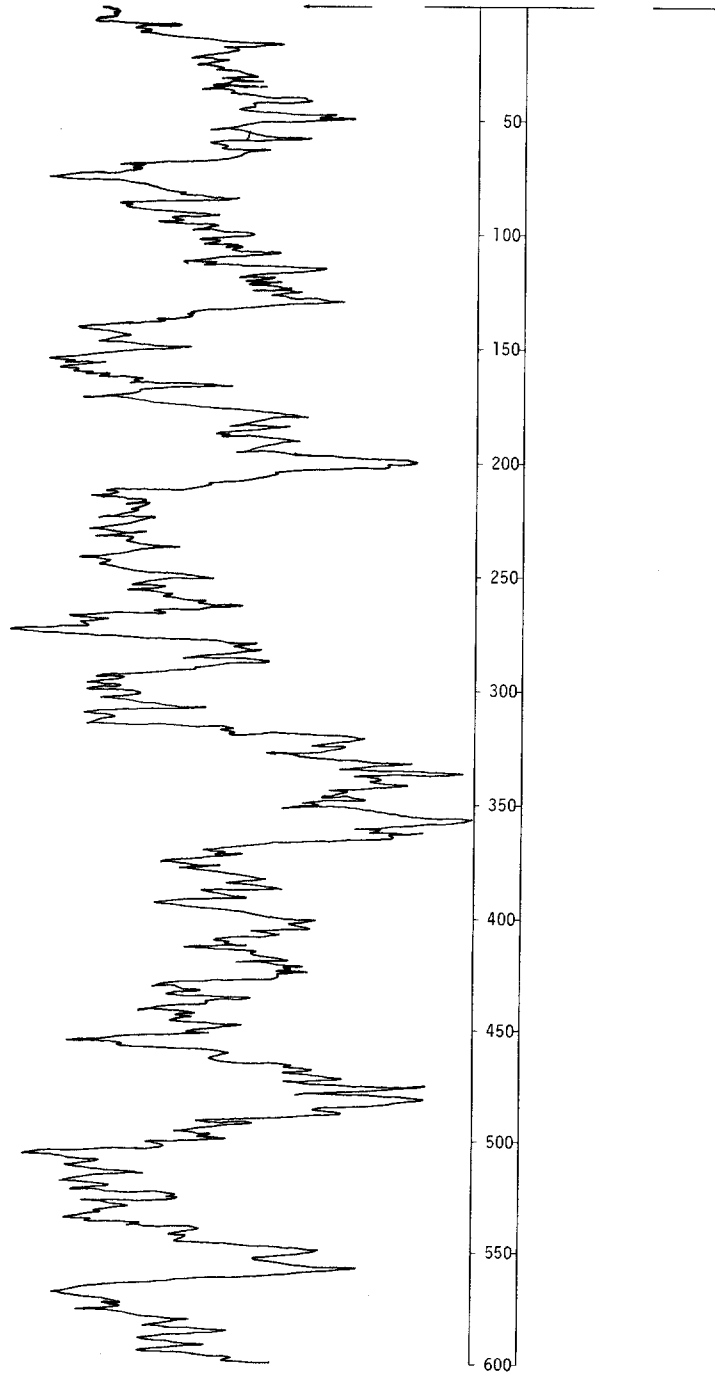
LOCATION: 136-082-07CCC1, 2

DATE DRILLED: June 1975

ALTITUDE: 1850
(FT. MSL)

DEPTH: 720
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 9305, 9305A, Continued

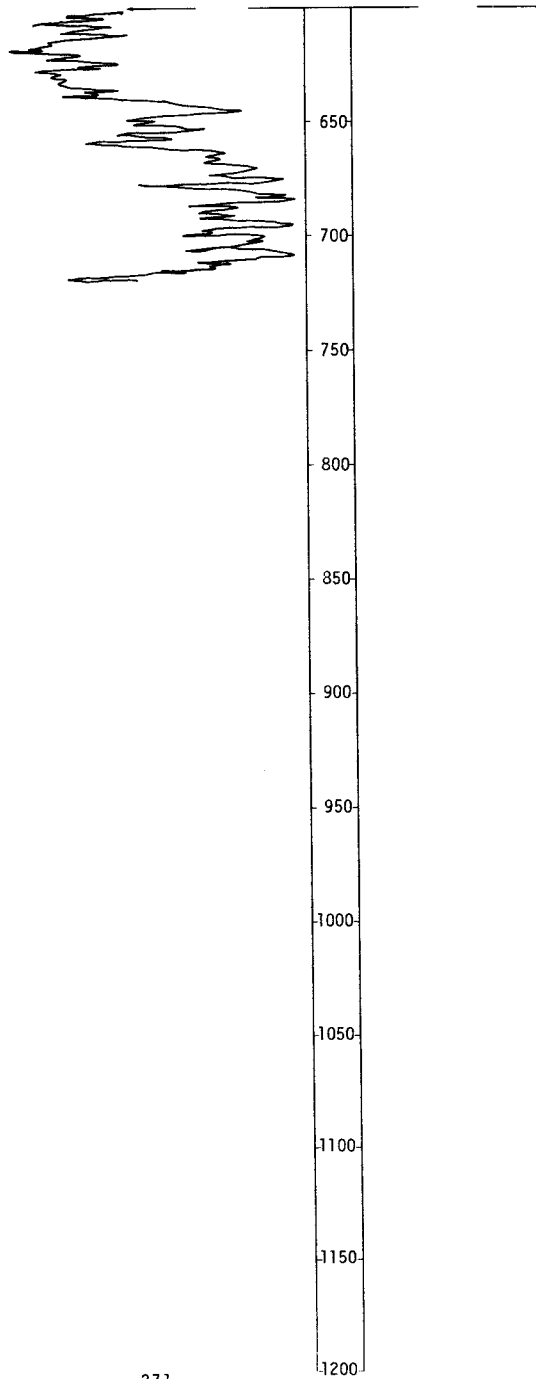
LOCATION: 136-082-07CCC1, 2

DATE DRILLED: June 1975

ALTITUDE: 1850
(FT, MSL)

DEPTH: 720
(FT)

NATURAL-GAMMA (T.C. 4)



136-082-07CCC1, 2, Continued
NDSWC 9305, 9305A

Altitude: 1850 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellowish-brown, silty, slightly sandy, pebbly, gravelly, oxidized-----	15	15
Cannonball Formation:			
	Sand, fine to medium, slightly silty, moderately well rounded, quartzose, oxidized-----	25	40
	Clay, grayish-black, silty, brittle-----	25	65
Hell Creek Formation:			
	Clay, brownish-gray to light-gray, very sandy, silty; small layer of lignite at 95 feet-----	44	109
	Clay, dark-gray, very silty, hard, brittle-----	31	140
	Sand, light-gray to dark-gray, very fine, clayey, silty, friable-----	25	165
	Clay, moderate-brown, silty, sandy; some small layers of lignite-----	15	180
	Sand, light-bluish-gray, very fine to fine, clayey, silty, friable-----	14	194
	Clay, brownish-gray to medium-light-gray, silty, brittle-----	16	210
	Sand, greenish-gray, very fine to fine, clayey, silty, angular to subrounded; some thin beds of lignite-----	55	265
	Silt, brownish-gray, sandy, clayey, hard, brittle-----	27	292
	Sand, greenish-gray, very fine to fine, clayey, silty, angular to subrounded, quartzose; some thin beds of lignite-----	28	320
	Clay, moderate-brown to grayish-brown, very silty, brittle-----	50	370
	Silt, grayish-green, very sandy, clayey; with layers of silty sand-----	60	430
	Sand, light-blue-green, very silty, clayey; with layers of sandy silt-----	30	460
	Clay, medium-light-gray to greenish-gray, silty, sandy, bentonitic-----	12	472
Fox Hills Formation:			
	Sand, light-gray to greenish-gray, fine to very fine, clayey, silty-----	7	479
	Sandstone, hard, well-cemented-----	2	481
	Sand, grayish-blue-green, very fine to fine, very clayey, silty-----	19	500
	Sand, bluish-gray, very fine to medium, clayey, silty-----	40	540
	Sand, medium-gray to grayish-blue-green, very fine to fine, silty, clayey-----	10	550

136-082-07CCC1, 2, Continued
 NDSWC 9305, 9305A

Altitude: 1850 feet

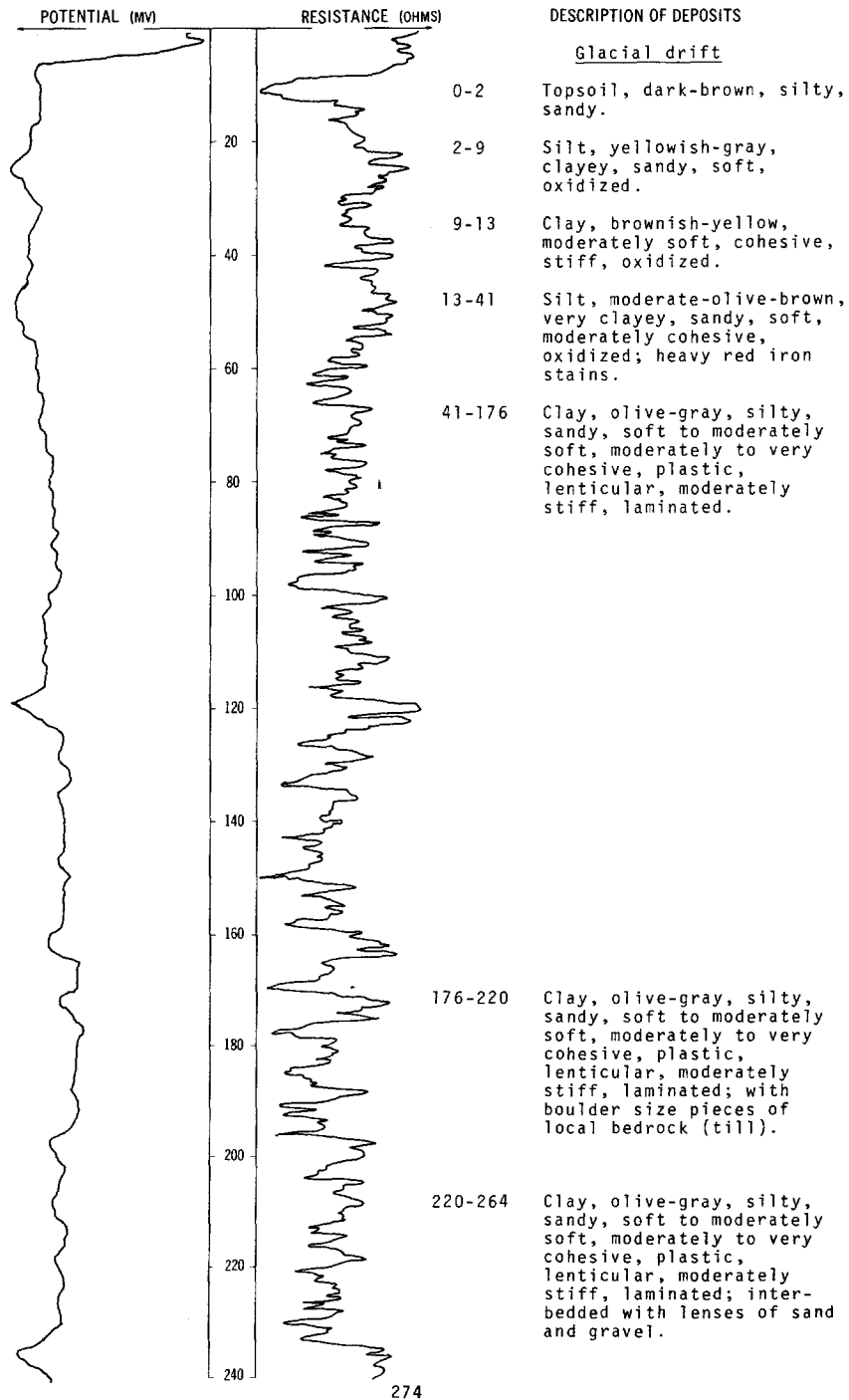
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Fox Hills Formation, Continued:			
	Silt, bluish-gray, clayey, sandy-----	15	565
	Sand, bluish-gray, silty, clayey-----	15	580
	Sand, bluish-gray, clayey, silty-----	20	600
	Silt, dark-greenish-gray to medium-gray, sandy, clayey-----	40	640
	Silt, dark-greenish-gray to medium- bluish-gray, clayey, sandy to slightly sandy-----	30	670
Pierre Formation:			
	Shale, olive-black, silty, non- calcareous, hard, brittle-----	50	720

LOCATION: 136-082-08DDD

DATE DRILLED: September 1973

ALTITUDE: 1809
(FT, MSL)

DEPTH: 320
(FT)



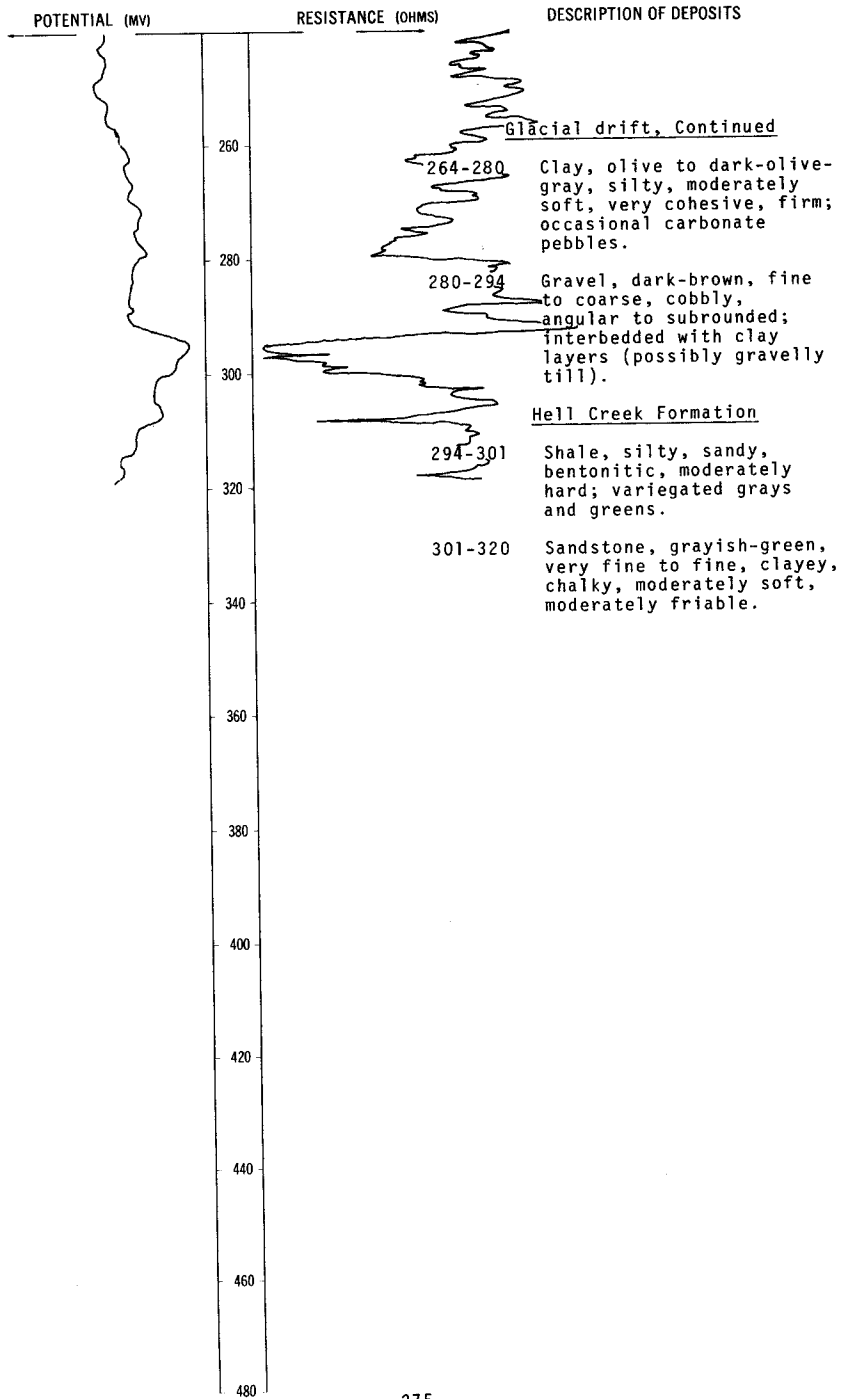
NDSWC 4588, Continued

LOCATION: 136-082-08DDD

DATE DRILLED: September 1973

ALTITUDE: 1809
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4588, Continued

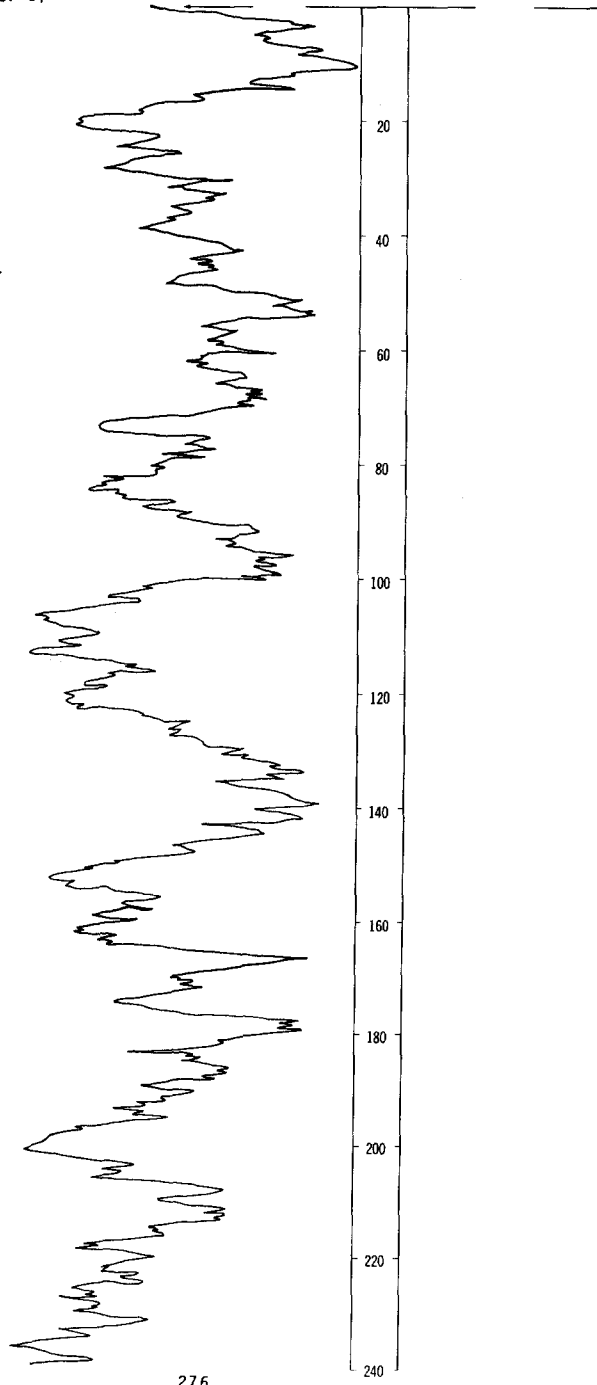
LOCATION: 136-082-08DDD

DATE DRILLED: September 1973

ALTITUDE: 1809
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4588, Continued

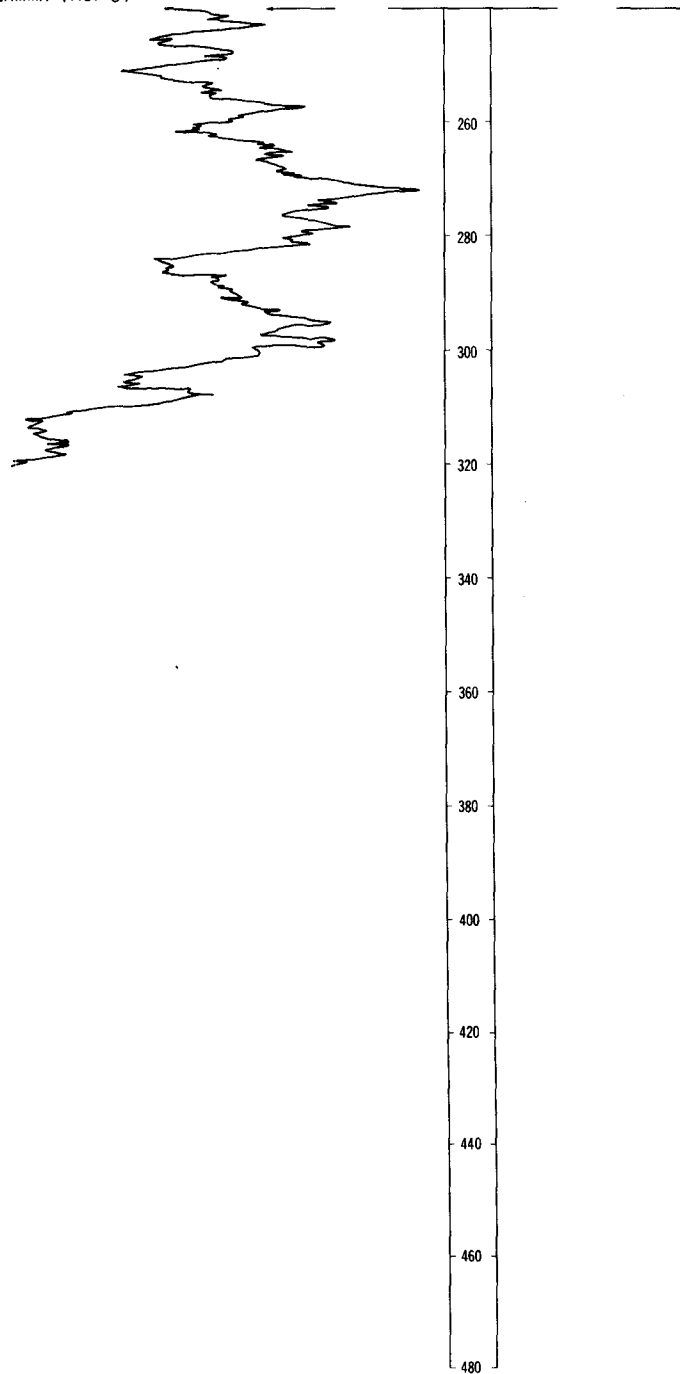
LOCATION: 136-082-08DDD

DATE DRILLED: September 1973

ALTITUDE: 1809
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 8)



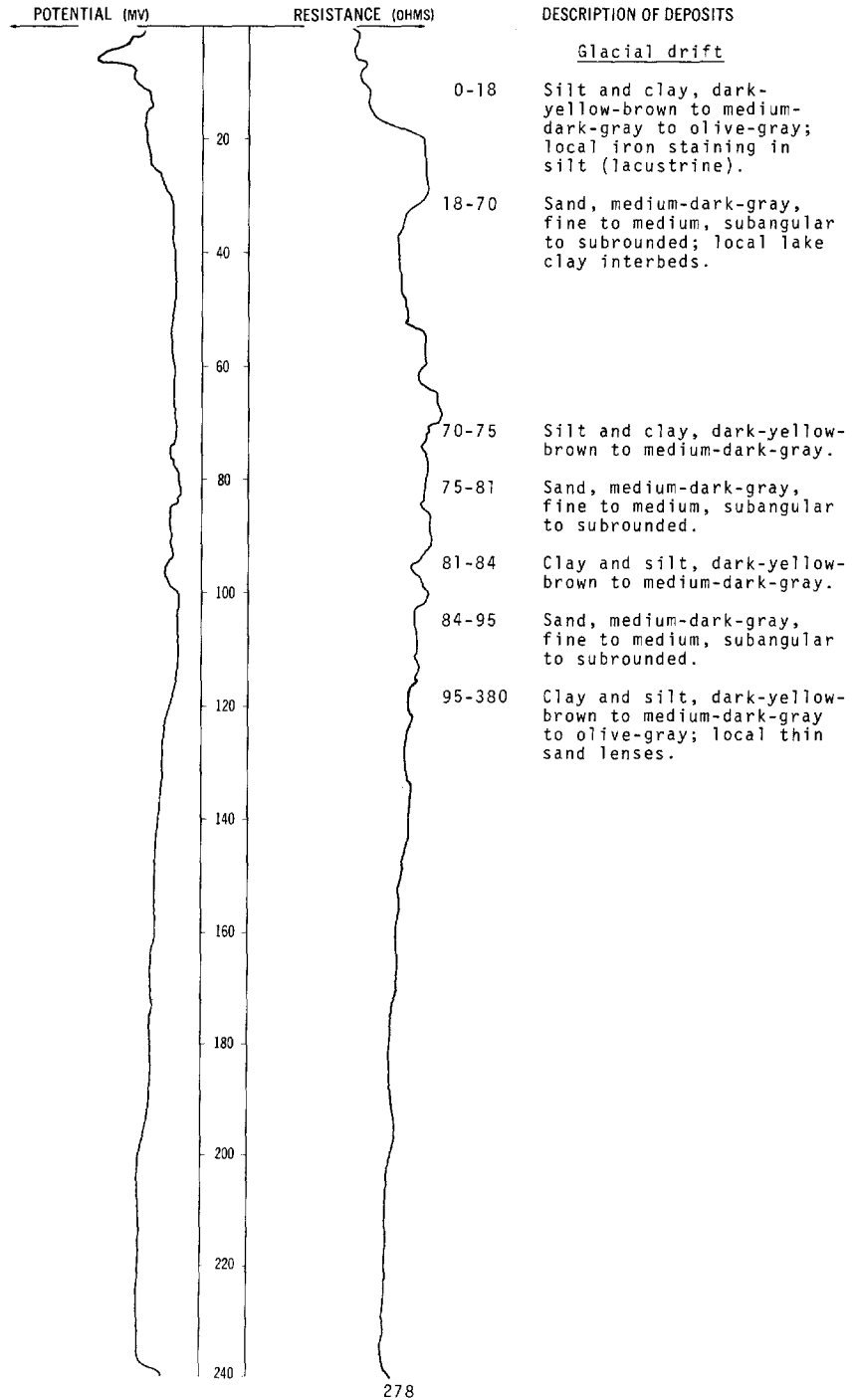
NDSWC 9000

LOCATION: 136-082-09AAA

DATE DRILLED: August 1974

ALTITUDE: 1767
(FT, MSL)

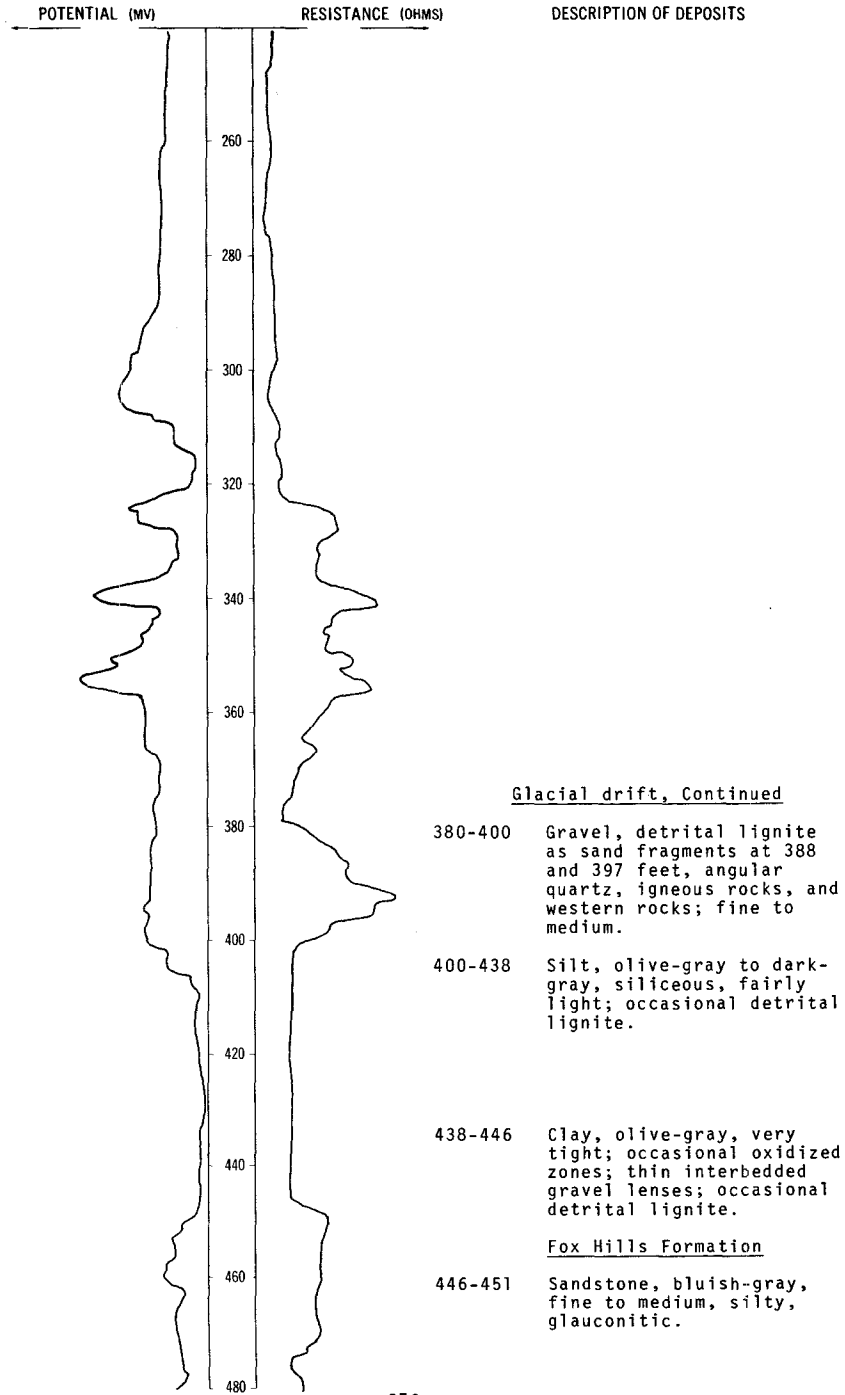
DEPTH: 500
(FT)



NDSWC 9000, Continued

LOCATION: 136-082-09AAA
 ALTITUDE: 1767
 (FT, MSL)

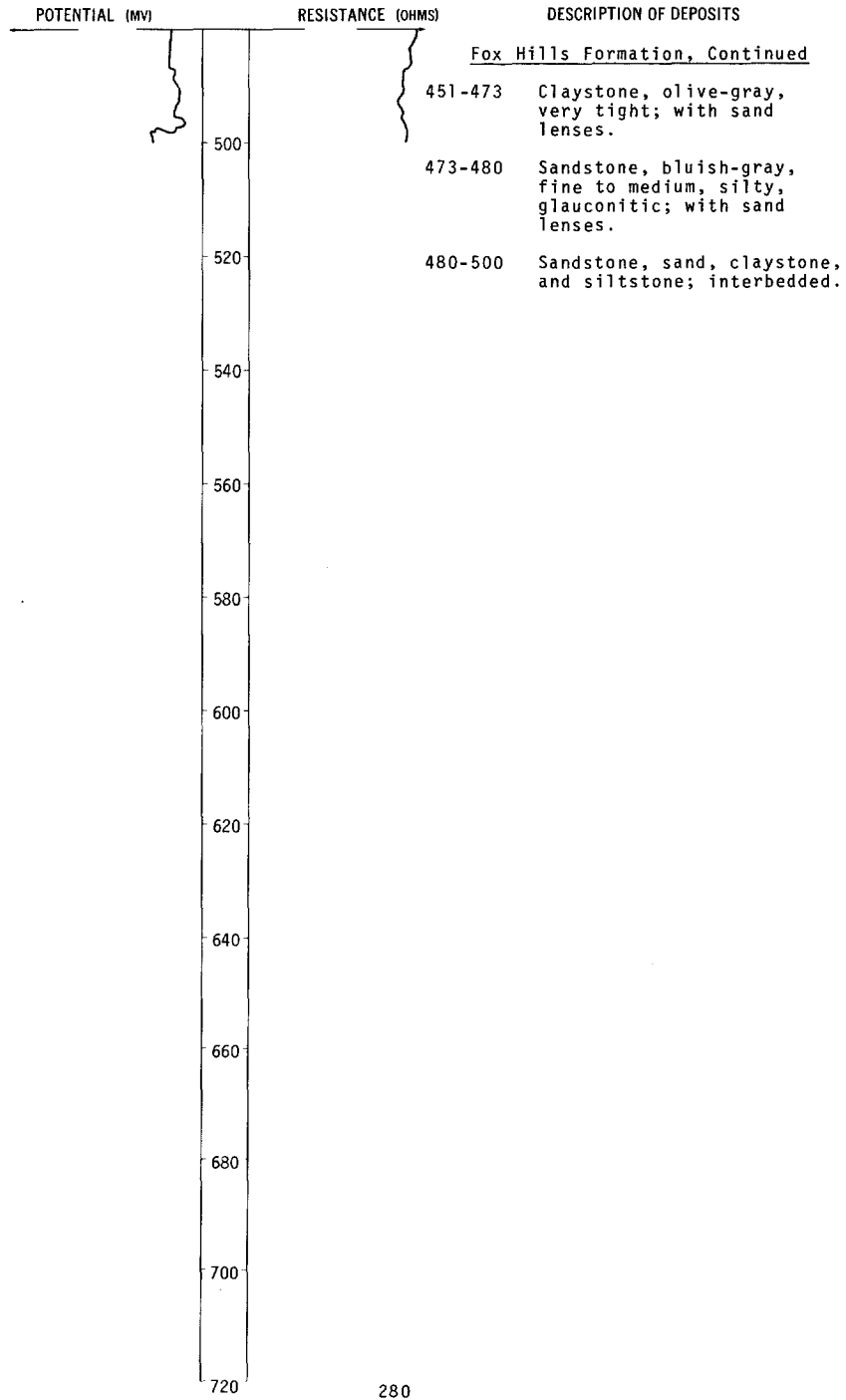
DATE DRILLED: August 1974
 DEPTH: 500
 (FT)



NDSWC 9000, Continued

LOCATION: 136-082-09AAA
 ALTITUDE: 1767
 (FT, MSL)

DATE DRILLED: August 1974
 DEPTH: 500
 (FT)

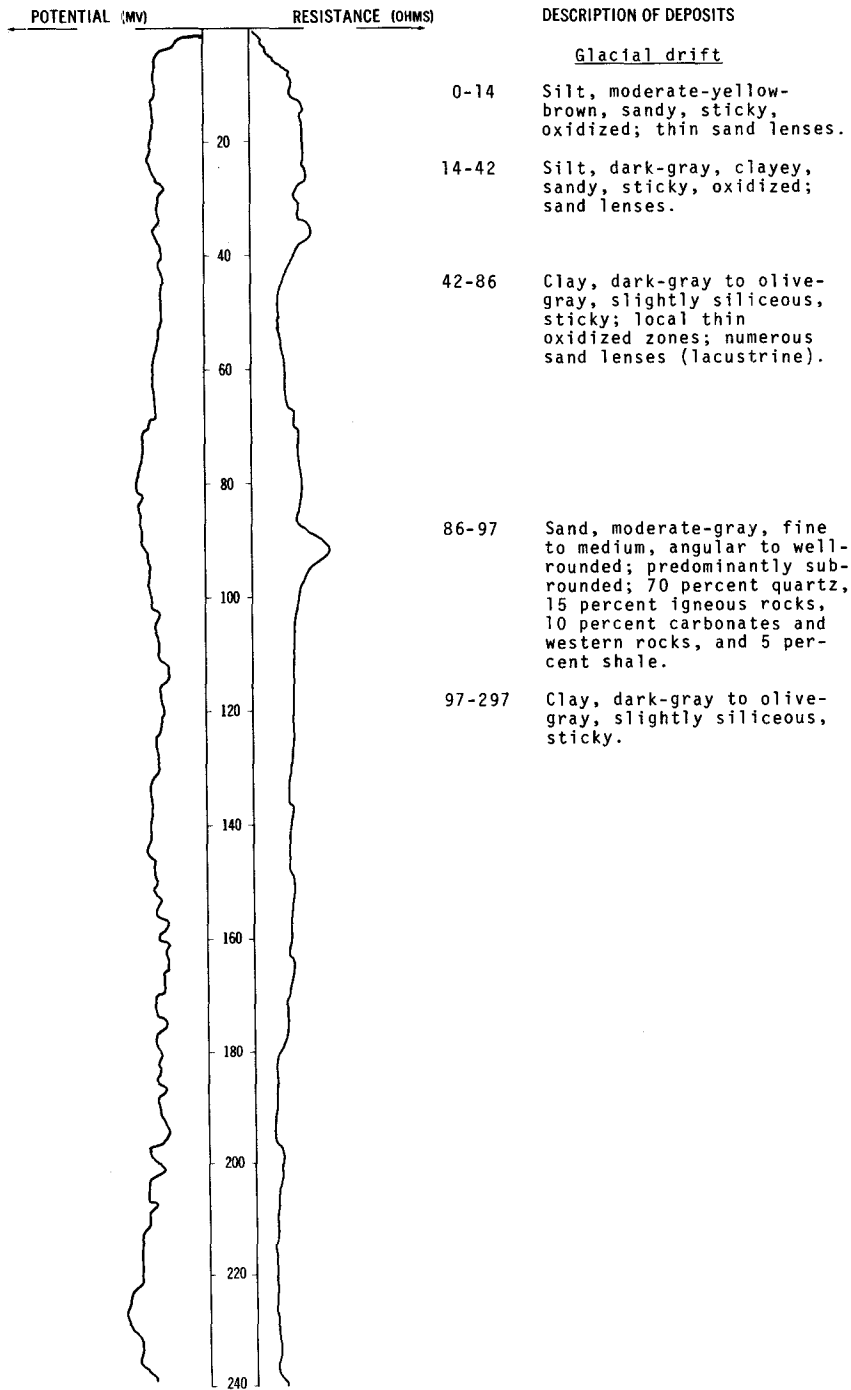


LOCATION: 136-082-09ABB

ALTITUDE: 1768
(FT, MSL)

DATE DRILLED: August 1974

DEPTH: 420
(FT)



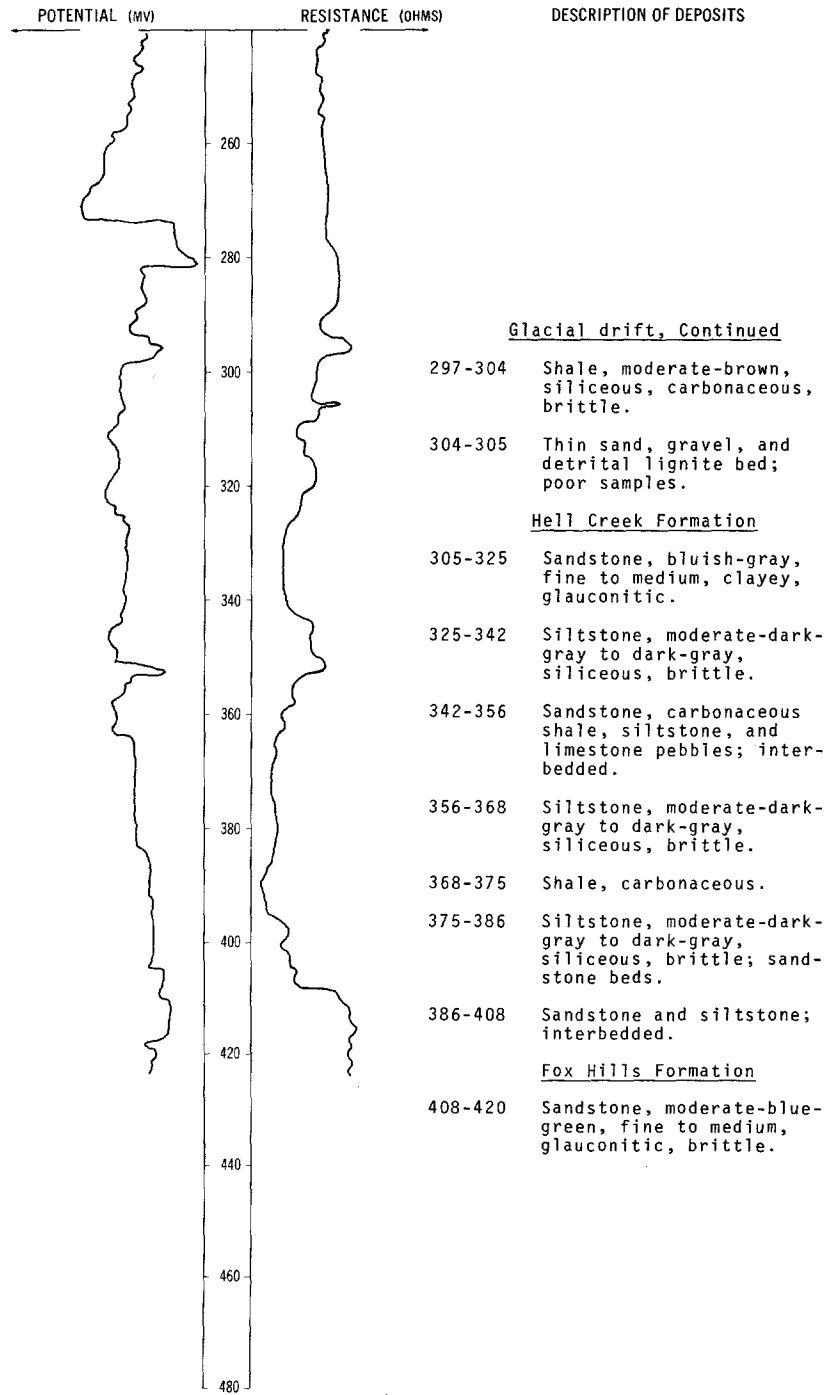
NDSWC 9001, Continued

LOCATION: 136-082-09ABB

DATE DRILLED: August 1974

ALTITUDE: 1768
(FT, MSL)

DEPTH: 420
(FT)

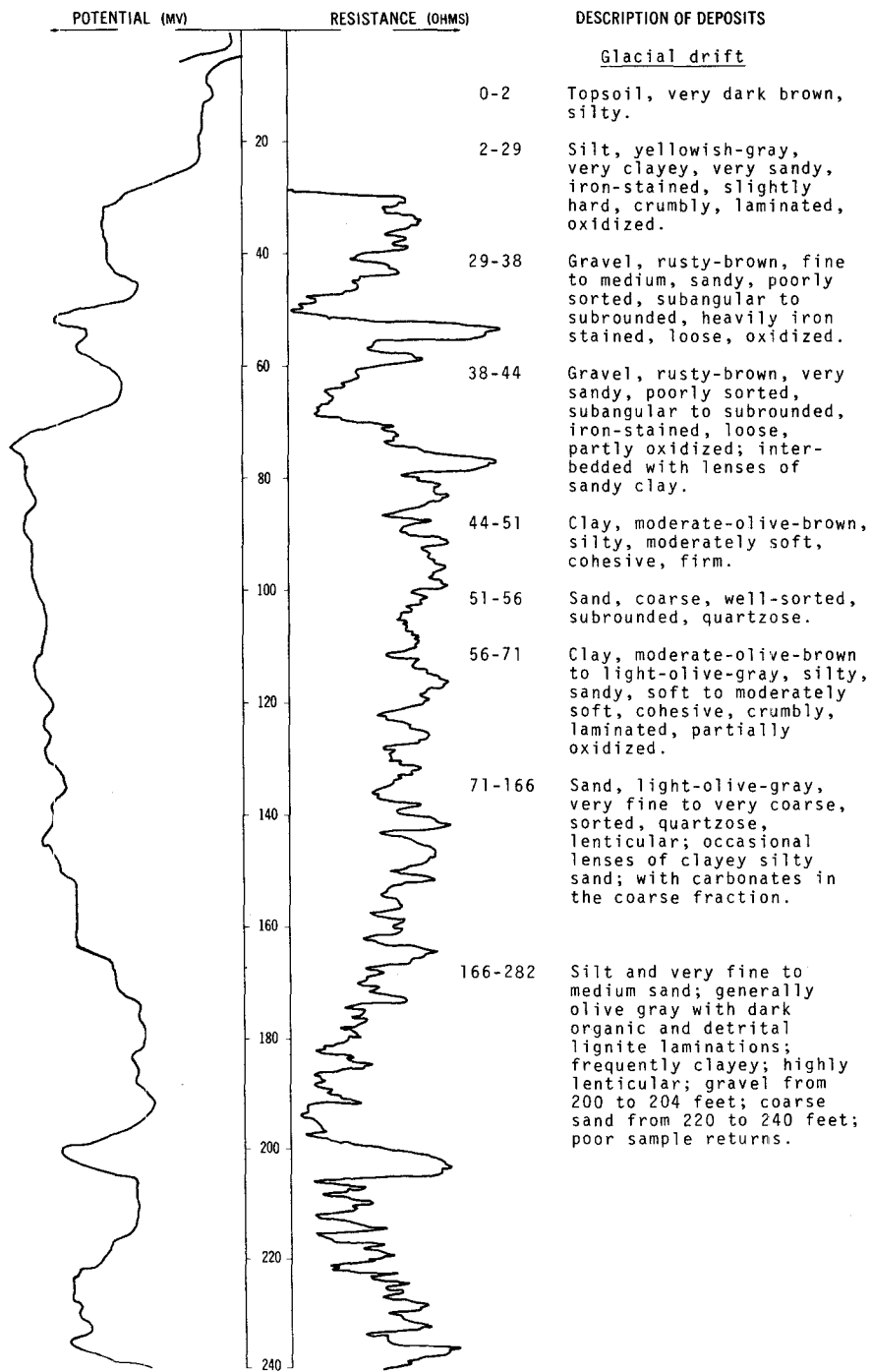


LOCATION: 136-082-22DAA

DATE DRILLED: September 1973

ALTITUDE: 1814
(FT, MSL)

DEPTH: 400
(FT)



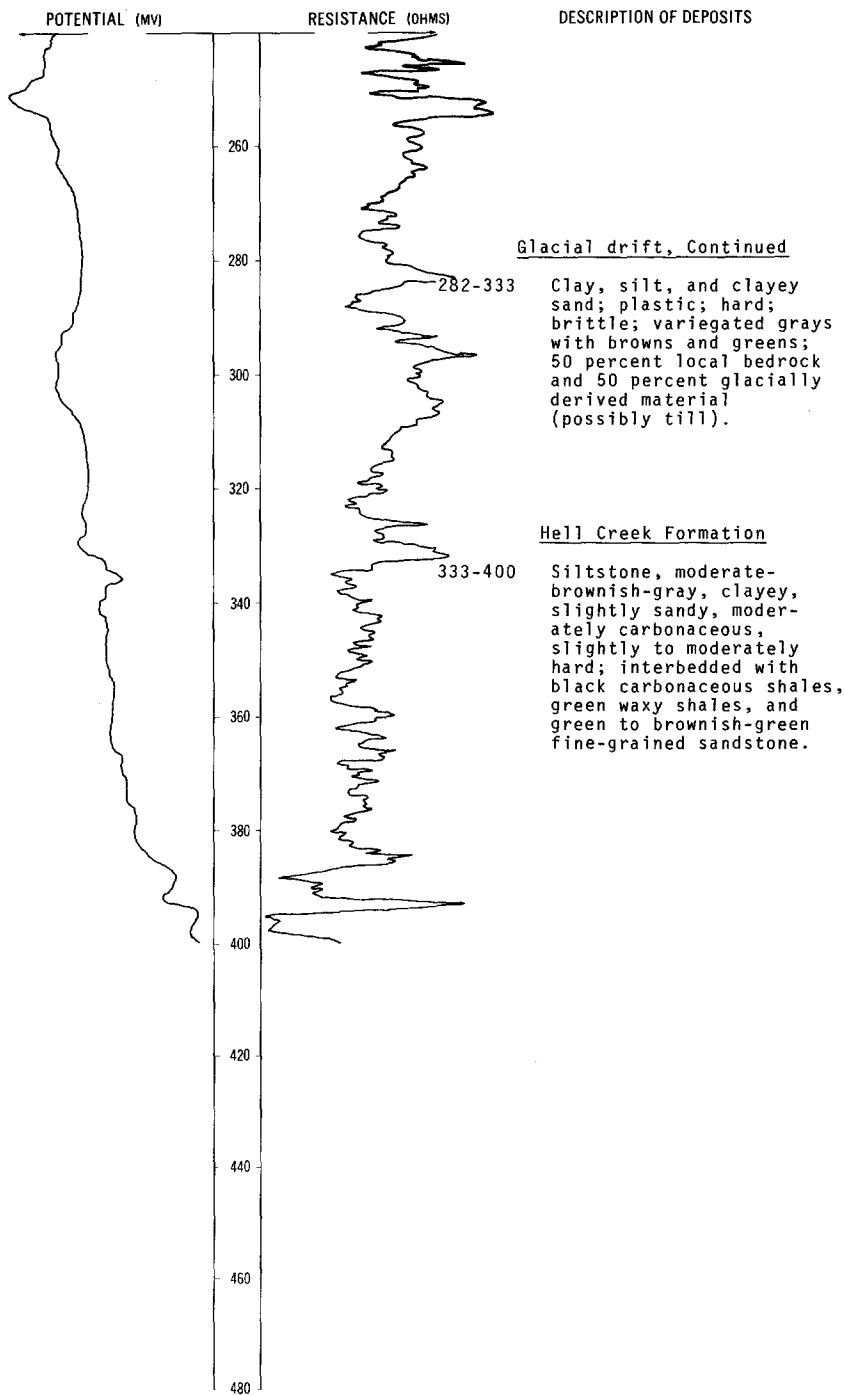
NDSWC 4580, Continued

LOCATION: 136-082-22DAA

DATE DRILLED: September 1973

ALTITUDE: 1814
(FT, MSL)

DEPTH: 400
(FT)



NDSWC 4580, Continued

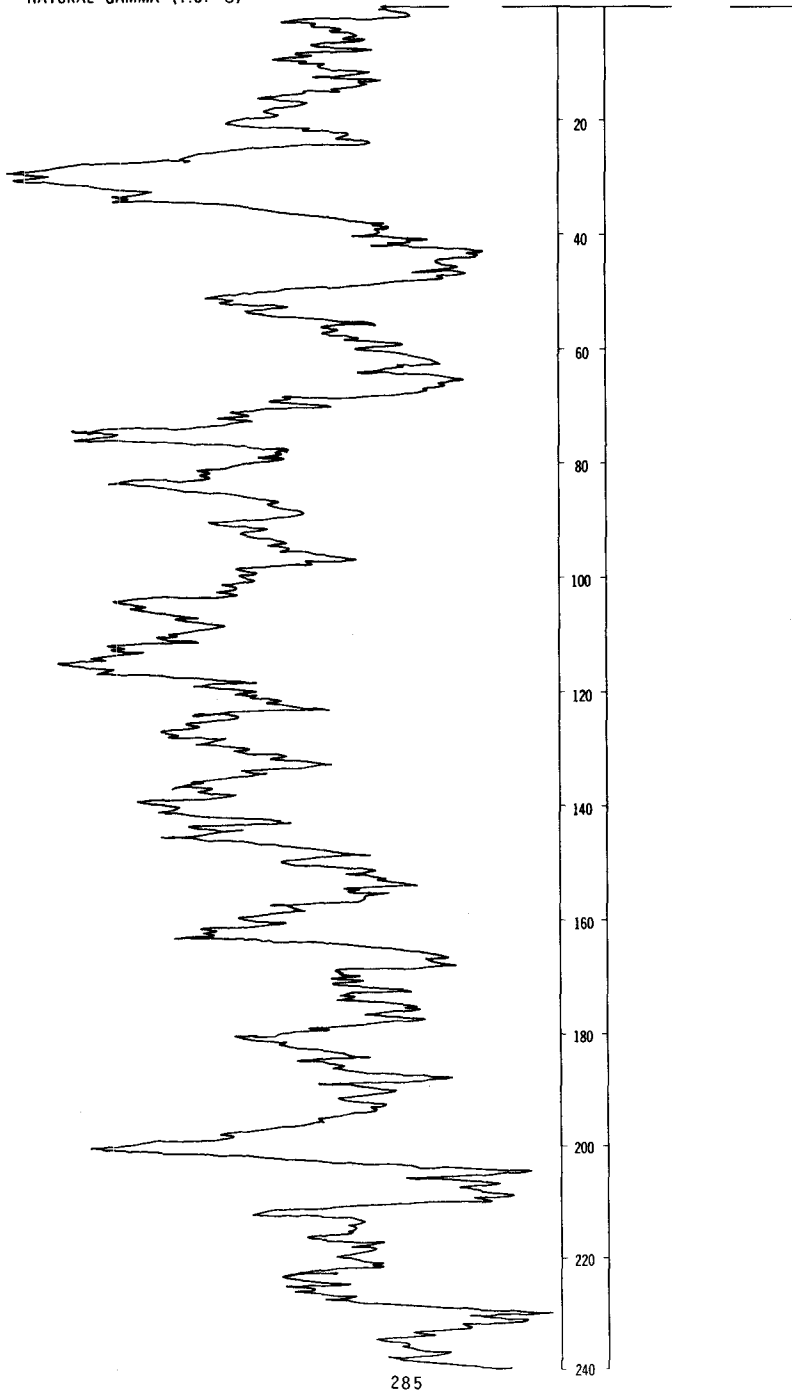
LOCATION: 136-082-22DAA

DATE DRILLED: September 1973

ALTITUDE: 1814
(FT, MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4580, Continued

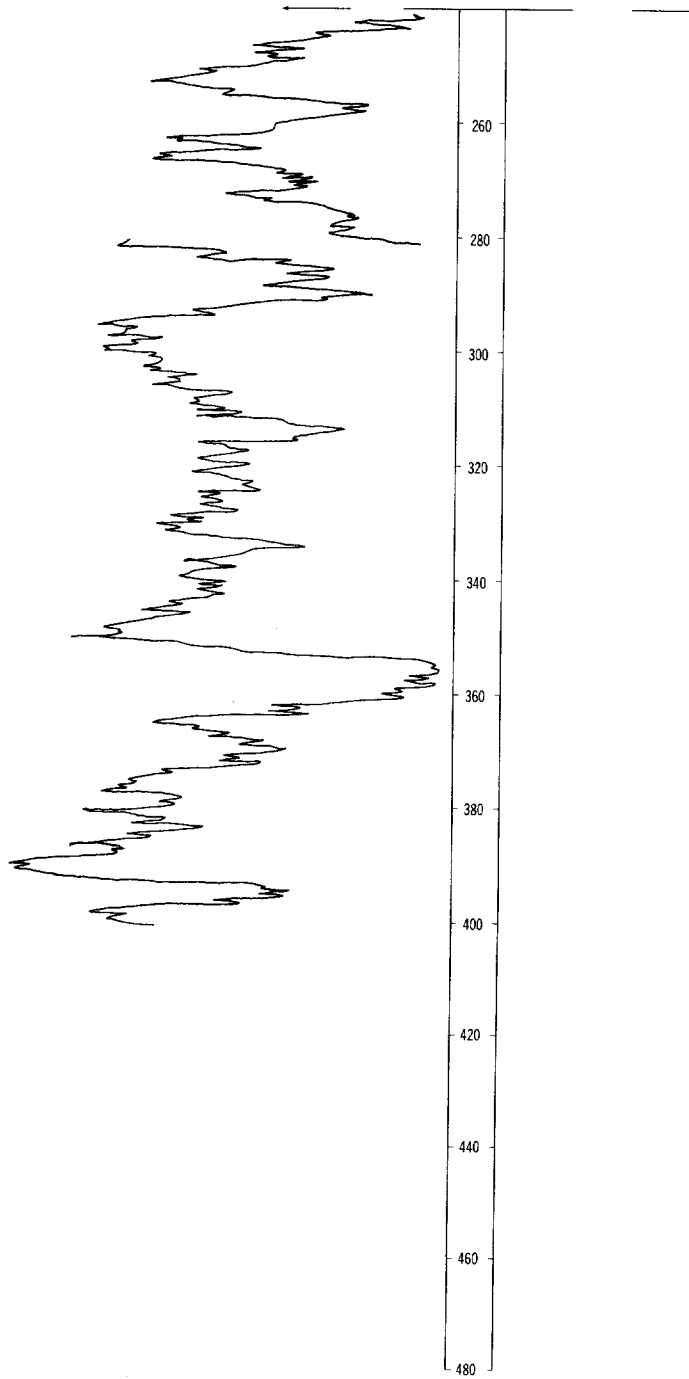
LOCATION: 136-082-22DAA

DATE DRILLED: September 1973

ALTITUDE: 1814
(FT, MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 8)

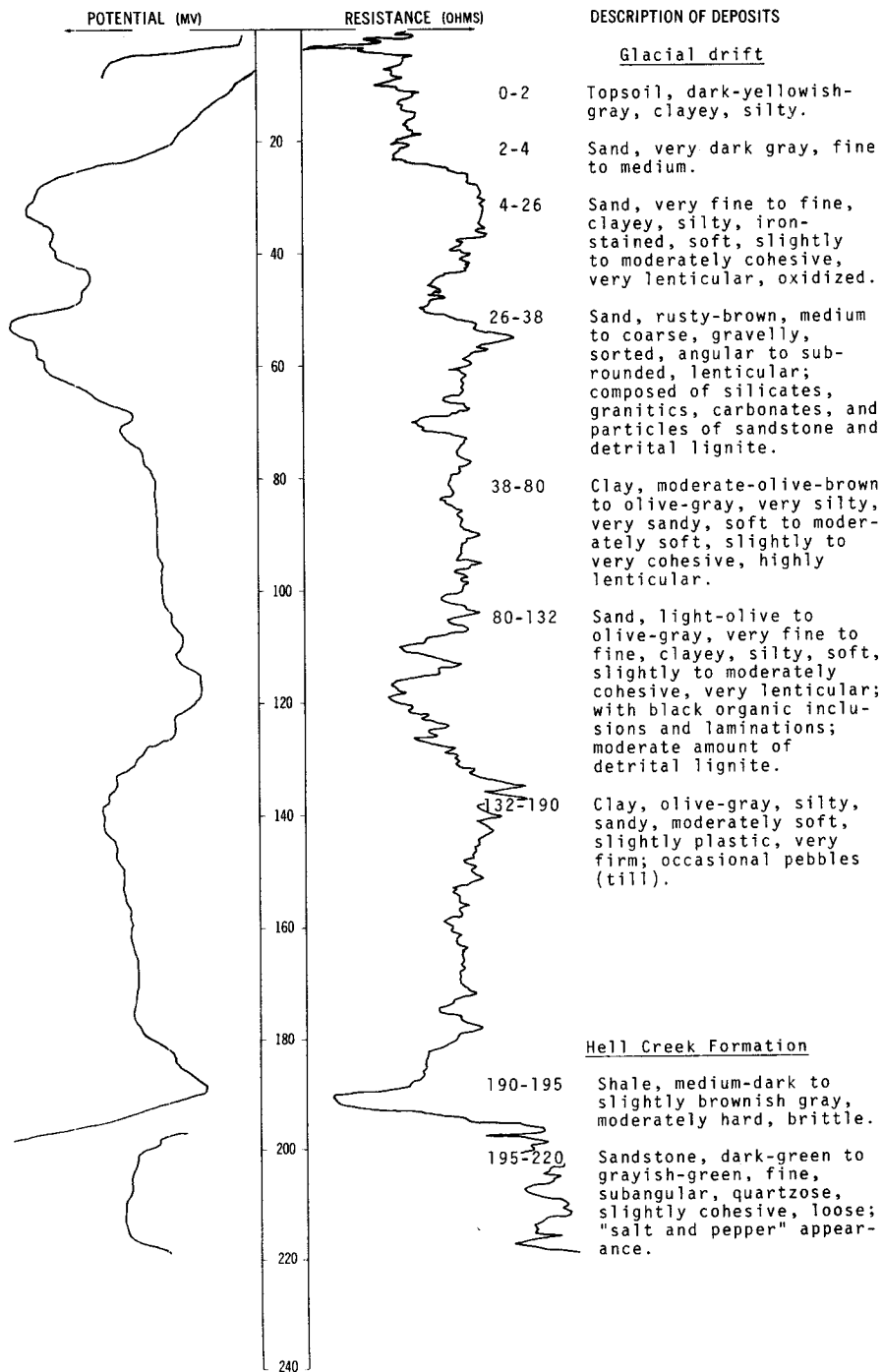


LOCATION: 136-083-01CCC

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 220
(FT)



NDSWC 4586, Continued

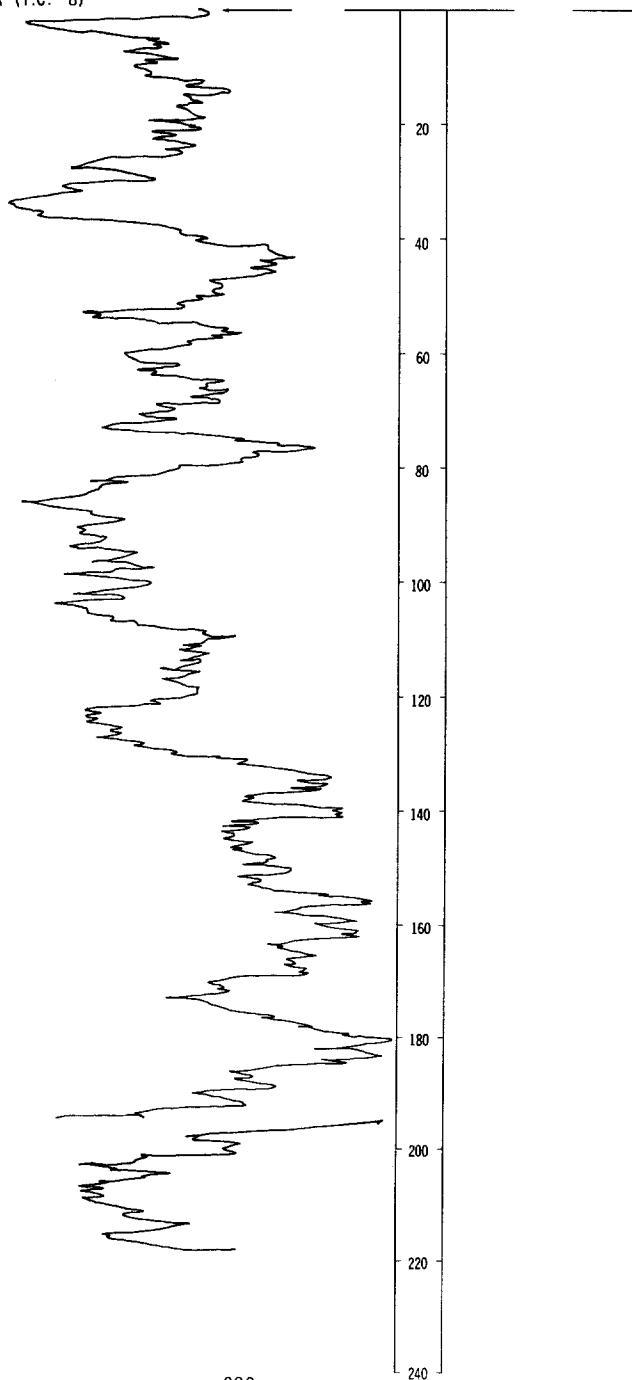
LOCATION: 136-083-01CCC

DATE DRILLED: September 1973

ALTITUDE: 1820
(FT, MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 8)

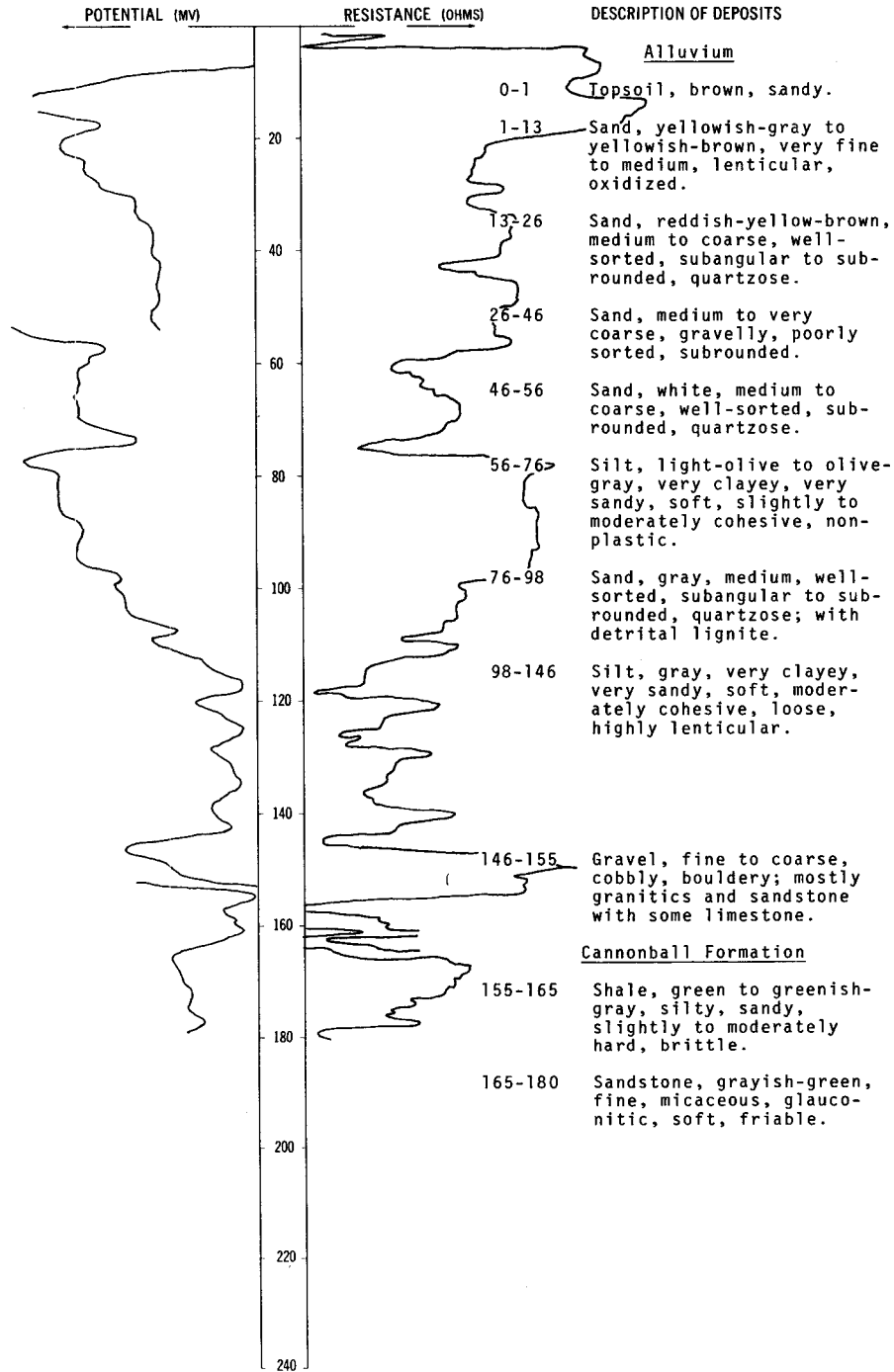


LOCATION: 136-084-20DBA

DATE DRILLED: September 1973

ALTITUDE: 1795
(FT, MSL)

DEPTH: 180
(FT)



NDSWC 4553, Continued

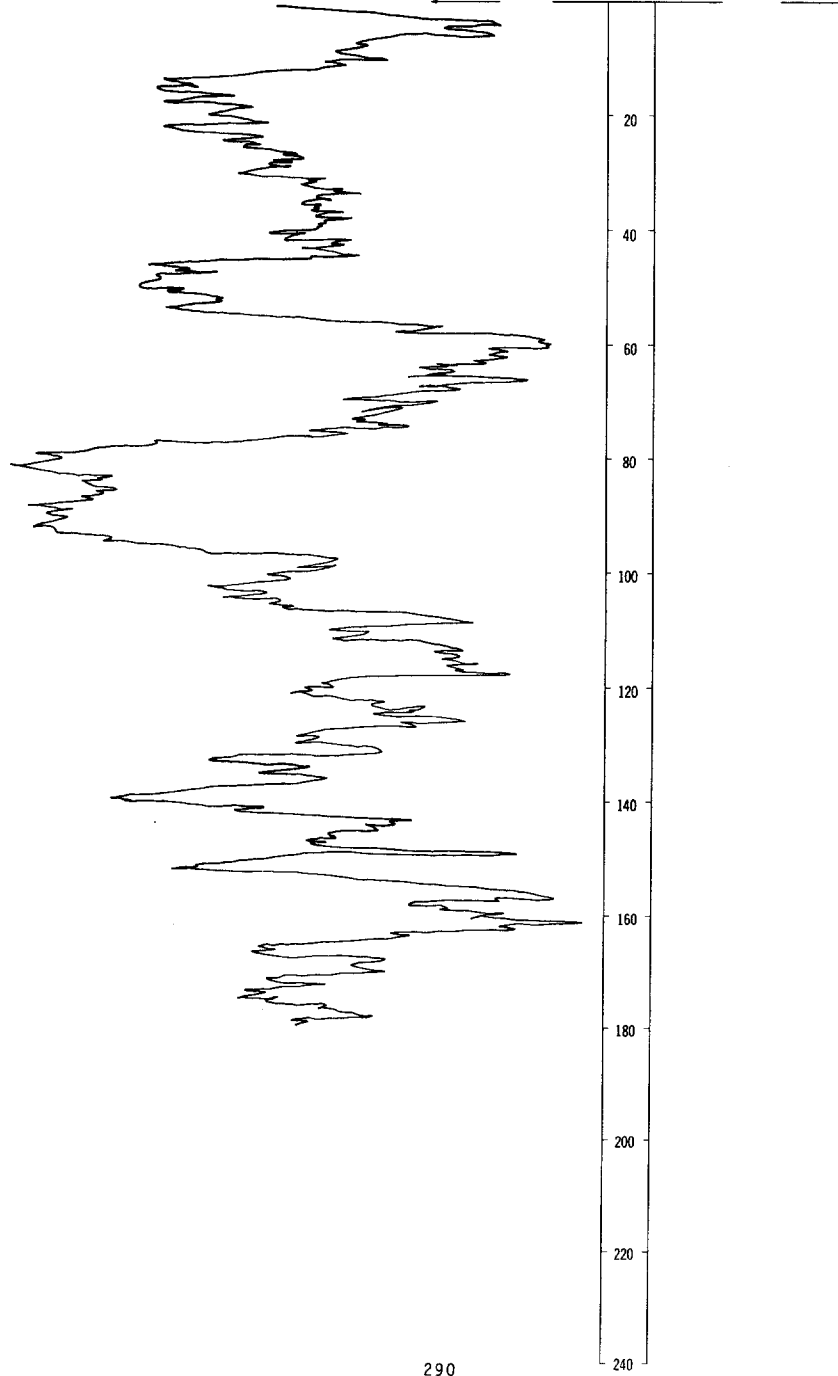
LOCATION: 136-084-20DBA

DATE DRILLED: September 1973

ALTITUDE: 1795
(FT, MSL)

DEPTH: 180
(FT)

NATURAL-GAMMA (T.C. 4)



136-084-30DAA
NDSWC 4554

Altitude: 1793 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Sand, yellowish-gray, fine to medium, well-sorted, subangular to subrounded-----	10	10
	Sand, reddish-brown, medium to very coarse, poorly to moderately sorted, subangular to subrounded, iron-stained, oxidized-----	16	26
	Gravel, fine to coarse, poorly to moderately sorted, subangular to subrounded-----	15	41
Cannonball Formation:			
	Sandstone, grayish-green, very fine to fine, silty, micaceous, soft, slightly cohesive-----	19	60

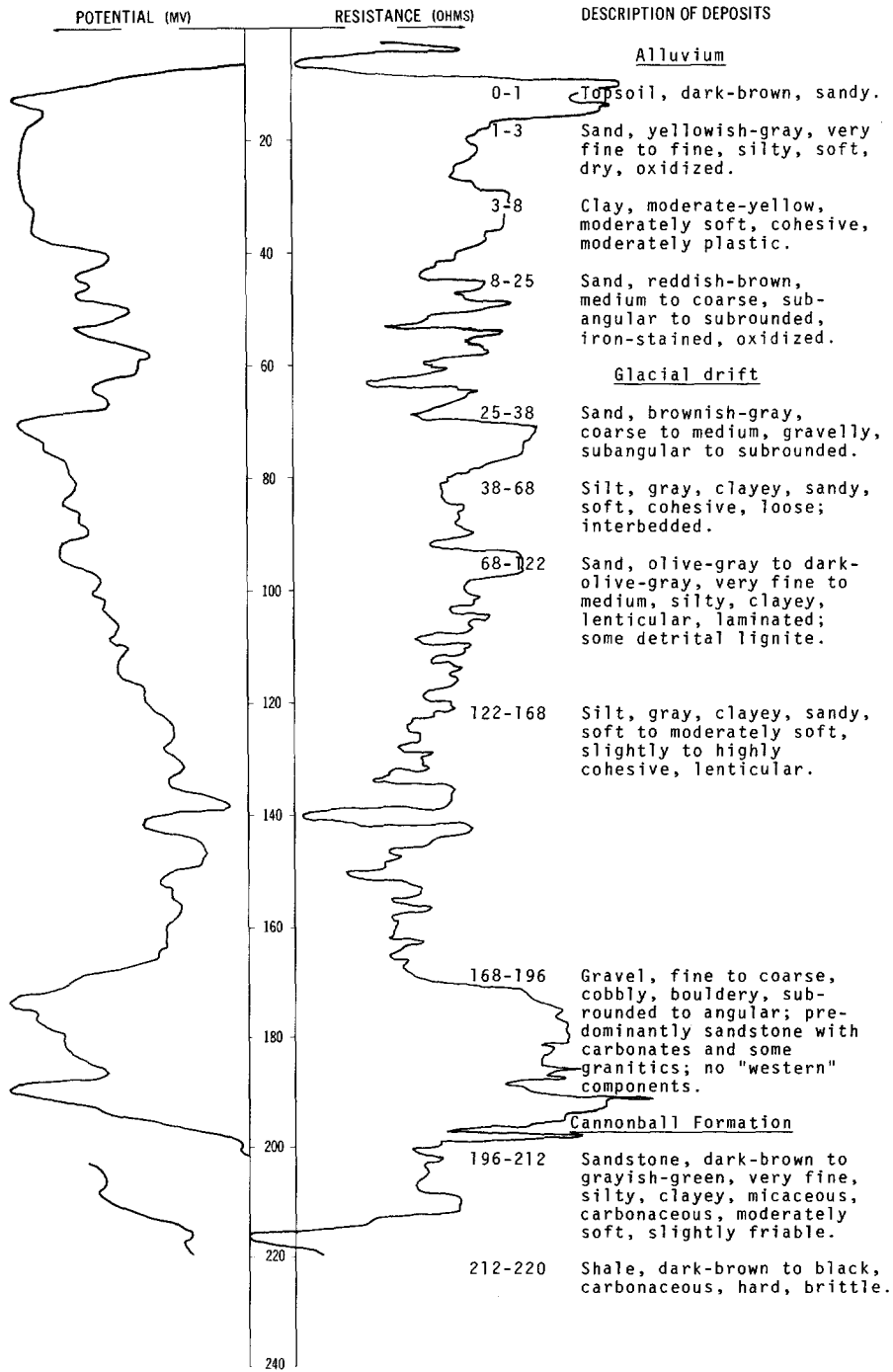
NDSWC 4555, 4555A

LOCATION: 136-084-31ADD1, 2

DATE DRILLED: September 1973

ALTITUDE: 1806
(FT, MSL)

DEPTH: 220
(FT)



NDSWC 4555, 4555A, Continued

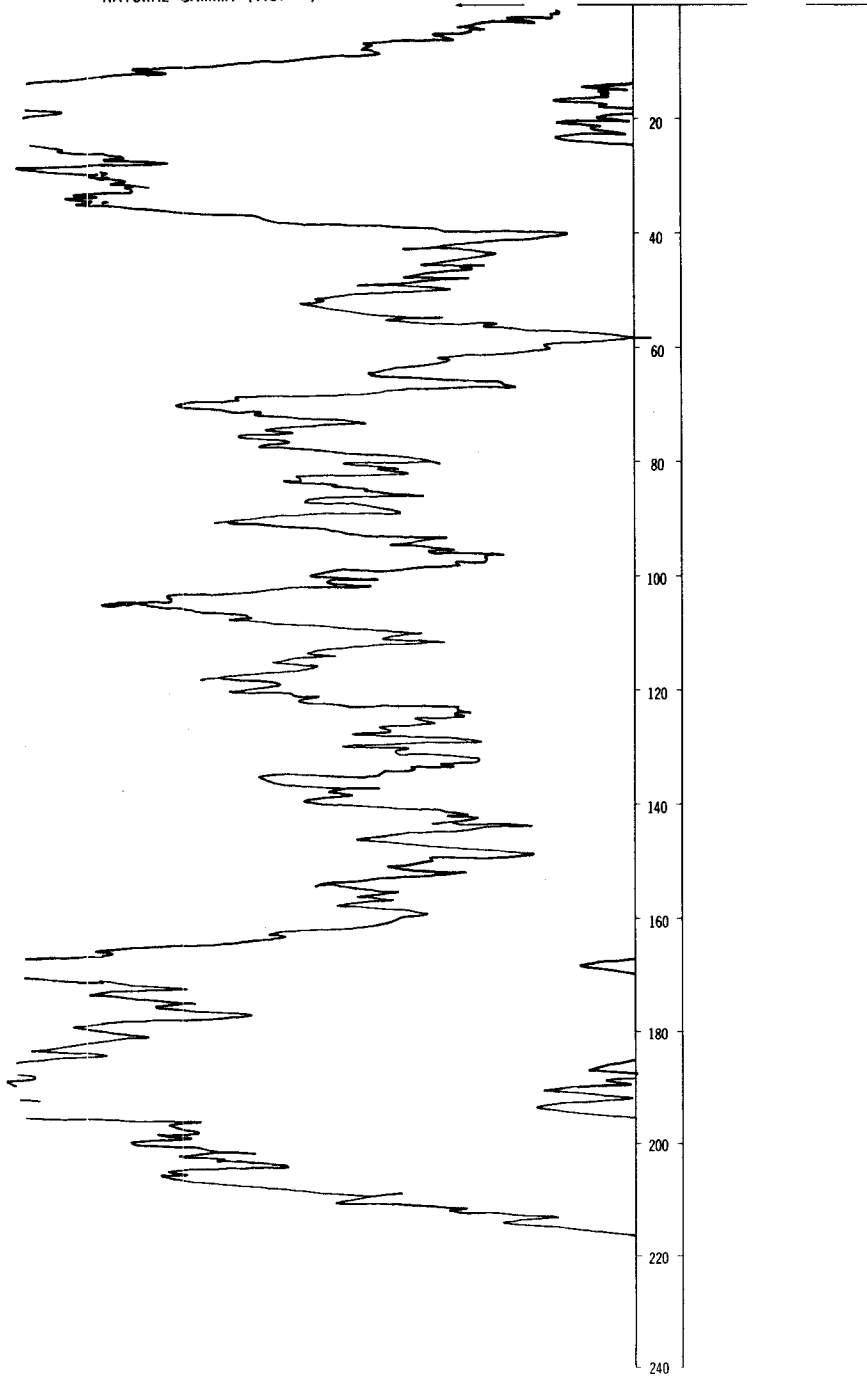
LOCATION: 136-084-31ADD1, 2

DATE DRILLED: September 1973

ALTITUDE: 1806
(FT. MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 4)



136-084-32BDD2
W. Bahm
(Log from Moe Drilling Company)

Geologic source	Material	Thickness (feet)	Depth (feet)
Glacial drift:			
	Sand and gravel, yellow-----	27	27
	Till, brown-----	2	29
	Gravel, sandy-----	18	47
	Boulders-----	1	48
Cannonball Formation (?):			
	Sand, gray-----	13	61
	Clay, dark-brown-----	43	104
	Sand, dark-brown, very fine-----	12	116
	Clay, dark-brown, brittle-----	16	132
	Lignite-----	3	135
	Clay, gray, sandy-----	9	144
	Lignite-----	3	147
	Clay, light-green-----	38	185
	Clay, gray, sandy-----	5	190
	Sand, green-----	20	210
	Sand, green; salt and pepper-----	39	249
	Clay, gray-----	9	258
	Sand, dark-green-----	3	261

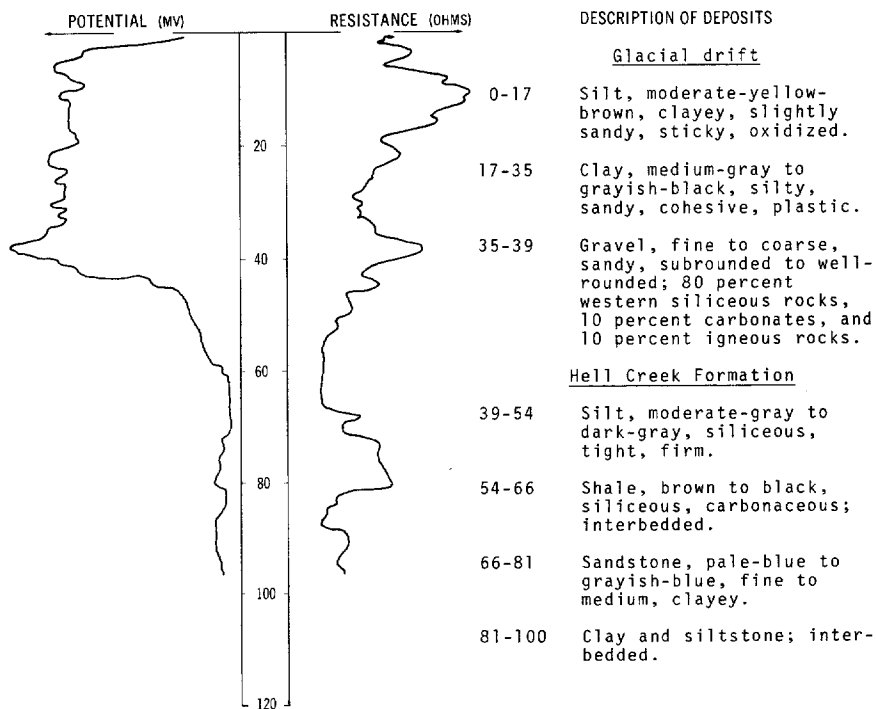
NDSWC 9011

LOCATION: 137-080-08CDC

DATE DRILLED: August 1974

ALTITUDE: 1635
(Ft, MSL)

DEPTH: 100
(Ft)

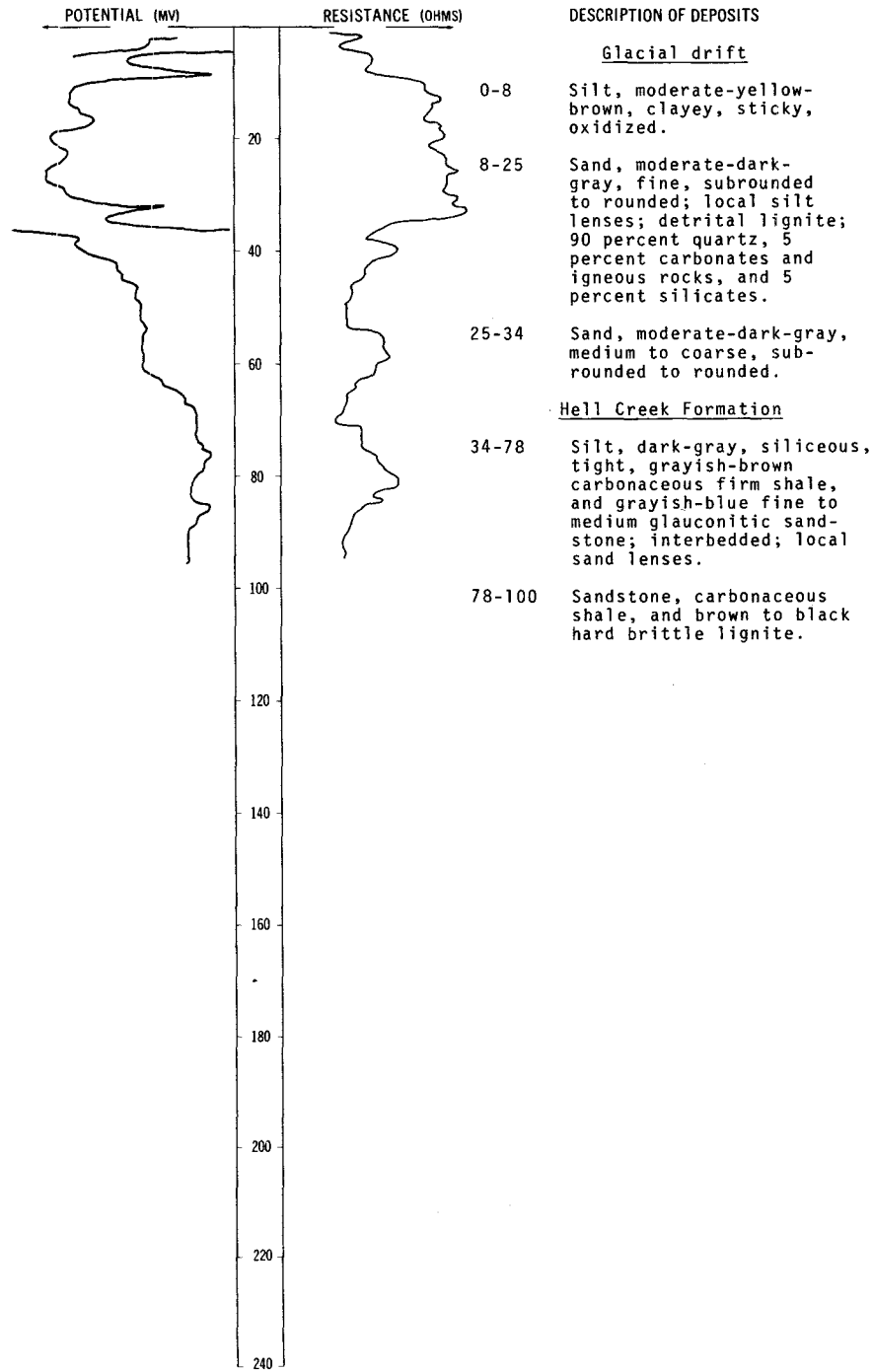


LOCATION: 137-080-16DBB

ALTITUDE: 1625
(FT, MSL)

DATE DRILLED: August 1974

DEPTH: 100
(FT)

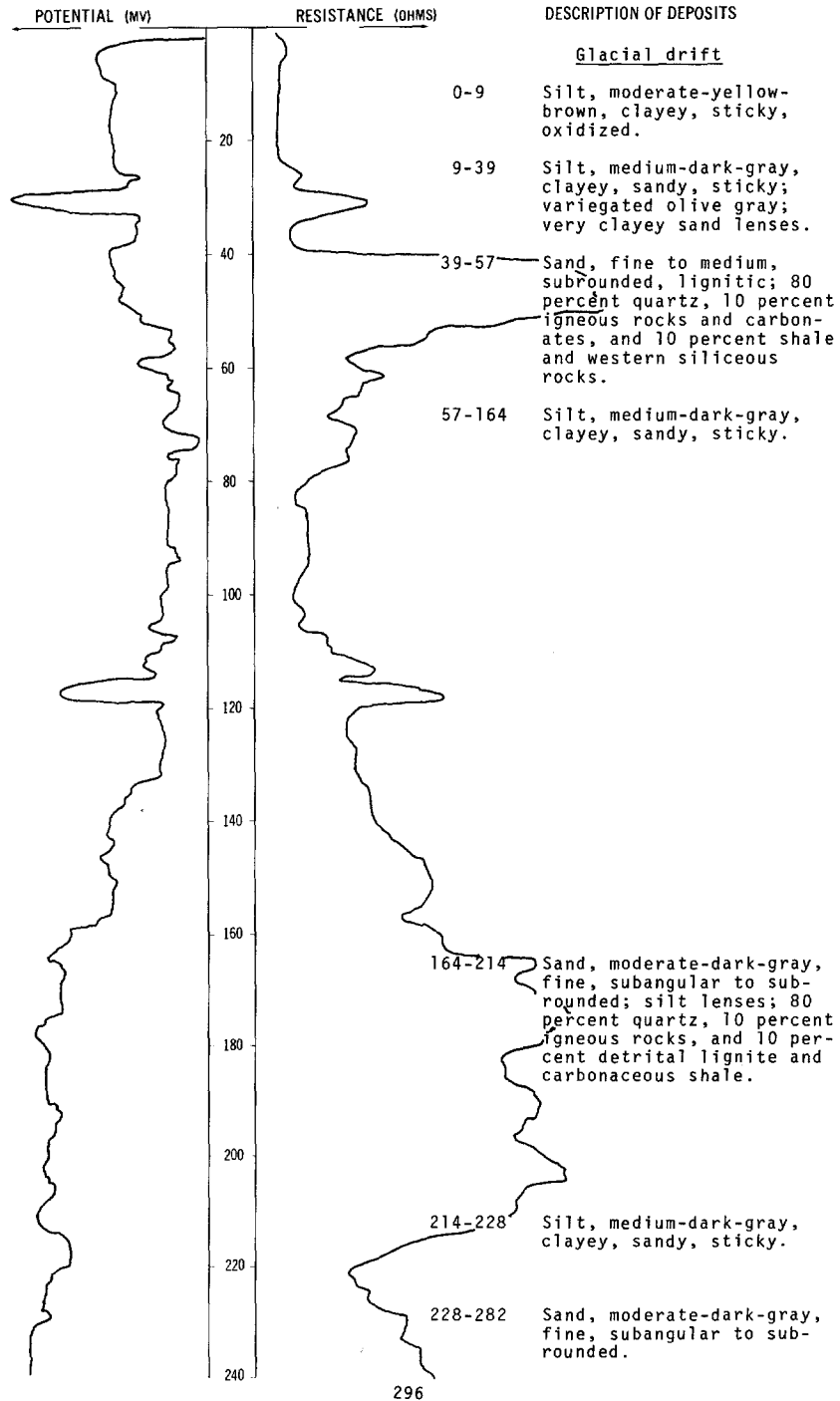


LOCATION: 137-081-10BAA

DATE DRILLED: August 1974

ALTITUDE: 1744
(FT, MSL)

DEPTH: 360
(FT)



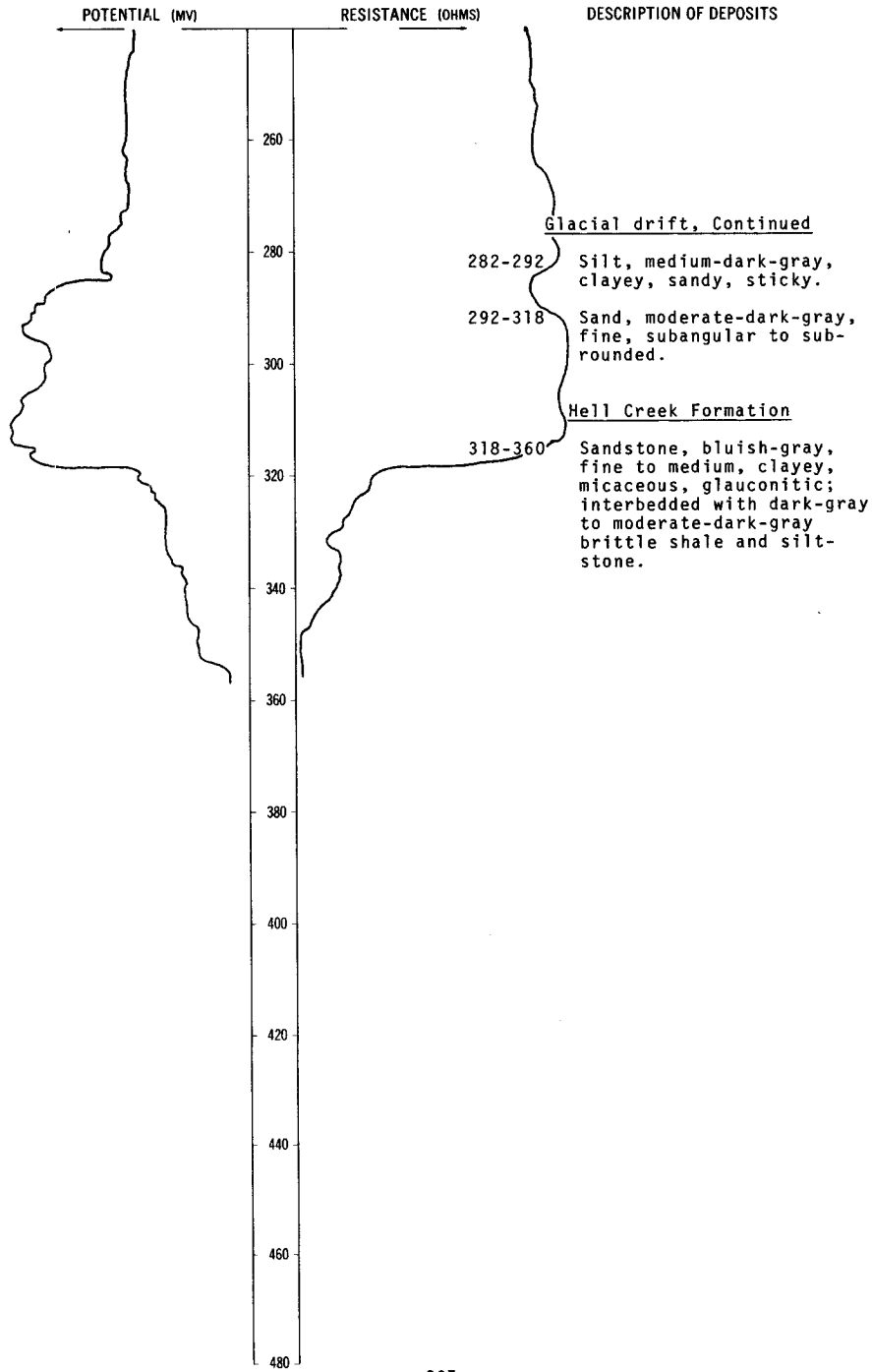
NDSWC 9007, Continued

LOCATION: 137-081-10BAA

DATE DRILLED: August 1974

ALTITUDE: 1744
(FT, MSL)

DEPTH: 360
(FT)

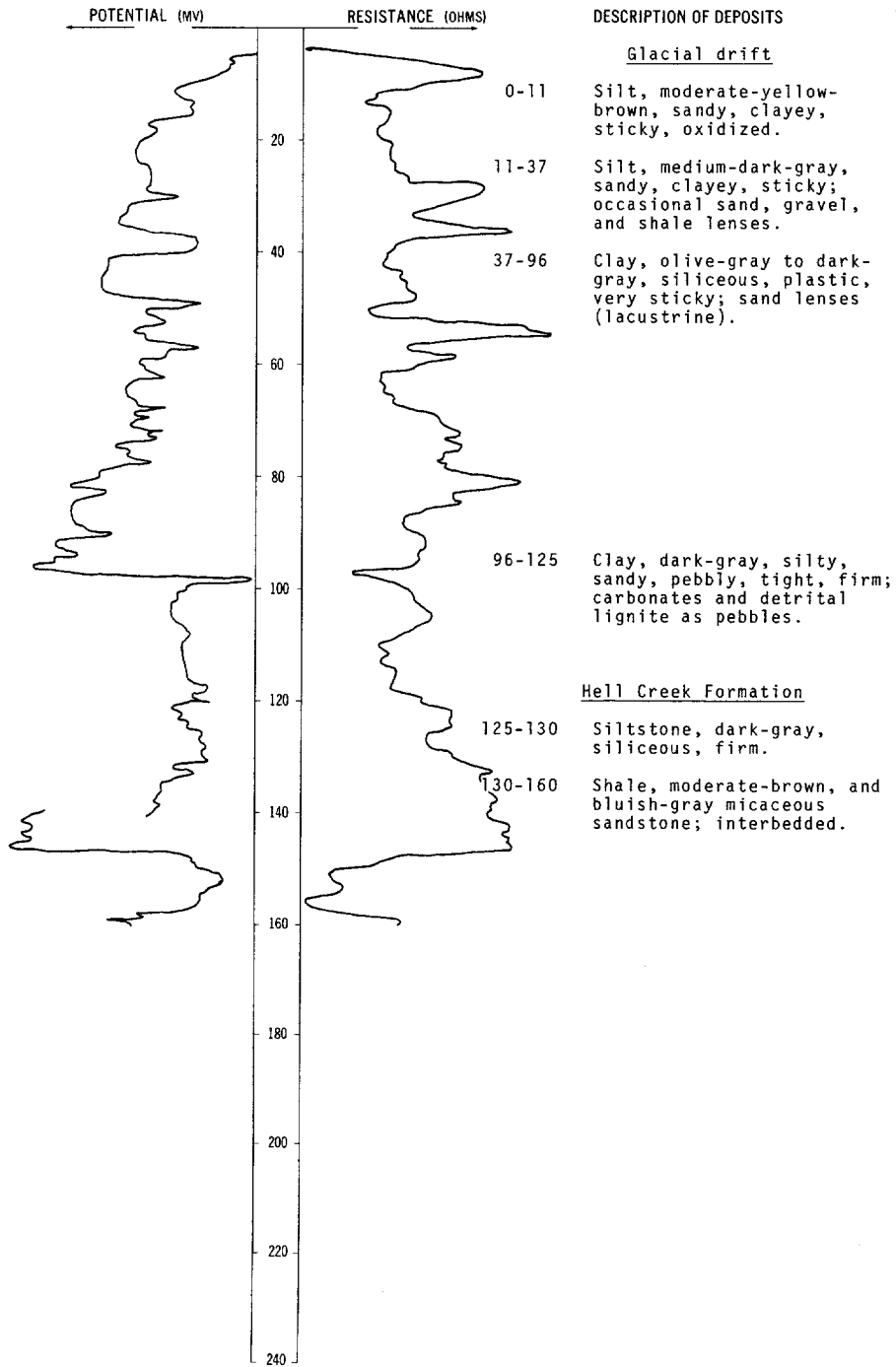


LOCATION: 137-081-16AAA

DATE DRILLED: August 1974

ALTITUDE: 1732
(FT, MSL)

DEPTH: 160
(FT)

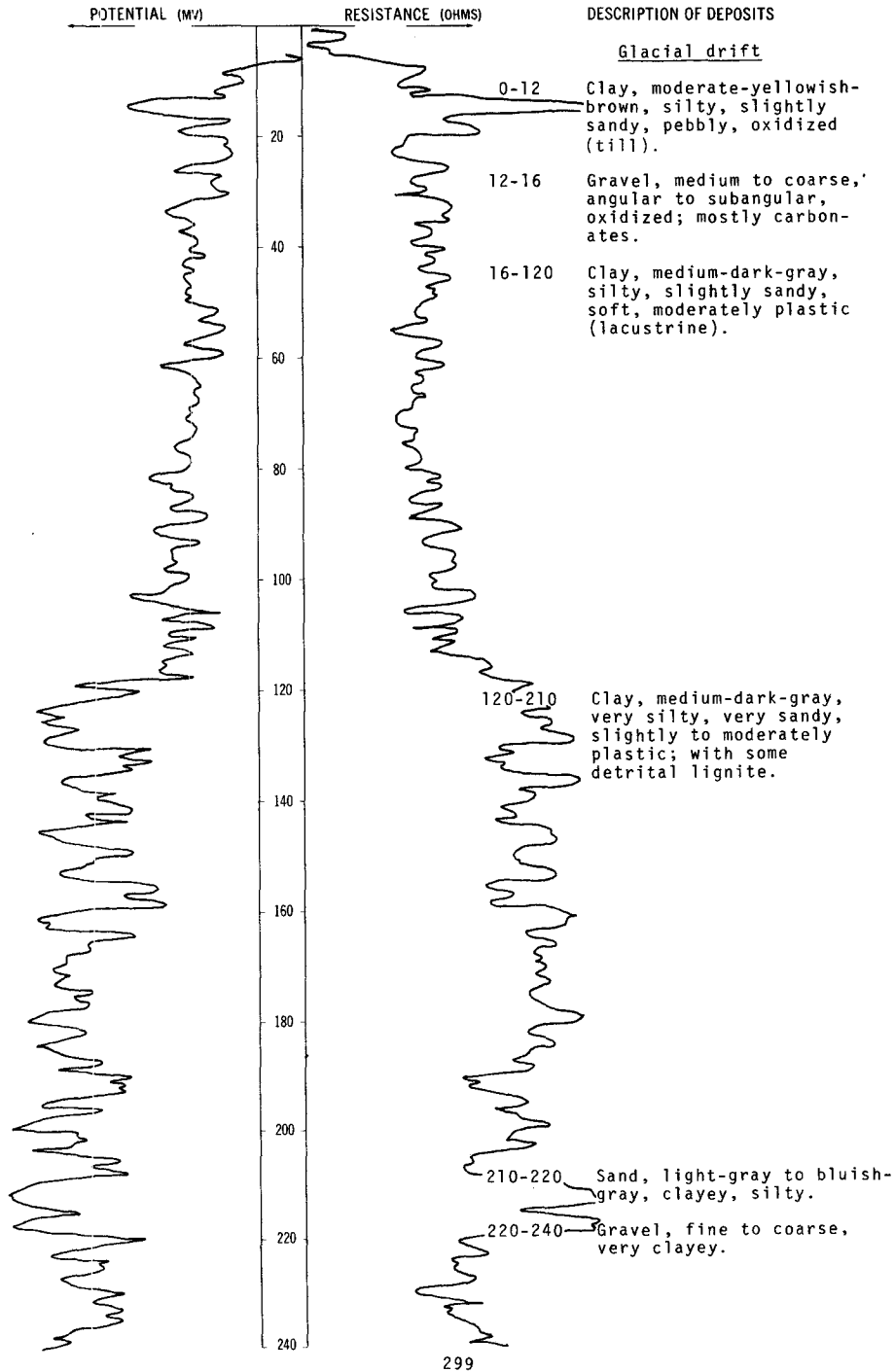


LOCATION: 137-081-21ACA

DATE DRILLED: July 1975

ALTITUDE: 1708
(FT, MSL)

DEPTH: 280
(FT)



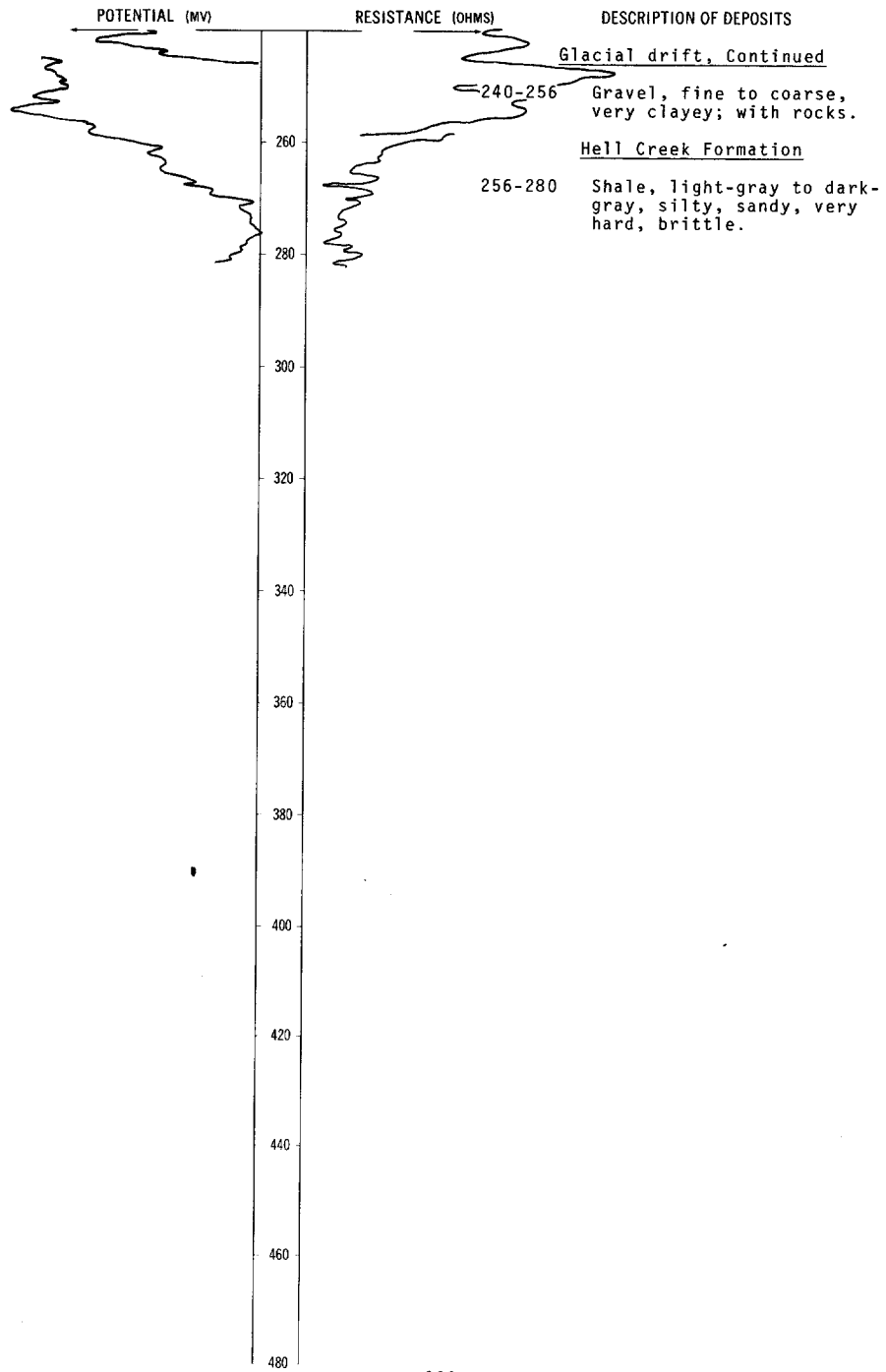
NDSWC 9329, Continued

LOCATION: 137-081-21ACA

DATE DRILLED: July 1975

ALTITUDE: 1708
(FT, MSL)

DEPTH: 280
(FT)



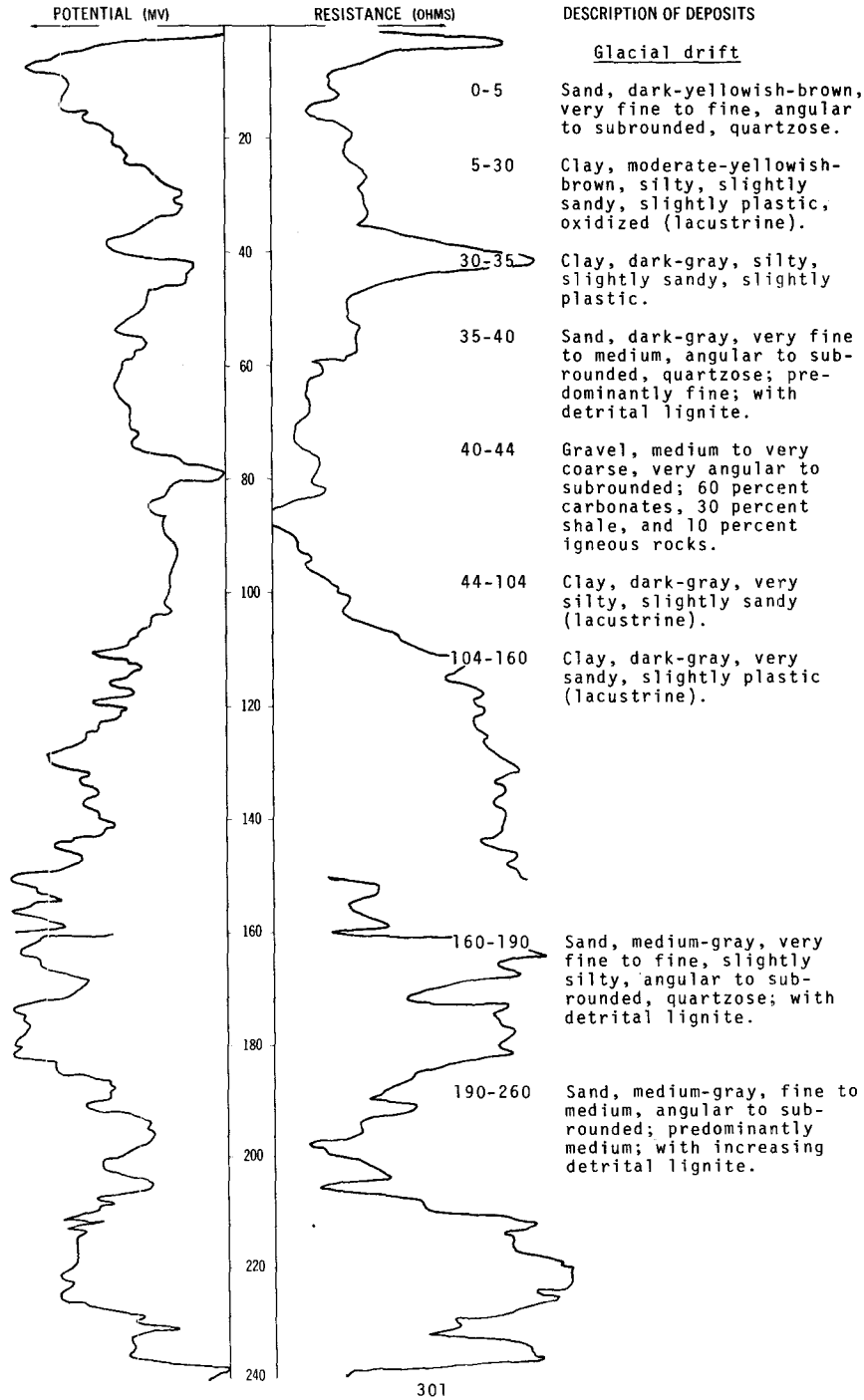
NDSWC 9283

LOCATION: 137-081-28CCD

DATE DRILLED: June 1975

ALTITUDE: 1747
(FT. MSL)

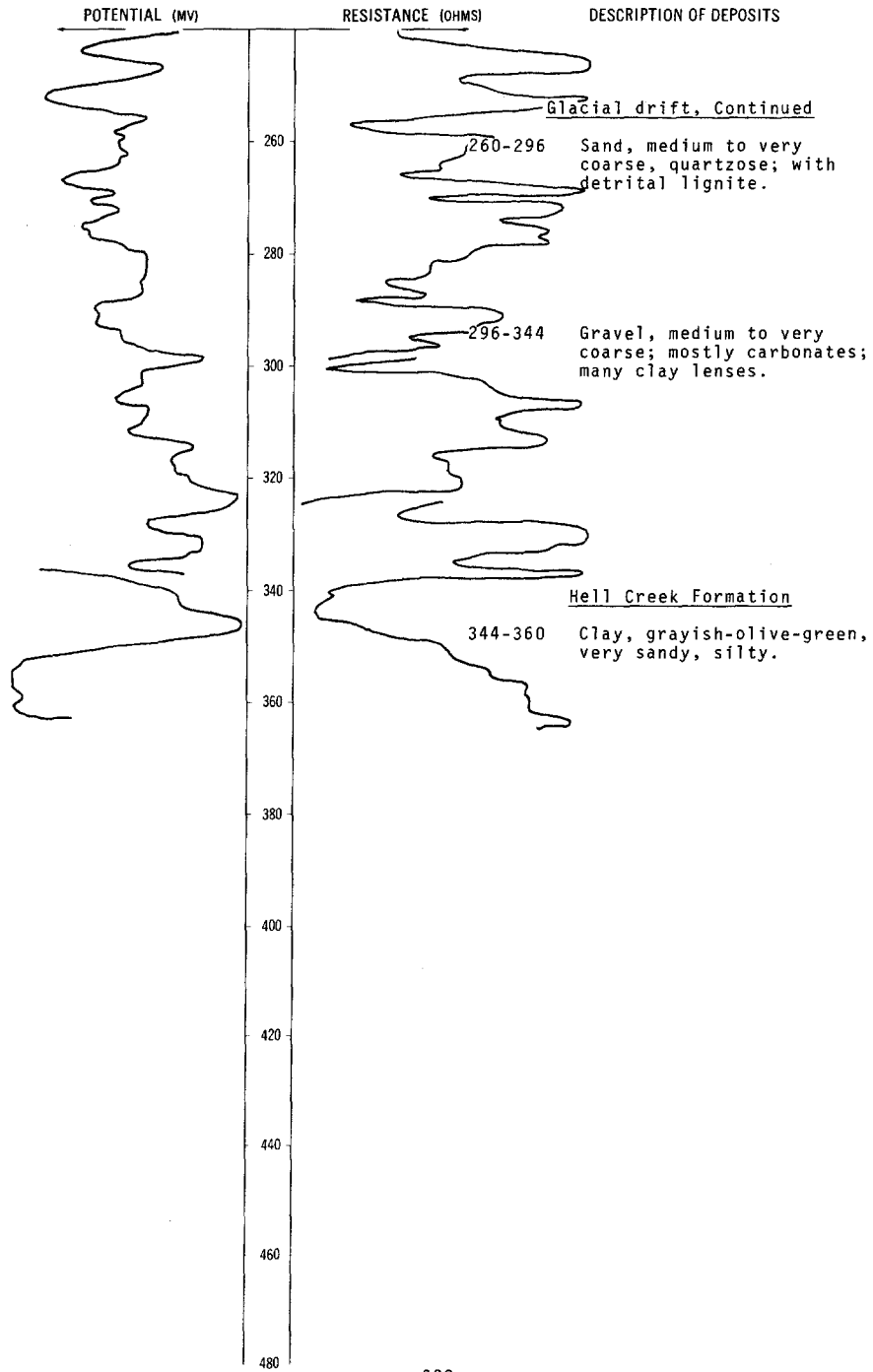
DEPTH: 360
(FT)



NDSWC 9283, Continued

LOCATION: 137-081-28CCD
ALTITUDE: 1747
(FT, MSL)

DATE DRILLED: June 1975
DEPTH: 360
(FT)

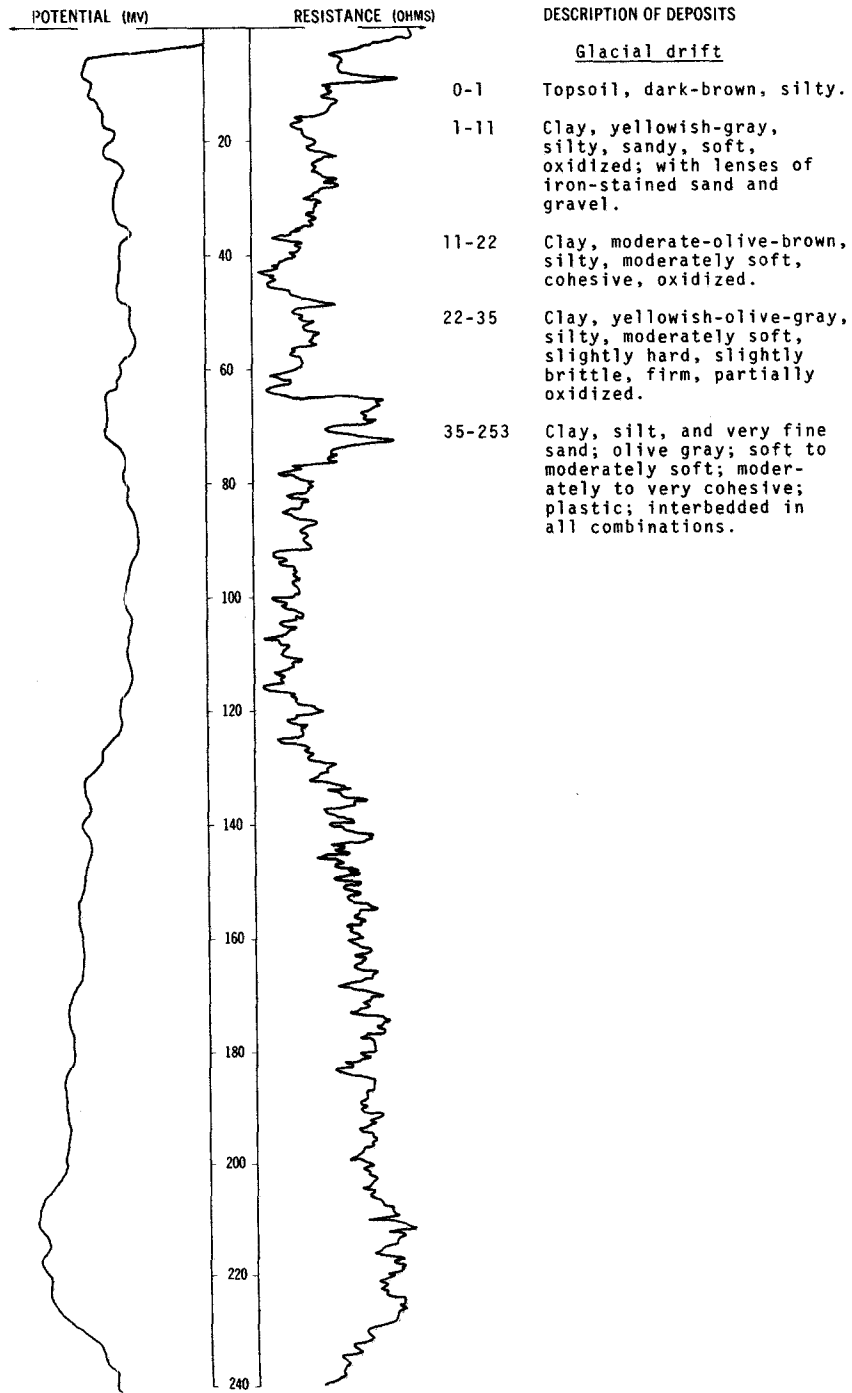


LOCATION: 137-081-31DDD

DATE DRILLED: September 1973

ALTITUDE: 1740
(FT, MSL)

DEPTH: 280
(FT)



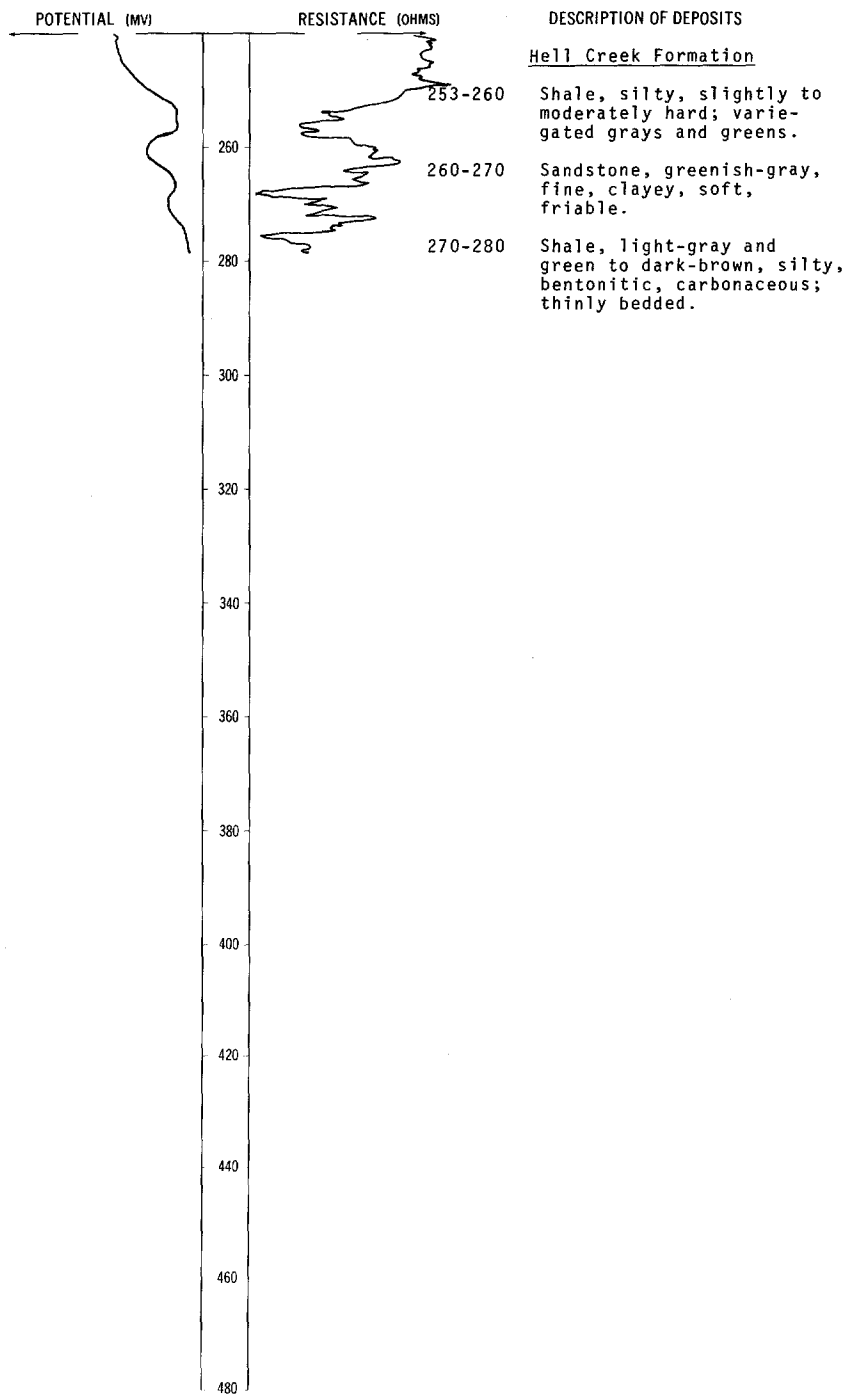
NDSWC 4589, Continued

LOCATION: 137-081-31DDD

DATE DRILLED: September 1973

ALTITUDE: 1740
(FT, MSL)

DEPTH: 280
(FT)



NDSWC 4589, Continued

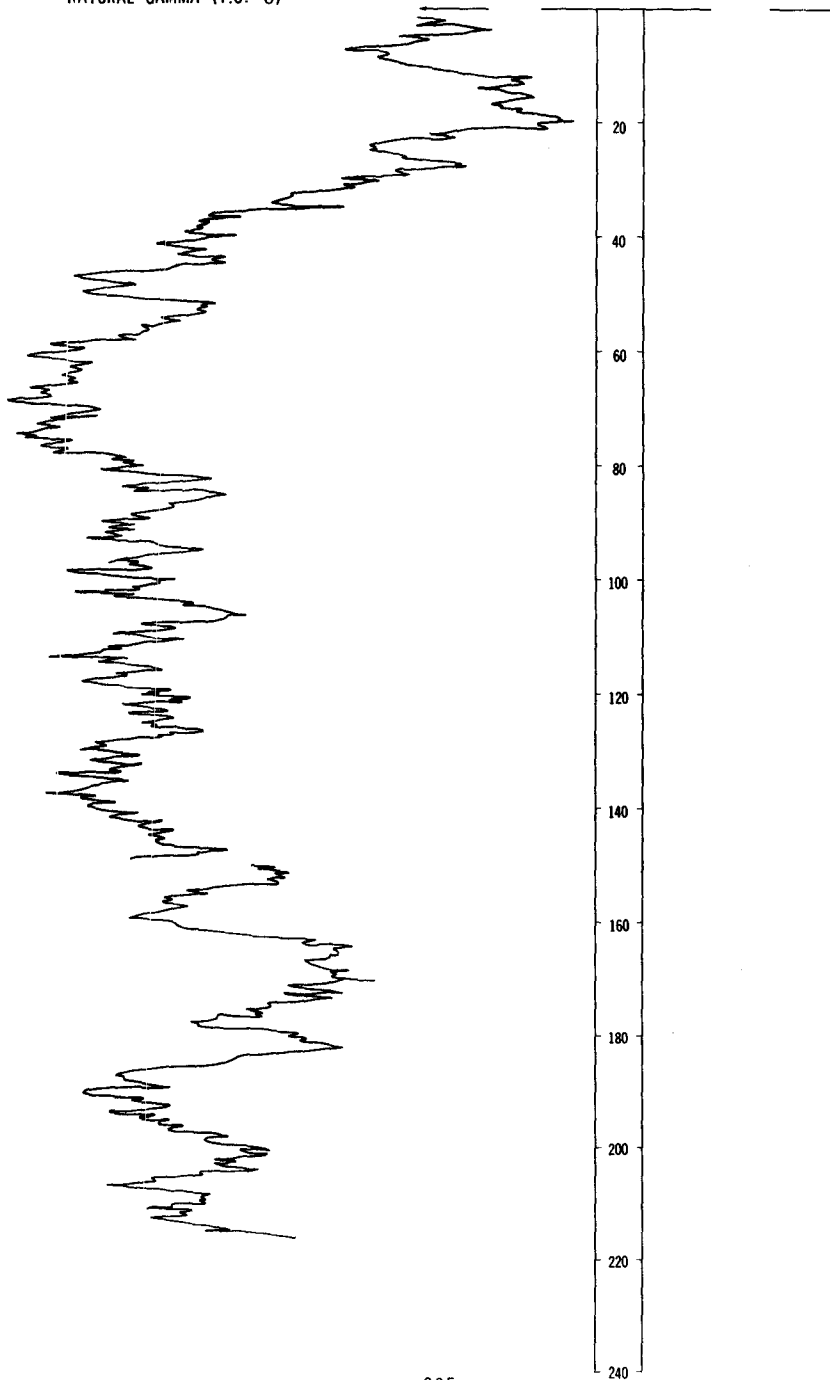
LOCATION: 137-081-31DDD

DATE DRILLED: September 1973

ALTITUDE: 1740
(FT, MSL)

DEPTH: 280
(FT)

NATURAL-GAMMA (T.C. 8)



NDSWC 4589, Continued

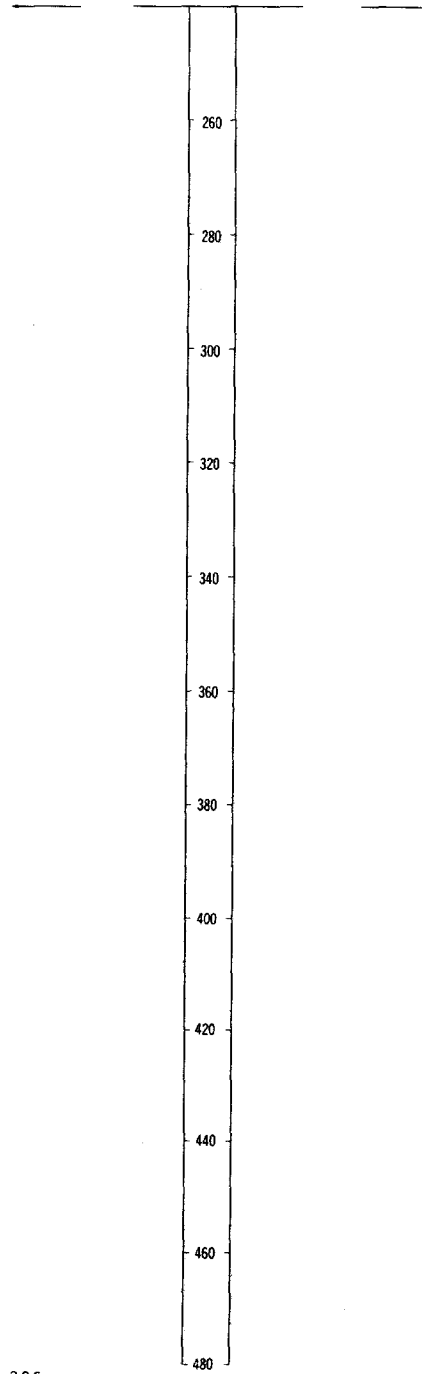
LOCATION: 137-081-31DDD

DATE DRILLED: September 1973

ALTITUDE: 1740
(FT, MSL)

DEPTH: 280
(FT)

NATURAL-GAMMA (T.C. 8)



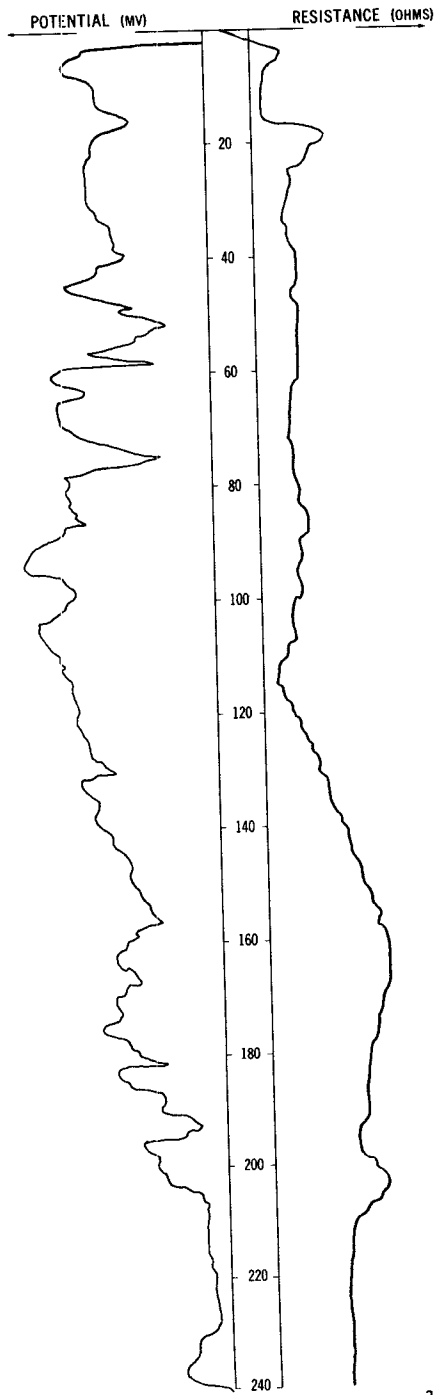
NDSWC 9284

LOCATION: 137-081-32BAA

ALTITUDE: 1739
(FT, MSL)

DATE DRILLED: June 1975

DEPTH: 280
(FT)



DESCRIPTION OF DEPOSITS

Glacial drift

- 0-5 Clay, dark-yellowish-brown, very sandy, silty, oxidized (lacustrine).
- 5-25 Clay, dark-yellowish-brown, silty, iron-stained (lacustrine).
- 25-158 Clay, dark-gray, silty, iron-stained.

- 158-258 Clay, dark-gray, silty, sandy, pebbly (till).

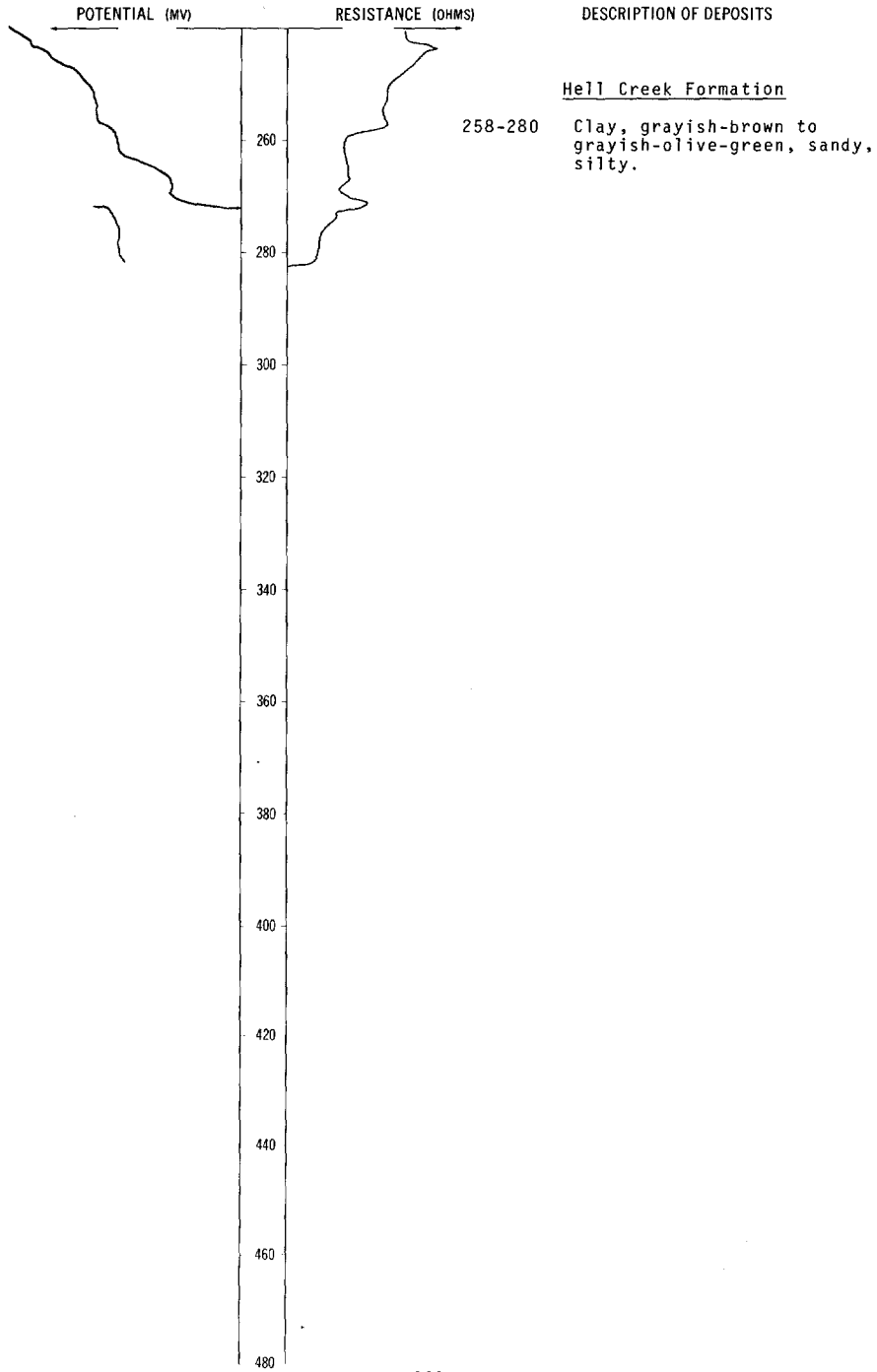
NDSWC 9284, Continued

LOCATION: 137-081-32BAA

DATE DRILLED: June 1975

ALTITUDE: 1739
(FT, MSL)

DEPTH: 280
(FT)

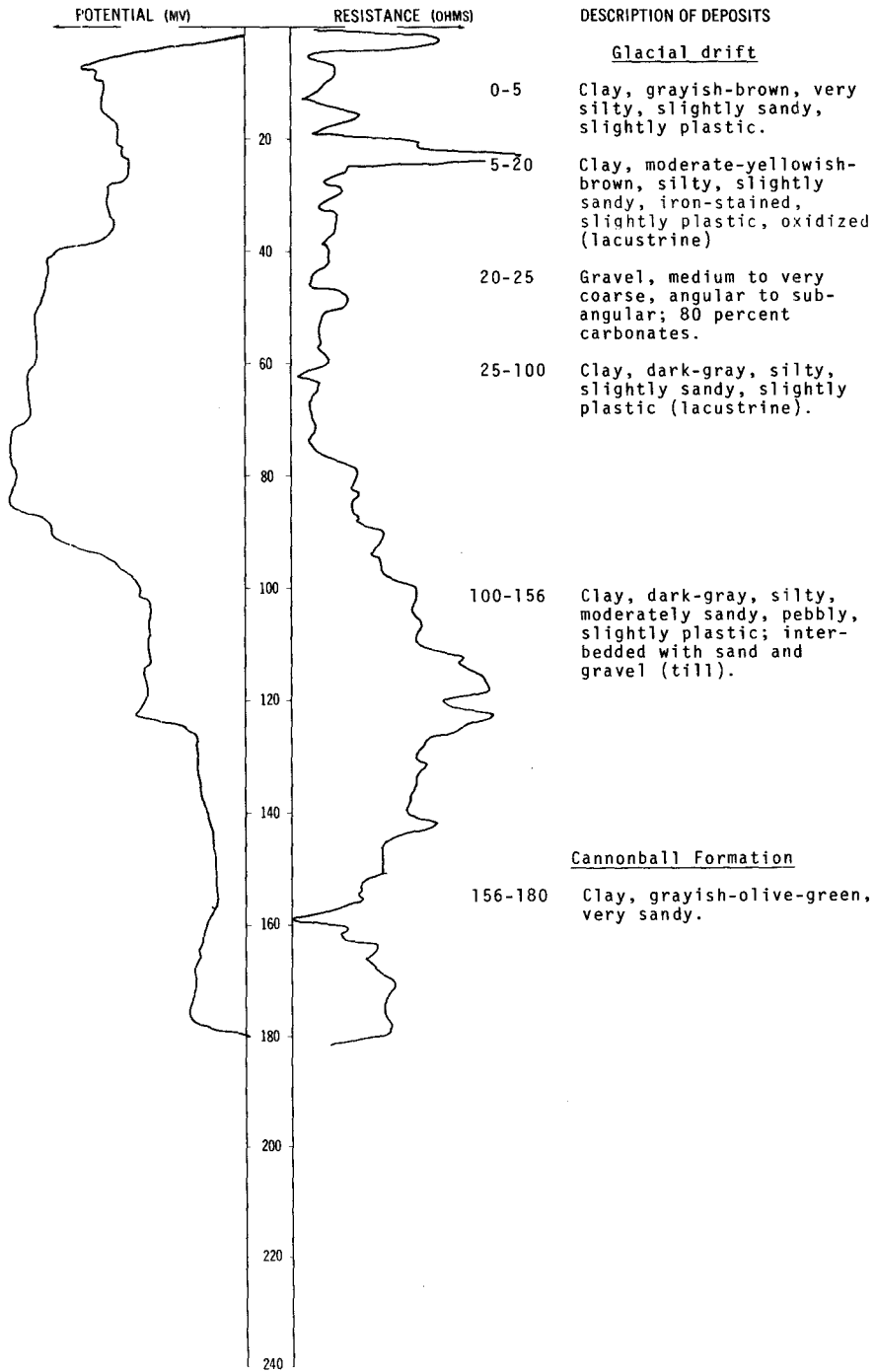


LOCATION: 137-081-32BBB

ALTITUDE: 1731
(FT, MSL)

DATE DRILLED: June 1975

DEPTH: 180
(FT)

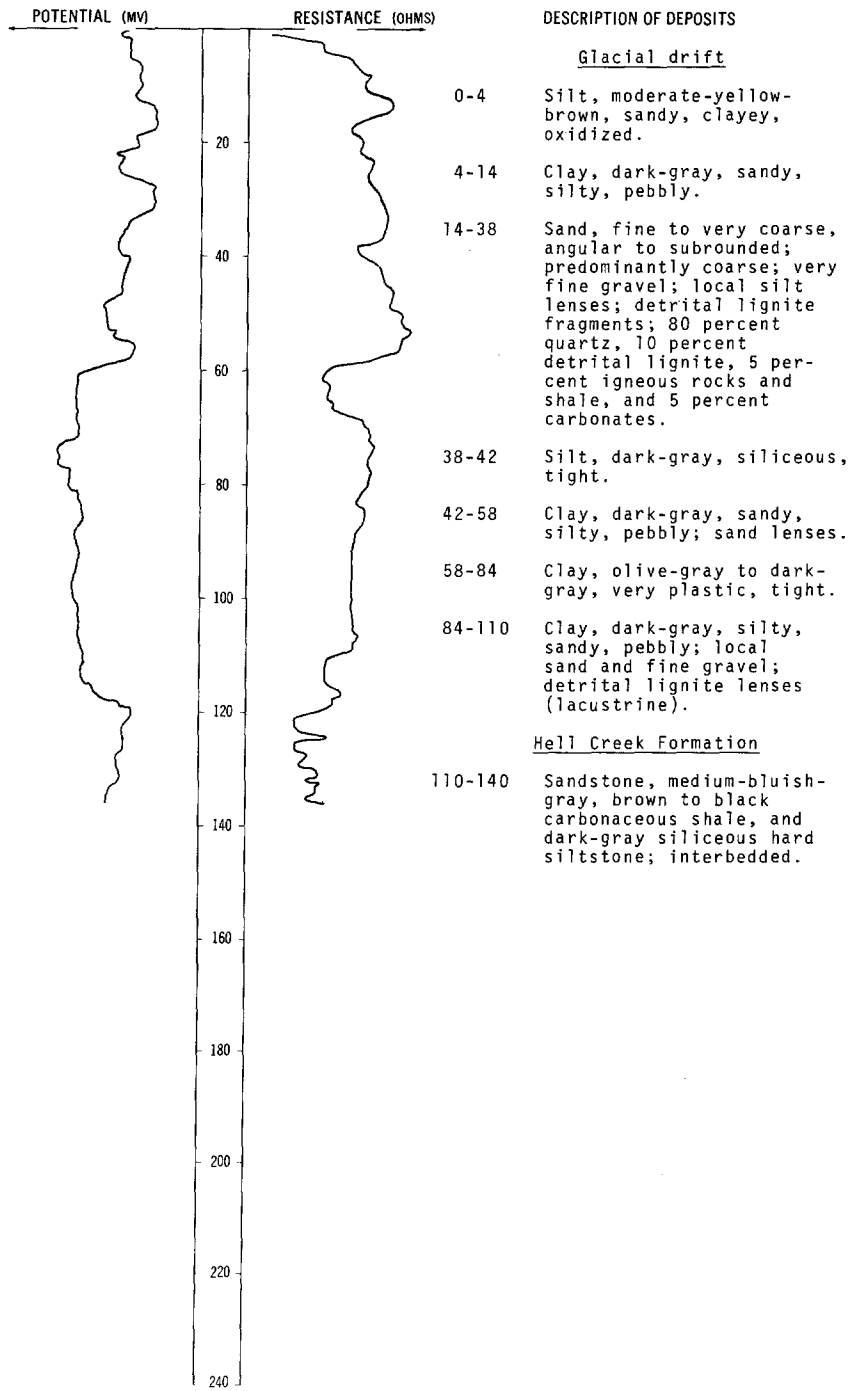


LOCATION: 137-082-20DAA

DATE DRILLED: August 1974

ALTITUDE:
(FT, MSL)

DEPTH: 140
(FT)

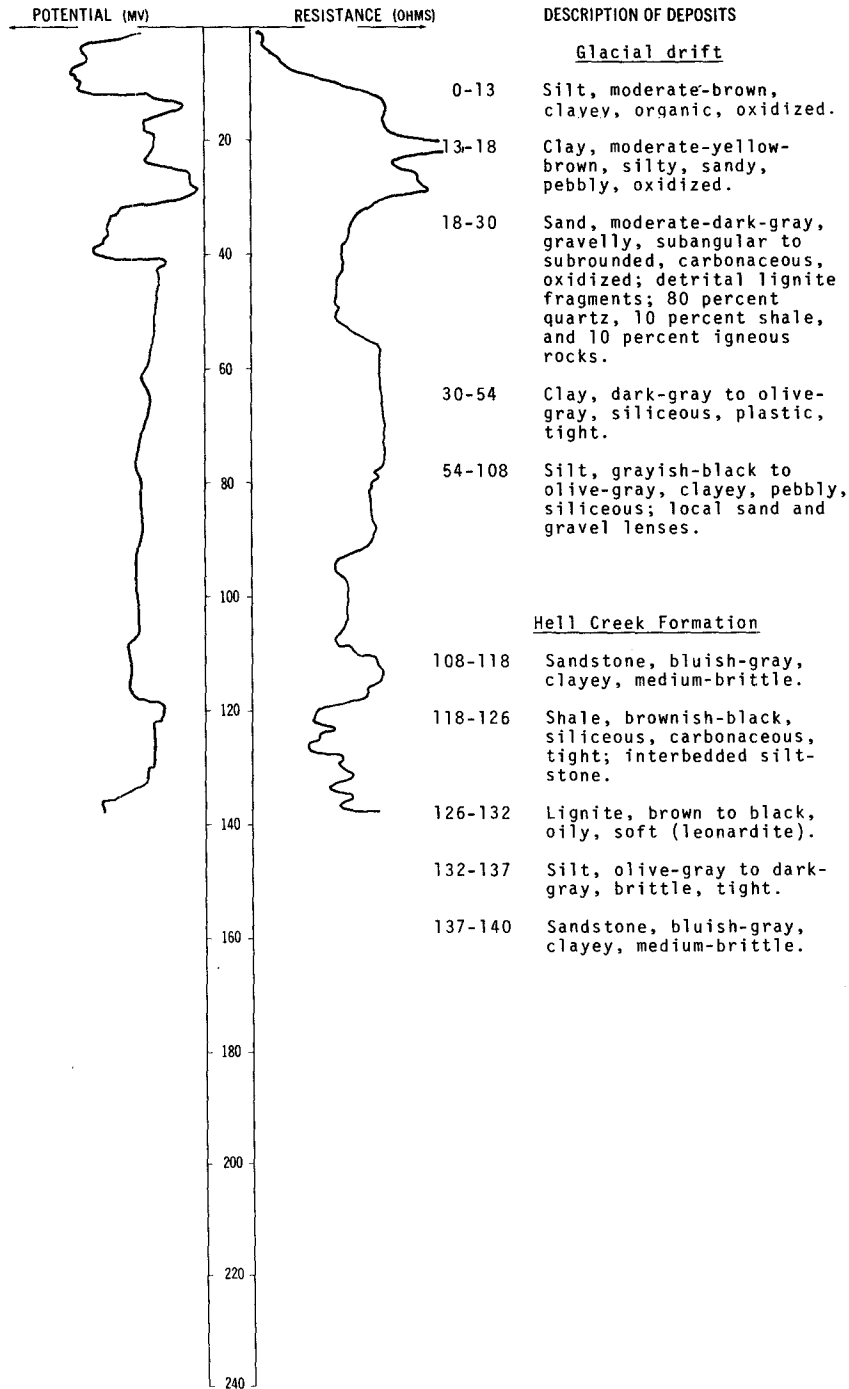


LOCATION: 137-082-21CCC

DATE DRILLED: August 1974

ALTITUDE:
(F', MSL)

DEPTH: 140
(FT)

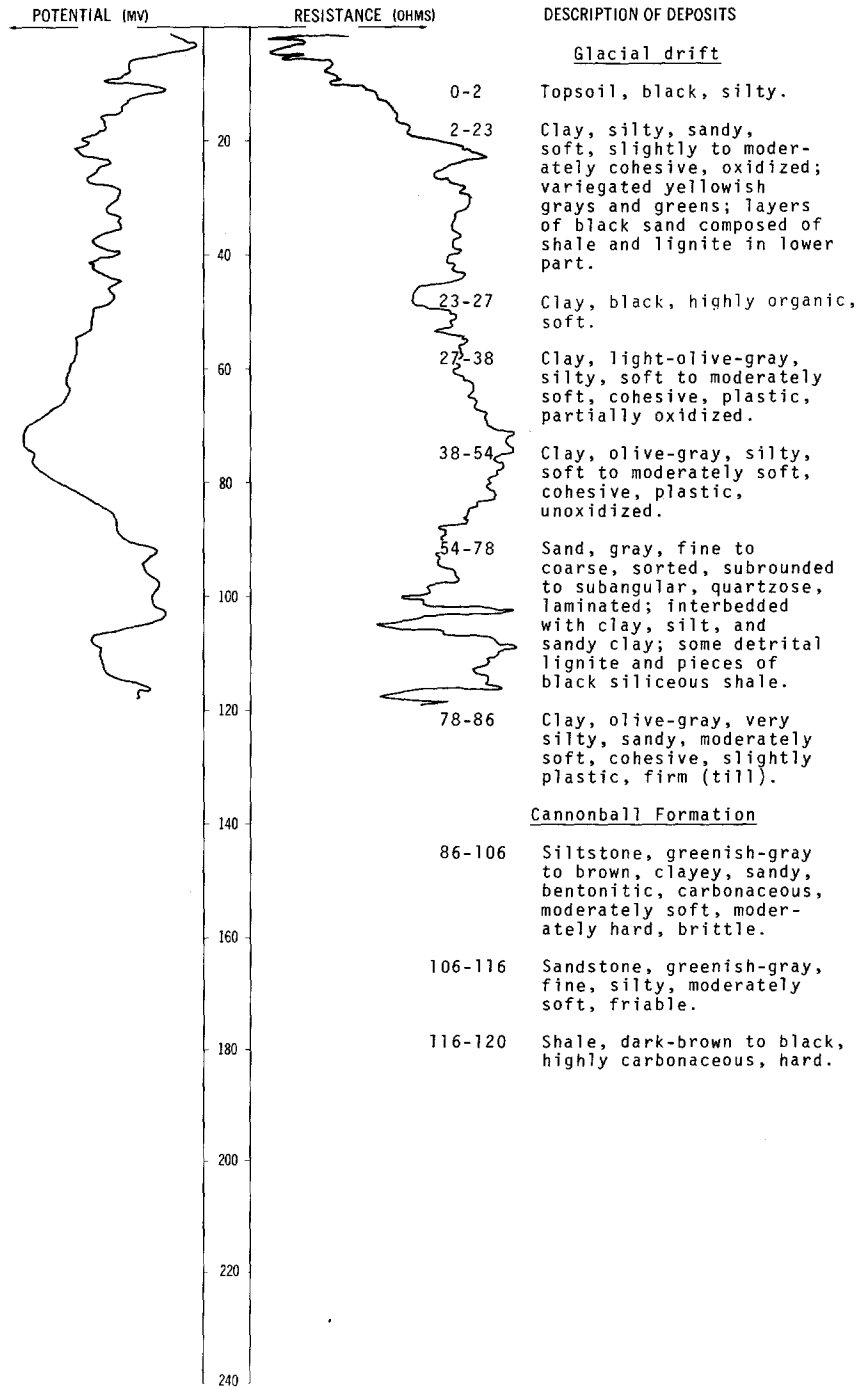


LOCATION: 137-082-32DCC2

ALTITUDE: 1801
(FT, MSU)

DATE DRILLED: September 1973

DEPTH: 120
(FT)



NDSWC 4585, Continued

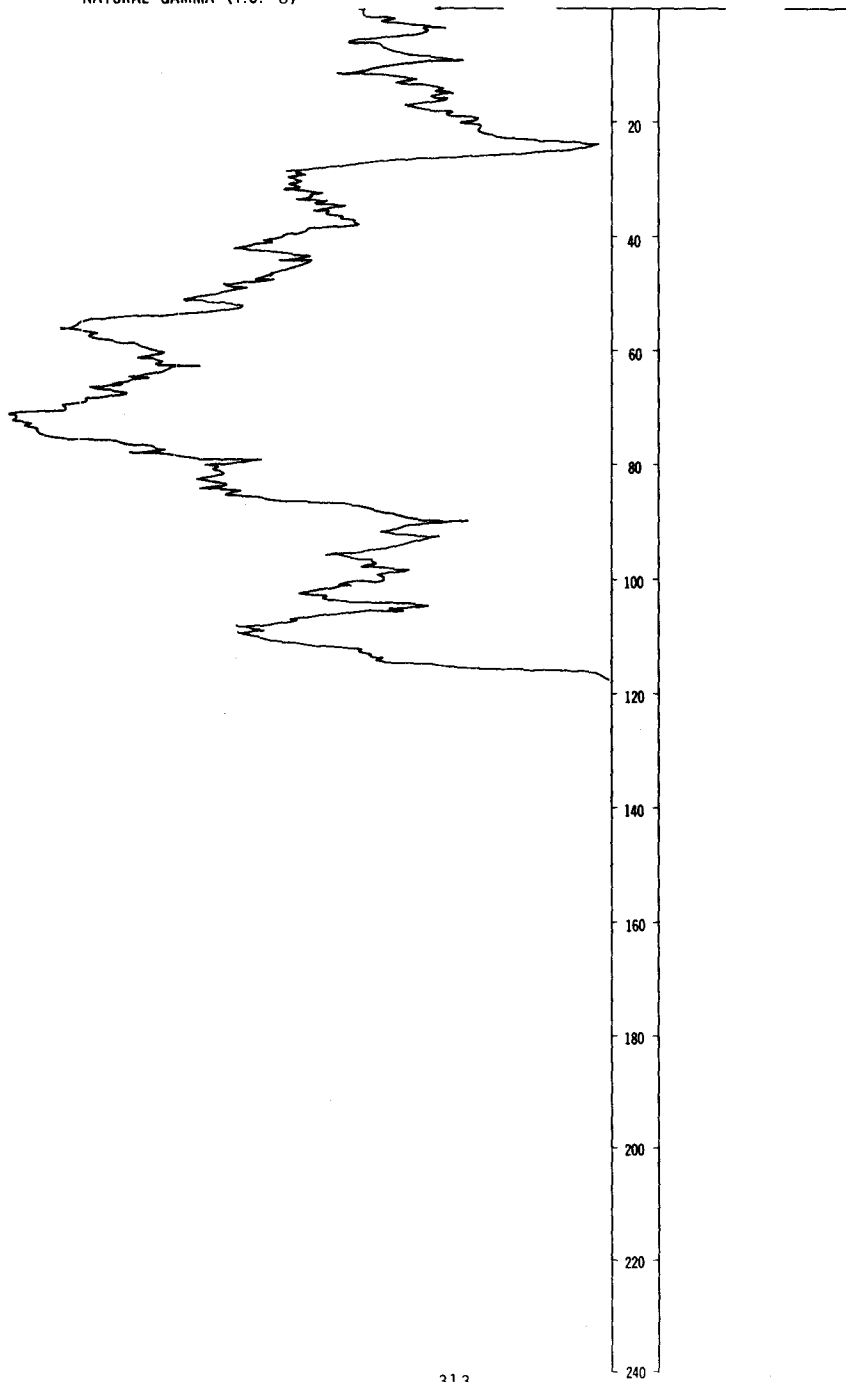
LOCATION: 137-082-32DCC2

DATE DRILLED: September 1973

ALTITUDE: 1801
(FT, MSL)

DEPTH: 120
(FT)

NATURAL-GAMMA (T.C. 8)

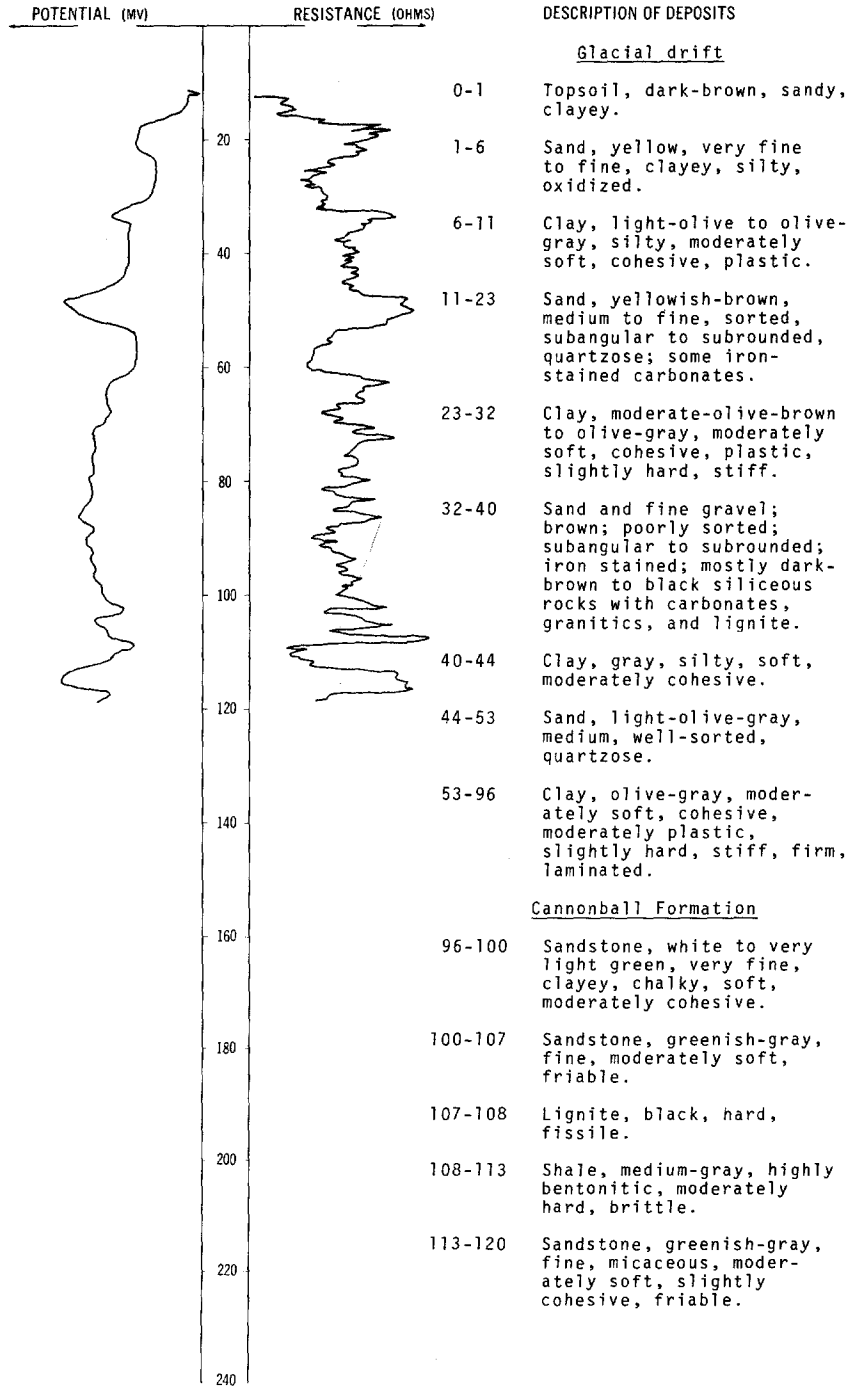


LOCATION: 137-082-33DCC

ALTITUDE: 1789
(FT, MSL)

DATE DRILLED: September 1973

DEPTH: 120
(FT)



NDSWC 4584, Continued

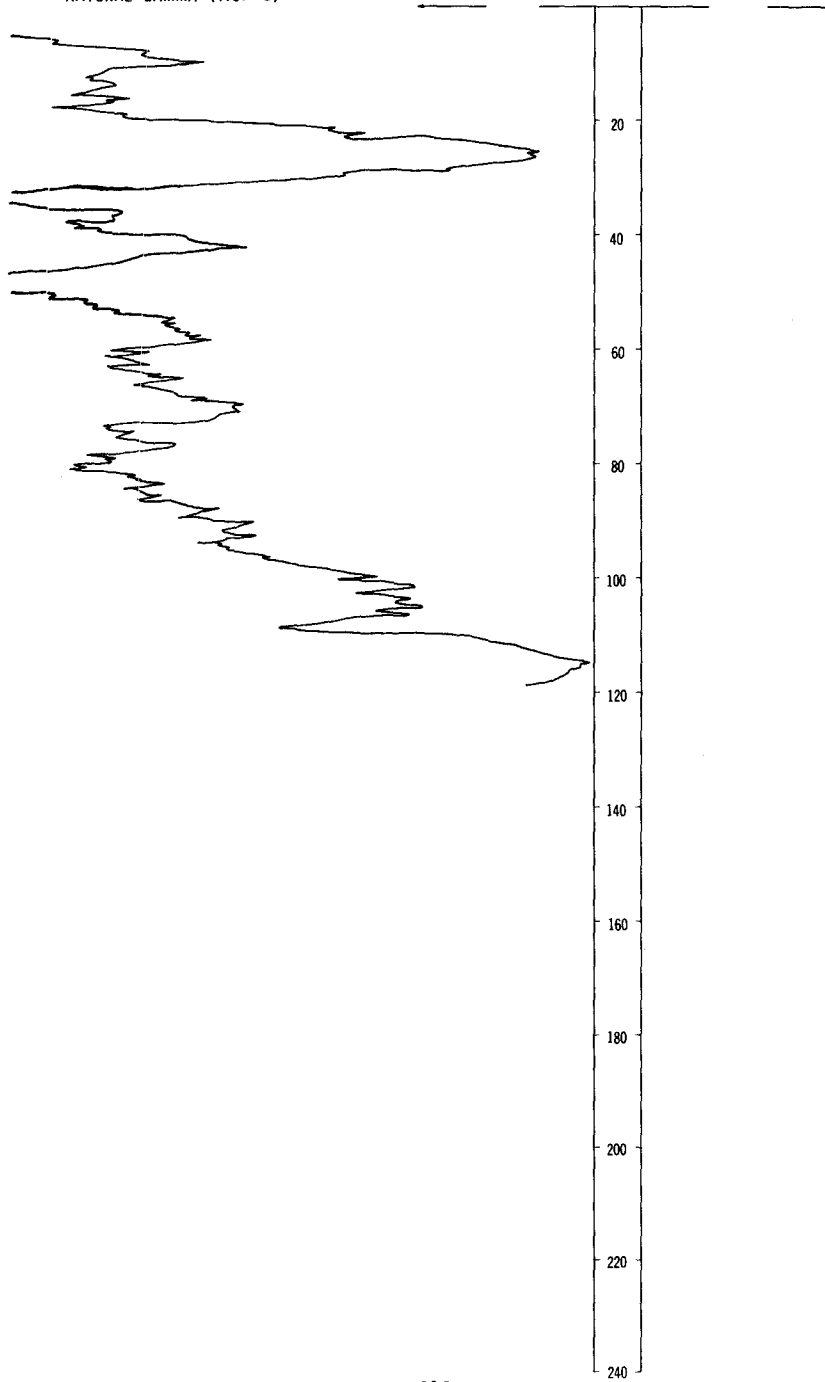
LOCATION: 137-082-33DCC

DATE DRILLED: September 1973

ALTITUDE: 1789
(FT, MSL)

DEPTH: 120
(FT)

NATURAL-GAMMA (T.C. 8)

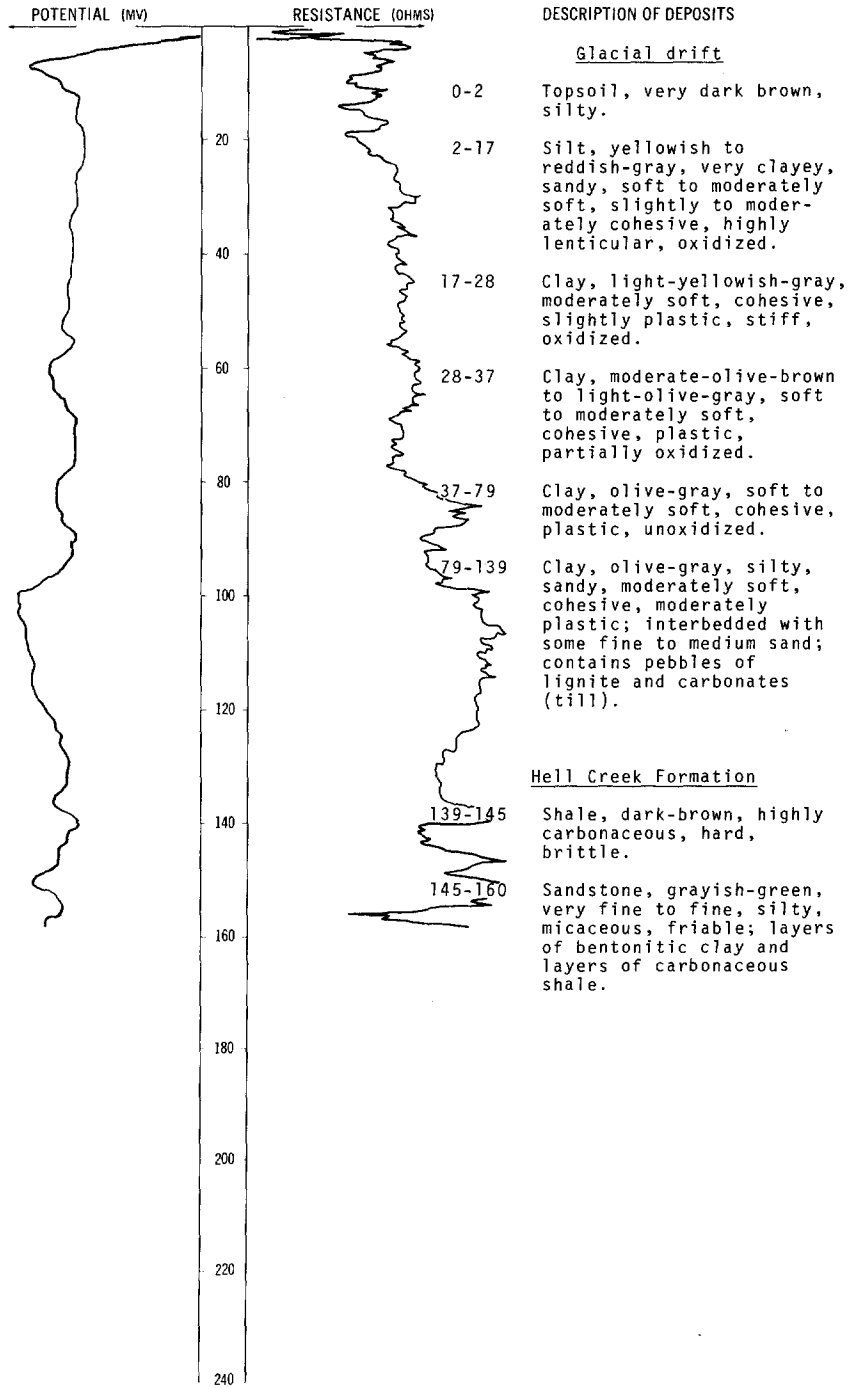


LOCATION: 137-082-35CCC

DATE DRILLED: September 1973

ALTITUDE: 1769
(FT, MSL)

DEPTH: 160
(FT)



NDSWC 4583, Continued

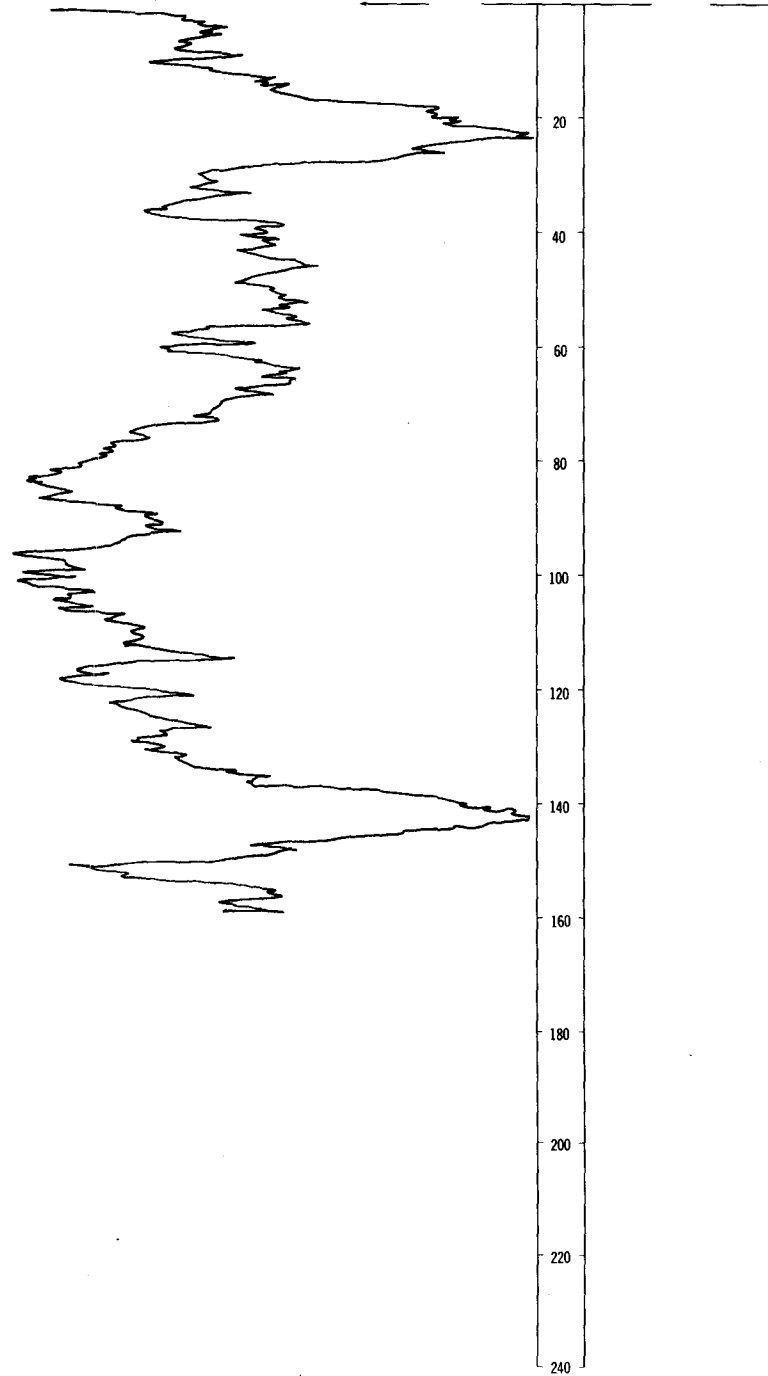
LOCATION: 137-082-35CCC

DATE DRILLED: September 1973

ALTITUDE: 1769
(FT, MSL)

DEPTH: 160
(FT)

NATURAL-GAMMA (T.C. 8)

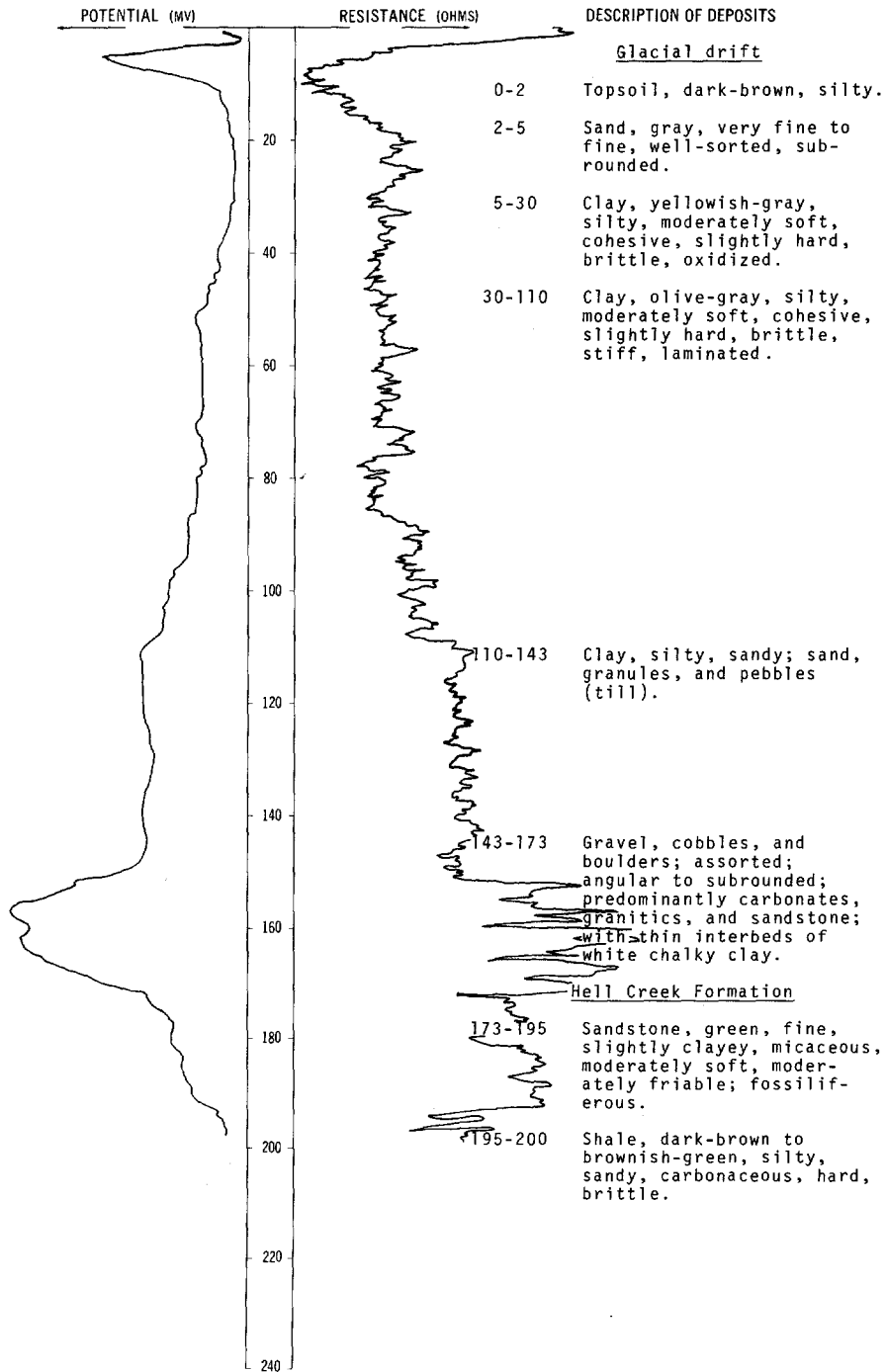


LOCATION: 137-082-36DDD

DATE DRILLED: September 1973

ALTITUDE: 1752
(FT, MSL)

DEPTH: 200
(FT)



NDSWC 4581, Continued

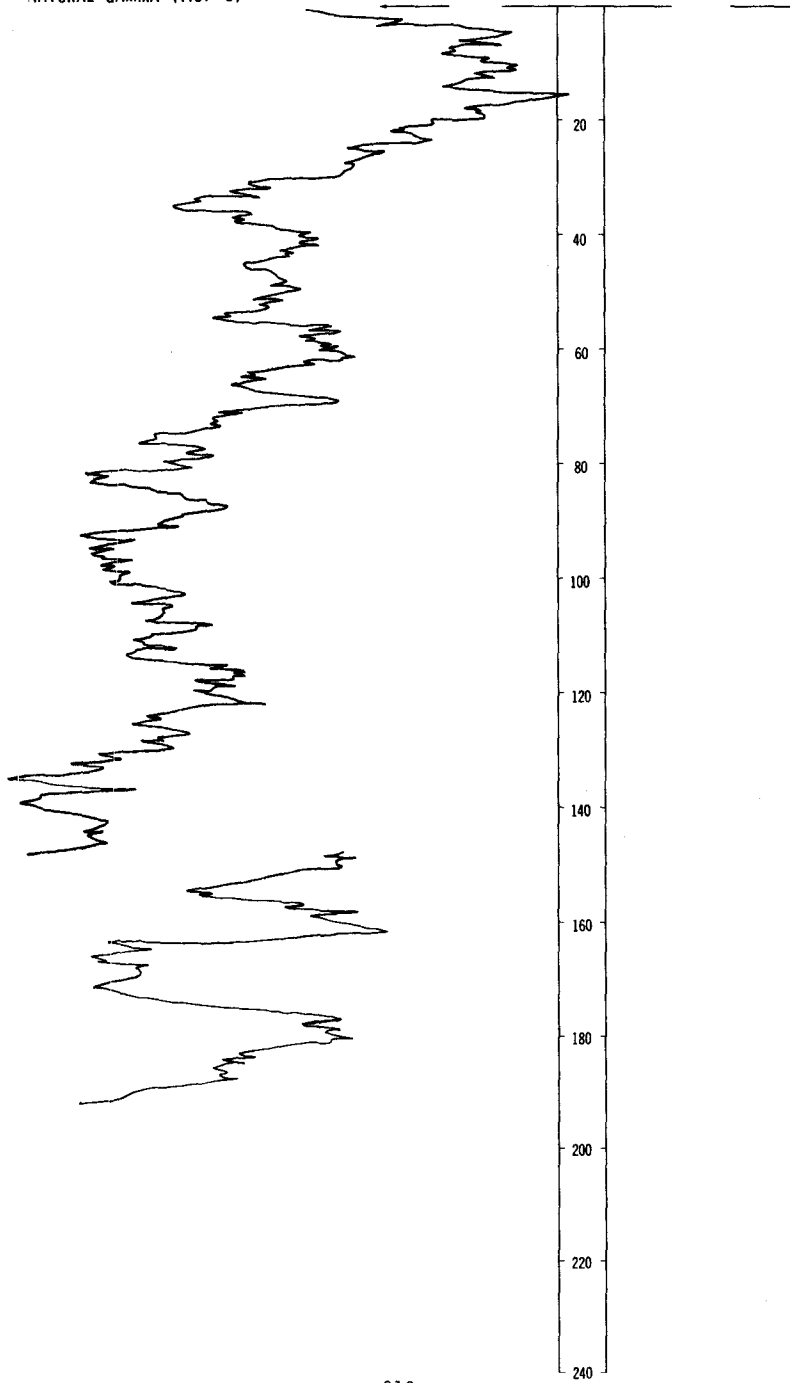
LOCATION: 137-082-36DDD

DATE DRILLED: September 1973

ALTITUDE: 1752
(FT, MSL)

DEPTH: 200
(FT)

NATURAL-GAMMA (T.C. 8)

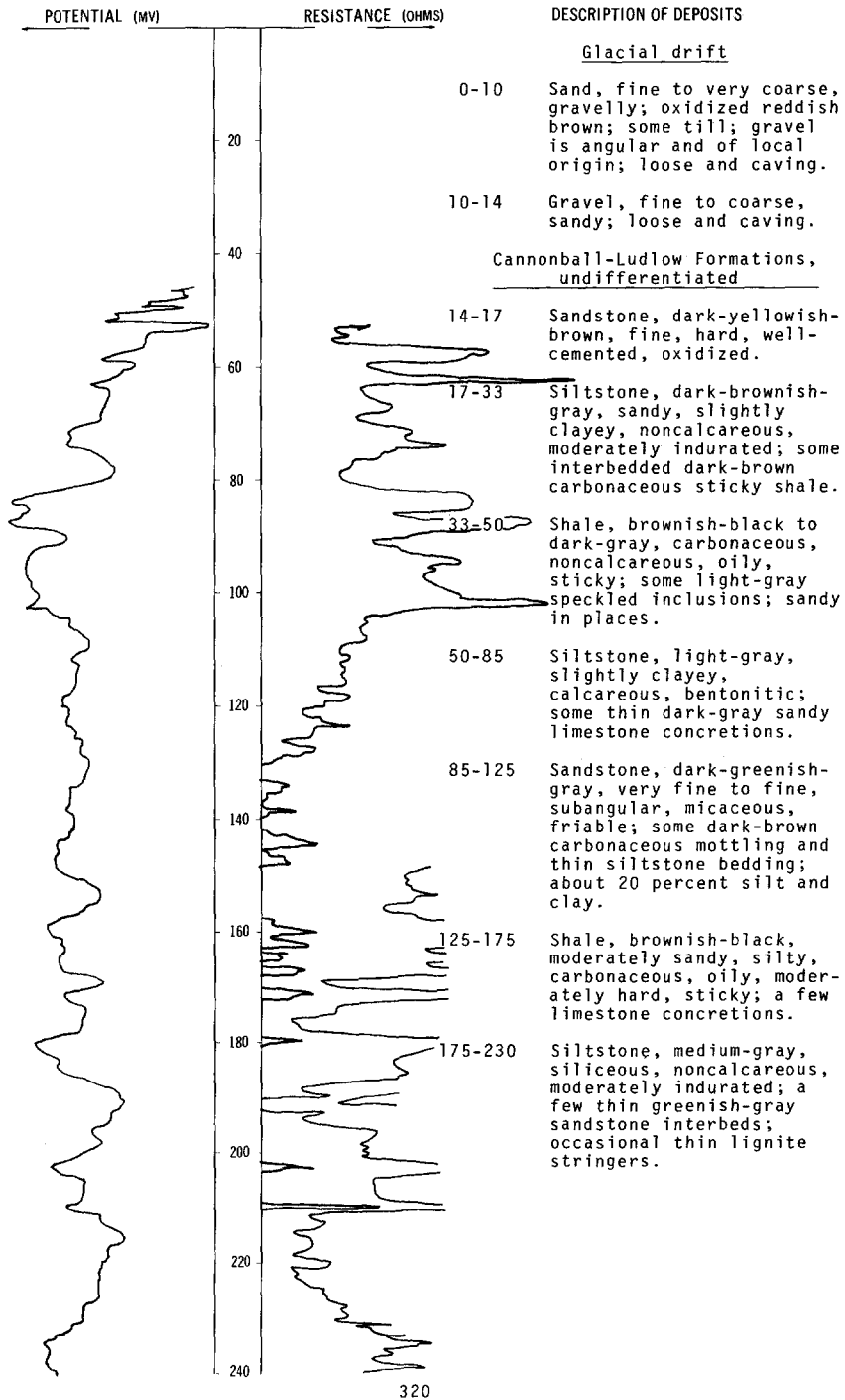


LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)



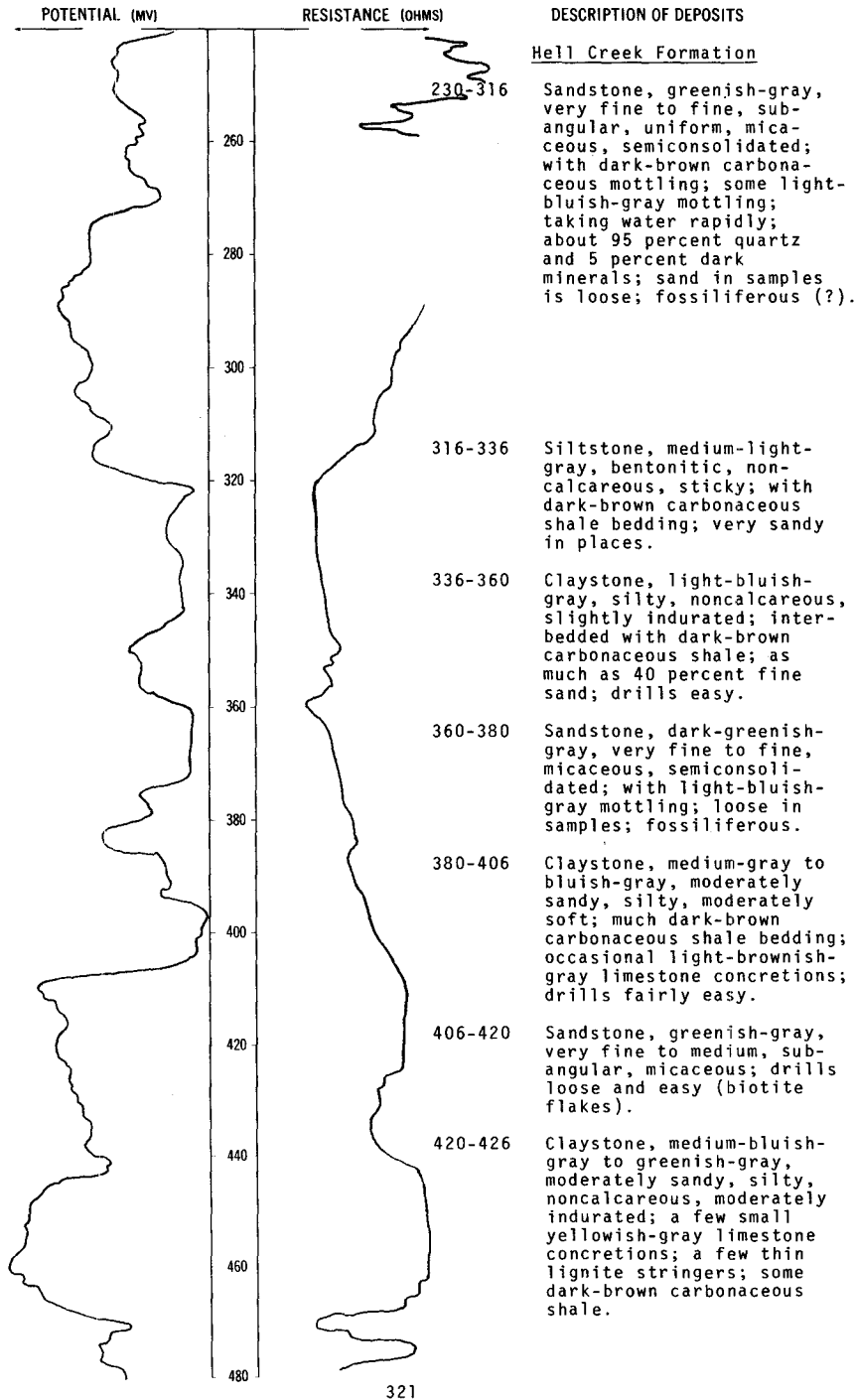
NDSWC 4763, 4763A, 4763B, Continued

LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)

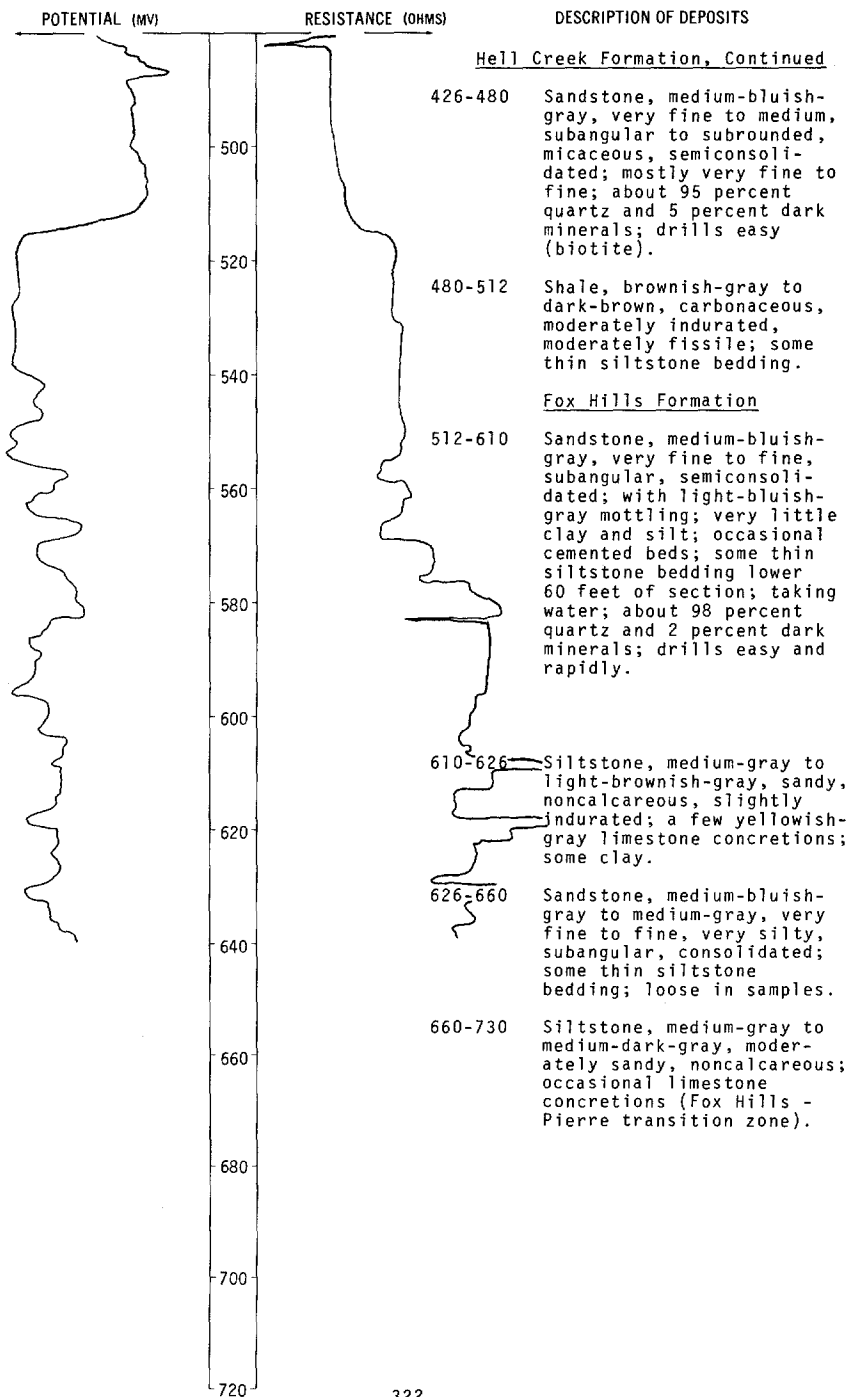


LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)



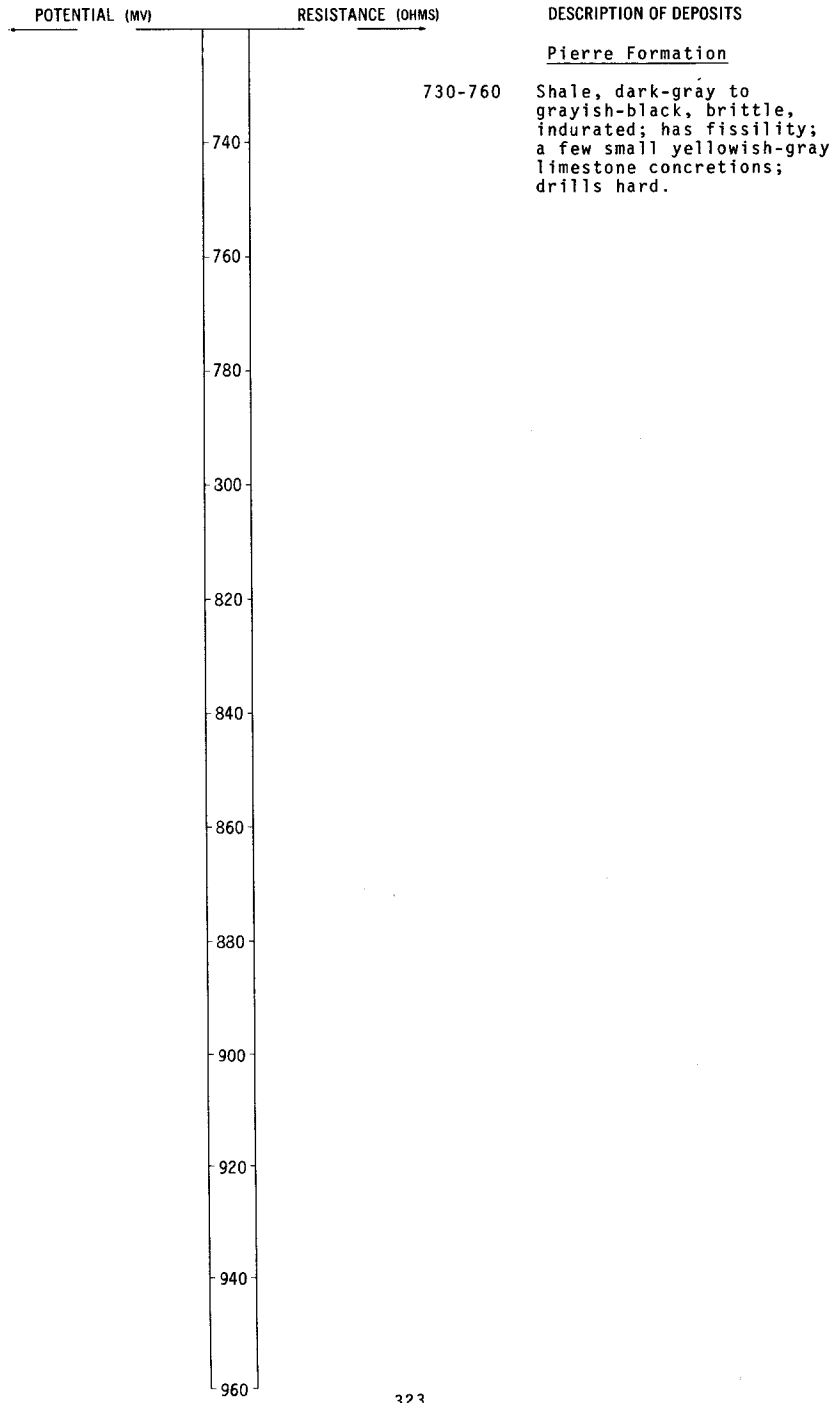
NDSWC 4763, 4763A, 4763B, Continued

LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)



NDSWC 4763, 4763A, 4763B, Continued

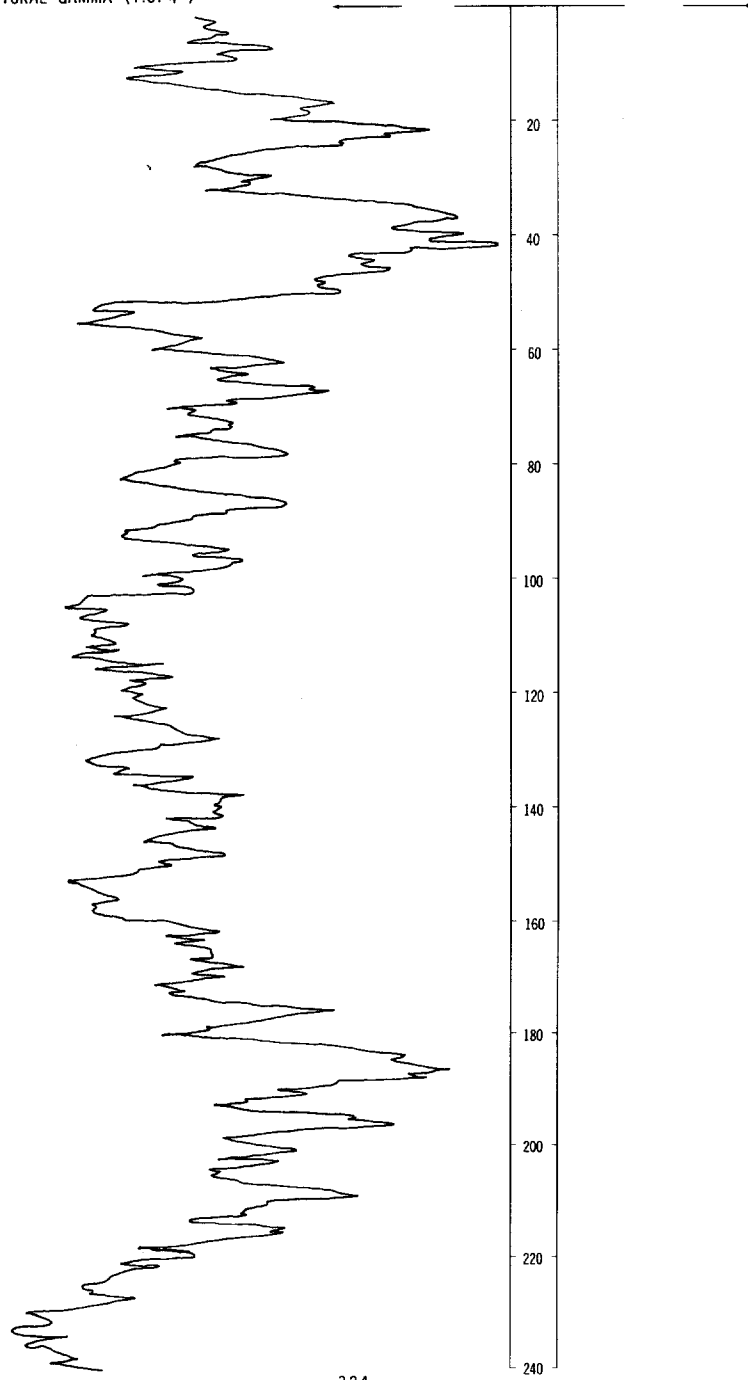
LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4763, 4763A, 4763B, Continued

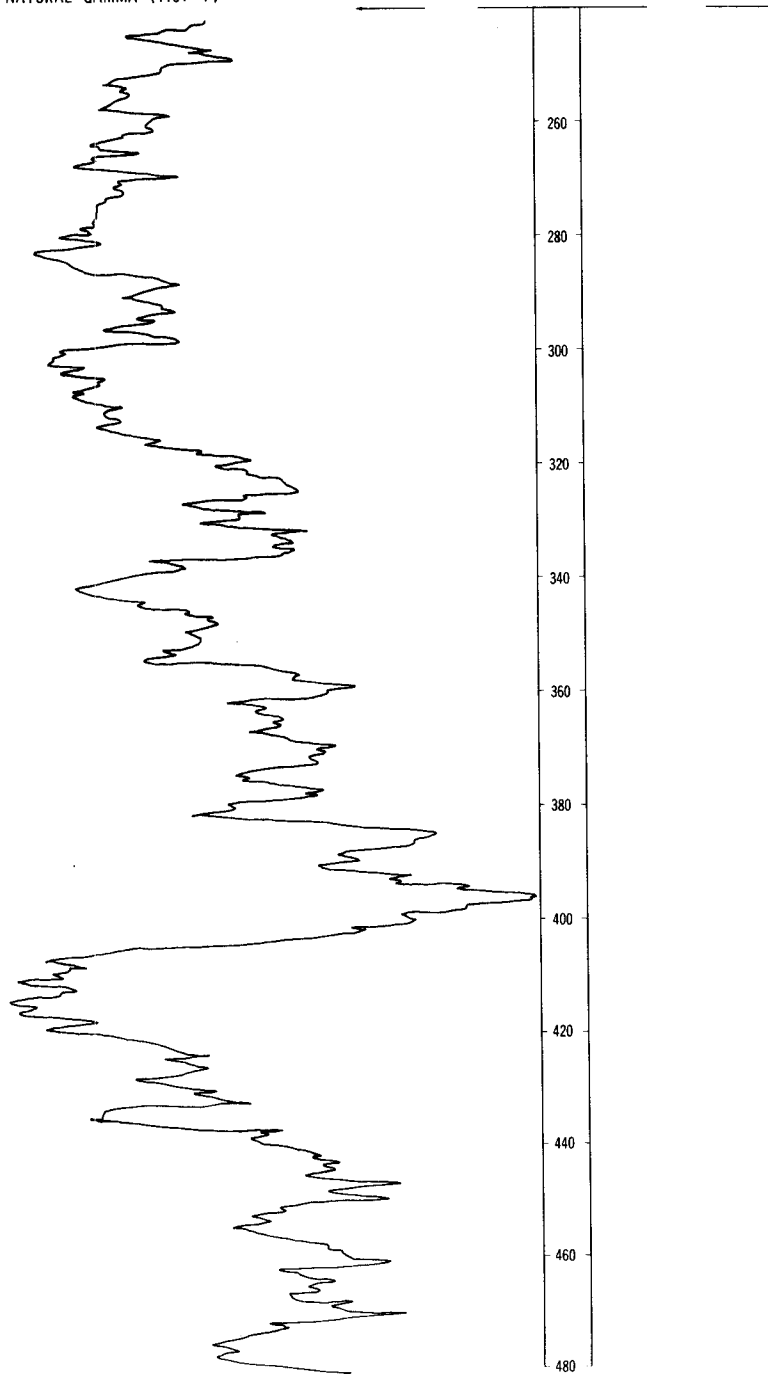
LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4763, 4763A, 4763B, Continued

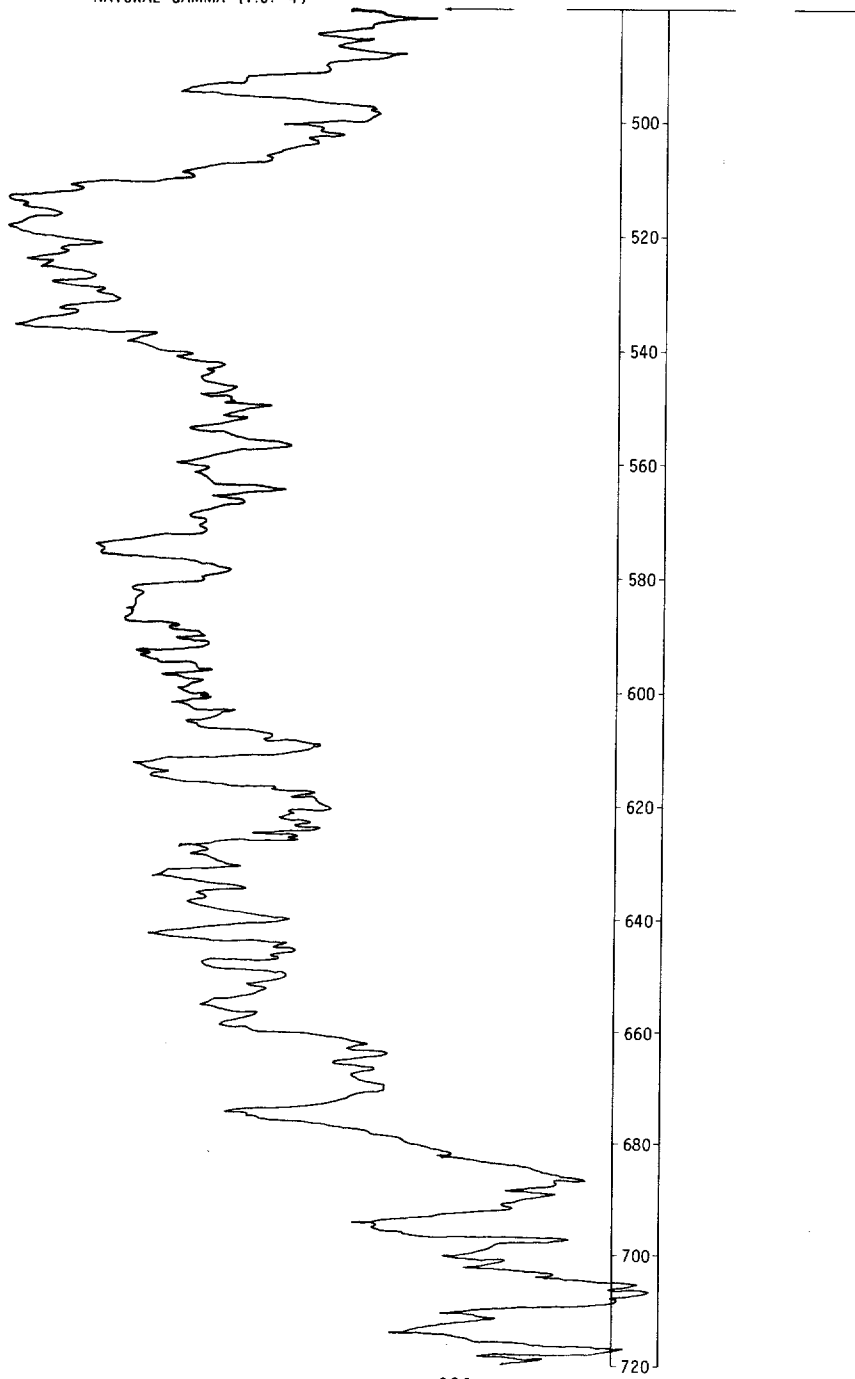
LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4763, 4763A, 4763B, Continued

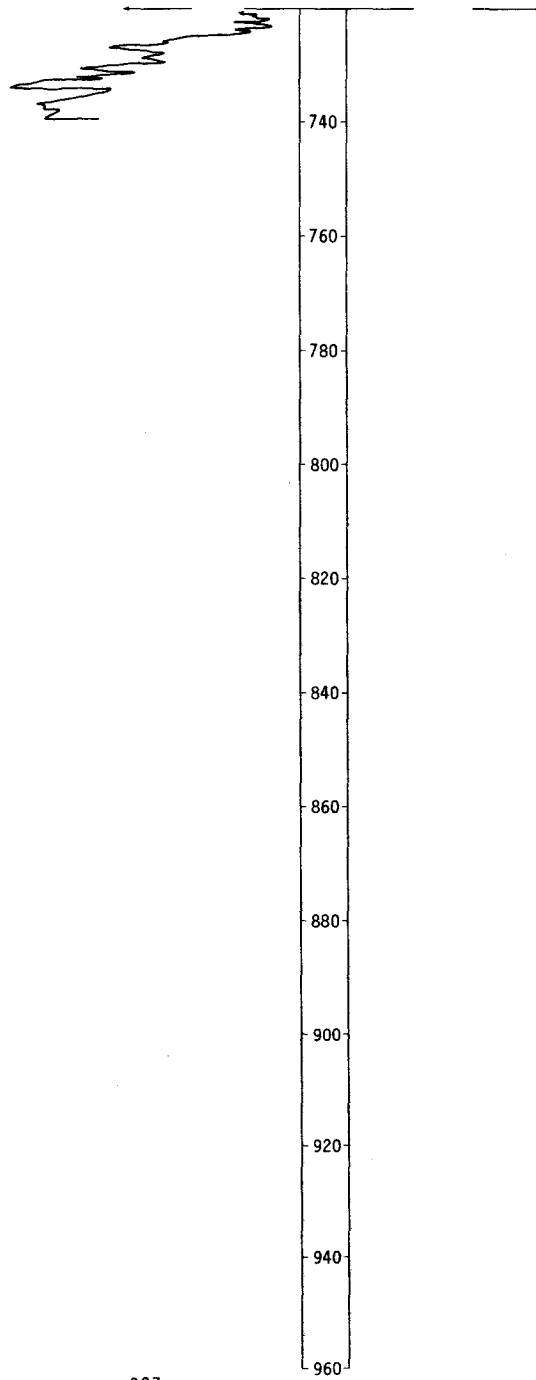
LOCATION: 137-083-06CDD1, 2, 3

DATE DRILLED: September 1974

ALTITUDE: 1816
(FT, MSL)

DEPTH: 760
(FT)

NATURAL-GAMMA (T.C. 4)



137-083-07BBA
NDSWC 4552B

Altitude: 1742 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Sand, yellowish-gray to reddish-brown, very fine to fine, silty, oxidized-----	5	5
	Sand, medium to coarse, gravelly, moderately sorted, subrounded, quartzose-----	5	10
	Gravel, fine to coarse, sandy, subangular to rounded-----	15	25
Cannonball Formation:	Sandstone, very fine to fine, clayey, silty, micaceous, soft, slightly cohesive, friable; variegated greens and browns-----	14	39
	Shale, silty, sandy, highly carbonaceous, slightly hard, brittle, crumbly-----	21	60

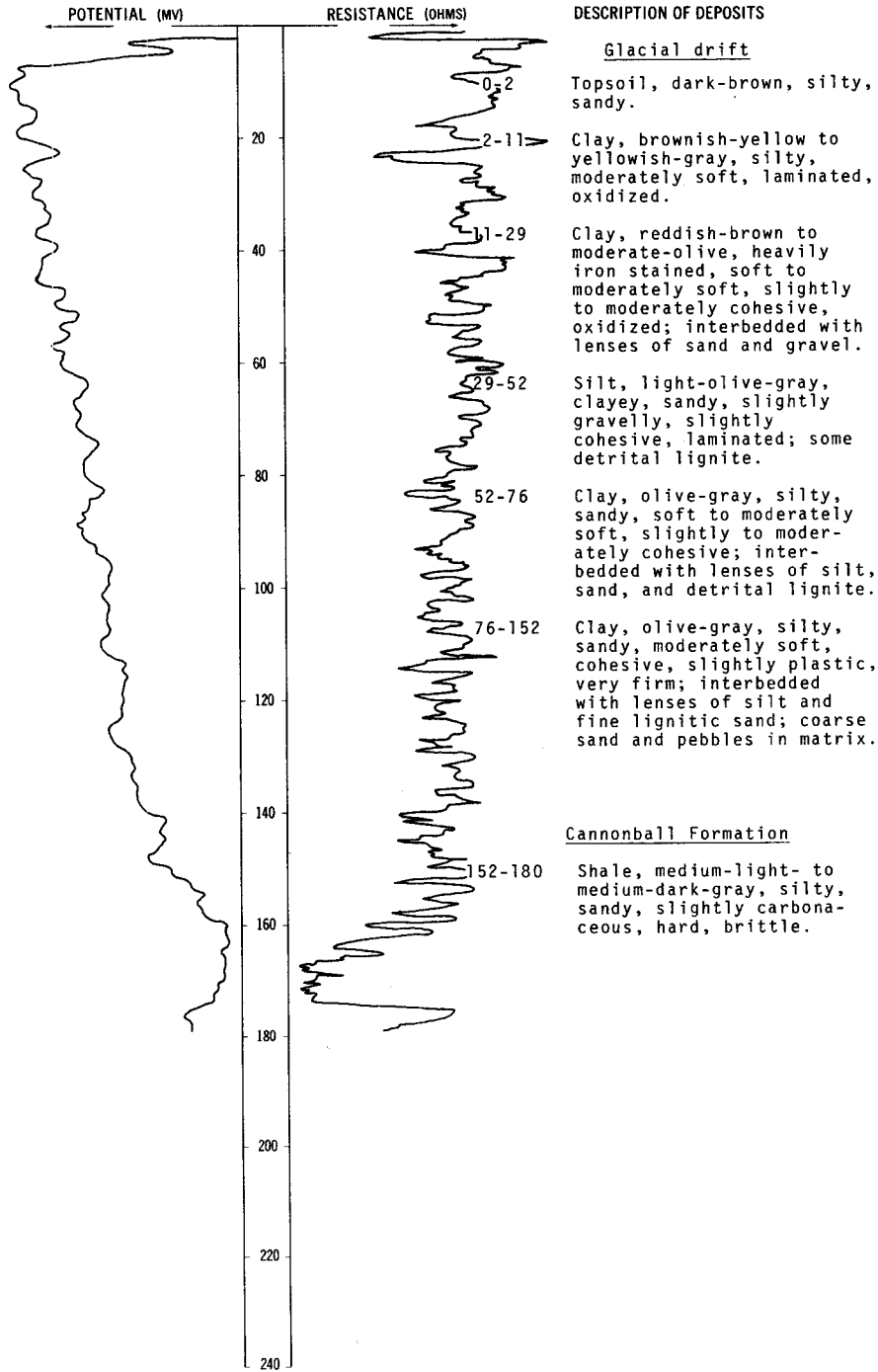
137-083-07BBB1, 2
NDSWC 4552, 4552A

Altitude: 1740 feet

Alluvium:	Topsoil, dark-brown, sandy-----	1	1
	Sand, reddish-brown, fine to medium, moderately well sorted, subangular to subrounded, heavily iron stained, oxidized-----	8	9
	Sand, tan, medium to very coarse, gravelly, sorted, subangular to rounded, lenticular-----	10	19
	Sand, coarse, gravelly; numerous shell fragments-----	13	32
	Gravel, brown, fine to coarse, sandy; rock fragments with detrital lignite-----	22	54
Cannonball Formation (?):	Clay, very dark gray to brown, moderately soft, stiff-----	6	60

LOCATION: 137-083-240DA
 ALTITUDE: 1861
 (FT, MSL)

DATE DRILLED: September 1973
 DEPTH: 180
 (FT)



NDSWC 4587, Continued

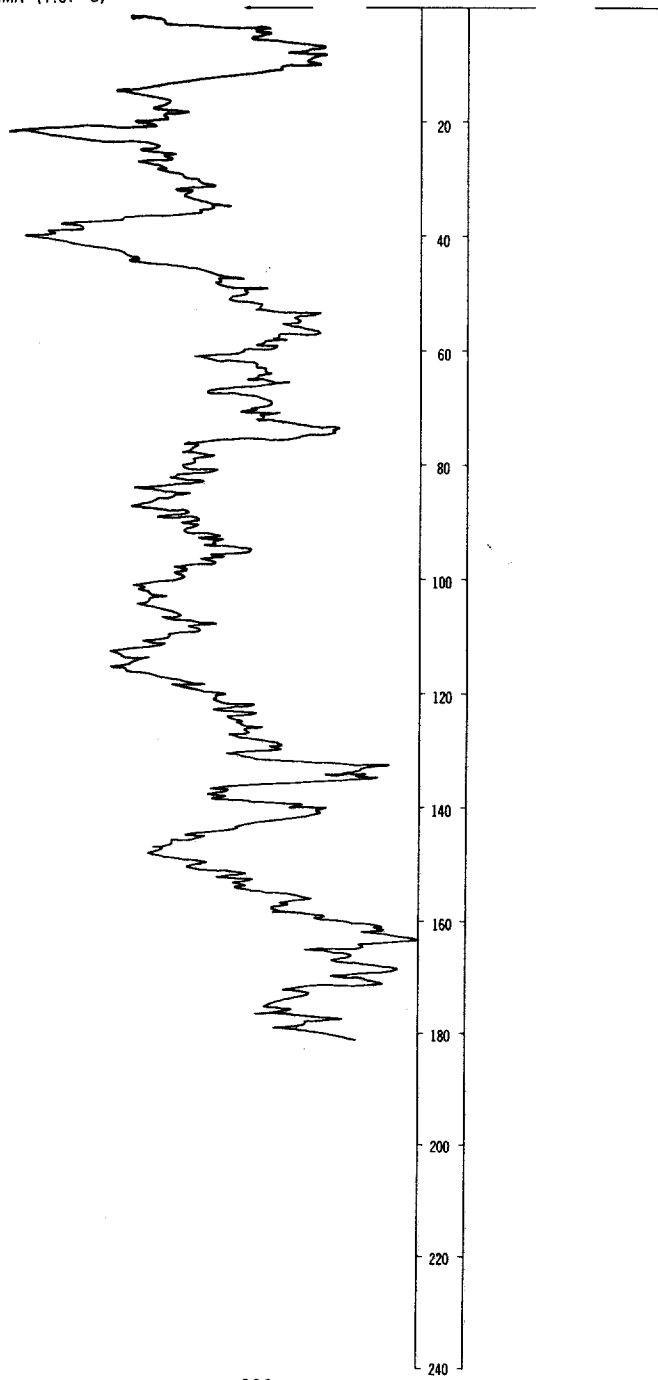
LOCATION: 137-083-24DDA

DATE DRILLED: September 1973

ALTITUDE: 1861
(FT, MSL)

DEPTH: 180
(FT)

NATURAL-GAMMA (T.C. 8)



137-084-18BAD2
 R. Ritz
 (Log from Moe Drilling Company)

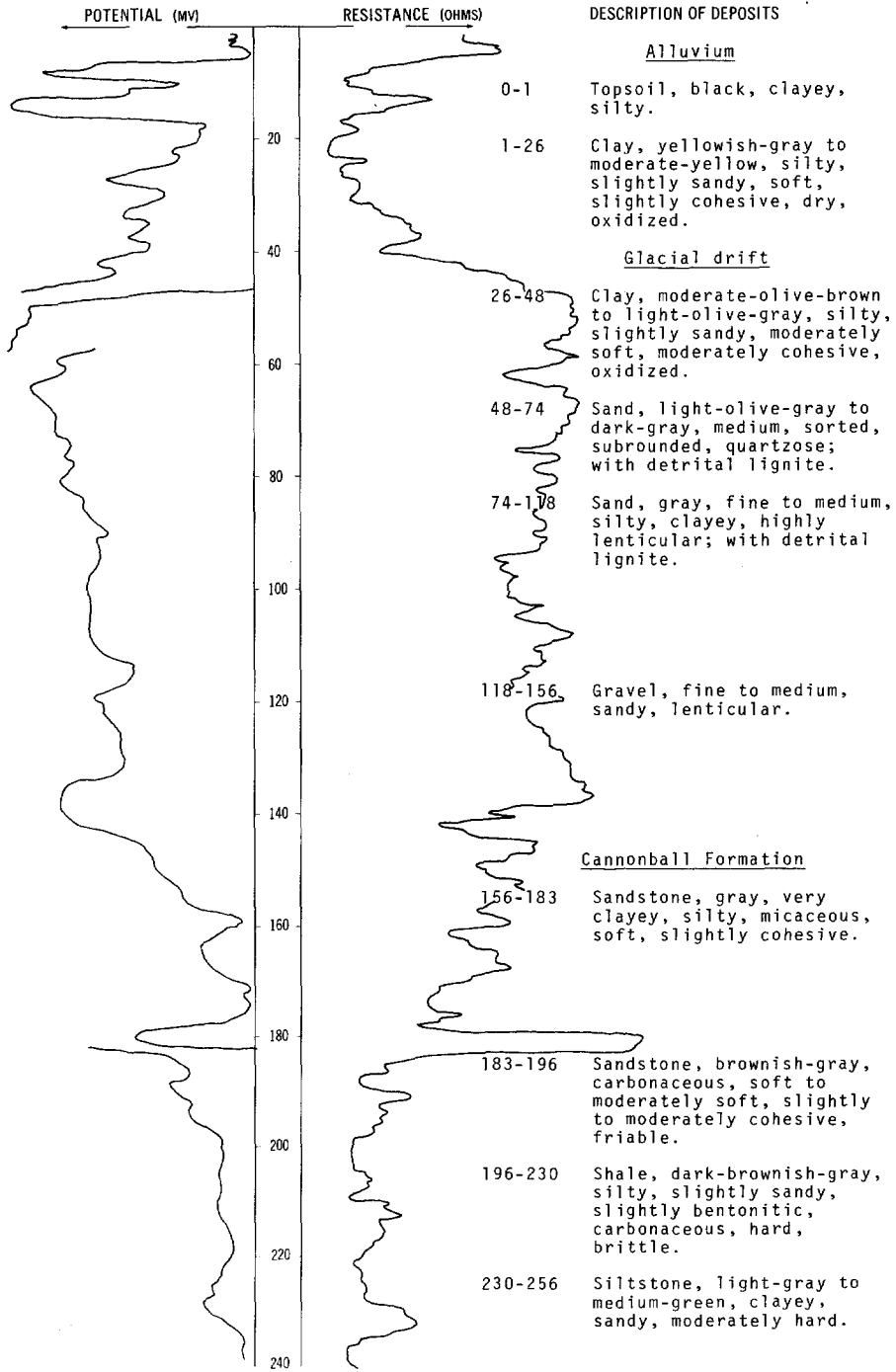
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation (?):			
	Sand, yellowish-brown-----	24	24
	Clay, gray-----	19	43
	Lignite-----	1.5	44.5
	Clay, gray-----	9.5	54
	Lignite-----	1	55
	Clay, gray-----	14	69
	Sand, gray, very fine-----	32	101

LOCATION: 137-085-06CCD

DATE DRILLED: August 1973

ALTITUDE: 1901
(FT, MSL)

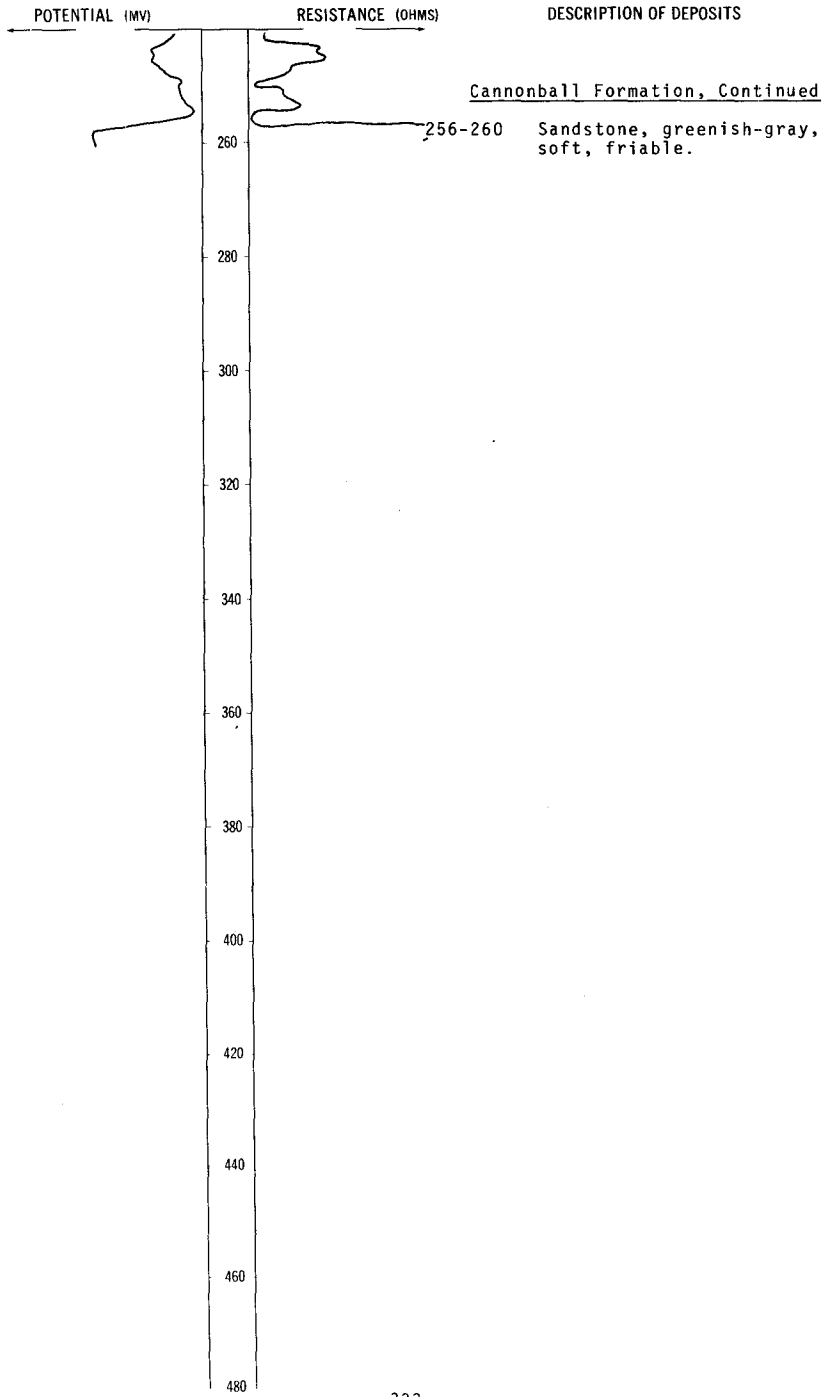
DEPTH: 260
(FT)



NDSWC 4551, Continued

LOCATION: 137-085-06CCD
ALTITUDE: 1901
(FT, MSL)

DATE DRILLED: August 1973
DEPTH: 260
(FT)



NDSWC 4551, Continued

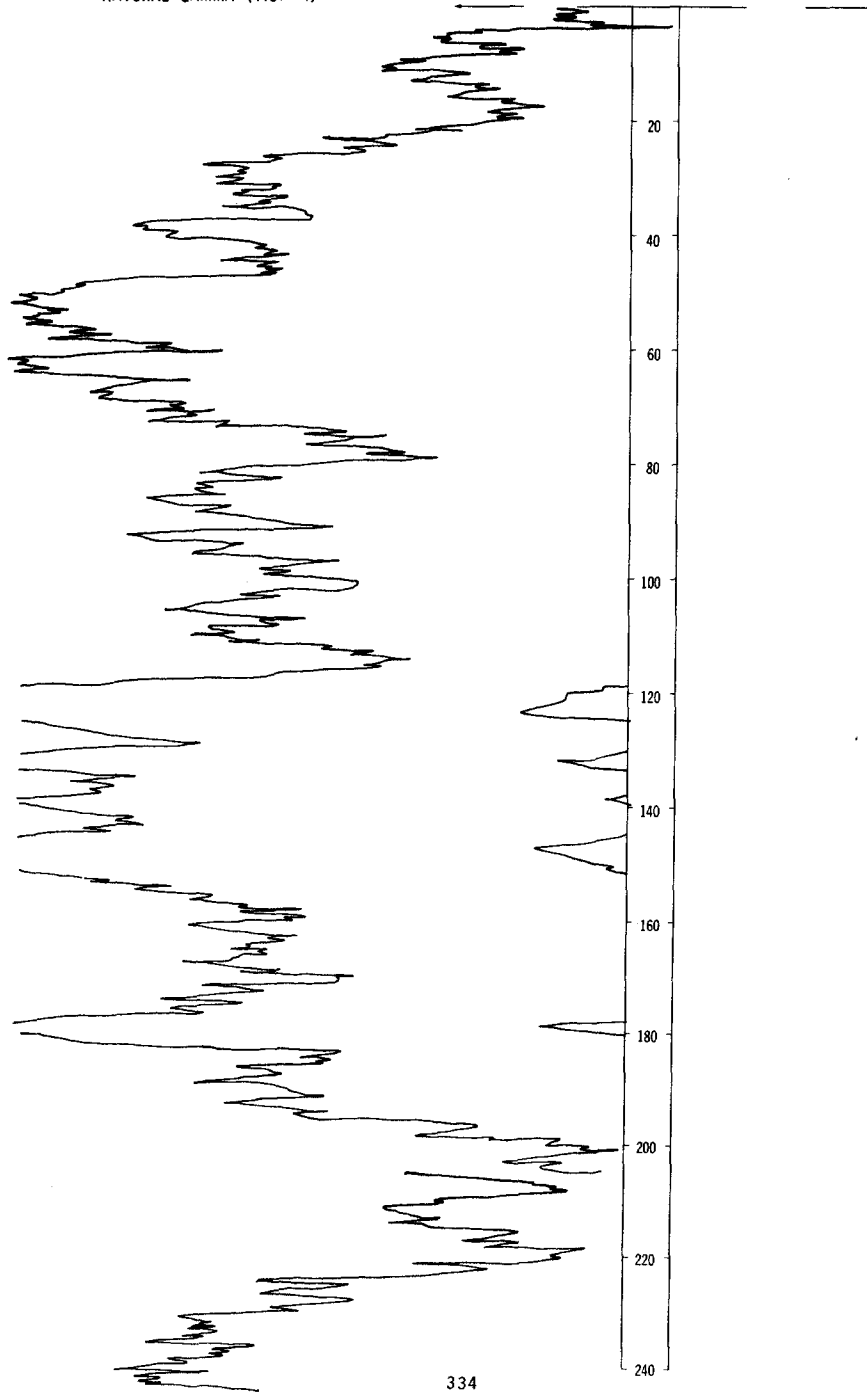
LOCATION: 137-085-06CCD

DATE DRILLED: August 1973

ALTITUDE: 1901
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4551, Continued

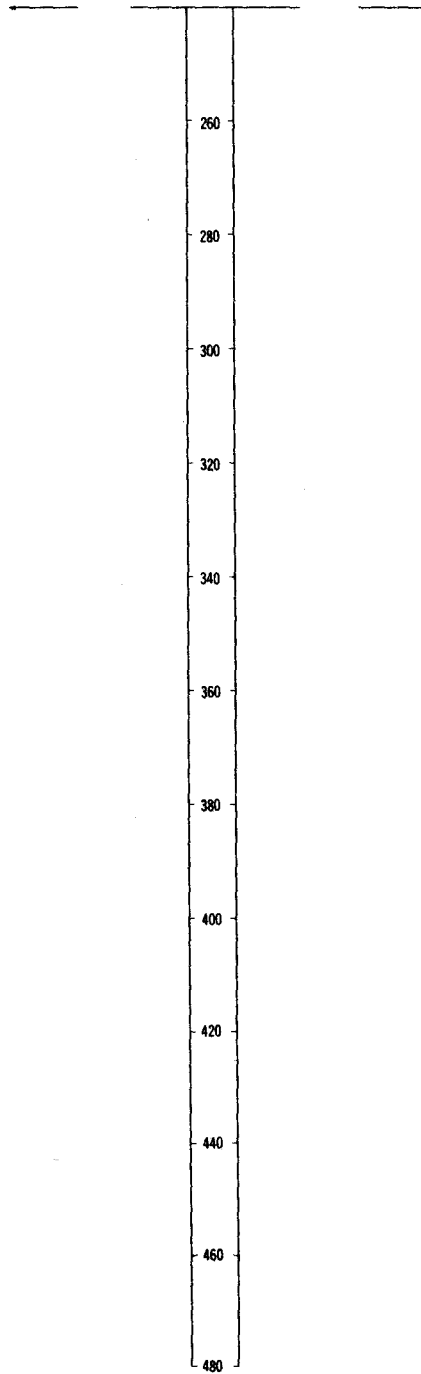
LOCATION: 137-085-06CCD

DATE DRILLED: August 1973

ALTITUDE: 1901
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



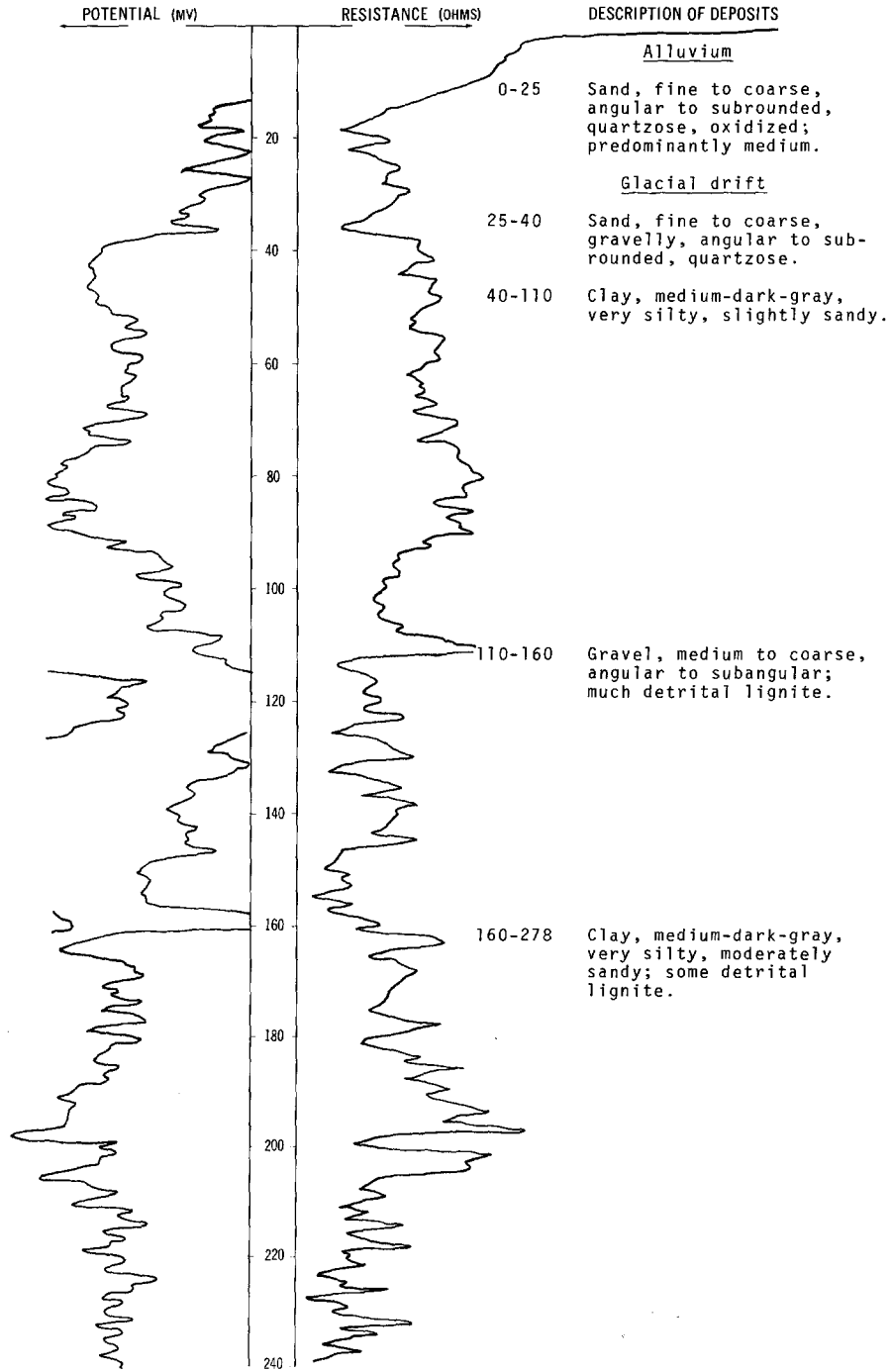
NDSWC 9304

LOCATION: 137-085-17CDB

DATE DRILLED: June 1975

ALTITUDE: 1860
(FT, MSL)

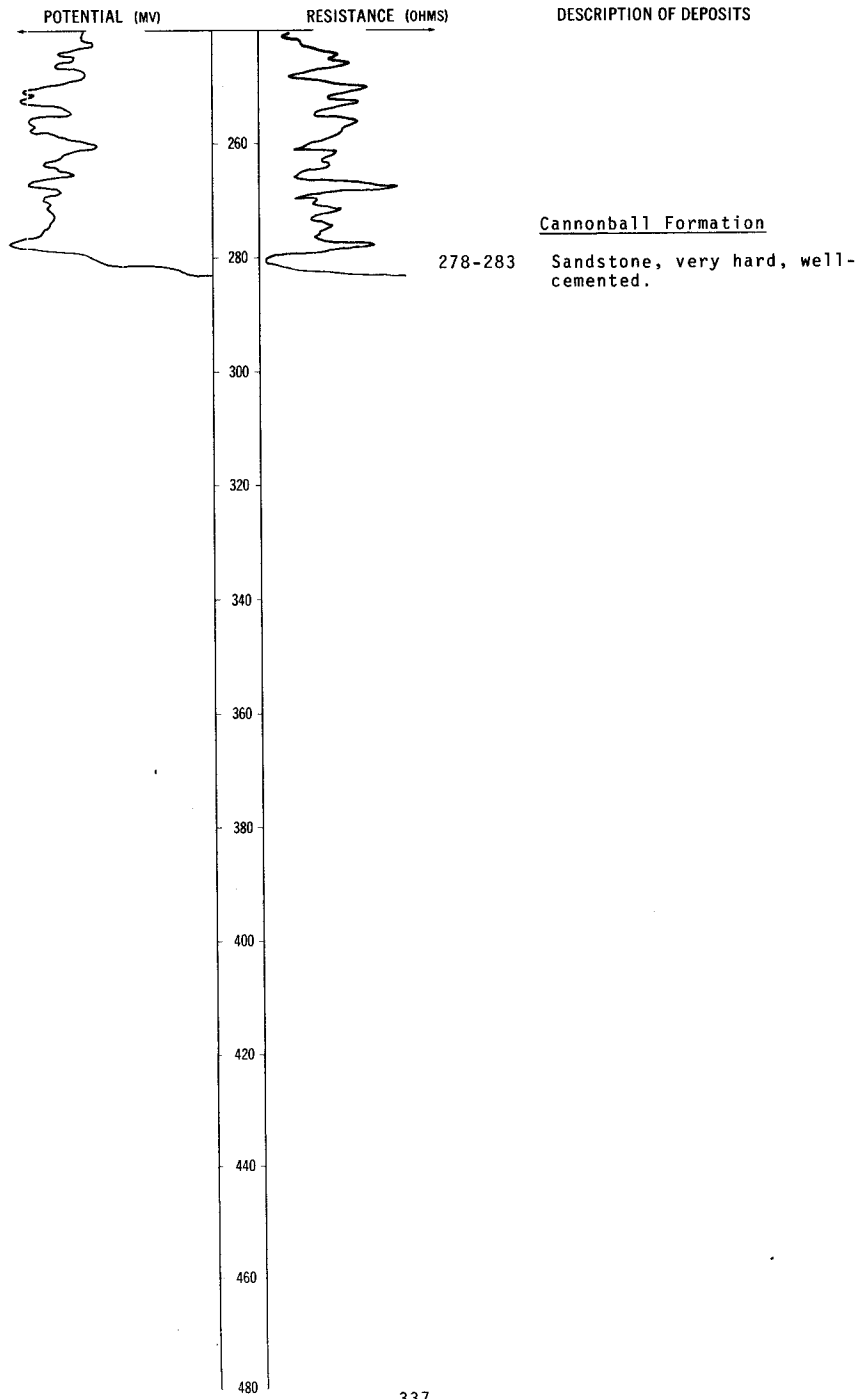
DEPTH: 283
(FT)



NDSWC 9304, Continued

LOCATION: 137-085-17CDB
ALTITUDE: 1860
(FT, MSL)

DATE DRILLED: June 1975
DEPTH: 283
(FT)

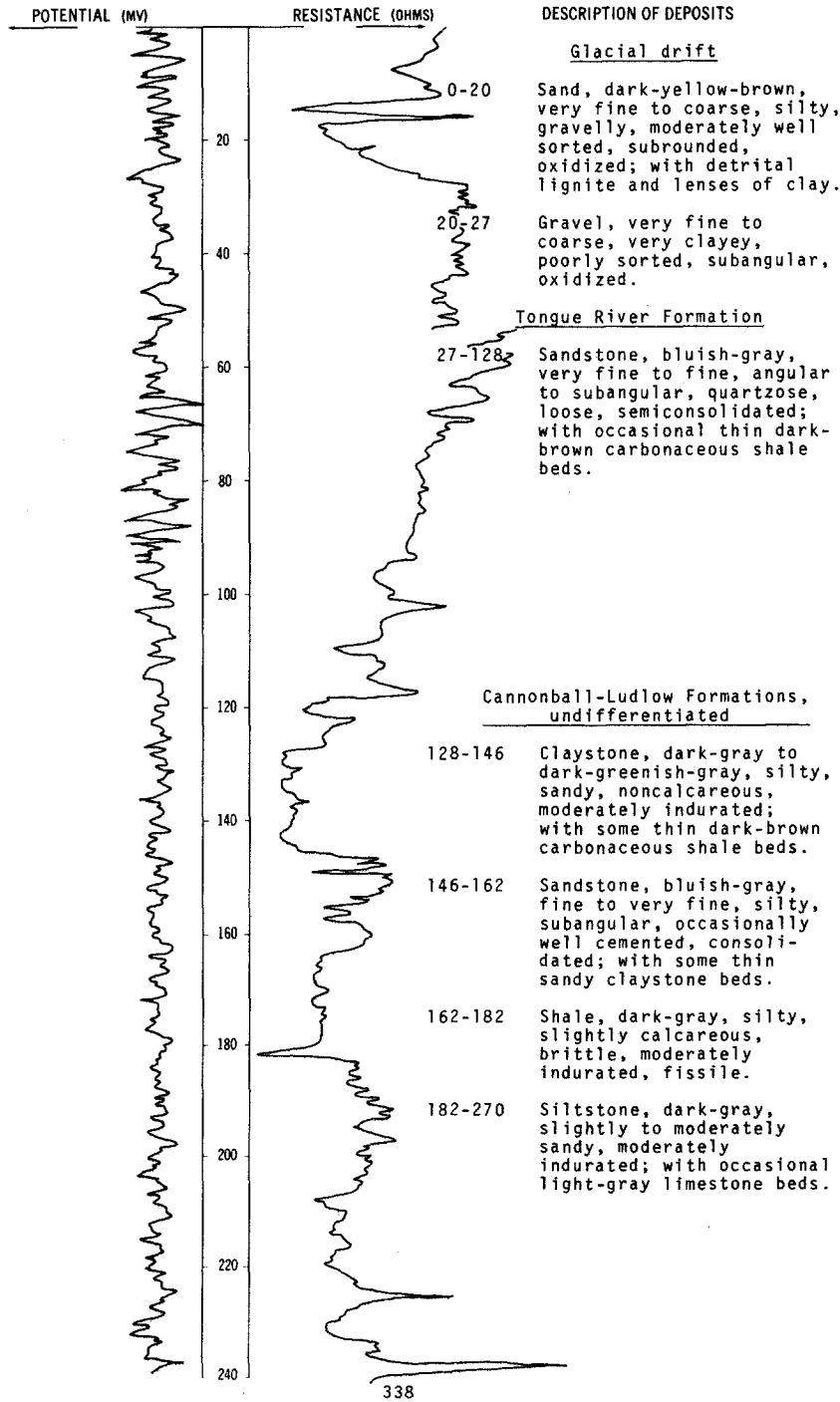


LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

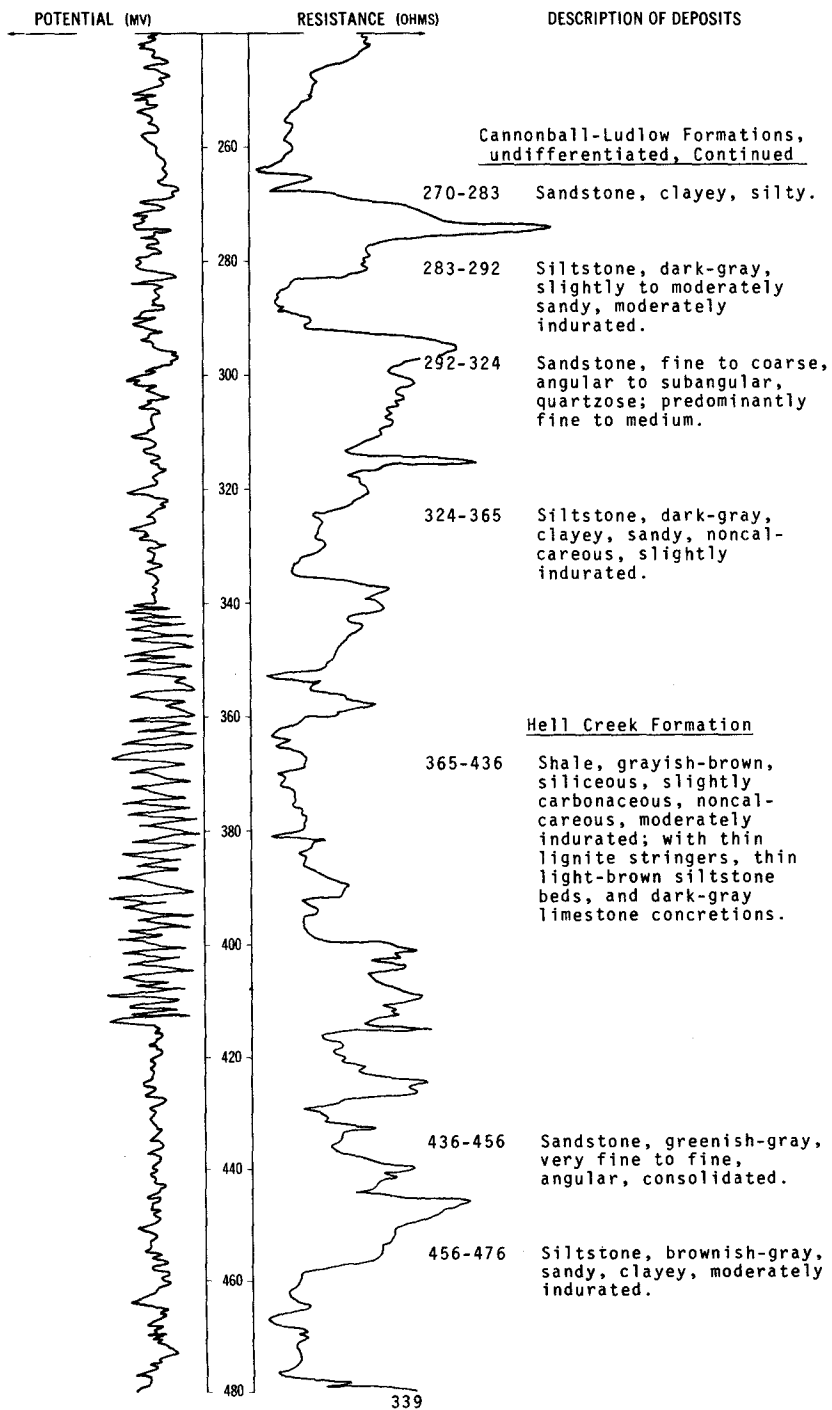


LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



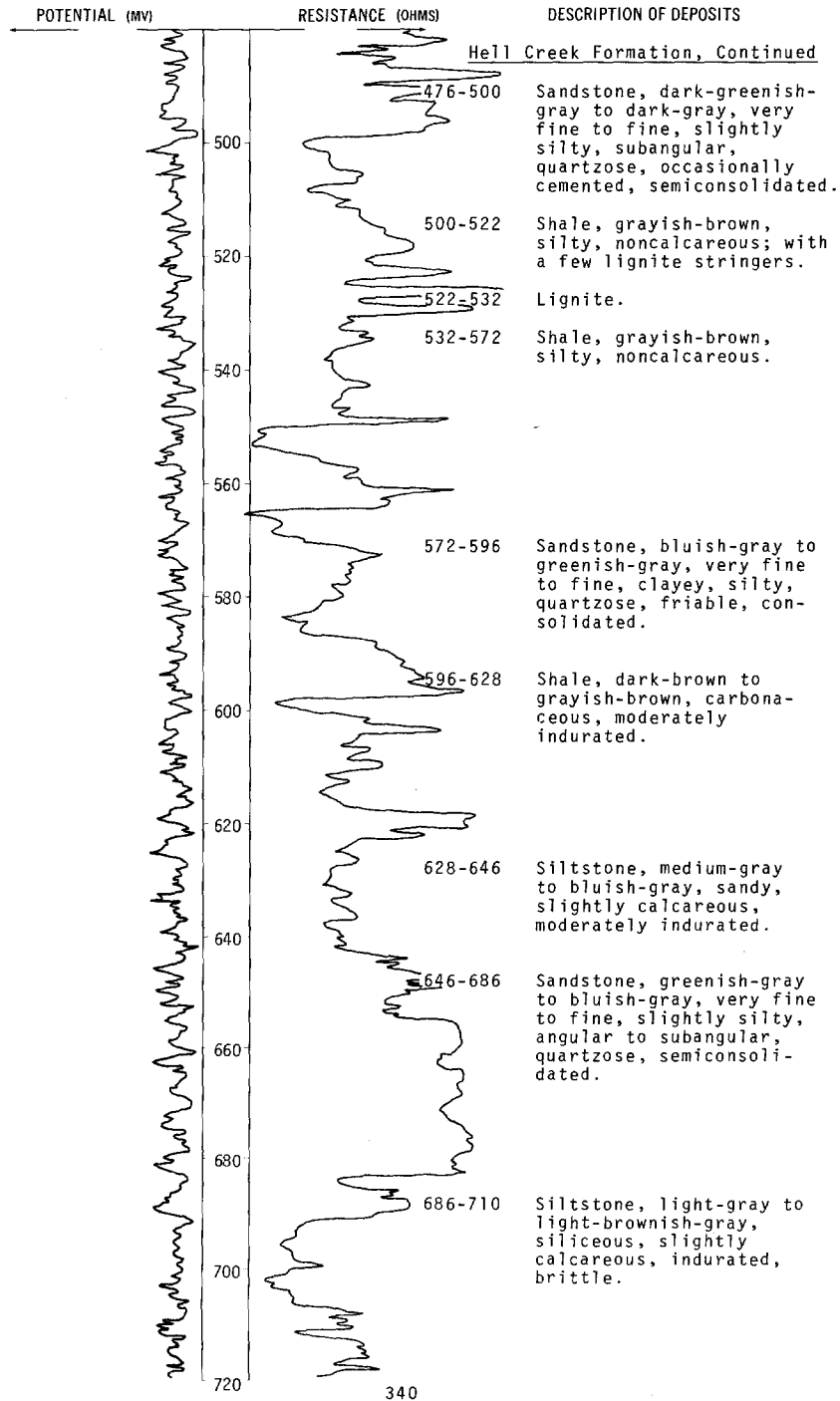
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

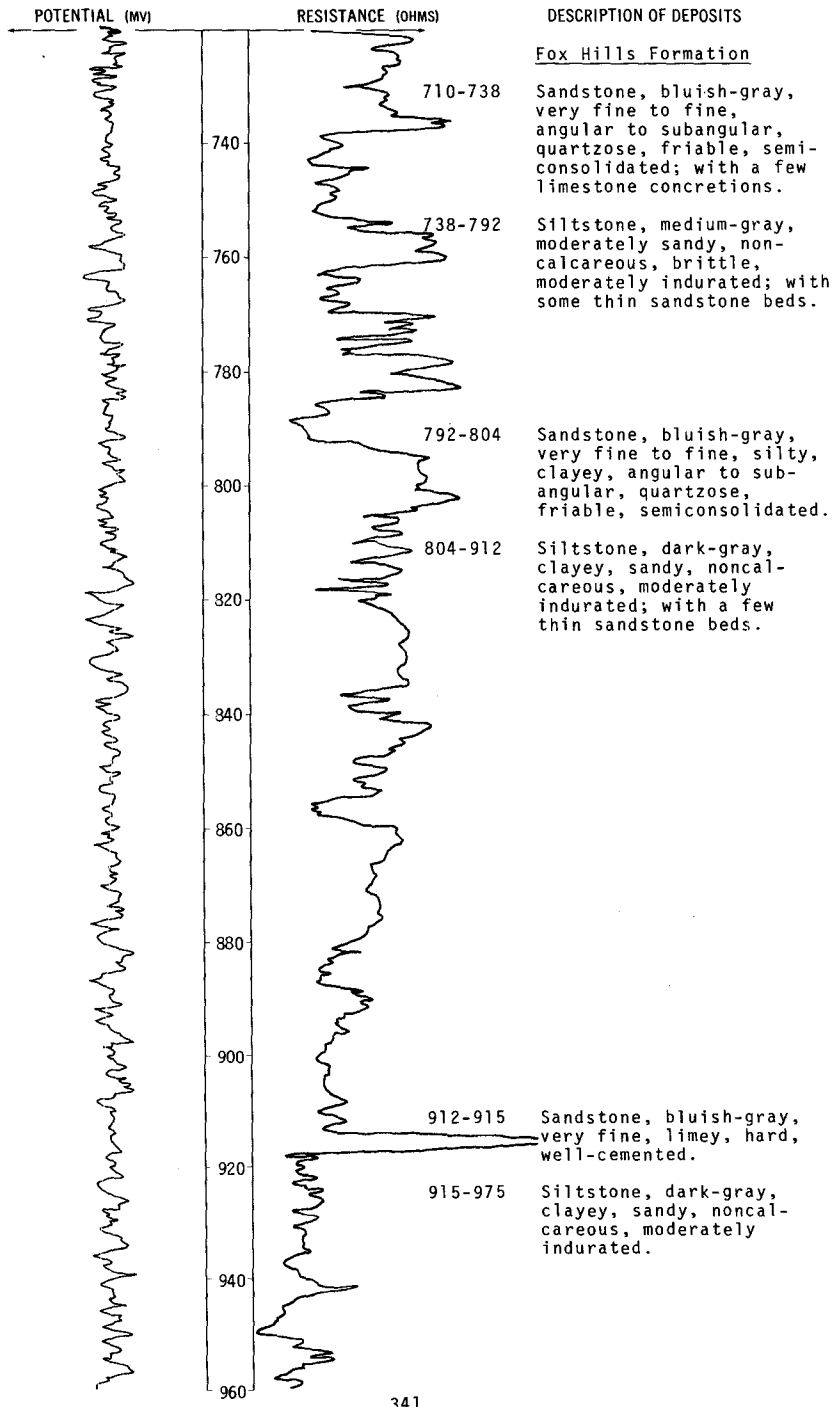


LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT. MSL)

DEPTH: 1022
(FT)



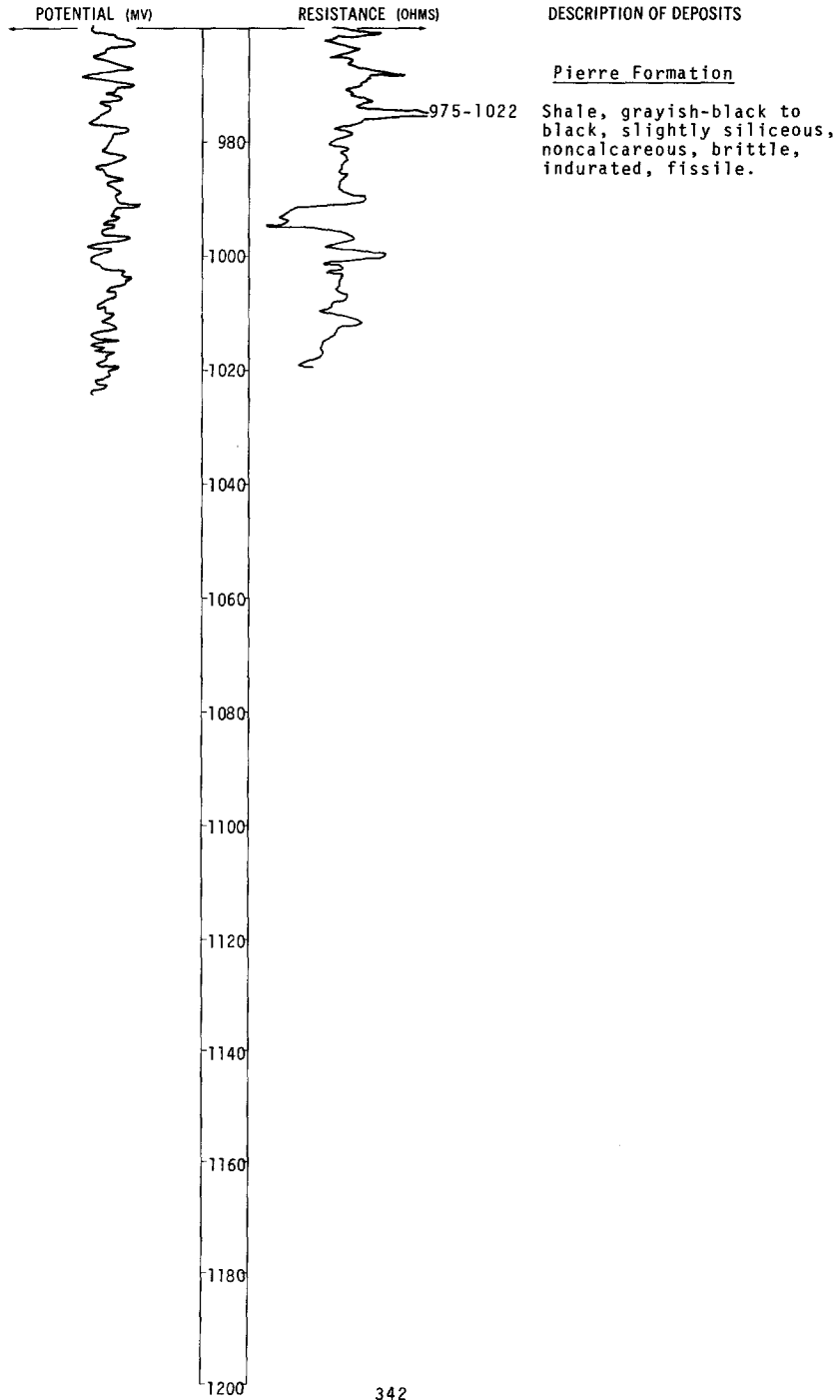
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



NDSWC 4752, 4752A, 4752B, 4752C, Continued

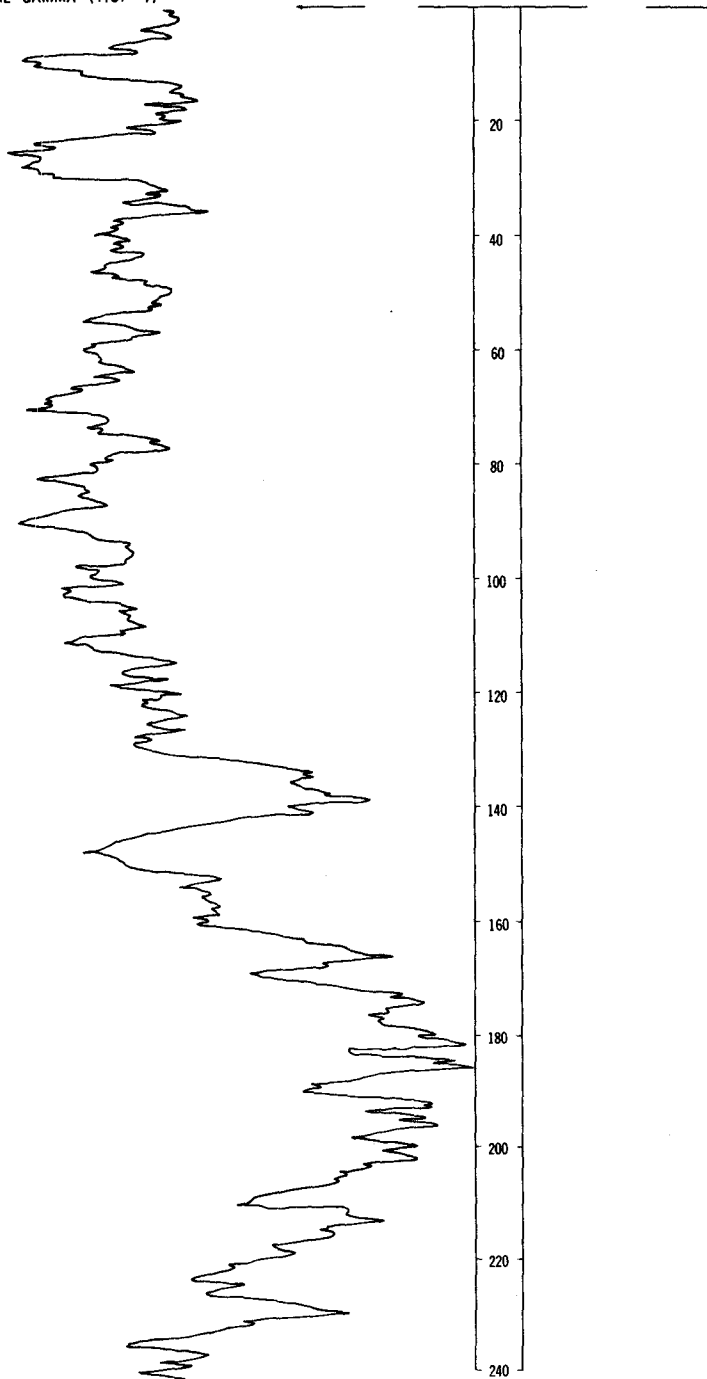
LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4752, 4752A, 4752B, 4752C, Continued

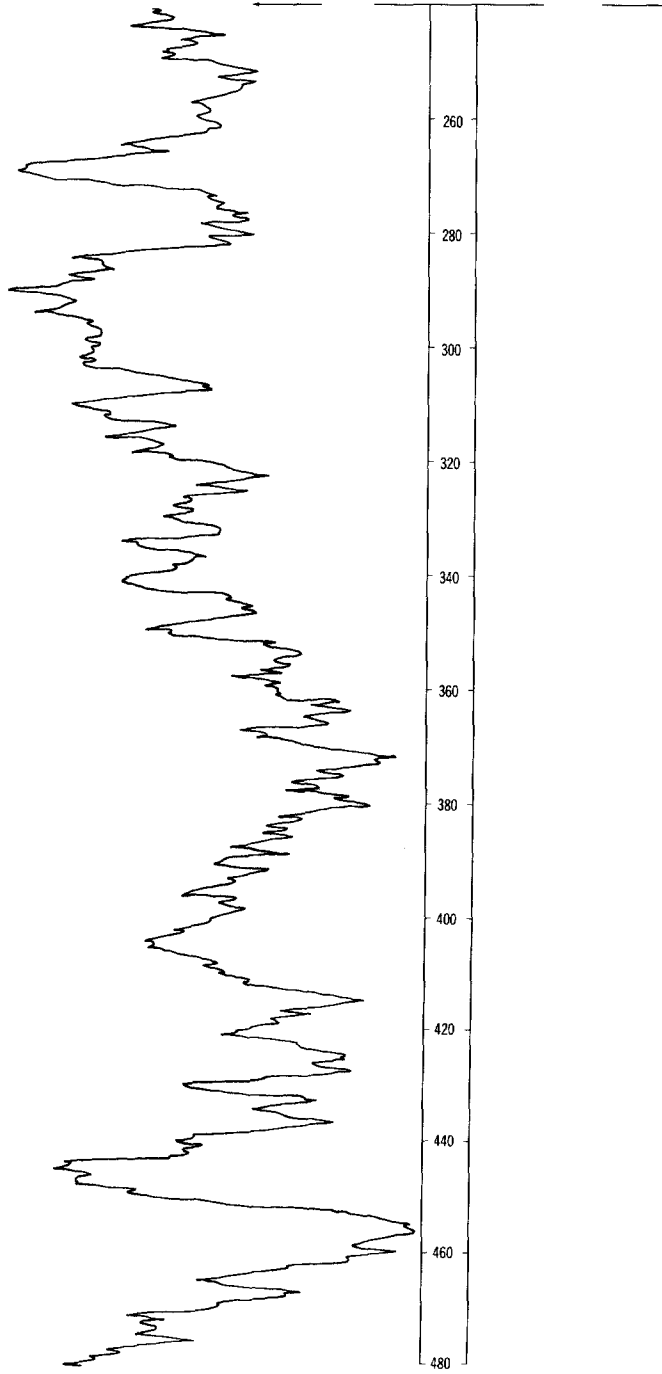
LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4752, 4752A, 4752B, 4752C, Continued

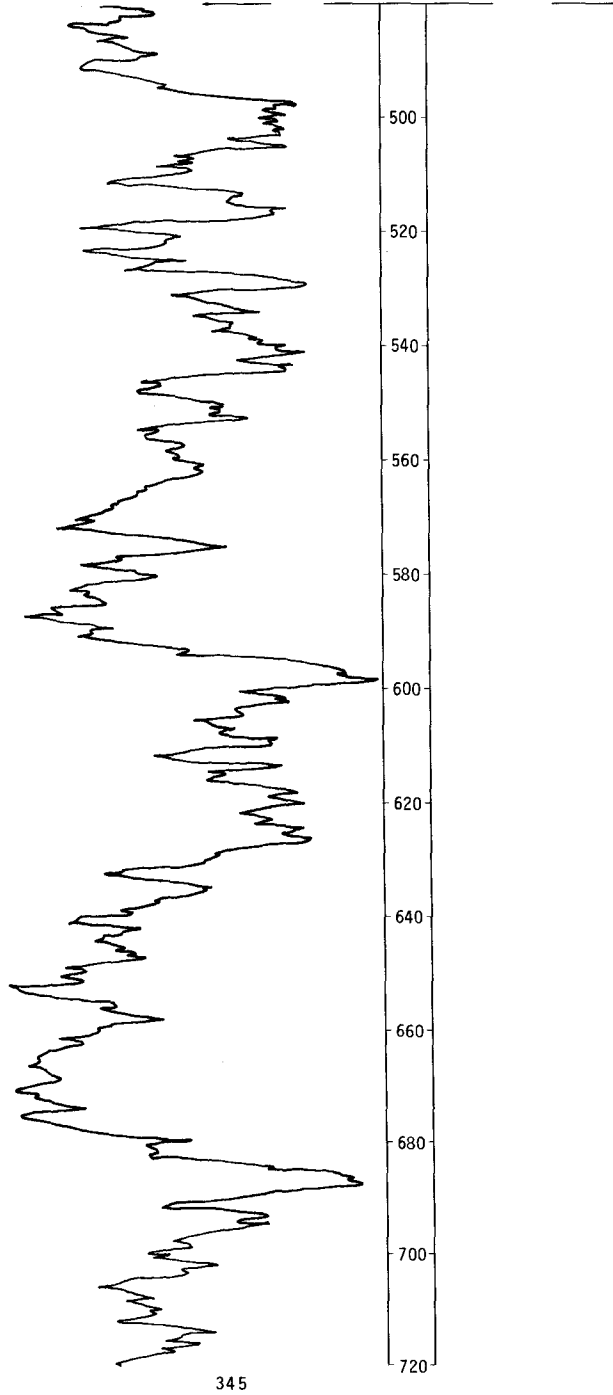
LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT. MSL)

DEPTH: 1022
(FT)

NATURAL-GAMMA (T.C. 4)



345

NDSWC 4752, 4752A, 4752B, 4752C, Continued

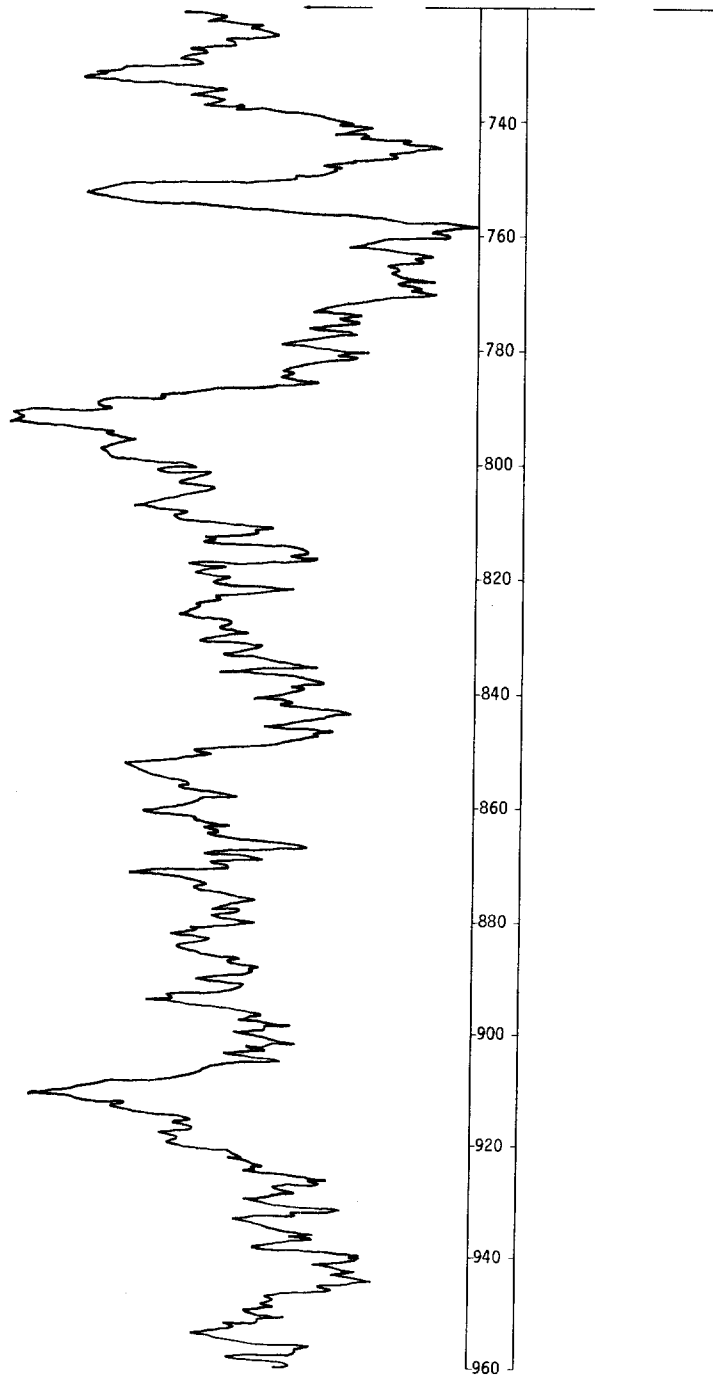
LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4752, 4752A, 4752B, 4752C, Continued

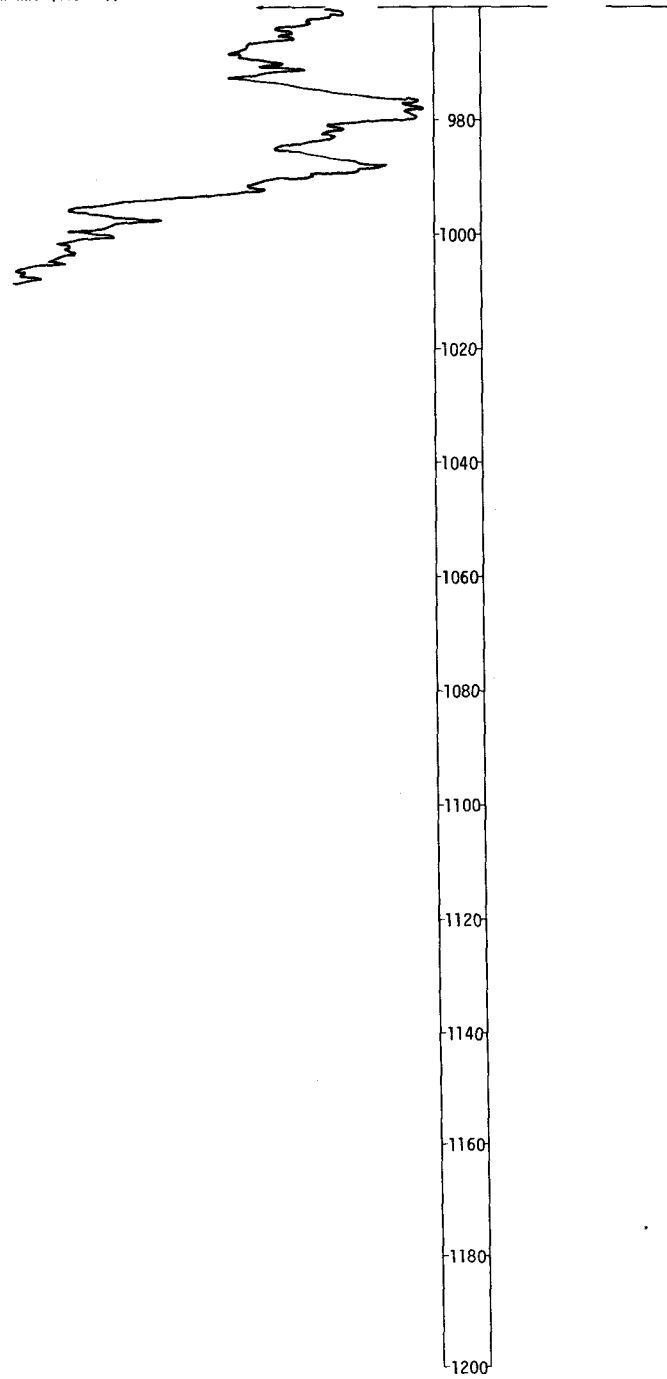
LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)

NATURAL-GAMMA (T.C. 4)



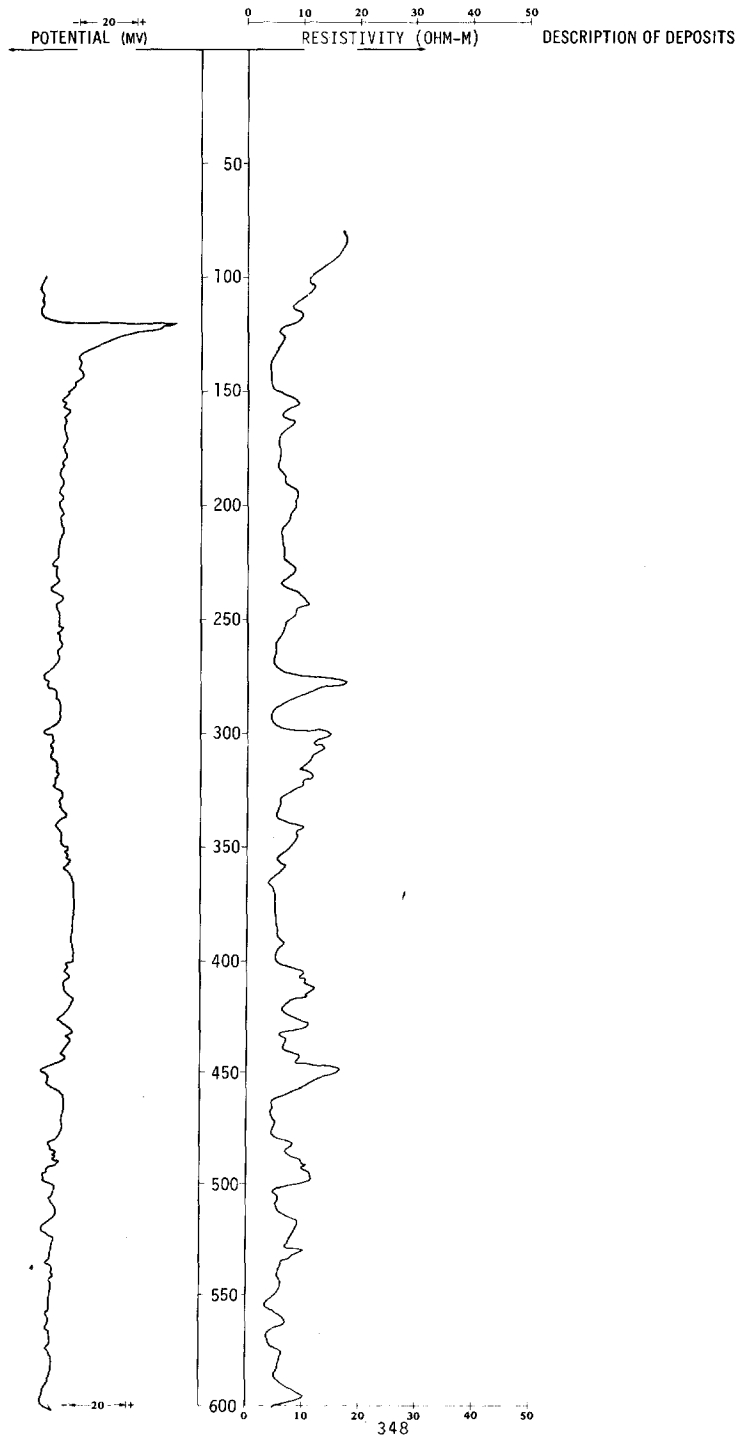
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



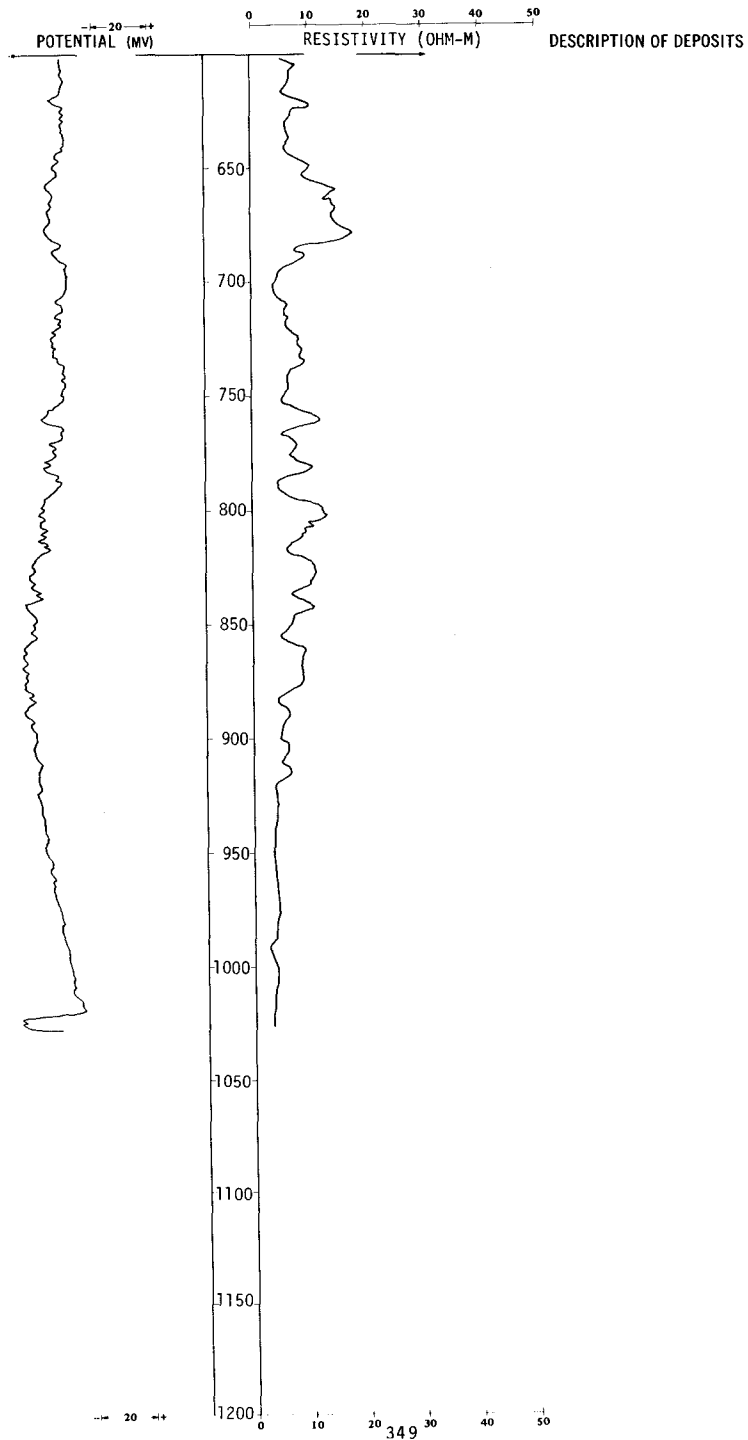
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



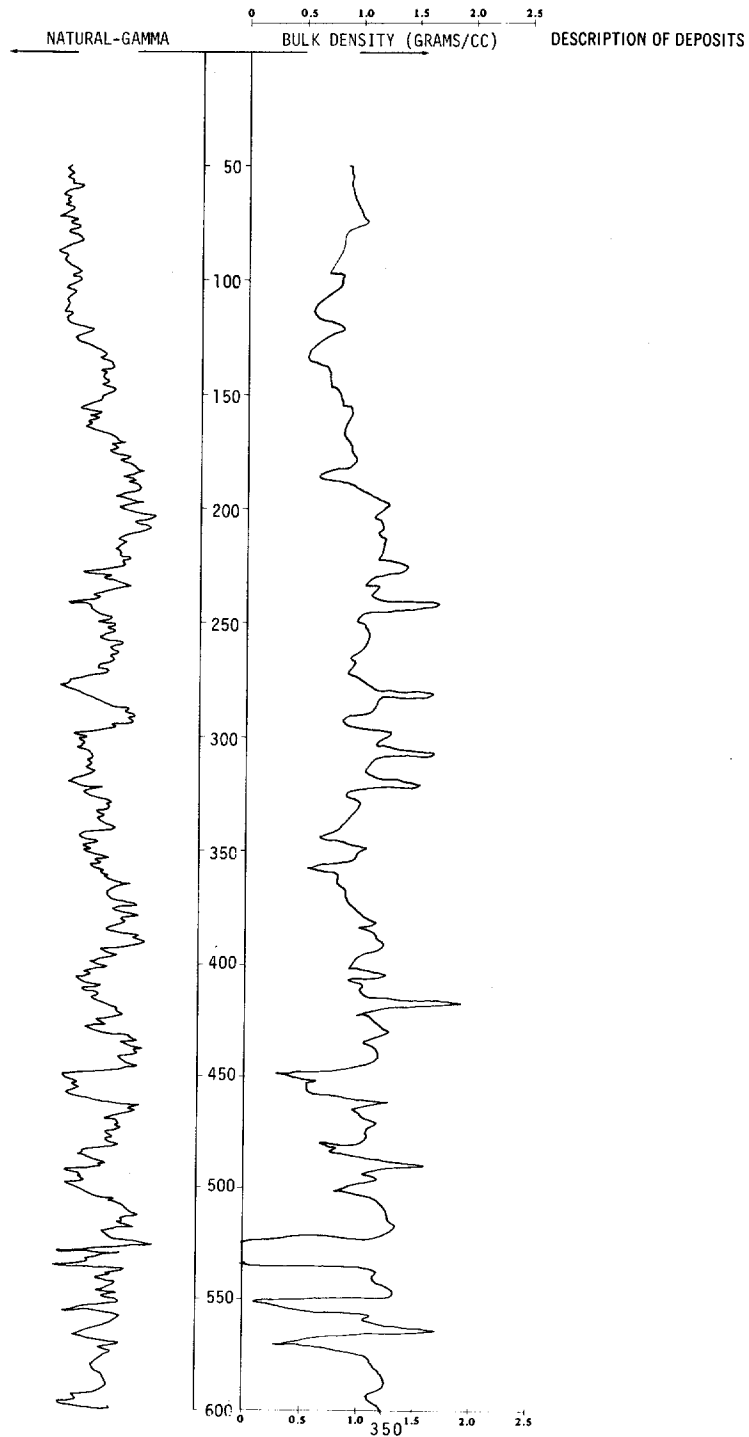
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



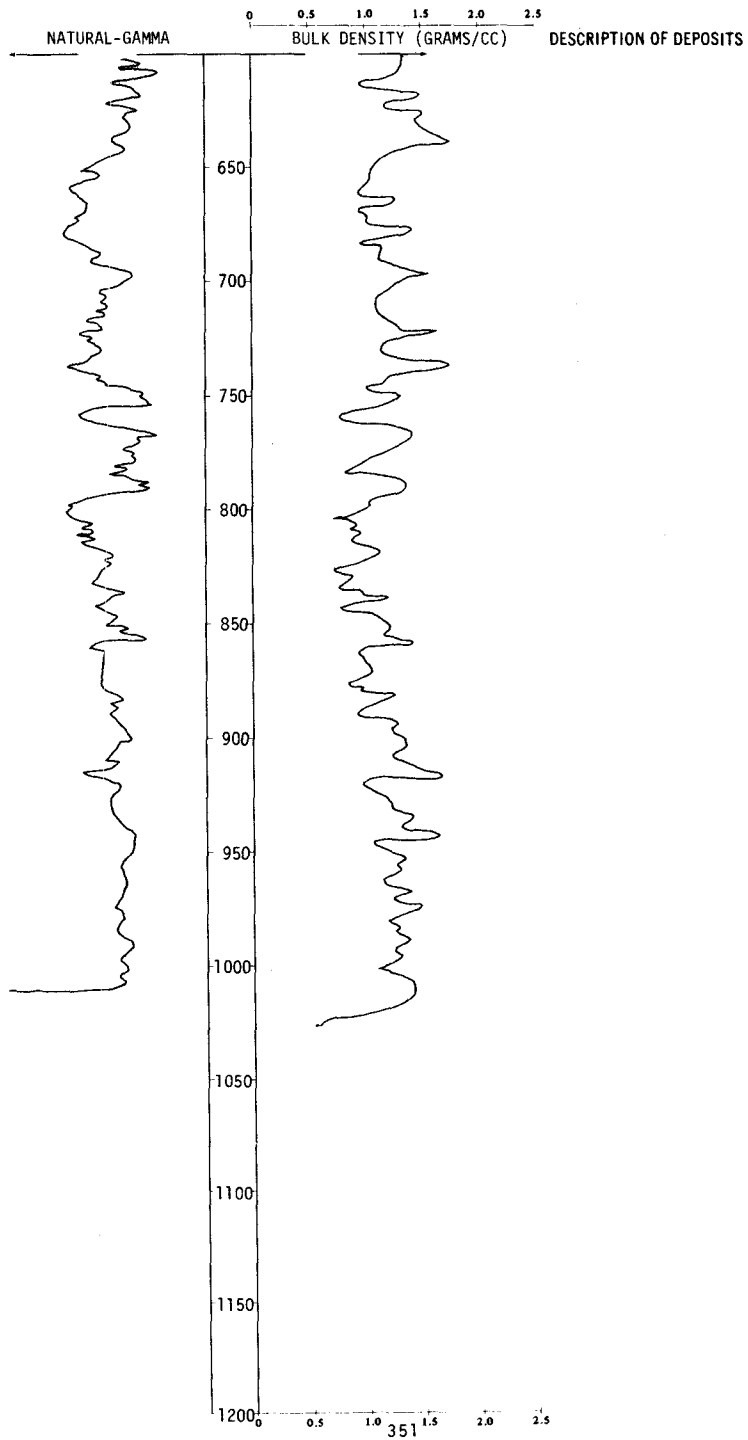
NDSWC 4752, 4752A, 4752B, 4752C, Continued

LOCATION: 137-086-03AAD1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1948
(FT, MSL)

DEPTH: 1022
(FT)



Altitude: 2210 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Sand, dark-yellowish-brown, fine to medium, very silty, loose, oxidized; drills easy-----	9	9
Tongue River Formation:			
	Lignite, brownish-black, shaly, soft; some leonardite-----	2	11
	Siltstone, moderate-yellowish-brown, sandy, slightly indurated, oxidized-----	4	15
	Siltstone, medium-gray, sandy, noncalcareous, moderately indurated; some ironstone concretions-----	15	30
	Sandstone, medium-light-gray to light-bluish-gray, extremely fine to very fine, silty, fairly clean, friable-----	15	45
	Siltstone, medium-gray, sandy, noncalcareous, slightly indurated-----	7	52
	Lignite, brownish-black to black, soft, hard, brittle; some shale partings-----	5	57
	Siltstone, medium-gray, sandy, noncalcareous, moderately indurated-----	11	68
	Lignite, brownish-black to black, mostly brittle; some shale partings-----	4	72
	Siltstone, greenish-gray, smooth, slippery, siliceous, bentonitic, noncalcareous (an underclay)-----	13	85
	Sandstone, light-bluish-gray, very fine to fine, subangular, friable, consolidated; some dark-reddish-brown ironstone concretions and thin limey cemented concretions; 10 percent silt; about 98 percent quartz and 2 percent dark minerals-----	15	100
	Sandstone, medium-bluish-gray, very fine to fine, subangular, loose, friable, semiconsolidated; a few thin lignite stringers; about 5 percent silt-----	30	130
	Sandstone, medium-bluish-gray, very fine to fine, subangular, loose, friable, semiconsolidated; numerous siltstone interbeds-----	10	140
	Siltstone, medium-gray, very sandy, clayey, moderately indurated; with greenish-gray, light-gray, and brownish-gray variegated coloration; an occasional thin lignite stringer; drills easy-----	60	200
	Siltstone, greenish-gray, siliceous, bentonitic, moderately indurated; some dark-brown carbonaceous shale bedding and thin lignite stringers-----	50	250
	Sandstone, medium-light-gray, silty, slightly calcareous, moderately friable, consolidated; some clay; about 95 percent quartz and 5 percent dark minerals and carbonates-----	20	270

137-087-12CDA, Continued
NDSWC 4757

Altitude: 2210 feet

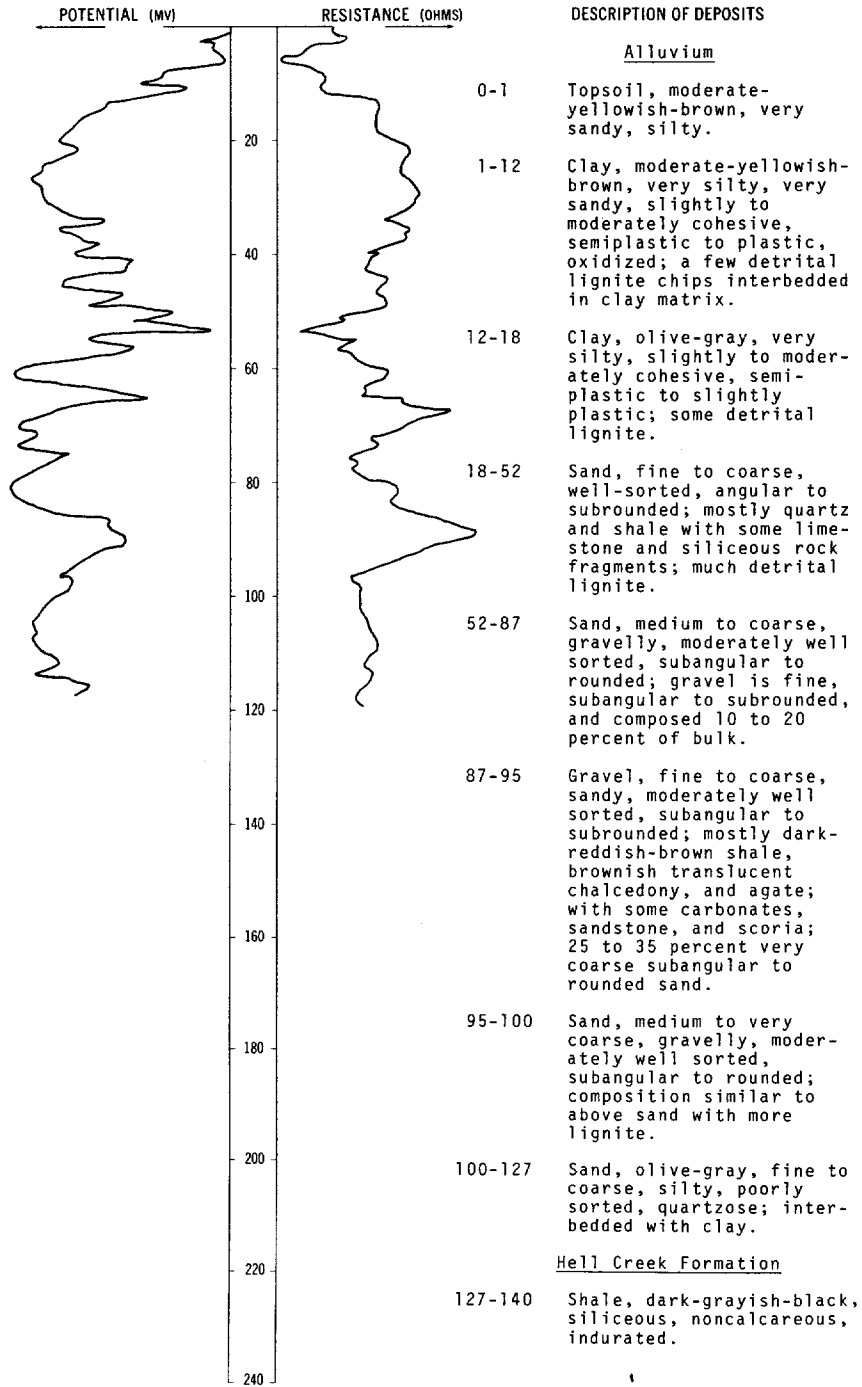
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation, Continued:			
	Siltstone, greenish-gray to light-gray, siliceous, bentonitic, noncalcareous, moderately indurated-----	20	290
	Sandstone, medium-dark-gray to dark-greenish-gray, very fine to fine, highly calcareous, well-cemented; slow hard drilling-----	5	295
	Sandstone, light-brownish-gray, extremely fine to very fine, subangular, moderately friable; about 10 percent silt-----	13	308
Cannonball-Ludlow Formations (?):			
	Shale, medium-gray to dark-greenish-gray, sandy, slightly calcareous, moderately indurated; dark-gray limestone concretions from 308 to 310 feet-----	12	320

LOCATION: 138-080-06BCC

DATE DRILLED: April 1968

ALTITUDE: 1634
(FT. MSL)

DEPTH: 140
(FT)



138-080-30CCC
NDSWC 2909

Altitude: 1650 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Gravel, fine to coarse, cobbly, poorly sorted, angular to subrounded; mostly carbonates with a few granitics and shale fragments-----	4	4
Cannonball Formation:	Sandstone, dark-gray to brownish-gray, medium, noncalcareous, consolidated, oxidized-----	11	15
	Sandstone, medium-bluish-gray, medium, noncalcareous, consolidated, oxidized-----	5	20

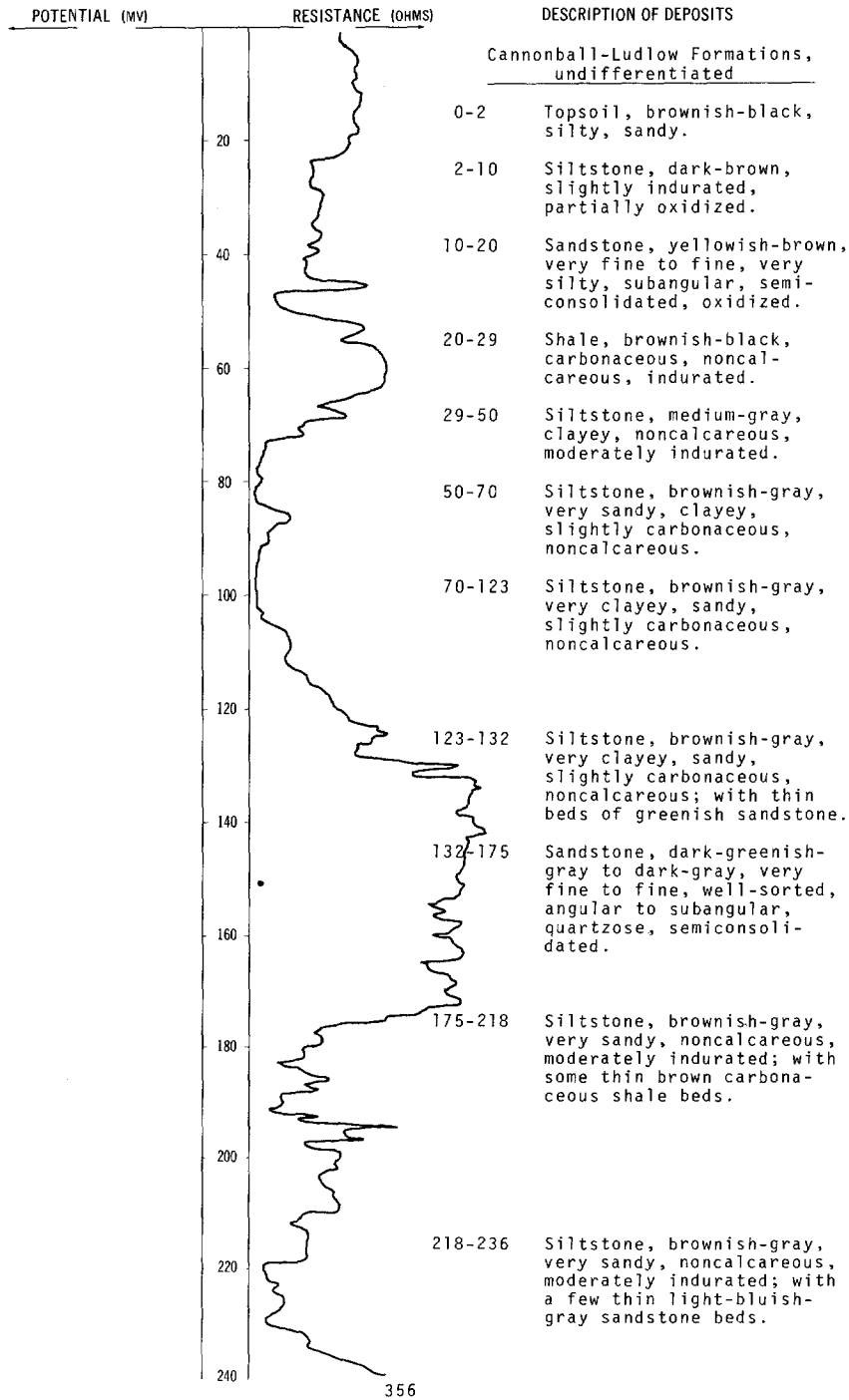
NDSWC 4750, 4750A, 4750B, 4750C

LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

DEPTH: 762
(FT)



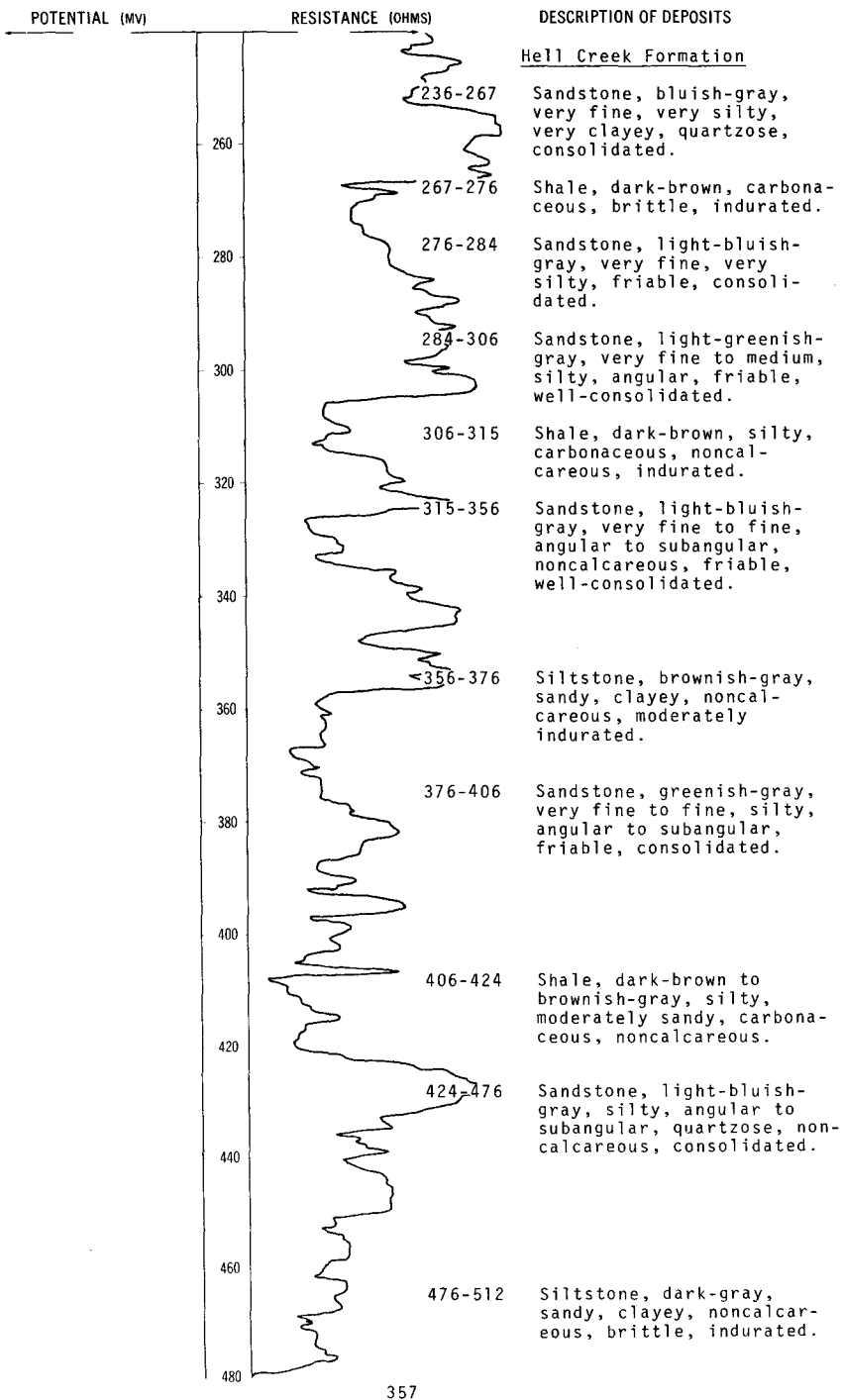
NDSWC 4750, 4750A, 4750B, 4750C, Continued

LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

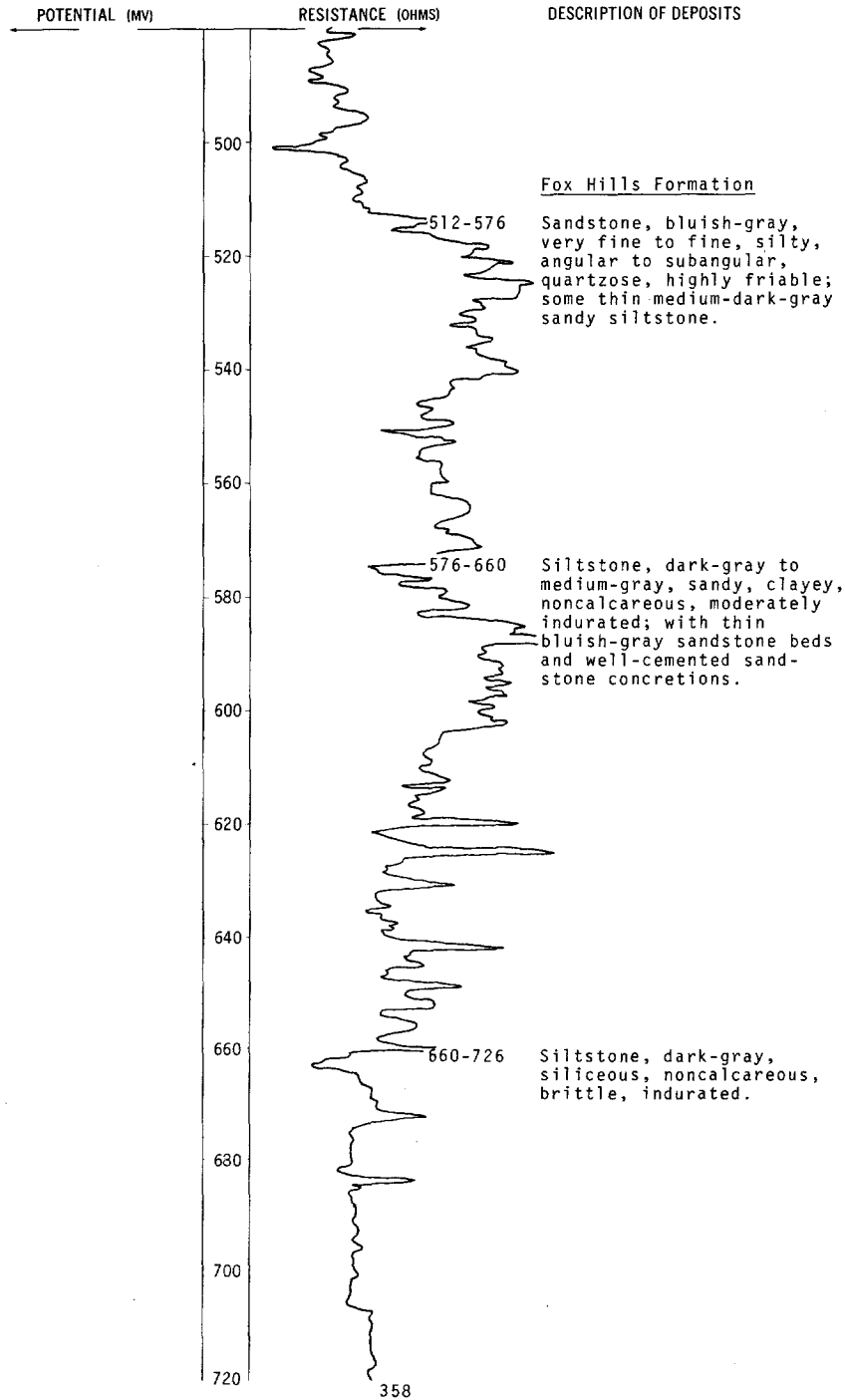
DEPTH: 762
(FT)



NDSWC 4750, 4750A, 4750B, 4750C, Continued

LOCATION: 138-081-09ABB1, 2, 3, 4
 ALTITUDE: 1780
 (FT, MSL)

DATE DRILLED: July 1974
 DEPTH: 762
 (FT)



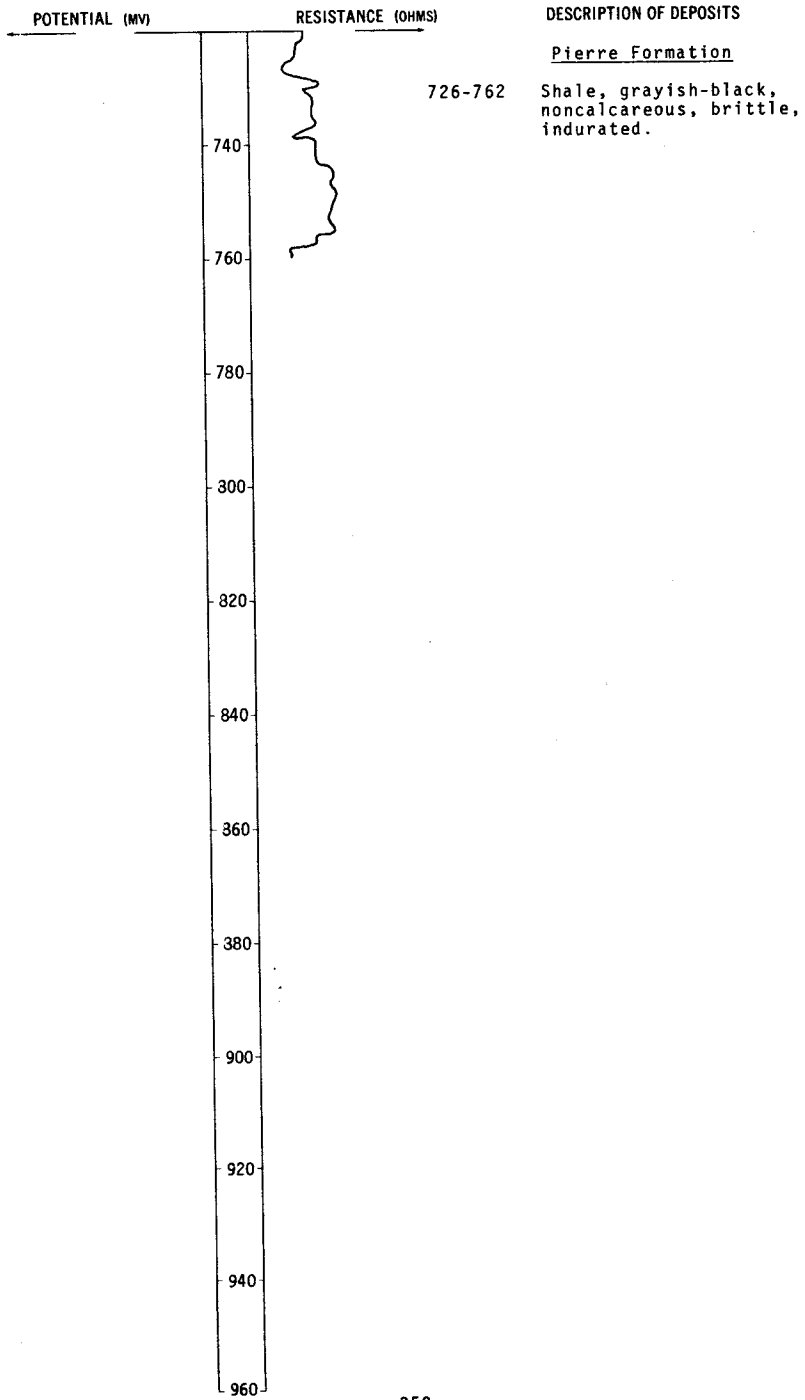
NDSWC 4750, 4750A, 4750B, 4750C, Continued

LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

DEPTH: 762
(FT)



NDSWC 4750, 4750A, 4750B, 4750C, Continued

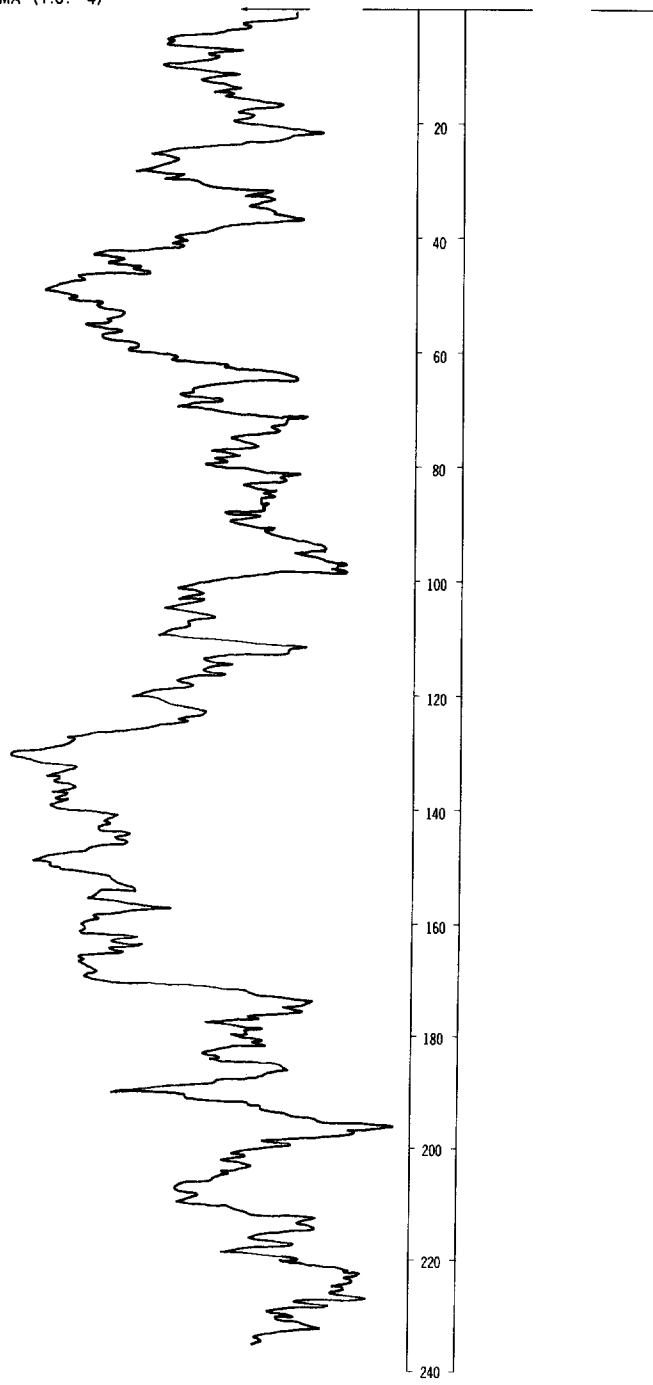
LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT. MSL)

DEPTH: 762
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4750, 4750A, 4750B, 4750C, Continued

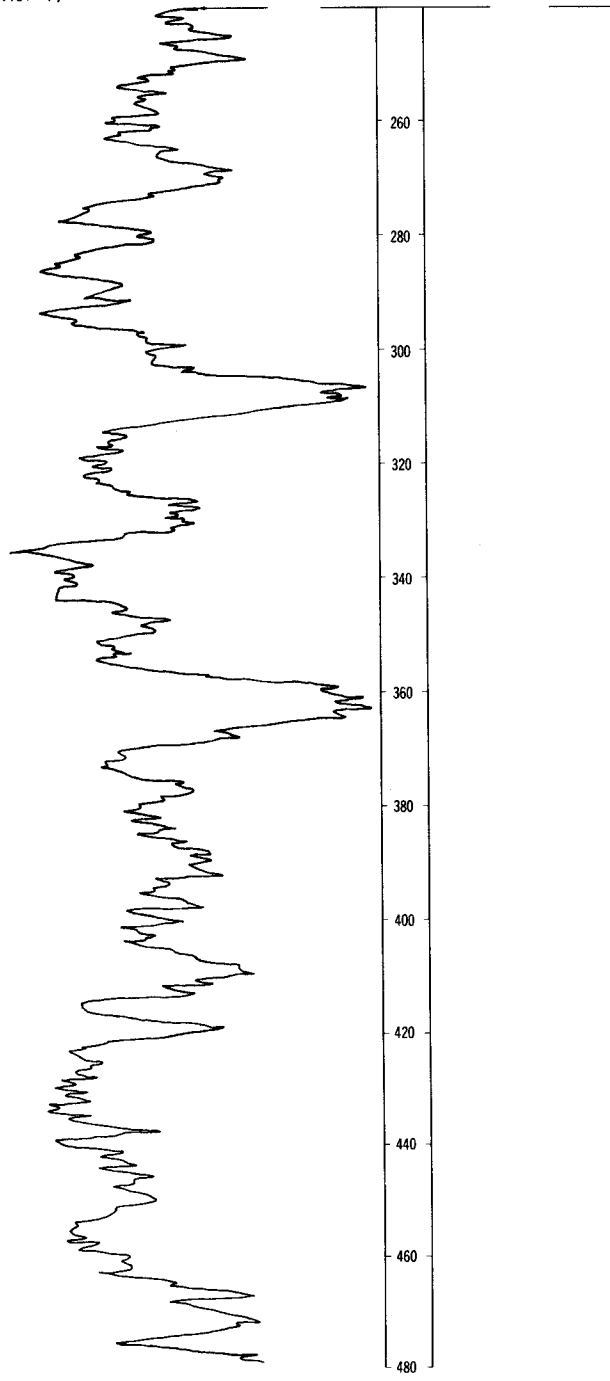
LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

DEPTH: 762
(FT)

NATURAL-GAMMA (T.C. 4)



361

NDSWC 4750, 4750A, 4750B, 4750C, Continued

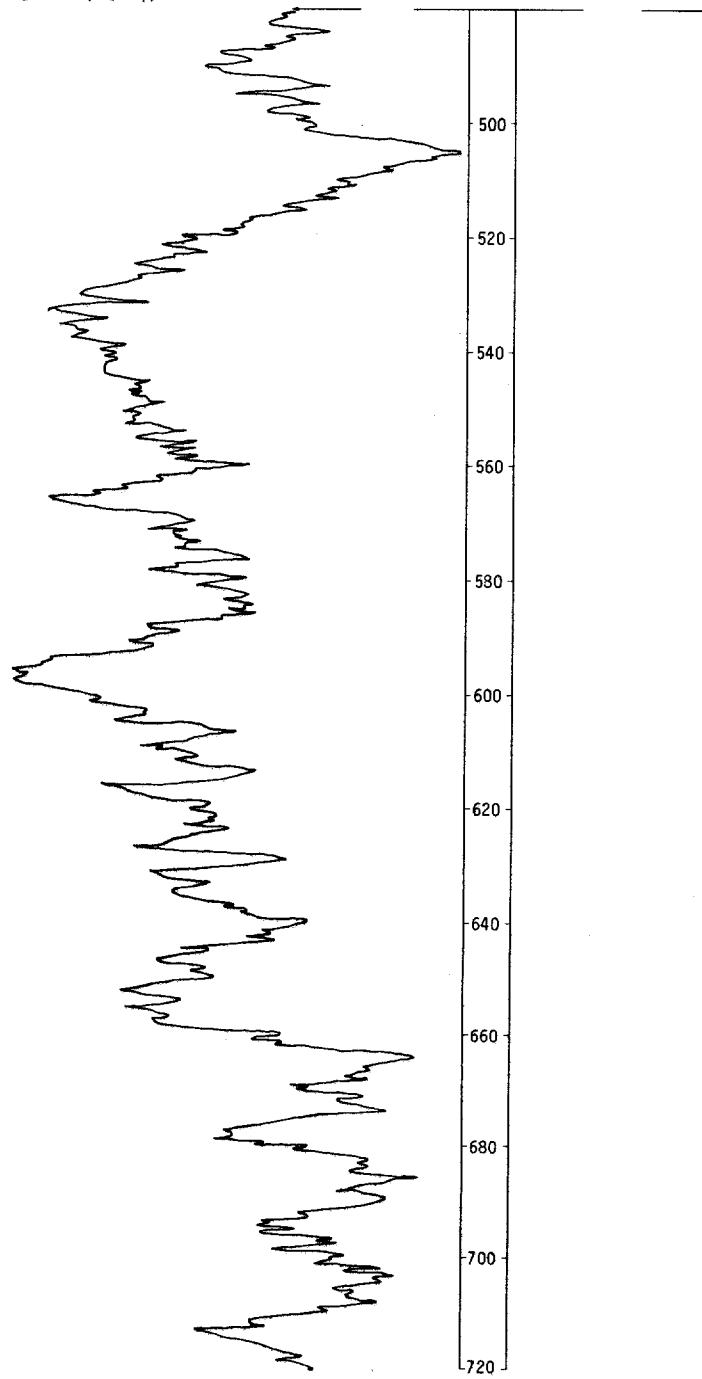
LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

DEPTH: 762
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4750, 4750A, 4750B, 4750C, Continued

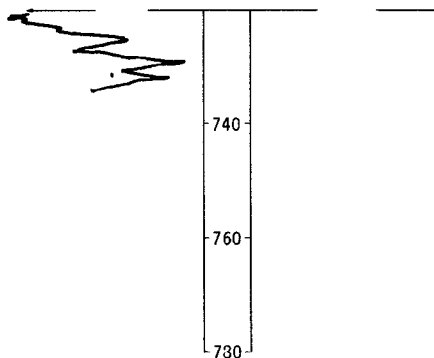
LOCATION: 138-081-09ABB1, 2, 3, 4

DATE DRILLED: July 1974

ALTITUDE: 1780
(FT, MSL)

DEPTH: 762
(FT)

NATURAL-GAMMA (T.C. 4)



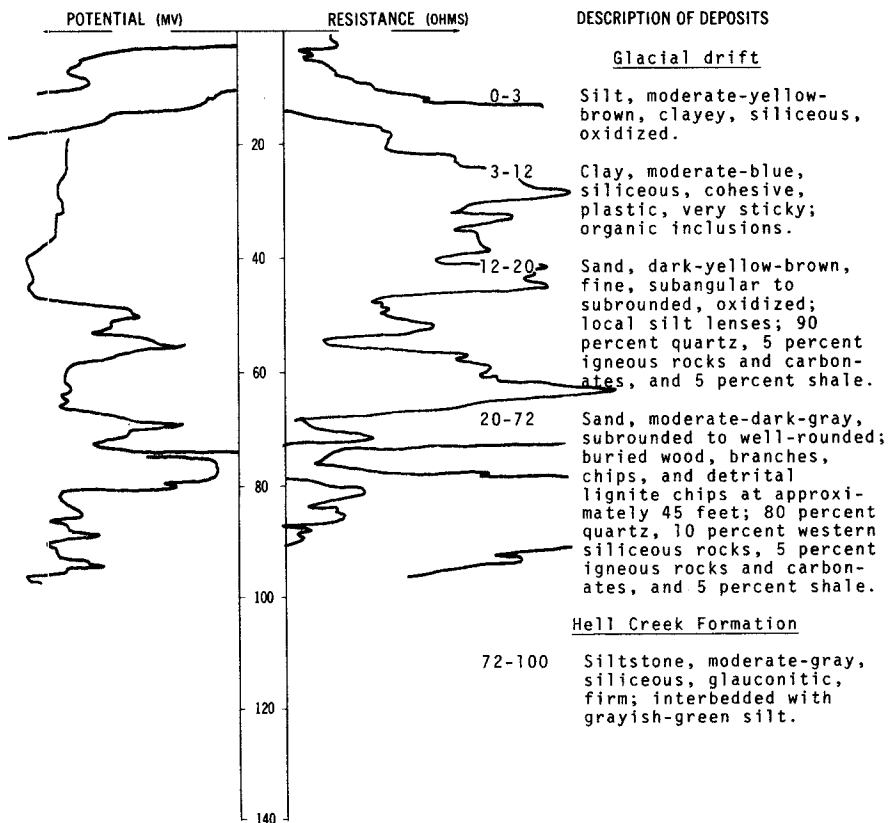
NDSWC 9014

LOCATION: 138-081-12DAB

DATE DRILLED: August 1974

ALTITUDE: 1630
(FT, MSL)

DEPTH: 100
(FT)



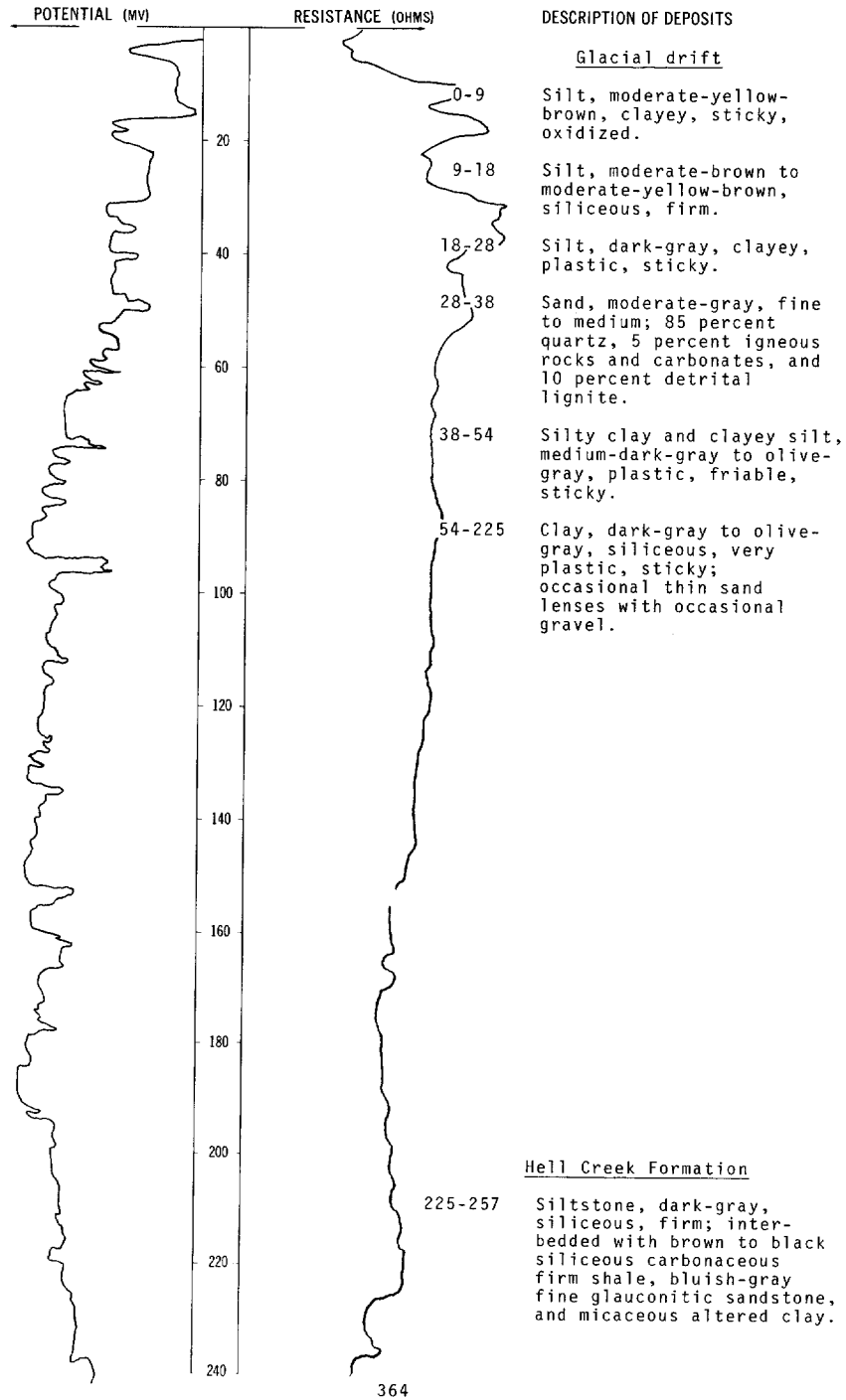
NDSWC 9012

LOCATION: 138-081-240CD

DATE DRILLED: August 1974

ALTITUDE: 1630
(FT, MSL)

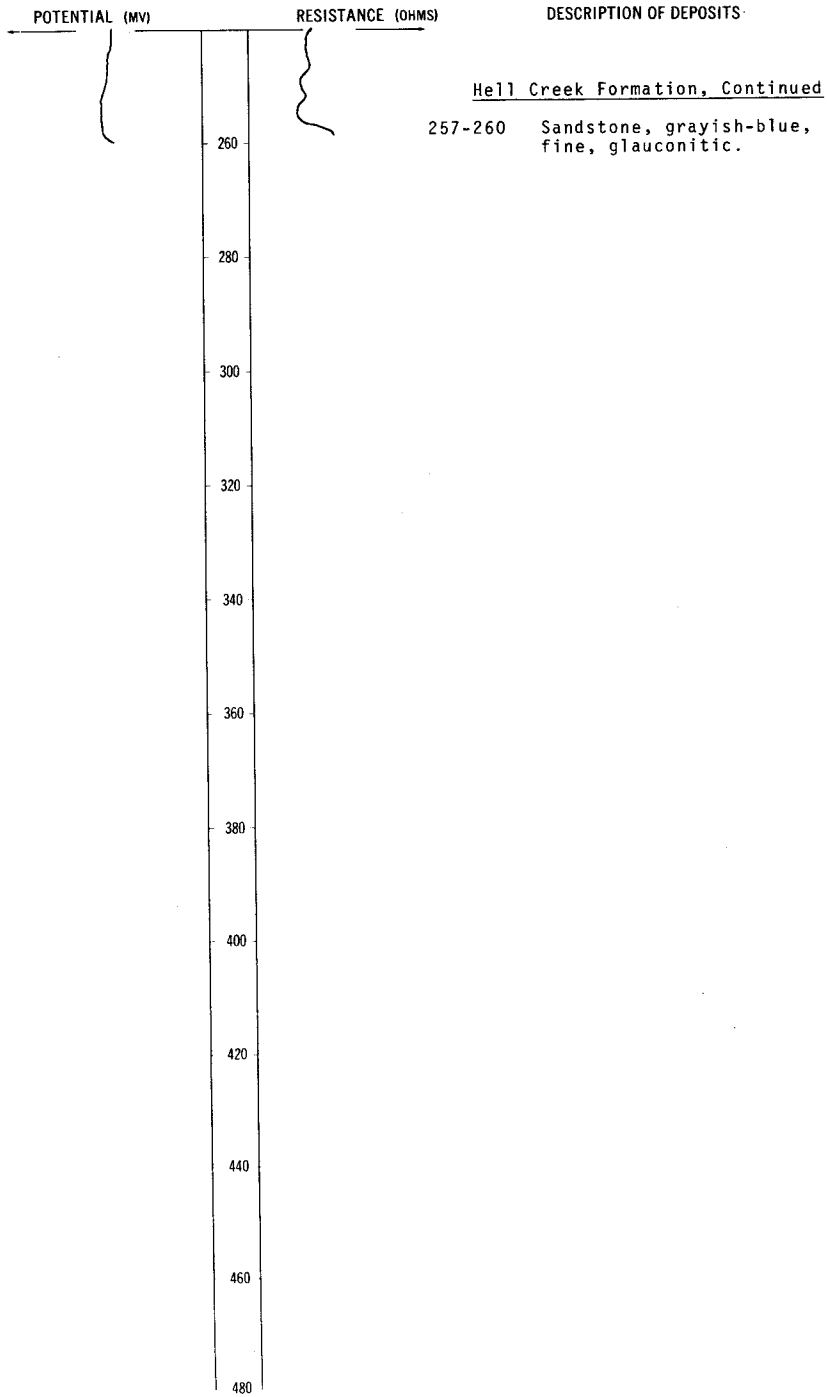
DEPTH: 260
(FT)



NDSWC 9012, Continued

LOCATION: 138-081-24DCD
ALTITUDE: 1630
(FT, MSL)

DATE DRILLED: August 1974
DEPTH: 260
(FT)

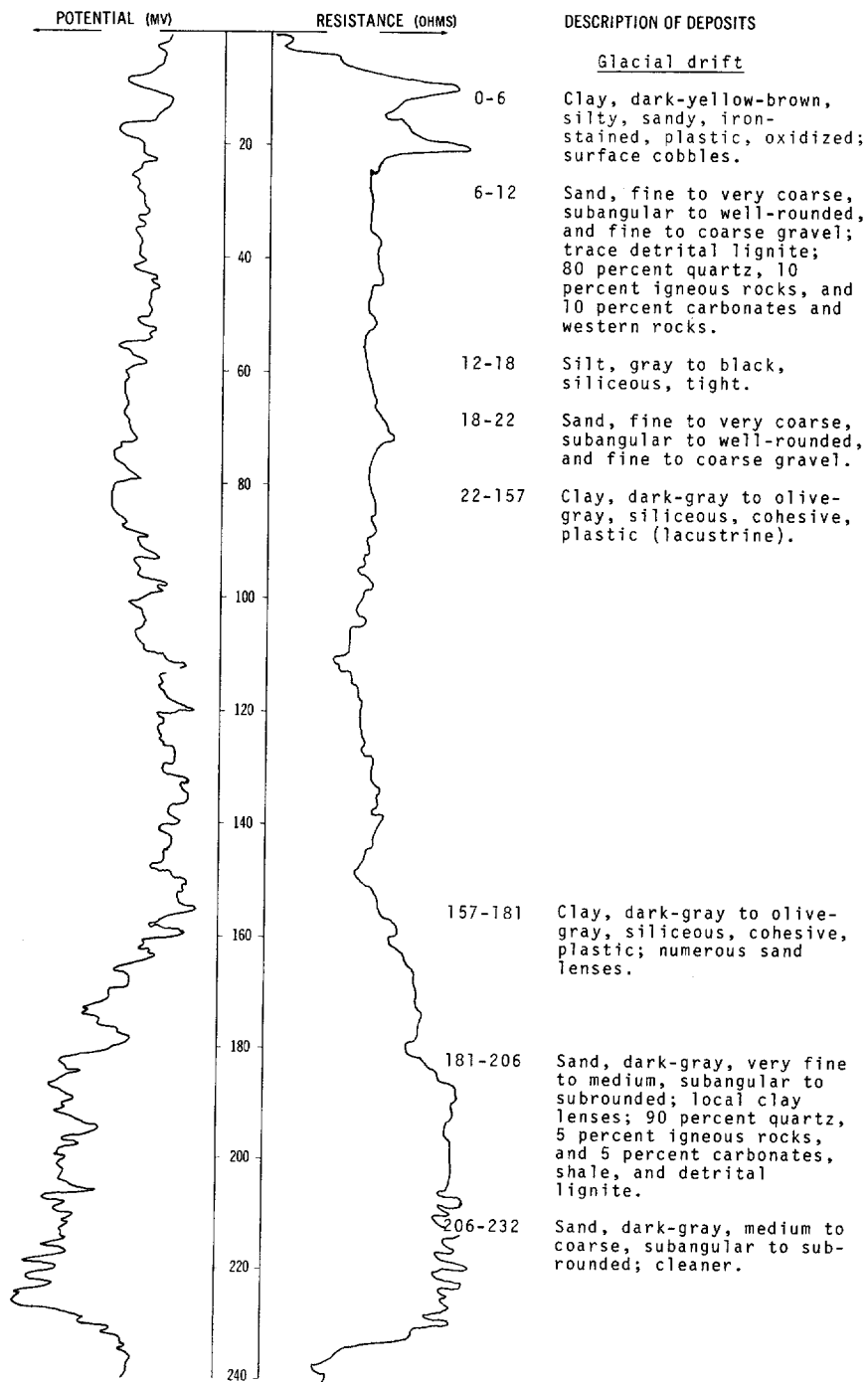


LOCATION: 138-081-35ABA

DATE DRILLED: August 1974

ALTITUDE: 1682
(FT, MSL)

DEPTH: 300
(FT)

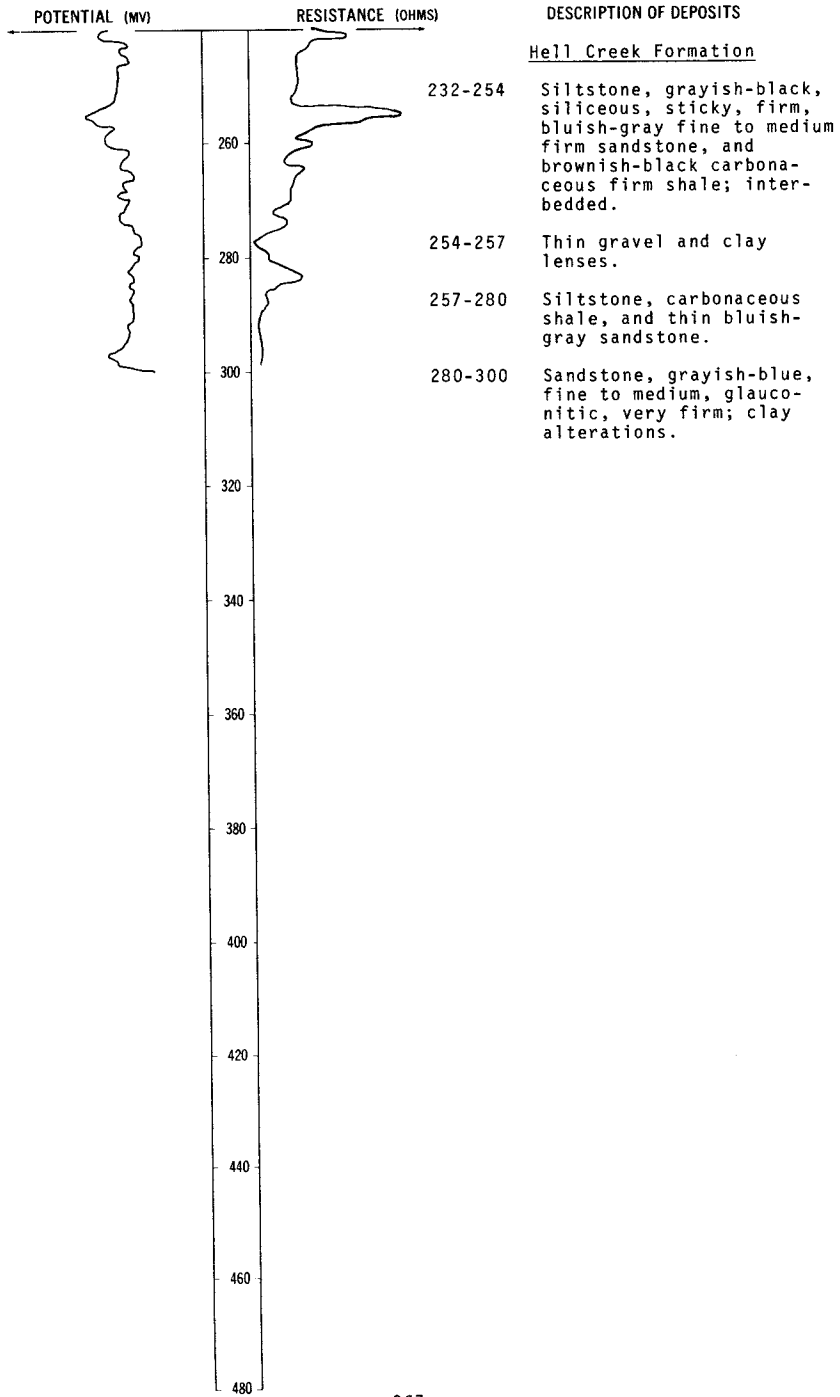


LOCATION: 138-081-35ABA

DATE DRILLED: August 1974

ALTITUDE: 1682
(FT, MSL)

DEPTH: 300
(FT)

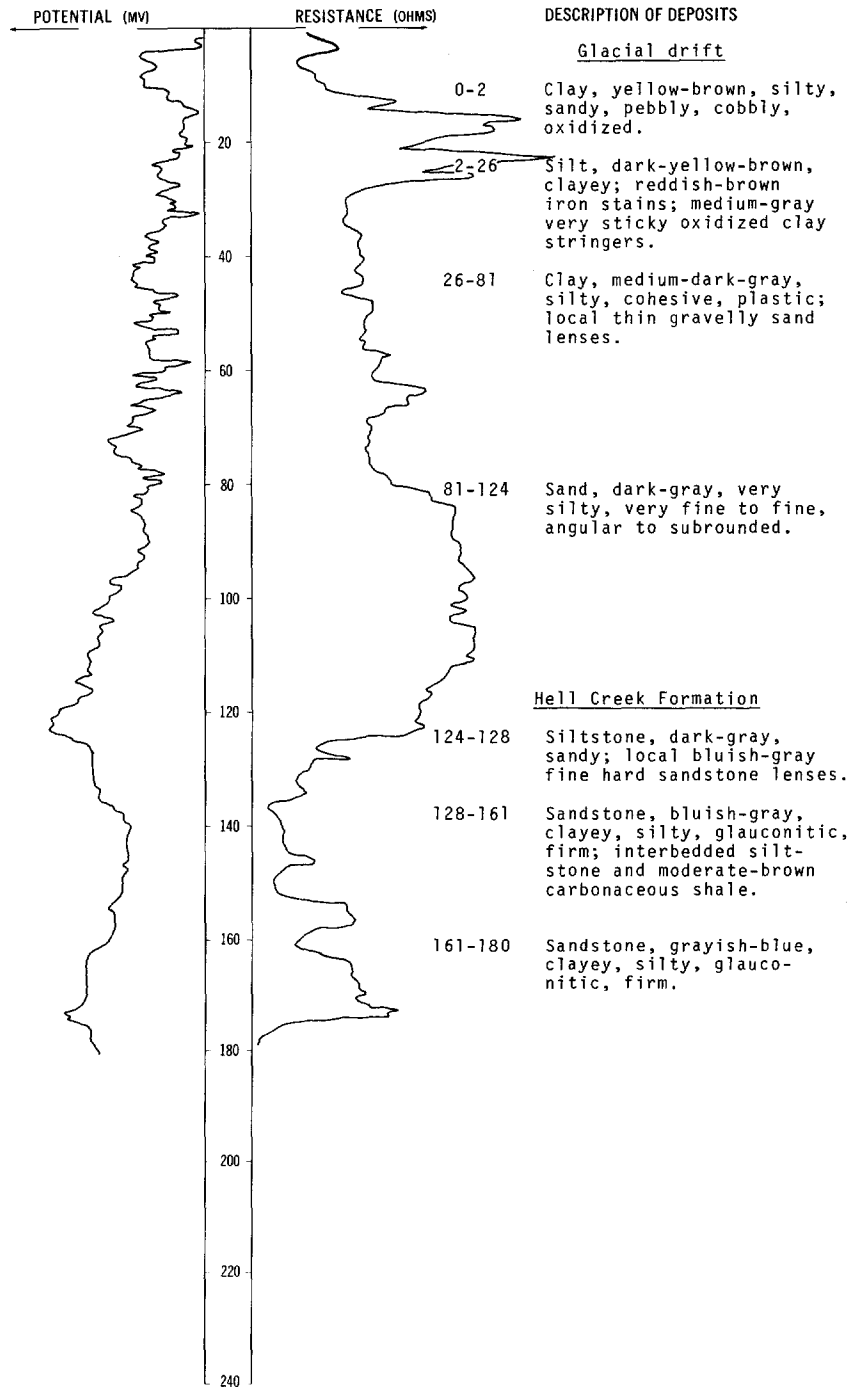


LOCATION: 138-081-35BAA

DATE DRILLED: August 1974

ALTITUDE: 1705
(FT, MSL)

DEPTH: 180
(FT)

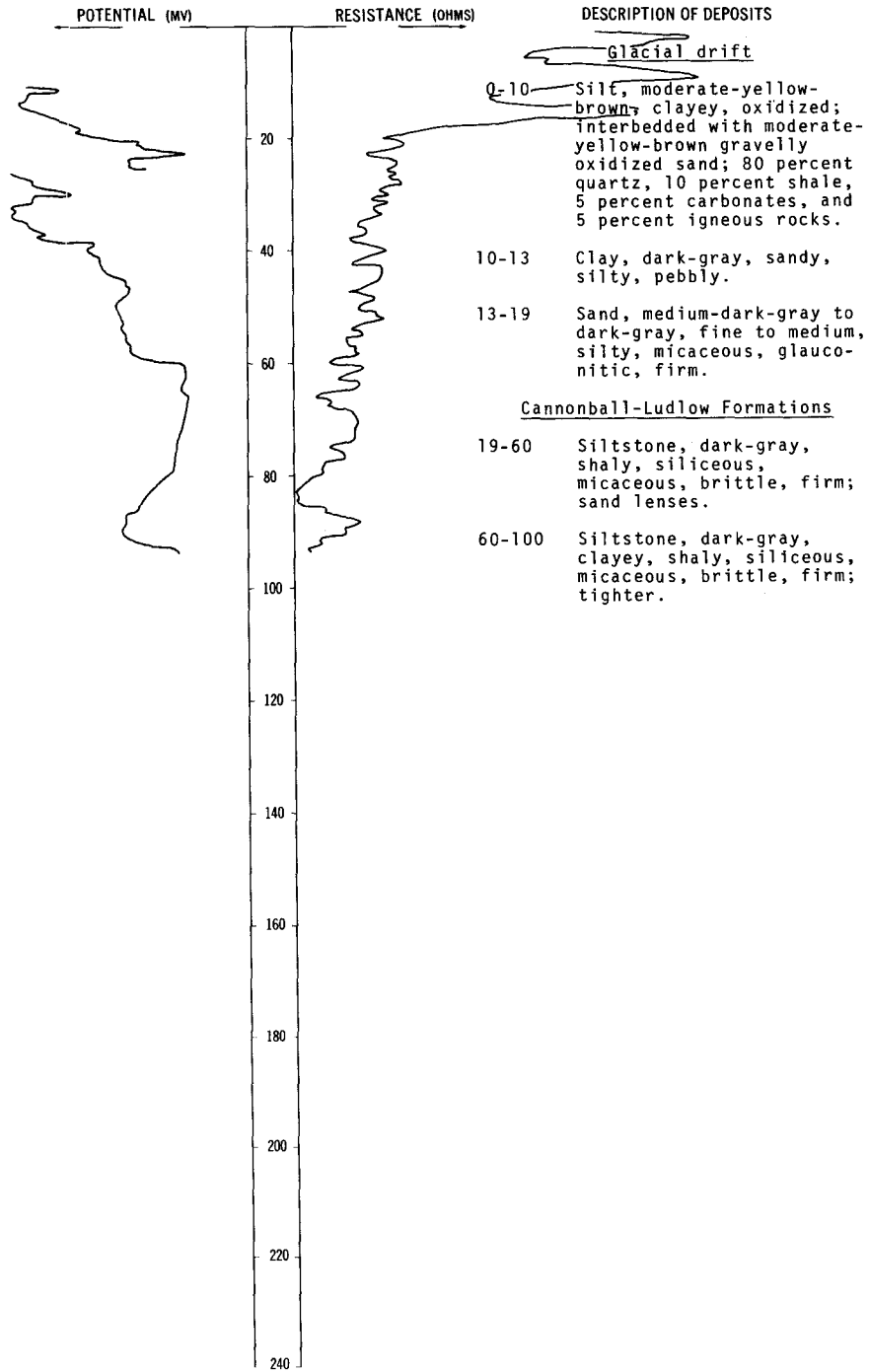


LOCATION: 138-082-15DDD

DATE DRILLED: August 1974

ALTITUDE:
(FT, MSL)

DEPTH: 100
(FT)



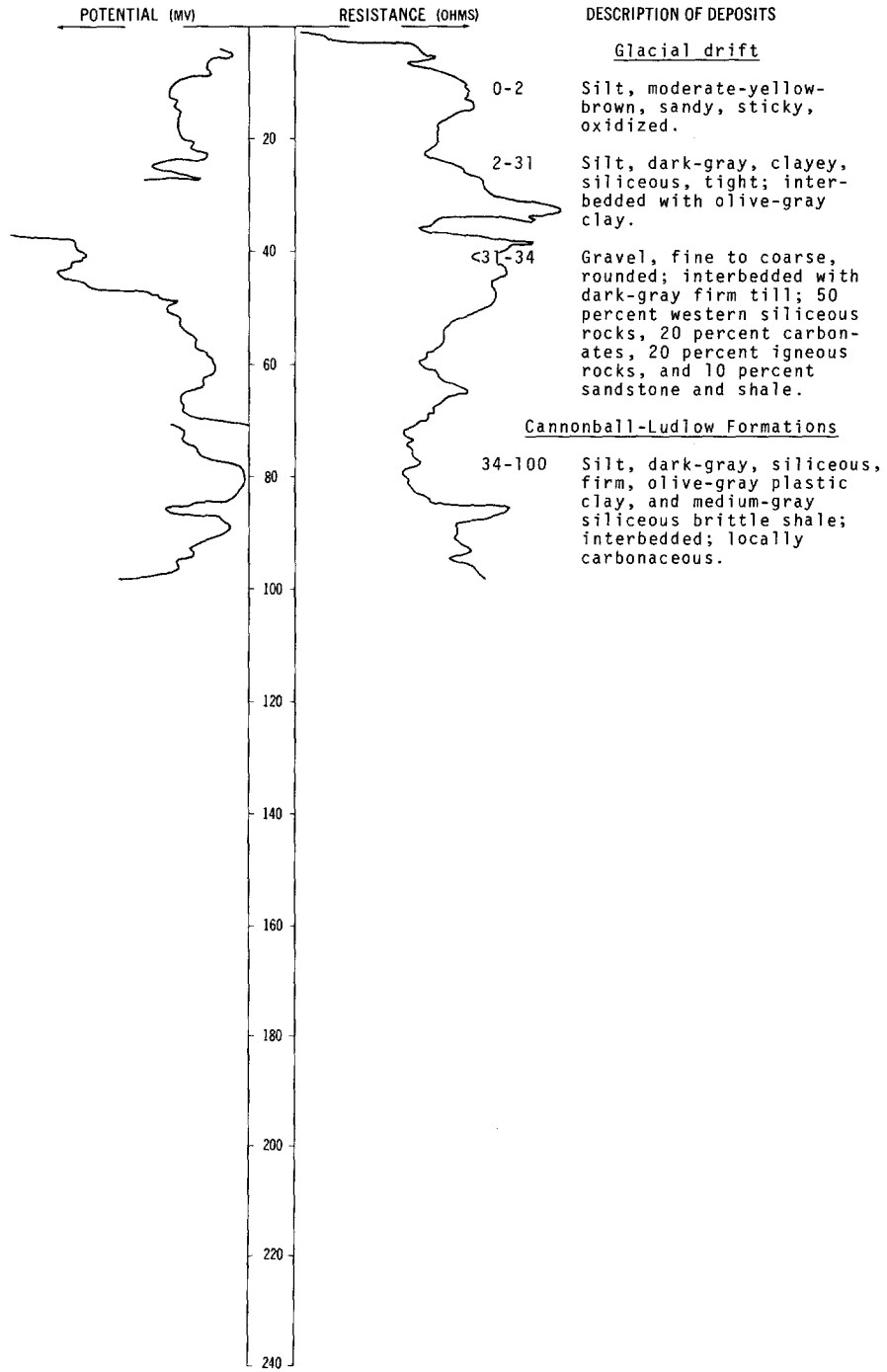
NDSWC 9005

LOCATION: 138-082-25DDC

DATE DRILLED: August 1974

ALTITUDE:
(FT, MSL)

DEPTH: 100
(FT)

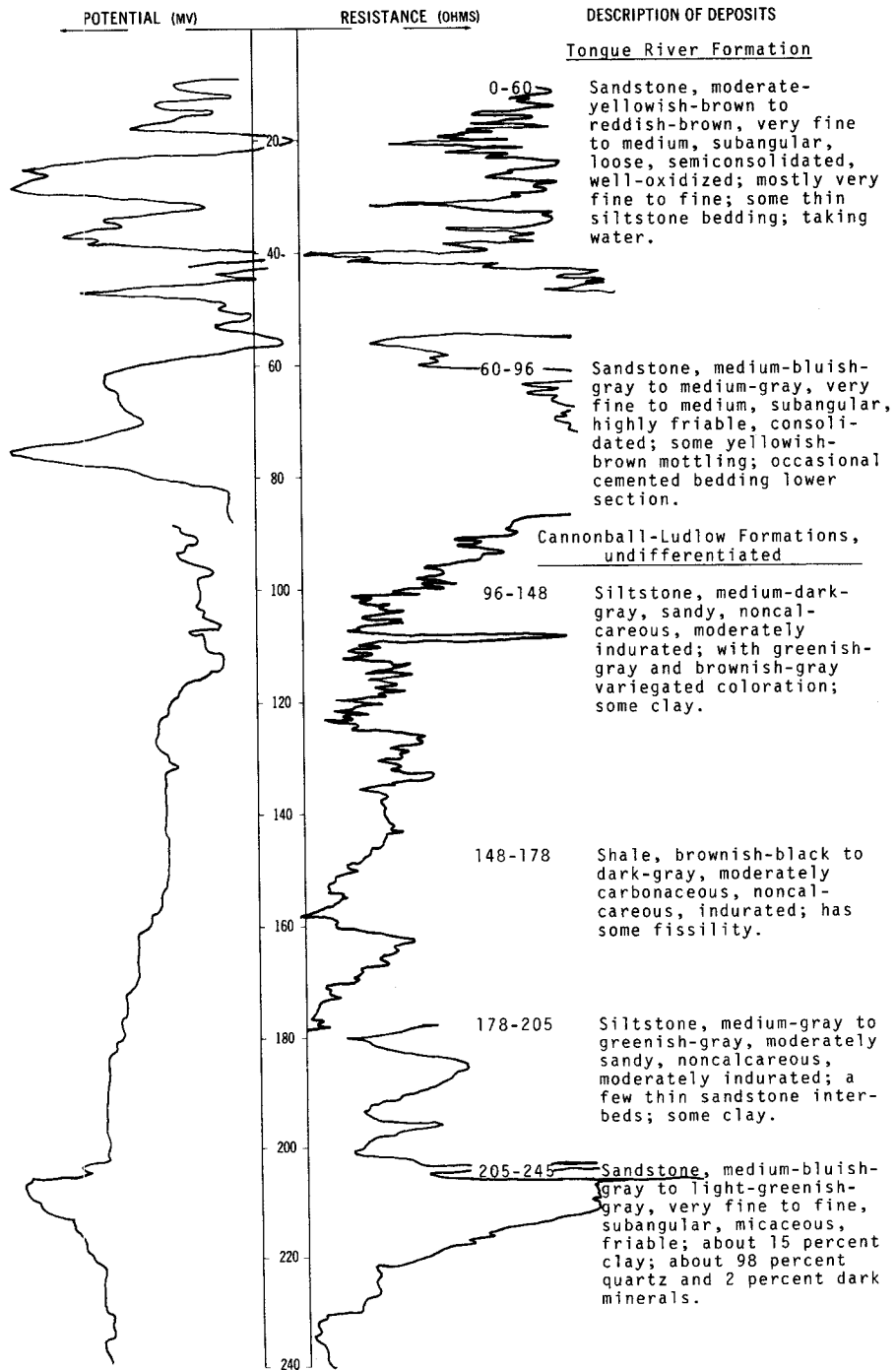


LOCATION: 138-084-27CCC1, 2

DATE DRILLED: September 1974

ALTITUDE: 2093
(-T, MSL)

DEPTH: 280
(FT)



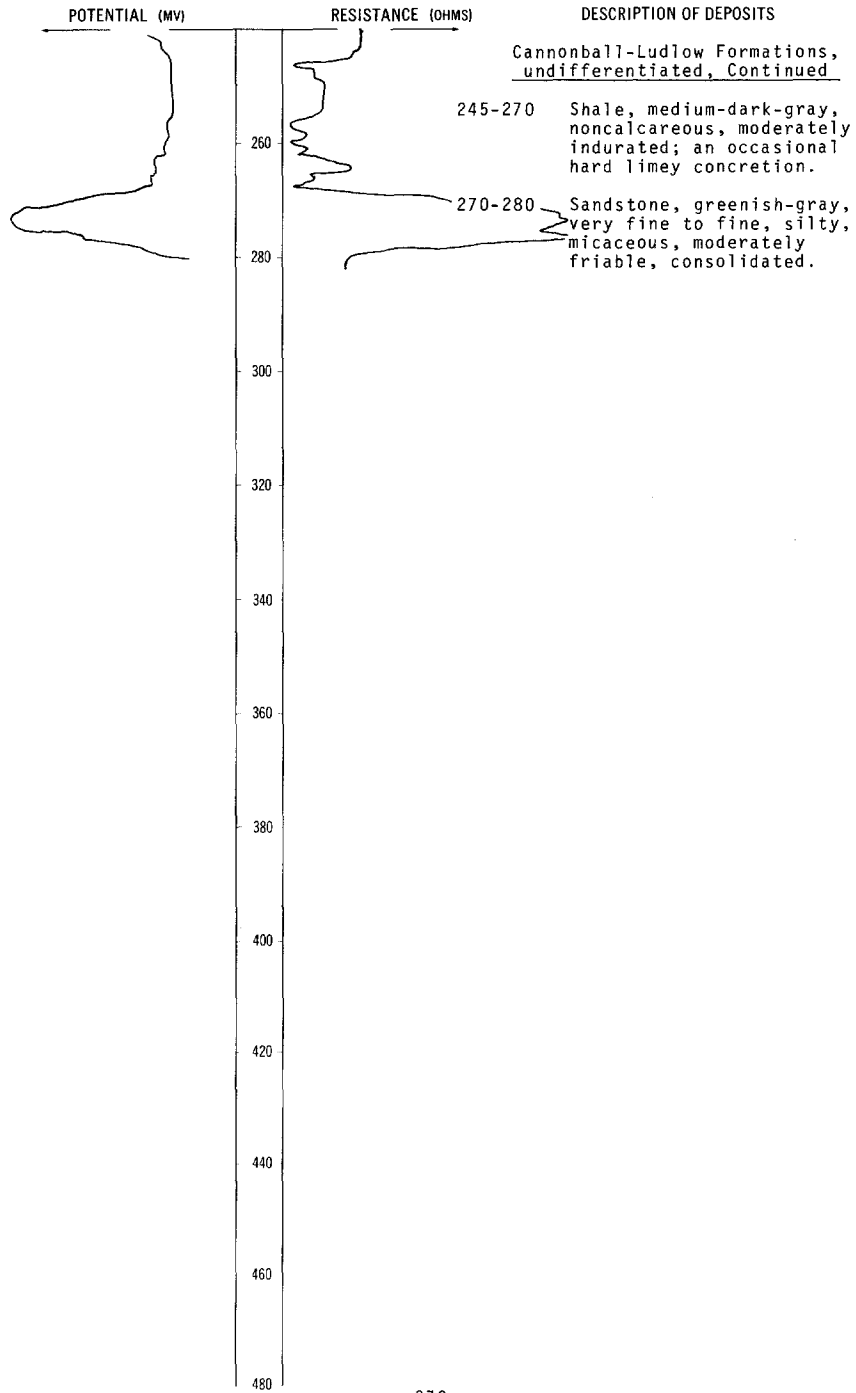
NDSWC 4761, 4761A, Continued

LOCATION: 138-084-27CCC1, 2

DATE DRILLED: September 1974

ALTITUDE: 2093
(FT, MSL)

DEPTH: 280
(FT)



NDSWC 4761, 4761A, Continued

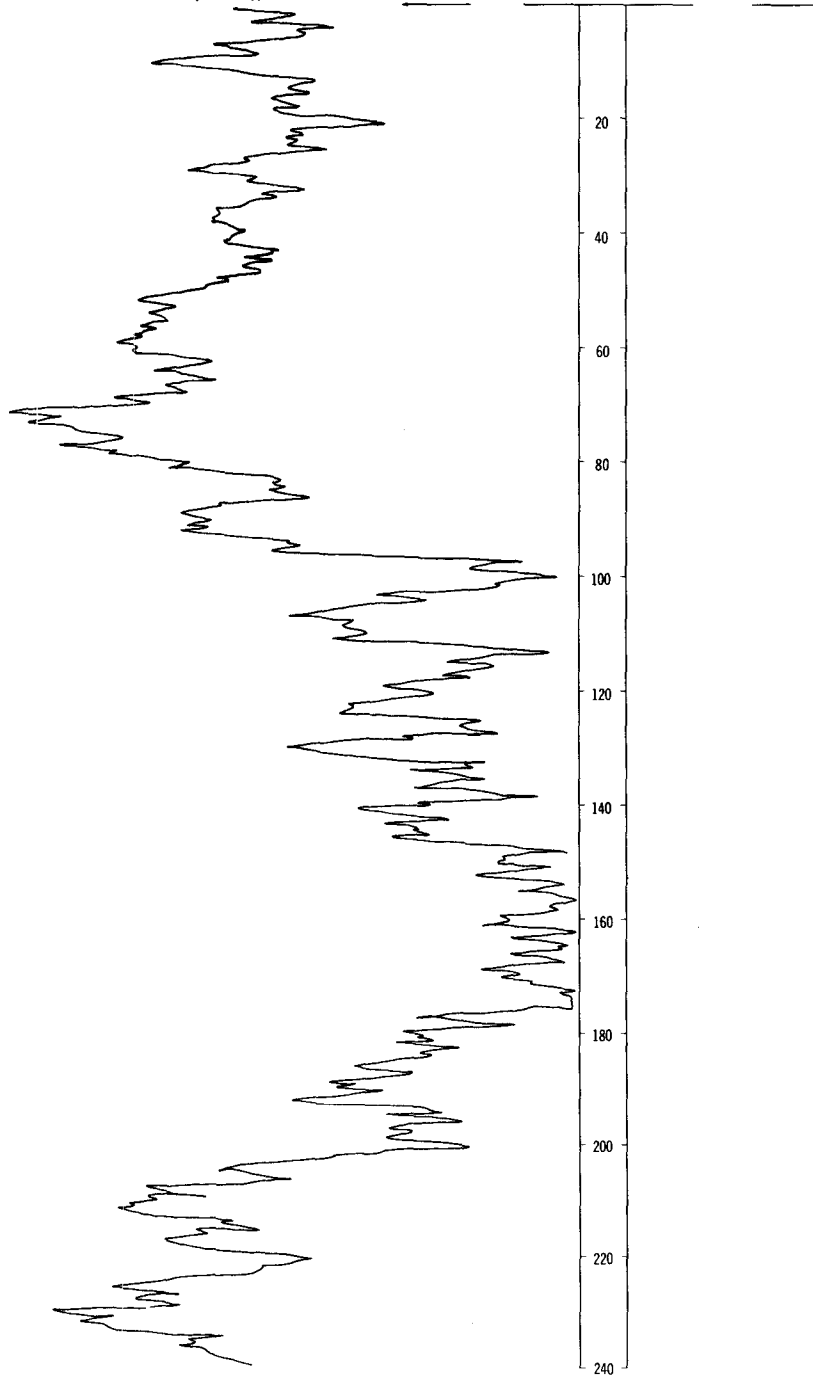
LOCATION: 138-084-27CCC1, 2

DATE DRILLED: September 1974

ALTITUDE: 2093
(FT, MSL)

DEPTH: 280
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4761, 4761A, Continued

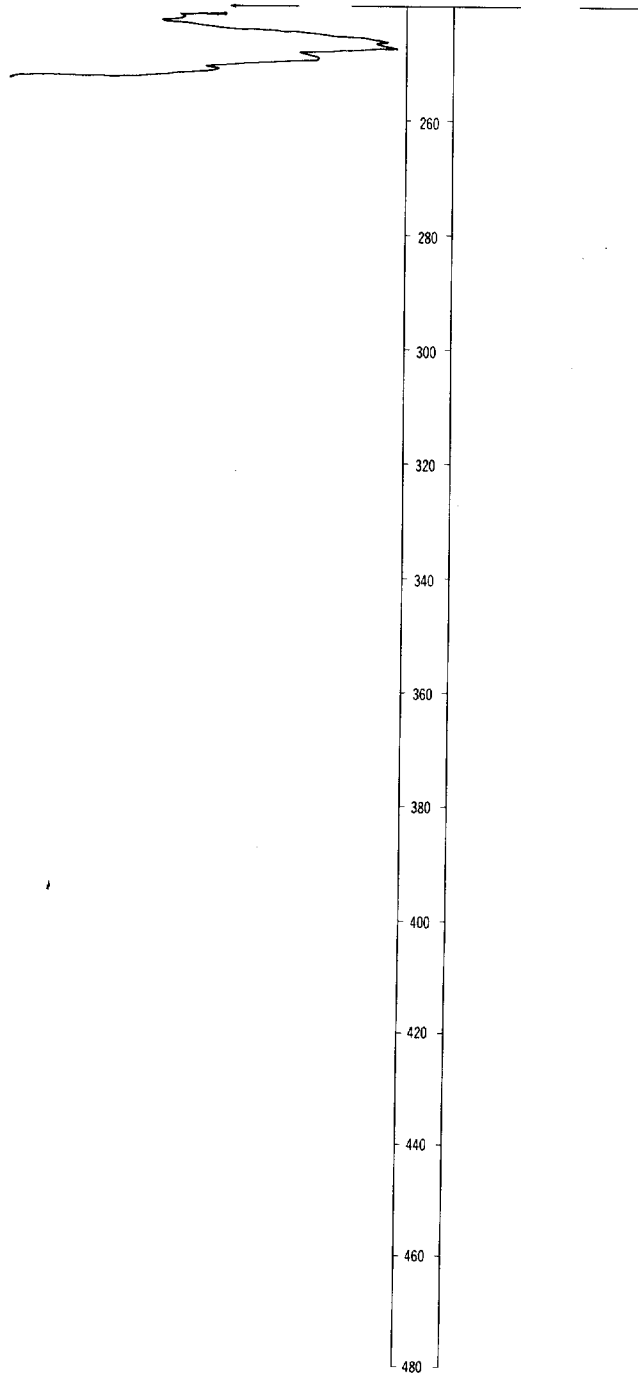
LOCATION: 138-084-27CCC1, 2

DATE DRILLED: September 1974

ALTITUDE: 2093
(FT. MSL)

DEPTH: 280
(FT)

NATURAL-GAMMA (T.C. 4)



138-085-08CBC
U.S. Geological Survey Conservation Division 19

Altitude: 2115 feet

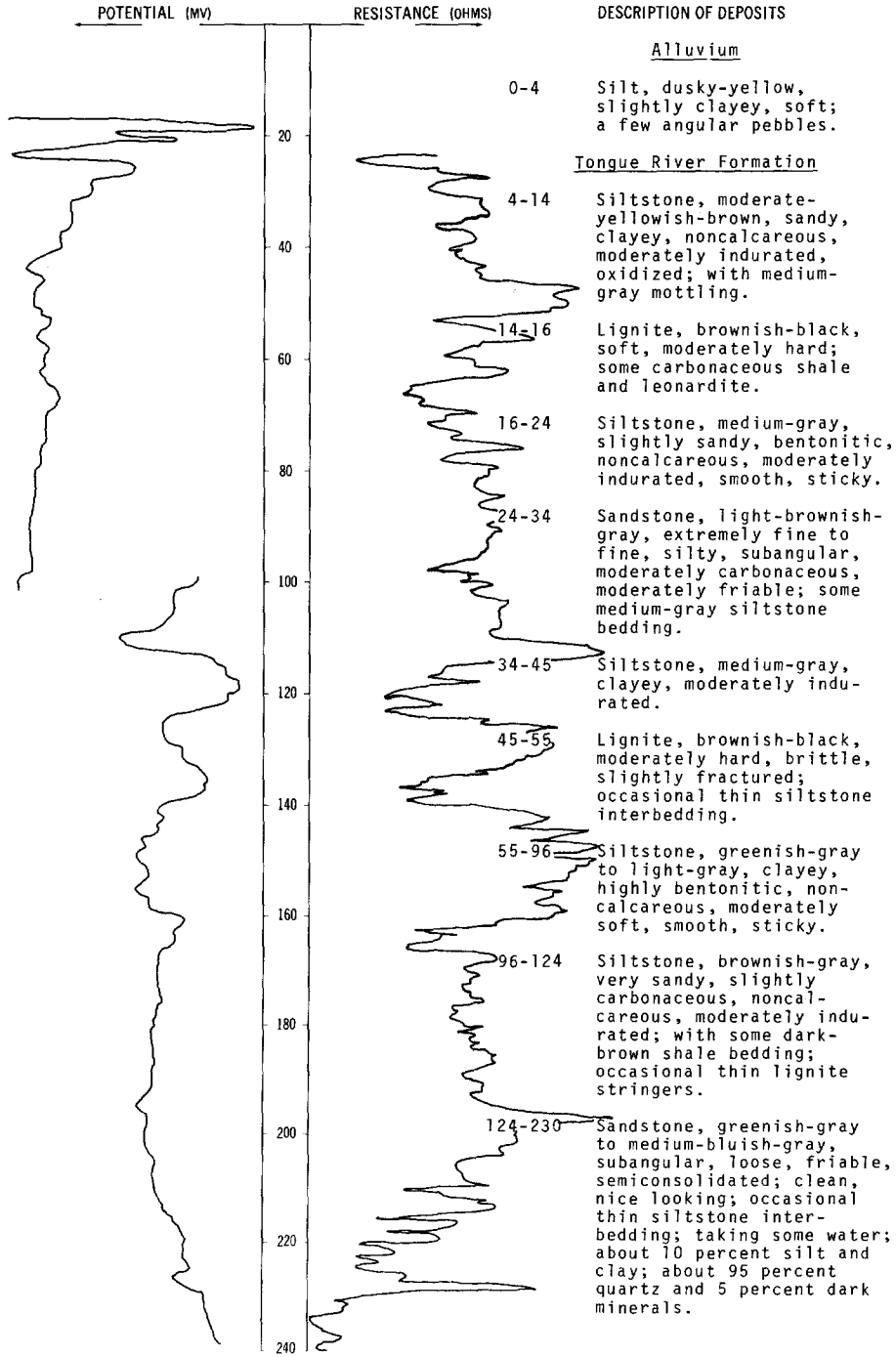
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation:			
	Sandstone-----	10	10
	Sandstone and weathered lignite; lignite at 12.8-19.7 feet-----	15	25
	Sandstone, very fine grained, weathered-----	5.3	30.3
	Siltstone, greenish-gray-----	1.8	32.1
	Siltstone-----	10	42.1
	Claystone and siltstone, greenish- gray-----	13.3	55.4
	Claystone and siltstone-----	7.6	63
	Siltstone, claystone, and lignite; lignite at 64.3-68.2 feet and 69.3-70.1 feet-----	15.3	78.3
	Siltstone and claystone; lignite stringers at 78.3-78.5 feet, 86.1-86.5 feet, and 87-87.4 feet-----	12.7	91
	Siltstone, claystone, and sandstone-----	20	111
	Claystone, greenish-gray, and sandstone-----	12	123
	Lignite and claystone; lignite at 125.6-130.3 feet-----	16	139
	Claystone, greenish-gray-----	14	153
	Siltstone, sandstone, and claystone-----	10	163
	Sandstone, claystone, and siltstone-----	9	172
	Claystone, siltstone, and lignite; lignite at 172.7-173.1 feet, 176- 176.8 feet, and 177.3-179.1 feet-----	12	184
	Claystone, siltstone containing fossil shells, and lignite stringer-----	10.9	194.9
	Claystone and siltstone-----	7.7	202.6
	Claystone-----	4.4	207
	Claystone, siltstone, and lignite-----	9	216
	Clay and lignite; lignite at 215.3- 216.8 feet, clay at 216.8-217 feet; lignite at 217-221.7 feet-----	5.7	221.7
	Lignite-----	3	224.7
	Lignite and clay; lignite at 224.7- 230.5 feet-----	7	231.7
	Claystone and siltstone-----	31.3	263
	Siltstone and sandstone-----	13.6	276.6
	Lignite and clay; lignite at 276.6- 280.2 feet and 280.4-280.6 feet; clay at 280.2-280.4 feet-----	4	280.6
	Lignite and siltstone; lignite at 280.6-282.2 feet-----	20	300.6

LOCATION: 138-085-26CDD

DATE DRILLED: September 1974

ALTITUDE: 2149
(FT, MSL)

DEPTH: 260
(FT)

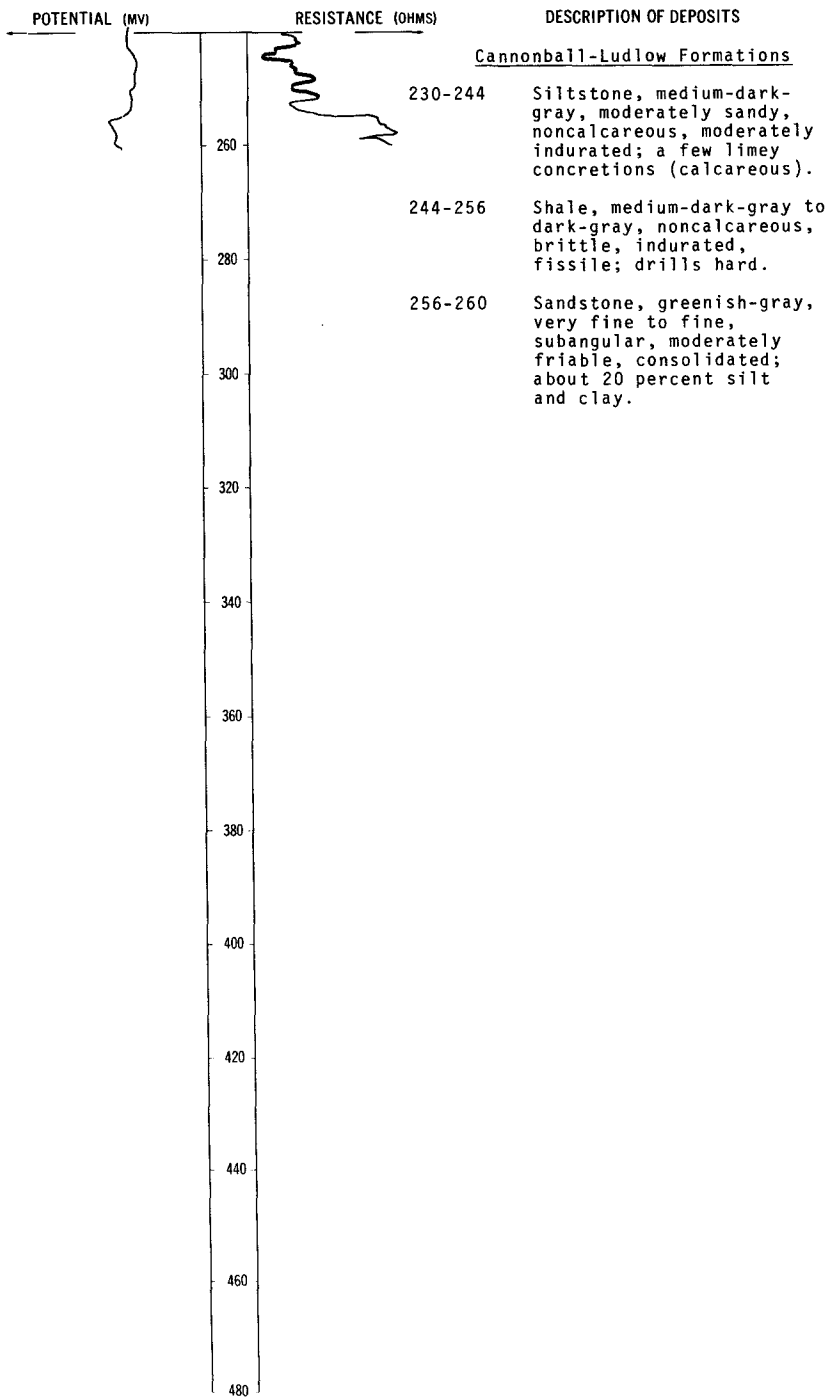


LOCATION: 138-085-26CDD

DATE DRILLED: September 1974

ALTITUDE: 2149
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4762, Continued

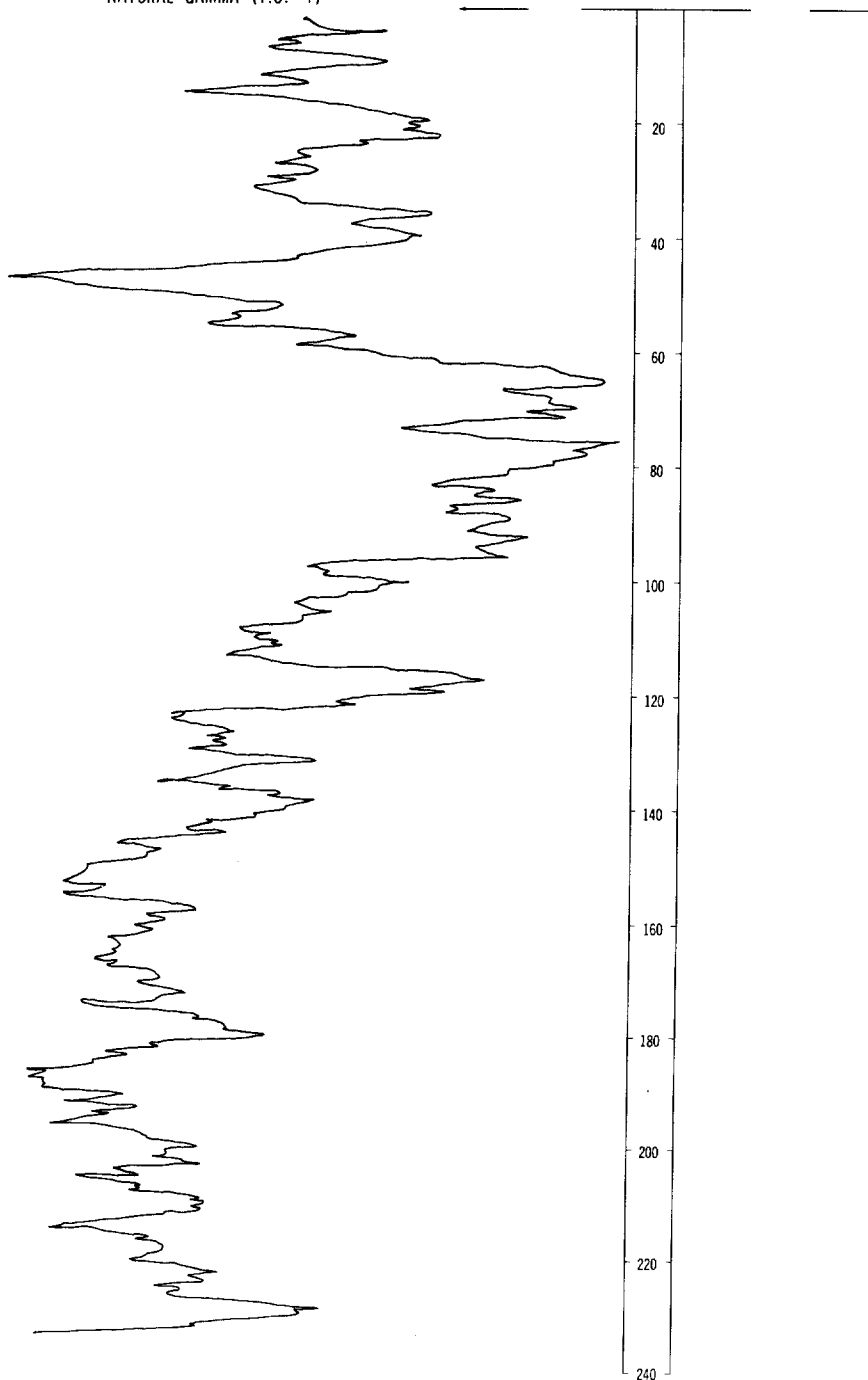
LOCATION: 138-085-26CDD

DATE DRILLED: September 1974

ALTITUDE: 2149
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4762, Continued

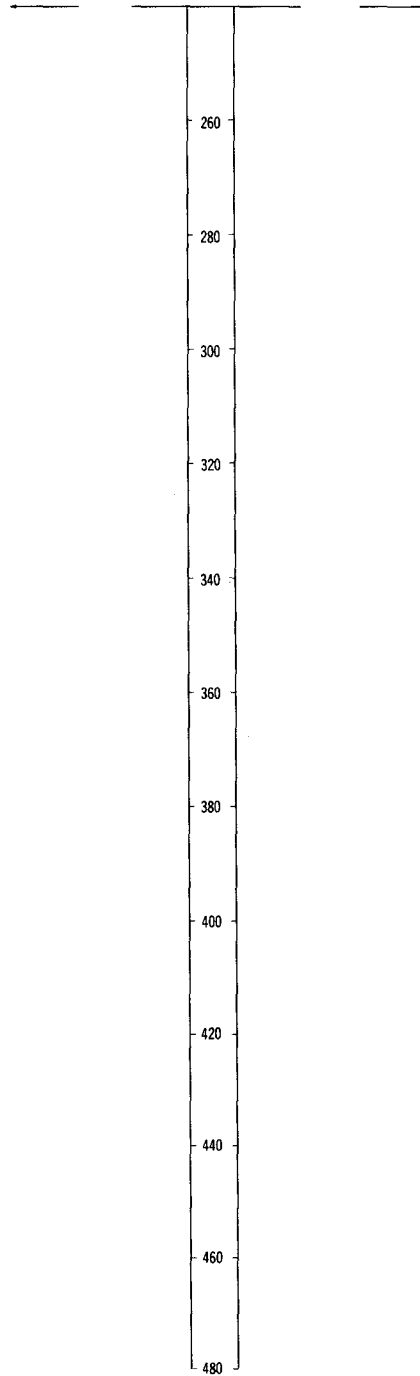
LOCATION: 138-085-26CDD

DATE DRILLED: September 1974

ALTITUDE: 2149
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)



138-086-02BCB
NDSWC 4656

Altitude: 2015 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow, very silty, sandy, slightly cohesive, crumbly, oxidized-----	12	12
	Gravel, fine to coarse, clayey, very sandy, poorly sorted, angular to subrounded, oxidized-----	7	19
Tongue River Formation:			
	Siltstone, light-gray, clayey, highly calcareous, limey, moderately indurated-----	11	30
	Lignite, black, hard, brittle-----	10	40

138-086-11ACC
NDSWC 4649

Altitude: 1965 feet

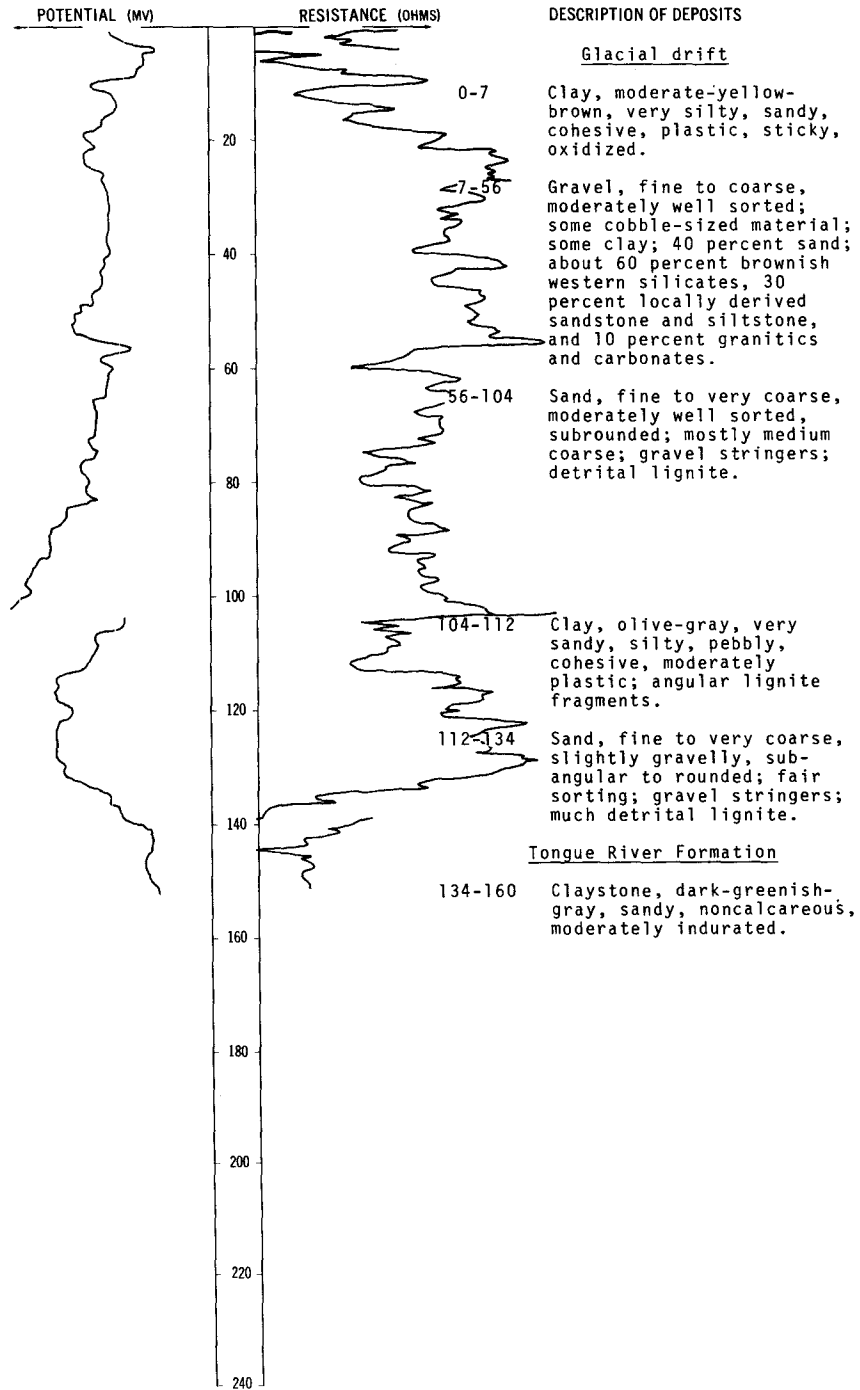
Glacial drift:			
	Clay, moderate-yellow-brown, very silty, sandy, soft, plastic, sticky, oxidized-----	10	10
	Sand, fine to very coarse, gravelly, clayey, poorly sorted, subangular, well-oxidized; stained reddish brown-----	7	17
	Gravel, medium to coarse, slightly sandy, angular to well-rounded; fair sorting; about 60 percent brownish western silicates, 30 percent locally derived sandstone and shale, and 10 percent granitic and carbonate rocks-----	7	24
	Clay, medium-gray to brownish-gray, very sandy, silty, highly calcareous, soft, plastic; detrital lignite chips-----	4	28
	Sand, medium-gray, very fine to medium, moderately well sorted; occasional clay layers; angular lignite chips in clay layers; detrital lignite-----	42	70
Tongue River Formation:			
	Claystone, medium-gray, noncalcareous, hard, brittle-----	4	74
	Lignite, black, hard, brittle; some dark-brown carboniferous shale partings-----	5	79
	Siltstone, medium-light-gray, calcareous, moderately indurated-----	1	80

LOCATION: 138-086-11DBB

DATE DRILLED: June 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 160
(FT)



NDSWC 4657, Continued

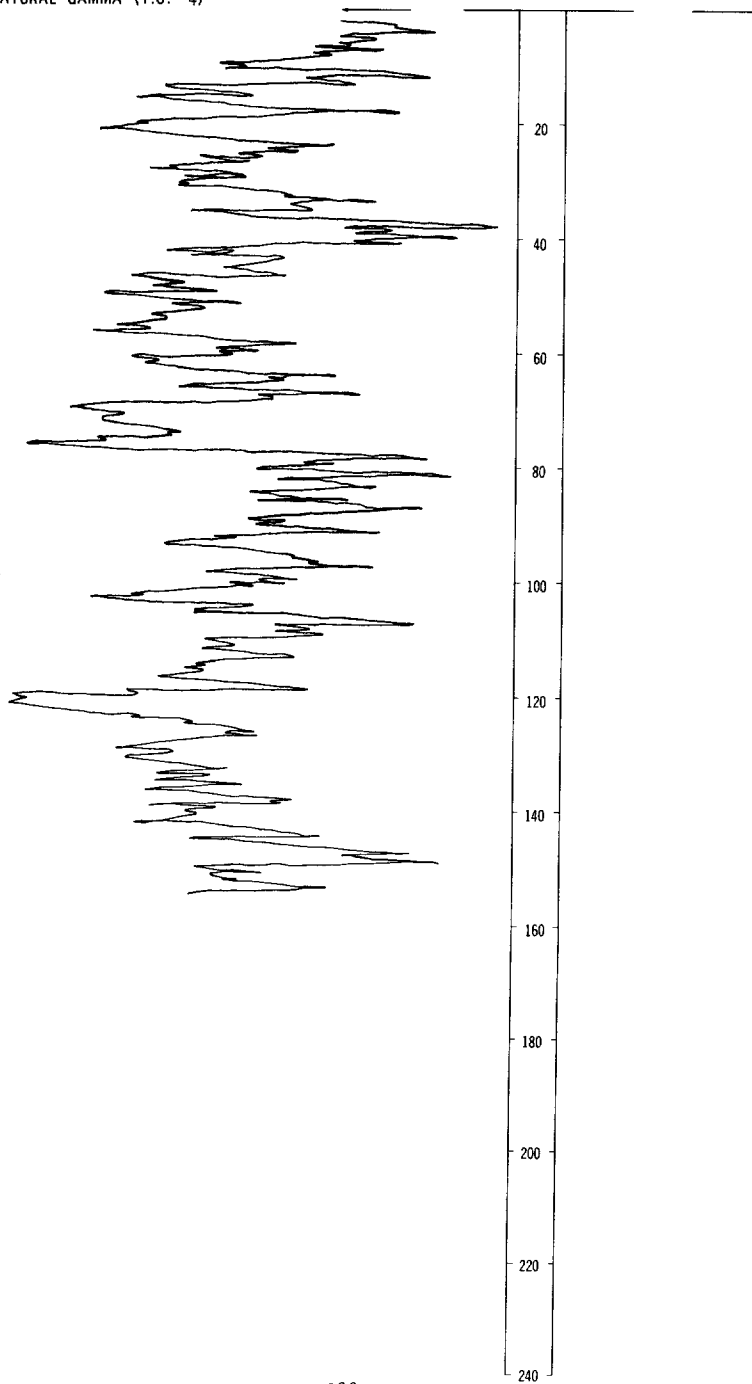
LOCATION: 138-086-110DB

DATE DRILLED: June 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 160
(FT)

NATURAL-GAMMA (T.C. 4)



138-086-13CCC
NDSWC 9303

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellowish-brown, very silty, slightly sandy, moderately soft, slightly plastic, oxidized-----	10	10
	Sand, fine to coarse, angular to subrounded, quartzose; some detrital lignite-----	25	35
	Gravel, fine to coarse, angular to subangular; mostly granitics; some detrital lignite-----	15	50
Tongue River Formation:			
	Clay, medium-light-gray, silty, sandy, hard, brittle-----	10	60

138-086-14ABC
NDSWC 4650

Altitude: 1950 feet

Glacial drift:			
	Clay, dark-yellow-brown, very silty, sandy, cohesive, plastic, oxidized-----	5	5
	Clay, olive-gray, very silty, highly calcareous, cohesive, plastic, sticky; wood fragments; sand layers-----	10	15
	Sand, gravelly, loose-----	10	25
Tongue River Formation:			
	Sandstone, bluish-gray, very fine to fine, subangular to subrounded, micaceous; with some thin claystone bedding-----	16	41
	Lignite, black, hard, brittle; a few thin shale partings-----	6	47
	Claystone, brownish-gray, moderately indurated-----	5	52
	Lignite, brownish-black, hard-----	3	55
	Claystone, brownish-gray to medium-gray, moderately indurated-----	5	60

138-086-14CBB
NDSWC 9302

Altitude: 1940 feet

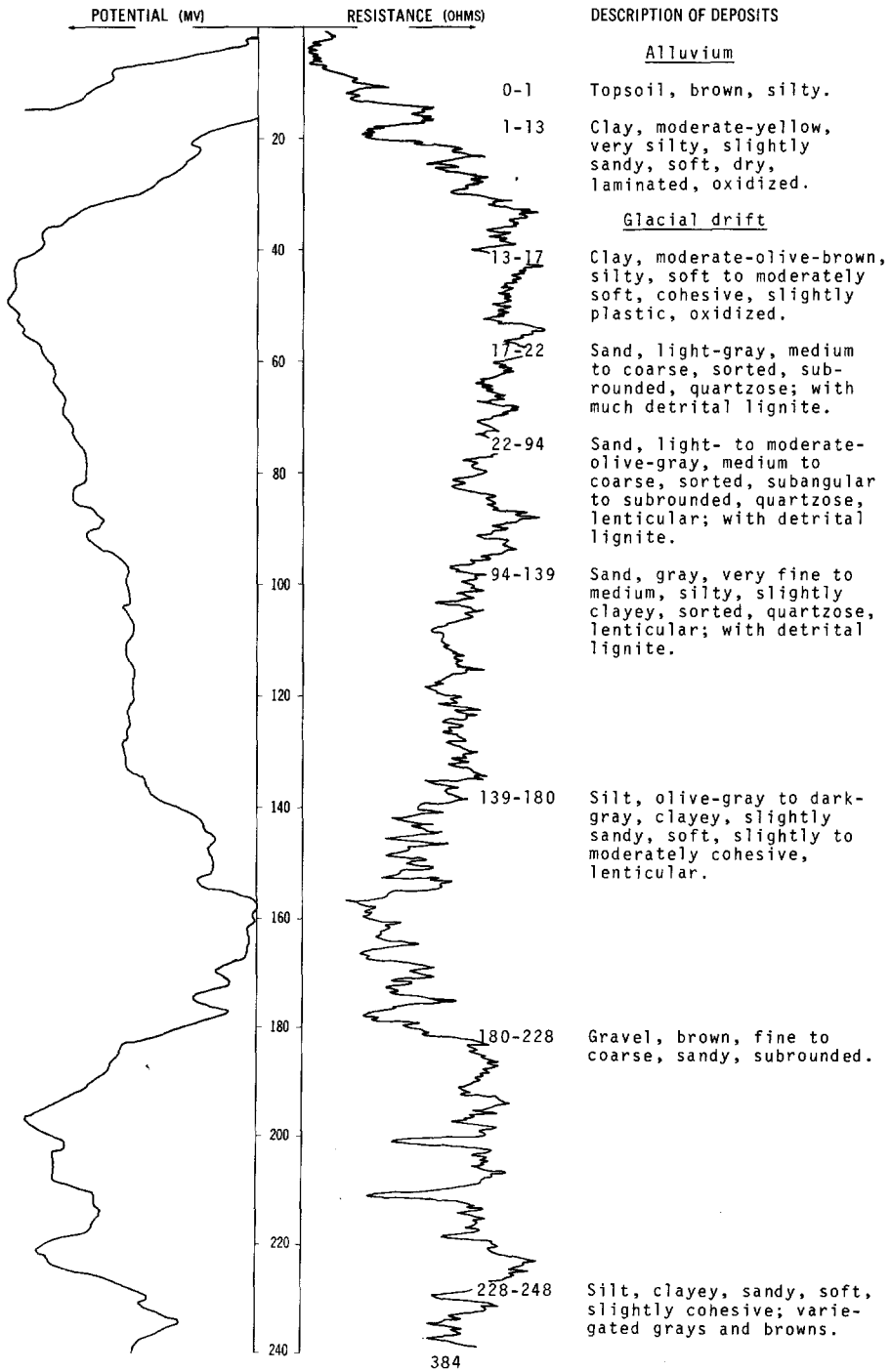
Glacial drift:			
	Clay, moderate-yellowish-brown, very silty, slightly sandy, iron-stained, oxidized-----	9	9
	Clay, dark-gray, very silty, sandy; with detrital lignite; fossiliferous-----	9	18
	Sand, fine to coarse, angular to subrounded, quartzose, and fine to coarse gravel-----	15	33
Tongue River Formation:			
	Clay, light-gray, very sandy-----	27	60

LOCATION: 138-086-17CDD

DATE DRILLED: August 1973

ALTITUDE: 1947
(FT, MSL)

DEPTH: 320
(FT)



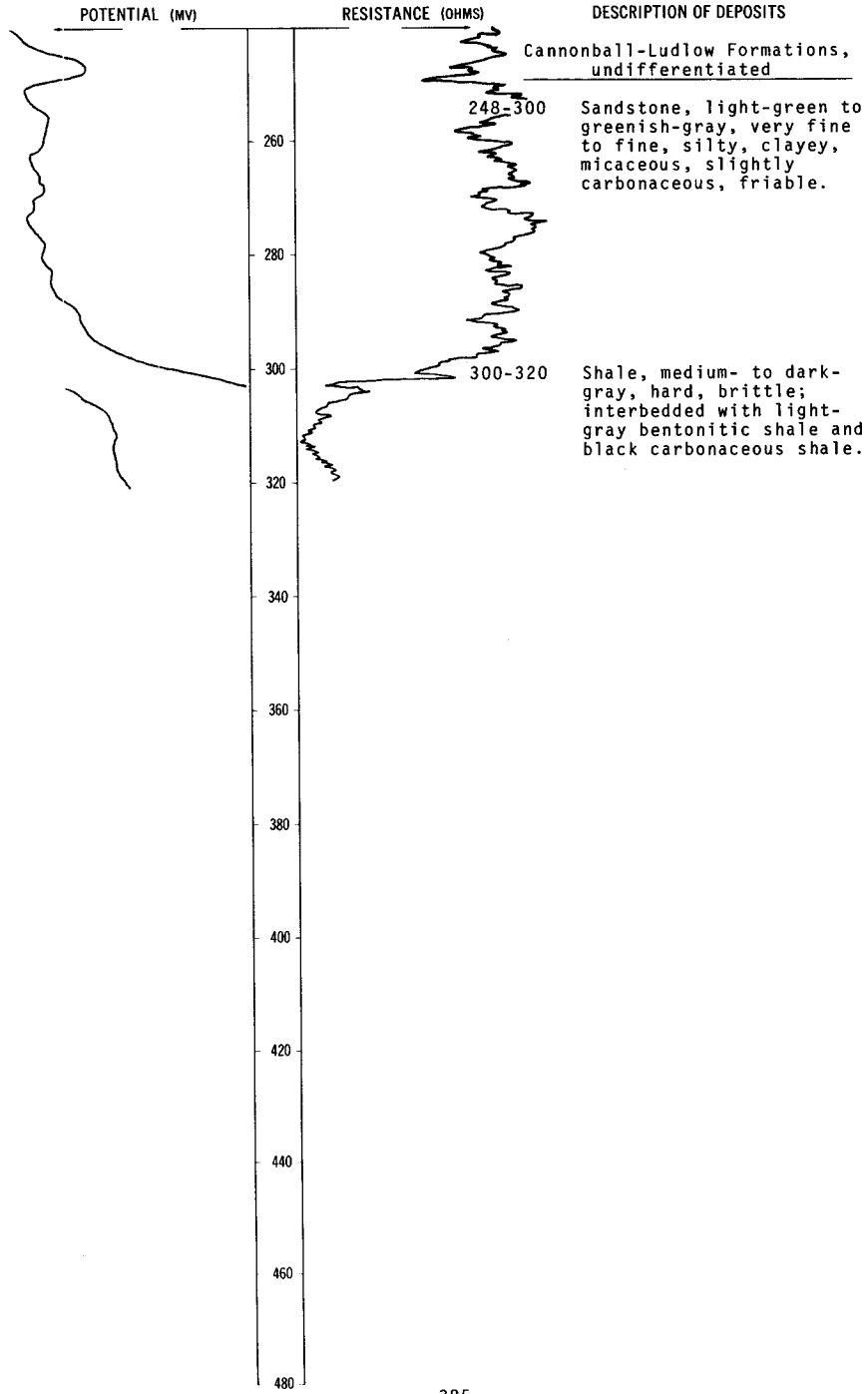
NDSWC 4547, Continued

LOCATION: 138-086-17CDD

DATE DRILLED: August 1973

ALTITUDE: 1947
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4547, Continued

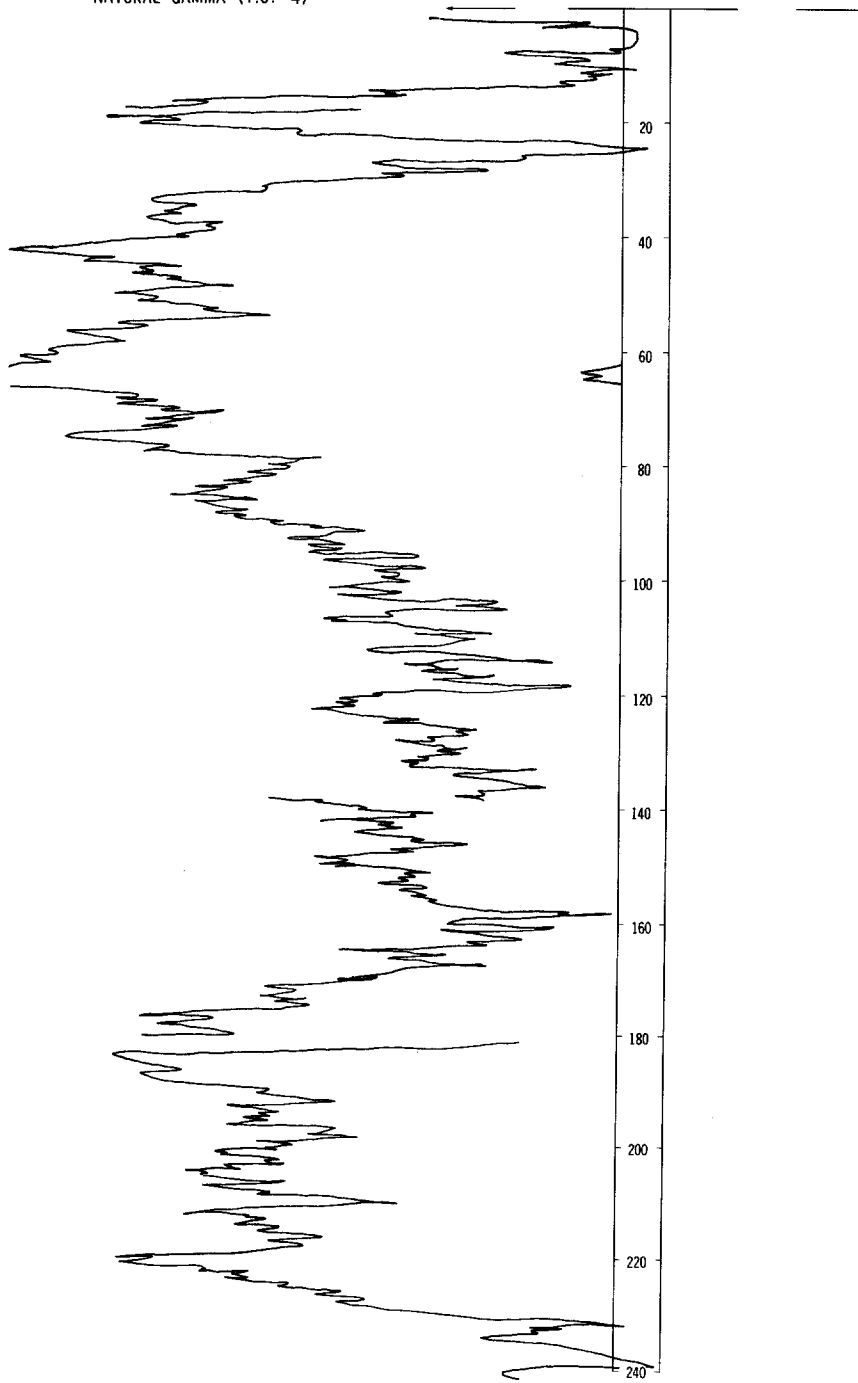
LOCATION: 138-086-17CDD

DATE DRILLED: August 1973

ALTITUDE: 1947
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4547, Continued

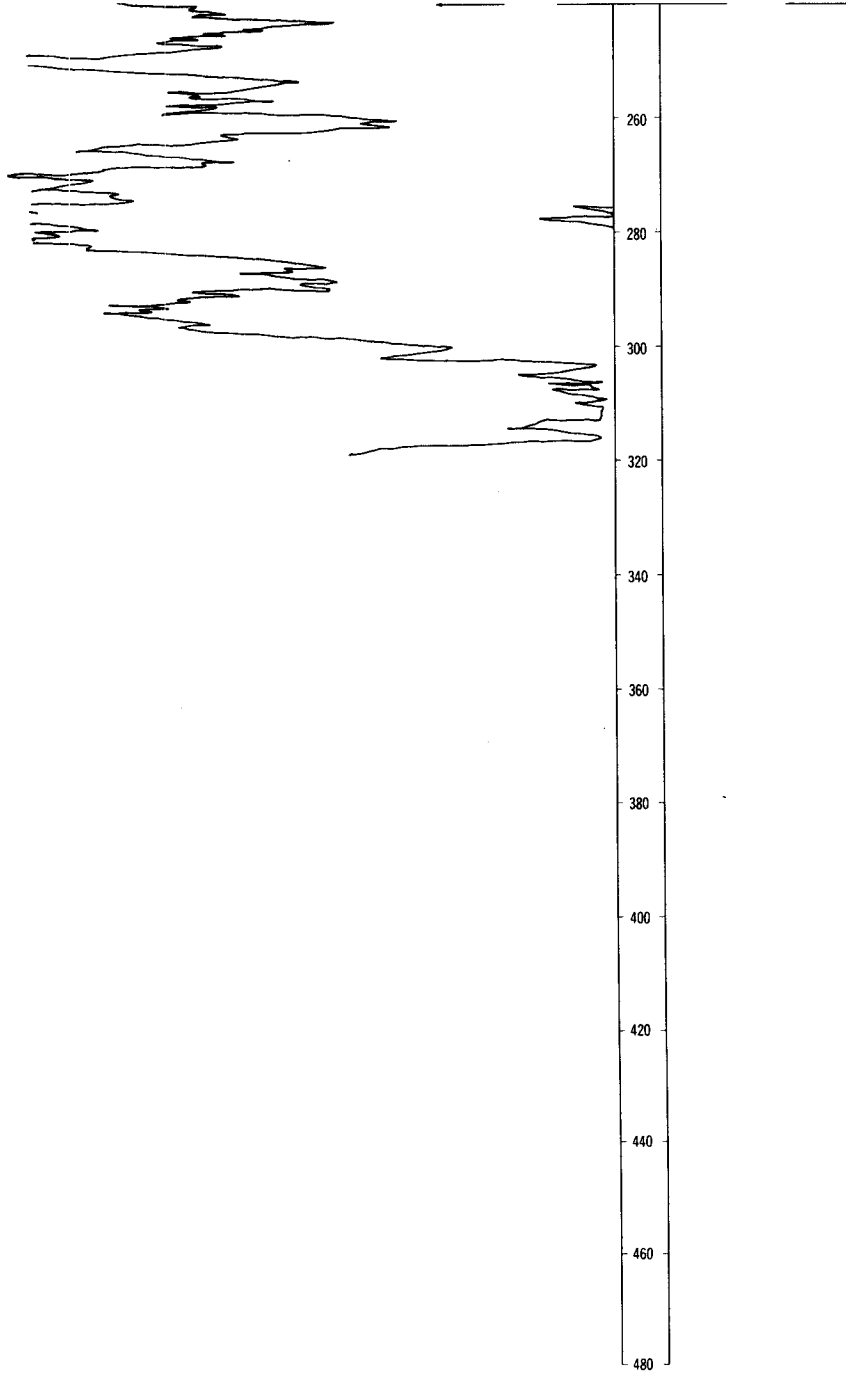
LOCATION: 138-086-17CDD

DATE DRILLED: August 1973

ALTITUDE: 1947
(FT, MSL)

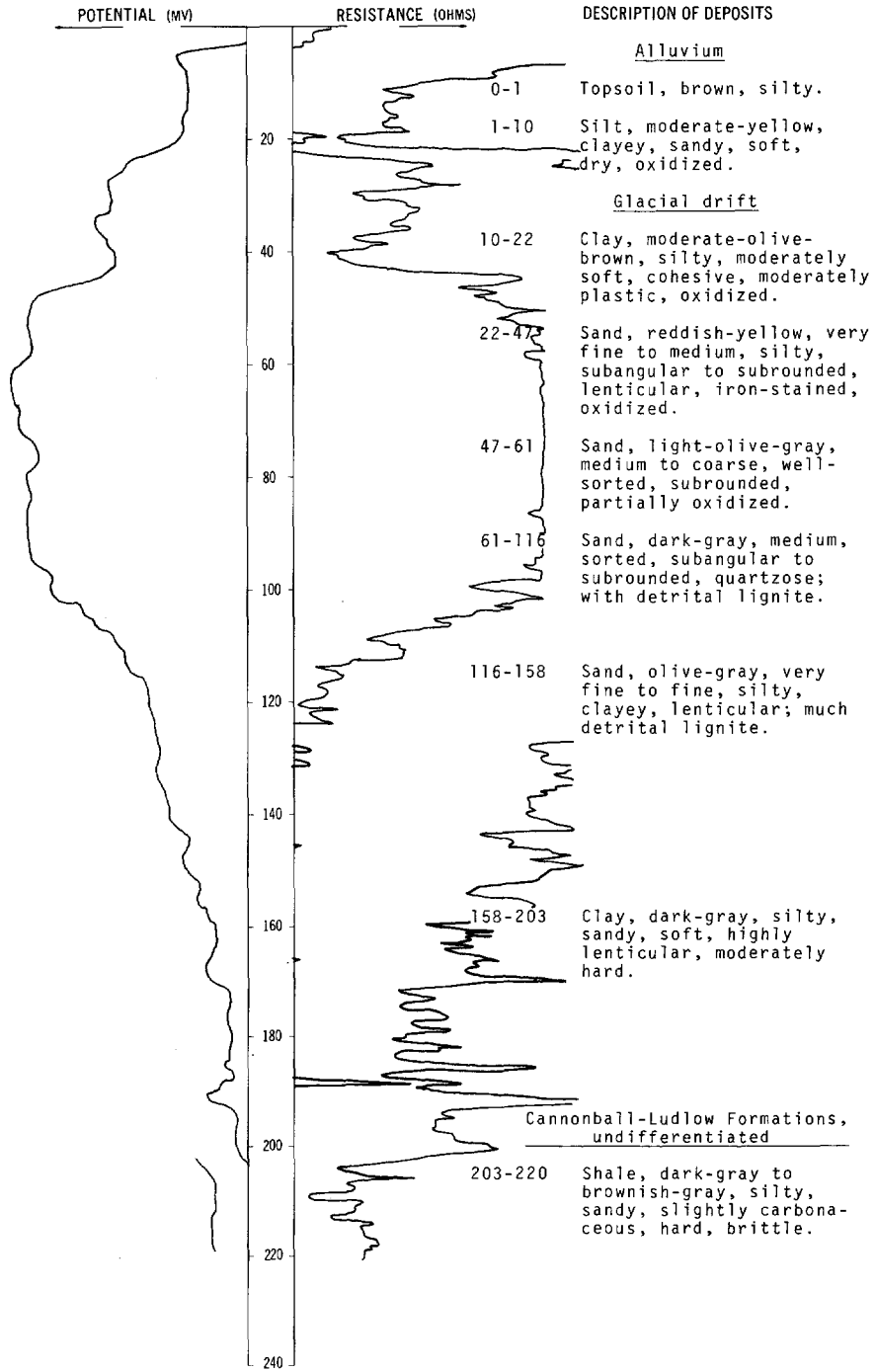
DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



LOCATION: 138-086-17DDC
 ALTITUDE: 1967
 (FT, MSL)

DATE DRILLED: August 1973
 DEPTH: 220
 (FT)



NDSWC 4548, Continued

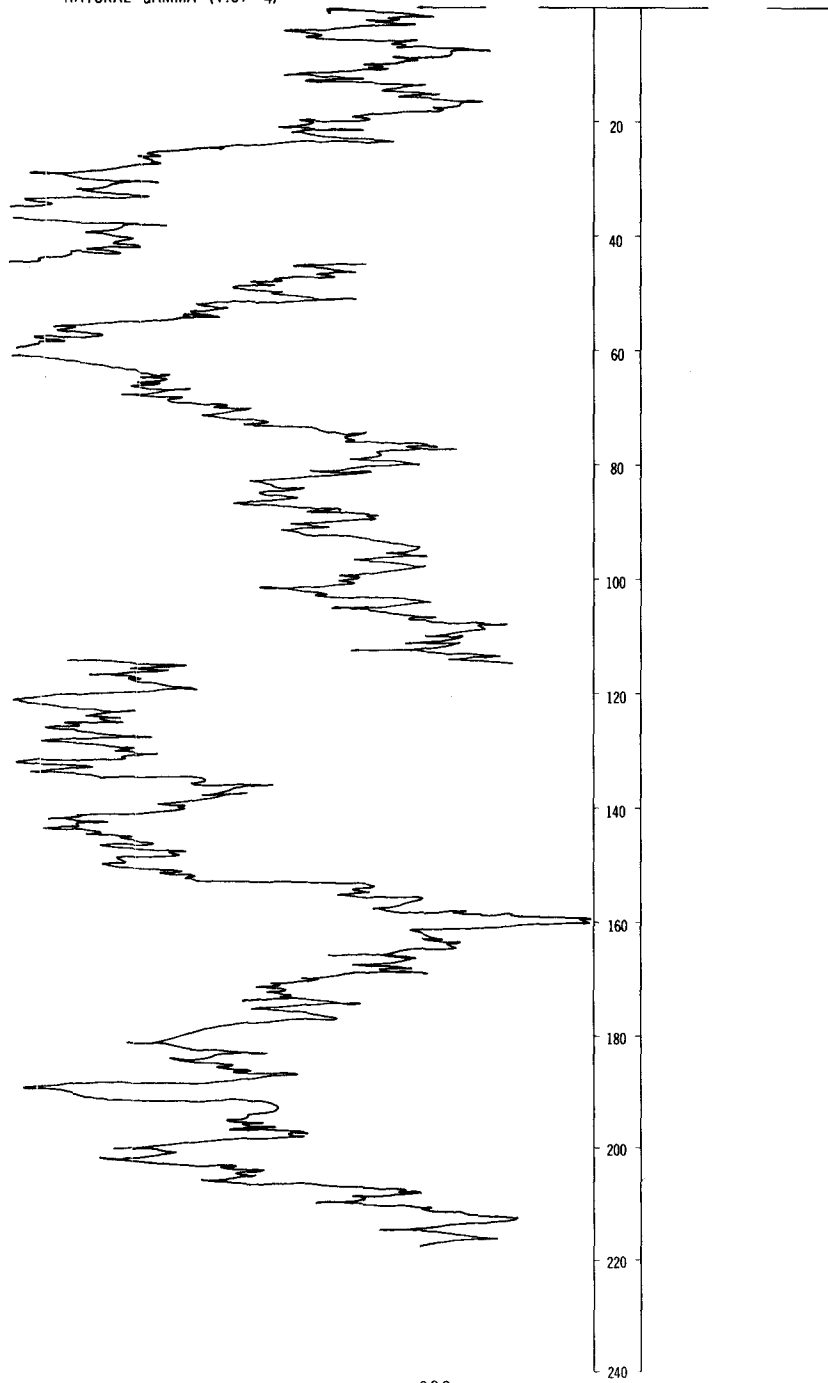
LOCATION: 138-086-17DDC

DATE DRILLED: August 1973

ALTITUDE: 1967
(FT, MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4546

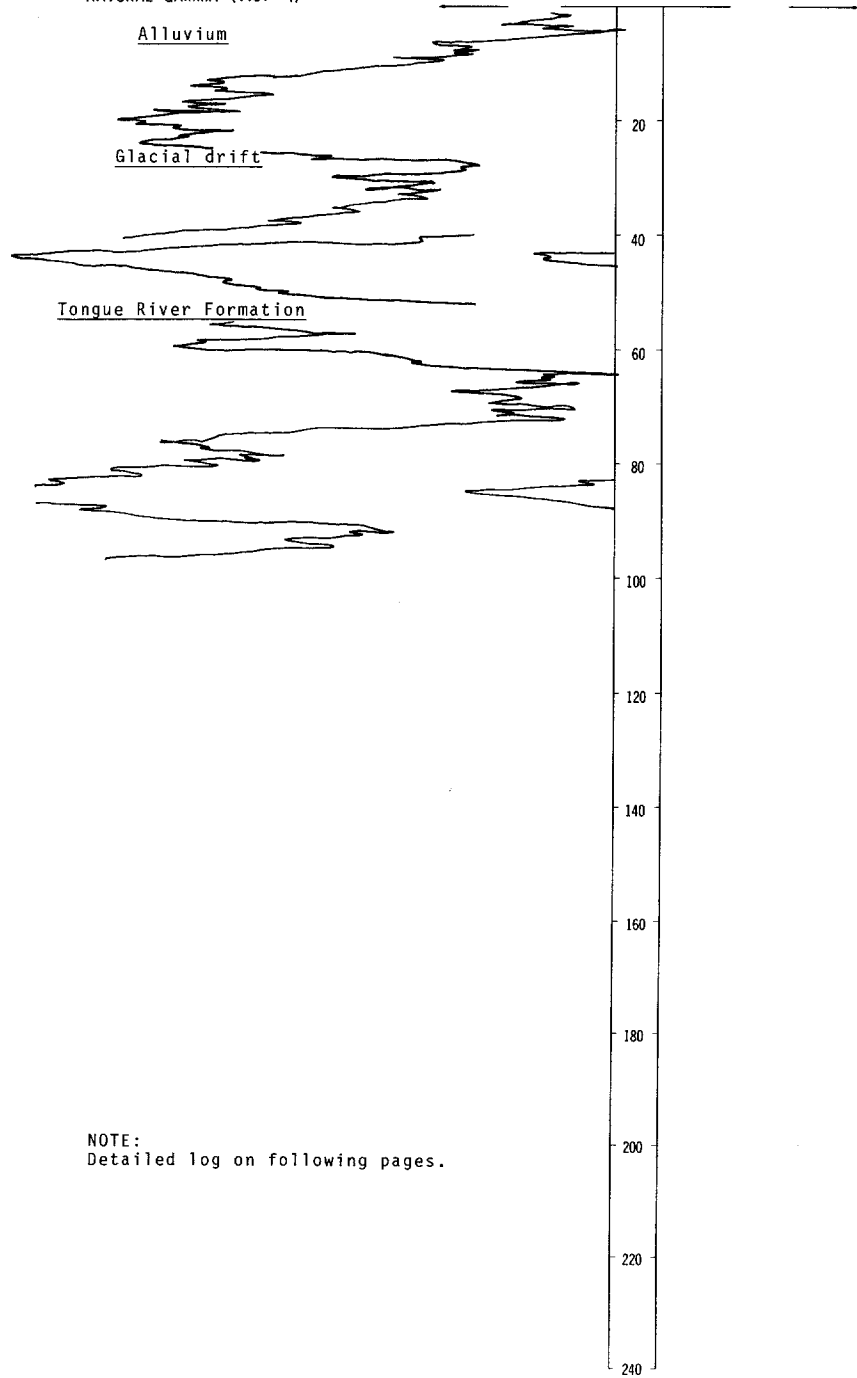
LOCATION: 138-086-18DCD

DATE DRILLED: August 1973

ALTITUDE: 1955
(FT, MSL)

DEPTH: 100
(FT)

NATURAL-GAMMA (T.C. 4)



NOTE:
Detailed log on following pages.

138-086-18DCD, Continued
NDSWC 4546

Altitude: 1955 feet

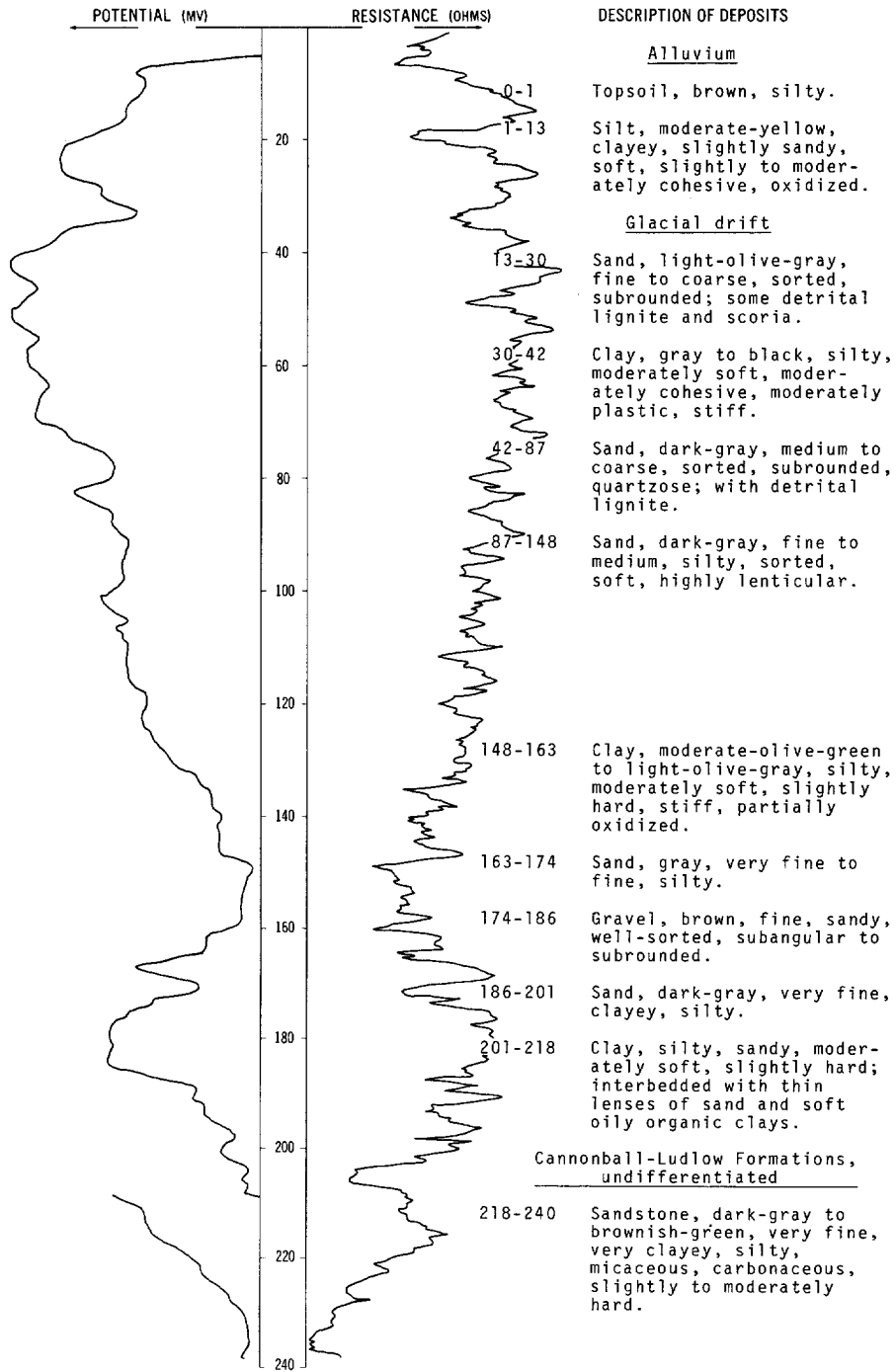
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Topsoil, brown, silty-----	1	1
	Silt, moderate-yellow, sandy, clayey, soft, slightly cohesive, oxidized-----	11	12
	Silt, moderate-olive-brown, clayey, sandy, soft, cohesive, slightly plastic, crumbly, oxidized-----	14	26
Glacial drift:			
	Clay, olive-gray, silty, moderately soft, very cohesive, moderately plastic, stiff-----	15	41
	Sand, light-olive-gray, coarse to medium, subrounded, partially oxidized; numerous snail and clam shells-----	11	52
Tongue River Formation:			
	Siltstone, light- to medium-gray, bentonitic, moderately hard-----	10	62
	Shale, medium- to dark-gray, bentonitic, slightly carbona- ceous, hard, brittle, fissile-----	12	74
	Siltstone, very light gray, sandy, limy, moderately soft, slightly cohesive-----	10	84
	Lignite, black, hard, solid-----	4	88
	Shale, medium-gray, bentonitic, hard, brittle-----	9	97
	Lignite, black, solid-----	3	100

LOCATION: 138-086-20BAB

ALTITUDE: 1942
(FT. MSL)

DATE DRILLED: August 1973

DEPTH: 240
(FT)

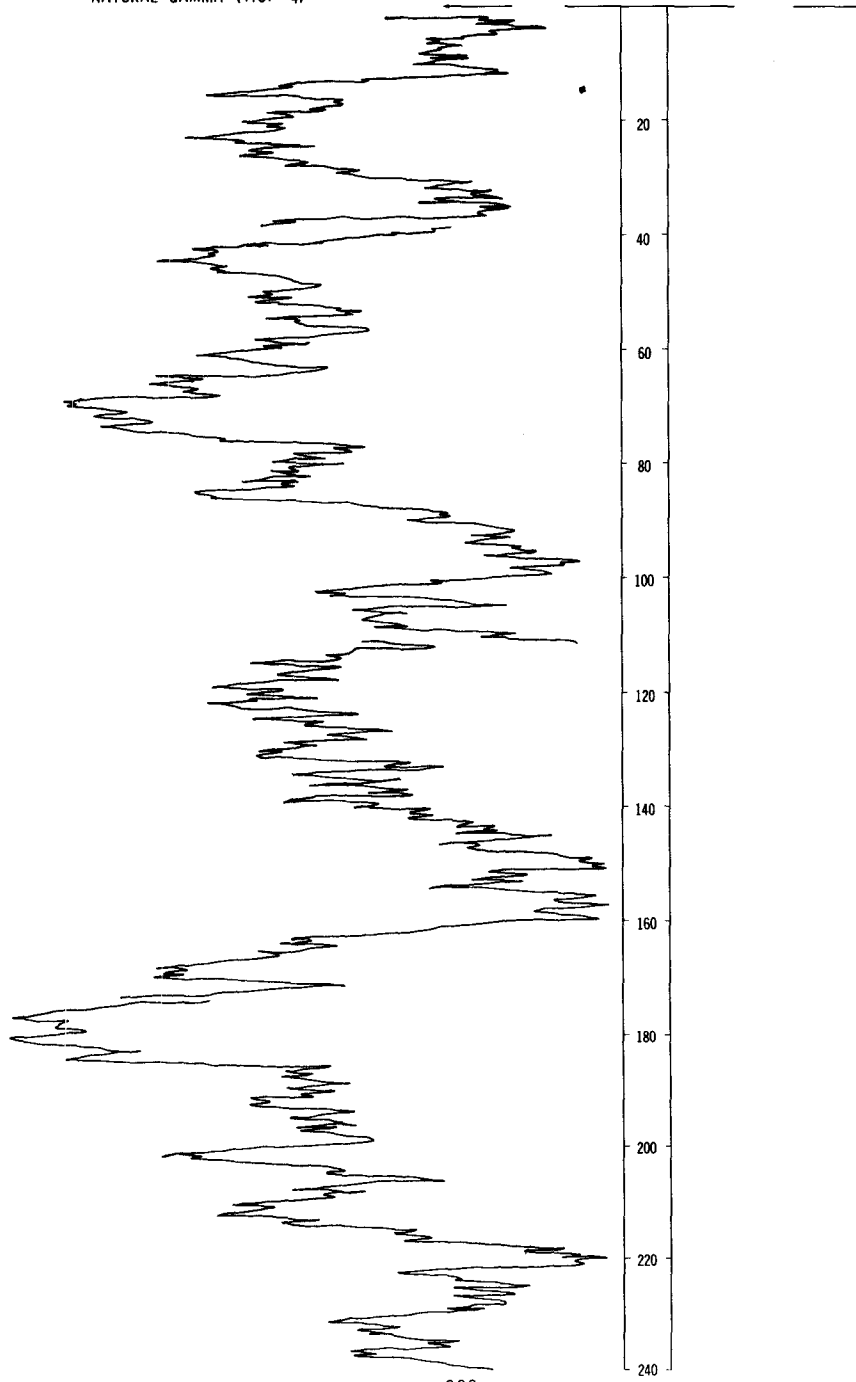


NDSWC 4544, Continued

LOCATION: 138-086-20BAB
ALTITUDE: 1942
(FT, MSL)

DATE DRILLED: August 1973
DEPTH: 240
(FT)

NATURAL-GAMMA (T.C. 4)

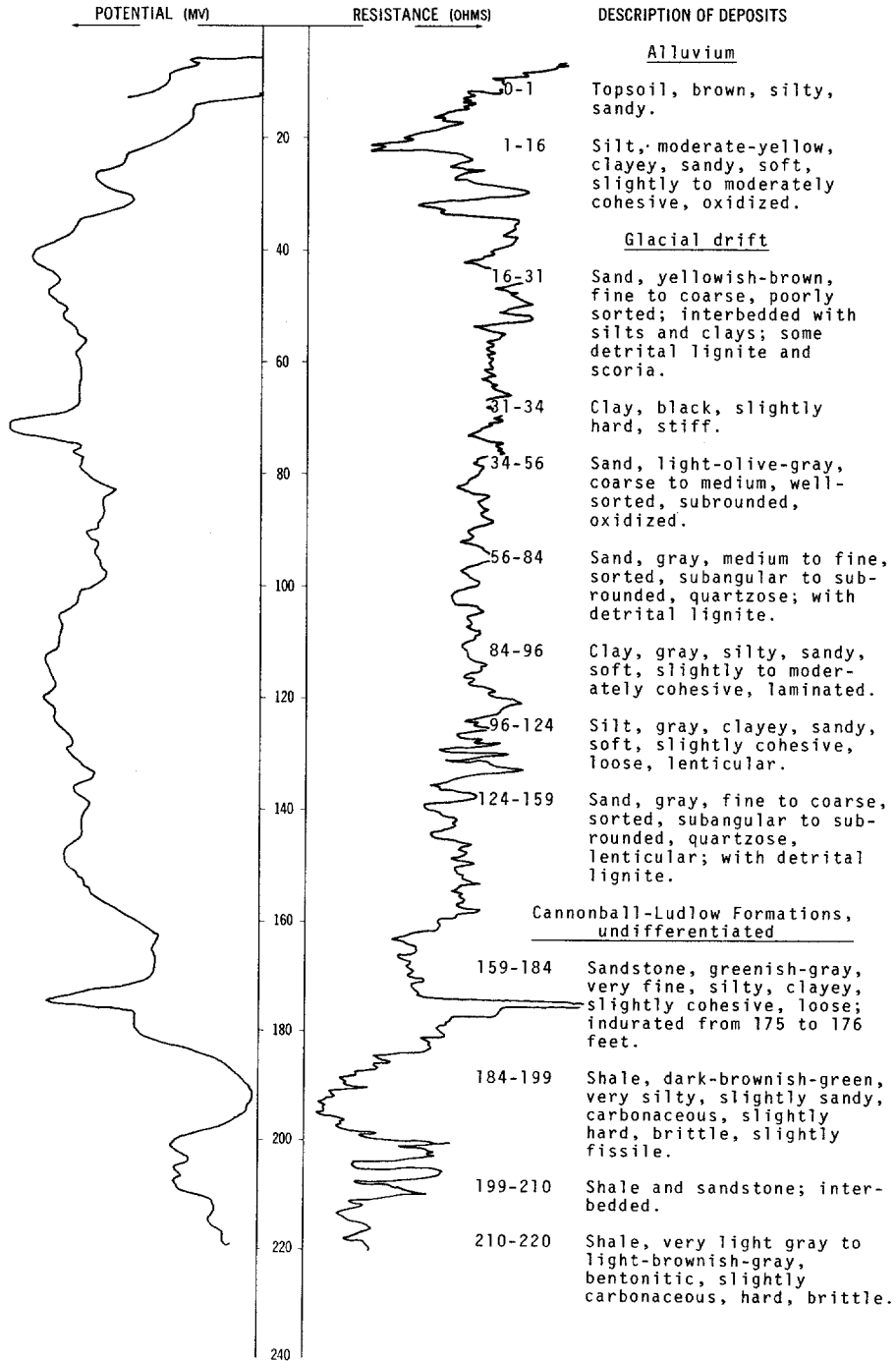


LOCATION: 138-086-20BBB

DATE DRILLED: August 1973

ALTITUDE: 1942
(FT, MSL)

DEPTH: 220
(FT)



NDSWC 4545, Continued

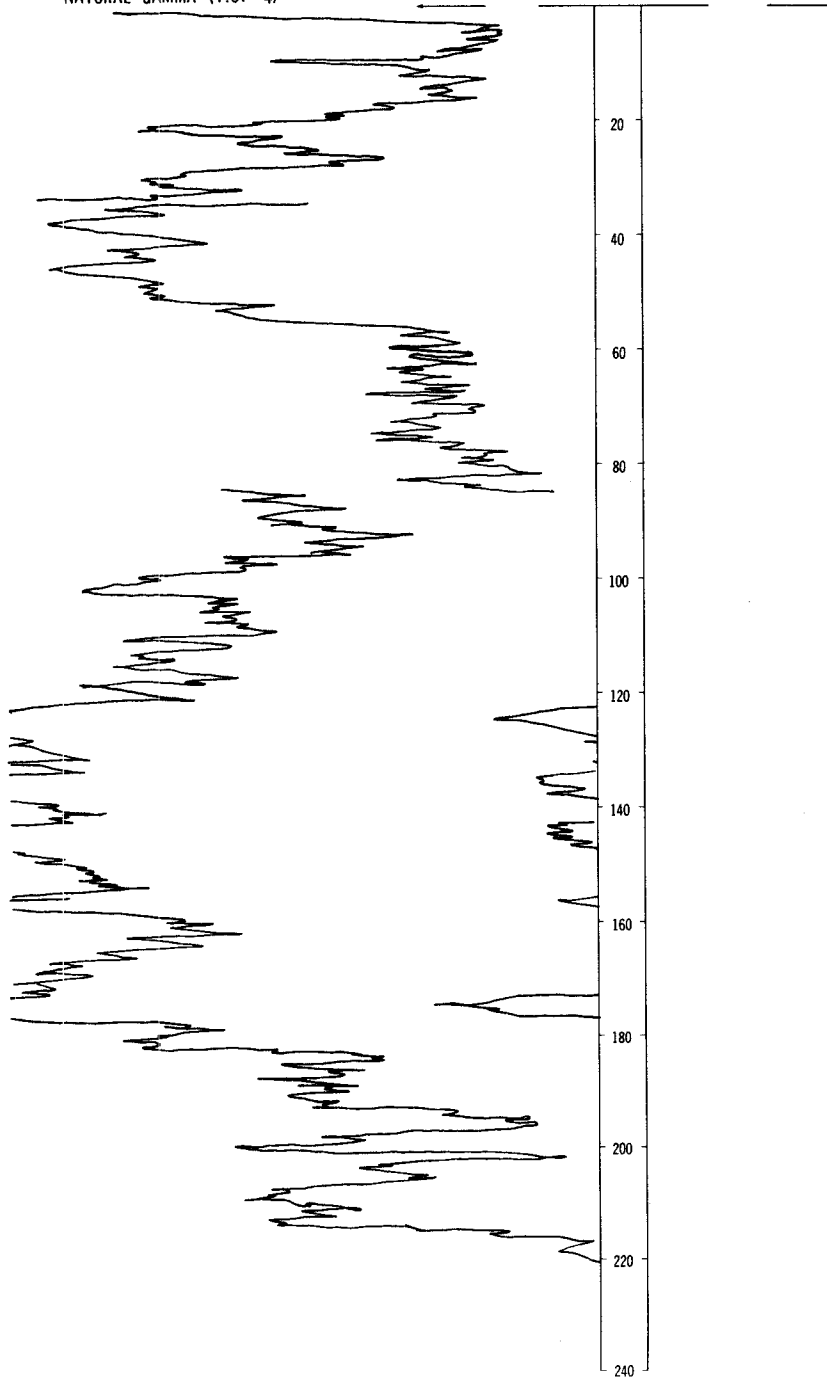
LOCATION: 138-086-20BBB

DATE DRILLED: August 1973

ALTITUDE: 1942
(FT, MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 4)



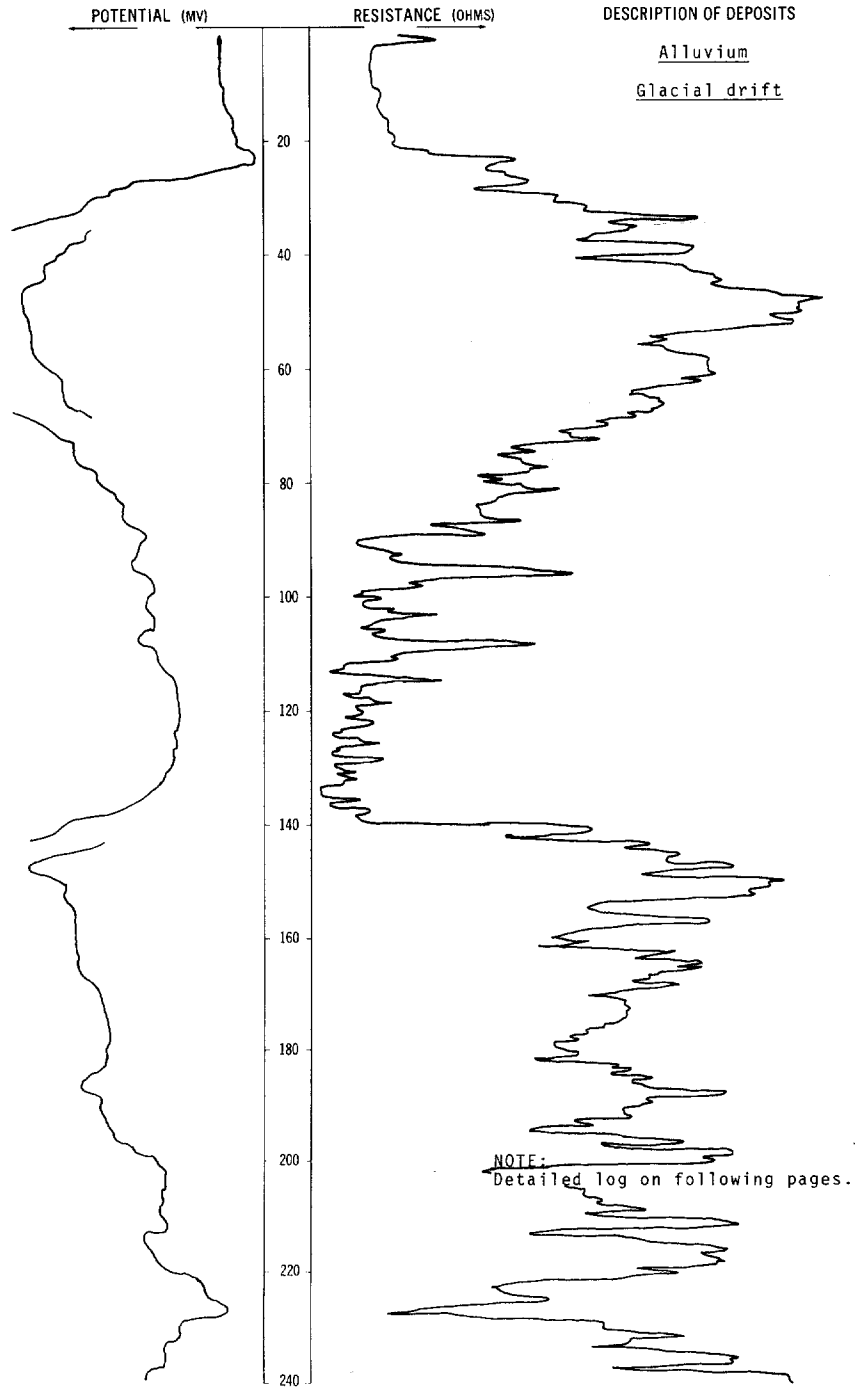
NDSWC 4549

LOCATION: 138-086-26CCC

DATE DRILLED: August 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 251
(FT)



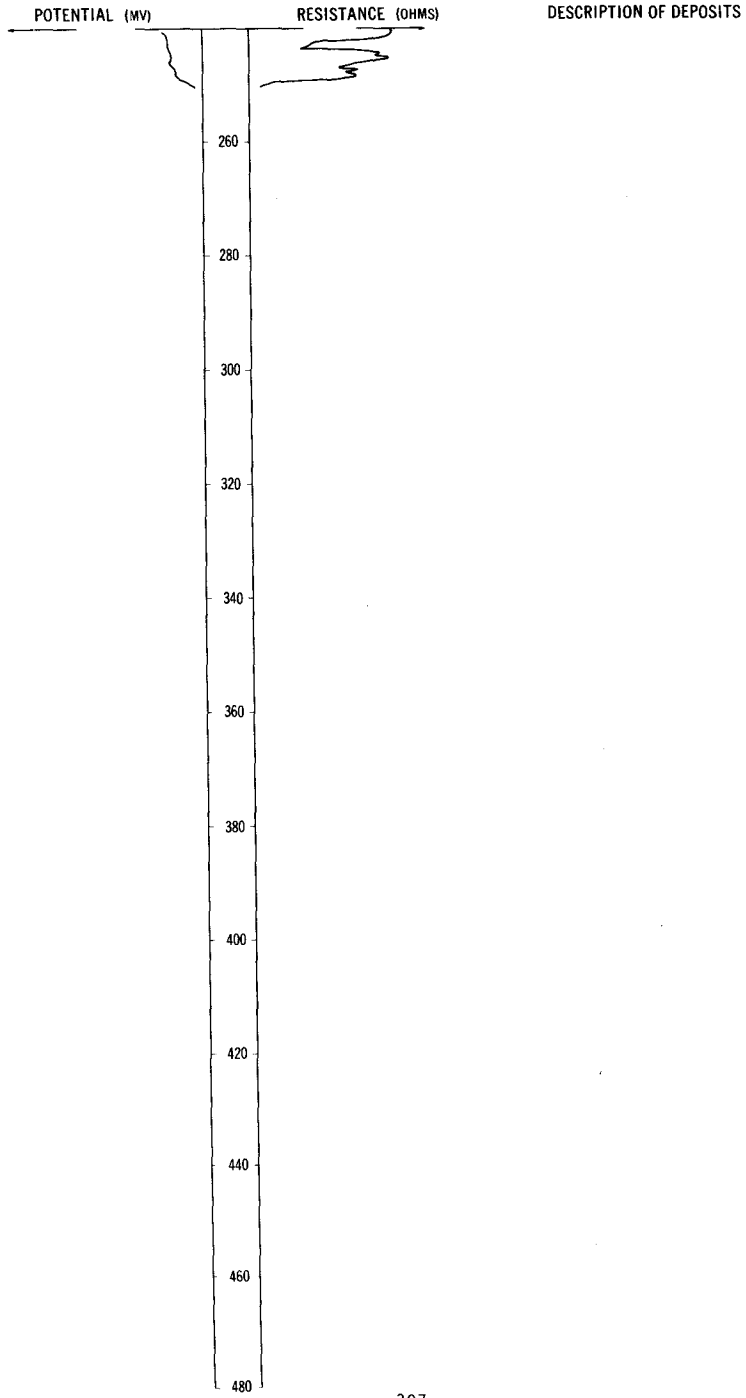
NDSWC 4549, Continued

LOCATION: 138-086-26CCC

DATE DRILLED: August 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 251
(FT)



NDSWC 4549, Continued

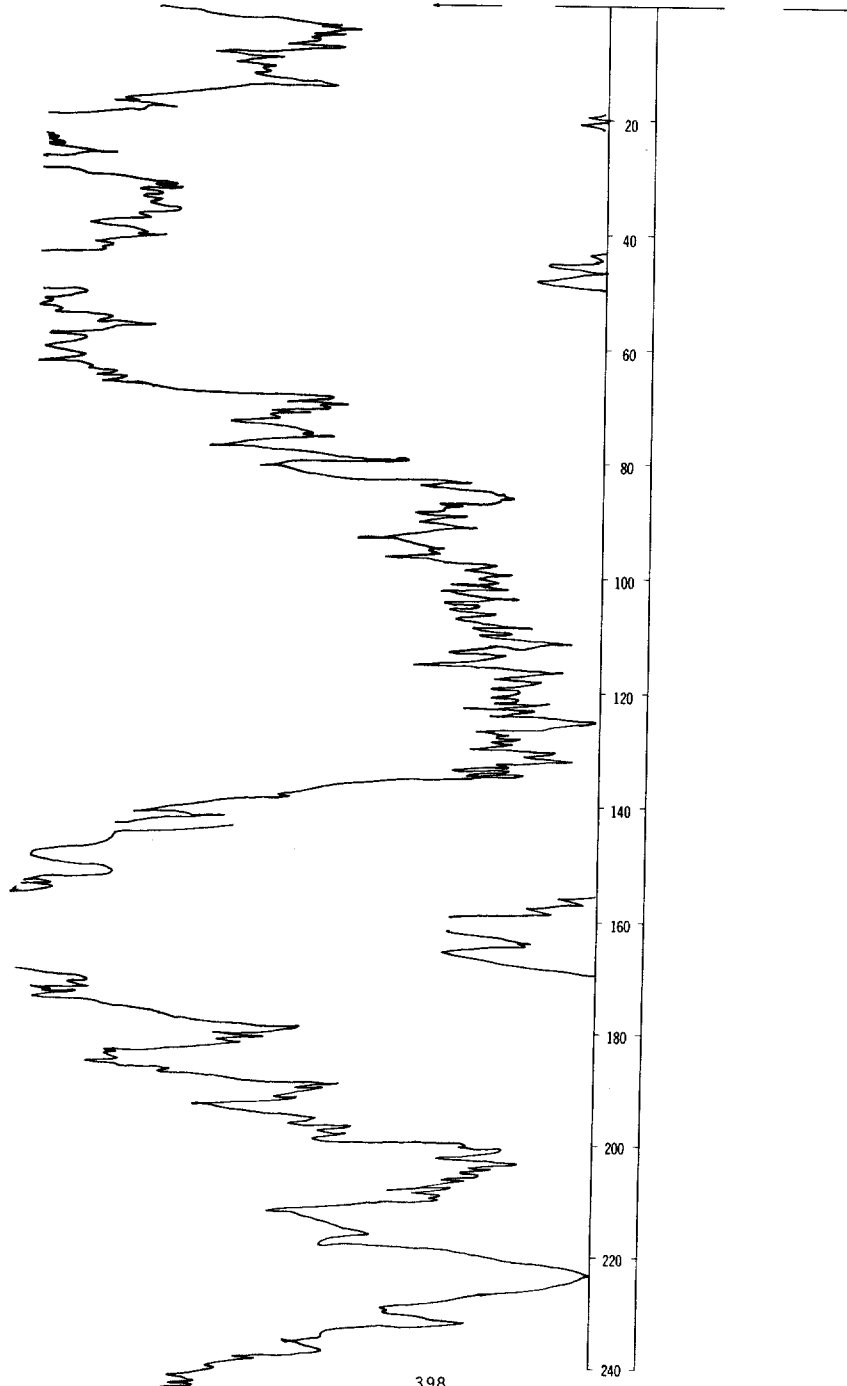
LOCATION: 138-086-26CCC

DATE DRILLED: August 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 251
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4549, Continued

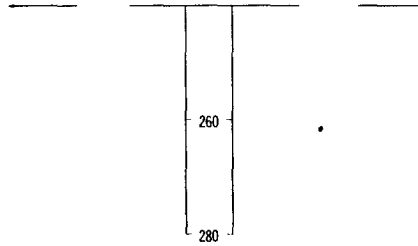
LOCATION: 138-086-26CCC

DATE DRILLED: August 1973

ALTITUDE: 1914
(FT, MSL)

DEPTH: 251
(FT)

NATURAL-GAMMA (T.C. 4)



138-086-26CCC, Continued
NDSWC 4549

Altitude: 1914 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Alluvium:	Clay, moderate-yellow, silty, slightly sandy, soft, dry, oxidized-----	15	15
Glacial drift:	Silt, light-olive-gray, clayey, sandy, soft, slightly cohesive, partially oxidized-----	4	19
	Sand, gray, fine to medium, sorted, subangular to subrounded, quartzose; with detrital lignite-----	49	68
	Silt, gray, very sandy, slightly cohesive, loose, lenticular-----	15	83
	Clay, olive-gray to dark-olive-gray, moderately soft, very cohesive, slightly plastic, slightly hard, firm-----	56	139
	Gravel, fine to coarse, sandy, moderately sorted, subangular to subrounded; much detrital lignite-----	61	200
	Sand, light- to dark-olive-gray, very silty, clayey-----	51	251

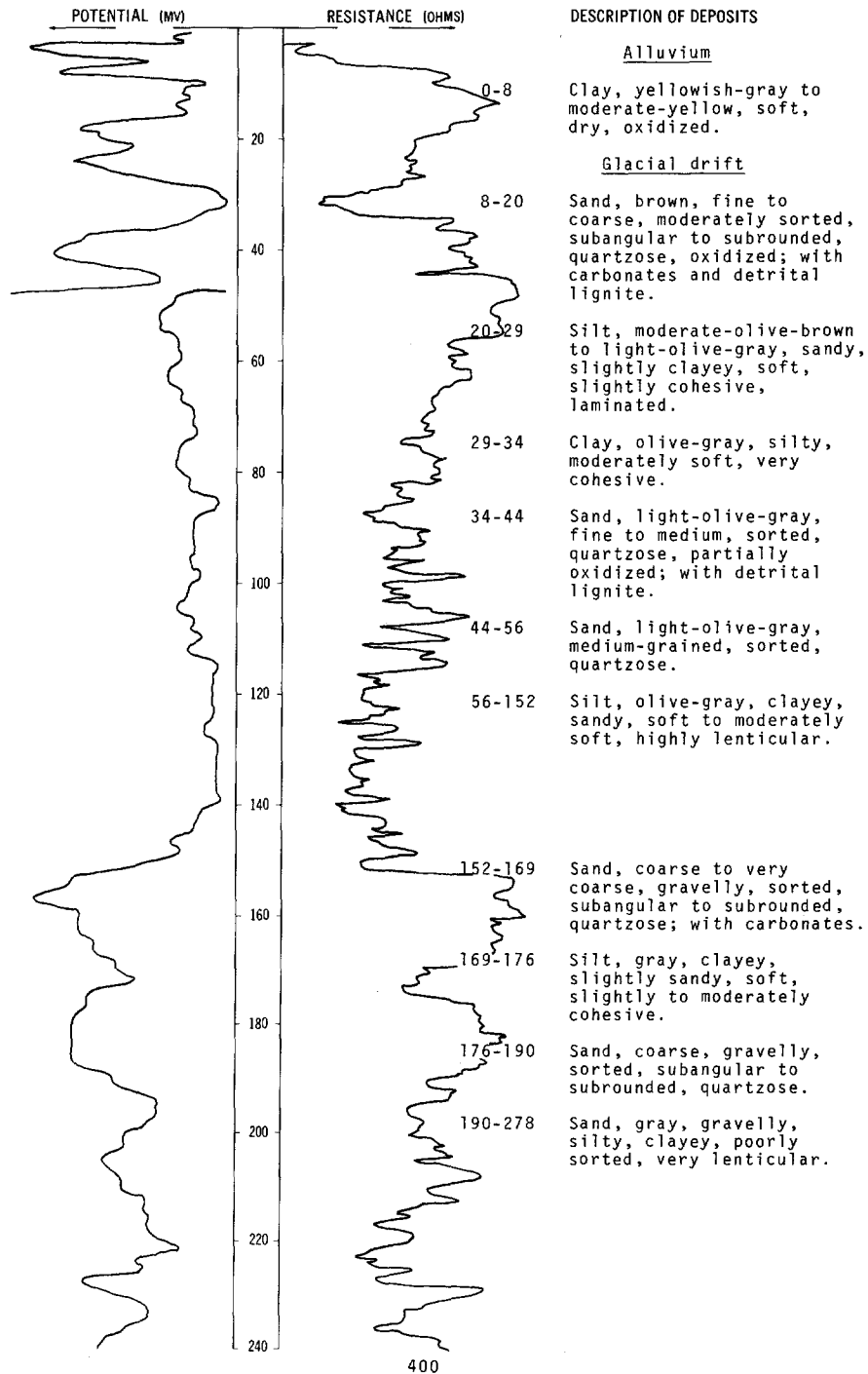
NDSWC 4550

LOCATION: 138-086-35BBC

DATE DRILLED: August 1973

ALTITUDE: 1912
(FT, MSL)

DEPTH: 350
(FT)



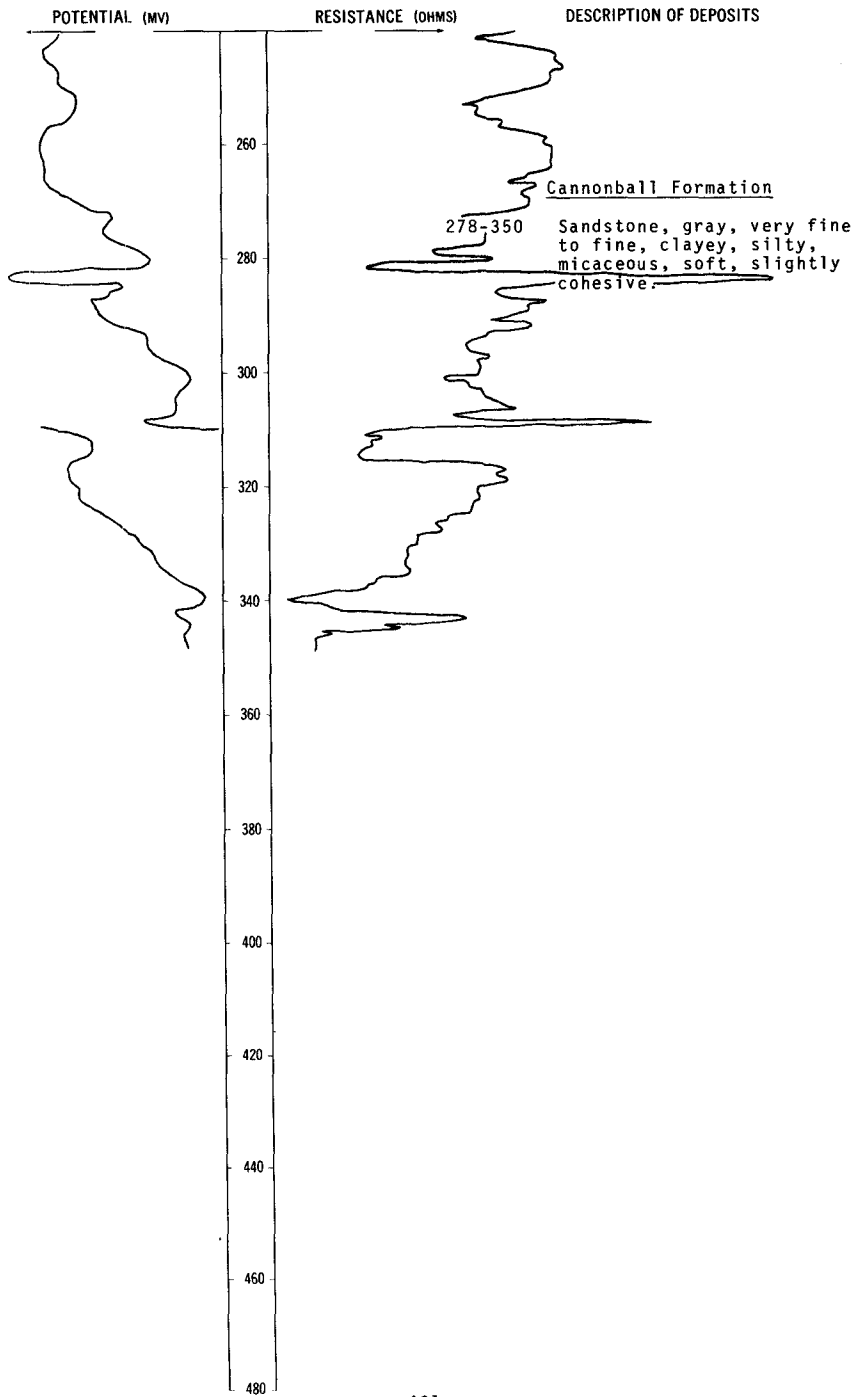
NDSWC 4550, Continued

LOCATION: 138-086-35BBC

DATE DRILLED: August 1973

ALTITUDE: 1912
(FT, MSL)

DEPTH: 350
(FT)



NDSWC 4550, Continued

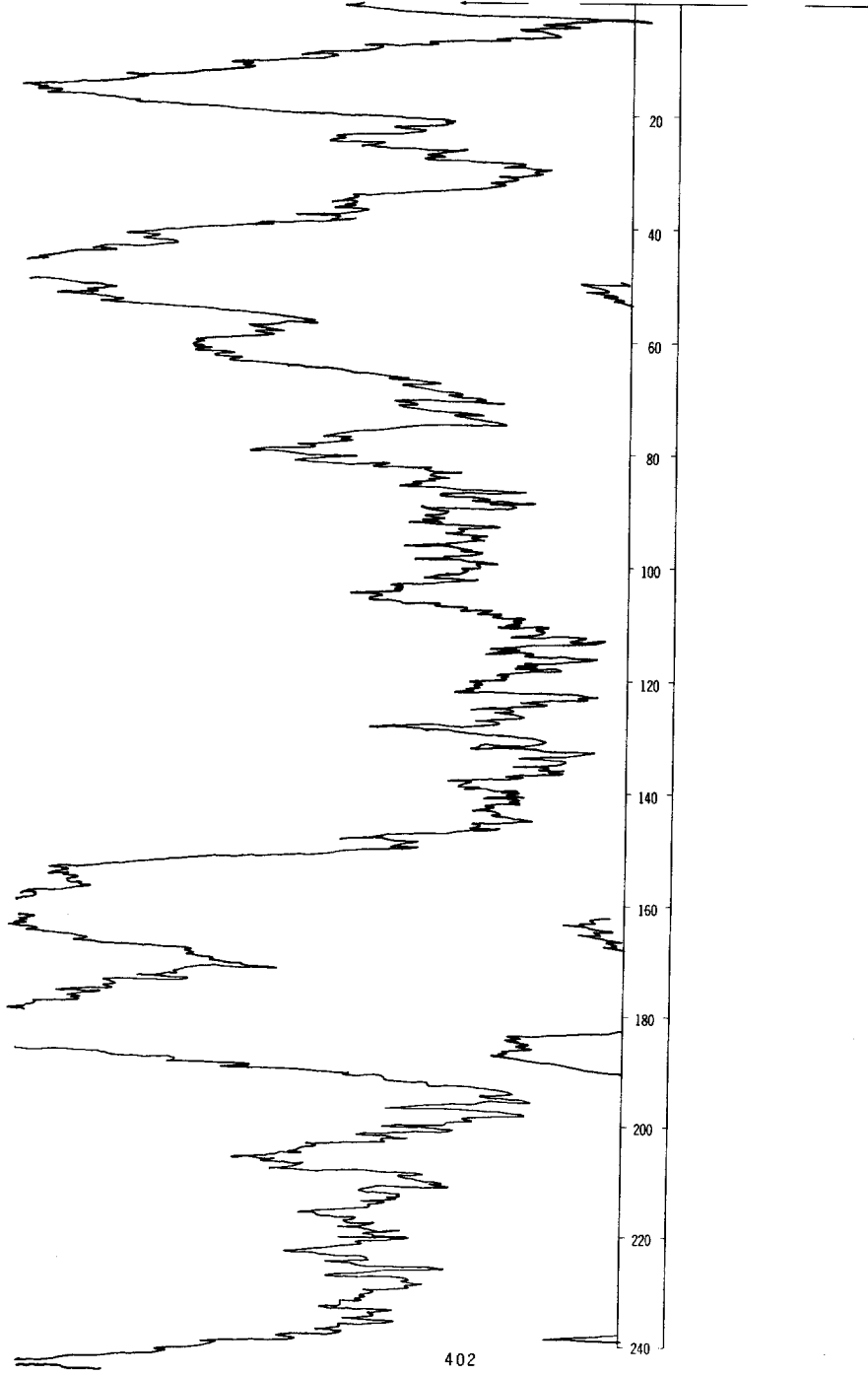
LOCATION: 138-086-35BBC

DATE DRILLED: August 1973

ALTITUDE: 1912
(FT, MSL)

DEPTH: 350
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4550, Continued

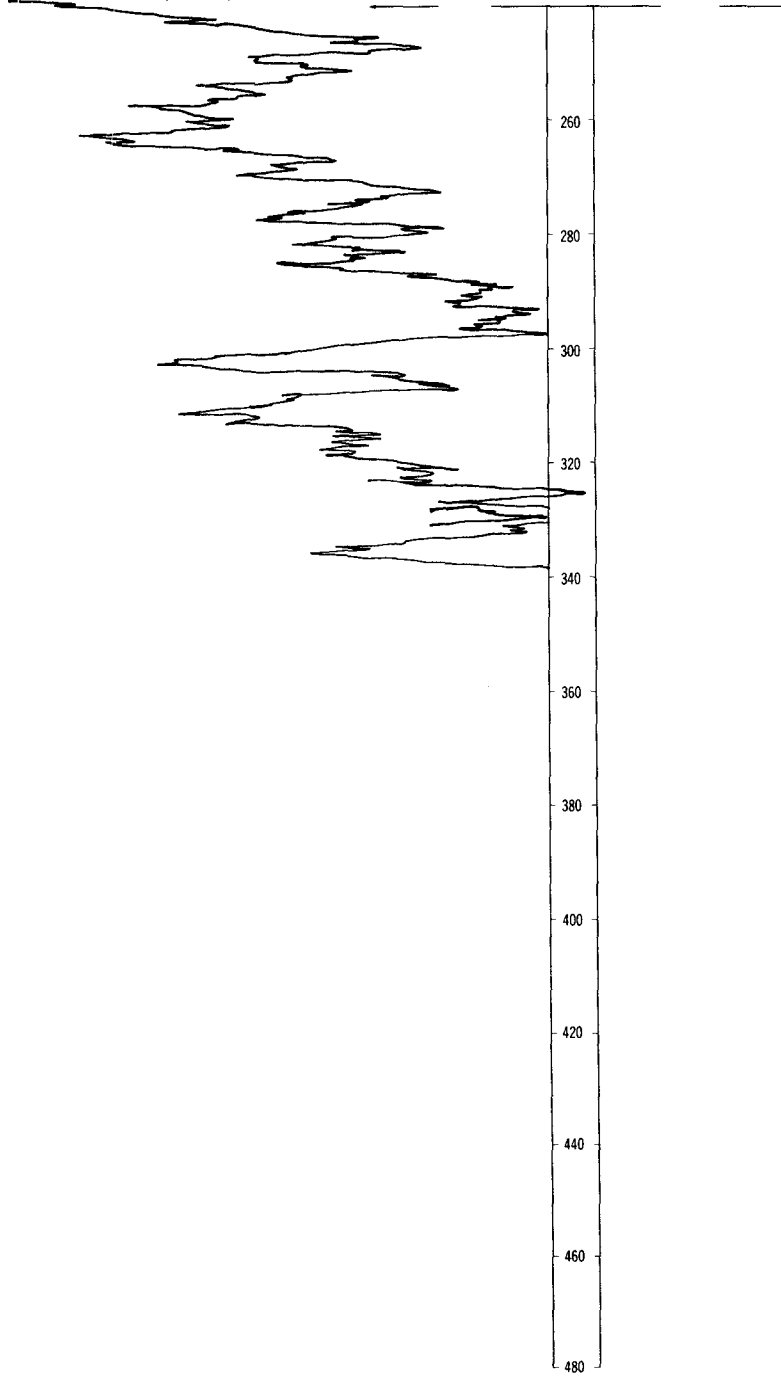
LOCATION: 138-086-35BBC

DATE DRILLED: August 1973

ALTITUDE: 1912
(FT. MSL)

DEPTH: 350
(FT)

NATURAL-GAMMA (T.C. 4)

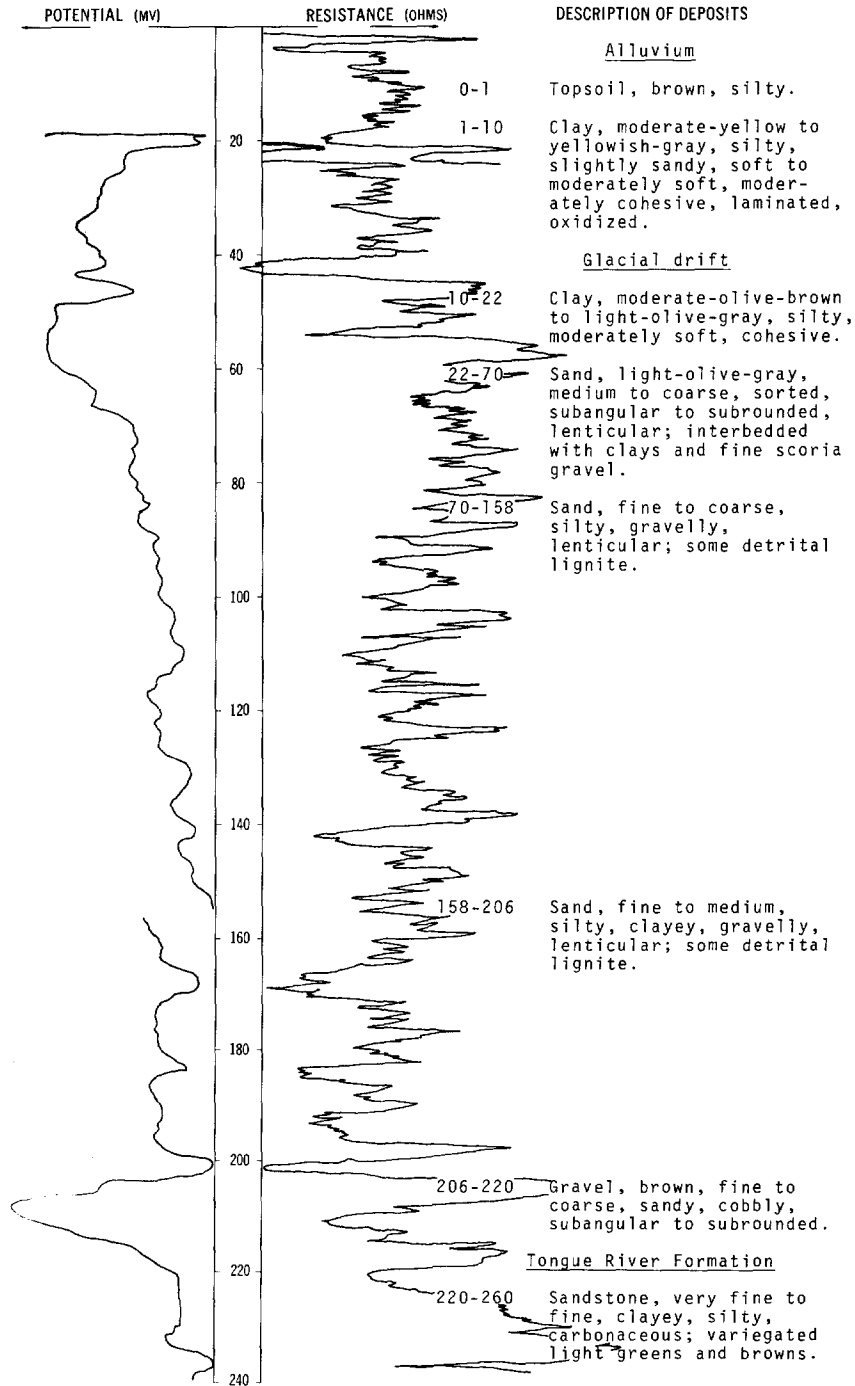


LOCATION: 138-087-03DBB

DATE DRILLED: August 1973

ALTITUDE: 1975
(FT, MSL)

DEPTH: 260
(FT)



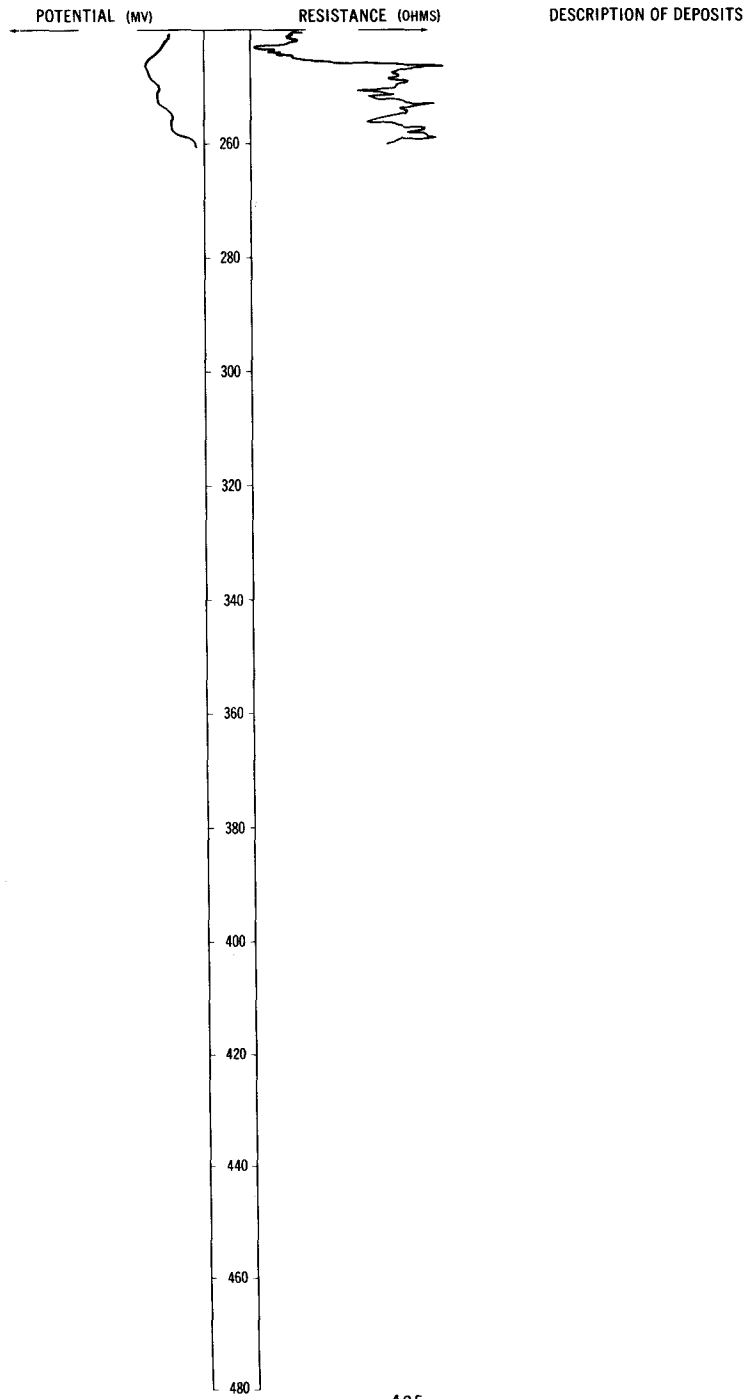
NDSWC 4543, Continued

LOCATION: 138-087-03DBB

DATE DRILLED: August 1973

ALTITUDE: 1975
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4543, Continued

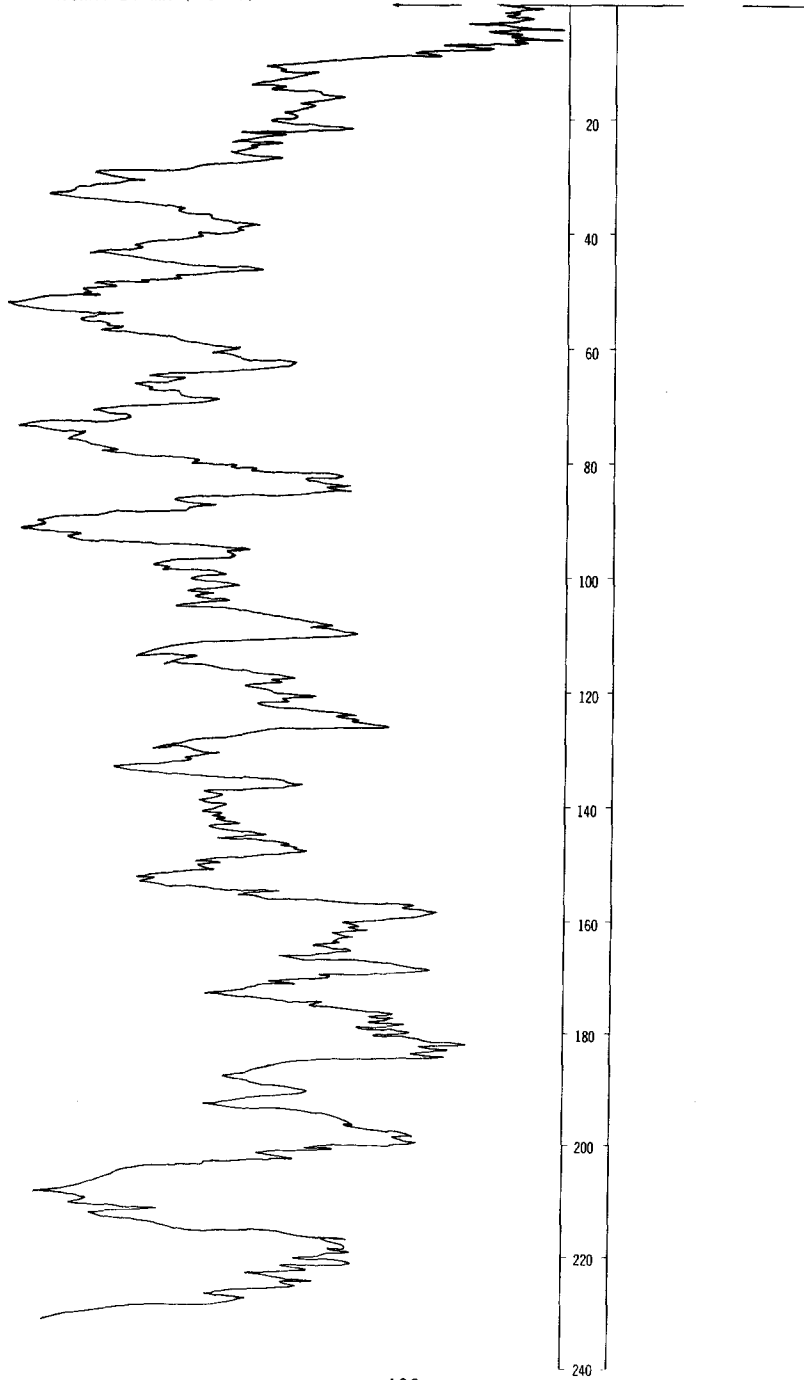
LOCATION: 138-087-03DBB

DATE DRILLED: August 1973

ALTITUDE: 1975
(FT, MSL)

DEPTH: 260
(FT)

NATURAL-GAMMA (T.C. 4)

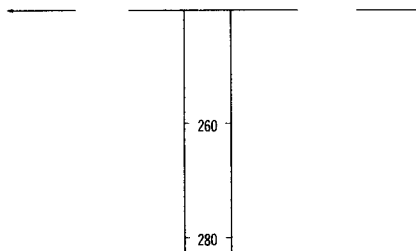


NDSWC 4543, Continued

LOCATION: 138-087-03DBB
 ALTITUDE: 1975
 (FT, MSL)

DATE DRILLED: August 1973
 DEPTH: 260
 (FT)

NATURAL-GAMMA (T.C. 4)



138-087-20ADD
 U.S. Geological Survey Conservation Division 13

Altitude: 2225 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Claystone and minor amounts of sandstone-----	20	20
	Mostly sandstone; lignite at 27.5 feet-----	9.8	29.8
	Claystone and siltstone; lignite at 30.6 feet and 39.8 feet-----	10	39.8
	Claystone, siltstone, sandstone, and lignite; lignite at 39.8-41.5 feet-----	8	47.8
	Depth correction of 0.7 foot-----	--	48.5
Tongue River Formation:			
	Siltstone, claystone, and sandstone-----	17.2	65.7
	Siltstone, sandstone, and claystone-----	17	82.7
	Claystone, siltstone, and lignite-----	7.6	90.3
	Lignite, claystone, and siltstone-----	13.6	103.9
	Claystone, siltstone, and sandstone; lignite at 120.4 feet-----	16.5	120.4
	Claystone, siltstone, and sandstone; lignite at 120.4-121.4 feet and 136.6 feet-----	16.2	136.6
	Claystone and sandstone; lignite stringer-----	17.5	154.1
	Claystone, siltstone, and sandstone at base; 0.6 foot of lignite at 162.5 feet; claystone with fossil shells at 156 feet-----	18.5	172.6
	Claystone, sandstone, and siltstone-----	20	192.6
	Sandstone and siltstone-----	20	212.6
	Siltstone, sandstone, claystone, and lignite; lignite at 214-216.5 feet-----	9	221.6
	Siltstone, claystone, and sandstone-----	12	233.6
	Siltstone, sandstone, and minor lignitic claystone at bottom-----	20	253.6
	Lignite with underclay-----	20	273.6
	Sandstone and siltstone-----	5	278.6
	Sandstone and siltstone-----	14.4	293
	Siltstone and sandstone-----	12	305

138-088-02DAD
V. Gervig
(Log from Opp Well Drilling)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation:			
	Topsoil, black-----	1	1
	Clay, gray; mixed with scoria-----	7	8
	Sand, gray, dry-----	9	17
	Sandstone-----	1	18
	Sand, gray, dry-----	2	20
	Clay, blue-----	12	32
	Clay, black-----	5	37
	Clay, blue-----	41	78
	Sand, blue, dry-----	10	88
	Clay, blue, dry-----	11	99
	Lignite, dry, hard-----	5	104
	Clay, blue-----	13	117
	Lignite, dry, hard-----	1	118
	Sand, gray, fine-----	12	130
	Sand, gray, medium-----	8	138
	Sand, blue (9 gpm)-----	5	143
	Clay, blue-----	11	154
	Lignite; black water-----	7	161
	Clay, blue-----	1	162
	Lignite, hard-----	2	164
	Clay, blue-----	8	172
	Sand, blue, coarse, dry-----	16	188
	Sand, blue; some water-----	3	191
	Sand, blue, medium; brown water-----	19	210

138-088-20DAA
U.S. Geological Survey Conservation Division 12

Altitude: 2400 feet

Sentinel Butte Formation:			
	Siltstone-----	6	6
	Shale, carbonaceous-----	5.5	11.5
	Claystone; lignite and carbonaceous shale seams in basal 0.5 foot-----	4.5	16
	Sandstone-----	5	21
	Claystone-----	7.5	28.5
	Sandstone-----	3.5	32
	Claystone and siltstone-----	3.1	35.1
	Sandstone-----	1	36.1
	Siltstone, clayey-----	2.9	39
	Sandstone-----	1.5	40.5
	Claystone and silty claystone; lignite seam at 55 feet-----	22	62.5
	Shale, carbonaceous-----	1.7	64.2
	Claystone-----	6.3	70.5
	Sandstone-----	17.5	88
	Lignite-----	2	90
	Lignite and sandstone-----	11.5	101.5
	Sandstone; lignite in lower 0.9 foot-----	19.4	120.9
	Claystone and lignite; lignite at 120-129.9 feet-----	12	132.9

138-088-28DD
U.S. Geological Survey Conservation Division 11

Altitude: 2375 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Claystone, silty; lignite at 21 feet-----	21	21
	Siltstone and sandstone; lignite at 21-22.9 feet-----	5.1	26.1
	Sandstone and siltstone-----	.9	27
	Claystone, gray-----	28	55
	Claystone, gray; lignite at 57.4 feet-----	2.4	57.4
	Lignite and clay; lignite at 57.4- 67.15 feet-----	12.1	69.5
	Claystone, greenish-----	12	81.5
	Claystone, greenish at 81.5-83 feet; claystone, gray at 83-85 feet-----	3.5	85
	Claystone; calcareous concretions at 87-89 feet-----	5.1	90.1
	Lignite at 90.1-90.6 feet-----	7.3	97.4
	Claystone, light-gray-----	17.6	115
	Clay, gray, soft-----	5	120
Tongue River Formation:			
	Clay and siltstone-----	7.5	127.5
	Claystone-----	.8	128.3
	Claystone, light-gray-----	6.4	134.7
	Claystone; lignite at 136.7-141.2 feet-----	7.7	142.4
	Claystone and sandstone-----	20	162.4
	Claystone and sandstone-----	10	172.4
	Sandstone, claystone, and lignite; lignite with clay partings at 177.6-182.6 feet-----	10.6	183
	Claystone and sandstone; lignite at 197.1-198 feet-----	20	203
	Sandstone, claystone, and siltstone; lignite at 210.3 feet-----	8.3	211.3
	Claystone and sandstone; lignite at 210.3-212.4 feet-----	16	227.3
	Sandstone, medium-gray-----	10	237.3
	Sandstone, fine-grained-----	5.8	243.1
	Sandstone, fine-grained-----	9.9	253
	Sandstone; lignite stringers-----	8.5	261.5
	Sandstone, medium-gray-----	6.8	268.3
	Sandstone, medium-gray-----	12	280.3
	Sandstone, medium-gray-----	3	283.3
	Claystone and sandstone-----	19.7	303
	Sandstone, fine-grained, soft-----	20	323
	Sandstone, fine-grained, soft-----	20	343
	Sandstone; lignite stringers-----	18.8	361.8
	Siltstone and sandstone-----	20	381.8

138-089-24DDB
 J. Kastner
 (Log from Opp Well Drilling)

Geologic source	Material	Thickness (feet)	Depth (feet)
Tongue River Formation:			
	Topsoil, black-----	3	3
	Sand, yellowish-gray-----	6	9
	Clay, black-----	2	11
	Clay, blue-----	7	18
	Sandstone-----	.5	18.5
	Clay, blue-----	23.5	42
	Sand, blue, dry-----	10	52
	Clay, blue-----	16	68
	Sandstone-----	.5	68.5
	Clay, blue, sandy-----	5.5	74
	Clay, brown-----	4	78
	Lignite, hard, dry-----	14	92
	Clay, blue, hard-----	10	102
	Sand, blue, silty-----	10	112
	Clay, blue-----	13	125
	Clay, blue, sandy-----	44	169
	Sandstone-----	.5	169.5
	Sand, blue, wet-----	2.5	172
	Sand, blue; water bearing-----	39	211

138-089-24DDD
 J. Kastner
 (Log from Opp Well Drilling)

Tongue River Formation:			
	Sand, gray, hard-----	10	10
	Sandstone-----	1	11
	Sandstone, gray-----	4	15
	Lignite (0.25 gpm)-----	2	17
	Clay, blue-----	37	54
	Clay, blue; with streaks of sand-----	24	78
	Lignite (1 gpm)-----	14	92
	Clay, blue; with streaks of sand; fossil bed 119-120 feet-----	33	125
	Clay, black-----	5	130
	Clay, blue, sandy-----	40	170
	Sandstone, cemented-----	1	171
	Clay, sandy-----	9	180
	Clay; with fine sand-----	10	190
	Sand, blue, very fine to medium-----	10	200
	Sand, blue, clayey-----	10	210

138-089-26BBC2
 J. Helfrich
 (Log from Opp Well Drilling)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, sandy-----	2.5	2.5
	Gravel-----	2	4.5
Tongue River Formation:			
	Clay, yellow-----	14.5	19
	Clay, blue-----	6	25
	Sand, blue-----	27	52
	Lignite, soft-----	2	54
	Clay, blue-----	14	68
	Sand-----	4	72
	Clay, blue-----	6.5	78.5
	Lignite, hard; black water-----	8	86.5
	Clay, sandy; lignite at bottom-----	9.5	96

138-090-09DAD1
 A. Heinle
 (Log from Moe Drilling Company)

Tongue River Formation:			
	Clay, gray-----	37	37
	Lignite-----	1	38
	Clay, gray-----	1	39
	Lignite-----	.5	39.5
	Clay, gray-----	14.5	54
	Clay, gray, sandy-----	11	65
	Lignite-----	5	70
	Clay, gray-----	31	101
	Sandstone-----	6	107
	Clay, gray-----	3	110
	Lignite-----	6	116
	Clay, gray-----	16	132
	Lignite-----	3	135
	Clay, gray-----	25	160
	Sand, gray, medium-----	31	191
	Sandstone-----	.5	191.5
	Sand, gray, medium-----	6.5	198
	Clay, gray-----	4	202

138-090-10DDDB2
 W. Buchli
 (Log from Bandy Well Drilling)

Tongue River Formation:			
	Topsoil-----	7	7
	Sand, yellow-----	3	10
	Clay, yellow-----	22	32
	Shale, blue-----	6	38
	Lignite-----	4	42
	Shale, blue-----	16	58
	Rock, hard-----	2	60
	Sandstone-----	16	76
	Shale, blue-----	6	82
	Sandstone-----	52	134
	Shale, blue-----	6	140

138-090-22DCC
U.S. Geological Survey Conservation Division 9

Altitude: 2421 feet

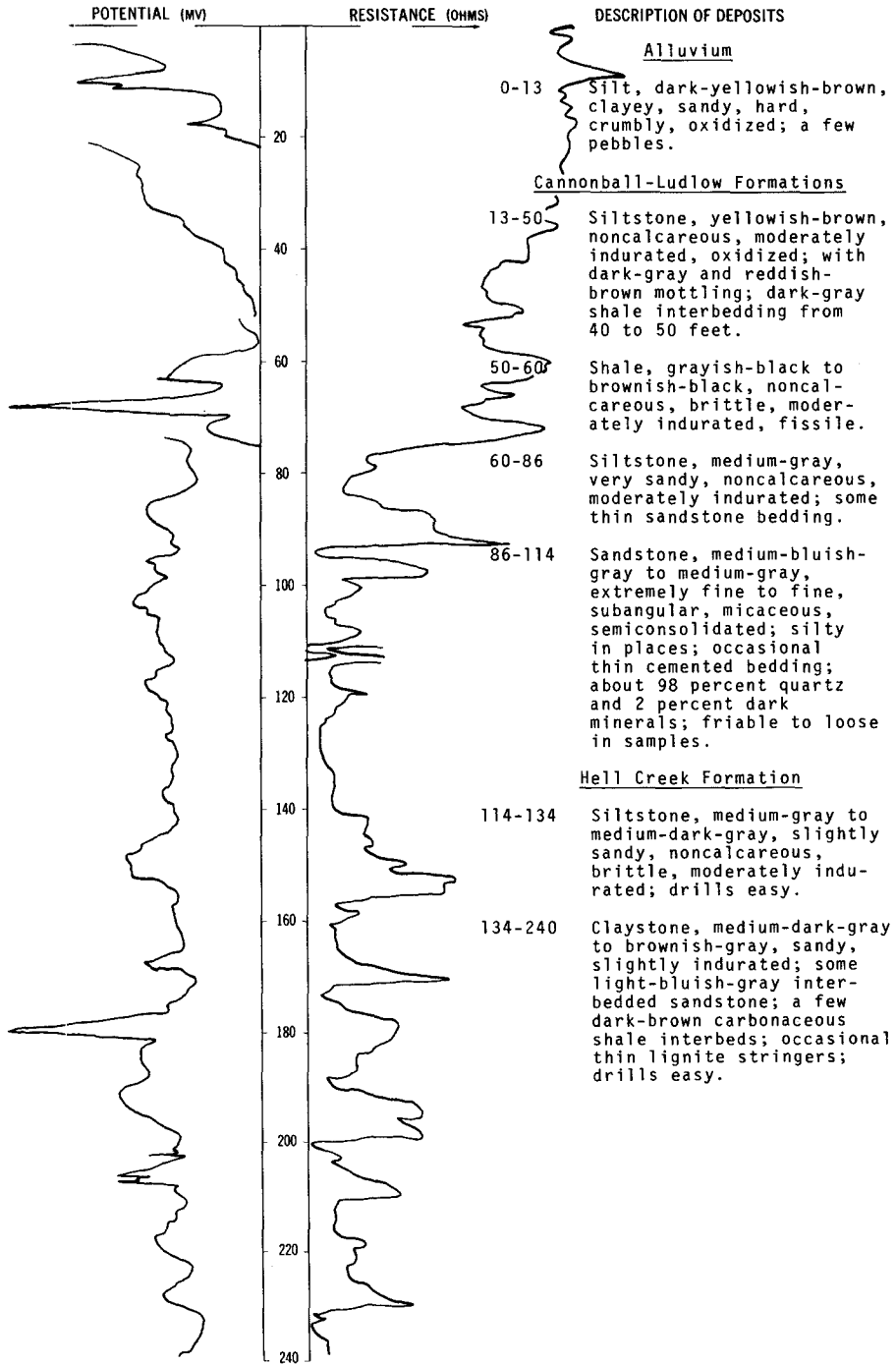
Geologic source	Material	Thickness (feet)	Depth (feet)
Sentinel Butte Formation:			
	Claystone, gray-tan-----	5	5
	Claystone, gray, silty-----	5	10
	Claystone, gray; 0.5 foot of lignite at 11 feet-----	5	15
	Claystone, olive-gray, silty-----	5	20
	Claystone, gray-tan; greenish color at 24 feet-----	5	25
	Claystone, greenish, sandy-----	10	35
	Claystone, gray, sandy; lignite at 38-40 feet-----	5	40
	Claystone; lignite at 40-42.8 feet-----	3.8	43.8
	Claystone; sandstone at 49 feet-----	6.2	50
	Claystone, gray-----	10	60
	Claystone, gray; lignite stringers-----	5	65
	Claystone, gray-----	15	80
	Claystone and lignitic lens-----	5	85
	Claystone, light-gray and gray-----	15	100
	Claystone and sandstone-----	5	105
	Claystone; lignite at 107.8-108.1 feet-----	3.1	108.1
	Lignite-----	2.1	110.2
	Lignite-----	4	114.2
	Sandstone-----	9	123.2
	Claystone-----	1.8	125
	Claystone, light-gray-----	15	140
	Sandstone-----	5	145
	Claystone-----	5	150
	Claystone; calcareous zone at 150-153 feet-----	5	155
	Claystone-----	15	170
	Claystone; lignite at 174-174.6 feet-----	4.6	174.6
	Lignite, 1.1 feet; clay, 0.8 foot; lignite, 0.8 foot; clay, 0.3 foot-----	3	177.6
	Claystone, gray-----	2.4	180
	Claystone, gray and greenish-gray-----	20	200
Tongue River Formation (?):			
	Claystone; sandstone at 203 feet-----	5	205
	Claystone containing fossil shells-----	5.7	210.7
	Sandstone; lignite at 218.5-220.3 feet-----	9	219.7
	Sandstone, claystone, and lignite-----	6.5	226.2
	Claystone-----	3.8	230
	Claystone and sandstone-----	5	235
	Claystone, gray-----	25.7	260.7
	Claystone and sandstone; loss, 2.2 feet in sandstone; washing at top; 0.6 foot lignite at 272.9-274.6 feet-----	16.5	277.2
	Lignite and claystone; lignite section at 281.6-285 feet; 1.6 feet lignite; 1.4 feet claystone; 0.5 foot lignite; 1.8 feet claystone-----	12.5	289.7
	Sandstone and claystone-----	20	309.7
	Claystone and siltstone; lignite at 323.6-326.3 feet-----	18.6	328.3
	Claystone; lignite at 332.2-332.9 feet-----	17.5	345.8
	Lignite, claystone, and sandstone-----	21	366.8
	Sandstone, soft, and claystone-----	8.5	375.3

LOCATION: 139-081-09AAA1, 2, 3, 4

DATE DRILLED: September 1974

ALTITUDE: 1720
(FT, MSL)

DEPTH: 700
(FT)

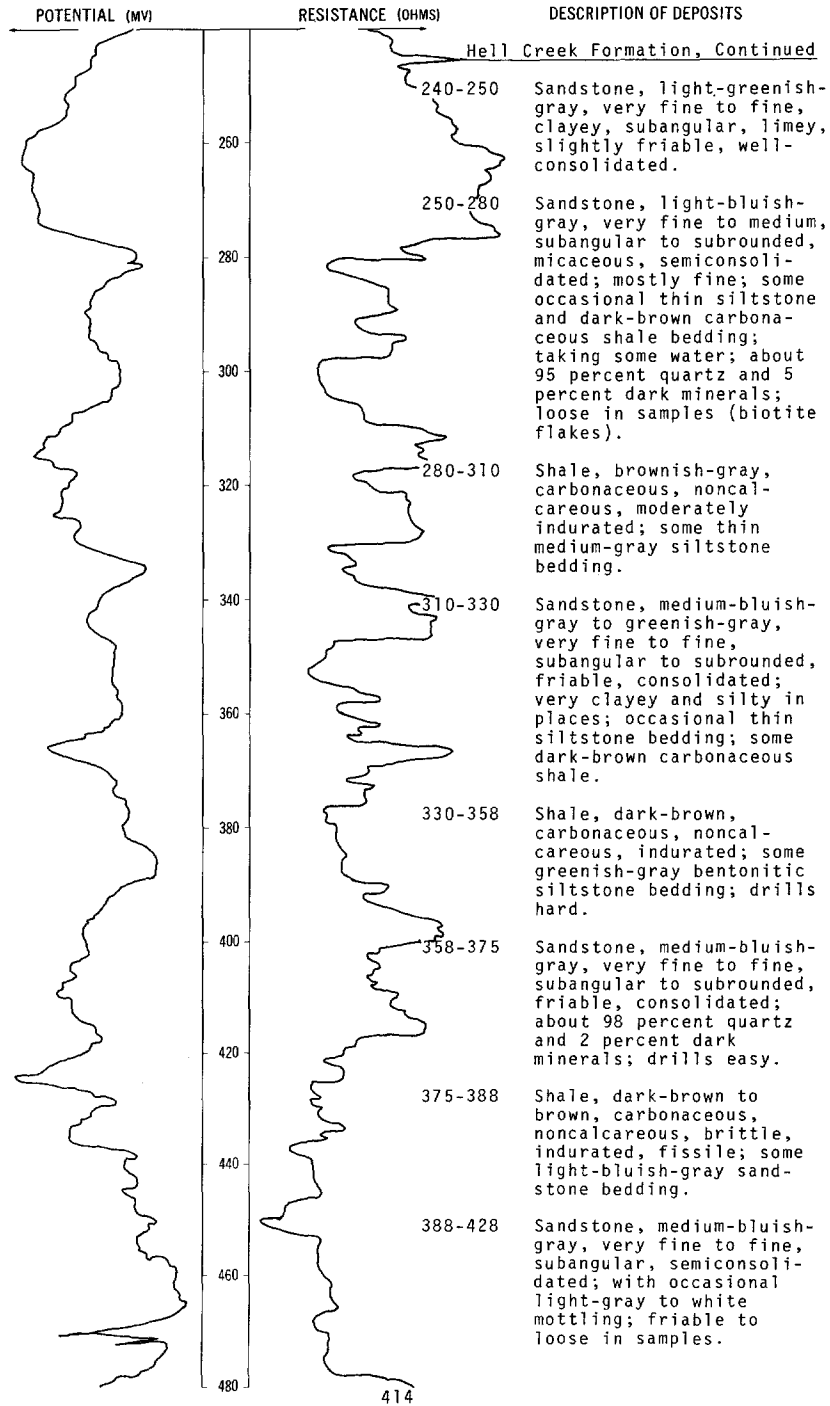


LOCATION: 139-081-09AAA1, 2, 3, 4

DATE DRILLED: September 1974

ALTITUDE: 1720
(FT, MSL)

DEPTH: 700
(FT)

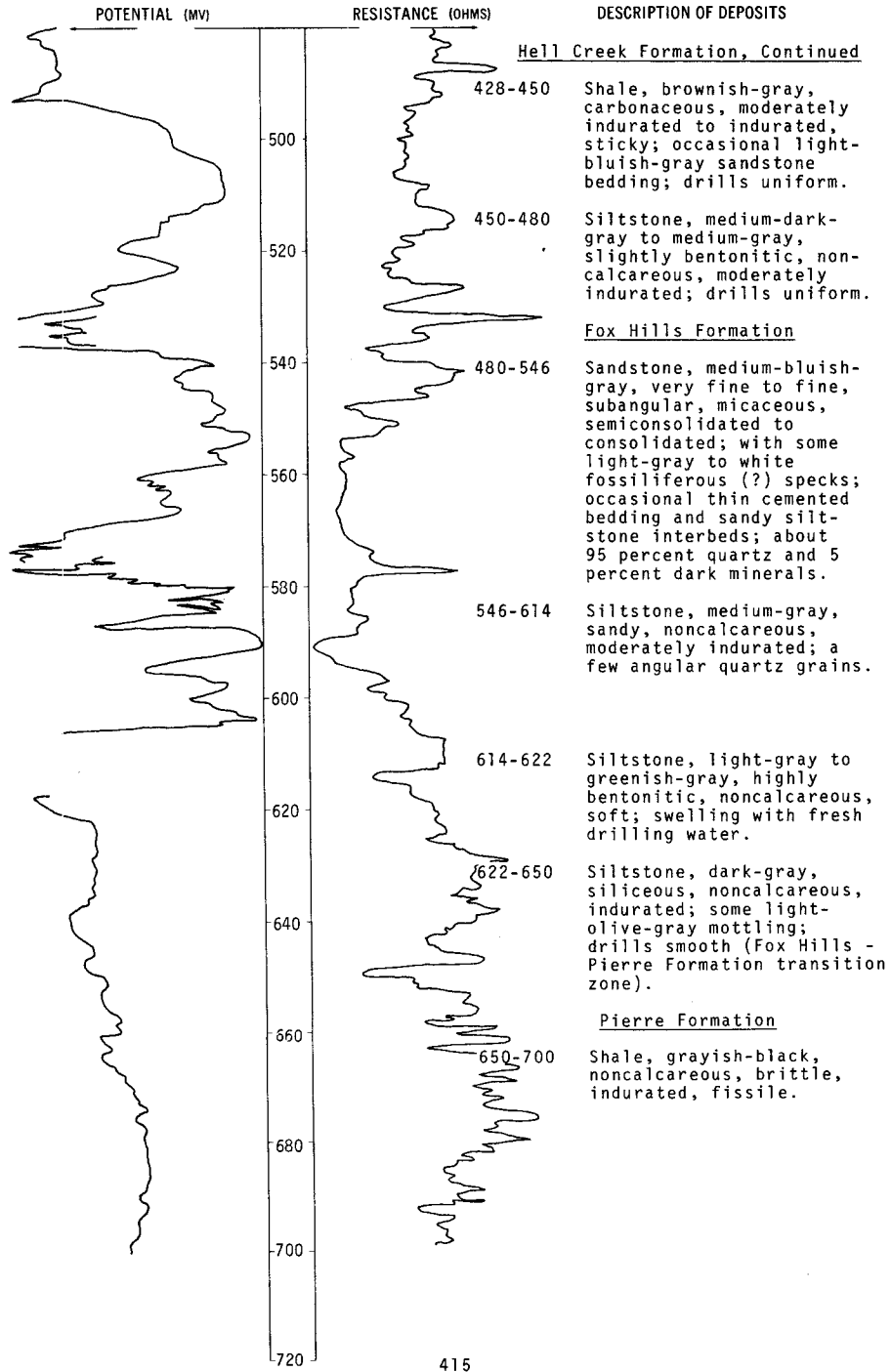


LOCATION: 139-081-09AAA1, 2, 3, 4

DATE DRILLED: September 1974

ALTITUDE: 1720
(FT, MSL)

DEPTH: 700
(FT)



NDSWC 4766, 4766A, 4766B, 4766C, Continued

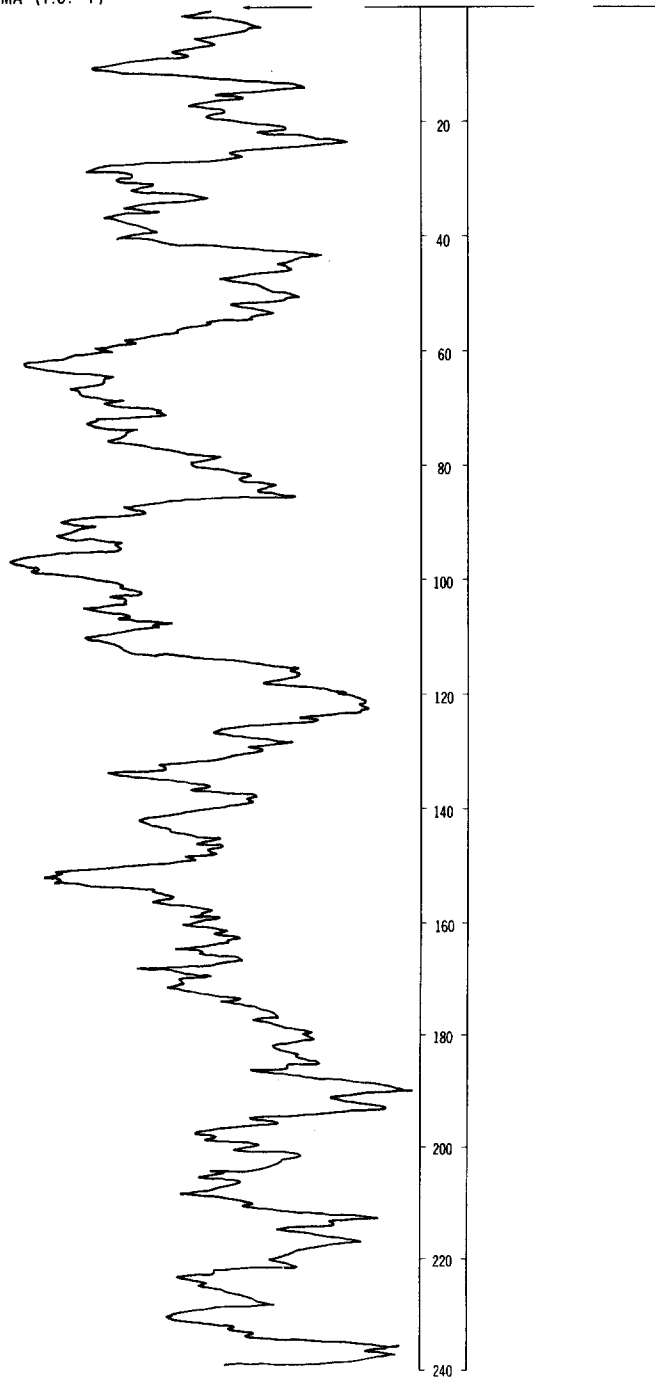
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DATE DRILLED: September 1974

ALTITUDE: 1720
(FT, MSL)

DEPTH: 700
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4766, 4766A, 4766B, 4766C, Continued

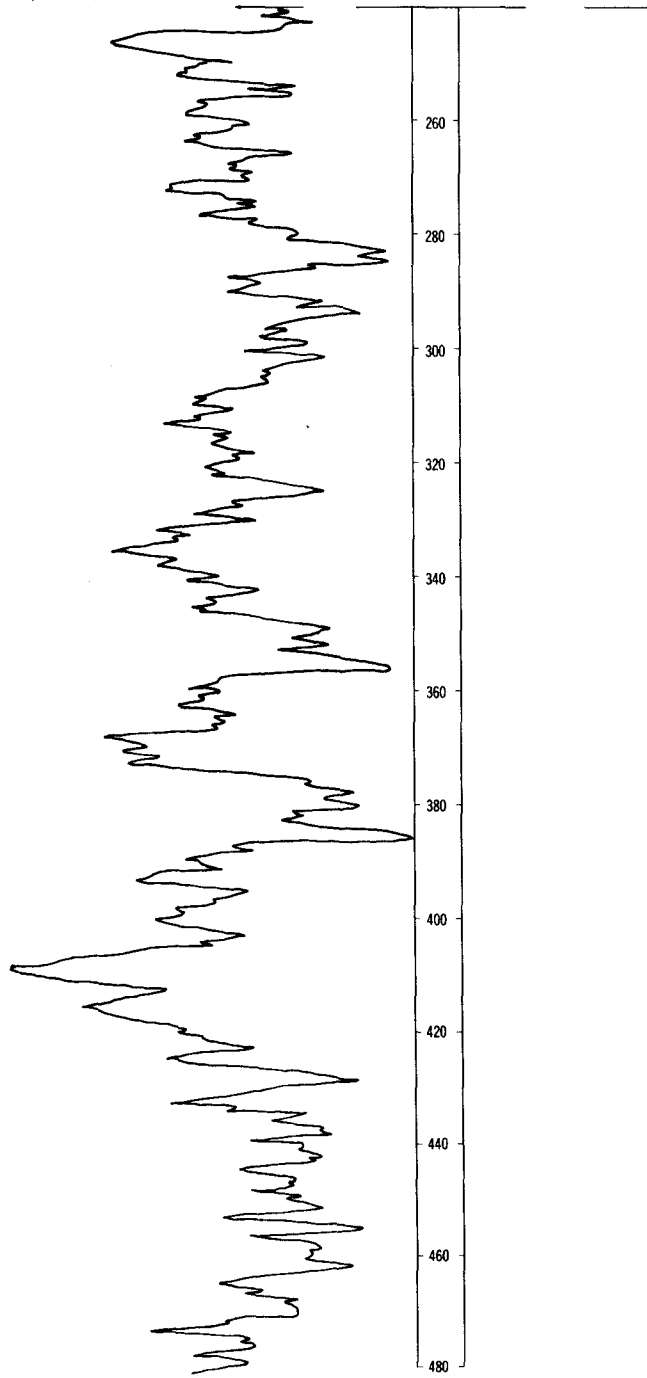
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DATE DRILLED: September 1974

ALTITUDE: 1720
(FT. MSL)

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NATURAL-GAMMA (T.C. 4)



NDSWC 4766, 4766A, 4766B, 4766C, Continued

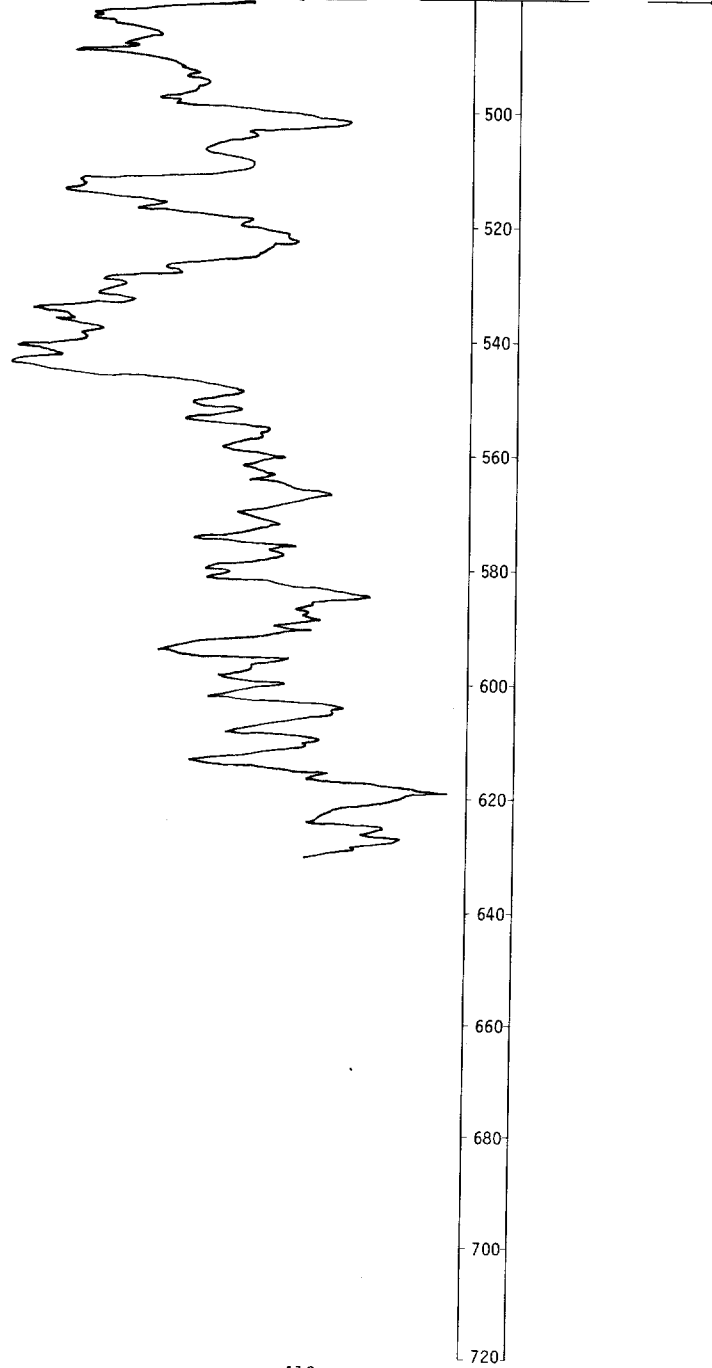
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DATE DRILLED: September 1974

ALTITUDE: 1720
(FT, MSL)

DEPTH: 700
(FT)

NATURAL-GAMMA (T.C. 4)

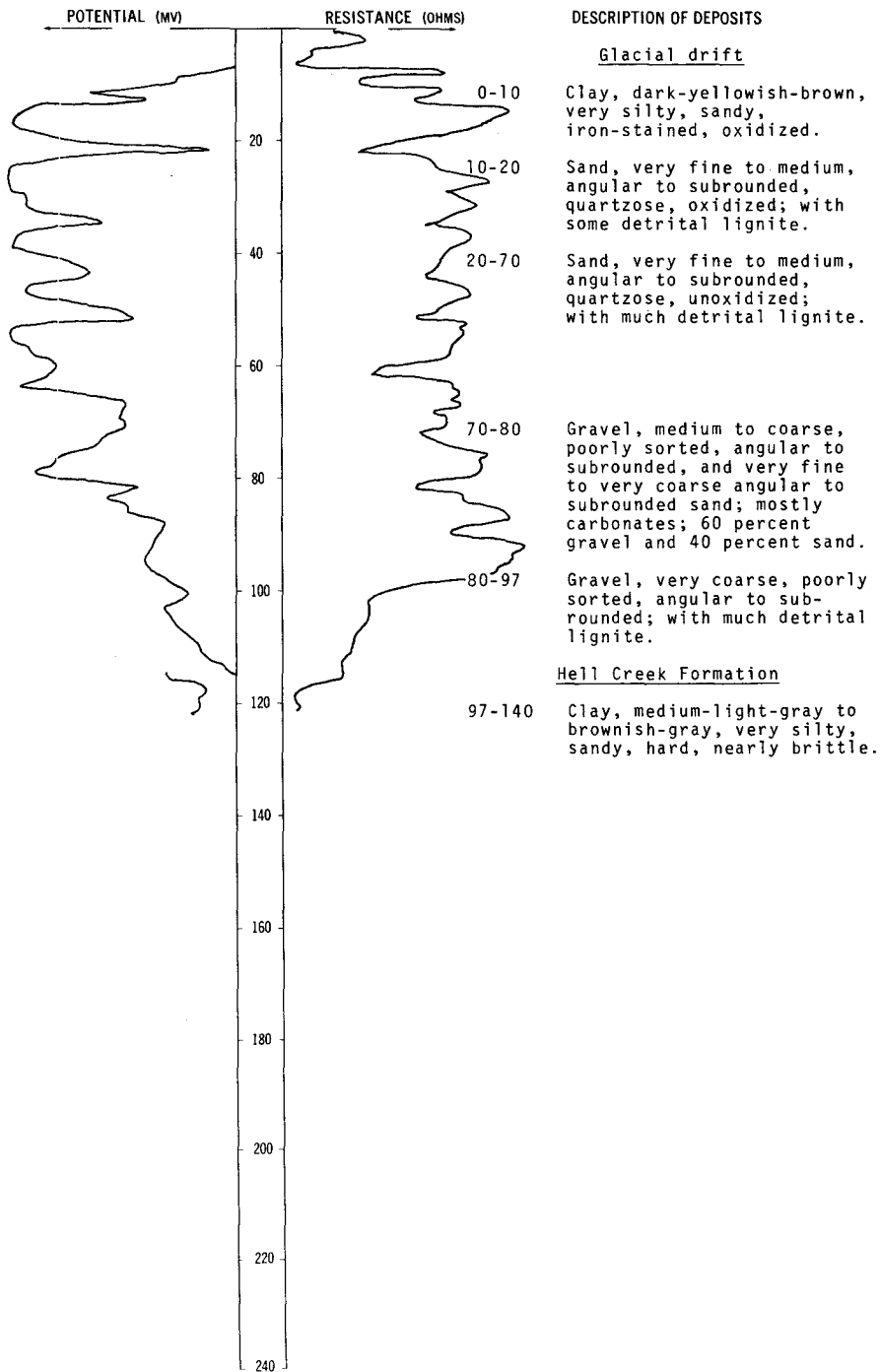


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ALTITUDE: 1635
(FT, MSL)

DATE DRILLED: July 1975

DEPTH: 140
(FT)

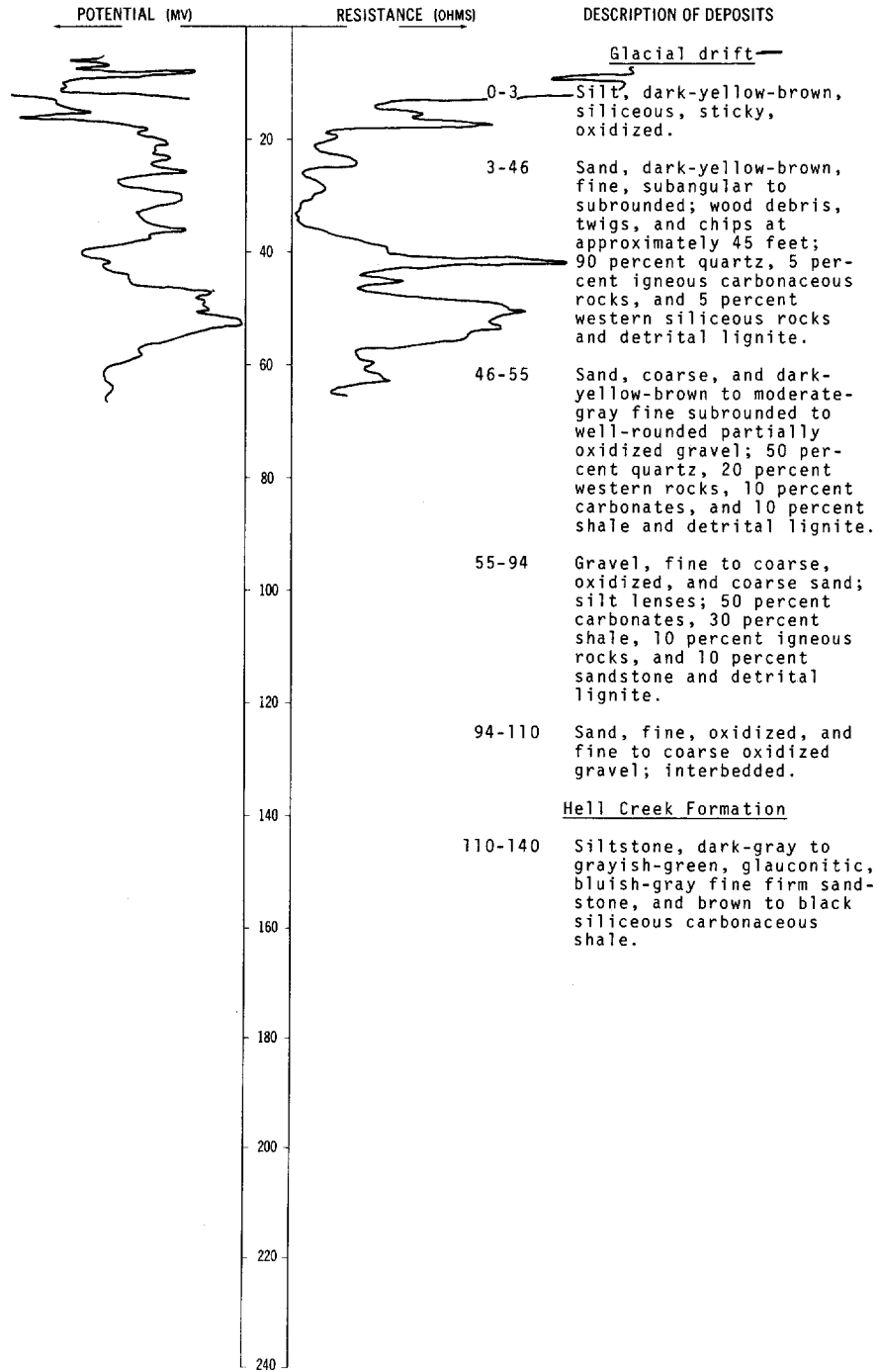


LOCATION: 139-081-36CCD

DATE DRILLED: August 1974

ALTITUDE: 1635
(FT, MSL)

DEPTH: 140
(FT)

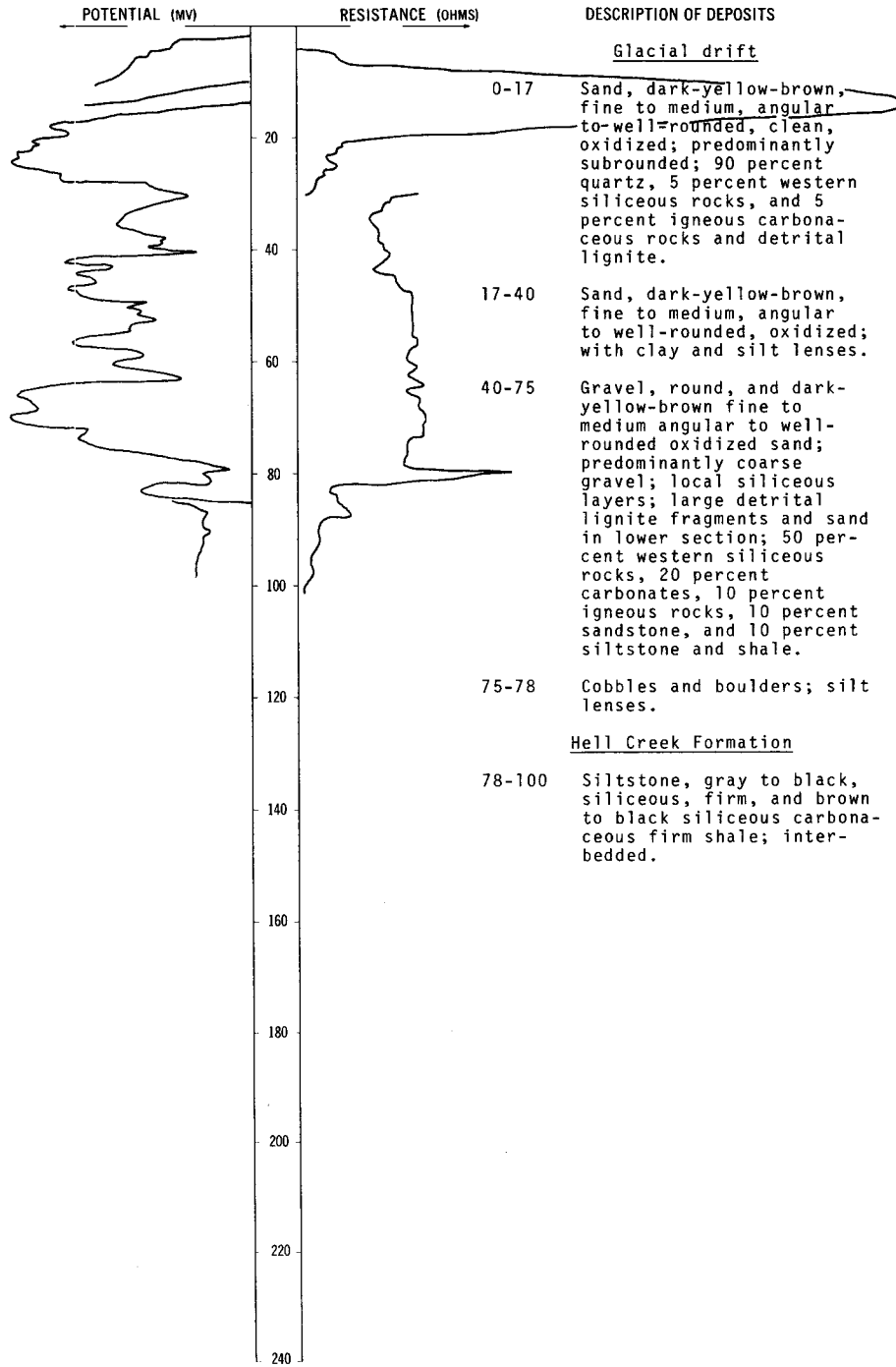


LOCATION: 139-082-25BBD

DATE DRILLED: August 1974

ALTITUDE: 1665
(FT, MSL)

DEPTH: 100
(FT)



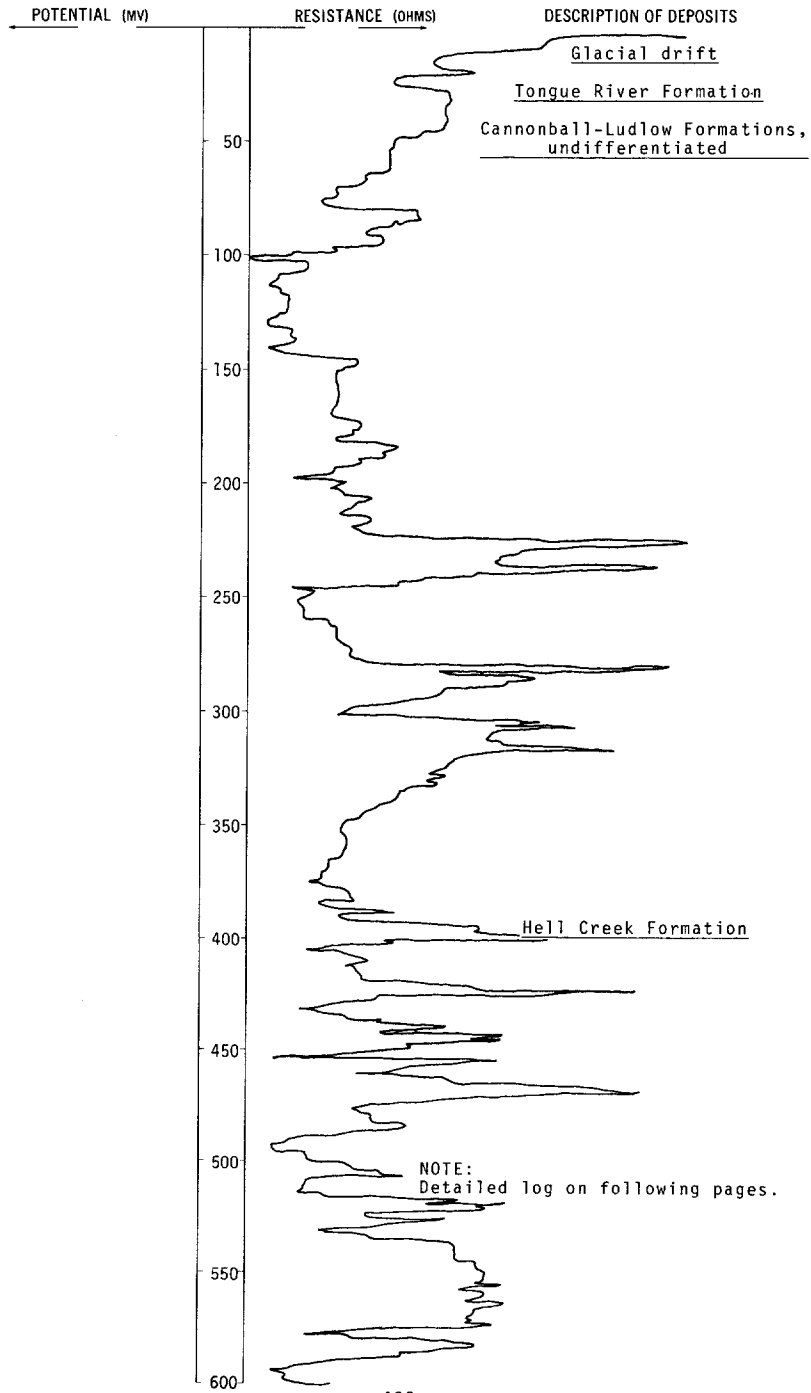
NDSWC 4751, 4751A, 4751B

LOCATION: 139-083-12DBA1, 2, 3

DATE DRILLED: July 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 1002
(FT)



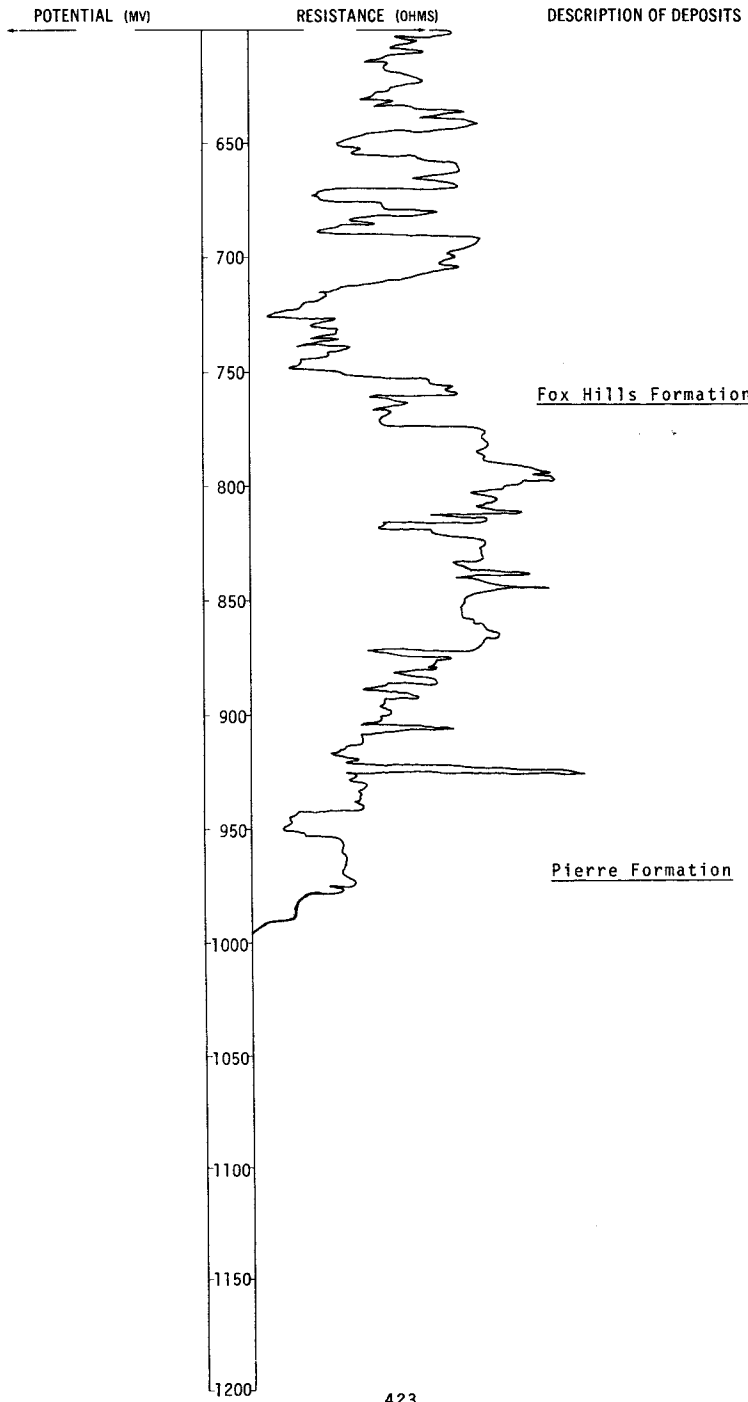
NDSWC 4751, 4751A, 4751B, Continued

LOCATION: 139-083-12DBA1, 2, 3

DATE DRILLED: July 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 1002
(FT)



NDSWC 4751, 4751A, 4751B, Continued

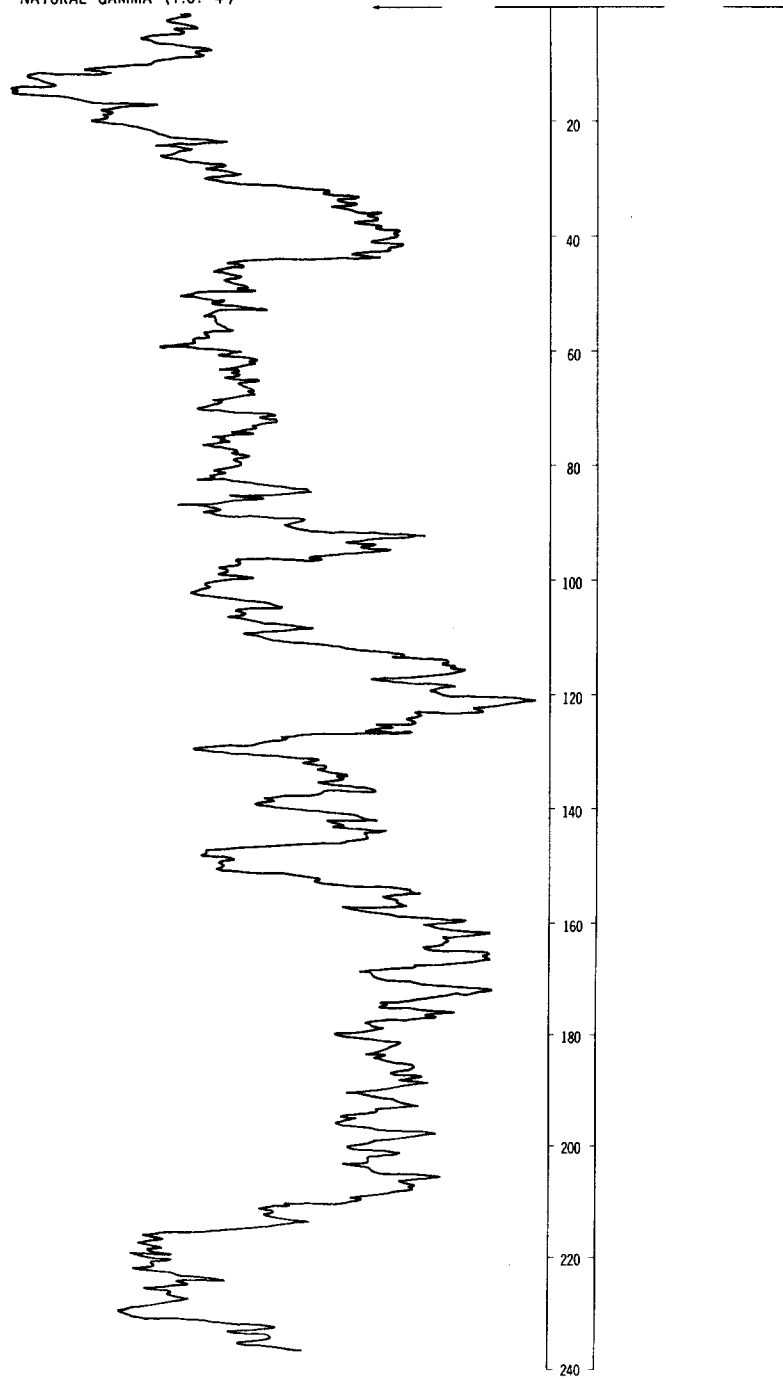
LOCATION: 139-083-12DBA1, 2, 3

DATE DRILLED: July 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 1002
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4751, 4751A, 4751B, Continued

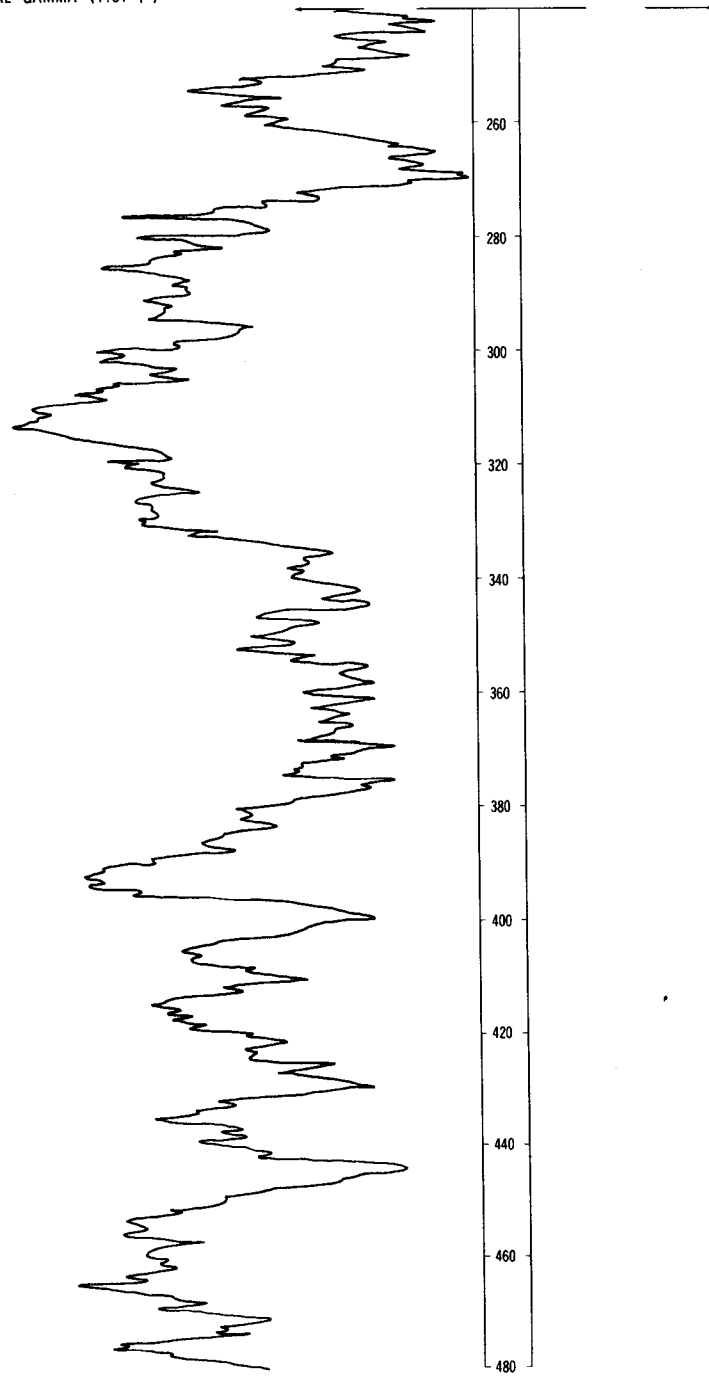
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DATE DRILLED: July 1974

ALTITUDE: 1960
(FT. MSL)

DEPTH: 1002
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4751, 4751A, 4751B, Continued

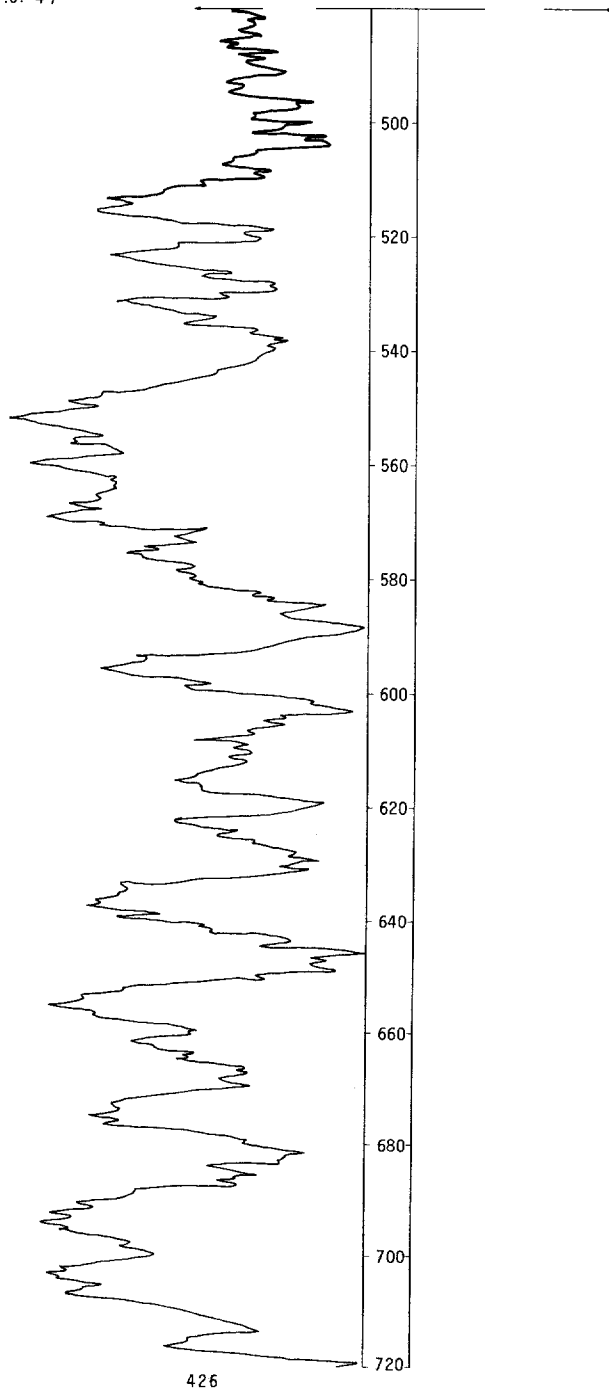
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DATE DRILLED: July 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 1002
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4751, 4751A, 4751B, Continued

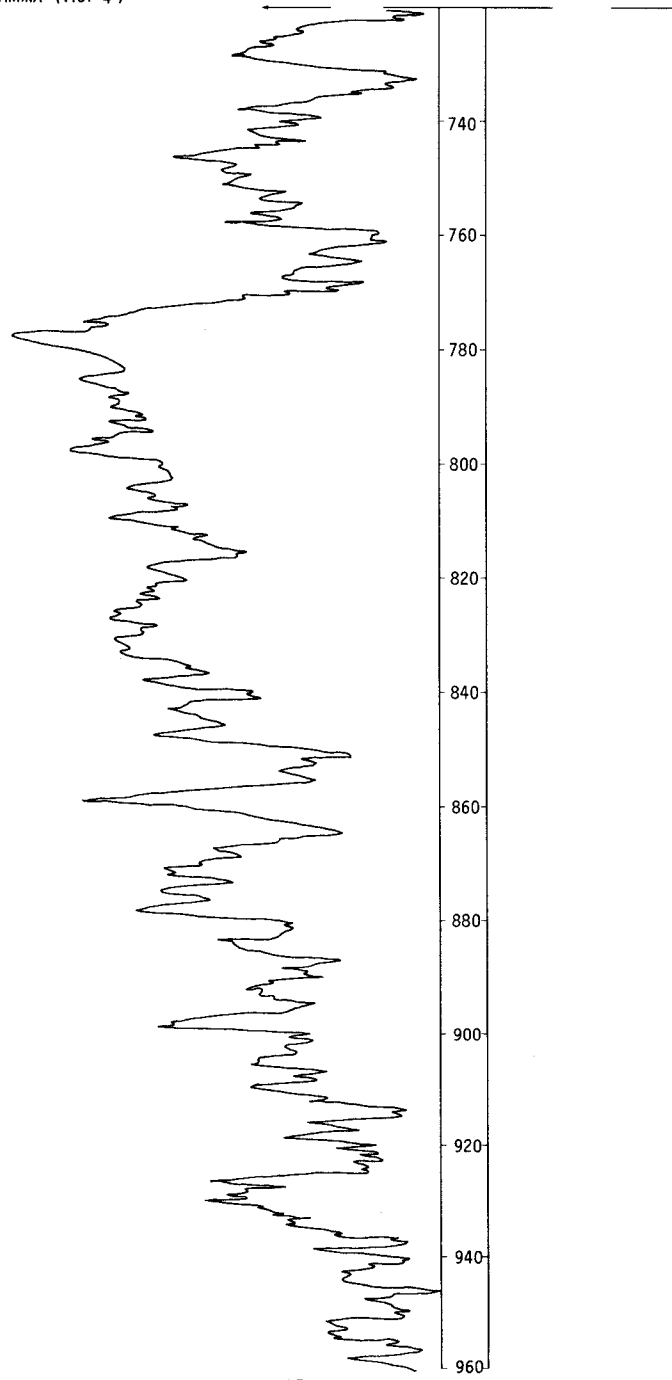
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DATE DRILLED: July 1974

ALTITUDE: 1960
(FT. MSL)

DEPTH: 1002
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4751, 4751A, 4751B, Continued

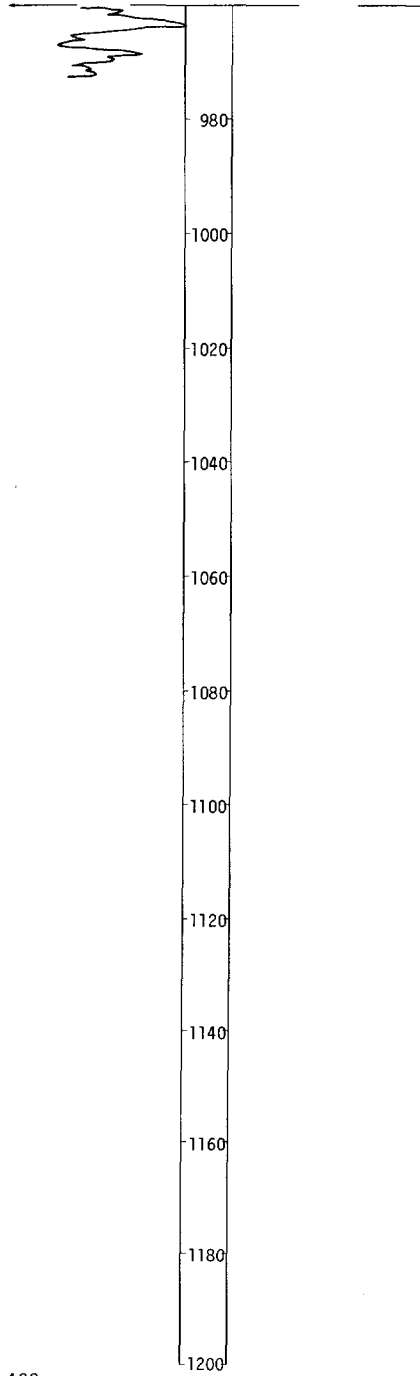
LOCATION: 139-083-12DBA1, 2, 3

DATE DRILLED: July 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 1002
(FT)

NATURAL-GAMMA (T.C. 4)



139-083-12DBA1, 2, 3, Continued
 NDSWC 4751, 4751A, 4751B

Altitude: 1960 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Topsoil, grayish-black, sandy, silty-----	1	1
	Clay, dusky-yellow, very silty, sandy, slightly pebbly, hard, oxidized (till)-----	5	6
Tongue River Formation:			
	Sandstone, yellowish-gray, fine to medium, silty, angular to sub-angular, semiconsolidated, oxidized-----	8	14
	Sandstone, yellowish-brown, fine to medium, silty, angular to sub-angular, semiconsolidated, oxidized-----	6	20
	Sandstone, bluish-gray, very fine to medium, slightly clayey, angular to subangular, friable, semiconsolidated-----	16	36
	Siltstone, medium-gray to brownish-gray, indurated-----	10	46
Cannonball-Ludlow Formations, undifferentiated:			
	Sandstone, bluish-gray, very fine to medium, silty, slightly clayey, angular to subangular, friable, semiconsolidated-----	28	74
	Siltstone, medium-gray, sandy, clayey, moderately indurated; with thin layers of dark-brownish-gray shale-----	2	76
	Sandstone, bluish-gray, silty, clayey, consolidated-----	18	94
	Siltstone, gray to dark-gray, sandy, noncalcareous, moderately indurated-----	6	100
	Sandstone, gray, very fine to fine, clayey, silty, subangular, consolidated-----	14	114
	Shale, dark-gray to dark-brownish-gray, slightly siliceous, occasionally calcareous, brittle, indurated, fissile-----	100	214
	Shale, dark-gray to dark-brownish-gray, slightly siliceous, occasionally carbonaceous, brittle, indurated, fissile; with limestone concretions-----	4	218
	Sandstone, dark-gray, very fine to fine, clayey, silty, angular to subangular, occasionally cemented-----	18	236
	Shale, dark-gray, fissile, indurated; with some thin sandy siltstone beds-----	40	276
	Sandstone, fine to coarse, silty, moderately well sorted, quartzose-----	20	296
	Shale, dark-gray, noncalcareous, brittle, moderately indurated, fissile; some limey sandstone concretions and a few thin lignite stringers-----	4	300

139-083-12DBA1, 2, 3, Continued
 NDSWC 4751, 4751A, 4751B

Altitude: 1960 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Cannonball-Ludlow Formations, undifferentiated, Continued:			
	Sandstone, dark-greenish-gray, very fine to fine, angular, micaceous, semiconsolidated-----	11	311
	Limestone, yellowish-gray, very hard-----	3	314
	Sandstone, dark-gray to dark-greenish-gray, very fine to fine, silty, subangular, quartzose, micaceous, semiconsolidated-----	20	334
	Siltstone, dark-gray, siliceous, noncalcareous, moderately indurated-----	50	384
Hell Creek Formation:			
	Sandstone, brownish-gray to dark-greenish-gray, clayey, carbonaceous, moderately consolidated-----	12	396
	Shale, brownish-gray, occasionally sandy, carbonaceous, smooth-----	22	418
	Limestone, dark-gray, very hard-----	4	422
	Shale, brownish-gray to dark-brown, carbonaceous, noncalcareous, moderately indurated; interbedded with greenish-gray sandstone-----	28	450
	Sandstone, greenish-gray, very fine to fine, silty, friable, semiconsolidated-----	20	470
	Shale, brownish-gray to dark-gray, silty, carbonaceous, moderately indurated; with occasional thin greenish-gray to bluish-gray sandstone beds-----	65	535
	Sandstone, bluish-gray to greenish-gray, very fine to fine, angular to subangular, slightly micaceous, consolidated; with some pyrite-----	50	585
	Siltstone, medium-gray to dark-gray, clayey, noncalcareous, moderately indurated; with occasional thin beds of lignite and sandstone-----	105	690
	Sandstone, bluish-gray, very fine to fine, silty, quartzose, semiconsolidated to consolidated; with some thin dark-brown carbonaceous shale-----	22	712
	Shale, brownish-gray to dark-brown, carbonaceous, noncalcareous; with some dark-gray siltstone beds-----	46	758
Fox Hills Formation:			
	Sandstone, bluish-gray, very fine to fine, slightly silty, angular to subangular, friable, occasionally cemented, semiconsolidated to consolidated; fossiliferous-----	52	810
	Siltstone, gray, sandy, noncalcareous, moderately indurated-----	8	818
	Sandstone, bluish-gray, very fine to fine, silty, slightly clayey, micaceous, fossiliferous-----	32	850

139-083-12DBA1, 2, 3, Continued
 NDSWC 4751, 4751A, 4751B

Altitude: 1960 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Fox Hills Formation, Continued:			
	Siltstone, dark-gray, sandy, silty, noncalcareous, moderately indurated; with some thin cemented sandstone concretions-----	18	868
	Siltstone, dark-gray, clayey, siliceous, noncalcareous, moderately indurated; with numerous limey sandstone concretions-----	92	960
Pierre Formation:			
	Shale, grayish-black to black, noncalcareous, brittle, indurated, fissile-----	42	1002

NDSWC 4764

LOCATION: 139-083-28DAD

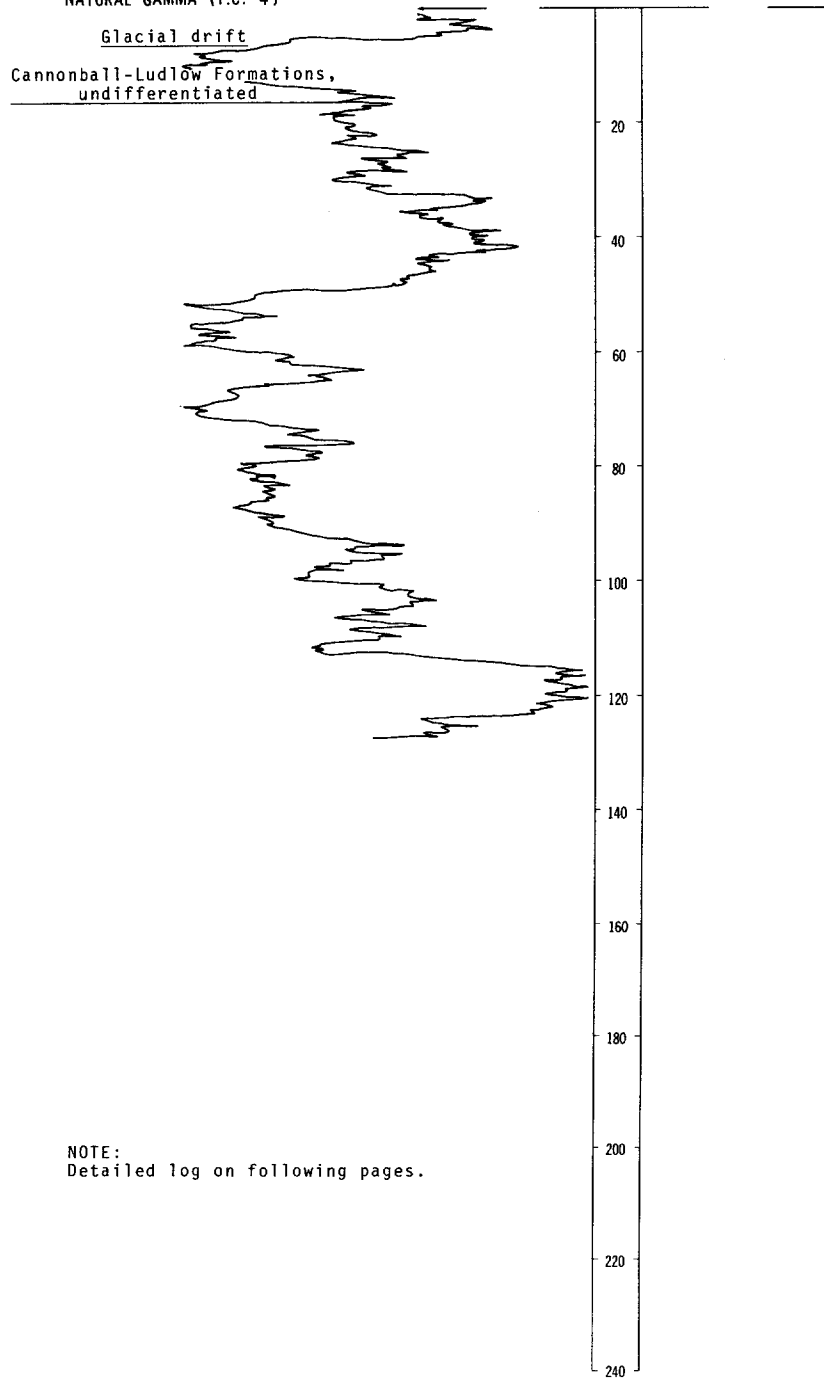
DATE DRILLED: September 1974

ALTITUDE: 1800
(FT, MSL)

DEPTH: 140
(FT)

NATURAL-GAMMA (T.C. 4)

Glacial drift
Cannonball-Ludlow Formations,
undifferentiated



NOTE:
Detailed log on following pages.

139-083-28DAD, Continued
NDSWC 4764

Altitude: 1800 feet

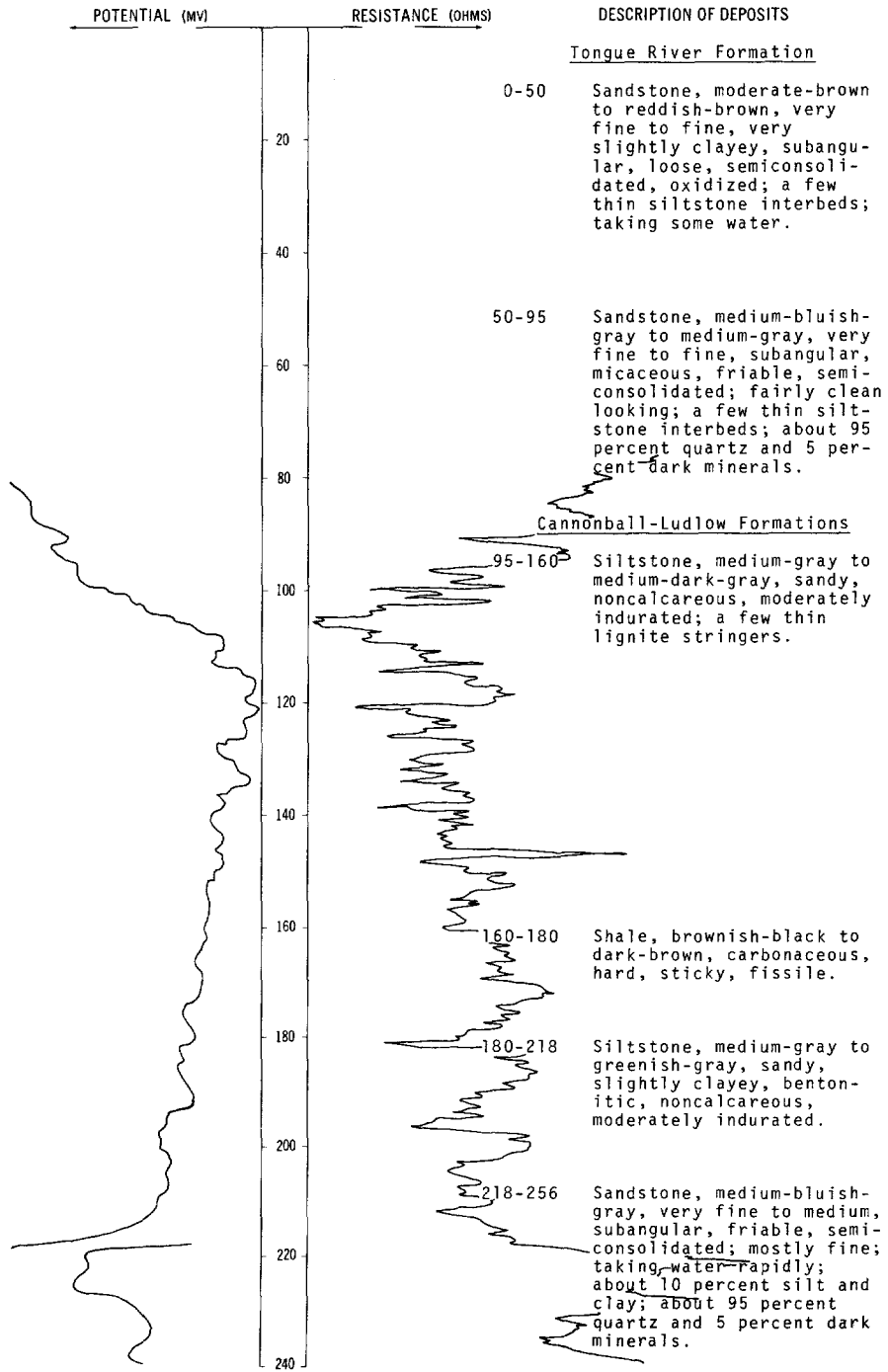
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Silt, dark-yellowish-brown, clayey, sandy, soft, crumbly, oxidized-----	3	3
	Clay, dark-yellowish-brown, very sandy, silty, crumbly, oxidized; a few pebbles-----	4	7
	Gravel, fine to very coarse, very sandy, subangular to well-rounded; mostly local brownish rocks; clay layers; losing circulation on surface cracked ground; loose and caving slightly-----	7	14
Cannonball-Ludlow Formations, undifferentiated:			
	Siltstone, medium-gray, slightly clayey, noncalcareous, moderately indurated-----	34	48
	Sandstone, medium-dark-gray, very fine to medium, subangular, micaceous, calcareous, consolidated; mostly fine; some thin light-gray limey siltstone bedding lower 24 feet of section; numerous cemented bedding-----	67	115
	Shale, dark-brown, carbonaceous, noncalcareous, brittle, indurated, fissile-----	10	125
	Siltstone, medium-dark-gray, slightly calcareous, moderately indurated-----	15	140

LOCATION: 139-084-27BBC

DATE DRILLED: September 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 300
(FT)



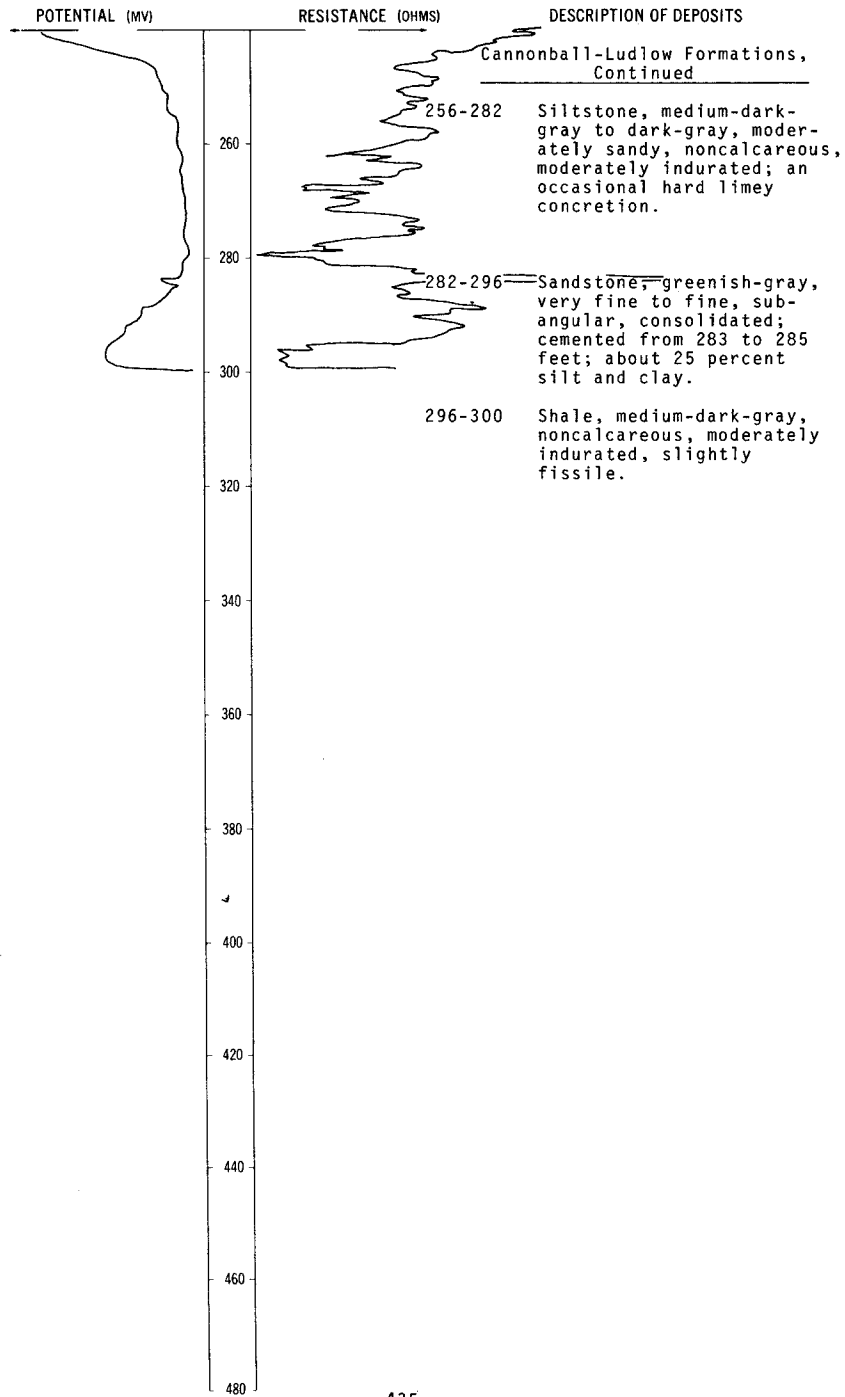
NDSWC 4760, Continued

LOCATION: 139-084-27BBC

DATE DRILLED: September 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4760, Continued

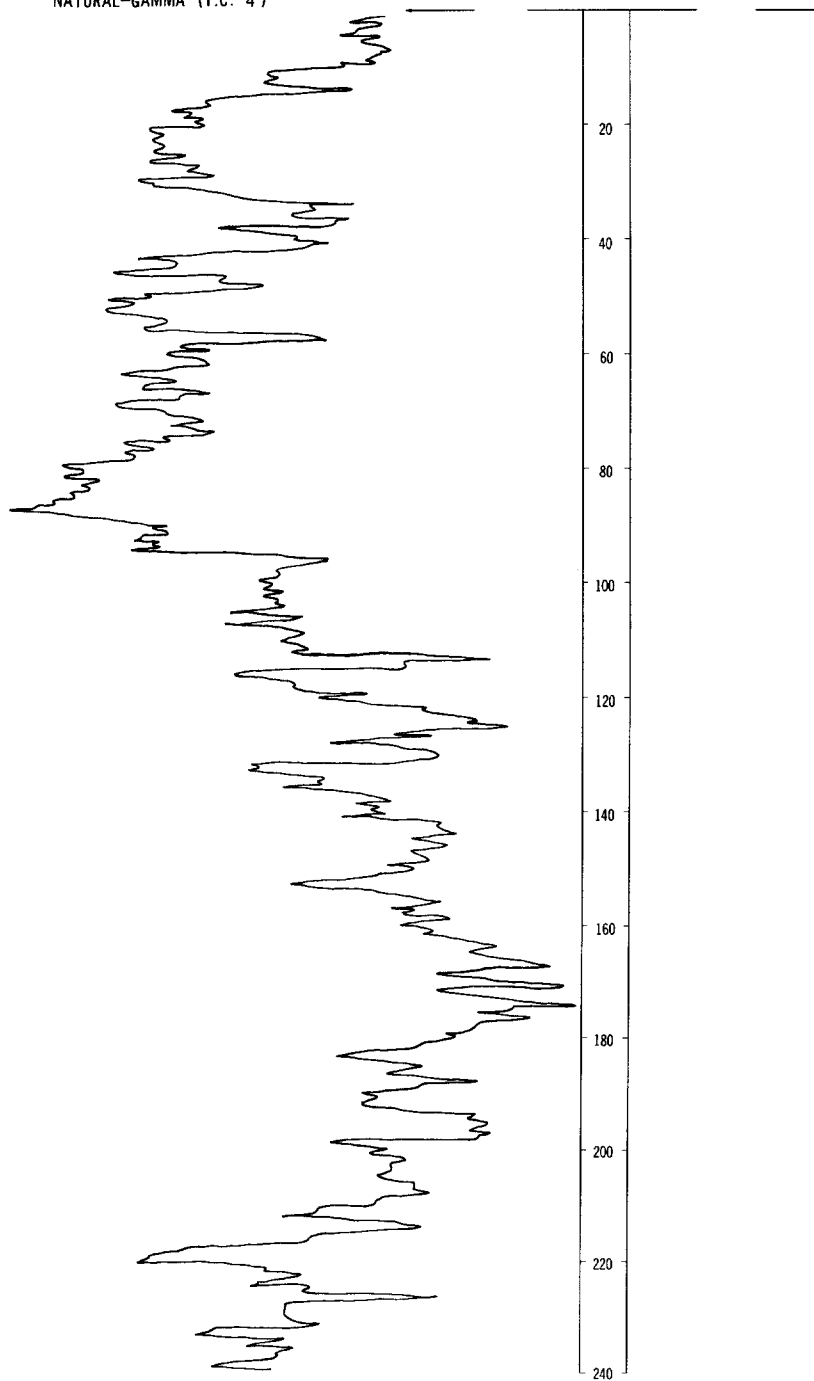
LOCATION: 139-084-27BBC

DATE DRILLED: September 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4760, Continued

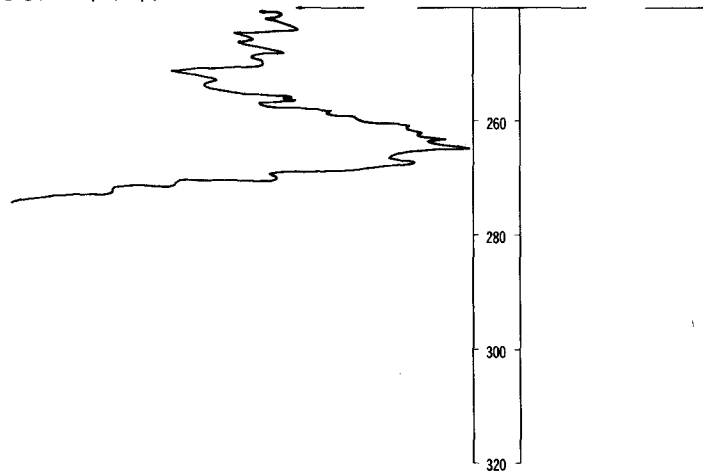
LOCATION: 139-84-27BBC

DATE DRILLED: September 1974

ALTITUDE: 1960
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



139-085-18DCC
NDSWC 4643

Altitude: 2015 feet

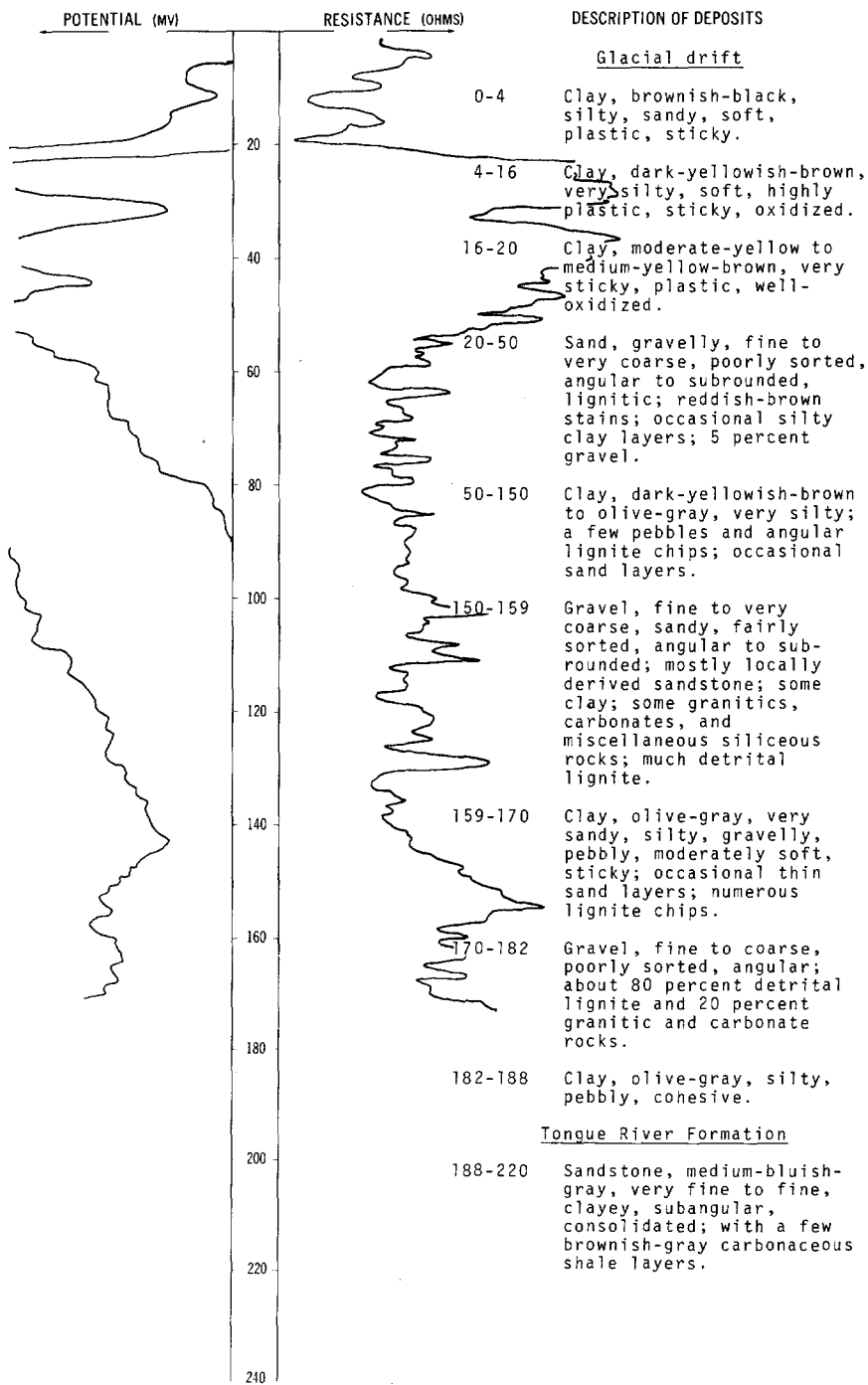
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow-brown, very silty, sandy, pebbly, soft, sticky, well-oxidized-----	2	2
Tongue River Formation:			
	Siltstone, moderate-yellow, slightly clayey, moderately indurated, well-oxidized-----	12	14
	Limestone, light-gray, hard-----	1	15
	Siltstone, dark-yellowish-brown, clayey, moderately indurated, oxidized; with medium-gray mottling-----	6	21
	Lignite, brownish-black, oily; shale partings-----	1½	22½
	Claystone, medium-gray to greenish-gray, silty, slightly bentonitic, noncalcareous, moderately indurated-----	17½	40

LOCATION: 139-085-18DCD

DATE DRILLED: May 1974

ALTITUDE: 2080
(FT, MSL)

DEPTH: 220
(FT)



Altitude: 2125 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow to moderate-yellowish-brown, very silty, sandy, soft, plastic, oxidized-----	2	2
Tongue River Formation:			
	Siltstone, moderate-yellow, clayey, slightly indurated, oxidized-----	8	10
	Siltstone, medium-gray, clayey, moderately indurated; with yellow-brown mottling; limestone concretion at 14 feet-----	5	15
	Sandstone, medium-gray, very fine to fine, very clayey, silty, consolidated---	6	21
	Lignite, black, brittle; dark-brown carboniferous shale partings; some oily leonardite-----	2	23
	Claystone, medium-bluish-gray to greenish-gray, silty, bentonitic-----	7	30
	Sandstone, dark-yellowish-brown, very fine to fine, subangular, well-oxidized-----	5	35
	Claystone, greenish-gray, silty, calcareous, slightly bentonitic, moderately indurated-----	7	42
	Sandstone, bluish-gray, very fine to fine, slightly clayey, subangular, limy; fossiliferous (?)-----	4	46
	Claystone, medium-gray, very sandy, slightly calcareous, moderately indurated; with brownish-gray mottling-----	14	60

Altitude: 2160 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, dark-yellow-brown, very sandy, silty, slightly cohesive, oxidized-----	2	2
Sentinel Butte Formation:			
	Sandstone, yellow-brown, fine, subangular to subrounded, clean, quartzose, semiconsolidated, oxidized-----	18	20
	Claystone, yellow-brown, very sandy, silty, slightly indurated, oxidized-----	14	34
	Lignite, black, very hard, brittle-----	4	38
Tongue River Formation:			
	Siltstone, greenish-gray, siliceous, noncalcareous, indurated-----	8	46
	Siltstone, medium-light-gray to medium-gray, clayey, slightly sandy, noncalcareous, moderately indurated; a few light-brownish-gray shale layers-----	46	92
	Lignite, black, hard, brittle; carboniferous shale partings-----	2	94
	Claystone, medium-gray, sandy, silty, noncalcareous, moderately indurated; a few yellowish-gray limestone concretions-----	36	130
	Lignite, brownish-black to black, shaly, moderately soft, brittle-----	4	134
	Claystone, medium-gray, silty, slightly calcareous, moderately indurated; a few thin dark-brown carboniferous shale layers and lignite stringers; sandy in places-----	10	144
	Sandstone, medium-light-gray, very fine to fine, silty, micaceous, limey, well-cemented, consolidated-----	12	156
	Siltstone, light-gray, clayey, highly calcareous, limey, slightly indurated-----	8	164
	Lignite, black, hard, brittle; shale partings-----	3	167
	Claystone, brownish-gray, silty, moderately indurated; occasional limestone and sandstone concretions-----	35	202
	Sandstone, light-bluish-gray, very fine to fine, clayey, calcareous, slightly cemented-----	5	207
	Lignite, black to brownish-black, brittle; a few thin carboniferous shale partings-----	9	216
	Shale, dark-brown to brownish-gray, silty, calcareous, moderately indurated-----	4	220
	Lignite, black, brittle-----	3	223
	Shale, brownish-gray, moderately sandy, carbonaceous, moderately indurated-----	30	253

139-085-21BAC, Continued
 NDSWC 4652

Altitude: 2160 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation, Continued:			
	Lignite, brownish-black to black, oily, soft; leonardite-----	2	255
	Claystone, greenish-gray, silty, bentonitic, noncalcareous, moderately indurated-----	11	266
	Sandstone, light-bluish-gray, very fine to medium, subangular to subrounded, micaceous, lignitic; a few thin claystone interbeds-----	74	340

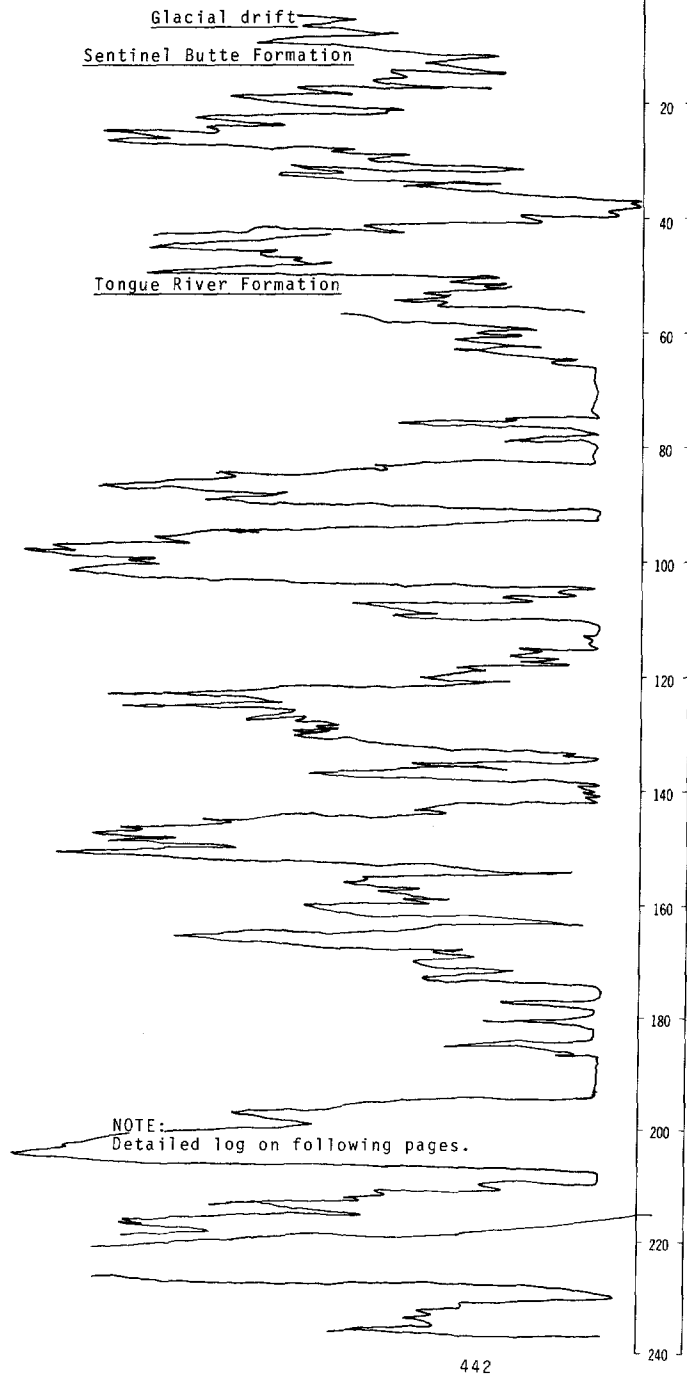
LOCATION: 139-085-22BCB

DATE DRILLED: June 1974

ALTITUDE: 2162
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4653, Continued

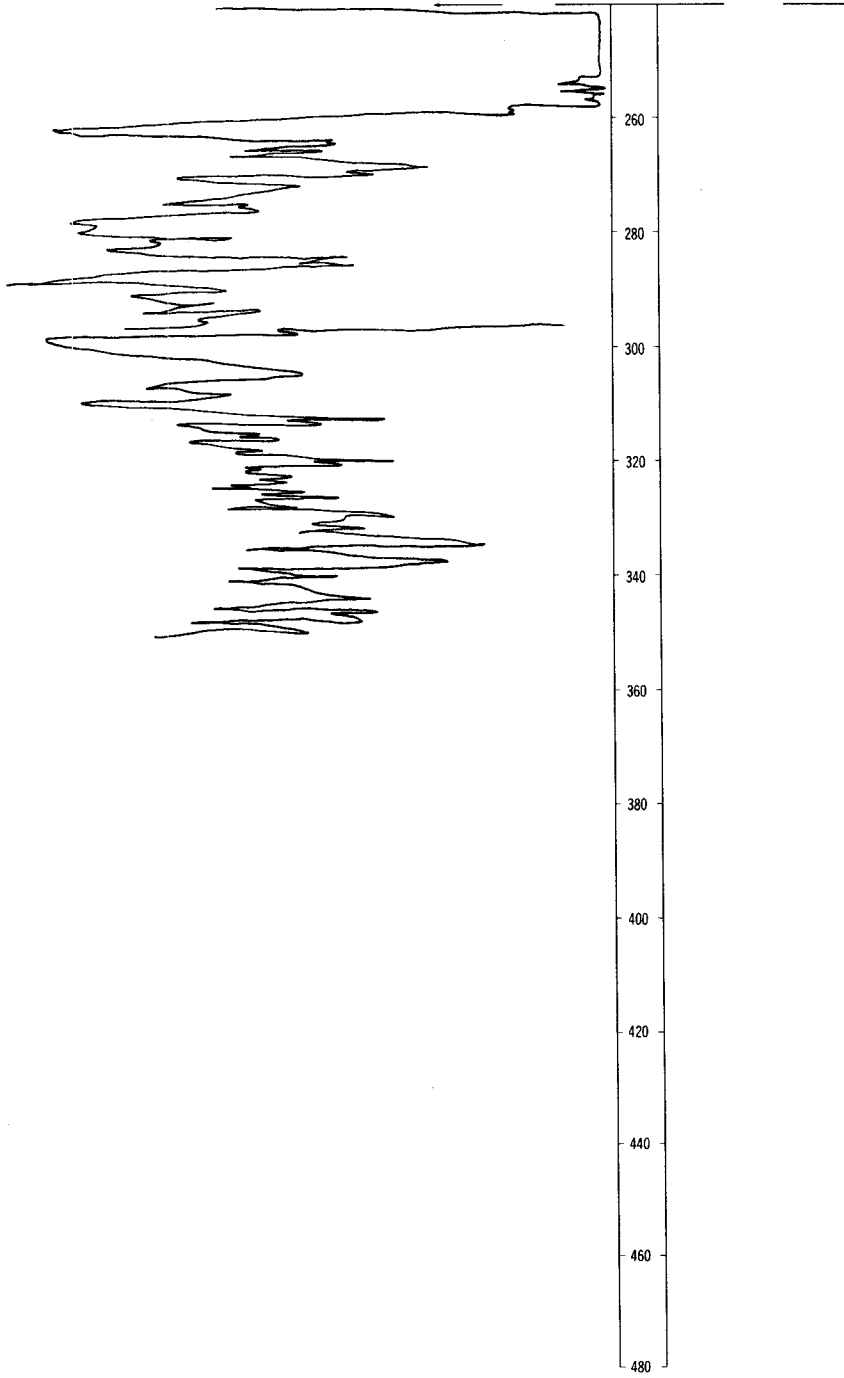
LOCATION: 139-085-22BCB

DATE DRILLED: June 1974

ALTITUDE: 2162
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



139-085-22BCB, Continued
NDSWC 4653

Altitude: 2162 feet

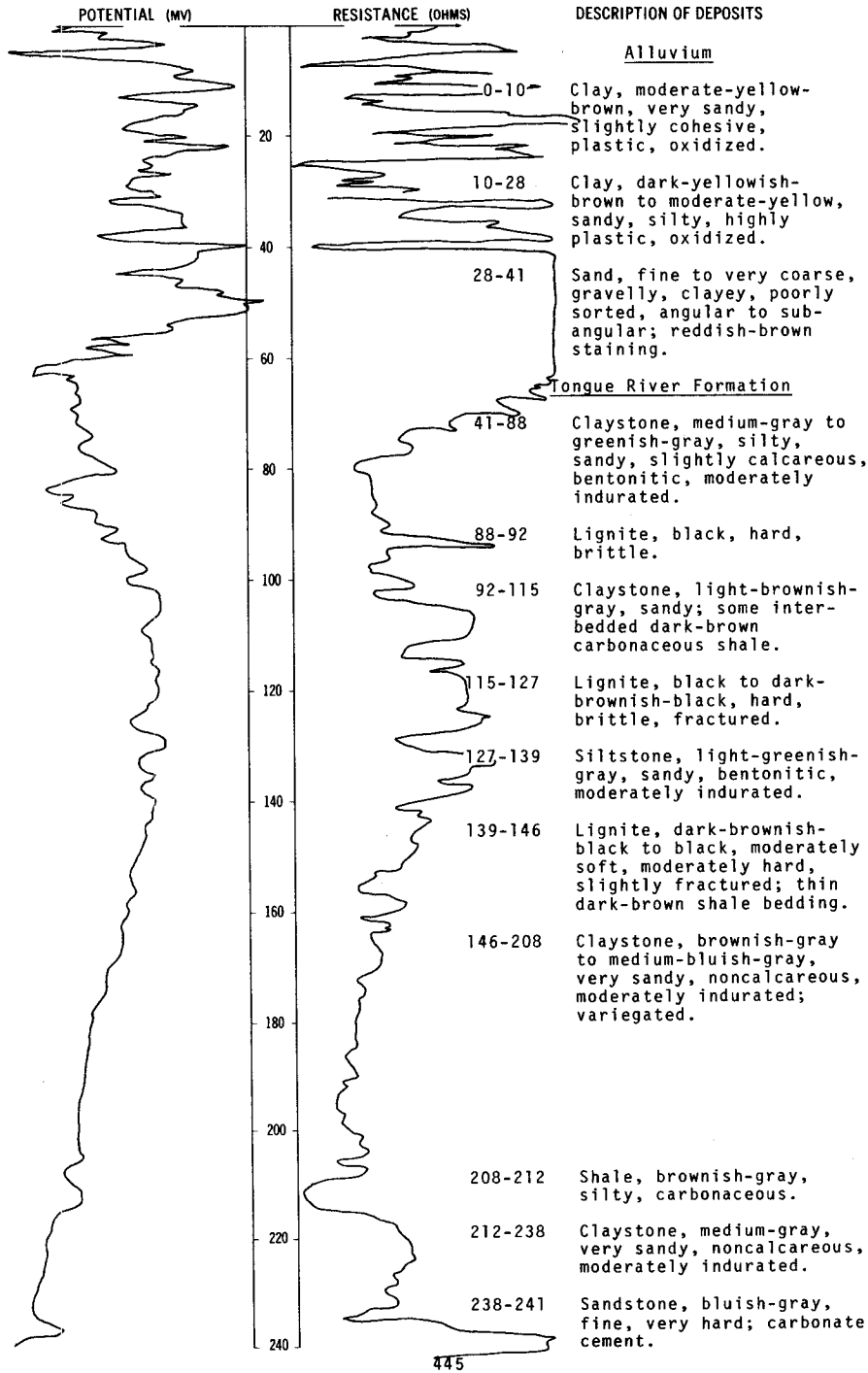
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, brownish-black, very silty-----	1	1
Sentinel Butte Formation:			
	Sandstone, moderate-yellow-brown, very fine to fine, silty, clayey, subangular, semiconsolidated, oxidized-----	42	43
	Lignite, brownish-black to black, carbonaceous, hard, brittle; shale partings-----	7	50
Tongue River Formation:			
	Siltstone, greenish-gray to medium-gray, siliceous, bentonitic, noncalcareous, moderately indurated; some thin limey sandstone concretions and lignite stringers-----	45	95
	Sandstone, bluish-gray, very fine, clayey, silty, micaceous, well-consolidated-----	8	103
	Claystone, medium-gray, silty, noncalcareous, moderately indurated; with light-brownish-gray bedding-----	21	124
	Lignite, black to dark-brown; interbedded with medium-gray sandy siltstone-----	4	128
	Claystone, medium-light-gray to light-brownish-gray, sandy, silty, noncalcareous, moderately indurated; a few limey siltstone concretions and thin lignite stringers-----	18	146
	Lignite, black, hard, brittle; shale bedding-----	7	153
	Claystone, light-brownish-gray, very sandy, carbonaceous, moderately indurated-----	68	221
	Lignite, black to brownish-black, soft, brittle; siltstone and carbonaceous shale interbeds-----	10	231
	Claystone, brownish-gray, silty, slightly carbonaceous, noncalcareous-----	29	260
	Claystone, medium-gray to greenish-gray, very sandy to sandy, noncalcareous, moderately cohesive-----	16	276
	Sandstone, light-greenish-gray, very fine to fine, clayey, subangular to subrounded, micaceous-----	8	284
	Claystone, brownish-gray to medium-gray, silty, moderately indurated, sticky-----	12	296
	Sandstone, medium-bluish-gray, very fine to fine, slightly clayey, subangular to subrounded, micaceous, semiconsolidated; cemented from 248 to 256 feet-----	60	356
	Siltstone, medium-light-gray, siliceous, slightly calcareous, limey, moderately indurated-----	4	360

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



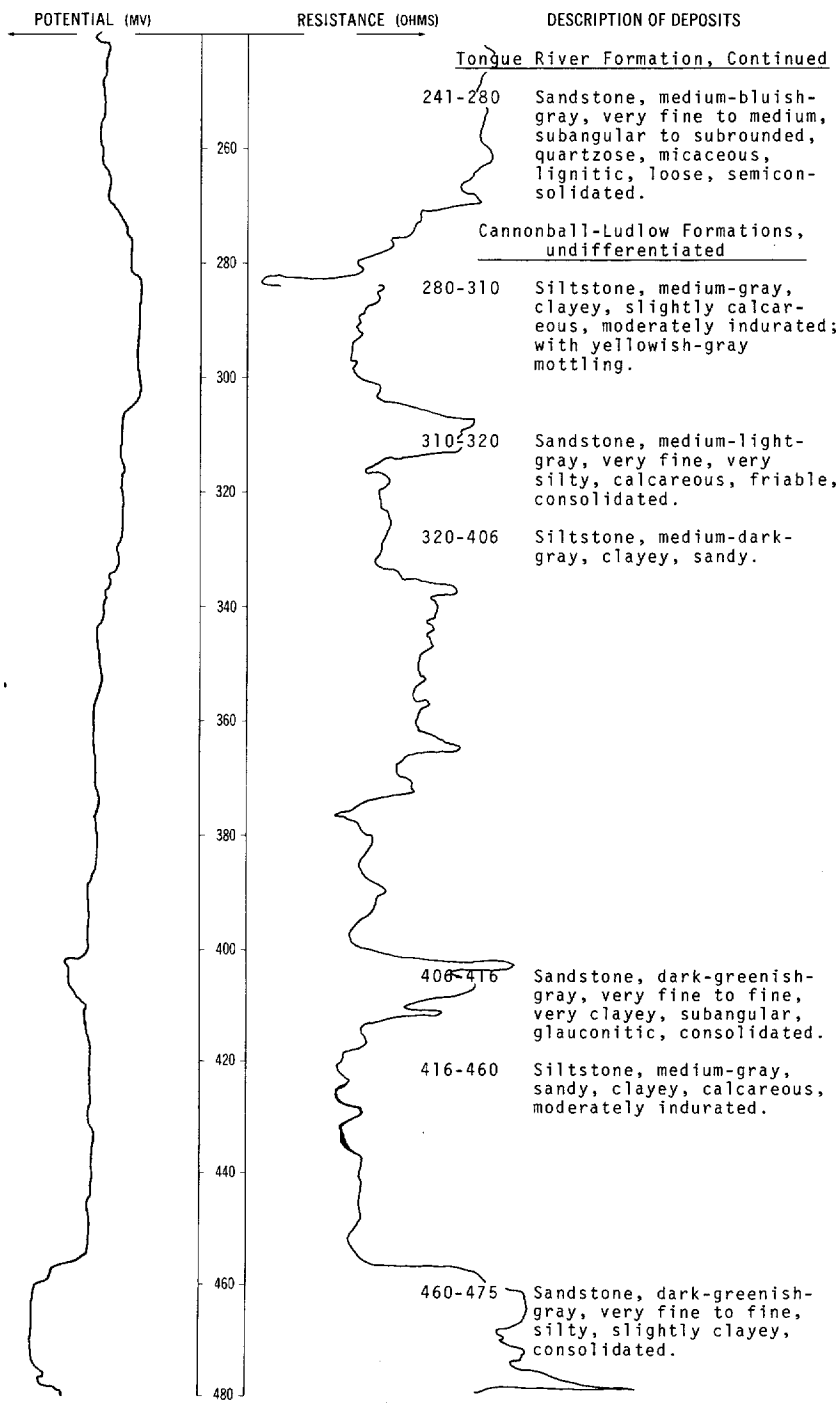
NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



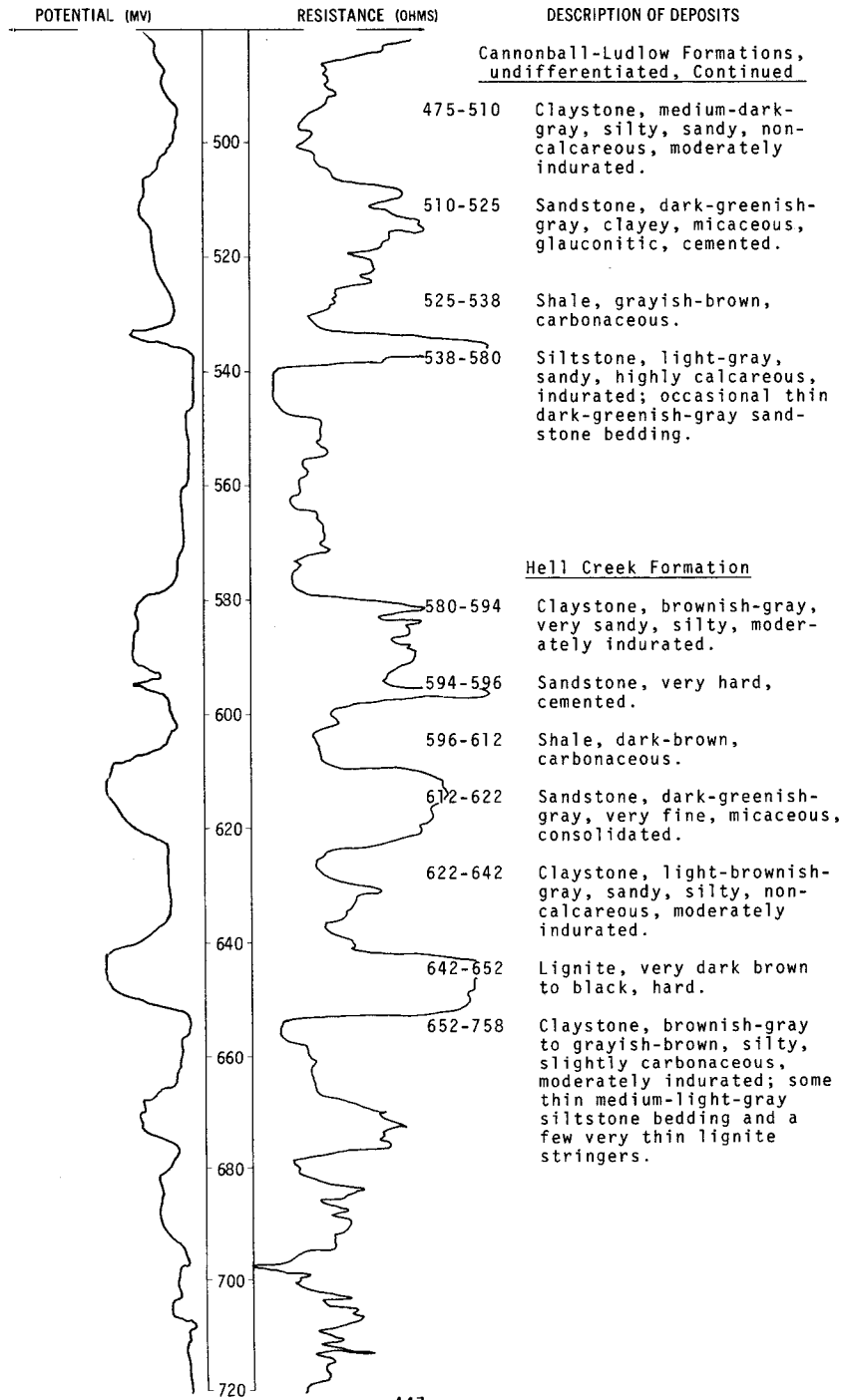
NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



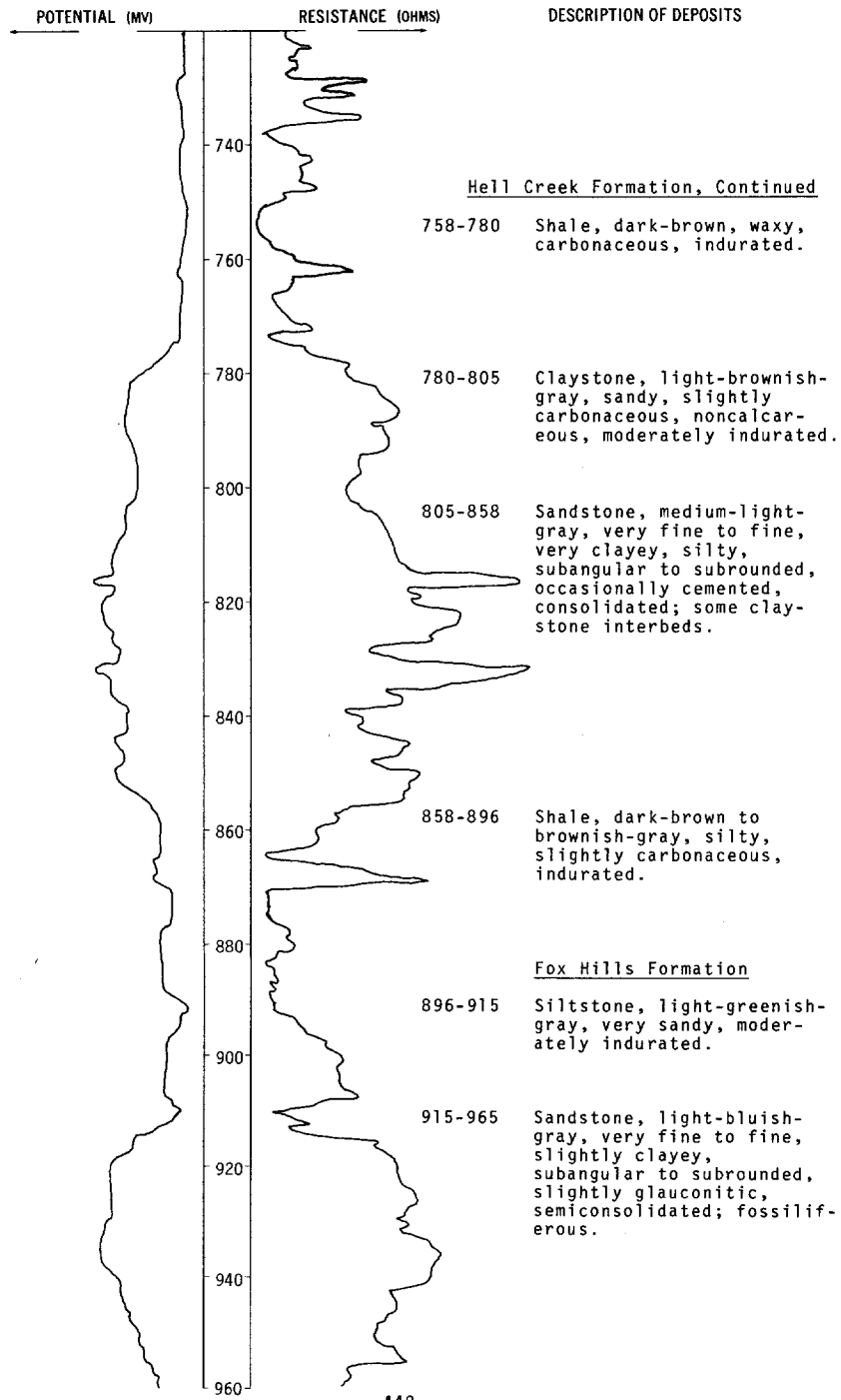
NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



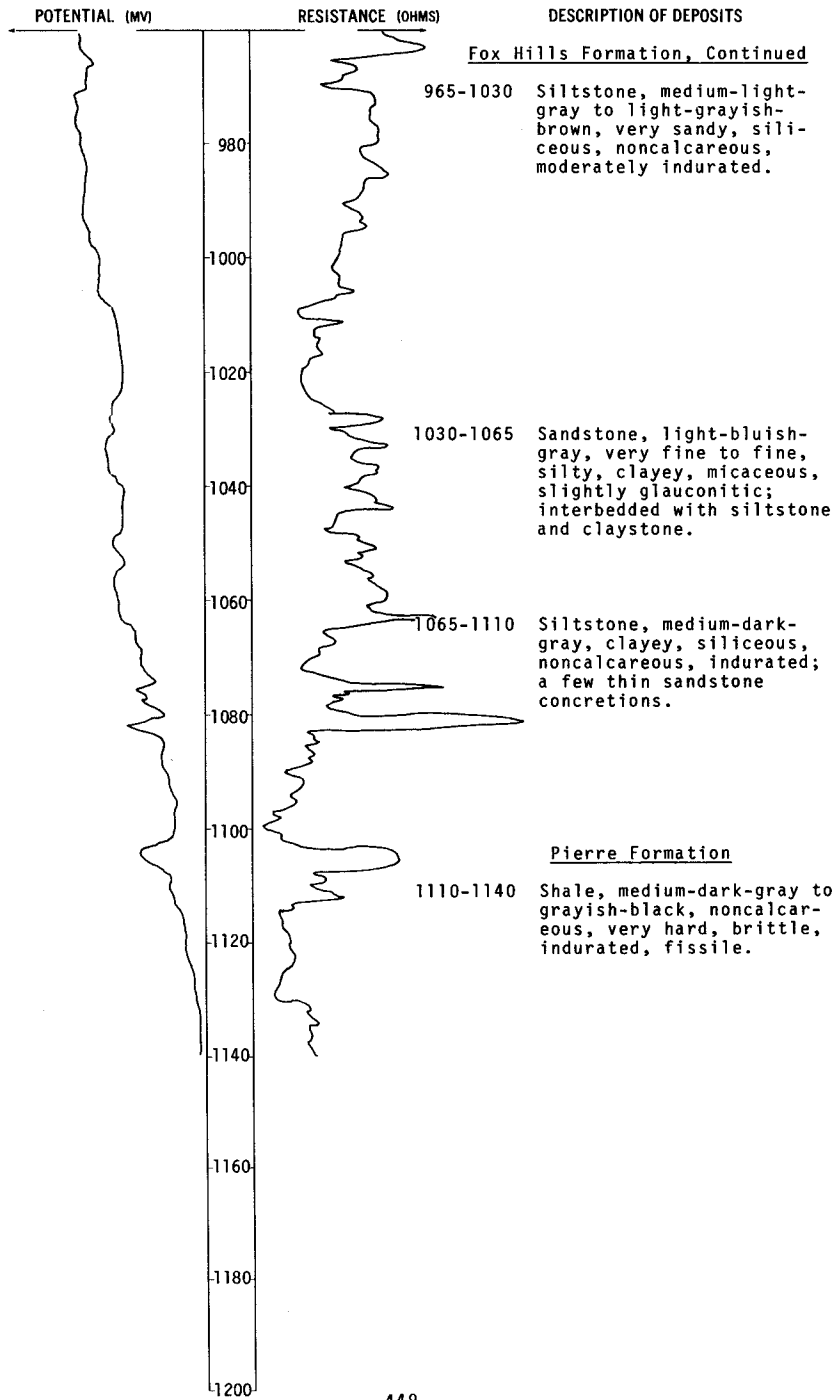
NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



NDSWC 4651, 4651A, 4651B, Continued

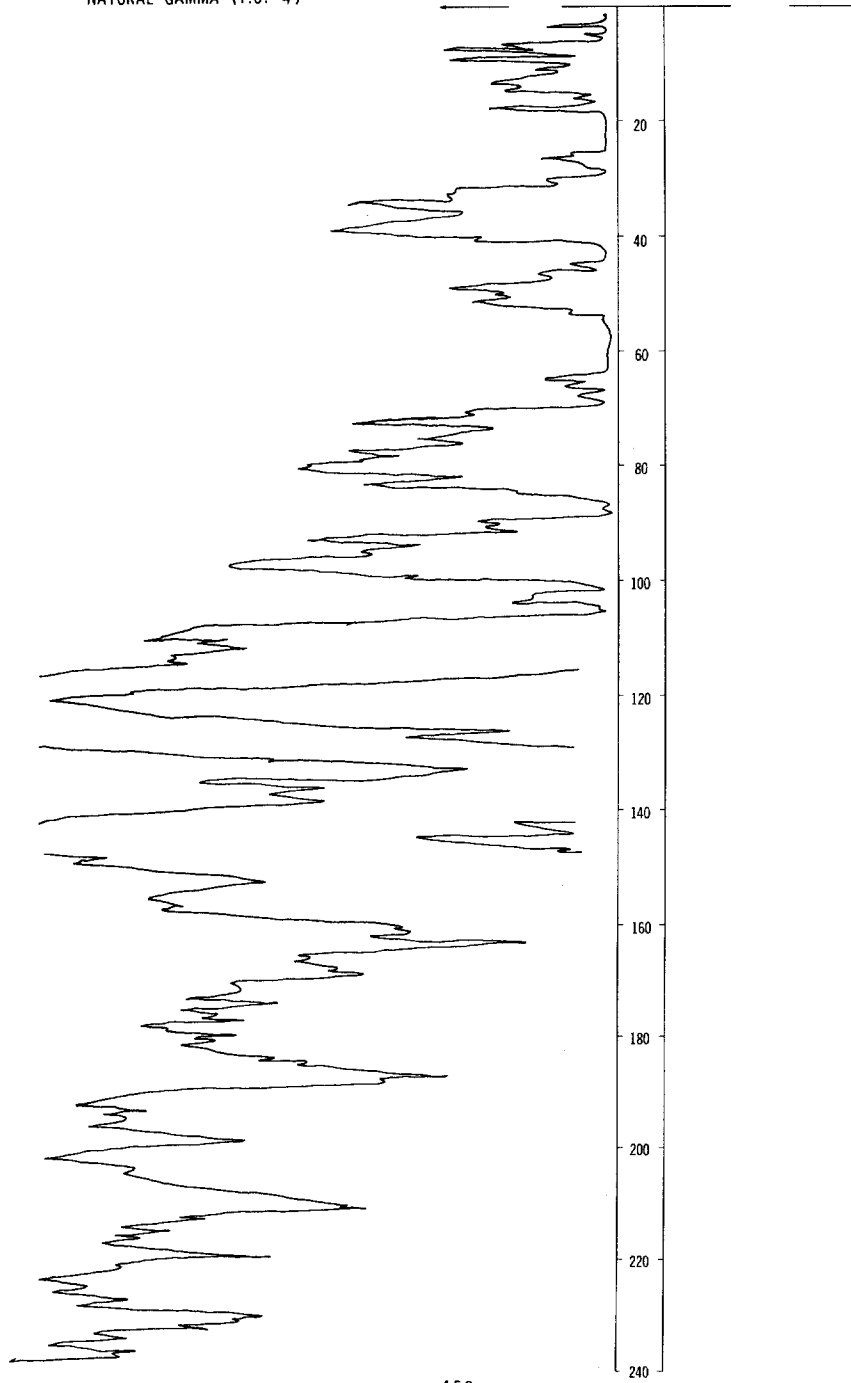
LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4651, 4651A, 4651B, Continued

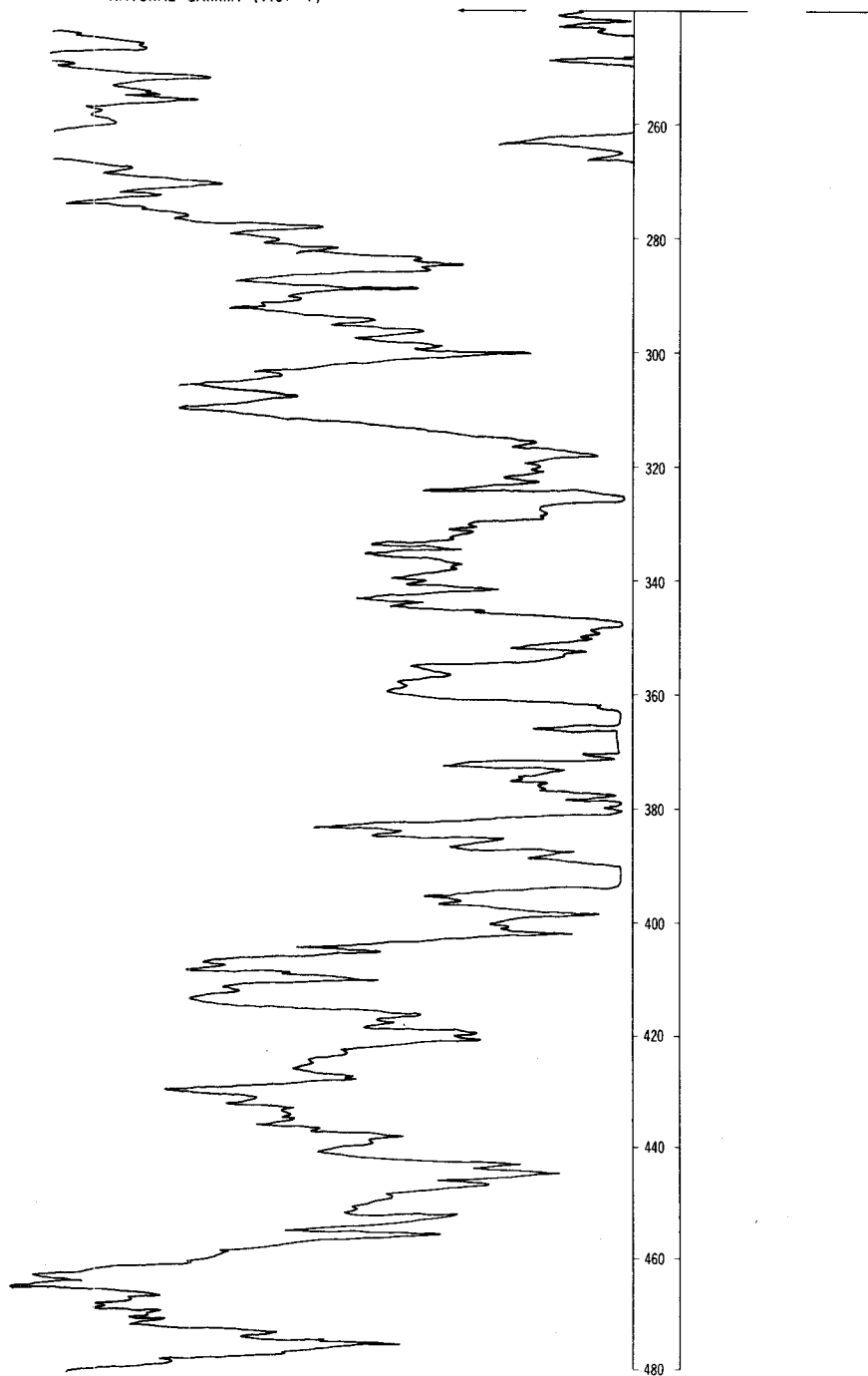
LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)

NATURAL-GAMMA (T.C. 4)



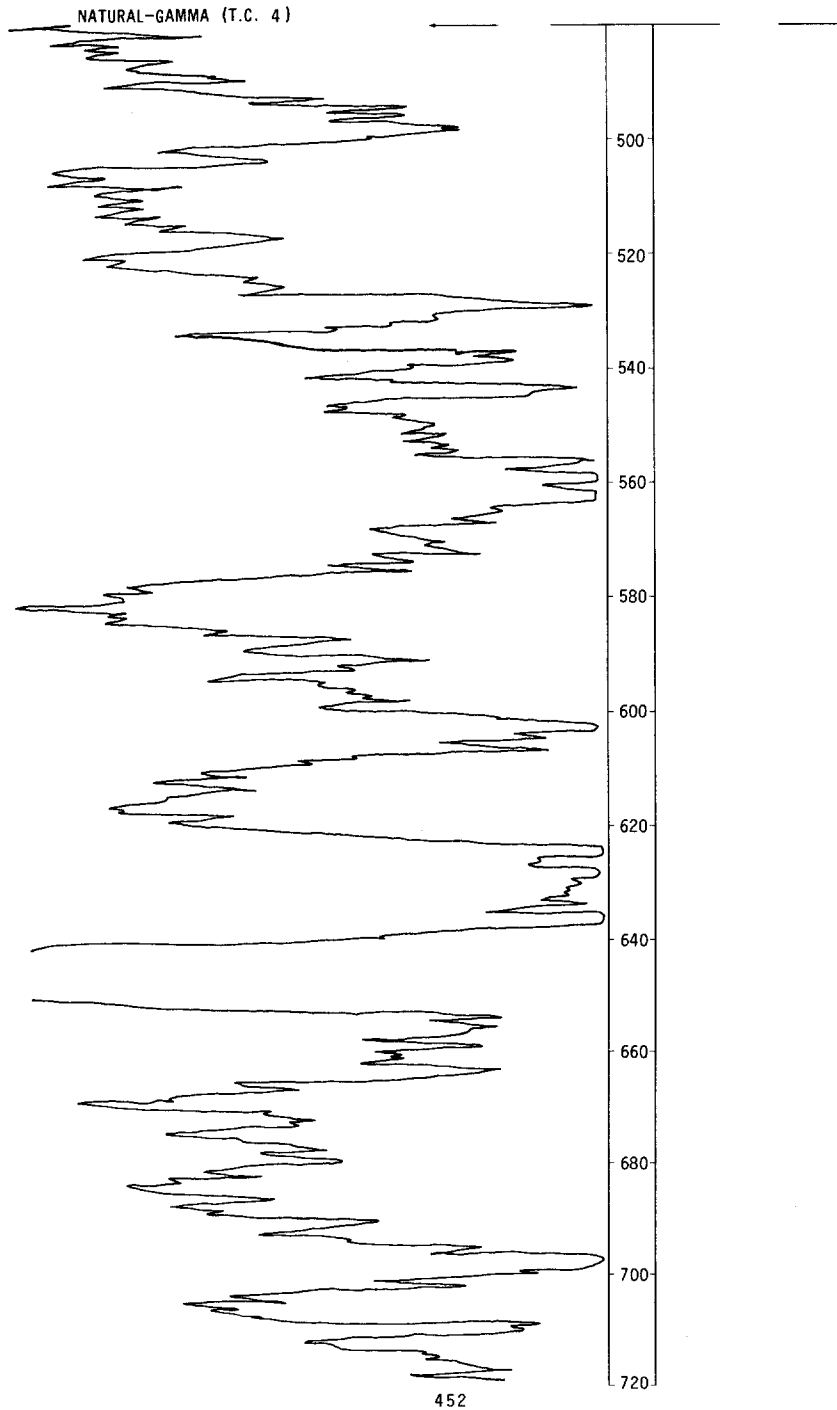
NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)



NDSWC 4651, 4651A, 4651B, Continued

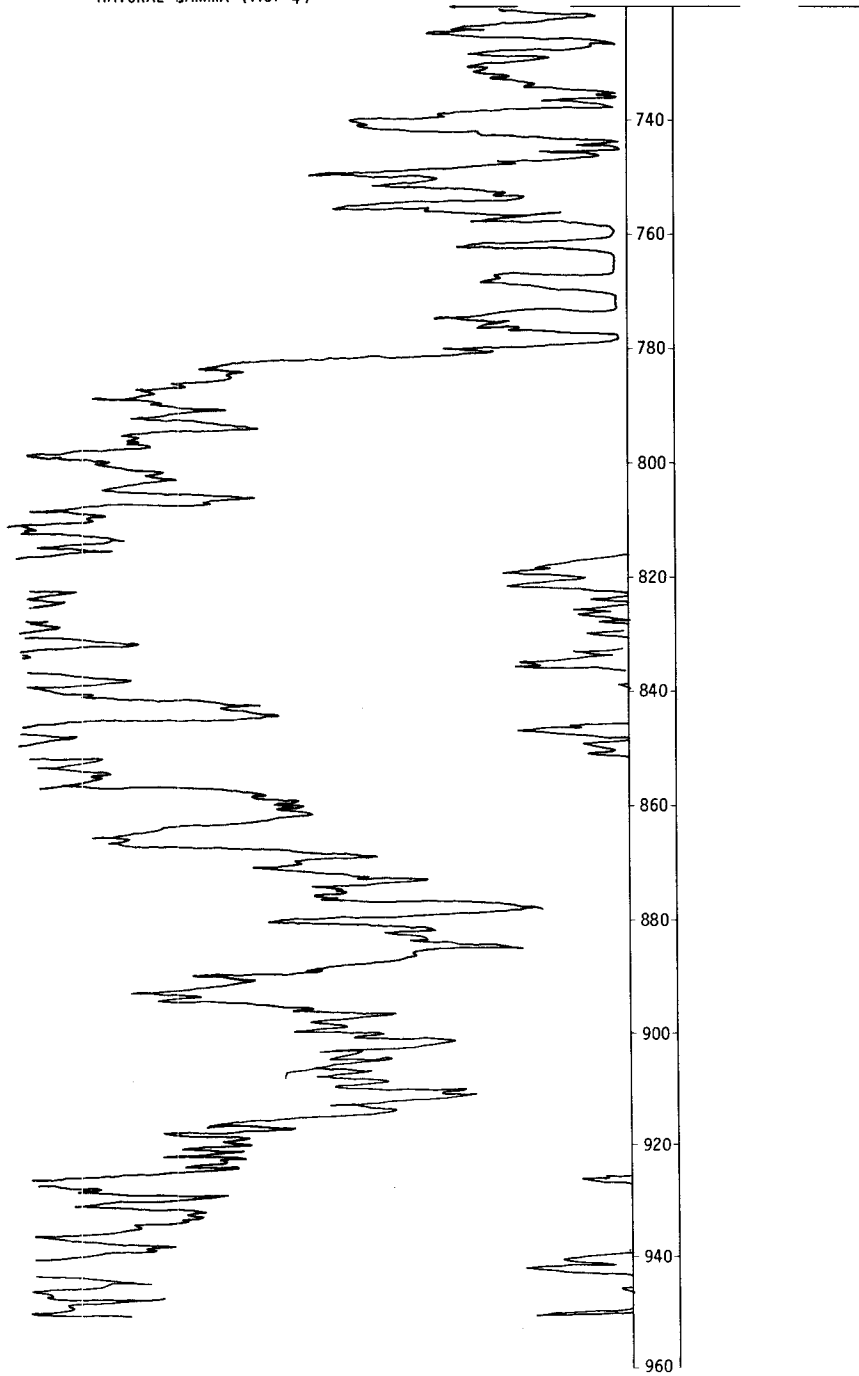
LOCATION: 139-085-30AAB1, 2, 3

DATE DRILLED: May 1974

ALTITUDE: 2065
(FT, MSL)

DEPTH: 1140
(FT)

NATURAL-GAMMA (T.C. 4)

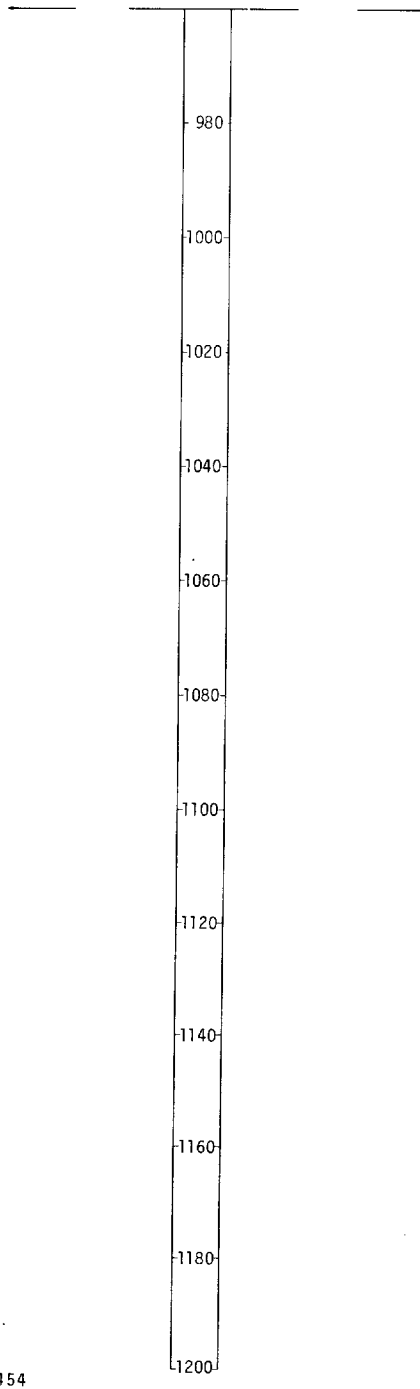


NDSWC 4651, 4651A, 4651B, Continued

LOCATION: 139-085-30AAB1, 2, 3
ALTITUDE: 2065
(FT, MSL)

DATE DRILLED: May 1974
DEPTH: 1140
(FT)

NATURAL-GAMMA (T.C. 4)



139-086-22CCD2
NDSWC 4659

Altitude: 2035 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow to dark-yellow-brown, very silty, sandy, soft, moderately cohesive, plastic, oxidized---	15	15
	Gravel, fine to coarse, sandy, clayey, poorly sorted, angular, oxidized-----	4	19
	Sand, medium to very coarse, moderately well sorted, angular to subangular; about 30 percent fine gravel-----	16	35
Tongue River Formation:			
	Siltstone, medium-light-gray, sandy, calcareous, moderately indurated-----	25	60

139-086-22CCD3
NDSWC 4660

Altitude: 2040 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow-brown to moderate-yellow, very silty, sandy, cohesive, plastic, oxidized-----	15	15
	Gravel, fine to very coarse, sandy, poorly sorted, angular to subrounded, oxidized-----	10	25
	Clay, dark-yellowish-brown, silty, sandy, pebbly, cohesive, oxidized-----	5	30
	Clay, olive-gray, sandy, pebbly, cohesive, moderately plastic; angular detrital lignite fragments-----	4	34
Tongue River Formation:			
	Siltstone, medium-light-gray, sandy, calcareous, moderately indurated; light-brownish-gray mottling; a few thin lignite stringers-----	24	58
	Lignite, black, hard, brittle-----	2	60

139-086-25DDB
NDSWC 4648

Altitude: 2045 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow-brown, silty, sandy, plastic, sticky, oxidized-----	15	15
	Sand, fine to very coarse, poorly sorted, subangular to subrounded, lignitic; stained reddish brown; occasional clay layers; about 25 percent gravel-----	33	48
	Gravel, fine to coarse, sandy, poorly sorted, angular to subrounded, oxidized; stained reddish brown-----	4	52
Tongue River Formation:			
	Claystone, medium-gray, silty, calcareous, moderately indurated-----	8	60

NDSWC 4661

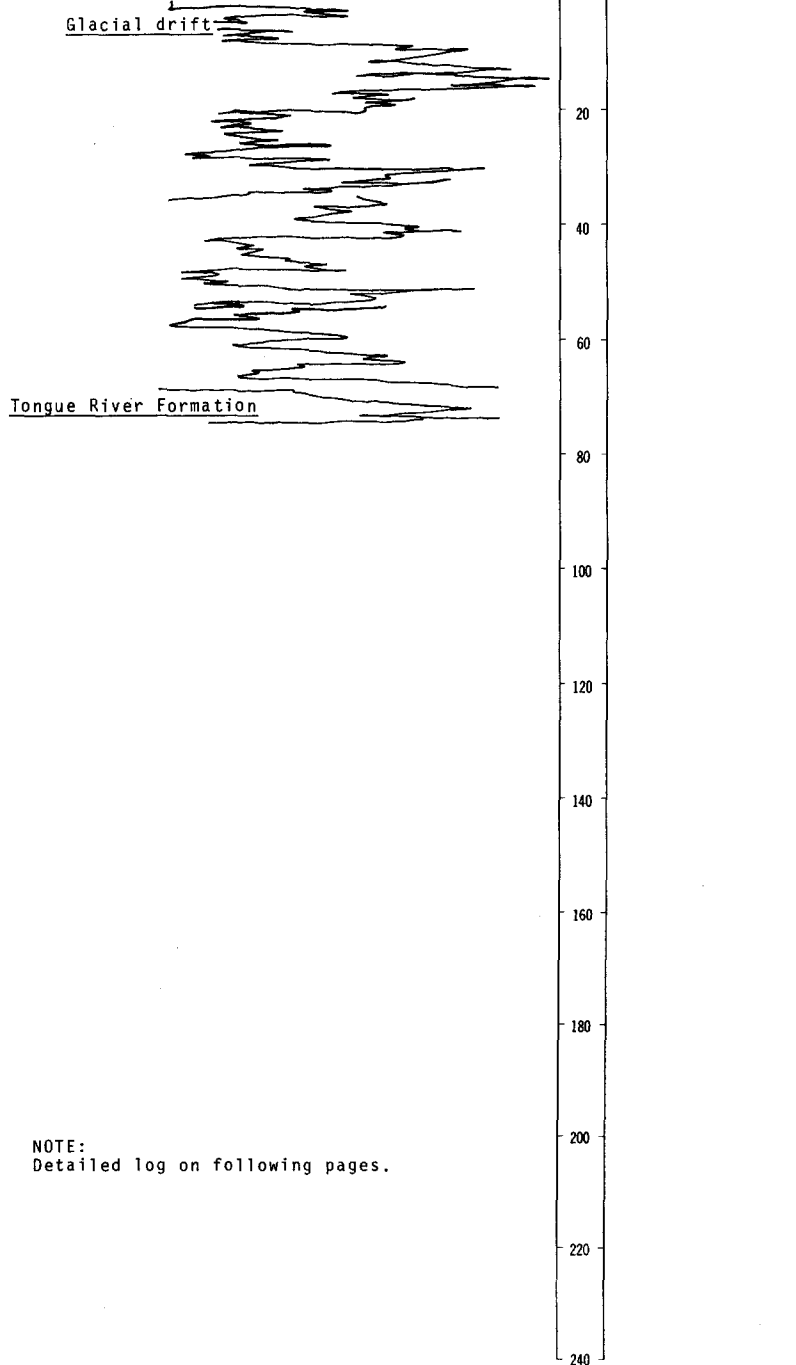
LOCATION: 139-086-27BAA

DATE DRILLED: June 1974

ALTITUDE: 2045
(FT, MSL)

DEPTH: 100
(FT)

NATURAL-GAMMA (T.C. 4)



NOTE:
Detailed log on following pages.

139-086-27BAA, Continued
NDSWC 4661

Altitude: 2045 feet

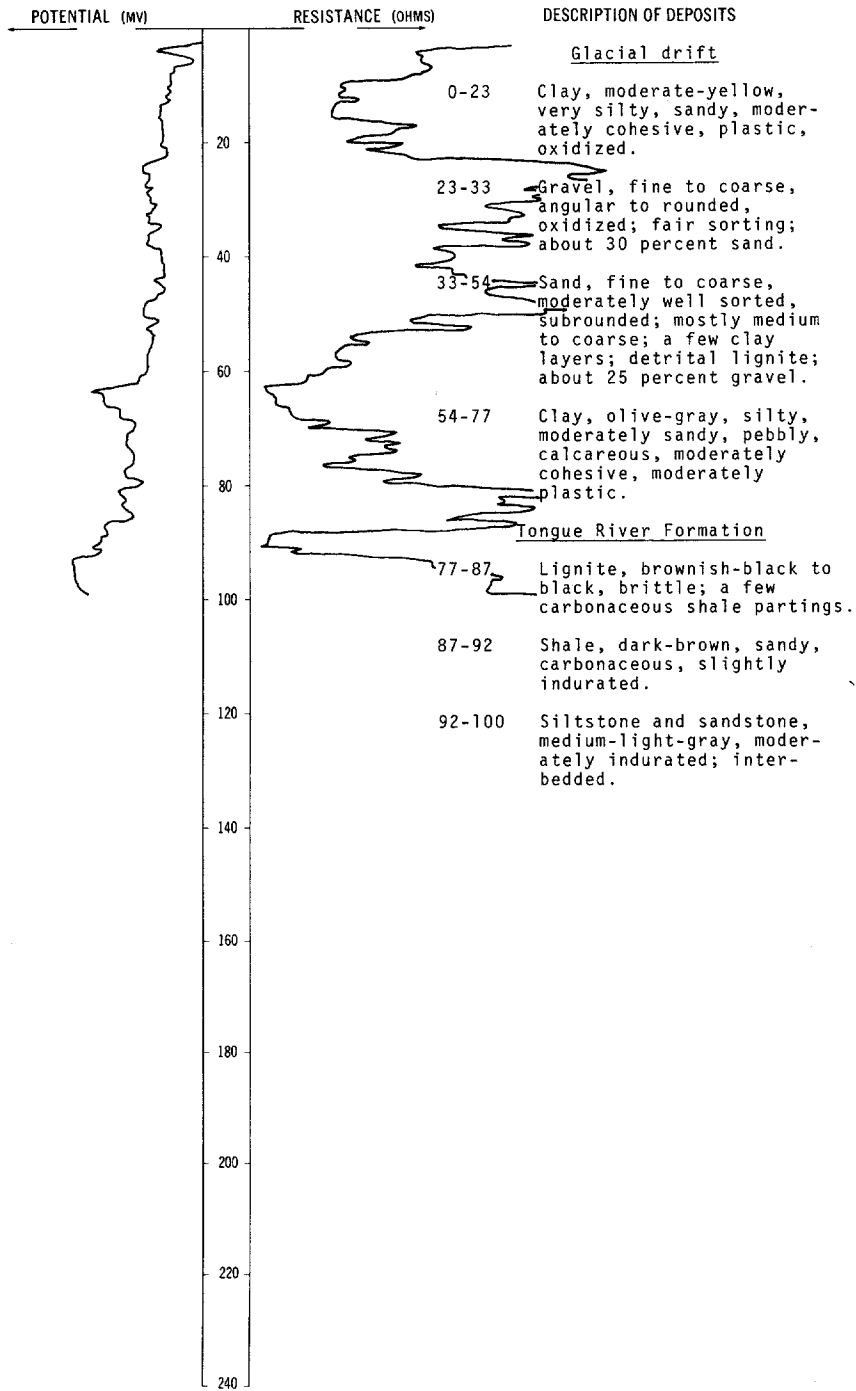
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellow to moderate-yellow-brown, very silty, sandy, plastic, oxidized-----	27	27
	Gravel, fine to coarse, clayey, poorly sorted, oxidized; about 30 percent sand-----	5	32
	Sand, fine to very coarse, gravelly, angular to subrounded, oxidized; fair sorting; dark-yellow staining; clay layers-----	12	44
	Gravel, fine to coarse, angular to well-rounded, loose; fair sorting; cobble-sized material; some thin clay stringers; detrital lignite; about 40 percent sand; about 60 percent brownish western silicates, 30 percent local sandstone and siltstone, and 10 percent granitic and metamorphic rocks-----	26	70
Tongue River Formation:			
	Siltstone, medium-light-gray, clayey, calcareous, moderately indurated, tight-----	8	78
	Lignite, black to brownish-black, hard, brittle; a few thin carbonaceous shale partings-----	12	90
	Claystone, brownish-gray, silty, noncalcareous, moderately indurated-----	10	100

LOCATION: 139-086-27BAB

DATE DRILLED: June 1974

ALTITUDE: 2040
(FT, MSL)

DEPTH: 100
(FT)

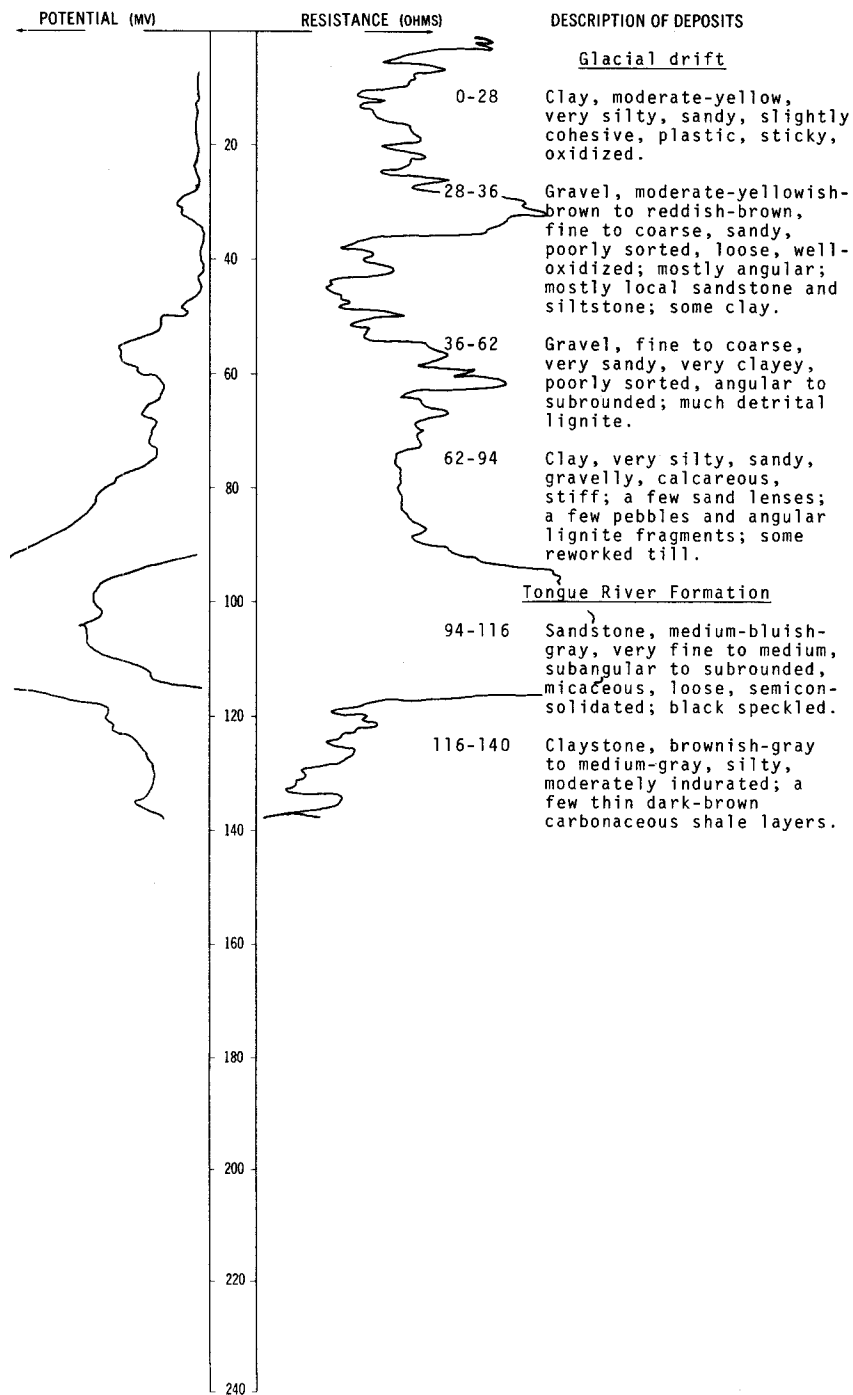


LOCATION: 139-086-34ACD

DATE DRILLED: June 1974

ALTITUDE: 2030
(FT, MSL)

DEPTH: 140
(FT)

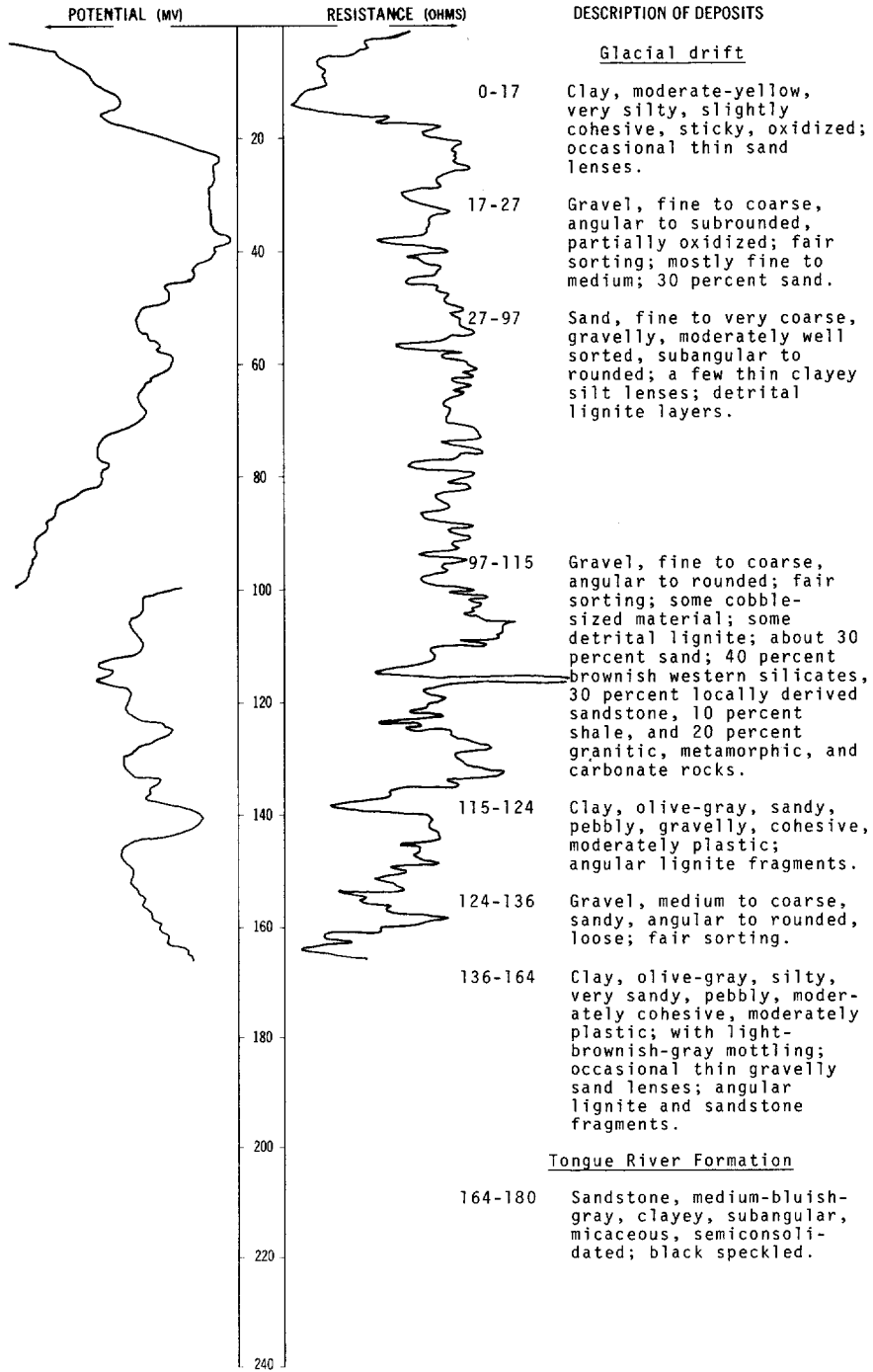


LOCATION: 139-086-34ADC

DATE DRILLED: June 1974

ALTITUDE: 2010
(FT, MSL)

DEPTH: 180
(FT)



NDSWC 4654, Continued

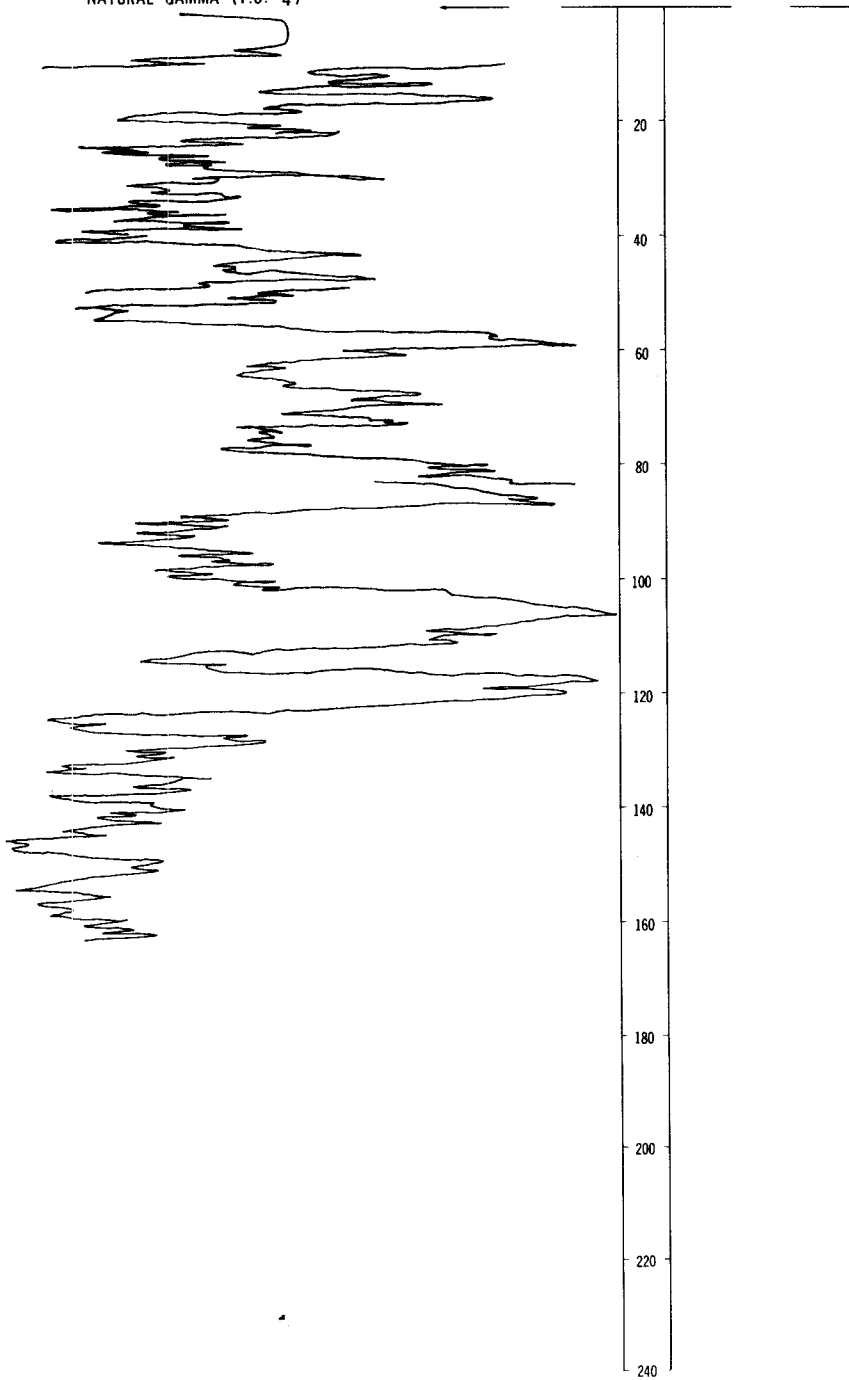
LOCATION: 139-086-34ADC

DATE DRILLED: June 1974

ALTITUDE: 2010
(FT, MSL)

DEPTH: 180
(FT)

NATURAL-GAMMA (T.C. 4)

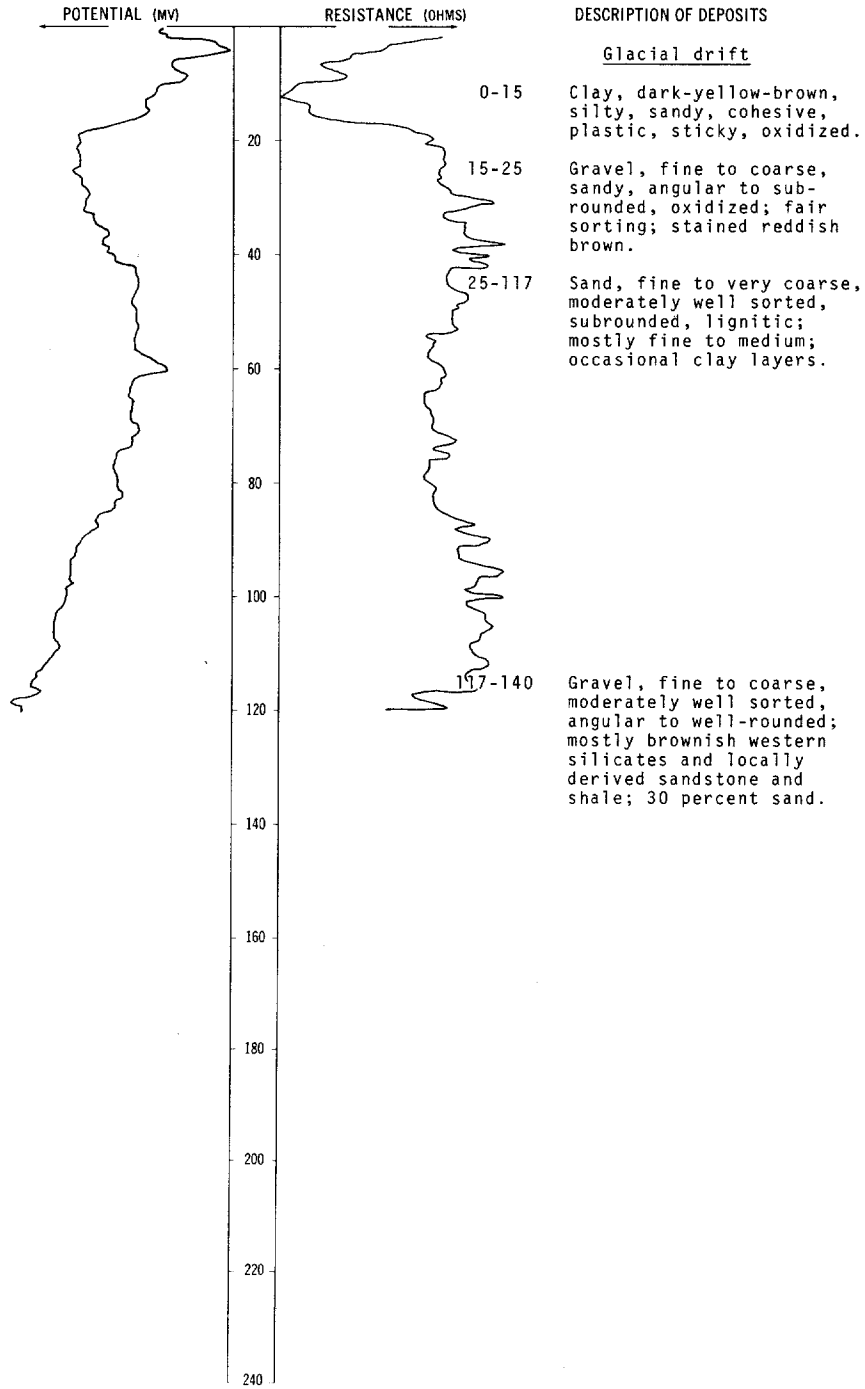


LOCATION: 139-086-35BCC

DATE DRILLED: May 1974

ALTITUDE: 2010
(FT, MSL)

DEPTH: 140
(FT)

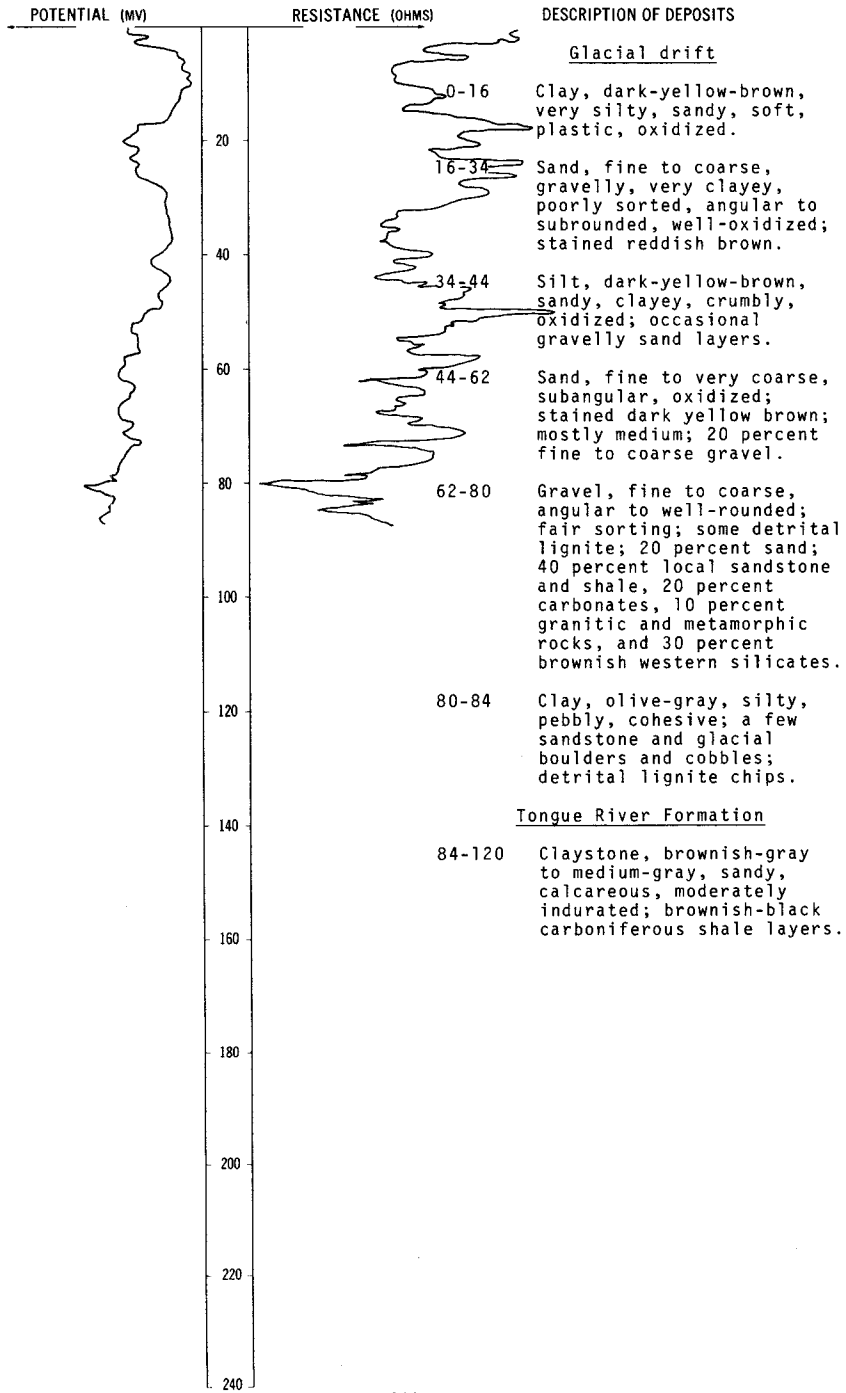


LOCATION: 139-086-35BDA

DATE DRILLED: May 1974

ALTITUDE: 2015
(FT, MSL)

DEPTH: 120
(FT)

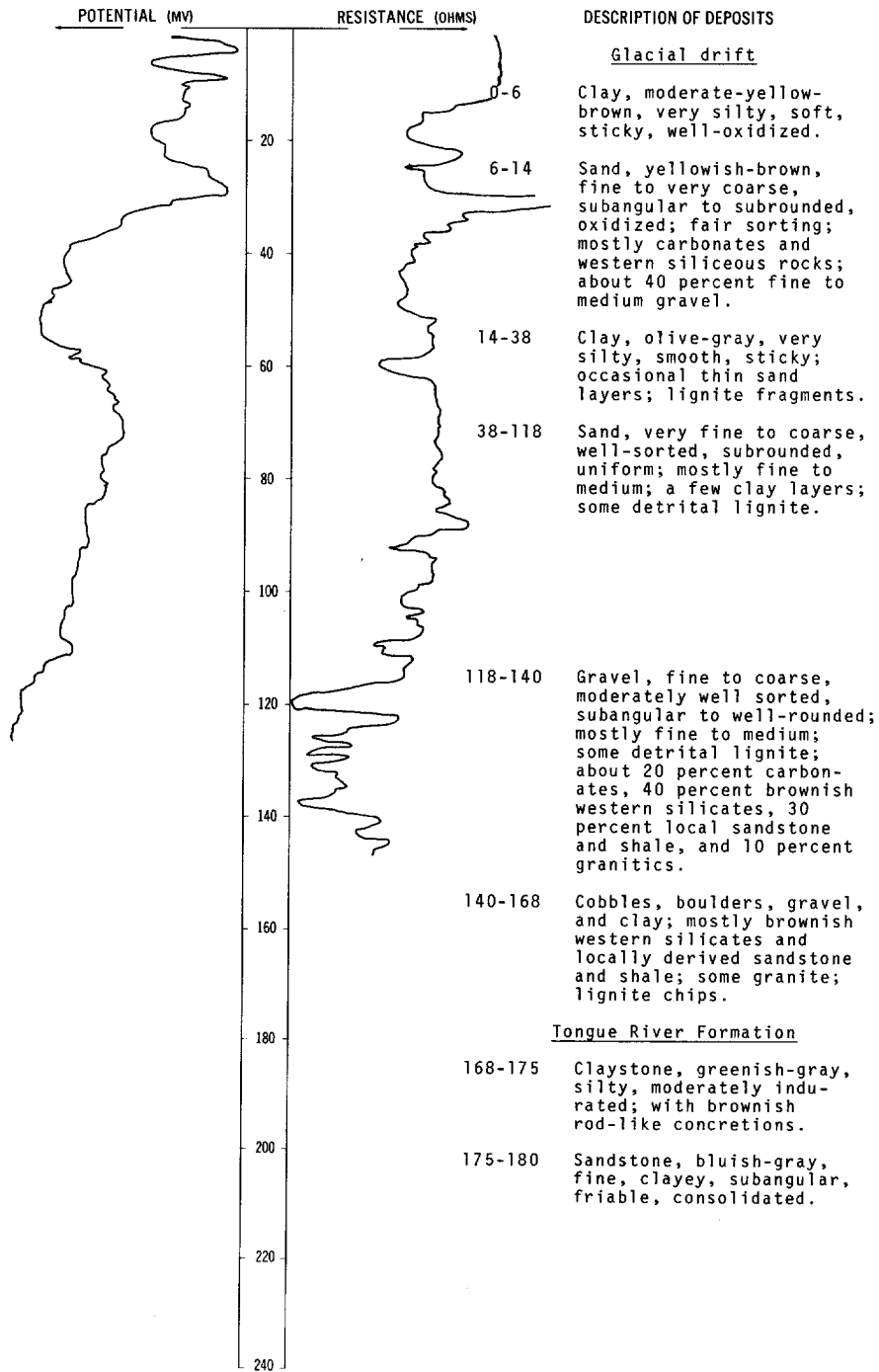


LOCATION: 139-086-35CBC

DATE DRILLED: May 1974

ALTITUDE: 2005
(FT, MSL)

DEPTH: 180
(FT)

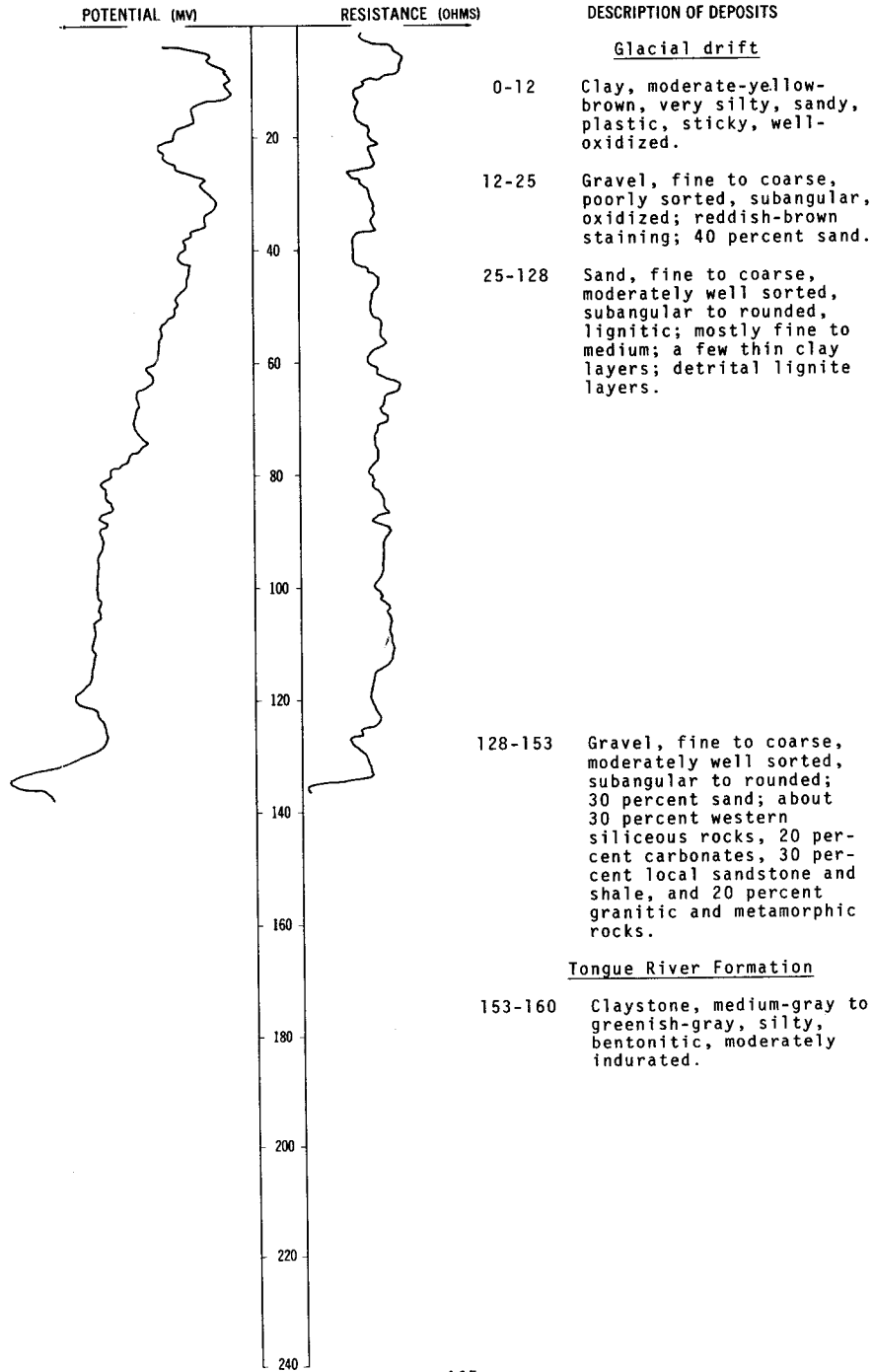


LOCATION: 139-086-35CCC

ALTITUDE: 1995
(FT, MSL)

DATE DRILLED: May 1974

DEPTH: 160
(FT)



139-087-12CCB
U.S. Geological Survey Conservation Division 17

Altitude: 2188 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Sandstone, light-gray, fine-grained; lignite stringer at 33.4-33.7 feet-----	35	35
	Siltstone, medium-gray-----	5	40
	Sandstone and claystone-----	20	60
	Claystone and siltstone-----	13.8	73.8
	Siltstone; lignite at 76.5 feet-----	5.9	79.7
	Lignite-----	2	81.7
	Lignite and claystone; base of lignite at 83.4 feet-----	2.7	84.4
	Lignite and claystone; lignite at 87.3-91.1 feet-----	8	92.4
	Lignite, claystone, and sandstone-----	10.5	102.9
	Claystone; lignite at 117.5-119.6 feet-----	20	122.9
Tongue River Formation:			
	Claystone, medium-gray; lignite at 131.6-133.4 feet-----	10	132.9
	Lignite, claystone, and siltstone; lignite at 148.7-150 feet-----	18	150.9
	Claystone; lignite stringers-----	19.2	170.1
	Claystone-----	10.5	180.6
	Siltstone, gray-----	12.4	193
	Sandstone, dark-gray-----	20	213
	Sandstone and siltstone-----	20	233
	Claystone-----	1.2	234.2
	Siltstone, gray-----	11.8	246
	Siltstone and sandstone-----	17	263
	Sandstone, dark-gray-----	14.5	277.5
	Sandstone, dark-gray-----	17.9	295.4
	Sandstone and claystone-----	10	305.4
	Claystone; lignite at 308.6 and 310.7 feet-----	9.3	314.7
	Clay and claystone; lignite at 314.7-317.6 feet and 325-327.8 feet-----	15.3	330
	Siltstone and sandstone-----	20	350
	Sandstone, greenish-gray-----	20	370
	Sandstone, greenish-gray-----	10	380
	Sandstone, greenish-gray; lignite at 383.9-385 feet-----	5	385
	Sandstone, greenish-gray-----	8	393
	Sandstone, greenish-gray, and siltstone-----	10	403

139-087-16CDB
NDSWC 4755

Altitude: 2045 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Silt, dusky-yellow, moderately clayey, slightly sandy, slightly cohesive, crumbly, oxidized; occasional scoria gravel lenses-----	37	37
	Gravel, fine to coarse, clayey, poorly sorted, angular, semiloose; mostly scoria; local sandstone and brownish western silicates; numerous clayey silt layers; some detrital lignite; about 30 percent sand; caving slightly-----	35	72
Tongue River Formation:			
	Sandstone, medium-bluish-gray, very fine to fine, subangular, semiconsolidated; losing circulation; gravel caving from above-----	8	80

139-087-18CCD
U.S. Geological Survey Conservation Division 16

Altitude: 2225 feet

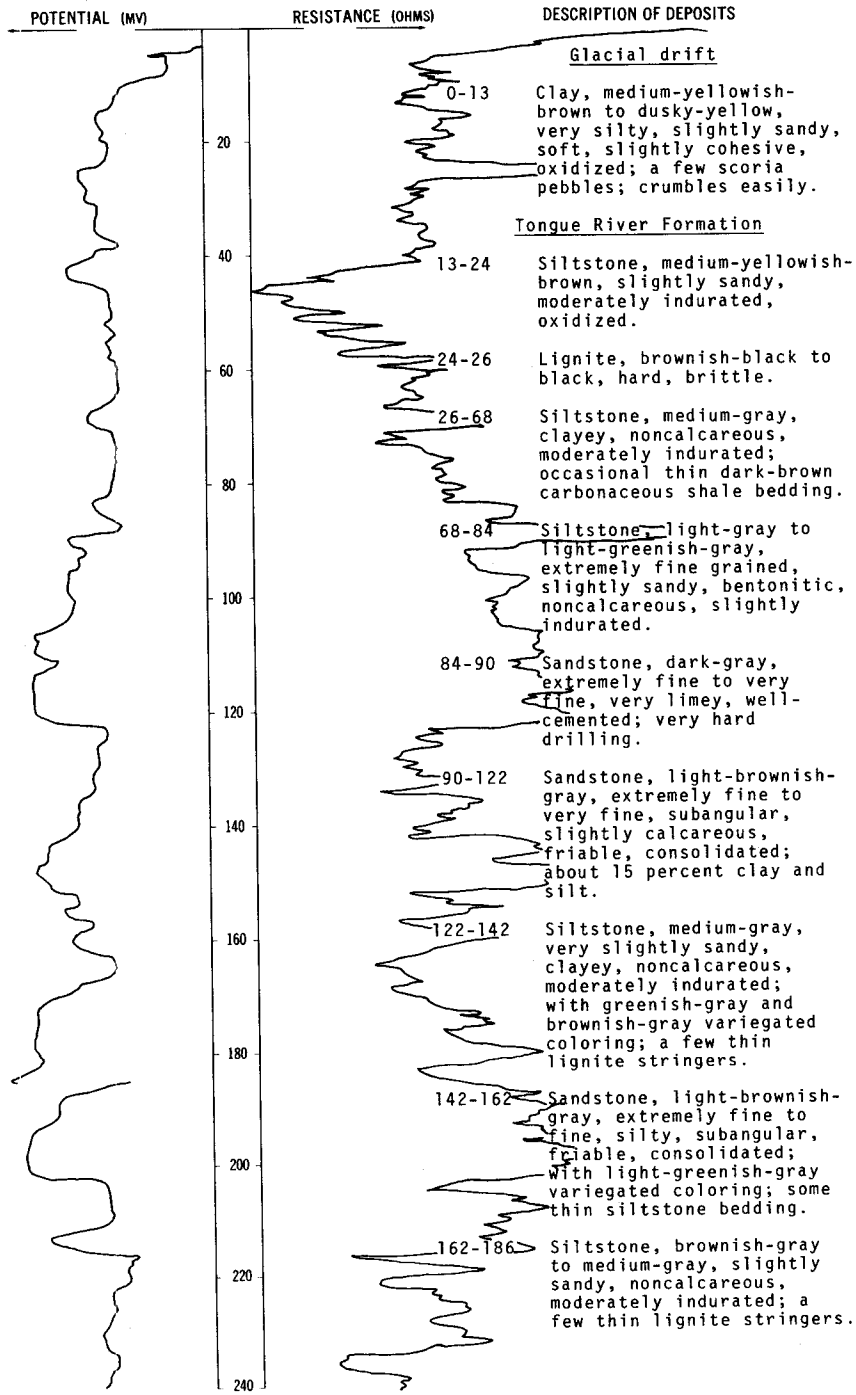
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
	Soil-----	1.5	1.5
Sentinel Butte Formation:			
	Sandstone-----	2	3.5
	Claystone; lignite and carbonaceous shale at 6.2-6.8 feet, 13-13.2 feet, and 17.1-18.3 feet-----	18.5	22
	Claystone, silty-----	1	23
	Siltstone and minor amount of sandstone and claystone-----	12.5	35.5
	Siltstone; sandstone at bottom-----	3.8	39.3
	Claystone, siltstone, and sandstone; lignite at 43-43.2 feet-----	10	49.3
	Claystone, siltstone, and sandstone; lignite at 58.4-60.4 feet-----	18	67.3
	Sandstone; siltstone and claystone at top-----	10	77.3
	Siltstone and claystone; lignite at 83.1-84 feet and 87.5-88.6 feet-----	11.3	88.6
	Lignite-----	3.9	92.5
	Lignite-----	2.8	95.3
	Lignite, siltstone, and claystone-----	6.2	101.5
	Siltstone-----	3.8	105.3
Tongue River Formation:			
	Claystone; some very thin lignite seams-----	15	120.3
	Limestone concretion-----	1.7	122
	Sandstone and siltstone; limestone concretion in upper 0.8 foot-----	11	133
	Sandstone and minor amount of siltstone-----	9	142
	Siltstone and claystone; thin sandstone near base-----	15	157
	Claystone and carbonaceous shale; lignite at 162.7-163 feet and 166.1-168.5 feet-----	15	172
	Sandstone, siltstone, and minor amount of claystone-----	20	192
	Sandstone, siltstone, and claystone-----	10	202
	Sandstone, claystone, and minor amount of siltstone; lignite at 213.2 feet-----	14	216
	Siltstone and sandstone-----	18	234
	Mostly siltstone and sandstone; lignite at 239.2-240.5 feet-----	10	244
	Siltstone, claystone, and sandstone-----	16	260
	Claystone, sandstone, and minor amount of siltstone; lignite and carbonaceous shale at 267.4-267.6 feet, 272.2-272.7 feet, and 275.3-276.3 feet-----	20	280
	Claystone and lignite-----	7	287
	Claystone and lignite-----	4	291
	Claystone and siltstone-----	19	310
	Siltstone and claystone-----	1.5	311.5
	Siltstone and claystone-----	11.5	323
	Siltstone and sandstone-----	7	330
	Sandstone-----	10	340

LOCATION: 139-087-23BBB

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 360
(FT)



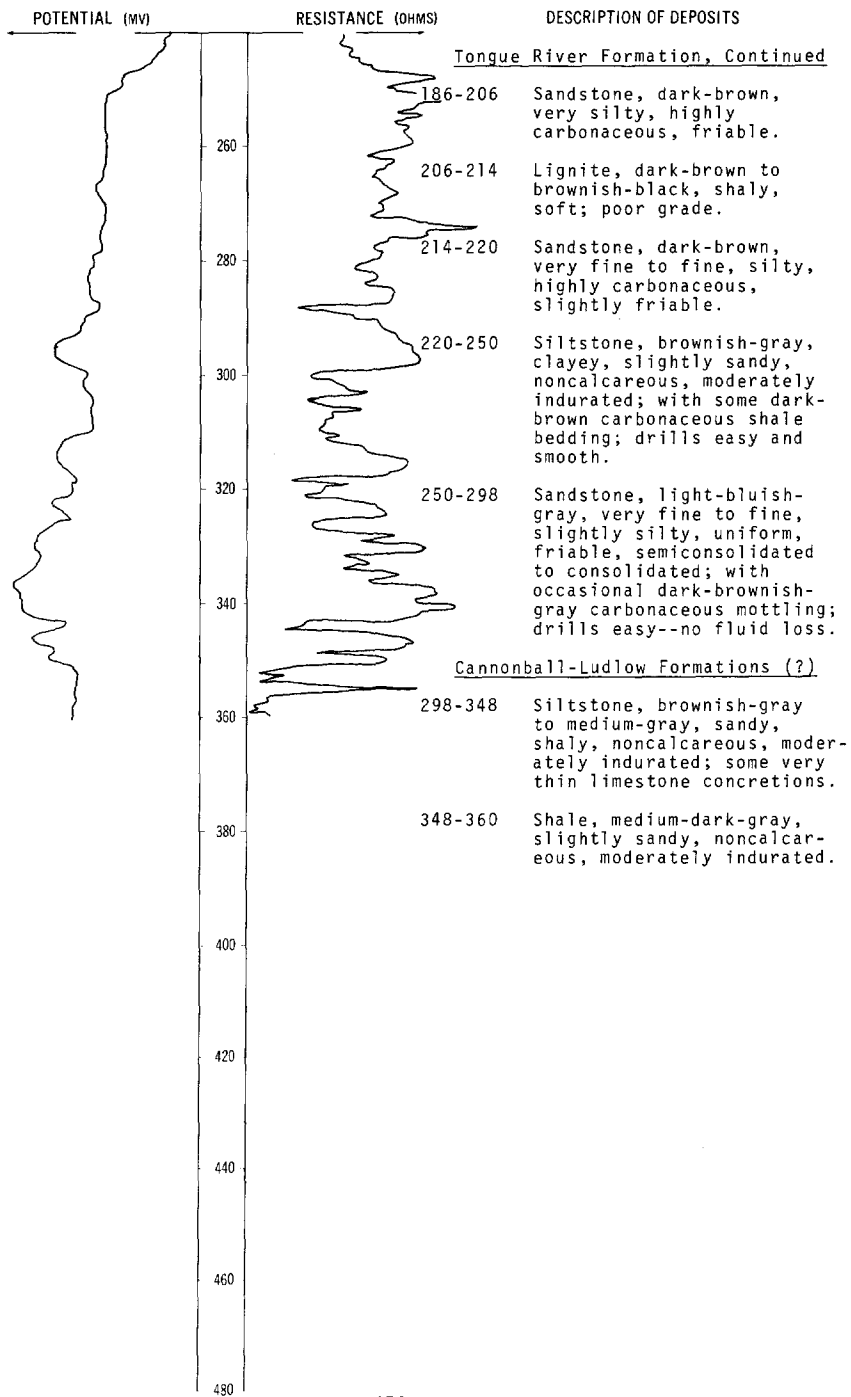
NDSWC 4756, Continued

LOCATION: 139-087-23BBB

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 360
(FT)



NDSWC 4756, Continued

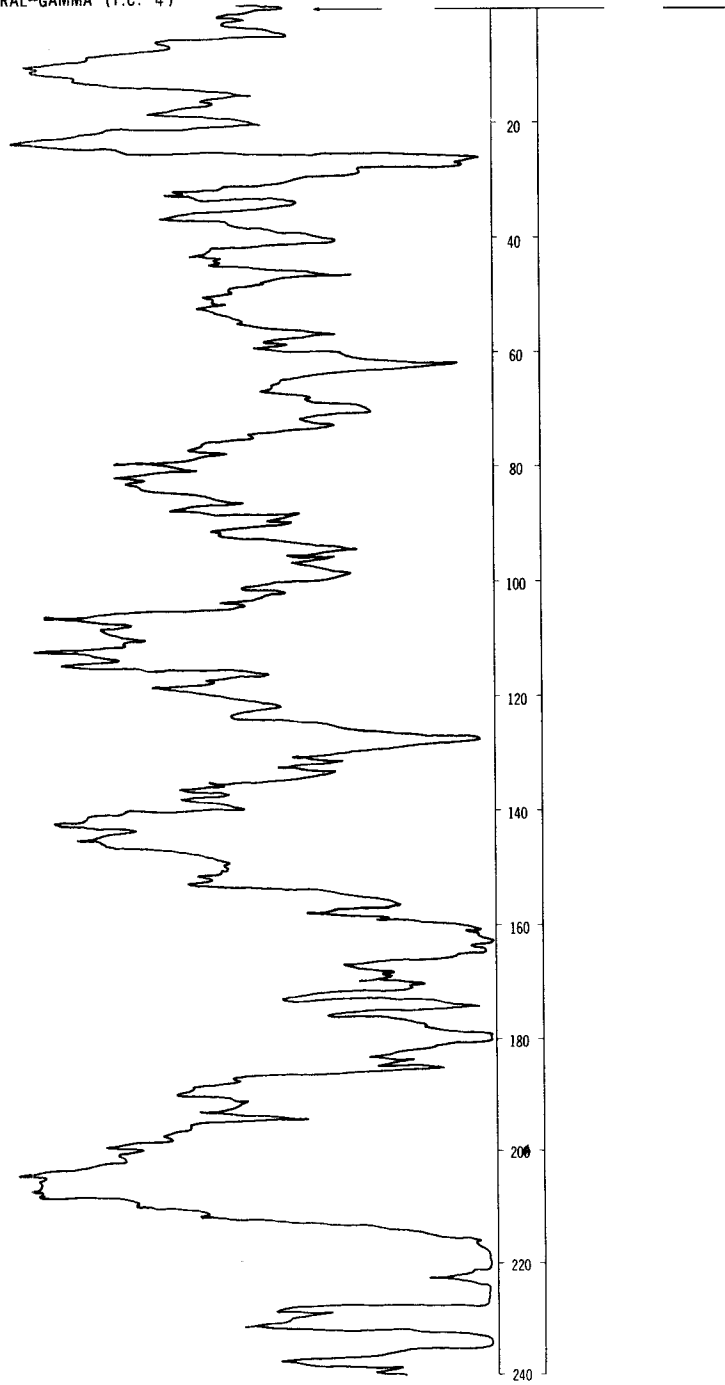
LOCATION: 139-087-23BBB

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4756, Continued

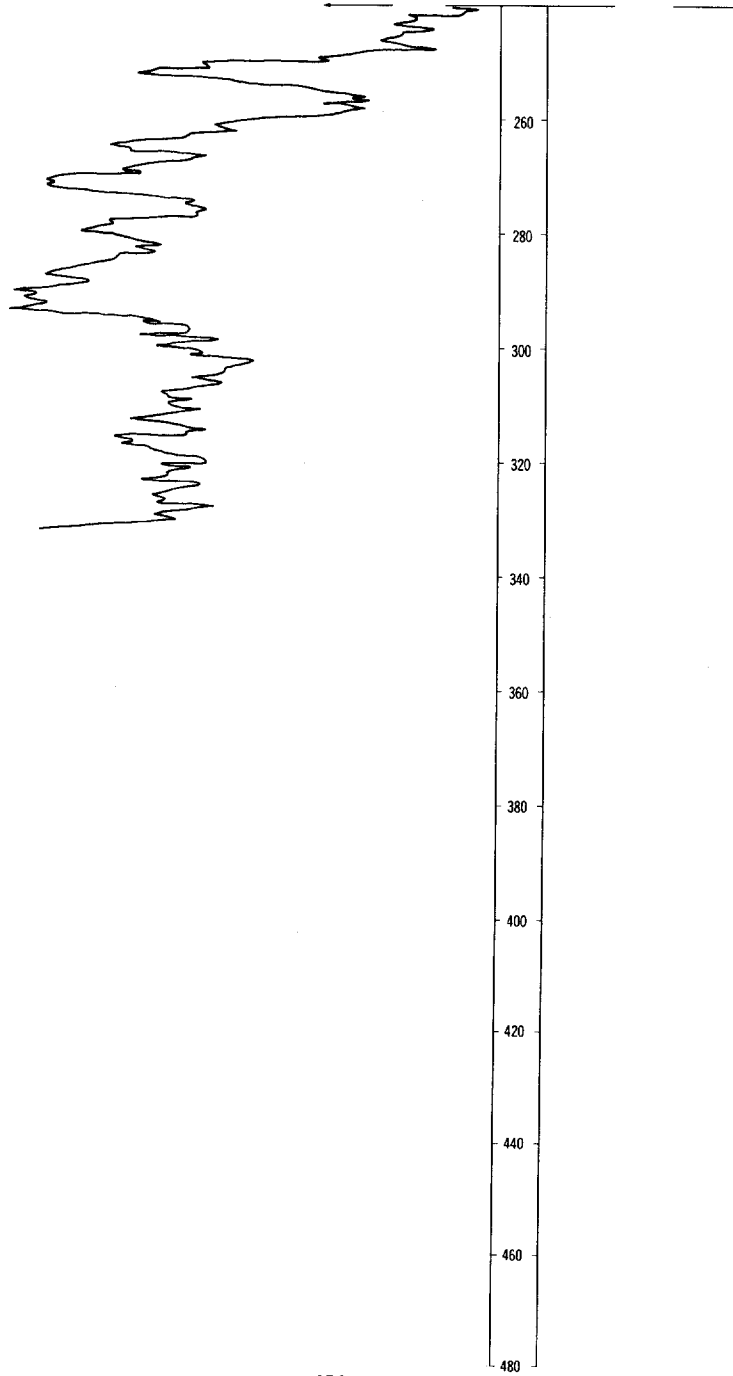
LOCATION: 139-087-23BBB

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 360
(FT)

NATURAL-GAMMA (T.C. 4)



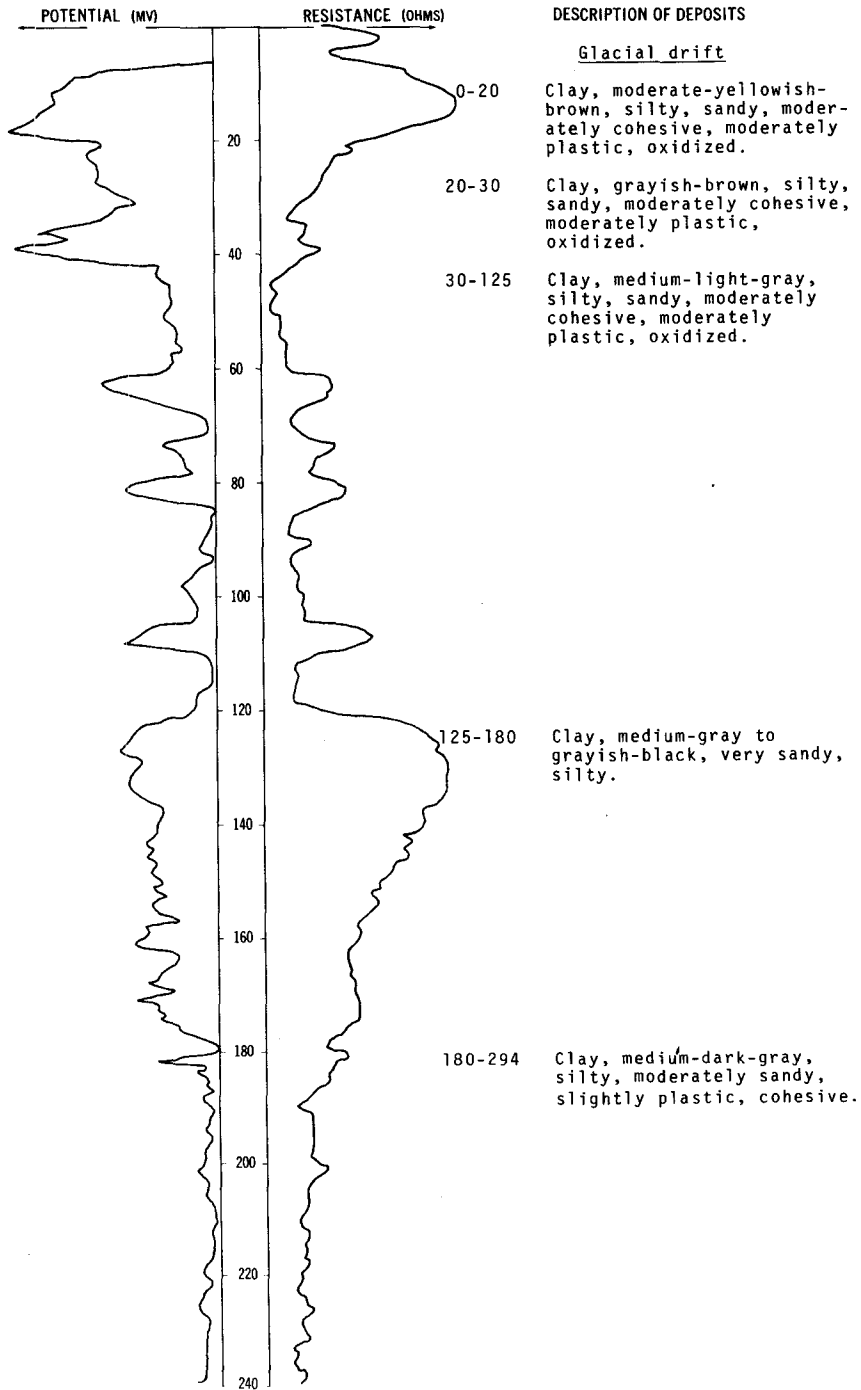
NDSWC 9331

LOCATION: 139-088-06DDD

DATE DRILLED: July 1975

ALTITUDE: 2072
(FT, MSL)

DEPTH: 340
(FT)



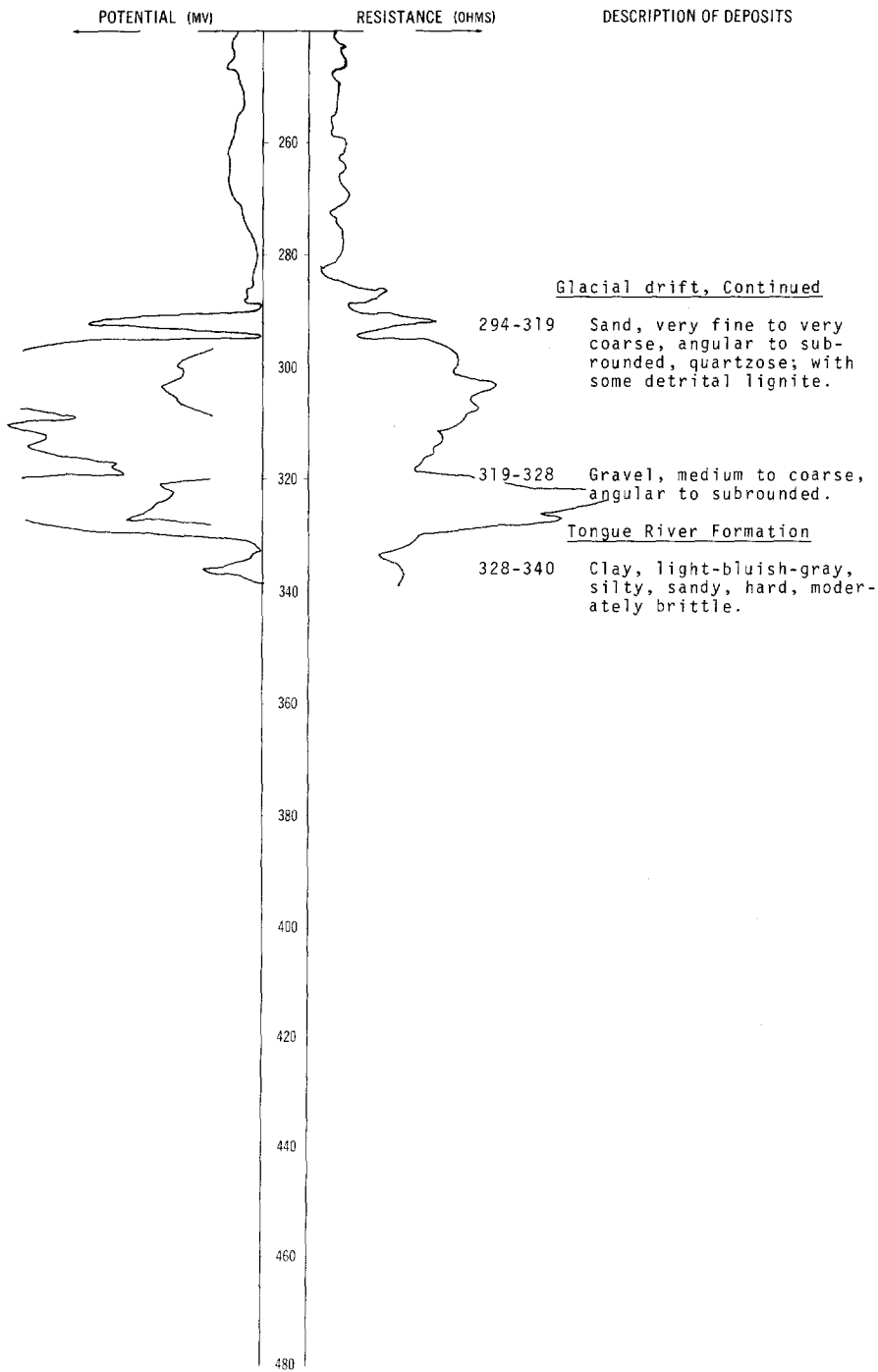
NDSWC 9331, Continued

LOCATION: 139-088-06DDD

DATE DRILLED: July 1975

ALTITUDE: 2072
(FT, MSL)

DEPTH: 340
(FT)

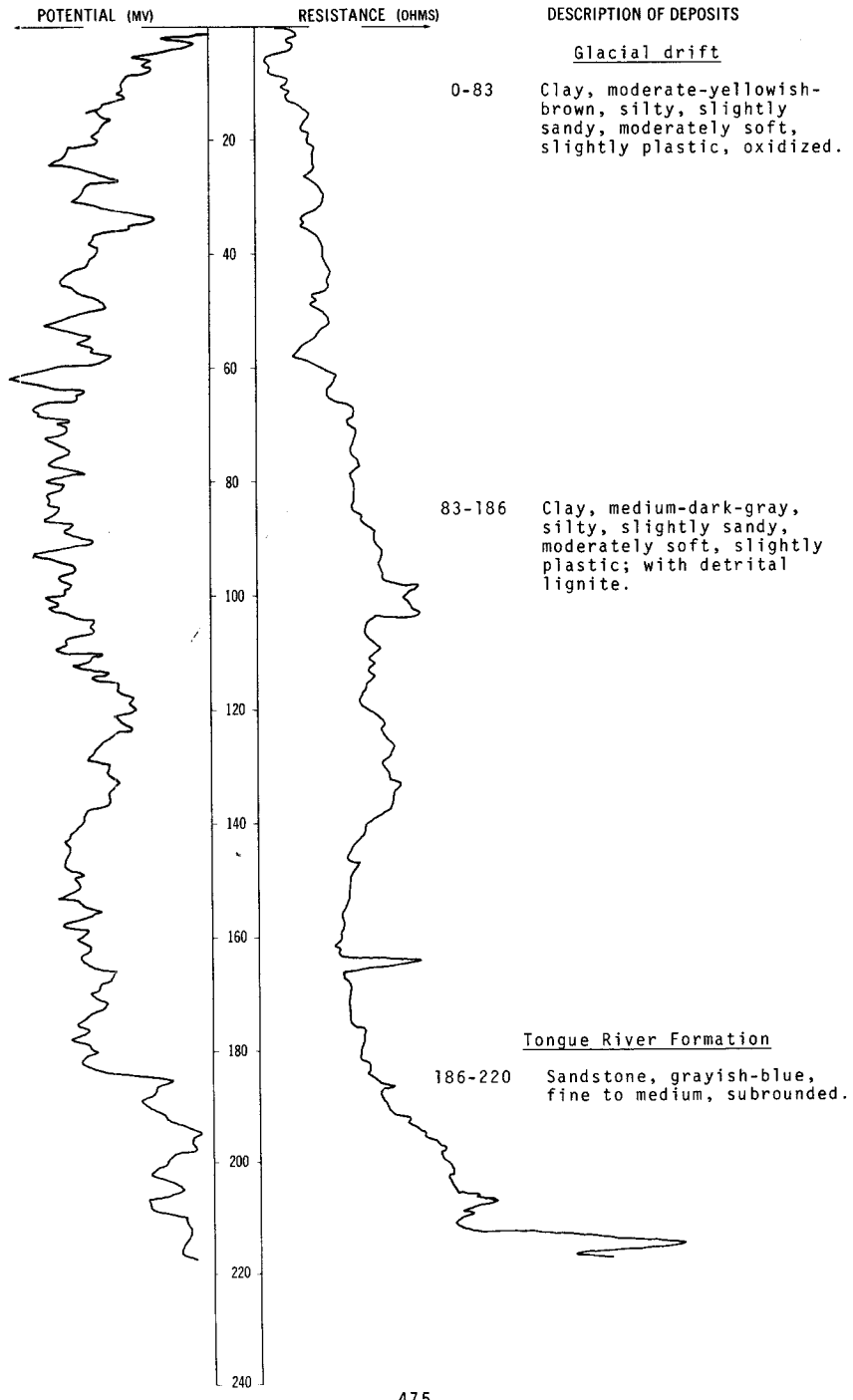


LOCATION: 139-088-08CCC

DATE DRILLED: June 1975

ALTITUDE: 2068
(FT, MSL)

DEPTH: 220
(FT)



139-088-10BDC
U.S. Geological Survey Conservation Division 15

Altitude: 2165 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Siltstone, clayey-----	1	1
	Siltstone, clayey-----	3	4
	Claystone, silty; lignite at 6.8-7 feet-----	2.8	6.8
	Claystone, silty, and lignite-----	3.7	10.5
	Sandstone; lignite at 10.7-12.5 feet-----	4.5	15
	Sandstone and silty claystone-----	5	20
	Sandstone, clayey-----	5	25
	Claystone-----	1.4	26.4
	Lignite; with carbonaceous shale partings-----	1.6	28
	Sandstone, silty-----	2	30
	Claystone-----	2.6	32.6
	Lignite-----	1	33.6
	Claystone-----	.1	33.7
	Lignite-----	1.3	35
	Claystone-----	.2	35.2
	Lignite-----	1.8	37
	Claystone, silty-----	3	40
	Claystone-----	5	45
	Claystone-----	5.2	50.2
	Sandstone, lignite, claystone, and clayey siltstone-----	4	54.2
	Siltstone, clayey, and sandstone; lignite at 65.2-67.3 feet-----	13.7	67.9
	Sandstone and siltstone-----	13	80.9
	Sandstone, siltstone, and lignite-----	6.7	87.6
Tongue River Formation:			
	Lignite, claystone, and sandstone-----	14	101.6

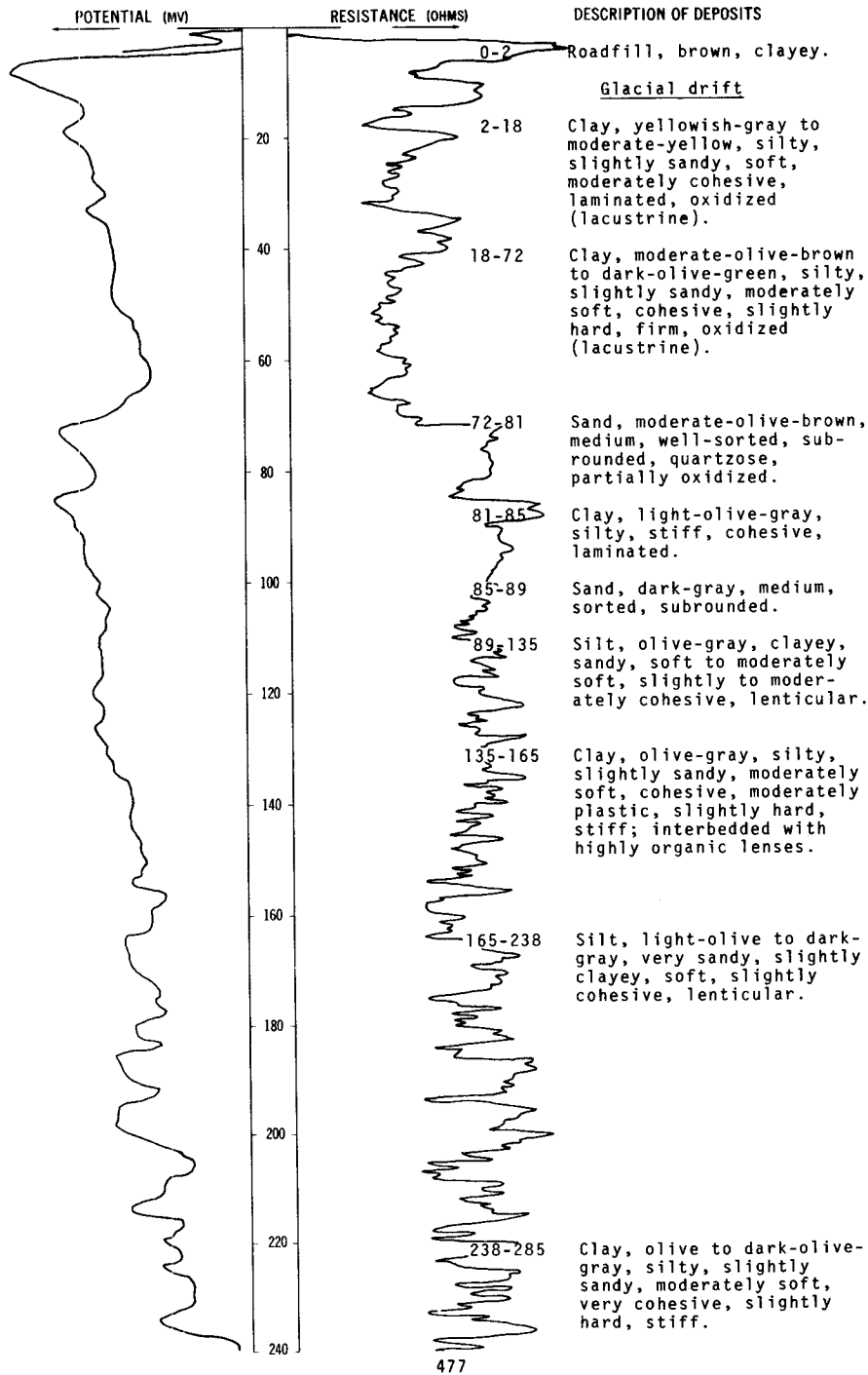
NDSWC 4540

LOCATION: 139-088-15CCC

DATE DRILLED: August 1973

ALTITUDE: 2056
(FT, MSL)

DEPTH: 360
(FT)



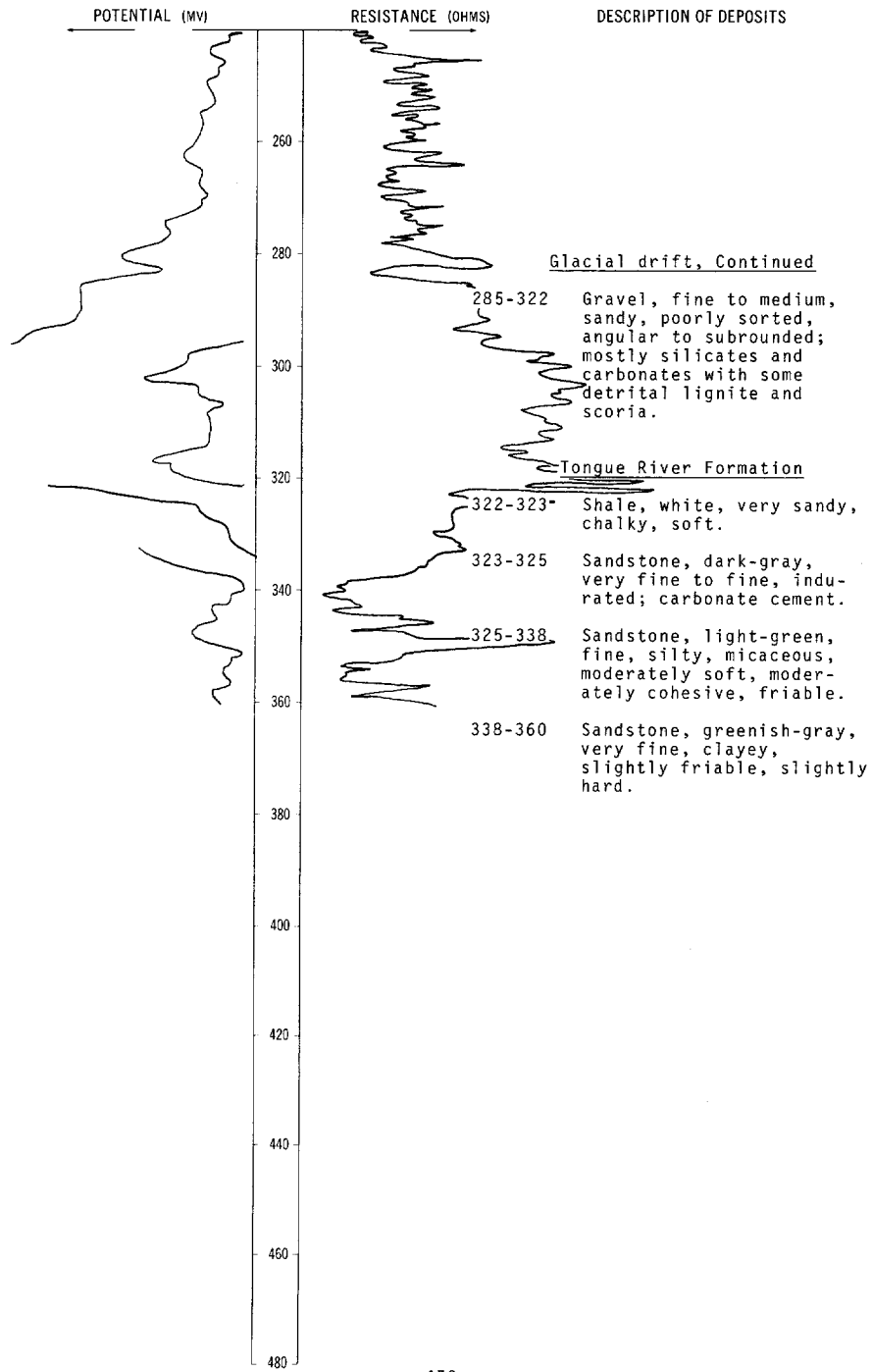
NDSWC 4540, Continued

LOCATION: 139-088-15CCC

DATE DRILLED: August 1973

ALTITUDE: 2056
(FT, MSL)

DEPTH: 360
(FT)



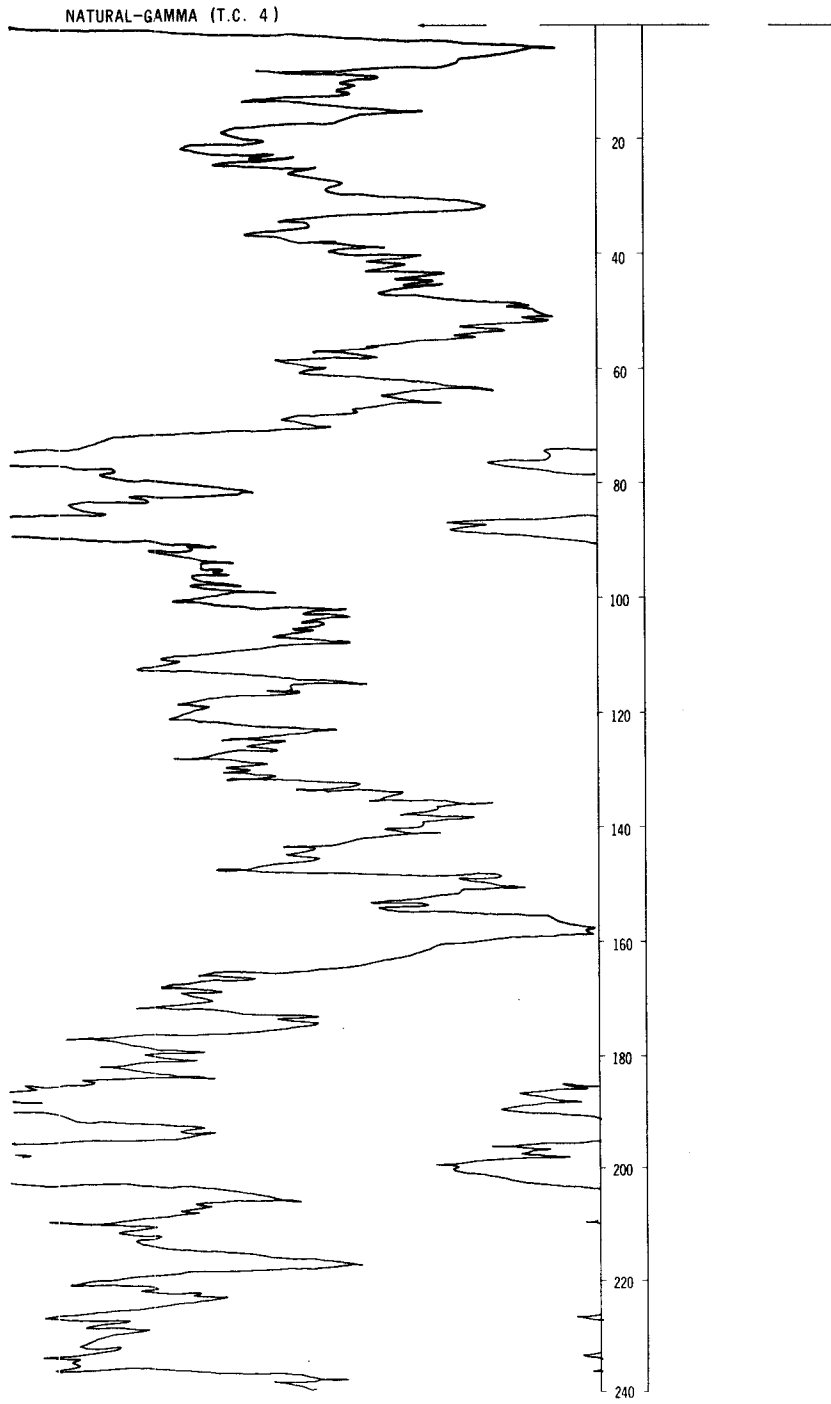
NDSWC 4540, Continued

LOCATION: 139-088-15CCC

DATE DRILLED: August 1973

ALTITUDE: 2056
(FT, MSL)

DEPTH: 360
(FT)

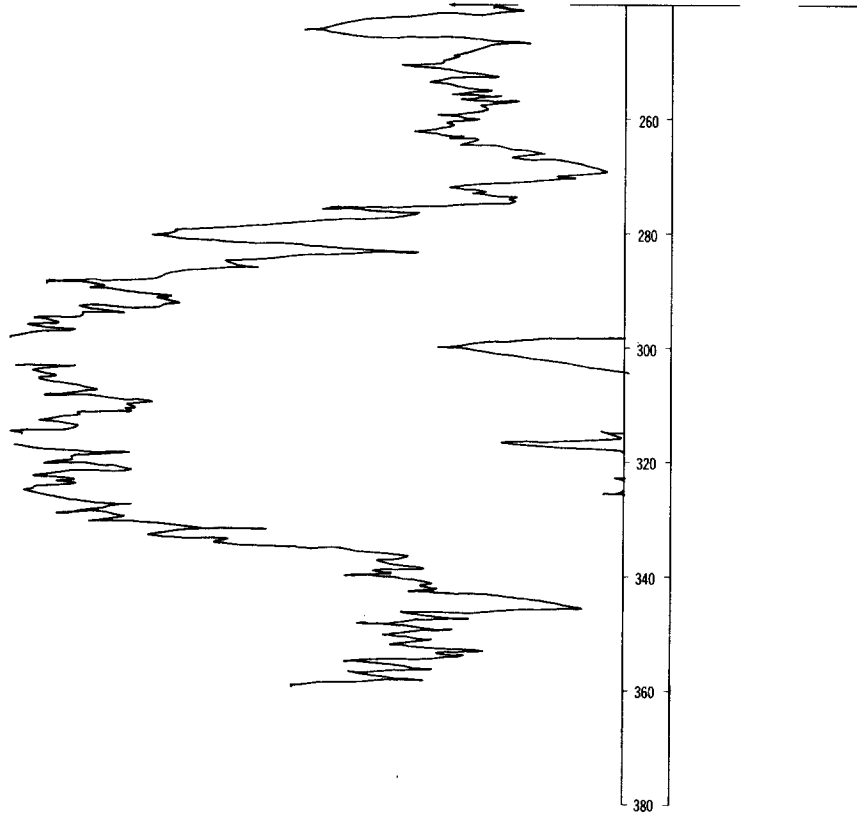


NDSWC 4540, Continued

LOCATION: 139-088-15CCC
 ALTITUDE: 2056
 (FT, MSL)

DATE DRILLED: August 1973
 DEPTH: 360
 (FT)

NATURAL-GAMMA (T.C. 4)



139-088-22DCB
 J. Duppong
 (Log from Erickson Well Drilling)

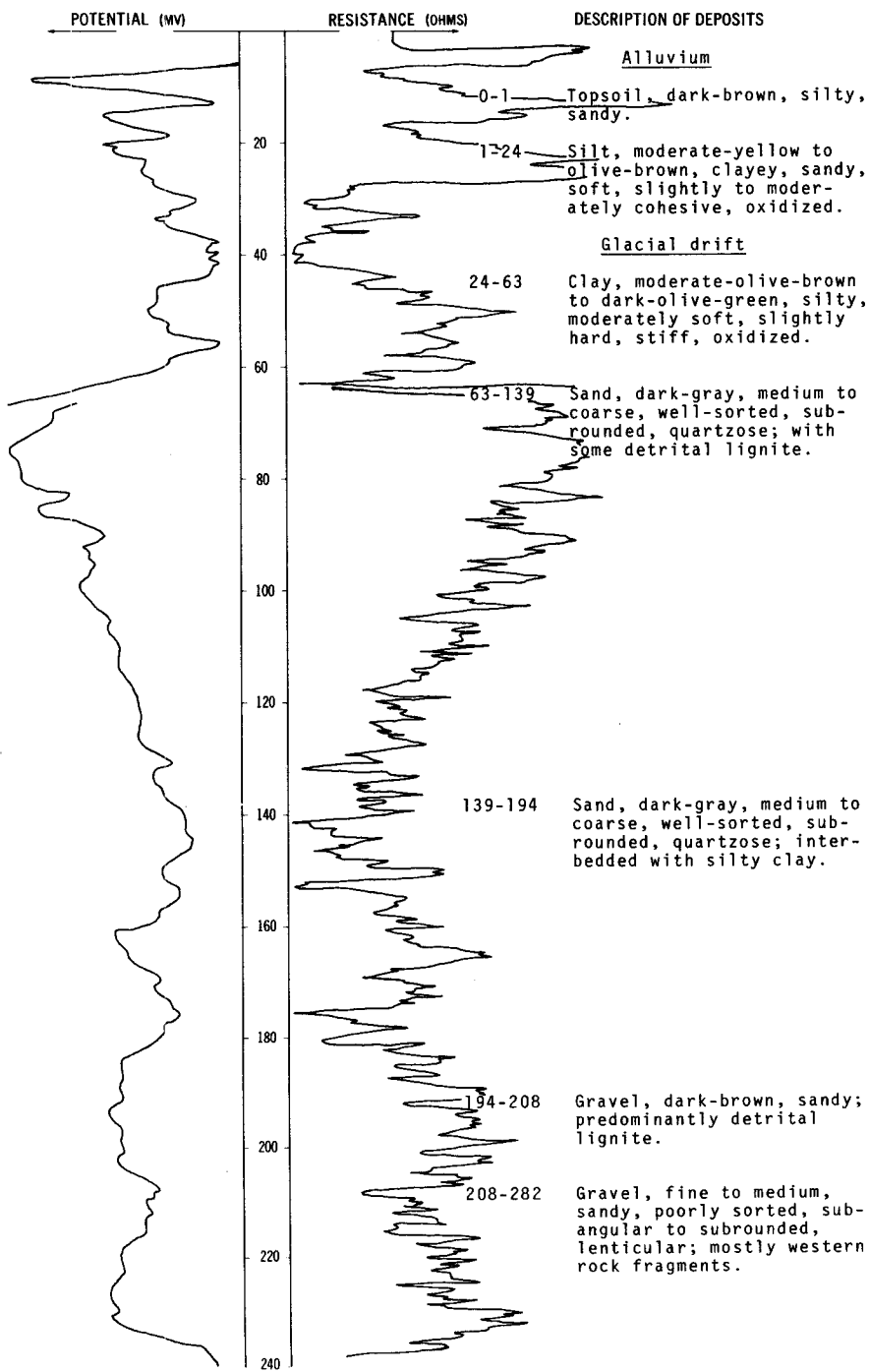
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Topsoil, black-----	3	3
	Clay, yellowish-gray-----	22	25
	Clay, gray, sandy-----	20	45
	Sand, medium-----	1	46
	Clay, gray, sandy-----	36	82
	Sand, fine to medium, clayey; some gravel-----	201	283

LOCATION: 139-088-25BAD

DATE DRILLED: August 1973

ALTITUDE: 2038
(FT, MSL)

DEPTH: 320
(FT)



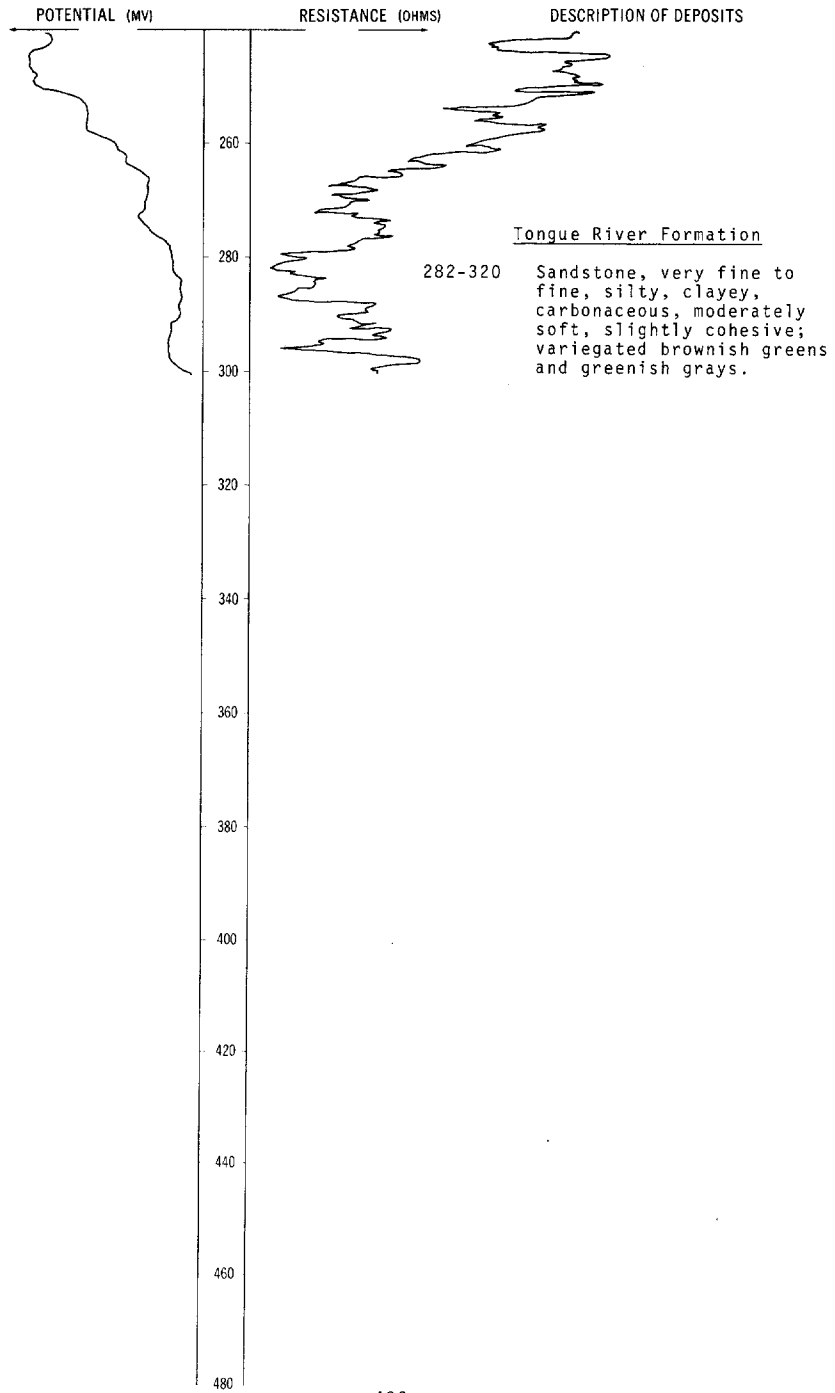
NDSWC 4541, Continued

LOCATION: 139-088-25BAD

DATE DRILLED: August 1973

ALTITUDE: 2038
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4541, Continued

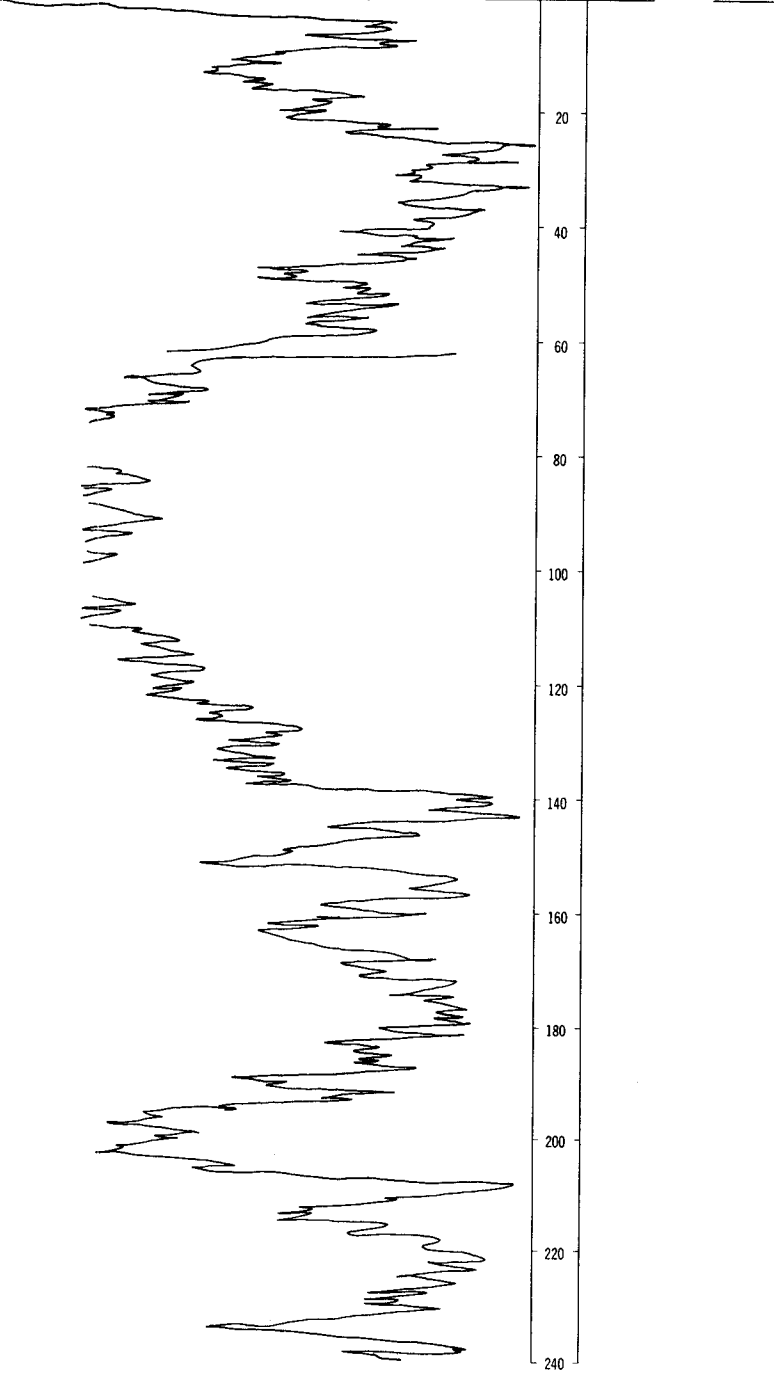
LOCATION: 139-088-25BAD

DATE DRILLED: August 1973

ALTITUDE: 2038
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



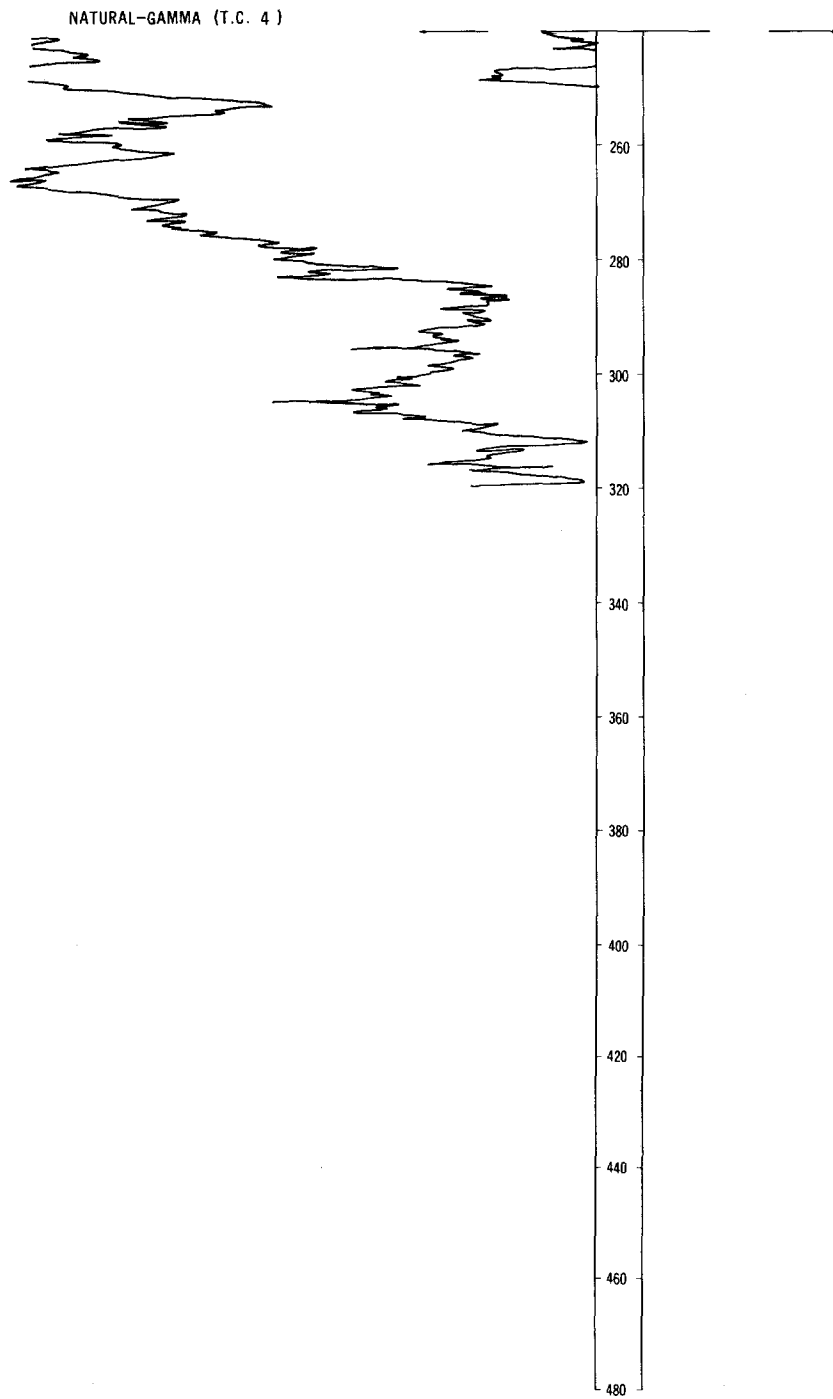
NDSWC 4541, Continued

LOCATION: 139-088-25BAD

DATE DRILLED: August 1973

ALTITUDE: 2038
(FT, MSL)

DEPTH: 320
(FT)



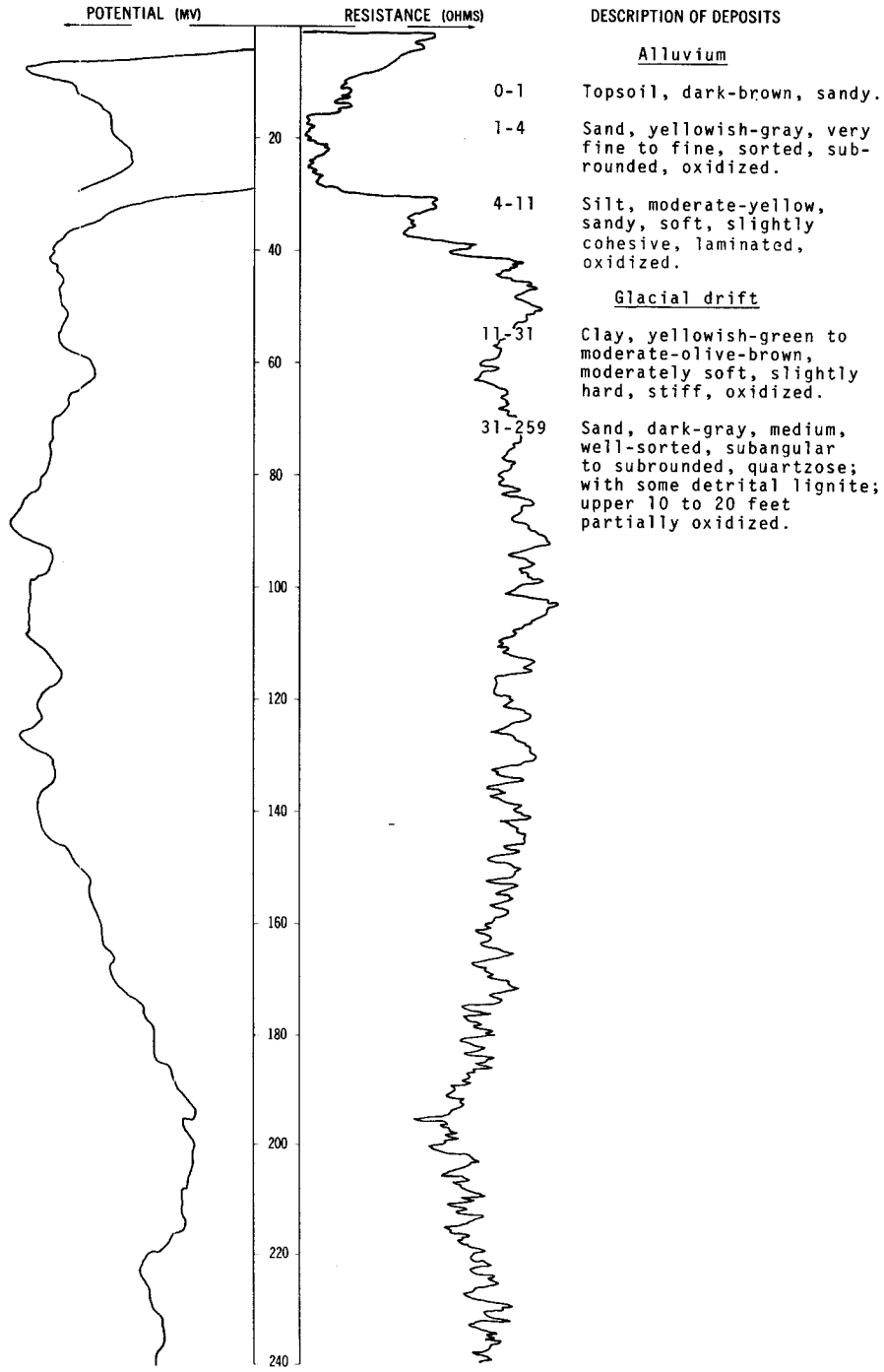
NDSWC 4542

LOCATION: 139-088-25BCC

ALTITUDE: 2018
(FT, MSL)

DATE DRILLED: August 1973

DEPTH: 315
(FT)



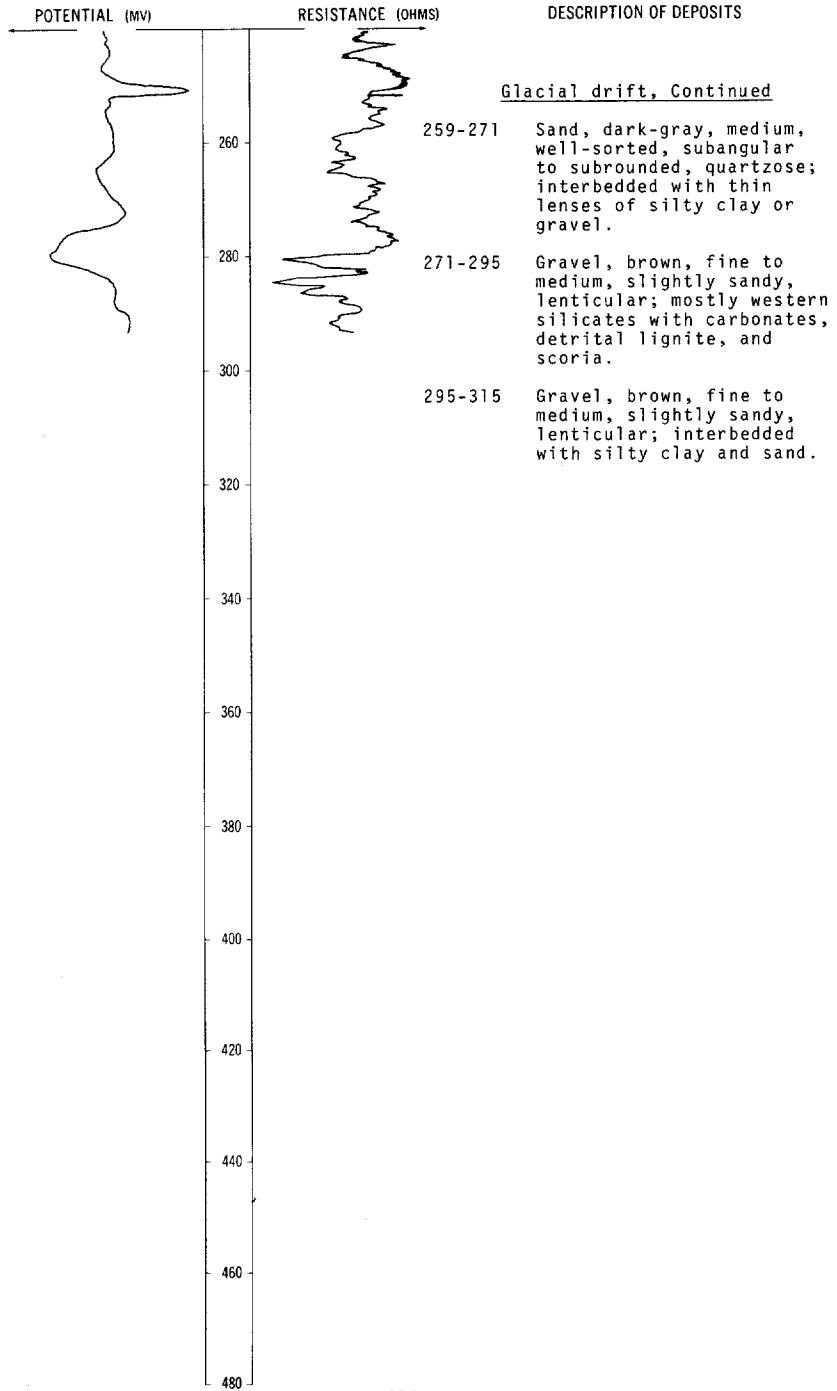
NDSWC 4542, Continued

LOCATION: 139-088-25BCC

DATE DRILLED: August 1973

ALTITUDE: 2018
(FT, MSL)

DEPTH: 315
(FT)



NDSWC 4542, Continued

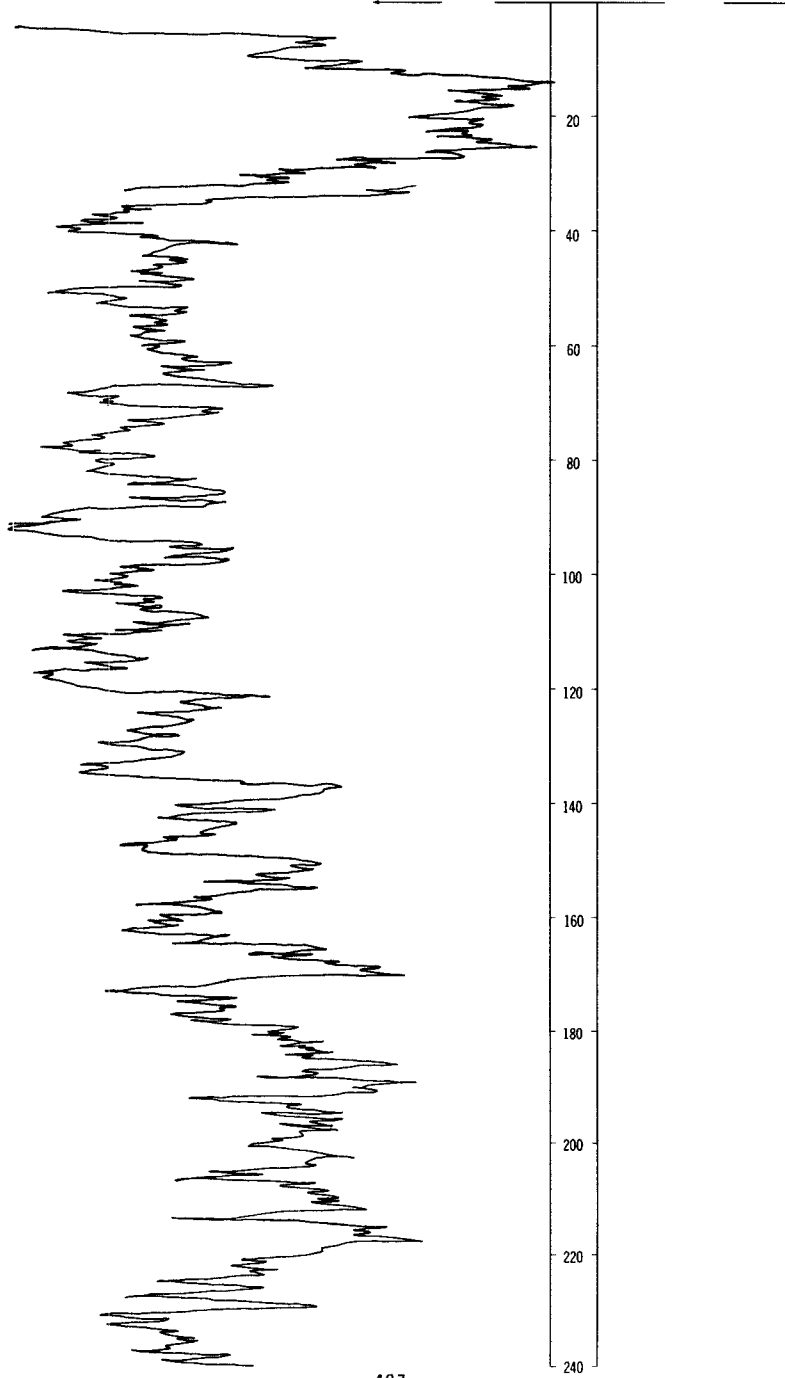
LOCATION: 139-088-25BCC

DATE DRILLED: August 1973

ALTITUDE: 2018
(FT, MSL)

DEPTH: 315
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4542, Continued

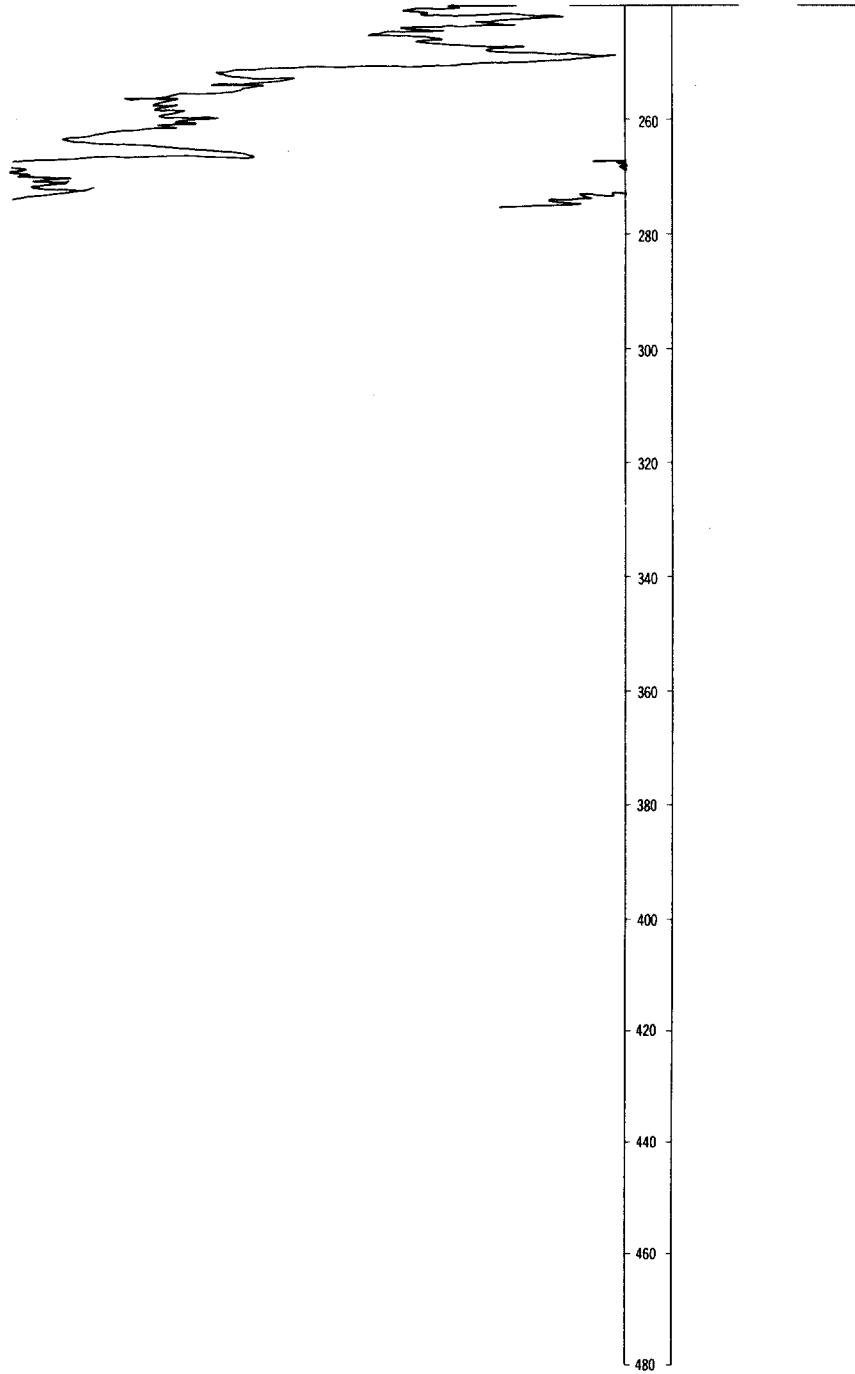
LOCATION: 139-088-25BCC

DATE DRILLED: August 1973

ALTITUDE: 2018
(FT, MSL)

DEPTH: 315
(FT)

NATURAL-GAMMA (T.C. 4)

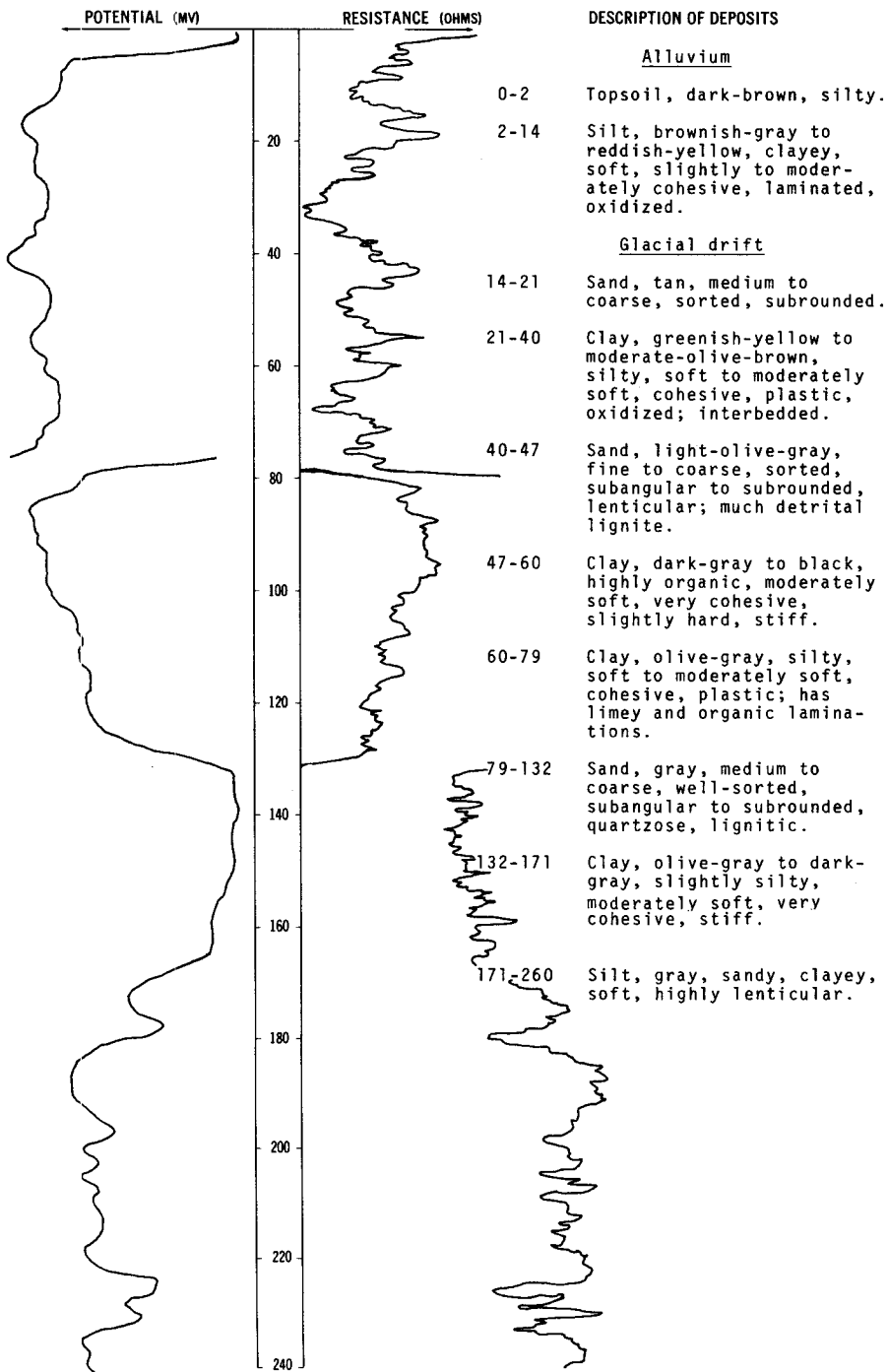


LOCATION: 139-088-28DDA

DATE DRILLED: August 1973

ALTITUDE: 2052
(FT, MSL)

DEPTH: 420
(FT)



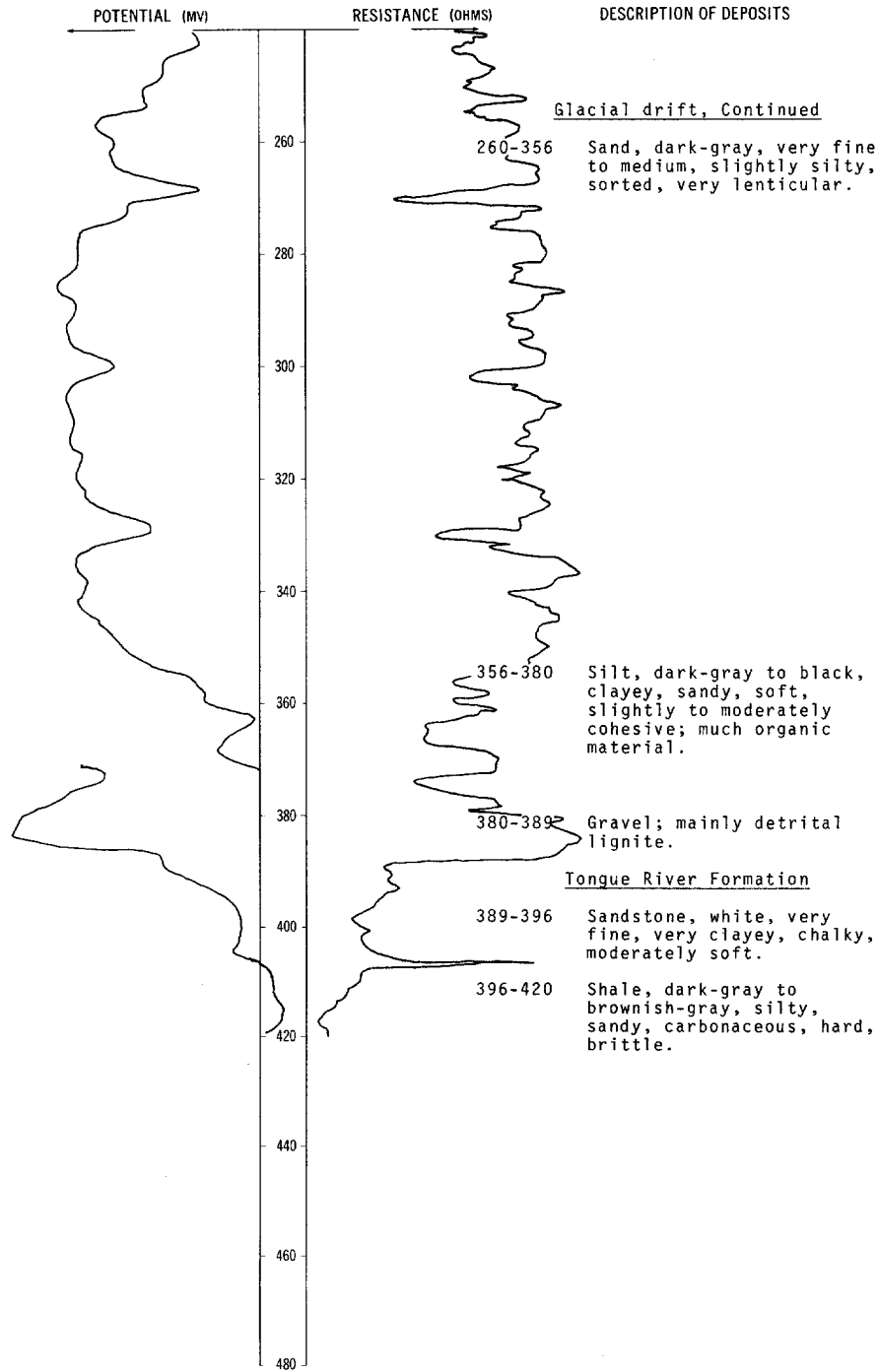
NDSWC 4539, Continued

LOCATION: 139-088-28DDA

DATE DRILLED: August 1973

ALTITUDE: 2052
(FT, MSL)

DEPTH: 420
(FT)



NDSWC 4539, Continued

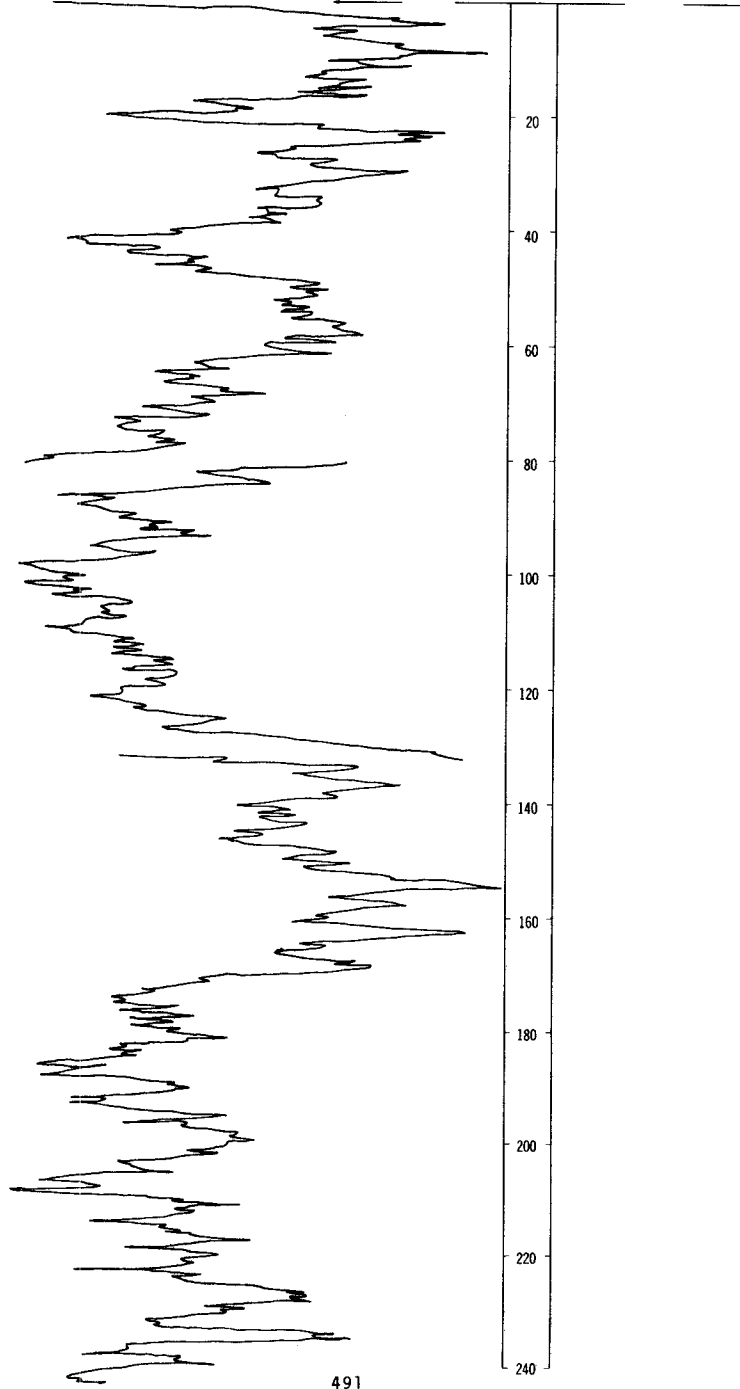
LOCATION: 139-088-28DDA

DATE DRILLED: August 1973

ALTITUDE: 2052
(FT, MSL)

DEPTH: 420
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4539, Continued

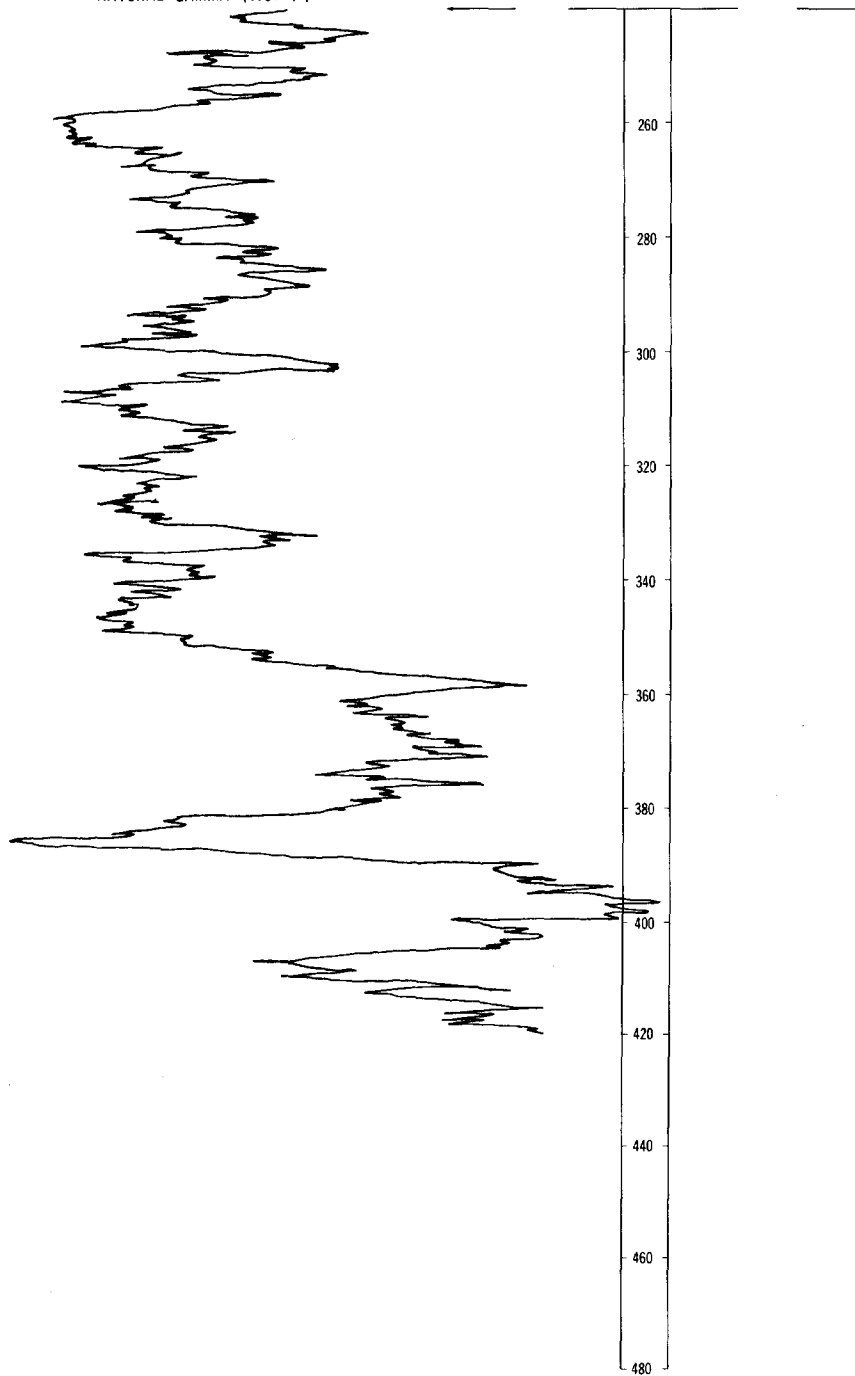
LOCATION: 139-088-28DDA

DATE DRILLED: August 1973

ALTITUDE: 2052
(FT. MSL)

DEPTH: 420
(FT)

NATURAL-GAMMA (T.C. 4)



139-088-29DBB
 E. Kinnischtzke
 (Log from Mohl Drilling Company)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, sandy-----	98	98
	Sand, coarse-----	2	100
	Gravel, fine-----	2	102
	Sand, coarse; water bearing-----	2	104
	Sand, fine; water bearing-----	9	113
	Clay, sandy-----	77	190

139-088-31ADC
 J. Navratil
 (Log from Opp Well Drilling)

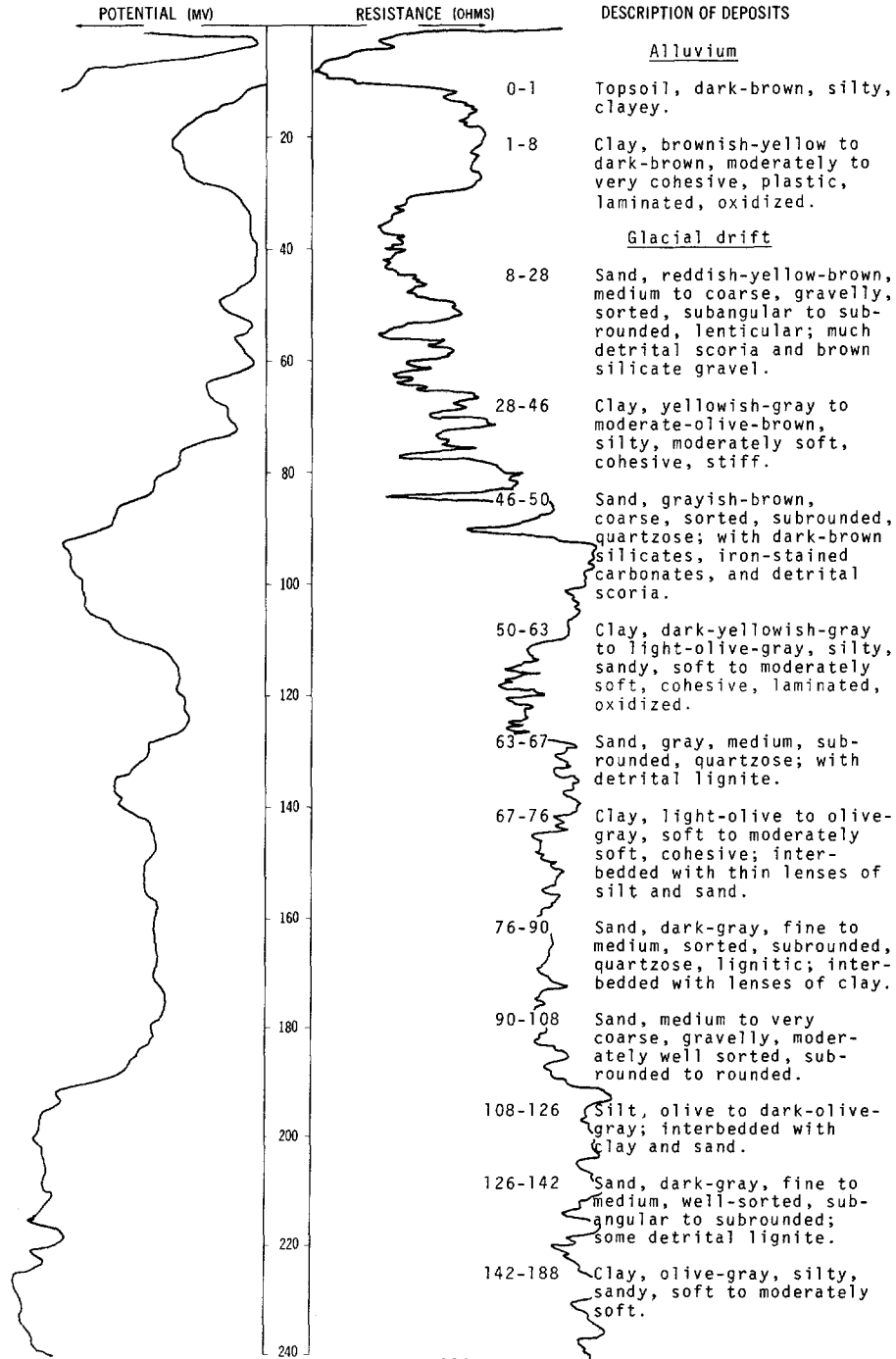
Glacial drift (?):			
	Clay-----	11	11
	Sand, silty-----	9	20
	Clay, sandy; with scoria-----	9	29
	Sand, very fine, very clayey; with scoria-----	18	47
Tongue River Formation (?):			
	Sandstone, gray-----	7	54
	Clay, blue-----	10	64
	Lignite, hard (5 gpm); dark water-----	7	71

LOCATION: 139-088-31BBC1, 2

DATE DRILLED: August 1973

ALTITUDE: 2075
(FT, MSL)

DEPTH: 400
(FT)



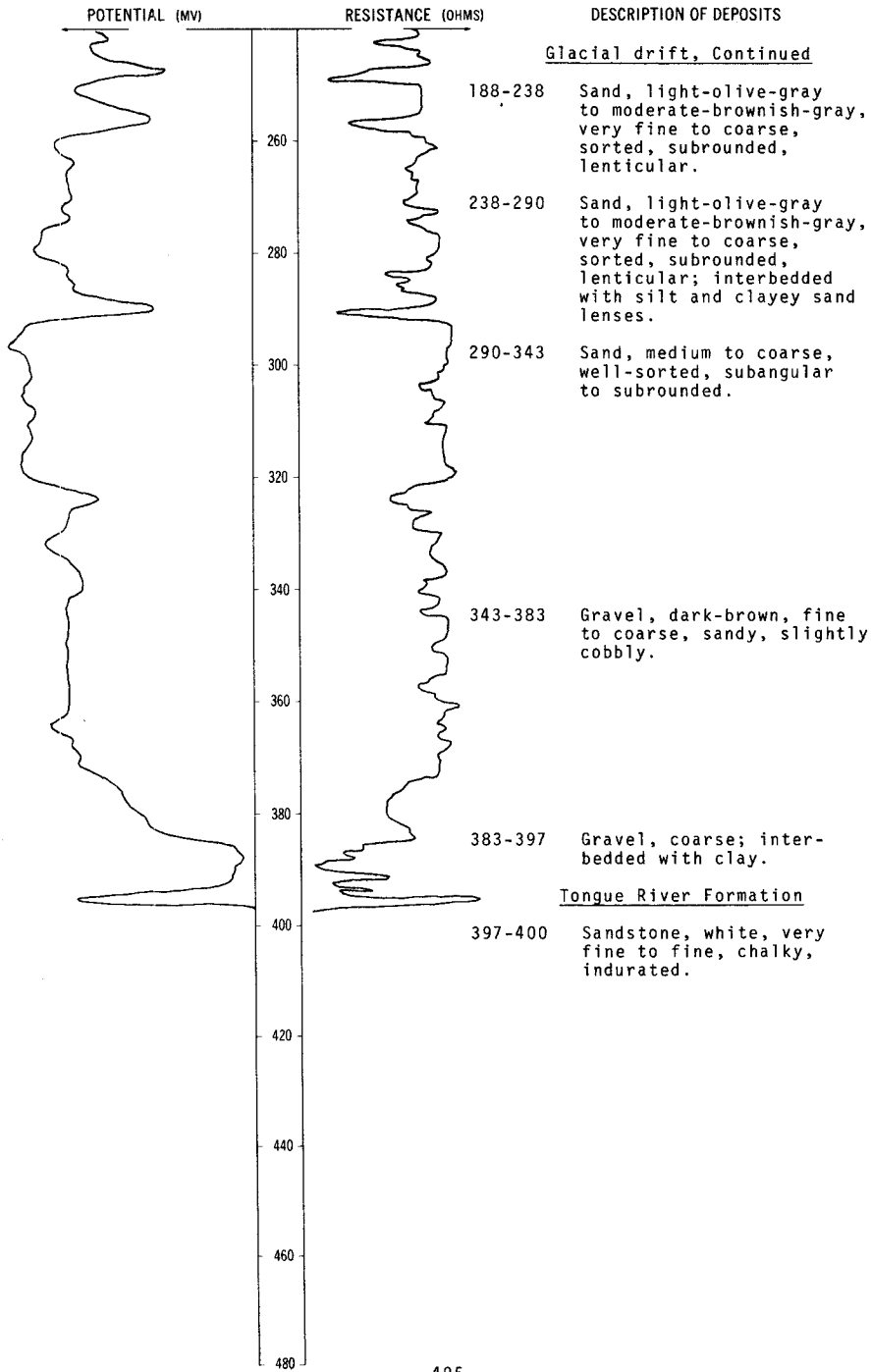
NDSWC 4538, 4538A, Continued

LOCATION: 139-088-31BBC1, 2

DATE DRILLED: August 1973

ALTITUDE: 2075
(FT, MSL)

DEPTH: 400
(FT)



NDSWC 4538, 4538A, Continued

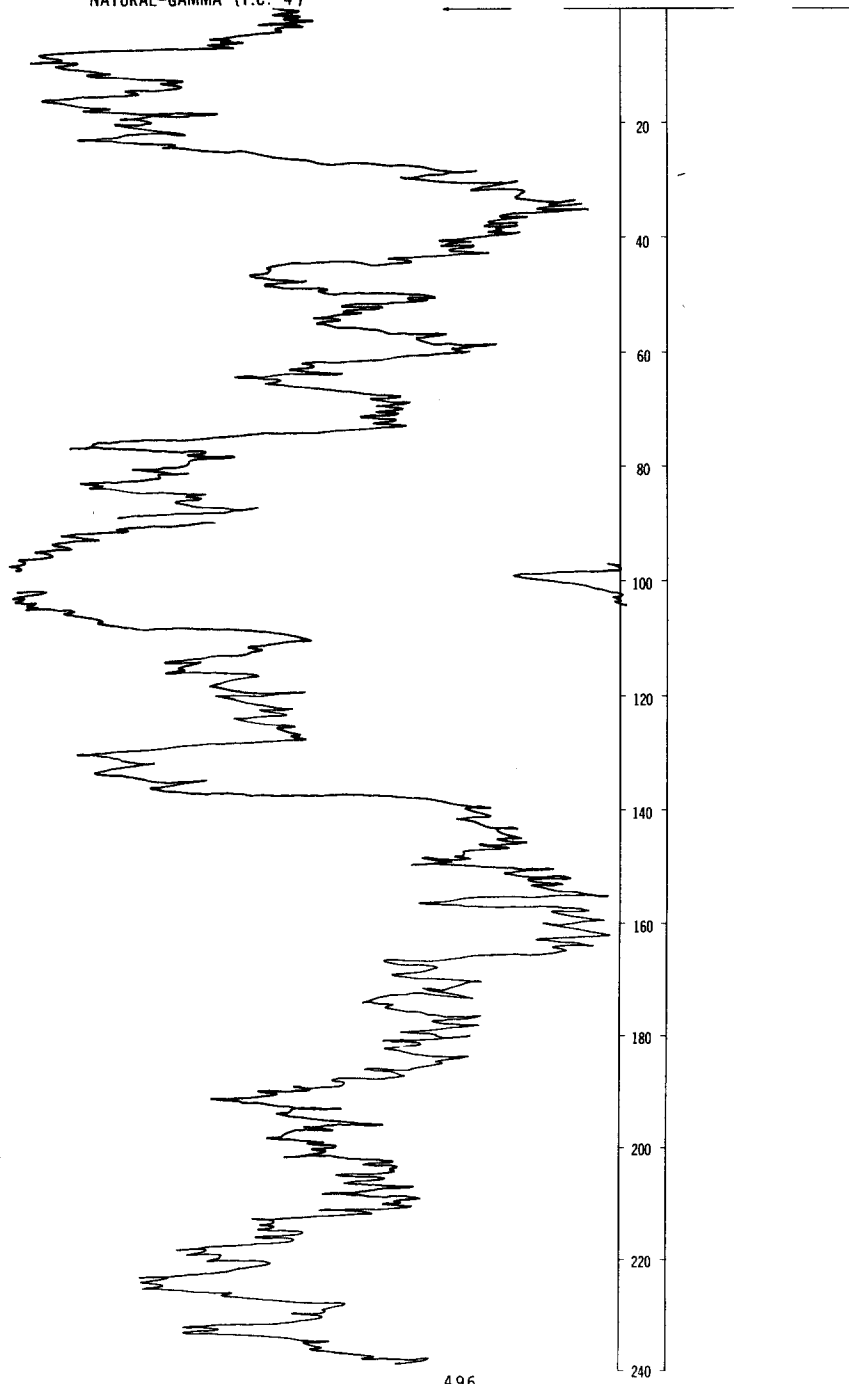
LOCATION: 139-088-31BBC1, 2

DATE DRILLED: August 1973

ALTITUDE: 2075
(FT, MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4538, 4538A, Continued

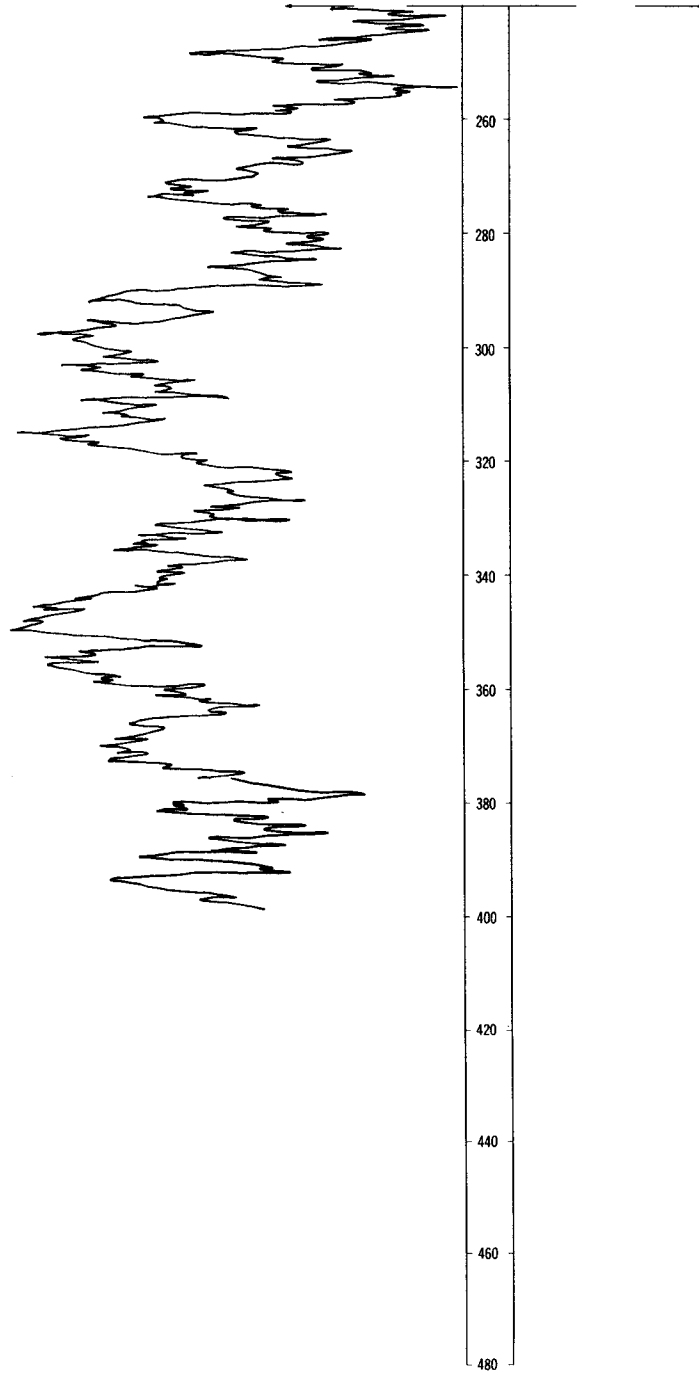
LOCATION: 139-088-31BBC1, 2

DATE DRILLED: August 1973

ALTITUDE: 2075
(FT. MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 4)



139-088-32AD
U.S. Geological Survey Conservation Division 14

Altitude: 2135 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation:			
	Siltstone, clayey-----	1.5	1.5
	Claystone, carbonaceous, shale, and impure lignite-----	8	9.5
	Lignite and claystone-----	2	11.5
	Claystone; silty claystone and carbonaceous shale at top-----	8.5	20
	Claystone, siltstone, and sandstone-----	2	22
	Claystone-----	1.6	23.6
	Claystone-----	18	41.6
	Claystone; lignite at 45.5-51.1 feet-----	10.8	52.4
	Claystone, siltstone, and sandstone-----	18.7	71.1
	Sandstone, claystone, and siltstone-----	12	83.1
	Siltstone, clayey, and minor amount of sandstone-----	13	96.1
	Sandstone-----	4	100.1
	Limestone-----	.9	101
	Depth correction-----	.4	101.4
	Limestone, 1 foot; claystone, 0.2 foot-----	3.7	105.1
	Siltstone and sandstone; pyritic at bottom-----	16.6	121.7
	Sandstone, siltstone, and claystone-----	16.7	138.4
	Sandstone and siltstone-----	17	155.4
	Sandstone, siltstone, claystone, and lignite; lignite at 162.6- 166.4 feet-----	16.8	172.2
	Siltstone and sandstone-----	17	189.2
	Siltstone-----	5.8	195
	Sandstone-----	6	201
	Sandstone-----	11.3	212.3

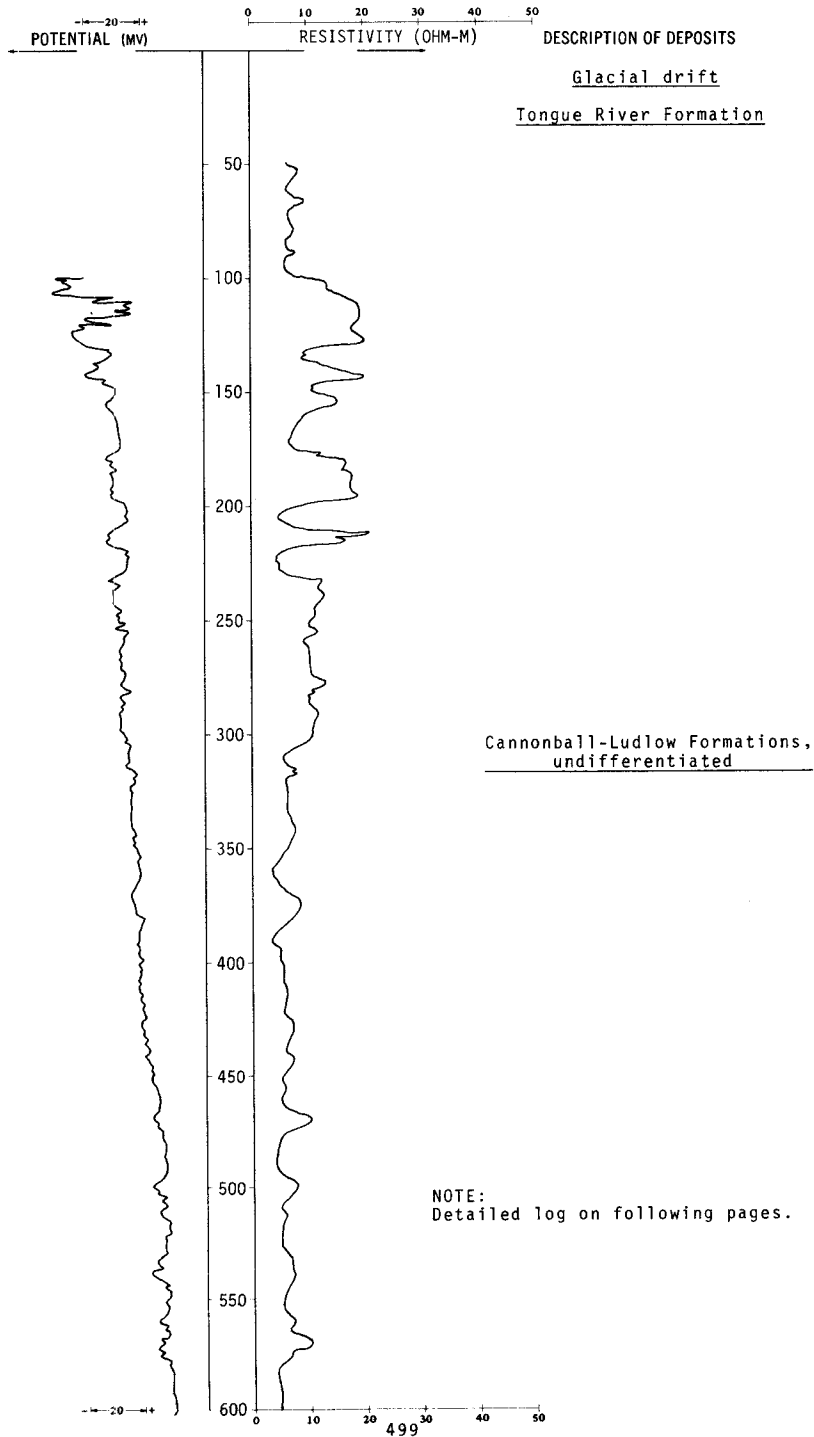
NDSWC 4753, 4753A, 4753B, 4753C

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT, MSL)

DEPTH: 1302
(FT)



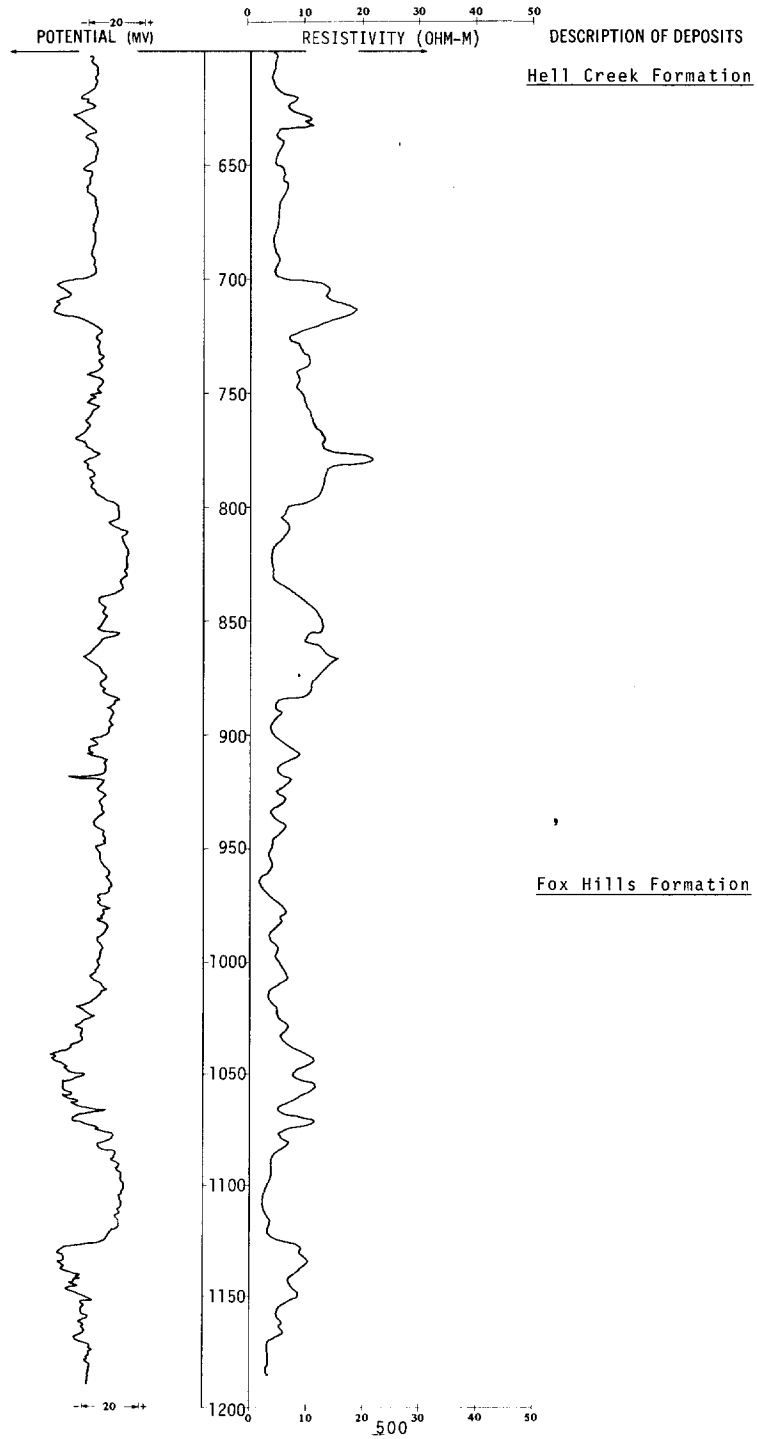
NDSWC 4753, 4753A, 4753B, 4753C, Continued

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT. MSL)

DEPTH: 1302
(FT)



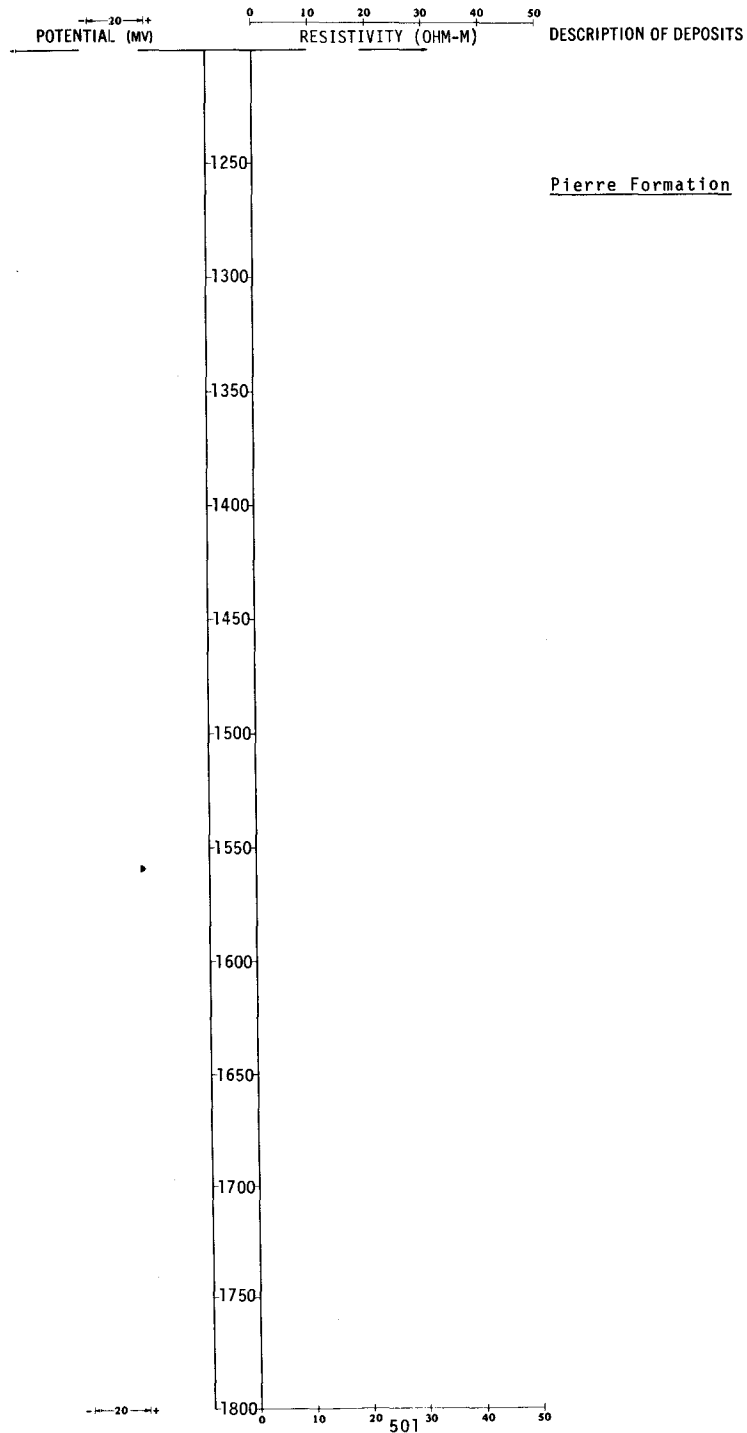
NDSWC 4753, 4753A, 4753B, 4753C, Continued

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT, MSL)

DEPTH: 1302
(FT)



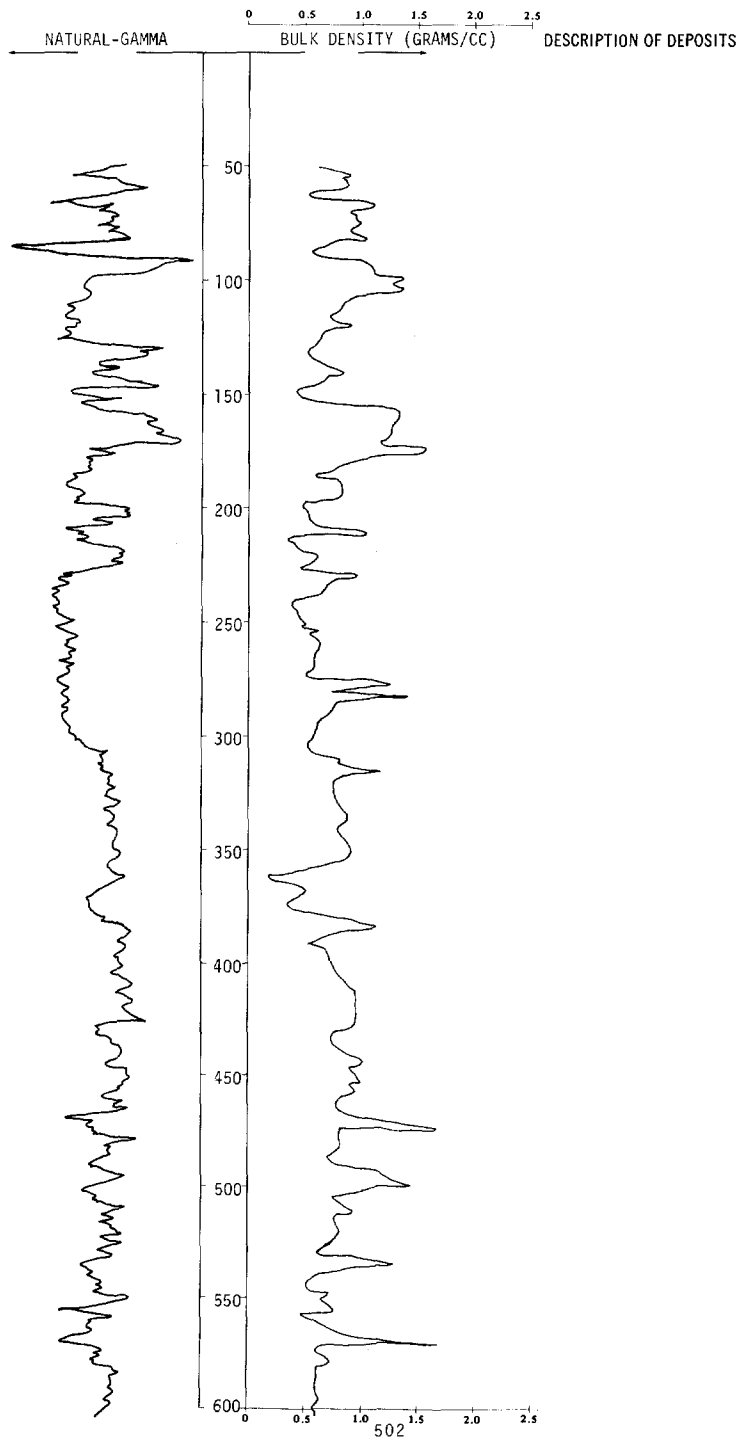
NDSWC 4753, 4753A, 4753B, 4753C, Continued

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT, MSL)

DEPTH: 1302
(FT)



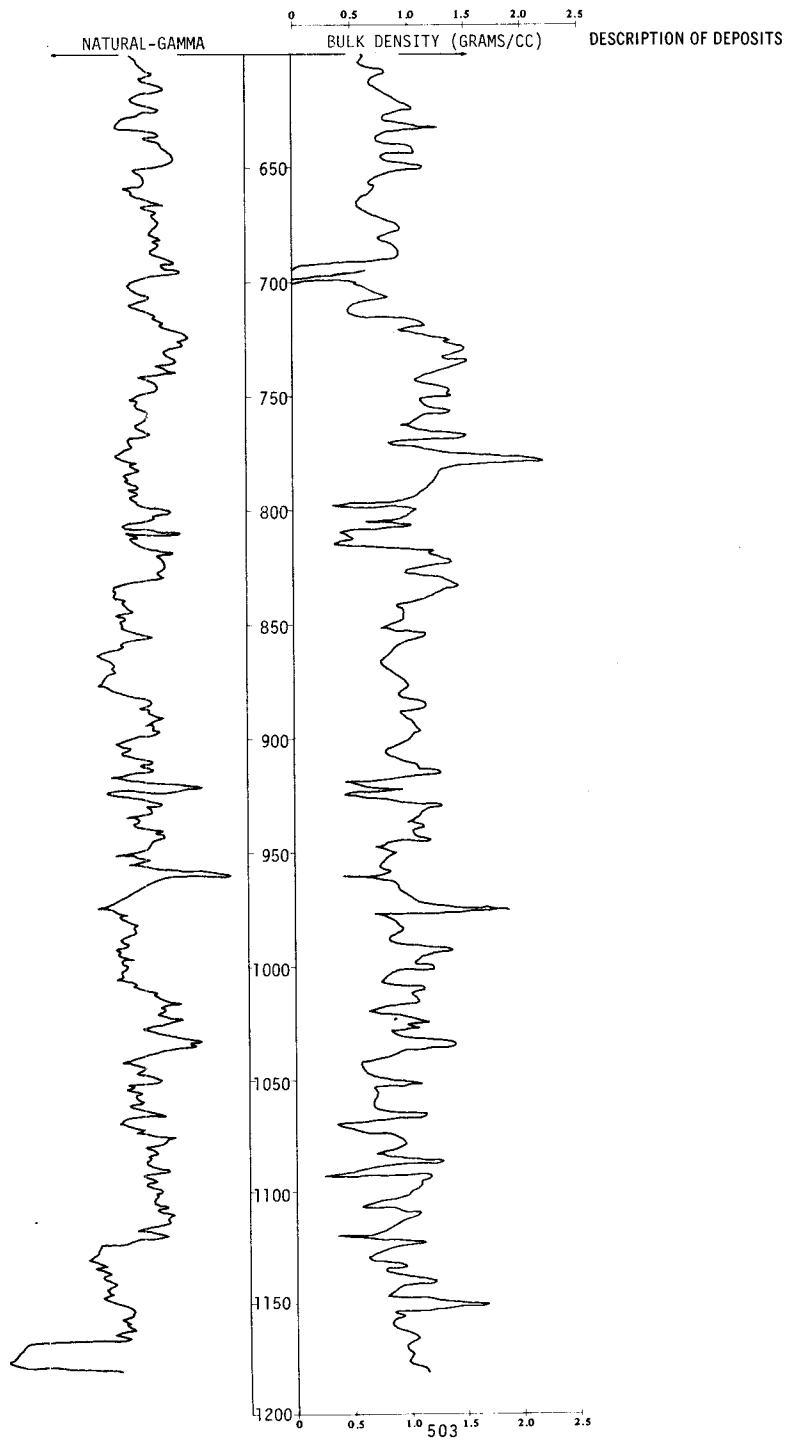
NDSWC 4753, 4753A, 4753B, 4753C, Continued

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT, MSL)

DEPTH: 1302
(FT)



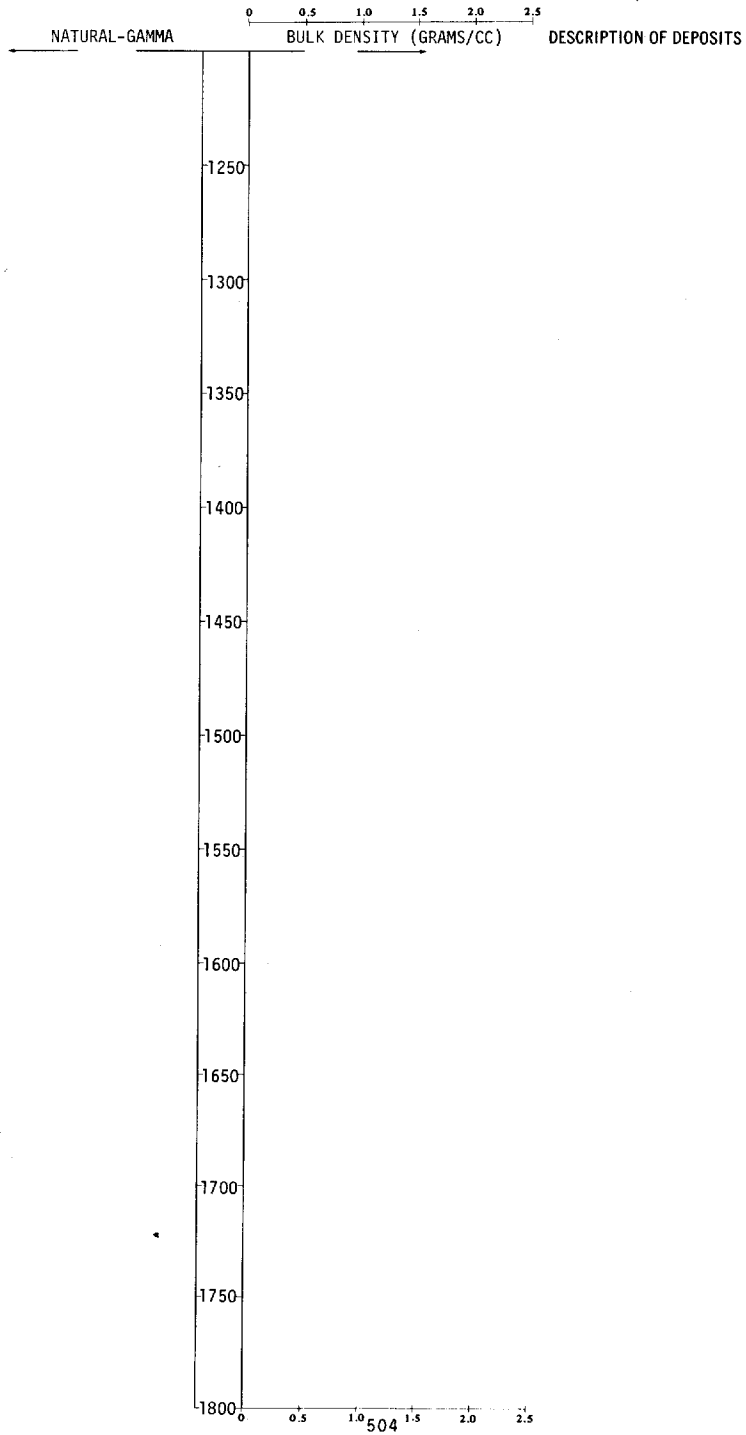
NDSWC 4753, 4753A, 4753B, 4753C, Continued

LOCATION: 139-088-34BCC1, 2, 3, 4

DATE DRILLED: August 1974

ALTITUDE: 2070
(FT, MSL)

DEPTH: 1302
(FT)



139-088-34BCC1, 2, 3, 4, Continued
 NDSWC 4753, 4753A, 4753B, 4753C

Altitude: 2070 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Topsoil, yellow-brown, silty, clayey, sandy, oxidized-----	2	2
Tongue River Formation:			
	Sandstone, yellow-brown, very fine to fine, angular to subangular, semiconsolidated, oxidized-----	15	17
	Siltstone, yellow-brown, clayey, moderately indurated, oxidized-----	7	24
	Siltstone, greenish-gray, sandy, noncalcareous; with lignite stringers-----	6	30
	Siltstone, greenish-gray, clayey, sandy, slightly calcareous, moderately indurated; with occasional yellowish-gray limestone concretions-----	20	50
	Sandstone, bluish-gray, very fine to fine, silty, angular to subangular, consolidated-----	36	86
	Lignite, black, hard, brittle, fractured-----	5	91
	Siltstone, light-gray, noncalcareous, moderately indurated; with thin beds of dark-brown carbonaceous shale-----	6	97
	Sandstone, light-gray, fine to very fine, very silty, well-consolidated-----	33	130
	Siltstone, brownish-gray, very clayey, indurated-----	5	135
	Lignite, brownish-black to black, brittle, slightly fractured; with carbonaceous shale partings-----	5	140
	Sandstone, light-gray, very fine, very silty, consolidated-----	2	142
	Lignite, brownish-black to black, brittle, slightly fractured-----	2	144
	Siltstone, greenish-gray, bentonitic, noncalcareous-----	14	158
	Siltstone, light-greenish-gray, clayey, sandy, noncalcareous, moderately indurated-----	18	176
	Sandstone, greenish-gray to bluish-gray, very fine to fine, clayey, angular, micaceous, semiconsolidated-----	20	196
	Lignite, brownish-black to black, brittle-----	2	198
	Siltstone, greenish-gray, clayey, sandy, slightly indurated-----	28	226
	Sandstone, bluish-gray, very fine to fine, angular to subangular, quartzose, micaceous, friable, semiconsolidated; interbedded with thin layers of carbonaceous shale-----	50	276
	Sandstone, gray, very fine, very silty, clayey, consolidated-----	24	300

139-088-34BCC1, 2, 3, 4, Continued
 NDSWC 4753, 4753A, 4753B, 4753C

Altitude: 2070 feet

Geologic source	Material	Thickness (feet)	Depth (feet)
Cannonball-Ludlow Formations, undifferentiated:			
	Siltstone, gray to light-brownish-gray, sandy, clayey, slightly calcareous, moderately indurated-----	90	390
	Shale, dark-gray, siliceous, slightly calcareous, brittle, moderately indurated, fissile-----	70	460
	Siltstone, light-brownish-gray, clayey, sandy, noncalcareous, moderately indurated; interbedded with some dark-brown carbonaceous shale and thin light-bluish-gray sandstone-----	70	530
	Sandstone, light-gray, very fine, very silty, clayey-----	16	546
	Siltstone, brownish-gray, sandy, noncalcareous, moderately indurated; lignite stringer at 554 feet-----	14	560
	Sandstone, light-gray to bluish-gray, very fine to fine, very silty, clayey, very angular, quartzose, consolidated-----	17	577
	Siltstone, gray, clayey; interbedded with dark-brown carbonaceous shale-----	9	586
	Shale, dark-brown to brownish-black, siliceous, carbonaceous, noncalcareous, brittle, indurated, fissile-----	40	626
Hell Creek Formation:			
	Siltstone, brownish-gray, sandy, clayey, noncalcareous, moderately indurated; with some dark-brown carbonaceous shale beds-----	80	706
	Sandstone, light-gray, very fine, very silty, consolidated-----	20	726
	Siltstone, gray, moderately sandy, clayey-----	30	756
	Sandstone, dark-bluish-gray, very clayey, moderately calcareous, brittle, fissile-----	40	796
	Siltstone, light-brownish-gray, moderately sandy, clayey; with a few thin lignite stringers-----	38	834
	Sandstone, light-bluish-gray, slightly clayey, very angular, very quartzose, consolidated-----	43	877
	Shale, dark-gray to brownish-gray, siliceous, noncalcareous, brittle, fissile-----	23	900
	Siltstone, light-brownish-gray, clayey, sandy, moderately indurated; with occasional limestone concretions----	65	965
Fox Hills Formation:			
	Sandstone, bluish to greenish-gray, very fine to fine, slightly silty, slightly clayey, quartzose, friable, consolidated-----	47	1012
	Siltstone, gray, moderately sandy, clayey, noncalcareous, moderately indurated-----	18	1030

139-088-34BCC1, 2, 3, 4, Continued
 NDSWC 4753, 4753A, 4753B, 4753C

Altitude: 2070 feet

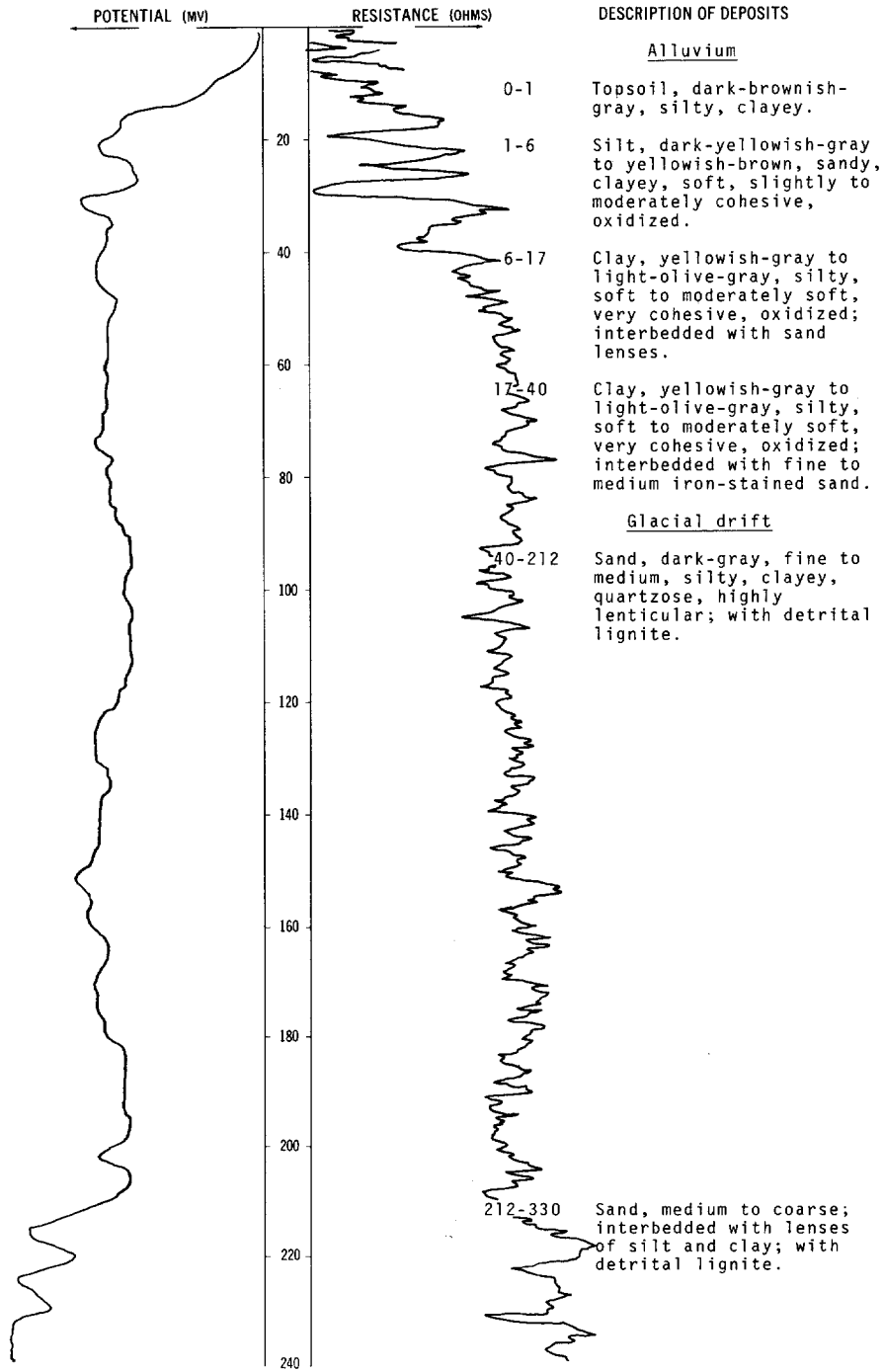
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Fox Hills Formation, Continued:			
	Sandstone, bluish-gray, very fine to fine, slightly silty, slightly clayey, quartzose, friable, consolidated-----	46	1076
	Siltstone, gray to dark-gray, moderately sandy, clayey, noncalcareous, moderately indurated-----	44	1120
	Sandstone, bluish-gray, very fine to fine, slightly silty, slightly clayey, quartzose, calcareous, friable, consolidated-----	35	1155
	Siltstone, gray to dark-gray, moderately sandy, clayey, noncalcareous, moderately indurated; with hard limey sandstone concretions-----	55	1210
	Sandstone, bluish-gray, consolidated; interbedded with some thin lenses of shale and siltstone-----	20	1230
	Shale, dark-gray, silty, sandy, very hard, brittle, fissile; with some interbedded gray sandy siltstone-----	30	1260
Pierre Formation:			
	Shale, grayish-black to black, slightly siliceous, noncalcareous, brittle, well-indurated, fissile-----	42	1302

LOCATION: 139-089-08DDC

DATE DRILLED: August 1973

ALTITUDE: 2115
(FT, MSL)

DEPTH: 380
(FT)



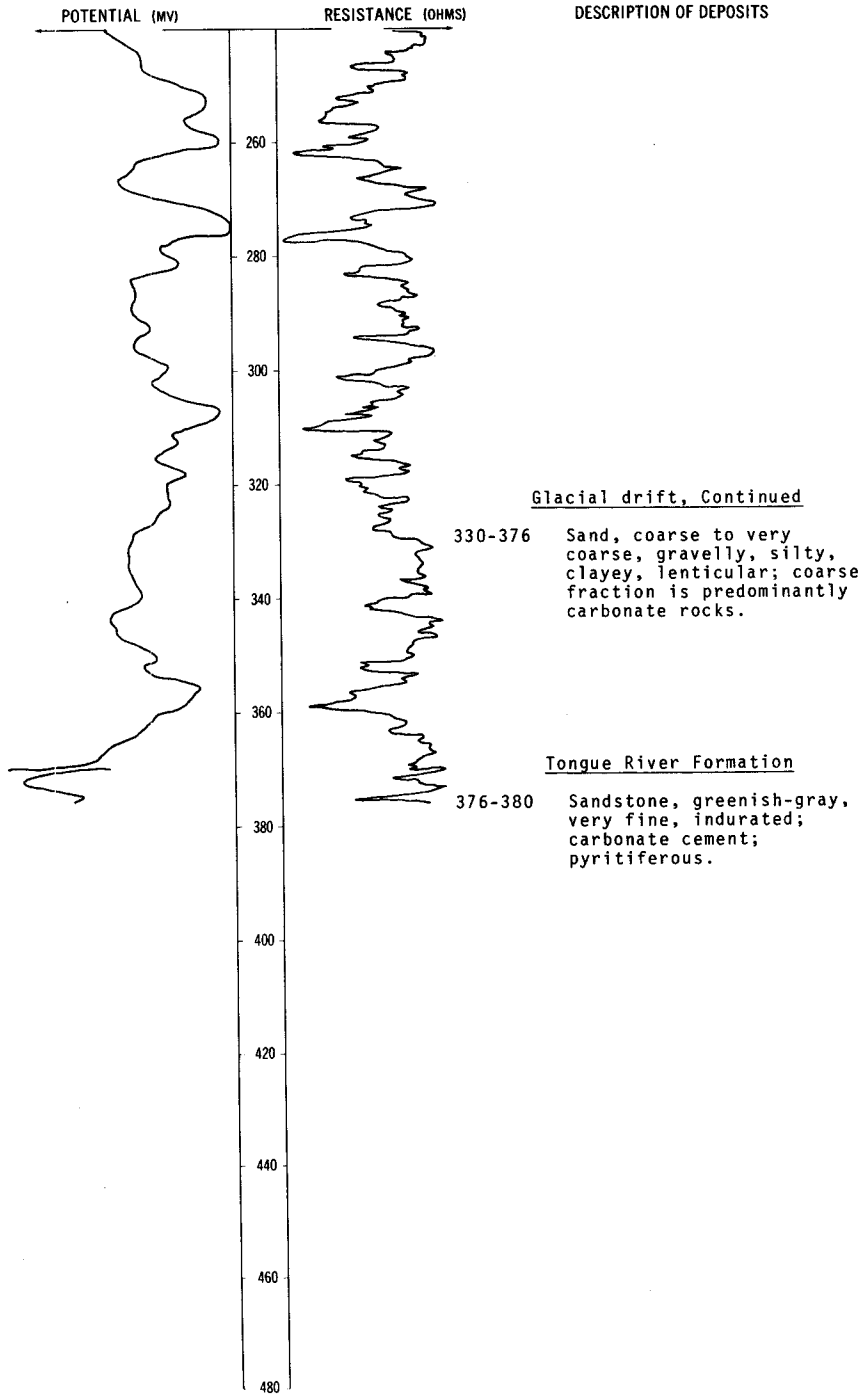
NDSWC 4535, Continued

LOCATION: 139-089-08DDC

DATE DRILLED: August 1973

ALTITUDE: 2115
(FT, MSL)

DEPTH: 380
(FT)



NDSWC 4535, Continued

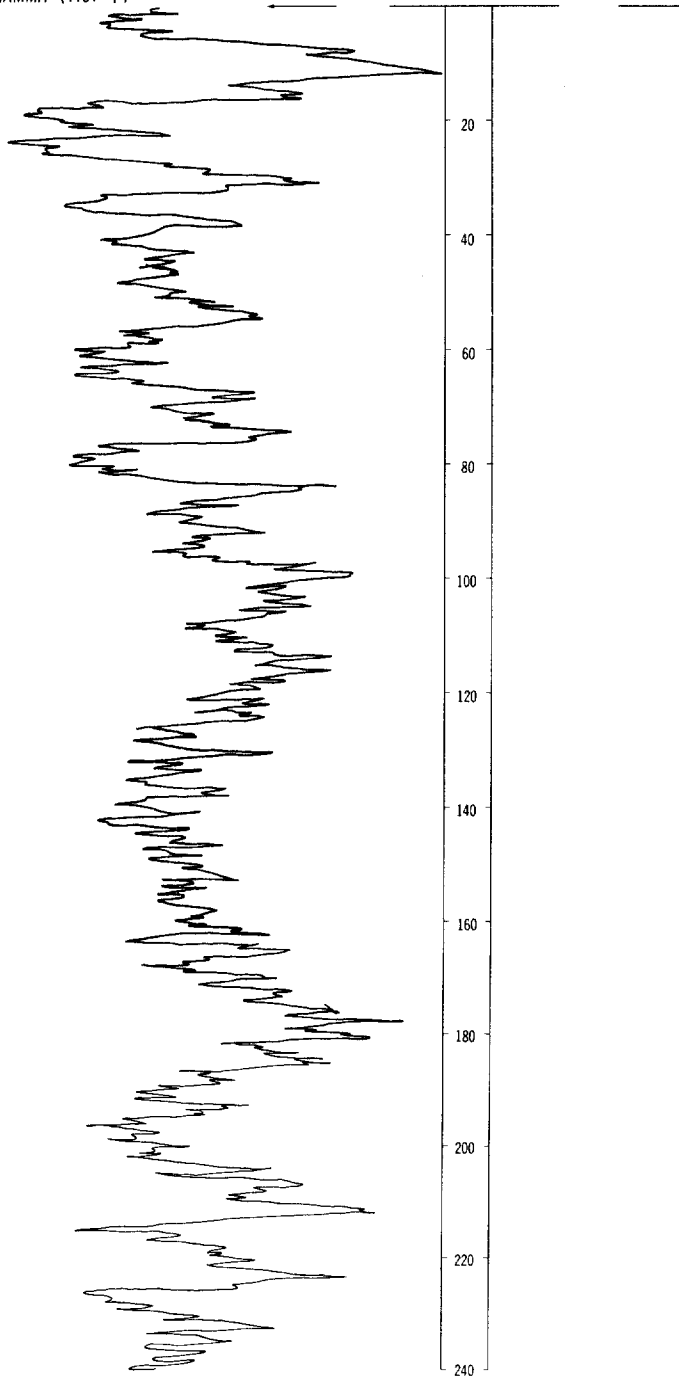
LOCATION: 139-089-08DDC

DATE DRILLED: August 1973

ALTITUDE: 2115
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4535, Continued

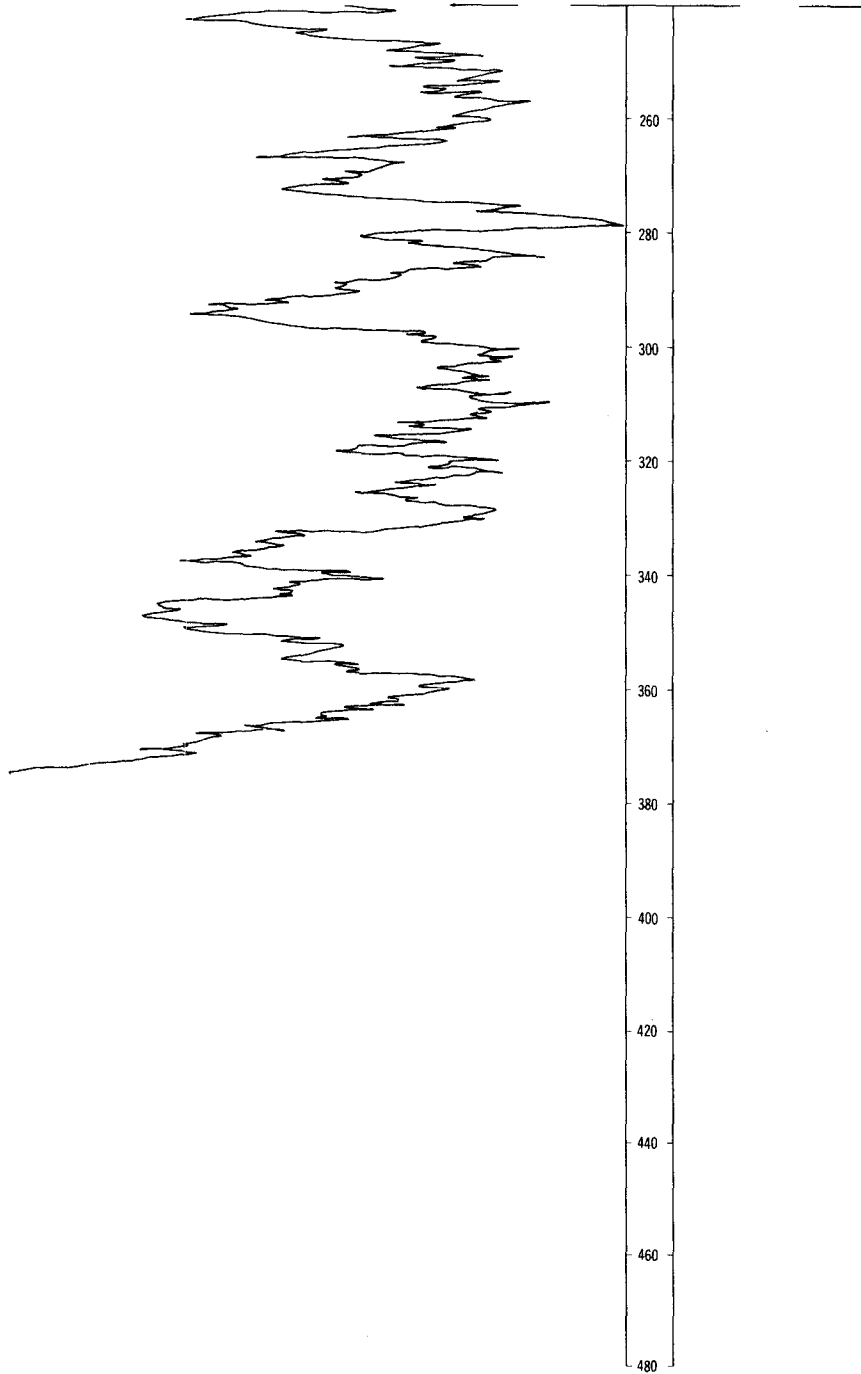
LOCATION: 139-089-08DDC

DATE DRILLED: August 1973

ALTITUDE: 2115
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



139-089-21ACC
NDSWC 9300

Altitude: 2100 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellowish-brown, silty, slightly sandy, moderately soft, slightly plastic; some detrital lignite-----	42	42
	Clay, medium-dark-gray, silty, slightly sandy, moderately soft, slightly plastic-----	18	60
	Sand, very fine to medium, angular to subrounded, quartzose; predominantly medium; with detrital lignite-----	32	92
	Clay, dark-gray, very silty, moderately sandy; some detrital lignite-----	128	220
	Clay, dark-gray, very silty, moderately sandy; much detrital lignite-----	132	352
Tongue River Formation:			
	Sandstone, fine, occasionally cemented; occasional thin beds of lignite-----	28	380

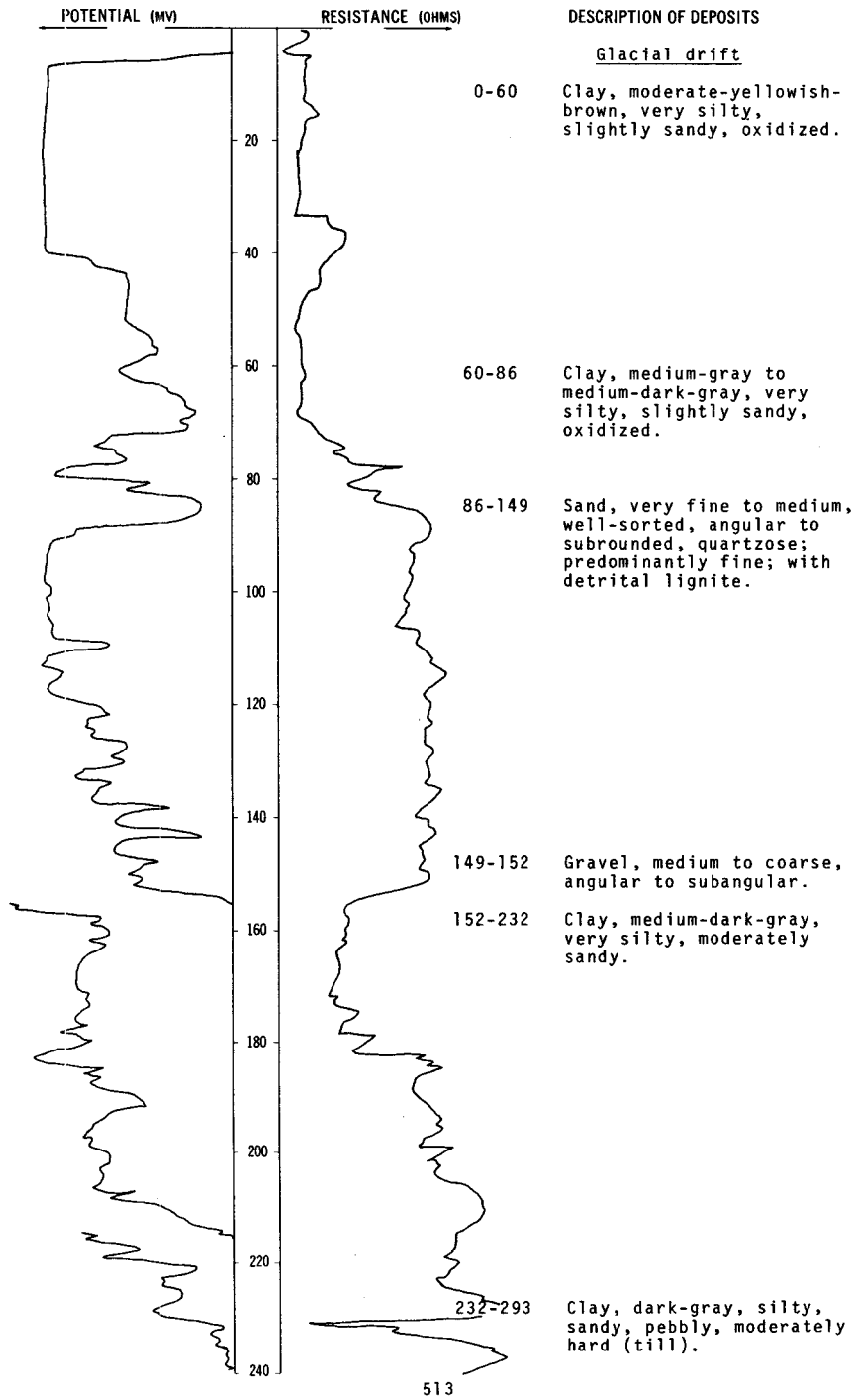
NDSWC 9299, 9299A

LOCATION: 139-089-26CCD1, 2

DATE DRILLED: June 1975

ALTITUDE: 2080
(FT, MSL)

DEPTH: 320
(FT)



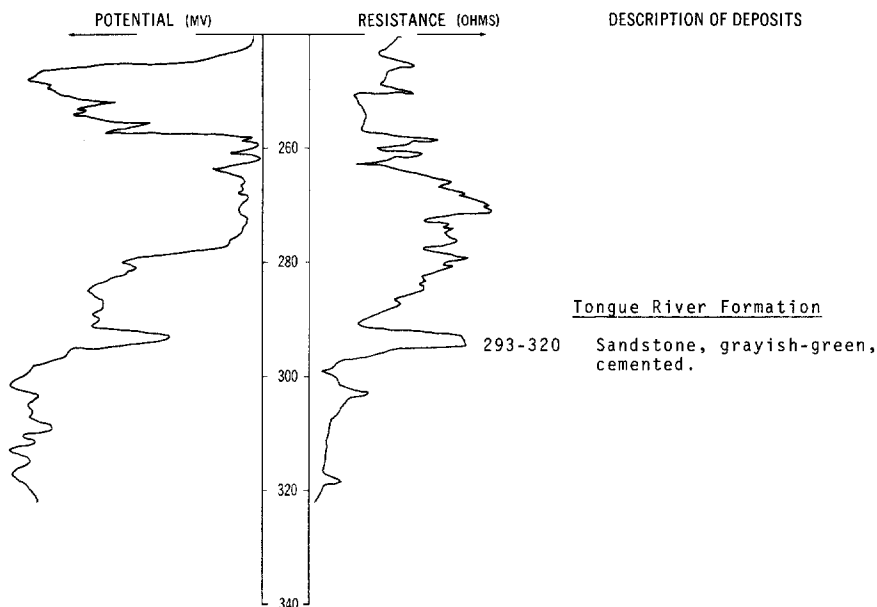
NDSWC 9299, 9299A, Continued

LOCATION: 139-089-26CCD1, 2

DATE DRILLED: June 1975

ALTITUDE: 2080
(FT, MSL)

DEPTH: 320
(FT)



139-089-27ACC
NDSWC 8955

Altitude: 2095 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Topsoil-----	½	½
	Clay, light-olive-brown, silty, calcareous, cohesive, oxidized-----	13½	14
	Clay, olive-gray, silty, calcareous, cohesive-----	42	56
	Sand, fine to medium; with some detrital lignite-----	3	59
	Silt, olive-gray, clayey, calcareous; with occasional sandy lenses and limestone and quartz grains; considerable detrital lignite-----	98	157
	Silt, olive-gray, clayey, sandy, cohesive; some snail shells-----	106	263
Tongue River Formation:			
	Siltstone and mudstone, hard; variegated blues, browns, and grays; some lignite layers-----	37	300

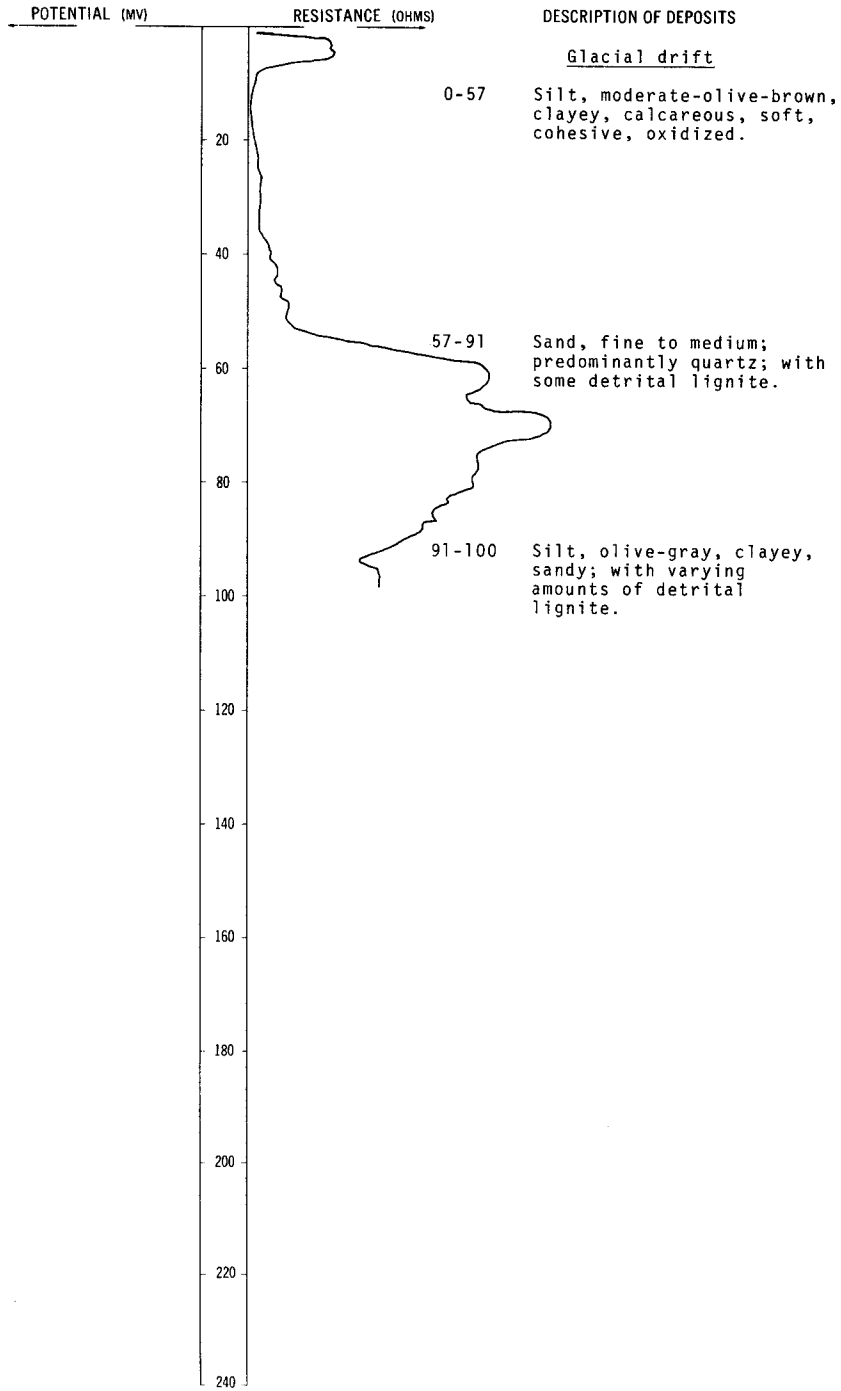
NDSWC 8959

LOCATION: 139-089-27BCC

DATE DRILLED: May 1974

ALTITUDE: 2105
(FT, MSL)

DEPTH: 100
(FT)



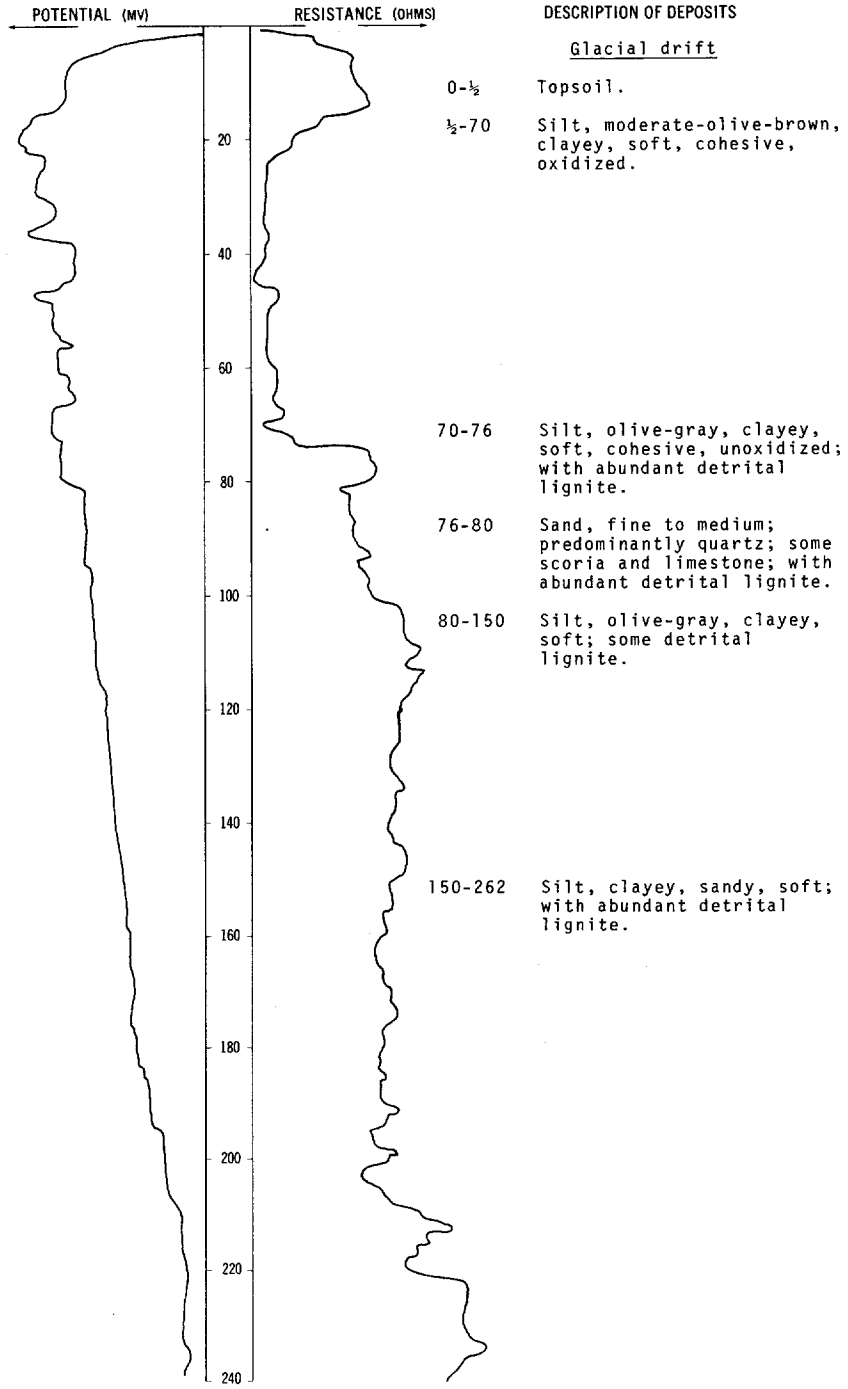
NDSWC 8958

LOCATION: 139-089-27BCD

DATE DRILLED: May 1974

ALTITUDE: 2105
(FT, MSL)

DEPTH: 380
(FT)



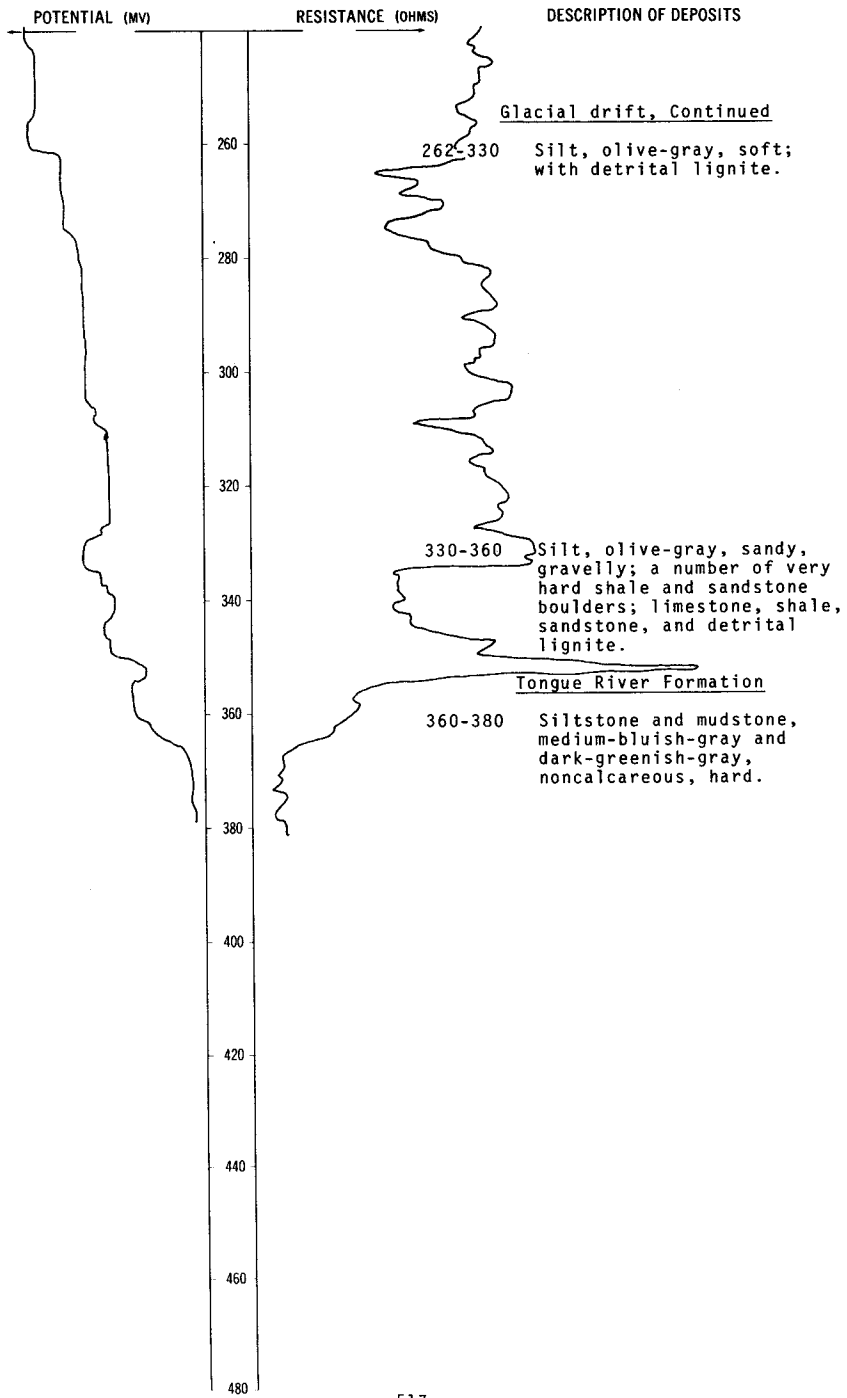
NDSWC 8958, Continued

LOCATION: 139-089-27BCD

DATE DRILLED: May 1974

ALTITUDE: 2105
(FT, MSL)

DEPTH: 380
(FT)



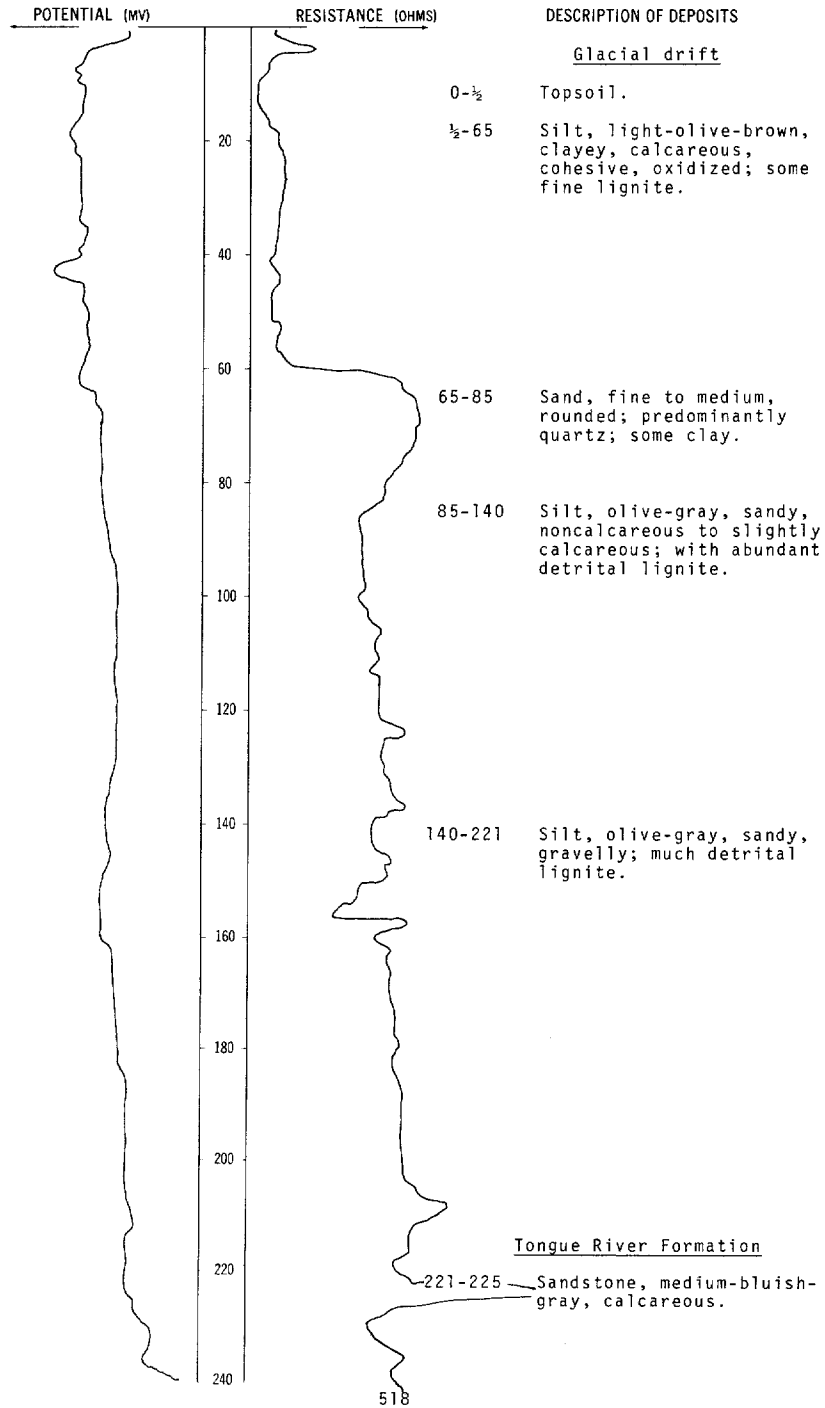
NDSWC 8956

LOCATION: 139-089-28DAA

DATE DRILLED: May 1974

ALTITUDE: 2105
(FT, MSL)

DEPTH: 260
(FT)



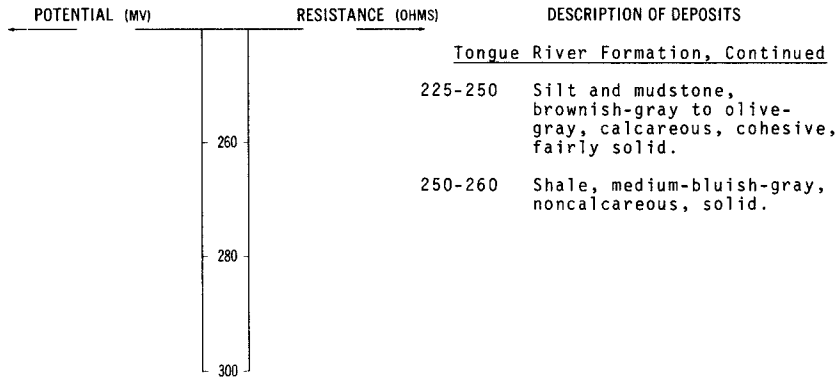
NDSWC 8956, Continued

LOCATION: 139-089-28DAA

DATE DRILLED: May 1974

ALTITUDE: 2105
(FT, MSL)

DEPTH: 260
(FT)



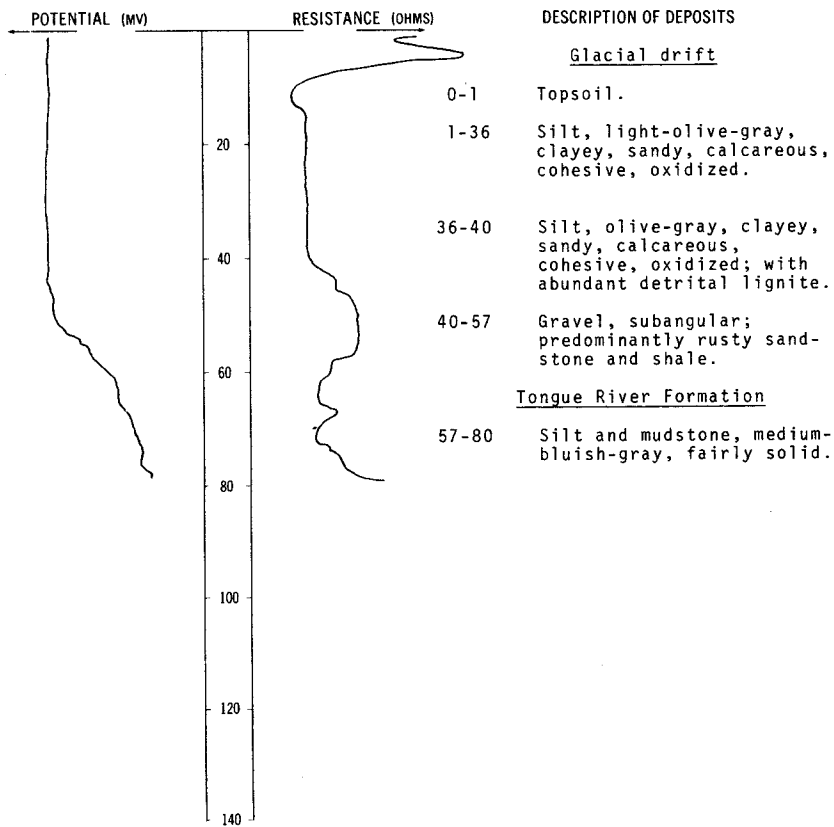
NDSWC 8957

LOCATION: 139-089-28DBA

DATE DRILLED: May 1974

ALTITUDE: 2115
(FT, MSL)

DEPTH: 80
(FT)



139-089-33DAA
NDSWC 8960

Altitude: 2135 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation:	Silt and mudstone, dark-yellowish-orange to olive-gray, solid, oxidized-----	20	20

139-089-33DDD
NDSWC 8961

Altitude: 2145 feet

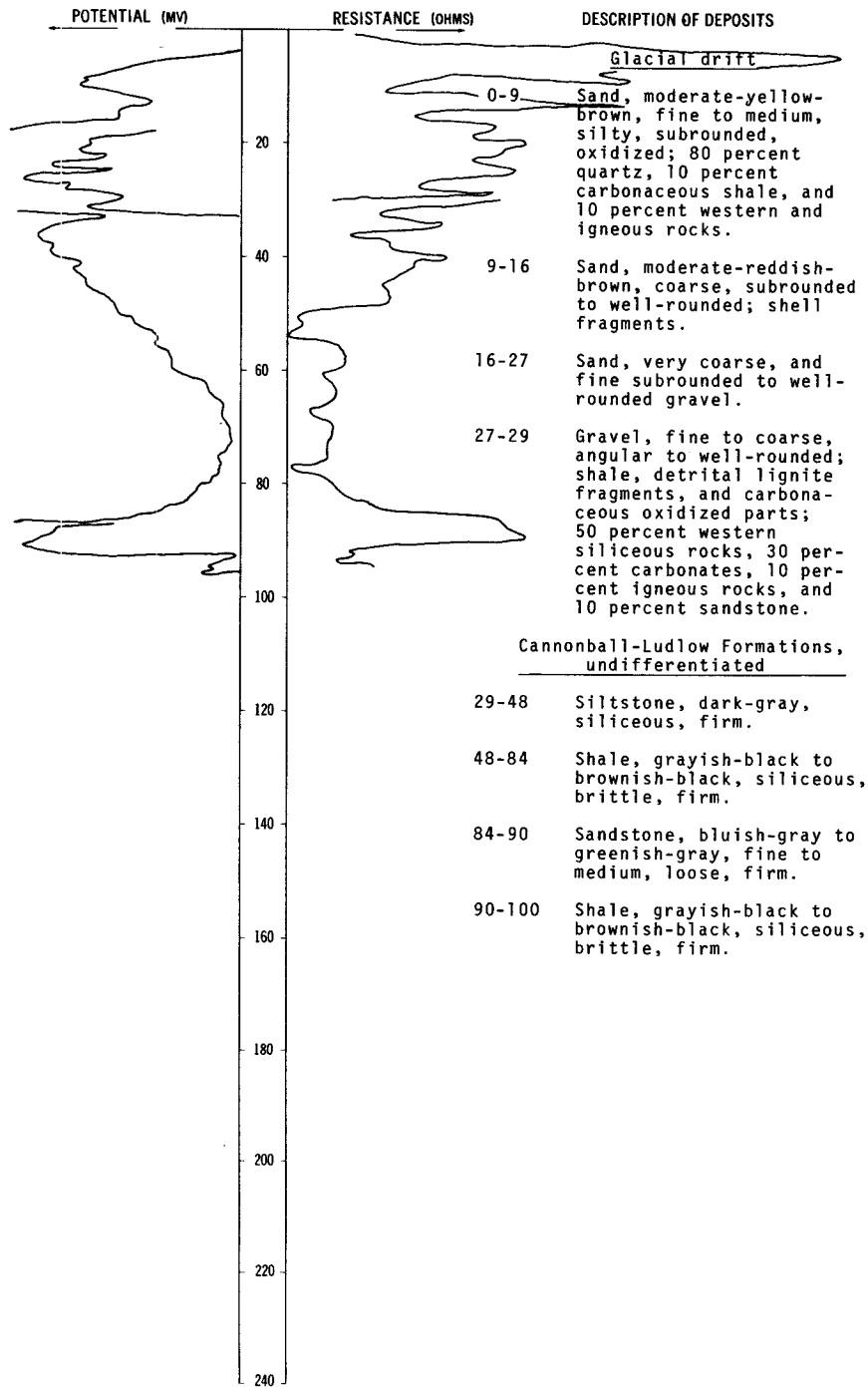
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:	Topsoil-----	½	½
	Silt, light-olive-brown, sandy, soft, cohesive-----	29½	30
	Sand, fine to medium-----	22	52
Tongue River Formation:	Mudstone, bluish-gray, hard; with some brownish-gray lignite seams-----	28	80

LOCATION: 140-081-06CCC

DATE DRILLED: August 1974

ALTITUDE: 1660
(FT, MSL)

DEPTH: 100
(FT)

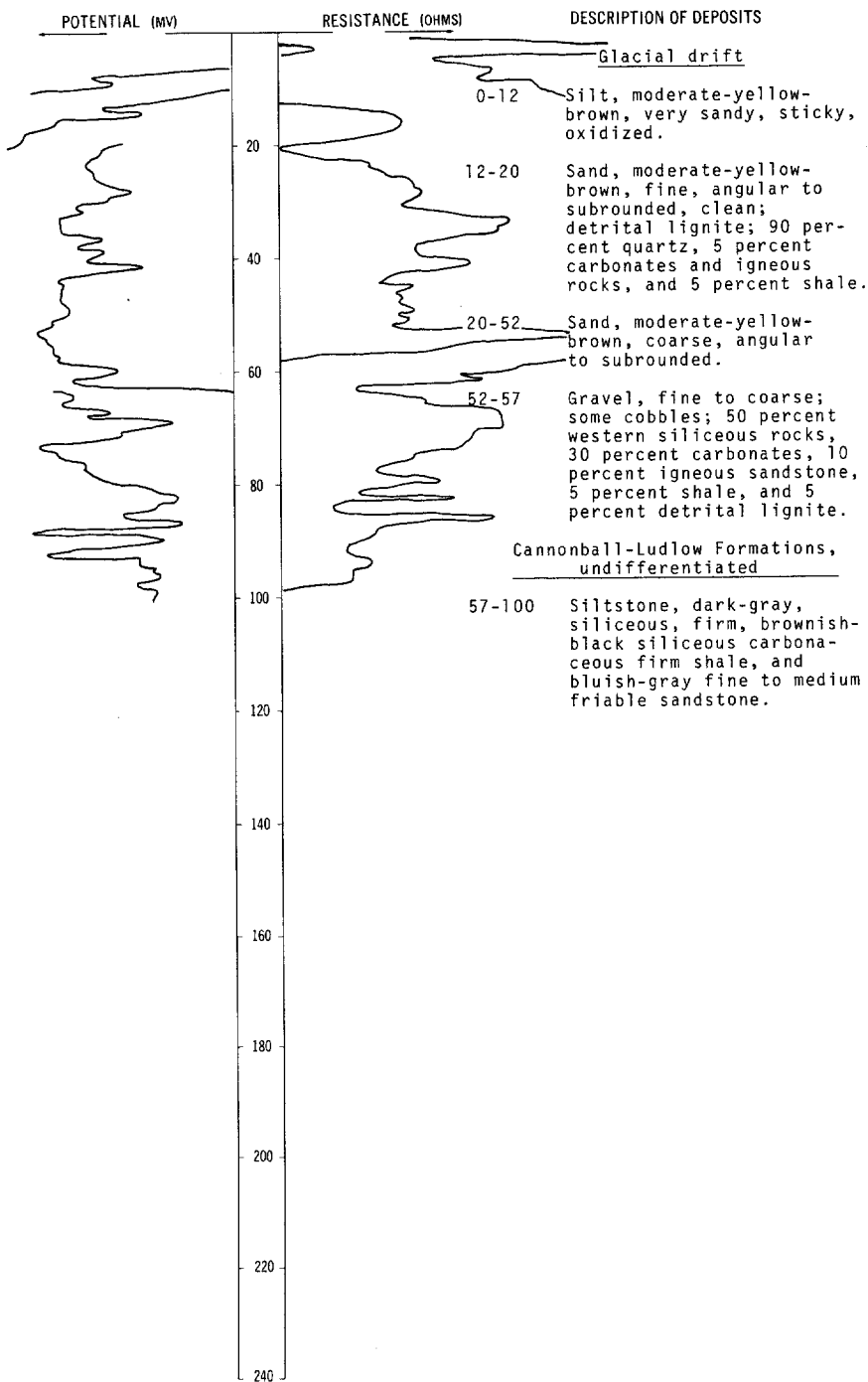


LOCATION: 140-081-18ABD

DATE DRILLED: August 1974

ALTITUDE: 1645
(FT, MSL)

DEPTH: 100
(FT)



140-082-01DAD
NDSWC 9327

Altitude: 1655 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, dark-yellowish-brown, very silty, very sandy, iron-stained, oxidized-----	9	9
	Sand, very fine to medium, angular to subrounded, quartzose, oxidized-----	11	20
	Sand, medium-gray, angular to subrounded, quartzose, unoxidized; with some detrital lignite-----	22	42
	Sand, very fine to very coarse, very gravelly, angular to subrounded, quartzose; about 30 percent fine to very coarse gravel-----	8	50
Cannonball Formation:			
	Shale, brownish-black, very silty, brittle-----	10	60

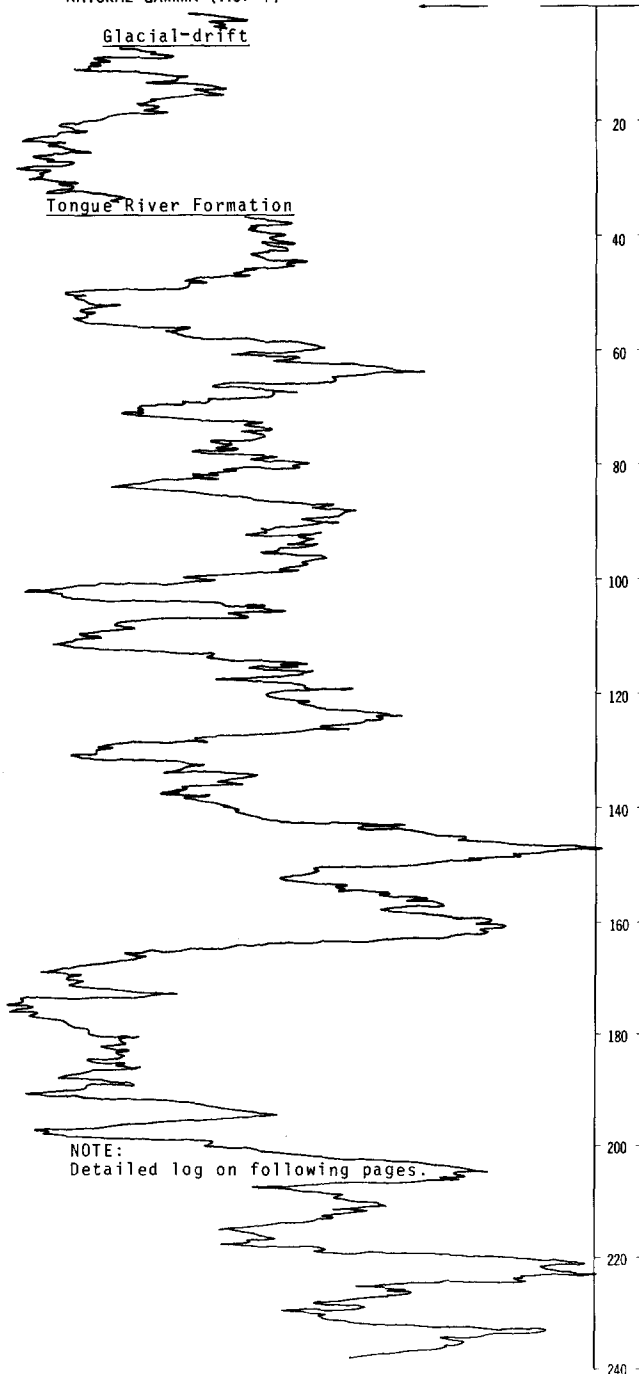
LOCATION: 140-083-16AAA

DATE DRILLED: September 1974

ALTITUDE: 2160
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



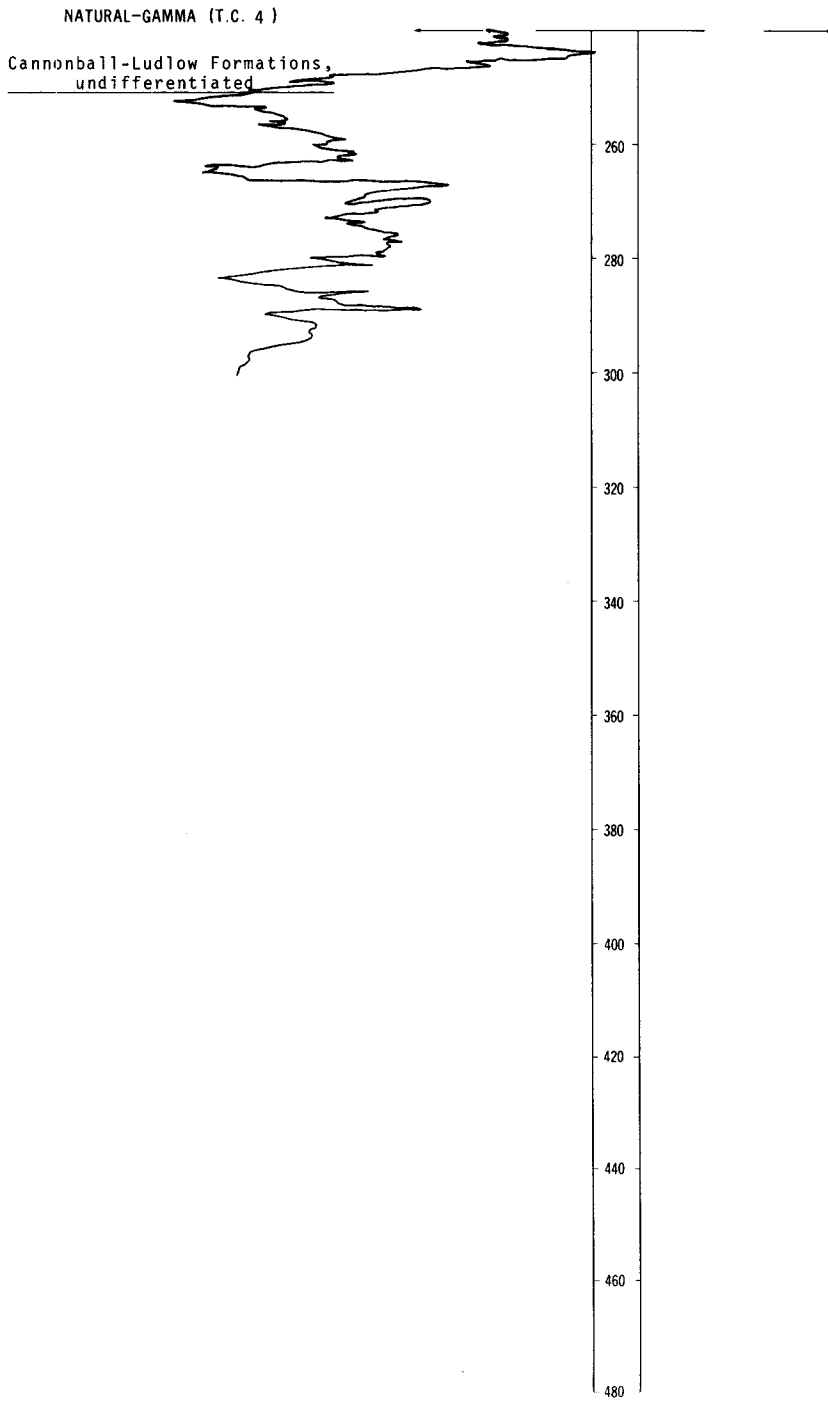
NDSWC 4765, Continued

LOCATION: 140-083-16AAA

DATE DRILLED: September 1974

ALTITUDE: 2160
(FT. MSL)

DEPTH: 300
(FT)



140-083-16AAA, Continued
NDSWC 4765

Altitude: 2160 feet

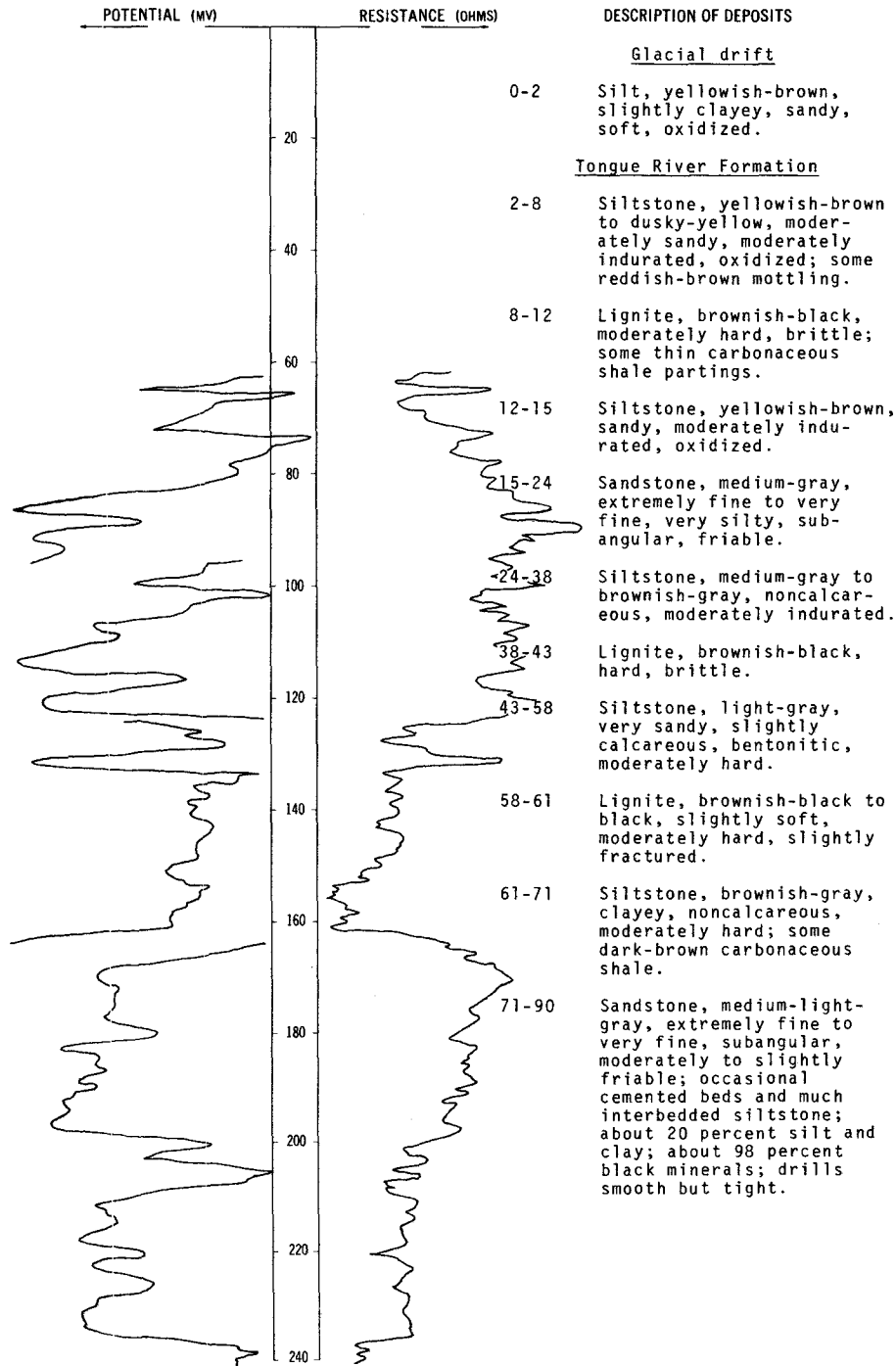
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, moderate-yellowish-brown, silty, moderately sandy, pebbly, cohesive, crumbly, oxidized (till)-----	20	20
	Gravel, fine to very coarse, slightly sandy, poorly sorted, very angular, oxidized; mostly locally derived sandstone and siltstone; some clay; mixed mud at 40 feet; taking water; loose and caving-----	16	36
Tongue River Formation:			
	Siltstone, medium-gray, noncalcareous, moderately indurated; some thin dark-brown carbonaceous shale bedding----	14	50
	Lignite, brownish-black, moderately hard, brittle-----	6	56
	Siltstone, medium-gray to brownish-gray, noncalcareous, moderately indurated; some thin carbonaceous shale bedding-----	14	70
	Sandstone, light-gray, extremely fine to very fine, calcareous, soft, friable; siltstone interbeds-----	15	85
	Siltstone, light-gray to grayish-white, calcareous, bentonitic, slightly indurated, sticky-----	15	100
	Lignite, brownish-black to black, moderately soft, brittle; some thin shale partings-----	3	103
	Siltstone, brownish-gray to medium-gray, noncalcareous, moderately indurated; a few thin lignite stringers-----	5	108
	Lignite, dark-brown, oily, soft; some shale-----	4	112
	Shale, dark-brown, carbonaceous, brittle, indurated, fissile-----	18	130
	Sandstone, greenish-gray, very fine to fine, clayey, silty, subangular, well-consolidated-----	12	142
	Shale, dark-brown, carbonaceous, hard, brittle, fissile-----	24	166
	Sandstone, light-gray, extremely fine to very fine, very silty, subangular, calcareous, slightly friable, very tight; siltstone interbeds-----	34	200
	Siltstone, medium-gray to medium-dark-gray, clayey, noncalcareous, moderately indurated; some thin limestone concretions-----	50	250
Cannonball-Ludlow Formations, undifferentiated:			
	Sandstone, dark-greenish-gray, very clayey, subangular, barely friable, very tight-----	16	266
	Siltstone, dark-gray; dark-brownish-black shale bedding; some thin greenish-gray sandstone bedding-----	34	300

LOCATION: 140-084-35CCC

DATE DRILLED: September 1974

ALTITUDE: 2030
(FT, MSL)

DEPTH: 300
(FT)

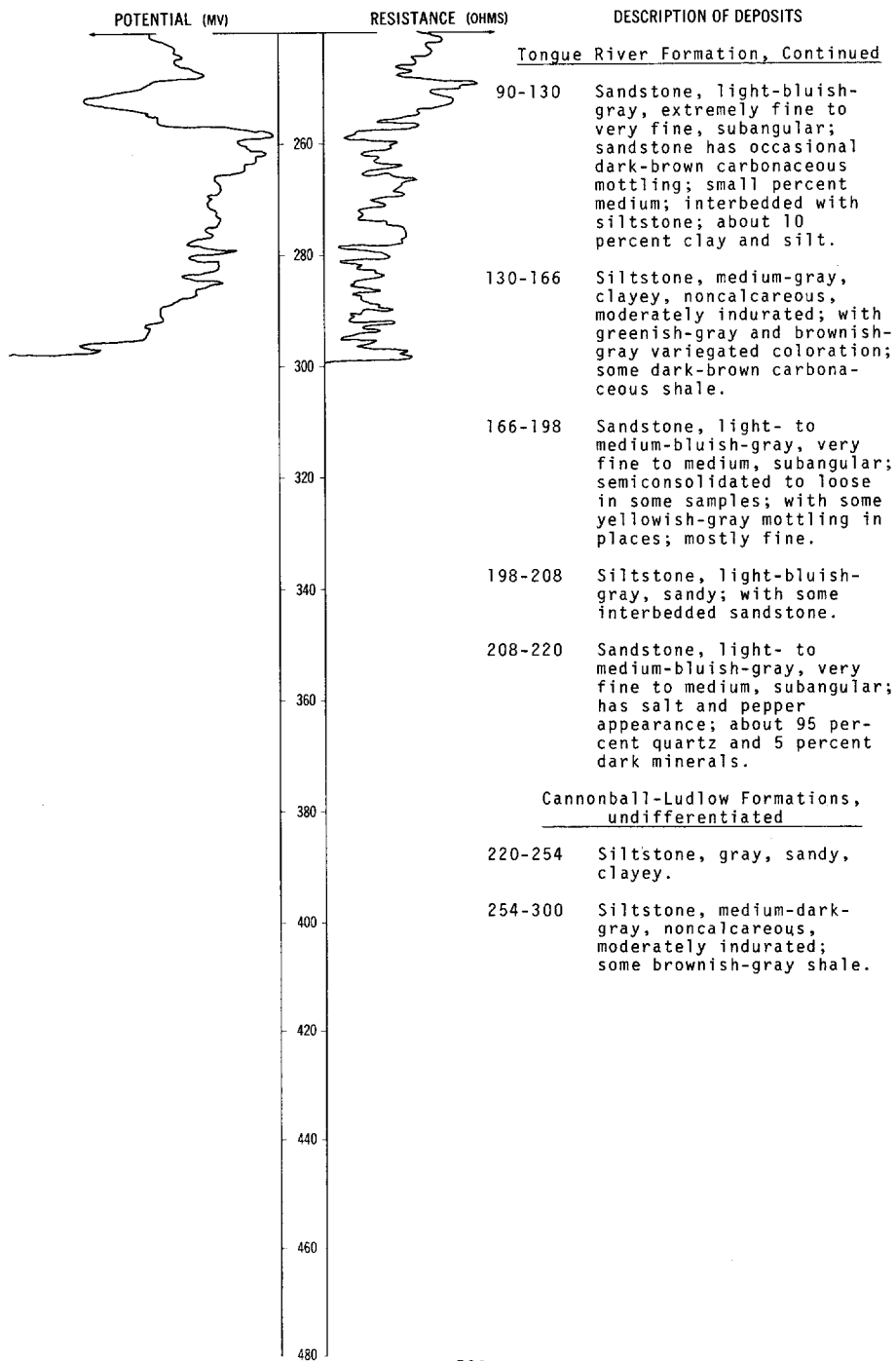


LOCATION: 140-084-35CCC

DATE DRILLED: September 1974

ALTITUDE: 2030
(FT, MSL)

DEPTH: 300
(FT)



NDSWC 4759, Continued

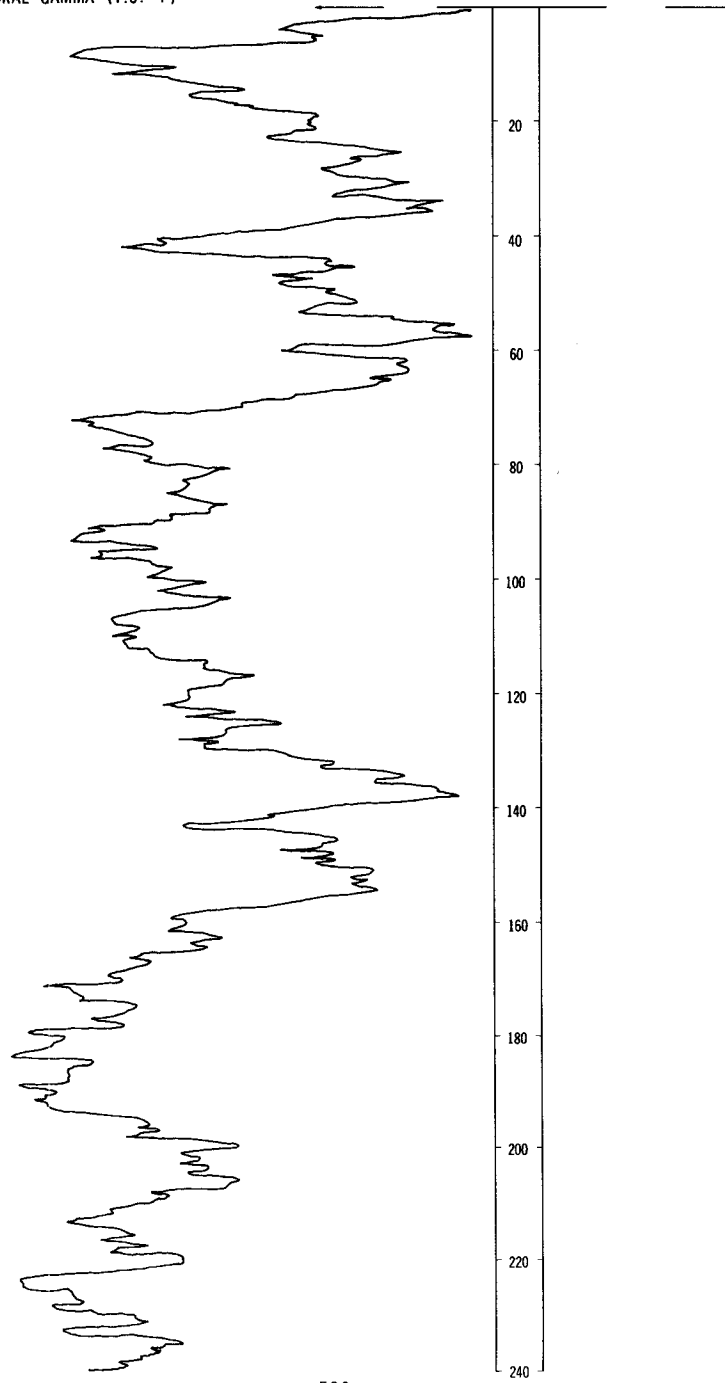
LOCATION: 140-084-35CCC

DATE DRILLED: September 1974

ALTITUDE: 2030
(FT. MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4759, Continued

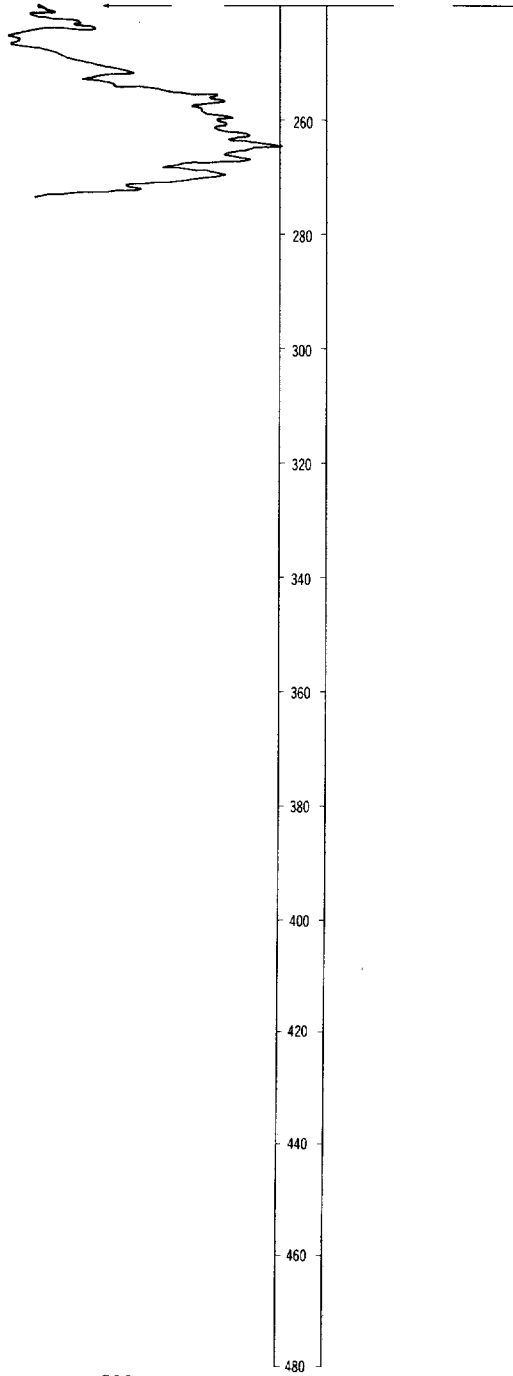
LOCATION: 140-084-35CCC

DATE DRILLED: September 1974

ALTITUDE: 2030
(FT, MSL)

DEPTH: 300
(FT)

NATURAL-GAMMA (T.C. 4)



140-085-03DDD
(Log from Mann Drilling Company)

Altitude: 2100 feet

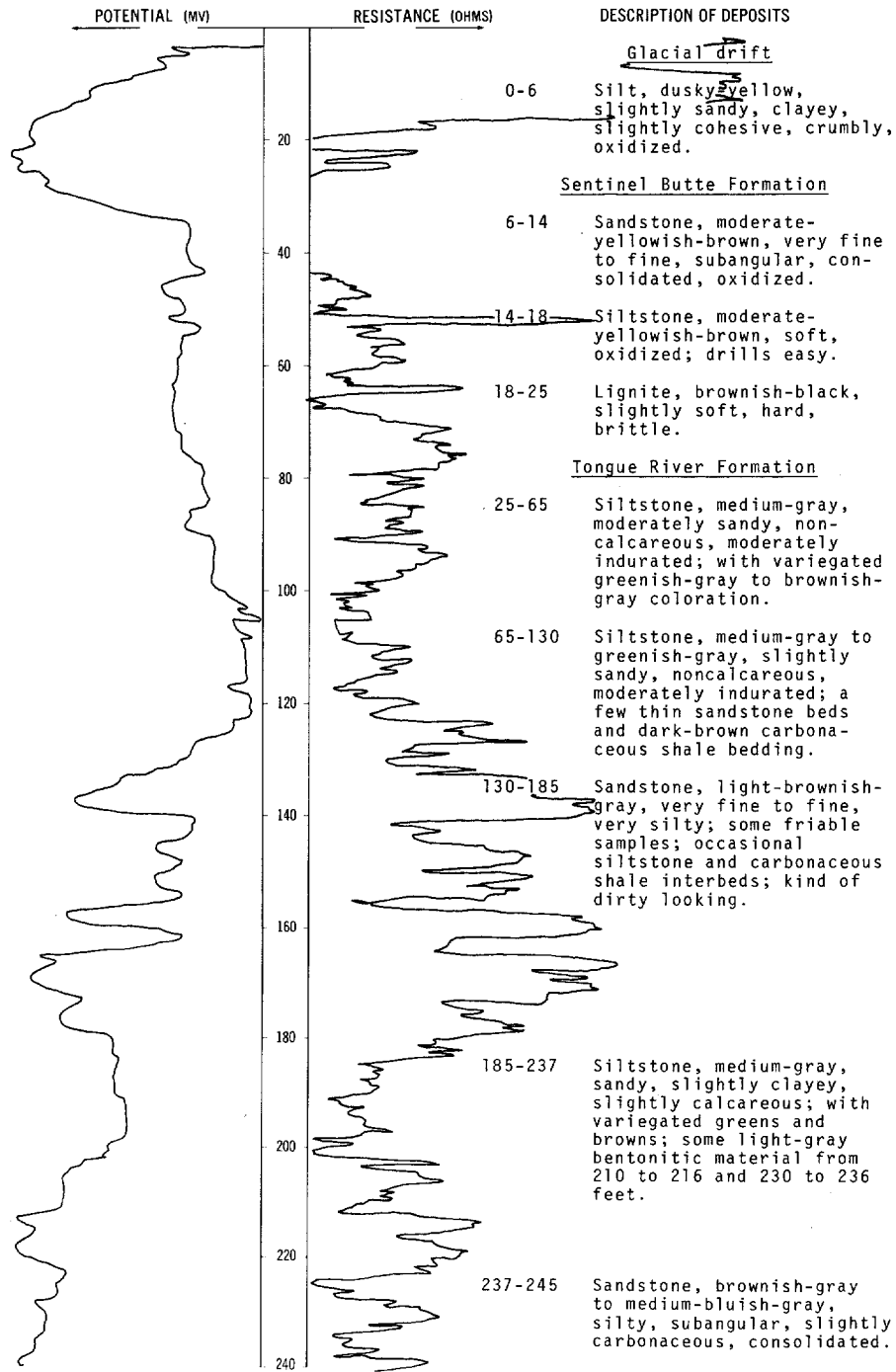
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation:			
	Claystone, sandy, brown-----	42	42
	Lignite-----	2	44
	Claystone, gray-----	72	116
	Lignite-----	2	118
	Claystone, gray-----	13	131
	Lignite-----	1	132
	Claystone, gray-----	18	150
	Sandstone-----	1	151
	Claystone, gray-----	18	169
	Lignite-----	3	172
	Claystone, gray-----	58	230
	Lignite-----	11	241
	Claystone, gray-----	20	261
	Sandstone; brown water (100 gpm)-----	49	310
Cannonball-Ludlow Formations, undifferentiated:			
	Claystone, gray-----	60	370
	Claystone, sandy, gray-----	100	470
	Sandstone-----	4	474
	Claystone, gray-----	42	516
	Sandstone-----	1	517
	Claystone, sandy, gray-----	45	562
	Claystone, sandy-----	9	571
Hell Creek Formation:			
	Sandstone-----	2	573
	Claystone, sandy, gray-----	55	628
	Sandstone-----	1	629
	Claystone, sandy, gray-----	6	635
	Sandstone-----	2	637
	Claystone, sandy, gray-----	25	662
	Claystone, sandy-----	25	687
	Sandstone-----	2	689
	Claystone, sandy, dark-gray-----	59	748
	Sandstone-----	2	750
	Claystone, sandy, brown-----	200	950
Fox Hills Formation (?):			
	Sandstone-----	30	980
	Claystone, sandy, gray-----	60	1040

LOCATION: 140-085-18BBC

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT. MSL)

DEPTH: 320
(FT)



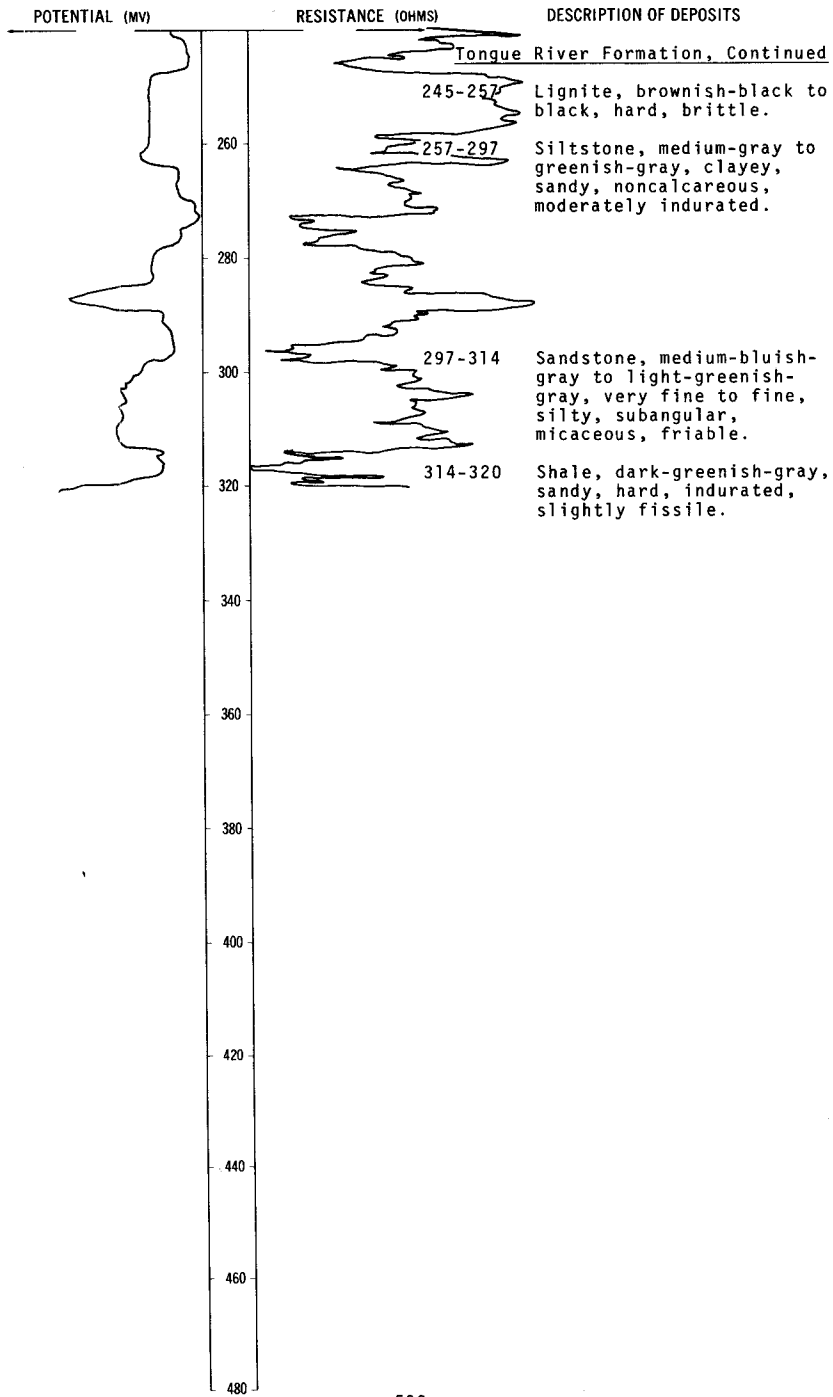
NDSWC 4758, Continued

LOCATION: 140-085-18BBC

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 320
(FT)



NDSWC 4758, Continued

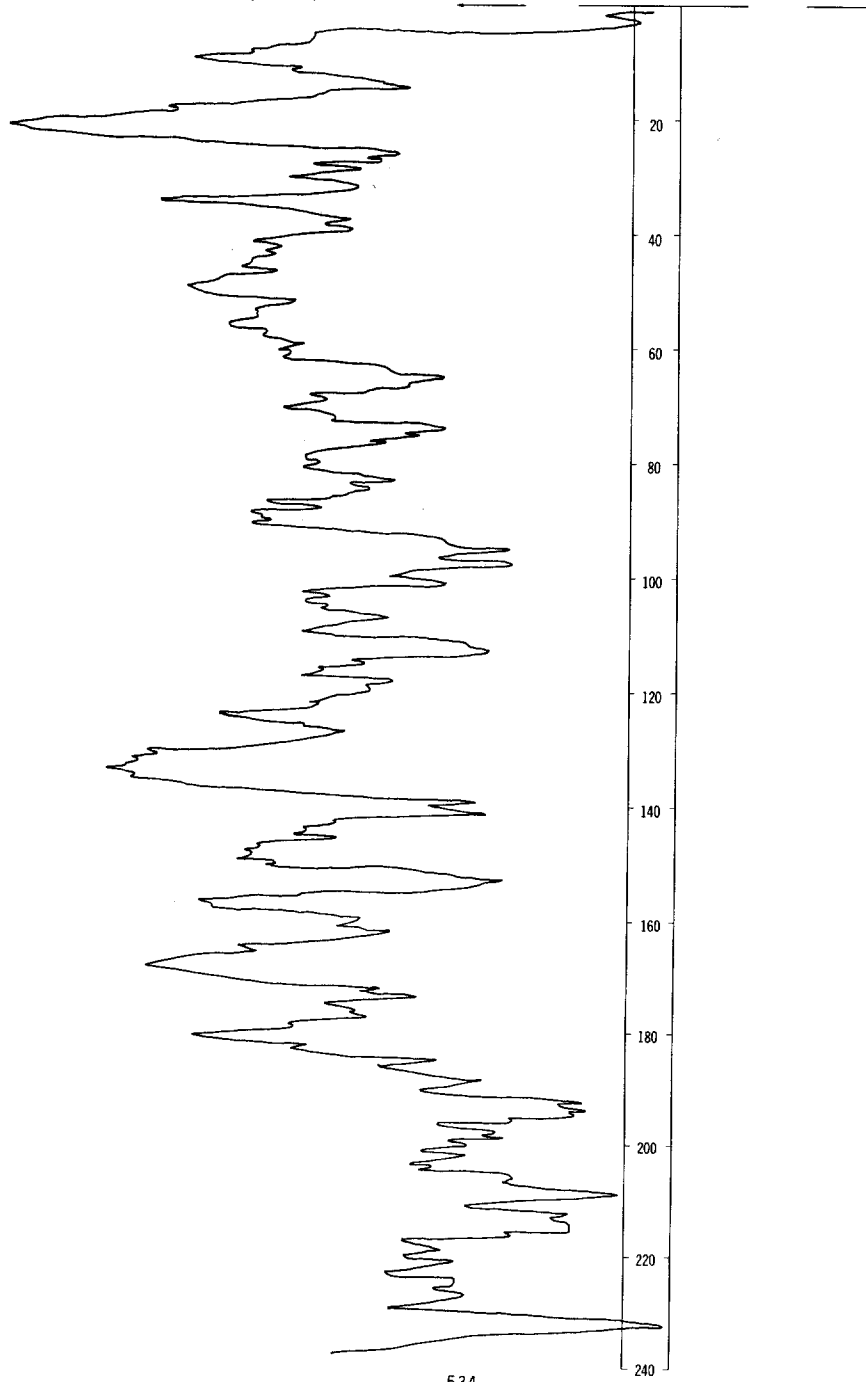
LOCATION: 140-085-18BBC

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT. MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4758, Continued

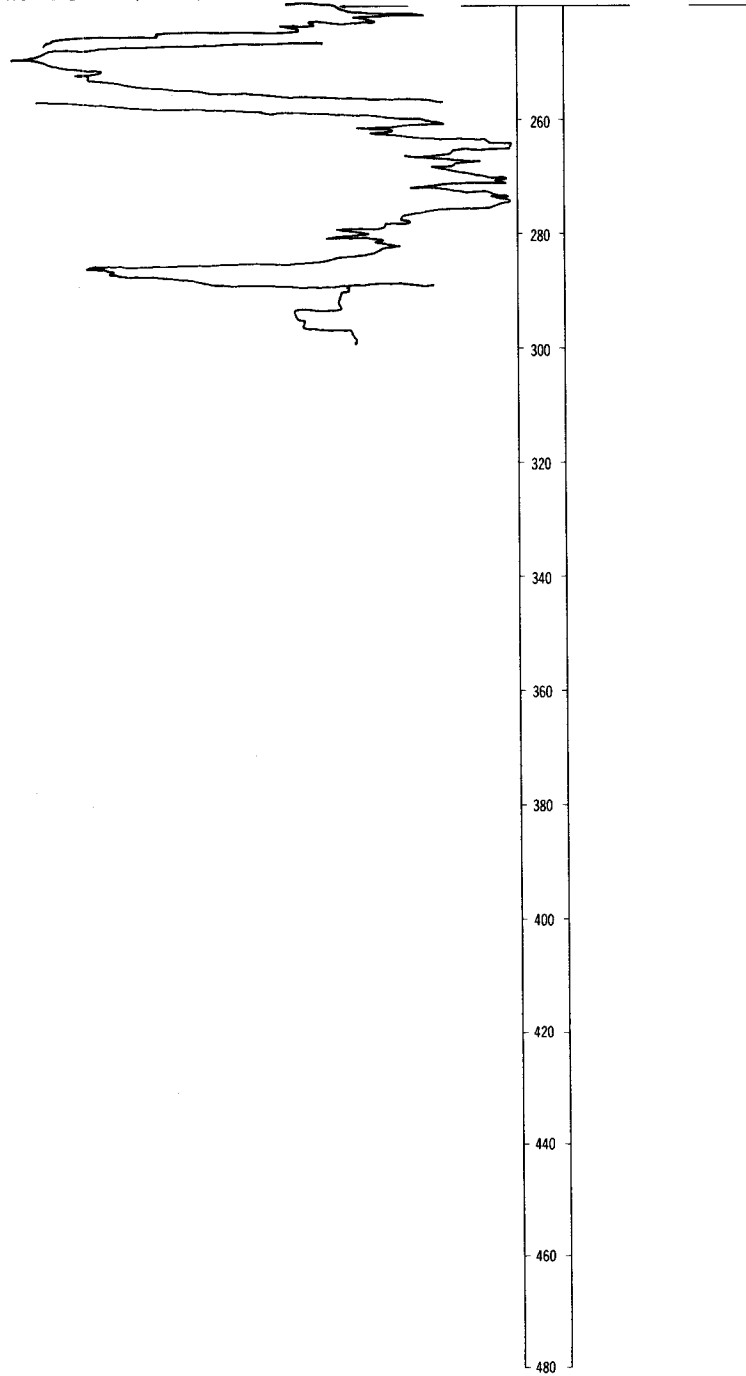
LOCATION: 140-085-18BBC

DATE DRILLED: September 1974

ALTITUDE: 2095
(FT, MSL)

DEPTH: 320
(FT)

NATURAL-GAMMA (T.C. 4)



140-085-25BBC
NDSWC 4640

Altitude: 2012 feet

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clay, brownish-gray, very silty, cohesive, oxidized-----	2	2
	Sand, fine to very coarse, gravelly, clayey, poorly sorted, angular, oxidized-----	2	4
	Clay, medium-yellow-brown, silty, cohesive, plastic, oxidized-----	6	10
	Clay, olive-gray, silty, cohesive, plastic, oxidized-----	4	14
	Gravel, fine to coarse, sandy, angular to subrounded, slightly oxidized; mostly local bedrock material; some granitic and carbonate rocks; about 40 percent sand-----	5	19
	Gravel, fine to coarse, sandy, loose; mostly local sandstone; some granitic, metamorphic, and carbonate rocks-----	9	28
Tongue River Formation:			
	Siltstone, light- to medium-gray, clayey, highly calcareous, moderately indurated-----	12	40

140-085-25BCB
NDSWC 4639

Altitude: 2010 feet

Glacial drift:			
	Clay, light-brownish-gray, very silty, soft, sticky, oxidized-----	6	6
	Sand, brown, fine to very coarse, gravelly, poorly sorted, angular, oxidized-----	8	14
	Gravel, brown, fine to medium, poorly sorted, angular to subrounded, oxidized-----	2	16
Tongue River Formation:			
	Claystone, medium-gray, silty, calcareous; with thin lignite stringers-----	10	26
	Sandstone, medium-light-gray, very fine to fine, micaceous, lignitic, loose, semiconsolidated-----	8	34
	Siltstone, light-gray, highly calcareous, limy, moderately indurated-----	6	40

140-085-25BCC
NDSWC 4638

Altitude: 2005 feet

Geologic source	Material	Thickness (feet)	Depth (feet)
Glacial drift:			
	Clay, light-brownish-gray, very silty, soft, sticky-----	6	6
	Sand, fine to very coarse, gravelly, subangular, oxidized; with detrital lignite and clay stringers-----	8	14
Tongue River Formation:			
	Claystone, brownish-gray to medium-gray, soft; with thin lignite stringers-----	12	26
	Sandstone, light-gray, very fine, silty, highly calcareous, semiconsolidated-----	10	36
	Siltstone, light-gray, sandy, highly calcareous, slightly indurated-----	4	40

140-087-08ADB
A. Winckler
(Log from Opp Well Drilling)

Sentinel Butte Formation:			
	Topsoil; sandy loam-----	2	2
	Sand, gray-----	18	20
	Clay, blue-----	18	38
	Lignite; water bearing-----	3	41
	Clay, blue-----	26	67

140-088-04ADD1
P. Weinhardt
(Log from Erickson Well Drilling)

Sentinel Butte Formation (?):			
	Topsoil, brown-----	1	1
	Sand, yellow, clayey-----	14	15
	Sand, brown, clayey-----	13	28
	Sand, gray, clayey-----	26	54
	Sandstone, gray-----	1	55
	Sand, clayey-----	4	59
	Sand, bluish-gray, clayey-----	7	66
	Sand, gray, clayey-----	2	68
	Sandstone, gray-----	2	70
	Sand, gray, clayey-----	6	76

140-088-04ADD2
E. Weinhardt
(Log from Mohl Drilling Company)

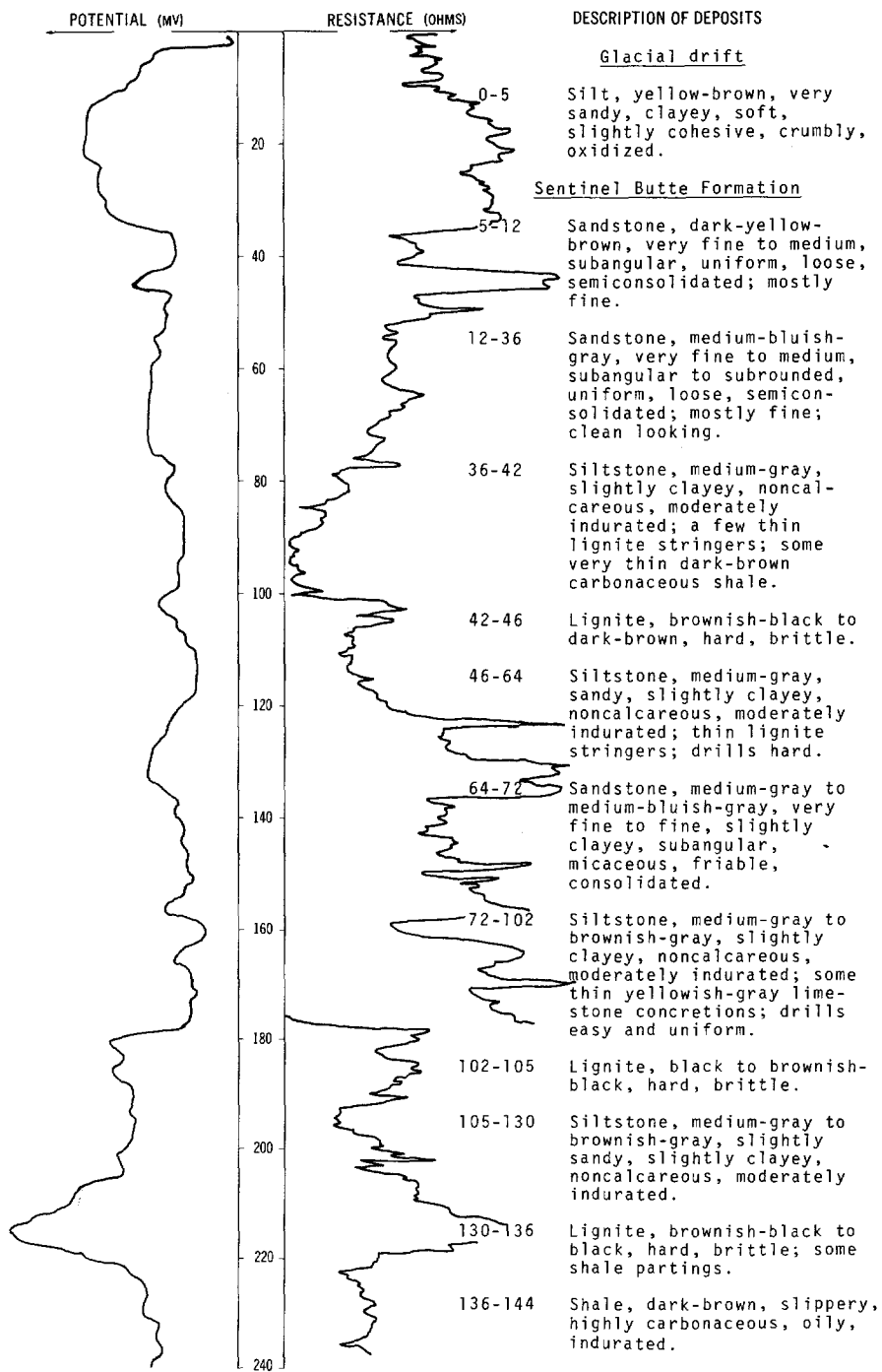
Sentinel Butte Formation:			
	Topsoil-----	2	2
	Sand, yellow-----	36	38
	Sandstone-----	28	66
	Lignite; water bearing-----	2	68
	Clay, gray-----	2	70

LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

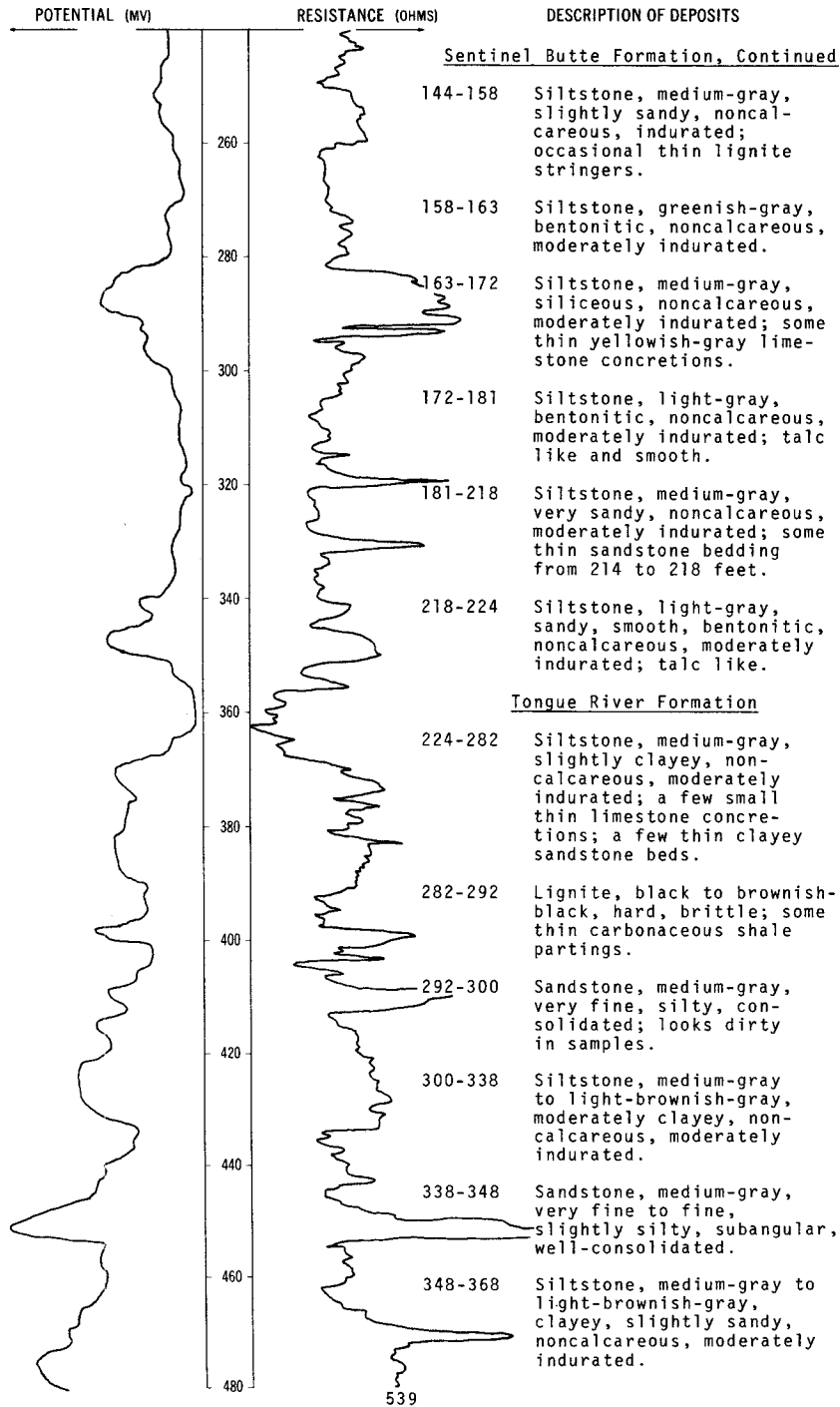


LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)



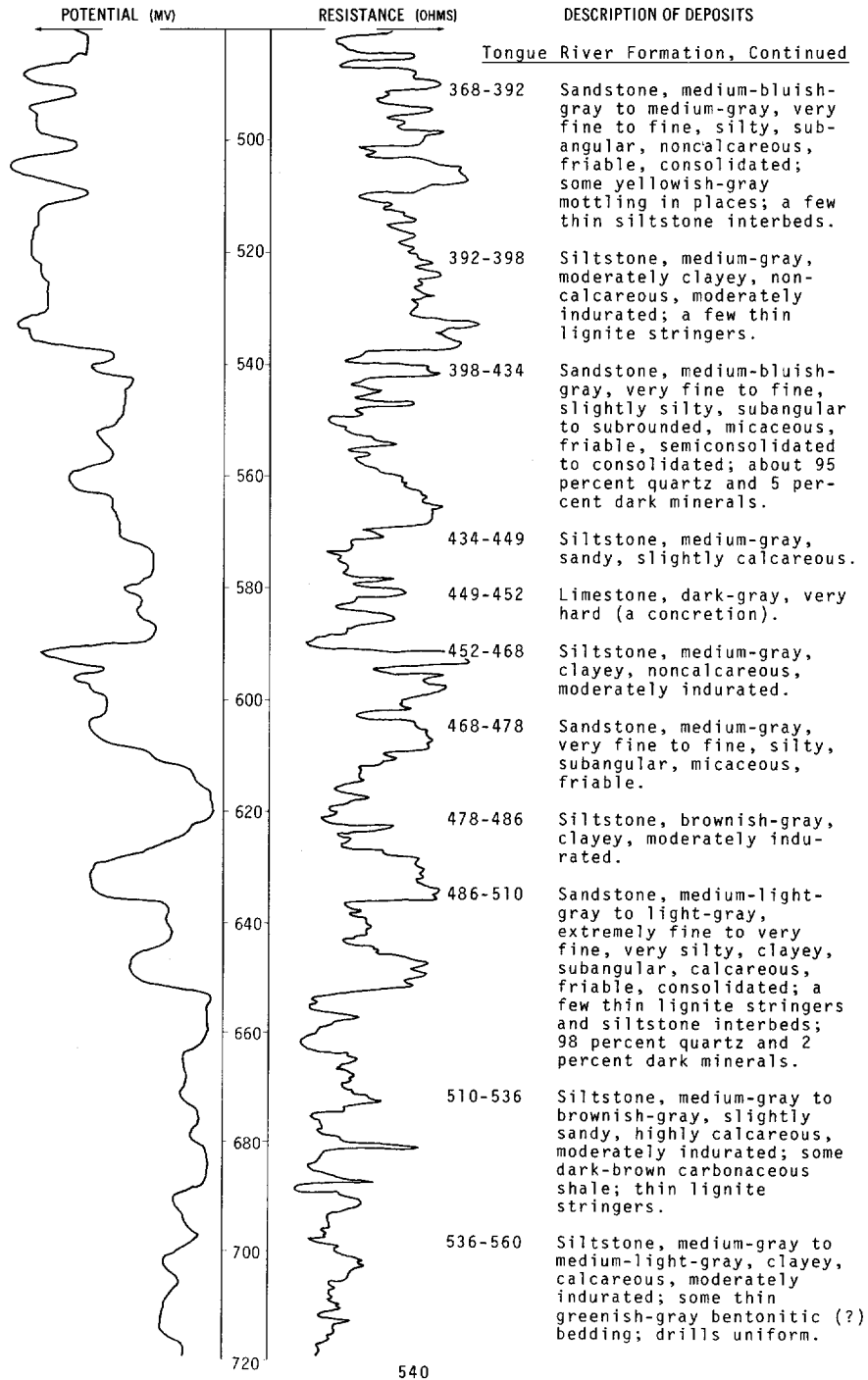
NDSWC 4754, 4754A, Continued

LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)



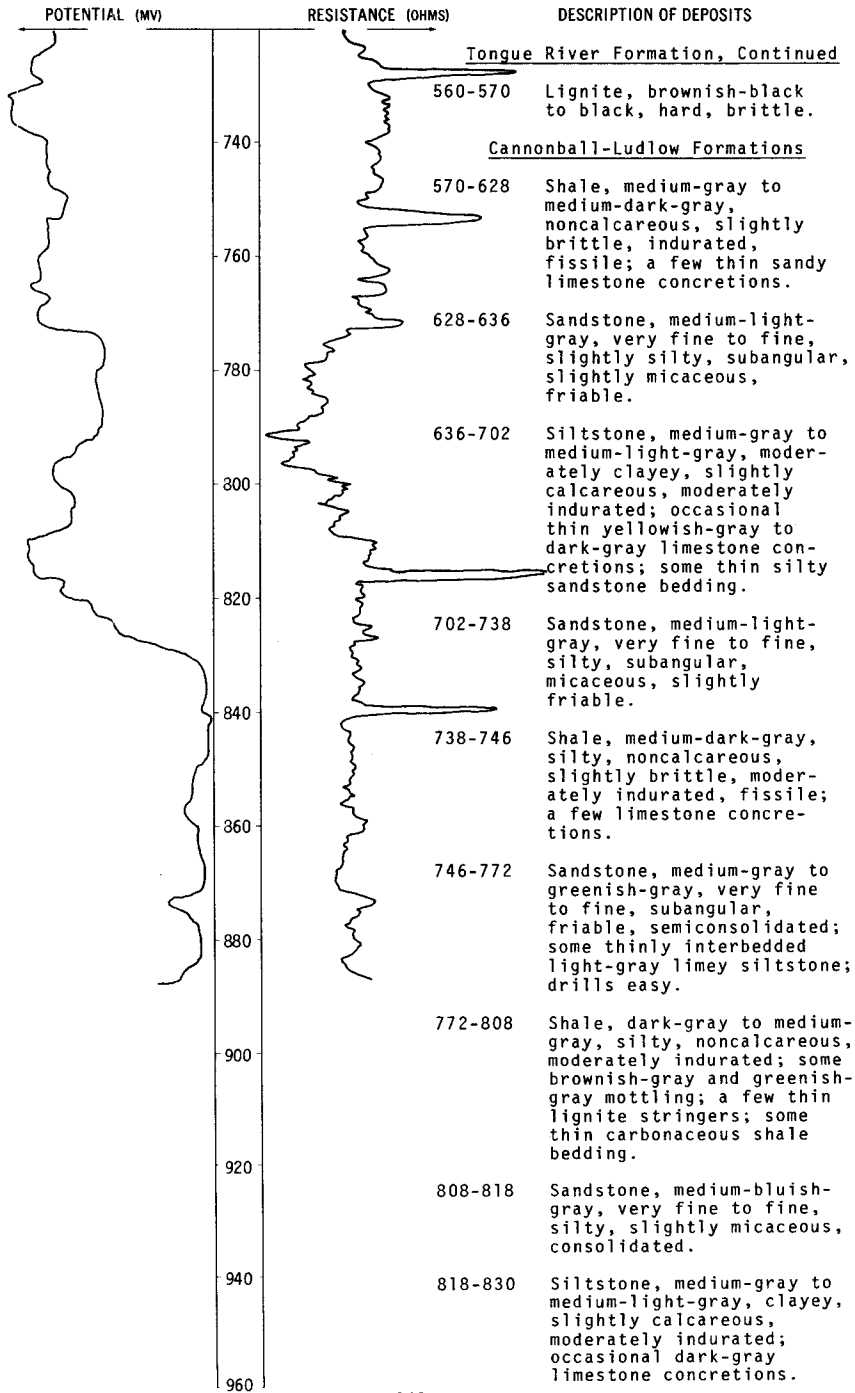
NDSWC 4754, 4754A, Continued

LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)



NDSWC 4754, 4754A, Continued

LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

POTENTIAL (MV)	RESISTANCE (OHMS)	DESCRIPTION OF DEPOSITS
		<u>Cannonball-Ludlow Formations, Continued</u>
980		830-890 Siltstone, brownish-gray to medium-dark-gray, clayey, smooth, slippery, generally noncalcareous; occasional limestone and sandstone concretions; some thin dark-brown carbonaceous shale.
1000		
1020		
1040		
1060		
1080		
1100		
1120		
1140		
1160		
1180		
1200	542	

NDSWC 4754, 4754A, Continued

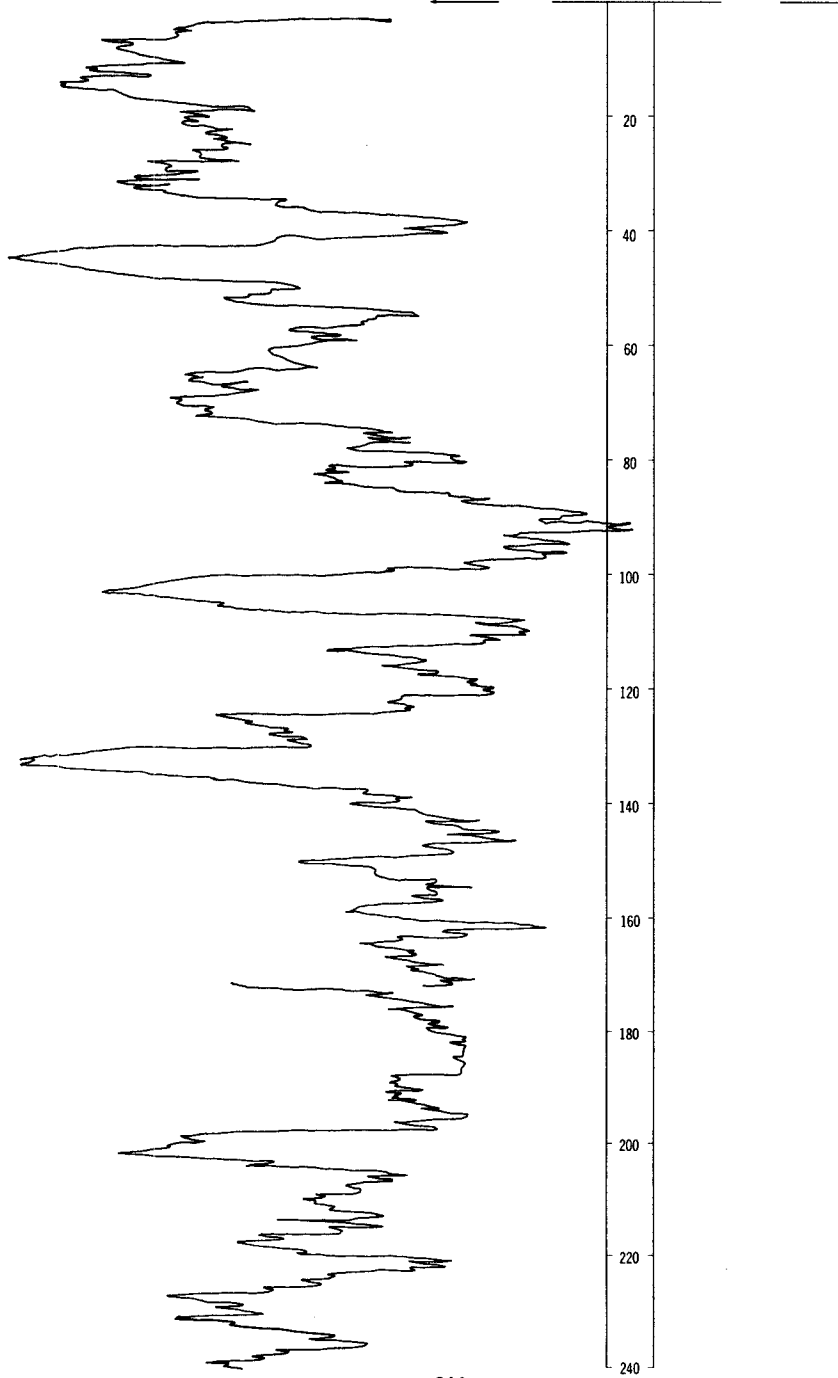
LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4754, 4754A, Continued

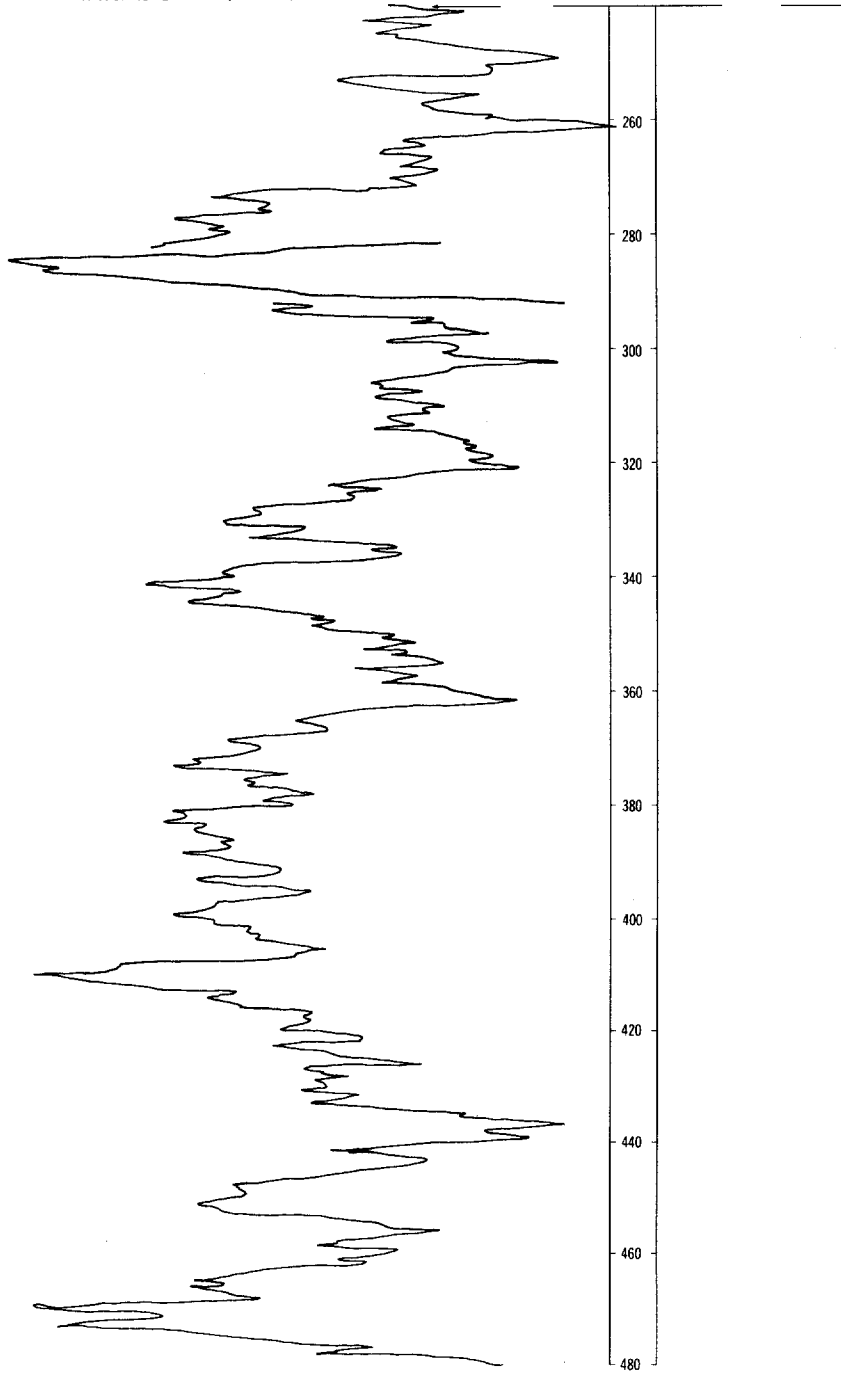
LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4754, 4754A, Continued

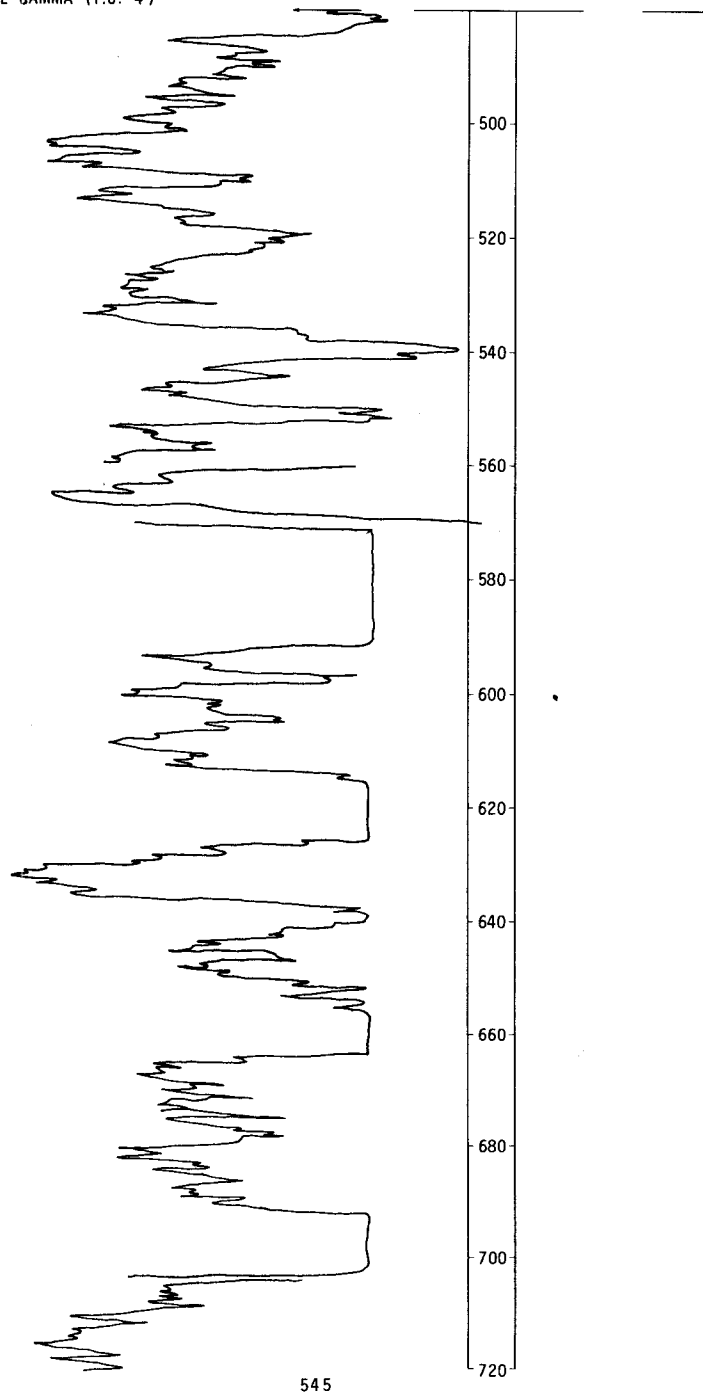
LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4754, 4754A, Continued

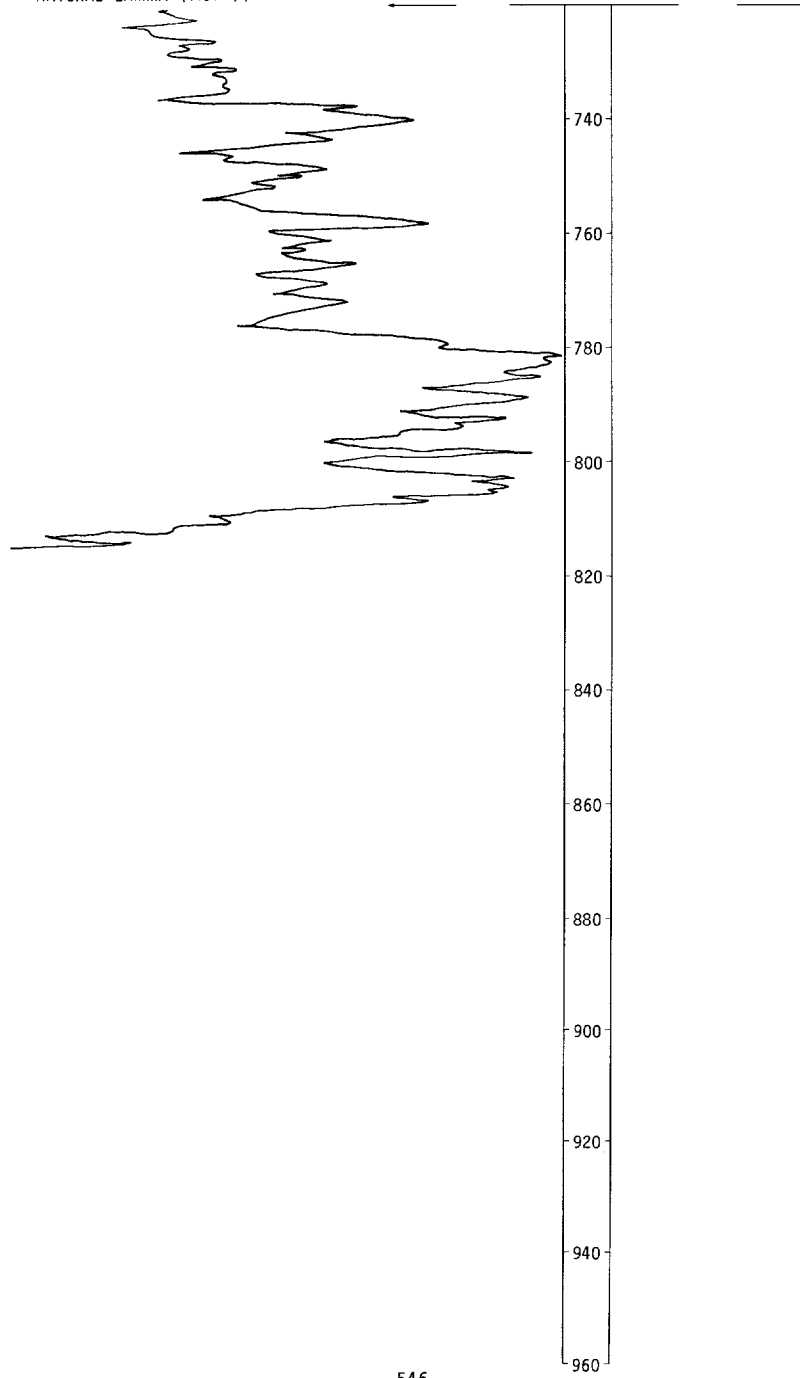
LOCATION: 140-088-16ADB1, 2

DATE DRILLED: September 1974

ALTITUDE: 2280
(FT, MSL)

DEPTH: 890
(FT)

NATURAL-GAMMA (T.C. 4)



140-089-11CCA
 J. Kottenbrock
 (Log from Opp, Well Drilling)

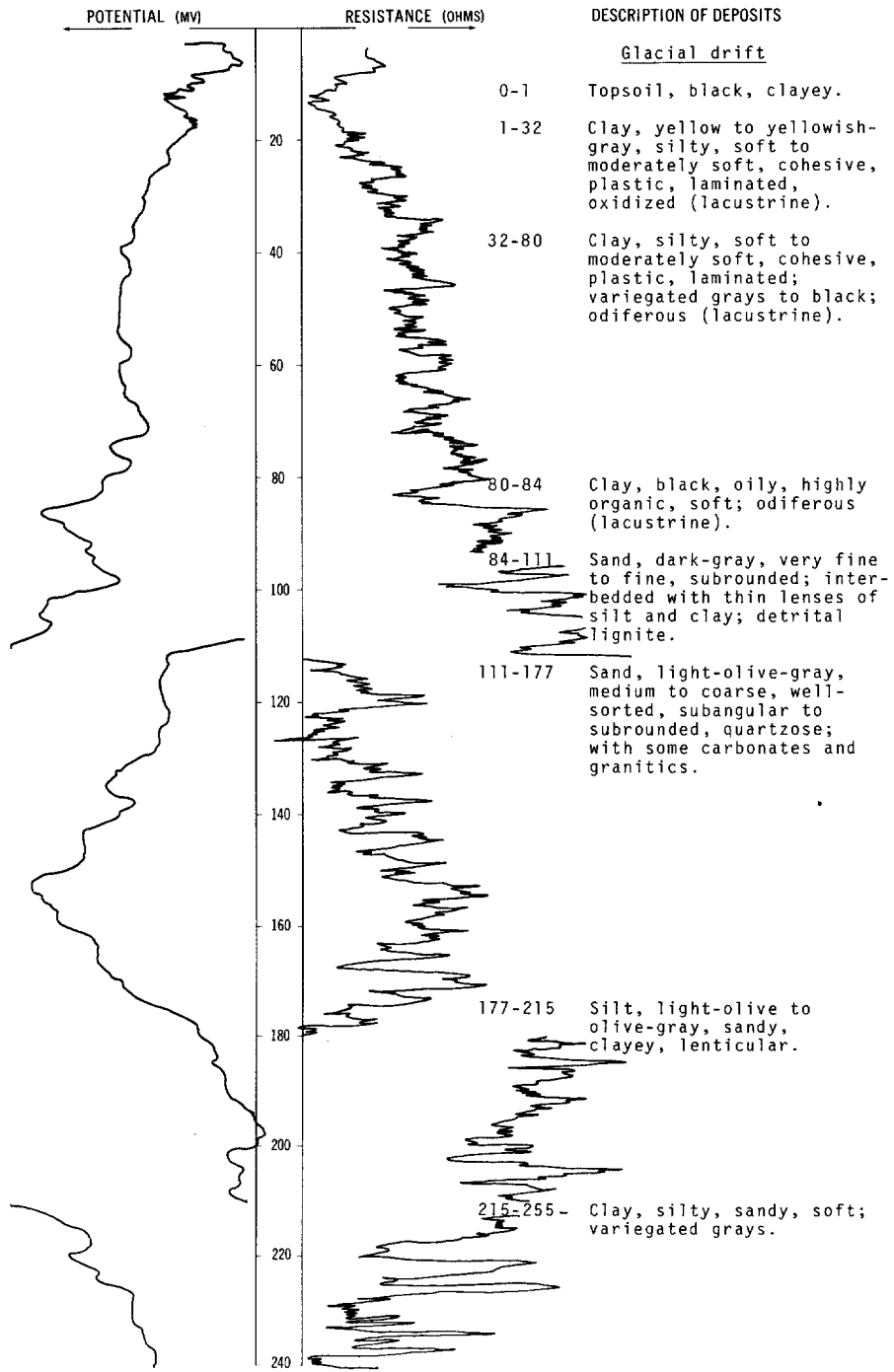
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel	Butte Formation:		
	Clay, gray, silty-----	34	34
	Sand, yellow-----	6	40
	Sandstone, gray, fine-----	7	47
	Sandstone, very hard-----	2	49
	Sandstone, gray, cemented-----	14	63
	Sandstone, fine-----	20	83
	Sand, bluish-white, medium-----	7	90
	Clay, blue, very sandy-----	20	110

LOCATION: 140-089-15DCC

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 380
(FT)



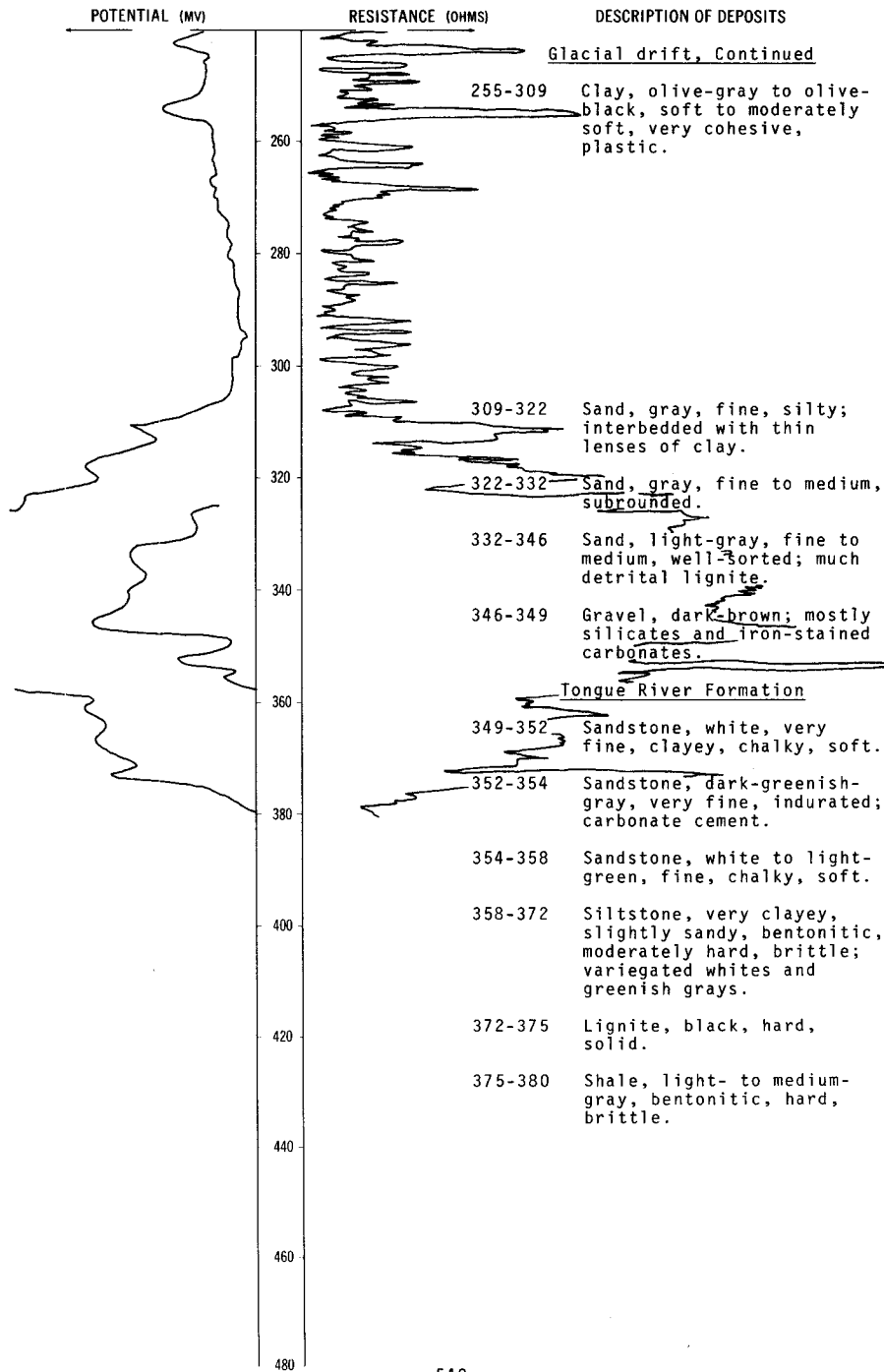
NDSWC 4536, Continued

LOCATION: 140-089-150CC

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 380
(FT)



NDSWC 4536, Continued

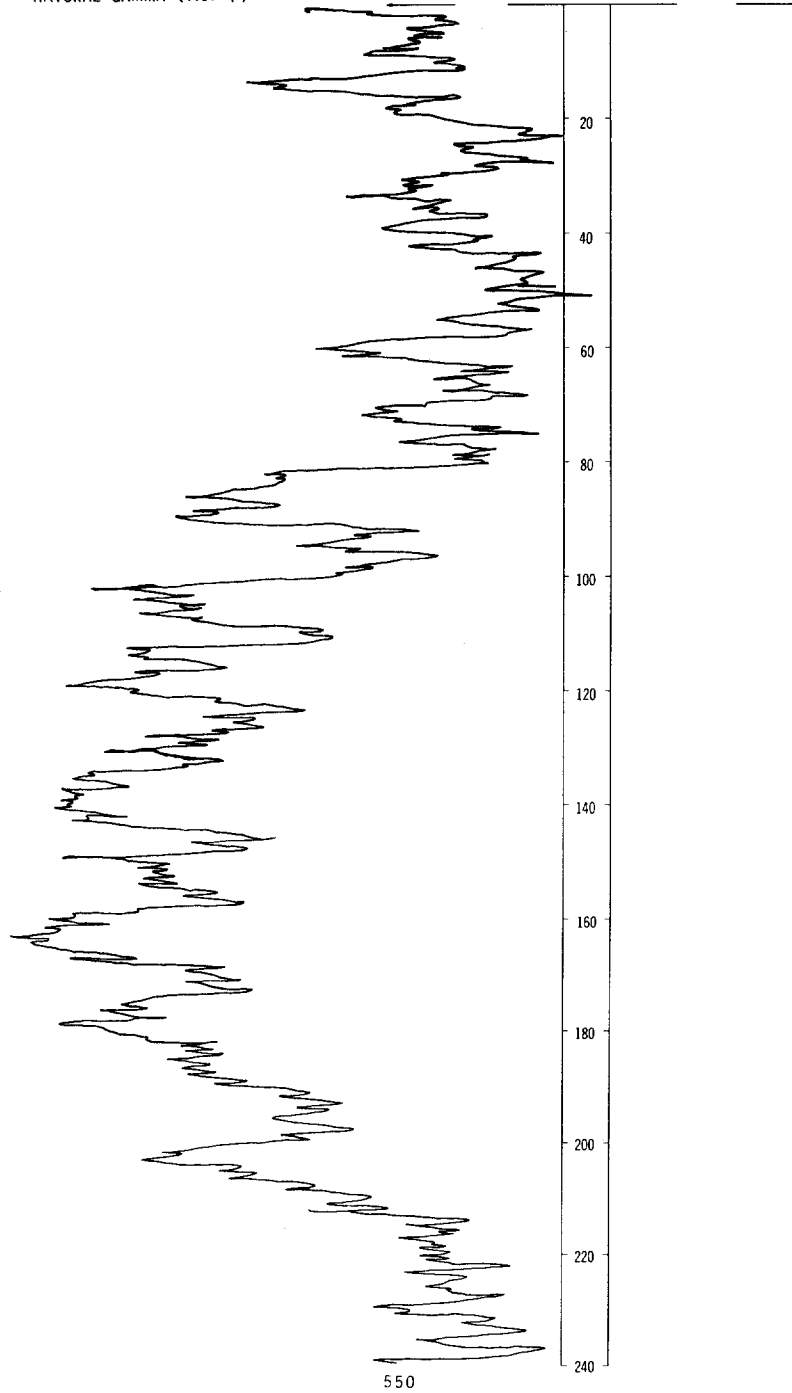
LOCATION: 140-089-15DCC

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4536, Continued

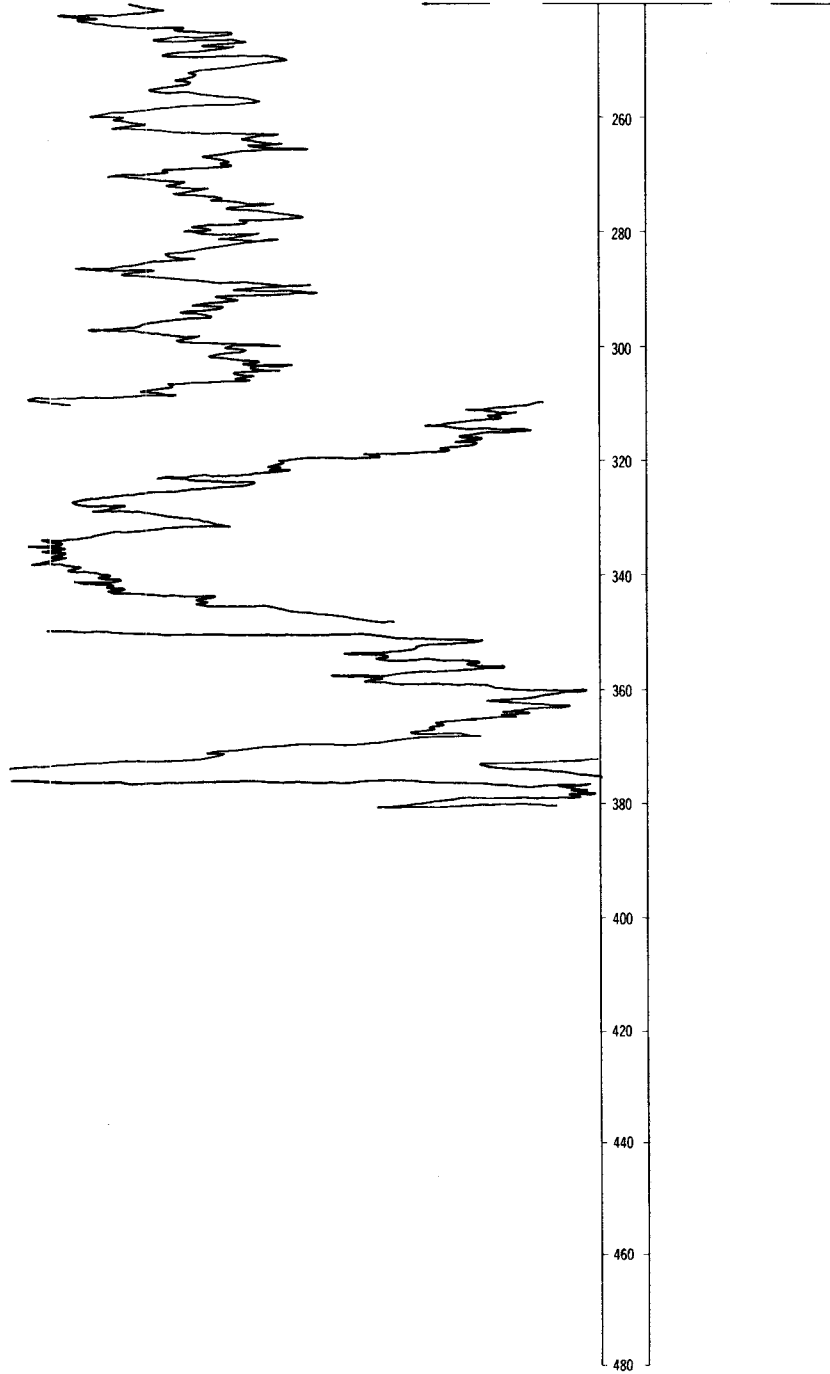
LOCATION: 140-089-15DCC

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT. MSL)

DEPTH: 380
(FT)

NATURAL-GAMMA (T.C. 4)



140-089-22CDB2
B. Gietzen

Altitude: 2183 feet

Geologic source	Material	Thickness (feet)	Depth (feet)
Sentinel Butte Formation (?):			
	Sand, yellow, dry-----	4	4
	Clay, gray-----	5	9
	Sand, gray, coarse-----	2	11
	Clay, gray-----	1	12
	Clay, yellow-----	3	15
	Lignite, fractured-----	8	23
	Clay, gray-----	5	28
	Sand, blue, dry-----	11	39
	Lignite, dry-----	2	41
	Clay, blue-----	5	46
	Lignite (3 gpm)-----	.5	46.5
	Sand, blue-----	11.5	58
	Clay, blue, silty-----	7	65
	Clay, blue-----	30	95
	Lignite, dry-----	1	96
	Clay, blue, sandy-----	2	98
	Sand, gray, fine; water bearing-----	7	105
	Sand, gray, fine (static water level 58 feet)-----	11	116
Tongue River Formation:			
	Clay, gray, sandy-----	4	120
	Clay, gray, sandy-----	6	126
	Clay, gray-----	9	135
	Sandstone, blue-----	3	138
	Clay, grayish-blue-----	40	178
	Lignite, dry-----	1.5	179.5
	Clay, brown-----	11.5	191
	Lignite, hard-----	1	192
	Clay, brown, sandy-----	3	195
	Clay, brown-----	2	197
	Lignite, hard-----	1.5	198.5
	Clay, blue-----	17.5	216
	Lignite-----	1.5	217.5
	Clay, blue-----	7.5	225
	Sand, blue-----	7	232
	Clay, blue-----	3	235
	Sand, blue-----	2	237
	Clay, blue-----	33	270
	Lignite, dry-----	1	271
	Clay, blue-----	4	275
	Lignite, hard, dry-----	2	277
	Clay, brown-----	6	283
	Clay, white, bentonitic-----	7	290
	Sand, blue, dry-----	14	304
	Clay, blue-----	10	314
	Lignite, dry-----	.5	314.5
	Clay, blue-----	10.5	325
	Sand, blue, wet-----	7	332
	Clay, blue-----	3	335
	Sand, blue, very fine (2 gpm)-----	11	346
	Clay, blue-----	8	354
	Clay, light-brown, hard-----	8	362
	Clay, blue, fine sand-----	13	375
	Lignite, dry-----	2	377
	Clay, white, bentonitic-----	19	396
	Clay, light-brown-----	8	404
	Clay, blue, hard-----	10	414
	Sandstone, blue, dry-----	1	415

140-089-22CDB2, Continued
 B. Gietzen

Altitude: 2183 feet

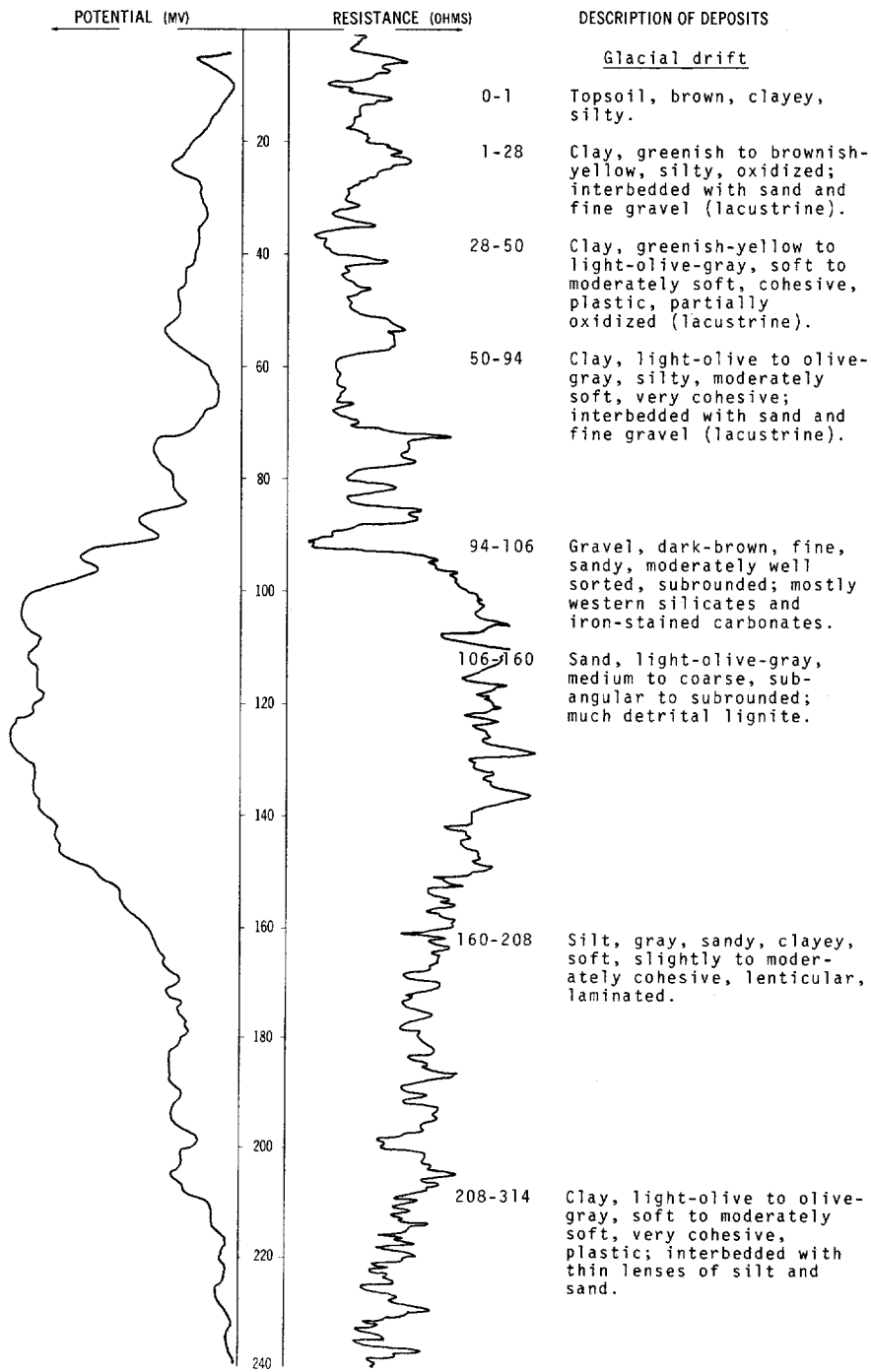
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Tongue River Formation, Continued:			
	Sandstone, hard-----	.5	415.5
	Clay, blue, hard-----	10.5	426
	Sandstone-----	.5	426.5
	Clay, blue, hard-----	21.5	448
	Lignite, hard (static water level 200 feet)-----	5	453
	Clay, hard-----	27	480
	Clay, blue-----	2	482
	Clay, black-----	3	485
	Lignite, hard, dry-----	3	488
	Clay, brown-----	7	495
	Clay, blue-----	9	504
Cannonball-Ludlow Formations, undifferentiated:			
	Clay, white, bentonitic-----	16	520
	Clay, blue-----	12	532
	Clay, brown-----	8	540
	Clay, blue-----	15	555

LOCATION: 140-089-36ADD1, 2

DATE DRILLED: August 1973

ALTITUDE: 2085
(FT, MSL)

DEPTH: 400
(FT)



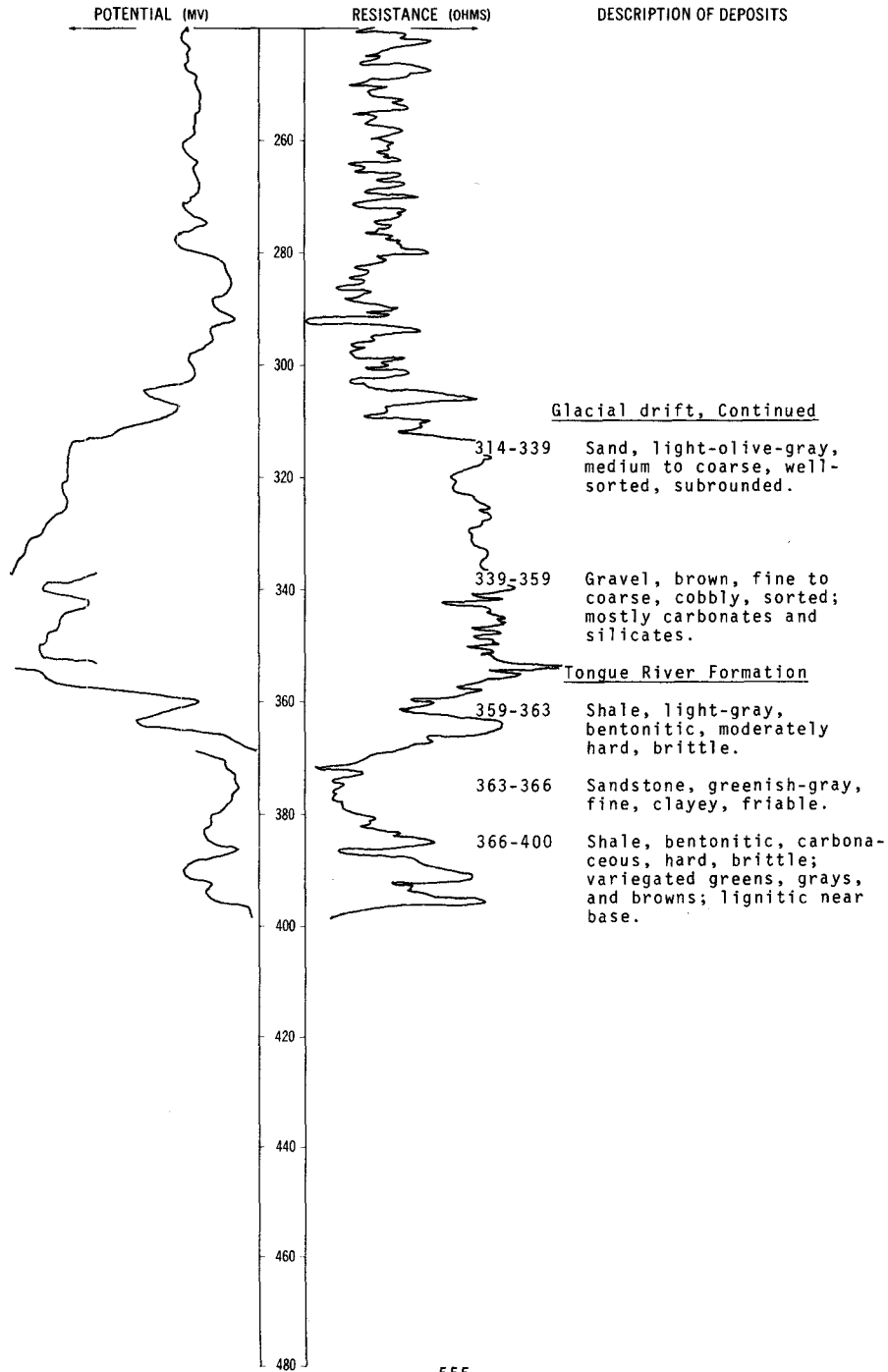
NDSWC 4537, 4537A, Continued

LOCATION: 140-089-36ADD1, 2

DATE DRILLED: August 1973

ALTITUDE: 2085
(FT, MSL)

DEPTH: 400
(FT)



NDSWC 4537, 4537A, Continued

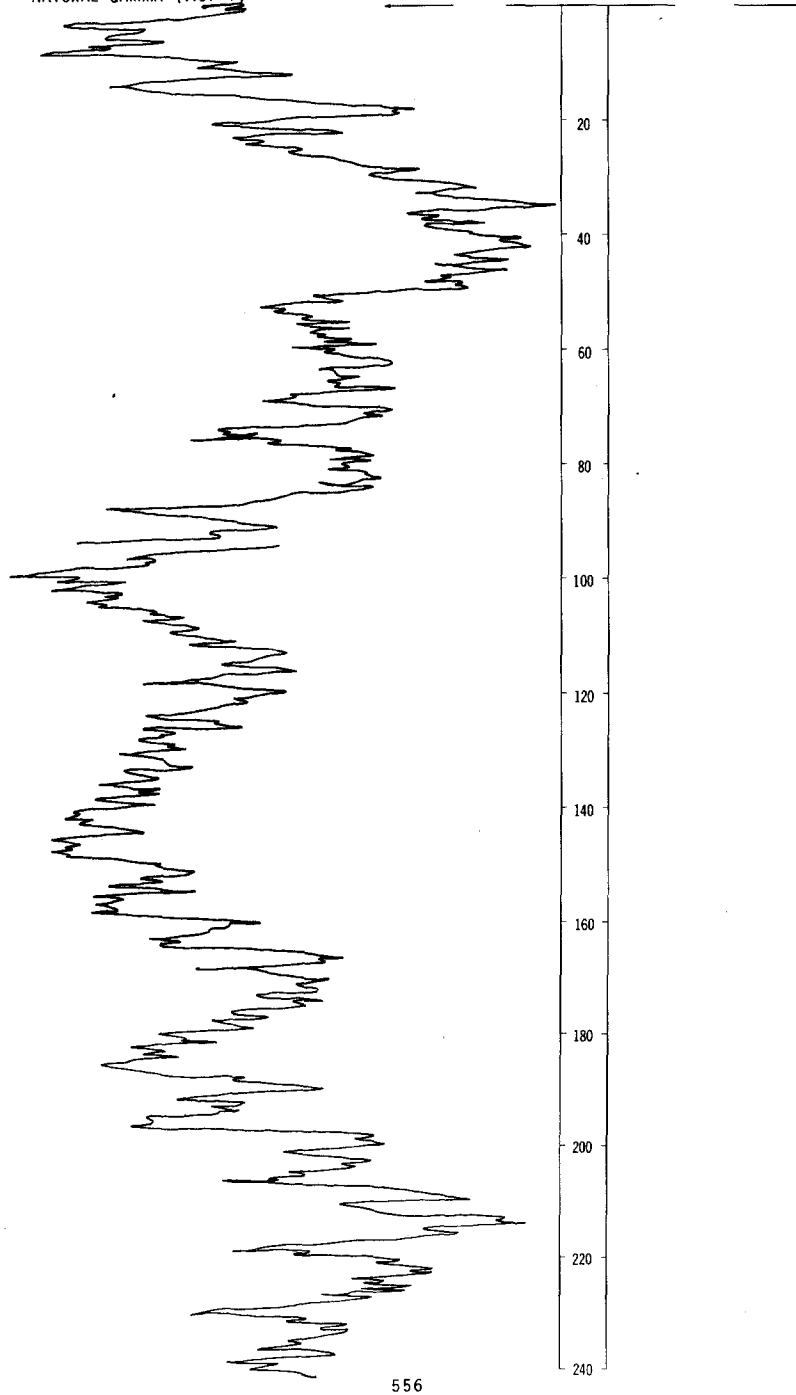
LOCATION: 140-089-36ADD1, 2

DATE DRILLED: August 1973

ALTITUDE: 2085
(FT, MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4537, 4537A, Continued

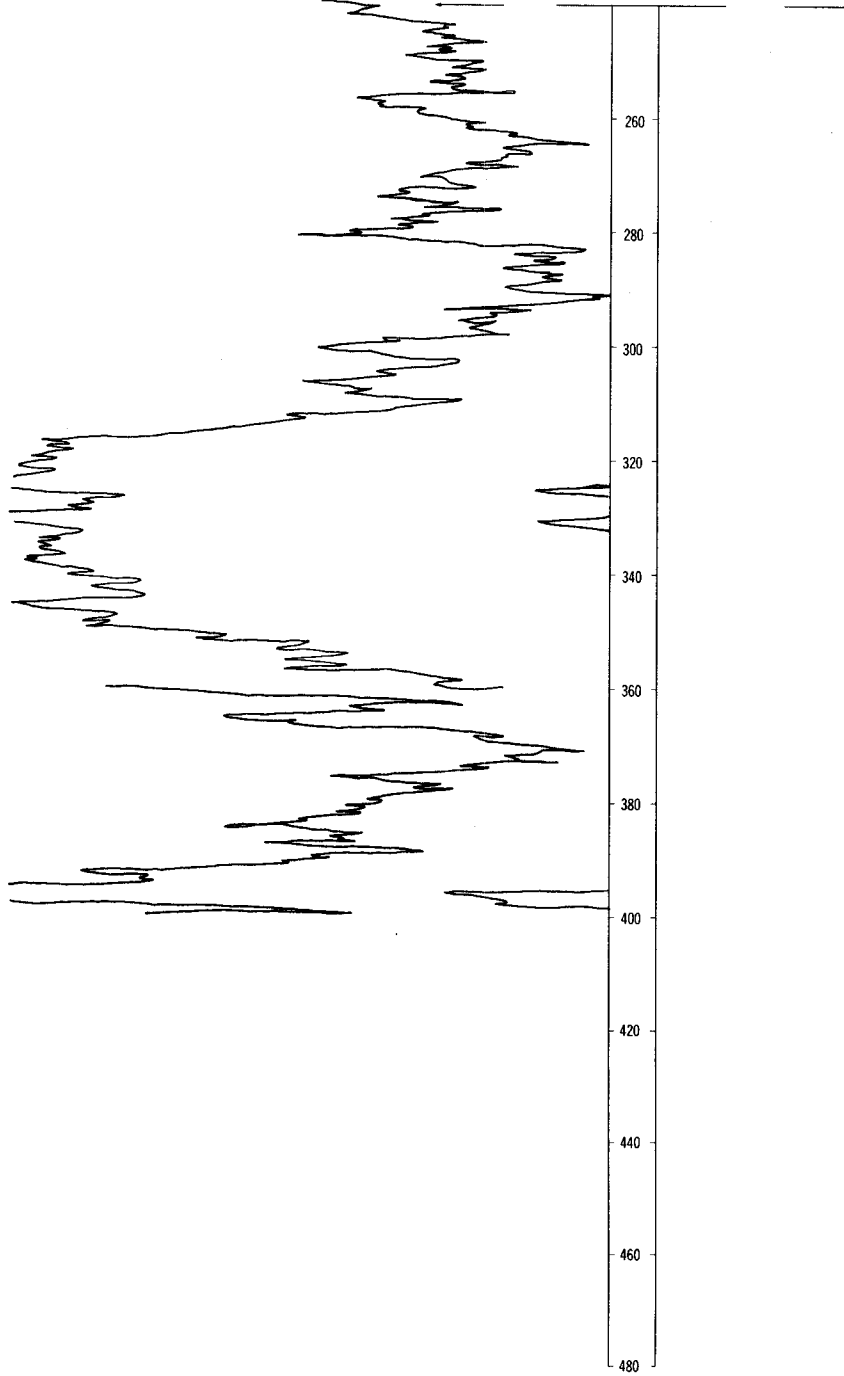
LOCATION: 140-089-36ADD1, 2

DATE DRILLED: August 1973

ALTITUDE: 2085
(FT, MSL)

DEPTH: 400
(FT)

NATURAL-GAMMA (T.C. 4)



140-090-17ACB
N. Underdahl
(Log from M & R Drilling Company)

Altitude: 2180 feet

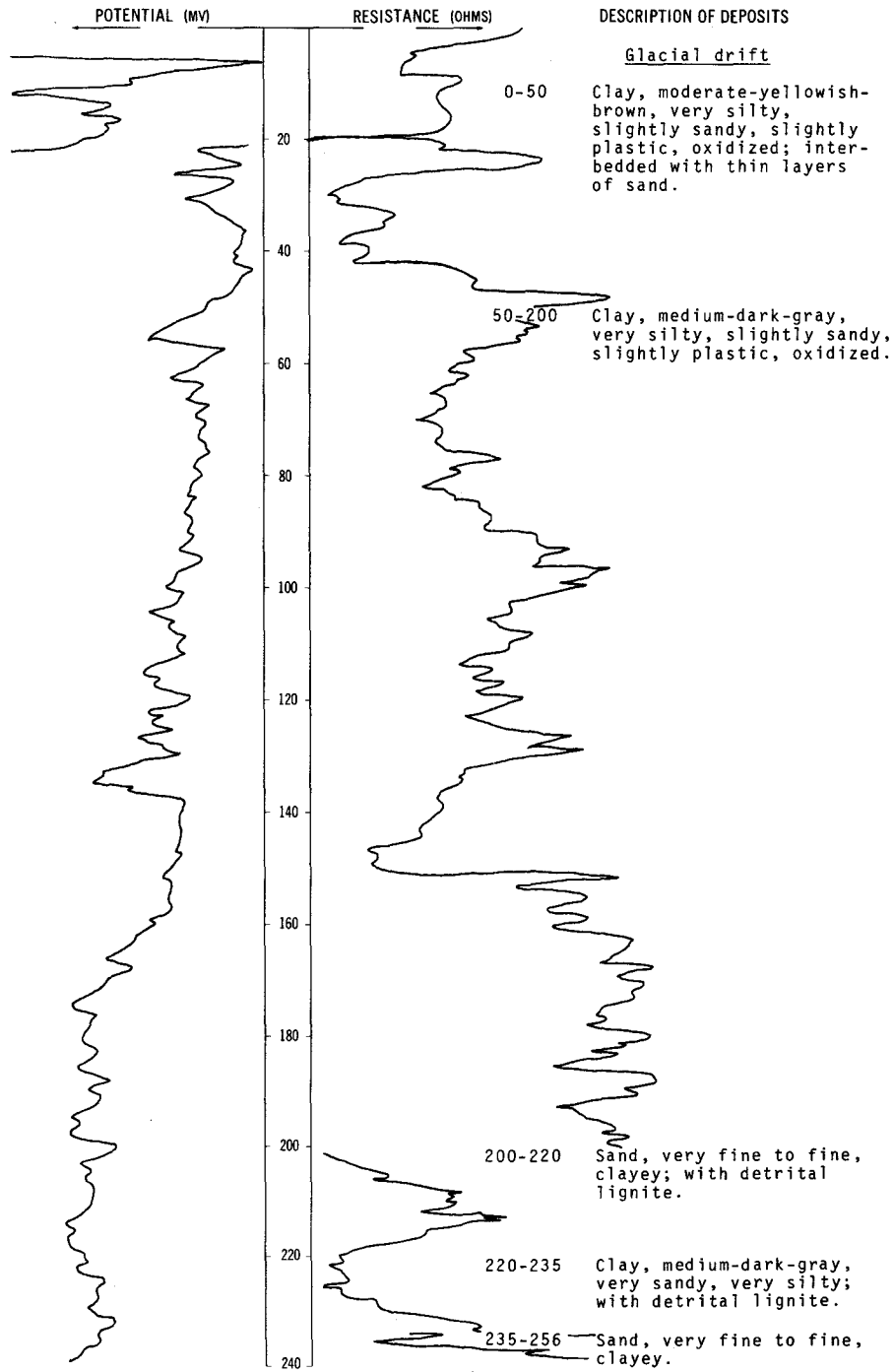
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Soil-----	18	18
	Lignite streaks and clay-----	10	28
	Shale, gray-----	109	137
	Sandstone, yellow-----	6	143
	Lignite-----	4	147
Tongue River Formation:			
	Shale, gray-----	92	239
	Sandstone-----	73	312
	Shale, blue-----	40	352
	Shale, sandy-----	12	364
	Shale, blue-----	59	423
	Sandstone-----	34	457
	Lignite-----	6	463
	Shale, blue-----	100	563
	Lignite-----	15	578
	Shale, gray-----	18	596
Cannonball-Ludlow Formations, undifferentiated (?):			
	Shale, sandy-----	35	631
	Shale, gray-----	47	678
	Shale, sandy-----	65	743
	Shale, blue-----	191	934
Hell Creek Formation (?):			
	Sandstone-----	2	936
	Shale, blue-----	38	974
	Sandstone-----	4	978
	Shale, blue-----	62	1040
	Sandstone, fine-----	40	1080
	Shale, blue-----	130	1210
Fox Hills Formation (?):			
	Sandstone-----	150	1360
	Shale, blue-----	94	1454
	Sandstone-----	7	1461
	Shale, blue-----	29	1490
	Sandstone-----	28	1518
	Shale, gray-----	42	1560

LOCATION: 140-090-18CBC

DATE DRILLED: June 1975

ALTITUDE: 2071
(FT, MSL)

DEPTH: 350
(FT)



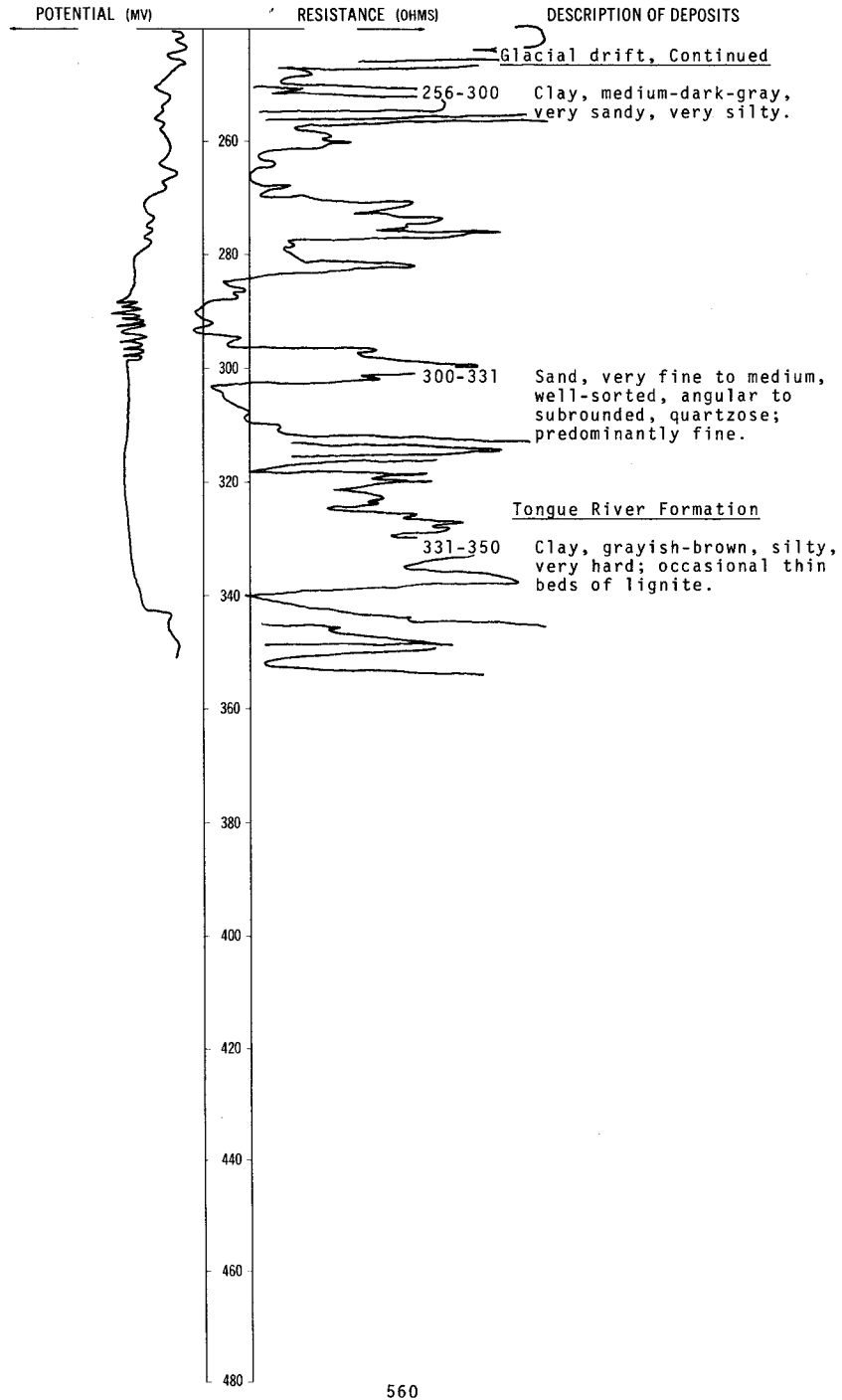
NDSWC 9297, Continued

LOCATION: 140-090-18CBC

DATE DRILLED: June 1975

ALTITUDE: 2071
(FT, MSL)

DEPTH: 350
(FT)



140-090-20DBA1
A. Rehm
(Log from Bandy Well Drilling)

Altitude: 2105 feet

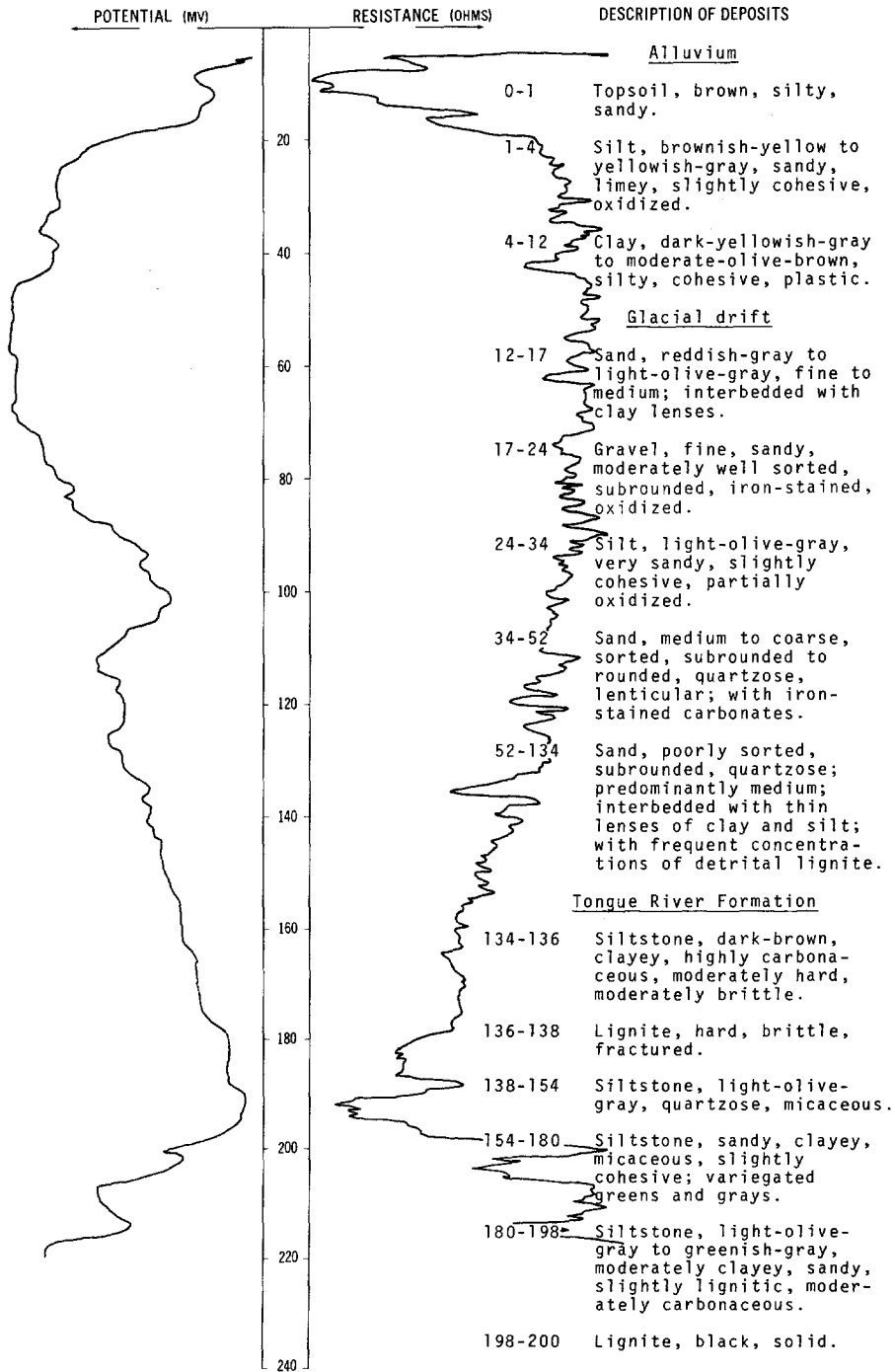
<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Sentinel Butte Formation:			
	Soil-----	17	17
	Sand-----	29	46
	Shale, blue-----	26	72
	Sand-----	10	82
Tongue River Formation:			
	Shale, blue; with lignite streaks-----	241	323
	Sand-----	137	460
Cannonball-Ludlow Formations, undifferentiated:			
	Shale-----	333	793
Hell Creek Formation:			
	Sand-----	52	845
	Shale, blue-----	65	910
	Sand-----	36	946
	Shale, blue-----	163	1109
Fox Hills Formation:			
	Sand-----	71	1180
	Shale, blue-----	20	1200

LOCATION: 140-090-21BBB

DATE DRILLED: August 1973

ALTITUDE: 2105
(FT, MSL)

DEPTH: 220
(FT)



NDSWC 4532, Continued

LOCATION: 140-090-21BBB
 ALTITUDE: 2105
 (FT, MSL)

DATE DRILLED: August 1973
 DEPTH: 220
 (FT)

POTENTIAL (MV)	RESISTANCE (OHMS)	DESCRIPTION OF DEPOSITS
		<u>Tongue River Formation, Continued</u>
		200-205 Shale, grayish-green, silty, hard, brittle.
260		205-207 Lignite, black, brittle.
		207-215 Siltstone, light-greenish-gray to light-olive-gray, slightly carbonaceous, moderately cohesive, slightly hard.
280		215-220 Lignite, black, hard; possible clay partings.
300		
320		
340		
360		
380		
400		
420		
440		
460		
480		

NDSWC 4532, Continued

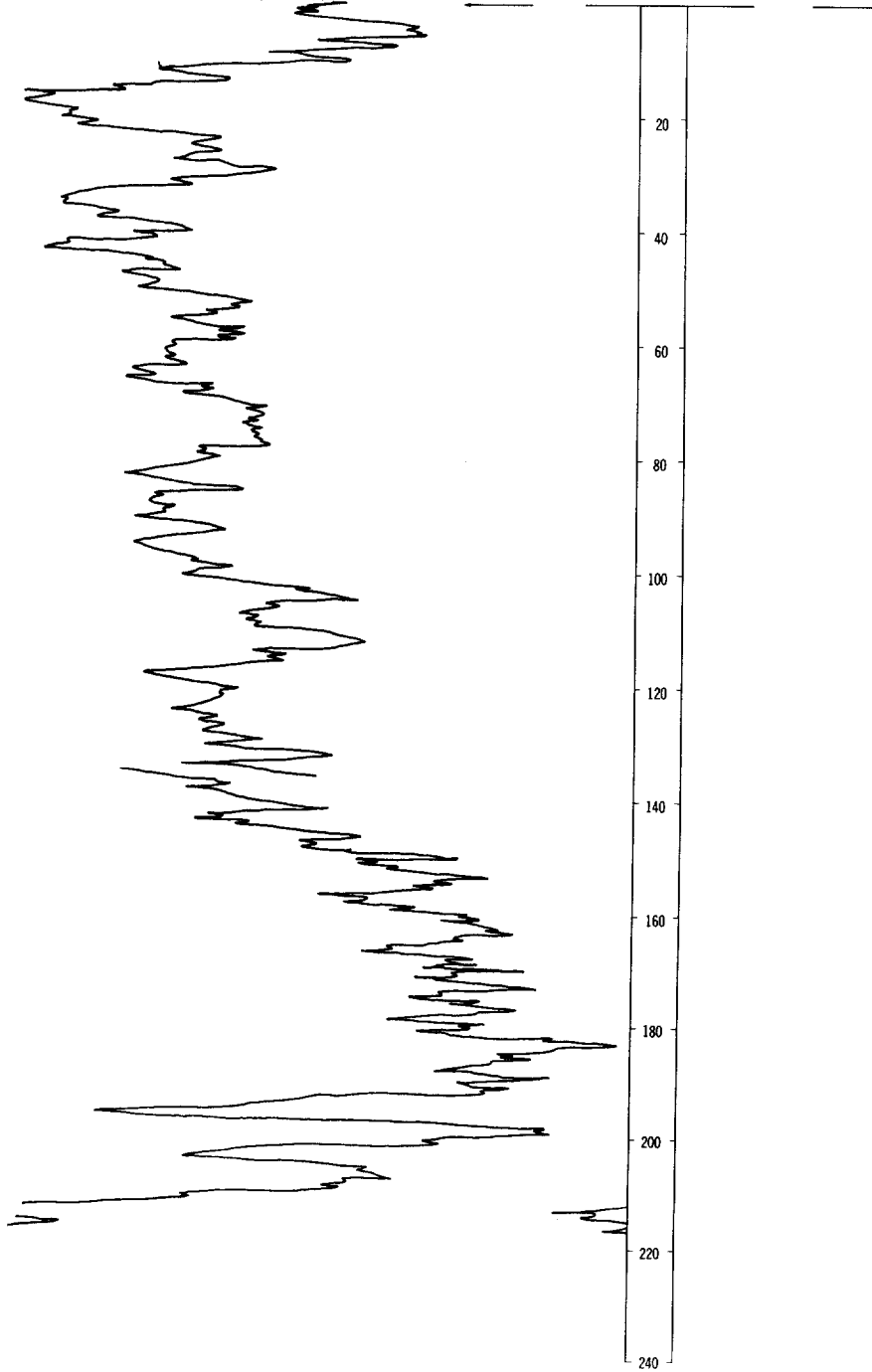
LOCATION: 140-090-21BBB

DATE DRILLED: August 1973

ALTITUDE: 2105
(FT, MSL)

DEPTH: 220
(FT)

NATURAL-GAMMA (T.C. 4)

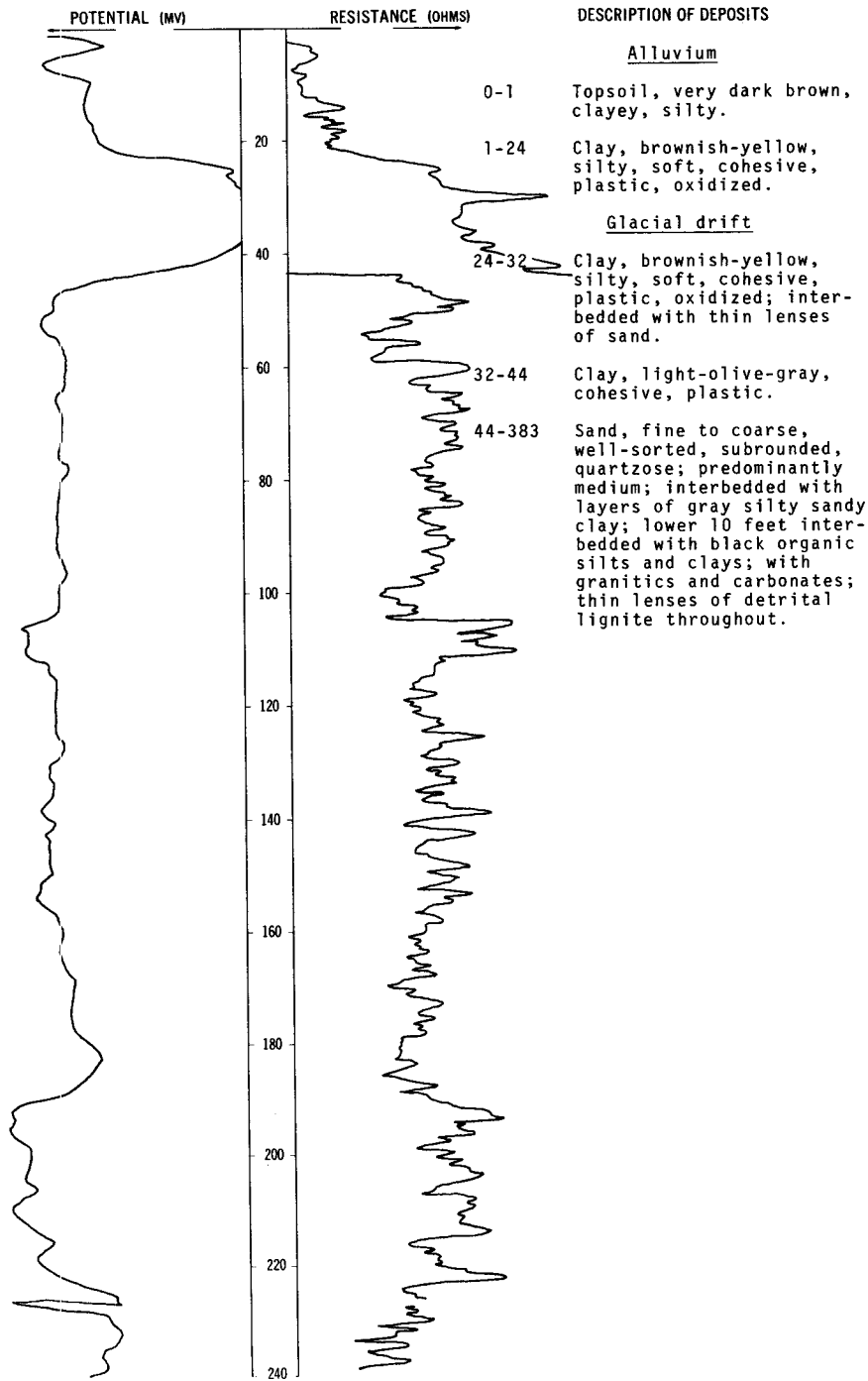


LOCATION: 140-090-21BCB1

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 440
(FT)



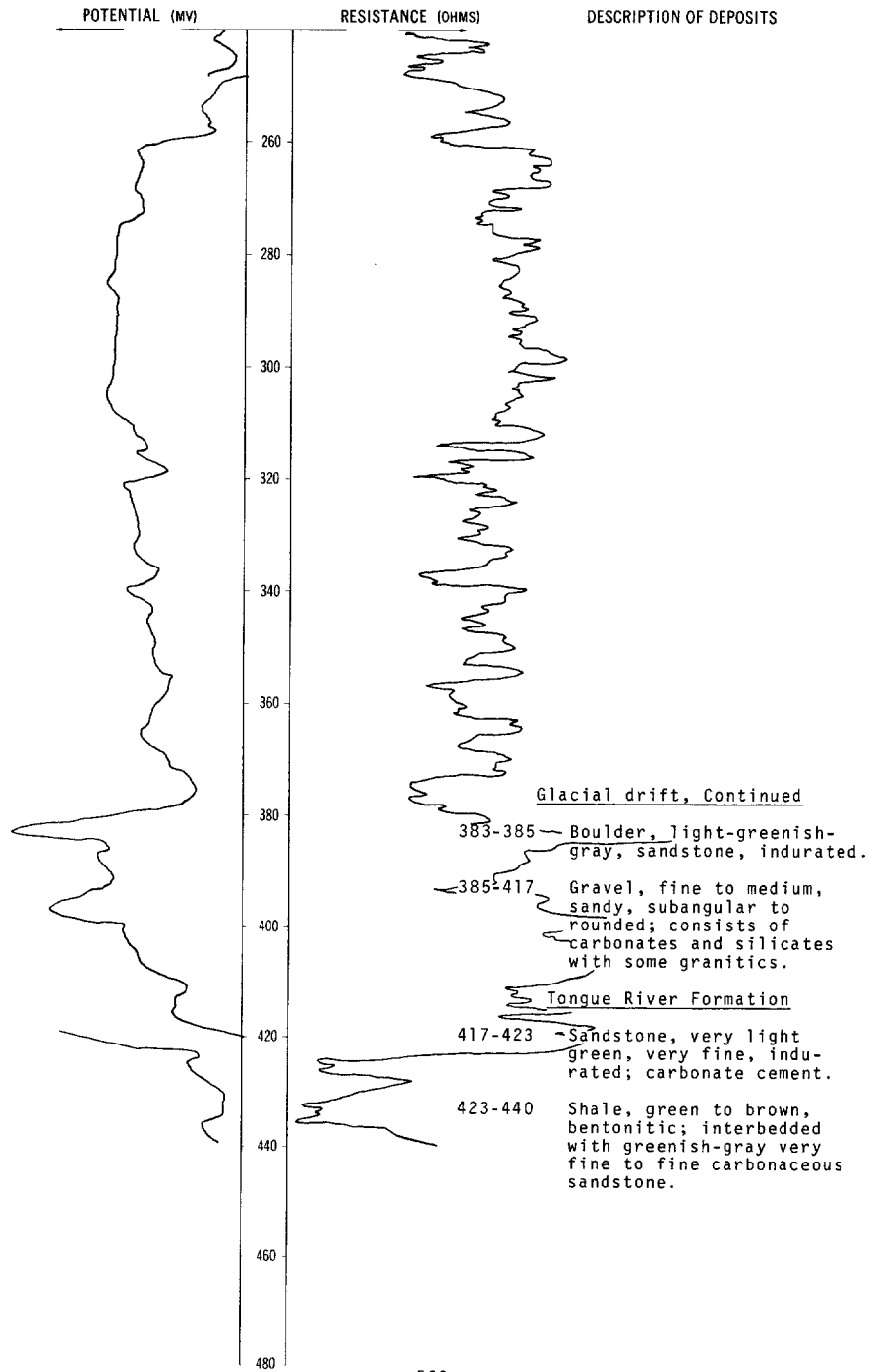
NDSWC 4531, Continued

LOCATION: 140-090-21BCB1

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 440
(FT)



NDSWC 4531, Continued

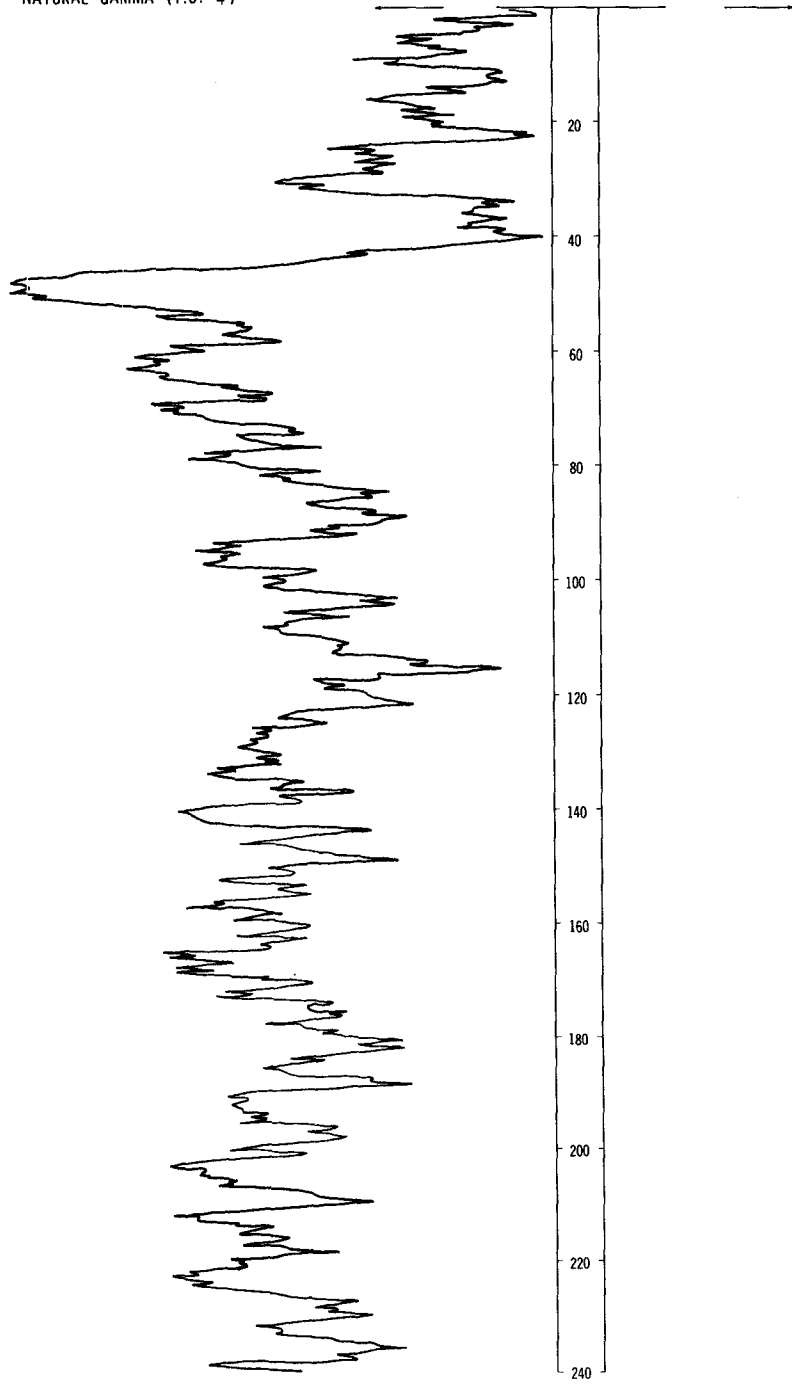
LOCATION: 140-090-21BCB1

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 440
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4531, Continued

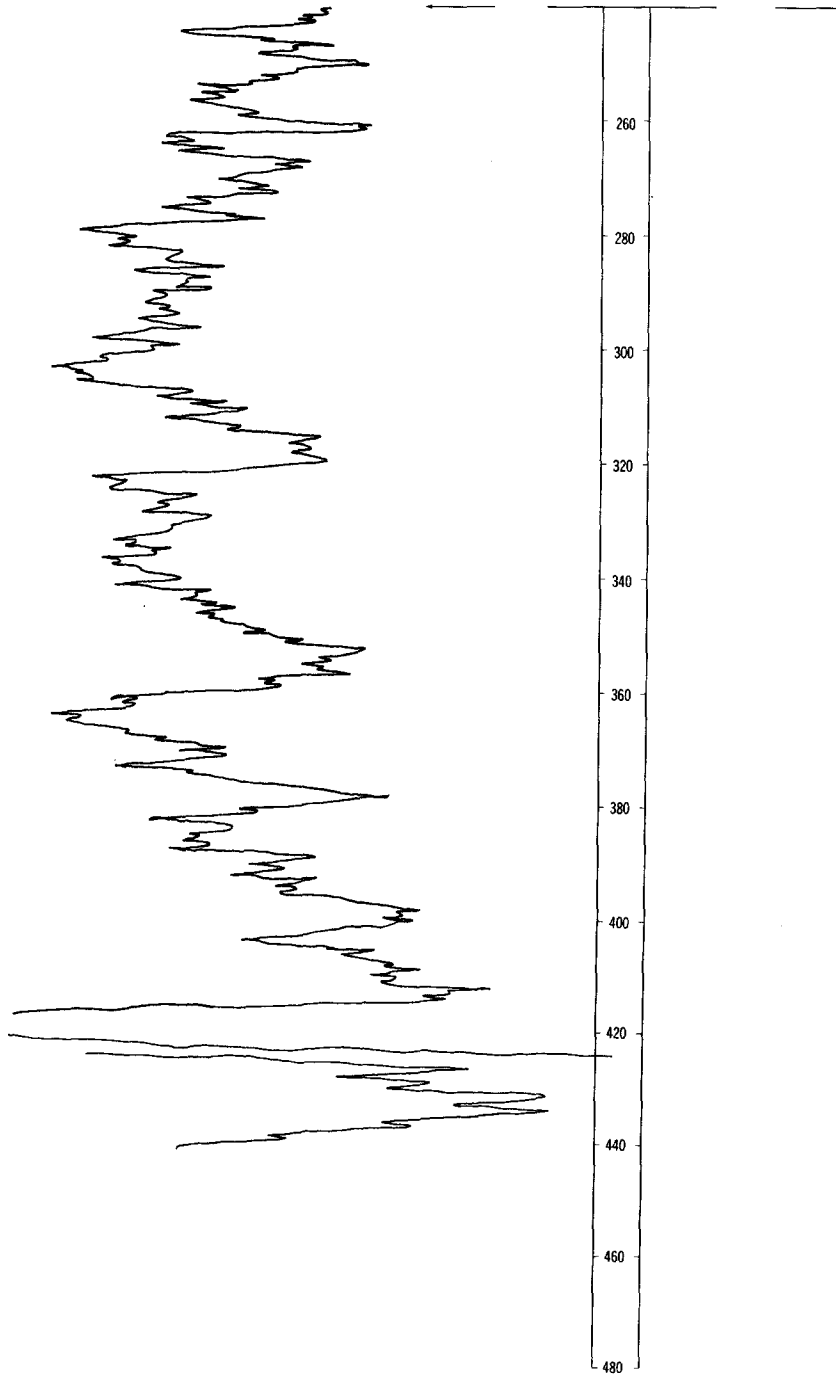
LOCATION: 140-090-21BCB1

DATE DRILLED: August 1973

ALTITUDE: 2103
(FT, MSL)

DEPTH: 440
(FT)

NATURAL-GAMMA (T.C. 4)



140-090-26BDB
 J. Patzwald
 (Log from Moe Drilling Company)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Sand-----	2	2
	Sand and gravel-----	111	113
	Till, gray-----	11	124
Tongue River Formation (?):			
	Clay, gray-----	14	138
	Lignite and clay-----	16	154
	Clay, gray-----	24	178
	Sand, gray, very fine-----	4	182
	Clay, grayish-brown-----	29	211
	Sandstone, green-----	1	212
	Clay, gray-----	4	216
	Sand, gray, fine, clayey-----	79	295
	Sand, gray, fine to medium-----	3	298
	Clay, brown-----	3	301

140-090-29DDC2
 R. Schneider
 (Log from Moe Drilling Company)

Altitude: 2240 feet

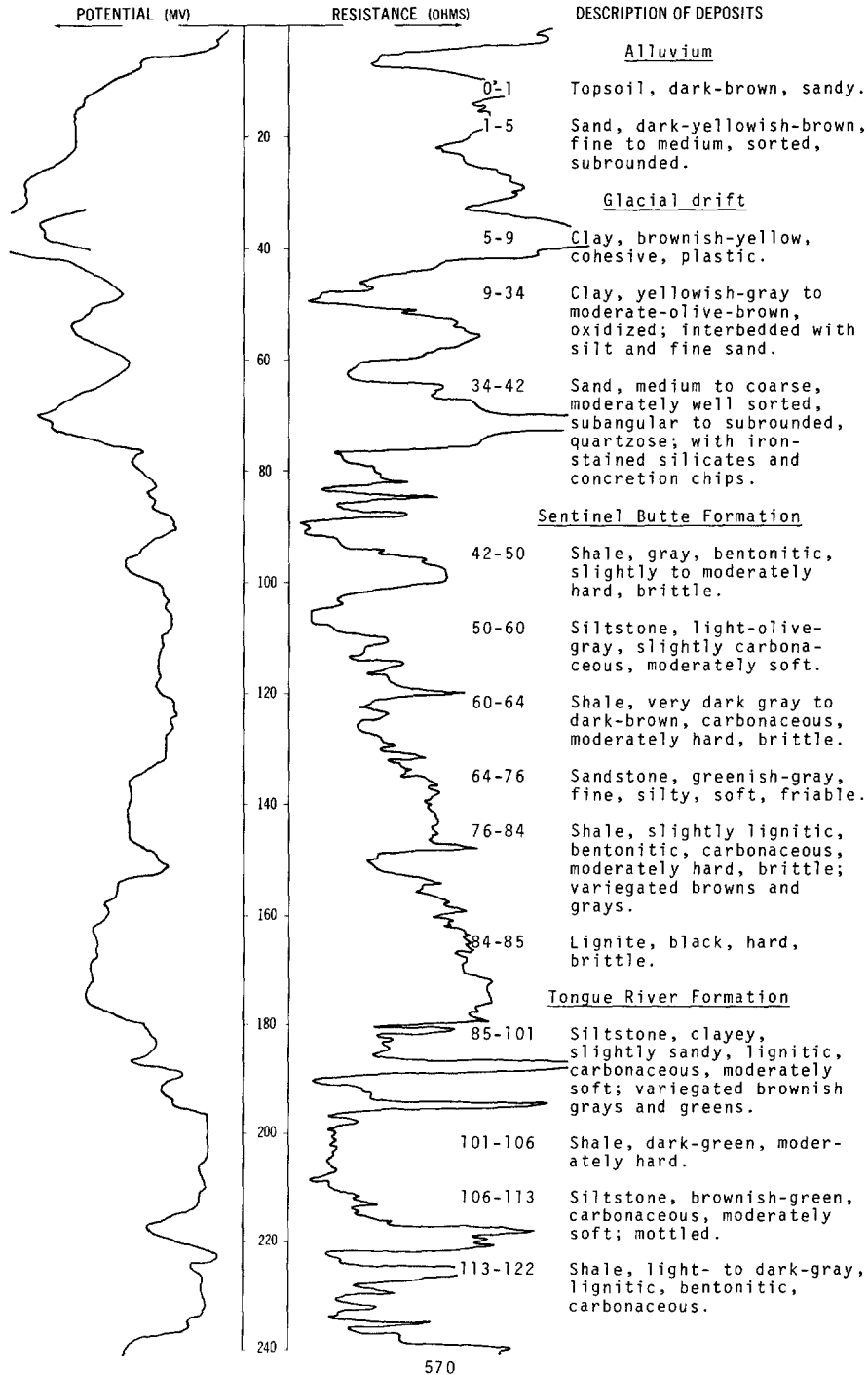
Sentinel Butte Formation:			
	Topsoil-----	1	1
	Clay, yellowish-brown, sandy-----	16	17
	Lignite-----	1	18
	Clay, gray-----	19	37
	Lignite-----	1	38
	Clay, brown-----	7	45
	Clay, brown-----	7	52
	Sand-----	2	54
	Lignite-----	61	115
	Clay, gray-----	2	117
	Sandstone-----	101	218
	Clay, gray; with streaks of sand-----		
Tongue River Formation:			
	Sand, gray, very fine-----	54	272
	Clay, gray-----	3	275
	Lignite-----	3	278
	Clay, gray-----	4	282

LOCATION: 140-090-32BDD

DATE DRILLED: August 1973

ALTITUDE: 2180
(FT, MSL)

DEPTH: 280
(FT)



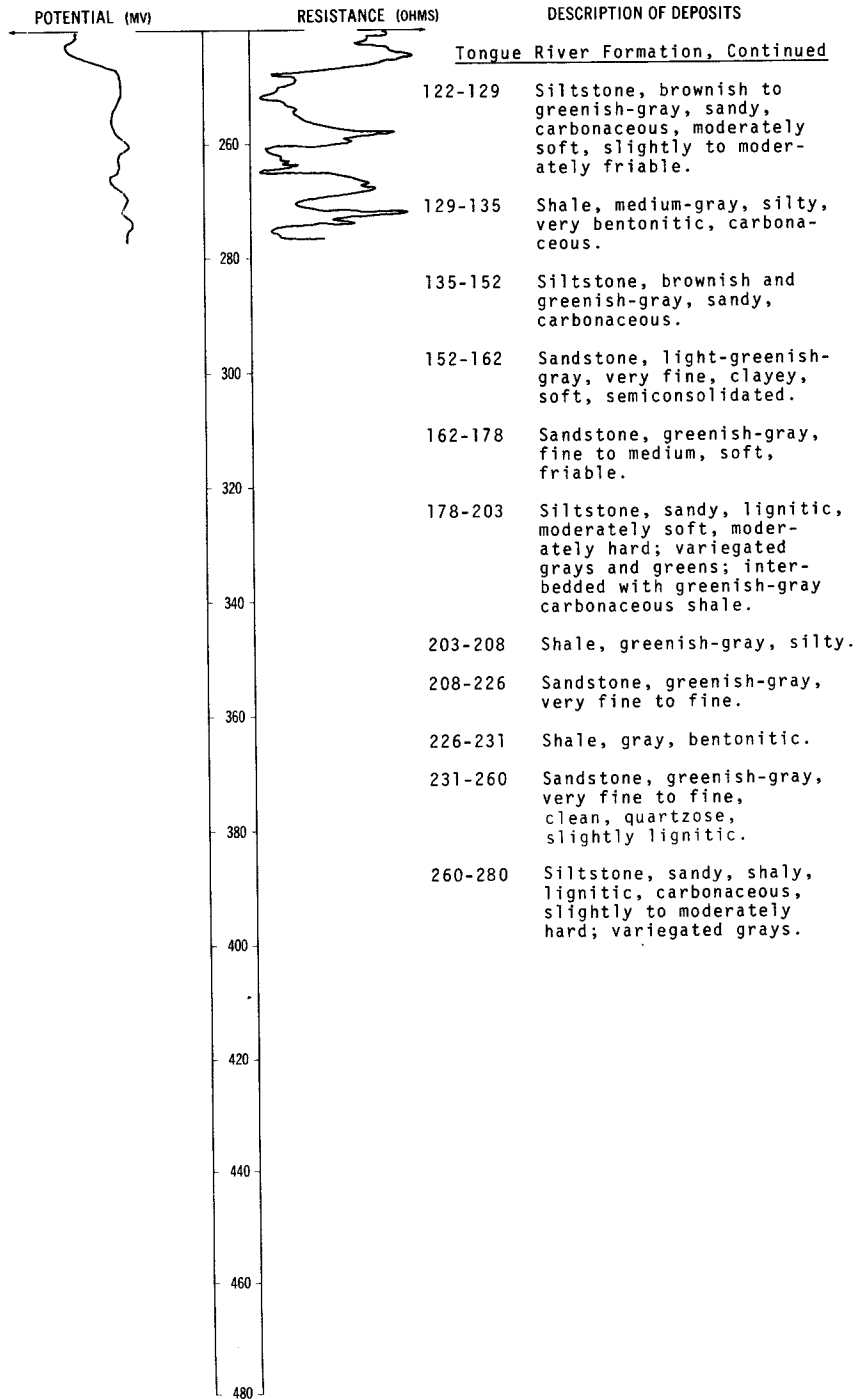
NDSWC 4530, Continued

LOCATION: 140-090-32BDD

DATE DRILLED: August 1973

ALTITUDE: 2180
(FT, MSL)

DEPTH: 280
(FT)



NDSWC 4530, Continued

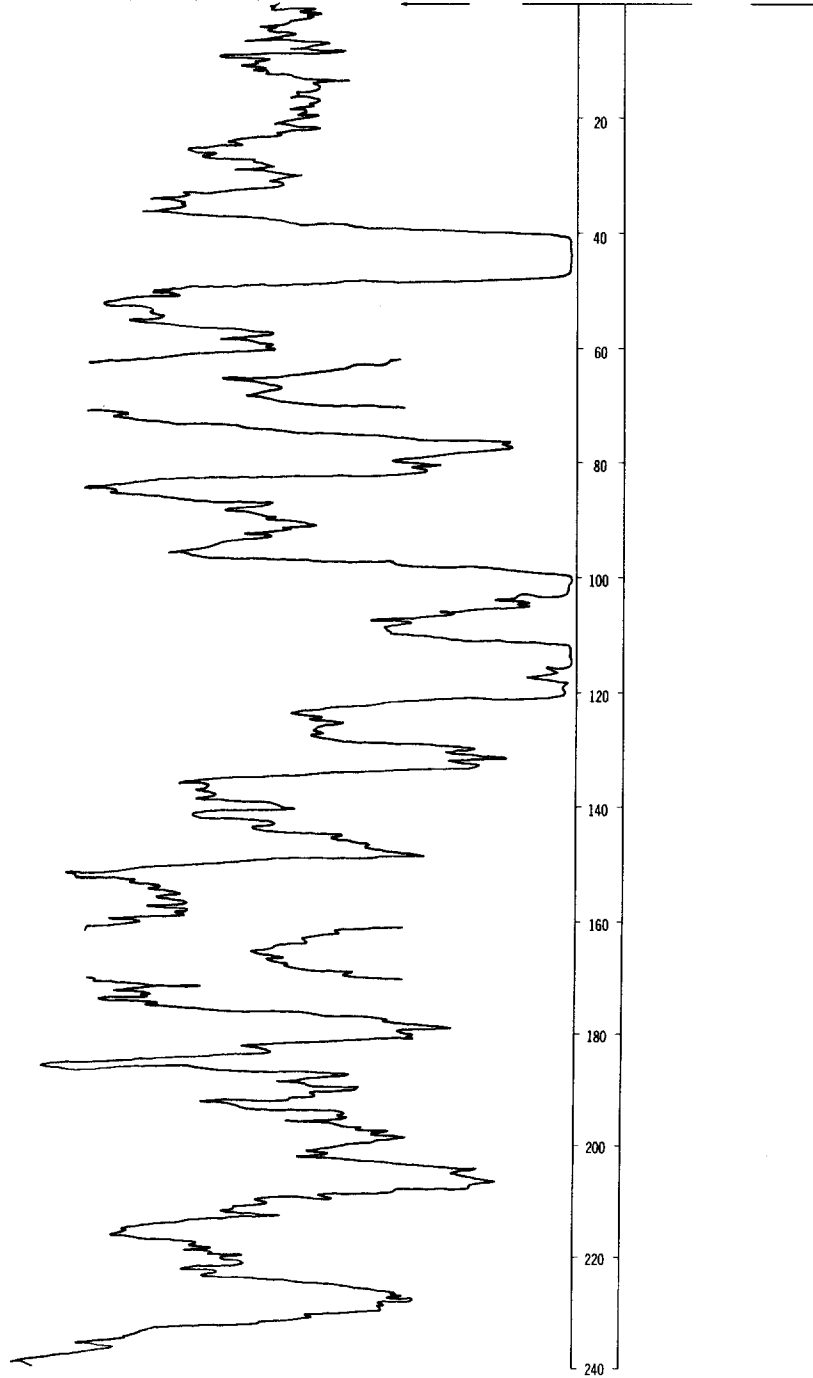
LOCATION: 140-090-32BDD

DATE DRILLED: August 1973

ALTITUDE: 2180
(FT. MSL)

DEPTH: 280
(FT)

NATURAL-GAMMA (T.C. 4)



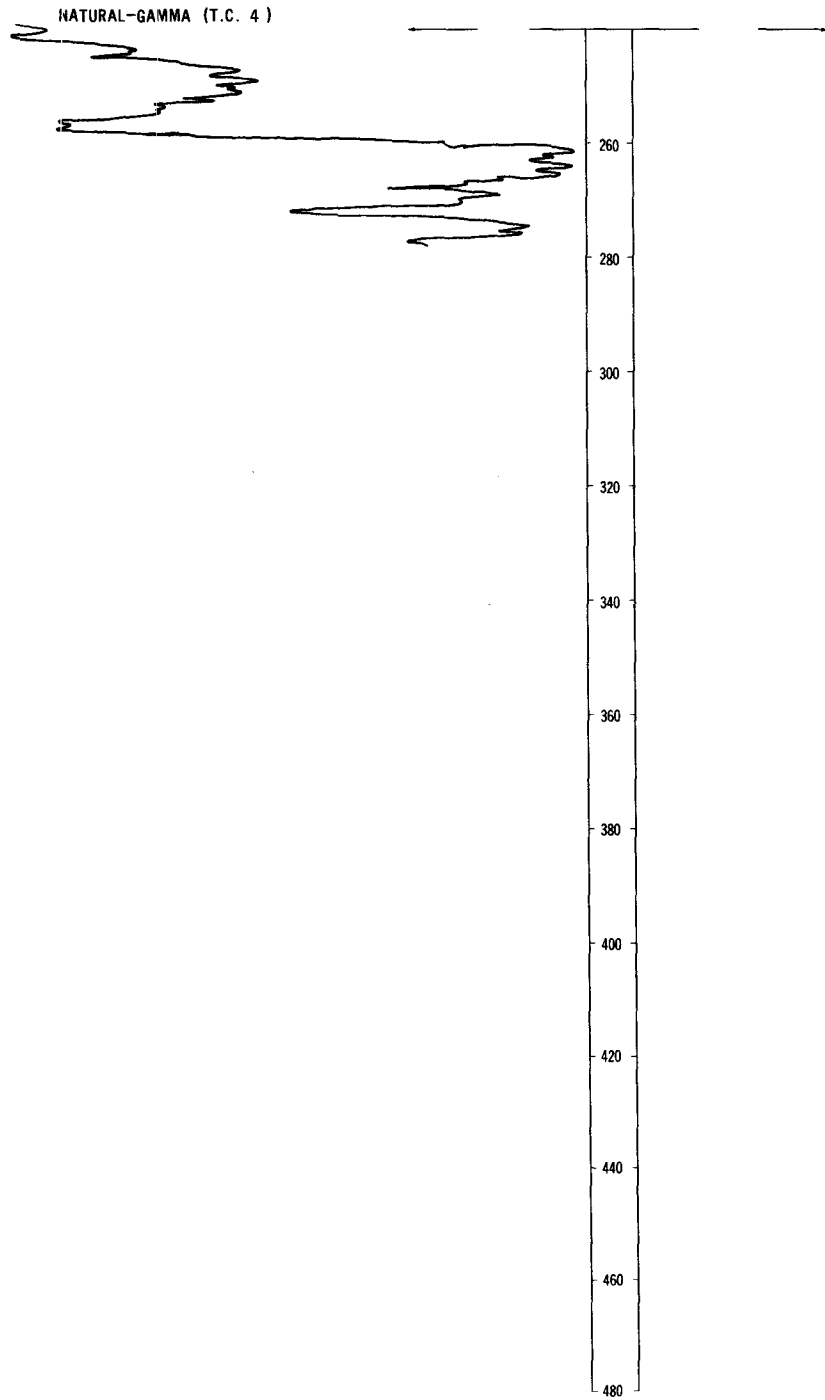
NDSWC 4530, Continued

LOCATION: 140-090-32BDD

DATE DRILLED: August 1973

ALTITUDE: 2180
(FT, MSL)

DEPTH: 280
(FT)



140-090-33AAC
City of Hebron
(Log from Independent Drilling Company)

Geologic source	Material	Thickness (feet)	Depth (feet)
Sentinel	Butte Formation:		
	Clay-----	16	16
	Sand and clay-----	13	29
	Clay-----	13	42
	Sand, black-----	17	59
	Sandstone-----	1	60
	Sand, black-----	9	69
	Tongue River Formation (?):		
	Clay, gray-----	34	103
	Lignite-----	2	105
	Clay, gray-----	48	153
	Sandstone-----	3	156
	Clay, gray-----	9	165
	Clay, gray, sandy-----	41	206
	Clay, gray-----	2	208
	Sandstone-----	6	214
	Clay, sandy-----	20	234
	Lignite and clay-----	6	240
	Clay, gray-----	33	273
	Sandstone-----	3	276
	Clay, gray-----	13	289
	Lignite-----	4	293
	Clay; with lignite seams-----	22	315
	Clay, gray-----	36	351
	Sand-----	5	356
	Clay, gray-----	5	361
	Lignite and clay-----	6	367
	Sand-----	49	416
	Lignite-----	4	420
	Clay-----	6	426
	Clay, sandy-----	7	433

140-090-33ACD
City of Hebron
(Log from Independent Drilling Company)

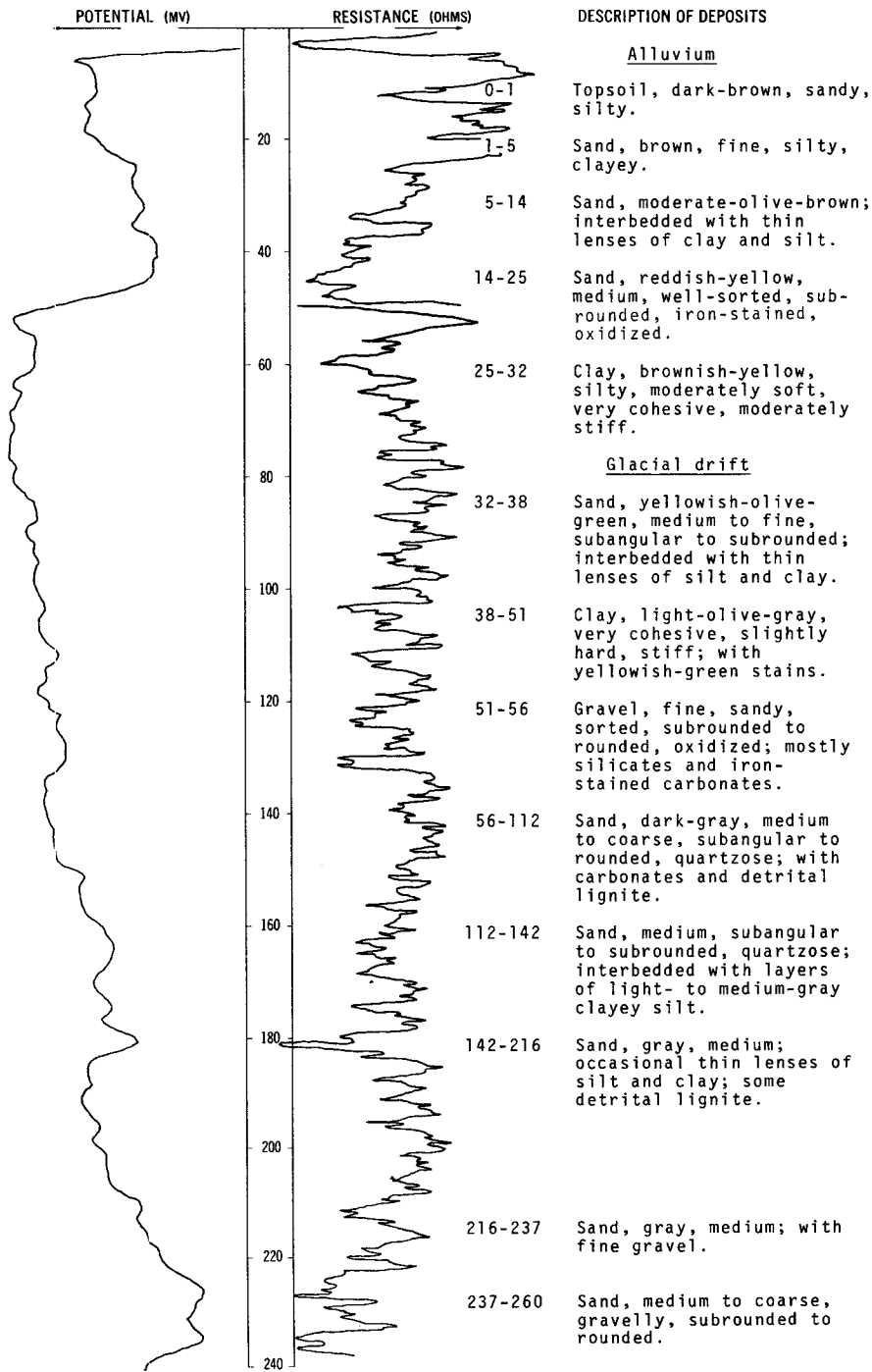
	Tongue River Formation (?):		
	Clay, yellowish-black-----	25	25
	Sand-----	8	33
	Clay; with sand streaks-----	42	75
	Sand-----	45	120
	Clay, blue-----	27	147
	Sandstone-----	4	151
	Clay, blue-----	25	176
	Clay, blue; with streaks of sandstone-----	4	180
	Lignite-----	5	185
	Clay-----	35	220
	Sand-----	6	226
	Sandstone-----	11	237
	Clay, black-----	37	274
	Lignite-----	3	277
	Clay, black-----	16	293
	Sandstone-----	1	294
	Clay-----	38	332
	Sandstone, hard-----	4	336
	Clay, blue-----	7	343
	Sand; with streaks of clay-----	17	360
	Sand; water bearing-----	40	400
	Clay and sand; interbedded-----	180	580

LOCATION: 140-090-34AAA

DATE DRILLED: August 1973

ALTITUDE: 2137
(FT, MSL)

DEPTH: 440
(FT)



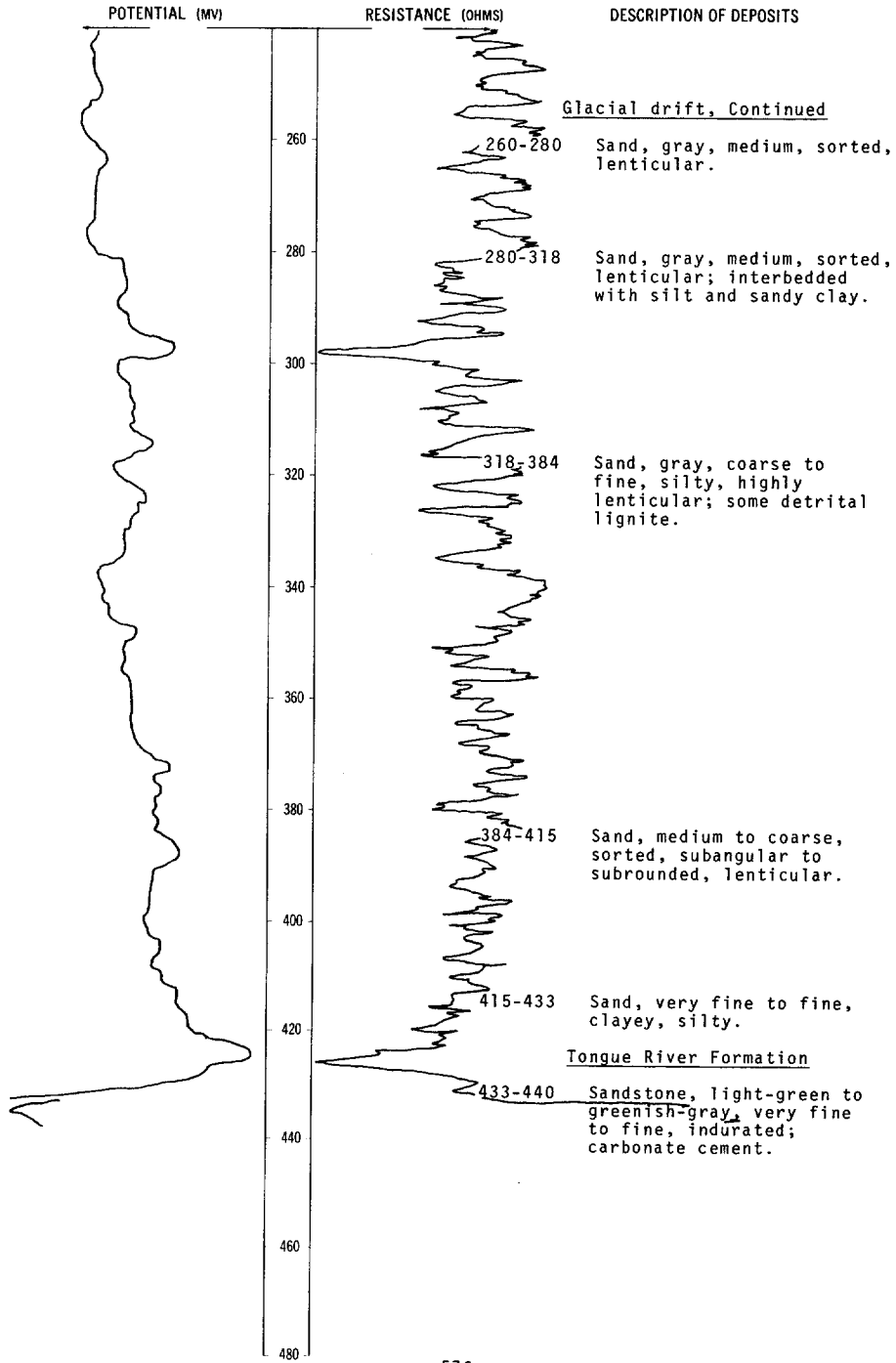
NDSWC 4533, Continued

LOCATION: 140-090-34AAA

DATE DRILLED: August 1973

ALTITUDE: 2137
(FT, MSL)

DEPTH: 440
(FT)



NDSWC 4533, Continued

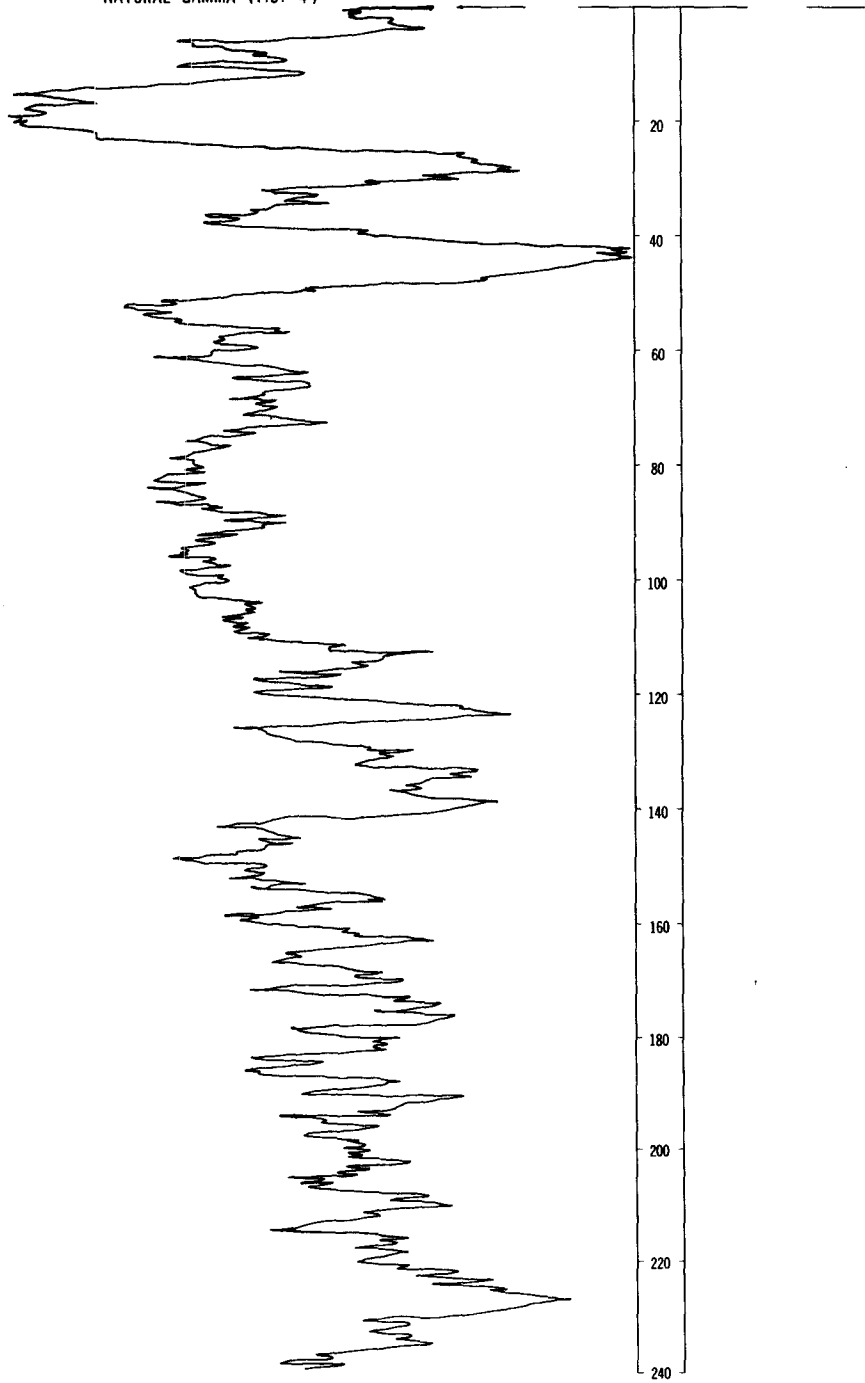
LOCATION: 140-090-34AAA

DATE DRILLED: August 1973

ALTITUDE: 2137
(FT, MSL)

DEPTH: 440
(FT)

NATURAL-GAMMA (T.C. 4)



NDSWC 4533, Continued

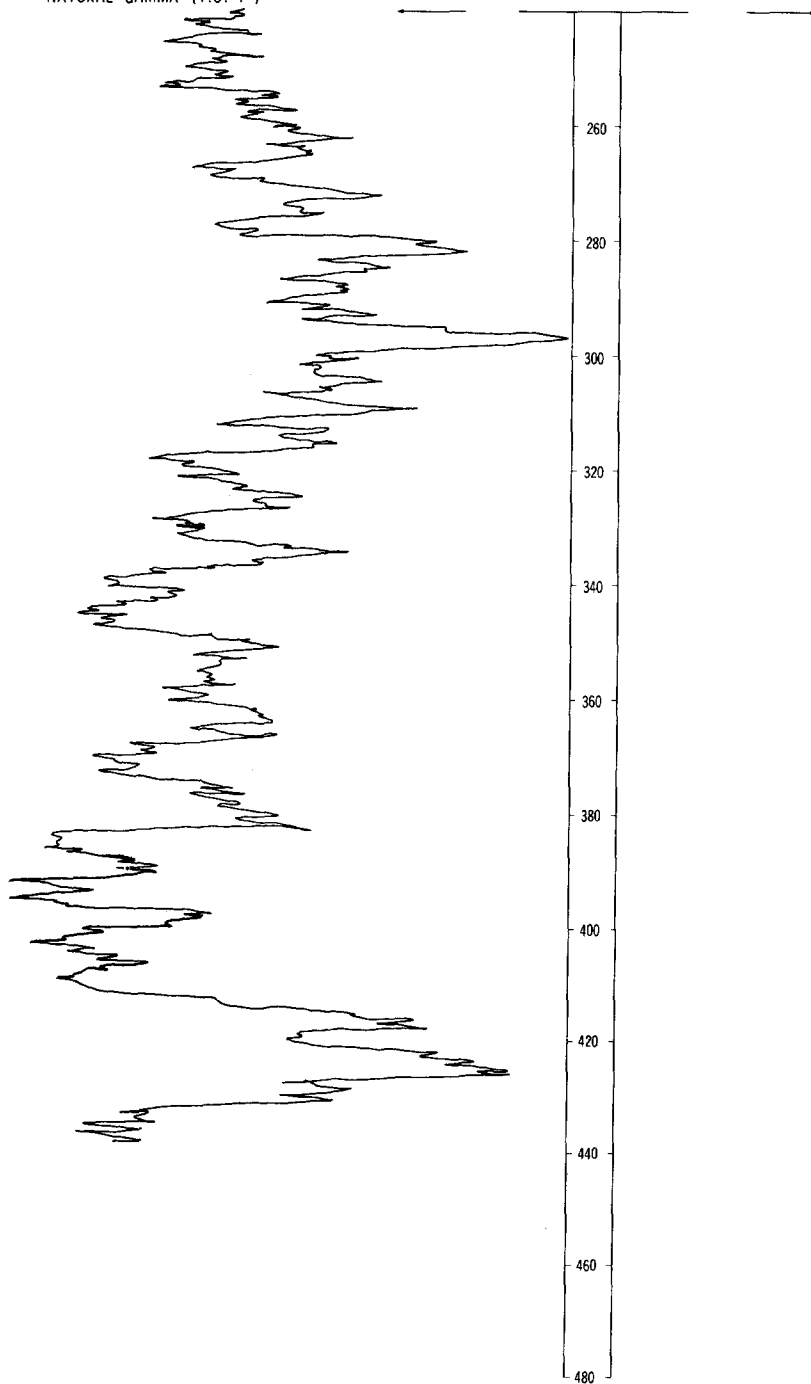
LOCATION: 140-090-34AAA

DATE DRILLED: August 1973

ALTITUDE: 2137
(FT, MSL)

DEPTH: 440
(FT)

NATURAL-GAMMA (T.C. 4)

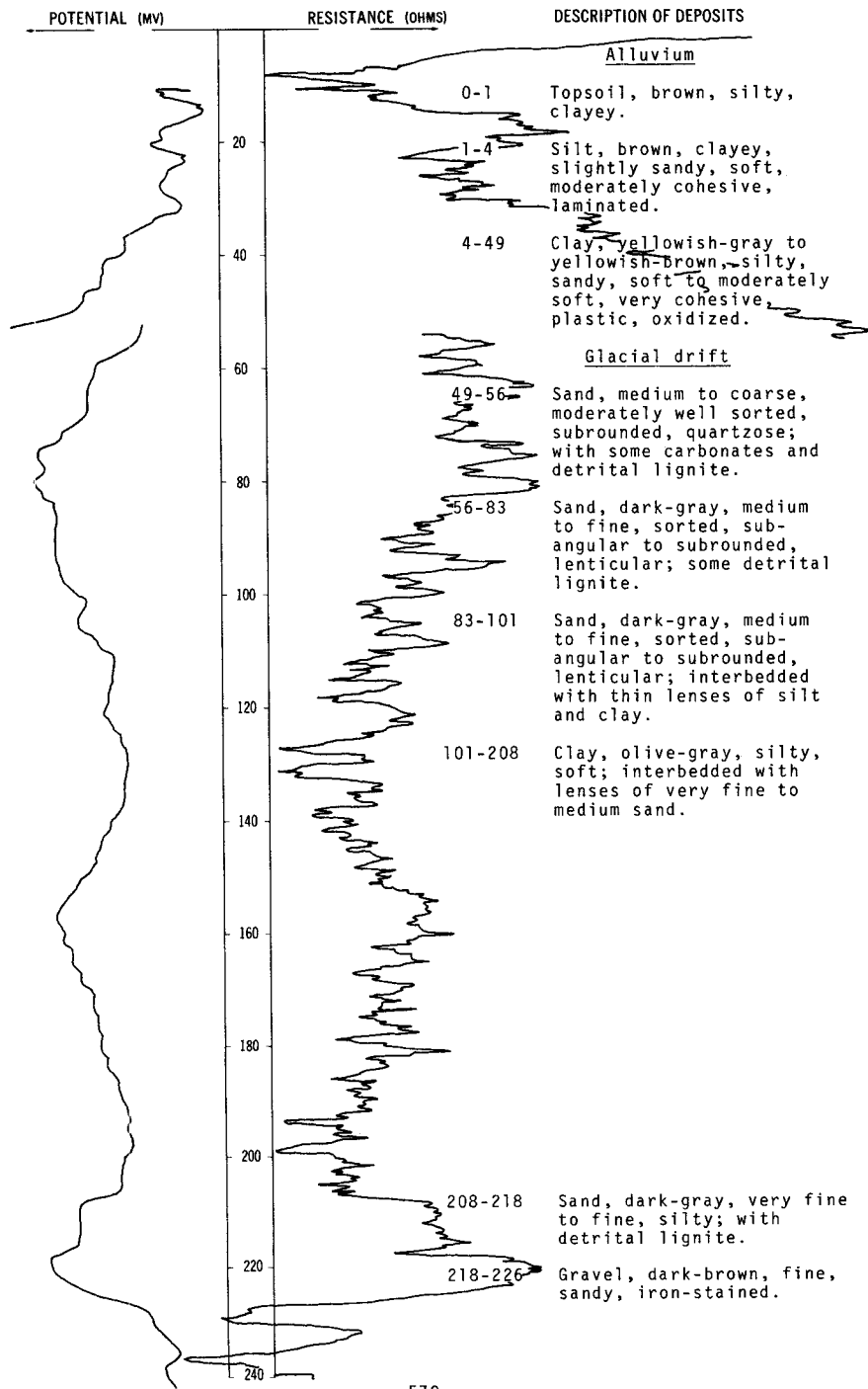


LOCATION: 140-090-34ADD

DATE DRILLED: August 1973

ALTITUDE: 2140
(FT, MSL)

DEPTH: 260
(FT)



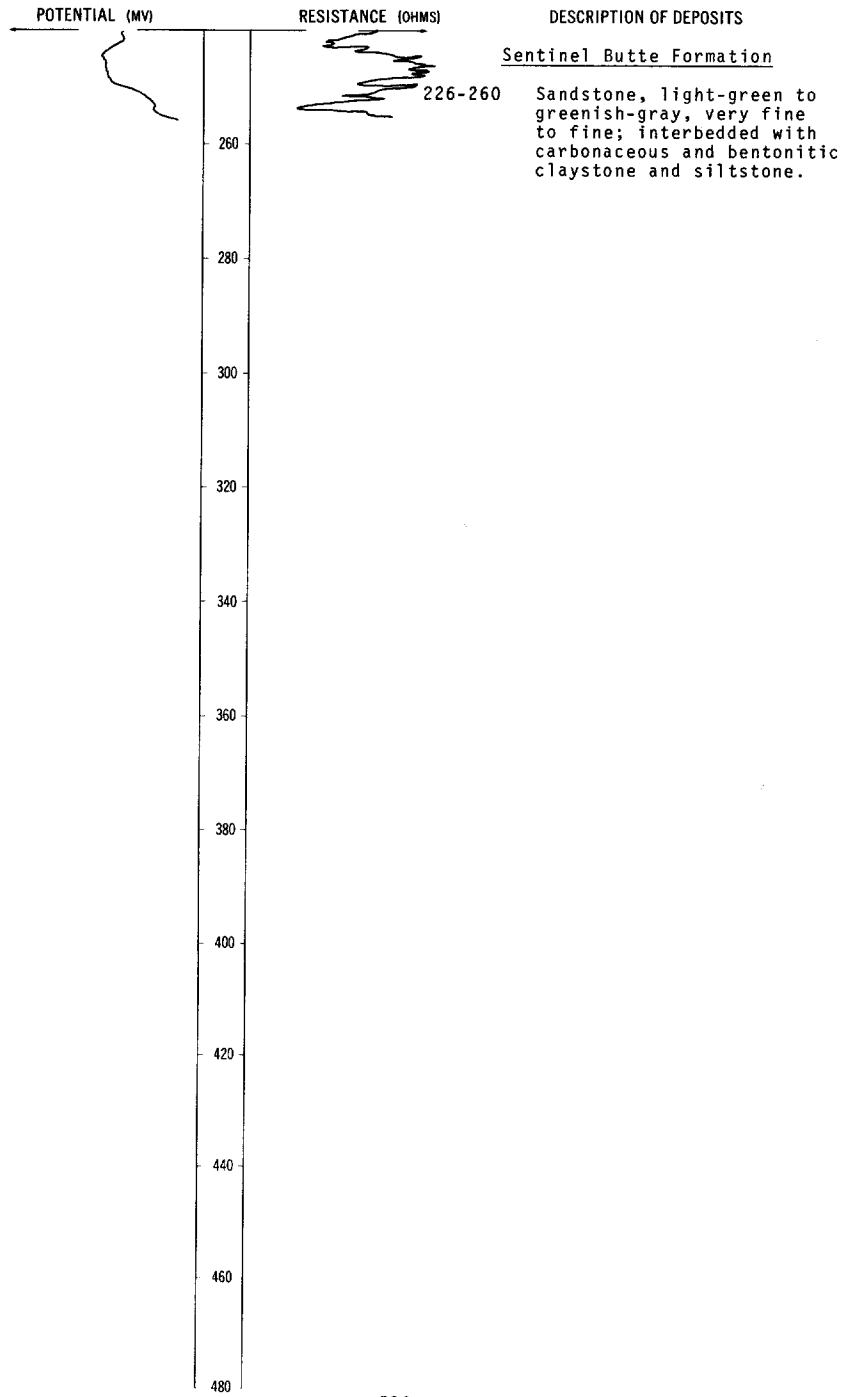
NDSWC 4534, Continued

LOCATION: 140-090-34ADD

DATE DRILLED: August 1973

ALTITUDE: 2140
(FT, MSL)

DEPTH: 260
(FT)



NDSWC 4534, Continued

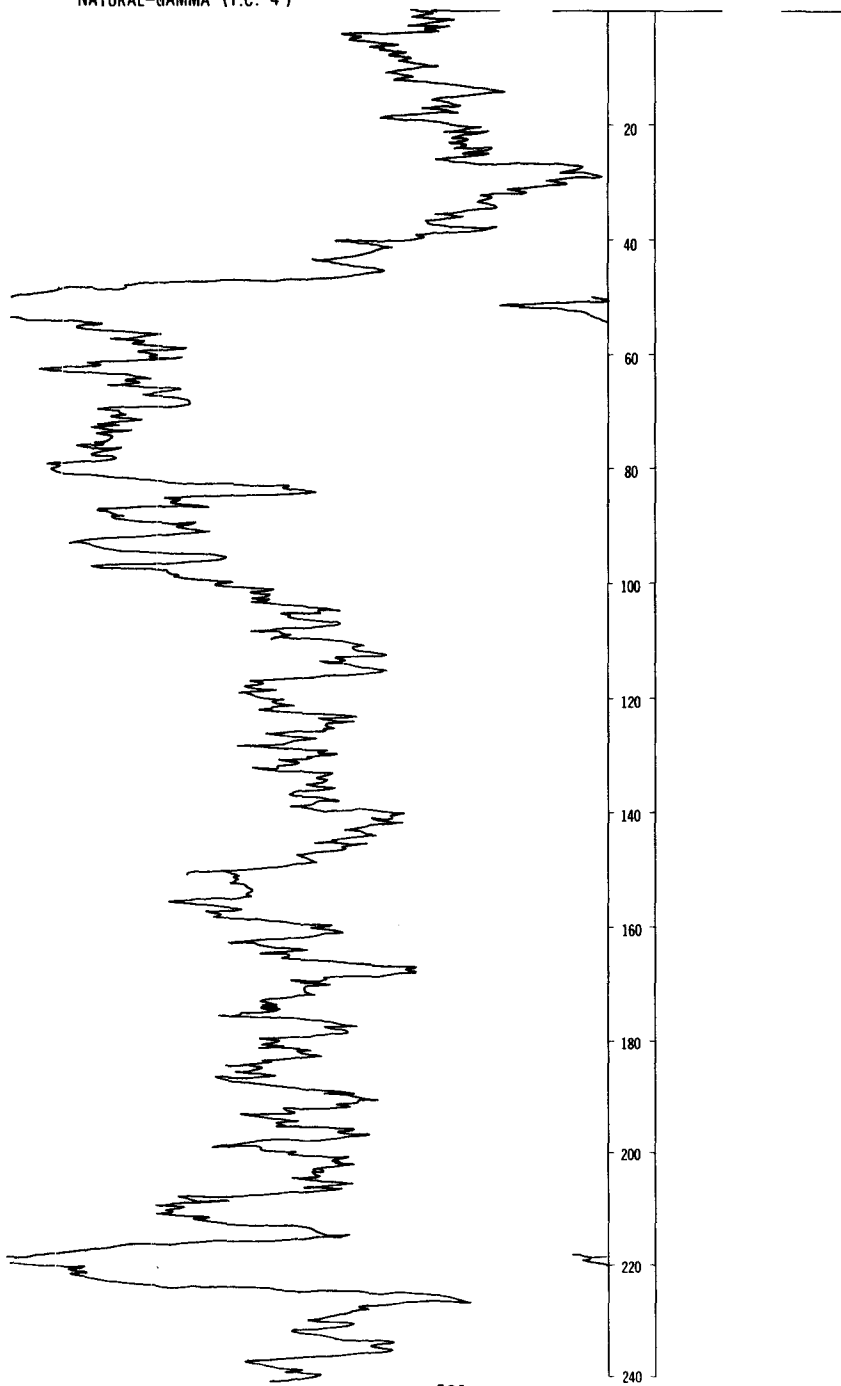
LOCATION: 140-090-34ADD

DATE DRILLED: August 1973

ALTITUDE: 2140
(FT, MSL)

DEPTH: 260
(FT)

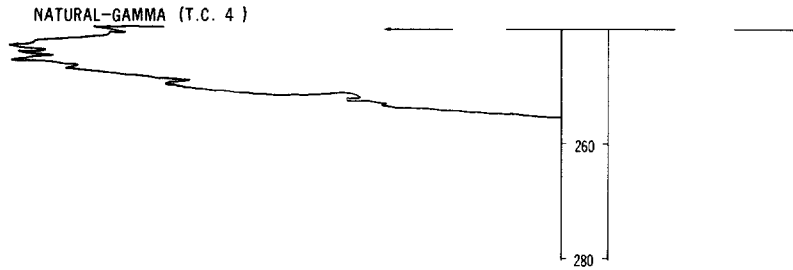
NATURAL-GAMMA (T.C. 4)



NDSWC 4534, Continued

LOCATION: 140-090-34ADD
 ALTITUDE: 2140
 (FT, MSL)

DATE DRILLED: August 1973
 DEPTH: 260
 (FT)



140-090-35BBA
 J. Elmer
 (Log from Bandy Well Drilling)

<u>Geologic source</u>	<u>Material</u>	<u>Thickness (feet)</u>	<u>Depth (feet)</u>
Glacial drift:			
	Clays and silts-----	175	175
Tongue River Formation:			
	Shale, blue-----	8	183
	Sandstone-----	2	185
	Shale, blue-----	29	214
	Shale, sandy-----	51	265
	Shale, blue-----	15	280

140-090-36CCD
 NDSWC 9301

Altitude: 2142 feet

Glacial drift:			
	Clay, moderate-yellowish-brown, silty, slightly sandy, iron-stained, oxidized-----	56	56
	Clay, dark-gray, silty, sandy-----	4	60
	Sand, very fine to fine, well-sorted, angular to subrounded, quartzose-----	12	72
	Clay, medium-dark-gray, very sandy, silty; much detrital lignite-----	188	260
	Clay, medium-dark-gray, extremely sandy, silty; with detrital lignite-----	80	340
Tongue River Formation:			
	Sandstone, very pale blue green, very hard-----	60	400

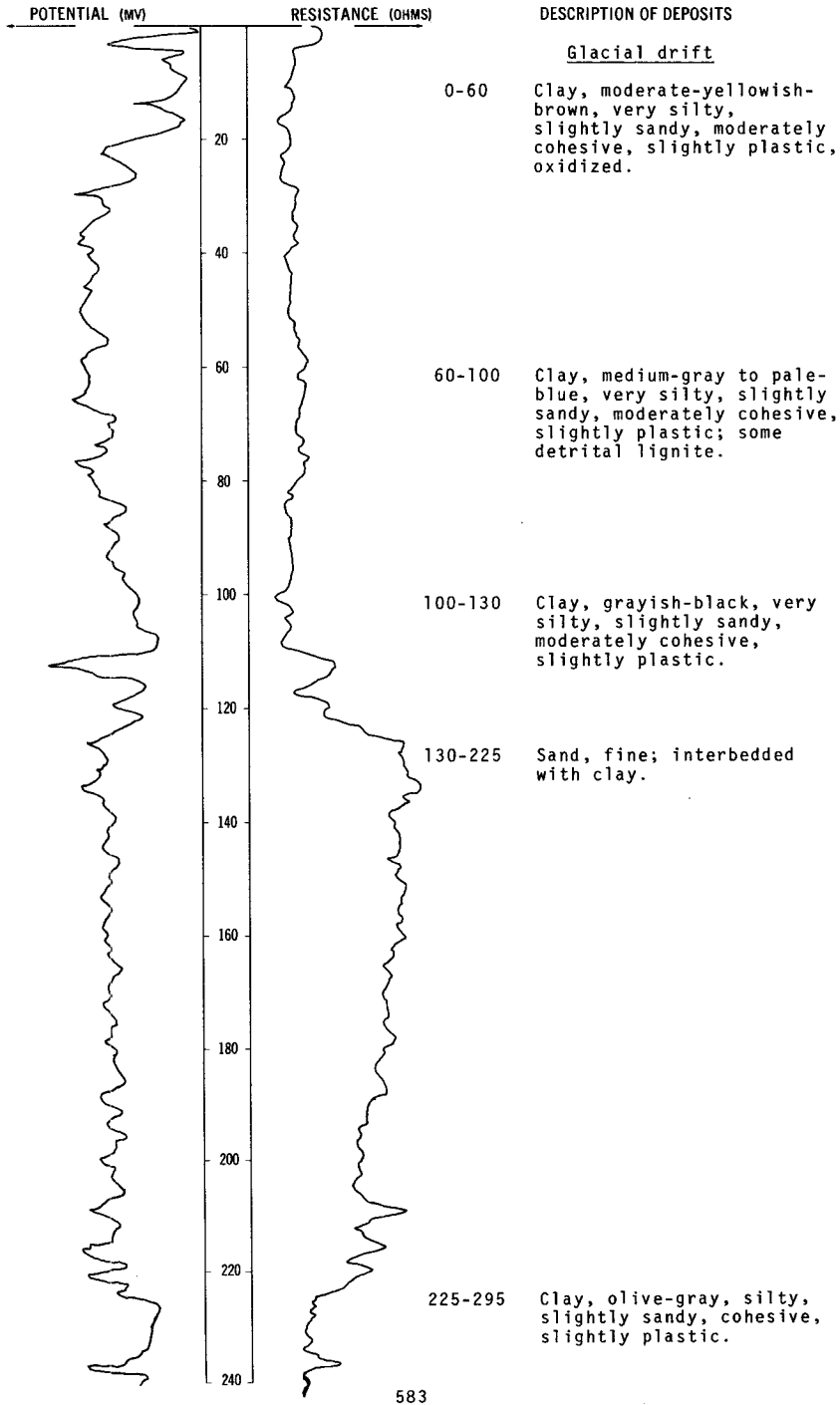
NDSWC 9330

LOCATION: 141-089-36DCD

DATE DRILLED: July 1975

ALTITUDE: 2093
(FT, MSL)

DEPTH: 380
(FT)



NDSWC 9330, Continued

LOCATION: 141-089-36DCD

DATE DRILLED: July 1975

ALTITUDE: 2093
(FT, MSL)

DEPTH: 380
(FT)

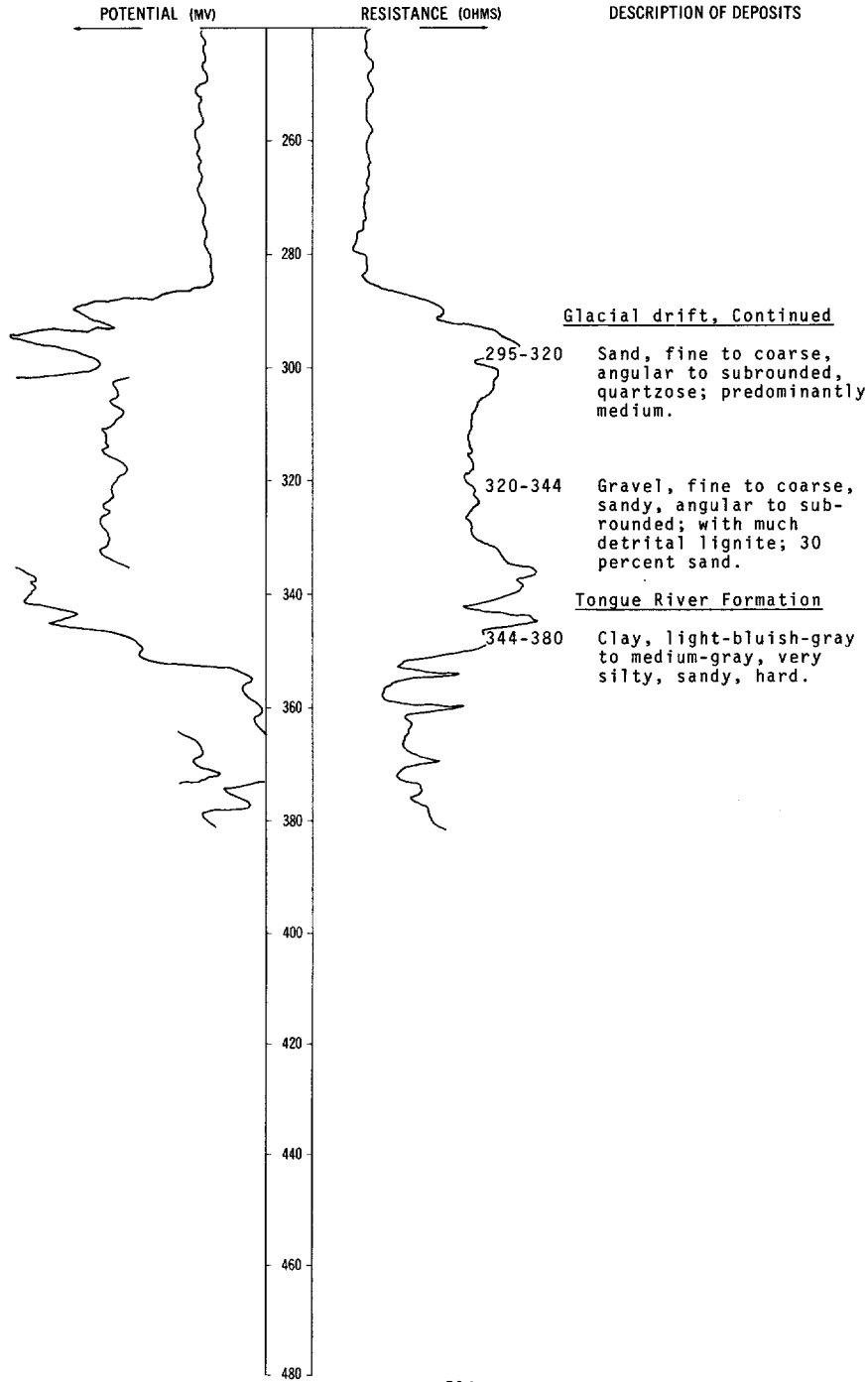


TABLE 5.--Chemical analyses of ground water for trace constituents

LOCAL IDENT - I - FIR	MAJOR AQUIFER ¹	DATE OF SAMPLE	TOTAL DEPTH OF WELL (FT)	DIS-SOLVED ALUM (AL) (UG/L)	DIS-SOLVED ARSENIC (AS) (UG/L)	DIS-SOLVED BARIUM (BA) (UG/L)	DIS-SOLVED BERYLLIUM (BE) (UG/L)	DIS-SOLVED CADMIUM (CD) (UG/L)	DIS-SOLVED CHROMIUM (CR) (UG/L)	DIS-SOLVED COBALT (CO) (UG/L)	DIS-SOLVED COPPER (CU) (UG/L)	CYANINE (CN) (MG/L)	DIS-SOLVED LEAD (PB) (UG/L)	DIS-SOLVED LITHIUM (LI) (UG/L)	DIS-SOLVED MERCURY (HG) (UG/L)	DIS-SOLVED MANGANESE (MN) (UG/L)	DIS-SOLVED NICKEL (NI) (UG/L)	DIS-SOLVED NITRATE (N) (MG/L)	DIS-SOLVED PHOSPHORUS (P) (MG/L)	DIS-SOLVED SILICUM (SI) (UG/L)	DIS-SOLVED SILVER (AG) (UG/L)	DIS-SOLVED STRONTIUM (SR) (UG/L)	DIS-SOLVED VANADIUM (V) (UG/L)	DIS-SOLVED ZINC (ZN) (UG/L)
137-083-06CDD1	211FXHL	75-05-28	589	10	0	0	0	0	0	0	0	.02	4	70	.0	5	0	.00	.08	0	0	210	4.2	0
137-083-06CDD2	211MLCK	75-05-28	435	10	0	100	0	0	0	0	0	.00	1	90	.1	4	0	.00	.08	0	0	230	3.2	0
137-083-06CDD3	211MLCK	75-05-28	284	50	0	0	0	0	0	0	0	.00	1	90	.4	4	1	.00	.13	0	0	160	2.1	10
137-086-03AAD1	211FXHL	74-11-27	734	20	0	<100	<10	0	<10	2	0	.00	0	100	<.1	6	3	.00	.12	0	0	120	2.6	40
137-086-03AAD2	211MLCK	74-11-27	672	20	1	100	<10	1	<10	2	0	.00	2	90	<.1	6	1	.00	.12	0	0	120	3.0	20
137-086-03AAD4	125TGRV	74-12-10	104	10	1	100	<10	1	<10	3	0	.00	1	90	<.1	4	1	.00	.21	0	0	280	1.1	80
138-081-09ABR1	211FXHL	74-12-16	537	0	2	<100	<10	0	<10	0	0	.00	0	150	<.1	1	10	.01	.12	0	0	210	21	40
138-081-09ABR2	211MLCK	75-01-02	348	30	0	<100	<10	0	0	0	1	.00	2	80	.0	4	9	.05	.15	0	0	100	3.0	40
139-081-04BDA1	125CBLD	73-04-25	240	0	1	0	0	0	0	1	5	.00	2	150	.0	1	2	.02	.15	0	0	510	.1	80
139-081-04BDA2	211FXHL	73-04-25	680	0	1	0	0	0	0	0	8	.00	3	110	.0	2	2	.00	.12	4	0	200	8.9	20
139-081-09AAA1	211FXHL	74-12-20	538	10	0	100	<10	0	<10	2	3	.00	0	150	.1	1	0	.03	.15	0	0	200	8.0	10
139-081-09AAA2	211MLCK	74-12-20	412	10	1	<100	<10	2	<10	0	1	.00	0	140	<.1	6	11	.05	.09	0	0	210	10	20
139-081-09AAA3	211MLCK	74-12-20	269	10	0	<100	<10	0	<10	0	1	.00	0	120	<.1	4	9	.03	.09	0	0	180	7.8	30
139-081-09AAA4	125CBLD	74-12-20	109	10	2	<100	<10	0	<10	0	0	.00	0	460	.7	0	12	.08	.00	4	0	1900	.0	250
139-083-12DBA1	211FXHL	74-12-09	789	0	0	200	<10	1	<10	2	1	.00	1	110	<.1	5	5	.00	.14	0	0	170	3.0	50
139-083-12DBA2	211MLCK	74-12-09	558	30	0	100	<10	2	<10	4	1	.00	0	100	<.1	4	1	.00	.13	0	0	150	6.0	50
139-083-12DBA3	125CBLD	74-12-10	324	20	0	300	<10	0	<10	2	4	.00	0	90	<.1	1	6	.01	.16	0	0	180	.1	50
139-088-34BCC1	211FXHL	75-06-17	1062	0	4	0	0	0	0	0	4	.00	1	90	.1	6	2	.01	.03	0	1	120	6.0	0
139-088-34BCC2	211MLCK	74-11-06	860	0	0	0	<10	<1	0	1	3	.00	1	50	.0	4	0	.01	.08	0	0	120	5.2	0
139-088-34BCC3	125TGRV	74-10-10	294	10	1	0	<10	<1	0	0	2	.02	2	100	.8	5	1	.02	.35	0	0	120	.5	50
139-088-34BCC4	125TGRV	74-10-15	78	0	0	0	<10	<1	0	0	2	.00	0	0	.0	2	0	.01	.19	0	0	440	3.8	40
139-090-12DAA	211MLCK	73-04-25	1165	0	0	0	0	0	0	0	2	.00	2	70	.6	1	1	.02	.19	3	0	240	.1	20

¹See page 13 for explanation.

TABLE 6.--Physical properties of core samples

Location	Geologic unit (formation)	Depth (feet)	Type of core (V-vertical, H-horizontal)	Density of solids (kg/m ³)	Total porosity (percent)	Vertical hydraulic conductivity (ft/d)	Horizontal hydraulic conductivity (ft/d)	Median size (mm)	Sorting coefficient	Skewness	Kurtosis	Uniformity coefficient	Percent of sizes (diameter in millimeters)						
													Clay <0.004	Silt 0.004-0.0625	Sand				
															Very fine 0.0625-0.125	Fine 0.125-0.25	Medium 0.25-0.5	Coarse 0.5-1.0	Very coarse 1-2
134-080-21DAB1	Hell Creek	Outcrop	V	2.68x10 ⁻³	38.9	5.9x10 ⁻¹	--	0.13	2.5	0.33	--	--	15.3	15.4	15.3	48.1	5.9	--	--
134-080-21DAB2	Hell Creek	Outcrop	V	2.63x10 ⁻³	41.7	6.6x10 ⁻¹	--	.12	5.2	.0084	--	--	22	11	19	46	2	--	--
134-080-21DD0	Fox Hills	Outcrop	V	2.63x10 ⁻³	--	4.6x10 ⁻¹	--	.17	1.2	1.0	0.16	33	9	2	6	81	2	--	--
135-079-10AAB1	Fox Hills	91-92.3	V	2.70x10 ⁻³	47.4	3.6x10 ⁻¹	--	.15	1.5	.7	.24	121	10.4	10.5	8.8	67.7	2.6	0.04	--
136-079-08CBC1	Cannonball	Outcrop	V	2.63x10 ⁻³	--	4.3x10 ⁻⁰	--	.13	1.7	.71	.26	74	13	10	23	51	3	--	--
136-079-08CBC2	Cannonball	Outcrop	V	2.72x10 ⁻³	--	3.1x10 ⁻⁰	--	.11	1.9	.66	130	.21	7.3	21	26.8	42.6	2.3	--	--
136-079-08CBD1	Hell Creek	Outcrop	V	2.71x10 ⁻³	41.9	2.2x10 ⁻⁰	--	.16	1.9	.60	.24	145	12.3	12.1	8.4	43.7	22.4	1.2	--
136-079-08CBD2	Hell Creek	Outcrop	V	2.69x10 ⁻³	--	3.2x10 ⁻¹	--	.16	1.9	.60	--	--	16	8	9	44	23	--	--
136-082-21DCD1	Cannonball	Outcrop	H	2.67x10 ⁻³	--	--	5.2x10 ⁻⁰	.16	1.3	1.0	.21	3.8	4.1	9.3	8.5	71.8	6.3	.1	--
136-082-21DCD2	Cannonball	Outcrop	V	2.65x10 ⁻³	--	8.2x10 ⁻⁰	--	.16	1.3	.98	.19	6.9	7	9	9	70	5	--	--
136-082-21DCD3	Cannonball	Outcrop	V	2.67x10 ⁻³	40.4	7.2x10 ⁻⁰	--	.16	2.5	.33	.22	4.5	3.1	10.3	12.7	68.7	5.2	--	--
137-086-03AAD1	Cannonball	310	H	--	38.3	--	5.2x10 ⁻⁰	.12	--	--	--	--	15	15	30	37	3	--	--
137-086-03AAD1	Hell Creek	412	H	--	37.5	--	1.3x10 ⁻¹	.096	--	--	--	--	8	19	52	20	1	--	--
137-086-03AAD1	Hell Creek	450	H	--	41.3	--	5.9x10 ⁻¹	.053	--	--	--	--	8	44	36	2	--	--	--
137-086-03AAD1	Hell Creek	660	H	--	38.0	--	9.5x10 ⁻¹	.16	--	--	--	--	5	17	13	54	11	--	--
137-086-03AAD1	Hell Creek	670	H	--	37.1	--	1.2x10 ⁻⁰	.15	--	--	--	--	9	17	14	54	6	--	--
137-086-03AAD1	Hell Creek	726	H	--	37.4	--	4.3x10 ⁻¹	.11	--	--	--	--	12	18	34	35	1	--	--
137-086-03AAD1	Fox Hills	730	H	--	35.4	--	2.9x10 ⁻¹	.091	--	--	--	--	12	25	45	18	--	--	--
137-086-03AAD1	Fox Hills	800	H	--	37.9	--	1.4x10 ⁻⁰	.17	--	--	--	--	5	13	10	63	9	--	--
137-086-03AAD1	Fox Hills	861	H	--	38.9	--	5.6x10 ⁻¹	.069	--	--	--	--	13	27	57	3	--	--	--
137-086-03AAD1	Fox Hills	926	H	--	36.0	--	1.3x10 ⁻¹	.056	--	--	--	--	14	41	44	1	--	--	--
138-084-15AAA	Tongue River	Outcrop	V	2.67x10 ⁻³	--	6.2x10 ⁻⁰	--	.18	1.4	1.0	.18	15	7	6	8	52	27	--	--
138-089-02A08	Tongue River	Outcrop	V	2.77x10 ⁻³	--	--	--	.0051	2.9	.33	--	--	18.7	39.6	37.5	4.1	--	--	--
139-081-09AAA2	Hell Creek	401-402.3	V	2.70x10 ⁻³	35.2	9.5x10 ⁻⁸	--	.11	4.7	.11	--	--	20.3	18.6	13	47.7	.31	--	--
139-081-09AAA2	Hell Creek	406.9-408	V	2.67x10 ⁻³	41.9	1.1x10 ⁻⁶	--	.086	6.2	.10	--	--	23.9	19	15.9	36.1	5.2	.06	--
139-081-09AAA3	Hell Creek	263-264.3	V	2.69x10 ⁻³	35.7	1.2x10 ⁻⁴	--	.082	7.1	.087	--	--	25.4	17.2	18.9	29.4	.09	--	--
139-081-09AAA3	Hell Creek	269.8-271	V	2.67x10 ⁻³	40.8	4.9x10 ⁻⁵	5.9x10 ⁻⁴	.14	4.2	.12	--	--	18.4	15.2	9.5	45.1	11.6	.08	--
139-083-12DBA3	Cannonball	320-321.2	V	2.71x10 ⁻³	40.2	7.2x10 ⁻²	--	.099	1.3	1.0	.21	1.7	--	4.6	68.5	26.8	.09	--	--
139-083-12DBA3	Cannonball	321.2-322.3	V	2.71x10 ⁻³	45.8	4.3x10 ⁻²	--	.080	2.3	.41	.27	94	12.8	20.6	47.9	18.7	.04	.06	--
139-088-348CC1	Tongue River	290	H	--	--	--	--	.065	--	--	--	--	10	28	61	1	--	--	--
139-088-348CC1	Cannonball	530	H	--	37.8	--	6.6x10 ⁻¹	.10	--	--	--	--	15	25	29	30	1	--	--
139-088-348CC1	Ludlow	550	H	--	37.5	--	4.6x10 ⁻³	.0071	--	--	--	--	38	60	1	1	--	--	--
139-088-348CC1	Hell Creek	710	H	--	--	--	--	.073	--	--	--	--	5	26	61	7	0	1	--
139-088-348CC1	Hell Creek	845	H	--	35.8	--	5.9x10 ⁻¹	.0832	--	--	--	--	20	25	18	37	--	--	--
139-088-348CC1	Hell Creek	865	H	--	35.8	--	2.0x10 ⁻¹	.074	--	--	--	--	12	30	50	8	--	--	--
139-088-348CC1	Hell Creek	950	H	--	29.1	--	1.7x10 ⁻²	.0098	--	--	--	--	27	71	1	1	--	--	--
139-088-348CC1	Hell Creek	960	H	--	30.4	--	1.1x10 ⁻⁰	.038	--	--	--	--	36	42	21	1	--	--	--
139-088-348CC1	Hell Creek	980	H	--	36.7	--	1.6x10 ⁻⁰	.065	--	--	--	--	20	29	41	10	--	--	--
139-088-348CC1	Fox Hills	1,004	H	--	37.7	--	2.0x10 ⁻⁰	.10	--	--	--	--	16	24	18	36	6	--	--
139-088-348CC1	Fox Hills	1,040	H	--	36.8	--	5.9x10 ⁻¹	.081	--	--	--	--	9	25	54	12	--	--	--
139-088-348CC1	Fox Hills	1,055	H	--	39.9	--	1.1x10 ⁻⁰	.088	--	--	--	--	9	23	51	17	--	--	--
139-088-348CC1	Fox Hills	1,131	H	--	35.3	--	7.9x10 ⁻¹	.125	--	--	--	--	6	22	22	49	1	--	--