North Carolina

Department of Conservation and Development

R. Bruce Etheridge, Director

Division of Mineral Resources

Jasper L. Stuckey; State Geologist

Information Circular 3

N. C. GEOLOGICAL SURVEY

Selected Well Logs

in the

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Coastal Plain of North Carolina
Compiled by

M. J. Mundorff

Prepared in cooperation with the United States Geological Survey
Raleigh

1944

Geologic logs of wells in the North Carolina Coastal Plain compiled by M. J. Mundorff

An invostigation of the ground water supplies and resources of North Carolina was begun, by the U. S. Geological Survey, in 1941, as a cooperative project between the North Carolina Department of Conservation and Development and the U. S. Geological Survey. The program is under the direction of Dr. O. E. Meinzer, Geologist in Charge, Division of Ground Water, U. S. Geological Survey, and Dr. J. L. Stuckey, State Geologist of North Carolina.

The investigation has included a large amount of work in the Coastal Plain in connection with ground-water supplies for the different military establishments. During the course of this work, samples were saved from many of the wells, and driller's logs were obtained for many others. The present report was prepared in order to make available, as quickly as possible, the information contained in those well logs.

The Tertiary and Cretaceous formations of the Coastal Plain are covered in most places by thin Pleistoceno sand and clay strata. Because the outcrops are so scattered and usually only a few tens of feet thick, well logs give the best information as to distribution, structure, and thickness of those formations.

The driller's logs have been changed chiefly by rewording the description to attain a consistency and uniformity of terminology. They also have been changed by combining, consecutive, and identical, or very similar descriptions.

The correlations indicated for these logs are based chiefly on lithology. The probable depth to the formational boundaries, based on projection of their dip from localities where the depth of the boundaries are known, was also considered.

The logs based on examined samples were prepared, by the author, from samples saved during the drilling of the well. The driller's log has also been considered in preparing these descriptions; especially as to the qualities of the material revealed during drilling, such as hardness, toughness, etc.

In describing the various strata the attempt was made to be consistent in terminology so that similar strata in different wells will have similar descriptions. It is possible, however, that a "clay, very sandy" in one well log might be termed a "sand, very clayey" in another log.

Nearly all of the strata have been included in the six following classifications: gravel, sand, clay, sandstone, limestone, marl. Of course nearly any combination of the can and does, occur, and this is indicated by the qualifying adjectives. Marl is probably the only term that needs to be defined. As used in this manuscript, marl is a soft or only slightly consolidated, earthy calcium carbonate, usually containing more or less sand or clay or both. The same material consolidated to form a rock is called limestone. Thus, "shell rock" and "shell rock marl" are called limestone except whom sand predominates, and then they are called "fossiliferous, calcareous sandstone."

Whore possible, correlations were made on paleontological evidence. The statement at the beginning of the log, "correlations by "means that the paleontologist named fixed the formational boundaries. The statement, "correlations based on paleontological studies by "means that the formational

boundaries were drawn by the writer on the basis of palcontological evidence furnished by the person named.

Strobest .L M ad belignee

Paleontological studies of the samples are not complete; foraminifera from only a few wells have been determined. Therefore, the correlations should not be considered as absolute or final, as they may be changed in the light of additional information.

Logs of five wells previously reported are included in this manuscript because of their significance and because the publications in which they appeared are no longer generally available.

The logations of the wells, for which logs are given in the test, are shown on the accompanying map.

most places by thin Plaisteethe and and alsy strains. Because the outerogs are

Principal water-bearing formations in the Coastal Plain

Cretaceous

Tuscaloosa formation and Cretaceous deposits (undifferentiated).-- The basal Cretaceous deposits of the Coastal Plain of North Carolina were correlated with the Patuxent formation of Virginia and Maryland by Stephenson . It was later

Logark, Wm. B.; Miller, B. L.; Stephenson, L. W.; Johnson, B. L.; and Parker, H. N., The Coastal Plain of North Carolina: N. C. Geol. and Econ. Survey, vol. 3, pt. 1, 1912.

shown by Cooke2/ that the bods of Cretaceous age in the southern part of the

2/ Cooke, C. Wythe, Correlation of the coastal Cretaceous beds of the southeastern states: U. S. Geol. Survey Prof. 140-F, pp. 137-39, 1925 (1926).

Coastal Plain, represent the Tuscaloosa formation, but the age of the basal Crotaceous deposits in the northern part of the Coastal Plain has not been determined. The Cretaceous strata consist chiefly of sand and clay and mixtures of the two, and at some places contain considerable gravel. The materials are commonly arkosic, and the beds are usually lenticular and often cross-bedded. The maximum thickness probably is more than 400 feet.

These strata are the chief source of ground water, for drilled wells, in nearly one-third of the Coastal Plain. Large yields are obtained from sand strata through screened or gravel-walled wells. The water is usually soft, except from strata near the top of the Cretaceous deposits where they are overlain by the Yorktown formation.

Black Creek formation. -- This formation is of Upper Cretaceous age and crops out, or is covered only by a thin layer of Pleistocene sand and clay, in a considerable area in the southeastern part of the Coastal Plain. It forms a belt roughly parallel to, and southeast of, the Tuscaloosa formation. It consists, typically, of black laminated clays and interbedded sands. Lignitized wood is very characteristic of these strata. Near the top of the formation the strata contains some glauconite and are somewhat calcareous. The maximum thickness

probably is about 800 feet. The Black Creek formation is an excellent aquifer. Wells yielding 500 or more gallons a minute are not uncommon. The water is usually soft, except that from strata in the upper part of the formation which sometimes may be moderately hard.

Peedee formation. -- The Peedee formation, of Upper Cretaceous age, crops out, or is covered only by thin Pleistocene deposits, in the southeastern part of the Coastal Plain in a belt southeast of and roughly parallel to the Black Creek formation. It is of marine origin and consists of sand and clay, which are predominantly glauconitic and calcareous, and some marl and limestone. The maximum thickness is probably about 900 feet.

The Peedee formation also is an excellent aquifer. Many wells will yield 400 to 500 gallons a minute, and some will probably yield more than 1,000 gallons a minute. The water is usually moderately hard to hard, and at some places brackish, connate water is encountered at depth.

Eccone

Castle Hayne marl. -- This formation, of late Eccene age, occurs in a belt extending southward from near Kinston to beyond Wilmington. It consists of sandy marls, sandy limestone, and some almost pure limestone. The maximum thickness is probably about 270 feet.

This formation yields large quantities of water at a number of places. The best aquifers are porous limestone strata. Usually the wells are neither screened nor gravel-walled. The water nearly always is hard, the only exceptions being water that is brackish.

decorporate aquitor because the docpor strata are and to yield bracked water and, and are an area of this area, yields a scallons a minute probably can be

Trent marl. -- The Trent marl, of lower Miocene age, occurs in a belt east of the Castle Hayne marl, and extends from the southern part of Onslow County into Beaufort County. It consists of sandy marls and limestone with more or less sand. The maximum thickness probably is about 350 feet.

The Trent marl yields a large amount of water to many wells. The best aquifers are the limestone strata which have been rendered porous by solution. Yields of 500 to 1,000 gallons a minute can be expected from the better horizons.

Yorktown formation. The Yorktown formation occupies a large area in the northern half of the Coastal Plain, cropping out, or being covered only by thin Pleistocene deposits from the Fall Zone eastward approximately to a line through Newbern and Edenton where the increasing dip carries it beneath younger formations. It consists of calcareous clays, sandy marls, with some beds of clean sand, and occasional limestone layers. The maximum thickness is probably more than 400 feet.

soft but from the your gor formed one may be as hard or harder than the deeper

In the western half of the area, the formation is usually not more than 50 to 60 feet thick and is generally a poor aquifer, most drilled wells obtaining water from the underlying Cretaceous deposits. However, in a few places, wells in the Yorktown yield up to 200 gallons a minute. Farther east, where the formation is thicker, yields of 500 or more gallons a minute have been recorded.

The water is nearly always hard, and brackish water is encountered at depth in the eastern part of the area.

Duplin marl. -- The Duplin marl is considered to be about equivalent in age to the upper part of the Yorktown and is very similar lithologically. It occurs in several thin, isolated patches in Duplin, Sampson, Robeson, Bladen, and Columbus Counties and has been found in wells drilled in Craven, Carteret, and Onslow Counties. It consists chiefly of calcareous sands and clays and marls. Its maximum thickness is probably about 250 feet. Wells ending in the more permeable sands, or porous limestone, will yield several hundred gallons a minute. The water is nearly always hard.

Pliocene

Waccamaw formation and Croatan sand. -- These two formations comprise the Pliocene formations of North Carolina. The Waccamaw formation, which consists of shell marl and calcareous sand and clay, is recognized in a few small areas south of the Neuse River. The Croatan sand consists of fossiliferous sand and crops out chiefly along the Neuse River but has also been recognized in cuttings from a number of wells in the northeastern Coastal Plain. The maximum thickness of either formation is about 50 feet.

In the northeastern part of the Coastal Plain, the Croatan sand is a rather important aquifer because the dooper strata are apt to yield brackish water and, in some parts of this area, yields up to 300 gallons a minute probably can be obtained from wells. Elsewhere the strata of Pliocene age furnish small to moderate supplies to some domestic and industrial wells. The water is generally moderately hard to hard.

Pleistocene

Columbia group. -- Sediments of the Columbia group occur as a thin blankot over practically the entire Coastal Plain, lying unconformably upon the eroded surface of older formations. These strata consist of arenaceous clay, argillaceous sand, and some clean sand and gravel. The maximum thickness of any of these formations which make up the Columbia group is about 75 feet, and the average is about 25 or 30 feet.

Most domestic supplies, and a number of industrial and a few municipal water supplies, are obtained from the Pleistocene formations. The yield of an individual well is usually small, and batteries of small-diameter wells are used where large supplies are desired. Supplies up to 1,000,000 gallons a day can be obtained in this way. The water from the older Pleistocene formations is usually soft but from the younger formations may be as hard or harder than the deeper formations. The water also often contains a considerable amount of iron.

1. City of Elizabeth City, Pasquotank County, 1932

altitude about 10 feet.

Log from U. S. Geological Survey Water Supply Paper 773-A, p. 14, 1936

	AND A THE OWN PART LINES AND A LINE OF THE PART AND A SHOPLE AND A SHO	Depth (feet)
Pleistocene	nonld .	12000
Sand, very fine, and silt	10	10
Sand, very fine, and silt, with a few grains of fine gravel	eni'i in	and .
few shells; Pleistocene and upper Pliocene diatoms at	(und) aude	Greinge
30-35 and 45-50 feet	20+	304
Pleistocone and upper Pliocone	anaon , bi	198 -
Same as above	20+	50
Sand, very fine, and silt: no large particles	5	55
Silt or clay, with some very fine sand	5	60
Clay; Pleistocene and upper Pliocene diatoms at 70-75 feet Upper Miocene	15	75
Sand, medium-grained	t an al s	oI oo
Sand, medium and coarse-grained, with fine gravel; few	5	80
pebbles as much as 3/16 inch in diameter; water-bearing	(braner s	87
Sand, fine-grained, with some medium-grained, some silt;	pum) phoe	Crotect
few shells; contains upper Miocene mollusks and	81800 482	
Foraminifera	6	93
Shells, many broken, a few small pebbles, said to have been	hinti our	an a
consolidated; contains upper Miocene mollusks and	and a be	
Foraminifera Silt or clay, with very little sand and a few particles of	2	95
fine gravel; few shell fragments in lower 25 feet	40	135
Silt or clay; some sand grading from coarse to fine from	40	100
top to bottom, a few shells in lower 5 feet; upper	and le m	of sa
Miocene diatoms at 145-150 feet	40	175
Silt, very fine grained sand, some fine gravel, a few shell	T BARDITY	
fragments; upper Miocene diatoms at 175-180 feet	10	185
Silt or clay, very fine sand, few particles of coarse sand	15	200
Clay; upper Miocene diatoms at 200-205 feet	10	210
Clay, little sand, a few shells; upper Miocene diatoms at 250-255 feet	90	300
Clay, some fine sand, a few particles of fine gravel; a	90	300
few shells	10	310
Clay; upper Miocone diatoms at 310-315 and 330-335 feet	75	385
Mioceno (?)	nois little	andset
Clay, with a few grains of fine sand; no diatoms	95	480
Sandstone, hard, comented with iron	24	482
Sand ? (no sample), water-bearing	otldw .va	10

Dand, and mart

2. Town of Winton, Hertford County, 1938 altitude about 45 feet	voito ef
Driller's log (Sydnor Pump & Well Co.) with modifications	
One at a A-av angul wagus watch woward Lance tool . Thickness	
(feet)	(feet)
(no record)	100
Miocene, Yorktown formation	170
Mud, black and sand 30	130 134
Mud, black and stiff Sand, fine gray	
Cretaceous (undifferentiated)	1.10
Sand, coarse gray and gray clay	146
Sand, coarse and less clay	152
Clay, sticky white	154
00,	
and silts and silts and large portioles	
or clay, with some very fine and . 5 60	
Second well drilled near same place	
Log is as follows:	
(no record) well lovery out dely beaters outed be in 196	196
(no record) 196 Cretaceous (undifferentiated)	130
Sand, coarse; water-bearing (this strata tested at	Sand
28 g.p.m.)	202
Clay gray and sand	208
Clay light brown	222
bee estaulion energil range antaines abadalitase	
to soloiston wo't a bout blook olithin your with your along you	4110
as 1 00 to the long and the manufacture of the to the to the to the total transport of transport of the total transport of transport of transport of the total transport of tr	
and and aware core although the core and a second and are core and a second are core as a sec	3116
3. Town of Ahoskie, Hertford County	
altitude about 55 leet	
Driller's log (Virginia Machinery & Well Co.) with modifications Thickness	ss Depth
del Of the Delect of the day in the day of the day is (feet	
Pleistocene	(2000)
Sand Sand Sand Sand Sand Sand Sand Sand	45
Miccene, Yorktown formation	V 49
Marl 60	105
Sand a floward out? to sololated well a prop on 1 55	160
Sand, fine ("quicksand")	168
Sand, mari, and cray	201
Cretaceous (undifferentiated)	848
Clay, Codgii, 1ed	245
sand and mari (water-bearing)	258 272
Clay, white	285
Sand, and marl 13 Clay 52	337
Clay, and sand 38	375

4.	Town of Woodland, Northampton County altitude about 70 feet	, 1941		
	Driller's log (Sydnor Pump & Well Co	•) with modifications	Thickness (feet)	Depth (feet)
Ple	istocene, Wicomico formation		(1990)	(Teec)
	Clay, yellow		29	29
164 -	Sand, yellow and clay		20	. 49
MITO	cene, Yorktown formation Clay and sand (water-bearing)		10	59
	Clay, blue		44	103
Cret	taceous (undifferentiated)	•		
	Clay, gray, and sand		46	149
÷.,	Clay, red		12	161
	Sand, gray and clay Clay, hard		25 15	186 201
•	Clay, gray (sticky)		51	252
• • •	Clay, sand (water bearing)		13	265
5.	Town of Jackson, Northampton County,	about 1940		villa Villa
	altitude about 90 feet	445 24 At 24		
	Driller's log (Layne Atlantic Co.) w	ith modifications	Thickness	Donth
			(feet)	
Plei	istocene, Sunderland formation		(,	(,
	Top soil	Grand Control	2.	, 2
	Clay, red		10	12
•	Clay, sandy		3 2	15 17
	Sand, fine		ĩ	18
	Clay, red		2	20
Mioc	cene, Yorktown formation	end of the second		
• •	Clay, light Sand, fine gray		8	. 28
:.	Hard sand and marl		18 18	46 64
Cret	taceous (undifferentiated)		10	01
٠.	Clay, very hard gray		22	. 86
	Clay, red Clay, blue; hard pan		10	96
•	Clay, soft blue		54 10	150 160
<i>:</i> .	Hard pan			200
	Sand, fine	•	10	210
	Sand, coarser		28	238
	Sand, fine and red clay Clay, hard brown		7	245
Base	ment rock		15	260
	Rock		• •	
			· · · · · · · · · · · · · · · · · · ·	
	· •	•		
• . • .	į. Į	e garage de la companya de la compa La companya de la co		•
	The state of the s			•,•
*	to the following the first of the state of t	A Company of the Comp	•	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6. Town of Scotland Neck, Halifax County, 1937 altitude about 100 feet Driller's log (Layne Atlantic Co.) with modifications

(dool) (dool)	Thickness (feet)	Depth (feet)
Pleistocene, Sunderland formation Top soil	2	2
Clay, red, sandy	14 25	16
Sand, coarse, brown Miocene, Yorktown formation	25	41
Marl, blue, with sand and shells	12 5	53
	21	58 79
Cretaceous (undifferentiated)	nefe her very the	
Clay, tough	41	120 136
Poglact	TOLOR DE L'ANDRE	170
	esotos) mag	220
Pocket Clay, tough, red	2 21	142
Sand and clay, gray	16	179
Pocket	1	182
Clay, soft, red Clay, tough, red	28	210

Lies an? .

7. C. B. Griffin at Lewiston, Bertié County, 1943 altitude about 70 feet Log based on examined samples

Pleistocene	Thicknes (feet)	s Depth (feet)
Sand, medium to coarse, subangular, and brown clay	15	15
Sand, and clay, mottled pink and white	10	25
Sand, medium to coarse, white, with a little clay	5	30
Sand, very fine, and clay, orange; with a few coarse sand grains	100	40
Miocene, Yorktown formation	. 10	m In .40
Clay, dark gray (a little sand may be from above or from	boa.	oley
thin sandy lenses)	15	55
Sand, coarse, gray, and clay	1	56
Sand, coarse, reddish brown, and clay; with some quartz	noe .	otal T
pobbles	2	58
Sand, very fine, light gray	17	75
Sand, fine, gray, with a little clay and shell	7	82
Clay, light gray, sandy with a few pebbles	8	90
Sand, fine to coarse gray, and a little clay Cretaceous (undifferentiated)	10	100
Clay, light buff to gray, sandy	7.0	170
Clay, red and white, tough; sandy	36 9	136 145
Sand, fine and clay, yellow-orange	15	160
Sand, medium to coarse, and clay, dark brown	3	163
Sand, fine to coarse, subangular, clean (water-bearing)	6	169

8. Town of Windsor, Bertie County, 1939 altitude about 10 feet

Driller's log (Carolina Drilling & Equipment Co.) with modifications

		•	•	Thickness (feet)	Depth (feet)
Pleistocene				()	(/
Sand and clay			•	16	16
Miccene, Yorktown	formation				
Clay, blue				16	32
Sand, fine to	coarse			18	50
Clay, yellow			•	. 8	58
Sand, coarse				14	72
Clay, blue				10	82
Shell rock				16	98
Clay, blue				12	110
Sand and clay	in seams			24	134
Clay, blue				84	218
Sand, coarse				2	220
Clay, blue				32	252
Cretaceous (?)					
Sand, fine				10	262
Clay				· 28	290
Sand				28	318
. Clay				16	334

9. Town of Colerain, Bertie County, 1939 altitude about 50 feet

Driller's log (Carolina Drilling & Equipment Co.) with modifications

	Thickness (feet)	Depth (feet)
Pleistocene	, ,	•
Sand and clay	35	35
Miocene, Yorktown formation		
Clay, black, and sand (water bearing)	180	215
Clay, black and dry	: 5	220
Shell rock and sand	12	232
Sand, fine and shell	14	246
Eccene (?)		
Clay, groen	12	258
Clay, black; little sand	15	273

10. Town of Edenton, Chowan County, 1927 altitude about 14 feet

Sand, good

Sand, pepper

Sand, gray

Sand

Sand, good, hard

Rock and clay

Rock and clay

Driller's log (Layne Atlantic Co.) with modifications Thickness Depth (feet) (feet) Pleistocene and Pliocene 40 40 Sand, fine 10 . Sand, very fine Miocene, Yorktown formation 24 74 Sand, fine, blue 2 Clay, hard 76 8 84 Shale, hard 21 105 Clay, and fine sand, shells Clay and shells, very hard 31 . 136 Shells, hard ansea of valo 3 Clay, hard, and shells 26 165 Clay, hard, streaks of shells 40 . 205 Clay, soft 5 210 8 218 Sand and sholls Rock 1 219 Clay, hard 3 222 230 Sand, good (well flowed) 8 Shale, hard, and rock 3 233 7 240 Sand, good Shell rock 1 241 Clay, shell, and rock, in layers 10 251 tricing birted schooled 50 Shell rock, and hard clay 14 Sand, coarse Sand, with shale streaks 12 282 5 Sand, good 287 2 Shale 289 1 Rock 290 Sand 5 20 Clay and sand 5 320 Clay and black sand Sand, black, hard 6 ... 326

12 338

3

5

4

27

348

351

356

360

364

391

10

4

11. Marine Corps Air Station, 4 miles southeast of Edenton, Chowan County, 1943 altitude 15 feet

Log based on examined samples, correlations by Dr. H. G. Richards, Associate Curator, Academy of Natural Science, Philadelphia

	Thickness (feet)	Depth (feet)
(no samples)	10	10
Pleistocene and Pliocene		
Clay, light brown, sandy	10	.20
Sand, fine to modium, gray, and clayey	10	30
Sand, medium, white, clean	6	36
Sand, fine to coarse, light brown; clayey	24	60
Mioceme, Yorktown formation		
Clay, light gray; sandy, with shell	12	. 72
Sand, medium, gray; much shell (water bearing)	8	80
Sand, gray; clayey; with shell (yields a little water)	20	100
Sand, fine, greenish gray to bluish gray, with clay	•	
and shell; clay increasing toward bottom	50	150
Clay, light bluish gray and fine sand	30 .	180
Clay, light gray	. 60	240
Clay, light gray; with shell	5	245
Sand, black; and clay; glauconitic and phosphatic	2	247
Sand, medium, dark gray, with much shell; glauconitic and	l	
phosphatic	3	250
Clay, light gray with some sand and much coarse shell	5	255
Sand, fine, gray, calcareous, lightly cemented with some		
shell	15	270
Limestone, whittish, sandy	3	273
Sand, fine, white, calcareous with foraminifera	. 2	275
Sand, very fine, clean; mostly white quartz with a few	-	
pink and some orange; glauconitic	. 5	280
Sand, very fine, light gray, slightly micaceous	1	281
Marl, light gray, sandy; with molds and casts	7	288
Sand, medium, light gray, well rounded, clean (water		
bearing)	12	300
Sand, fine, light gray; with clay and shell	ļO	310
Sand, very fine gray, and clay	50	360
Clay, light greenish gray; glauconitic sand and pebbles	•	
of phosphate	10	370
Sandstone, soft calcareous, with fossils molds and casts	15	385
Sand and clay, olive green; glauconitic and phosphatic	30 ·	415
Sand and clay, light greenish gray with gravel and shell	;	
glaucomitic and phosphatic	. 5	420
·		

12. Town of Tarboro, Edgecombe County, 1899 altitude about 50 feet

Modified from log in "The Coastal Plain of North Carolina" N. C. Geol. and Econ. Survey, Vol. 3, pt. 1, pp. 104-105, 1912

	Thickness (feet)	Depth (fect)
Pleistocene		•
Sand, white	15	15
Miccone, Yorktown (?). formation	•	
Sand, caving	10	25
Clay, sandy	15	40
Sond, white	25	65
Cretaceous (undifferentiated)		
Clay, stiff bluish	8	7 3
Clay, sandy yellow	12	85
Sand, white	5	90
Clay, white stiff	5	95
Clay, bloodred, and slate ?	10	105
Clay, sandy, white and pink	10	115
Sand, coarse, white (with a little water)	10	125
Clay, sandy yellow	3	128
Sand, yollow	4	132
Clay, red and yellow	18	150
Clay, sandy yellow	2	152
Clay, stiff rod and yellow	18	170
Clay, sandy yellow	4	174
Clay, sandy, and coarse gravel	. ₽	182
Sand, coarse (little water)	8	190
Clay, stiff yollow	4	194
Clay, sandy yellow	2	196
Sand, coarse	3	199
Clay, stiff, red, yellow, brown, tan, white, and black	54	253
Sand, yellow Sand, fino	3	256
Clay, yellow, blue, and red	1	257
Sand, fine	21	278
Marl, rock	4	282
Clay, stiff blue	2	284
Clay, hard red	6	290
Sandstone, red	10	300
Clay, hard red	3	303
Clay, dark	2	305
Clay, dark and gravel	- 6	
Basement rock	17	32 8
Clay, dark, like rotten soapstone		
Clay, tan	4	332
Rock	2	334
Clay, tan	4	338
Clay, hard and gravel ?	2	340
Rock, dark	3	343
Clay, hard and gravel ? mixed	3	346
Sandstone, hard	3	349
amount of the c		349

Town of Pinetops, Edgecombe County, 1925 ? altitude about 100 feet Driller's log (Virginia Machinery and Well Co.) with modifications Thickness Depth (feet) (feet) Pleistocene, Sunderland formation 27 27 Top soil and red clay Miocene, Yorktown formation 30 57 Sand -- some water 75 18 Marl, blue; and shells Cretaceous (undifferentiated) 80 Clay, chocolate colored 25 110 Clay, red 115 5 Sand, water-bearing 130 15 Clay, red 140 10 Sand, water-bearing 5 145 Clay, gray 170 315 Clay, red tough 320 5 Clay and talc ? 22 342 Clay, red tough Basement rock 104 446 Granite Town of Williamston, Martin County, 1941 14. altitude about 60 feet Log based on examined samples; corrolations by Dr. H. G. Richards, Associate Curator, Academy of Natural Sciences, Philadelphia Thickness Dopth (foet) (foet) 10 10 (no samples) Miocene, Yorktown formation 20 10 Sand, fine, light yellowish-gray 20 40 Sand, fine, and clay, gray; shells 20 60 Sand, fine, light gray; shells 100 Clay, light gray; much sholl (chiefly turritellas) 40 Sand, medium, clear quartz, and about 40 percent glauconite 110 green sand, phosphatic grains and much shell 10 Clay, gray sandy, calcareous, glaucomitic and phosphatic; 130 240 considerable shell (no samples; driller reports material to be same as above 400 to 400 feet) (lignitized wood at 500 feet) 160 420 20 (no samples) Cretaceous (?) Sand, fine to coarse, mostly clear quartz, but considerable blue, yellow, and red quartz grains; glauconite and phosphate grains, sharp and angular; some fragments of sandstone. Probably some sandstone strata (becomes more arkosic, coarsor, and contains more blue quartz towards 500 80 bottom, less glauconite and phosphate)

15. Dr. A. B. Williams, 9 miles east of Wilson, Wilson County, 1942 altitude about 123 feet

	Duillants las (Waster Wall Car) with madifications	I named the	
	Driller's log (Heater Well Co.) with modifications	Thickness	Donth
		(foot)	(feet)
Mioce	ene, Yorktown formation	tug , smeet	niali
111111111111111111111111111111111111111	Clay, blue and shell	60	60
Crete	aceous (undifferentiated)	woti'woYas	
87	Sand	98	158
GI	Sond and clay, red	57	215
	Clay, brown (parallement)	30	245
Baser	ment rock (Huronian (?) slates)	Clay anone	
	Rock, soft green	55	300
DEE	Shale	15	315
	Sand rock	20	335
145	actual-		
	170		
ORE	2.	ber .valo	
16.	Town of Fountain, Pitt County, 1936		
	altitude about 105 feet	ber voil	
	Driller's log (Sydnor Pump and Well Co.) with modificati	ons	
		Thickness	Depth
		(feet)	(feet)
Ploi	stocene		
	Clay, yellow	20	20
Mioc	one, Yorktown formation		
	Mud, blue	68	: 88
Creta	accous (undifferentiated)		
	Clay, yellow and red	22	110
	Mud, white and sand	30	140
	Clay, yollow and red	23	163
	Sand	21	184
	Mud, white and sand	Sunt June	185
Oa	Sand, hard and mud	7	192
	Sand	1	193
	of imports the content of the conten	mari, renth	
	eleas quarte, and about 40 persont glonomited		
17.	Town of Farmville, Pitt County, 1937		
	altitude about 80 feet		
	Driller's log (Layne Atlantic Co.) with modifications		
	Obl (foot ook a boow bestfamil) (foot	Thickness	Depth
023		(feet)	(foot)
Plei	stocene	Avducia only	
	Clay, yellow	16	16
	Starting Cottle Co.	12	28
Mioce	one y and allowed a data and a da		
	one, j brac care beare	8	36
		9	45
C		47	92
creta	and of the contract of the con		
	Sand, hard	4	96
	Clay, sandy	20	116
	(cont'd)		

17. Town of Farmville, Pitt County,	zoo, (ouro u)		Thickness (feet)	Depth (feet)
Cretaceous (undifferentiated) (cont'd)			
Sand			· 5	121
Clay, hard	• *		13	134
Sand, coarso			4	138
Clay, hard, sandy	r va		13	151
Sand	: •		13	164
Clay			7	171
Clay, sandy		•	25	196
Sand			10	206
Cley, sandy			9	215
Sand		•	8	223
Clay, sandy		• •	12	235
Sand	:		17	252
Clay, white and red; and sand	•		19	271
Clay, hard and marl			9	280
Clay and sand, mixed			21	301
Sand, hard and clay	<i>:</i>		35	336
Clay	•		· 7	343
Clay, hard			8	351
Clay			11	362
Clay, soft, and sand			8.	370
Clay, colored, and sand			16	386
Sand, hard, and clay			16	402
Sand			3	405
Clay, hard			10	415
Clay and sand			50	465
Basement rock, Granite	•			
Rock		Y	7	472

(Four wells at water plant in Farmville between 472 and 503 feet deep; rock struck at 465, 479, and 490 feet and not struck at 480 feet. Several reliable persons report having seen a core from one of the wells and that the rock was granite.)

18. Town of Washington, Beaufort County, 1940 altitude about 6 feet Driller's log (Layne Atlantic Co.) with modifications

	Service Control of the Control of th	Thickness (feet) (
Pleistocene		•	
Sand and clay		10 .	10
Miocene, Yorktown formation	•	•	
Sand and shell		10	20
Miocene, Trent marl			
Limestone, soft		10	30
: Limestone, hard		10.	40
Shell rock		2	42
Shell rock, hard		40	82
Limestone, very hard	. € . 	14	96
	(cont'd)		

18. Town of Washington, Beaufort County, 1940 (c	eont td)	
(ptdepa) TEEL igtapod	Thickness	Depth
idage stemoldi	(feet)	(feet)
Miocene (?) or Eccene (?) Sand, black	55 to 1.0 () 39 () 39 ()	135
Eocene, Castle Hayne marl	Nim's	100
Limestone and white sand, in layers	28	163
Shell rock and clay, in layers	27	190
Shell rock and white sand	27	217
Clay and shell rock	10	227
Sholl rock and sandy clay	22	249
Eocene (?) or Cretaceous (?)	45.	294
Cretaceous, Peedee formation	40	234
Clay, blue	106	400
2.013	Dates - stander	
14.0	e le deserte de la company	
19. Town of Snow Hill, Greene County, 1928	has they but of his well	
altitude about feet		
Driller's log (Layne Atlantic Co.) with modi	Thickness	Depth
	(feet)	(feet)
(no record)	188	188
Cretacoous (Tuscaloosa (?) formation)	1-1	0
Sand, fine; water-boaring	bros ban affort, 5 yet	193
Sand, fine gray	Same from posto 15 20	208
Clay, blue	ye to been about 5 and	213
Sand, fine brown	5	218
Clay, hard	3	221
Sand, good	39	260
347		43
20. Soymour Johnson Field, Well 3, 4.5 miles sou	theast of Goldsboro,	
Wayne County, 1942	ed amake worken to all in	THOR)
altitude 64 feet	940 064 335 641 (440 4	
Driller's log (Carolina Drilling & Equipment		
	Thickness	The state of the s
Pleistocene	(foot)	(foot)
Sand and clay	15	. 15
Cretaceous, Black Creek formation	2 2 result churchila	1
Clay, black wolf-eilthou aslw (and out a	I M empal) col a 10	25
Sand, with wood	25	50
Clay	4	54
Sand, with clay lenses	47	101
Cretaceous, Black Creek (?) formation or Tuscalog		110
Clay Sand and clay	1017, 41101	110
Sand, coarso	19	135
Cretaceous, Tuscaloosa (?) formation	the sections	200
Clay, red	18	153
Rock	100410	157
Clay, red	23	180
The second secon	Same Kink Salarahan	
34		
- 16 -		
The Management of the Manageme		

21. Seymour Johnson Field, Well 6, 1100 feet east of Well 3	anla 10 val	2.5
altitude about 60 feet		
Driller's log (Carolina Drilling & Equipment Co.) with	Thickness	
	(feet)	
Pleistocene	(1000)	(1000)
Sand and clay	15	15
Cretaceous, Black Creek formation	dould .bu	
Sand	45	60
Clay, black	varallyaf	71
Sand, coarse	15	86
Cretaceous (Tuscaloosa (?) formation) Clay, red	lay, green	7.00
Clay, yellow	34	120
ora oray, yorrow	donid5 to	125
(Basement rock was encountered at 185 feet in Well 1 and 167 at Seymour Johnson Field)		Well 2
moneyarg) 15 372		
22. Town of La Grange, Lenoir County	ould syst	
altitude about 105 feet (moltamed (1) and		
Driller's log (Carolina Drilling & Equipment Co.) with	modification	ns
pouring) 29 446	Thickness	
Pleistocone	(foet)	(foet)
Sand and clay		2
Cretaceous, Black Creek formation	15	15
Sand, red	113	128
Clay, blue (newse) wollow		142
Clay and sand in layers		185
Marl, blue (fattotam daitidw emas duly		205
OSS Sand S valo 5	5	210
Clay, gray		250
Sand, white	20	270
Clay Sand	34	304
respond to seem and descention of the for the Ann	28	332
Loneir Comey, 1945		
23. City of Kinston, 1 mile west of, Loneir County, 1922		
altitude about 50 feet		
Driller's log (Virginia Machinery & Well Co.) with modi	fications	
A A	Thickness	Dopth
	(fect)	(feet)
Pleistoceno .		0
Clay and sand	26	26
Cretaceous, Peedec formation Shell rock, soft	lay, gray to	0
Clay and sand layers with thin strata of shell rock		00
and date rayors when their strata of shell rock	67	100

23.	City of Kinston, 1 mile west of, Lenoir County, 1922 (co	nt'd)	0 50
	S lies to the feet COAD . S LOW Bleet mism	Thickness	Depth
	aceous, Black Creek formation	(feet)	(feet)
Cret	aceous, Black Creek formation	T 9 JOILI	
digel	Clay, slightly sandy	60	160
(Jest	Sand (water-bearing)	23	183
	Mud, black	2	185
15	Sand (water-bearing)	6	191
	Mud, black	0.816 6 0 °	197
00	Sand (water-bearing)	18	215
	Clay, gray	45	260
	Sand (no water)	4	264
	Clay, green (1) excels	16	
	Sand, coarse, and some gravel (large water supply)		280
	Mud, black	24	304
		6	310
	Sand (water-bearing) Clay, black	15	325
	7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7	20	345
	(110001 0001 1116)	9	354
	Clay	. 3	357
	Sand (water-bearing)	15	372
	Clay, blue	33	405
Cret	aceous (Tuscaloosa (?) formation)	nittin	
	Sand, hard (no water); diseased a price of the online) to	11	416
· ddq · (Sand (water-bearing)	29	445
	Clay (col)	3	448
	Gravel, coarse, red (some water)	9	457
1.5	Sand, red	13	470
	Clay, sticky, red	25	495
	Clay, sticky, red (very slow drilling)	25	520
	Clay, sticky, yollow (caves)	23	543
ISS	Clay, red and fine sand	27	570
	Clay, sandy (with some whitish material)	ould 5 Inc	575
DIS	Sand, red, and clay	5	580
	Sand, red; and gravel, mixed with chalky clay	5	585
	Clay, blue, and sand	23	608
	20	of inte , he	B
24	Norrol Auxiliams Aim Station 4 5 miles worth 250 mail	fine	
22.	Naval Auxiliary Air Station, 4.5 miles north 25° west of	Kinston,	
	Lenoir County, 1943		
	altitude about 80 feet	andi to wh	0 68
	Log and correlations based on examined samples.		
	or (Virginia Machinery & Well Co.) with modifications	Thickness	
		(foot)	(feet)
	(no samples)	5	5
1101		n. manne	
Cant	Clay, grayish brown, sandy	10	15
Oreci	aceous, Peedee formation	week Person	Crotcor
	Clay, gray to greenish gray, sandy, contains glauconito		(3)
00	grains	20	35
	Clay, light gray, compact, micaceous	5	40
	Clay, gray, sandy, micaceous	10	50
	(cont'd)		
	# 11 W 1 A A A A A A A A A A A A A A A A		

24. Naval Auxiliary Air Station, 4.5 miles north 25° west of Kinston, Lenoir County, 1943 (cont'd)

Lenoir County, 1943 (cont'd)		
anothalogood . aser wering training to a standard a Thick	ness Depth	1
(foo	t) (feet)	
Crotacoous, Peedee formation (cont'd)		
Sand, greenish-gray, glauconitic, clayey, some shell 4	0 90	
	0 100	
Crotaceous, Black Creek formation	(DII)	
THE THE PARTY OF T	5 105	
	0 125	
	0 120	
Clay, dark gray, compact; micaccous; some shell?	Arma8	
	0 145	-
	5 180	
	4 184	
Sand, very fine to medium, and a few much coarsor grains		
much wood and a little shell 3	4 218	
Sand, fine, gray, and a little wood	2 230	
Clay, brownish-gray, compact; slightly sandy	0 240	
	8 278	
	7 285	
	3 298	
Clay, tan, tough, compact	a manufacture	
	The state of the s	
Sand, medium, gray clayey		
	7 317	
	3 340	
Clay, light gray, fine, sandy; and wood 4	0 380	
Sand, fine gray, and a little clay	0 390	
Sandstone; sand, fine to coarse, arkosic (basal		
	7 407	
Crotaceous (Tuscaloosa (?) formation)	4-110 Bin	
Clay, varigated, yellow, brown, and red, very tough, compact 1	8 425	
	5 440	
	5 445	
	9 464	
Sand, fine to medium, yellowish gray	6 470	
(3001) (3001)		
25. City of New Born, Test Well 8, 3 miles west of, Craven Coun	ty, 1943	
altitude about 20 feet	Sund.	
Log based on examined samples. Correlations based on paleonto	logical	
determinations by Dr. A. J. Cushman and Dr. H. G. Richa		
	ness Depth	
in the first contains confidence (fee		
Sand, fine, yellow, and a little clay		
Sand, fine, yellow, clean wooden which allows data decrease	7 23	
Sand, fine, gray, clean		
Miocone, Tront marl	na .	
Sand, very fine and much shell, loosely comented		
Limostone, light buffish gray to light gray, sandy,	*Vnf0	
vory fossiliferous and moved not a specific and supplied to 5	0 90	
Eccene, Castle Hayne marl		
Sand, very fine, calcareous, glauconitic, slightly		
phosphatic, fossiliferous (foraminifera, etc.) 10	8 198	
* A STATE OF THE PARTY OF THE P		

26. City of Now Bern, Cravon County, 1916 altitude 12 feet

Log given in unpublished manuscript "City Water Supply at New Bern, North Carolina" by W. N. White, U. S. Geological Survey, 1928. Correlations added.

St. Wewell musi Place Air Scheite

on os ifotalares specificate	Thick	A STATE OF THE PARTY OF THE PAR	Depth
005	. (100	and the same of the same of	(feet)
(no record; boccom of old g-Inch well)	38	4	354
Cretaceous, Peedee formation	LORRING LOS IN GOTOS	MALTON DI	10.0.70
Sand rock	2,035,00 - 30,000	54	408
	oma grove, perg. Xxxib	1	409
Sand and sand rock		3	502
Mud, blue		55	637
11001	no tapana. Moda samp	8	645
	loca contino od enia		
Mud. sand, and wood	carlibon of oals know	9	720
Danu Dilla Didown Disco	ality a had a hour of	2	782
	if a ball, gray court	1	783
Sand and wood		55	838
Rock (salt water at 839 feet)	payers of the marriage	7 0010	839
? (no record)	id bits mored dall-box	7	846
Sand, coarse, shells and wood	night and them of our	2.	868
Rock	desemble alguest and	Tollo	869
Sand and wood	vetalo yare antiber	0	889
Sand, fine (running)	light prop digitly	3	892
Shell wools	tight gray night	F	897
Sand, wood, and I foot of rock	os jonit jure insila	2	929
Ogs of the state o	fil a bas agent out?	BERNE	929

27. Oil-prospecting Well, Groat Lake Drilling Co., 5 miles west of Havelock, Craven County, 1924-1925 altitude about 30 feet.

Modified from log previously published (Mansfield, W. C., Oil-prospecting Well near Havelock, N. C., N. C. Dept. of Conservation and Development, Economic Paper No. 58, 1927).

feed) of which to comes, order to the

	hickness	
	(feet)	(feet)
Pleistocene	7.5	es sint
Sand and soil and soil and soil and soil as soil we	7	7
Sand, blue-gray (water-bearing)	8	15
Clay, blue, with sond	10	25
Clay, blue, plastic tom and and the total and the first	15	40
Pliocene (?)		
Sand, compact, contains corals	1	41
Sand, gray, (water-bearing)	5	46
Sand and sholls valotte a ban wallow as	4	50
Sand, compact with shells, chiefly pelecypods	5	55
Sand, medium to coarse, quartz pebbles, phosphatic pebbles	mid som	
shells	15	70
Miocone, Duplin (?) marl bod missa with all locations the outly	TOY A POL	38
Clay, gray, calcareous, plastic de vora de rand de alla	35	105
Clay, gray, calcareous, sandy; with layers of fossiliferous		
sand; quartz and phosphatic pobbles	52	157
rime, cologrecus, glanconlide, slightly	Man Pin	

27. Oil-prospecting Well, Great Lake Drilling Co., 5 miles west of Havelock, Craven County, 1924-1925 (cont.d)

Craven Councy, 1924-1925 (Cont.d)		D 11
(J001) (J001)	Thickness	Depth
it Oreolt formation (continental fonies)	(feet)	(foot)
Miocene "anodrao , solddog dithe grafigna sinky od oddine ,o	arcon bun	
Sand, medium to coarse, gray, compact, with shells, quart	Z	
pebblos and phosphatic nodulos. Layers of less compact	t	
BITT sand	73	230
Miocone, Trent (?) marl	common -bons	
Sand, medium to coarse, gray, argillaceous, with layers of	f	
indurated marl and calcareous sandstone; shells	48	278
	10	210
	3.00	1
Sandstone, gray, calcareous, fossiliferous	177	455
Miocone (?), Trent (?) marl	ranom . var	
Sand, medium to coarse, gray; with shells	59	514
Sand, fine to medium, with shell; layers of sandstone	13	527
Sandstone, medium-grained, calcareous slightly phosphatic	36	563
Eccene (?), Castle Hayne (?) marl	o asimulas o	
Clay, soft, light brown, calcaroous, sandy	109	672
Sand, medium to coarse, and gravel, glauconitic, contains	.emdsomi	
phosphatic nodules areason in visely and the self are	12	684
Cretaceous, Peedee formation	From Isra	
Sandstone, hard gray, calcareous, slightly glauconitic	14	698
Sand, gray, calcaroous, slightly cemented	10	708
Sandstone, hard, dark gray, calcaroous and slightly	10	100
	74	722
glauconitic walls was a state of the state o	14	166
Clay, dark gray, sandy, contains quartz pebblos and large	and I start I	
pelecypods of some years with the stands and	18	740
Clay, light brown, sandy, calcareous field beautiful	40	780
Sand, dark gray, argillaceous, calcareous		805
Sand, medium to coarse, gray	43	848
Clay, dark gray, sandy, slightly glauconitic	82	930
Clay, gray, sandy, micaceous and slightly glauconitic	97	1027
Clay, green, gray and bluish, sandy, finely micaccous	Tilda .vef	
highly glauconitic, plastic to compact, contains poloc	V-	
pods, pyrite	251	1278
Sandstone, glauconitic, calcareous, contains pyrite;	a the board	5
alternates with softer strata	8	1286
Sand, coarse dark gray, glauconitic, argillaceous; quartz		1200
		1710
and phosphatic pebbles, and carbonaceous material		1316
Sandstone, fossiliferous, glauconitie, calcareous; congle		2000
merate in lower part VI = 0 sapoxa realgant bouleast's	19	1335
Crotaceous, Black Creok formation (marine facies)		Z to the second
Clay, soft, gray, glauconitic, very sandy	30	1365
Clay, semi-plastic, light groen, micaceous, very sandy	98	1463
Clay, compact, light brown; a little send and pebblos	2	1465
Clay, plastic, very dark gray, micaccous, slightly sandy	77	1542
Sandstone, dark gray, calcareous; with alternating strate		
of dark gray sandy clay and pyrite		1595
Sand, coarse green, glauconitic, micaceous		1630
	10, 50,	

27. Oil-prospecting Well, Great Lake Drilling Co., t miles west of Havelock, Craven County, 1924-1925 (cont'd)

Cravon County, 1924-1925 (cont'd)	ll-prospost	27. 0
Craven County, 1924-1925 (cont'd)	Thickness	Depth
Thickness Depth	(feet)	(feet)
Cretaceous, Black Creek formation (continental facies)	1 22	
Sand, coarse, white to pink angular; with pebbles, carbo	na-	meoch!
coous fragments land Athy Jonatho your parage of	63	1693
Clay, very tough, micaceous, mettled-vermilion to gray,	e eniddog	
089 sandy	25	1718
Sand, compact, white to light gray quartz	4 .0	1722
Clay, very tough, micaceous, mottled-vermilion to gray-	mulben bm	
sandy; a few pebbles pendalina amorrolas has Iran		1772
(not revealed, but inferred to be an indurated, ferrugin		decount
serial serial secondary seconds of the serial seconds of the second of t	a model from	1773
Clay, moderately soft, red to gray, sandy; with small	mar (?) e	Mooca
angular pebbles	12	1785
Cretaceous, Black Creek formation (marine facies)	hord's thee	1100
Sand, compact to indurated, greenish, micaceous, clayey;		5
chunks of dirty white calcareous sand and carbonaceou		Econo
material with shell impressions		1838
Limestone, fossiliferous, impure		1884
Clay, compact, bluish green, finely micaceous; a little		1004
and pyrite. Pelecypods		2046
	62	1946
Clay, moderately soft, bluish, finely micaceous; with a little sand	20 00000	3005
and out of politic	19	1965
Sandstone, gray, pyritic; with alternating strata of blu		
be be contained attracted and country of the bottom board	89	2054
Shale, dark gray to black, carbonaceous, pyritic shale;	with	4
and of the of the of the party of the	pod Aporod	07.05
vertebrate remains and shells		2125
Cretaceous (Tuscaloosa (?) formation)		
Clay, reddish brown, plastic, micaceous, sandy with thin		
strata of deeper red arenaceous clay; a few pink to r		0 01-0
angular pebbles would within the shooten where	51	2176
Clay, stiff to plastic, brick red to gray, sandy	136	2312
Sand, and gravel, semi-indurated, angular	6	2318
Basement rock	rid fanca	
Granite tother anistes amounted of the other	33	2351
s with softer shrute. 8 1286		
dark gray, glassonities argillassous; quarts		
28. Marine Air Station, Well 52, Cherry Point, Craven County altitude 24.2 feet		
Log based on examined samples; except 0 - 17 feet and 11		
are from well inspector's record. Correlations based	on paleon-	Crotee
tological study by Dr. H. G. Richards		
lastic, light groen, microsque, very sendy 98 1463	Thickness	Donth
t, light brown; a little send and pebbles . 2 less	(feet)	(feet)
Pleistocene and Pliocene Malla . Albonoon to . Wary dans your .	(1000)	(2000)
Sand, fine gray and brown, clayey	17	17
Clay, blue, slightly sandy		25
Sand, medium gray; sholl and a little clay		
Sand, fine dark green, glauconitic and phosphatic, claye		10
with shell	20	60
(cont'd)	20	00
(cont.c.d)		

28. Marine Air Station, Well 52, Cherry Point, Craven County	Thicknes	
Pleistocone and Pliocone (cont'd)	((===,
Sand, medium, light greenish gray, slightly glauconitic,		
phosphatic, clayey	4	64
Sand, fine to medium, gray, well rounded pebbles;		0 -
shell and shark teeth	6	70
Miocene, Duplin marl		
Marl, white, very sandy with some round pebbles,		
	33	3.02
fossiliferous		103
Sand, very fine, light greenish gray, clayey	13	116
Clay, green, and shell	4	120
Sond, medium, and clay; shell	10	130
Clay, green, and coarse shell	5	135
Sand, medium; and shell	5	140
Clay, blue; and coarse shell	20	160
Shell, coarse	10	. 170
Marl, white, and shell	10	180
Gravel, stone, and shell	5	185
Miccone, Trent marl	_	
Limostone and shell	10	195
Limostone, grayish white, fossiliforous, sandy	25	220
Coquina, white, fine textured, slightly sandy	5	225
	25	250
Limestone, grayish white, fossiliferous, sandy	63	200
Limestone, white, fossiliferous, slightly glaucomitic	3.0	005
and sandy	15	265
Limestone, white, slightly glauconitic, very sandy		
(sand is very fine quartz)	15	280
Eccone, Castle Hayne marl		
Limostono, light gray, fossiliferous, sandy	43	323
Sand, very fine, light gray, calcaroous, and shell	46	369
29. Marine Corps Auxiliary Air Base, Atlantic, Carteret Coun- altitude 15 feet Log based on examined samples. Correlations based on pa		ical
study by Dr. H. G. Richards	m1 2 -1	- 541
	Thicknes	
	(fect)	(feet)
Pleistocene		
Sand, medium, dark brown, quartz	20	20
Sand, fine, dark brown; with shell	10	30
Pliocene, Croatan sand		
Sand, fine, gray, calcaroous; with shell	30	60
Sand, fine, gray, calcareous, phosphatic and considerable	6	
shell	30	90
Miocono, Duplin marl		
Limestone, sandy, fossiliferous	5	95
Limostono, hard, white, sandy	10	105
Marl, vory sandy, light gray, with shell	25	
		130
Marl, with much coarso shell, sandy	10	140

(cont'd)

. •	and the second of the second o			
29.	·			•
			ickness	. • .
• :		· (reet)::::	(feet)
Mioc	ceme, Duplin marl (cont'd)	:		
•	Sand, fine to medium, light gray, calcareous, with she			180
	Sand, very fine, dark gray, slightly calcaroous, and	clayey		190
	Sand, fino, greenish gray, phosphatic, calcareous	. •	30:	210
	Marl, dark gray, with very fine sand	· :	20 😘	
	Sand, fine gray, calcareous	•	50 : 3	
	Marl, light gray, sandy		50	330
Mioc	seno, Trent marl	:		
••	Limestone, gray fossiliferous, sandy	•	30	360
		-	30	
•	Limestone, light gray, sandy, fossiliferous		18	408
		** ·	•	
			·:	
30 •	U. S. Navy, Section Base, Morehead City, Carteret Cou	aty, 1	942.	
	altitude 23 foot	• •		
•	Log based on examined samples. Correlations by Dr. H			
			ickness.	
		(:	feet) 🦠	(feet)
Ploi	istocene		• • • • • • • • • • • • • • • • • • • •	
•	Sand, fine light yellow, with a little clay		20	20
•	Sand, medium orange-yellow, with a little clay		10	30
Plio	ocone (Croatan sand) and Miocene (Duplin marl)			
•	Sand, fine dark gray, phosphatic, with clay and shell		42	72
	Sandstone, hard		. 1	7 3
•	Sand, fine, greenish gray, phosphatic and glaucomitic	,		
	clayoy		24	97
Mioc	ceno, Duplin marl or Yorktown formation	. *		
	Limestone, soft, gray, sandy, fossiliferous	•	13	110
	Sand, fine to medium, clear quartz; with considerable			
	amount of brown and black phosphate grains		6	116
	Sand, medium, gray, clayey; with some small quartz pe	bbles		
	and shell		5	121
	Sand, fine to medium, gray; with shell and thin strat	a of		
	sandy, fossiliferous limestone		29	150
Mioo	ome, Trent (?) morl			
	Limestone, white, sandy, fossiliforous, with shark te	oth	63	213
	Coquina, porous, fine grained, sandy		8 .	221
. •	Limestone, white, very sandy		14	235
			4,81	
		•	. • :	ogen (1847)
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				;
• .		• •	15 July 1	
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មិនប្រកា ក៏ម៉ូល នេះប៉ឺកែការី (១៩៩១ ដើម ក៏សម្រេច នេះបាន មនុស្ស ស្ត្រីស្រាស់ មូលសមាក់ពេលនៅ ១០១០ នេះយើលស និក្សាស់ មូលក្សីមិលលើង ១០១៣ មុខ ប៉ុន្តែស្រាស់ បានស នូវិកាស់ ១០១៨ នៃ បានសកសមាន និកស្សាល់ ដូច្នៃស្រាស់ ដូច្នេះ

31. Fort Macon State Park, east end of Bogue Banks, 3 miles south of Morehead City, Carteret County, 1940 altitude about 10 feet

Log based on examined samples. Correlations based on paleontological study by Dr. H. G. Richards.

	Thickness (feet)	
Pleistocene		
Sand, fine to medium, gray; with much shell	50	50
Sand, very fine, gray, clayey, calcareous, with shell	20	70
Pliocene and Miocene, Duplin marl		
Marl, greenish gray, fossiliferous, very sandy	10	80
Limestone, white, fossiliferous; fine quartz sand and		
round black phosphate grains and pebbles	40	120
Marl, gray, fossiliferous, very sandy	30 .	150
Sand, coarse, well rounded; with many small round quartz	•	•
pebbles and black phosphate grains and pebbles	2	. 152
Clay, green, slightly calcareous, and fine sand	36 .	188
Coquina, grayish white, sandy; phosphate grains	4	192
Sand, fine to medium, gray, quartz; with a few quartz		
pebbles and considerable amount of black phosphate		
grains and pebbles, and much shell	•	192

32. U. S. Marine Auxiliary Air Base, Bogue, Carteret County, 1942 altitude 18.5 feet

Log based on examined samples. Correlations based on palcontological determinations by Dr_{\bullet} H. G. Richards

	Thickness (feet)	Depth (foet)
Pleistocene	•	
Sand, fine brownish gray, clayey; with some shell	40	40
Plicome (?) or Micome (?)		
Sand, light gray, medium to coarse, well rounded, with		
coarse black phosphatic grains, and shell	53	93
Miccome, Duplin marl	* *	
Marl, very fine, white, sandy, and much shell	37	130
Sand, medium to coarso, white, phosphatic, calcareous	20.	150
Sand, fine to medium, gray; and limestone	25	175
Micoone, Trent marl		
Limestone, light gray, sandy, some pebbles	55	230
Limestone, grayish white, very fine sand	30	260

33. U. S. Marine Corps Auxiliary Air Base, 3 miles west of Polloksville, Jones County, 1942 altitude about 30 feet

Log based on examined samples, except from 0 - 20 feet and 280 - 300 feet. Correlations based on paleontological determinations by Dr. (Jeel) (Jeel) H. G. Richards and Dr. J. A. Cushman

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	Thickness	Depth
Human gray; with intoh sholl 50 50	(feet)	(feet)
Ploistocene Ilais driv account Lee grayale warm	Sance yery chack	
	20	20
Miocene, Trent marl what where the constillated to yet		
Marl, yellow, sandy as a same with a sales and a sales	15 mil	35
Sandstone, hard, buffish white, fossiliferous, calc	pareous 10	45
Marl, light gray, sandy		53
Limestone, hard, gray, fossiliferous	law partition 4 has	57
Eccene, Castle Hayne marl	id bar saldden	
Marl, vory fine, sandy (shell fragments in some of	the	
samples) among stanger typing attiv	163	220
Sandstone, gray, calcareous; with glauconite green	sand 15	235
Limestone, marl; with coarse sand and gravel,	on bus solddeg.	
phosphate grains and pebbles; fossiliferous	dog 0m 0m 15	250
Sandstone, dark gray, calcareous; with glauconite a	ind	
phosphate grains and coarse shell	30	280
Cretaceous, Peedee formation	b 8. Inches dans	256
Clay, blue, sandy	. 20	300
Lapisolojimolog no besed agaldalarnoù Laplanag banis	meste no Beard so.	

deboration by Dr. 4. (a Manage

34. Well D, Marine Corps Tent Camp, 12 miles southwest of Jacksonville, Onslow County, 1941

Log and correlations based on examined samples

Thickness Depth

(1) accounting	Thickness (feet)	Depth (foet)
Pleistocone Final Bus and my placement to be	03/1,000	(/
Sand, fine to medium, brownish gray, with a little clay	10	10
Miocene, Trent marl	gior des	
Marl, light gray, with a little very fine sand	20	30
Limestone, grayish white, sandy, fossiliforous with black	(1-17-7 0-16)	R
. O	39	69
Marl, light gray, slightly sandy and clayey	36	105
Eccene (?), Castle Hayne (?) marl	- and a onti	vi.
Limestone, hard, gray, fossiliferous, sandy (medium		
grained sand) with some dense, fine grained fossilifere	ous,	
gray limostone	5	110
Limestone, gray to white, fossiliferous, slightly sandy	20	130
Limestone, white, chalky, fossiliferous	40	170
Limestone, hard, blue, sandy; also porous white coquina	14	184

4 115 4 110 4

35. Rural Electrification Authority, Power Station, 5 miles southeast of Jacksonville, Onslow County, 1942 altitude about 20 feet

Log based on examined samples, except Q - 38, 199 - 228, 301 - 315, and 327 - 335 which are from driller's records. Correlations based on palcontological determinations by Dr. H. G. Richards and Dr. J. A. Cushman.

•	Thickness	Dopth
Pleistocene	(feet)	(fect)
Sand, beach, roots, etc.		5
	5	-
Sand, and clay, medium coarse Pliocene (?)	3,3	38
Clay, fino gray sandy	20	58
Sand, very fine, white, clean	15	73
Miocene, Tront (?) marl	• • •	
Limestome, soft porous, light gray, fossiliferous, sandy	6 .	79
Marl, light gray, fine, sandy	- 4	83
Limestono, light gray, porous, fossiliferous, very sandy,		
phosphatic	5	88
Ecceme (?), Castlo Hayne (?) marl		
Marl, tough, gray, fine sandy	111	199
Clay, hard, fino, gray sandy (Marl ?)	29	228
Marl, tough, light bluish gray, fine, sandy	25	253
Cretaceous, Poedee formation		
Sandstone, hard, light gray, fine grained; with		
phosphate grains	4	257
Marl, light gray sandy and clayey; with some sholl	7	264
Marl, tough, gray, sandy	37	301
Mud, gray sandy (marl ?)	14	315
Marl, greenish gray, very fine, sandy	4	319
Marl, dark greenish gray, sandy; with molds and casts of	•	
sholls	8	327
(soft streak with pieces of shell rock)	8	335
Marl, gray; medium grained, sandy; with shells	32	367
Marl, gray, fine grained, sandy. Sand, fine, light gray,		
calcareous	25	392
Sand, medium, gray, calcareous; with shell	·11	403
Warl, dark gray, fine sandy	109	512
Marl, sandy, with thin hard gray sandstone strata	14	526
Sand, very fine, dark greenish gray, slightly clayey	40	566
Sand, medium, gray, clayey	22	588

36. Test well 4; New River, Marine Base, Onslow County, 1941

altitude 31.5 feet

Log based on examined samples, except 0 - 78, 116 - 125, 297 - 311, and

398 - 567. Correlations based, in part, on paleontological
determinations by Dr. J. A. Cushman and Dr. H. G. Richards

by by our manner and by a second and by a seco	Thickness	Depth
Pleistocene and Pliocene	(feet)	(feet)
Sand	78	78
Miocene (?), Duplin (?) marl)	78	78
Sand, fine, colorless; and white shell	77	05
	13	95
Sand, very fine, light gray; with a little shell and very		
fine shiny black phosphate grains	21	116
Micoene, Trent marl		
Rock, soft, gray, and quicksand	9	125
Sand, medium, white and colorless, quartz and shiny brown		
and black phosphate grains; much shell fragments	13	138
Coquina, white	7	145
Eccene, Castle Hayne marl		
Sand, very fine, light gray, contains black phosphate		
grains, with shell	152	297
Rock, hard, white	3	300
Mud, blue	11	311
Limestone, white, slightly sandy	39	350
Limestone, gray, sandy; contains large amount of	• •	
glaucomite greensand	10	360
Sand, very fine, bluish gray, calcareous, clayey	38	398
Gravel, coarse	16	414
Cretaceous, (?), Reedes (?) formation		
Mud, blue	6	420°
Shale, rock, semi-soft	4	424
Sand, blue	11	435
Shale	1	436
Quicksand	4	440
Shale, hard (thin layer) quicksand below	11	451
Gravel, coarse, and sand	3	454
Rock with sand	21	475
Quicksand	10	485
Rock	5	490
Send, fine white, and gravel	77	56 7
Amin's TTILO MITTODS OTTO BYTHADT	, <i>II</i>	307

37. Town of Holly Ridge, Onslow County, 1942 altitude about 60 feet

Log based on examined samples. Correlations based on paleontological determinations by Dr. H. G. Richards

	Thickness (feet)	Depth (feet)
Pleistocene, Pliocene, and Miocene (?)		1
Sand, fine, gray clean	70	70
Sand, very fine, gray, slightly clayey	56	126
Eccene (?), Castle Hayne (?) marl	•	
Limestone, light gray, phosphatic and glaucomitic, sand,		
very fossiliferous	2	128
Clay, white, with sholl	10	138
Limestone, hard, white, dense, fossiliferous (driller reports 155 - 165 is softer than rest)	42	180

38. U. S. Army, New Topsail Inlet, on the barrier, 10 miles southwest of Camp Davis, Pender County, 1942 altitude about 8 feet

Log based on examined samples, except 112 - 116 feet, which is from driller's log. Correlations by Dr. H. G. Richards

	Thicknoss (feet)	• .
Recent		
Sand, fine gray; with much shell	7	7
Sand, fine to medium, clean; with much brown and black	*	
water-worn shell material	8	. 15
Mioceno, Duplin-Yorktown unit	•	•
Sand, fine to medium, with shell	15	30
Sand, very fine, gray, phosphatic, slightly clayey;	•	
with shell	40	70
Sandstone, gray, fossiliferous, fine clear quartz and black and brown phosphate grains comented with		
calcium carbonato	3	7 3
Eccone, Castle Hayne marl		
Limestone, hard, gray, fossiliferous, slightly sandy	3	76
Limestone, gray, fossiliferous, very sandy	4	80
Sand, medium gray, and much shell	10	90
Limestone, light gray, fossiliferous, very sandy	14	104
Marl, light gray, vory sandy; shell	8	112
Rock, hard, firm	4	116
Marl, gray, glaucomitic and phosphatic, sandy; with		
much shell	1.5	117.5
Limestone, gray, fossiliferous, sandy	7.5	125
Marl, gray, glauconitic and phosphatic, very sandy	29	154
Limestone, gray, phosphatic, fossiliferous, very sandy	18	172
Marl, dark gray, glauconitic, sandy	20	192
Sand, modium, gray; with shell	5	197
Marl, tough, dark gray, sandy and slightly clayey	23	220
Sandstone, gray, fossiliferous	15	235

No. John of Lally Ridge, Oction County, 1942 Town of Mount Olive, Wayne County, 1938 39: altitude about 160 feet Driller's log (Carolina Drilling & Equipment Co.) with modifications

Driller's log (Carolina Drilling & Equipment Co.) with	Jul 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Manage analysis of the	Thickness Depth
	(feet) (feet)
Pleistocene	PLIASTOCK OF PLAN
Soil and clay	20 20
Peat 96 veyalo videalle avera avel	1, , , , , , , , , , , 21
Clay, white	4 25
Cretaceous, Black Creek formation	I to the second
Sand, fine; and clay	15 . 40
Sand. little water	3 43
Clay, black; and sand	72 115
Shale, black (door mont to fine at all - 341 some	47. 162
Sand	12 174
Clay, black	174
to vessilian alla Of tolana, ont no trill lingol was	AVERA NO. AU. SON

Seels County Library County, 1948 Later about a free Town of Clinton, Sampson County, 1940

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OS H

Driller's log (Carolina Drilling & Equipment Co.) with mod	lification	IS
(\$002) (\$002)	Thickness	Depth
	(feet)	(feet)
Pleistocene	enia. See	
	27	26
Cretaceous, Black Creek formation		
Clay, blue; and sand	11,	37
Clay, brown; and sand to will all a serious of the sand	8	45
Clay, blue	37	82
Sand, fine	11	93
Sand, fine; and wood by believe a state of the same and t	10	103
	24	127
010, 010		
Sand, coarse		-
Sand and clay		
Of Clay of Links to the state of the state of		191
Sand, coarse		
Cretaceous, Tuscaloosa (?) formation	made of	N. Comment
Clay, tough ("pipe clay")	64	257
Sand and clay		
built and oray		

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payofe with the year and the stand of the stand

Marl, dark seep, glossest tie, sendy

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Sandatoro, gruy, Costiliforond

Linestone, gray, phosonatile, resultivens, very scady

41. Pender Lea Farms, Test well at school house, Watha, Pender County, 1937.

altitude about 60 feet

Driller's log (Heater Well Co.) with modifications

100	Thickness I	
D1 21 - 1 - 2 2	(feet) (:	feet)
Pleistocene	Olay Mard	
Soil and yellow clay	90.08	8
Clay, yellow	levere-breamana.	12
Cretaceous, Peedee formation	pani-faro	
Clay, light blue, with a little sand	Claysion chois	30
Clay, dark blue, increasing amount of sand	55	
Sand (water-bearing)	Moor but after 2 yeld	87
Clay, blue, and sand	8 3000	95
Clay, blue, sand and shell	5	100
Clay, blue, with shell IIII work to day of	?) Asono doeld 14ucesa	114
Clay, blue, and sand	brod 9 ora	123
Sandstone	levery eliese 1 hand	124
Sand (water-bearing)	arehimed avaisagined	126
Sandstone, very hard	5	128
Clay, blue, sand and a little shell	entrod a funda - 22 out o	150
Sand, and shell; with a very little clay		155
Clay, blue, with some sand and shell	5 (410	160
Cretaceous, Black Creek (?) formation		
Clay, blue, and a little sand	25	185
Sand and blue clay	20	205
(no record)	10	215
Clay, blue, and sand o togeth was the long to discos	0011198 4090 20	235
Rock, soft		236
Clay, blue, and sand	Interior off 113 and	249
Sand (water-bearing)		2494

(Logs of four other wells from 184 to 211 feet deep, drilled on nearby farms, indicate that the Peedee-Black Creek contact is probably at about 165 to 170 feet.)

42. Town of Burgaw, Pender County, 1935 altitude about 50 feet

Driller's log (Layne Atlantic Company) with modifications

loose, light gray, micecooms, glauconitio 10 80 desing, but darior gray 10 80	Thickness	Depth feet)
Pleistocone _ agospania yisain agospalityia yildakia yem	Sundy dark	2000)
	10	10
Olf Clay of. onoof anil torn		The state of the s
Cretaceous, Peedee formation	Sand, Michit	
Clay, hard to addamped anow-today flama year one ploce !	6	22
Clay, black		330
Clay, sandy	30	60
Clay, sandy brown	20	80
Shale, hard autopalitata ylidakia kuru kopusco ilo galita	Famo 6 Fant	86
Sand, fine	10	96
to Amade og T (cont'd) iv. composit by to	that, sondy	

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Mari, stailer to proceding fossiliforous

42. Town of Burgaw, Pender County, 1935 (cont'd)		
		Depth
anoldselfitom ddtw (.o.D. flew rodesH) gol	(feet)	(feet)
Cretaceous, Peedee formation		Taranga F
Shale, hard	2	98
Clay, hard	18	
8 Sand, fine vale wolley		
	3	
Clay, hard		146
OE Clay soft sandy bres siddle a total one		152
38 Clay, shard base to samoma galametoni suld N		165
Clay, soft, and rock		187
ag Sanda bas to		
cof Clays	13	203
Cretaceous, Black Creek (?) formation (Snow Hill (?) marl member	r) d va	
Bar Rock, hard bas to	old 7 vs	
	8	
Rock, clay, boulders (animaders	10	
Rock, hard	adfrone	
OSI Sand and sandstone field elittle bas bas bas	6	235
Cretaceous, Black Creek formation of all the floring	ben bis	
OBI Claya		
Sand politament (f) seems ton		
ear Clayes bine effilf a bas .o	cidll vo	275
blue clay 20 805		
d) 10 216		
43. St. Helena, 22 miles south of Burgaw, Pender County	uld ava.	
-7-1-1-1-1 O1		
Log from "The Coastal Plain of North Carolina": N. C. Geo	l. and H	
	l. and H	
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912	l. and H	Econ. Depth
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912	l. and H hickness (feet)	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene	l. and H hickness (feet)	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray	l. and H hickness (feet)	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray Miocene	l. and H hickness (feet)	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand	l. and H hickness (feet)	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation)	hickness (feet) 10 50	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy	nickness (feet) 10 50	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated	nickness (feet) 10 50	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy	nickness (feet) 10 50	Depth (feet)
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated	l. and H hickness (feet) 10 50	Depth (feet) 10 60 70
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic	l. and Henickness (feet) 10 50 10 10 10	Depth (feet) 10 60 70 80 90
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray	loand Frickness (feet) 10 50 10 10 10 10 10	Depth (feet) 10 60 70 80 90
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous,	loand Frickness (feet) 10 50 10 10 10 10 10 10	Depth (feet) 10 60 70 80 90 100
Log from "The Coastal Plain of North Carolina": N. C. Geol Survey, vol. 3, pt. 2, pp. 161-162, 1912 Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose	loand Frickness (feet) 10 50 10 10 10 10 10 10 10 10	Depth (feet) 10 60 70 80 90 100 110
Log from "The Coastal Plain of North Carolina": N. C. Geol Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose Sand, light gray, fine, loose Sand, light gray, very coarse, loose; with small pieces of	10 10 10 10 10	Depth (feet) 10 60 70 80 90 100 110
Log from "The Coastal Plain of North Carolina": N. C. Geol Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose Sand, light gray, fine, loose Sand, light gray, very coarse, loose; with small pieces of gray sand rock, and many small water-worn fragments of	10 10 10 10 10	Depth (feet) 10 60 70 80 90 100 110
Log from "The Coastal Plain of North Carolina": N. C. Geol Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Pleistocene Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose Sand, light gray, very coarse, loose; with small pieces of gray sand rock, and many small water-worn fragments of	10 10 10 10 20	Depth (feet) 10 60 70 80 90 100 110
Log from "The Coastal Plain of North Carolina": N. C. George Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose Sand, light gray, very coarse, loose; with small pieces of gray sand rock, and many small water-worn fragments of sharks' teeth, plates, etc. Sand, fine, loose, light gray, micaceous	10 10 10 10 20 50	Depth (feet) 10 60 70 80 90 110 110
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Sand as preceding pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Sand, dark gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, fine, loose, light gray, micaceous, glauconitic; and sandy clay, apparently laminated Sand, light gray, slightly argillaceous, calcareous, sand, fine, loose, light gray, micaceous, calcareous, sand, very coarse, gray, slightly argillaceous, calcareous, sand,	10 10 10 10 10 10 10 10 10 10 10 10 10 1	TO 80 90 100 110 130 180 190
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The coastal plain of North Carolina of North Car	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Depth (feet) 10 60 70 80 90 110 130 180 190
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Clay of the Clay of Shark gray or gray or greenish-gray, fossiliferous Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey or carolina of caecous, glauconitic sand sand gray or gray, slightly argillaceous sand; fossiliferous Log from "The Coastal Plain Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of Carolina": N. C. Geo. Sund, fine, loose, light gray, micaceous, glauconitic gray sand, very coarse, gray, slightly argillaceous, calcareous sand; fossiliferous	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Depth (feet) 10 60 70 80 90 110 130 180 190
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Clay, gray Miocene Shell marl and gray or greenish-gray, fossiliferous sand Cretaceous (Peedee formation) Sand, dark gray, finely micaceous, glauconitic; and sandy clay, apparently laminated Sand, fine, loose, light gray, micaceous, glauconitic Same as preceding, but darker gray Sand, dark gray, slightly argillaceous, finely micaceous, glauconitic Sand, light gray, fine, loose Sand, light gray, very coarse, loose; with small pieces of gray sand rock, and many small water-worn fragments of sharks' teeth, plates, etc. Sand, fine, loose, light gray, micaceous Sand, very coarse, gray, slightly argillaceous, calcareous Marl, consisting of coarse, gray, slightly argillaceous sand; fossiliferous Marl, sandy, argillaceous, with one large chunk of gray,	10 10 10 10 10 10 10 10 10 10 10 10 10 1	To so
Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of the Clay of the Clay of Shark gray or gray or greenish-gray, fossiliferous Log from "The Coastal Plain of North Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey or carolina of caecous, glauconitic sand sand gray or gray, slightly argillaceous sand; fossiliferous Log from "The Coastal Plain Carolina": N. C. Geo. Survey, vol. 3, pt. 2, pp. 161-162, 1912 The Survey of Carolina": N. C. Geo. Sund, fine, loose, light gray, micaceous, glauconitic gray sand, very coarse, gray, slightly argillaceous, calcareous sand; fossiliferous	10 10 10 10 10 10 10 10 10 10 10 10 10 1	To so

44. Town of Red Springs, Robeson County, 1941 altitude about 200 feet

altitude about 200 feet	7. 0.	
Driller's log (Carolina Drilling & Equipment Company) with me	odlilear	cions
ridged asomicinit	ckness	Depth
(fee1) (fee1)	eet)	(feet)
The American State of		
LTGTGCCCHG		
Sand, yellow		16
Clay, red		19
Cretaceous, Black Creek formation		
Sand, medium	51	70
The state of the s	55 300	75
Cray, gray		95
Sand, coarse almolow beaugnoods near daby man of along	20	
Clay, black : delines sole meny bas more to semment) fat	11	106
Cretaceous, Tuscaloosa formation		
Sand, fine	40	146
	28	174
Clay, white	10	184
Sand	The state of the s	
Clay 2401 yours meeded trooming		200
Sand and black clay	6	206
diged enemiable		

45. Maxton Glider School, 3 miles northwest of Maxton, Scotland County, 1942 altitude 210 feet

Log furnished by U. S. Engineer's Office, Charleston, S. C., with modifications.

nord with thin send strete and strete	Thickness	Depth
icaccous; contains lightless wood 15 180	(feet)	(feet)
Pleistocene	ley, bleck,	
Soil, black; sandy	and placed in the	1
Clay, tan; sandy	o desidito	12
Cretaceous, Tuscaloosa formation	Hogid , woll	
Clay, light gray to pink; plastic	22	14분
Sand, tan: clayev	202	
Clay, tan, pink, and gray, very little sand	LoosuT 17moo	
Sand, fine to medium, tan, with a little clay	13	65
Sand, medium to coarse, dark gray; angular, with clay	20 7	70
Clay, cream colored, plastic	.4	74
Sand, fine to medium and clay	3 100	77
Clay, tough, tan, and sandy	20	97
Sand, fine to coarse, micaceous; and clay	30	127
Sand, medium to coarse, light gray; clean; subangular	29	1567
Clay, tough gray; sandy	3	159
Sand, fine to coarse, gray, arkosic, clayey	5	164
Clay, tough, gray; sandy	16	180
Sand, fine to coarse, arkosic, gray to brown, clayey	15	195
Clay, gray, tan, and chocolate brown, plastic, slightl	У	
sandy	35	230
Sand, coarse and gravel and tough gray clay	7	237
Clay, tough red	18	255
Sand, coarse, brown and gray; clayey	5	260
Clay, chocolate brown and fine sand	5	265
Sand, fine to medium; tan to chocolate brown; and clay	11	276
Clay, brown, gray, and green; sandy	22	298

(cont'd)

45.	Maxton Glider School, 3 miles northwest of Maxton,	Scotland County	1942
	traditibem with (versumed *(cont'd)	ditortal hor (Co	art.
ridgo	asomoru.	Thickness	Depth
(380	1) (faul)	(feet)	(feet)
	caceous, Tuscaloosa formation (contid)	0.0000	Plefatt
91	Clay, green, pink, gray, tank, with varying amounts		di .
01	The state of Double	43	341
	Sand, medium to coarse, some gravel, and clay	south Black Cros	
Dage	Clay, tan and medium sand	mulfiom 3, fire	353
	ment rock, pre-cambrian (?)	town arey	
30	of the state of th	0 030000	
	1 - Grand of Care Proof Million Politi	st doold .vel	
	found in samples from depths 363 - 445 feet)	1800 Inobut 95	448
146		gnd, fine	
174	85	odlitw ville	
10	Married D. i	bru	
	Town of Fairmont, Robeson County, 1944		
206	altitude about 140 feet	is sloudd bee bee	
		Thickness	
Plai	thorono ((Sundaniana A	(feet)	(feet)
1101	stocene (Sunderland formation)	arton Olider Sel	45. 1
	Soll and red cray	12	12
Const	Sandilw . O. C. dornal and de ser to at company . S. U.	yd bonskari3: 30	15
Crec	aceous, black creek formation		
	cray, brack, hard with thin sand strata	150	165
(1150	Sand, fine, micaceous; contains lignitized wood	15	180
	Clay, black	4.150	184
	Sand, medium to coarse, gray, with interbedded layer	rsis theals allo	0
		ybuda pho 70, yo f	
AAL	Condicacons	Hoo Inchair 54 100	THE RESERVE THE PERSON NAMED IN
547	Clear his all		
Cret	scenes Tugas loose formation	pyalo tra 37 pm	356
OLCO	aceous, Tuscaloosa formation	idata took the	250
0.5	Sand, gray; containing pyrite concretions	on of entito bon	359
	Clay, red, brown, pink, and white; tough, compact	of muthoral ban	380
Log	based on examined samples except 0 - 165 feet and 251	750 0-4 -4	0
108	based on Driller's log (Carolina Drilling & Equipmen	- 356 leet whi	cn 18
781			
1862		oo od onil ,bnd	
159	A THE PERSON AND A SECOND PROPERTY OF THE PERSON AND ADDITION OF THE PERSON AND ADDITIONS OF THE PERSON ADDITIONS OF THE PERSON ADDITIONS OF THE PERSON AND ADDITIONS OF THE PERSON ADDITI	of mulben bus	
164		luy, tough gray	
180	to form formation of the Parkett	es of smil thu	
981	CANADA EX	loy, tough, gra	
		eo or earl ,bad	
280	and chocolate brown, plastic, slightly		
287		sandy	
385	gravel and tough gray alay		
008		box rigger and	
285	The state of the s	nd feathoo take	
979	the state of the s	Teh, cuncorne	
688	The same of the sa	en os oner then	
	gy and green; sordy	ers * mount * 401	d.

47. Town of Elizabethtown, Bladen County, 1940 altitude about 120 feet

		altitude about 120 feet	(020 1002) 10 HAO.	0.00
16.11	Drille	or's log (Carolina Drilling & Equipment Compa		
14000		1991/	Thickness	Depth
		moltageof 1	(feet)	(feet)
Plei	stocen	10	OUTH STORY	
1,404	Sand a	nd clay	18	18
.'992	Sand a	nd water	buni spid 2 doe	20
Cret	aceous	, Black Creek formation	and, time	
2.542	Clay,		bnaa 51 Val.	71
20 BTS		clay, and peat	24	95
32	Clay,		34	129
.008	Sand .		bran 3 va D	132
170 56	Clay,	black	12 44	
5005	Sand		4 vall	
828	Clay,	hlack	valo bal bad	169
-588	Sand		10 VAL	179
340		coarse	vala 20 mai	199
358:	bands	COM SO	eurid .vafi	133
570				
48.	M course	of Whitemills Columbus Country 1079	val	
537	Town	of Whiteville, Columbus County, 1938	3/00	
1.482	D. 233	altitude about 80 feet		
1 A08	DLITIE	er's log (Virginia Machine & Well Company) wi		D 4.1.
1.6688			Thickness	Depth
	,		(feet)	(feet)
200	(no re		155	155
Cret		, Black Creek formation		N annua
000		and sand (yields a little water)	15	170
7		with a little clay (some water)	15	185
1/95		dark blue	ould dance 5 val	190
	Sand (a little water)	5	195
	Clay,	dark blue, with sand mixed	omid day 45	240
	Rock,	light gray	2	242
	Olay,	dark blue	10	252
	Sand,	coarse, and shell	11	263
	Clay,	dark blue	187	450
			lays while	
		es valo e	day, white or pla	
49.	Town	of Tabor City, Columbus County, 1926	ley, white and so	
0.19		altitude about feet	loy, blue	
	Drille	er's log (Virginia Machine & Well Company) wi	th modifications	
	Name of the last o		Thickness	Depth
0.14			(feet)	(feet)
Cret	aceous	, Peedee formation	(1000)	(2000)
7	Marl,		50	50
-038	Sand,	DING	Id wholes bio hea	60
	Marl,	111200	oxim ould 169 bas	129
.250	Rock,	Diao	onld 1 val	
				130
		blue and sand mixed	65	195
	mud,	plue, hard, and sand mixed	26	221

(cont'd)

49.	Town of Tabor City, Columbus County 1926 (contid)	ANTIN TO 1990	474 I
	(Carolina Inilians & Equipment Company) with modificati	Thickness	Depth
ddae0	spominist?	(feet)	(feet)
Cret	aceous, Black Creek formation		
	Rock, blue	4	225
18	(no record)	tale 5 has	230
OS	Rock, blue, hard	25	255
	Sand, fine noldamio xeero.	Monfa 5 poes	260
77	Clay and sand	. 16	276
95	Clay be	2 2	278
esi	Sand		280
132	Clay, hard	20	300
146	Clay and sand	10	310 320
148	Sand and clay		326
691	Clay and marl	2	328
179	Sand and clay	12	340
. 861	Clay, blue	18	358
	Clay	13	370
	07	7.0	380
	Ages & Company on Forstand	The same of	381
	27	01 .	384
1000	Rock states	2	386
nader	Clay	2	388
1000	Rock	2	390
001	Olors and mani	0	392
170	Clay, hard (1000 of the a short)	THE RESIDENCE OF THE PARTY OF T	398
185	Mud at (notow emoa) to do aldeli	THE REAL PROPERTY.	400
001	Clay, tough blue	-40	440
201	Marl, blue	5	445
CAS	Marl, tough blue	. 85	530
242	Clay, blue	13	543
. 223	Marl	2	545
263	Sand, blue	6	551
Cret	aceous, Tuscaloosa formation	old venty sen	
	Clay, white	4	555
	Clay, white or pipe clay	* 25	580
	Clay, white and some sand with rolling clay with it	20	600
	Clay, blue	10.	610
	Mud, blue and line sand	201 2 10	625
. ddqo(Clay, blue	10	635
(#00)	Mud, and fine sand	5	640
	Clay, blue noldango with some water	rooms Peeder	642
	suid, line and coarse, with some water	911 D	647
	Sand and sticky blue clay	10,	
. esi	Sand and blue mixed	10,	660
ISO	Clay, blue		675
106	sand mixed		
188	6S bexim bans bans bans bans	rate sound son	
		it, [t]	
	(blance)		

(contid)

50. Clarendon Waterworks Company, Wilmington, New Hanover County, altitude 9 feet

Log from "The Coastal Plain of North Carolina": N. C. Geol. and Econ. Survey, vol. 3, pt. 1, pp. 163-166, 1912

paptir (seet)	(#00%)	Thickness (feet)	Depth (feet)
Cret	accous, Peedee formation	PHILIPPI OF	11
HOL	, 0 0		10
	Sand, yellowish-brown, argillaceous	20	30
ROLD	Hard, gray, calcareous sandstone rock containing sholl impressions	10	10
1001	Sand, pale yellow, calcareous, with small pieces of crus		40
	sandstone; fossiliferous	10	50
	Sand, loose, gray; fossiliferous	10000	60
1001	Sandstone, hard, gray, calcareous	10	70
1065	Sand, gray, calcareous, micaceous, varying slightly in c	The second secon	
STOR	tent of lime and mica and also in color and coarsenes		
0801	Fossiliferous	208	350
	Sand, light gray, loose, calcareous, micaceous;	Cley , red	
	fossiliferous	40	390
	Same as 350-390 feet; fossiliferous	10	400
OPUL	Sand, fine, dark gray, calcareous, argillaceous, slightl	y	
DOLL .	glauconitic	50	450
	Sand, light gray, loose, calcareous; fossiliferous	10	460
	Sand, gray, calcareous, micaceous, glauconitic, with	MOOT THE	
	chunks of gray clay, fossiliferous	10	470
	Sand, loose, gray, glauconitic, slightly micaceous, with		
189	chunks of gray clay, fossiliferous	30	500
	Sand, fine gray, calcareous, glauconitic; fossiliferous	10	510
	Sand, gray, calcareous, glauconitic	10	520
god and	Sand, loose, light gray, calcareous, micaceous, with chunks of gray clay	10	530
ASTICL .	Sand, gray, calcareous, glauconitic, argillaceous and	10	550
(2,103)	fossiliferous	30	560
	Sand, loose, light gray, glauconitic	10	570
	Sand, looso, light gray, glauconitic	10	580
	Sand, loose, light gray, glauconitic, micaceous	20	600
	Sand, light gray, finely micaceous, glauconitic,	oner the	
	argillaceous and fossiliferous	120	720
Croto	accous, Black Crock formation	only their	
	Sand, light gray, very calcareous, slightly glauconitic	rations found	
	possibly a ground-up rock	10	730
	Sand, fine, light greenish and yellowish glauconitic, ca	1-	
	careous, argillaceous, finely micaceous, containing		
	fossils	90	820
	Similar to samples from 730-820 feet	10	830
	Clay, gray, calcareous, finely micaceous; fossiliferous	80	910
	Mostly fragments of shells, with some lumps of gray,	Sandatone,	0.00
	calcareous clay; fossiliforous	20	930
	Sand, coarse, brownish, micaccous, very calcareous; fossiliferous	osld, tale	040
	Sand, clean, loose, very micaceous	10 10	940 950
	Sand, white to pale yellow and pinkish, coarse, slightly		900
	micaceous, with angular grains	40	990
	Sand, coarse, yellow, with indurated chunks comented	Mariy yell	000
	with arkosic material	10	1000
	(cont*d)		

		Satisfactor Company, Wilmington, New Bacver Country:	Cigrendon	50.
	. hos	the Constal Plain of Horth Carolina"; N. C. Geol, ond "	og from "	• • • •
	50.	Clarendon Waterworks Company, Wilmington, New Hanover Co	mhialmaga	Donath
, ,	June.	Special T	Thickness (feet)	Depth (feet)
-1	(1	The remainder of the section is taken from the driller's		(1990)
:	01	description of the materials penetrated.)	WILOUGH	
		Sand, red	11	1011
		Sand, yellow	. 2	1013
÷	0.0	Sand, yellow, and gravel	2	1015
		Oyster shells, shale rock, mud	16	1031
58.	50	Clay, white, and sand mixed	. 3	1034
		Clay, blue	19	1053
		Gravel and green clay, soft rock	8 mai	1061
		ROCK, SOIT, and Shells	varia 4 one	1065
		Sand assessment but woler at only but some off	10	1075
		Sand, black	6	1081
		Clay, red and white succession succession send and sholls	2	1083
		61	1	1088
	900	Clare and	7	1095
	450	Sand and small pebbles	14	1104
	CAA	Clay, red and hard rock, which looks like granite	5	1109
	Basen	ment rock nath othlogously successing suboresting	were have	
¥ :		Granite approliffusor avoid your li	. 221	1330
		of the state of the state of the with	and, loos	
	51.	Well 2, Wilmington Housing Authority, 4 miles south of V	Vi Imination	
	DIG	New Hanover County, 1942	ATTIMITIE COLL	
	620	altitude about 60 feet	yarn abnat	
	-	Log based on examined samples, except 9 - 3 feet, which	is driller	's log
	Occ	Apro April 16	Thickness	
		bulear coulties erallinesous and	(feet)	(feet)
	Pleis	stocene		
		Sand, white and topsoil	3	3
		Sand, fine to medium, yellow, slightly clayey	15	18
		Sand, fine, white, clean (water-bearing)	2	20
	720	Sand, fine, reddish brown, clayey	, 5	25
		Sand, fine, light gray, a little clay	10	35
		Sand, fine to coarse, white, clean quartz (water-bearing	g) 15 · · · · · · · · · · · · · · · · · ·	50
	Eccer	Sand, medium to fine gravel, white ne (?), Castle Hayne (?) marl	vii la so	58
	Hood	Sand, medium, grayish white, calcareous, slightly glauce	mitic 6	64
		Limestone, soft, white, earthy, fossiliferous (chalk?)	23	87
		Limestone, hard, gray, sandy; with shell	3	90
	650	Limestone, soft gray, sandy	4	94
	910	Sand, fine gray, calcareous, with shells	6	100
		Sandstone, gray, calcareous, fossiliferous	2	102
	Creta	aceous (?), Peedee (?) formation		
7		Clay, black, and fine sand, calcareous, glauconitic, wit		10111000000
	950	comented layers of glauconitic sandstone	30	132
		Sand, fine, light gray, semi-consolidated, calcareous,	od Law - bred	3.00
	990	with shell	25	157
		Marl, yellowish gray to gray, sandy, with shells	29	186
	1000	Of : Latration of ac	inn dd br	
		(for temps)		

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(sombia)

52. Fort Caswell near the mouth of Cape Fear River, Brusswick County,

Log from "The Coastal Plain of North Carolina": N. C. Geol. and Econ. Survey, vol. 3, pt. 2, pp. 194, 195, and 170, 1912

	Survey, vol. 3, pt. 2, pp. 194, 195, and 170, 19			
	dides formation, in part (sintita)	ickness	Depth	
		(feet)	(feet)	
Plei	stocene stocene	Clay, 11		
SSEI -	Sand, loose beach, with small shell fragments	30	30	
	Clay, gray, calcareous, sandy, with well-preserved			
	Pleistocene fossils	15	45	
1334	Sand, loose calcareous, with numerous shell fragments;	drawn -		
	pieces of calcareous sand-rock, fragments of peat, iron	Most secon		
1066	crusts, and one fragment of crystalline rock, probably	Sound, co		
	granite t deal tol by an solded date fever ban toric		78	
Eoce	ne, Castle Hayne marl Manager to the cold cold cold cold cold cold cold cold	record b		
	Sand, yellow, medium-grained, calcareous, with a few	onole.		
	scattered grains of glauconite and many fragments of	nte Lang		
	shells to voic succession vara to asingtone if the district	24	102	
1405	Sand, pale yellow, fine-grained, calcareous, slightly	risk law		
	glaugonitic des land to an advance and the land	7	109	
	Like sample from 78-102 feet, but contains numerous small			
		1 3/4	110	3/4
1440	Rock, pure, white, soft, chalk-like, without grit and			,
	composed almost entirely of CaCO2	1	111	
	Sand, yellow, medium-grained calcareous, with a large per-	ne freeze		
	centage of shell gragments; scattered grains of glaucon			
1442		127	238	
	Clay, yellow calcareous, and yellow sand, like preceding			
dasy.	Sand, yellow, filled with Bryozoan remains	- 5	254	
Crete	aceous, Peedce formation, in part	E Aven	,	
ORNE	Clay, gray, very calcareous, with an admixture of soft san	d 164	418	
odar	Sand, gray, calcarcous, very glauconitic.		419	
OFFICE	Clay, gray calcareous, slightly sandy		678	
asag "	Clay, mixture of gray calcareous, with sand and gragments			
	of shells was a state of the st		680	
980 F	Samples representing 680 to 690 missing	10	690	
1640	Same as 678-680, but contains impure lime concretions	oti book		
	as much as 1 inch in diameter	3	693	
	Sand, gray, angillaceous, calcareous, with numerous small	mero have A		
	shell fragments; fragments of gray calcarcous sand-rock	102	795	
	Sand, dark green, very glauconitic, calcareous	85	880	
	Mixture of chunks of dark-green glauconitic sand and gray	and her	000	
	calcareous sand	-16	896	
	Sand, coarse gray, with small shell fragments and lime-		000	
IDES	stone, light gray argillacoous; fossiliferous		899	
	Clay, gray calcareous, finely micaceous, large pieces of	4	000	
	shells	241	1140	
	Clay, light pinkish plastic	20	1160	
	Samples missing	40	1200	
	Clay, gray calcareous, with a mixture of quartz pebbles	10	1200	
	up to $\frac{1}{2}$ inch in diameter and shell fragments	37	1237	
	Sand, clean, loose, slightly calcareous	1.6	1253	
	, and a substant out out	3.0	1000	

(cont'd)

	aswell near the mouth of Cape Fear River, Bro swick County,	i Ci	For	58.
52.	Fort Caswell near the mouth of Cape Fear River, Brunswick Co	ount	y (c	ont'd)
e/190	ith Courtel Flain of Marth Caroline": . W. C. Gool. and Bo	ckne	66	Depth
	Sigi off ban del abel agg . S .to .tov .vovrus (fe	oot)	(feet)
Crot	aceous, Peedee formation, in part (contid)			
feet)	Sample missing	6		1259
	Clay, light gray calcardous	at		1259
	Clay, light to dark pinkish or reddish finely laminated		Ben	1322
	No record beviousing-liew diff and appearables avery			1326
45	Clay, light gray calcareous, with an admixture of small			
	quartz pebbles as large as birdshot			1334
	No recorded along to summer along bear base to see			1342
	Sand, coarse, argillaceous, calcareous	23		1365
87	Sand, coarse, and gravel, with pobbles up to 1/3 inch in	Care Dr		
	diameter. Also piece of gray calcareous sand-rock and		400	Bood
	pioces of shells with anormalise bordang-purious wolfer			1380
	and the same of th	1808		
	shot, with small particles of gray calcareous clay, and			
	with numerous fragments of shells			1405
	Sand, coarse, with a large percentage of small particles			
AFF	of gray calcareous clay, scattered grains of glauconite,			
110	and numerous shell fragments, among them encrusting			2440
0.554	Bryozons but ding duckly extlediate the country entry			1440
Cret	aceous, Black Creek formation 0000 to viewlood decale beace			
	Sand, coarse, loose, and fine fragments of crushed sand-	40		
	stone, filled with particles of iron exide. Contains	0		7449
645	a few shell fragmonts	2		1442
103	Sand, loose, white, medium-grained, with a few shell fragments	13	The state of the s	1455
		15		1470
SIA	Sand, fine, dark gray, micaceous, slightly glauconitic	20	s ED	1490
GIP.	Sand, loose, gray, medium-grained slightly micaceous Sand, fine, yellowish gray, glauconitic, micaceous	10	Street	1500
878	Sand, fine, dark gray, micaceous, slightly glauconitic	10	a EO	1510
	Clay, dark pinkish drab, arenaceous, micaceous	15		1525
	Sand, coarse, argillaceous, and chunks of light gray	10		2000
069	and pink-mottled, coarsely arenaceous clay	7		1532
	Sand, very fine, gray, micaceous, glauconitic	8	mag	1540
Base	ment rock			
	A metamorphosed rock (possible from an old eruptive ?)		75	
288	having a very fine granular texture. Consists principal.			
	of interlocking quartz grains with considerable greenish			
	mica flakes and grains of red iron oxide. There are also			
308	numerous grains of epidote and some chlorite. A	rlas		
	stretched apatite crystal observed in one slide. (Des-	o al	Son	
668	cription credited to Dr. Albert Johannsen)			1543
	to second egys! canonosols vionit , emocracies vie	A VV	n Fo	

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CORE

TEST

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Secretor electing Give, grey electrons, with a mixture of quarts pobblos up to f inch in diameter and shell fragments Sand, clear, loose, slightly calestoous

Oley, light pinitsh plastic

