

WELL RECORDS
AND OTHER BASIC GROUND-WATER DATA
CRAVEN COUNTY,
NORTH CAROLINA

By
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and
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U. S. Geological Survey

GROUND WATER CIRCULAR 14

NORTH CAROLINA
DEPARTMENT OF WATER AND AIR RESOURCES

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DIVISION OF GROUND WATER

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Prepared by the
United States Geological Survey
in cooperation with the
Craven County Board of Commissioners
and the
North Carolina Department of Water
and Air Resources

MARCH 1970

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February 12, 1970

The Honorable Robert W. Scott
Governor of North Carolina
Raleigh, North Carolina

Dear Governor Scott:

I am pleased to submit Ground-Water Circular 14, "Well Records and other Basic Ground-Water Data, Craven County, North Carolina", by E. O. Floyd, Hydraulic Engineer and A. T. Long, Geologist, U. S. Geological Survey.

This report contains the results of a detailed study of the ground-water resources and data made by the U. S. Geological Survey in cooperation with the Craven County Board of Commissioners and the North Carolina Department of Water and Air Resources. It should prove to be of much value toward the economic and industrial development of the County.

Respectfully submitted,

George E. Pickett

GEP:hbd

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WELL RECORDS AND OTHER BASIC GROUND-WATER DATA,

CRAVEN COUNTY, NORTH CAROLINA

by E. O. Floyd and A. T. Long

Introduction

This report is one of two reports resulting from an investigation of the ground-water resources of Craven County, North Carolina, an area of about 725 square miles in the east-central part of the State (fig. 1). The purpose of the investigation was to determine the character, areal extent, depth, and thickness of the water-bearing formations; to estimate the ability of the formations to store and transmit water; and to determine the chemical quality of the ground water.

The results of the investigation are described in USGS Hydrologic Investigations Atlas 343 (Floyd, 1969). The basic data collected during the investigation are included in this report, which supplements HA-343. The data presented herein pertain to the water-bearing sediments (aquifers) and the occurrence of water in those aquifers. The water-bearing sediments are beds of sand and limestone, alternating with beds of clay, and are all typical of the Coastal Plain sediments.

The data are presented in tabular and graphical form for the use or information of anyone interested in the ground-water resources of Craven County. The report contains records of 456 wells (table 1), chemical analyses of 254 water samples (tables 1 and 2), logs of 123 wells (table 3 and fig. 3), and hydrographs of 5 wells (fig. 4). Tables and figures are located at the end of the report. The chemical analyses of 211 water samples in table 1 are given for only four or five of the most important constituents used in evaluating ground water for domestic uses. In table 2 are given "complete" analyses of 43 water samples. These so-called complete analyses are for 19 to 22 constituents commonly used in classifying water for industrial and municipal uses, and they do not show any trace elements or rare metals.

Table 4, excerpted from HA-343, is used in this report for the reader's convenience. It gives a summary of the aquifer characteristics, briefly describing the geologic, hydrologic, and water-quality properties of the aquifers.

Acknowledgments

Gratitude is due the well owners of Craven County for supplying information about their wells. Especially helpful in making well records available were E. E. Welch, City Manager of New Bern, Craven Well Drilling, Inc., Max Bennette, Well Driller, and the Public Works Officer at the Cherry Point Marine Corps Air Station. Stratigraphic determinations of formation boundaries were made by P. M. Brown, Research Geologist, U. S. Geological Survey. Detailed lithologic log descriptions were made by James A. Miller, Geologist, U. S. Geological Survey.

The investigation was carried out in cooperation with the Craven County Board of Commissioners. The work was performed under the supervision of Granville G. Wyrick, District Geologist, and E. B. Rice and R. C. Heath, District Chiefs, all of the U. S. Geological Survey, Water Resources Division.

Well-numbering system

Inventoried wells in North Carolina are identified by U. S. Geological Survey well numbers. Records of wells in a county are numbered in the approximate order of inventory, and this number, prefixed by a symbol for the county, constitutes the well number. For Craven County, the well-number prefix is "Cr." For example, well Cr-1 is first in the well inventory of Craven County. This system has been used in numbering wells on the well-location map (fig. 1) and in the records of wells (table 1).

Well-location system

The well-location system used in North Carolina conforms to the system adopted by the U. S. Geological Survey for the data-card processing of well information. This system, derived from latitude and longitude coordinates, is based on a grid of 1-second parallels of latitude and meridians of longitude. The wells in a 1-second quadrilateral are numbered consecutively in the order inventoried (fig. 2).

The well-location number is composed of 15 numbers and letters (table 1): the first six numbers and one letter compose the digits of the degrees, minutes, seconds, and indicate northern (N) hemisphere that define the latitude of the southside of the 1-second quadrilateral; the next seven numbers compose the digits of the degrees, minutes, and seconds that define the longitude on the east side of the 1-second quadrilateral. Where more than one well was inventoried in a 1-second quadrilateral, the sequence numbers are shown in the order the wells were inventoried. By use of the latitude-longitude well-location system, a well may be located on maps that show the system of coordinates, or the position may be determined on the well-location map, figure 1.

Basic data

Records of wells and analyses of water

Tables 1 and 2 contain hydrologic information on individual wells and water from the wells. Data such as yield, static water level, and quality of water are included. These data are useful to well drillers and prospective well owners in estimating depths and yields of proposed wells. Chemical analyses of water from, and records of some additional wells are given by LeGrand (1960).

The aquifer numbers listed in table 1 refer to the relatively permeable sand or limestone strata that yield water to the wells. The characteristics of each of the aquifers are described in Hydrologic Atlas 343, and in table 4 of this report.

The significance of the chemical constituents given in table 2 are discussed in Hydrologic Atlas 343. The temperature of the water from some of the wells is given in Celsius units in table 1. These temperatures range from 17° to 21°C, which is equivalent to a range of 63° to 70° Fahrenheit.

Well logs

The well logs may be subdivided according to the kind of information recorded, and include geophysical logs, lithologic logs, and stratigraphic logs. The logs are from auger holes drilled by the U. S. Geological Survey and from a few other test wells. The cuttings were examined and described according to the lithology and the stratigraphic units determined. The stratigraphic units were determined principally from the identification of microfossils, such as the Ostracoda and the Foraminifera. The microfossils themselves are not identified in the report except where they are of special importance in the determination. Some typical species of ostracodes and eight additional well logs from Craven County are shown by P. M. Brown (1958). A geologic cross section showing lithologic logs of three wells in Craven County is shown by LeGrand (1960).

The well logs (table 3 and fig. 3) are included in this report primarily to help the reader understand the physical characteristics of geologic units and how they affect their hydrologic properties. The lithology, thickness, and depth of the units may be determined directly from a log, and the geographic extent of the unit may be determined by correlation from one well to another. The geophysical (electric and gamma-ray) logs (fig. 3) are useful in correlating individual strata and in determining the thickness of a unit. In some cases the salinity of the water in a unit may be estimated from an electric log.

Hydrographs

The hydrographs show records of water-level measurements in wells over a period of several years. These wells are a part of a statewide network established to monitor the trends in water-level fluctuations, and, therefore, changes in the amount of ground water in storage.

The name and number of the aquifer tapped by the well are given for each hydrograph.

It should be of interest to note that the hydrograph of the wells in aquifer 2 show only seasonal fluctuations of water levels. The hydrographs of wells Cr-24, Cr-305, and Cr-454 show a continuous decline in water levels throughout the period of record. This decline is probably caused by heavy pumping from these same aquifers about 17 miles distant from each of the wells in a neighboring county. Well Cr-454 is 581 feet, about 3500 feet, and about 7000 feet respectively from the three wells in a well field near Cove City. The two nearest wells have each been producing about 2 mgd (million gallons per day) since late spring of 1968. The well 7000 feet distant is used intermittently. The effects of this pumping on the water level in well Cr-454 can readily be seen by the abrupt change in the slope of the hydrograph curve for this well (fig. 4).

Selected references

- Billingsley, G. A., Fish, R. E., and Schipf, R. G., 1957, Water resources of the Neuse River basin: U. S. Geol. Survey Water-Supply Paper 1414, 89 p.
- Brown, P. M., 1958, Well logs from the Coastal Plain of North Carolina: North Carolina Dept. Conserv. and Dev. Bull. 72, pls. 1-8, p. 19-23.
- Floyd, Edwin O., 1969, Ground-water resources of Craven County, North Carolina: U. S. Geol. Survey Hydrologic Investigations Atlas 343, 2 sheets.
- LeGrand, H. E., 1953, Memorandum on the well-water supply at New Bern, North Carolina: U. S. Geol. Survey open-file report, 4 p., 1 fig.
- _____ 1960, Geology and ground-water resources of Wilmington-New Bern area: North Carolina Dept. Water Resources Ground-Water Bull. 1, p. 31, 36-38, fig. 10.
- Mansfield, Wendell C., 1927, Oil-prospecting well near Havelock, North Carolina: State of North Carolina Dept. of Conserv. and Dev. Economic Paper 58, 19 p.
- Mundorff, M. J., 1945, Progress report on ground water in North Carolina: North Carolina Dept. Conserv. and Devel. Bull. 47, 78 p.

TABLES AND ILLUSTRATIONS

Table 1.--Records of wells in Craven County, N. C.

Use: O-Observation; T-Test hole; U-Unused; W-Withdrawal of water. Type of QW analysis available: P-Partial; C-Complete. Log data available: D-Driller's log; E-Electric log; J-Gamma-ray log. Well finish: G-Gravel wall, O-Open-end; S-Screen; T-Sand point; W-Shored; X-Open hole. Quality of water: Iron, Sulfate, Chloride, Hardness, and Specific Conductance are coded according to range in concentration. Explanation of code given on last page of table. Aquifer: Number shown is same as described in Hydrologic Atlas 343.

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QW analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No.
Lat	Long													SO ₄	Cl	Hardness	Sp. Cond.	
351742N	0765766	1	1	USGS TEST HOLE	T		132		1	X		14						2
351651N	0765618	1	2	G W WHITFORD	W		114		1	X								
351515N	0765437	1	3	USGS TEST HOLE	T	D	122		1	X								2
351639N	0765821	1	4	FULCHER	W	P	120		1	X		14		1	0	6	3	
351652N	0770025	1	5	USGS TEST HOLE	T		112		1	X		9			0	5	3	
351550N	0765835	1	6	TOLER	W	P	72		1	X								2
351514N	0765914	1	7	ALEX COTHRELL	W	P	85	80	1	X		12			0	6	3	
351431N	0765859	1	8	USGS TEST HOLE	T	D	112		1	X		9						
351248N	0765709	1	9	USGS TEST HOLE	T	D	109		2	X					0	6	4	
351231N	0765709	1	10	A M PURIFOY	W	P	190		2	X		2						2
351134N	0765834	1	11	TRAY JONES	W	P	100	85	2	X		14	5	1	6	3		2
351200N	0765925	1	12	SPRING HOPE CH	W		22		1	T		2						1
351242N	0765948	1	13	J V ROWE	W	P		15	1	X		14			2	1	2	
351405N	0765935	1	14	M G TOLER	W	P	17		1	T		11			1	2	1	
351436N	0770101	1	15	UNKNOWN	U	P	31		1	X		8			1	2	1	
351505N	0770106	1	16	CHURCH	W	P	54			X		11			0	7	4	
351519N	0770047	1	17	USGS TEST HOLE	T	D	132					77						
352010N	0770539	1	18	USGS TEST HOLE	T	D	116											

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QW analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No.
Lat	Long													Iron	SO ₄	Cl	Hardness	
350817N	0770158	1	55	CY POWELL	W			78	65	2	X	8					2	
350849N	0770235	1	56	O A GASKILL	U			20		4	O	5					2	
351014N	0770310	1	57	EVERINGTON	W	P		22		1	I						1	
351148N	0770335	1	58	WETHERINGTON	W	P		77		1	X	13					2	
351248N	0770344	1	59	UNKNOWN	U			14		1	I	8					1	
351309N	0770331	1	60	KITE SWP CHURCH	W	P		19		1	I	8					1	
351448N	0770434	1	61	CHURCH	W	P		22		1	T	6					1	
351529N	0770516	1	62	ERNUL SCHOOL	W	P		54		2	X	15	30				2	
351536N	0770559	1	63	WILLIS	W	P		42		1	X	7					2	
351445N	0770640	1	64	FORENS	W	P		27		1	X	4					1	
351432N	0770643	1	65	USGS TEST HOLE	T		D	127		1	X						2	
351635N	0770645	1	66	JAMES GASKINS	W			43		1	X	11					2	
351632N	0770657	1	67	RUDOLPH GASKINS	W			45		1	X						2	
351728N	0770743	1	68	WHITFORD	W	P		50		1	X	6					2	
351814N	0770932	1	69	ATLANTIC OIL CO	W		D	120		2	X	12					3	
351821N	0770933	1	70	WAYNE BRYAN	W	P		135		1	X	8					3	
351904N	0770845	1	71	LANCASTER	W	P		33		1	X	9					1	
351936N	0770800	1	72	IPOCK	W	P		118		1	X	9					3	
352024N	0770836	1	73	G C LANCASTER	W	P		112		1	X	11					3	
352041N	0770851	1	73a	G C LANCASTER	W	P	D	138		8	G	10	500				2	
351855N	0770956	1	74	MORRIS	W	P		112		1	X	15					3	
351824N	0771029	1	75	ROSS	W	P		32		1	T	16					1	
351951N	0771020	1	76	BUCK	W	P		135		1	X	8					3	
352044N	0771112	1	77	MCLAWHON	W	P		105		1	X	10					3	

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QW analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water Level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No.	
Lat	Long													Iron	SO ₄	Cl	Hardness		Sp. Cond.
352045N	0771712	1	114	BRIDGES	W	P		19		1	T	8			4	0	3	2	1
352139N	0771638	1	115	WITHERINGTON	W	P		22		1	T	15			7	2	2	2	1
352156N	0771738	1	116	USGS TEST HOLE	O		35b/		33	1	T	6				1	2	2	1
352058N	0771824	1	117	CROSLLEY	W	P		21		1	T	11			2	1	2	2	1
352012N	0771748	1	118	USGS TEST HOLE	T		D	107		1	T	4			2	2	2	2	1
352007N	0771830	1	119	UNKNOWN	W	P		22		1	T	10			2	2	2	2	1
352033N	0771935	1	120	BRUCE GARRIS	W	P		325		3	S	10			1	1	1	4	7
351944N	0772020	1	121	USGS TEST HOLE	T		D	80		1	X	3			4	1	5	3	
351839N	0772000	1	122	BRYSON	W	P		55		1	O	10			5	0	5	3	
351811N	0771900	1	123	MAYBERRY	W	P		73		1	O	10			4	0	5	3	
351825N	0771830	1	124	USGS TEST HOLE	T		D	112		1	X	7			4	0	5	2	
351741N	0771757	1	125	L T HEATH	W	P		60							3	0	5	3	
351728N	0771810	1	126	L T HEATH	W	P		38		1	X	8			3	0	5	3	
351606N	0771726	1	127	D F BRAXTON	W	P	D	120 c/	62	8	G	2	100		2	0	0		
351535N	0771712	1	128	E W CIVILS	W	P		75	60	3	X				4	0	5	3	
351512N	0771621	1	129	WADEMOUTH	W	P		110		2	X				4	0	5	3	
351450N	0771502	1	130	CHAS CONWAY	W	P		130	115	2	X	18			4	0	6	3	
351429N	0771419	1	131	USGS TEST HOLE	T		D	112											
351317N	0771248	1	132	JAKE HERRING	W			163	135	2	X	12			4	0	4	2	3
351323N	0771206	1	133	FLOYD HILL	W	P		146		1	X	8			4	0	4	2	
351237N	0771216	1	134	BOB IPOCK	W			42	26	2	X				0	1	6	3	2
351250N	0771100	1	135	GUY HOPEWELL SR	W	P		15		1	X	12			0	1	6	3	1
351239N	0770924	1	136	USGS TEST HOLE	T		DE	554			S	6			2	1	6	4	
351233N	0770931	1	137	L J RICE	U			56	56	1	O	9							2

b/ Originally drilled to 102 feet.

c/ Originally drilled to 164 feet.

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QM analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No.
Lat	Long													Iron	SO ₄	Cl	Hardness	
350806N	0770611	1	173	GEORGE WIGGINS	W			42	35	2	X							2
350815N	0770610	1	174	R H STEPHENSON	W			52	38	2	X	20						2
350818N	0770630	1	175	USGS TEST HOLE	T	C	DE	964			S	14						2
350914N	0770748	1	176	PL HILL SCHOOL	W	P		78			X							2
350939N	0770902	1	177	W C PARKER	W			60	50	1	X							2
350944N	0770908	1	178	W. C PARKER	T	D		180										2
351003N	0770949	1	179	CAMPBELL	W	P				1	0	5						1
351100N	0771003	1	180	HEATH	W	P		126		1	0	14						3
351102N	0771019	1	181	USGS TEST HOLE	T		D	112										3
351101N	0771058	1	182	HEATH	W	P		30		1	X	5						2
351136N	0771203	1	183	BETHANY CHURCH	W			150	135	2	X							4
351210N	0771222	1	184	W K WILSON	W	P		65		1	X	3						2
351206N	0771220	1	185	JASPER SCHOOL	W	P		150	130	2	X	4	33					3
351227N	0771248	1	186	ROSCOE CASE	W	P		163	147	2	X	8						3
351347N	0771545	1	187	IPOCK	W			85		2	X	7						3
351430N	0771526	1	188	JAMES WRIGHT	W	P		38	36	1	T	9						1
351450N	0771659	1	189	OLIVER	W	P		100		1	X	15						4
351459N	0771800	1	190	BRYAN	W	P		85		1	X							3
351521N	0771645	1	191	SMITH	W	P		80		1	X							3
351546N	0771827	1	192	ESTELLE	W	P		100		1	X	11						4
351613N	0771850	1	193	RUSSELL	W			34		2	X	7						1
351616N	0771845	1	194	RUSSELL	W	P		90		1	X	12						4
351640N	0771840	1	195	USGS TEST HOLE	T		D	112										4
351718N	0771935	1	196	D F BRAXTON	W	P		45		1	X							4

351802N	0772018	1	197	FRANCIS BARWICK	W	D	97d/	40	8	G	8	300	3	0	4	2	3
351742N	0772031	1	198	CHURCH	W	P	58		1	G	10		6	0	8	2	2
351812N	0772041	1	199	SERMONS	W	P	54			G	10		2	0	4	2	4
351844N	0772150	1	200	C REGISTER	W	P	80		1	X	10		5	0	6	3	2
351909N	0772304	1	201	CHURCH	W	P	29		3	X	7		5	0	6	3	5
351939N	0772341	1	202	R BROWN	W	P	185			X	21			0	4	3	
351928N	0772506	1	203	USGS TEST HOLE	T	D	33										
351911N	0772452	1	204	PARKER	W	P	165	90	2	X	16		4	0	4	3	5
351753N	0772218	1	205	ROYAL	W	P	60		1	X	8		5		6	3	3
351736N	0772248	1	206	USGS TEST HOLE	T	D	56		6	X	8		3	0	5	7	4
351704N	0772142	1	207	NOBLE	W	P	95		1	X	8			0	4	2	2
351647N	0772141	1	208	JACK NOBLE	W	P	28		4	X	7	200		1	2	2	2
351628N	0772203	1	209	WESLEY NEWELL	W	P	150	20	1	T	6		9	1	2	2	1
351638N	0772044	1	210	GIBBON	W	P	15		1	T	14		5	0	5	3	4
351558N	0772000	1	211	SMITH	W	P	85		1	X			6	0	6	3	4
351459N	0772045	1	212	USGS TEST HOLE	T	D	109		1	X	15			0	6	3	4
351456N	0772023	1	213	RUSSELL	W	P	90										
351331N	0771827	1	214	USGS TEST HOLE	T	D	58		2	T	5		6	0	0	1	
351322N	0771817	1	215	CHURCH	W	P	20		1	X	8		4	0	4	2	
351336N	0771716	1	216	UNKNOWN	W	P	100				7		6	0	6	3	3
351256N	0771609	1	217	B T SUTTON	W	P	112		1	X	6			0	6	3	2
351234N	0771518	1	218	USGS TEST HOLE	T	D	42		1	X	8		8	0	5	3	2
351026N	0771231	1	219	BUTLER	W	P	35		1	X			4	1	5	3	2
350932N	0771147	1	220	DALEY	W	P											
350832N	0771025	1	221	USGS TEST HOLE	O	C	660	475	2	G	3	1	5	6	3	6	2
350848N	0771005	1	222	J L HUMPHREY	W	P	39	35	1	X	8						2
350638N	0770605	1	223	BILL BOUSMAN	W	P	63	57	1	X	4						2
350638N	0770605	2	224	BILL BOUSMAN	W	P	63	52	1	X							2
350628N	0770605	1	225	USGS TEST HOLE	T	D	62		2	X	5						2
350559N	0770534	1	226	CONTRACTORS INC	W	P	15										
350552N	0770525	1	227	HORNER VENEER	W	P	145	86	4	X							2
350513N	0770412	1	228	USGS TEST HOLE	T	D	67		2	X	5						2
350432N	0770420	1	229	DON DEICHMAN	W	P	70	42	2	X							2
350431N	0770429	1	230	DR JUNIUS DAVIS	W	P	70	60	2	X							2
350444N	0770443	1	231	BERN BUILDERS	W	P	77		2	X	6						2
350432N	0770448	1	232	USGS TEST HOLE	T	D	72										

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QV analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water level (feet below MP)	Yield (gpm)	Quality of water					Aquifer No.
Lat	Long													Iron	SO ₄	Cl	Hardness	Sp. Cond.	
350424N	0770509	1	233	CITY LUMBER CO	W		56		2	X	X	6					2		
350428N	0770518	2	234	CLARENCE GAULT	W		74	52	3	X	X	6					2		
350428N	0770518	1	235	CLARENCE GAULT	W		57	52	2	X	X	11	17				2		
350430N	0770525	1	236	GARBER M CHURCH	W	P	105	49	4	X	X	8		0	4	2	2		
350426N	0770533	1	237	BILL HUNNICUTT	W		72	68	2	X	X	8		0	3	1	2		
350437N	0770533	1	238	FRANK VOLNEY	W	P	58	50	2	X	X	8		0	3	1	2		
350427N	0770546	1	239	C T BARKER	W	P	80	55	3	X	X	11	60	2	3	2	2		
350411N	0770557	1	240	HARDIN	W		58	45	2	X	X						2		
350429N	0770621	1	241	RAMSAY	W	P	50	52	2	X	X			6	6		2		
350436N	0770637	1	242	GRAHAM BARDEN	W		60	52	2	X	X						2		
350437N	0770645	1	243	F BORDEAUX	W		58	50	2	X	X		15				2		
350439N	0770617	1	244	LAUGHINGHOUSE	W		58	50	1	X	X	8					2		
350446N	0770611	1	245	BILLY HARRIS	W		70	49	3	X	X	12	30				2		
350506N	0770613	1	246	I C WYATT	W	P	63		2	X	X	16		0	5		2		
350509N	0770604	1	247	THOMAS	W		66		2	X	X	14					2		
350522N	0770554	1	248	UNKNOWN	T		57												
350527N	0770521	1	249	UNKNOWN	W				1	X	X	3					3		
350531N	0770535	1	250	COASTAL ELECTRO	W	P	305	284	2	X	X	9	30	5	6	4	3		
350548N	0770611	1	251	SHRINE CLUB	W	P	82		2	X	X	6		0	3	2	2		
350542N	0770617	1	252	CONTRACTORS INC	W		57		1	X	X	5					2		
350605N	0770616	1	253	RUSSELL HAWKINS	W		60	52	1	X	X	5	15				2		
350558N	0770645	1	254	AZELEA MEATS	W	P	135	50	6	X	X	9	200	5	5		2		
350519N	0770703	1	255	GREENLEAF PARK	W		65		2	X	X						2		
350439N	0770703	1	256	WARRINGTON	W		75	47	2	X	X	8	17				2		

350530N	0770756	1	257	CHURCH	W	C		14	1	G	6	6	15	5	4	5	3	6	1	
350544N	0770908	1	258	USGS TEST HOLE	T	ED		605		O	7	7							1	
350532N	0770905	1	259	N W FIELDS	W			25	1	X	9	9							1	
350524N	0770855	1	260	ROCKY RUN CH	W			16			9	9							1	
350813N	0771021	1	261	USGS TEST HOLE	T	D		112	1	T	9	9							1	
350751N	0771052	1	262	TRIPP	W	P													1	
350838N	0771133	1	263	USGS TEST HOLE	T	D		50		X	6	6							2	
350937N	0771303	1	264	W MAY	W	P		37	1	X	10	10							2	
351019N	0771406	1	265	N C FOREST SER	W			33	1	X	9	9							2	
351033N	0771502	1	266	USGS TEST HOLE	T	ED		533	2	G	16	16	6	1	1	1	1	4	3	
351044N	0771626	1	267	WHITE	W	P		85	1	X	16	16							2	
351212N	0771705	1	268	REGISTER	W	P		38		X	6	6							2	
351247N	0771805		269	BRYAN	W	P		90	1	X	8	8							3	
351246N	0771755	1	270	BRYANT	W	P		20	1	T	4	4							1	
351144N	0771822	1	271	UNKNOWN	W	P		85	1	X	7	7							3	
351121N	0771846	1	272	ELTON WHITE	W		90	112	1	X	8	8							3	
351124N	0771858	1	273	USGS TEST HOLE	T	D		112											3	
351130N	0772007	1	274	UNKNOWN	W	P		98	1	X	8	8							3	
351414N	0772343	1	275	USGS TEST HOLE	T	D		60											1	
351631N	0772316	1	276	GLENO COBB	W	P		20	1	T	5	5							7	
351734N	0772440	1	277	GEO NOBLE	W		18	236	2	X	23	23							6	
351820N	0772458	1	278	JOHN LANGSTON	W	P		210		G	16	16							7	
351752N	0772623	1	279	J H WEST	W	P		110	1	X	13	13							6	
351645N	0772534	1	280	GRIFFIN	W	P		22		W	7	7							5	
351624N	0772505	1	281	USGS TEST HOLE	T	D		23											1	
351557N	0772441	1	282	CHURCH	W	P		19	1	T	4	4							2	
351434N	0772518	1	283	MARY WILLIAMS	W	P		26	1	X	6	6							2	
351342N	0772602	1	284	QUEENS CHAPEL	W	P		27	3	X	4	4							1	
351323N	0772618	1	285	MILTON ROGERS	W			40	2	X	2	2							2	
351310N	0772624	1	286	DOVER HIGH SCH	W	P		194	4	O	3	3							6	
351316N	0772621	1	287	MILTON ROGERS	W	P		110	2	X	8	8							4	
351256N	0772604	1	288	V F W CLUB	W			38	1	X									1	
351236N	0772359	1	289	USGS TEST HOLE	T	D		90												
351234N	0772345	1	290	MIKE KUSHMAN	W	P		105	2	X	5	5							3	
351217N	0772323	1	291	E LEE	U			162	4	O	3	3								
351155N	0772207	1	292	OATES LUMBER CO	W	P		280	6	S	18	18							4	

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QM analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water Level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No	
Lat	Long													Iron	SO ₄	Cl	Hardness		Sp. Cond.
350207N	0770003	1	353	WILLIAMS	W	P		123		1	X				5	0	5	3	2
350127N	0765916	1	354	GIBBLE	W	P		119		2	X	24			5	0	6	4	2
350007N	0770143	1	355	USGS TEST HOLE	T		D	45		1	X	3			7	1	5	3	2
345945N	0765826	1	356	BLANCHARD	W	P		135		1	X	20			6	0	6	3	2
345830N	0765623	1	357	MULLINS	W	P		110		1	X				6	0	6	3	2
345712N	0765706	1	358	W E HARDISON	W	P		190		1	X	15			7	1	6	4	2
345813N	0765825	1	359	CROATAN SCHOOL	W			75	63	2	X								2
345813N	0765825	2	360	CROATAN SCHOOL	W			110	63	1	X								2
345721N	0770138	1	361	USGS TEST HOLE	T		D	122		1	T	12							
345617N	0770335	1	362	USGS TEST HOLE	O		D	105 e/	103	1	T	3							
345434N	0770606	1	363	USGS TEST HOLE	T		D	137		2	X	3							
345510N	0765622	1	364	ABC CLEANERS	W	P		180	160	2	X	14			5	0	6	3	2
345502N	0765630	1	365	BOWDEN : KERR	W	P		80	55	2	X	2			7	0	1	1	2
345300N	0765646	1	366	CONNORS TRAILER	W			147	78	6	X	5	800			0	5	4	2
345145N	0765640	1	367	JONES	W	P		85		1	X				7	1	6	2	
345034N	0765656	1	368	USGS TEST HOLE	T		D	117	96	3	X	2							
345115N	0765457	1	369	JIM ASKEW	W		D	130		3	X	2							
345104N	0765337	1	370	USGS TEST HOLE	T		D	60											
345155N	0765424	1	371	S H REAMES	W	P		130	90	2	X	12			3	0	6	3	2
345233N	0765423	1	372	CHRISTY HAYES	W			125	78	2	X								
345329N	0765449	1	373	SHELTON:ASHBY	W			91	70	2	X	15							
345329N	0765449	1	374	SGT BOHANAN	W			63	57	2	X								
345313N	0765450	1	375	HARRY INMAN	W			70	57	2	X	18							
345313N	0765450	2	376	CLIFTON DANIELS	W			84	60	2	0	19							

e/ Originally drilled to 112 feet.

345301N	0765422	1	377	USMC	W	P	D	116	112	4	X	3	36	5	1	5
345300N	0765410	1	378	USMC	W	P	D	97 f/	95	8	X	0	190	5	1	5
345308N	0765403	1	379	USMC	W	P	D	155	155	4	0	3		7	1	6
345412N	0765432	1	380	USMC	W	P	D	215	210	6	X	12	180	5	0	5
345427N	0765435	1	381	USMC	W	P	D	207	179	6	X	12	164	2	0	5
345513N	0765419	1	382	USMC	W	P	D	275	274	6	0	12	300			
345506N	0765434	1	383	USMC	W	P	D	90	82	4	X	16	33	5	1	5
345605N	0765422	1	384	USMC	W	P	D	190	179	6	X	15	200	6	0	5
345647N	0765259	1	385	USMC	U	J		200		4	X	19				
345445N	0765358	1	386	USMC	W	P	D	294	292	8	X	11	257	5	0	5
345422N	0765403	1	387	USMC	W	P	D	367	367	8	0	13	327	5	0	5
345404N	0765406	1	388	USMC	W	P	D	220	203	8	X	4				
345350N	0765334	1	389	USMC	W	P	D	289	236	8	X	12	412			
345403N	0765322	1	390	USMC	W	P	D	128	119	4	X	15	31	4	0	5
345411N	0765336	1	391	USMC	W	P	D	130	115	4	X	15	43	4	1	4
345439N	0765333	1	392	USMC	W	P	D	327	300	8	X	16	413	5	0	5
345426N	0765313	1	393	USMC	W	P	D	132	129	4	X	15	71	5	1	5
345350N	0765251	1	394	USMC	W	P	D	211	191	4	X	14	77	5	0	6
345405N	0765241	1	395	USMC	W	P	D	160	126	6	X	19	36	5	1	5
345424N	0765227	1	396	USMC	W	P	D	115	106	4	X	15	30	5	1	5
345442N	0765246	1	397	USMC	W	P	D	220	217	6	X	14	164	5	1	4
345224N	0765126	1	398	USGS TEST HOLE	T	P	D	112	185	1	T	9	2			
345224N	0765138	1	399	LUNDYS TRAILER	W	P		265		8	X		800	7	0	0
345206N	0765021	1	400	HYMANS CHAPEL	W	P		35		1	0				0	1
345229N	0764859	1	401	JONES	W	P		28	28	1	0	9		6	1	3
345200N	0764802	1	402	USGS TEST HOLE	T	P	D	125		4	0	3				
345606N	0764834	1	403	STATE OF NC	W	P		23	23	2	0	15		5	1	1
345458N	0764603	1	404	UNKNOWN	W	P		55		2	0			4	1	3
345441N	0764546	1	405	DUDLEY	W	P		55	55	1	0			4	1	3
345433N	0764731	1	406	UNKNOWN	W	P		23	23	1	0	13		5	1	1
345352N	0764704	1	407	USGS TEST HOLE	T	P		112		1	S	9				
345346N	0764721	1	408	ELLIS	W	P		45	45	1	0	10		2	1	3
345245N	0764720	1	409	REED	W	P		18	15	1	T	8		5	0	1
345244N	0764620	1	410	PRIVETTE	W	P		18	15	1	T	10		5	2	1
345209N	0764717	1	411	PILGRIMS CHURCH	W	P		32	32	1	0	10		5	2	1
345144N	0764618	1	412	TAYLOR	W	P		134	134	2	0			6	1	1

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f/ Originally drilled to 125 feet.

Table 1.--Records of wells in Craven County, N. C.--Continued

Well location		Sequence No.	Well No. (Cr...)	Owner	Use	QW analysis	Log data	Depth (feet)	Depth cased (feet)	Diameter (in)	Finish	Water level (feet below MP)	Yield (gpm)	Quality of water				Aquifer No.		
Lat	Long													Iron	SO ₄	Cl	Hardness		Sp. Cond.	
345051N	0764537	1	413	USGS TEST HOLE	T		D	117	240	1	X	2				5	1	6	3	2
345107N	0764506	1	414	TAYLOR	W	P		245		1		3				6	1	6	3	2
345206N	0764439	1	415	USGS TEST HOLE	T		D	127	32	1	0	7				6	1	6	3	1
345233N	0764453	1	416	GODDET	W	P		32		30	W	1				5	1	4	2	1
345300N	0764453	1	417	UNKNOWN	W	P		6		1	0	12				5	1	4	2	1
345325N	0764454	1	418	BECTON	W			45		2	X									
345358N	0764454	1	419	BECTON	W			90												
345432N	0764521	1	420	USGS TEST HOLE	T		D	122		1	0	3	4							
345511N	0764511	1	421	H N HARRIS	W			150	76	2	0	10				8	1	2	1	2
345415N	0764353	1	422	OAK GROVE CH	W	P		76		2	0	0								
345506N	0764353	1	423	USGS TEST HOLE	T		D	132		30	W	5								
345514N	0764338	1	424	C H SMITH	W			15												
345702N	0764242	1	425	MARTIN	W	P		76		2	0					4	2	2	3	2
345623N	0764155	1	426	USGS TEST HOLE	O		D	112	103	1	T	1								
345457N	0764125	1	427	JONES	W	P		17	15	1	T	7				7	1	3	2	1
345704N	0764105	1	428	CIVILS	W			12	10	1	T	5								
345551N	0764016	1	429	USGS TEST HOLE	T		D	132				3								
345617N	0763955	1	430	TESCH	W	P		200	200	2	X	1				5	2	6	4	2
351038N	0771752	1	431	CITY OF NEW BERN	W	C	EDJ	846g/		8	S		1400							7,8
345050N	0765735	1	432	GREAT LAKE DRLG CO	T		D	2351												
345105N	0765844	1	433	CHARLES BRYAN NO 1	T		E	2411												
351758N	0772508	1	434	H L WHITE	W	P		315	170	2	S									4
350725N	0770300	1	435	MAOLA MILK & ICE CR	T		J	350	325	8	0									3
351111N	0770254	1	436	USGS TEST HOLE	T		D	58												

g/ Originally drilled to 915 feet.

351400N	0770333	1	437	USGS TEST HOLE	T	D	35	1
352012N	0771027	1	438	USGS TEST HOLE	T	D	68	2
351635N	0771351	1	439	USGS TEST HOLE	T	D	98	2
351307N	0771145	1	440	USGS TEST HOLE	T	D	135	2
351523N	0771751	1	441	USGS TEST HOLE	T	D	77	2
351555N	0772442	1	442	USGS TEST HOLE	T	D	57	2
345748N	0765718	1	443	USGS TEST HOLE	T	D	64	1
351245N	0771030	1	444	USGS TEST HOLE	T	D	82	
351102N	0770305	1	445	USGS TEST HOLE	T	D	32	
351240N	0770830	1	446	USGS TEST HOLE	T	D	32	
350925N	0770605	1	447	USGS TEST HOLE	T	D	40	
350826N	0770558	1	448	USGS TEST HOLE	T	D	37	
345538N	0770510	1	449	WEYERHAEUSER CO	T	DE	700	2,3,4
345556N	0770452	1	450	WEYERHAEUSER CO	T	D	302	2
345606N	0770444	1	451	WEYERHAEUSER CO	T	DE	300	2
345612N	0770430	1	452	WEYERHAEUSER CO	T	DE	311	2
345721N	0770200	1	453	WEYERHAEUSER CO	T	DE	700	2
351106N	0771755	1	454	TULL JACKSON	O	E	852	
351110N	0771818	1	455	CITY OF NEW BERN	W	E		1400
351104N	0771725	1	456	CITY OF NEW BERN	W	E		1400

Explanation of Quality of Water Code

<u>Code Number</u>	<u>Iron Range (mg/l)</u>	<u>Code Number</u>	<u>Hardness Range (mg/l)</u>
0	0.00-0.05	0	0-10
1	0.06-0.1	1	11-20
2	0.11-0.30	2	21-50
3	0.31-0.50	3	51-100
4	0.51-1.0	4	101-150
5	1.1 -3.0	5	151-200
6	3.1 -5.0	6	201-300
7	5.1 -10	7	301-500
8	11 -15	8	501-1,000
9	More than 15	9	more than 1,000

<u>Code Number</u>	<u>Sulfate Range</u>	<u>Code Number</u>	<u>Specific Conductance Range (micromhos)</u>
0	0-10	0	0-50
1	11-25	1	51-150
2	26-50	2	151-300
3	51-100	3	301-500
4	101-150	4	501-1,000
5	151-200	5	1,001-2,000
6	201-250	6	2,001-5,000
7	251-500	7	5,001-10,000
8	501-1,000	8	10,000-20,000
9	more than 1,000	9	more than 20,000

<u>Code Number</u>	<u>Chloride Range</u>
0	0-10
1	11-25
2	26-100
3	101-250
4	251-500
5	501-1,000
6	1,001-2,000
7	2,001-5,000
8	5,001-20,000
9	more than 20,000

Table 2.--Chemical analyses of water

(Results in milligrams per liter except temperature, specific conductance, pH, and color)

Well No.	Date of collection	Aquifer No.	Depth sampled (in feet)	Silica (SiO ₂)	Aluminum (Al)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO ₃)	Carbonate (CO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Phosphate (PO ₄)	Total Dissolved Solids (g/l)	Hardness as CaCO ₃		Temperature (°C)	Specific conductance (micro-mhos at 25°C)	pH	Color		
																				Calcium, magnesium	Non-carbonate						
24	10-19-62	4	320-330	11	0.4	0.10	0.02	3.7	1.2	270	12	545	48	15	44	5.3	0.1	0.2	679	16	0	--	1110	8.9	33		
24	10-16-62	6	540-550	9.4	.5	.10	.00	3.0	1.0	216	8.1	451	23	4.0	12	3.1	.3	1.6	525	14	0	--	863	8.8	35		
24	10-13-62	7	670-680	11	.2	.04	.00	2.6	1.0	212	8.2	405	11	1.8	67	4.4	.1	3.1	530	10	0	--	902	8.4	35		
136	1-23-64	2	30-40	13	--	.50	.00	51	11	3.5	3.8	204	0	2.8	7.4	.1	.1	.0	193	172	5	--	312	7.4	--		
136	1-24-64	4	302-312	26	--	.07	.00	46	27	42	13	352	0	3.4	25	.3	.1	.0	356	225	0	--	568	7.5	--		
175	1-23-64	5	443-453	16	--	.17	.00	6.6	7	610	22	1150	0	34	302	2.4	--	.2	1570	46	0	19	2510	8.2	--		
175	9-2-62	2	250-260	39	.0	.02	.00	67	18	13	4.5	231	0	8.6	14	.0	.0	.1	307	244	5	18	493	7.6	5		
175	8-31-62	3	266-286	34	.1	.01	--	86	11	21	12	339	0	5.2	18	.2	.3	.0	355	260	0	19	570	7.4	4		
175	8-30-62	3	344-360	31	.1	.02	--	78	13	36	12	350	0	12	36	.2	.1	.0	381	250	0	19	648	7.5	5		
175	8-30-62	4	379-389	26	.2	.07	--	76	10	35	11	269	0	29	44	.5	.2	.1	365	231	10	--	590	7.5	4		
175	8-20-62	6	640-650	--	--	--	--	69	1.8	98	10	16	--	--	202	--	--	--	--	180	167	--	--	--	7.0	--	
175	8-13-62	7	800-820	--	--	--	--	15	11	1330	42	723	4	--	1600	--	--	--	--	82	0	--	--	5970	8.3	--	
221	2-10-63	2	80-100	22	--	2.1	--	7.1	.2	6.0	2.0	230	0	1.8	6.0	.0	.0	.0	160	187	0	--	--	7.5	--		
221	2-27-63	2	190-200	34	--	1.2	--	61	6.3	4.8	7.0	225	0	.2	7.2	.1	.0	.0	232	180	0	--	--	7.9	--		
221	3-3-63	4	340-350	5.6	--	--	--	22	32	1140	50	994	0	256	1100	1.3	.0	.0	3100	187	0	--	--	5170	7.9	--	
221	3-13-63	5	480-490	9.4	--	2.9	--	7.4	13	1130	45	1320	0	53	1020	2.5	.0	.1	2940	73	0	--	--	4380	7.9	--	
239	7-29-63	2	55-80	--	--	--	--	29	2.1	--	--	--	--	--	7.4	.3	.0	.0	--	80	--	--	--	--	--	--	
241	8-22-63	2	50	--	--	3.6	--	98	12	--	--	--	--	--	140	.3	.0	.0	--	296	--	--	--	--	--	--	
258	6-19-63	2	41	12	--	1.1	--	62	4.1	5.5	1.1	203	0	8.4	5.6	.2	.3	.0	200	172	6	--	--	309	7.4	--	
258	6-19-63	3	330-340	9.7	--	--	--	13	9.8	516	17	737	9	109	360	1.7	.4	.0	1430	72	0	--	--	2320	8.3	--	
258	6-19-63	4	382-392	9.5	--	1.2	--	10	12	574	20	768	0	114	510	1.8	.2	.0	1630	76	0	--	--	2610	7.9	--	
266	2-10-64	4	250-260	29	--	.59	.00	62	41	45	14	478	0	14	20	.3	.2	.0	461	324	0	--	--	785	7.5	--	
266	7-7-64	5	378-388	8.8	--	.26	--	11	11	498	20	641	0	157	319	2.6	.0	.0	1340	74	0	--	--	2300	8.2	--	
305	10-10-62	2	152-162	19	.1	1.5	.04	57	4.9	15	3.5	211	0	4.6	8.4	.2	.0	.1	217	162	0	18	--	353	7.6	2	
305	10-10-62	3	240-250	26	.2	.78	.04	71	14	73	11	356	0	12	68	.6	.1	.1	452	236	0	19	--	763	7.6	8	
305	10-10-62	4	307-317	8.0	.2	.06	.02	19	18	398	20	524	0	62	347	2.4	.0	.0	1150	122	0	--	--	2000	8.1	--	
305	10-8-62	4	360-370	7.7	.3	.30	.00	11	8.6	330	20	368	20	70	374	2.4	.2	.1	1100	63	0	--	--	1900	8.6	15	
305	10-6-62	5	439-449	8.7	.1	.57	.00	8.0	8.0	645	28	634	10	109	566	3.2	.3	.0	1700	56	0	19	--	2920	8.3	12	
305	10-6-62	6	540-550	--	--	--	--	2.6	2.0	--	--	--	--	--	141	--	--	--	--	14	--	--	--	--	--	--	
305	10-2-62	6	690-700	9.0	.3	.49	.00	3.7	1.0	445	14	821	39	7.4	145	7.0	.5	.3	1058	14	0	--	--	1630	8.6	50	
305	10-2-62	7	811-821	9.5	.3	.44	.01	1.9	1.8	232	8.4	485	35	6.8	55	2.0	.6	.9	577	14	0	--	--	932	8.8	32	
311	6-26-63	3	336-346	22	--	.41	--	69	13	96	9.7	397	0	24	79	.6	.4	.1	510	228	0	--	--	711	8.1	--	
311	6-24-63	4	376-386	5.6	--	--	--	21	23	942	28	654	25	292	914	1.3	.2	.0	2570	149	0	--	--	3700	8.6	--	
311	7-5-63	5	625-635	--	--	--	--	--	--	--	--	--	--	--	430	3.0	--	--	--	28	--	--	--	--	2700	--	--
311	7-4-63	6	782-792	--	--	2.1	--	4.2	4.0	--	--	1040	56	--	254	3.2	.4	--	--	27	0	--	--	2310	8.7	--	
311	7-2-63	7	878-888	--	--	--	--	6.8	5.1	--	--	962	48	--	618	2.9	.3	--	--	38	0	19	--	3280	8.7	--	
431	10-9-64	5	297-312	12	--	.61	--	23	5.5	120	9.1	403	0	4.0	14	.5	.2	.4	387	80	0	--	--	845	8.1	8	
431	10-9-64	7	490-505	10	--	.21	--	2.6	.5	188	10	457	22	1.2	8.2	1.3	.3	1.1	470	8	0	--	--	646	8.7	18	
431	10-1-64	7	565-580	9.3	--	.25	--	2.6	.8	200	10	483	31	4.6	7.6	1.8	.3	.9	507	10	0	--	--	700	8.6	38	
431	10-1-64	8	715-730	11	--	.16	--	2.4	.6	100	5.0	233	10	3.4	15	.5	.2	1.0	262	8	0	21	--	370	8.8	15	
431	9-25-64	8	805-815	11	--	.70	.00	2.7	.4	138	7.0	289	6	6.8	42	.9	.4	1.1	359	9	0	--	--	664	8.4	20	
451	3-26-65	8	297-315	11	--	.08	.00	2.2	.2	118	5.8	265	13	3.2	10	.7	.7	.9	297	6	0	21	--	448	8.7	10	
73a	5-24-55	2	61-138	--	--	.40	.05	32	2.2	9.1	--	119	0	3.0	5.8	--	.2	--	140	89	--	17	--	212	8.7	--	

g Dissolved solids calculated as sum of determined constituents.

b Field pH meter value.

Table 3.--Lithologic and stratigraphic logs of wells in Craven County

WELL NUMBER 1

Location: 351742N0765766.1
 Depth: 132 feet
 Elevation of land surface: 34 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
Post-Miocene--undifferentiated	
0-5	Clay, brown
5-10	Silt, gray
Late Miocene--Yorktown Formation	
10-55	Silt, gray
55-85	Sand, gray
85-90	Sandy clay
90-95	Angular gravel
95-100	Angular gravel, sand, and cemented shell and sand
100-105	Sand, gray and shell
Eocene--Castle Hayne Limestone (Eocene fossils very sparse, chiefly recrystallized forms)	
105-120	Sand, gray and shell
120-132	Sand, greenish gray and shell

WELL NUMBER 3

Location: 351515N076543.1
 Depth: 122 feet
 Elevation of land surface: 48

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
Post-Miocene(?)--undifferentiated	
0-5	Clay, brown
5-40	Sand, gray
40-50	Silty sand, gray
50-70	Sand, gray

Middle Miocene--(?)

(Definite middle Miocene upper boundary at 70 feet. The Yorktown Formation may be absent. Abundant Radiolaria at 80 feet.

70-80	Sand, gray
80-90	Sandy clay, greenish gray
90-100	Clayey sand, greenish gray, shells and gravel
100-110	Clayey sand, greenish gray, shells, gravel, and coarse white sand
110-122	Clayey sand, greenish gray, shells and gravel

WELL NUMBER 5

Location: 351652N0.770025.1
Depth: 112 feet
Elevation of land surface: 40

Date drilled: 1962
Driller: USGS

Depth
(feet)

Description

Post-Miocene--undifferentiated

0-5	Silt, brown
5-10	Clayey silt, gray

Late Miocene--Yorktown Formation

(Boundary between late and middle Miocene deposits well defined)

10-40	Clayey silt, gray
40-60	Sandy silt, gray
60-65	Sandy silt, hard, gray
65-80	Sand, gray

Middle Miocene--(?)

(Bulimina elongata and Trachyleberis evax common)

80-100	Sand, gray
100-105	Sand, greenish gray

Eocene(?)--Castle Hayne Limestone

(Bottom sample had a mixture of Eocene and middle Miocene foraminifera--probably represents contamination)

105-112	Sand, greenish gray
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WELL NUMBER 8

Location: 351431N0765859.1
 Depth: 112 feet
 Elevation of land surface: --

Date drilled: 1962
 Driller: USGS

Depth
(feet)

Description

Post-Miocene--undifferentiated

0-5 Clayey sand, brown

Oligocene--undifferentiated

(The top of this unit is placed at five feet on basis of microlithology. Definitive fossils occur from 55 feet to the bottom of the hole.)

5-55 Silty sand, gray
 55-65 Clayey sand, gray
 65-85 Sand, gray, and some shell
 85-112 Sand, gray, some clay, gravel, and shell

WELL NUMBER 9

Location: 351248N0765709.1
 Depth: 109 feet
 Elevation of land surface: 34 feet

Date drilled: 1962
 Driller: USGS

Depth
(feet)

Description

Post-Miocene--undifferentiated

0-5 Clayey sand, brown
 5-20 Silty sand, gray

Late Miocene-Yorktown Formation

20-50 Silty sand, gray
 50-85 Sand, gray

Oligocene(?)--undifferentiated

(Interval contains middle Miocene--Oligocene faunal mixture)

85-109 Sandy clay, shells and gravel

WELL NUMBER 17

Location: 351519N0770047.1
 Depth: 132 feet
 Elevation of land surface: 31 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-5	Clay, brown
5-10	Sandy silt, brown
	Late Miocene--Yorktown Formation (Fossil fauna scarce in this interval. A large number of sponge fragments are commonly found in the late Miocene.)
10-25	Sandy silt, gray
25-70	Sand, gray
70-105	Sand, gray, gravel, cemented shell and sand
	Eocene--Castle Hayne Limestone (Eocene fossils abundant and well preserved. No middle Miocene fauna in this well.)
105-125	Sand, gray
125-132	Sand, greenish gray

WELL NUMBER 18

Location: 352010N0770539.1
 Depth: 116 feet
 Elevation of land surface: 28 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-5	Clayey sand, brown
5-15	Clayey sand, gray
	Late Miocene--Yorktown Formation
15-25	Clayey sand, gray
25-50	Sand, gray
50-75	Sand, greenish gray

Eocene--Castle Hayne Limestone
 (This interval represents the middle (Claiborne) part of
 the Castle Hayne Limestone.)

75-115 Sand, greenish gray
 115-116 Limestone(?), gray

WELL NUMBER 19

Location: 352200N0770610.1
 Depth: 112 feet
 Elevation of land surface: 37 feet

Date drilled: 1962
 Driller: USGS

<u>Depth</u> (feet)	<u>Description</u>
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Post-Miocene--undifferentiated

0-5	Sandy clay, gray
5-10	Sand, gray
10-25	Silty sand, gray

(?)Eocene--Castle Hayne Limestone(?)

No fossil fauna found in this interval. Probably Eocene on
 basis of microlithology.)

25-60	Silty sand, gray
60-85	Silty sand, brown
85-90	Silty sand, gray

Eocene--Castle Hayne Limestone
 (Eocene fossils abundant from 90-103 feet)

90-105	Silty sand, gray
105-112	Glaucconitic sand and clay

WELL NUMBER 24

Location: 352305N0770042.1
 Depth: 959 feet
 Elevation of land surface: 50 feet

Date drilled: 1962
 Driller: R. L. Magette

<u>Depth</u> <u>(feet)</u>	<u>Description</u>
Post-Miocene surficial sands and clays--undifferentiated	
0-5	Clay, red-brown mottled; 95 percent red to brown clay. 5 percent very fine subangular to subrounded clear quartz sand. Trace of fine-grained phosphate, limonite-stained quartz, fine-grained muscovite. Foraminifera very rare, no Ostracoda.
5-10	Clay and sand, gray-brown mottled; 40 percent light-gray clay. 40 percent tan clay, 20 percent very fine subangular to subrounded clear quartz sand. Trace of limonite-stained quartz. No microfossils.
10-15	Sand, light-gray; Fine angular to subangular clear quartz sand. Trace of reddish-brown clay. No microfossils.
Late Miocene--Yorktown Formation	
15-22	Clay, dark-gray; 90 percent dark-gray clay. 10 percent fine angular to subangular clear quartz sand. Trace of reddish-brown clay. No microfossils.
22-32	Sand, tan; medium rounded to subrounded clear quartz sand. Trace of brown clay, frosted quartz grains, rose quartz. Foraminifera very rare, no Ostracoda.
32-37	Sand, light-gray; medium rounded to subrounded clear quartz sand. Trace of limonite-stained quartz, fine-grained glauconite. Foraminifera very rare, no Ostracoda.
37-42	Marl, light-gray; 50 percent coarse-sand-size particles of blue-gray limestone. 50 percent coarse rounded to subrounded clear quartz sand. Trace of siderite, phosphate. Foraminifera and Ostracoda rare.
42-47	Sand and shell, light-gray; 70 percent coarse rounded to subrounded clear quartz sand. 30 percent coarse dark-gray shell and limestone fragments. Trace of glauconite, siderite, phosphate. No microfossils.
Middle Eocene--Castle Hayne Limestone	
47-63	Limestone and sand, light-gray; 80 percent coarse light-gray limestone fragments. 20 percent coarse subrounded to rounded clear quartz sand. Coarse broken shell fragments prominent. Foraminifera rare, no Ostracoda.

- 63-68 Clay and limestone, light-gray; 50 percent light-gray highly calcareous clay. 35 percent coarse fragments of dark-gray limestone. 15 percent medium to coarse subangular to subrounded clear quartz sand. Trace of siderite. Foraminifera and Ostracoda abundant.
- 68-73 Limestone and clay, light-gray; 60 percent coarse fragments of light-gray to white limestone. 30 percent light-gray highly calcareous clay. 10 percent medium subrounded to rounded clear quartz sand. Shell fragments prominent. Foraminifera and Ostracoda abundant.
- 73-78 Limestone, light-gray; same as 68-73 foot interval with 20 percent decrease in clay and corresponding increase in limestone fragments. Foraminifera common, no Ostracoda.
- 78-104 Limestone, light-gray; very coarse particles of light-gray to white limestone. Trace of fine-grained phosphate. Coarse rounded clear quartz sand prominent. Foraminifera common, Ostracoda rare.
- 104-109 Limestone, light-gray; fine gravel-size particles of dark-gray to white limestone. Fine-grained light-green glauconite prominent. Trace of light-gray calcareous clay. Foraminifera common, Ostracoda very rare.
- 109-114 Limestone and sand, light-gray; 50 percent coarse sand-size particles of light-gray to white limestone. 35 percent fine subangular to subrounded clear quartz sand. 15 percent light-gray calcareous clay. Fine-grained phosphate and light-green glauconite prominent. Trace of pyrite aggregates. Foraminifera common, no Ostracoda.
- 114-152 Limestone and sand, light-gray; 75 percent coarse sand-size particles of light-gray to white limestone, 25 percent fine subrounded to subangular clear quartz sand. Fine-grained phosphate and light-green glauconite prominent. Foraminifera and Ostracoda common.

Paleocene--Beaufort Formation

- 152-155 Glauconitic sand and limestone, green-gray mottled; 35 percent fine- to medium-grained dark- to light-green glauconite, 35 percent fine subangular to subrounded clear quartz sand, 25 percent medium sand-size particles of shell and white limestone, 5 percent light-gray clay. Trace of fine-grained phosphate. Foraminifera common, Ostracoda rare.
- 155-160 Glauconitic sand and limestone, green-gray mottled; same as 152-155 foot interval with 10 percent decrease in glauconite and corresponding increase in limestone fragments. Foraminifera and Ostracoda abundant.

- 160-170 Glauconitic sand, green-gray mottled; 70 percent fine subangular to subrounded clear quartz sand, 25 percent fine-grained dark-green glauconite, 5 percent fine sand-size particles of white limestone. Siderite prominent. Foraminifera and Ostracoda common.
- 170-186 Glauconitic sand, green-gray mottled; same as 160-170 foot interval with slight decrease in glauconite and corresponding increase in fine quartz sand. Foraminifera and Ostracoda common.

Upper Cretaceous--Peedee Formation

- 186-196 Glauconitic sand and shell, medium-gray; 75 percent medium subangular to subrounded clear quartz sand, 15 percent coarse broken shell fragments and white limestone fragments, 10 percent medium-grained dark-green glauconite. Siderite prominent. Trace of phosphate, pyrite aggregates, rose quartz. Foraminifera and Ostracoda common.
- 192-201 Sand, medium-gray; 90 percent fine subangular to subrounded clear quartz sand, 10 percent fine to medium sand-size shell and white limestone fragments. Fine-grained dark-green glauconite prominent. Trace of siderite, pyrite aggregates. Foraminifera and Ostracoda common.
- 201-206 Sand, medium-gray; same as 196-201 foot interval with slight increase in shell and limestone fragments and corresponding decrease in fine quartz sand. Foraminifera and Ostracoda common.
- 206-211 Shell and sand, dark-gray; 45 percent coarse fragments of shell and medium-gray limestone, 35 percent fine to coarse subangular to subrounded clear quartz sand, 20 percent medium-gray calcareous clay. Medium-grained dark-green glauconite prominent. Trace of pyrite aggregates, phosphate. Foraminifera abundant, Ostracoda common.
- 211-232 Sand and shell, dark-gray; 80 percent fine to medium subangular to subrounded clear quartz sand, 20 percent medium to coarse broken shell fragments. Medium-grained dark-green glauconite and light-gray clay prominent. Trace of siderite, pyrite aggregates, medium-gray limestone, brown clay, phosphate. Foraminifera and Ostracoda common.
- 232-242 Sand, light-gray; very fine subangular to subrounded clear quartz sand. Fine-grained dark-green glauconite and fine shell fragments prominent. Trace of phosphate. Foraminifera abundant, Ostracoda common.

- 242-247 Sand and limestone, light-gray; 70 percent medium sub-rounded clear quartz sand, 20 percent medium sand-size fragments of white to light gray limestone, 10 percent light-gray clay. Medium-grained glauconite and shell fragments prominent. Trace of phosphate. Foraminifera common, no Ostracoda.
- 247-262 Sand, light-gray; very fine angular to subangular clear quartz sand. Fine-grained glauconite and medium-grained white limestone fragments prominent. Trace of siderite, pyrite aggregates, medium quartz sand. Foraminifera common, Ostracoda rare.
- 262-283 Limestone and clay, dark-gray; 65 percent very coarse sand-size particles of dark-gray to white limestone, 15 percent medium-gray calcareous clay, 10 percent coarse rounded quartz sand, 10 percent fine to medium angular to subangular clear quartz sand. Trace of fine-grained glauconite, phosphate, pyrite aggregates. Foraminifera common, no Ostracoda.
- 283-288 Sand and clay, dark-gray; 60 percent very fine angular to subangular clear quartz sand, 25 percent medium-gray clay, 15 percent fine gravel-size particles of light-gray limestone, dark gray limestone and sand aggregates, and shell fragments. Trace of fine rounded quartz gravel, medium-grained phosphate. Fine-grained dark-green glauconite prominent. Foraminifera abundant, Ostracoda rare.
- 288-309 Sand and clay, dark-gray; 30 percent very fine angular to subangular clear quartz sand, 30 percent dark-gray clay matrix, 20 percent fine gravel-size particles of white limestone and shell fragments, 10 percent fine rounded, stained quartz gravel, 10 percent very fine-grained dark-green glauconite. Limestone-sand aggregates prominent. Trace of fine-grained phosphate. Foraminifera abundant, Ostracoda rare.
- 309-319 Glauconitic sand and clay, dark-gray; 40 percent very fine angular to subangular clear quartz sand, 30 percent dark-gray calcareous clay, 25 percent very fine-grained dark-green glauconite, 5 percent coarse broken shell fragments, fine gravel-size limestone-sand aggregates, and fine smokey quartz gravel. Foraminifera abundant, Ostracoda rare.
- 319-324 Glauconitic sand and clay, dark-gray; same as 309-319 foot interval with 5 percent increase in fine-grained glauconite and corresponding decrease in fine quartz sand. Foraminifera abundant, Ostracoda rare.

- 324-350 Glauconitic sand and clay, dark-gray; 35 percent very fine angular to subangular clear quartz sand, 30 percent dark-gray clay, 20 percent fine-grained dark-green glauconite, 15 percent coarse sand to fine gravel-size limestone and sand aggregates, coarse shell fragments, and fine rounded quartz gravel. Trace of phosphate. Trace of rose quartz. Foraminifera abundant, Ostracoda rare.
- 350-360 Glauconitic sand and clay, dark-gray; same as 324-350 foot interval with trace of medium rounded quartz gravel. Foraminifera common, no Ostracoda.
- 360-370 Glauconitic sand and clay, dark-gray; 40 percent fine angular to subangular clear quartz sand, 40 percent dark-gray clay matrix, 20 percent fine-grained dark-green glauconite. Trace of phosphate, limestone and sand aggregates, coarse shell fragments, coarse rounded quartz sand. Foraminifera common, no Ostracoda.
- 370-396 Glauconitic sand and clay, dark-gray; same as 360-370 foot interval with 10 percent decrease in fine quartz sand and glauconite and corresponding increase in limestone and sand aggregates and coarse shell fragments. Medium rounded quartz gravel prominent. Trace of pyrite aggregates. Foraminifera common, Ostracoda rare.
- 396-401 Glauconitic sand, light-gray; 90 percent fine angular to subangular clear quartz sand, 10 percent fine-grained dark-to-light green glauconite. Trace of phosphate, pyrite aggregates, rose quartz, white limestone. Foraminifera common, Ostracoda rare.
- 401-406 Glauconitic sand, light-gray; same as 396-401 foot interval with coarse rounded quartz sand and coarse limestone and sand aggregates prominent. Foraminifera common, Ostracoda rare.

Upper Cretaceous--Snow Hill member of Black Creek Formation

- 406-411 Sand and clay, dark-gray; 65 percent fine angular to subangular clear quartz sand, 25 percent dark-gray clay, 5 percent fine-grained dark-green glauconite, 5 percent fine rounded quartz gravel, broken shell fragments, and limestone and sand aggregates. Trace of siderite, rose quartz. Foraminifera and Ostracoda common.

- 411-469 Sand and clay, dark-gray; 65 percent fine angular to subangular clear quartz sand, 30 percent medium-gray clay matrix, 5 percent fine-grained dark-green glauconite. Trace of coarse shell fragments, fine rounded quartz gravel, rose quartz, pyrite aggregates, limestone and sand aggregates, siderite. Foraminifera common, Ostracoda rare.
- 469-473 Glauconitic sand, dark-gray; 90 percent fine angular to subangular clear quartz sand, 10 percent fine-grained dark-green glauconite. Trace of shell fragments, coarse rounded quartz sand, siderite, pyrite aggregates, phosphate. Foraminifera rare, no Ostracoda.
- 473-493 Sand and clay, dark-gray; 50 percent fine angular to subangular clear quartz sand, 35 percent medium-gray clay, 10 percent fine-grained dark-green glauconite, 5 percent coarse sand to fine gravel-size rounded quartz grains, shell fragments, limestone and sand aggregates. Pyrite aggregates prominent. Trace of brown clay, lignitized wood fragments. Foraminifera common, Ostracoda rare.
- 493-514 Sand and clay, dark-gray; 60 percent fine angular to subangular clear quartz sand, 40 percent medium-gray clay. Fine-grained dark-green glauconite and coarse rounded quartz sand prominent. Trace of pyrite aggregates, shell fragments, limestone and sand aggregates, brown clay, fine-grained muscovite, lignitized wood fragments. Foraminifera common, no Ostracoda.
- 514-519 Sand, medium-gray; medium angular to subrounded clear quartz sand. Fine-grained glauconite and coarse rounded sand prominent. Trace of pyrite aggregates, shell fragments, siderite. Foraminifera rare, no Ostracoda.
- 519-523 Sand, medium-gray; 60 percent medium angular to subrounded clear quartz sand, 40 percent coarse subangular to subrounded quartz sand. Fine-grained dark-green glauconite prominent. Trace of rose quartz, shell fragments, pyrite aggregates, siderite, black clay. Foraminifera rare, no Ostracoda.
- 523-528 Sand, light-gray; 90 percent fine subangular to subrounded clear quartz sand, 10 percent fine-grained dark-green glauconite. Coarse rounded quartz sand prominent. Trace of pyrite aggregates, phosphate, shell fragments, rose quartz. Foraminifera and Ostracoda rare.

- 528-533 Sand and clay, dark-gray; 50 percent medium subangular to subrounded clear quartz sand, 20 percent dark-gray clay, 20 percent fine angular to subangular clear quartz sand, 10 percent fine to medium rounded stained quartz gravel. Trace of fine-grained glauconite, phosphate, shell fragments. Foraminifera common, Ostracoda rare.
- 533-538 Sand and clay, dark-gray; same as 528-533 foot interval with 10 percent increase in clay and corresponding decrease in medium quartz sand. Foraminifera common, no Ostracoda.
- 538-559 Sand and clay, dark-gray; 50 percent fine angular to subangular clear quartz sand, 30 percent dark-gray clay, 10 percent coarse subangular to subrounded clear quartz sand, 10 percent fine rounded, stained quartz gravel. Trace of shell fragments, phosphate, fine-grained dark-green glauconite, brown clay, rose quartz, lignitized wood. Foraminifera common, no Ostracoda.
- 559-564 Sand and clay, dark-gray; same as 538-559 foot interval with slight decrease in fine quartz gravel. Foraminifera common, Ostracoda rare.
- 564-599 Sand and clay, dark-gray; 40 percent fine angular to subangular clear quartz sand, 30 percent dark-gray clay, 20 percent fine rounded quartz gravel, coarse shell fragments, fine gravel-size particles of limestone and sand aggregates, 10 percent coarse rounded quartz sand. Fine-grained glauconite prominent. Trace of rose quartz, pyrite aggregates, brown clay, lignitized wood fragments. Foraminifera rare, no Ostracoda.
- 599-604 Sand and clay, dark-gray; same as 564-599 foot interval with 10 percent decrease in coarse shell and fine quartz gravel and corresponding increase in fine quartz sand. Foraminifera rare, no Ostracoda.

Upper Cretaceous--Lower unnamed member of Black Creek Formation

- 604-609 Sand and clay, dark-gray; 85 percent fine angular to subangular clear quartz sand, 15 percent dark-gray clay. Fine-grained glauconite prominent. Trace of pyrite aggregates, shell fragments, coarse rounded quartz sand, phosphate, lignitized wood fragments. Foraminifera rare, no Ostracoda.

- 609-631 Sand and clay, dark-gray; same as 604-609 foot interval with coarse rounded quartz sand prominent. Foraminifera rare, no Ostracoda.
- 631-657 Sand, medium-gray; fine angular to subangular clear quartz sand. Medium rounded quartz sand and fine-grained glauconite prominent. Trace of pyrite aggregates, phosphate, brown clay, fine-grained muscovite. Foraminifera and Ostracoda rare.
- 657-678 Sand, medium-gray; same as 631-657 foot interval with light-gray clay prominent. Foraminifera common, Ostracoda rare.
- 678-688 Sand and clay, medium-gray; 80 percent fine subangular to subrounded clear quartz sand, 15 percent light-gray clay, 5 percent coarse rounded quartz sand. Fine-grained dark-green glauconite and coarse sand-size particles of white limestone prominent. Trace of fine-grained muscovite, brown clay, pyrite aggregates, black clay, lignitized wood. Foraminifera common, Ostracoda rare.
- 688-698 Sand, medium-gray; fine angular to subangular clear quartz sand. Light-gray clay and fine-grained dark-green glauconite prominent. Trace of white limestone, sand and glauconite aggregates, pyrite aggregates, coarse quartz sand, black clay. Foraminifera common, Ostracoda rare.
- 698-719 Clay and sand, tan; 90 percent light-brown to light-gray clay; 10 percent very fine angular to subangular clear quartz sand. Trace of fine- to coarse-grained dark-green glauconite, shell fragments, pyrite aggregates, fine rounded quartz gravel, rose quartz, lignitized wood fragments, brown clay. Foraminifera rare, no Ostracoda.
- 719-729 Sand and clay, tan; 60 percent very fine angular to subangular clear quartz sand, 30 percent tan clay matrix, 10 percent coarse rounded quartz sand, coarse sand-sized particles of limestone, and coarse shell fragments. Trace of pyrite aggregates, fine-grained glauconite, phosphate, black clay. Foraminifera very rare, no Ostracoda.
- 729-749 Sand and clay, medium-gray; 60 percent very fine angular to subangular clear quartz sand, 20 percent light-gray clay, 20 percent fine gravel-size particles of sand and glauconite aggregates, limestone and sand aggregates, coarse broken shell fragments, and fine subrounded quartz gravel. Fine-grained dark- to light-green glauconite prominent. Trace of phosphate, pyrite aggregates, black clay, yellow clay, Foraminifera common, Ostracoda rare.

- 749-765 Sand and clay, medium-gray; 80 percent very fine angular to subangular clear quartz sand, 15 percent light-gray clay, 5 percent fine subrounded quartz gravel, coarse broken shell fragments, and limestone and sand aggregates. Pyrite aggregates and fine-grained light- to dark-green glauconite prominent. Trace of phosphate, rose quartz, limonite-stained quartz, black clay, lignitized wood fragments. Foraminifera common, no Ostracoda.
- 765-770 Sand and clay, medium-gray; same as 749-765 foot interval with 15 percent increase in fine quartz gravel, broken shell fragments, limestone and sand aggregates and corresponding decrease in very fine quartz sand. Medium- to coarse-grained phosphate prominent. Foraminifera common, no Ostracoda.
- 770-816 Sand and clay, medium-gray; 80 percent fine angular to subangular clear quartz sand, 15 percent light-gray clay, 5 percent fine rounded to subrounded quartz gravel and limestone and sand aggregates. Fine-grained dark- to light-green glauconite prominent. Trace of coarse-grained phosphate, coarse broken shell fragments, pyrite aggregates, brown clay, lignitized wood fragments. Foraminifera common, no Ostracoda.
- 816-826 Sand, medium-gray; 85 percent fine angular to subangular clear quartz sand, 15 percent medium subrounded to subangular quartz sand. Light-gray clay, fine-grained dark- to light-green glauconite, fine-grained phosphate prominent. Trace of shell fragments, limestone and sand aggregates, limonite-stained quartz, pyrite aggregates, black clay. Foraminifera rare, no Ostracoda.
- 826-831 Sand, medium-gray; same as 816-826 foot interval with slight increase in light-gray clay. Foraminifera rare, no Ostracoda.
- 831-852 Sand, medium-gray, 60 percent fine angular to subangular clear quartz sand, 40 percent medium-to-coarse subangular to subrounded clear quartz sand. Fine-grained dark-green glauconite, fine-grained phosphate prominent. Trace of pyrite aggregates, hematite-stained clay, limonite-stained quartz. Foraminifera rare, no Ostracoda.
- 852-862 Sand, tan; medium subangular to subrounded quartz sand. Limonite-stained quartz and coarse subrounded quartz sand prominent. Trace of shell fragments, fine-grained glauconite, pyrite aggregates, hematite, siderite, phosphate. Foraminifera rare, no Ostracoda.

Upper Cretaceous--Tuscaloosa Formation

- 862-872 Sand, medium-gray; 60 percent medium angular to subangular quartz sand, 40 percent fine angular to subangular clear quartz sand. Limonite-stained quartz, light-gray clay, fine-grained glauconite and phosphate prominent. Trace of pyrite aggregates, hematite, siderite, coarse shell fragments. Foraminifera common, no Ostracoda.
- 872-908 Sand, light-gray; 60 percent fine angular to subangular clear quartz sand, 40 percent medium subangular to subrounded clear quartz sand. Fine-grained glauconite, limonite-stained quartz prominent. Trace of hematite, siderite, pyrite aggregates, shell fragments, phosphate. Foraminifera and Ostracoda very rare.
- 908-929 Clay and sand, brown; 65 percent brown clay, 35 percent very fine to fine angular to subangular clear quartz sand. Fine-grained glauconite and medium subrounded quartz sand prominent. Trace of limonite-stained quartz, hematite, pyrite aggregates, siderite, fine-grained muscovite. Foraminifera rare, no Ostracoda.
- 929-939 Sand, gray-brown; 70 percent fine angular to subangular clear quartz sand, 30 percent medium subangular to subrounded clear quartz sand. Limonite-stained quartz and fine-grained light-green glauconite prominent. Trace of hematite, siderite, phosphate, pyrite aggregates. Foraminifera rare, no Ostracoda.
- 939-944 Sand and clay, dark-gray; 50 percent fine angular to subangular clear quartz sand, 30 percent dark-gray clay, 20 percent medium to coarse subrounded clear quartz sand. Fine-grained glauconite and light-gray limestone prominent. Trace of pyrite aggregates, phosphate, hematite, limonite-stained quartz. Foraminifera rare, no Ostracoda.
- 944-959 Sand, light-gray; fine angular to subangular clear quartz sand. Fine-grained dark- to light-green glauconite and medium angular to subangular quartz sand prominent. Trace of siderite, hematite, pyrite aggregates, phosphate, limonite-stained quartz. Foraminifera very rare, no Ostracoda.
- 950-off bit Clay, red; 90 percent dark red clay, 5 percent very fine angular to subangular clear quartz sand, 5 percent medium subrounded clear quartz sand. Trace of siderite, hematite, fine-grained glauconite, phosphate, pyrite aggregates, fine-grained muscovite. Foraminifera very rare, no Ostracoda.

WELL NUMBER 29

Location: 351748N0770458.1
 Depth: 132 feet
 Elevation of land surface: 36 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-5	Silt, brown
5-15	Silt, gray
	Eocene--Castle Hayne Limestone (First fossil fauna is in 30-35 foot interval and is upper part of Castle Hayne Limestone)
15-60	Sand, gray
	Eocene--Castle Hayne Limestone (Abundant fossil fauna of the middle part of the Castle Hayne Limestone)
60-132	Clayey sand, greenish gray

WELL NUMBER 30

Location: 351600N0770429.1
 Depth: 132 feet
 Elevation of land surface: 24 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-5	Sandy clay, brown
5-15	Sand, gray
	Eocene-Castle Hayne Limestone (Abundant Eocene fossils, especially <u>Textularia hackleyensis</u> beginning at 60 feet)
15-35	Sand, gray
35-60	Sand and gravel, angular, cemented sand and shell
60-132	Sand, greenish gray

WELL NUMBER 33

Location: 351217N0770208.1
 Depth: 112 feet
 Elevation of land surface: 27 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
Post-Miocene--undifferentiated	
0-5	Silt, brown and gray
5-25	Silt, gray
Late Miocene--Yorktown Formation	
25-35	Silt, gray
35-40	Clay, green and silt, gray
40-55	Silt, gray
55-60	Gravel, sand, and clay; angular fragments cemented sand and shell
Oligocene(?)--undifferentiated (Fossil fauna scarce below 60 feet. Age is based on several recrystallized specimens.)	
60-90	Gravel, sand, and clay; angular fragments of cemented sand and shell
90-112	Sand, greenish gray

WELL NUMBER 36

Location: 351010N0770020.1
 Depth: 112 feet
 Elevation of land surface: 26 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
Post-Miocene--undifferentiated	
0-5	Sand, brown
5-15	Sand, gray
Late Miocene--Yorktown Formation	
15-25	Sand, gray
25-35	Silty sand, gray
35-55	Sand, gray, drilling bumpy

Oligocene(?)--undifferentiated

(This interval contains a mixture of Oligocene and middle Miocene fossil fauna. No Eocene fossils found in samples.)

55-65	Sand, gray
65-90	Sand, gray, and shell
90-100	Gravel, and cemented sand and shell
100-112	Sand, gray

WELL NUMBER 37

Location: 350817N0765832.1

Date drilled: 1962

Depth: 122 feet

Driller: USGS

Elevation of land surface: 7 feet

Depth
(feet)

Description

Post-Miocene--undifferentiated
(Base determined from lithology)

0-5	Silty sand, brown
5-10	Clayey silt, brown
10-30	Silty sand, brown

Late Miocene--Yorktown Formation
(The fossil fauna are too few to determine the upper boundary.)

30-40	Sand, brown
40-60	Sand, gray

Eocene--Castle Hayne Limestone
(Abundant fossils below 60 feet)

60-95	Sand, gray, and angular limestone(?) fragments
95-110	Sand, gray
110-115	Sand, gray and gravel
115-122	Sand, gray

WELL NUMBER 43

Location: 350345N0765738.1

Date drilled: 1963

Depth: 36 feet

Driller: USGS

Elevation of land surface: 6 feet

Depth
(feet)

Description

Post-Miocene(?)--undifferentiated

0-5 Sand, tan
5-15 Medium- to coarse-sand, beige

Late Miocene--Yorktown Formation

15-20 Medium- to coarse-sand, beige to brown
20-25 Medium- to coarse-sand, gray, and clay
25-30 Sand, gray, and clay
30-36 Sand and clay, blue-gray, hard at bottom of hole

WELL NUMBER 44

Location: 350734N0765950.1
Depth: 132 feet
Elevation of land surface: 15 feet

Date drilled: 1962
Driller: USGS

Depth
(feet)

Description

Post-Miocene--undifferentiated

0-40 Sand, brown
40-50 Sand, gray

Oligocene(?)--undifferentiated

(The fossil fauna are indicative of older sediment than those of the Yorktown Formation and younger than Eocene sediments, therefore, definite age is pending.)

50-60 Sand, gray and shells
60-65 Sand, gray and gravel-sized angular fragments of cemented sand and shell
65-95 Sand, gray and shell and some cemented fragments
95-105 Sand, gray and some shell
105-115 Sand, gray and angular fragments of cemented sand and shell
115-132 Sand, gray and some shell

WELL NUMBER 65

Location: 351432N0770643.1
Depth: 127 feet
Elevation of land surface: --

Date drilled: 1962
Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Late Miocene--Yorktown Formation
0-20	Sand, brown
20-45	Sand, gray
	Middle Eocene--Upper part of Castle Hayne Limestone (Fossils show secondary crystallization of calcite)
45-65	Sand, greenish gray
65-70	Clayey sand, gray, some gravel and angular fragments of cemented shell
70-105	Clayey sand, greenish gray
	Middle Eocene--Middle part of Castle Hayne Limestone (The fossils show no evidence of secondary crystallization)
105-127	Clayey sand, greenish gray

WELL NUMBER 79

Location: 352257N0771120.1
 Depth: 93 feet
 Elevation of land surface: 40 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-5	Clayey sand, brown
5-15	Sand, brown
15-25	Silty sand, brown
25-30	Silty sand, gray-brown
	Late Miocene--Yorktown Formation
30-75	Silty sand, gray-brown
	Eocene--Castle Hayne Limestone (First abundant fossil fauna at 85 feet)
75-85	Silty sand, gray
85-93	Silty sand, gray and clay

WELL NUMBER 81

Location: 352227N0771407.1
Depth: 67 feet
Elevation of land surface: 19 feet

Date drilled: 1962
Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-10	Sand, brown
	Oligocene(?)--undifferentiated
10-20	Sand, brown
20-25	Sand, dark brown
25-50	Sand, gray-brown
50-67	Sand, gray

WELL NUMBER 82

Location: 352225N0771353.1
Depth: 58 feet
Elevation of land surface: 23 feet

Date drilled: 1962
Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-15	Sand, brown
15-20	Sand, gray
	Oligocene--Undifferentiated (No fossil fauna; the boundary at 20 feet was determined on change in microlithology.)
20-55	Sand, gray
55-58	Sand, brown

WELL NUMBER 87

Location: 352039N0771359.1
Depth: 103 feet
Elevation of land surface: 29 feet

Date drilled: 1962
Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-15	Sand, brown
	Late Miocene--Yorktown Formation
15-25	Sand, brown
	Eocene--Castle Hayne Limestone (A sandy glauconitic zone at 85 feet
25-40	Sand, greenish gray
40-85	Sand, gray
85-100	Sand, greenish gray
100-103	Sand, green

WELL NUMBER 88

Location: 352024N0771331.1
 Depth: 201 feet
 Elevation of land surface: 26 feet

Date drilled: 1955
 Driller: Heater Well Company

<u>Depth (feet)</u>	<u>Description</u>
0-4	Clay, yellow
4-16	Sand, white, coarse
16-18	Clay, blue, soft
18-23	Sand, white, very coarse
23-33	Shellrock and fine sand, soft
33-44	Shellrock and trace of sand, soft
44-47	Shellrock, hard
47-61	Shellrock, hard and soft
61-71	Shellrock, hard streaks
71-83	Hard shellrock
83-86	Soft shellrock and trace of sand
86-93	Soft shellrock
93-101	Soft shellrock and trace of sand
101-106	Glauconitic sand
106-121	Glauconitic sand and shellrock
121-130	Glauconitic sand, some shell
130-138	Glauconitic sand, some shell
138-145	Sand and clay
145-155	Shellrock, streaks of loose sand 149-154 feet
155-161	Shellrock and clay
161-171	Clay
171-180	Unconsolidated medium and fine sand
180-191	Clay (sand at 183 feet)
191-201	Clay

WELL NUMBER 95

Location: 351410N0770849.1
 Depth: 132 feet
 Elevation of land surface: 14 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-25	Sand, brown
	Eocene--Castle Hayne Limestone (The Eocene fossil fauna to a depth of 80 feet are diagnostic of the Jackson Group. The uppermost zone of Claiborne fossil fauna is at a depth of about 85 feet.)
25-35	Sand, brown
35-125	Sand, gray
125-132	Sand, gray and shell

WELL NUMBER 99

Location: 351516N0771115.1
 Depth: 132 feet
 Elevation of land surface: 20 feet

Date drilled: 1962
 Driller: USGS

<u>Depth (feet)</u>	<u>Description</u>
	Post-Miocene--undifferentiated
0-20	Sand, brown
	Eocene--Castle Hayne Limestone--upper part (The first definitive fossil fauna are at 20-25 feet and the sediments probably are of middle(?) Eocene age.)
20-65	Sand, gray
	Eocene--Castle Hayne Limestone (The fossil fauna are well preserved and abundant in this unit.)
65-75	Sand, gray
75-115	Clayey sand, gray
115-132	Sand, gray and shell, some cementing