JO-T-1-84

RKA
Hydrogeology
Geology
Environmental Sciences
Soils

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PART I-- GEOLOGIST REPORT

Water Sample Recommendations

A review of the driller's log, geophysical logs and the well cuttings revealed potential water bearing formations at 905 to 920 ft, 840 to 870 ft., 805 to 815 ft., 720 to 740 ft., and 505 to 585 feet. Water samples should be taken in the upper formation (between505 and 525 ft.) in order to determine the influence of limestone solubility of these uppermost portions of the aquifer. A production well screened in all of the described aquifers will probably derive most of the supply from the 505 to 585 foot zone. Additional samples should be taken from the 840 to 870 foot aquifer and the 905 to 920 foot aquifer to analyse the potential for upconing of underlying brackish water. The zones at 720 to 740 feet and 805 to 815 feet appear to be able to contribute water that should have less chloride than beneath and lower hardness values than above. Grain size analyses should be run on all of the sediment samples in the potential aquifers; it may be necessary to use several screen aperture sizes.

770045
350548

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PART II-- Well Log

GEOLOGIC REPORT

Depth (ft.)	Lithology
0-10	Mottled orange gray fine silty sand with clay. Estimated water table at 3-5 ft.
10-20	Brown with gray mottles fine silty sand with clay
20-30	Brown with gray/orange mottles fine silt with clay and coarse sand and organics
30-40	Brown with gray/orange mottles with purple clay balls and light gray silt and black organics
40-50	Brown with gray/red mottles with light gray silt and black organics
50-60	Brown with gray/black mottles (light gray silt)
60-70	Light gray silty sand with light gray clay - Koolin
70-80	Light gray silty sand (some brown mottles, possible calcareous.
80-90	Light gray green silty sand well sorted - some cement
90-100	Gray green silty sand with light gray clay balls

JONES COUNTY

Well Log

Depth (ft.)	Lithology
100-110	Gray limestone - glauconite - coarse coarse shell fragments - calcaeous
110-120	Gray limestone with sand and coarse shell fragments
120-130	Gray sandy limestone - neat cement - quartz, few small shell fragments
130-140	Gray silty sand, some limestone fragments probably from above
140-150	Light gray silty sand quartzitic with heavy minerals - visually appears bimodal
150-160	Light gray silty sand with shells and limestone fragments; spicules pelecypoda
160-170	Gray silty sand with some shells and limestone fragments
170-180	Gray silty sand with limestone streaks (fine shell hash and calcaeous matrix)
180-190	Gray silty limestone - coarse pebbles (quartz) shell fragments - probably streaks silty limestone
190-200	Brown silty clayey sand w/ orange mottles

JONES COUNTY

Well Log

Depth (ft.)	Lithology
200-210	Brown silty clayey fine sand
210-220	Brown silty clay with fine sand
220-230	Brown silty clay with fine sand
230-240	Brown silty clay with fine sand
240-250	Dark gray silty clay with fine sand
250-260	Dark gray silty clay with fine sand
260-270	Dark brown-gray silty clay with fine white sand
270-280	Dark brown gray silty clay with coarse sand (gravel)
280-290	Dark brown gray silty clay with coarse sand
290-300	Dark brown silty clay with medium sand and organics
300-310	Dark grown silty clay with silt and sand
310-320	Dark brown clay with silt and sand
320-330	Dark brown clay with silt and medium coarse sand
330-340	Dark brown clay with silt and medium sand with coarse shell fragments
340-350	Gray silty sand with clay and coarse shell fragments

JONES COUNTY

Well Log

Depth (ft.)	Lithology
350-360	Grey silty fine sand with medium white sand
360-370	Gray brown fine sand with silt
370-380	Gray brown fine sandy silt
380-390	Gray brown fine sandy silt with sand
390-400	Brown silty clay with sand
400-410	Brown silty clay with fine sand
410-420	Brown silty clay
420-430	Brown silty clay with gray medium sand
430-440	Brown silty clay with some shell fragments and fine sand
440-450	Brown silty clay with some shell fragments and fine sand
450-460	Brown silty clay with shell fragments and fine sand
460-470	Brown silty clay with light gray silt and sand
470-480	Brown clayey silt with fine sand and few shell fragments
480-490	Brown clayey silt with fine sand and few shell fragments
490-500	Dark brown silty clay with few shell fragments

JONES COUNTY

Well Log

Depth (ft.)	Lithology
500-510	Brown/gray fine silty sand with clay
510-520	Brown gray fine silty sand (with glauconite)
520-530	Brown gray fine silty sand (with glauconite)
530-540	Brown/gray sand with silt and glauconite
540-550	Gray medium sand with silt
550-560	Brown silty sand with clay
560-570	Brown silty sand with clay and coarse medium sand
570-580	Brown gray silty fine sand with little clay
580-590	Brown gray silty fine sand with little clay
590-600	Light brown gray medium sand with little glauconite
600-610	Dark grown silty clay with light tan clay balls and tan fine sand
610-620	Brown sandy silt with clay
620-630	Dark brown silty sandy clay, Tan clay balls
630-640	Dark brown silty sandy clay, Tan clay balls

JONES COUNTY

Well Log

Depth (ft.)	Lithology
640-650	Brown sandy clay with silt, tan clay and fine shell fragments
650-660	Brown sandy silty clay
660-670	Brown sandy clay with silt and tan clay
670-680	Brown silty clay with sand
680-690	Dark silty clay with little gray fine sand
690-700	Brown silty clay with little clay
700-710	Brown gray clay with little silt
710-720	Brown gray clay with little silt light green sand
720-730	Brown gray clay with little silt and sand
730-740	Light gray sand with brown clay
740-750	Light gray sand
750-760	Brown clay
760-770	Brown clay
770-780	Brown clay
780-790	Brown silty sandy clay
790-800	Brown silty sandy clay

JONES COUNTY

Well Log

Depth (ft.)	Lithology
800-810	Brown silty sandy clay
810-820	Gray fine medium well sorted sand with glauconite
820-830	Brown sandy clay
830-840	Brown silty clay
840-850	Light brown silty sand with clay
850-860	Light brown silty sand with clay
860-870	Light brown silty sand
870-880	Light brown silty sand
880-890	Brown red silty sandy clay
890-900	Brown red silty clayey fine sand
900-910	Red brown silty sand w/little brown clay
910-920	Red light coarse well sorted sand
920-930	Red, gray and light green silty sandy clay
930-940	Red, white silty clay with fine sand
940-950	Red gray white and light green clay with fine silty sand

NORTH CAROLINA DEPARTMENT OF WATER AND AIR RESOURCES
DIVISION OF GROUND WATER
BOX 9392 - RALEIGH, N. C.

. RECORD
uation Sheet

ler Sydnor Hydrodynamics Reg. No. 144 Well Permit No.

Town Trenton County Jones.

Location

Owner Board of Commissioners Date 8-31-64

Well #4 DRILLING LOG

Depth From	Depth To	Formation	Depth From	Depth To	Formation
778	796	gray fine coarse	SAND		
796	804	Gray clay, fine sand,	Some white clay		
804	808	*SAND STONE*			
808	840	White clay, gray clay,	limestone streaks		
840	868	fine medium coarse sand,	Wood, gray clay		
868	872	Shell Rock			
872	886	grayish clay			
886	892	Red clay, fine	SAND		
892	919	Medium to coarse	SAND		
919	928	White, Red clay	medium to coarse sand		
928	930	Tough Light blue clay			
930	938	Red-white clay,	fine sand		
938	944	Dark Red clay			

White Copy - Department of Water & Air Resources; Blue - Drillers Copy; Green - Owner's Copy.

Form GW-1a

NORTH CAROLINA DEPARTMENT OF WATER AND AIR RESOURCES
DIVISION OF GROUND WATER
BOX 9392 - RALEIGH, N. C.

WELL RECORD
Continuation Sheet

Driller Sydnor Hydrodynamics, Inc. Reg. No. 174 Well Permit No.

Town Trenton County Jones

Location Intersection SR 1002 - NC 41

Owner Board of Commissioners Date 8-31-84

Well # 4 DRILLING LOG

Depth From	Depth To	Formation	Depth From	Depth To	Formation
0	1	Top soil			
1	11	Light brown clay			
11	12	Coarse sand			
12	34	Light brown and gray clay			
34	39	gray clay - small gravel			
39	49	Light gray clay			
49	103	Light green fine sandy clay			
103	154	Soft shellrock some gray clay			
154	320	gray clay, some shell rock Lenses			
320	383	Shell streaks, fine sand, gray clay			
383	428	gray clay			
428	430	Limestone			
430	502	gray clay, some fine Black sand			
502	503	Limestone			
503	520	gray clay, fine to coarse sand shell Lenses.			
520	545	gray clay, fine sand coarse sand, some wood			
545	583	fine to medium coarse sand			
583	588	Limestone			
588	603	gray clay, soft limestone			
603	615	gray clay			
615	638	gray clay, fine sand			
638	654	Light green clay, fine sand			
654	721	Soft gray clay			
721	724	Shellrock			
724	742	gray clay - fine sand			
742	762	gray clay			
762	778	gray clay, fine to coarse sand			

White Copy - Department of Water & Air Resources; Blue - Drillers Copy; Green - Owner's Copy.

Form GW-1a

MEMORANDUM

TO: Charles W. Hoffman

FROM: Philip M. Brown PMB

SUBJECT: Micropaleontology - N.C. Coastal Plain

DATE: October 9, 1984

Attached, is the subject information for two wells, GR-T-1-81 and JO-T-1-84.

GR-T-1-81 (slides 0'-5' to 475'-478')

No microfauna present in slides examined

Age	JO-T-1-84 (slides 0'-10' to 940'-944')	
?	0'- 40'	- No microfauna
M. Eocene	40'-150'	- Ostracodes and forams - B. watervalleyeusis Loxoconcha creolensis, etc., Castle Haye Formation
Paleocene	150'-170'	- Ostracodes and forams - B. interrasilis, Beaufort Formation
K - "A"	170'-180'	- Ostracodes and forams - F. pidgeoni
K - "A"	250'-260'	- Ostracodes and forams - B. rhomboidalis
K - "B"(?)	270'-280'	- first Inoceramus prisims
K - "C"	320'-330'	- first "C" ostracodes. Asciocythere acuminata, Veenia paratriplicata and several C. gapensis (B & C)
K - "C" (lower part)	500'-510'	- first Brachycythere nausiformis
K - "C"	780'-790'	- Asciocythere macropunctata

No fauna older than Unit "C" on slides.

PMB/jac

cc: Paleontology file