

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

LITHOLOGIC LOG FOR A DEEP STRATIGRAPHIC TEST HOLE, CLUBHOUSE
CROSSROADS NO. 3, DORCHESTER COUNTY, SOUTH CAROLINA

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This report is preliminary and has
not been edited or reviewed for
conformity with Geological Survey
standards or nomenclature.

Introduction

Three deep stratigraphic test holes were drilled by the U.S. Army Corps of Engineers under contract with the U.S. Geological Survey in Dorchester County, South Carolina, between January, 1975 and June, 1977. The three holes, designated Clubhouse Crossroads No. 1, No. 2, and No. 3, are in the southern part of the northeast quarter of the Cottageville 15' quadrangle, about 40 km west-northwest of Charleston, South Carolina (Figure 1). All three holes are adjacent to Cane Acre Road either northeast or southwest of the community of Clubhouse Crossroads.

Clubhouse Crossroads No. 3 is the deepest of the three test holes and penetrated three major rock sequences (Table 1). Cenozoic and Upper Cretaceous Coastal Plain sediments were penetrated to a depth of 2544 ft (775 m), and basalt was encountered from that depth to a depth of 3386 ft (1032 m). Below the basalt, dominantly red sedimentary rocks were penetrated to a total depth of 3780 ft (1152 m). Crystalline rocks representing "true basement" were not reached.

The lithologic log that describes the cuttings and cores from Clubhouse Crossroads No. 3 was prepared by a field geologist at the well site at the time the samples were collected. This log emphasizes the dominant lithology

in each sample; subordinate lithologies may have been overlooked during the description process. Table 2 lists petrologic data from bulk samples of the cuttings of the Coastal Plain material. Listed is the amount of material (weight-percentages) in 25-gm samples that is soluble in dilute acetic acid and the data from a textural analysis of the acid-insoluble residues remaining from those samples. Plate 1 consists of a gamma and an electric log run in Clubhouse Crossroads No. 3 by Mark D. Zoback and John H. Healy, Office of Earthquake Studies, U.S. Geological Survey. Because of errors in notation, depths on the geophysical logs above 400 ft (122 m) are uncertain.

Cuttings were collected during the drilling of the first 10 ft (3 m) of each 30 ft (9.1 m) drill rod. Sample collection followed a 10- to 15-minute period of mud circulation during which time the drill bit was not advanced. The drill rig equipment, including the drill rods, and the equipment used for the geophysical logging were calibrated in U.S. customary units, and this notation was used in originally labeling the samples and logs.

The continuously cored Coastal Plain section in Clubhouse Crossroads No. 1 has been described by Gohn and others (1977) and Hazel and others (1977). In those reports, the Paleogene section was provisionally assigned to the Cooper Formation (Oligocene and Eocene), the Santee Limestone (Eocene), the Black Mingo Formation (Eocene and

Paleocene), and the Beaufort(?) Formation (Paleocene). The Upper Cretaceous sediments were provisionally assigned to the Peedee, Black Creek, Middendorf, and Cape Fear Formations. A subsequent study of the outcropping Middendorf and Cape Fear Formations (Christopher and others, in press), in conjunction with a regional study of subsurface Cretaceous sediments in South Carolina (Gohn and others, 1978), suggests that the "Middendorf and Cape Fear" in the Clubhouse Crossroads wells are neither temporally or physically related to the true Middendorf and Cape Fear Formations in their outcrop type areas. Those two names should no longer be considered for use in the subsurface of the South Carolina Coastal Plain. Preliminary picks for the tops of the Paleogene and Cretaceous formations are indicated on the geophysical log. The top of the "Middendorf Formation" is marked as the "top of reddish sand and clay."

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Table 1. Summary of test hole data and geophysical logs for Clubhouse Crossroads No. 3.

Drilled January to May, 1977

LATITUDE 32°54.18' N

LONGITUDE 80°18.95' W

Elevation (ground level) + 22 ft (+ 6.7 m)

Total Depth 3780 ft (1152 M)

materials recovered:	<u>core</u>	<u>cuttings</u>
Coastal Plain sediments		0-2544 ft (0-775.4 m)
basalt	2544-2573 ft (775.4-784 m)	2573-3022 ft (784-921 m)
	3022-3050 ft (921-930 m)	3050-3225 ft (930-983 m)
	3225-3386 ft (983-1032 m)	
sedimentary red beds	3386-3460 ft (1032-1054 m)	3460-3754 ft (1054-1144 m)
	3754-3780 ft (1144-1152 m)	
geophysical logs run:	electric log natural gamma log caliper log	

Table 2. Percentage of acid-soluble material and textural analysis of acid-insoluble residues (weight-percent) from 25-gm bulk samples of cuttings

Depth of Sample	Textural Analysis - Insoluble Residues					Percent Acid - Soluble
	silt + clay	very fine sand	fine sand	medium sand	coarse sand and coarser grains	
88 ft	95.9%	2.5%	1.1%	0.5%	-0%	85.3%
118	95.5	2.5	1.5	0.3	0.2	67.8
148	93.8	3.1	1.4	0.4	1.3	62.5
178	96.4	1.8	1.8	-0-	-0-	78.0
208	90.6	3.1	1.5	0.4	4.4	68.8
238	82.2	2.2	5.5	2.8	7.3	87.0
268	95.5	1.0	2.1	0.4	1.0	71.6
298	84.0	1.8	1.1	0.5	12.6	65.8
328	73.4	2.9	2.3	0.8	20.6	66.6
358	96.3	2.2	0.6	0.2	0.7	78.4
388	74.2	11.5	9.7	3.1	14.5	75.3
418	11.8	9.3	15.2	26.1	37.6	76.3
448	5.3	3.5	63.3	15.1	12.7	67.0
478	5.8	0.6	2.9	1.9	88.8	20.2
509	39.8	10.5	24.9	9.5	15.3	52.6
540	75.1	14.2	3.5	1.0	6.2	21.4
570	89.2	6.8	0.9	0.6	2.5	22.2
600	48.1	23.5	3.2	0.7	24.5	17.4
630	75.9	18.4	2.3	0.4	3.0	29.6
660	95.5	3.0	0.8	0.6	0.1	66.5

690	83.2	4.5	1.6	0.4	10.3	24.4
720	86.3	2.7	1.5	0.7	8.8	21.6
750	87.1	5.6	2.2	0.6	4.5	24.6
780	65.5	30.6	1.6	0.6	1.7	35.6
810	38.0	41.3	17.7	1.8	1.2	47.9
840	74.7	19.0	1.0	0.5	4.8	30.1
870	48.6	27.4	20.1	2.8	1.1	33.6
900	45.6	30.2	22.5	0.9	0.8	18.3
930	59.8	29.3	8.7	0.8	1.4	28.3
960	41.2	21.5	31.1	4.9	1.3	24.3
990	31.0	19.2	46.9	2.3	0.6	23.0
1020	52.9	21.7	21.9	2.1	1.4	56.8
1050	52.0	25.6	9.5	3.2	9.7	39.0
1080	49.9	20.8	19.5	2.3	7.5	68.0
1110	26.1	4.2	63.3	4.5	1.9	41.8
1140	26.5	6.8	55.6	8.5	2.6	46.6
1170	29.6	50.3	11.2	2.5	6.4	56.4
1200	40.1	52.5	5.1	0.6	1.7	37.4
1230	48.2	35.8	13.0	1.3	1.7	58.6
1260	57.7	36.4	3.5	0.4	2.0	22.0
1290	76.2	21.5	0.8	0.1	1.4	16.7
1320	77.1	11.5	2.9	0.8	7.7	27.2
1350	58.9	21.7	17.1	0.7	1.6	17.4
1384	85.6	9.1	2.5	0.5	2.3	28.5
1414	39.1	27.7	24.7	1.3	7.2	43.1
1444	56.4	39.2	2.9	0.4	1.1	21.5
1474	67.7	26.0	4.9	0.7	0.7	17.8
1504	67.3	23.3	7.2	0.9	1.3	27.6
1534	85.2	11.8	1.6	0.7	0.7	20.0
1564	89.2	10.2	0.6	0	0	39.6

1594	85.4	10.5	0.7	0.3	3.1	28.2
1624	48.5	44.3	3.6	0.2	3.4	50.8
1654	91.4	6.7	0.9	0.3	0.7	27.7
1684	83.0	14.7	0.7	0.9	0.7	22.5
1714	92.4	5.2	0.9	0.4	1.1	25.1
1774	90.1	6.5	1.4	0.5	1.5	13.7
1765	65.9	7.6	16.2	4.1	6.2	36.2
1744	83.2	9.3	3.0	1.4	3.1	23.6
1804	24.6	1.7	2.9	4.5	66.3	9.6
1834	58.0	5.7	4.3	4.4	27.6	16.2
1864	91.4	0	2.9	1.0	4.7	27.8
1894	48.3	6.1	3.5	1.6	40.5	10.6
1924	25.1	6.4	9.8	11.3	47.4	9.1
1954	6.1	5.3	12.0	15.1	61.5	6.4
1984	27.1	6.6	6.9	8.3	51.1	5.2
2014	11.9	2.6	2.0	2.5	81.0	3.3
2044	17.5	3.6	7.1	8.5	63.3	3.3
2074	14.1	3.4	4.1	4.7	73.7	3.1
2104	11.3	2.6	5.4	7.8	72.9	2.7
2134	5.3	1.4	2.5	3.8	87.0	2.5
2168	2.0	0.6	0.7	1.0	95.7	3.4
2198	10.2	3.1	3.0	3.4	80.3	2.8
2228	12.6	1.9	2.1	3.1	80.3	3.2
2258	15.7	3.3	4.5	3.5	73.0	3.1
2288	13.4	8.9	7.4	5.4	64.9	5.0
2318	17.0	2.6	2.8	3.3	74.3	0.4
2349	82.1	3.7	0.8	1.3	12.1	22.5
2379	78.6	1.3	1.0	1.4	17.7	11.6
2385	53.1	4.8	6.6	8.6	26.9	-
2409	81.3	8.5	3.5	1.5	5.2	20.9

2439	50.4	5.0	1.2	1.0	42.4	13.0
2469	21.6	7.3	5.0	3.8	62.3	10.2
2500	88.6	5.3	1.2	0.5	4.4	15.1
2530	22.1	2.1	0.9	1.4	73.5	5.6
2537	42.1	12.2	6.7	10.2	28.8	14.3

Lithologic Log

Sampled Interval

Lithology

Cuttings:

Sample 1 88-98 ft 26.8 - 29.9 m	Limestone (calcilutite), very clayey, abundant microfossils and common mollusk fragments, 10Y6/2 (wet), 5Y8/1 to 5GY7/2 (dry).
Sample 2 118 - 128 ft 36.0 - 39.0 m	As above.
Sample 3 148 - 158 ft 45.1 - 48.2 m	Similar to above; mollusk fragments sparse.
Sample 4 178 - 188 ft 54.3 - 57.3 m	Similar to above; contains some chips of harder, lithified, quartzose and phosphatic limestone.
Sample 5 208 - 218 ft 63.4 - 66.5 m	Limestone (calcilutite or very fine-grained calcarenite), clayey (30%), trace amounts of quartz (very fine-grained sand) and phosphate, common microfossils, 10Y6/2 (wet), 5Y8/1 (dry).
Sample 6 238 - 248 ft 72.5 - 75.6 m	As above, with addition of chips consisting of harder, phosphatic, clayey calcilutite; mollusk fragments common as loose grains.
Sample 7 268 - 278 ft 81.7 - 84.7 m	Similar to Sample 5, microfossils abundant.
Sample 8 298 - 308 ft 90.8 - 93.9 m	As in Sample 5.
Sample 9 328 - 338 ft 100.0 - 103.0 m	As in Sample 5.
Sample 10 358 - 368 ft 109.1 - 112.2 m	As in Sample 5.

Sample 11
388 - 398 ft
118.3 - 121.3 m

Limestone (calcilutite), clayey, very abundant phosphate (fine-grained sand) and glauconite (very fine-grained sand), sparse quartz (very fine- to fine-grained sand), common microfossils, 10Y6/2 (wet), 5Y8/1 (dry).

Sample 12
418 - 428 ft
127.4 - 130.5 m

Limestone (fine- to medium-grained calcirudite), very abundant quartz (medium- to coarse-grained sand), and phosphate (medium- to coarse-grained sand), common glauconite (fine- to medium-grained sand), very abundant well-rounded mollusk (maximum 1 cm) and bryozoan (maximum 5mm) fragments, well indurated chips, color overall is N8 (dry) with "salt and pepper" look.

Sample 13
448 - 458 ft
136.6 - 139.6 m

Sand, quartzose, fine- to medium-grained, well-rounded, calcareous (30 - 50%), trace amounts of phosphate and glauconite, abundant mollusk fragments (maximum 15 cm), well-indurated chips, 5Y4/1 (wet), N6 (dry).

Below 463 ft
141.1 m

Clay, silty and sandy (quartz, fine-grained), slightly calcareous, 5GY4/1 (wet).

Sample 14
478- 488 ft
145.7 - 148.7 m

Sand and clay as in Sample 13, plus limestone (calcilutite), very abundant quartz (very fine- to fine-grained sand), abundant very fine-grained, black organic material, petroliferous odor, sparse microfossils, common mollusk fragments (3-8 mm) as loose grains, 5GY4/1 (wet), 5GY6/1 to N6 (dry).

Sample 15
509 - 519 ft
155.1 - 158.2 m

3 lithologies as above, plus chips of clay, silty, calcareous (10 - 30%), 5YR4/1 (wet), N6 to 5YR6/1 (dry).

Sample 16
540 - 550 ft
164.6 - 167.6 m

Clay, silty, calcareous (10 - 30%), trace of quartz (very fine-grained sand), phosphate, and mica; common mollusk fragments (3 - 10 mm) in clay, sparse microfossils, 5GY2/1 (wet) 10GY5/2 (dry).

Sample 17
570 - 580 ft
173.7 - 176.8 m

Similar to above, trace of carbonaceous material, sparse mollusk fragments.

Sample 18
600 - 610 ft
182.9 - 185.9 m

Similar to above, mica and very fine-grained quartz sand more abundant.

Sample 19
630 - 640 ft
192.0 - 195.1 m

As above, plus chips of silt, or very fine-grained sand, clayey, calcareous (10 - 30%) micaceous, 5Y4/1 (wet), N7 (dry).

Sample 20
660 - 670 ft
201.2 - 204.2 m

As above.

Sample 21
690 - 700 ft
210.3 - 213.4 m

As above.

Sample 22
720 - 730 ft
219.5 - 222.5 m

As above.

Sample 23
750 - 760 ft
228.6 - 231.6 m

As above.

Sample 24
780 - 790 ft
237.7 - 240.8 m

As above, plus chips of sand, quartzose, fine-grained, clayey, calcareous (10 - 30%), micaceous, trace of phosphate, very abundant microfossils, 5Y3/2 (wet), 5YR6/1 to 5YR4/1 (dry), and chips of limestone, crystalline, quartzose (fine-grained sand), common glauconite 5Y7/2 (wet).

Sample 25
810 - 820 ft
246.9 - 249.9 m

Similar to fine-grained sand and limestone above.

Sample 26
840 - 850 ft
256.0 - 259.1 m

Sand, quartzose, very fine- to fine-grained, clayey, calcareous (10 - 30%), micaceous, abundant microfossils, 5Y4/1 to 5Y2/1 (wet), 5YR6/1 to 5YR4/1 (dry).

Sample 27
870 - 880 ft
265.2 - 268.2 m

As above.

Sample 28
900 - 910 ft
274.3 - 277.4 m

Sand as above, plus chips of clay, silty, calcareous (5 - 10%), common microfossils, 5Y4/1 (wet), 5GY6/1 (dry).

Sample 29
930 - 940 ft
283.5 - 286.5 m

Sand and clay as above.

Sample 30
960 - 970 ft
292.6 - 295.7 m

Sand and clay as above, common mollusk fragments as loose grains.

Sample 31
990 - 1000 ft
301.8 - 304.8 m

As above.

Sample 32
1020 - 1030 ft
310.9 - 313.9 m

Dominantly sand chips as above, common clay chips and mollusk fragments as above.

Sample 33
1050 - 1060 ft
320.0 - 323.1 m

As above.

Sample 34
1080 - 1090 ft
329.2 - 332.2 m

Dominantly clay chips and mollusk fragments as above, common sand chips as above.

Sample 35
1110 - 1120 ft
338.3 - 341.4 m

Dominantly sand chips as above, common clay chips and mollusk fragments as above.

Sample 36
1140 - 1150 ft
347.5 - 350.5 m

As above.

Sample 37
1170 - 1180 ft
356.6 - 359.7 m

Dominantly clay chips as above, common sand chips and mollusk fragments as above.

Sample 38
1200 - 1210 ft
365.8 - 368.8 m

Dominantly sand chips as above, common clay chips and mollusk fragments as above plus chips of sand, quartzose, fine-grained, calcareous (30%), moderately well sorted, common mollusk fragments.

Samples 39 and 40
1230 - 1240 ft
374.9 - 378.0 m

Sand chips and clay chips as in Sample 37, very abundant mollusk and bryozoan fragments.

Sample 41
1260 - 1270 ft
384.1 - 387.1 m

Clay, silty and sandy (quartzose, very fine-grained, micaceous, abundant mollusk fragments, 5GY4/1 (wet), 5Y4/1 to 5GY4/1 (dry)).

Sample 42
1290 - 1300 ft
393.2 - 396.2 m

Similar to above, mollusk fragments less abundant.

Sample 43
1320 - 1330 ft
402.3 - 405.4 m

Similar to above, common mollusk fragments.

Sample 44
1350 - 1360 ft
411.5 - 414.5 m

As above.

Sample 44a
1384 - 1394 ft
421.8 - 424.9 m

Sand (quartzose, very fine- to fine-grained) or silt, calcareous (10 - 30%), clayey, micaceous, rare mollusk fragments, 5Y4/1 (wet), N6 (dry).

Sample 45
1414 - 1424 ft
431.0 - 434.0 m

Sand, quartzose, fine-grained, clayey, calcareous (30 - 50%), trace of mica and phosphate, very abundant mollusk fragments, 5Y2/1 (wet), 5Y4/1 (dry).

Sample 46
1444 - 1454 ft
440.1 - 443.2 m

Sand, quartzose, very fine-grained, clayey, calcareous (10 - 30%), sparse mollusk fragments, 5Y2/1 (wet), 5Y4/1 (dry).

Sample 47
1474 - 1484 ft
449.3 - 452.3 m

As above.

Sample 48
1504 - 1514 ft
458.4 - 461.5 m

Sand as above, plus chips of clay, silty, calcareous (10 - 30%), sparse microfauna, 5GY4/1 (wet), 5GY6/1 (dry).

Sample 49
1534 - 1544 ft
467.6 - 470.6 m

2 lithologies as above.

Sample 50
1564 - 1574 ft
476.7 - 479.8 m

2 lithologies as above.

Sample 51
1594 - 1604 ft
485.9 - 488.9 m

Clay, silty and sandy (quartzose, very fine-grained), calcareous (10 - 30%), trace of mica and phosphate, sparse microfana, 5GY4/1 (wet), 10GY5/2 (dry).

Sample 52
1624 - 1634 ft
495.0 - 498.0

Clay as above plus very abundant mollusk fragments as loose grains, and chips of sand, quartzose and very phosphatic, fine-grained, well sorted, calcareous (10 - 30%), well-indurated chips, N6 (dry).

Sample 53
1654 - 1664 ft
504.1 - 507.2 m

3 lithologies as above, but dominantly clay.

Sample 54
1684 - 1694 ft
513.3 - 516.3 m

Clay as in Sample 51.

Sample 55
1714 - 1724 ft
522.4 - 525.5 m

As above.

Sample 56
1744 - 1754 ft
531.6 - 534.6 m

Clay as above, plus chips of sand, quartzose, very fine-grained, very clayey, calcareous (10 - 30%), micaceous, sparse lignitic fragments, common mollusk fragments 5Y2/1 (wet), 5G4/1 (dry).

Sample 57
1774 - 1784 ft
540.7 - 543.8 m

Clay and sand as above plus common mollusk fragments, coarse- to very-coarse-grained quartz sand, and lignite fragments as loose grains.

Sample 58
1804 - 1814 ft
549.9 - 552.9 m

Clay and sand as above, but dominantly loose grains of sand, quartzose and feldspathic, very coarse-grained to 4 mm, micaceous, N5 to N8 (dry).

Sample 59
1834 - 1844 ft
559.0 - 562.1 m

3 lithologies as above.

Sample 60
1864 - 1874 ft
568.1 - 571.2 m

Clay, silty, calcareous (10 - 30%), micaceous sparse mollusks and microfossils, 5Y2/1 (wet), 10GY5/2 (dry).

Sample 61
1894 - 1904 ft
577.3 - 580.3 m

Clay as above, plus loose grains of sand, quartzose and feldspathic, fine-grained to 4 mm, 10YR7/4 (dry).

Sample 62
1924 - 1934 ft
586.4 - 589.5 m

Clay and sand as above, plus chips of sand, quartzose and feldspathic, fine-grained to 4 mm, clayey, sparingly calcareous, mottled 5G5/1 and 5YR4/4 (wet) or 5GY7/2 and 10R4/6 (dry).

Sample 63
1954 - 1964 ft
595.6 - 598.6 m

Chips of quartzose and feldspathic, fine-grained to conglomeratic sand as above.

Sample 64
1984 - 1994 ft
604.7 - 607.8 m

As above, plus sparse chips of siltstone, clayey, 5RP4/2 (wet).

Sample 65
2014 - 2024 ft
613.9 - 616.9 m

Sand only as above, plus chips of clay, silty or sandy (quartzose, fine- to coarse-grained), sparingly calcareous, 10R4/4 (wet).

Sample 66
2044 - 2054 ft
623.0 - 626.1 m

Sand similar to above, color mottled 10YR6/6, 5Y6/4, and 5G6/1.

Sample 67
2074 - 2084 ft
632.2 - 635.2 m

Sand chips and similar loose sand grains as above.

Sample 68
2104 - 2114 ft
641.3 - 644.3 m

As above.

Sample 69
2134 - 2144 ft
650.4 - 653.5 m

As above.

Sample 70
2168 - 2178 ft
660.8 - 663.9 m

As above.

Sample 71
2198 - 2208 ft
670.0 - 673.0 m

As above.

Sample 72
2228 - 2238 ft
679.1 - 682.1 m

As above.

Sample 73
2258 - 2268 ft
688.2 - 691.3 m

As above

Sample 74
2288 - 2298 ft
697.4 - 700.4 m

As above

Sample 75
2319 - 2329 ft
706.8 - 709.9 m

As above.

Sample 76
2349 - 2359 ft
716.0 - 719.0 m

As above, plus chips of clay,
silty, calcareous (10 - 30%),
micaceous, N4 (wet), 10GY5/2 to
N5 (dry).

Sample 77
2379 - 2389 ft
725.1 - 728.2 m

Calcareous clay as above.

Sample 78 - 79
2409 - 2419 ft
734.3 - 737.3 m

Similar to above, with common
mollusk fragments.

Sample 80
2439 - 2449 ft
743.4 - 746.5 m

As above, plus common sand,
quartz and feldspar, coarse- to
very coarse-grained, as loose
grains.

Sample 81
2469 - 2479 ft
752.6 - 755.6 m

2 lithologies as above.

Sample 82
2500 - 2510 ft
762.0 - 765.1 m

2 lithologies as above.

Sample 83
2530 - 2537 ft
771.1 - 774.2 m

Clay chips as above, but
dominantly sand, quartzose and
feldspathic, very coarse-grained,
sparingly calcareous, 5Y6/1 (dry).

Sample from bit
2537 ft
773.3 m

Clay, very sandy (quartzose,
medium- to very coarse-grained),
mottled 10YR7/4 and N6 (dry).

Cuttings at 2544 ft
775.4 m

Basalt chips.

Core Run No. 1
2544 - 2573 ft
775.4 - 784.3 m
Cored 28.5 ft (8.7 m)
Recovered
28.1 ft (8.6 m)

Basalt, amygdaloidal - 2-10 mm,
filled with zeolite, talc(?),
chlorite(?); horizontal to vertical
veinlets of zeolite and calcite,
5GY3/2.

Cuttings:

Sample at 2600 ft
792.5 m

Basalt

Sample at 2630 ft
801.6 m

Basalt

Sample at 2690 ft
819.9 m

Basalt

Sample at 2721 ft
829.4 m

Basalt

Sample at 2750 ft
838.2 m

Basalt

Sample at 2781 ft
847.6 m

Basalt

Sample at 2811 ft
856.8 m

Basalt

Sample at 2842 ft
866.2 m

Basalt

Sample at 2872 ft
875.4 m

Basalt

Sample at 2907 ft
886.1 m

Basalt

Sample at 2932 ft 893.7 m	Basalt
Sample at 2962 ft 902.8 m	Basalt
Sample at 2992 ft 912 m	Basalt
Sample at 3014 ft 918.7 m	Basalt
Core Run No. 2 3022 - 3050 ft 921 - 930 m Cored 27.6 ft (8.4 m) Recovered 26.6 ft (8.1 m)	Basalt, with sandstone, fine- grained, argillaceous, 5R4/2 to 5R/4 (dry) at 3034 - 3036 ft (925 - 925.7 m).
Cuttings:	
Sample at 3143 - 3173 ft 958.0 - 967.1 m	Basalt
Sample at 3173 - 3203 ft 967.1 - 976.3 m	Basalt
Sample at 3203 - 3217 ft 976.3 - 980.5 m	Basalt
Sample at 3217 - 3225 ft 980.5 - 983.0 m	Basalt
Core Run No. 3 3225 - 3238 ft 983.0 - 986.9 m	Basalt
Core Run No. 4 3238 - 3264 ft 986.9 - 994.9 m	Basalt
Core Run No. 5 3264 - 3289 ft 994.9 - 1002.5 m Cored 25 ft (7.6 m) Recovered near 100%	Basalt

Core Run No. 6 3289 - 3315 ft 1002.5 - 1010.4 m Cored 26 ft (7.9 m) Recovered near 100%	Basalt
Core Run No. 7 3315 - 3345 ft 1010.4 - 1019.6 m Cored 30 ft (9.2 m) Recovered 100%	Basalt
Core Run No. 8 3345 - 3377 ft 1019.6 - 1029.3 m Cored 32 ft (9.7 m) Recovered near 100%	Basalt
Core Run No. 9 3377 - 3407 ft 1029.3 - 1038.5 m Cored 30 ft (9.2 m) Recovered 11 ft (3.4 m)	Basalt at 3377 - 3386 ft (1039.3 - 1032.12 m); mudstone, calcareous nodules (1 mm - 80 mm), micaceous, mottled 5R4/2, N5 and 5GY6/1 (dry), interbedded with sandstone, very fine-grained, argillaceous, calcareous nodules (1 mm - 80 mm), current-bedded, mottled 5R4/2, N4, and 5Y8/1 (dry) at 3386 - 3397 ft (1032.12 - 1035.4 m)
Core Run No. 10 3407 - 3426 ft 1038.5 - 1044.2 m Cored 19 ft (5.7 m) Recovered 15 ft (4.6 m)	Sandstone and mudstone as above.
Core Run No. 11 3426 - 3432 ft 1044.2 - 1046.1 m Cored 6 ft (1.9 m) Recovered 6 ft (1.9 m)	As above.
Core Run No. 12 3432 - 3460 ft 1046.1 - 1054.6 m Cored 28 ft (8.5 m) Recovered 15 ft (4.6 m)	As above

Cuttings:

Sample at 3460 - 3480 ft
1054.6 - 1060.7 m

Mudstone and sandstone similar to above, moderately calcareous (5 - 30%), 10R3/4 to 5R4/6 (dry), or red and 5G6/1; basalt; clay, silty, calcareous, micaceous, 5GY6/1; sand, quartz and feldspar, coarse-grained.

Sample at 3480 - 3500 ft
1060.7 - 1066.8 m

As above.

Sample at 3500 - 3530 ft
1066.8 - 1075.9 m

As above, plus chips of sandstone, coarse-grained to conglomeratic, sedimentary clasts within sandstone chips include quartzofeldspathic gneiss or "granite" and mafic, fine-grained clasts.

Sample at 3530 - 3560 ft
1075.9 - 1085.1 m

Lithologies as above.

Sample at 3560 - 3590 ft
1085.1 - 1094.2 m

As above.

Sample at 3590 - 3622 ft
1094.2 - 1104.0 m

As above.

Sample at 3622 - 3652 ft
1104.0 - 1113.1 m

As above

Sample at 3652 - 3682 ft
1113.1 - 1122.3 m

As above.

Sample at 3682 - 3712 ft
1122.3 - 1131.4 m

As above

No samples
3712 - 3754 ft.
1131.4 - 1144.26 m

Core Run No. 12
3754 - 3780 ft
1144.26 - 1152 m
Cored 26 ft (7.9 m)
Recovered 10 ft (3.1 m)

Sandstone, coarse-grained to conglomeratic, maximum clast size 5 cm, poorly sorted, calcareous nodules (1 to 30 mm), feldspathic, mottled 5Y8/1 and 5GY8/1 with 5R4/6 to 10R3/4; interbedded with mudstone, massive, calcareous nodules (1 to 30 mm), mottled green and red as above.

No samples
3780 - 3785 ft
1152 - 1154 m

Termination of drilling
Total depth recorded as 1152 m.

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- Gohn, G.S., Higgins, B.B., Smith, C.C., and Owens, J.P., 1977, Lithostratigraphy of the deep corehole (Clubhouse Crossroads corehole 1) near Charleston, South Carolina: in Rankin, D.W., editor, Studies related to the Charleston, South Carolina earthquake of 1886 - A preliminary report, U.S. Geol. Survey Professional Paper 1028, p. 59-70.
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