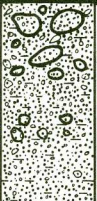
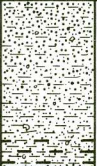






METERS	SAMPLE NUMBERS	FORMATION	LITHOLOGIC UNITS	SECTION	LITHIC DESCRIPTION	FAUNAL ASSOCIATION																					
1	2	YORK TOWN	UPPER Yorktown	Unit 5	 <p>"Boulder" bed</p>	<p>MUDDY ($\leq 10\%$), GRAVELLY (1% - 24%), VERY FOSSILIFEROUS, INTERMITTENTLY INDURATED, COARSE TO VERY COARSE, LIGHT GREY QUARTZ SAND</p> <p>clumps of cemented (CaCO₃) sediment in upper part of unit may exceed 50 cm in diameter.</p>	<p>Abundant shell hash in gravel-size fraction; <i>Balanus</i> dominant, some echinoid material (urchin spines); no large entire bivalves, fragments and small whole specimens of <i>Glycimeris</i>, <i>Plicatula</i>, <i>Cyclocoardia</i>, <i>Astarte</i>. Traces of bryozoans. <i>Buccella frigida</i> (15%, sample 2) and <i>Nonionella miocenica</i> (38%, sample 5 and 27%, sample 9) dominant benthonic foraminifera. <i>Fistulose</i> polymorphinids extremely abundant (sample 2). Planktonics few.</p>																				
3	4					YORK TOWN	MIDDLE Yorktown	Unit 4		<p>VERY MUDDY (14% - 42%), SLIGHTLY GRAVELLY ($\leq 1\%$), FOSSILIFEROUS, FINE TO MEDIUM BLUE - GREY QUARTZ SAND</p>	<p>Much less shell material in this unit; no whole shells, traces of barnacle and bivalve hash. Appearance of vertebrate material, including small teeth ($\leq 3mm$). Microfaunas in this unit extremely abundant and diverse; preservation better than in Unit 3. <i>Cibicides lobatulus</i> (15-48%) dominant; <i>Nonionella miocenica</i> (11-33%) also very abundant. Planktonics few to abundant (in samples 16,17).</p>																
5	6									YORK TOWN	MIDDLE Yorktown	Unit 3		<p>VERY SANDY (fine to very fine calcareous quartz sand 37% - 47%), SLIGHTLY GRAVELLY ($\leq 1\%$ - 6%), FOSSILIFEROUS, SLIGHTLY GLAUCONITIC ($\leq 1\%$), BLUE - GREY MUD</p>	<p>Barnacle hash comprising most of gravel-size fraction ($\leq 1\%$) in all but samples 26&27 where internal molds of bivalves and gastropods, particularly <i>Turritella</i>, and granules of cemented sediment raise the gravel-size fraction. Appearance of <i>Ephora quadrir-costata</i> and <i>Ostrea</i> sp. Benthonic foraminifera small but abundant; preservation poor. <i>Parafissurina bidens</i> (17-18%, samples 18,23) and <i>Cibicides lobatulus</i> (22-23%, samples 22,24) dominant. Planktonics extremely abundant except in samples 26&27 ("Leached Zone")</p>												
7	8													YORK TOWN	LOWER Yorktown	Unit 2		<p>EXTREMELY MUDDY (22% - 49%), GRAVELLY (1% - 8%), FOSSILIFEROUS, FINE TO MEDIUM, BLUE - GREY QUARTZ SAND</p>	<p>Upper part containing abundant internal molds as above. Encrusted shells and fragments, largely <i>Ostrea</i> sp. Vertebrate bone material, also traces of barnacles and bryozoans. Lower part of unit dominated by <i>Chlamys jeffersonius</i>, other pectens, but particularly by abundant urchin spines and test fragments, as matted, flattened masses in the gravel fraction and abundant spines in the sand. Also, netlike and encrusting bryozoans, parrot fish beaks. <i>Nonionella miocenica</i> (17-69%) dominant. <i>Cassidulina laevigata</i> (<1-28%) and <i>Caucasina gracilis</i> (<5-20%) also abundant.</p>								
9	10																	PUNGO RIV.	LOWER Yorktown	Unit 1		<p>EXTREMELY MUDDY (21% - 33%), GRAVELLY (3% - 8%), FOSSILIFEROUS, MEDIUM TO COARSE, GREY-BLACK PHOSPHATIC QUARTZ SAND</p>	<p>Shell hash $\leq 10\%$ of gravel-size, mostly phosphate; urchin, gastropod, barnacle bivalve material. <i>Nonionella miocenica</i> (11-27%), <i>Caucasina gracilis</i> (<1-37%), and <i>Epistominella danvillensis</i> (1-17%) dominant. Mushy shell beds at base.</p>				
11	12																					PUNGO RIV.	LOWER Yorktown	Unit 1		<p>CALCAREOUS ($\leq 20\%$), MUDDY (7% - 38%), QUARTZ-RICH ($\leq 38\%$), COARSE TO VERY COARSE, BLACK PHOSPHATE SAND with ABUNDANT GRAVEL (1% - 54%); LENSES OF SANDY, SHELLY LIMESTONE</p>	<p>Barnacle hash abundant; lesser amounts of bivalve material; fragments of <i>Ephora tricostata</i>; considerable abraded organic phosphate, including small teeth, bone fragments, and fragments of phosphatized shell. <i>Buliminella elegantissima</i> ($\leq 40\%$) dominates a sparse, leached benthonic foraminiferal assemblage.</p>