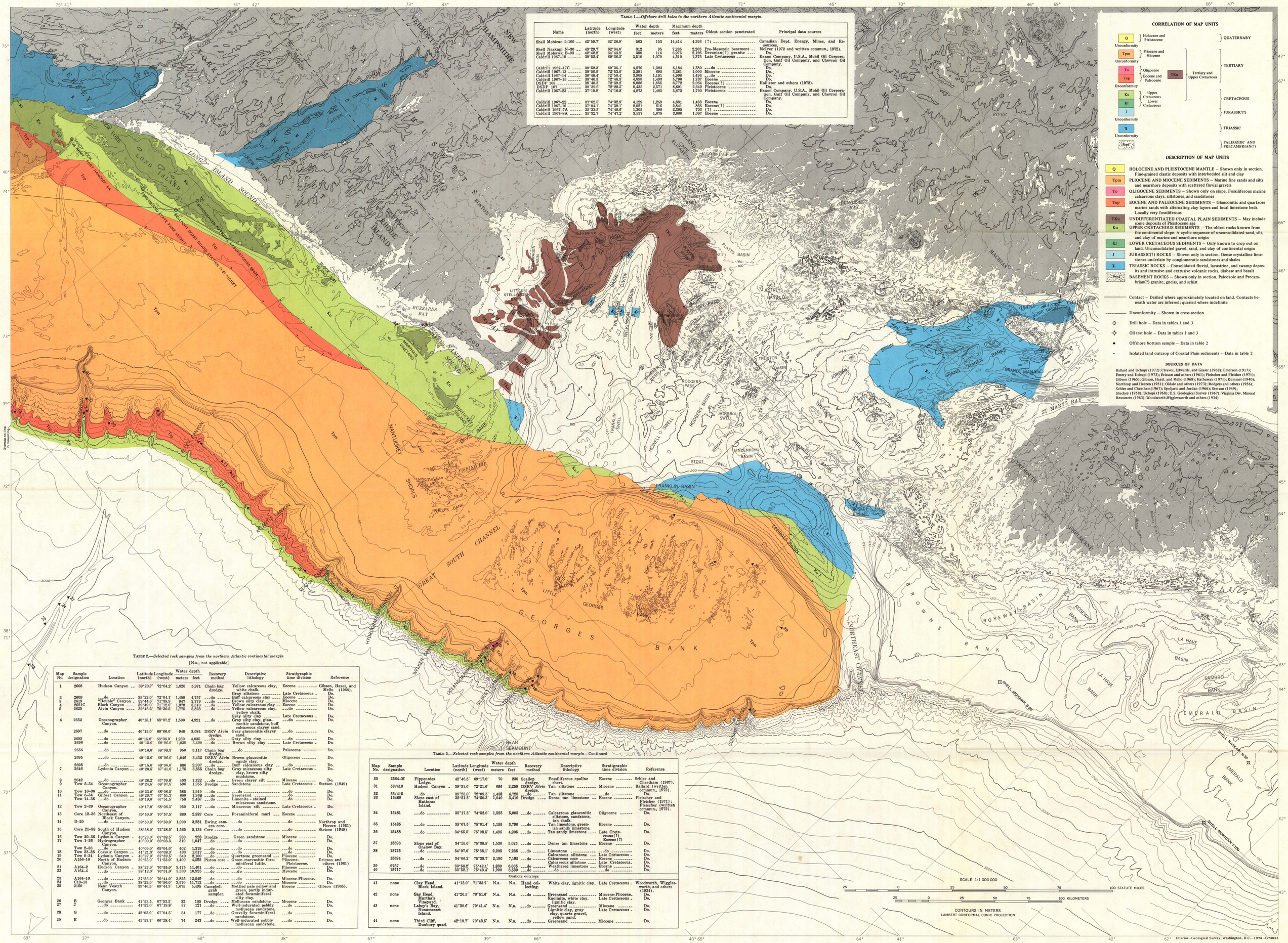

TABLE 1.—*Offshore drill holes in the northern Atlantic continental margin*

Name	Latitude (north)	Longitude (west)	Water depth feet	Water depth meters	Maximum depth feet	Maximum depth meters	Oldest section penetrated	Principal data sources
Shell Mohican 1-100	42°59.7′	62°28.9′	503	153	14,414	4,393	(?)	Canadian Dept. Energy, Mines, and Resources.
Shell Naskapi N-39	43°29.7′	62°34.6′	312	95	7,235	2,205	Pre-Mesozoic basement	McIver (1972 and written commun., 1972).
Shell Mohawk B-93	42°42.2′	64°43.9′	380	116	6,975	2,126	Devonian(?) granite	Do.
Caldrill 1967-18	39°52.4′	69°36.2′	3,510	1,070	4,510	1,375	Late Cretaceous	Exxon Company, U.S.A., Mobil Oil Corporation, Gulf Oil Company, and Chevron Oil Company.
Caldrill 1967-17C	39°52.3′	69°35.1′	4,570	1,393	5,184	1,580	do	Do.
Caldrill 1967-13	38°50.9′	72°53.0′	2,281	695	3,281	1,000	Miocene	Do.
Caldrill 1967-14	38°48.4′	72°50.4′	3,908	1,191	4,908	1,496	do	Do.
Caldrill 1967-15	38°46.3′	72°48.3′	4,898	1,493	5,700	1,737	Eocene	Do.
DSDP 108	38°48.3′	72°39.2′	6,086	1,855	6,772	2,064	Eocene(?)	Hollister and others (1972).
DSDP 107	38°39.6′	72°28.5′	8,435	2,571	8,691	2,649	Pleistocene	Do.
Caldrill 1967-23	37°19.8′	74°10.8′	4,873	1,485	5,873	1,790	Pleistocene	Exxon Company, U.S.A., Mobil Oil Corporation, Gulf Oil Company, and Chevron Oil Company.
Caldrill 1967-22	37°02.5′	74°32.9′	4,129	1,259	4,881	1,488	Eocene	Do.
Caldrill 1967-19	37°04.1′	74°39.1′	2,021	616	2,841	866	Eocene(?)	Do.
Caldrill 1967-7A	35°33.5′	74°48.6′	1,305	398	2,305	703	(?)	Do.
Caldrill 1967-8A	35°32.7′	74°47.2′	3,537	1,078	3,600	1,097	Eocene	Do.

TABLE 2.—*Selected rock samples from the northern Atlantic continental margin*

[N.a., not applicable]

Map No.	Sample designation	Location	Latitude (north)	Longitude (west)	Water depth meters	Water depth feet	Recovery method	Descriptive lithology	Stratigraphic time division	Reference
1	2608	Hudson Canyon	39°20.7′	72°04.2′	1,820	5,971	Chain bag dredge.	Yellow calcareous clay, white chalk.	Eocene	Gibson, Hazel, and Mello (1968).
								Gray siltstone	Late Cretaceous	Do.
2	2609	do	39°22.0′	72°04.1′	1,450	4,757	do	Buff calcareous clay	Eocene	Do.
3	2619	"Double" Canyon	39°44.6′	71°39.9′	847	2,779	do	Brown silty clay	Miocene	Do.
4	2621C	Block Canyon	39°49.9′	71°12.0′	1,070	3,510	do	Yellow calcareous clay	Eocene	Do.
5	2625	Alvin Canyon	39°46.2′	70°30.5′	1,775	5,823	do	Yellow calcareous clay, yellow chalk.	do	Do.
								Gray silty clay	Late Cretaceous	Do.
6	2652	Oceanographer Canyon.	40°15.1′	68°07.2′	1,500	4,921	do	Gray silty clay, glauconitic sandstone, buff calcareous clayey sand.	do	Do.
	2697	do	40°15.0′	68°06.0′	940	3,084	DSRV *Alvin* dredge.	Gray glauconitic clayey sand.	do	Do.
	2693	do	40°15.0′	68°06.0′	1,230	4,035	do	Gray silty clay	do	Do.
	2696	do	40°15.0′	68°06.0′	1,039	3,409	do	Brown silty clay	Late Cretaceous	Do.
	2656	do	40°16.0′	68°08.3′	950	3,117	Chain bag dredge.	do	Paleocene	Do.
	2695	do	40°15.0′	68°06.0′	1,046	3,432	DSRV *Alvin* dredge.	Brown glauconitic sandy clay.	Oligocene	Do.
	2698	do	40°15.0′	68°06.0′	886	2,907	do	Buff calcareous clay	do	Do.
7	2646	Lydonia Canyon	40°20.5′	67°41.0′	1,175	3,855	Chain bag dredge.	Gray micaceous silty clay, brown silty mudstone.	Late Cretaceous	Do.
8	2642	do	40°28.2′	67°39.8′	403	1,322	do	Green clayey silt	Miocene	Do.
9	Tow 5-34	Oceanographer Canyon.	40°24.5′	68°07.5′	596	1,955	Dredge	Sandstone	Late Cretaceous	Stetson (1949)
10	Tow 10-36	do	40°23.0′	68°08.5′	585	1,919	do	do	do	Do.
11	Tow 6-34	Gilbert Canyon	40°20.7′	67°51.3′	600	1,968	do	Greensand	do	Do.
	Tow 14-36	do	40°19.0′	67°51.5′	758	2,487	do	Limonite-stained micaceous sandstone.	do	Do.
12	Tow 2-39	Oceanographer Canyon.	40°17.0′	68°06.3′	950	3,117	do	Micaceous silt	Late Cretaceous	Do.
13	Core 12-36	Northeast of Block Canyon.	39°50.0′	70°57.5′	880	2,887	Core	Foraminiferal marl	Eocene	Do.
14	D-20	do	39°50.0′	70°50.0′	1,000	3,281	Ewing camera core.	do	do	Northrop and Heezen (1951)
15	Core 21-38	South of Hudson Canyon.	38°58.0′	72°28.5′	1,565	5,134	Core	do	do	Stetson (1949)
16	Tow 20-36	Lydonia Canyon	40°23.0′	67°38.5′	283	928	Dredge	Green sandstone	Miocene	Do.
17	Tow 1-36	Hydrographer Canyon.	40°09.0′	69°03.3.	319	1,047	do	do	do	Do.
	Tow 2-36	do	40°09.0′	69°04.0′	402	1,319	do	do	do	Do.
18	Tow 23-36	Corsair Canyon	41°21.3′	66°08.3′	493	1,617	do	do	do	Do.
19	Tow 9-34	Lydonia Canyon	40°27.0′	67°39.5′	640	2,100	do	Quartzose greensand	Pliocene	Do.
20	A156-10	North of Hudson Canyon.	39°25.0′	71°53.0′	1,400	4,593	Piston core	Green marcasitic foraminiferal lutite.	Pliocene-Pleistocene.	Ericson and others (1961)
21	A164-2	Hudson Canyon	38°27.0′	70°55.0′	3,475	11,401	do	do	Pliocene	Do.
22	A164-4	do	38°12.0′	70°51.0′	3,330	10,925	do	do	Miocene	Do.
23	A164-10	do	37°56.0′	70°44.0′	3,825	12,549	do	do	Miocene-Pliocene.	Do.
24	C10-13	do	38°22.0′	70°56.0′	3,570	11,712	do	do	Miocene	Do.
25	2150	Near Veatch Canyon.	39°46.5′	69°44.3′	1,675	5,495	Campbell grab sampler.	Mottled pale yellow and green, partly indurated foraminiferal silty clay.	Eocene	Gibson (1965).
26	B	Georges Bank	41°53.5.	67°53.5′	32	105	Dredge	Molluscan sandstone	Miocene	Do.
27	J	do	41°52.0′	67°19.8′	37	121	do	Well-indurated pebbly molluscan sandstone.	do	Do.
28	G	do	42°03.0′	67°04.5′	54	177	do	Gravelly foraminiferal sandstone.	do	Do.
29	K	do	41°53.7′	66°28.4′	74	243	do	Well-indurated pebbly molluscan sandstone.	do	Do.

TABLE 2.—*Selected rock samples from the northern Atlantic continental margin*—Continued

Map No.	Sample designation	Location	Latitude (north)	Longitude (west)	Water depth meters	Water depth feet	Recovery method	Descriptive lithology	Stratigraphic time division	Reference
30	2564-M	Fippennies Ledge.	42°46.5′	69°17.0′	70	230	Scallop dredge.	Fossiliferous opaline chert.	Eocene	Schlee and Cheetham (1967).
31	53/410	Hudson Canyon	39°31.0′	72°21.0′	686	2,250	DSRV *Alvin* dredge.	Tan siltstone	Miocene	Ballard (written commun., 1972).
32	53/415	do	39°25.0′	72°09.5′	1,438	4,720	do	Tan siltstone	do	Do.
33	15480	Slope east of Hatteras Island.	35°21.5′	74°50.5′	1,040	3,410	Dredge	Dense tan limestone	Eocene	Fleischer and Fleisher (1971); Fleischer (written commun., 1972).
34	15481	do	35°17.3′	74°52.0′	1,525	5,005	do	Calcareous glauconitic siltstone, sandstone, tan chalk.	Oligocene	Do.
35	15485	do	35°07.5′	75°01.4′	1,155	3,790	do	Tan limestone, greenish sandy limestone.	Eocene	Do.
36	15488	do	34°55.5′	75°08.5′	1,495	4,905	do	Tan sandy limestone	Late Cretaceous(?) Eocene(?)	Do.
37	15696	Slope east of Onslow Bay.	34°15.0′	75°38.5′	1,530	5,025	do	Dense tan limestone	Eocene	Do.
38	15725	do	34°07.0′	75°38.1′	2,205	7,235	do	Limestone	do	Do.
	15694	do	34°06.2′	75°38.7′	2,190	7,185	do	Calcareous siltstone	Late Cretaceous	Do.
								Calcareous ooze	Eocene	Do.
								Calcareous siltstone	Late Cretaceous	Do.
39	9767	do	33°56.2′	75°42.1′	1,830	6,005	do	Weathered limestone	Eocene	Do.
40	15717	do	33°52.1′	75°43.4′	1,990	6,530	do	do	do	Do.
							Onshore outcrops.			
41	none	Clay Head, Block Island.	41°13.0′	71°33.7′	N.a.	N.a.	Hand collecting.	White clay, lignitic clay.	Late Cretaceous	Woodworth, Wigglesworth, and others (1934).
42	none	Gay Head, Martha's Vineyard.	41°20.5′	70°51.6′	N.a.	N.a.	do	Greensand	Miocene-Pliocene.	Do.
								Kaolinite, white clay, lignitic clay.	Late Cretaceous	Do.
43	none	Lakey's Bay, Nonamesset Island.	41°30.6′	70°41.4′	N.a.	N.a.	do	Greensand	Miocene	Do.
								Lignitic clay, gray clay, quartz gravel, yellow sand.	Late Cretaceous	Do.
44	none	Third Cliff, Duxbury quad.	42°10.7′	70°43.5′	N.a.	N.a.	do	Greensand	Miocene	Do.

CORRELATION OF MAP UNITS

Q	Holocene and Pleistocene	QUATERNARY
Unconformity		
Tpm	Pliocene and Miocene	TERTIARY
Unconformity		
To	Oligocene	TERTIARY
Tep	Eocene and Paleocene	TERTIARY
TKu	Tertiary and Upper Cretaceous	TERTIARY
Unconformity		
Ku	Upper Cretaceous	CRETACEOUS
Kl	Lower Cretaceous	CRETACEOUS
J		JURASSIC(?)
Unconformity		
Ꞧ		TRIASSIC
Unconformity		
PzpC		PALEOZOIC AND PRECAMBRIAN(?)

DESCRIPTION OF MAP UNITS

- **Q** — HOLOCENE AND PLEISTOCENE MANTLE – Shown only in section. Fine-grained clastic deposits with interbedded silt and clay
- **Tpm** — PLIOCENE AND MIOCENE SEDIMENTS – Marine fine sands and silts and nearshore deposits with scattered fluvial gravels
- **To** — OLIGOCENE SEDIMENTS – Shown only on slope. Fossiliferous marine calcareous clays, siltstones, and sandstones
- **Tep** — EOCENE AND PALEOCENE SEDIMENTS – Glauconitic and quartzose marine sands with alternating clay layers and local limestone beds. Locally very fossiliferous
- **TKu** — UNDIFFERENTIATED COASTAL PLAIN SEDIMENTS – May include some deposits of Pleistocene age
- **Ku** — UPPER CRETACEOUS SEDIMENTS – The oldest rocks known from the continental slope. A cyclic sequence of unconsolidated sand, silt, and clay of marine and nearshore origin
- **Kl** — LOWER CRETACEOUS SEDIMENTS – Only known to crop out on land. Unconsolidated gravel, sand, and clay of continental origin
- **J** — JURASSIC(?) ROCKS – Shown only in section. Dense crystalline limestones underlain by conglomeratic sandstones and shales
- **Ꞧ** — TRIASSIC ROCKS – Consolidated fluvial, lacustrine, and swamp deposits and intrusive and extrusive volcanic rocks, diabase and basalt
- **PzpC** — BASEMENT ROCKS – Shown only in section. Paleozoic and Precambrian(?) granite, gneiss, and schist

Contact – Dashed where approximately located on land. Contacts beneath water are inferred; queried where indefinite

Unconformity – Shown in cross section

Drill hole – Data in tables 1 and 3

Oil test hole – Data in tables 1 and 3

Offshore bottom sample – Data in table 2

Isolated land outcrop of Coastal Plain sediments – Data in table 2

SOURCES OF DATA

Ballard and Uchupi (1972); Cleaves, Edwards, and Glaser (1968); Emerson (1917); Emery and Uchupi (1972); Ericson and others (1961); Fleischer and Fleisher (1971); Gibson (1965); Gibson, Hazel, and Mello (1968); Hathaway (1971); Kümmel (1940); Northrop and Heezen (1951); Oldale and others (1973); Rodgers and others (1956); Schlee and Cheetham (1967); Spoljaric and Jordan (1966); Stetson (1949); Stuckey (1958); Uchupi (1968); U.S. Geological Survey (1967); Virginia Div. Mineral Resources (1963); Woodworth, Wigglesworth and others (1934)

Base from U.S. Coast and Geodetic Survey

GENERALIZED PRE-PLEISTOCENE GEOLOGIC MAP OF THE NORTHERN UNITED STATES ATLANTIC CONTINENTAL MARGIN

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