

CORE DESCRIPTIONS

VERNON

**VR**  
ROYAL

# COMPOSITIONS

CAPE COD BAY

M/V ATLANTIC TWIN

JUNE 1974

+74005

ATTN 103513  
74005

Under the following core descriptions these conventions will be followed: (1) cores if cut into sections will have a subscript to the core number indicating section (2) section 1 will be the upper section section 2 below section 1 and so on. (3) measurements of depth will be within a given section only measured from the TOP of that section. (4) measurements will be made in centimeters.

Samples taken for size were taken relative to the base of the core section rather than the top

29-1

1 of 2

0-44

medium and coarse sand with small amount of organic stain.

44-51

Coarse sand and gravel with dark organic stain and large fragments of shells.

51-174

medium and coarse sand with <sup>increasing</sup> ~~decreasing~~ organic stain downward one dark band 2cm wide at <sup>121</sup> ~~111~~ cm

176-181

coarse and very coarse organic stained sand

181-223

organic stained (black) medium sand and coarse sand. Contains large broken shell fragment. Venus shell 830 ± 200 yrs

223-226

Clean coarse and very coarse sand with some shell material and small grooves

all Qob

29-2

two of 2

- 0-7 coarse and very coarse sand with no stain
- 7-19 medium and coarse sand with slight organic stain
- 19-27 medium to very coarse sand with some gravel very dark organic stain
- 27-57 slightly organic stained medium and coarse sand with some very coarse sand and fine gravel
- 57-71 organic stained medium and coarse sand
- 71-131 medium and coarse sand with small amount of very coarse sand and slight organic stain
- 131-149 medium and coarse sand with dark organic stain
- 149-162 medium and coarse sand with a small amount of very coarse sand
- ~~162~~<sup>171</sup> med and coarse sand with dark organic stain
- 171-188 medium and coarse sand with slight organic stain
- 188-203 medium and coarse sand with small amount of very coarse sand. clean with little organic stain

all Qob

89/2

2 of 2

0-230

Clear medium and coarse sand with a small amount of very coarse sand. Some slight organic staining between 150 and 170 cm. When opened core smelled strongly of  $H_2S$

89/1

1 of 2

0-200

clean medium and coarse sand with some  
very coarse sand. Slight organic stain.  
Odor of  $H_2S$ . Shell fragments present through-  
out

130/2

20/2

- 0-20 missing
- 20-32 grey green silt and clay
- 32-38 missing
- 38-178 Gray green silt and clay with some organic matter

all Qm

87/1

1 of 2

- 0-8 Coarse and v. coarse sand, brownish orange in color (hematite stain)
- 8-31 v. fine and fine sand, grey in color
- 31-76 Coarse sand and gravel grey in color with cobbles up to 7 cm across at the base also contains large shell fragment
- 76-187 Brownish orange medium and coarse sand with small amount of very coarse sand and small gravel

84B/2

2 of 2

0-221

grey-green fine and v. fine sand with slight changes in tone and small areas of organic stain throughout the core.

130/1

1 of 2

- 0-28 organic rich silt and clay. dark gray in color. strong  $H_2S$  odor
- 28-173 gray green silt and clay
- 173-183 organic rich silt and clay dark gray in color

All am

Qm  
Qob?

5A / 2

2 of 2

- 0-108 gray silt and fine sand with brownish orange marbling between 65 and 85 cm coarse shell fragments at ~~25~~<sup>25</sup> and 57
- 108-215 Gray clay with minor amounts of silt at 175-185cm

all Qm

24/1

1 of 2

- 0-121 Coarse sand and gravel gravel up to 70mm
- 121-160 V. coarse sand and gravel
- 160-165 medium sand with small pods of clay
- 165-170 Very fine sand with silt. Gray green color  
Upper most material contained a very thin layer of peaty material.
- 170-183 Silt and clay. dark gray green color
- 183-193 poorly sorted mixture of coarse to very coarse <sup>sand</sup> with minor amounts of silt and gravel. gray organic stain

Note no Qt possibly Qd under Cab

12/1

1 of 2

- 0-16 Fine sand gray in color
- 16-33 Peat reddish brown in color 12,000 yrs
- 33-49 Peat stained fine sand. reddish brown in color
- 49-70 organically stained fine sand with stain decreasing downward. gray to black in color.
- 70-178 Gradational sequence of v. fine and fine sand downward to coarse sand with some v. coarse sand and gravel. Some mottling of darker fine grained material

All drift! note 12,000 year old peat!

24/2

20/2

0-89

missing

89-234

Coarse + Very Coarse sand with  
some gravel. upper portion highly  
disturbed

Note: no QF

3/2

O-201

20/2

Fine and very fine sand, high in mica. with clay layer about 1 cm thick at 148 cm

CK Qb

Qob/Qf?

68/2

2 of 2

0-205

Very fine sand and silt with high mica content. Pale gray green color.

68/1

1 of 2

- 0-35 Dark organic stained fine and medium sand with occasional gravel size material and shell debris. Upper 30cm highly disturbed
- 35-74 Fine and v fine sand
- 74-139 Medium sand with thin layers of fine sand
- 139-225 Very fine sand and silt gray green in color with dark (very dark gray) organic mass at 142 cm.

Core smelled strongly of  $H_2S$   
when opened

Qf at bottom?

3/1

1 of 2

0-38

Coarse sand with large gravel grading upward to medium sand with the upper 30 cm disturbed slightly by handling

38-62

gradation from medium + coarse sand up to organic rich silt and clay as grain size decreases upward organic stain increases

62-64

coarse and very coarse sand with some gravel.

64-77

Fine and medium sand

77-110

gradation from fine and very fine sand basal up to very coarse sand + gravel

110-124

coarse sand and gravel

124-228

Fine and very fine sand high in mica pale gray green in color.

72/2

2.12

- 0-4 missing
- 4-126 Silt and Very fine sand gray green color
- 126-172 Fine sand grading upward into medium sand gray green color
- 172-176 Silt and clay gray-green color
- 176-202 Fine sand and medium sand gray-green
- 202-238 Silt high in mica).

Most likely Qob/Qt.

5A/1

10/2

- 0-26 Dark organic stained silt and clay  
26-174 Very fine sand and silt gradational  
upward to silt and clay. gray green in color.

OK Qm

Q6  
Qd

35A / 1 10/2

- 0-87 Coarse and Very Coarse sand with matrix of silt and clay. Gray green in color.
- 87-151 Fine and medium sand light gray in color.
- 151-193 Very Coarse sand light gray in color.
- 193-219 Coarse sand with some Very Coarse sand and gravel grading upward to fine and medium sand. Pale gray in color.

Old very shallow

12/2

20/2

- 0-16 medium and coarse sand grading to medium + fine upward.
- 16-59 Coarse sand with some medium sand grading upward to medium and fine sand organic layers at 28cm and 16 cm
- 59-90 medium <sup>sand</sup> with some coarse sand dark organic layer at 61 cm
- 90-176 Coarse and Very Coarse sand with an increasing medium sand content upward. This area appears highly disturbed and some material is missing (pale gray color)

All Qd below 12k year old peat

65/1

1 of 1

0-30

med. and fine sand. organic rich  
highly disturbed  
no sample taken

28/1

10/1

0-62

Fine and Very fine sand highly  
disturbed. organic stains

no samples taken

68A/1

10/1

- 0-16 Tan medium and coarse grained sand  
16-32 Organic stained (Black) medium and  
coarse sand  
32-73 Medium + Coarse sand gray in color  
73-88 Missing

Fishing ledge section 1 10/2.

- 0-126 - poorly sorted mixture of sand  
silt, gravel, pebbles, cobbles and clay  
gray-green in color predominately  
finer grained material.
- 126-188 missing.

## Fishing Ledge section 2

2 of 2

- 0-24 missing
- 24-78 Clay rich mixture of sand, silt pebbles and cobbles gray green with some brown stains. (finer than the layers below)
- 78-166 sand rich mixture of silt clay pebbles and cobbles. gray-green with <sup>much</sup> brown stain. (~~is~~ Coarser than the layers above and below)
- 166-179 clay rich mixture of sand silt pebbles gray green with some brown stain.
- 179-196 missing.

95A / 1

10/2

- 0-~~10~~<sup>10</sup> cm light brown med-to coarse sand  
with some shell fragments.
- 10-170 Very fine sand with some silt  
gradational upward to medium and  
coarse sand. some shell material  
in the upper 10 cm gray green in  
color

all Qob

82/1

101 1

- 0-32 Fine-Very fine sand with some silt.  
shell fragments. gray to dark gray in color.
- 32-80 gray silt and clay grading upward  
to include some fine and very fine  
sand.
- 80-220 Light Brown sand (med to coarse)  
very clean.

Qob  
Qf

84B/1

1 of 2

0-205

light gray green sand (med to  
Very fine) some shell fragments  
increasing upward.

86-1

10/2

0-202. <sup>clean</sup> medium <sub>1</sub> sand. lt. gray brown in color with some shell fragments.

86/2

242

- 0-10 medium sand
- 10-13 coarse and V. coarse sand
- 13-96 Fine and Very fine sand grading upward to medium and coarse sand
- 96-108 Coarse sand grading <sup>up</sup> to V coarse sand
- 108-122 medium to very fine sand
- 122-127 coarse sand to very coarse sand
- 127-177 med → very fine sand
- 177-180 medium to coarse sand
- 180-202 medium to fine sand lt gray in color

all units gray green in color

all Qob!

Qob/Qa

97-2

0-215 lt brown medium → coarse  
sand. Very clean with some small  
shell fragments.

All old beach

Qm

11/1

141

0- 12

gray silt and clay

12- 223

gray green silt and clay with some  
small shell fragments.

all Qm

87/2

2 of 2

0-6

iron stained (rust) coarse sand  
colored

6-135

silty medium sand grading upward to  
silt and very fine sand

135-198

Fine and medium sand with some silt

all Q2 (?)

Qob

95A / 2

2 of 2

0-217 Medium gray-green silt and clay  
with clay ball at 90cm

Maybe all Qm

97/1

10/2

0-214 Med → coarse sand light brown  
in color some small shell fragments.

18/2

20/2

- 0-28 Very coarse sand and gravel grading  
upward to medium sand.
- 28-61 Medium to coarse sand
- 61-174 Very coarse sand with some  
fine gravel 4 cm rock at 126 cm  
missing
- 174-214

28A/1

1 of 2

0-175

Fine and Very fine sand. med.  
brown in color with some gray  
organic (mottled) some small  
shell fragments.

4-1

1 of 2

- 0-160 V fine sand, silt and clay grey green in color.
- 160-180 Silt and clay with some V-fine sand grey green in color
- 180-190 Iron stained fine sand and silt

Qml?

4-2

2 of 2

- 0-91 alternating layers of fine sand / silt and clay grey green in color
- 91-98 admixture of silt and clay and v fine sand grey greens
- 98-101 Silt and clay with small woody fragment at 98 cm grey green
- 101-103 v fine sand in silt and clay.
- 103-107 Silt and clay grey-greens
- 107-110 Silt and clay with some fine sand
- 110-121 Silt and clay grey green in color
- 121-123 Silt and clay with v-fine sand
- 123-171 Silt and clay grey-green in color.

Qm (?)

28A-2

2 of 2

0-212

fine to medium sand brown with  
some grey stain

212-224

Missing

5/1

1 of 2

- 0-6 Dark grey green silt and fine sand
- 6-112 Unsorted silt → medium sand.  
greenish grey. some shells
- 112-158 fine and v. fine sand grey brown in color well sorted.
- 158-168 silty v. fine and fine sand grey green in color
- 168-216 v. fine and fine sand grey brown in color well sorted

35A/2

2 of 2

Q6  
Qd

0-30

medium → Very coarse sand  
with some gravel.

20-106

Very coarse sand and gravel.  
grading upwards to medium and  
coarse sand mud ball at  
27 cm.

106-210

Coarse and Very coarse sand iron  
stained (reddish brown)

Could see Qd.

5/2

O-214

Very fine and fine sand with some silt grading upward to medium and fine sand. shell fragments throughout. High mica content.

131A/1

1 of 1

Qm  
Qe

0-250

silt and clay light grey  
to dark grey in color slight  
H<sub>2</sub>S odor.

all Qm

18-1

10/2

0-33

Coarse and medium sand with some silt.

53-38

V-large rocks up to 8 cm in diameter

38-218

Coarse and Very Coarse sand with some gravel decreasing in size upward to medium to coarse sand  
iron stain between ~~78~~ 78-158 cm

Q6/Qd

Q ob/br  
or QF

72/1

1-2

- 0-22 Silt and clay grading up to coarse sand with some silt and clay.
- 22-31 Medium to coarse sand.
- 31-39 silt and clay gray green
- 39-54 medium to coarse sand gray green
- 54-63 Silt and clay grey green
- 63-66 Medium and coarse sand grey green
- 66-76 silt and clay grey green
- 76-83 Medium and coarse sand grey green
- 83-119 Silt and clay. grey green in color
- 119-122 Medium and coarse sand dk grey
- 122-174 Silt and clay grey green

Qb/Qd

62/1

1 of 1

0-11

clean medium to coarse sand

11-205

disorted mixture of sand, gravel,  
silt and clay. gravel with some  
pebbles + cobbles

Qb/Qd

1/2

2 of 2

- 0-35 silt and clay grey green in color
- 35-38 clay lt grey in color
- 38-47 silt and clay dark grey
- 47-60 lt grey clay
- 60-72 silt and clay with some fine sand  
med. → dark grey in color
- 72-81 grey brown clay
- 81-87 lt grey silt and clay with some v fine  
sand.
- 87-105 grey brown clay
- 105-114 dark grey silt and clay
- 114-132 grey brown clay
- 132-139 dark grey silt and clay
- 139-157 grey brown clay

Qd (?)

~~1/1~~ 1/1

10/2

- D-51 clean sand with some large rock fragments (5cm)
- 51-59 layers of dark sand and silt alternating with clean sand
- 59-75 Very coarse sand and gravel becoming finer upward to fine and medium sand.
- 75-86 dark grey → black sand and silt.
- 86-90 iron stained (reddish brown) medium to very coarse sand
- 90-154 silt and clay grey green in color

Qd ( )

91/2

2 of 2

- 0-9 coarse sand and gravel  
 9-14 silty medium to coarse sand  
 14-79 coarse sand and gravel  
 79-96 medium to coarse sand  
 96-176 sand and gravel with rock fragments  
 up to 5 cm in length.

Qm/Qoo!

91/1

Qm

91/1

142

0-70

Silty sand and gravel grading upward to very fine sand, silt and clay.

gray-green in color. some shell fragments

70-90

coarse sand and gravel.

90-97

gravel with v. coarse sand. iron stained

97-142

coarse sand and gravel

Qm/Q00

120/2

2 of 2

- 0-22 V coarse sand some gravel grading finer upward
- 22-156 fine and very fine sand iron stained lower 70 cm. grading to grey in upper part of section

Q6/Qd

120/1

10/2

- 0-27 Very coarse sand. tan in color  
27-150 medium to fine sand grading finer  
upward