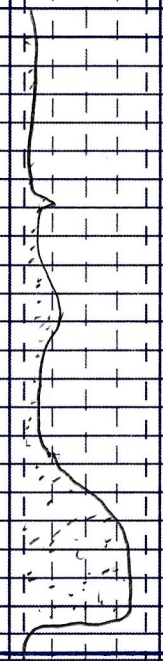
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC - 01
Latitude: 39.9627333
Longitude: -74.1026364
Date Vibracored: 08/05/2014
Geographic Location: Base of large channel (OSL - No)

Date Described: 09/17/2014
Described By: KELSO
Core Penetration:
Core Length: 2.24m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND (0 – 50 – 100)	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
Stratigraphy; CLAY; SILT; FINE SAND; MEDIUM SAND; COARSE SAND; INTERVAL (Meters)		COLOR; DEFORMATION; BED THICKNESS; % SHELL; % ORGANICS; % BIOTURBATION	WAVY; FLASER; LENTICULAR; CROSS BED; MASSIVE BED; INCLINED BED; HORIZON LAMINATION	GRAIN SIZE; HEAVY MINERAL; MICRO FOSSILS; RADIOMETRIC; RADIOGRAPH; PHOTOGRAPH	cut off 1st 16cm occupied by a noodle



0-22 cm - Mud, very dark gray (2.5y 3/1), slightly organic silty mud, with disseminated very small mica flakes - gradational contact

22-87 cm - Mud + thin silt interbeds, very dark grayish brown (2.5y 3/2) silty mud with thin gray (2.5y 5/1) silt / very fine sand horizons
Heavy mica content

87-122 cm - Mud, very dark gray (2.5y 3/1) slightly organic mud with occasional thin silt horizons and moderate disseminated mica flakes

122-135 cm - Muddy Sand gray (2.5y 5/1) muddy sand with clayey very fine, light gray (2.5y 7/1) sand horizons, minimal disseminated mica flakes

135-158 cm - Muddy Sand dark gray (2.5y 4/1) very fine massive muddy sand, with minimal disseminated shell hash and a single articulate razor clam @ 151 cm

158-167 cm - Shelly Sand fine, moderately sorted gray (2.5y 6/1) shelly quartz sand, with small coarse sand lenses

167-218 cm - Sand and silt very dark brown (7.5yr 2.5/2) silt interbedded with dark brown (7.5yr 3/2) fine sand and strong brown (7.5yr 4/6) sand no visible shell and no mica flakes horizon of coarse dark brown (7.5yr 3/3) sand from 203-206cm

218-224cm - Silty Mud, very dark gray (2.5y 3/1) massive silty mud

USGS
science for a changing world

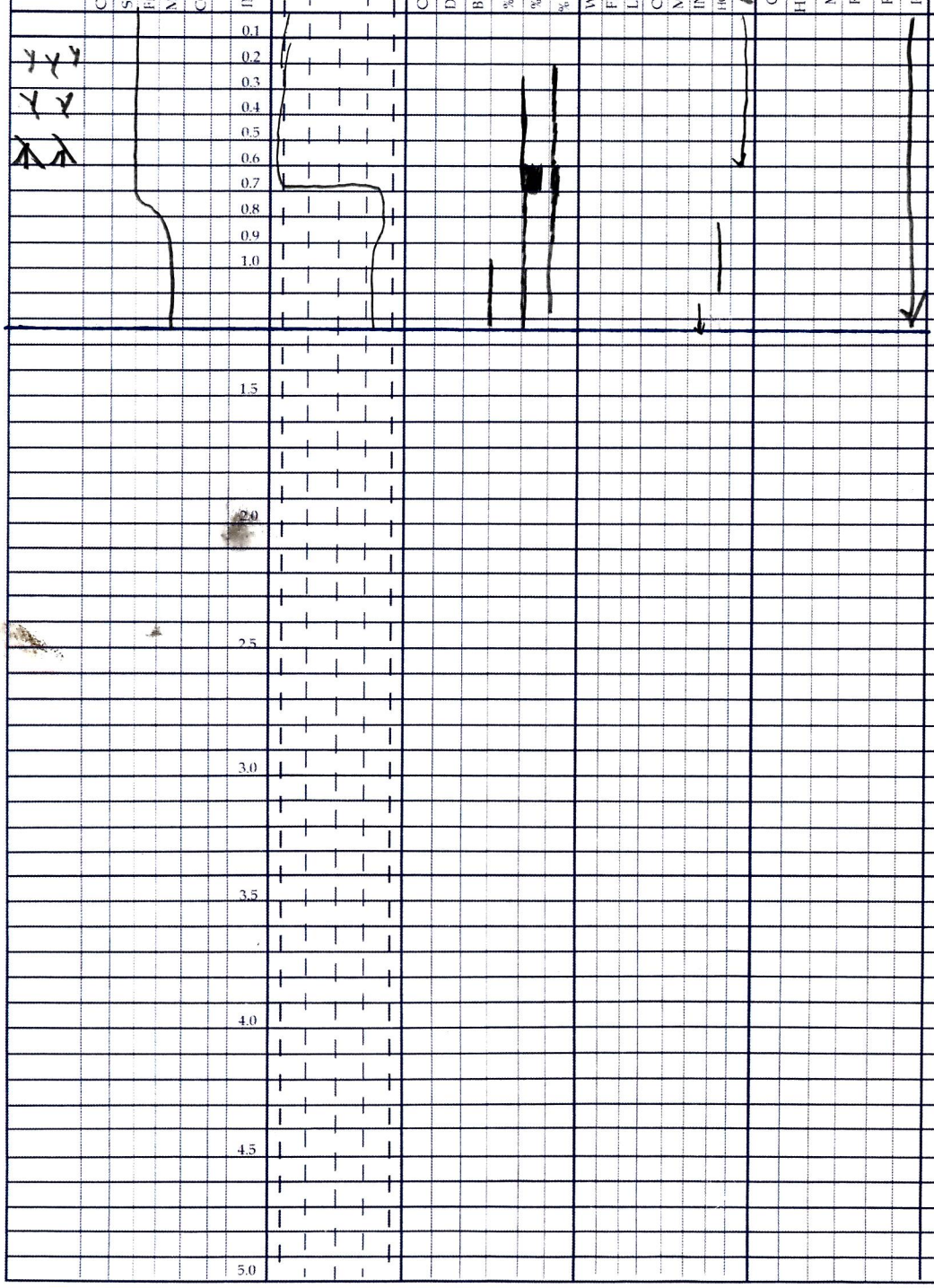
Vibracore Description Sheet

Core ID: SPCMSC-02
Latitude: 40.0054536
Longitude: -74.0911078
Date Vibracored: 08/13/2014
Geographic Location: Barnegat Bay, NJ - Base of large channel top)

Date Described: 09/29/14
Described By: KELSO
Core Penetration:
Core Length: 1.22 m (after cut off

OSL - yes

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND (0 – 50 – 100)	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)		COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, Mottled	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	Cut 57.5 cm off top



0-8 cm - Mud (2.5y 3/1) very dark gray silty mud very fluid, partially organ.

8-60 cm - Muddy silt + clay very dark gray organic rich mud with small organic fibers throughout including small woody particles, lenses of cleaner clay, due recent down core bedding is mottled by bioturbation

60-70 cm - Organic mud, Black (10yr 2/1) organic rich mud (dense peat) with small degraded root fibers through out

70-79 cm - Sand, gray (5y 5/1) massive well sorted medium granite sand with darker gray mud clasts

79-122 cm - Sand, slightly muddy interbedded light and dark reddish brown (5yr 2.5/2) & (5yr 3/4) bedding is horizontally laminated, the darker the sediment the more fine the grain size lighter units are well-sorted medium, and darker units are fine to very fine well sorted muddy sand bedding is inclined from 116-120 cm, occasional black organic flecks throughout and an occasional shell fragment

USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC - 03
Latitude: 39.9769974
Longitude: -74.0986829
Date Vibracored: 07/31/2014
Geographic Location: Faint continuous reflector, large channel fill

Date Described: 09/17/2014
Described By: KELSO
Core Penetration:
Core Length: 2.545m

SEDIMENTARY TEXTURE AND STRUCTURES: CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)

% SAND: 0, 50, 100

PHYSICAL CHARACTERISTICS: COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION

STRATIFICATION TYPE: WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, mottled

SAMPLE: GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH

OSL - No

PHYSICAL DESCRIPTION

37cm

Cut off ~~[illegible]~~ at Void off Top.

0-12cm - Muddy Silt. Very dark grayish brown to black (2.5y 2.5/1) muddy silt, moderately organic with minimal disseminated mica flakes - unit is massive

12-205cm - Muddy Sand dark gray (2.5y 4/1) and dark grayish brown (2.5y 4/2) mottled muddy sand, with abundant disseminated small mica flakes and scattered shell fragments. there is a thin shell hash horizon at 193cm with inclined bedding. From 191-200cm is a grayish moderately preserved wood fragment

205-228 cm - Silty Clay dark grayish brown (2.5y 4/2) silty clay with large silt/clay clasts throughout, mica flakes are visible in silt clasts - sharp based contact

228-248 cm - Sand, dark grayish brown (2.5y 4/2) moderately sorted fine to medium, massive slightly muddy sand - sharp based contact

248-254.5cm - Organic Rich Mud. Dark Brown (7.5 yR 3/2) medium organic rich silty mud

* bottom of core was not complete and may not be reliable although contacts seem to be solid.

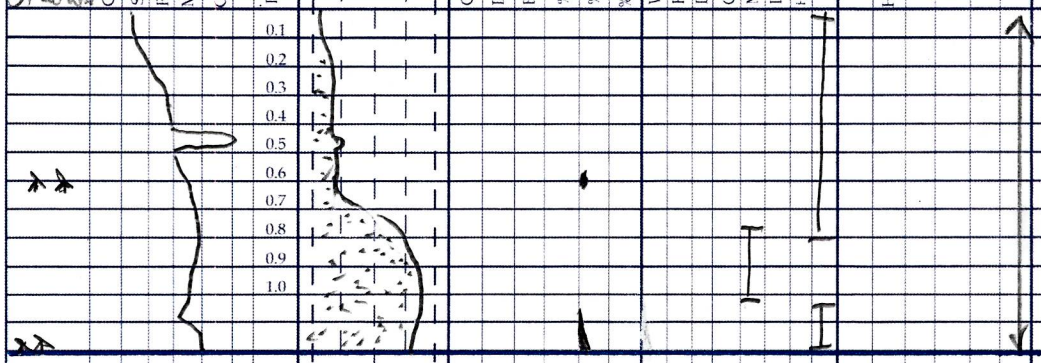
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC-04
Latitude: 39.978938
Longitude: -74.1066506
Date Vibracored: 08/04/2014
Geographic Location: Base of small channel (OSL-No)

Date Described: 09/18/2014
Described By: KELSO
Core Penetration:
Core Length: 1.215

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
Starting, CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	Cut 28cm off top + 4 cm off bottom



0-63cm - Silty Mud, very dark gray (2.5y 3/1) silty mud, with silt content increasing down core becoming very fine sand @ ≈23cm. Sporadic mica flakes. 2 cm diameter coarse sand lens @ 41.5cm, highly degraded organic clast / lens at base of unit

63-66cm - Sand, black (2.5y 2.5/1) medium well sorted organic sand.

66-103cm - Sand - relatively clean, light gray (2.5y 7/1) moderately sorted fine to medium massive quartz sand with sporadic organic clasts at top which decrease down core

103-116cm - Muddy Sand, very dark brown (7.5yr 2.5/2) organic rich muddy sand with lenses of coarser very dark brown / black (7.5yr 2.5/1) organic sand with the "coffee ground" texture, large pebble at basal contact

116-121.5 cm - Sand, very dark brown / black (7.5yr 2.5/1) coarse organic rich sand with coffee ground texture

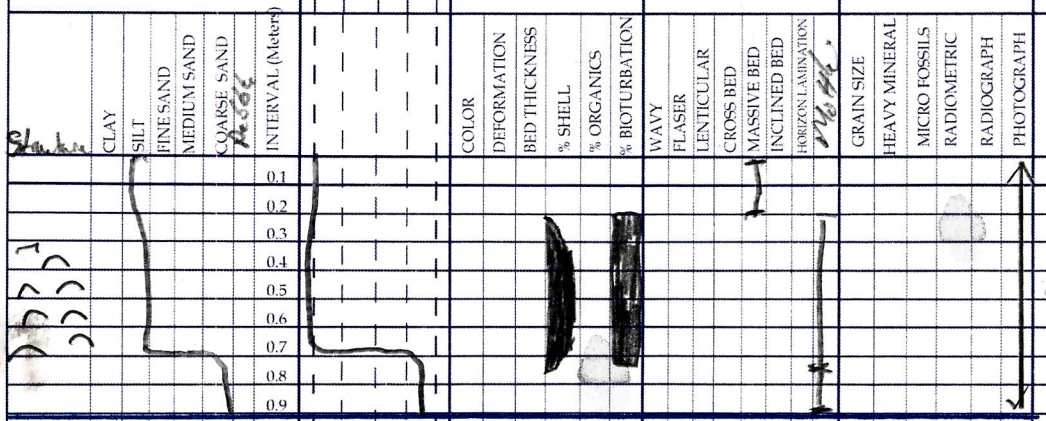
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPOMSC-05
Latitude: 40.06954
Longitude: -74.07387
Date Vibracored: 06/06/2014 ?
Geographic Location: base of a channel (OSC-No)

Date Described: 09/18/2014
Described By: Kelso
Core Penetration:
Core Length: 0.91 m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND (0–100)	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
Structure, CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, Pebble, INTERVAL (Meters)		COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, Mottle	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	Cut off top 11cm of void space



0–20cm - Mud, very dark gray (7.5yr 3/1) Massive slightly silty mud

20–73cm - Oysterbed - intact and articulated oysters in a very dark gray (7.5yr 3/1) mud matrix + abundant shells ≈ 70% - sharp basal contact

73–91cm - Sand gray (7.5yr 6/1) to light gray (7.5 7/1) moderately sorted fine to medium grained, partially indurated sand with abundant quartz pebbles of various size which increase down core

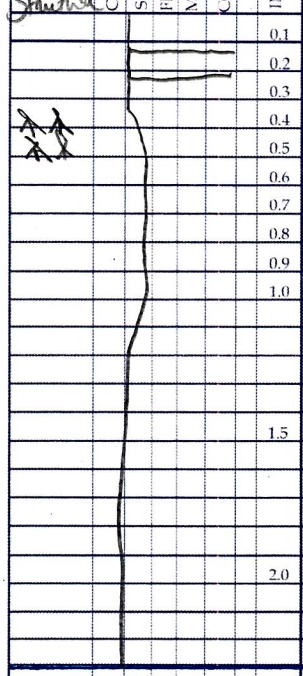
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC-06
Latitude: 39.831381
Longitude: -74.1422263
Date Vibracored: 06/03/2014
Geographic Location: Base of relict tidal creek (OSL - No)

Date Described: 09/18/2014
Described By: KELSO
Core Penetration:
Core Length: 2.30m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND (0 – 50 – 100)	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
Structure, CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)		COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	Cut off top 19cm of void space



0-49cm - Silty Mud, very dark gray (7.5yr 3/1) silty mud with orange brown (7.5yr 4/6) and dark gray (7.5yr 4/1) lenses bedding is mottled with large (1cm diameter) pebbles @ 19 & 27 cm, relatively thick very dark brown (7.5yr 2.5/2) organic mud horizon and lenses, small wood fragments from 44-50cm

49-60cm - Organic Mud. Very dark brown (7.5yr 2.5/2) mud with abundant very small degraded organic fragments

60-110cm - Clayey Silt dark gray (10yr 4/1) grading into gray (10yr 5/1) Clay silt down core with organic decreasing down core, two larger cleaner clay lenses at basal contact, bedding is mottled.

110-230cm - Clayey Silt horizontally laminated clayey silt of various colors - main color is light olive gray (5y 6/2) with laminations of dark gray (5y 4/1) and olive (5y 5/4) horizons, unit is free of any shell material Horizontal bedding evident from 110-165cm then faint from 165-207cm - bedding is deformed from 207-230 with a concave down indurated clay horizon @ 223cm

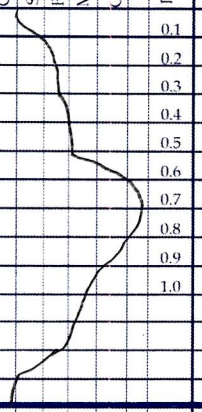
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SACMSC-07
Latitude: 39.8460906
Longitude: -74.1275834
Date Vibracored: 07/22/14
Geographic Location: Interflume between 2 creeks (OSL-No)

Date Described: Kelso
Described By: 09/18/2014
Core Penetration:
Core Length: 1.38m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
Structure; CLAY; SILT; FINE SAND; MEDIUM SAND; COARSE SAND; INTERVAL (Meters)	0; 50; 100	COLOR; DEFORMATION; BED THICKNESS; % SHELL; % ORGANICS; % BIOTURBATION	WAVY; FLASER; LENTICULAR; CROSS BED; MASSIVE BED; INCLINED BED; HORIZON LAMINATION; Mottled	GRAIN SIZE; HEAVY MINERAL; MICRO FOSSILS; RADIOMETRIC; RADIOGRAPH; PHOTOGRAPH	Cut 39cm of Voids at Top



0-49cm - Mud and Muddy Sand, Dark gray (2.5y 4/1) Mottled Muddy Sand and Mud with minimal sedimentary shell fragments, and occasional small olive brown (2.5y 5/6) muddy sand lenses, some organics at the top with organics decreasing down core

49-75cm - Mottled Muddy Sand, cleaner sand and more muddy sand with abundant small pebbles colors range from gray (2.5y 4/1) to grayish brown (2.5y 5/2) to brown (10yr 4/3)

75-126cm - Sand, clean, light brown to gray (10yr 6/2) grading into light gray (10yr 7/2) with little change in grain size, only scattered shell fragments, bedding is massive - sharp basal contact

126-138cm - Clay (Gley1 5/N) clean, massive clean clay

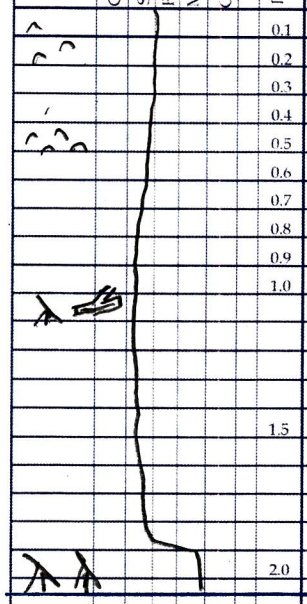
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPC MSC-08
Latitude: 39.8281792
Longitude: -74.139419
Date Vibracored: 5-12-2014
Geographic Location: Barnegat Bay, NJ, Edge of tidal creek

Date Described: 9-29-14
Described By: KELSO
Core Penetration:
Core Length: 2.10 m after cut

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	OSL - yes PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	None cut off top 21.5 cm cut off bottom



0-17cm - Mud, very dark gray (Gley1 3/N) silty mud, with moderate shell fragments and occasional small organic pieces, bedding is mottled

17-55cm - Organic Mud, Black (Gley N 2.5/N) mottled organic silty mud and silty lens 3 horizontal with minimal aussiencental shell fragments

55-172cm - silty clay (10yr 4/1) with clayey soft clay lenses, abundant organic fragments throughout with content decreasing down core, occasional woody fragments and a dinod wood chat @ 111cm

172-187cm - Interbedded clay and organic rich clay horizons, dark grayish brown (2.5y 4/2) and dark gray (2.5y 4/1) cleaned clay in 1cm beds, faint horizontal bedding evident

187-197cm - Organic Clay very dark brown (10yr 2/2) clay with abundant very dark brown/black peat clasts, thin organic horizon from 95-96cm - organic content increases down core

possible wood fragments

197-202cm - Peat black (10yr 2/1) hemic peat (coffee ground texture)

202-210cm - Sand, gray (5y 5/1) well sorted, medium quartz sand, with dark gray organic sand lenses at upper contact - transition between peat & sand or bioturbated

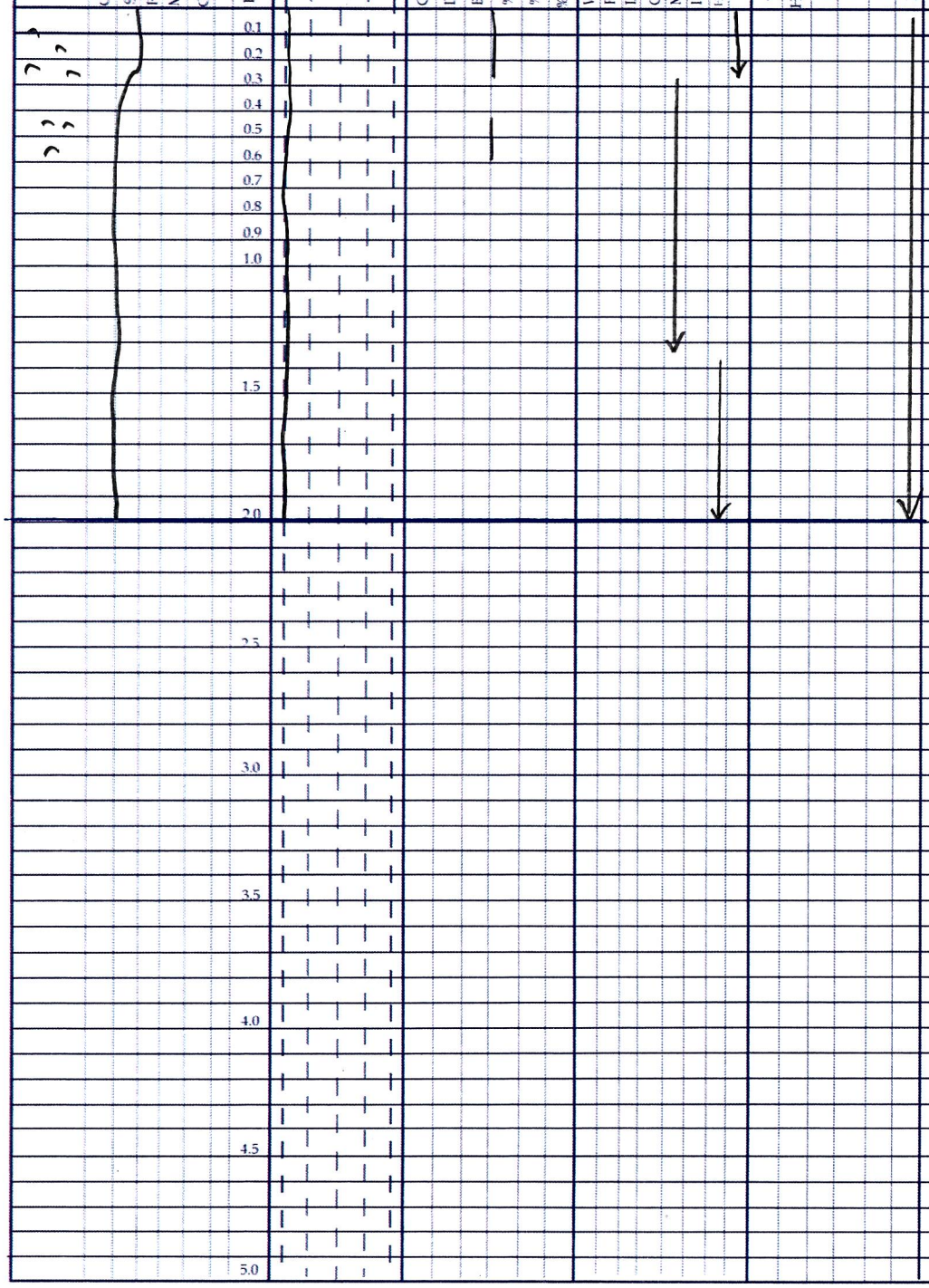
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC-09
Latitude: 39.8388779
Longitude: -74.1169538
Date Collected: 7.29.14
Geographic Location: Barnegat Bay, NJ, tidal creek fill

Date Described: 9-29-14
Described By: KELSO
Core Penetration:
Core Length: 1.96m not cut

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	OSL - yes PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (m)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	NONE CUT



0-12cm - Mud, Black (Gley1 2.5/N), slightly organic soft silty mud

12-196cm - Clay, dark gray (Gley1 4/N), clay with thin silt lenses and horizons, which increase in frequency down core, minimal disseminated shell fragments, thin horizontal bedding

USGS science for a changing world

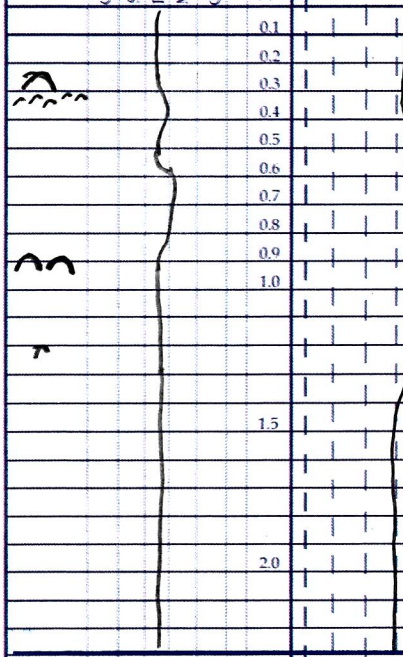
Vibracore Description Sheet

Core ID: SPCMSC-10
Latitude: 39.8223346
Longitude: -74.121368
Date Collected: 5-6-14
Geographic Location: Barnegat Bay, NJ, Transgressive Surface?

Date Described: 9-29-14
Described By: KELSO
Core Penetration:
Core Length: 2.30 m after cut

OSL - yes

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (m)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, % Hel	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	26 cm cut off the top



0-27cm - Sand, grayish brown (2.5y 5/2) very fine, well sorted slightly muddy sand with occasional darker brown sandy mud clasts, large intact articulate clam shell @ basal contact separated by finer shell hash cluster

27-43cm - Sand, olive gray (5y 5/2) fine, well sorted sand with thin darker muddy sand laminae zones exhibiting wavy bedding increasing down core, occasional small brown sandy mud clast, moderately disseminated small mica flake.

43-58 - Sand light gray (Gley1 7/N) very fine well sorted clean sand with thin wavy muddy sand laminated, minimal disseminated mica flakes

58-87 cm - Sand, olive gray (5y 5/2) fine, well sorted sand with thin muddy sand laminae and occasional muddy sand clasts, minimal disseminated shell hash. Two large articulate clam shells at basal contact

131-230 Muddy Sand dark gray (Gley1 4/N) muddy very fine sand mottled with heavier silt horizons, minimal disseminated mica flake and occasional very small shell fragments bedding is mostly massive except laminated zone from 131-147 cm

87-131 cm - Sand light gray (Gley1 7/N) very fine well sorted with thin wavy muddy sand horizons and occasional muddy sand clasts, minimal disseminated mica and an occasional shell

30

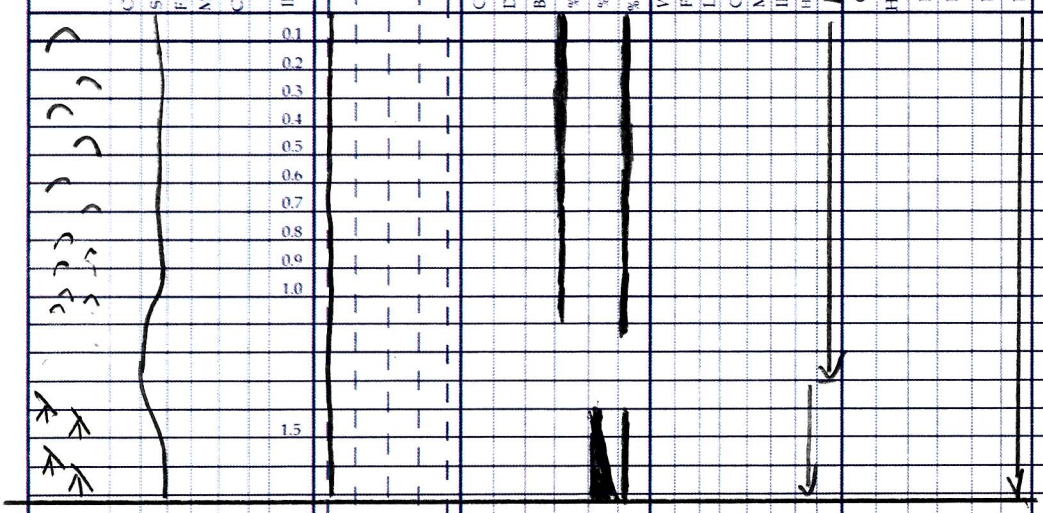
USGS science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC - 11
Latitude: 39.82037
Longitude: - 74.136393
Date Collected: 7-15-14
Geographic Location: Barnegat Bay, NJ, Interfluve/bathy high

Date Described: 9-[redacted]-14
Described By: KELSO
Core Penetration:
Core Length: 1.725 m after cut

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	OSL - yes PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (m)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, Mottled	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	22cm cut off the top



0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0

0 - 11.5 cm - Shell hash V. dark gray (Gley1 3/N) mud with abundant shell hash

11.5 - 54 cm - Mud, soft massive mud, gray - very dark gray (Gley 4/1) with large intact but inarticulate shell (oyster)

54 - 94 cm Muddy silt gray - very dark dark (Gley1 4/1) highly bioturbated mud with abundant shell fragments - shell content decreases down core

94 - 113 cm - organic rich mud and clay, mottled gray (Gley1 4/N) clay and dark gray (2.5y 4/1) with abundant brown organic fragment throughout minimal shell content unit becomes more clayey down core.

113 - 132 cm - Clay mottled very dark gray (Gley1 3/N) and gray (2.5y 5/1) dense clean clay.

132 - 170 cm - Organic rich mud interbedded light and dark horizon of organic-rich mud organic content increases down core, colors range from very dark grayish brown (2.5y 3/2) to very dark gray (10yr 3/1) with black organic horizons and abundant highly degraded root fibers - (hemic peat) " sharp basal contact with underlying clay unit

170 - 172.5 cm - Clay very dark gray 3/1 dense clay

peat Black (7.5yr 2.5/1)

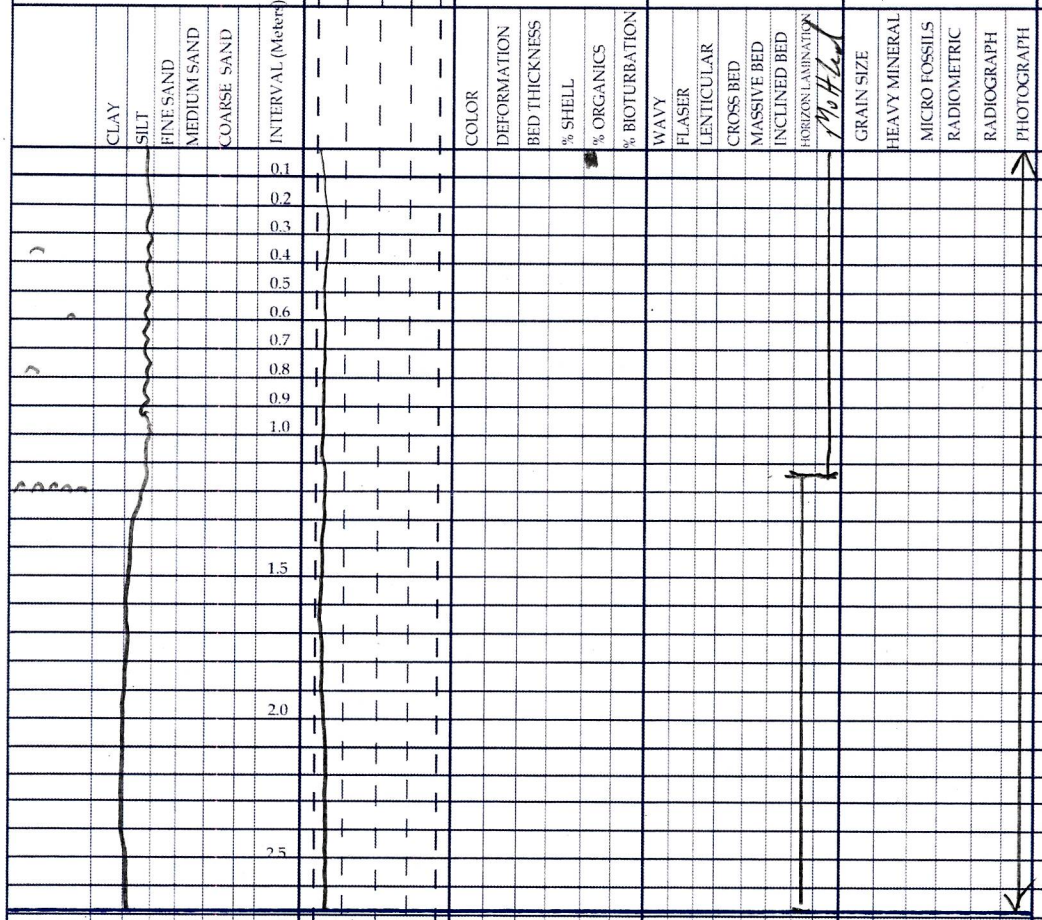
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SpcmSC-12
Latitude: 39.8032361
Longitude: -74.15609972
Date Vibracored: 07/16/2014
Geographic Location: Transition from bathy high to fill (OSC-N0)

Date Described: 09/18/2014
Described By: KBLSO
Core Penetration:
Core Length: 2.675m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	



Cut 16cm of void

0-13cm - Mud, Very dark gray - black (Gley 1 2.5/N) organic muddy sand with very small degraded organic fragments

13-116cm - Silty Mud Very dark greenish gray (Gley 1 3/1) silty clay and clay, bedding is mottled with only scattered shell fragments

116-267.5cm - Interbedded clay and silty clay. Very dark greenish gray (Gley 1 3/1) clay with thin silty clay interbed throughout, including visible shell material and occasional small woody organic fragments

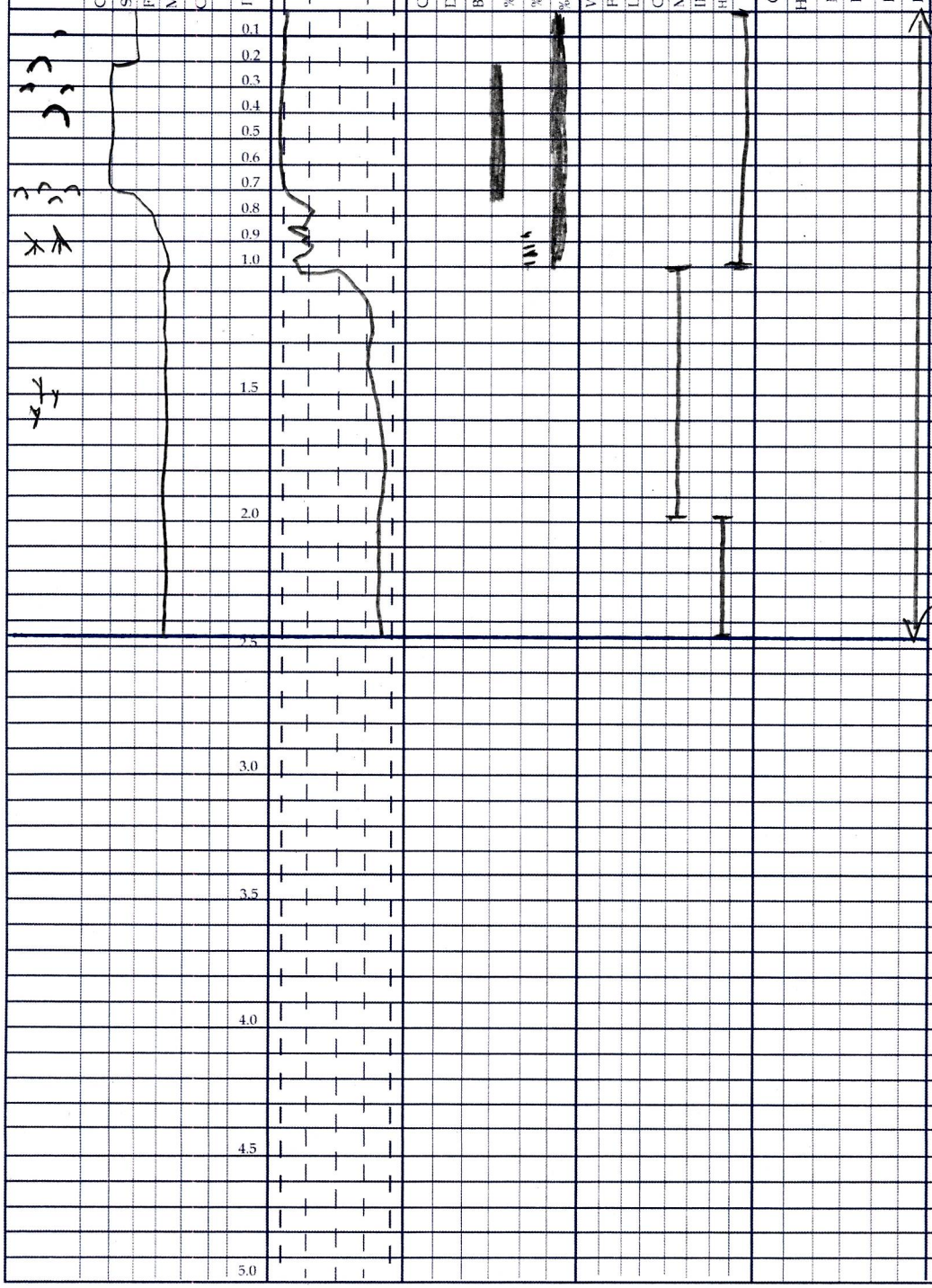
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC - 13
Latitude: 39.7594321
Longitude: -74.1768148
Date Vibracored: 07/18/2014
Geographic Location: Subsurface interfluve and fill (No OSL)

Date Described: 09/18/2014
Described By: KELSO
Core Penetration:
Core Length: 2.45m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION



Cut 14cm off top

0 - 22 cm - Silty Clay, Very dark gray (Gley 1 3/1) Mottled silty clay with moderate shell fragments and moderate very small mica flakes.

22 - 74cm - Oysterbed, Very dark gray (Gley 1 3/1) Clay with abundant intact articulated and fragmented oyster shells

74 - 102 cm - Interbedded. Silty Clay and organic Mud gray (Gley 1 5/1) clay interbedded with very dark brown/gray (7.5yr 3/1) organic mud with abundant organic fragment and small woody fragments throughout

102 - 120cm - Sand, top of unit is transition between units - Sand is very dark and organic - unit then becomes much cleaner grayish brown (10yr 5/2) well sort medium - fine sand with small black organic flecks (occasional)

120 - 192cm - Sand, Very dark grayish brown (10yr 3/2) grading into grayish brown (10yr 5/2) down core as sand becomes cleaner. organic fragment throughout but decrease down core

192 - 245cm - Sand, yellowish brown (10yr 5/4) fine, well-sorted quartz sand with horizontally laminated grayish brown (2.5y 5/1) muddy sand that exhibit some deformation from coring, occasional scattered very coarse quartz sand and small shell fragments throughout

USGS
science for a changing world

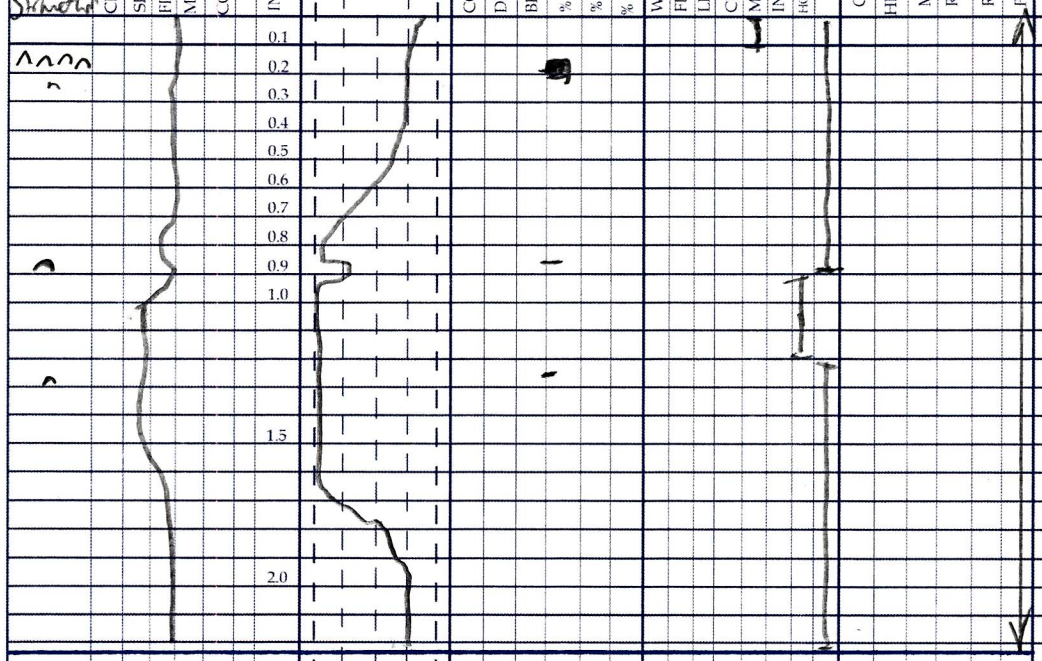
Vibracore Description Sheet

Core ID: SPCMSC - 14
Latitude: 39.822145
Longitude: -74.116268
Date Vibracored: 05/06/2014
Geographic Location: Distinct reflector; low stand surface? (No osc)

Date Described: 09/19/2014
Described By: Kelso
Core Penetration:
Core Length: 2.24m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION

Structure | CLAY | SILT | FINE SAND | MEDIUM SAND | COARSE SAND | INTERVAL (Meters) | 0 50 100 | COLOR | DEFORMATION | BED THICKNESS | % SHELL | % ORGANICS | % BIOTURBATION | WAVY | FLASER | LENTICULAR | CROSS BED | MASSIVE BED | INCLINED BED | HORIZON LAMINATION | GRAIN SIZE | HEAVY MINERAL | MICRO FOSSILS | RADIOMETRIC | RADIOGRAPH | PHOTOGRAPH



Cut 34cm off top

0-13cm - Sand - relatively clean, light brownish gray (10yr 6/2) fine to very fine well sorted sand with small dark gray (10yr 4/1) silty mud lenses

13-22cm - lag deposit mottled grayish brown (10yr 5/2) muddy sand with abundant shell fragments of various size

22-89cm - Sand to muddy sand, light gray (10yr 7/2) sand with grayish brown (10yr 5/2) muddy sand lenses and horizons; mud content gradually increases down core becoming muddy sand with cleaner mud horizons; mica flakes throughout relatively large bivalve fragment in a cleaner sand lens towards basal contact at 87cm

89-120cm - interbedded muddy and muddy silt, very dark greenish gray (Gley 1 3/1) interbedded mud and muddy silt with abundant small mica flakes throughout the muddy silt horizons

120-190cm - Muddy Silt to Muddy Sand, dark olive gray (5y 3/2) muddy silt gradually grading into muddy very fine sand down core, with abundant mica flecks and scattered shell fragment with a small shell hash chert @ 127cm

190-224cm - Muddy Sand, dark olive gray (5 3/2) muddy sand with occasional small muddy silt lenses, with abundant mica

USGS science for a changing world

Vibracore Description Sheet

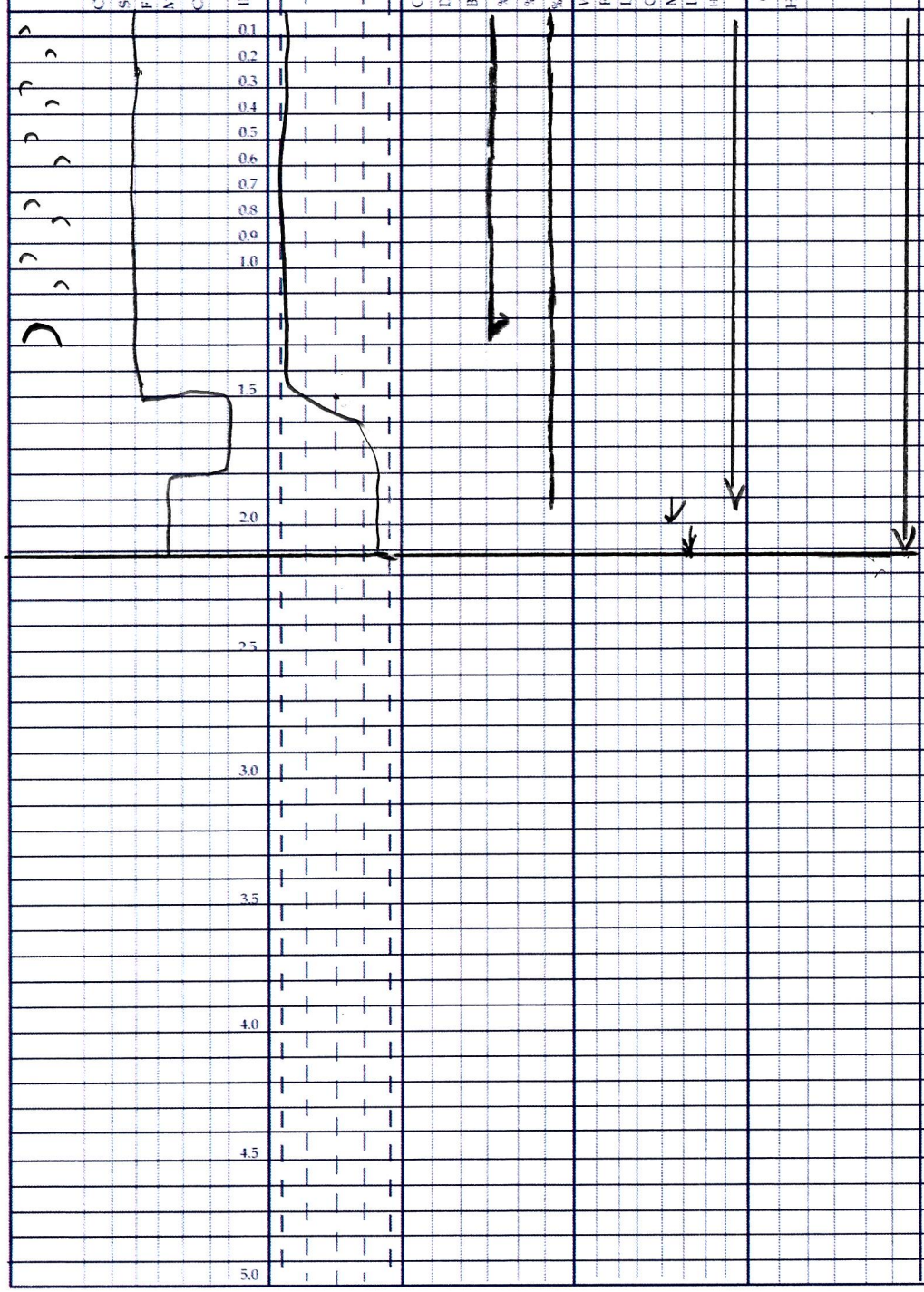
Core ID: SPCMSC-15
Latitude: 39.7990441
Longitude: -74.1621333
Date Collected: 07/17/2014
Geographic Location: Barnegat Bay, NJ, Edge of older Barn Inlet Channel ?

Date Described: 09/30/14
Described By: Kelso
Core Penetration:
Core Length: 2:12cm aftercut

OSL yes

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND (0 – 50 – 100)	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION

Columns: CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (m) | COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION | WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION, 0% H/Ed | GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH



Cut 25cm off top

0-6 cm - Muddy Silt, black (5y 2.5/1) soft, massive silty mud

6-155cm - Muddy Silt very dark gray (2.5y 3/1) highly bioturbated with abundant scattered shell fragments, occasional large pebbles, and intact shells, shell content decreases down core

155-208 cm - Muddy Sand and clay, very dark grayish brown (2.5y 3/2) grading into olive brown (2.5y 4/4) down core with abundant large and small pebbles throughout and gray silt & clay lenses. Sand is very muddy with a 60/40 sand ratio, clay content decreases down core. Angular basal contact

208-212 cm Clay dark gray (2.5y 3/1) massive clay with olive brown (2.5y 4/4) sand lenses, with small pebbles

USGS
science for a changing world

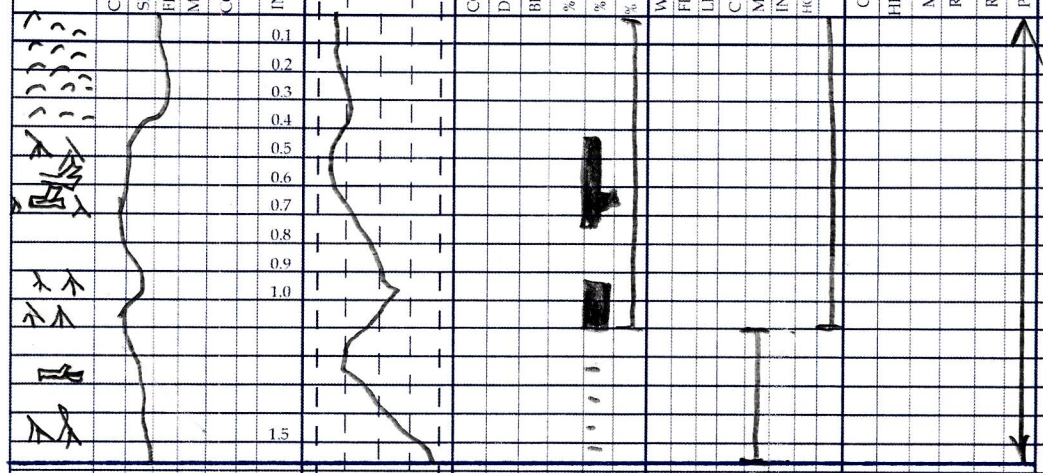
Vibracore Description Sheet

Core ID: SPCMSC-16
Latitude: 39.8614704
Longitude: -74.1204615
Date Vibracored: 07/22/2014
Geographic Location: Undulating semi-continuous surface (No OSL)

Date Described: 09/19/2014
Described By: Kelso
Core Penetration:
Core Length: 1.56m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION

Structure | CLAY | SILT | FINE SAND | MEDIUM SAND | COARSE SAND | INTERVAL (Meters) | % SAND 0 50 100 | COLOR | DEFORMATION | BED THICKNESS | % SHELL | % ORGANICS | % BIOTURBATION | WAVY | FLASER | LENTICULAR | CROSS BED | MASSIVE BED | INCLINED BED | HORIZON LAMINATION | GRAIN SIZE | HEAVY MINERAL | MICRO FOSSILS | RADIOMETRIC | RADIOGRAPH | PHOTOGRAPH



Cut 13cm of void off Top
Cut 22cm of void off Bottom

0-18cm - Silty mud, very dark gray (Gley 1 3/N) silty mud with abundant shell hash

18-43cm - Muddy Sand very dark gray (5y 3/1) mottled muddy sand with abundant disseminated shell hash

43-73cm - Mud very dark gray (5y 3/1) soft mud and very dark brown (10yr 2/2) organic rich mud with abundant large organic fragments and large wood fragments - especially from 66-69 cm - very sharp basal contact

73-80 cm - Mud - Very dark gray (Gley 1 3/N) soft, massive mud with minimal disseminated shell hash

80-93cm - Muddy Sand - very dark gray (Gley 1 3/N) muddy fine sand with moderately disseminated shell hash - sand content increases down core

93-111cm - Organic Rich mud, dark brown/black organic rich mud with small organic fragment throughout and small woody fragments. Hemic peat horizon with sharp contacts above and below unit

111-156cm - Silty Mud to muddy sand, dark olive brown (2.5y 3/3) mud grading into muddy sand down core, sporadic wood fragments and an occasional small pebble. Mud content decreases down core

USGS science for a changing world

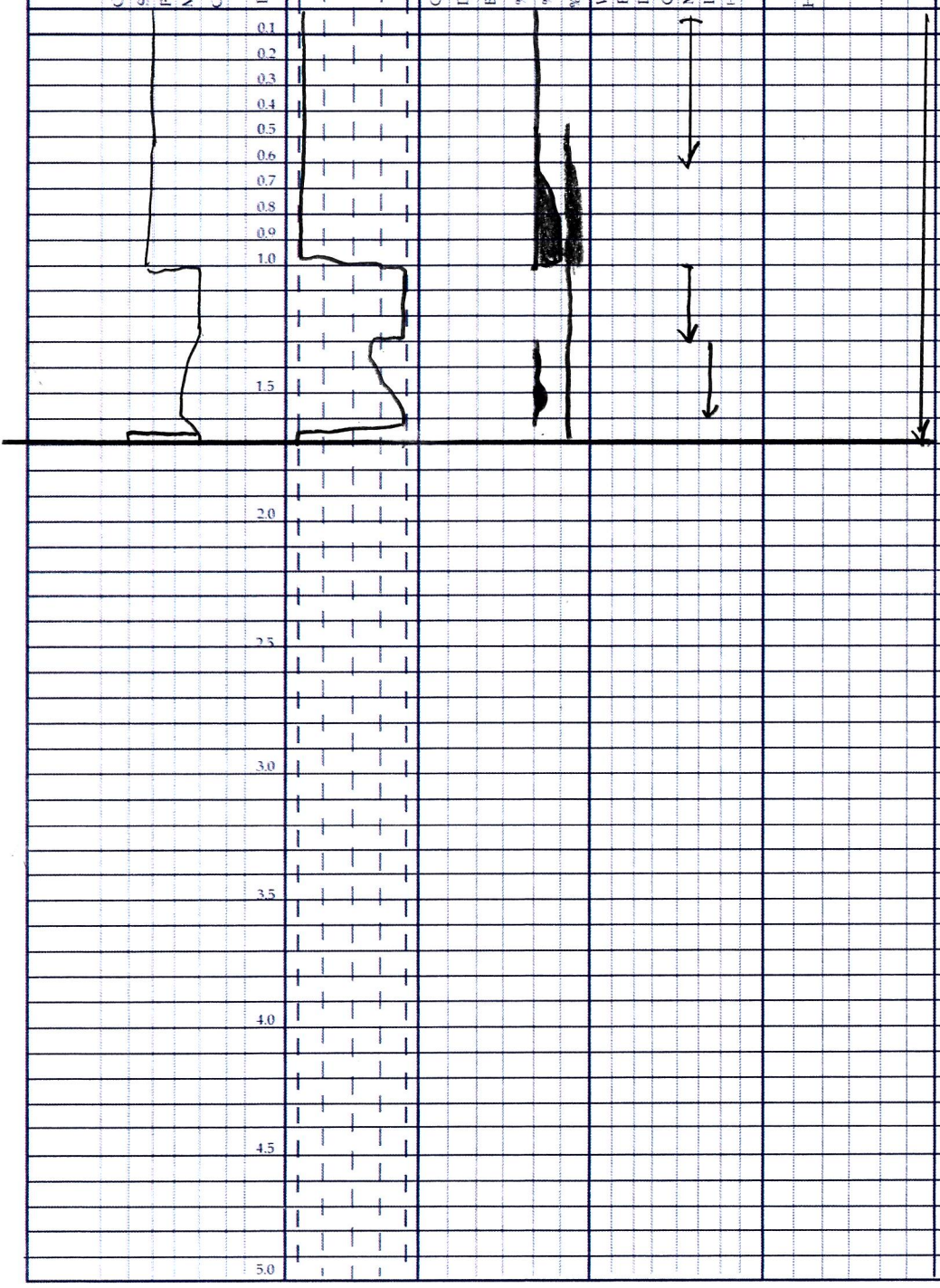
Vibracore Description Sheet

Core ID: SPCMSC-18
Latitude: 39.9451605
Longitude: -74.1133251
Date Collected: 08/04/2014
Geographic Location: Barnegat Bay, NJ, Lowstand Thalweg of Toms River

Date Described: 09/30/14
Described By: Kelso
Core Penetration:
Core Length: 1.70 m after cut

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	OSL - yes PHYSICAL DESCRIPTION

Columns: CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (m) | % SAND (0, 50, 100) | COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION | WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION | GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH



Cut 30 cm off top of core.
cut 25 cm off bottom of core

0-6cm - Silty mud black (2.5y 2.5/1) soft massive silty mud

6-59cm Silty Mud: Very dark brown to black (2.5y 2.5/1) grading into (2.5y 3/1) down core, no shells, massive with organic rich mud clasts & horizons towards basal contact

59-100cm - Peat, alternating dark and slightly lighter peat, with colors ranging from (10yr 5/1) to (10y 2/2), with abundant intact root and other organic fragments (Hemic Peat), sharp basal contact with underlying clean sand unit

100-131cm - Sand, gray (10yr 6/1) well sorted, medium, massive with black root casts and small organic clasts, sharp basal contact

131-170cm - Organic rich sand and sandy mud interbeds - with small fibrous root fragments and root casts colors are variable with colors ranging from very dark brown (10yr 2/2) to dark grey (7.5yr 3/2) to brown (7.5yr 5/2) with a black (7.5 2.5/1) highly organic horizon from 150-152cm, with grades to dark brown (7.5yr 2.5/2) with sporadic small shell fragments and occasional organic clasts throughout, small pebble throughout, with a large quantity at base of the core

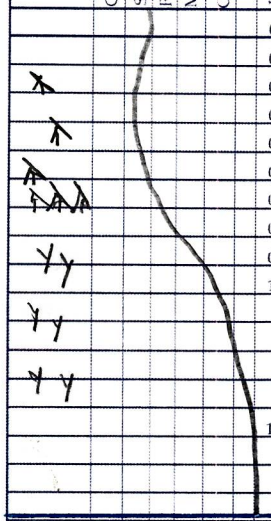
USGS
science for a changing world

Vibracore Description Sheet

Core ID: SPCMSC-20
Latitude: 40.0046546
Longitude: -74.0985156
Date Vibracored: 08/11/2014
Geographic Location: Tie line; interfluve? (No OSL)

Date Described: 09/19/2014
Described By: Kelso
Core Penetration:
Core Length: 1.76m

SEDIMENTARY TEXTURE AND STRUCTURES	% SAND	PHYSICAL CHARACTERISTICS	STRATIFICATION TYPE	SAMPLE	PHYSICAL DESCRIPTION
CLAY, SILT, FINE SAND, MEDIUM SAND, COARSE SAND, INTERVAL (Meters)	0, 50, 100	COLOR, DEFORMATION, BED THICKNESS, % SHELL, % ORGANICS, % BIOTURBATION	WAVY, FLASER, LENTICULAR, CROSS BED, MASSIVE BED, INCLINED BED, HORIZON LAMINATION (Pebbles)	GRAIN SIZE, HEAVY MINERAL, MICRO FOSSILS, RADIOMETRIC, RADIOGRAPH, PHOTOGRAPH	cut 60cm off top



0-12cm - Silty Mud, (10yr 3/1) massive soft Silty Mud minor scattered mica flecks

12-60 cm - interbedded clay and organic-rich mud horizons, very dark greenish gray (Gley 1 3/2) clay and dark olive brown (2.5y 3/3) organic mud horizons with abundant small degraded organic fragments

60-72 cm - Organic dense rootmat in a black (2.5y 2.5/1) mud matrix with abundant small root fibers (Hemic)

72-146 cm - Sand slightly muddy, fine, well sorted sand with moderate scattered organic fragment (sea grass roots) color ranges from gray (2.5y 5/1) to dark grayish brown (2.5y 4/2) to light brownish gray (2.5y 6/2) down core. Unit is massive with occasional larger (coarse) sand particles.

146-176 cm - Pebbles. fining upward unit of all pebbles in a brown mud matrix, color changes to light gray around 168 cm and pebbles become more angular.