

53
Nb 08-08
Marshy Hope)
Sample ID: N/A

Core #

1

Start Depth

0

Stop Depth

5

Recovery %

40

Run Start Time

2:20

Run Stop Time

2:40

Drilling Notes:

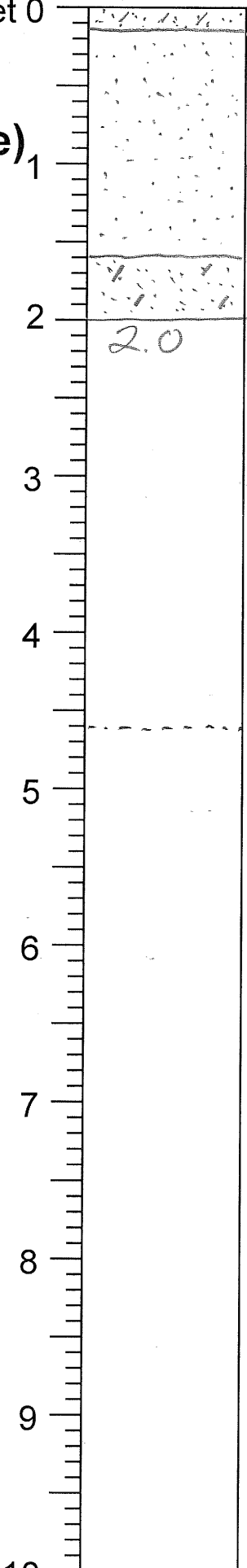
5ft squeezed
into 2ft. Some
may have washed
away.

Date

5/26/09

Described by

Feet 0



Core Description

0-0.13' SAND, ^{slightly muddy, funny} Med sand, subrounded, rootlets present
0.13'-1.6' SAND Med sand, well sorted quartz grains, loose
Sparse org. matter (plant) to 1.1 ft, decr. down
Light olive brown 2.5YR 5/4 to brownish yellow
1.6-2.0 SAND, recovered from shoe. 10YR 6/6
- Still med sand, but on the low side
- Also darker (distinct from upper portion)
Strong brown 7.5YR 5/8. Slightly tighter/
siltier than above

0.13' to 1.6' swollen laterally
& compressed vertically

10

Core Description

Feet 0

53

Nb-08

(Marshy Hope)

Sample ID: 105562

Core #

2

Start Depth

5

Stop Depth

10

Recovery %

62

Run Start Time

0640

Run Stop Time

0655

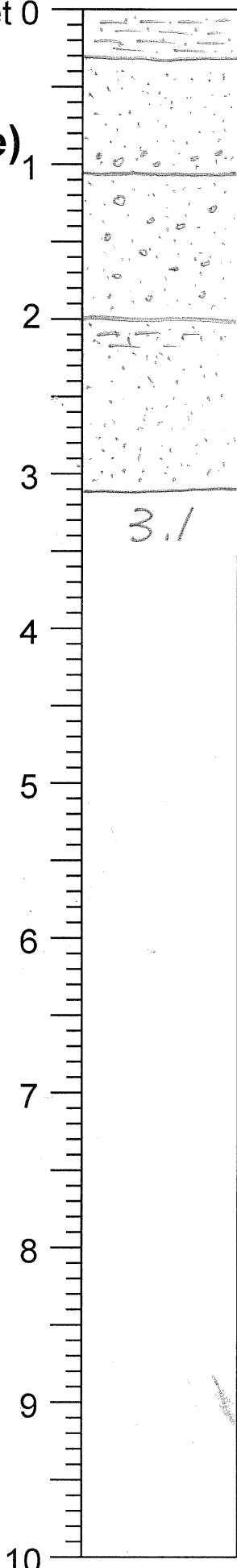
Drilling Notes:

Date

5/27/09

Described by

JPM



CLAY, silty, sandy, the uppermost part is sandy clay / clayey sand; sand < 10%, fine; a few flecks of plant debris greenish gray GLEY 2.5GY6/1

SAND, from med-crs @ top to CRS-VERS in most of interval to CRS side pebbles in bottom 0.1 ft; poorly sorted, some silty matrix; CRS sbrng, med gr. are sbrnd-sbrng mostly tannish (pale yellow 2.5Y 7/3) top 0.2 ft is reddish yellow (7.5YR 6/8) w/ 0.05 ft of light gray just below it (it greenish gray 5GY 8/1); loose, uncemented; mostly gtz, variable amts of ohm, mostly 1-3% a few zones where more conc; pebbles mostly < 1 cm; trace mica

SAND, pebbly CRS sd w/ vers grains & granules pebbles up to 2 cm; v poorly srted, whitish, muddy matrix gives sticky texture; sbrng-sbrnd; mostly gtz, 3-5% ohm, in some places more conc (almost 10%), larger pebble is chert; light greenish gray (GLEY 2.5GY 8/1); varying to gray (GLEY 2 N 6/1)

SAND, med-crs, avg u. med; abd CRS & fines; some vers grains; poorly srted; sbrng-sbrnd; slightly silty matrix, w/ two clayey zones nr top & rusty zone nr. bottom; a few% (1-3%) ohm, w/ several laminae where more concentrated; mostly pale yellow (2.5Y 8/2)

Core Description

53
Nb-08
(Marshy Hope)

Sample ID: 105563

Core #

3

Start Depth

10

Stop Depth

15

Recovery %

Run Start Time

0700

Run Stop Time

0710

Drilling Notes:

RUN 4 - NO RECOVERY

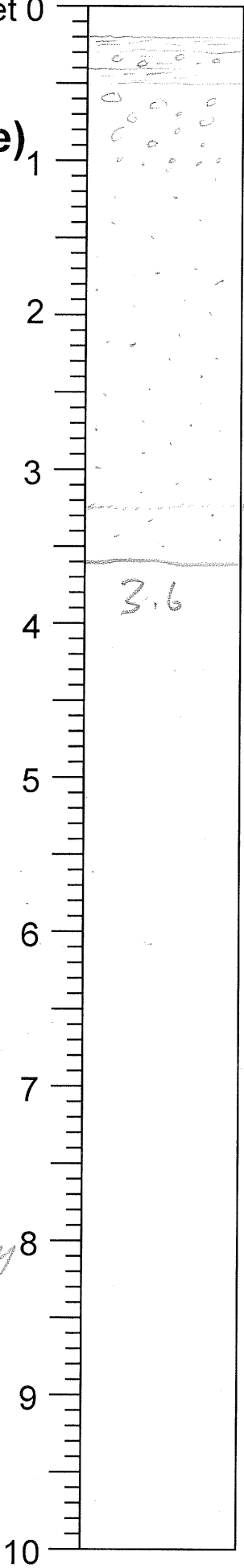
Date

5/27/09

Described by

PM

Feet 0



SAND

predom c.l.m.v. Inter bedded clay 0.2-0.3+0.4-0.5
 Poorly sorted, pebbly @ top (~20%) fining down
 - largely absent below 1.0 ft
 - Subrad-Subang
 Sparse (1-2%) micas + OHM
 - EXCEPTION @ 3.25ft OHM BAND (~5-10%)
 ORANGE-TAN @ TOP (~TO 0.4)
 Gray-white to 3.2
 ORANGE 3.2-3.6
 No Sed Structures Noted

OHM 3.25

3.6

10

Core Description

Feet 0

53

Nb 15-08

(Marshy Hope)

Sample ID: 105564

Core #

4

Start Depth

15

Stop Depth

20

Recovery %

Run Start Time

7:20

Run Stop Time

7:45

Drilling Notes:

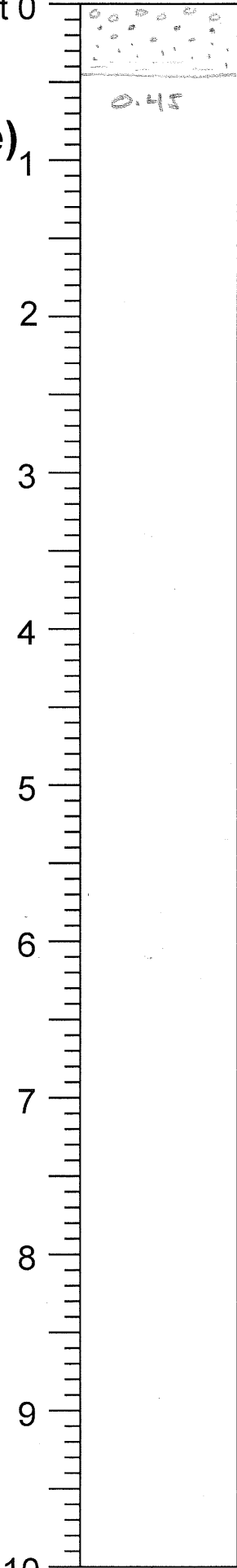
Large pebbles
in core/little
recovery except
in shoe.

Date

5/27/09

Described by

PSM



SAND pebbles + VC sand in top 0.1ft
fining down to med sand to cohesive
bottom 0.1ft: clay + silt in matrix w/ MS+FS.
Micas + Ohas present in very small amount (2%)

Core Description

Feet 0

53

Nb08-08

Marshy Hope

Sample ID: 105565

Core #

5

Start Depth

20

Stop Depth

25

Recovery %

Run Start Time

8:24

Run Stop Time

8:35

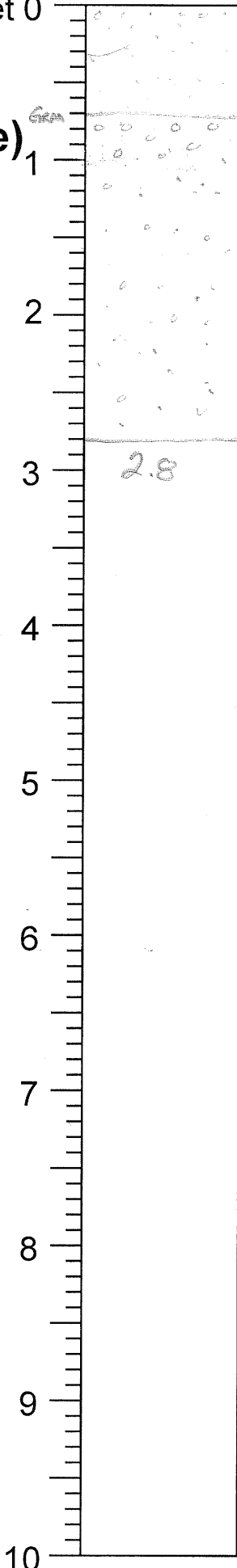
Drilling Notes:

Date

05/27/01

Described by

pyl



SAND cL, cU w/ smaller fraction m + f; Poorly-sorted
Subang-subround, loose
Gray-white to 0.4 ft, grading into orange-tan
Trace micas + OHM (???)
Cross bedding present, CHM x-bed @ 0.2 ft

SAND vL, vU with cL, cU to med, poorly sorted (fine frac. origin)
Subang-subround, loose
orange 0.7 - 0.9 ft, more gray 0.9 - 1.3 ft, orange 1.3 - 2.8
Trace micas + OHM present in fine fraction
X-Bedding absent
Sparse pebbles

Core Description

Feet 0

53
Nb05-08
(Marshy Hope)
Sample ID: 105566

Core #

6

Start Depth

25

Stop Depth

30

Recovery %

Run Start Time

8:40

Run Stop Time

9:05

Drilling Notes:

granules in reeve
mod. core?

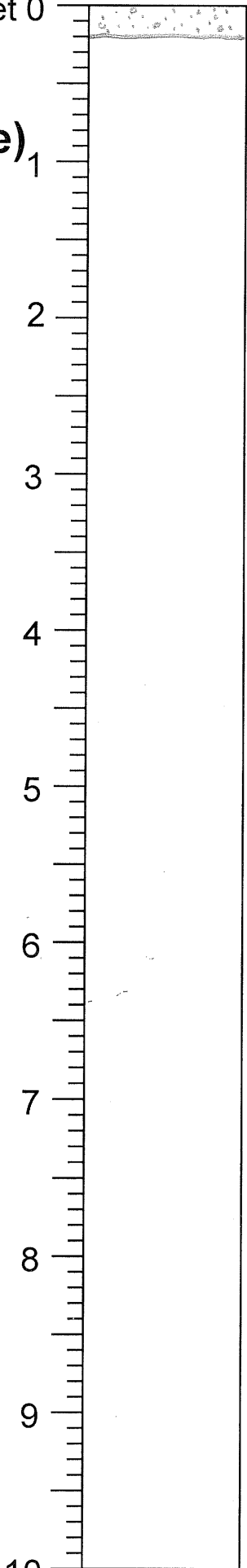
✓ Little Recovery

Date

5/27/09

Described by

PJM



SAND red-clay w/ pebbles (>10mm) subang. subround
trace OHM (41%), cherty, some spar
Loose
No structure noted

53
Nb05-08
(Marshy Hope)
Sample ID: 105567

Core #

7

Start Depth

30

Stop Depth

35

Recovery %

Run Start Time

9:10

Run Stop Time

9:21

Drilling Notes:

32.5 ft durable
- Little Recovery (1/4)

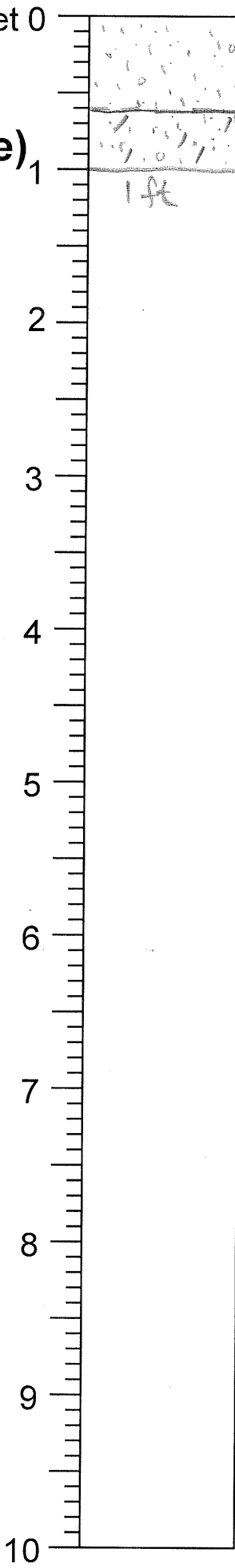
Date

5/27/09

Described by

[Signature]

Feet 0



Core Description

SAND
mU - cU poorly sorted to 0.25, few (41) pebbles
Subang - subrounded
Loose
Little K-spar, chert
Slightly ox (orange) → Russ-stained Qtz prev
TIGHTER
0.6 ft - 1 ft from shoe, more cohesive packed
Poorly sorted (but better than above)
Finer than above
Olive yellow 2.5g 6/8
SILTIER, + ML SAND
STILL PEBBLES QUA

53
Nb05-08
(Marshy Hope)
Sample ID: 105568

Feet 0

Core #

8

Start Depth

35

Stop Depth

40

Recovery %

85

Run Start Time

9:50

Run Stop Time

10:13

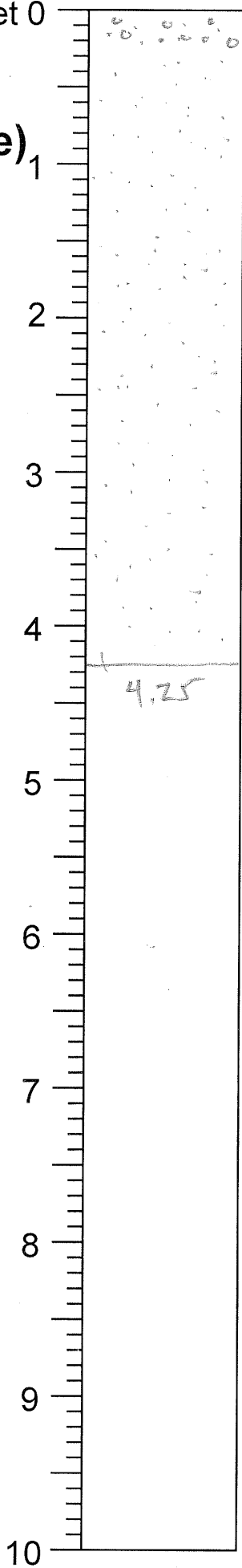
Drilling Notes:

Date

5/27/09

Described by

ph



Core Description

SAND mostly cu-cl (>70%) less veU (pebbles in top 0.25 ft)
fairly well sorted
Subangular
Loose - slight cohesion - silt matrix
orange 10µr 6/8 (90-95%)
Iron stained Qtz, Rose Qtz, F.SPAR (1-2%)
LESS CHERT (1-2%)
TRACE MICA, OHM (1-2%)
X-BEDDING (FAINT) THROUGHOUT

53
 Nb-08
 (Marshy Hope)₁

Sample ID: 105569

Core #

9

Start Depth

40

Stop Depth

45

Recovery %

Run Start Time

1022

Run Stop Time

1042

Drilling Notes:

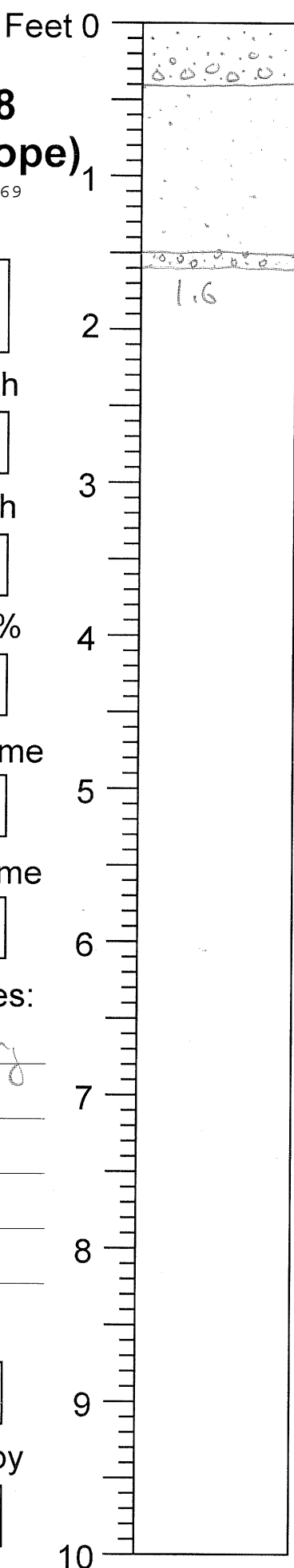
Rig chattering

Date

5/27/09

Described by

[Signature]



Core Description

SAND mostly μ -MU, sparse pebbles ^{slight} silt matrix
 Pebble lag at bottom contact
 Aside from pebble lag fairly well sorted
 Subrounded
 Mostly Qtz (>95%) brownish
 Few Fspar + OHM (1-2%) 10YR 6/8
 Slightly orange
 NO SED STRUCTURE

SAND μ -ch, sparse veU, overall well sorted
 Subang-subrounded w/silty matrix
 Mostly Qtz (>95%)
 FEW FSPAR + OHM (~1%)
 VERY Fe STAINED - ORANGE-RED
 NO SED STRUCTURE
 strong brown 7.5YR 5/8

SAND veU-pebbles, m-f sand + silt matrix
 Poorly Sorted
 Angular-subang GLEY 1.5GY 8/1
 Mostly Qtz (~75%)
 More chert
 Milky white cement (No Frizz in HC)
 - Siderite Cement
 - Hematite concretions
 very dusky red 10R 2.5/2

Core Description

Feet 0

53
Nb-08
(Marshy Hope)
Sample ID: 105570

Core #

10

Start Depth

45

Stop Depth

45.5

Recovery %

Run Start Time

10:55

Run Stop Time

11:00

Drilling Notes:

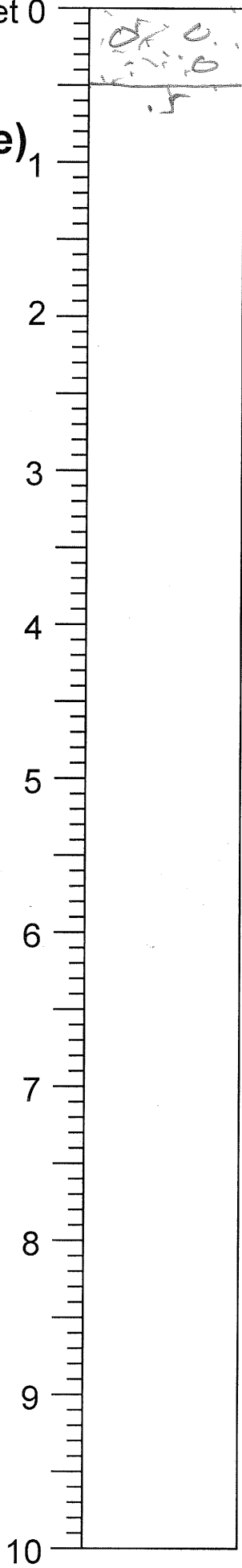
Hard Zone
-stopped run
early to clean
shoe.

Date

5/27/09

Described by

PJM



SAND M-C SAND, SPARSE PEBBLES
MOSTLY QTZ (>90%)
SOME BIOTITE (~10%)
TRACE F-SPAR (~2%)
SUB ANG.

* Core material stuck in shoe
Description is that of
material removed (not intact)

53
Nb 85-08
(Marshy Hope)
Sample ID: 105571

Feet 0

Core #

11

Start Depth

45.5

Stop Depth

50.0

Recovery %

Run Start Time

11:25

Run Stop Time

11:40

Drilling Notes:

Date

5/22/09

Described by

guy

10

Core Description

SAND c-vc w/small fract (~5%) pebbles
Mostly QTZ (~90%)
Some F-SPAR (~5%)
Some Biotite (~5%)
Subangular-angular
~Speckled w Biotite
orange-red stained QTZ

STUCK TO SHOE:

clayey silt
2.54 4/1

53
 Nb05-08
 (Marshy Hope)
 Sample ID: 105572

Core #

12

Start Depth

50.0

Stop Depth

55.0

Recovery %

100

Run Start Time

11:43

Run Stop Time

11:59

Drilling Notes:

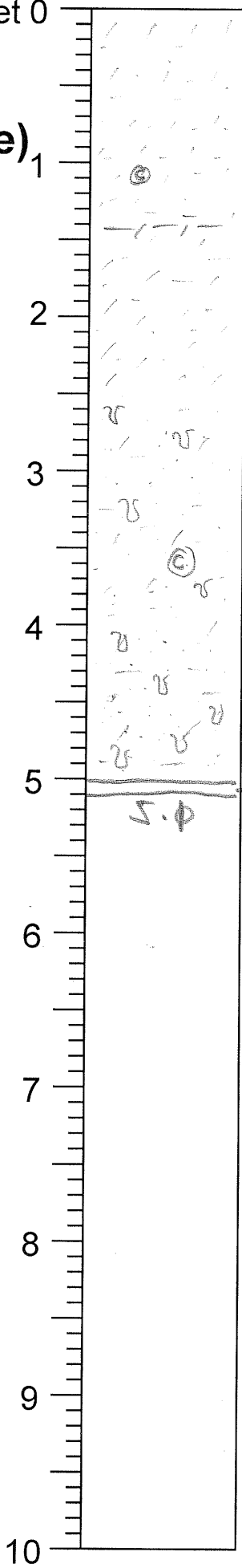
Date

5/27/09

Described by

[Signature]

Feet 0



Core Description

SILT - very CLAYEY SILT, ^{+ fine sand} COHESIVE
 Laminated (~0.5-1.5mm laminae)
 + slightly irregular
 BIOTURBATED THROUGHOUT → ^{Horiz, Oblique} ~ ≤ 1cm dia
 Slightly micaceous (~2-3%)
 Dark gray concretion @ 1.1ft (C)
 - cemented sand grains
 - Burrow fill ~ 1.5cm dia
 Tan burrow fill @ 2.6ft freezes slightly
 w/carbon (C)
 Darker toward bottom
 Vf sand present in transition from top to bottom
 w/micas, glauc.
 Plant frag @ 1.6ft
 light

extended beyond run

S.P.

53
Nb15-08
(Marshy Hope)

Sample ID: 105573

Core #

13

Start Depth

55

Stop Depth

65

Recovery %

100

Run Start Time

12:15

Run Stop Time

12:53

Drilling Notes:

Lunch Break

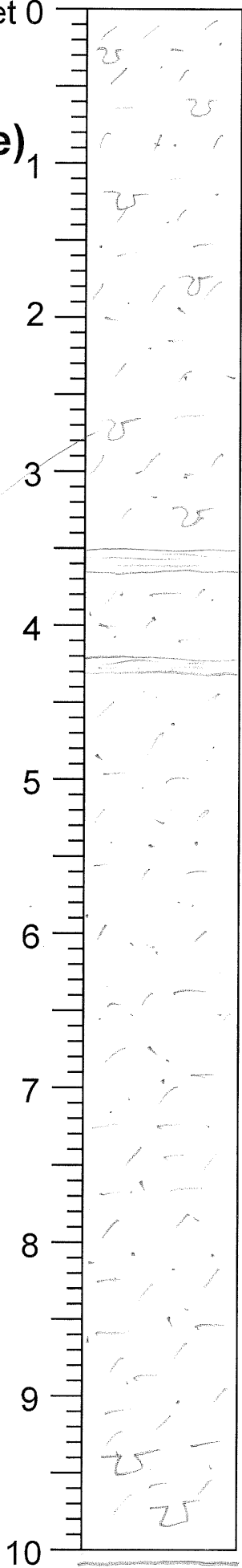
Date

5-27-09

Described by

pgm

Feet 0



Core Description

clayey SILT w VF sand^(w/40%); very cohesive [SAND IS QTZ] [<1% MICA]
Mottled gray (light + dark) dark = sandier

Heavy Bioturbation to 3.5 ft
Burrows Horizontal to Oblique (≤ 1.5 cm)
Infilled w/ finer material (also lighter)
(clayey, w/silty-vf sand)

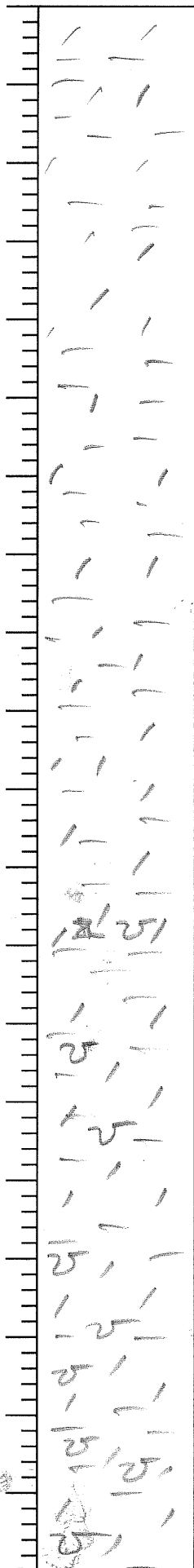
Crumbly "shaley" zones 3.5-3.65 ft; 4.2-4.35 ft
→ Beyond 3.5 ft
thin laminae (mm)
Rhythmic (cyclic to 2nd Order) → GRAIN SIZE ALTERATION
Scattered small bone, plant debris, woody frags.
Infrequent Bioturbation

10.1 ft

Core Description

53
Nb05-08
(Marshy Hope)
Sample ID: 105574

Feet 0



SILT very clayey w/ w/ sand { QZ
MICA
very fine laminations still present (not as clear as #13)
3.35-3.50 Darker, more silty, less clay zone
Laminations somewhat irregular
Bioturbation evident but not as prevalent as #13 (top)
- Horizontal-oblique burrows (+1.5cm)
After 5.7ft infilled w/ clayey matrix
- Small amts. of plant frags. phosphate frags.
- Lt. + dk gray

Core #

14

Start Depth

6.5

Stop Depth

7.5

Recovery %

100%

Run Start Time

8:00

Run Stop Time

1348

Drilling Notes:

Date

5/27/09

Described by

RM

(104)

53
 Nb 35-08
 (Marshy Hope)
 Sample ID: 105575

Core #

15

Start Depth

7.5

Stop Depth

8.5

Recovery %

93.5

Run Start Time

1350

Run Stop Time

1428

Drilling Notes:

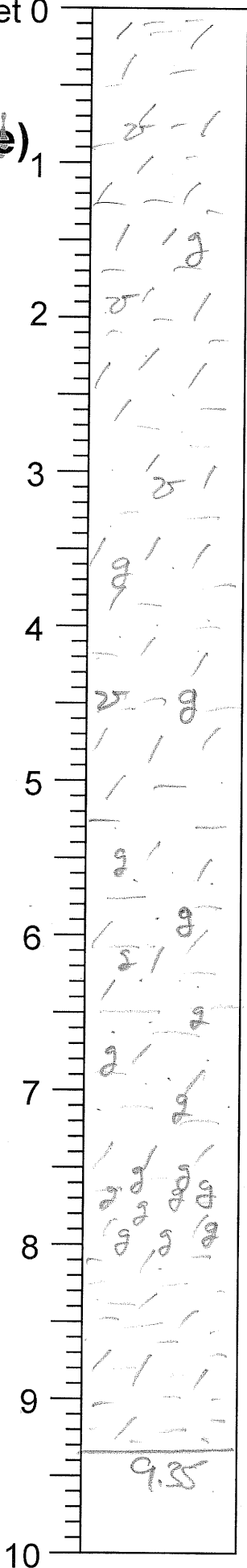
Date

5/22/09

Described by

RYM

Feet 0



Core Description

SILT very clayey, little to no v/sand at top
 Med sand fraction concentrated at 6.95ft
 - Approx 40% Sand 60% silt/clay
 - Sand fraction Glauc., Q12,
 - Gradually fines up to
 1/4 φ sand at top. (~5% bet 4-5ft)

Very fine lamination present
 0-4.8ft Bio turbation present
 but not excessive (horiz-oblique, clon etc)

Contact @ 7.9ft from glauc. sands
 to silt. w/ very little fine sand
 (very little glauc) (~2%)

Glauc layer also from 8.4-8.55ft (~10%)
 Glauc absent below 8.8ft

Begin Mottling below 7.9ft
 lt. gray - yellowish/tan gray
 - lamination still present

Organic (plant) frag-rich @ 9.5ft
 (Also showing lamination)

Core Description

53
Nb-08
(Marshy Hope)
Sample ID: 105576

Core #

16

Start Depth

85

Stop Depth

95

Recovery %

91.5

Run Start Time

1433

Run Stop Time

1527

Drilling Notes:

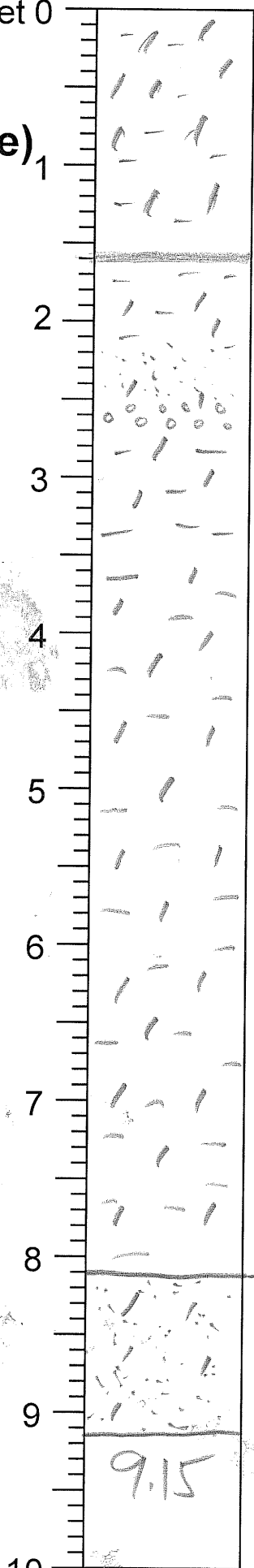
Date

5-27-09

Described by

[Signature]

Feet 0



SILT very clayey, small vf sand fraction - Qtz
 organic (light) horizon @ 1.60-1.63 ft
 fine laminations w/ Pyrite cement
 Bioturbated @ 2.3 ft (~0.5cm dia)
 horizontal burrows
 Also bioturb. @ 4.4 ft (~1.5cm dia)
 Truncated burrow.
 Many Truncated horizons
 followed by deposition
 Sandier lenses ~ every 0.6 ft,
 below 5.1 ft
 Alternating GRAY-yellow/TAN mottling
 SAND (f-vf), silty (Qtz)
 Med-DK gray w/ lighter mottling
 OHM + Micr's < 2%
 pyrite cement
 Remnant laminations evident
 (a bit messy out of core)

VCU layer @ 2.6 ft
VF above to 2.2 ft

10

53
Nb-08
(Marshy Hope)
Sample ID: 105577

Feet 0

Core #

17

Start Depth

95

Stop Depth

105

Recovery %

63

Run Start Time

1532

Run Stop Time

1610

Drilling Notes:

Date

5/29/09

Described by

pjm

Core Description

SAND v/L and silt
QTZ
Med Gray
Fine laminations
Variably somewhat bioturbated
Sparse glauconite (<1%) below 2.1 ft
Shell fragments (<0.5cm) below 3.5 ft (15%)
Plant matter below 3.5 ft (very sparse)
→ Most concentrated (~3%) 4.5-5.4 ft



53
Nb 55-08
(Marshy Hope)
Sample ID: 105578

Feet 0

Core #

18

Start Depth

105

Stop Depth

115

Recovery %

78

Run Start Time

1620

Run Stop Time

1650

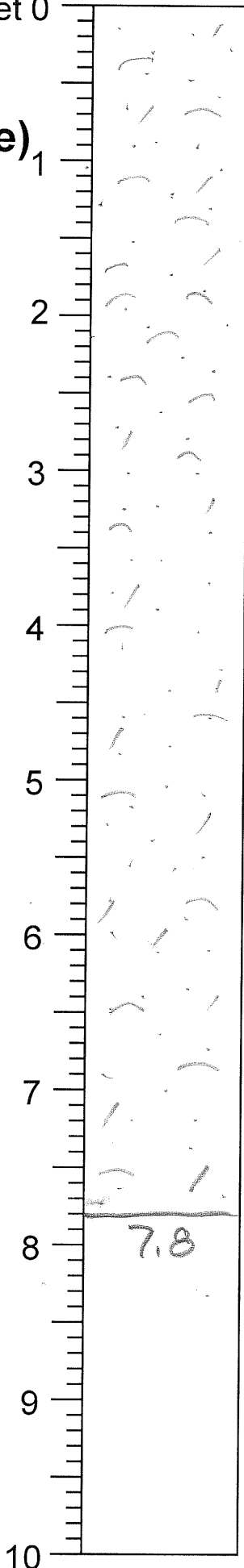
Drilling Notes:

Date

5/27/09

Described by

psm



Core Description

SAND fl, with silt + shell fragments
Qtz (>95%) OHM (<2%); Well sorted (aside from silt)

Shell fragments in matrix

0-1.5 ft (2-5%)

1.5-3 ft (10-15%)

Sharp break in prevalence @ 3 ft

3-7.8 ft (2-5%)

Shells include Turatella, pectinate, bivalve
... anemone? oyster?

Laminations present

Somewhat rhythmic @ ~0.1 ft intervals

Matrix is med-dark gray (BUT FAINT)

7.8

53
 Nb00-08
 (Marshy Hope)
 Sample ID: 105579

Core #

19

Start Depth

115

Stop Depth

125

Recovery %

66.5

Run Start Time

1655

Run Stop Time

1737

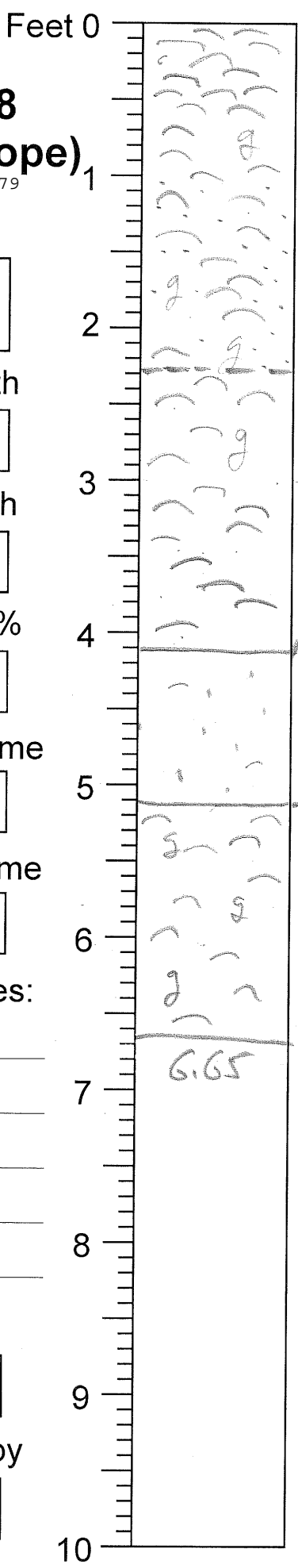
Drilling Notes:

Date

5/27/09

Described by

[Signature]



Core Description

SHELL BED / fine sand matrix (90% QZ, few (small) BARN, Pecten, Mercenaria white/tan gray/black ARAGONITE
 Bone Phosphate frags
 MORE sand, more frags (less whole) @ 2.1
 more dense @ 2.3ft

2.3-3.2ft Mostly dk gray and chalky matrix
 Some glauc. infilling in shells
 Greenish-gray tint to matrix
 oyster?

SAND of, silty, well sorted
 ~3% glauc, 95+% QZ
 Smaller frags of delicate shells
 No Lamination noted.
 sharp contact w/ lower section

~~SHELL BED / SAND~~ - shelly (very) silty matrix
 Frags + whole shells
 Weathered shell @ contact
 Lt greenish/gray silty matrix
 2-3% glauc
 Shell frags very coarse

10

53
Nb-08
(Marshy Hope)
Sample ID: 105580

Core #

20

Start Depth

125

Stop Depth

135

Recovery %

48.5

Run Start Time

07:10

Run Stop Time

07:41

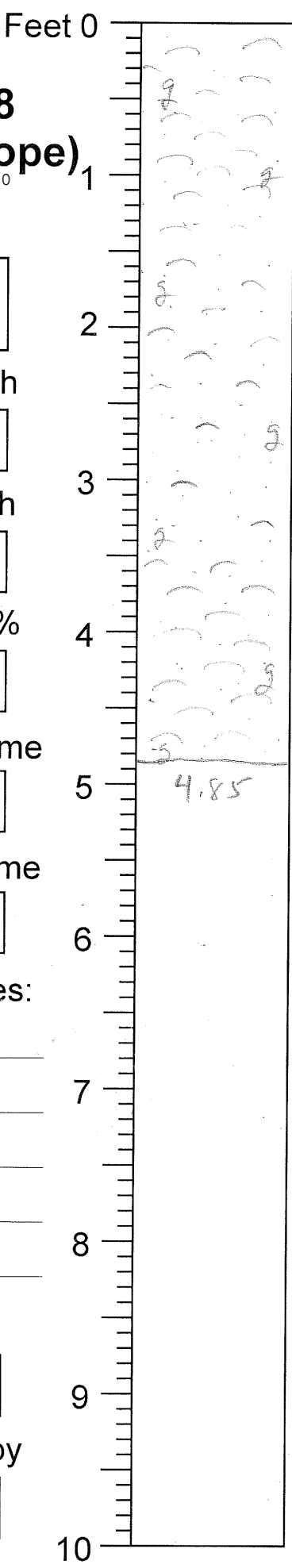
Drilling Notes:

Date

5/28/07

Described by

PJM



Core Description

SAND very shelly (~40% frags + whole)
Sand FU-ML
Also small ant's phosphatic bone frags
Trace (~1% OHM) in sand fraction / also ~2% glass
2.5-3.4 ft shell concentration decreases
to ~5%.
3.4 ft - 4.85 ft shell conc. returns
to ~40%.
- Also matrix from med gray to
med-dark gray.
Shell frags chalky, some
weathering
NOTED types: Oyster, Pecten,
some shells encrusted w/ bryozoa
No laminae, structure noted

Core Description

Feet 0

53
Nb05-08
(Marshy Hope)
Sample ID: 105581

Core #

21

Start Depth

135

Stop Depth

141.5

Recovery %

Run Start Time

0747

Run Stop Time

0831

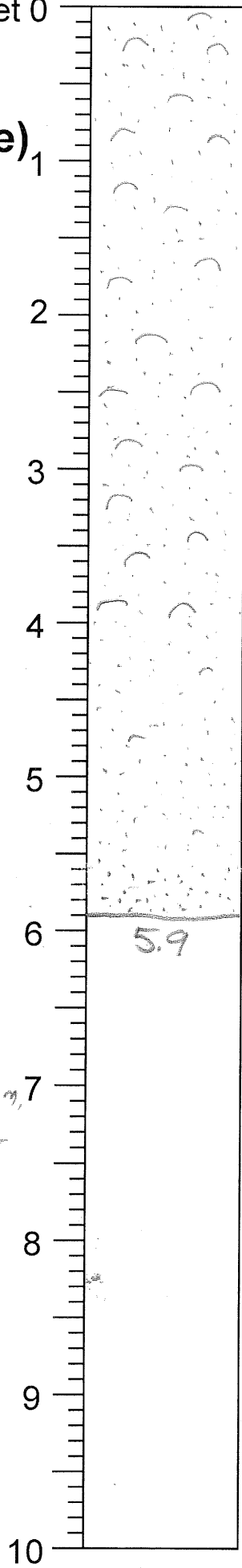
Drilling Notes:

stopped @ 6.5 ft
because R.O.P. about
zero - after retrieval,
attempted to reconnect
core barrel & drill but
plugged & no core -
cable snapped when
tried to pull

Date

5/28/09

Described by



SAND, shelly; slightly muddy; sand is mostly
fg, some mg & vfg; shell ~10% overall,
more conc in a few places not much below 4.0 ft;
shells mostly fragments of thin bivalves, mostly
white, some (~25%) dark shells, also
a few turritellids & barnacles, uncommon pearly
aragonite shell frags; sand mostly gtz,
~3% dark grains (mostly glauc?), some mg-size
? phosphate grains & bone frags (~2%); no
apparent lam/bedding; enough silty matrix
(? clay, too) for core to hold together well
dark greenish gray 5GY 4/1

Core Description

Feet 0

53

Nb05-08

Marshy Hope

Sample ID: 105582

Core #

22

Start Depth

141.5

Stop Depth

150

Recovery %

Run Start Time

1220

Run Stop Time

1300

Drilling Notes:

very hard shelly
sand lodged in
shoe, so jammed
up & no recovery
beyond that

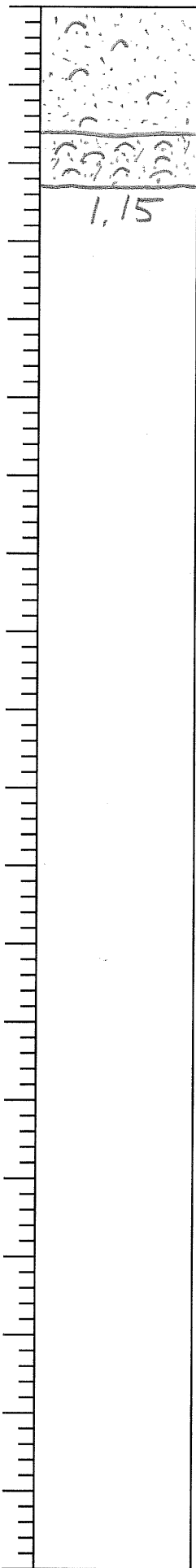
Date

5/28/09

Described by

PPNL

10



SAND, slightly shelly, soft, unconsolidated, little bit of muddy matrix; shells are frags, incl. mostly bivalves, some barnacle, tur. tellid, more dark than light shell (Pecten pres.), a few pieces green/glaucanitized; sand is fg (more upper), some mg, some vfg, mds, rty; homogeneous no visible lamination; bottom 0.1 ft incl.

broken frags of cemented sand w/ weak f33 to HCl; dark greenish gray GLEY ± 5GY 4/1 8-2 grains mostly sbrnd; wt-2% darks

SAND, firm, almost indurated, shelly sand, more muddy matrix than above; much of the light color shell is fragile, almost punky; common green, glaucanitized shell frags; shell is 30-40% of vol; some dark shell;

Sand is a med-poorly sorted mix of mg & cg, mostly gtz, mostly sbrnd-sbrng. 3-5% glauc (grn & black); a few veg & grains of gtz; greenish gray 5GY 5/1 GLEY 1

Core Description

Feet 0

53
Nb 08-08
(Marshy Hope)
Sample ID: 105583

Core #

23

Start Depth

150

Stop Depth

160

Recovery %

97.5

Run Start Time

1320

Run Stop Time

1355

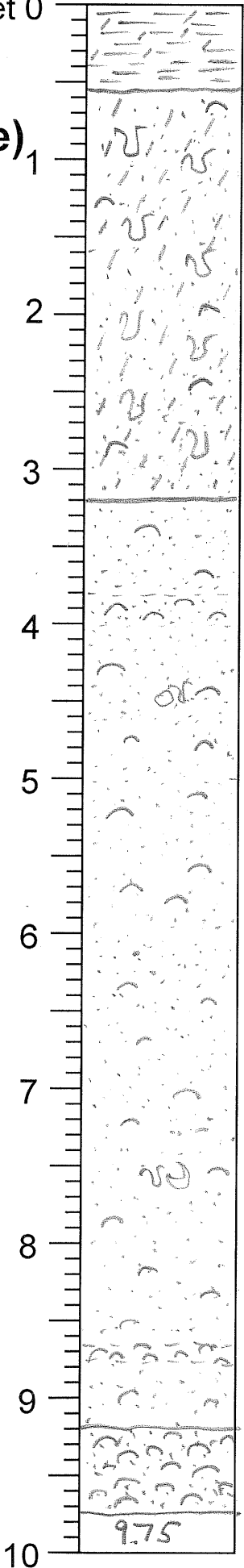
Drilling Notes:

Date

5/28/09

Described by

PPMCL



CLAY; 0-0.15 ft is soft, friable v. silty clay;
0.15-0.45 is harder, friable green silty clay; and 0.45-
0.55 is reddish friable silty clay (more details @ *)

SAND, uncommon shells, with mixed-in clay,
like above beds, @ burrow structures; sand is
mg-fg, mostly gtz, which is sbang-sbrnd;
3-5% glauc? (hard to tell b/c some gtz has a
greenish tint/stain); lithology firm, dense, due to
abd silt matrix; in termixed clayey burrow fill/
burrowed clay is greenish lith above and under
green hard silt; shell is <10% vol; frags
up to 2cm, some semi-intact shells; burrows large, 1-2cm
muddy sand = dk greenish gray 5GY 4/1 GLEY 2
light green silty clay w/ burrows = GLEY 2 10Y 5/1
dk green hard silt = dk greenish gray GLEY 2 5GY 4/1

SAND, common shells; mostly mg gtz, also
some fg & cg, mod srtg; gtz is sbang-sbrnd;
shell varies from 10% av. to ~30% @ 3.8-4.0
ft - 40% @ 8.65-8.75, frags from sd size to
2cm, incl. Area, Pecten, serpulids, turritellids,
mostly light, some dark; tan muddy blebs,
apparent burrow fills/linings, @ 4.5 & 7.6 ft;
lithology softer, looser, less muddy than above;
maybe 3% darks (glauc?) w/ scattered blackish
bone phosphate-like frags
dk greenish gray GLEY 2 5GY 4/1

fairly homogeneous except for the 2 burrows

* more clay notes
green = GLEY 2 10Y 5/1 greenish gray
reddish = reddish gray 10R 5/1

SAND, very shelly; sim sand a/a, but w/ ~40%
shell; shell mostly frags, ~1/2 dark or 1/2 light, some
frags w/ green glauc in openings / borings, incl. oysters
& barnacles

10

Core Description

53
Nb05-08
(Marshy Hope)
Sample ID: 105584

Feet 0

Core #

24

Start Depth

160

Stop Depth

170

Recovery %

98.5

Run Start Time

1405

Run Stop Time

1520

Drilling Notes:

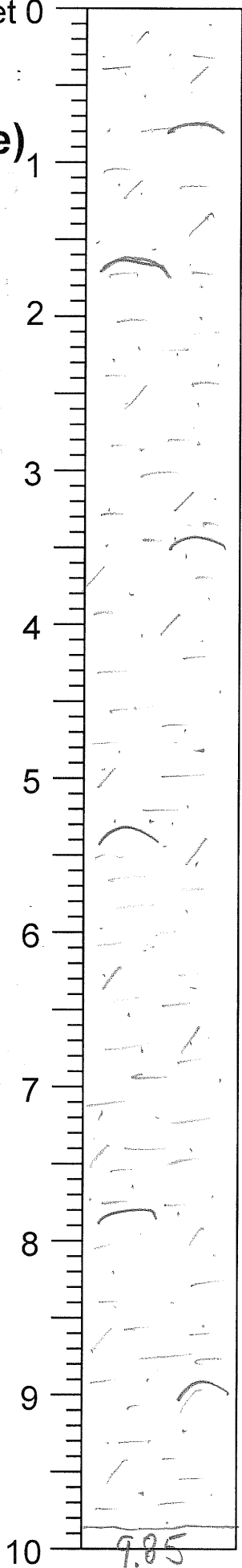
a fair amt of rind
on outside of core,
esp. on outside of
friable lower muds

Date

5/28/09

Described by

PPM9



SAND, very muddy (silty + clayey) transition
down to incr. abd CLAY, very silty + some sand,
interbeds; common shell throughout;
sand fg, well sorted, w/ large volume of
mud matrix (40%?); mostly gtz, some mica,
too muddy to note if many dark grains;
Clay is increasingly abd as interbed down-
ward, making most of volume near bottom
similar to muddy matrix of sand but
w/ no much sand; mud is somewhat friable;
whereas sand is more homogenous;
most conspicuous shell material are large
(> dia core) punky, friable lamellar shells,
thin lamellae, some aragmitic/pearly,
probably weathered Isogomma; also lesser
volumes of fragments of other shells, some
dark.

greenish gray 5GY 5/1 GLEY 1

bottom part looks somewhat bedded,
probably due to lams of friable mud

10 9.85

Core Description

Feet 0

53

Nb 25-08

(Marshy Hope)

Sample ID: 105585

Core #

25

Start Depth

170

Stop Depth

180

Recovery %

58

Run Start Time

1525

Run Stop Time

1615

Drilling Notes:

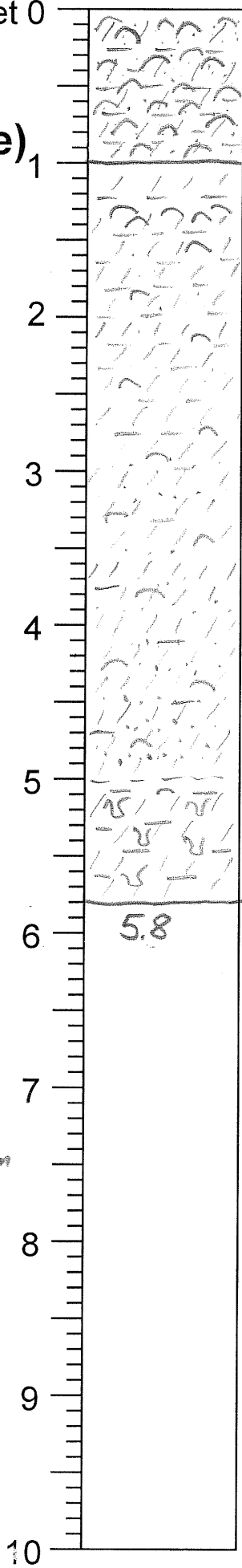
lower 4' of
core composed of
"biscuits" of real
lith within zones
of injectate between

Date

5/28/09

Described by

PPMCL



SILT, very shelly, very clayey, sandy; (? 50% mud, ~30% shell, ~20% sand?); sand poorly sorted, vf-cg; shells incl. some whole, ^{light} bivalve valves & abd frags; somewhat sticky; dark shell frags; dark grains (bone phos?) that are sd size; matrix is greenish

GLEYS greenish gray 5GY 5/1

SILT, clayey, transitions from slightly sandy (vf) in upper part to very sandy (vf-f) by ~5 ft, to slightly sandy (vf) from 5.0-5.8 ft. Scattered shells throughout, fewer below 5.0'. Some shell is lamellar, flakey, pearly, probably Isognome; also Arca, whole, + various frags. Above 5.0 ft, lith is faintly laminated & even slightly friable in places. Below 5.0, some contrast of clayey vs. siltier lith appears to be burrows.

10GY 5/1 GLEYS

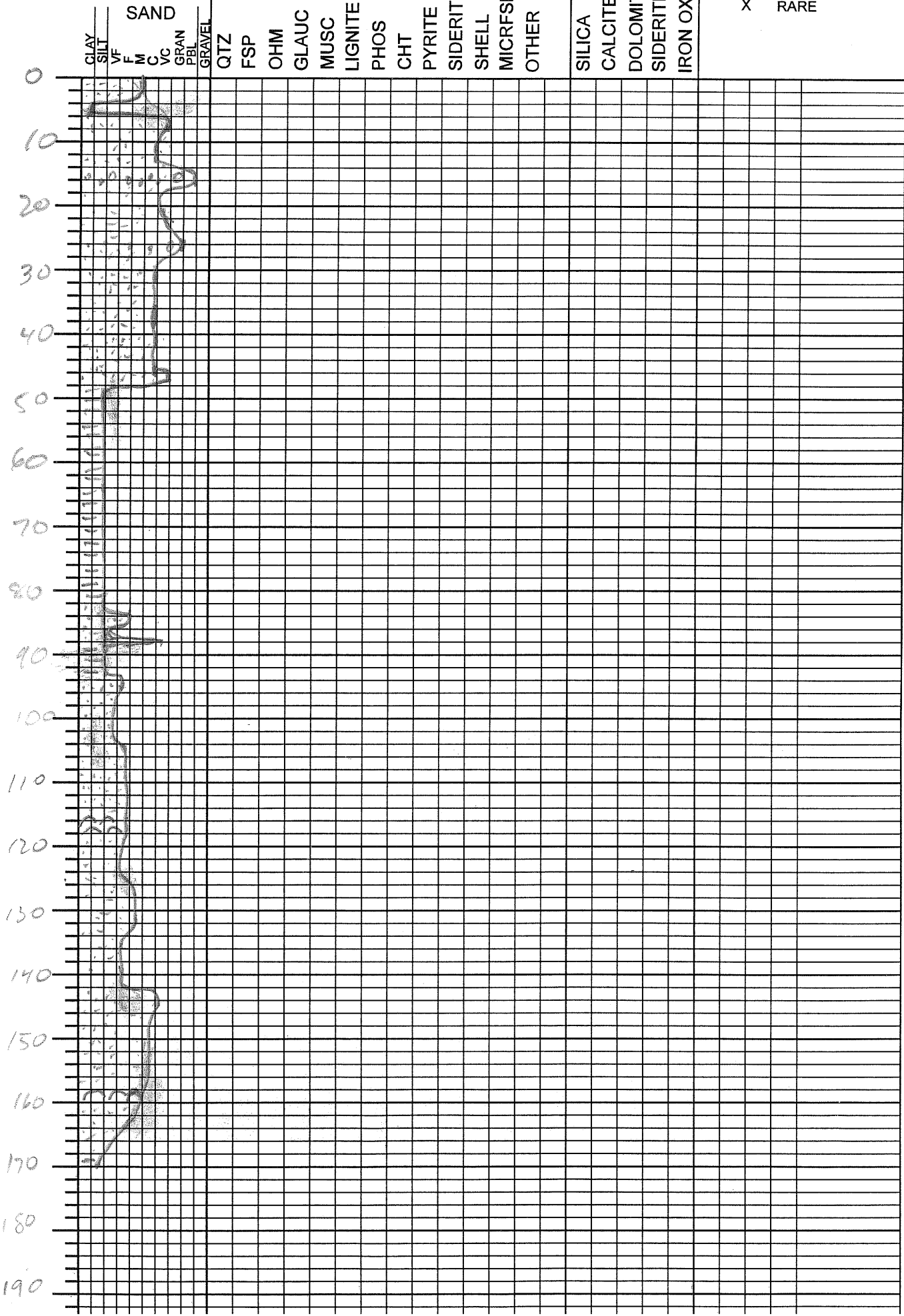
TEXTURE

COMPOSITION

CEMENT

■ ABUNDANT
● COMMON
○ FEW
x RARE

CORE RECOVER
CORE NUMBER



Core Description

Feet 0

53

Nb05-08

(Marshy Hope)

Sample ID: 105586

Core #

26

Start Depth

180

Stop Depth

190

Recovery %

Run Start Time

1625

Run Stop Time

1705

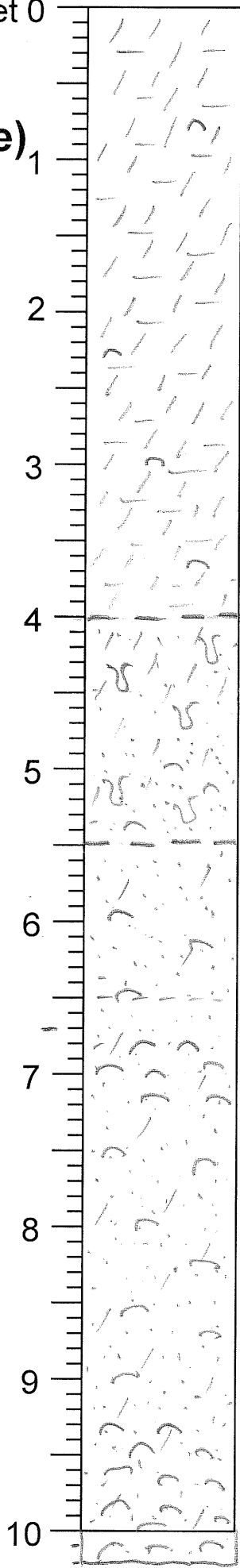
Drilling Notes:

Date

5/28/09

Described by

PPMCL



SILT, very clayey, somewhat crumbly/
friable, faintly laminated, uncommon
small shell fragments

GLEYS 10GY 4/1 dk greenish gray

← burrowing begins
more burrowing
downward

↑ transitional

no clayey silt from
above w/ increasing
amt muddy sand
as below

↓ some shells

burrows give
horiz. mottles
~1cm dia

← more homogeneous muddy sand

SAND, muddy; sd mostly fq, some vfq & rare
mg; common to abd (~6.7-7.2' & 9.2-10.2')
shell frags & shells, incl. coral @ ~7.0ft, also
barnacle oyster frags, shell varying from 5-30%
avg 10%; some shells dark, more light;
Sand is in a silty, slightly clayey greenish
gray matrix that gives it some cohesion; 2-3%
fairly homogeneous structure, no real
lam or burrowing

GLEYS 5GY 4/1 dk greenish gray

lightening down to
GLEYS 10Y6/1 greenish gray

10.2'

53
 Nb08-08
 (Marshy Hope)
 Sample ID: 105587

Core #

27

Start Depth

190

Stop Depth

200

Recovery %

95%

Run Start Time

0800

Run Stop Time

0837

Drilling Notes:

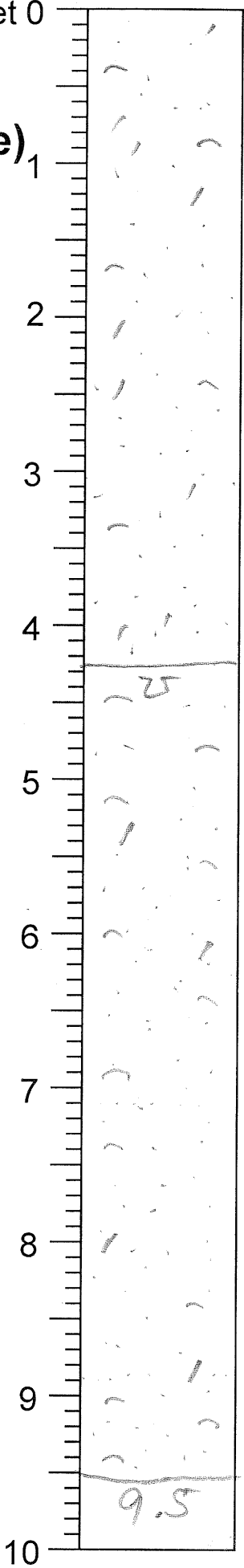
Date

5/29/09

Described by

ASJ

Feet 0



Core Description

SAND mostly fg, some mg + vfg; Silty

Visible grains QZ
 Sparse (<1%) Dark grains
 ~3% shell frags. (most <1cm)

- BARNICLES, small clam; Aragonite frags, etc
- Mostly light.

Slight bioturbation

- Burrows semi-horizontal
- Infilled w/ finer grained sed (lighter)

Thin, irregular laminations

SAND mostly mL, w/fort; Silty

Visible grains QZ, few (~5%) dark grains
 At contact w/ upper bed change from
 lighter gray-green to darker gray-green

- ~5-7% shell fragments (most <1cm) to 7.1
- Mostly light-colored (whitish)
- fewer, smaller dark (black)

From 7.1ft - 8.9ft fewer shells (~2%)
 - MORE Homogenous/less laminated than
 ABOVE

- ONLY 10'S SHELL FRAGS BARNICLES
- Large (>1.5cm) Burrow infilled w/ clayey
 sed @ 4.4ft
- Other than that only slight bioturb.

↑
 wave
 TIDE

VF
 [SHELL
 BONE]
 ↑

53
Nb08-08
(Marshy Hope)
Sample ID: 105588

Core #

28

Start Depth

200

Stop Depth

205

Recovery %

92

Run Start Time

0845

Run Stop Time

0945

Drilling Notes:

pull to 5ft
due to hard zone
encountered

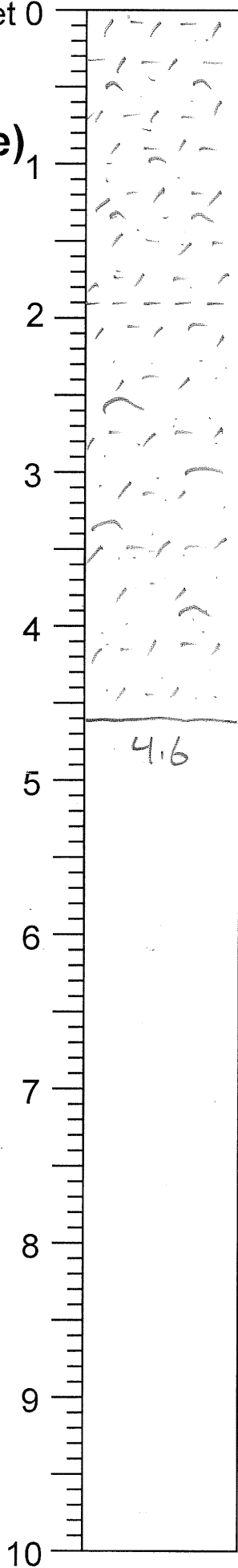
Date

5/29/09

Described by

pxm

Feet 0



Core Description → qtz, sparse (OHM or Cl)

SILT clayey w/ v.f sand and numerous shell frags
shell frags above 1.9ft very small (< 2mm generally)

above 1.9ft generally homogeneous
- no laminations noted.

shell frags both light + dark, some iridescent
equal
No burrowing noted.

below 1.9ft

large-diameter shells (> core dia)
likely isigona

Small shell frags still present
Some irregular, thin laminations

Bottom 0.5ft semi-cemented/crumble

Scattered Mg Qtz
Sandier than above
Cemented spots (steinkerns)

Oyster shells

53
Nb 05-08
(Marshy Hope)
Sample ID: 105589

Feet 0

Core #

29

Start Depth

205

Stop Depth

215

Recovery %

10

Run Start Time

0951

Run Stop Time

1039

Drilling Notes:

Shoe Jammed
w/ cemented
sed.
poor recovery

Date

5/29/09

Described by

pyy

10

Core Description

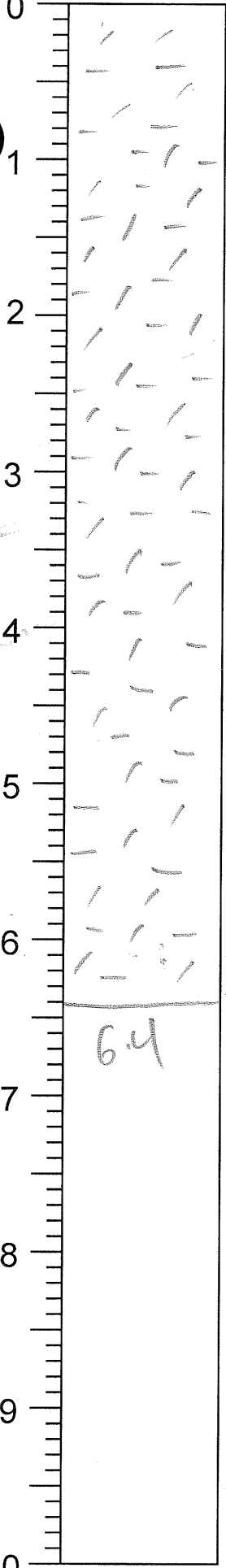
SAND - variably cemented (CaCO₃)
Very shelly (pectin, oyster, other bivalves)
Mostly fg
Med-DK gray
No laminations noted
Sand: variable grain size
Mostly vt-f w/ some mg

* Chocolate Brown Clay
on outside of shoe

Core Description

53
Nb-08
Marshy Hope
Sample ID: 105590

Feet 0



S/LT very clayey,
Chocolate Brown [Very DK gray] 2.54 3/1
Faint, very thin laminations (regular)
Irregular, thin (~3mm) shell laminations
Composed of fine shell frags.
No burrowing noted
fairly dry interior

Core #

30

Start Depth

215

Stop Depth

225

Recovery %

64

Run Start Time

1056

Run Stop Time

1150

Drilling Notes:

Date

5/29/09

Described by

[Signature]

10

53
Nb05-08
(Marshy Hope)
Sample ID: 105591

Feet 0

Core #

31

Start Depth

225

Stop Depth

235

Recovery %

Run Start Time

1215

Run Stop Time

1249

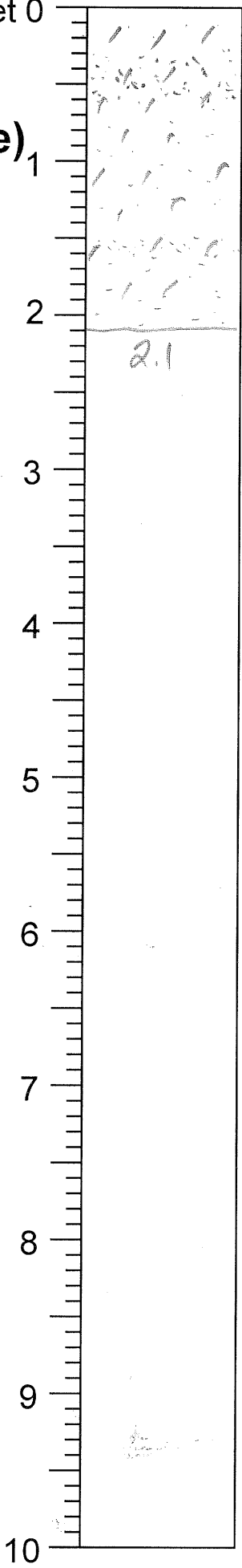
Drilling Notes:

Date

5/29/09

Described by

PJM



Core Description

SILT very clayey inter bedded with
vf sand laminae (~1mm < 1cm)
Concentrated between 0.3-0.6 ft
+ Solitary laminae @ 1.5 ft
Visible in sand: QTZ, MICA
Silt fraction progressively sandier
downward.
Bottom of core silt/vf sand
sand: qtz + mica
color "chocolate" [v. dark gray 2.54 3/1]
No burrowing noted

* TOP 0.2 ft (shell frags + sand)
Retained but not likely
from in place.

Core Description

Feet 0

53

Nb08-08

Marshy Hope

Sample ID: 105592

Core #

32

Start Depth

235

Stop Depth

245

Recovery %

100

Run Start Time

1310

Run Stop Time

1350

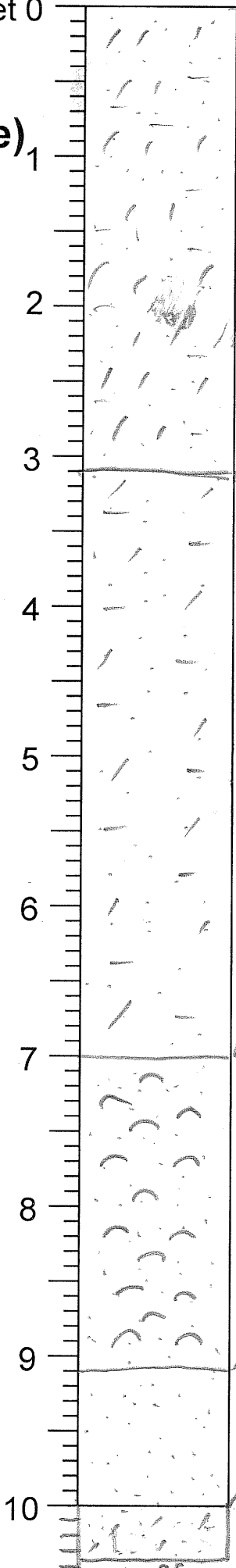
Drilling Notes:

Date

5/29/09

Described by

SM



SILT w/ abundant vf sand + f sand + cl
 Sand fraction qtz + ~2% mica
 shell frags (small, ~1-2mm) sparse (1/2 ft)
 small shark tooth @ 4.4 ft
 Laminations faint, regular, small (~2mm)
 Burrowing present, fairly sparse
 infilled w/ darker sand (less silt)

SAND very silty, clayey
 sand fraction fine, coarsening down
 common med, few coarse grains
 phosphatic bone frags infrequent
 No Laminations, fairly homogeneous
 due likely to bioturbation

SAND very silty/clay (m-cl, few c)
 variably indurated
 ~30% shell + indurated pieces (No ID)
 shells punky
 No laminations present

SAND (cl) some M, QZ, ~1% OHM, sparse pebbles
 shell frags (~1-2mm) infrequent
 QZ rounded to subrounded, poorly sorted
 No laminations noted
 No Bioturb noted

SAND interbedded w/ silt/cl
 thin lam, well defined sand/silt altern
 sand f+m, sparse coarse almost 100% qtz

S3
Nb05-08
(Marshy Hope)
 Sample ID: 105593

Core #

33

Start Depth

245

Stop Depth

255

Recovery %

31.5

Run Start Time

1502

Run Stop Time

1544

Drilling Notes:

DIFFICULT EXTRACTING

FROM CORE TUBE.

EXTRACTED UNDER PRESSURE

SHOT LIKE CANNON

LOWER 1.8 FT ASSEMBLY
 UNCERTAIN.

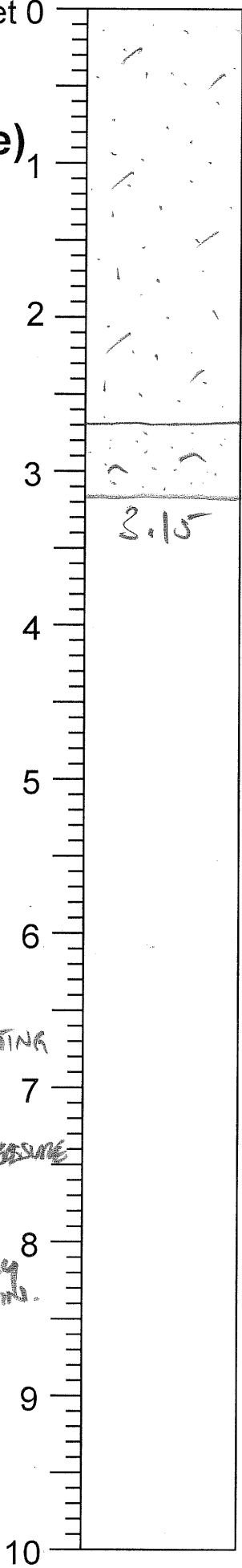
Date

6/1/09

Described by

[Signature]

Feet 0



Core Description

sub rounded
 well sorted

SAND mg/some fgi mostly QTZ (>95%)
 rare OHM or shell (~1%)

Interbedded silty, vfg sand (some clay) (ribbons)
 ↳ SILT w/vfsand

Some distinct, some uneven,
 disrupted laminae
 - Due to bioturbation

Interval from 2.4-2.7 ft

Contains veg-pebbly fraction (5-7%)

Sparse (<1%) shelly frags (Bivalve @ 0.9 ft)

4/10Y (gley) - SAND (DK GN GY)

5/10GY - silty lamin (GN GY)

SAND mg. similar to above, QTZ, sub rounded

Variably Indurated

↳ sub rounded
 poorly sorted

shell frags (<3mm) more common than
 above (~7%)

Laminations not noted

6/5GY (GN GY)

53
 Nb05-08
 (Marshy Hope)
 Sample ID: 105594

Core #

34

Start Depth

255

Stop Depth

261.75

Recovery %

Run Start Time

1555

Run Stop Time

1645

Drilling Notes:

* RET. TOP of
shoe + bott. of
core (@2ft) appears
to be MISSING
SECTION

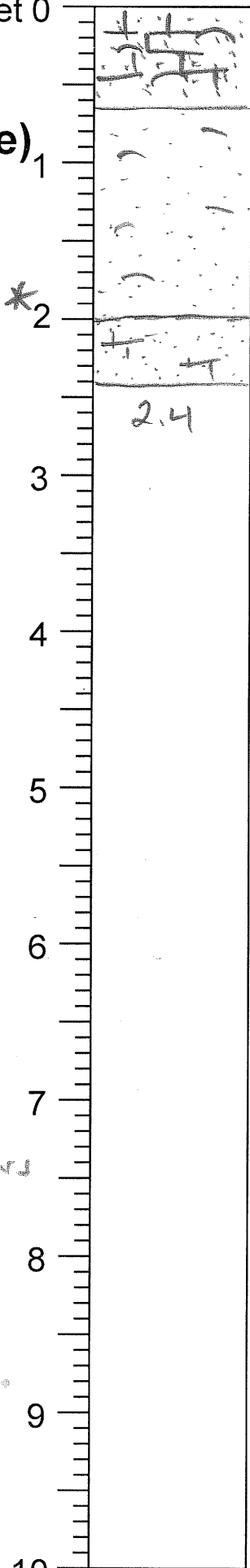
Date

6/1/09

Described by

AM

Feet 0



Core Description

SAND mg, qtz, subrounded-rounded
 fairly well sorted
 SPARSE dk. grains (OHM ~3%)
 some glauc. (~1%)
 Variably indurated
 Numerous shell frags + whole
 (~7-10%). [CLAM, ECHINOIDS, GAST, REEF]
 FAINT laminations (~1mm)

SAND CL-MU, subrounded, well sorted
 (<5mm) - SPARSE SHELL FRAGS (~3%) [ECHINOIDS, PECTEN]
 MOSTLY QTZ (~95%)
 SPARSE DK. GRAINS (~1%)
 HOMOGENEOUS
 BECOMING finer grained
 toward 1.8-2.0ft

SAND MU, well sorted QTZ (~95%)
 subangular
 uniform moderate induration
 SPARSE coarse fraction (~3%)
 Shell frags highly absent

53
Nb05-08
(Marshy Hope)
Sample ID: 105595

Core #

35

Start Depth

261.75

Stop Depth

270

Recovery %

Run Start Time

1657

Run Stop Time

1732

Drilling Notes:

Hard-Soft
etc.

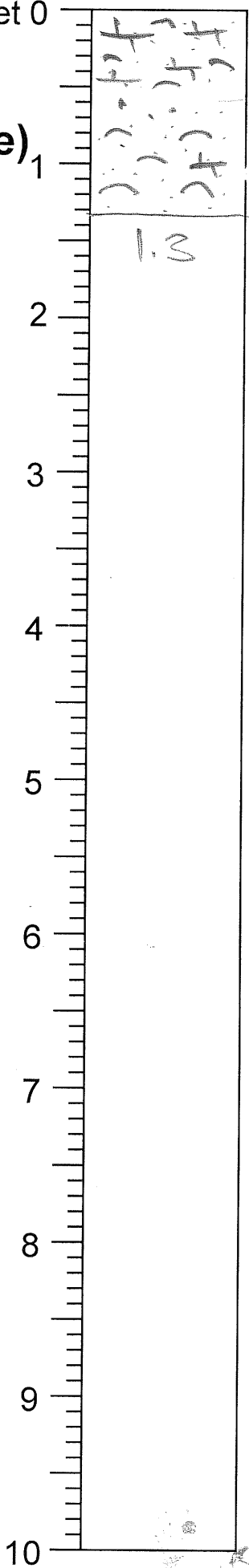
Date

6/1/09

Described by

PSA

Feet 0



Core Description QTZ (~95%)

SAND mg, well sorted, subrounded-round
w/ freq. shell frags+whole (~8%)
[Echinoid, Barnacle, Pecten, clam]

No laminations noted
No bioturb. noted
Variable Induration

*SAND IN CORE MAY BE
WASHED OUT OF SOFT INTERVALS

Core Description

53
Nb08-08
(Marshy Hope)
Sample ID: 105596

Core #

36

Start Depth

270

Stop Depth

275

Recovery %

80

Run Start Time

1745

Run Stop Time

1824

Drilling Notes:

Chatter

* Chatter...

Lower 0.4

from shoe,

Likely missing

Section above

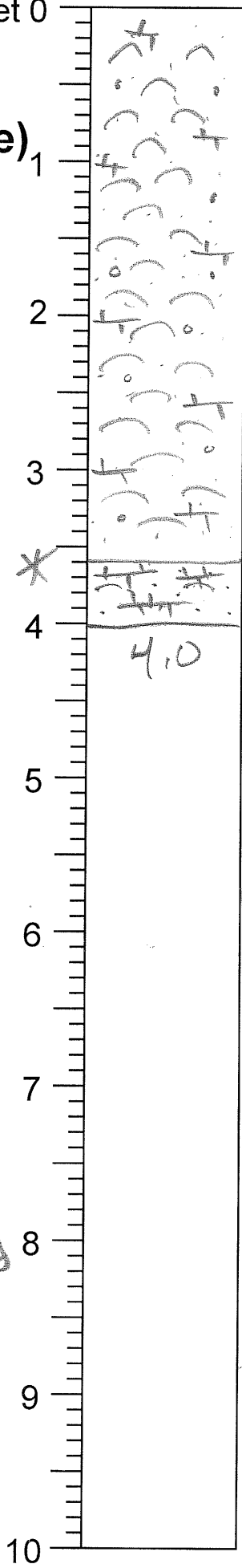
Date

6/1/09

Described by

DM

Feet 0



SAND mg qtz.
Frag (Also)
Maj. green-gray
dk gray
very shelly (~50%)
also frequent pebbles (QTZ) (~2-3%)
sand + pebble-size phosphate
light frags very chalky, to
the point that they become
part of the matrix.
- Horizontal alignment of
many shells, creating the
appearance of very thin "laminations"
- Variably indurated → FIZZES
VIGOROUSLY
- Some cemented concretions
appear to have been reworked
SAND mg w/silt (QTZ) (~95%)
very indurated, FIZZES vigorously
Shell frags present
No lamination noted

53
 Nb-08
 (Marshy Hope)
 Sample ID: 105597

Core #

37

Start Depth

275

Stop Depth

280

Recovery %

Run Start Time

0725

Run Stop Time

0750

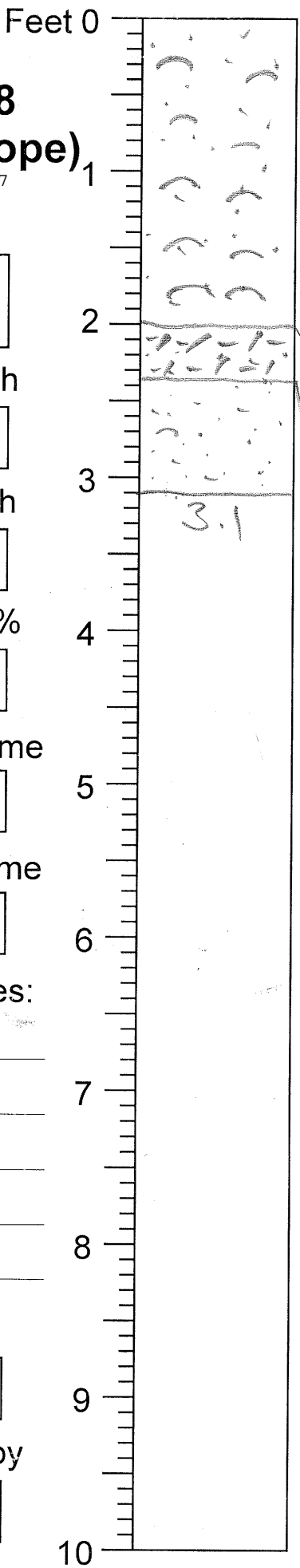
Drilling Notes:

Date

6/2/09

Described by

[Signature]



Core Description

SAND mostly mg qtz; some eg, pebble (2%)
 - poorly sorted, sub rounded
 Very shelly (~40%) [PEC, ECH, TURR,
 Mostly FRAGS, MANY ENCRUSTED W/ SYMNO. BRN
 phosphatic frags (~1%)
 Variable dk. grains (1-5%)
 - Mostly OHM (F-vf, angular)
 No laminations noted
 No Bioturb noted.
 5Y/10G (GRGY) (GLEU 2)

SAND ML/FU; well sorted, subrounded (0.1%)
 VERY CLAYEY SILTY; SPARSE MICAT (1%)
 VERY FINE LAMINATIONS
 SOME BIOTURBATION
 SOME SHELL FRAGS (MAY BE DRILLING RECI)
 2.5Y 3/1 (VY DK GR)

SAND ML, FU; well sorted, well rounded
 Mostly QTZ (~95%)
 SOME OHM (~5%) possible GNT.
 SOME SHELL FRAGS (1-2%)
 NO LAM
 NO BIOTURB
 2.5Y 4/2 (DK GR BN)

53
Nb35-08
(Marshy Hope)
Sample ID: 105598

Core #

38

Start Depth

280

Stop Depth

285

Recovery %

44

Run Start Time

0802

Run Stop Time

0838

Drilling Notes:

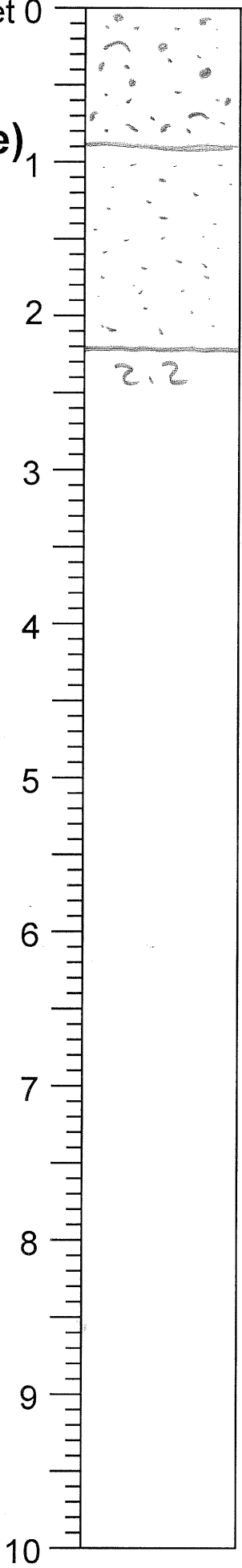
Date

6/2/09

Described by

[Signature]

Feet 0



Core Description

SAND c-vc; poorly sorted, ^{QTZ} SOME mg (~20%)
SOME SHELL FRAGS (<1cm) (~3-5%)
ANGULAR
NO LAM
NO BIOTURB

SAND mU-mL; well sorted; rounded-sub rhd
MOSTLY QTZ
SHELL FRAGS RARE (<1%)
NO LAM (PERHAPS VERY FAINT)
NO BIOTURB
OHM/DK GRAINS RARE (<1%)

53
 Nb-08
 (Marshy Hope)

Sample ID: 105599

Core #

39

Start Depth

285

Stop Depth

290

Recovery %

98

Run Start Time

0845

Run Stop Time

0920

Drilling Notes:

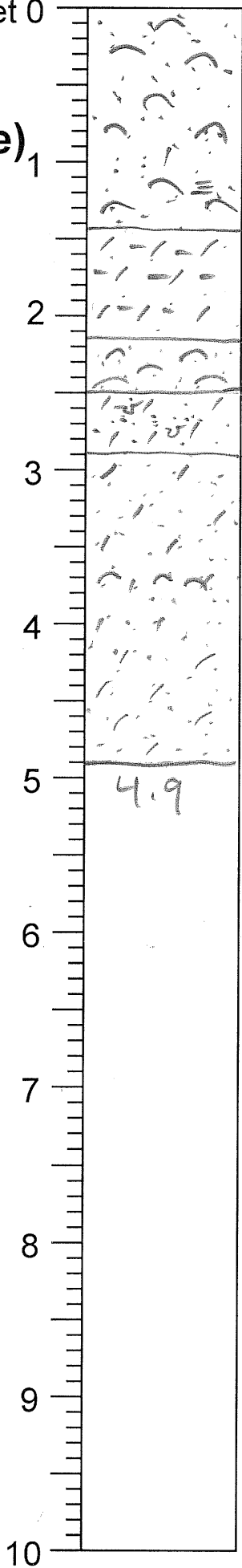
Date

6/2/09

Described by

[Signature]

Feet 0



Core Description

SAND f-v c.g.; some (~2%) pebbles; ^{POORLY SORTED} ANG-SUBANG QTZ (~90%) ^{AVG M-C}
 Shell frags common (~7-10%)
 - [PEC, GAST, BARN, OTHER BIOTURBES]

NO LAM; NO BIOTURB
 CLAY CLAST @ 1.2 ft (from below)
 DK grains; mica uncommon (~2%)

SILT clayey; some vf sand, micaceous (~2%)
 Thinly laminated - well defined (~1mm)
 - variable, mostly Horiz,
 some slightly inclined

Interbedded m-cg sand - lenticular
 - Qtz, angular grains
 Not much; if any bioturb noted

SAND (very similar to 0-1.4 ft)

SILT + SAND; interlaminated
 SILT fraction AS 1.4-2.15
 SAND FL-FU, well sorted QTZ (>95%)
 slightly micaceous (~2%)
 Laminae horizontal - slightly inclined
 Slight bioturb noted in disruption
 of laminae

very thin (mm)
 HORIZ - SLIGHTLY INCL.
 SILTY vs. SANDY LAM

SAND FL-FU, similar to above lam.
 siltier toward top.

← Very thin laminations toward top
 - slight bioturb. noted in
 disrupted laminae

- More Homogeneous toward bottom
 - slightly shelly interval 3.6-3.7 (5%)

Site Name/ID

Nb53-08
Marshy Hope
Sample ID: 105600

Core #

40

Start Depth

290

Stop Depth

295

Recovery %

85

Run Start Time

1000

Run Stop Time

1025

Drilling Notes:

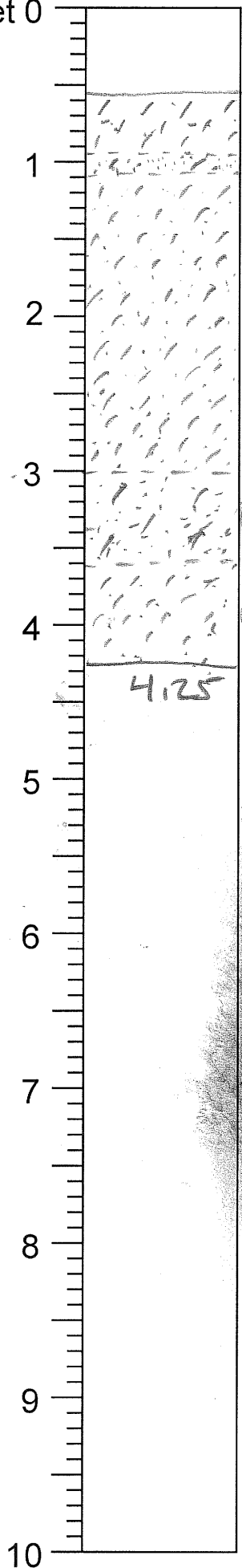
Date

6/2/09

Described by

[Signature]

Feet 0



DIFF
A
B
C
D
E

4.25

Core Description

SAND FL+FU, well sorted QTZ (>85%)
slightly micaceous (~1%)
Small shell frags (<3mm) (3-5%)
No lam, bioturb

SAND+SILT; interbedded
SILT clayey w/ ^{VERY} LITTLE vt sand (<1%)
slightly micaceous (~1%)

SAND FL-FU, SLIGHTLY MICACEOUS (~1-2%)
MOSTLY QTZ (>85%), angular, well sorted
small dk fraction (~2%)

Very thinly laminated (<1mm-3mm)
Laminae horiz. to slightly incl.
variable sandier + silty intervals
SANDY (B,D), silty (A,C,E)
Slight Bioturbation possible
Between 3-3.3 ft
- DISRUPTED LAMINAE

Core Description

Feet 0

Site Name/ID

Nb 53-08
AKA
TICK HAVEN

Sample ID: 105601

Core #

41

Start Depth

295

Stop Depth

300

Recovery %

100

Run Start Time

1040

Run Stop Time

1120

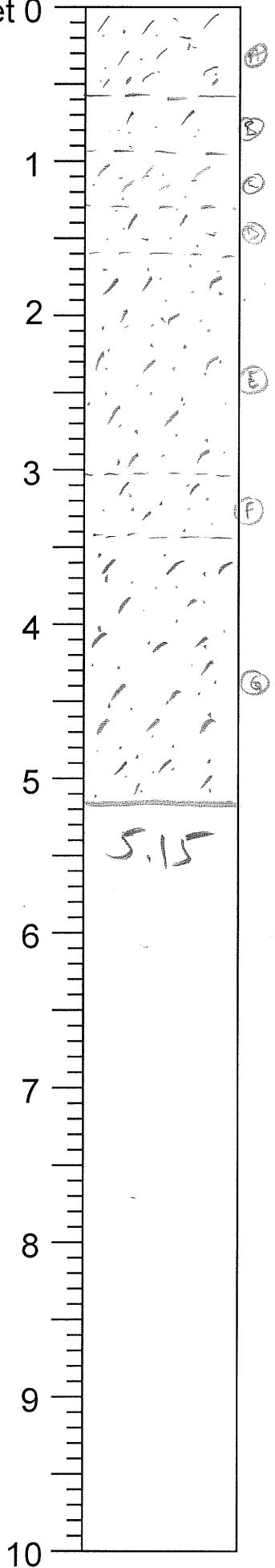
Drilling Notes:

Date

6/2/09

Described by

DM



SAND + SILT interbedded

SILT - some vf sand (~2%)
MICACEOUS (~3%)

SAND - FU - ML mostly
well sorted, subang. QZ (~95%)
rare (~1%) shell frags
vf darker grains (~1-2%)
down section (E) (glauc?)

Sand + silt interbedded,
- Very thinly laminated
- Horiz.

Some sections sandier, some siltier
Sandy (B, D, F) silty (A, C, E, G)
No Boturb noted, but
possibly present in some
"unsettled" beds.

Core Description

Feet 0

Site Name/ID

Nb S3-08
Hokey Marsh

Sample ID: 105602

Core #

42

Start Depth

300

Stop Depth

305

Recovery %

100

Run Start Time

1140

Run Stop Time

1212

Drilling Notes:

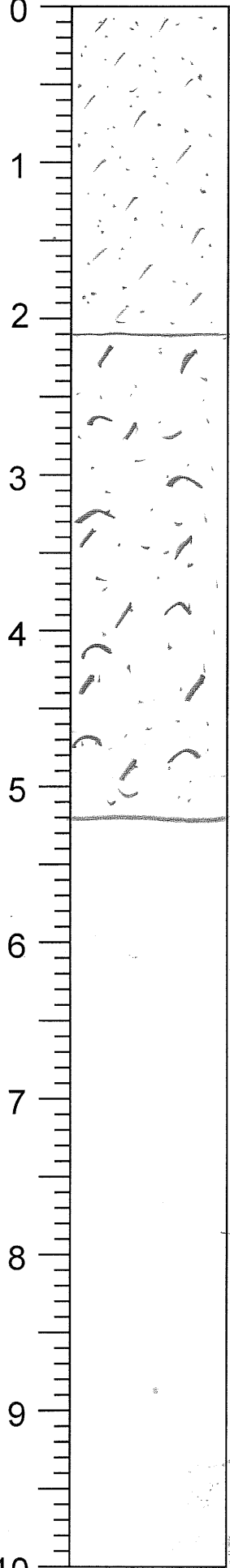
Date

6/2/09

Described by

PJM

10



SILT + SAND interbedded

Silt is clayey, sand fraction not apparent
Micaceous (2-3%)
very thinly laminated (<1mm)
-laminæ horizontal

SAND is vfg; well sorted, subangular
No shell frags noted
Bioturb not apparent

SAND fg, well sorted, silty (ore)
w/ frequent shell frags. (~7-10%)
interbedded with silt (as above)
either micaceous, small shell frags,
or both (~2%)

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARVIN HOPE

Sample ID: 105603

Core #

43

Start Depth

305

Stop Depth

310

Recovery %

24

Run Start Time

1230

Run Stop Time

1309

Drilling Notes:

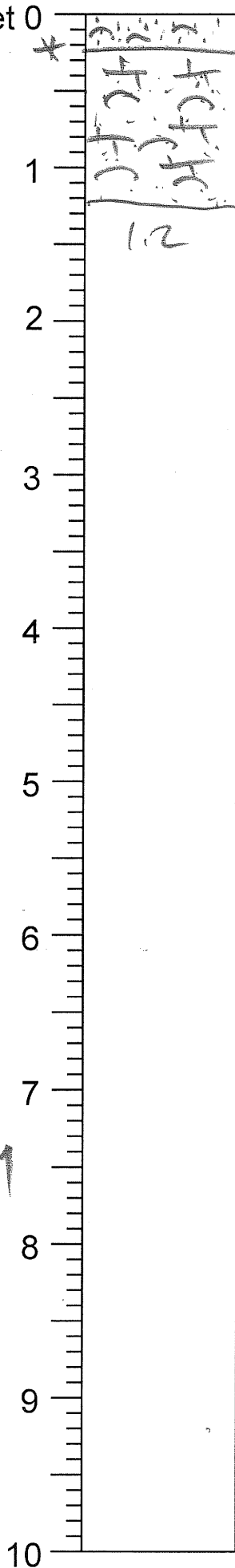
hard stuff;
drill not
moving quickly

Date

6/2/09

Described by

ejm



SAND c-f, poorly sorted, 972, silty, ^{very cohes} abundant (~15%) shell frags. No lam. noted. No bioturb. noted

* THIS contact not likely accurate. Drill hung up on Indurated bed, most likely intermediate core lost.

SANDSTONE ML-fU, with coarse fraction poorly sorted. Numerous shell fragments - chalky "goopy" Variably indurated = very hard: fissures vigorously No laminations noted but some preferred horiz. orientation of shells present

Core Description

Feet 0

Site Name/ID

N653-08
MARSHY HOPE

Sample ID: 105604

Core #

44

Start Depth

310

Stop Depth

315

Recovery %

62

Run Start Time

1332

Run Stop Time

1442

Drilling Notes:

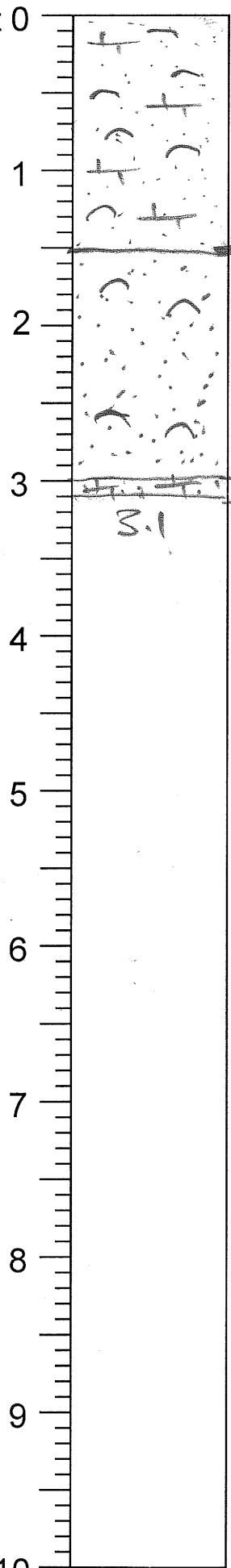
Date

6/2/09

Described by

EM

10



SANDSTONE (F) - ML quartz, well-sorted
 few dk grains (~5%) some (M-C)
 Variably indurated
 Very shelly (?) actually mostly
 just molds of shells remain
 [ARCA, PECTIN, OTHER BIVALVES]
 from 1.25-1.5 ft faint laminations (?)
 otherwise no laminations visible

SAND ML w/ finer fraction present
 well sorted sand fraction (~72%)
 Some vc phosphatic grains (~2%)
 shell frags. present (<1cm) (~5%)
 Firm, but not indurated as above
 No lam. or bioturb. noted.

SAND (AS ϕ - 1.5 ft)

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY HOPK

Sample ID: 105605

Core #

45

Start Depth

215

Stop Depth

320

Recovery %

38

Run Start Time

1500

Run Stop Time

1520

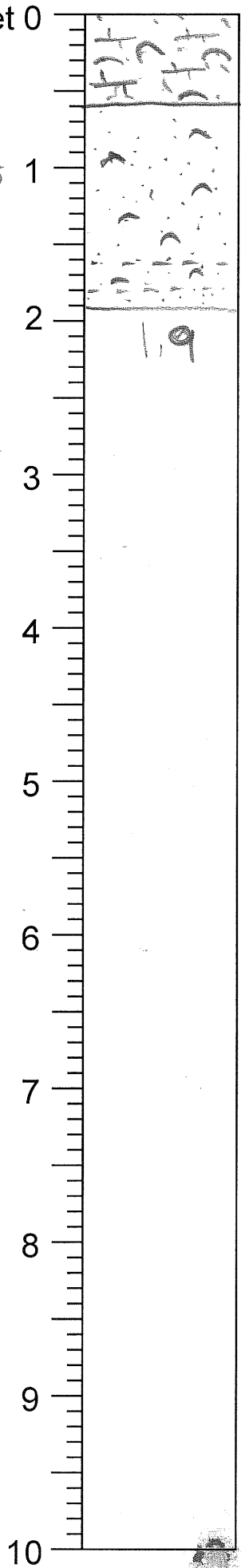
Drilling Notes:

Date

6/2/09

Described by

AM



SANDSTONE ML, CU
well-sorted sand fraction
w/ abundant shell material
(whole + frag)
- most in some state of
dissolution or just mold remains
Some phosphatic grains (~2%)
No lam., No bioturb noted
Variably Indurated

SAND ML, MU, QTZ, SUBANG, well SORTED
Numerous shell frag.
(+ small whole shells) (~10%)
[Turrit., PECT, OTHER BIVALVES]
Some Aragonite frags.
from 1.6-1.8 ft more gray, lighter
phosphatic + glauc more common (~5%)
Transition @ 1.8 ft back
to color of above, less shelly
Laminations very faint
horiz, ~3mm
No obvious bioturb noted

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY HOPE

Sample ID: 105606

Core #

46

Start Depth

320

Stop Depth

325

Recovery %

Run Start Time

1532

Run Stop Time

1610

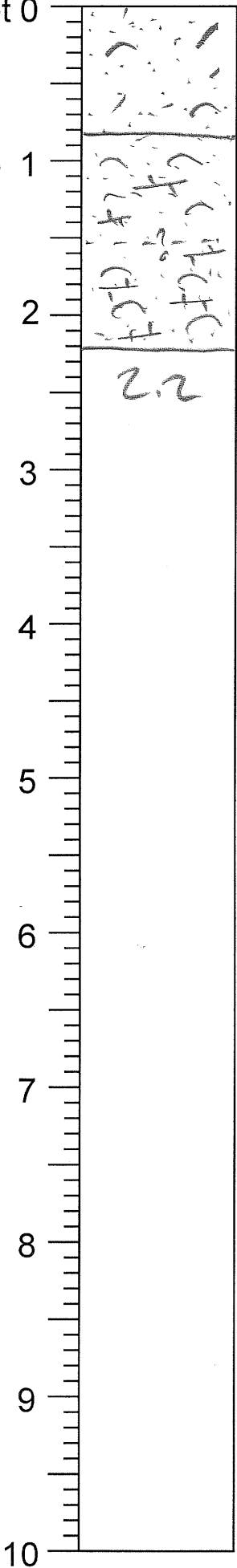
Drilling Notes:

Date

8/2/09

Described by

[Signature]



SAND ML-FU, a little silty.
 Well-sorted, subang. (Q₁₂)
 v.f dk grains (~1-2%)
 Shell frags sparse (~1%)
 v. thin laminations present but Faint
 Horizontal
 A bit 'jumbled' in places (Structure?)

SANDSTONE
 Mg, well sorted sand fraction
 Shell material present
 but mostly dissolved, numerous
 molds remain.
 @ 1.5 ft, mass of pebble-sized clasts
 appearing like the surrounding material
 but in a silty-sandy matrix.
 Unsure if in place or drilling remnant
 Dark grains present (~2-3%)

10

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY HOPE

Sample ID: 105607

Core #

47

Start Depth

328

Stop Depth

330

Recovery %

99

Run Start Time

1615

Run Stop Time

1635

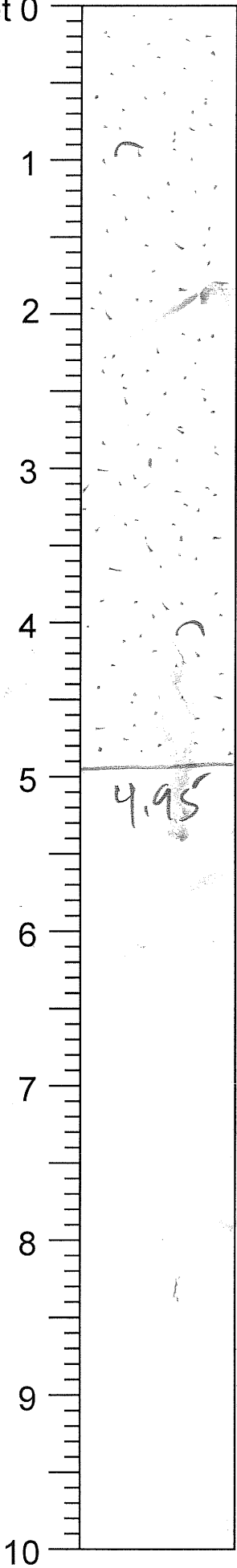
Drilling Notes:

Date

6/2/09

Described by

PM



SAND Mg, well sorted, subang.
OHM present (~3-5%)

Siltier laminae throughout
- generally FINE
- horizontal to slightly inclined

Very sparse shell frags (<<1%)

No bioturb. noted
Bioturb noted - horiz
- silty burrow linings
(<1cm dia)

Core Description

SAND ML, FU & TZ well sorted, ^{SUB} ANG _{SUB} RND
 OHM (~3%)
 Siltier laminations (~1-3 mm) present
 - Horizontal to slightly inclined
 - Some bioturb evident in disrupted laminae
 Very few (<1%) shell fragments
 - Notably @ 2.5 ft

Feet 0

Site Name/ID

MARSHY HOPE
 N153-08

Sample ID: 105608

Core #

48

Start Depth

330

Stop Depth

335

Recovery %

100

Run Start Time

1655

Run Stop Time

1712

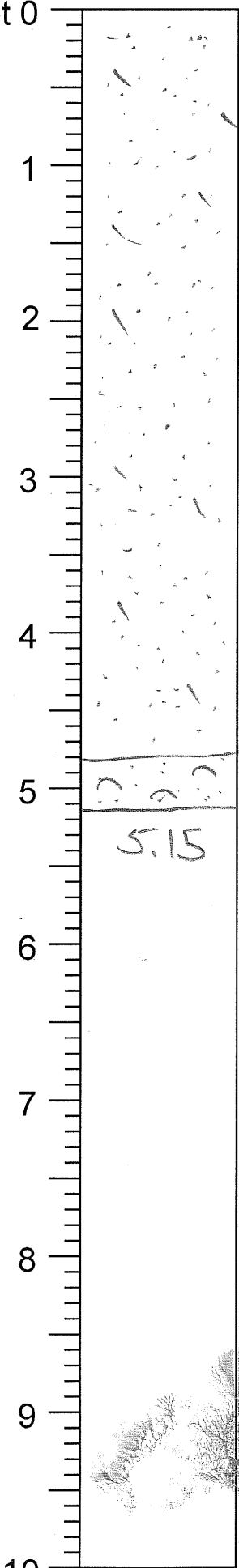
Drilling Notes:

Date

6/2/09

Described by

DM



SAND

- AS ABOVE but shell fragments (up to ~1cm) common (5%)
 - Laminae and Bioturb not evident

5.15

Core Description

Feet 0

Site Name/ID

N653-08
MARSHY HOPE

Sample ID: 105609

Core #

49

Start Depth

335

Stop Depth

336.16

Recovery %

Run Start Time

1725

Run Stop Time

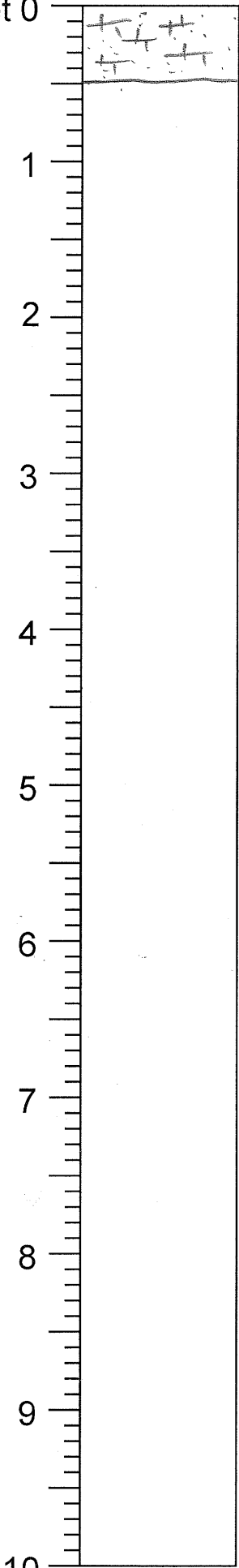
1753

Drilling Notes:

Date

6/2/09

Described by



SANDSTONE mg, subrad-rnd, orz
Small fraction orim (~1%)
Shells + shell frags present (~510%)
Variably Indurated
(Totally to partially)
No Lam, Bio Turb noted.

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY Hops

Sample ID: 105610

Core #

50

Start Depth

336.16

Stop Depth

340

Recovery %

☹

Run Start Time

0645

Run Stop Time

0709

Drilling Notes:

No Recov.

Barrel empty

Described sample
stuck to shoe

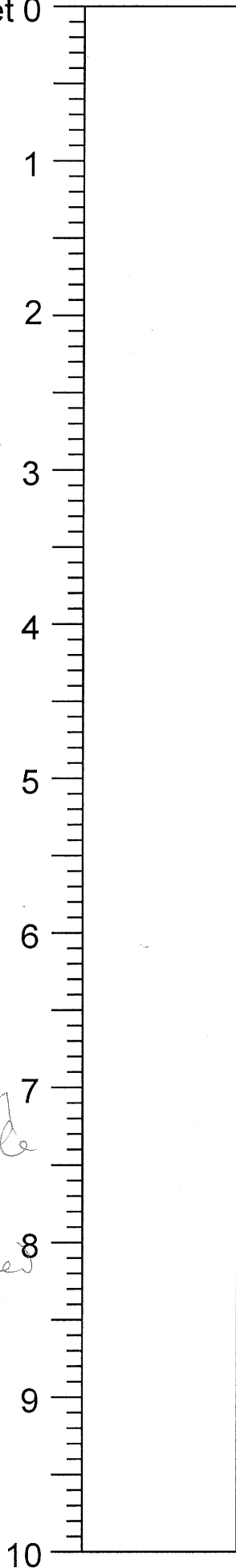
-RAN w/ Shoe backed
all the way up.

Date

6/3/09

Described by

[Signature]



No Recovery

* STUCK TO SHOE:
SAND FL, subangular, well sorted
w/ SILT

Core Description

Feet 0

No Core

Site Name/ID

Nb 53-08
MARSHY HOPE

Sample ID: 105611

Core #

51

Start Depth

340

Stop Depth

345

Recovery %

0

Run Start Time

0751

Run Stop Time

0803

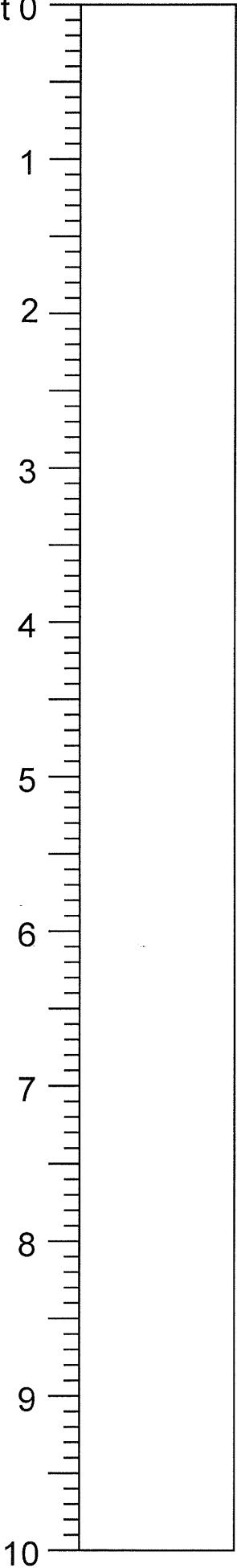
Drilling Notes:

Date

6/3/09

Described by

PJM



Core Description

Feet 0

Site Name/ID

NB53-08
MARSHY HOPE

Sample ID: 105612

Core #

52

Start Depth

345

Stop Depth

350

Recovery %

4

Run Start Time

0832

Run Stop Time

0842

Drilling Notes:

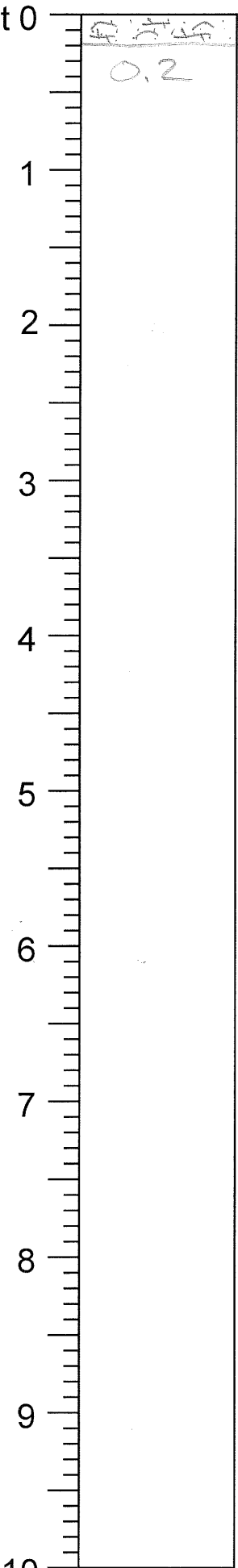
Cemented bit
in shoe.
otherwise no
recovery

Date

6/3/09

Described by

RLM



SANDSTONE

Mostly QTZ (>95%), m U-fl well sorted
OHM present (~3%)
Sub Round
round

Shell frags (+ Remnants (molds))
[PECTIN NOSES]

No LAM, NO BIOTURB

fizzes vigorously in HCl

Core Description

Feet 0

Site Name/ID

N1 53-08
MARSHY HOPE

Sample ID: 105613

Core #

53

Start Depth

350

Stop Depth

355

Recovery %

0

Run Start Time

0908

Run Stop Time

0924

Drilling Notes:

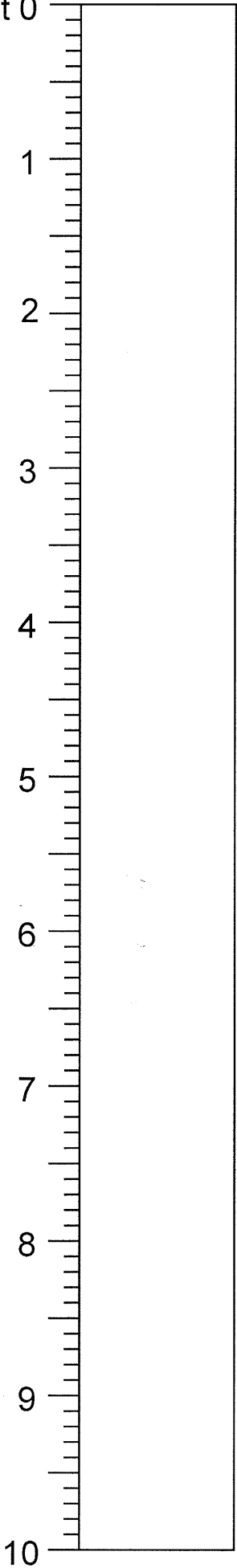
NADA

Date

6/3/09

Described by

[Signature]



NOTHING...

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY HOLE

Sample ID: 105614

Core #

54

Start Depth

355

Stop Depth

360

Recovery %

Run Start Time

1004

Run Stop Time

1021

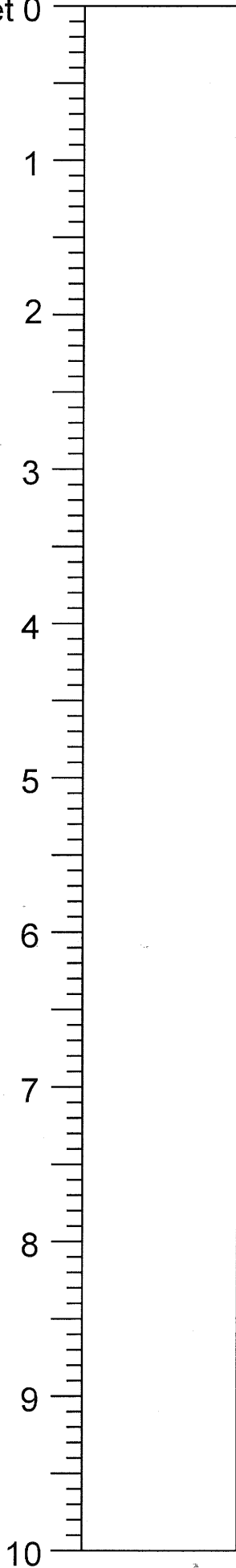
Drilling Notes:

Date

6/3/09

Described by

[Signature]



NOTHING

Core Description

Feet 0

Site Name/ID

Nb 53-08
MARSHY HOPE

Sample ID: 105615

Core #

55

Start Depth

360

Stop Depth

365

Recovery %

0

Run Start Time

1050

Run Stop Time

1054

Drilling Notes:

Extended shoe

snout -

STILL

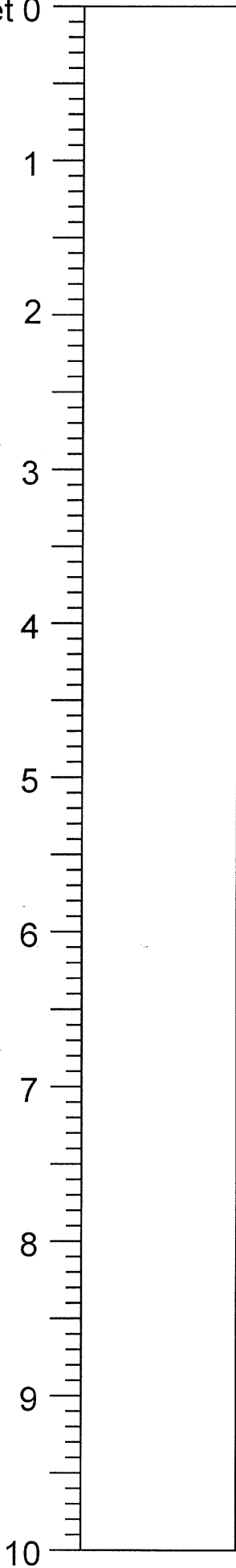
NOTHING

Date

1/6/09

Described by

RM



* Nothing

- Change tactic

going deep

w/ less concern

for intermediate
recovery

Core Description

Feet 0

Site Name/ID

N653-08
MARSHY HOPE

Sample ID: 105616

Core #

56

Start Depth

365

Stop Depth

375

Recovery %

11

Run Start Time

1126

Run Stop Time

1155

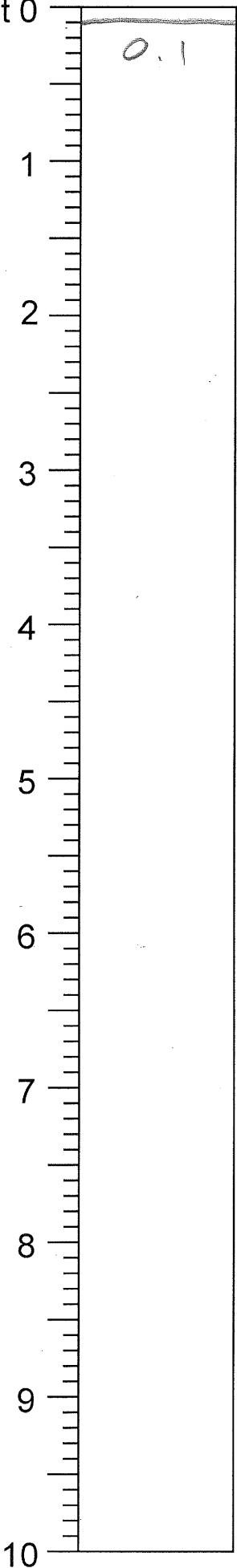
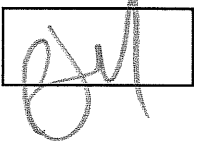
Drilling Notes:

SWITCH TO
10' BARREL

Date

6/3/09

Described by



SANDSTONE ML-FU, well sorted,
QTZ, subrad-rnd, ~1% OM
- Imprint of peedin
- Some shell material, molds+frag
- HARD -
Very indurated, freezes vigorously
No LAM, Bioturb noted.

*likely from above,
chased down hole.

0.1' of heavily cemented (sandstone)
core stuck in shoe.

Core Description

Feet 0

Site Name/ID

Nb53-08
MARSHY HOPS

Sample ID: 105617

Core #

57

Start Depth

375

Stop Depth

385

Recovery %

2.5

Run Start Time

1227

Run Stop Time

1254

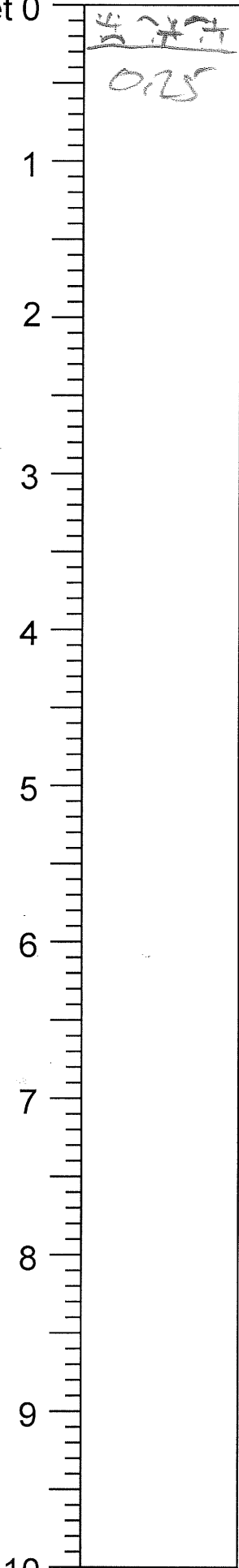
Drilling Notes:

Date

6/3/09

Described by

[Signature]



SANDSTONE m L/U, well sorted
QZ, submd/md
~1-2% OHM
Shell molds/frags ~ 5%
Very hard/fully indurated
CaCO₃ cement / Fizzes vigorously
No lam. noted
-perhaps some preferred
horizontal orientation of shells
No Boturb noted.

* likely from above +
chased down hole

Core Description

Feet 0

Site Name/ID

Nb53-08
MARSHY HOPE

Sample ID: 105618

Core #

58

Start Depth

385

Stop Depth

395

Recovery %

0

Run Start Time

1320

Run Stop Time

1342

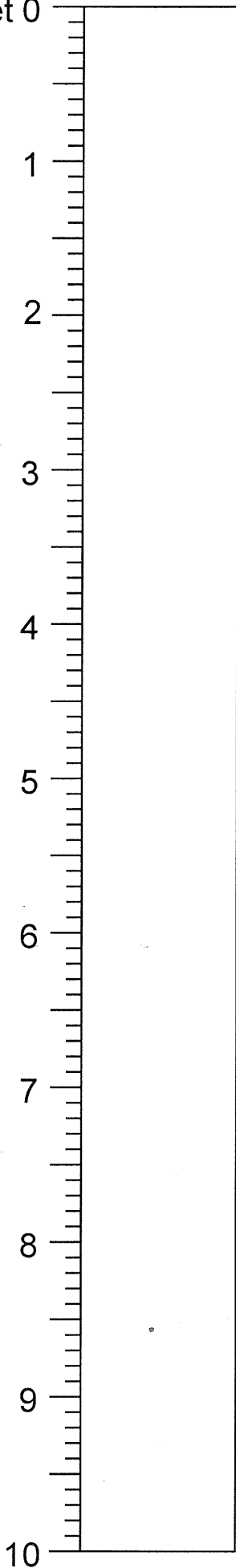
Drilling Notes:

Date

6/3/09

Described by

PM



~~Nothing~~

Core Description

Feet 0

53
Nb ~~55~~-08
(Marshy Hope)
Sample ID: 105619

Core #

59

Start Depth

395

Stop Depth

405

Recovery %

51.5

Run Start Time

1713

Run Stop Time

1732

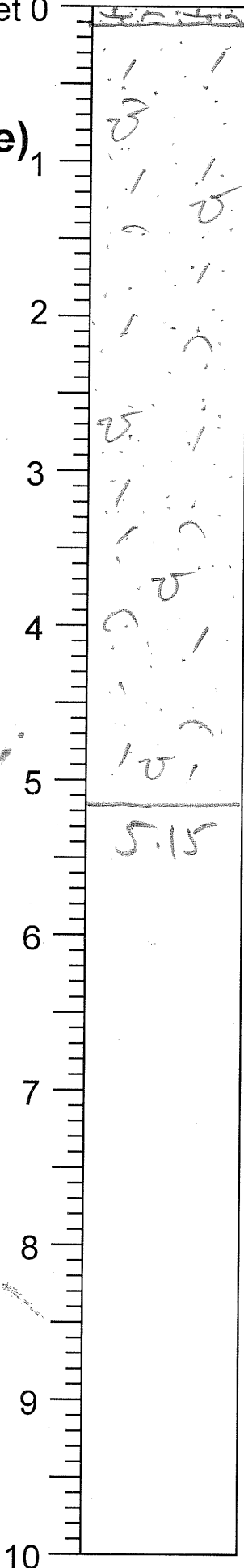
Drilling Notes:

Date

6/3/09

Described by

[Signature]



SAND vf-f, (w) silt
Subang-any qtz (~95%+)
v. little mica (~1%)*
" OHM (~1%)

SILT mostly in very thin laminae (<1mm)
laminae bioturbated (51cm)
burrows horiz to oblique-vert @ 4.3-4.5 ft
very thin-shelled bivalves (~3-5%)
~3% of sand fraction shell frags

* Top 0.1ft consists of indurated
fragments → sandstone w/ shells.
May have contributed to lack
of recovery in previous sections.

Core Description

53
Nb35-08
(Marshy Hope)
Sample ID: 105620

Core #

60

Start Depth

405

Stop Depth

415

Recovery %

100+

Run Start Time

1800

Run Stop Time

1821

Drilling Notes:

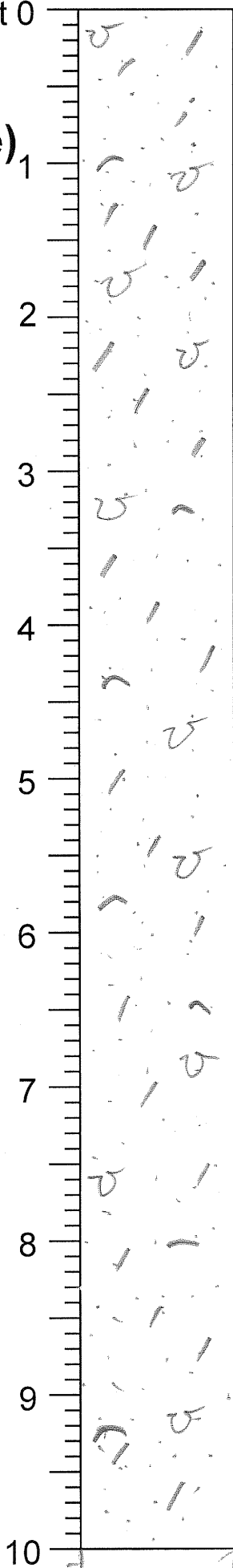
Date

6/3/09

Described by

pdm

Feet 0



SAND vf-f; well sorted (95%)
w/ thinly laminated, interbedded sil.
~2-3% OFIM, v. little mica (<1%)
silty laminae disrupted by
bioturbation - Burrows horiz-obliq.
within shells present
→ Burrows generally < 0.5 cm dia

10.2

Core Description

Feet 0

S3

Nb 5-08

(Marshy Hope)

Sample ID: 105621

Core #

61

Start Depth

415

Stop Depth

425

Recovery %

100

Run Start Time

0747

Run Stop Time

0805

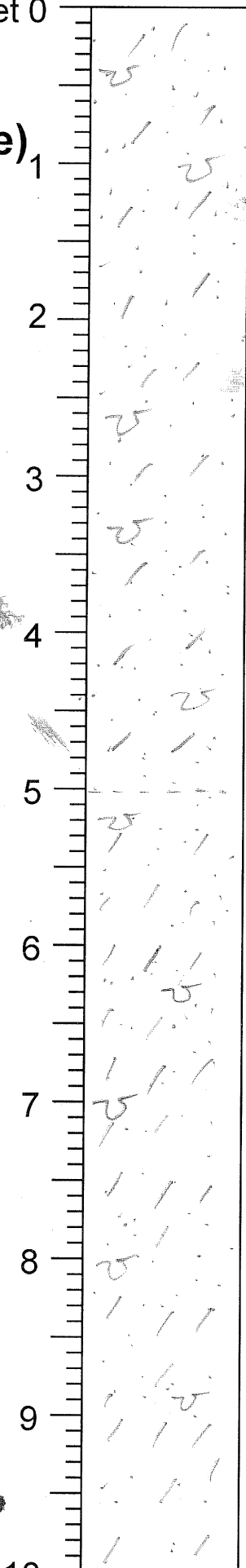
Drilling Notes:

Date

6/7/09

Described by

[Signature]



SAND v-f, well-sorted grz (55%)
 somewhat silty, ang-subang
 ~ 2% ovm
 ~ 1-2% shell frags in fine sand fract.
 Silty laminae common, (horiz-slight) ^(~1mm-2mm)
 disrupted by bioturb common
 Burrows (silty lined, sand filled, horiz-obliq) common.
 1-2% v thin shelled bivalves present
 * Bottom 1/2 (5-10ft) Lith changes slightly
 - Thicker ^{SANDY} silty laminae (up to len) present
 - SLEN 1, 4/5 GR (DK greenish gray)
 - Darker than above
 - Also, thicker ^(~3cm) silt (dry, crumbly) beds
 - greenish, sandy, clayey

10.0

Core Description

Feet 0

53
Nb 35-08
(Marshy Hope)
Sample ID: 105622

Core #

62

Start Depth

425

Stop Depth

435

Recovery %

104

Run Start Time

0840

Run Stop Time

0900

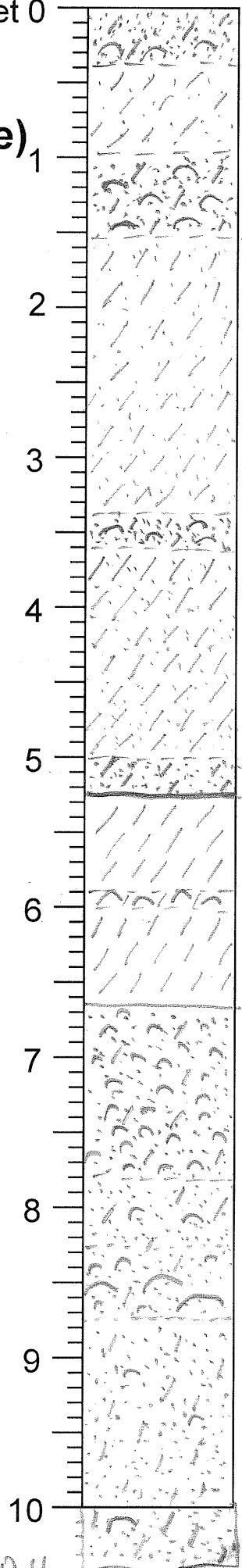
Drilling Notes:

Date

6/4/09

Described by

PPMCL



Interbedded sandy SILT and silty SAND; sandy silt is silty clay, v. sandy with vf gtz sand & mica; ~~tz~~ laminated, with thin interlams of clean f-vf sand 1-5 mm thick plus some burrows disrupting lams; silty sand is f-vf sd, very silty, silty clay, with thin shelled molluscs (mollusc frags common in some of them, some up to 30 mm wide); the sandy silt also has scattered small shells/frags, thin shelled; silty sand has, in places, completely disrupted thin laminae (2-3 mm) of clayey silt/sand. Some disruptions of lam & likely sand-filled burrows in the silt.

Silt = GLEY 2 10Y 4/1 dk greenish gray
Sand = GLEY 2 10Y 3/1 dk greenish gray

← kind of transitional
SILT, with rare vf sand, thinly laminated (1-2 mm), scattered small burrows; silty clay; a zone in middle with small (1 cm) shells & shell frags, some thicker shells, more robust
GLEY 2 10Y 4/1 dk greenish gray

← distinct, sharp planar contact
SAND, muddy, shelly with decr. shells down, abd (~30%) thick shell fragments, from 6.65 to 7.8 ft in an overall m-f sand w/ some CRS grains; some blackish shell frags & phosphate grains; another shellier zone from 8.25 to 8.75 w/ frags of thicker shells and whole chalky bivalves, some w/ thinner shells, shells here ~20% vol; scattered shells & shell frags in less shelly zones; abd muddy (clayey silt) matrix in shelly zones, more abd mud matrix in less shelly zones, overall muddier down ward
GLEY 2 10Y 3/1 dk greenish gray

53
 Nb35-08
 (Marshy Hope)
 Sample ID: 105623

Core #

63

Start Depth

435

Stop Depth

440

Recovery %

100

Run Start Time

0930

Run Stop Time

0950

Drilling Notes:

h.t hard zone
 @ 5ft, so
 brought up core

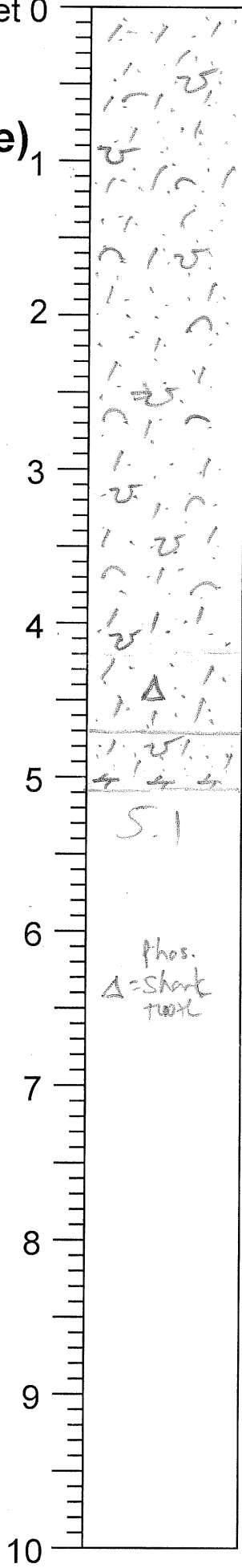
Date

6/4/09

Described by

RM

Feet 0



Core Description

f. of SAND w/ silt + rare C (w/ 2%)
 rare phosphate (~1%), little clayey
 Mostly QTZ (>95%) well sorted - subangular
 Silty laminae, ~~thin~~ - inclined slightly
 ≤ 1mm
 Laminae disrupted by bioturbation
 Burrows mostly horizontal some
 generally less than 0.5cm dia. Oblique
 Shell material very thin
 - preferentially oriented w/ laminae

Transition

silty of SAND w/ coarse (~3%-5%)
 (Lith similar to above, w/
 shells dissolved and more
 coarse sand, less clay)
 Laminations and bioturb
 similar to above, but faint
 Bottom 0.1-0.2 ft variably indurated,
 fizzes only very slightly, a bit more
 when powdered (Dole?)

53
 Nb35-08
 (Marshy Hope)
 Sample ID: 105624

Core #

64

Start Depth

440

Stop Depth

~~450~~

Recovery %

Run Start Time

1050

Run Stop Time

1203

Drilling Notes:

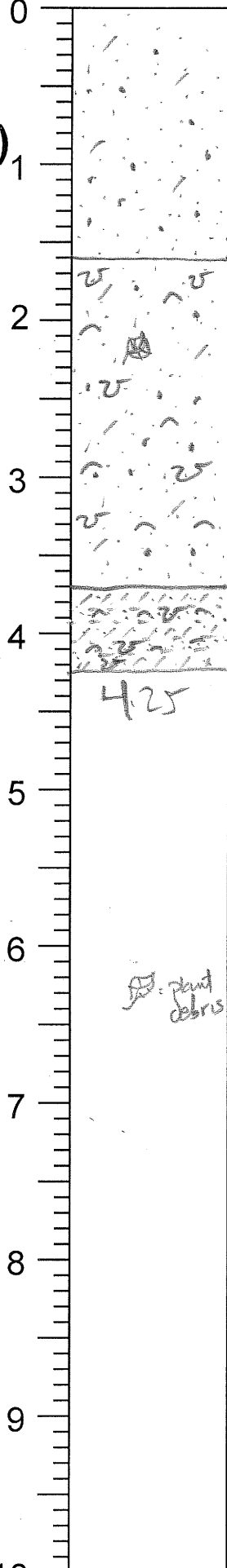
Date

6/4/09

Described by

[Signature]

Feet 0



Core Description

SAND - v f to C ^{-Avg M} poorly sorted Qtz, little silt -
 Variably indurated, little to no fine
 No shell material, but shell
 molds common (pecten)

TRANS

SAND - v f to C (Avg M) poorly sorted Qtz,
 Little silt, subang-cmg
 Shell frags common (7-10%)
 Size range (1mm - 0.2cm)
 plant debris @ 2.2 ft
 v. faint laminations visible
 - horiz - slight incline
 Some phosphatic grains (~1%)

4.25

SILT w/ little v f sand interbedded
 w/ SAND

Silt laminae has little (<1%) mica
 laminae horiz, <1mm thick

SAND laminae as above, but
 siltier

Bioturb. apparent from
 disrupted silt laminae
 and burrows ~ 0.5cm, sand-lin
 oblique.

[Symbol] plant debris

615
 Panel
 for

445

Core Description

Feet 0

53

Nb 5-08

(Marshy Hope)

Sample ID: 105625

Core #

65

Start Depth

~~445~~ 445

Stop Depth

~~455~~ 455

Recovery %

30

Run Start Time

1230

Run Stop Time

1255

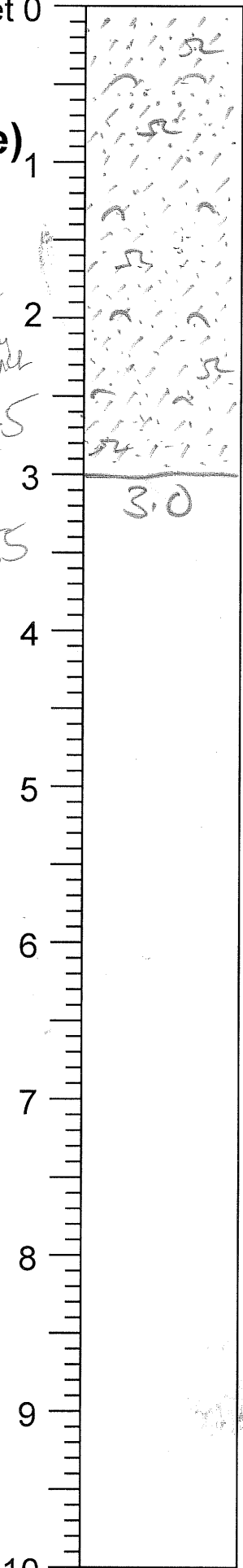
Drilling Notes:

Date

6/4/09

Described by

[Signature]



SILT w/ little v of sand (~10%)
+ mica (~1%)

very thin (clm), horiz. laminations
showing evidence of silt
due to disruption of laminations
and occasional horiz burrow (~4mm dia)

interbedded with SAND
v-f-c, poorly sorted, QTZ w/ little silt
+ mica (~1%) [MOSTLY COARSE]
Shell frags common (fine - v. 0.5mm)
QTZ Poorly sorted, subang. ang

silt laminations less common ~2.2-2.5
likely due to lack of sand intervals
(FAINT)

53
Nb35-08
(Marshy Hope)
Sample ID: 105626

Core #

66

615
PPMCL
fix

Start Depth

~~460~~

455

455

Stop Depth

~~470~~

465

465

Recovery %

38

Run Start Time

1337

Run Stop Time

1419

Drilling Notes:

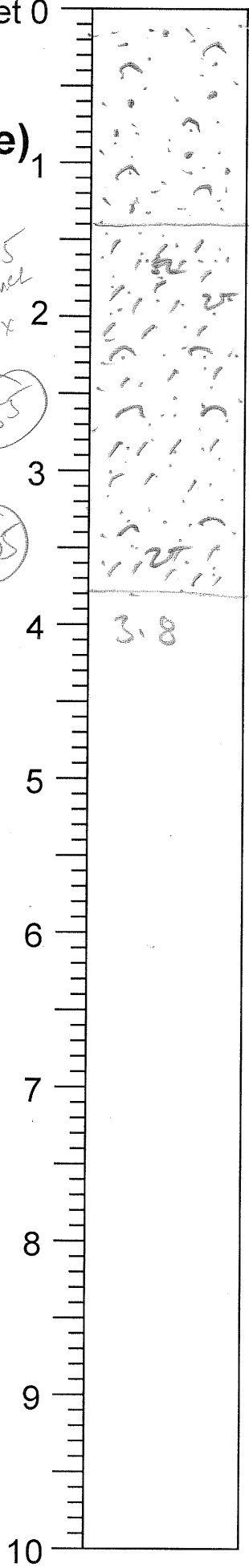
Date

6/4/09

Described by

[Signature]

Feet 0



Core Description

SAND (LOOSE) CL-VEL, some Med
QTZ (95%), subang-ang
Shell fragments common (~10%)
- from $4\mu m - 5mm$

* Unclear where in section this
came from, but very similar
to coarse sands above and
below (in this core)

interbedded SAND and SILT
SILT w/ v. little vf sand, <math><1\%</math> mica
v. thin laminations, horizontal,
some disruption due to bioturb

SAND more prominent, fining
down section, from coarse to MU.
Shell fragments common
= overall sand is very similar to
above, but getting finer

Core Description

53
Nb35-08
Marshy Hope
Sample ID: 105627

Feet 0

Core #

67

Start Depth

465 ~~470~~ (465) ^{615 PPMCL}

Stop Depth

475 ~~480~~ (475)

Recovery %

99

Run Start Time

1450

Run Stop Time

1509

Drilling Notes:

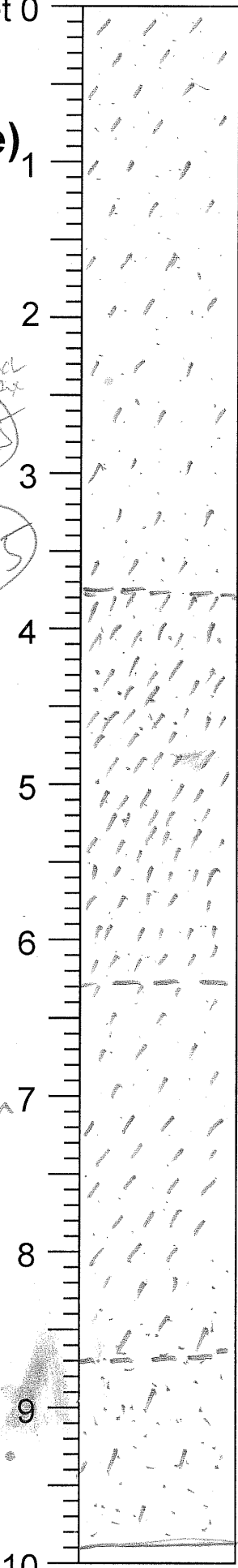
hard spot
~7-8ft into run

Date

6/4/09

Described by

DM



SILT; interbedded w/ SAND

Silt has little v f sand + mica (2-3%)
very thinly laminated (horiz.) (<1mm)

Some disruption of laminae (bioturbation?)
noted, as well as burrows (Horseshoe) + small

Interbedded sand of 2 distinct
types:

- Mg fairly well sorted, subang-ang w/ abundant (~5-7%) shell frags + some (~1%) mica
- fL-vfU, well sorted
QTZ (~95%), MICA (~2%), OHM (~5%)
- CROSS laminated, lenticular also infilling some burrows

* from 3.7-6.3ft very silty
- Little sand

* from 8.7-9.9 very little silt
Mostly Mg sand (as above)

9.9

Core Description

Feet 0

Nb35-08
Marshy Hope

Sample ID: 105628

Core #

68

615
P/M
Fix

Start Depth

~~470~~

475

Stop Depth

~~490~~

485

Recovery %

Run Start Time

1549

Run Stop Time

1630

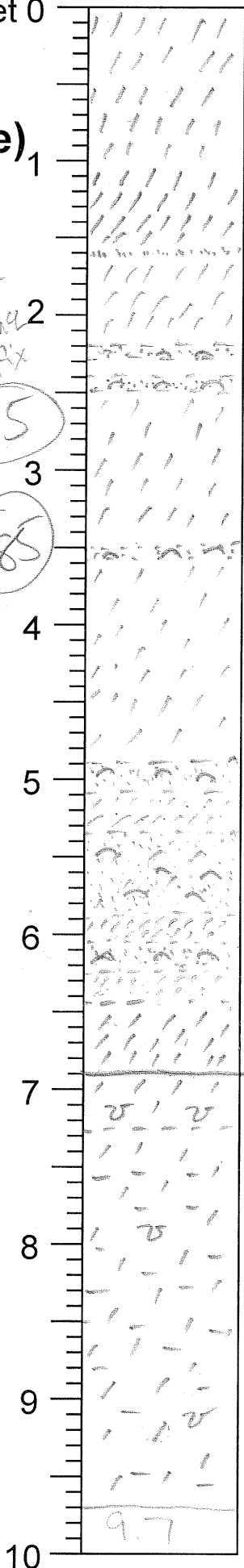
Drilling Notes:

Date

5/4/09

Described by

[Signature]



interbedded SILT + SAND
Silt has very little vt sand
+ Mica (1-2%)

very thin laminae, horiz.
some bioturb. evident in
disrupted Lam.
More silt than sand

Sand Med, fairly well sorted, 0%
subang. ang.
~3% ovm, ~1% mica, ~2-3% shell frags

* from 4.9-6.4 sand intervals silt
fine w/ shell frags (~3%)

Below 6.45 sand fraction not
evident.

Silt, clayey, ~5% micaceous,
rare shell frags (~1%)

Faint laminations, visible

Burrows (occasional)

Horiz. ~4mm dia.

slight color chng. at 7.25

Core Description

Feet 0

53

Nb 08

Marshy Hope)

Sample ID: 105629

Core #

69

615 ppm
fix

Start Depth

~~490~~ 485

485

Stop Depth

~~500~~ 495

495

Recovery %

1035

Run Start Time

1644

Run Stop Time

1729

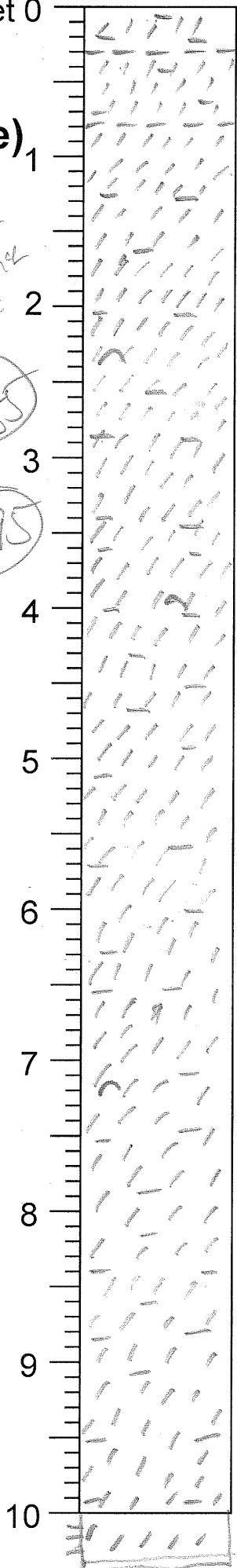
Drilling Notes:

Date

6/4/09

Described by

[Signature]



SILT, micaceous (3-5%)
Little to no vfg sand, slightly clayey
very faint laminations; horiz.
rare shells (gast., bivalve) (<<1%)
0.3-0.8 ft more defined within
laminae (<1mm-3mm), fissile

10.35

Core Description

Feet 0

S3

Nb36-08

Marshy Hope

Sample ID: 105630

Core #

70

bis pencil for

Start Depth

~~500~~ (495)

495

Stop Depth

~~505~~ (500)

505

Recovery %

101

Run Start Time

1806

Run Stop Time

1840

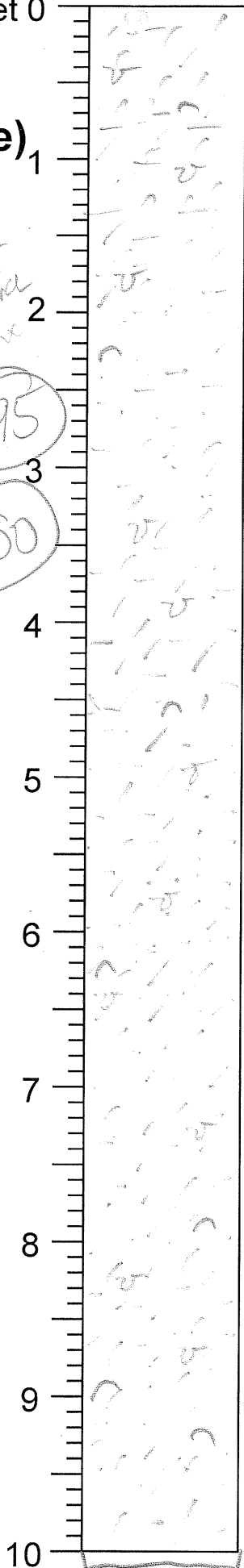
Drilling Notes:

Date

6/9/09

Described by

OM



SILT, clayey (ribbons a bit)
 micaceous (2-3%)
 whole + frags of shells (gast, in.
 - very sparse (<1%))
 Variably laminated from
 faint to distinct
 regular to irreg
 homogeneous in sections
 (recognizable in broken section
 6.1-6.4)
 Bioturb evident: burrow fill
 less clayey/more silty
 ~3mm diameter, h. cont'd
 also smaller (1mm)

10.1 ft

Core Description

Feet 0

53

Nb 08

(Marshy Hope)

Sample ID: 105631

Core #

71

Start Depth

510

Stop Depth

520

Recovery %

99

Run Start Time

0650

Run Stop Time

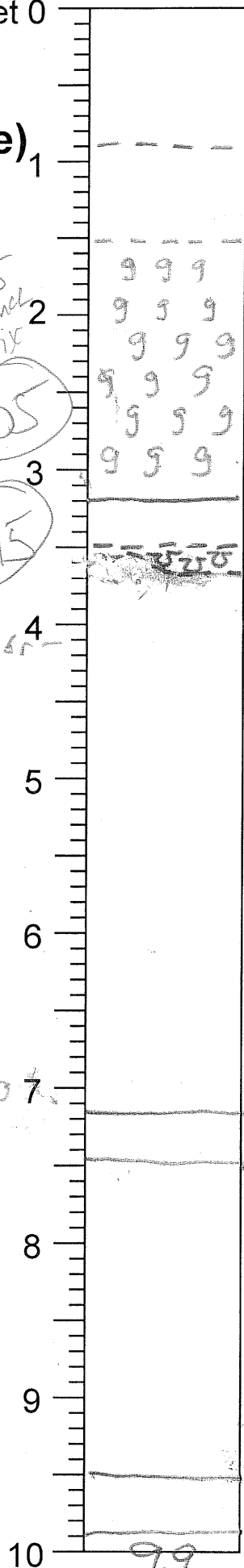
0718

Drilling Notes:

rainy, bad light
conditions for describing
great core

Date

Described by



SILT, dry, crumbly, clayey, sandy, imbricated; laminae alternating between more crumbly silty layers & more coherent clayey layers; some zones contain have 10-20% fine grained sand (study more - hard to see in light); scattered small frags of thin shells; 1% mica - dk olive gray 5Y3/2

SAND, very silty, clayey (trans between above & below) mostly fg glauc, some vf gtz; burrowed

SAND, fine fg glauconite, silty matrix; rare mica & vf g-fg gtz; heavily burrowed, w/ burrows filled w/ brownish silt from above; also some thin-shelled bivalves

← 3.2 - MAJOR BURROWED SURFACE - CONTACT

SILT, hard, brittle, clayey, upper part heavily burrowed

3.5-3.7 ← BURROW CLUSTER

SILT is vaguely, irregularly laminated or banded; it is densely burrowed on top, with a cluster of superimposed burrows between 3.5 & 3.7 ft, filled w/ a mix of a little of this silt and a lot of muddy glauc sd from above; most burrows are horiz/subhoriz, 4mm-2cm dia; burrows less common downward, dense from 3.2-3.7; common from 3.8-4.3, uncommon 4.3 down dk greenish gray 6EY1 5GY4/1

vy dk gray 5Y3/1

(transitional contact across <0.1 ft)

SILT, very sandy w/ vf gtz & mica (broken zone - less strength than lith above); Pseudonema & some thin bivalve shells (brownish than above below)

BURROWED SURFACE

SILT, same lith as 3.2-7.15 - burrows present, scattered, to 8.4 ft

← some burrows across

SILT, w/ sd size mica - brittle but weaker than above, breakage notes can't be seen - burrows filled w/ greener silt from above dk olive gray 5Y3/2

500

515

6.5
ppm
SiC

505

515

51

Core Description

Feet 0

Site Name/ID

N153-08

Sample ID: 105632

Core #

72

b/s
ppmcl
fix

Start Depth

~~520~~ 515

515

Stop Depth

~~520~~ 525

525

Recovery %

102.5

Run Start Time

~0730

Run Stop Time

~0815

Drilling Notes:

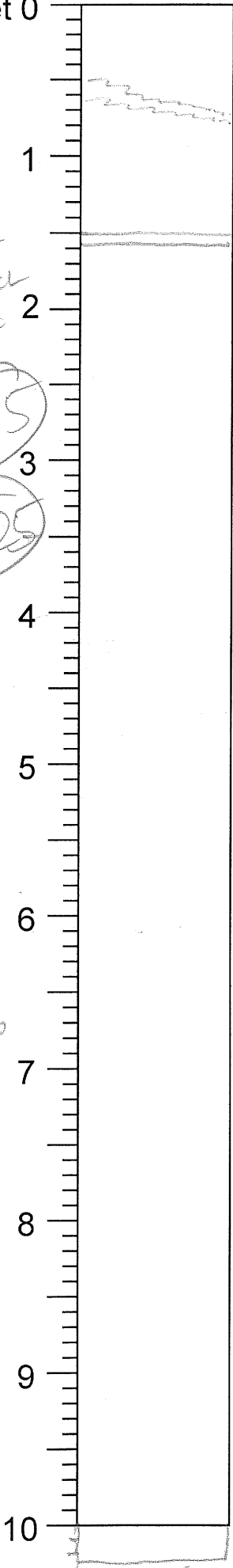
poor light for descrip

Date

6/5/09

Described by

PPML



SILT, slightly clayey, slightly sandy with some f-vf glauc & rare vf gt2; odd burrow or contact, almost zig-zag, between 0.45 & 0.65 w/ slightly lighter tan between in over olive-brown lithology; faintly laminated; a few burrows & small shell frags; from 1.5-1.55, the same tan color as in 2.15 but w/ sharp basal contact that slightly truncates banding/lams below, which are slightly darker so contrast; silt is mostly free of sand by ~4.0 ft; some burrows

darker lit @ top is 5Y3/2 dk olive gray

two taner zones are 5Y4/2 olive gray

most lith in middle is 5Y4/1 dk gray to 5Y4/2

at around +/- 7.0 ft, silt gradually darkens downwards, picks up v-rare vf-fg glaucinite sd & mica; a few thin shells

more burrowed in lower part?

by around 8.5 ft, vf-fg glauc sd is common, more mica; lith darker.

darker color in lower part is v/dk gray 5Y3/1

the bottom, ~9 ft down, is on border of sandy silt & silty sand - vf-fg glauc sd is abundant; lith darker; a few thin shells

10.25

Core Description

Feet 0

Site Name/ID

M053-08

Sample ID: 105633

Core #

73

6/5
per
ft

Start Depth

~~520~~

525

Stop Depth

~~535~~

530

Recovery %

Run Start Time

~ 0850

Run Stop Time

0938

Drilling Notes:

hard slow

drilling after

533A

Date

6/5/09

Described by

PPMCL

SILT, slightly sandy nr top changing downward to very sandy, possibly topoint of Silty SAND; sand is mostly v-f glauc, some v-f gtz, uncommon mica; vaguely banded & mottled suggesting some lam w/ bioturb disruption; a few shells above 1.0ft, common whole bivalve valves 1-2 cm long, horiz oriented (mostly concave up), some fragments

← MAJOR CONTACT

SAND, hard, partly cemented, mottled w/ a muddy or chalky lighter matrix; sand ind. med-vers gtz, poorly sorted (~50% f-med glauc (~25%); and shell frags (~25%), mostly in the core vers sd range; glauc sd ind. black & green grains. also some large glauc zones (shell reoli? cement?); Small pyrite cemented zones (shiny, gold, orange) scattered thru core; preserved shells are mostly dark grey; overall appearance is mottling of greenish, dark gray, and buff/tannish; mottling suggestive of burrowing/bioturb; at least 2 burrows filled w/ brown silt from above in upper 1.0 ft

10

Core Description

Feet 0

Site Name/ID

Nb53-08

Sample ID: 105634

Core #

74

615
FPM
fix

Start Depth

~~535~~

525

Stop Depth

~~545~~

535

Recovery %

88

Run Start Time

1008

Run Stop Time

1106

Drilling Notes:

slow Drilling

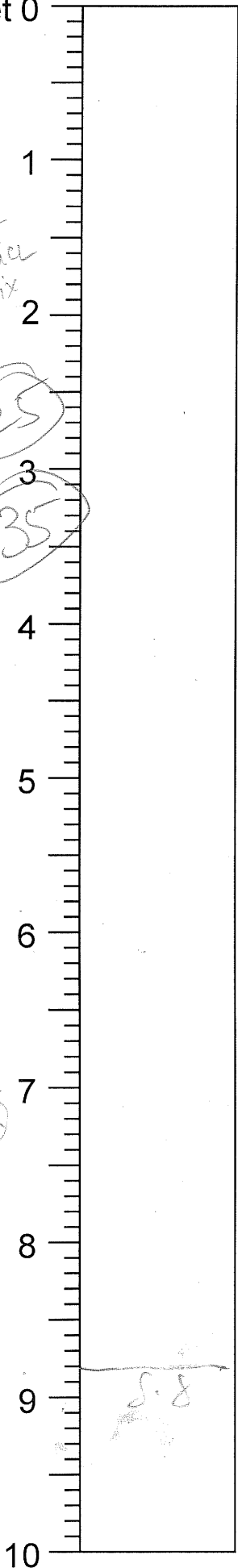
Date

6/5/09

Described by

[Signature]

SAND. m-vc Qtz (~50%)
subangular. f-m glauc (~2%)
shell frags (~25%)
More whole shell towards
bottom of core
- partially cemented
- some zones more glauc.
- overall mottled.
- greenish, dk gray, tan
- seems very burrowed



S. 8