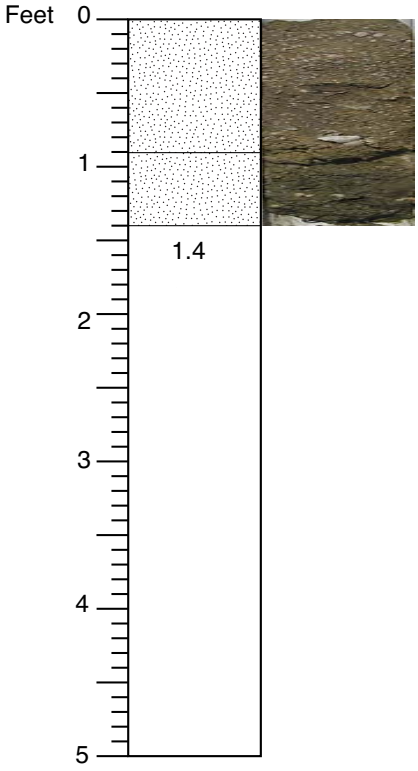


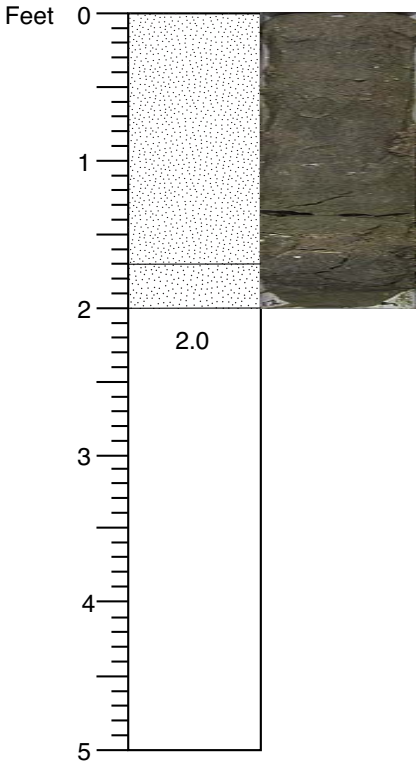
SAND; coarse-very coarse, subangular/subround, poorly sorted, gravel to 2 cm, little silt; 10 YR 4/2 dark grayish brown

0.9 contact slightly silty layer
SAND medium-fine, moderately well sorted; 95% quartz, ~5-10% dark minerals, NOT glauconite; a few pebbles on the outside are probably from on top; 10 YR 3/2 very dark grayish brown

0-5 not recovered- some was Macadam parking lot

Head driller- Gene Cobbs; Assistant driller-Jeffrey Grey
Brian B-NJGWS; Jim, Kendra, Chris

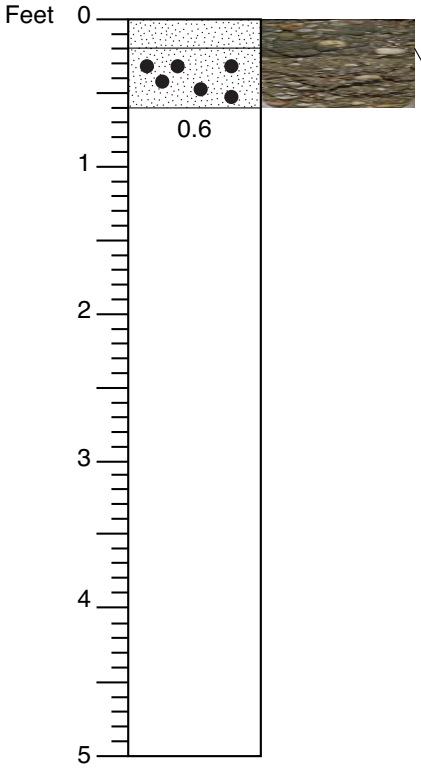
SH-NMY Core #1
Start depth: 5
Stop depth: 10
Recovery (ft): 1.4
Date: 5/6/14
Described by: JVB, BB, CJL, KMM



SAND, medium, moderately well sorted; 5% darks (not glauconite); shell fragment layers 1.0-1.1 and ~1.5 ft; shell fragments - 1 cm; homogeneous sand; 10 YR 4/2 dark grayish brown

contact
SAND, medium, 5% darks; similar texture to above but different color, maybe siltier; 2.5 Y 3/2 very dark grayish brown

SH-NMY Core #2
Start depth: 10
Stop depth: 15
Recovery (ft): 2
Date: 5/6/14
Described by: JVB, BB, CJL, KMM



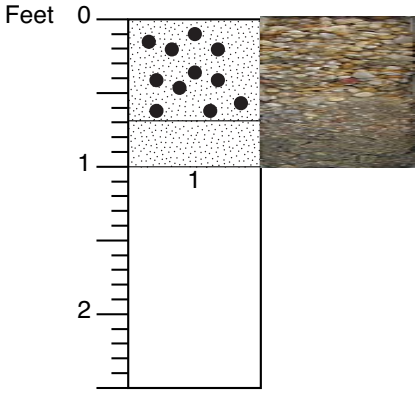
SAND; same as last core; fine to medium; 5-10% dark, subangular/subrounded; moderate sorting; 2.5 Y 4/3 olive brown

0.2

GRAVEL; with medium; sand; pebbles up to 16 cm; quartz and quartzite; very poorly sorted; pebbles are in upper layer too but are believed to be mixed from below

Gravel bed blocked the shoe, probably right at top
Different shoes
Portable Mud-puppy drilling mud cleaning system; manufactured by Tibban Co.

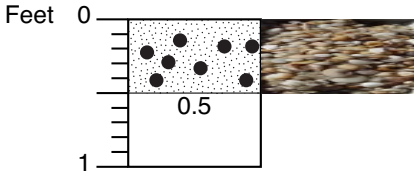
SH-NMY Core #3
Start depth: 15 ft
Stop depth: 20 ft
Recovery (ft): 0.6 ft
Date: 5/6/14
Described by: JVB, BB, CJL, KMM



GRAVEL, None of the gravel is in place per G. COBBS; it is caved; 1 cm pebbles, shell fragments 1.5-2 cms long (bivalve); gravel is well washed

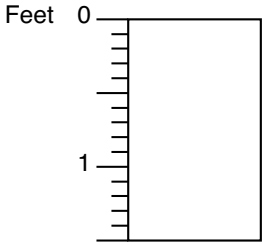
SAND, only in the shoe; coarse quartz and ~5-10% dark grains that are fine to medium; moderate sorting; this bottom 0.7-1.0 ft is more likely in place; 2.5 Y 5/2 grayish brown

SH-NMY Core #4
Start depth: 20
Stop depth: 22.5
Recovery (ft): 1
Date: 5/6/14
Described by: JVB, KMM, CJL, BB



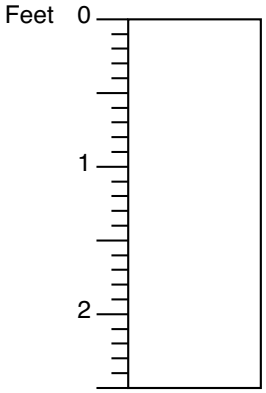
SAND and GRAVEL; caved into hole, first run of day; coarse; very poorly sorted; quartzite pebbles up to 2.5 cm;

SH-NMY Core #5
Start depth: 22.5 ft
Stop depth: 23.5 ft
Recovery (ft): 0.5
Date: 5/7/14
Described by: JVB



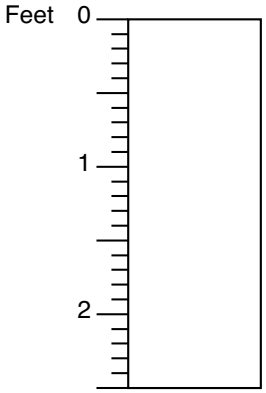
No Recovery

SH-NMY Core #6
Start depth: 23.5 ft
Stop depth: 25 ft
Recovery (ft): 0
Date: 5/7/14
Described by: JVB



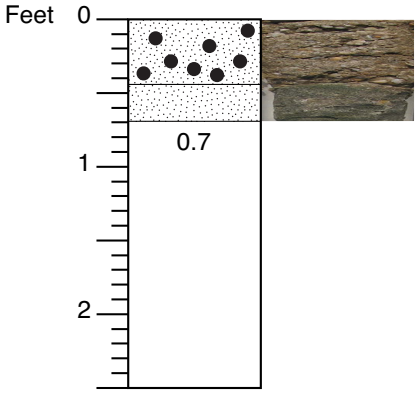
No recovery

SH-NMY Core #7
Start depth: 25 ft
Stop depth: 27.5 ft
Recovery (ft): 0
Date: 5/7/14
Described by: JVB



No recovery

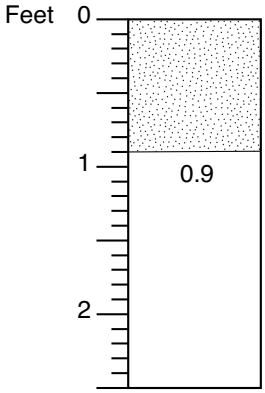
SH-NMY Core #8
Start depth: 27.5 ft
Stop depth: 30 ft
Recovery (ft): 0
Date: 5/7/14
Described by: JVB



GRAVEL; All gravel is caved from 27.5-30 ft

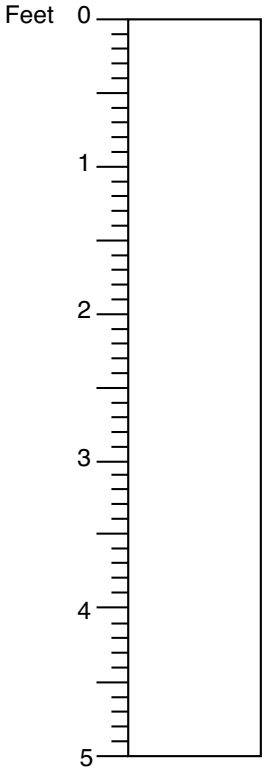
SAND; 5-10% dark grains; the rest is quartz; medium-coarse; shell fragment at 5.5 ft; some pebbles pushed in subrounded-subangular; moderately sorted

SH-NMY Core #9
Start depth: 30 ft
Stop depth: 32.5 ft
Recovery (ft): 0.7
Date: 5/7/14
Described by: JVB



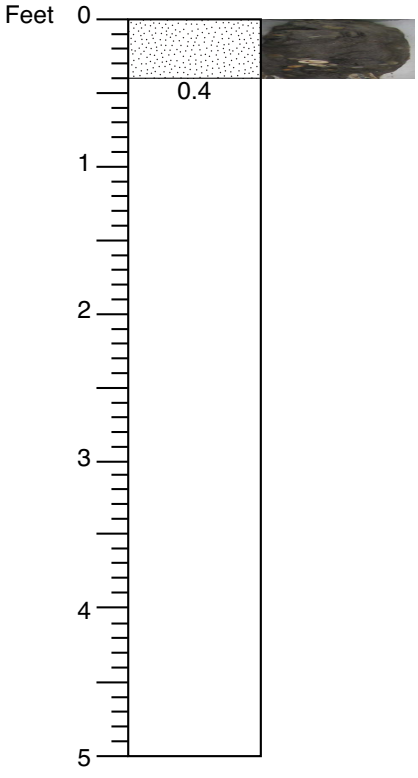
SAND; gravelly; most likely caved; similar to previous; pebbles to 2 cm, pebbles are on inside; 5 Y 5/2 olive gray

SH-NMY Core #10
Start depth: 32.5 ft
Stop depth: 35 ft
Recovery (ft): 0.9
Date: 5/7/14
Described by: JVB



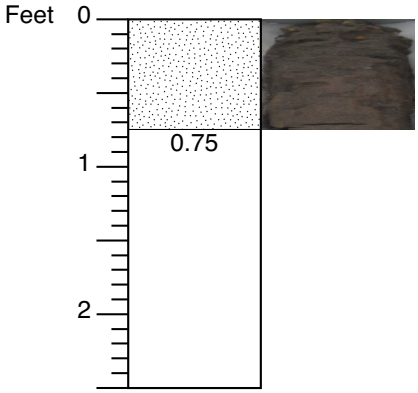
No recovery

SH-NMY Core #11
Start depth: 35 ft
Stop depth: 40 ft
Recovery (ft): 0
Date: 5/7/14
Described by: JVB



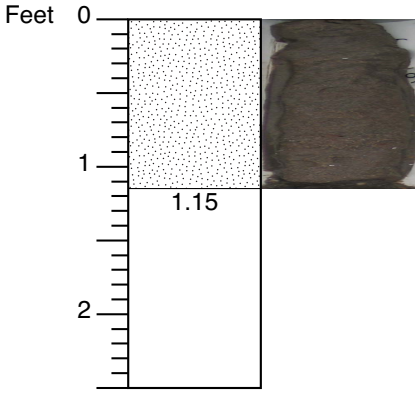
SAND; medium; subrounded; mostly quartz, ohms ~15%; some pebbles ≤ 1 cm, subrounded; one shell fragment; 10 YR 5/2 grayish brown

SH-NMY Core #12
Start depth: 70 ft
Stop depth: 75 ft
Recovery (ft): 0.4
Date: 5/8/14
Described by: KGM, CL



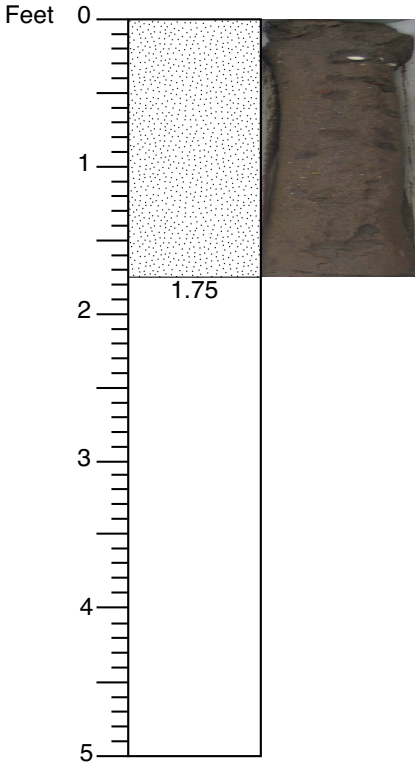
SAND; medium, moderately sorted, no silt, subrounded; quartz, 5-10% ohms, few reddish grains (Newark Basin lithics?), trace glauconite and mica; 10 YR 4/1 dark gray

SH-NMY Core #13
Start depth: 75 ft
Stop depth: 77.5 ft
Recovery (ft): 0.75
Date: 5/8/14
Described by: KGM, CJL



SAND; medium to coarse; quartz, ~10% ohm; coarse sand is concentrated in 2-3 cm thick bed with 5-6 mm long reddish brown sedimentary lithics (possibily from Newark Basin); possible graded zones; beds go from upper medium to upper medium with coarse subrounded quartz and ohms; looks like tidal channels, cut and fill; tiny shell fragments are rare; 5 YR 4/2 dark reddish gray

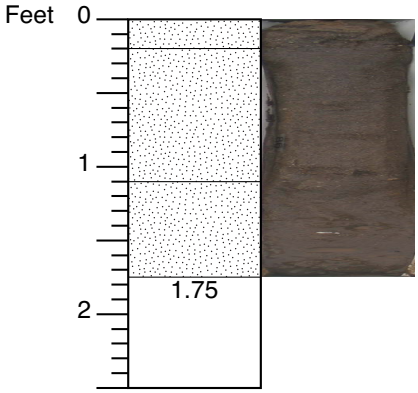
SH-NMY Core #14
Start depth: 77.5ft
Stop depth: 80 ft
Recovery (ft): 1.15
Date: 5/8/14
Described by: KGM, CJL, DHM, LLL



SAND; (upper 0.3 ft) upper medium sand with minor coarse material; subrounded; ~5-10% subangular o.h.m. with long axis ~ 2:1

SAND; (0.3 to bottom) medium, with some fine; subrounded, quartz dominant; shells at 80.3 ft; 80.45: Newark Basin reddish lithic, subrounded, 4.5 mm; 5YR 4/2 dark reddish gray

SH-NMY Core #15
Start depth: 80 ft
Stop depth: 85 ft
Recovery (ft): 1.75
Date: 5/8/14
Described by: CJL, LLL, KGM, DHM

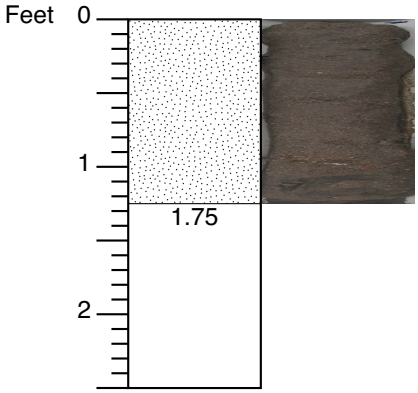


SAND (0.0-0.2 ft); medium to fine, possible silt; moderate sorting, subrounded; quartz dominates, ~2% ohm; grades into (at 0.5 ft) lower coarse sand, similar material but coarser; 5 YR 4/2 reddish gray

SAND (0.2-1.1 ft) medium, quartz, ~5-10 ohm; at 1.75 ft grades down into coarse and very coarse sand (bottom 0.5 ft) shells; subangular for largest sediments ~5-10% ohm; 5 YR 4/1 dark gray

SAND (1.1-1.75 ft) lower medium, quartz; subrounded, ~5-10% ohm; shell fragment at 1.5 ft

SH-NMY Core #16
Start depth: 85 ft
Stop depth: 87.5 ft
Recovery (ft): 1.75
Date: 5/8/14
Described by: DHM, LLL, CJL, KGM



SAND (0.0-0.2 ft); coarse, subrounded; quartz dominated, 7-10% ohm, grades down to coarse sand but coarser than above; subangular to subrounded, shell fragments

SAND (0.2-0.8 ft); upper medium, same as above; grades to coarse, up to 15% ohm, shell fragments are coarse sand sized only 0.05 ft thick

SAND (0.8-0.9 ft); upper medium, same as above

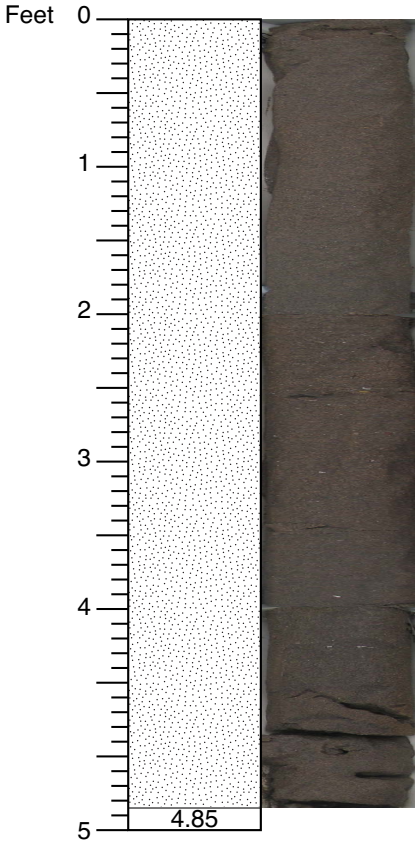
SAND (0.9-1.3 ft); coarse, moderately well sorted; quartz dominated, subrounded

SAND (1.3-1.4 ft); coarse, very poorly sorted, shell fragments possible, trace mica, red brown sedimentary lithics, possible Newark Basin lithology

SAND (1.4-1.75 ft); medium, quartz dominates, subrounded 5-% OHM; fine to lower medium, subrounded; all sand colors: 5 YR 4/1 dark gray

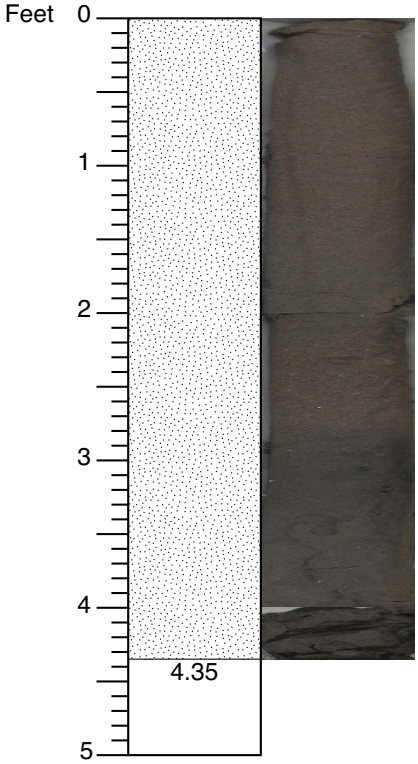
CLAY, discontinuous layer at 1.6 ft, shell fragments and mica, possible rip-up; 5 PB 2.5/1 bluish black

SH-NMY Core #17
Start depth: 87.5 ft
Stop depth: 90 ft
Recovery (ft): 1.75
Date: 5/8/14
Described by: DHM, CJL, LLL



SAND; upper medium to lower coarse, subrounded; quartz, some small red brown lithics with 5% ohm; 10 YR 4/1 dark gray
0.15 ft: 0.5 cm grains floating in sand matrix
1.1-1.3 ft: sand sized shell fragments
2-2.6 ft: shell fragments
2.0-2.5 ft: lower coarse to upper medium grading to more coarse fragments going down; with larger shell fragment and clay rip-up
3.9 and 4.2 ft: shell fragments
4.5 ft: laminae; 2.5 mm thick zone of ohms; low medium grained, subrounded, well sorted

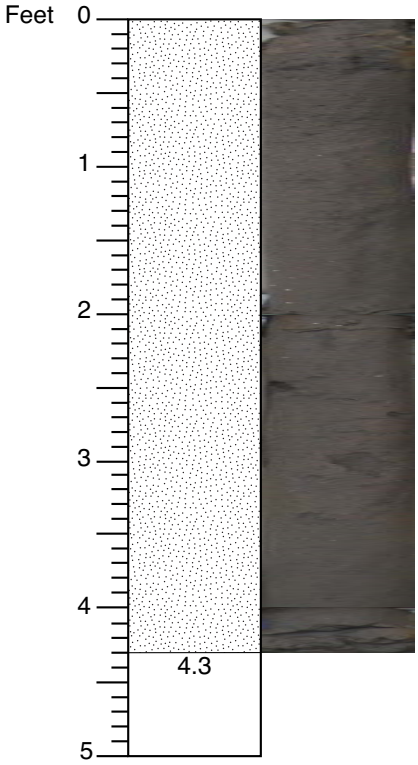
SH-NMY Core #18
Start depth: 90 ft
Stop depth: 95 ft
Recovery (ft): 4.85
Date: 5/8/14
Described by: CJL, LLL, DHM



SAND; medium; well sorted, rare red brown lithics subrounded, same thing throughout to bottom; coarse rare ohm 5-7%, low medium, upper fine; 10YR 4/1 dark gray

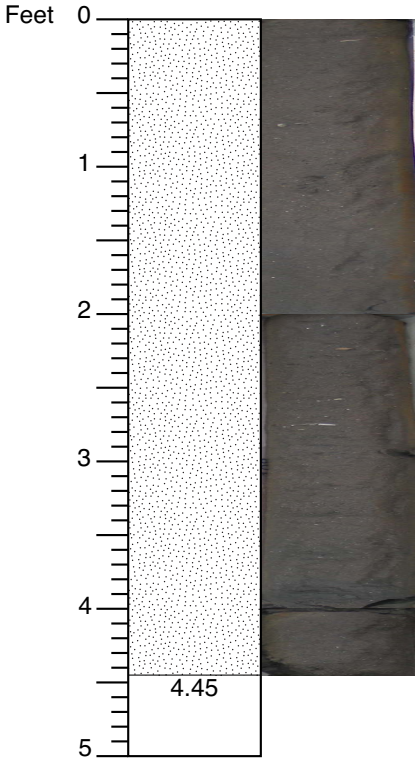
SAND (2.0-bottom); increased mica content; clay balls at 3.0, 3.15 and 4.1 ft; 2.8-3.4 darker (gradational color change), 10 YR 3/1 very dark gray

SH-NMY Core #19
Start depth: 95 ft
Stop depth: 100 ft
Recovery (ft): 4.35
Date: 5/8/14
Described by: LLL,CJL, DM, KGM



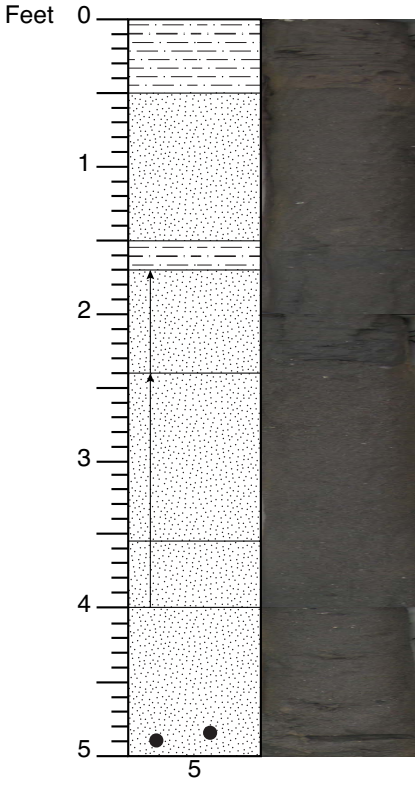
SAND, upper medium to lower coarse; 7% ohm; mica and shell fragments, shells decrease down section; burrowed; common lithics (Newark Basin) 0.3-0.4 ft organic-rich lignitic lamination(s), plant fragments/lignite to ~1 ft; 10 YR 4/1 dark gray

SH-NMY Core #20
Start depth: 100 ft
Stop depth: 105 ft
Recovery (ft): 4.3
Date: 5/9/14
Described by: KGM, NK



SAND, medium, silty; shelly, some whole (at 2.3 ft); lignitic, ohms ~5-7%; common red grains 3-5% (Newark Basin lithics); hints of clay at 2 ft; progressively finer down section; more Newark Basin lithics and shells down section; sandy, silty, clay laminae are found between 3.7-4 ft clay lams; looks estuarine;10 YR 4/1 dark gray

SH-NMY Core #21
Start depth: 105 ft
Stop depth: 110 ft
Recovery (ft): 4.45
Date: 5/9/14
Described by: KGM, NSK



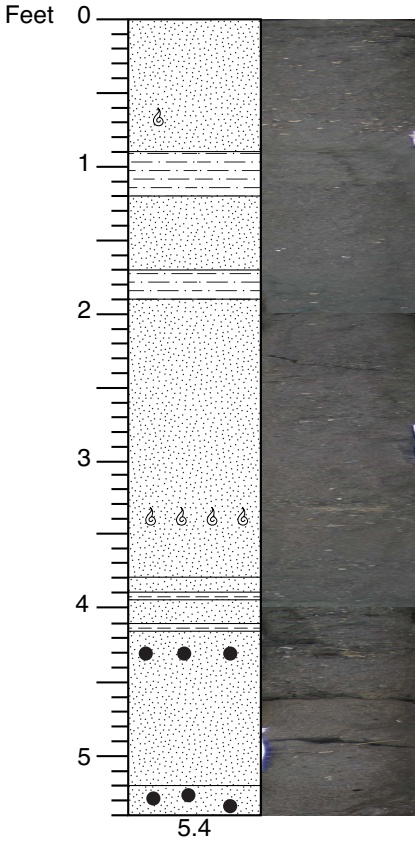
CLAY; sandy, and interlaminated SAND; clayey

CONTACT at 0.5 ft; 0.5-0.7 transition to below
SAND; medium fining down section to sandy clay

SAND; medium, micaceous few % lithics (Newark Basin lithology), ohm 5-7%; maybe two fining upward cycles (2.4-1.7 and 4.0-2.4 ft)

SAND; medium to coarse; phosphorite and ?glauconite granules; 10 YR 4/1 dark gray

SH-NMY Core #22
Start depth: 110 ft
Stop depth: 115 ft
Recovery (ft): 5
Date: 5/9/14
Described by: KGM, NSK



SAND; shelly, medium to coarse, slightly granuliferous, very slightly silty; shell concentration (at 0.7 ft) snail

CLAY; sandy; cross laminated, “drapey”

SAND; as above

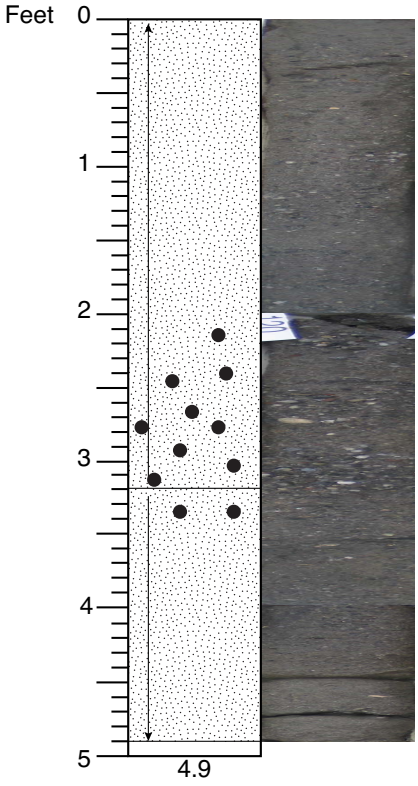
CLAY; as above

SAND; medium-coarse, shell bed at 3.4 ft

SAND; medium to very coarse, granuliferous; interbedded with medium to coarse sand and clay laminae; storm lag at 4.3 ft

SAND; medium-coarse; slightly granuliferous, dark granules

SH-NMY Core #23
Start depth: 115 ft
Stop depth: 120 ft
Recovery (ft): 5.4
Date: 5/9/14
Described by: KGM, NSK



SAND; medium to coarse; 3.5-5% ohm, shell fragments; becomes progressively granuliferous down to 3.2 ft; possibly a brackish river channel?; 10 yr 4/1 dark gray

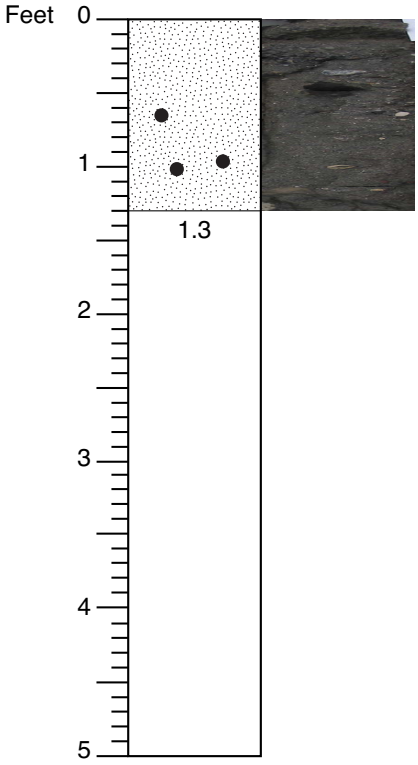
very granuliferous

granuliferous

few granules

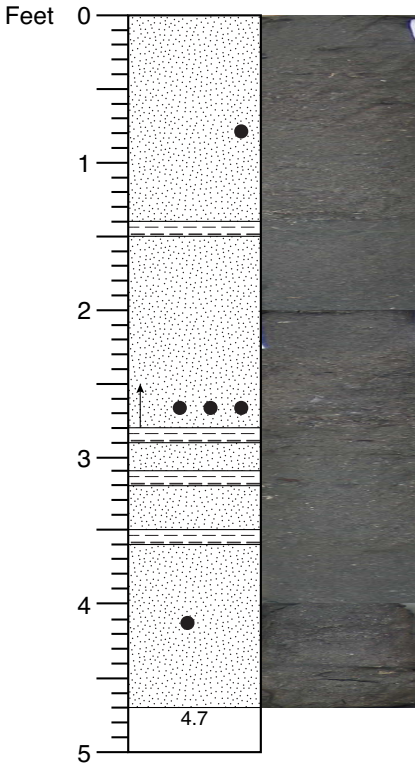
inside core labels are wrong

SH-NMY Core#24
Start depth: 120 ft
Stop depth: 125 ft
Recovery (ft): 4.9
Date: 5/9/14
Described by: KGM, NSK



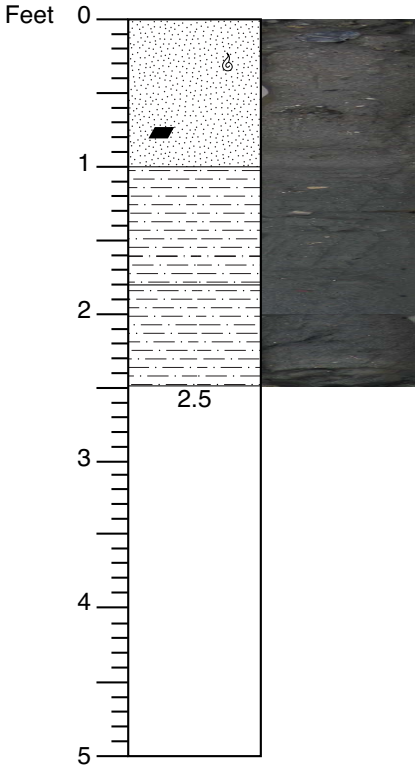
SAND; medium to coarse, granuliferous; large shells (2 cm), large lignite fragments (2-3 cm), pretty homogeneous

SH-NMY Core #25
Start depth: 125 ft
Stop depth: 130 ft
Recovery (ft): 1.3
Date: 5/9/14
Described by: KGM, NSK



SAND; interbedded medium, coarse and muddy sand; shell fragments; granules, including chert? and Newark Basin lithology; disseminated lignite pieces (lignite increases down section), ohm <3% wood increases downsection; clay laminae at 1.5, 2.9, 3.2 and 3.6 ft)

SH-NMY Core #26
Start depth: 130 ft
Stop depth: 135 ft
Recovery (ft): 4.7
Date: 5/9/14
Described by: KGM, NSK

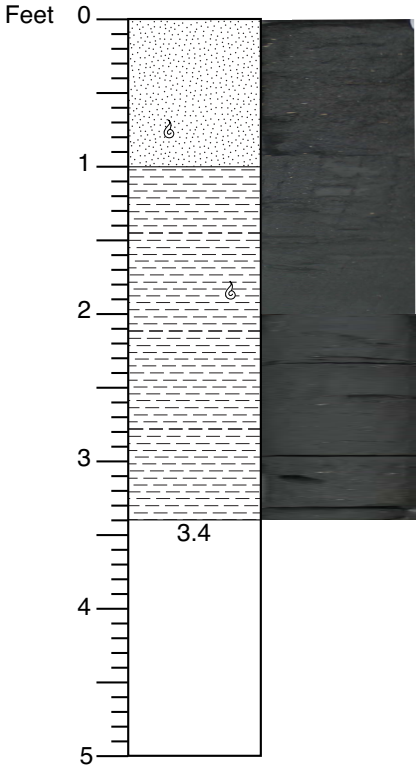


SAND, medium to coarse; granuliferous, shell fragments, lignite chunk; large (2.5 cm) shell

1 ft - CONTACT
CLAY, sandy; laminated, laminae irregular to cross bedded

SAND; medium, muddy; shell fragments; ohms ~3%; strong H_2S smell in shoe; 10 YR 4/1

SH-NMY Core #27
Start depth: 135 ft
Stop depth: 140 ft
Recovery (ft): 2.5
Date: 5/9/14
Described by: KGM, NSK

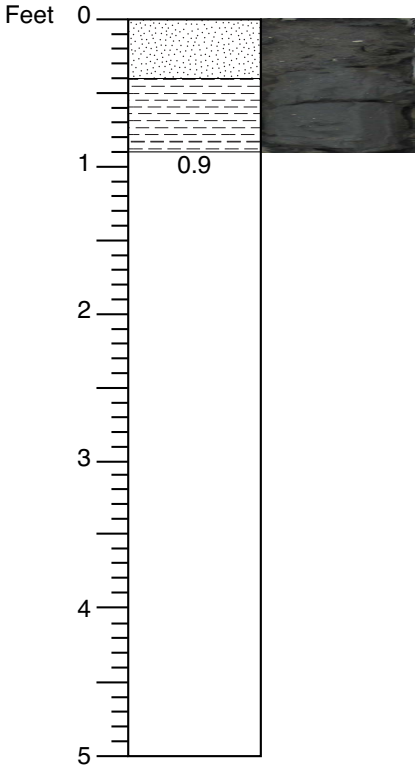


SAND; medium to coarse, a few granules; shelly; 10 YR 4/1 dark gray

CONTACT at 1 ft (this contact really at 142.5 ft)

CLAY; very slightly sandy with sandy clay interbeds that wash out; shells fragments, quartz and ohm, rare mica; shells look fresh, not likely Cretaceous; forams; clay has an H_2S smell; 5 GY 3/1 very dark greenish gray

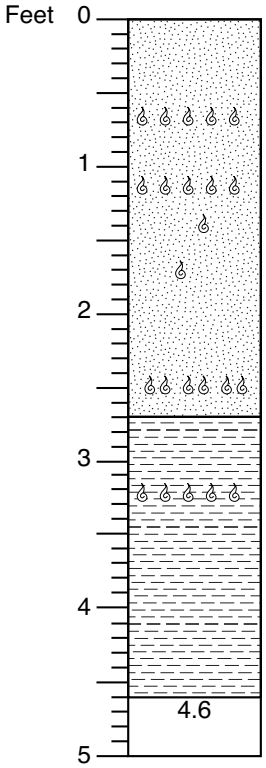
SH-NMY Core #28
Start depth: 140 ft
Stop depth: 145 ft
Recovery (ft): 3.4
Date: 5/9/14
Described by: KGM, NSK



SAND; medium to coarse; quartz, ~5 % ohms, shell fragment; sand could be caved

CLAY; slightly sandy; quartz, shell fragments;

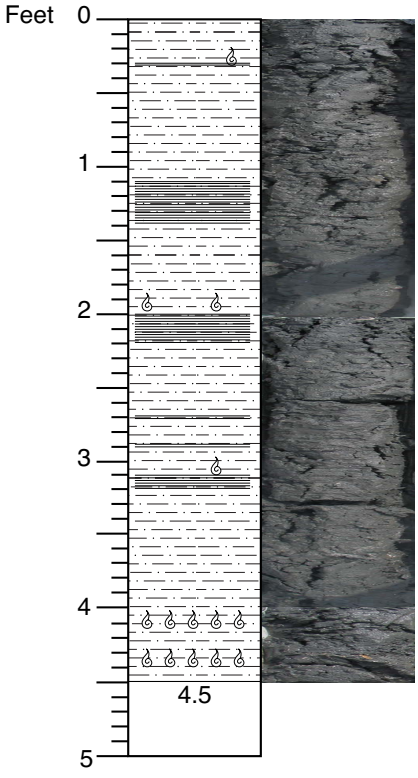
SH-NMY Core #29
Start depth: 145 ft
Stop depth: 150 ft
Recovery (ft): 0.9
Date: 5/9/14
Described by: KGM, NSK



SAND; very fine; silty, with shell beds at 0.5-0.8, 1.1-1.2, 1.4,1.7; and 2.4-2.6 ft, razor clam at 2.0 ft; some clay at 2.6-2.7 ft

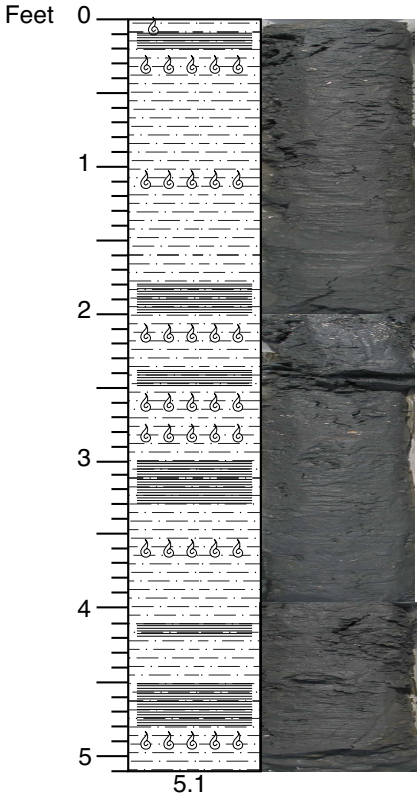
SILT; clayey, sandy; shells are a mix of broken and whole bivalves and gastropods, average size 2 cm; very fine sand bed at 2.7-3.1 ft; shells at 3.1-3.3 ft; sand laminations at 3.3, 3.6, and 3.9 ft; Gley 1 2.5/5 GY greenish black

SH-NMY Core #30
Start depth: 150 ft
Stop depth: 155 ft
Recovery (ft): 4.6
Date: 5/10/14
Described by: SCW, BB



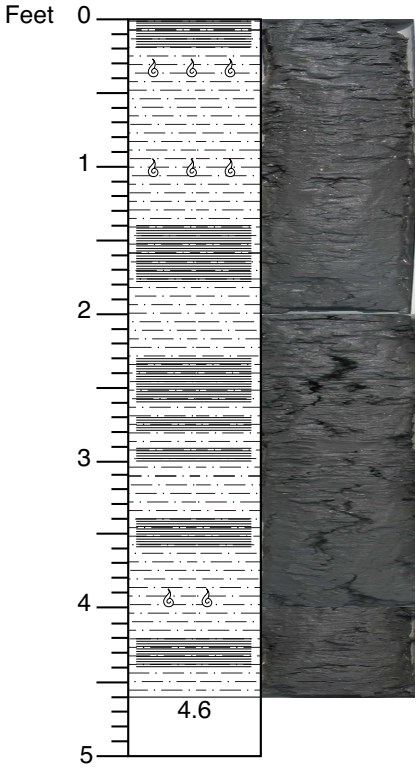
SILT; fine sandy, with clay; a few shell fragments interspersed and a few coarse sand grains; shell fragments tend to be above obvious laminated sections (e.g., 1.3, 2.0, and 3.1 ft), shell size 3-10 mm; laminated core at 0.3, 0.6-0.7, 1.1-1.4, 2-2.2, 2.7, 2.9, and 3.1-3.2 ft; below 3.2 ft the core is clayey with some laminae; shells at 4.1 ft, 4.3-4.4 ft thicker shell hash with few whole bivalves (disarticulated), shell size averages 5 mm, some up to 2-3 cm; Gley 12.5/10 GY greenish black

SH-NMY Core #31
Start depth: 155 ft
Stop depth: 160 ft
Recovery (ft): 4.5 ft
Date: 5/10/14
Described by: SCW



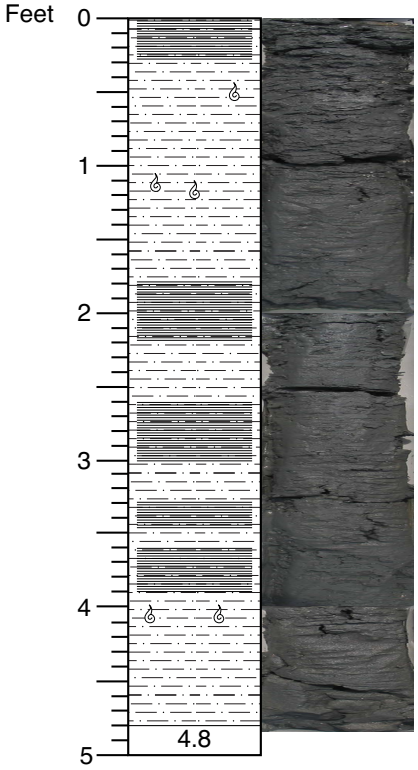
SILT; very fine sand, some clay; sand generally increases toward bottom of core; sands are micaceous, shell fragments; large 0.3 ft shell hash at 2 ft; common laminae, laminae tend to have a bit more fine sand; most shells are broken, few whole bivalve shells (~ 5 mm), average size <5 mm; shells at 0, 0.3-0.4, 1.1, 2-2.2, 2.6, 2.8, 3.6, and 4.8 ft; laminae at 0.1, 1.8-2, 2.4-2.5, 3-3.3, 4.1-4.3, and 4.5-4.8 ft; 4.9-5.1 ft disturbed by drilling; Gley 1 2.5/5 GY greenish black

SH-NMY Core #32
Start depth: 160 ft
Stop depth: 165 ft
Recovery (ft): 5.1
Date: 5/10/14
Described by: SCW



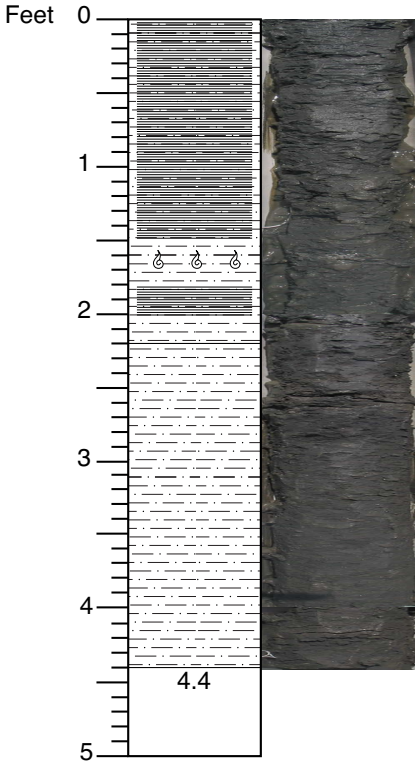
SILT (0-4.6 ft) with very fine sand and some clay in laminations; shell fragments (generally <5 mm) in thin beds (0.5-2 cm) and occasionally dispersed; more fine sand towards base of core, sands are micaceous; laminae at 0-0.2, 1.4-1.8, 2.3-2.6, 2.7-2.8, 2.9-3.0, 3.3-3.5, 4.2-4.4 ft; shells at 0.3, 1.0, 3.9 ft; sandy silt at 1.8-2.3, 3.0-3.3; Gley 1 3/5 GY very dark greenish gray

SH-NMY Core #33
Start depth: 165 ft
Stop depth: 170 ft
Recovery (ft): 4.6
Date: 5/10/14
Described by: SCW



SILT; with very fine to fine sand, slightly clayey throughout; sands are micaceous, some shell fragments throughout with a few distinct shell beds (<2 mm thick), shells are broken and small (<3 mm); core is sandier at bottom; laminae at 0-0.3; 1.8-2.2, 2.6-3.0, 3.3-3.5, 3.6-3.9 ft; shells at 0.5, 4.0-4.1; sandier at 0.3-0.5, 3.5-3.64.1-4.8 ft; Gley 1 3/5 GY very dark greenish gray

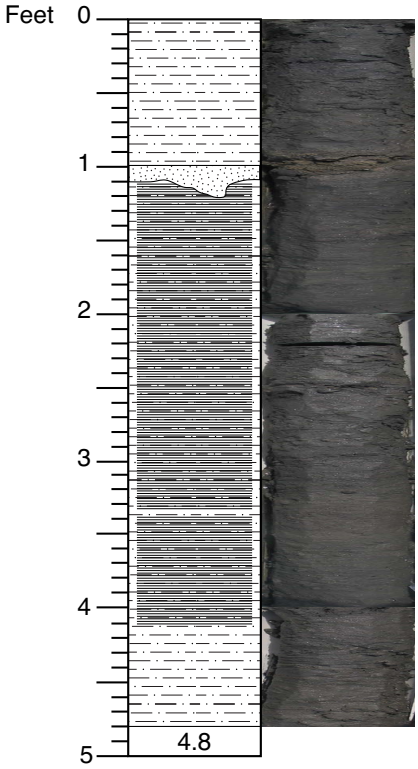
SH-NMY Core #34
Start depth: 170 ft
Stop depth: 175 ft
Recovery (ft): 4.8
Date: 5/10/14
Described by: SCW



SILT; laminated; with very fine sand; sandier at 1.5-1.6 ft; coarse sand bed with shell fragments at 1.6-1.8 ft; shell fragments with plant debris at 2.1-2.2 ft

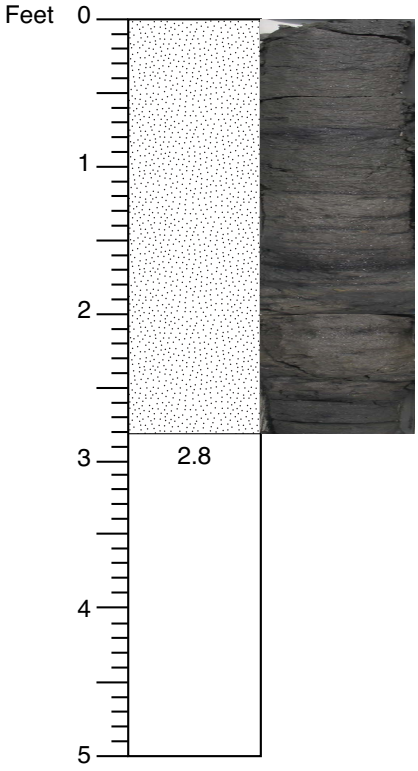
SILT; clayey; some fine/ very fine sand; shell fragments are large bivalve chunks (most <1 cm), some plant debris maybe mixed in; silty very fine sand at 2.5-2.7 ft; sands are micaceous; Gley 1 3/5 GY very dark greenish gray

SH-NMY Core #35
Start depth: 175 ft
Stop depth: 180 ft
Recovery (ft): 4.4
Date: 5/10/14
Described by: SCW



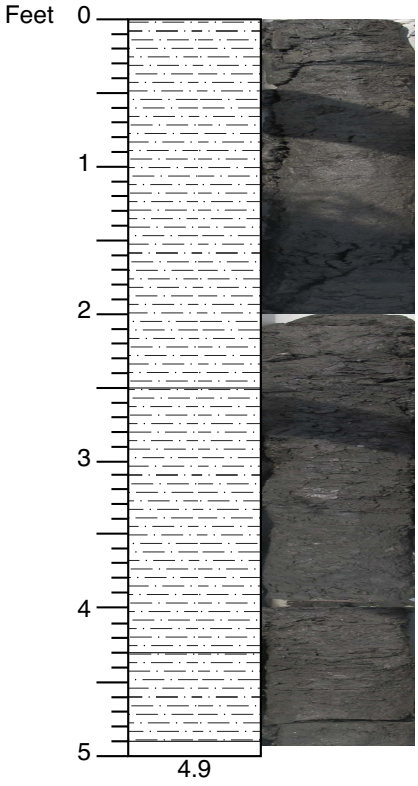
SILT; laminated, sandy, clayey; few shell fragments throughout (<3 mm), not in beds; more black plant debris appears toward base (throughout silt); sands are micaceous; sand bed (1.1-2.5 ft) poor-moderate sorting, some very coarse, subangular, some feldspar; brownish compacted silt-clay chunks at 2.5 ft ; clayey at 2.7 ft; clayey and browner at 3.2 ft; black chunk at 3.4 ft; clay-silt laminations with sand plant debris at 3.4-4.2 ft; sandy mica-rich medium sand in silt at 4.2-4.3 ft; silty with clay laminations at 4.3-4.6 ft; sandier at 4.6-4.8 ft; Primary Color: greenish black Gley 1 2.5/ 10 GY; sand at 0.9 ft 5Y 5/2 olive gray

SH-NMY Core #36
Start depth: 180 ft
Stop depth: 185 ft
Recovery (ft): 4.8 ft
Date: 5/10/14
Described by: SCW



SAND; very fine to fine, sub- rounded to rounded quartz, with larger mica flakes (medium to coarse) and black bits; poorly to moderately sorted; some organic rich clay beds (black); 0-0.7 ft: very fine sand- silt- clay; 0.7-0.8 ft: black very fine sand; 0.8-1.1 ft: sandy silt; 1.1 ft: black fine sand with silt, micaceous; 1.1-1.3 ft: fine sand; 1.3-1.6 ft: black; 1.7 ft: black; 1.9 ft: black; 2.1 ft: black; 2.1-2.6 ft: fine to very fine sand; 2.6-2.7 ft: clay band laminated black with plant debris; 2.7-2.8 ft: sand and silt; color: 1-1.1 ft: Gley 1 3/10 Y dark greenish gray with 2.5/N black interspersed;
1.1-1.6 ft: 5Y 4/1 dark gray; 1.8-2.6 ft: 5Y 5/1 gray

SH-NMY Core #37
Start depth: 185 ft
Stop depth: 190 ft
Recovery (ft): 2.8
Date: 5/10/14
Described by: SCW

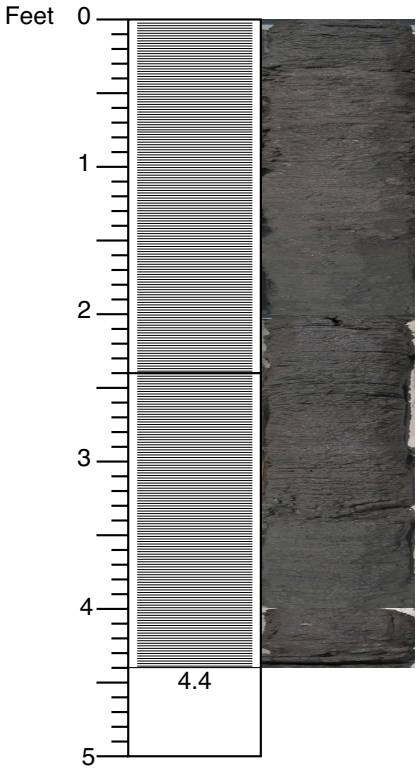


SILT; clayey, sandy (fine to very fine); increasing sand content dpown core; quartz with some mica, black organic sediment forms few distinct black bands or is mixed with sand in places making it darker gray, those sands are fine-medium grained; Gley 1 10 Y 2.5/ greenish black

SILT; sandy (fine); clayey; 2.9-3 ft: dark gray, organically rich; 3.2-3.7: dark organically rich; 3.9-4 ft: black; 4-4.3 ft: faint laminae; 4.3-4.9 ft: silt with less sand; color: Gley 1 2.5/10Y Greenish black

SILT; clayey, similar to what was on top; 5 Y 3/1 very dark gray

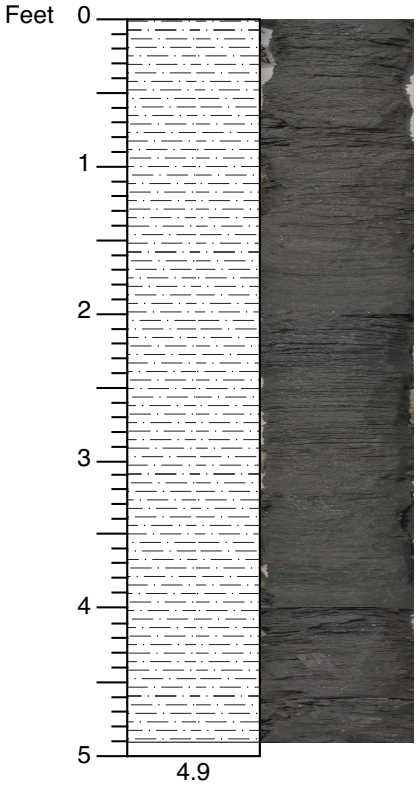
SH-NMY Core #38
Start depth: 190 ft
Stop depth: 195 ft
Recovery (ft): 4.9
Date: 5/10/14
Described by: SCW



CLAY; interbedded and interlaminated with SILT and silty very fine SAND; laminations with thicker (~1 cm) sandy beds, mica rich, some with black mineral/organics; ?couplets; Color: Gley 1 2/10 Y very dark greenish gray

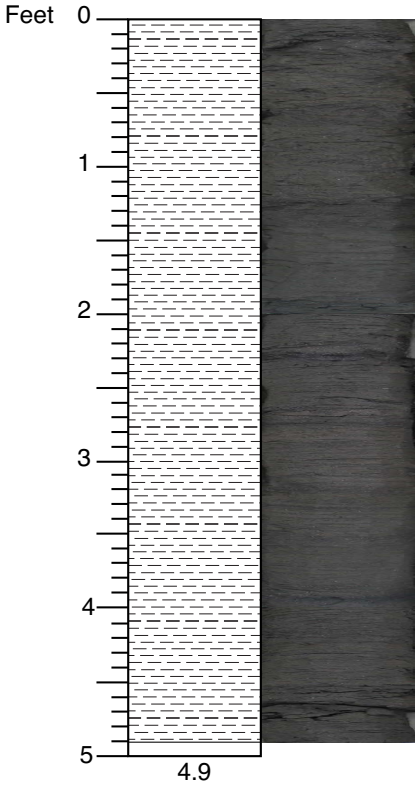
CLAY; lithology as above; change in character of bedding, some wavy and flat laminae (1-2 mm) with cross bedding, mica flakes and black organics throughout; silty; sandier beds; Color: 5Y 3/1 very dark gray

SH-NMY Core #39
Start depth: 195 ft
Stop depth: 200 ft
Recovery (ft): 4.4
Date: 5/10/14
Described by: SCW



CLAY; with interbedded and interlaminated SILT and with silty very fine sands; bedding is mostly wavy laminae with distinct bedding surfaces Breaking core into sediment packages, few thicker (2-3 cm) fine sand beds; low angle cross bedding is more apparent towards bottom of core and often includes black organic material (drapes); sand is micaceous; 0.7 ft: surface; 1.2-1.5 ft: wavy to low angle cross bedding; 1.7 ft: surface; 2.1-2.4 ft: sandy; 2.4 ft: surface; 2.9-3 ft: low angle cross beds; 3.2-3.3 ft: sandy; 3.3-3.7 ft: laminated; 3.7-4 ft: low angle cross beds with organics; 4.1-4.2 ft: low angle cross beds with organics; 4.5-4.7 ft: silty; Color: 2.5Y 3/1 very dark gray

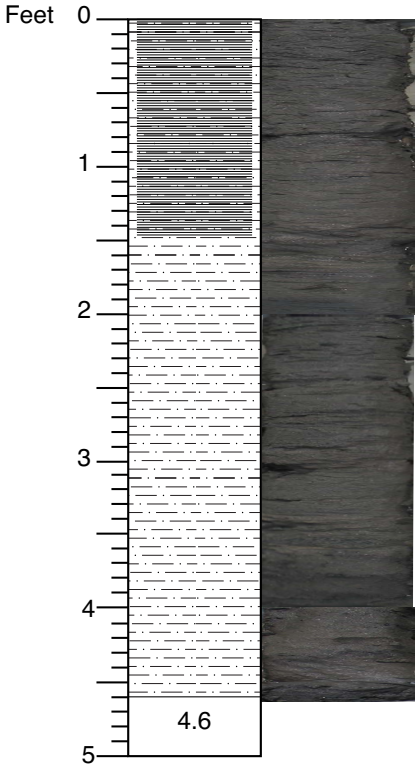
SH-NMY Core #40
Start depth: 200 ft
Stop depth: 205 ft
Recovery (ft): 4.9
Date: 5/10/14
Described by: SCW



SILT and CLAY; very micaceous; packages of what look like black, plant rich, micaceous sediments, fine sand-silt; break up segments of laminated silts and clays every ~0.5 m

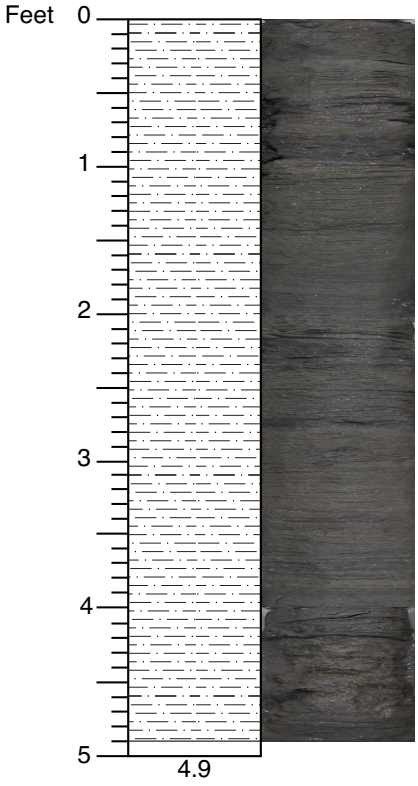
0-0.3 ft: laminae, clay/silt dark layers are weaker; 0.3-0.4 ft: wood present, mica; 0.4-1.1 ft: nondistinct layers; 1.1-1.2 ft: dark, micaceous, sandy silt/ clay; 2.3-2.4 ft: dark micaceous, wood; 2 ft: pebbles; 2-2.3 ft: laminated silty clay beds. fine sand; 2.3-2.4 ft: black micaceous, wood chips present; 2.8-2.9 ft: sandy silt, dark sediments, organic plant matter, mica; 3.2-3.4 ft: sand lenses, could be cross bedding or scour deposits; 3.7-3.8 ft: sand lenses, could be cross bedding or scour deposits; 4-4.2 ft: finely laminated clay beds, some wavy laminae with silty clay interbeds; 4.7-4.9 ft: sandy silt, plant matter, mica; 5Y 3/1 very dark gray

SH-NMY Core 41
Start depth: 205 ft
Stop depth: 210 ft
Recovery (ft): 4.9
Date: 5/10/14
Described by: BLD



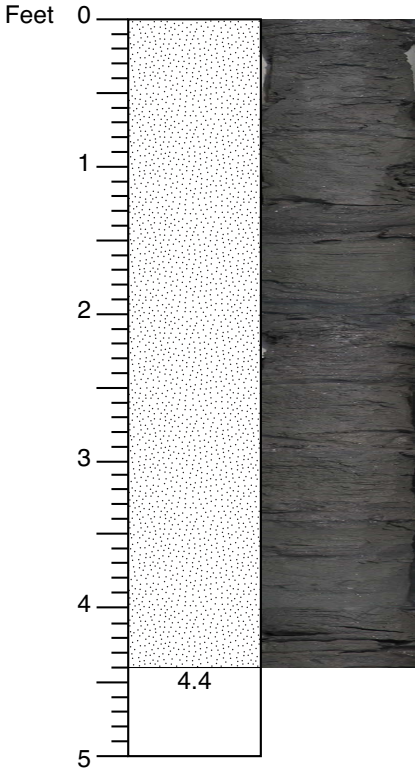
CLAY and SILT; wavy laminated clays and silts with organic rich lenses and wood chips, laminated clays are separated by coarser medium-fine sand and organic matter; non bedded medium sands with large wood chips at bottom of core; 0-1.2 ft: wavy laminae; 1.2-1.3 ft: fine sand with organics 1.8-2 ft: wavy laminae with sand; 2.1-2.2 ft: sand lens between clays; 2.4-2.5 ft: mica, sandy silt, pebble sized plant matter; 2.2-2.3 ft: dark organic rich lens interbedded with clays 2.9-3 ft: fine sandy silt with increased black plant matter; 3.4-3.5 ft: clay with wood chunks (pebble size); 3.5-4.6 ft: micaceous, moderately sorted, massively bedded medium sands with black plant matter interspersed

SH-NMY Core #42
Start depth: 210 ft
Stop depth: 215 ft
Recovery (ft): 4.6
Date: 5/10/14
Described by: BLD



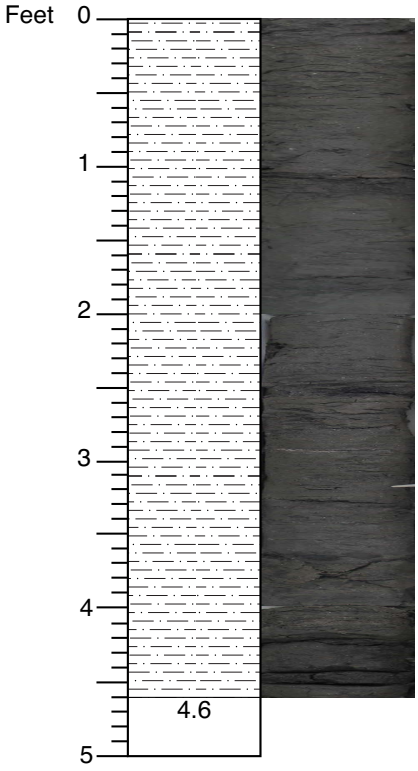
CLAY and SILT; planar/wavy laminated; broken up by sections of fine sand to silt with increased abundance of organic matter; distinct cross bedding features were found, sand intervals seem to be increasing in length; 0.7-1.1 ft: medium-fine sand, black wood chips, large pieces of wood (2 x 3.5 cm and 2.5 x 0.5 cm); 1.9-2 ft: wavy laminae; 2 ft: planar laminated clays/silts; 2.2-2.3 ft: fine sand/silt with plant matter and mica; 2.3-2.7 ft: wavy laminated clay and silt; 2.7-2.8 ft: fine sand/ silt, micaceous; 2.8-3 ft: cross bedded clays/silts; 3-3.3 ft: planar laminated silt/clay interbeds; 3.4-3.5 ft: wavy laminated clays/silts; 3.8-3.9 ft: fine sand-silt with clay packages; 3.9 ft: clay/silt laminae; 4-4.1 ft: clay with plant matter; 4.1-4.9 ft: medium to fine sand with black plant matter throughout

SH-NMY Core 43
Start depth: 215 ft
Stop depth: 220 ft
Recovery (ft): 4.9
Date: 5/10/14
Described by: BLD



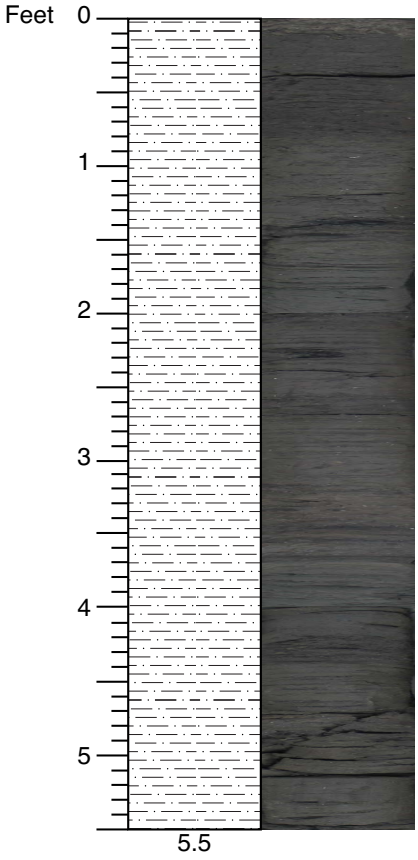
SAND; packages increase in abundance, still mica and wood chips found throughout the core,sandy/coarser grained units tended to be richer in organics/wood chips, wavy laminae dominate over planar laminae; 0.1-0.2 ft: fine sand with wood/organics; 0.6-0.7 ft: sand; 0.7-0.8 ft: wavy clay laminae; 1.4-1.6 ft: dark organic rich sandy silt 1.6-1.9 ft: planar laminae, clay; 1.9-2 ft: fine sand- silt, dark, no large chunks of wood; 2-2.2 ft: wavy laminated clays; 2.2-2.5 ft: micaceous medium sand-silt organic rich with wood chips; 2.5-2.9 ft: wavy clay/ silt laminae, organic; 2.9-3 ft: pebble size wood chips in fine-sand to silt; 3.3-3.6 ft: clay, no bedding; 3.7-3.8 ft: clay, no bedding; 3.9-4.2 ft: wavy, laminated clays; 4.2-4.4 ft: medium grained, moderately sorted; Color: 4/1 dark gray

SH-NMY Core #44
Start depth: 220 ft
Stop depth: 225 ft
Recovery (ft): 4.4
Date: 5/10/14
Described by: BLD



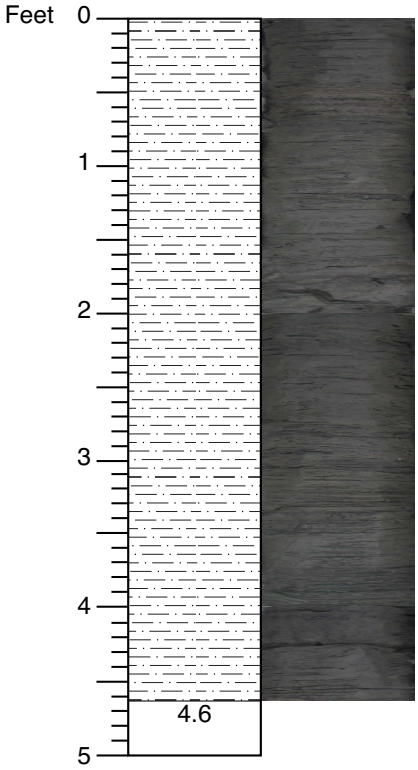
SAND; woodchips still present throughout core in lower abundance than previous core; clay beds in this core are more thickly laminated (~1 cm thickness); sand units increase in thickness/ frequency towards bottom; 0-0.6 ft: primarily fine- sand to silt, some wood chips present; wavy clay; 0.6 ft: laminae; 1.1-1.2 ft: sandy silt; 1.2-1.7 ft: clay with wavy laminae interspersed; 1.7-1.8 ft: sandy silt; 1.8-2.5 ft: massive clay with wavy laminae interspersed 2.6-2.7 ft: black sand with abundant wood chips; 2.7-2.8 ft: clay; 2.8-3 ft: dark organic rich sandy silt with large pebble size wood chips and mica; 3-3.7 ft: thickly laminated clays with medium grained sand lens; 3.8-4.1 ft: wavy clay laminae; 4.1-4.3 ft: dark medium-fine sand silt with pebble sized wood chips; 4.3-4.4 ft: clay/fine sand laminae; 4.4-4.5 ft: dark gray medium-fine sand 4.5-4.6 ft: clay; 3/1 very dark gray

SH-NMY Core 45
Start depth: 225 ft
Stop depth: 230 ft
Recovery (ft): 4.6
Date: 5/10/14
Described by: BLD



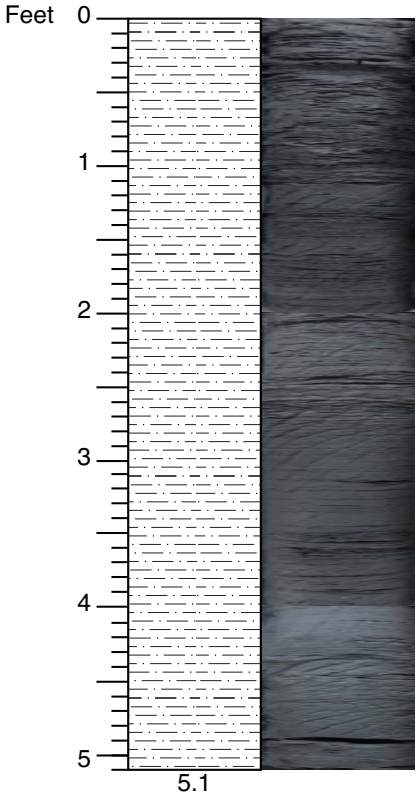
CLAY; regular clay-rich sandy-silt alternating bands; most are flat laminae (mm scale) in 1 cm packages, some thick sand rich intervals (2-10 cm thick) contain mica (saw some chlorite) and lots of black organic debris; these break up the laminated sections; 0.4 ft: sand; 0.4-0.8 ft: clay silt; 0.8 ft: sand; 1.3 ft: black; 1.3-1.9 ft: clay- silt; 1.9-2.1 ft: sandy black; 2.1-2.5 ft: cross beds; 2.3/2.4 ft: organic; 2.5-3.1 ft: clay- silt; 3.1-3.6 ft: sand with organics; 3.6-4.2 ft: clay- silt; 4.2-4.3 ft: sandy; 4.3-4.4.7 ft: clay- silt; 4.7 ft: sandy (olive-5Y 5/2) ; 4.7-5.5 ft: clay- silt; color: 5Y 3/1 dark gray

SH-NMY Core #46
Start depth: 230 ft
Stop depth: 235 ft
Recovery (ft): 5.5
Date: 5/10/14
Described by: SCW



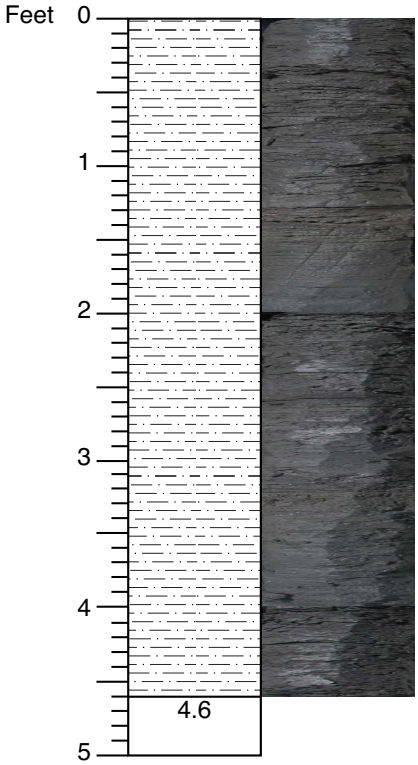
CLAY and interlaminated and interbedded SILT and SAND, fine, 1-2 mm horizontal- wavy laminae clays with interbedded silty very fine sands; 0-0.5 ft: fine 1-2 mm horizontal-wavy laminae clays with interbedded silty very fine sand; 0.5-0.8 ft: sandy, poorly sorted; 0.8-1.7 ft: fine 1-2 mm horizontal-wavy laminae, clays with interbedded silty very fine sand; 1.7-2.1 ft: sandy, poorly sorted; 2.1-4.3 ft: fine sand; 4.3-4.6 ft: sandy, poorly sorted; color: 5 Y 3/2 dark gray

SH-NMY Core #47
Start depth: 235 ft
Stop depth: 240 ft
Recovery (ft): 4.6
Date: 5/10/14
Described by: SCW



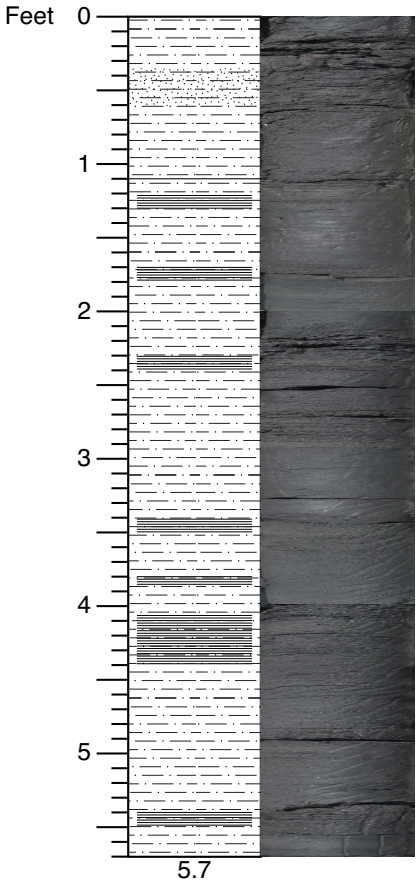
CLAY; silty interbedded with very fine sandy SILT; fine (1-2 mm) laminations are mostly horizontal, occasionally wavy or cross bedded; and beds are very fine to fine with large mica flakes (coarse sand); black organic debris is present throughout and concentrated in a layer at 2.1 ft; 0-1 ft: silty clay interbedded with very fine sandy silt, fine (1-2 mm) laminations are mostly horizontal, occasionally wavy or cross bedded; 1-1.2 ft: sand; 1.2-2.4 ft: silty clay interbedded with very fine sandy silt fine (1-2 mm) laminations are mostly horizontal, occasionally wavy or cross bedded; 1.7 ft: cross beds; 2.1 ft: black organic debris; 2.4-2.7 ft: sand; 2.7-5.1 ft: 3.8-4 ft: low angle cross beds?; Color: 5 Y 4/1 dark gray

SH-NMY Core #48
Start depth: 240 ft
Stop depth: 245 ft
Recovery (ft): 5.1
Date: 5/10/14
Described by: SCW



CLAY, silty, finely laminated; abundant lignite; micaceous-chlorite; some sandier beds; some beds are more massive; 0-0.5 ft: massive; 0.5-1.7 ft: laminated; 1.7-1.9 ft: massive; 1.9-2.2 ft: laminated; 2.2-2.6 ft: massive; 2.6-2.7 ft: laminated; 2.7-3.2 ft: massive; 3.2-3.4 ft: laminated; 3.4-3.9 ft: massive; 3.9-4.1 ft: laminated; 4.1-4.6 ft: massive; 2.5Y 3/1 very dark gray

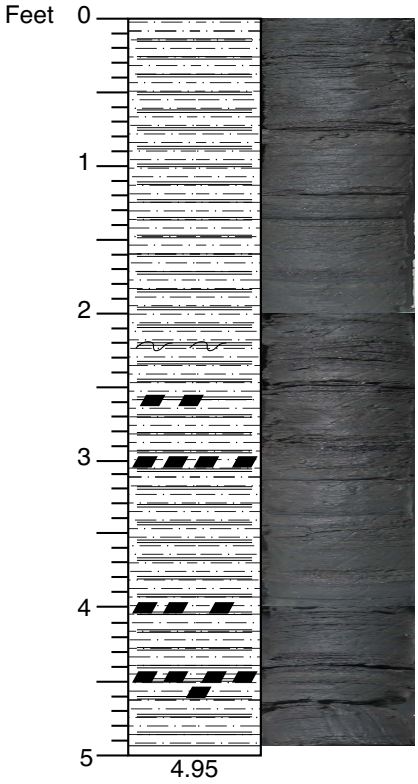
SH-NMY Core #49
Start depth: 245 ft
Stop depth: 250 ft
Recovery (ft): 4.6
Date: 5/11/14
Described by: JVB, KMM



SILT; Clayey; micaceous (chlorite), homogeneous, 0.25-0.4 ft is sandier

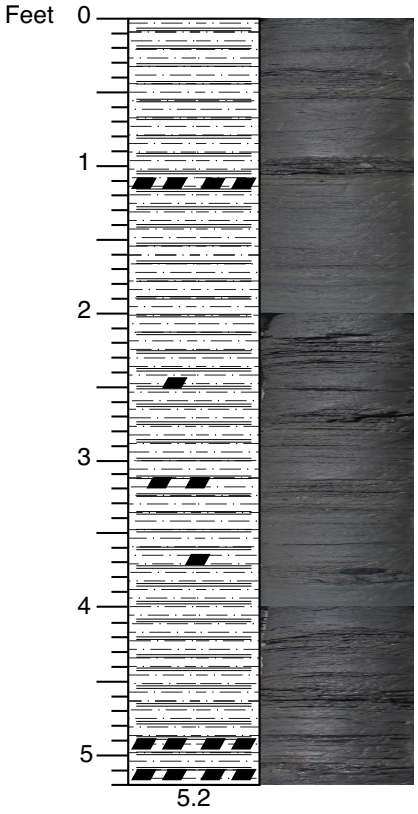
SILT; laminated and interbedded with sandy silt; lignitic, chloritic; some intervals are finely laminated, others are more massive; 2.5 Y 3/1 very dark gray

SH-NMY Core #50
Start depth: 250 ft
Stop depth: 255 ft
Recovery (ft): 5.7
Date: 5/11/14
Described by: JVB, KMM



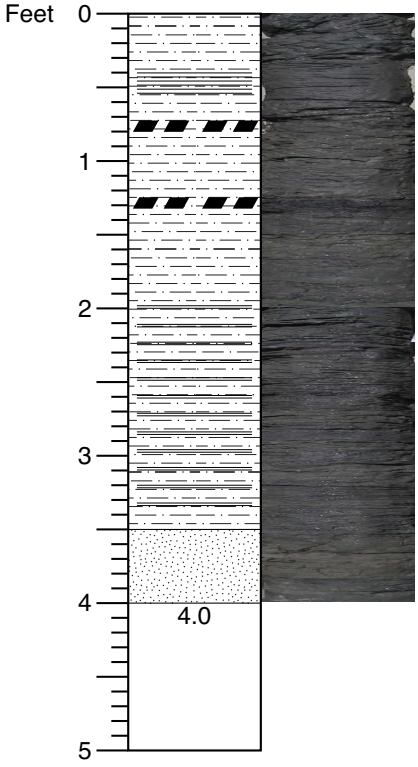
SILT; sandy, clayey and interlaminated silty sand; very fine sand, lignitic, very in places, very micaceous, chloritic; strongly laminated; 2.2 ft: soft sediment deformation; 3/N very dark gray

SH-NMY Core# 51
Start depth: 255 ft
Stop depth: 260 ft
Recovery (ft): 4.95
Date: 5/11/14
Described by: JVB



CLAY, silty and interbedded and interlaminated clayey SILT; micaceous (chlorite), rare sand beds; finely laminated throughout, abundant lignite; 3/N very dark gray

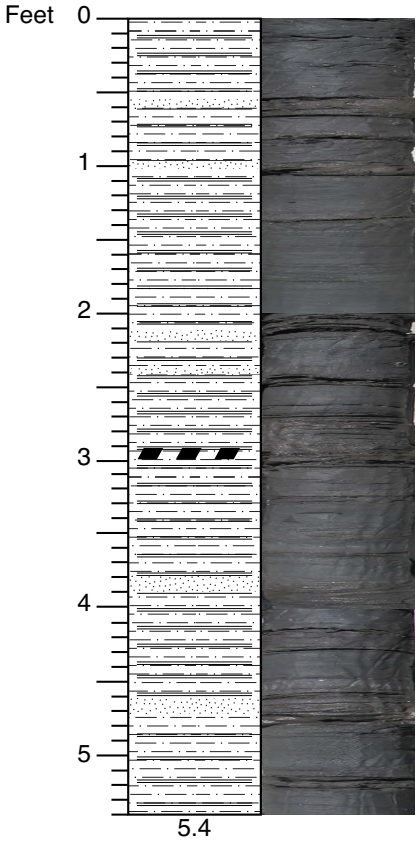
SH-NMY Core #52
Start depth: 260 ft
Stop depth: 265 ft
Recovery (ft): 5.2
Date: 5/11/14
Described by: JVB, NHS, KMM



CLAY; silty, and interbedded and interlaminated SILT; clayey; very micaceous, very lignitic; some intervals are more homogenous, other intervals are finely laminated; sand laminations are common at bottom; 3/N very dark gray

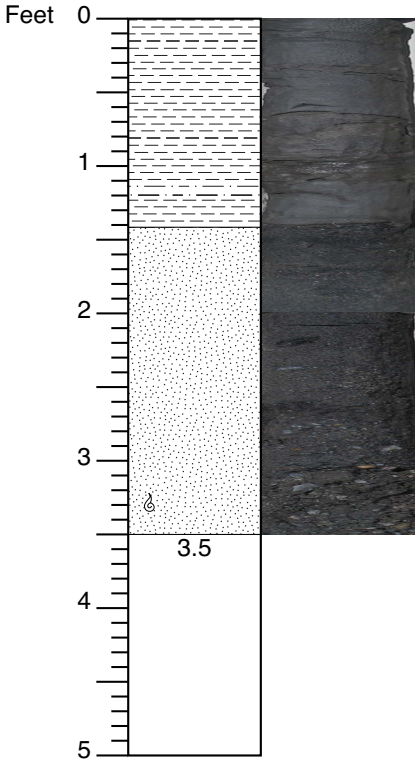
Contact
SAND; fine, quartz, trace ohms; the top looks bioturbated; sub-angular, well sorted

SH-NMY Core #53
Start depth: 265 ft
Stop depth: 270 ft
Recovery (ft): 4.0
Date: 5/11/14
Described by: JVB, NHK, KMM



CLAY; silty, micaceous, with interbedded SAND; sand is fine to very fine, sub-angular; trace ohm; beds up to 0.1 ft; clay is laminated in places and homogenous in others; lignite is common; much more homogenous layers; 3/N very dark gray

SH-NMY Core #54
Start depth: 270 ft
Stop depth: 275 ft
Recovery (ft): 5.4
Date: 5/11/14
Described by: JVB

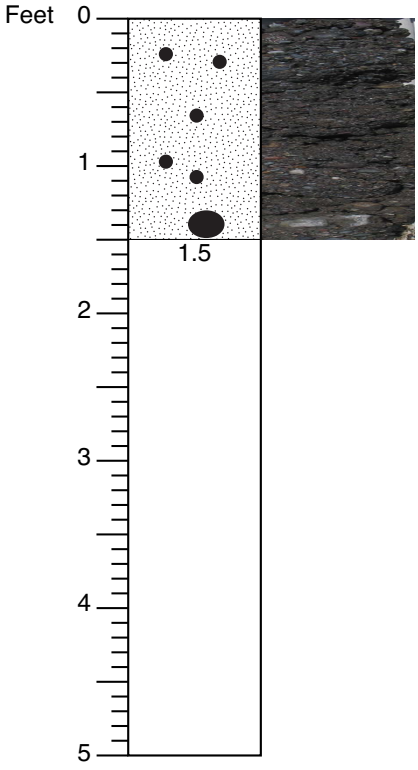


CLAY, silty, very fine sand, trace ohm; homogenous, micaceous silt bed at 1.0-1.1 ft

Contact – very sharp
SAND; medium to coarse, abundant granules and gravel, clasts to 1.5 cm; gravel more common to bottom; possible shell fragments at bottom;

bottom of run got messed up and gravel is just packed in; many lithologies

SH-NMY Core #55
Start depth: 275 ft
Stop depth: 280 ft
Recovery (ft): 3.5
Date: 5/11/14
Described by: JVB



SAND; coarse to very coarse, poorly sorted; abundant fine sand and abundant gravel clasts to 5 cm; most larger clasts are ~0.5-1 cm, many clasts from Newark Basin, many dark/ black clasts; the 5 cm clast probably blocked the shoe

SH-NMY Core #56
Start depth: 280 ft
Stop depth: 285 ft
Recovery (ft): 1.5
Date: 5/11/14
Described by: JVB