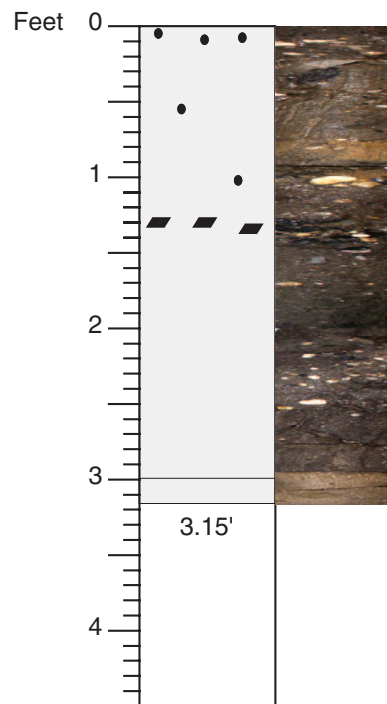


CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

1



SAND: medium to coarse; abundant pebbles up to 4 cm and granules; abundant lignite at 1.3-1.4 ft, harder brown clay layer at plastic sheet, above is fill, below is probably good core, fewer pebbles down core; very dark gray (10YR 3/1)

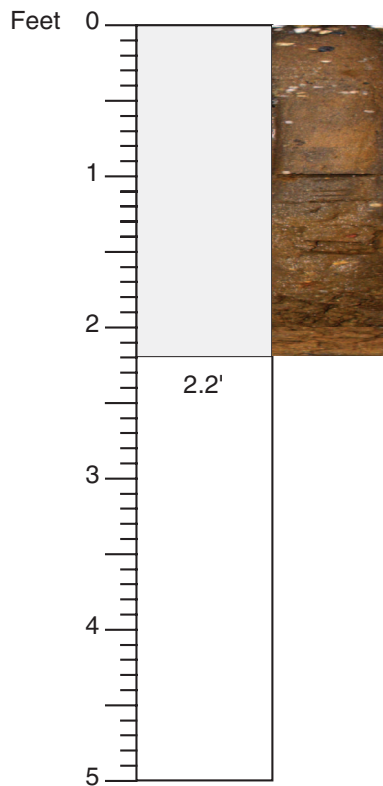
Sharp change

SAND; very fine to fine, silty, clayey, angular to subangular, mostly quartz; brown (10YR 4/3)

174AX SG
 Core #1
 Start depth: 1 ft
 Stop depth: 5.5 ft
 Recovery: 3.15 ft
 Date: 9/24/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

2



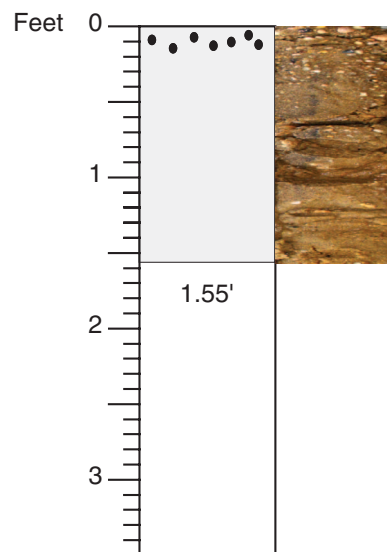
SAND; medium, some fine and some coarse; subangular, quartz; 0-1.1 — silty, the core holds together well; 1.1-2.2 — less silt more coarse sand; some granules and pebbles on outside of core, not in middle, yellowish brown (10YR 5/4)

174AX SG
Core #2
Start depth: 5.5 ft
Stop depth: 10.5 ft
Recovery: 2.2 ft
Date: 9/24/03
Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

3



SAND; coarse, 5% dark minerals (?lignite), subrounded, clear quartz grains, upper 0.2 ft contains abundant pebbles up to 25 mm; fewer pebbles further down, only on outside of core; yellowish brown (10YR 5/6)

174AX SG

Core #3

Start depth: 10.5 ft

Stop depth: 14.0 ft

Recovery: 1.55 ft

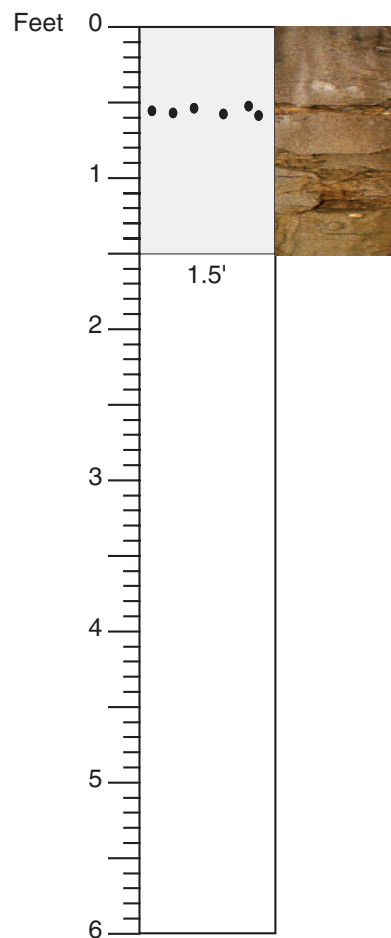
Date: 9/24/03

Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

4



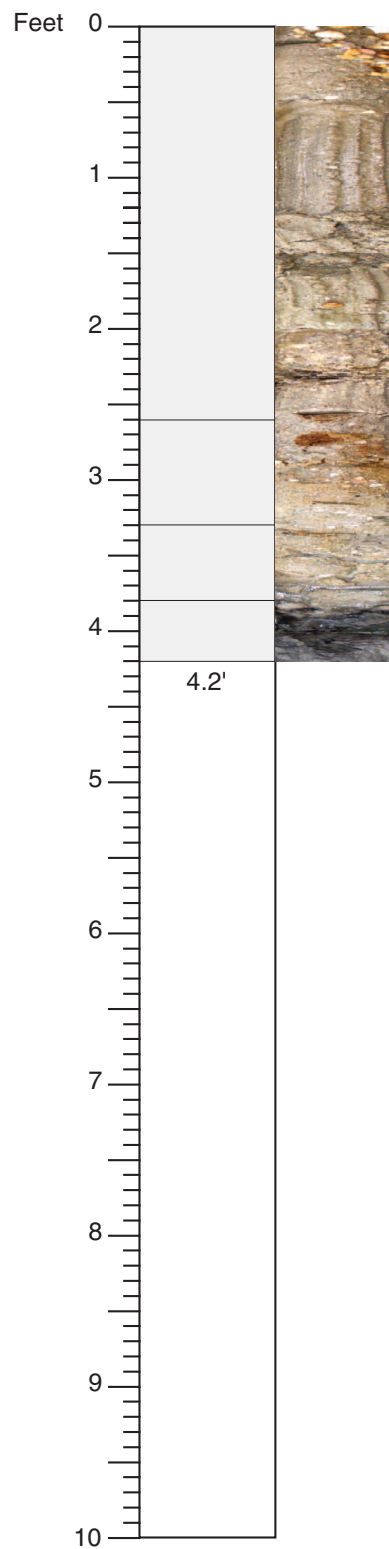
SAND; medium, subrounded, very slightly silty, quartz, ~1-3% ohm/lignite; at 0.6 ft is a thin layer of pebbles up to 10 mm, possible burrow at 0.5 ft, scattered granules and small pebbles on outside, may be slightly siltier at bottom (core catcher), clay nodule near bottom; pale olive (5Y 6/4)

174AX SG
Core #4
Start depth: 14 ft
Stop depth: 20 ft
Recovery: 1.5 ft
Date: 9/24/03
Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

5



SAND; medium, quartz, clear, subrounded, ~1% ohm, top 0-0.3 ft contains many large pebbles, note on inside of core, pebbles and granules are scattered on outside; thin iron-stained layer at 2.3 ft; two fining upward successions, 2.3-0 and 3.3-2.3 ft; light olive gray (5Y 6/2)

SAND; ?iron stained; coarse, subangular to subrounded yellowish brown (10YR 5/6)

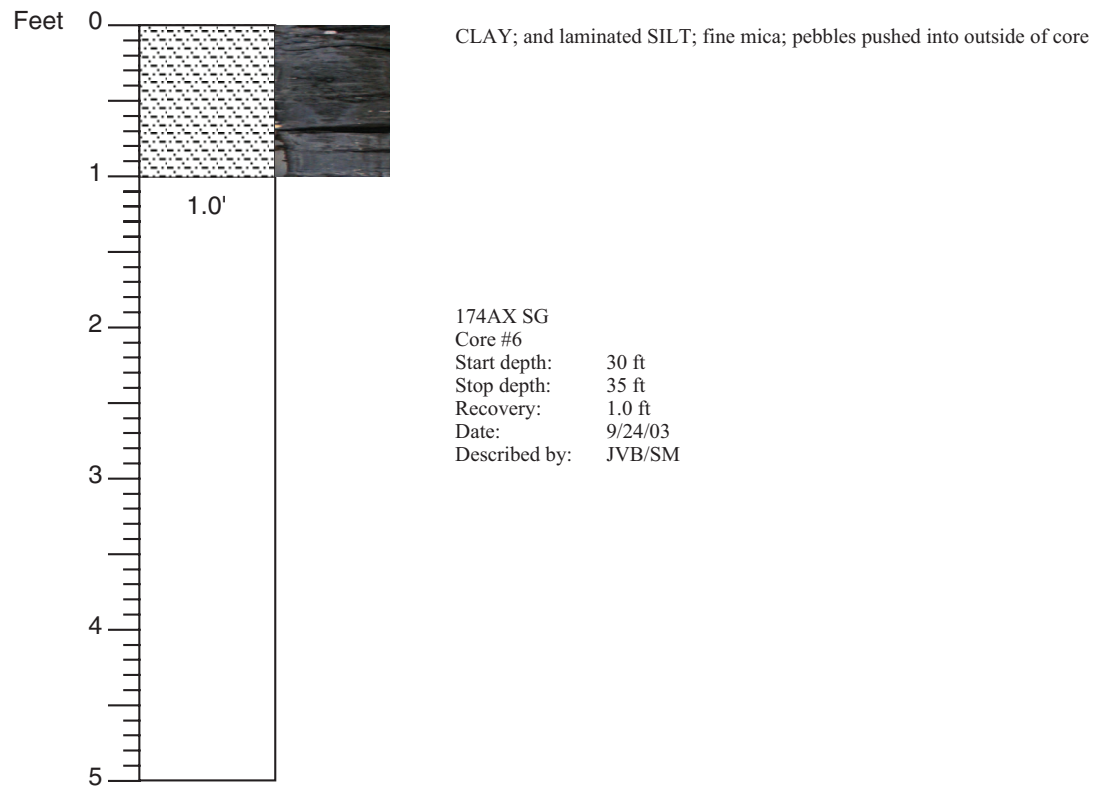
SAND; fine to very fine, quartz, 1-3% ohm

SAND; fine to very fine, silty, lots of organics; dark olive gray (5Y 3/2)

174AX SG
Core #5
Start depth: 20 ft
Stop depth: 30 ft
Recovery: 4.2 ft
Date: 9/24/03
Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

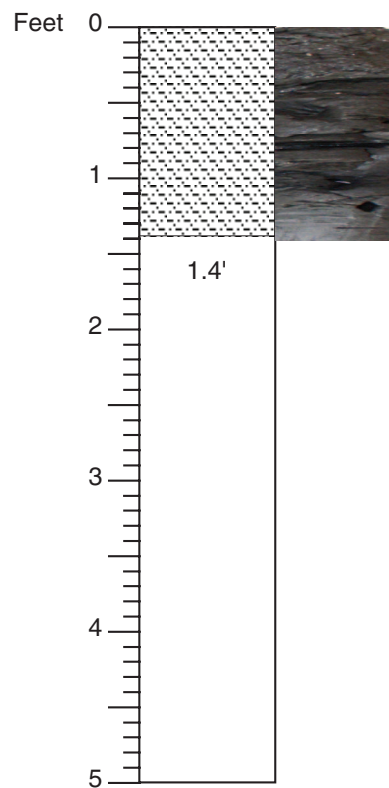
6



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

7

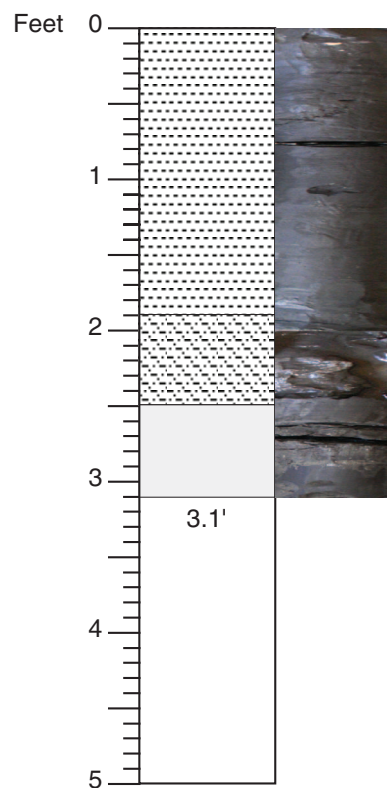


CLAY; slightly silty; slightly micaceous, scattered pebbles on outside of core, some burrows, no laminations seen, at bottom of core is a coating of medium sand and ?lignite; dark olive gray (5Y 3/2)

174AX SG
Core #7
Start depth: 35 ft
Stop depth: 40 ft
Recovery: 1.4 ft
Date: 9/24/03
Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

8



CLAY; very little silt; very slightly micaceous; 0.3-0.4 ft, ?laminations; otherwise structureless, very hard; dark olive gray (5Y 3/2)

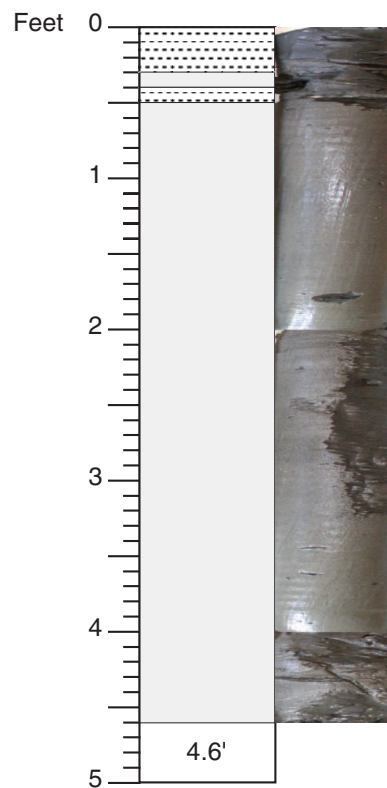
SILT; slightly very fine sandy; very soft, slightly micaceous; 1-3% lignite

SAND; fine to ver fine; abundant silt; sli htl micaceous

174AX SG
 Core #8
 Start depth: 40 ft
 Stop depth: 45 ft
 Recovery: 3.1 ft
 Date: 9/24/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

9



CLAY; hard; no silt, very slightly micaceous

SAND; soft, very fine; abundant silt, ~5% ?lignite; slightly micaceous, dark olive gray (5Y 3/2)

CLAY; as above

SAND; as above; clay plug at bottom

174AX SG

Core #9

Start depth: 45 ft

Stop depth: 50 ft

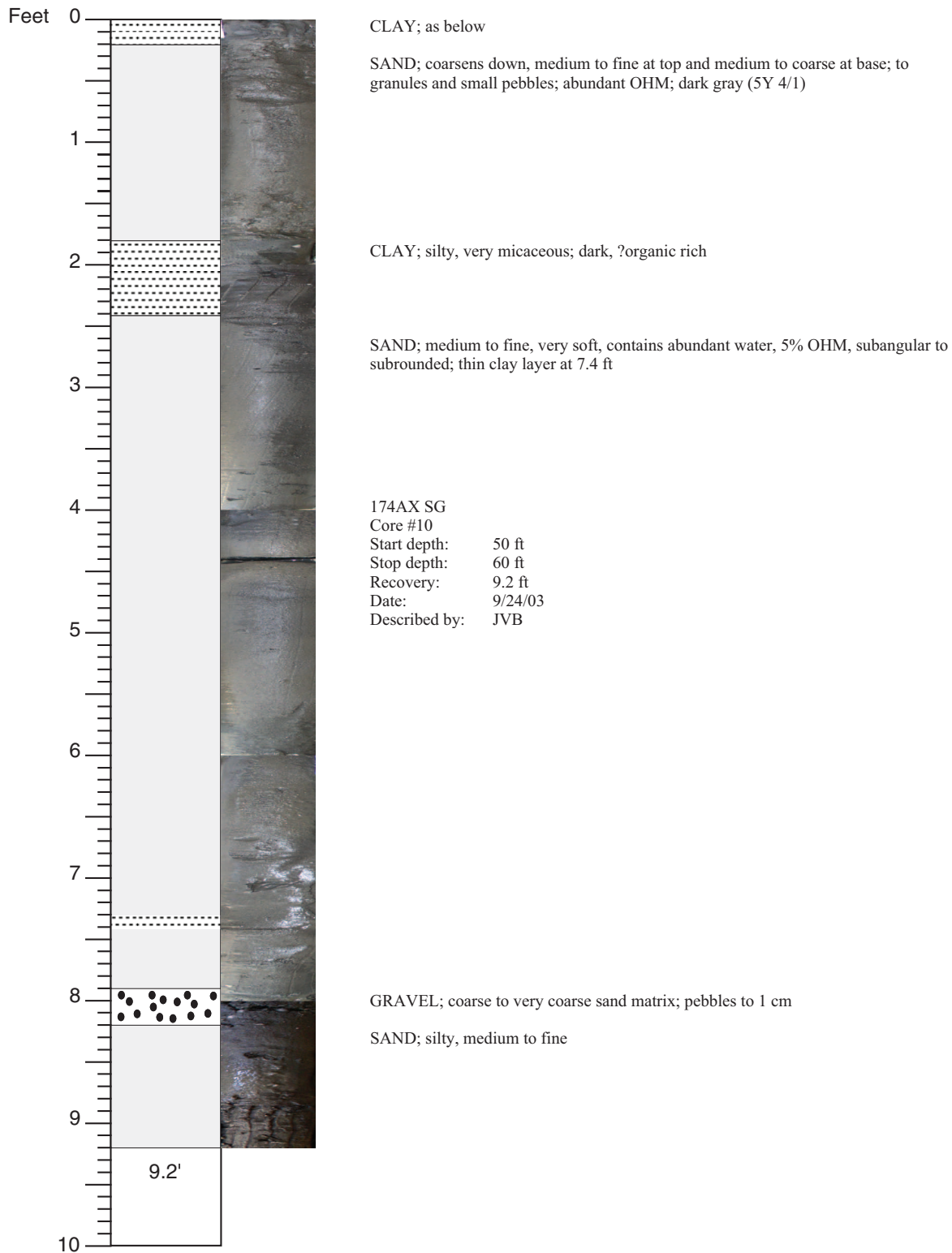
Recovery: 4.6 ft

Date: 9/24/03

Described by: JVB/SM

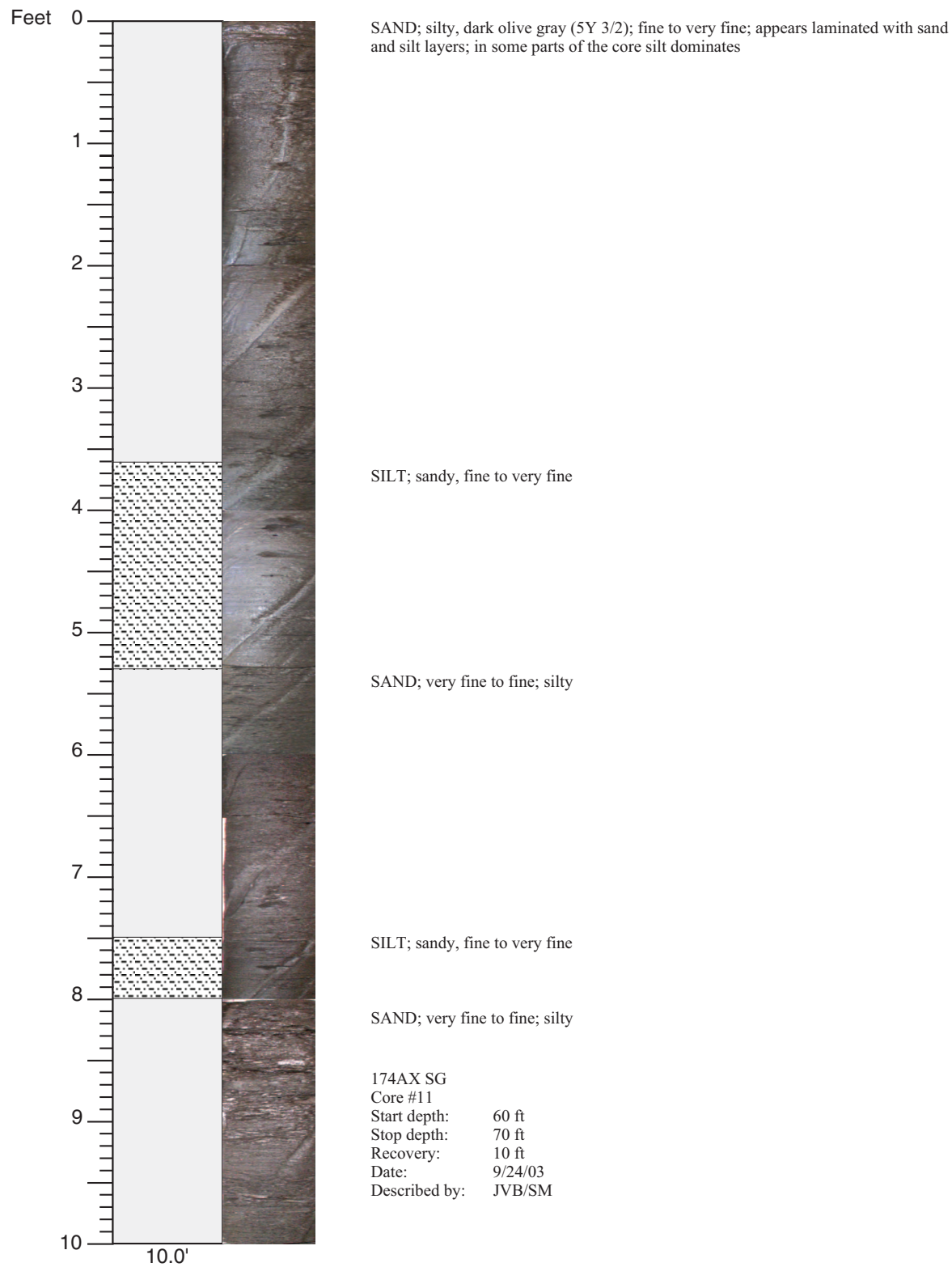
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

10



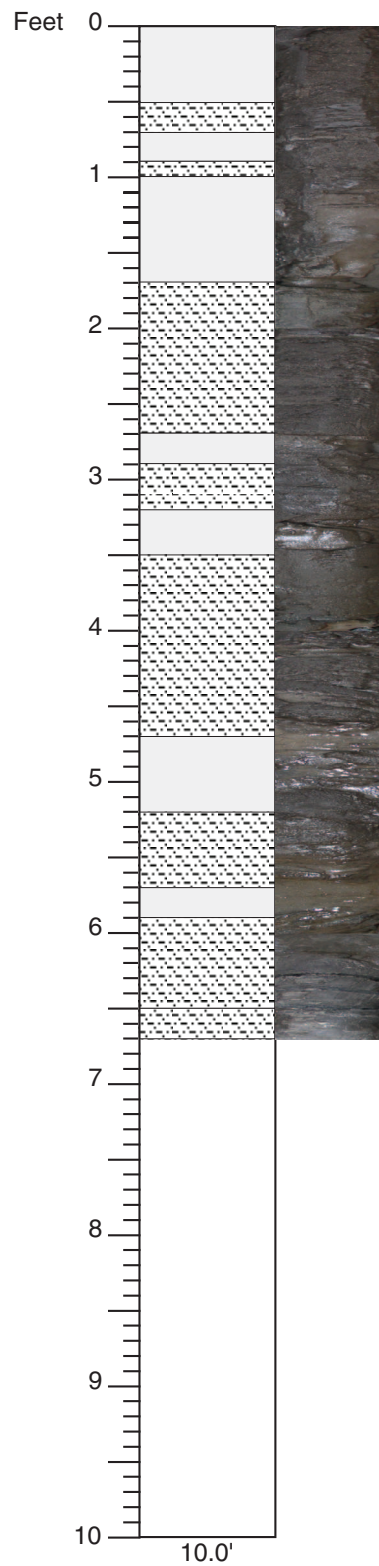
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

11



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

12

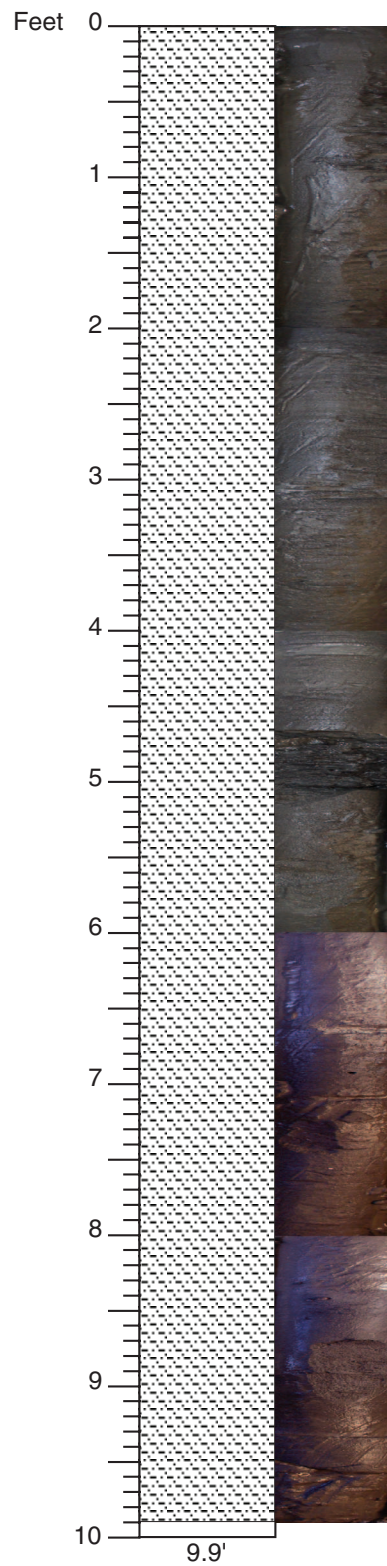


SAND; interbedded with silty SAND; quickly changing lithology, interbedded silt and clay some sand beds are thicker, very laminated at base

174AX SG
 Core #12
 Start depth: 70 ft
 Stop depth: 80 ft
 Recovery: 6.7 ft
 Date: 9/24/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

13



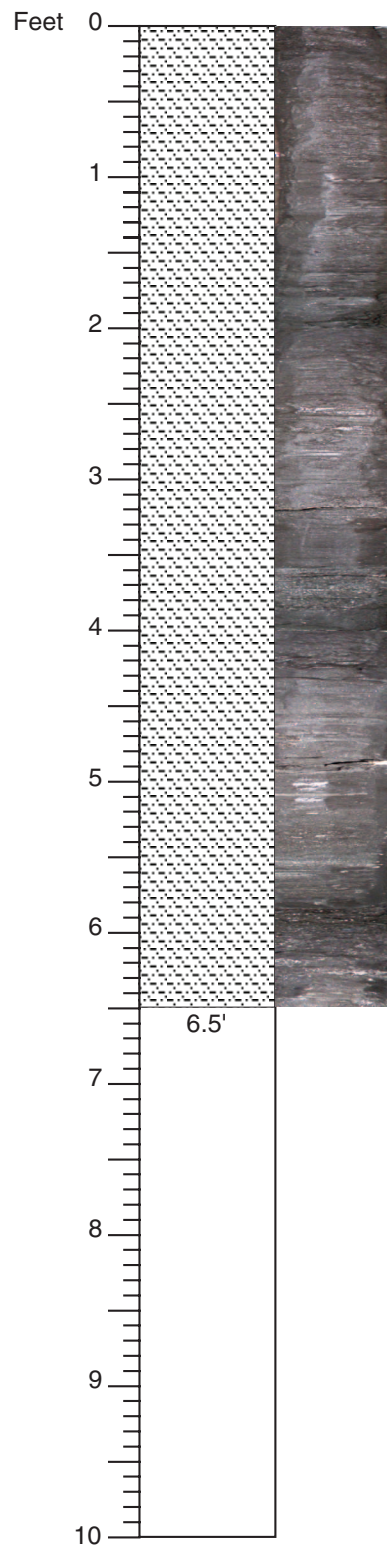
SAND; and interbedded/interlaminated SILT; micaceous and lignitic, sand is medium to fine; sand dominates in lower part of the core

174AX SG
Core #13
Start depth: 80 ft
Stop depth: 90 ft
Recovery: 9.9 ft
Date: 9/24/03
Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

14



SAND; with interlaminated SILT and clay; finely laminated (1-3 mm) in most of core; slightly burrowed (e.g., 1.3-1.4 ft); 0-0.3 ft — more silt; 0.3-0.9 ft — cross laminated sand and silt; 0.9-1.1 ft — silty clay; 1.1-3.2 ft — fine sand dominates with silt laminations; 3.2-3.5 ft — woody, micaceous, clayey silt; 3.5-3.8 ft — medium to very coarse sand with silt laminations; 3.8-5.7 ft — clayey silt with laminations of micaceous fine sand; 5.7-6.0 ft — medium to very coarse sand; 6.0-6.5 ft — silt with cross-bedded fine sand; dark olive gray (5Y 3/2)

174AX SG

Core #14

Start depth: 90 ft

Stop depth: 100 ft

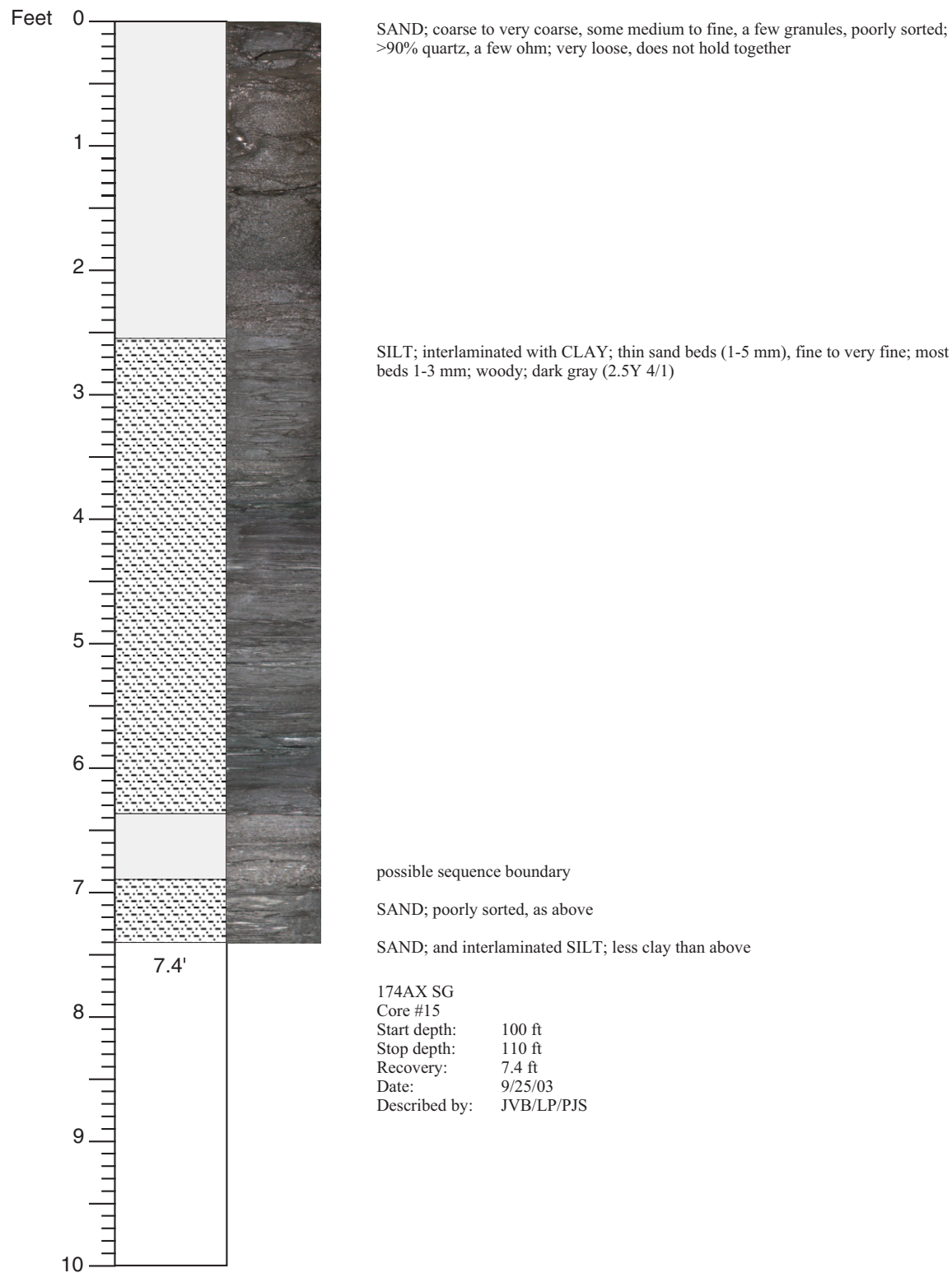
Recovery: 6.5 ft

Date: 9/25/03

Described by: JVB

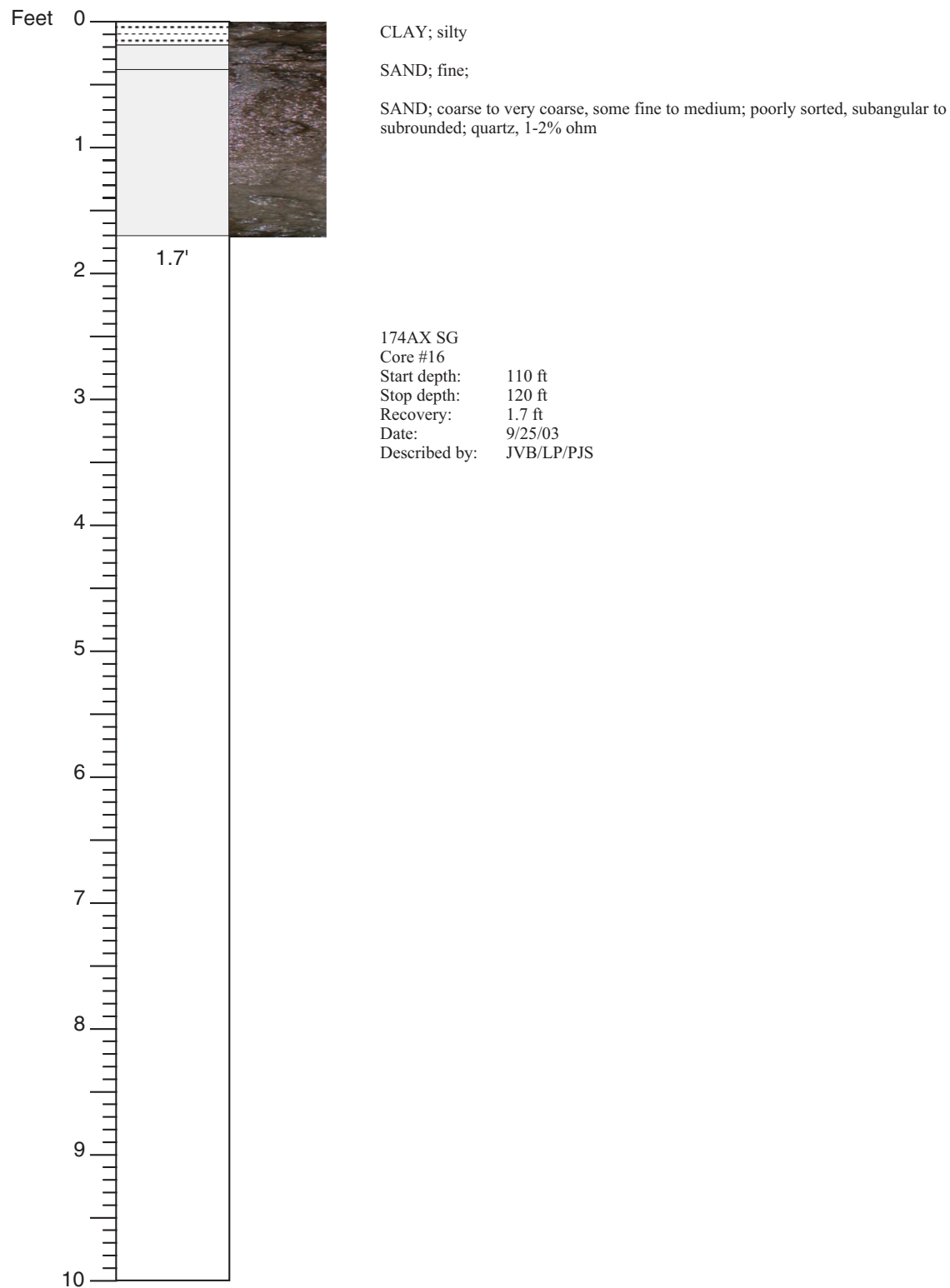
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

15



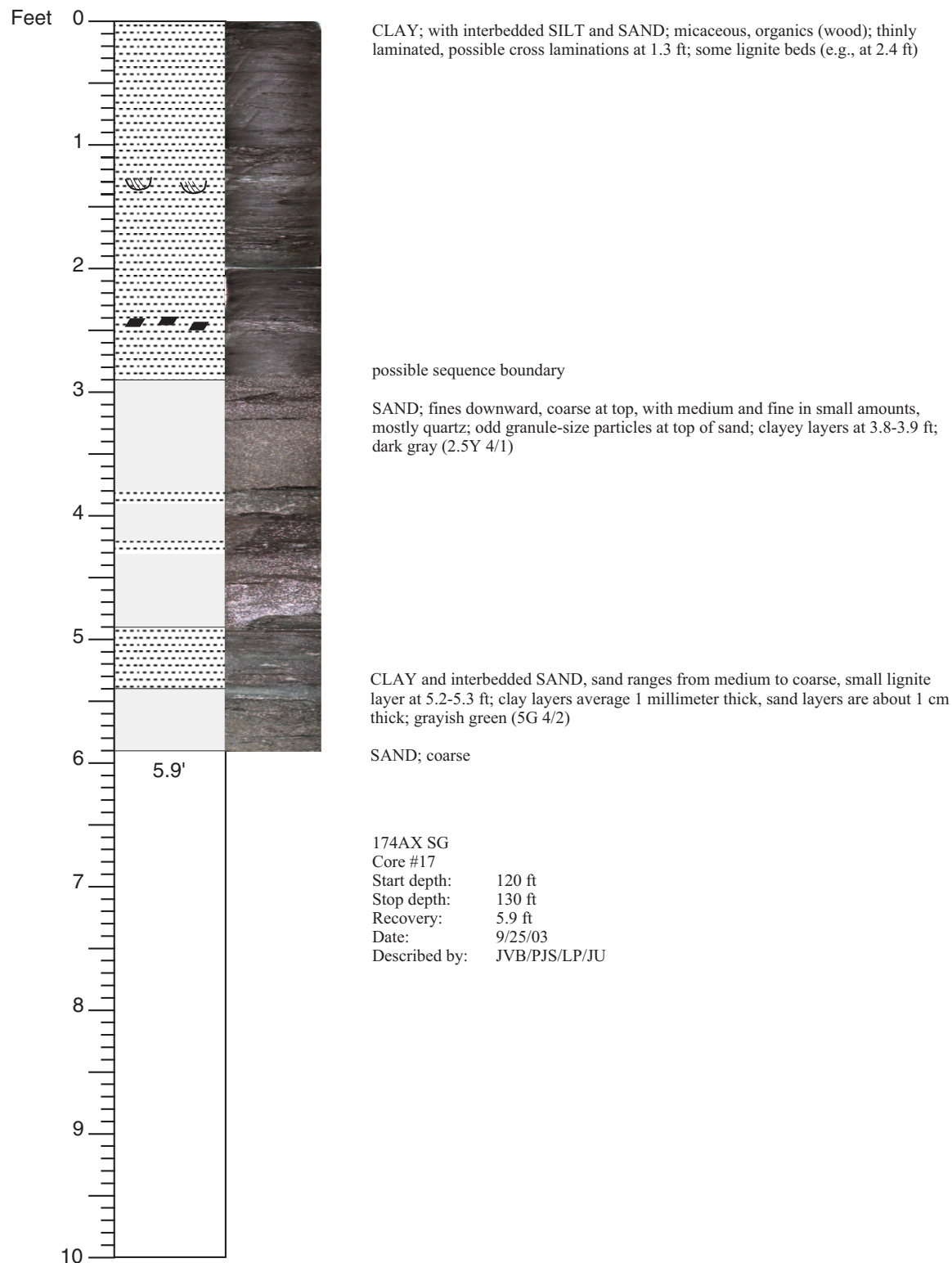
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

16



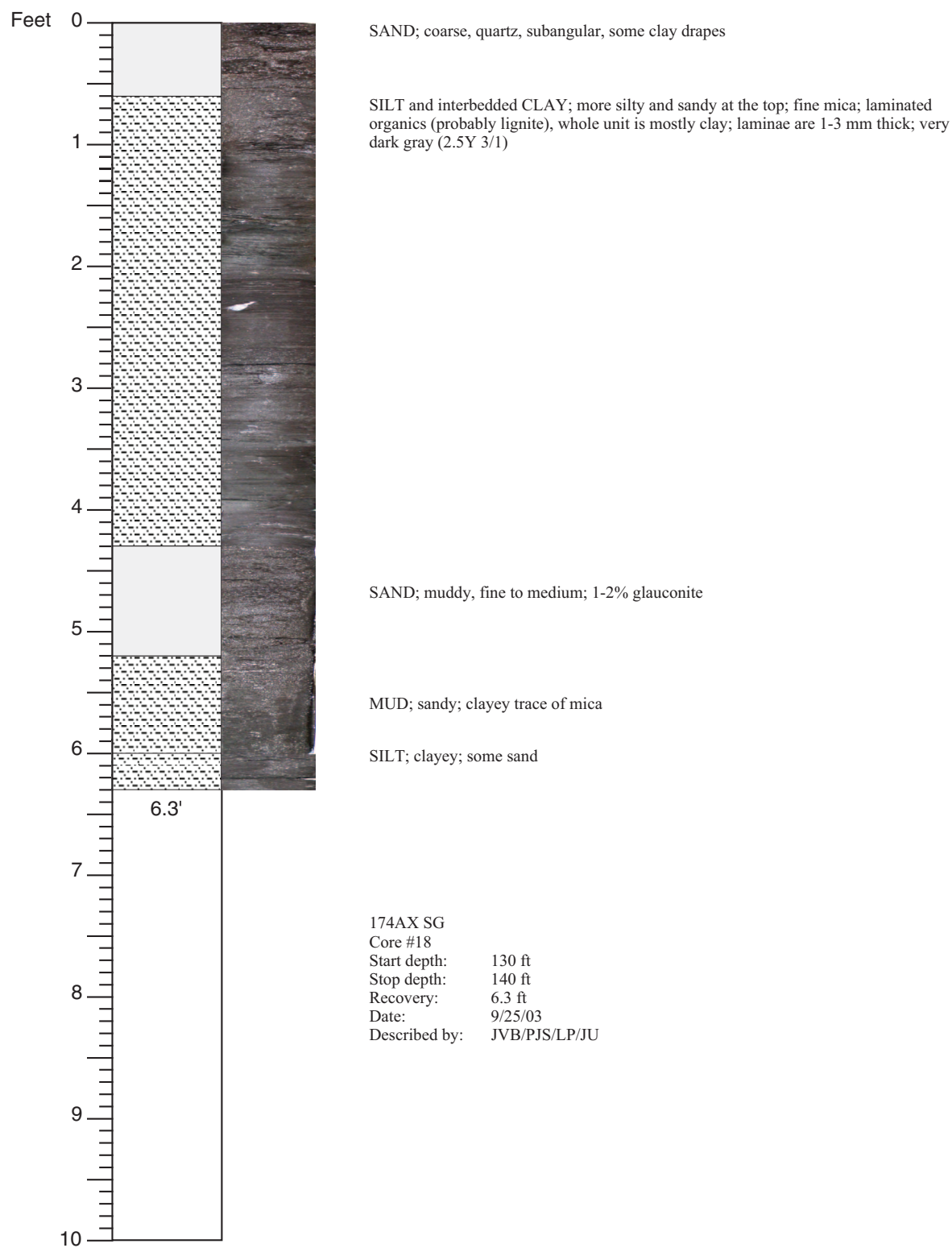
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

17



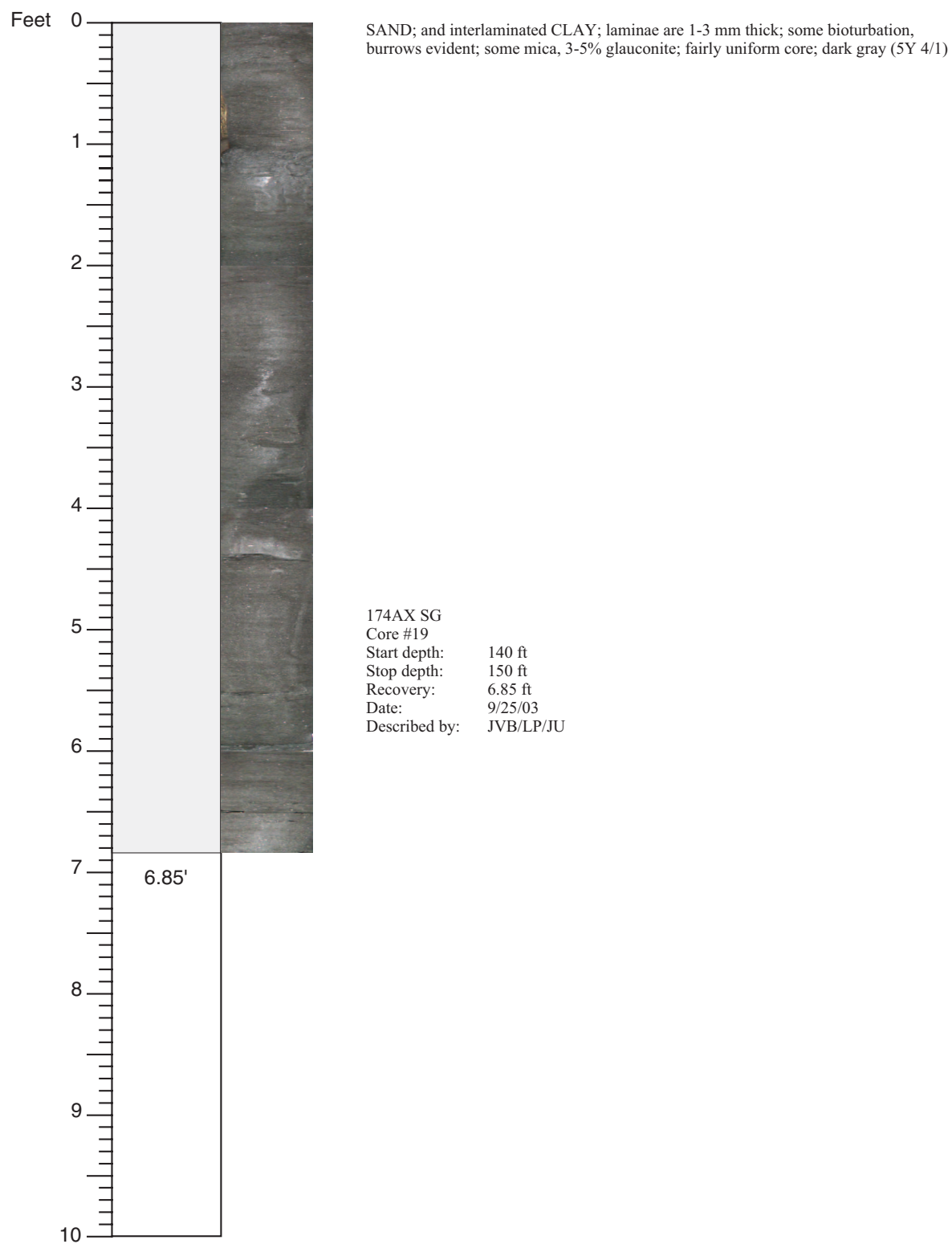
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

18



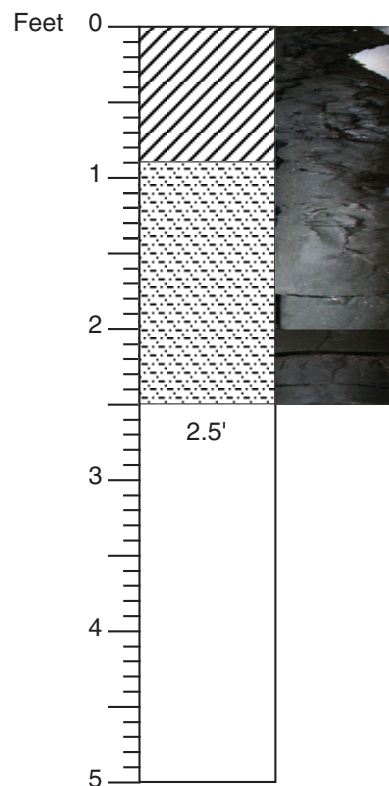
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

19



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

20



Mostly slop but there may be some good core

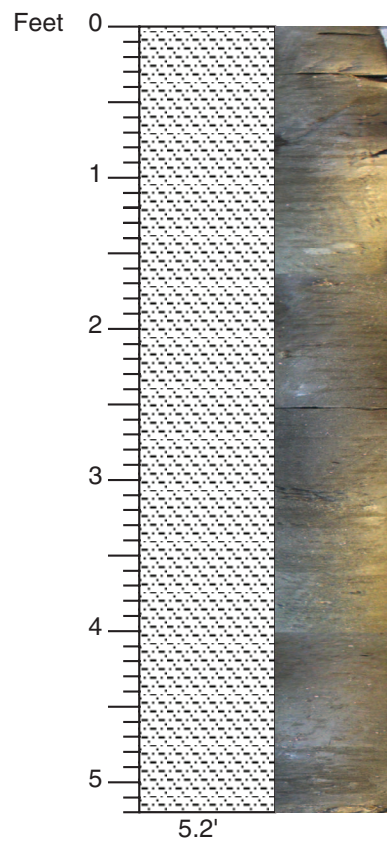
SAND; clayey or sandy CLAY; appears bioturbated together; large mica flakes, ~5% glauconite; dark gray (5Y 4/1)

174AX SG
 Core #20
 Start depth: 150 ft
 Stop depth: 155 ft
 Recovery: 2.5 ft
 Date: 9/26/03
 Described by: JVB/LP/JU

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

21



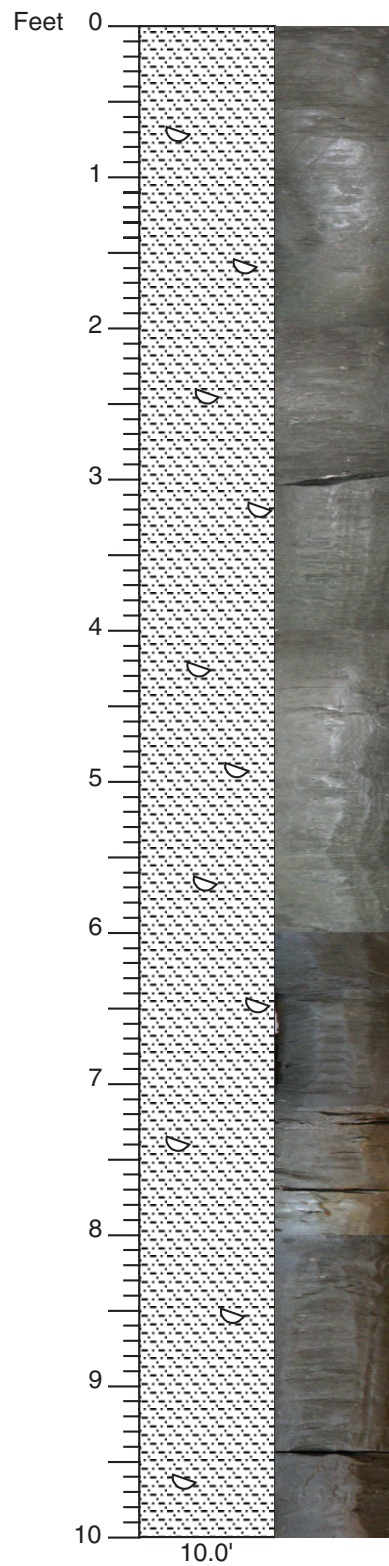
CLAY; sandy, probably clay and sand laminae that have been partially bioturbated together; fine to very fine quartz sand; ~5% glauconite; scattered laminations and burrows

174AX SG
Core #21
Start depth: 155 ft
Stop depth: 160 ft
Recovery: 5.1 ft
Date: 9/25/03
Described by: JVB/LP

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

22

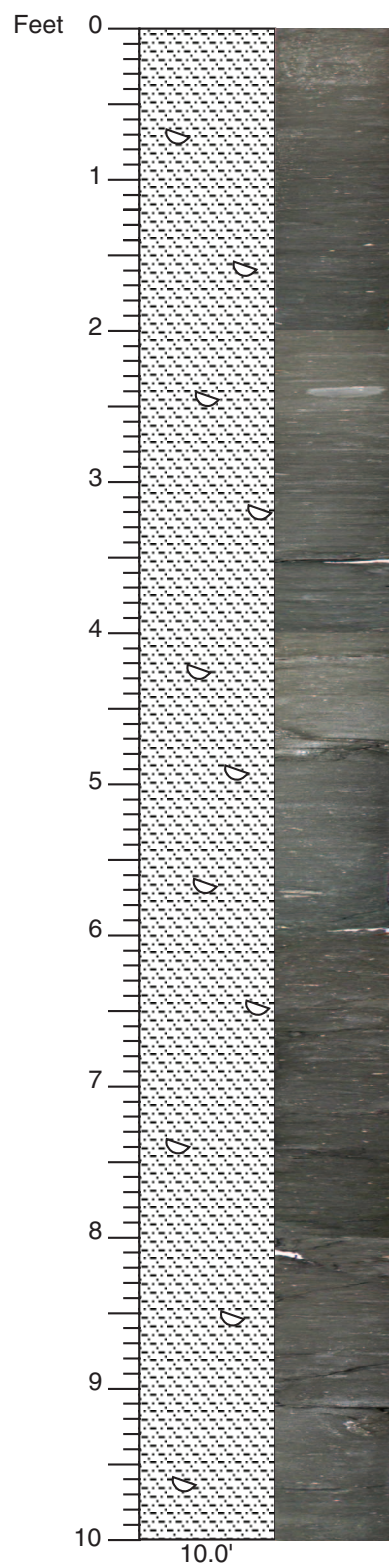


SAND; muddy; more silty than clayey, but a little bit of clay; sand is fine grained, micaceous, 5% glauconite; looks like laminations of silt an clay; some evidence of burrowing; large grains of mica throughout; scaphopod at 3.0 ft, shells at the base; very dark gray (5Y 3/1)

174AX SG
Core #22
Start depth: 160 ft
Stop depth: 170 ft
Recovery: 9.2 ft
Date: 9/25/03
Described by: JVB/LP

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

23

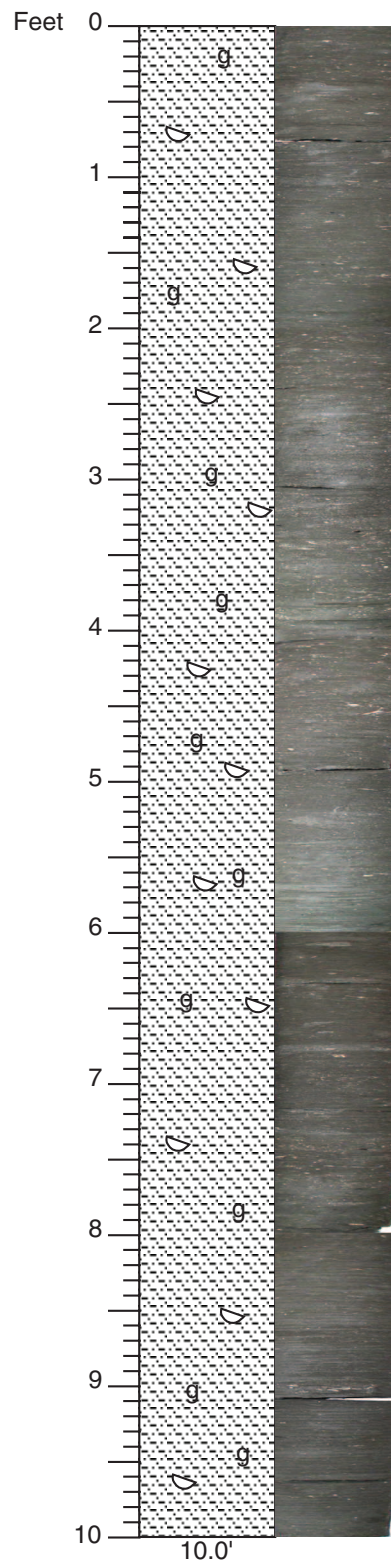


SILT; clayey, laminated, several percent of very fine glauconite, trace mica; fine shell hash throughout; ?pyritized shell at 5.7 ft; olive gray (5Y 4/2)

174AX SG
Core #23
Start depth: 170 ft
Stop depth: 180 ft
Recovery: 10.0 ft
Date: 9/26/03
Described by: PJS/DM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

24

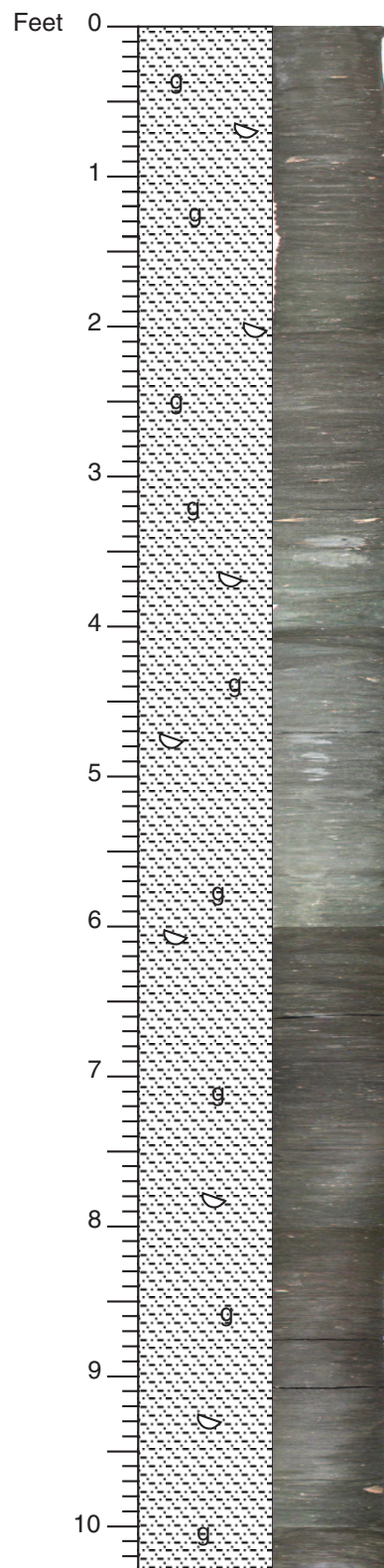


SILTY; glauconitic, shelly, clayey, with very fine sand; some beds are sandier (10%);
?phosphate at 9.1 ft; olive gray (5Y 4/2)

174AX SG
Core #24
Start depth: 180 ft
Stop depth: 190 ft
Recovery: 10.0 ft
Date: 9/26/03
Described by: PJS/DM/AK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

25



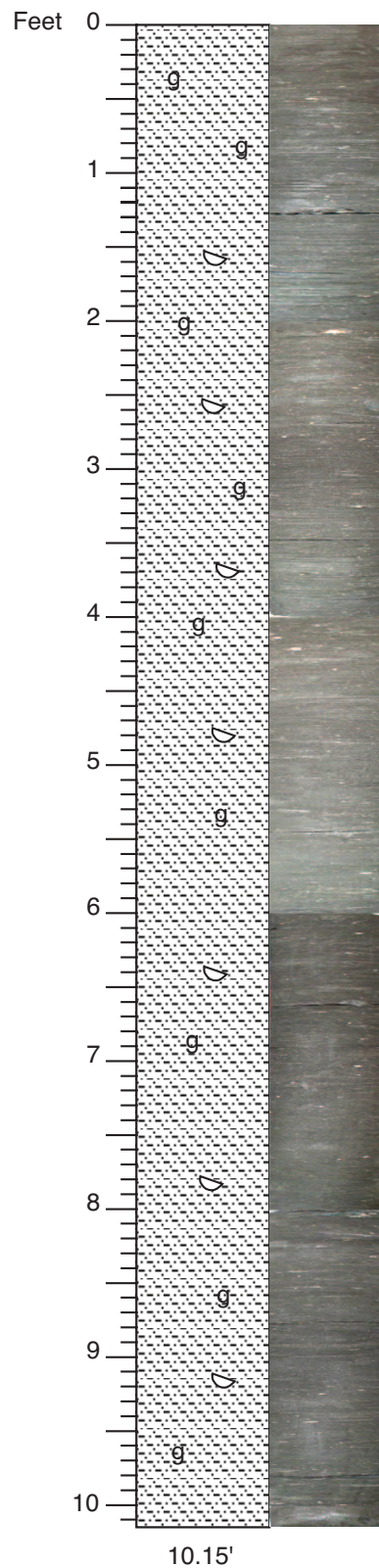
CLAY; silty, dark, slightly glauconitic, interbedded with more glauconitic (5%) slightly sandy (very fine grained) clayey silt; sandier beds are lighter; shelly, larger mollusks and busted shell hash, foraminifer rich

Core #25
 Start depth: 190 ft
 Stop depth: 200 ft
 Recovery: 10.3 ft
 Date: 9/26/03
 Described by: PJS/DM/AK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

26



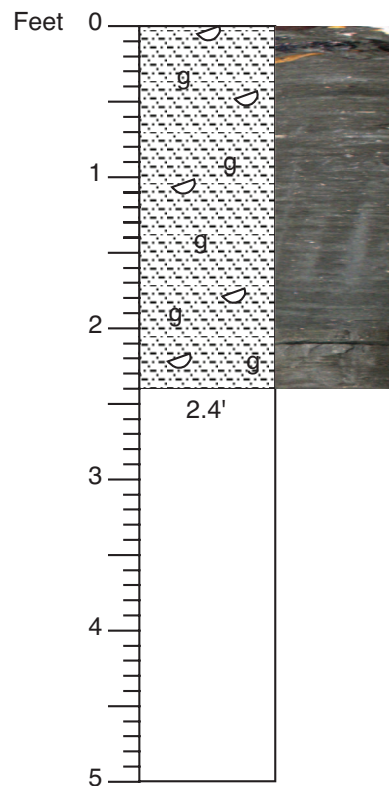
CLAY; some slightly silty laminae; foraminifer rich, some shell hash, occasional thin interbeds of slightly sandy silt; some very fine glauconite; pyritic glauconite clay at 8.3 ft; olive gray (5Y 4/2)

174AX SG
Core #26
Start depth: 200 ft
Stop depth: 210 ft
Recovery: 10.15 ft
Date: 9/26/03
Described by: PJS/DM/AK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

27



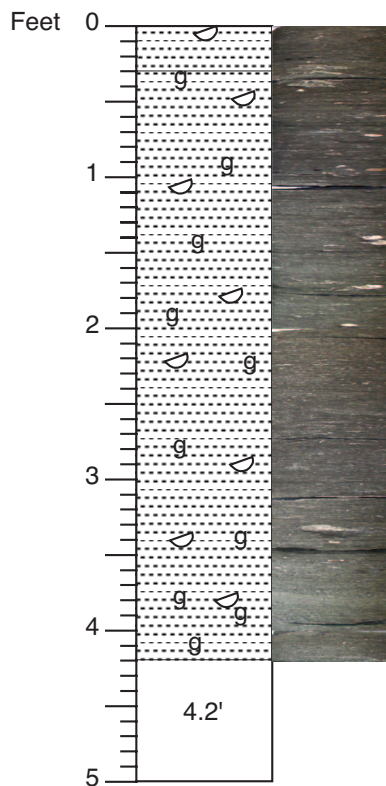
CLAY; slightly silty, fossiliferous, glauconitic; laminated (darker and lighter green), 1-2 cm bands; glauconitic (~5%); dark greenish gray (5GY 4/1)

Note: quartz and charcoal/lignite pebbles and granules are pressed into the outside of solid core

174AX SG
Core #27
Start depth: 210 ft
Stop depth: 215 ft
Recovery: 2.4 ft
Date: 9/29/03
Described by: KGM/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

28

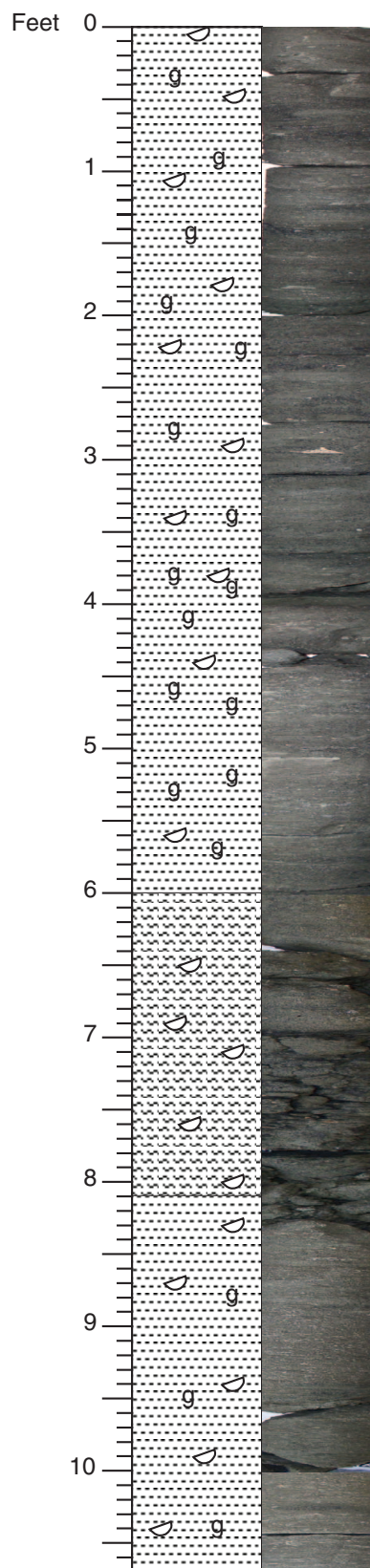


CLAY; fossiliferous, glauconitic, slightly silty, shells up to 8 mm; mollusks and foraminifers

CLAY; glauconite increases from top (~5%) to bottom (~10%); 20 mm pyrite nodule at 3.3 ft; dark greenish gray (SGY 4/1)

Note: at the very top a pebble (~40 mm) pushed into core

174AX SG
 Core #28
 Start depth: 215 ft
 Stop depth: 220 ft
 Recovery: 4.2 ft
 Date: 9/29/03
 Described by: KGM/SM



CLAY; glauconitic, slightly shelly; glauconite increases down section from <10% at top to 20-50% at 6.0 ft; heavily burrowed with large (2-3 cm burrows);

174AX SG
 Core #29
 Start depth: 220 ft
 Stop depth: 230 ft
 Recovery: 10.7 ft
 Date: 9/29/03
 Described by: KGM/SM

SAND; glauconite (50%); shelly; 7.0-8.0 ft is friable, >60% glauconite

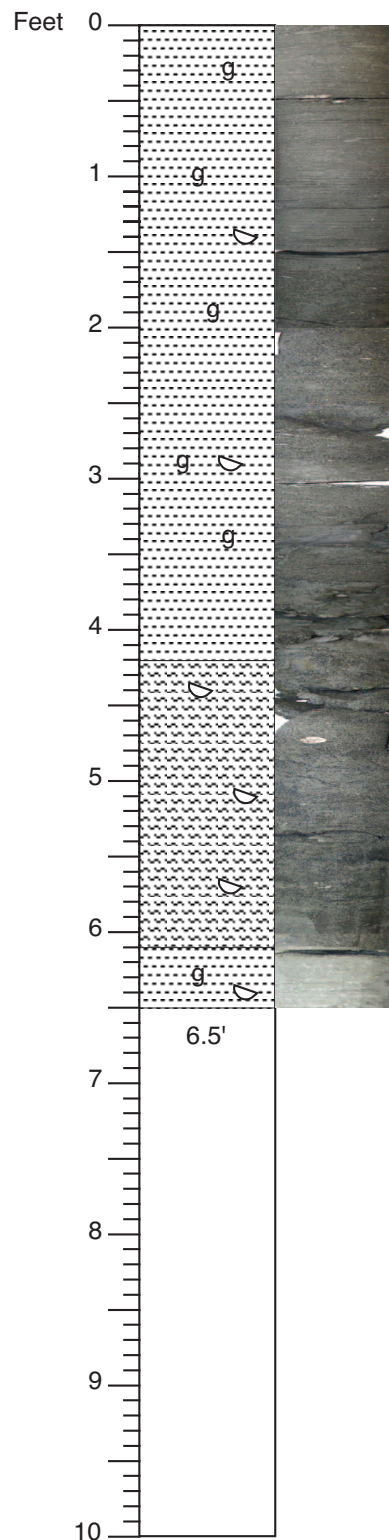
Contact

CLAY; glauconitic, shelly, heavily burrowed (?*Skolithos*, looks like a baccilium); glauconite sand filled burrows, interlaminae of darker brown (1-2 cm scale) and lighter green clay, foraminifers and mollusk shells

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

30



CLAY; glauconitic to clayey glauconite SAND; three different units; 0-1.6 ft is shelly glauconite clay; pyrite nodule at 0.7 ft; 1.6-4.2 ft is shelly very glauconitic clay; 4.2-6.1 ft is shelly, clayey glauconite sand; coral at 4.7 ft;

Contact

CLAY; hard, slightly glauconitic, heavily burrowed, small ?*Skolithos* (bacillum) burrows

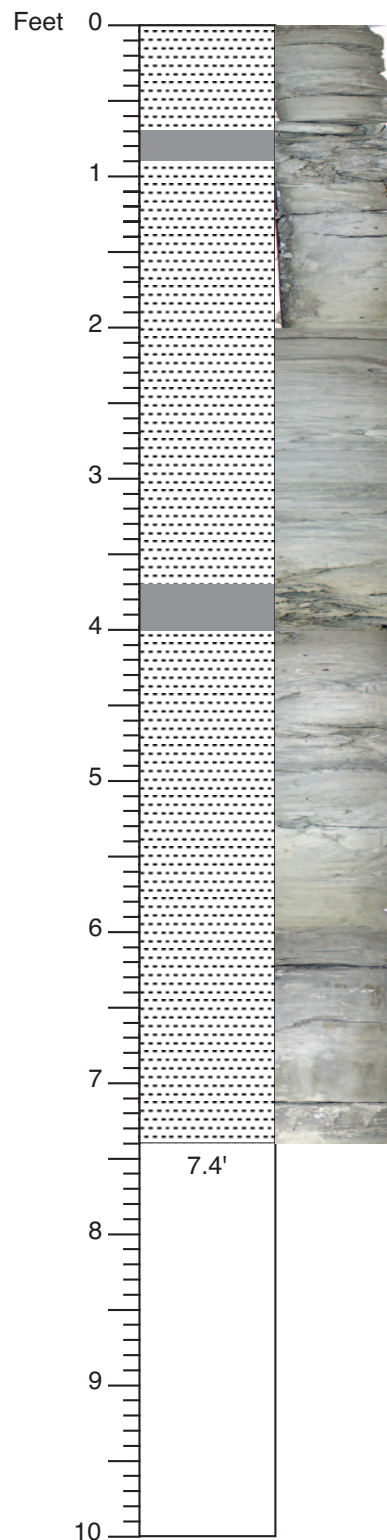
Looks like the contact was recovered with the clay in the shoe

174AX SG
Core #30
Start depth: 230 ft
Stop depth: 240 ft
Recovery: 6.5 ft
Date: 9/29/03
Described by: KM/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

31

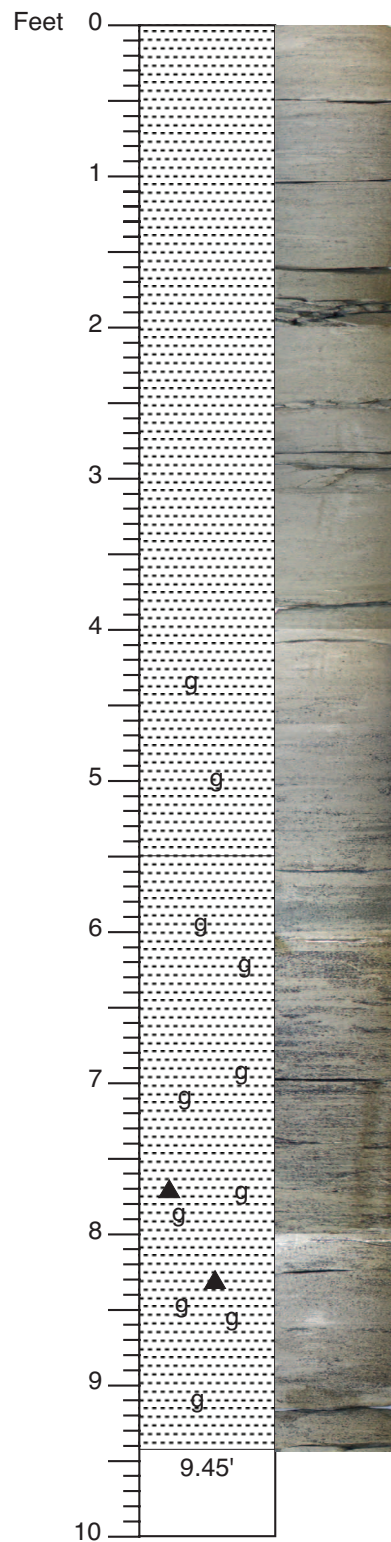


CLAY; occasional silt interbeds, slightly glauconitic (~2-4%), semi-indurated intervals; foraminifer rich; greenish gray (5GY 6/1)

174AX SG
Core #31
Start depth: 240 ft
Stop depth: 250 ft
Recovery: 7.4 ft
Date: 9/29/03
Described by: KM/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

32



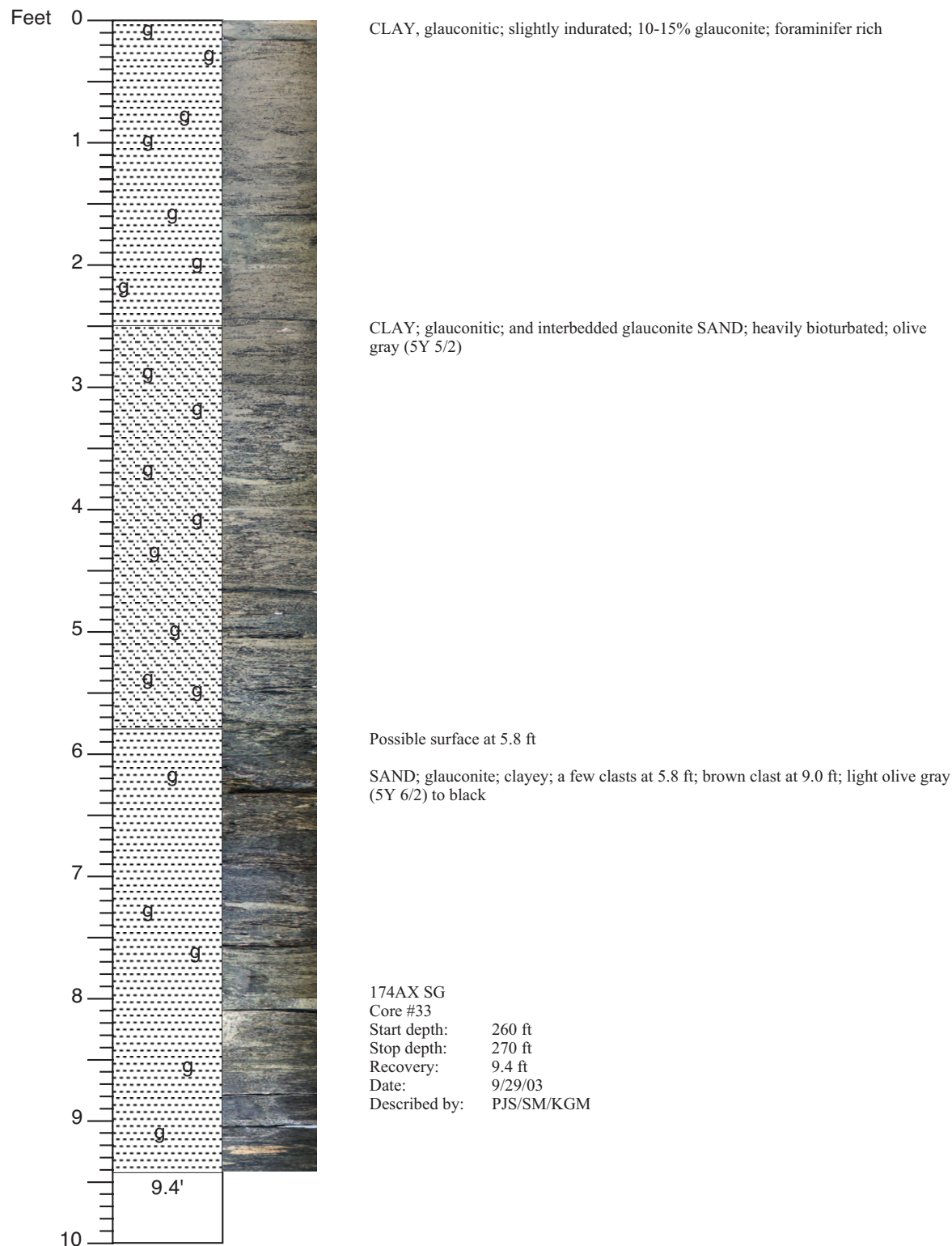
CLAY; indurated, slightly glauconitic; glauconite increases below 3.8 ft; greenish gray (5GY 6/1)

CLAY; glauconite to 20%; burrowed; porcellanitic at base

174AX SG
 Core #32
 Start depth: 250 ft
 Stop depth: 260 ft
 Recovery: 9.45 ft
 Date: 9/29/03
 Described by: PJS/KGM/SM

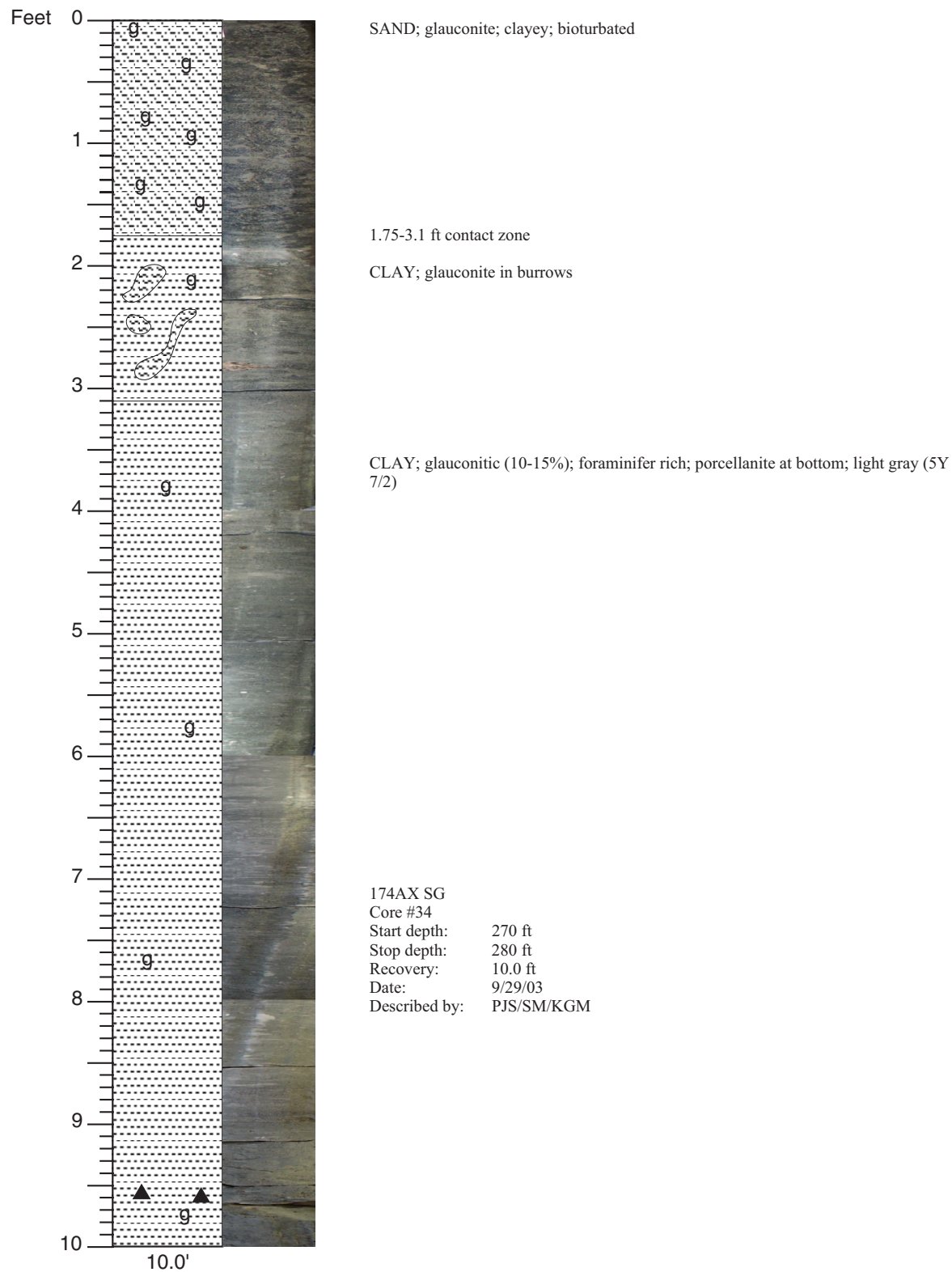
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

33



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

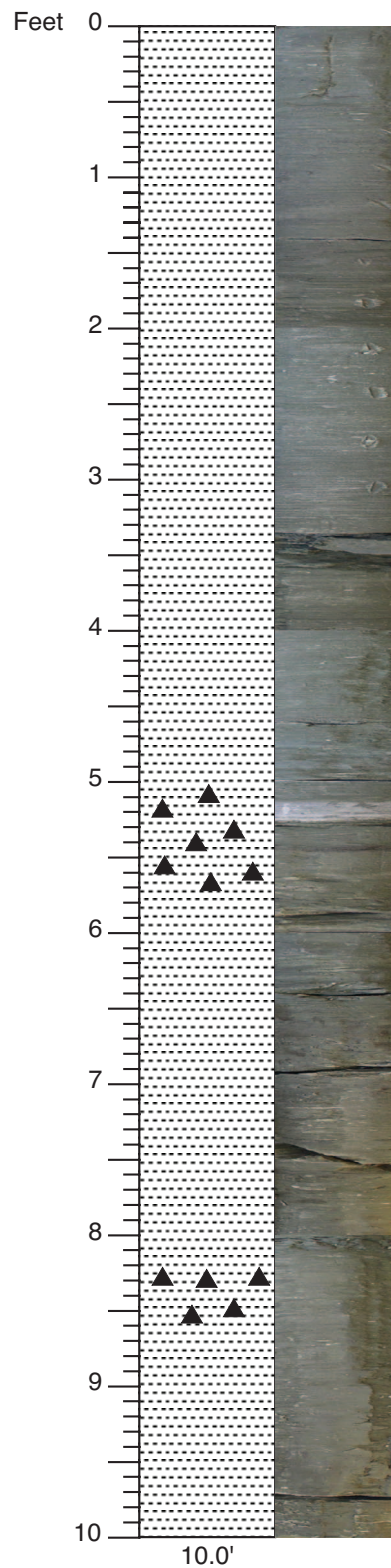
34



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

35

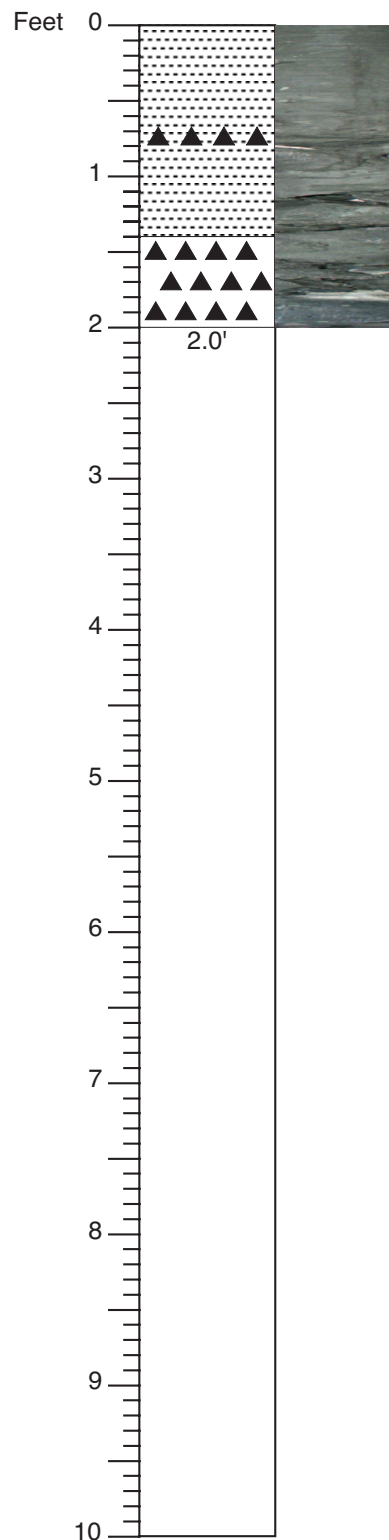


CLAY; slightly silty; rare very fine sand; burrowed with laminations in some intervals; porcellanite at 5.0-5.7 ft and 8.2-8.6 ft; burrowed contorted zone (hardground?, flooding surface?) at 7.9-8.0 ft; light olive gray (5Y 6/2)

174AX SG
Core #35
Start depth: 280 ft
Stop depth: 290 ft
Recovery: 10.0 ft
Date: 9/29/03
Described by: PJS/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

36



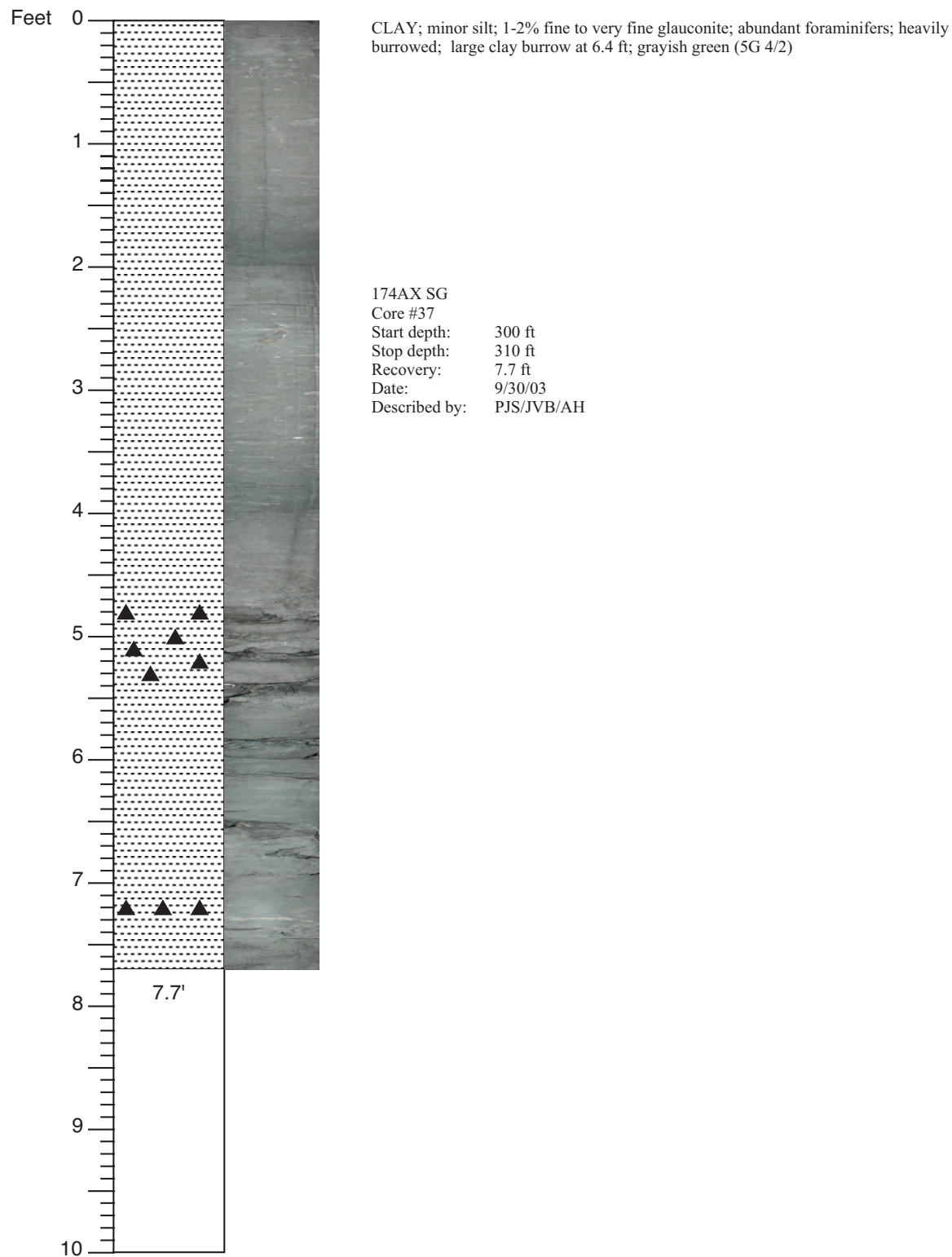
CLAY; very slightly silty, slightly micaceous; ~1% glauconite; foraminifers present; porcellanite at 0.7-0.8 ft

PORCELLANITE; same material as above but with silica cement; grayish green (5G 4/2)

174AX SG
 Core #36
 Start depth: 290 ft
 Stop depth: 300 ft
 Recovery: 2.0 ft
 Date: 9/30/03
 Described by: PJS/JVB

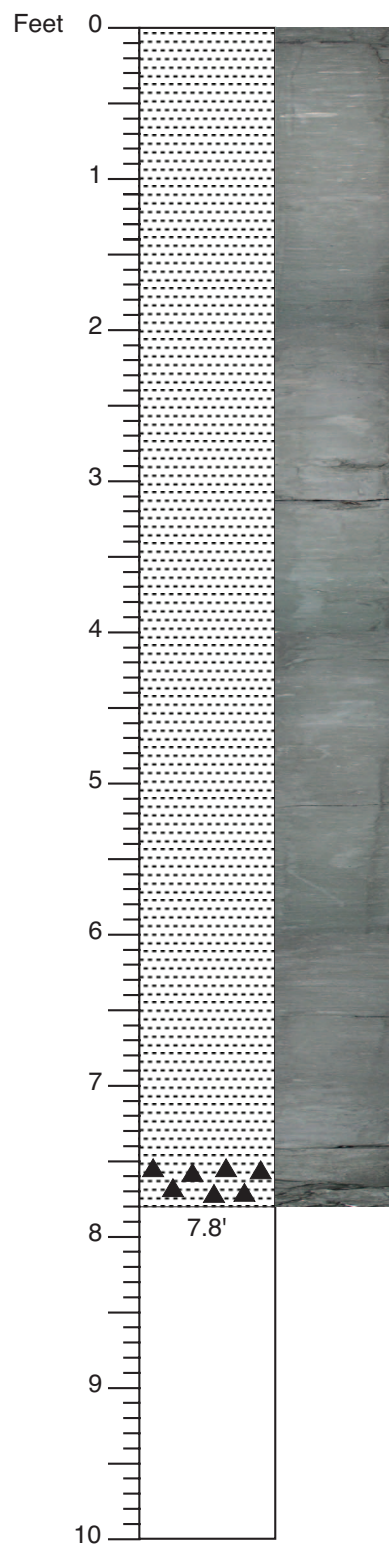
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

37



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

38

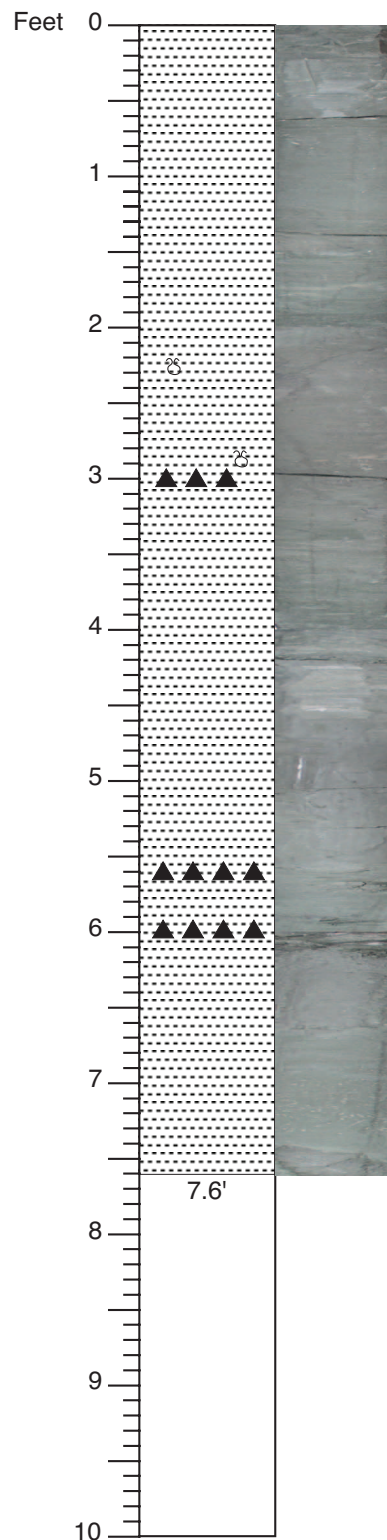


CLAY; slightly silty; 1-3% very fine to fine glauconite, trace medium; abundant foraminifers; heavily burrowed; porcellanite at 7.5-7.8 ft; grayish green (5G 5/2)

174AX SG
Core #38
Start depth: 310 ft
Stop depth: 320 ft
Recovery: 7.8 ft
Date: 9/30/03
Described by: PJS/JVB/AH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

39

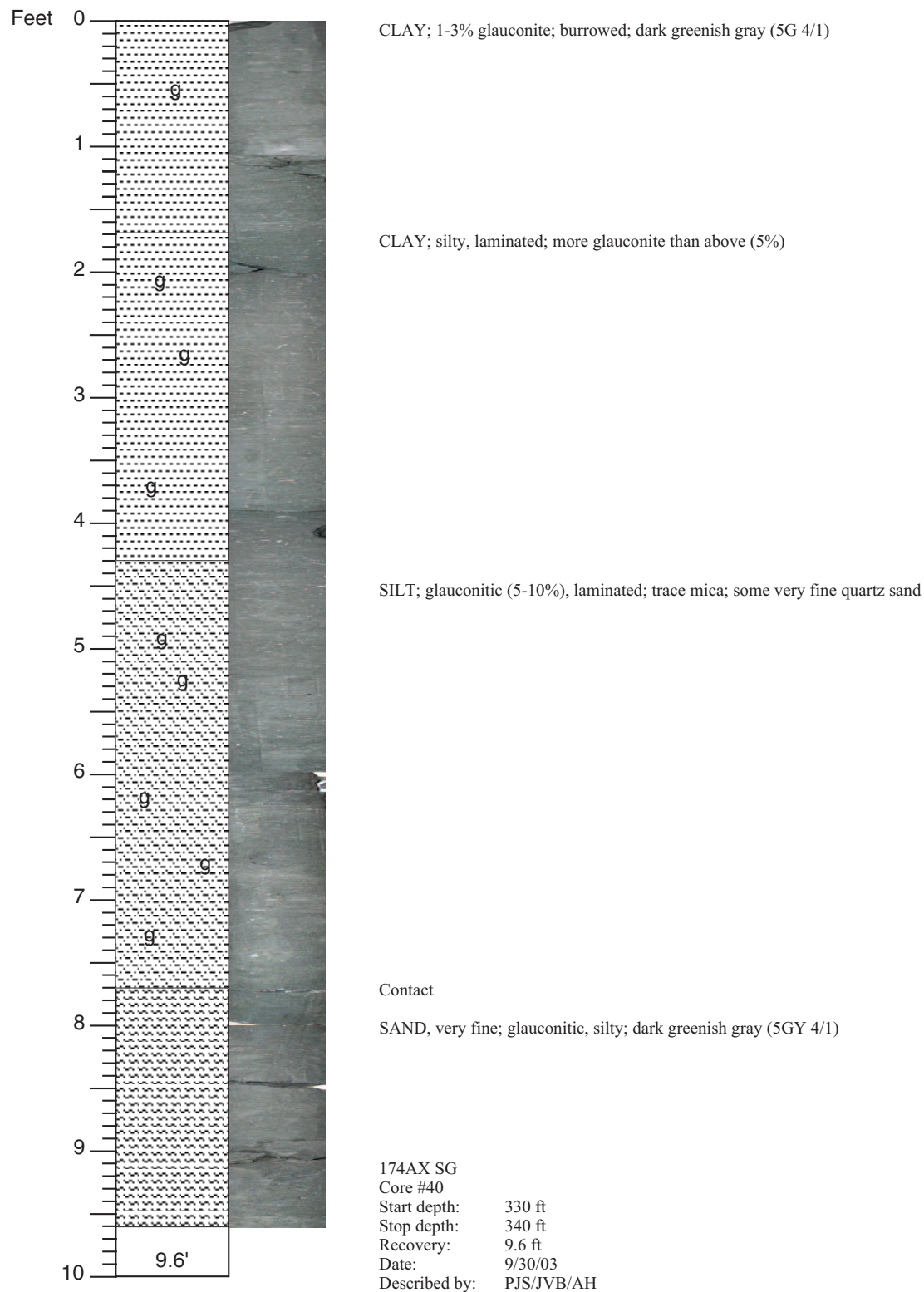


CLAY; slightly silty, 1-3% fine glauconite, often infilling burrows; foraminifer rich; some clay lined burrows; grayish green (5G 4/2)

174AX SG
 Core #39
 Start depth: 320 ft
 Stop depth: 330 ft
 Recovery: 7.6 ft
 Date: 9/30/03
 Described by: PJS/JVB/AH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

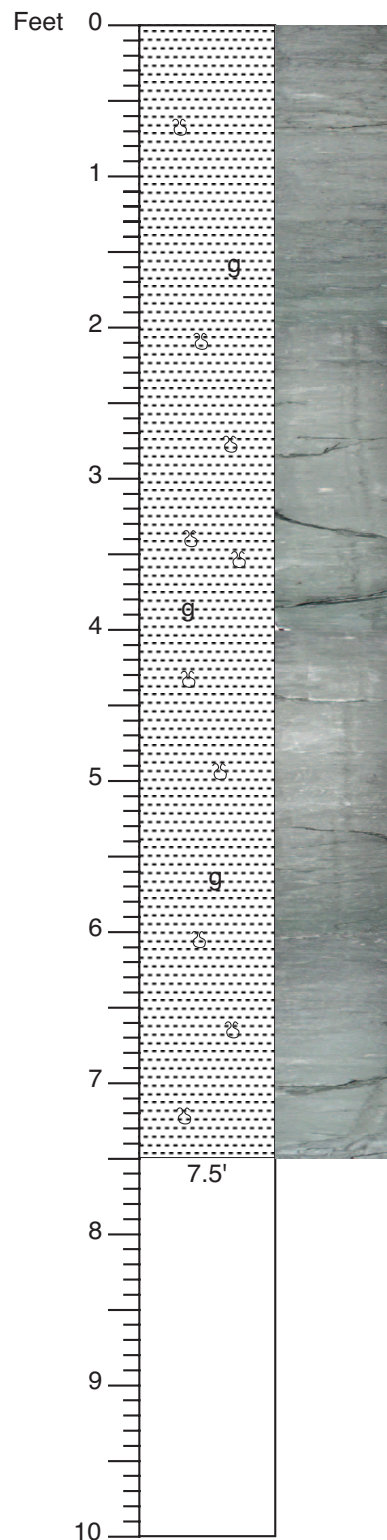
40



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

41

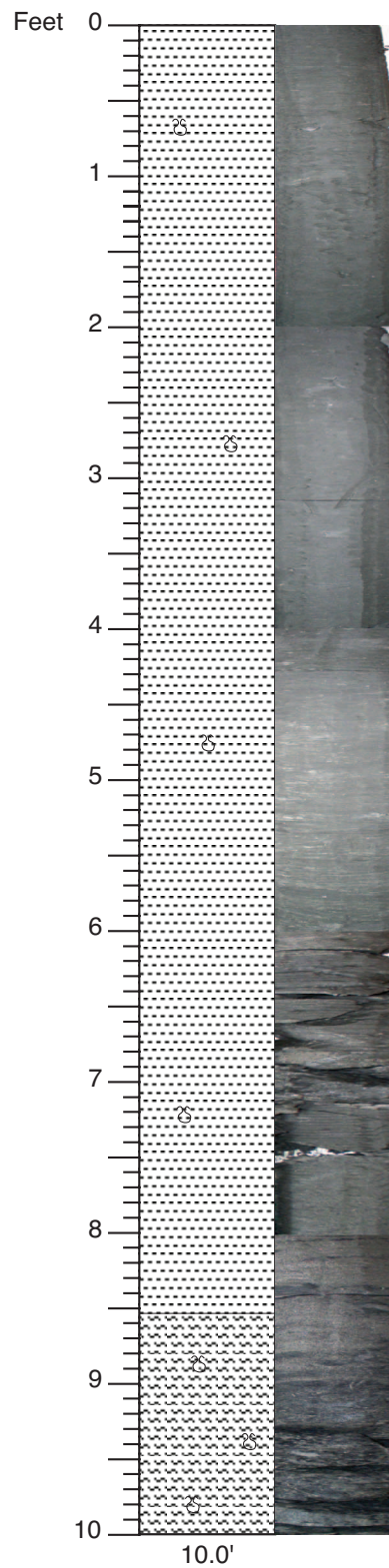


CLAY; silty, interlaminated with clay; 1-3% fine to very fine glauconite, the percentage is higher in coarser sediments, slightly micaceous; common 1 mm diameter burrows; below 2 ft the core becomes more silty with some very fine sand; brown clay filled burrow at 3.1 ft; common burrows at 4.2-4.8 ft; grayish green (5G 4/2)

174AX SG
Core #41
Start depth: 340 ft
Stop depth: 350 ft
Recovery: 7.5 ft
Date: 9/30/03
Described by: PJS/JVB/AH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

42



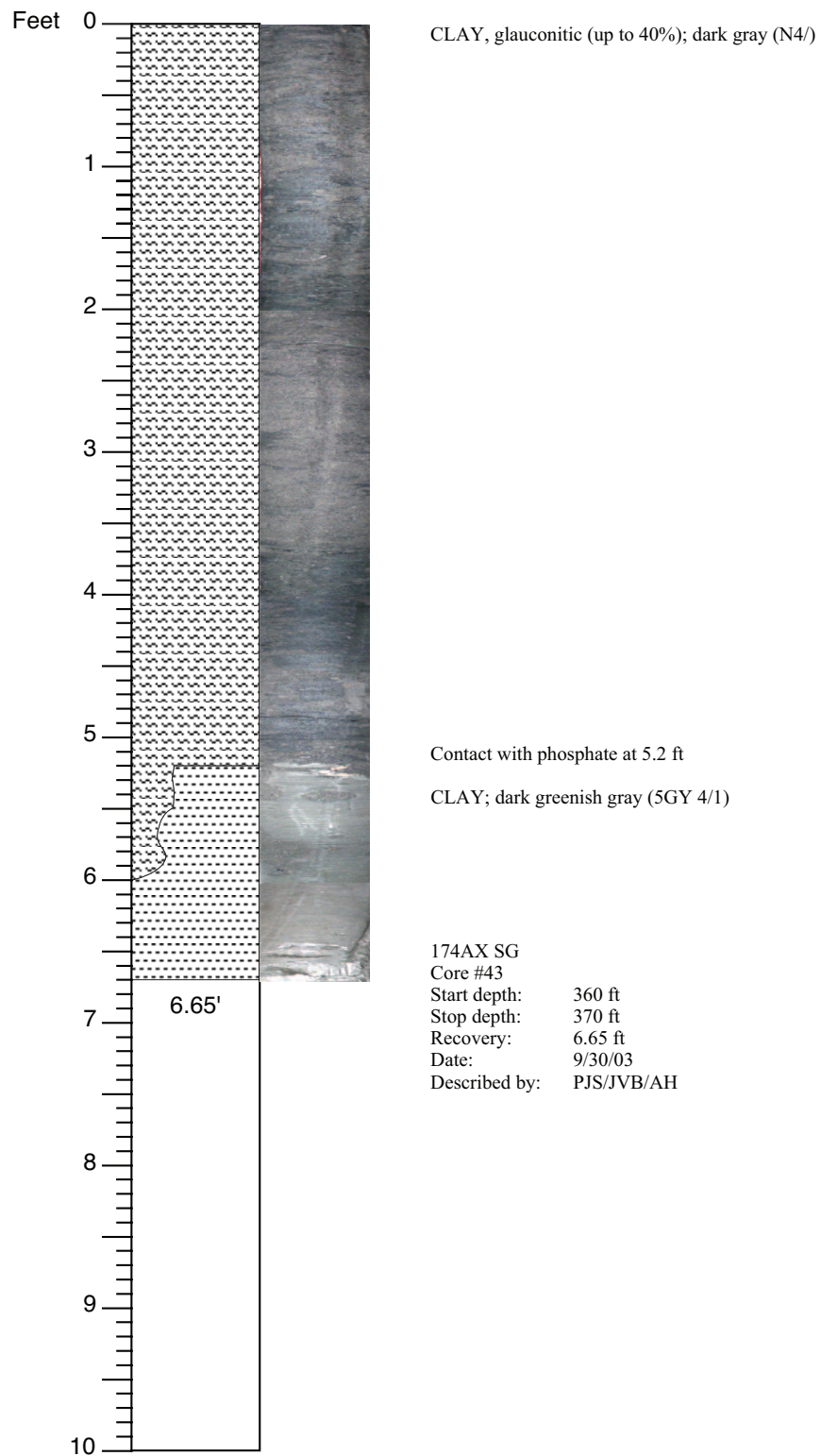
CLAY; laminated, slightly burrowed, trace very fine mica, some foraminifers; grayish green (SG 4/2)

174AX SG
 Core #42
 Start depth: 350 ft
 Stop depth: 360 ft
 Recovery: 10 ft
 Date: 9/30/03
 Described by: PJS/JVB/AH

SAND; medium grained glauconite appears in burrows from 1-3% to 40-70% at the bottom of the core

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

43

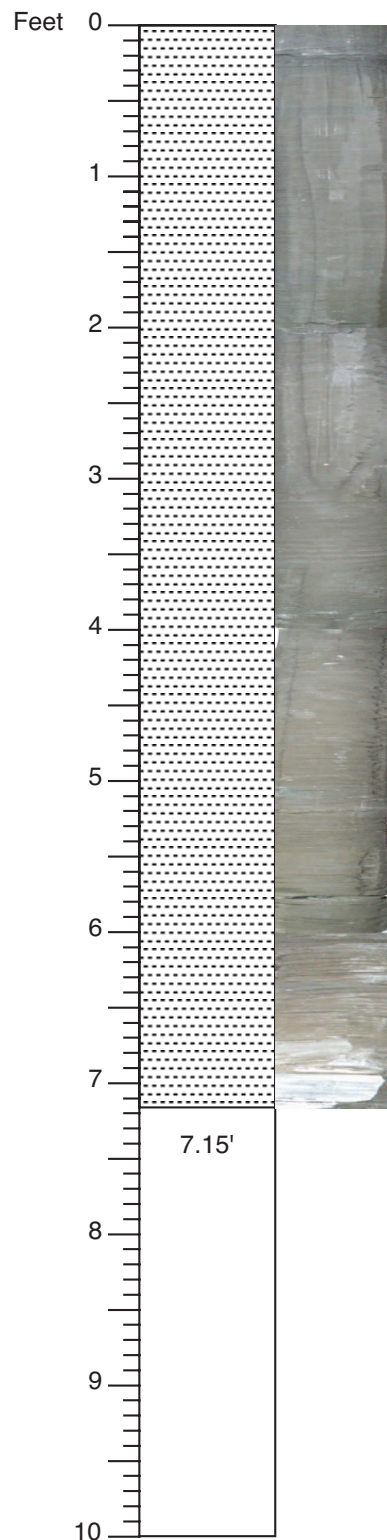


174AX SG
Core #43
Start depth: 360 ft
Stop depth: 370 ft
Recovery: 6.65 ft
Date: 9/30/03
Described by: PJS/JVB/AH

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

44

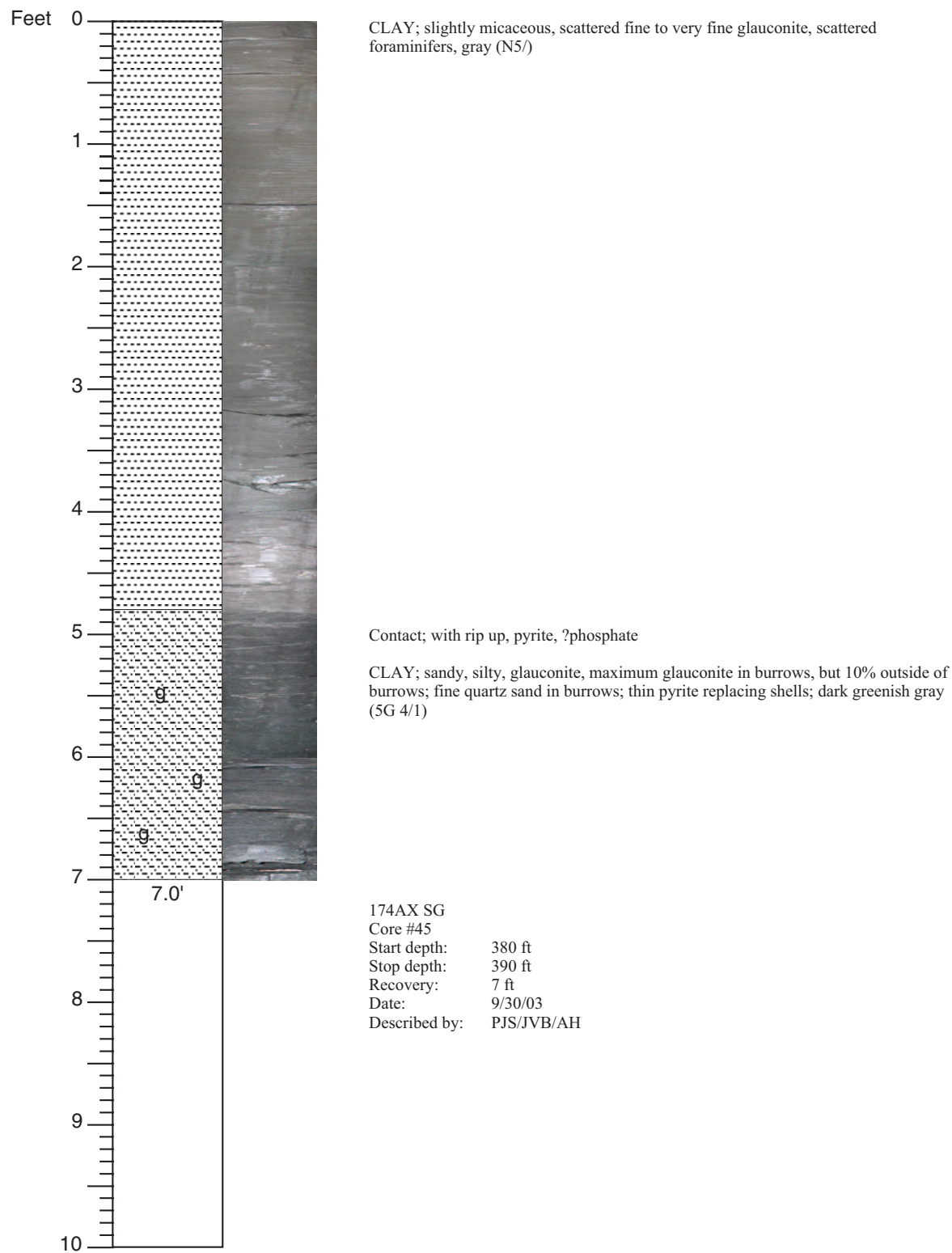


CLAY; trace of mica, some silt, laminated some foraminifers, glauconite filled burrows in top 0.4 ft; burrow with bright green clay at 5.1 ft; glauconite filled burrow at base; greenish gray (5GY 5/1)

174AX SG
Core #44
Start depth: 370 ft
Stop depth: 380 ft
Recovery: 7.15 ft
Date: 9/30/03
Described by: PJS/JVB/AH

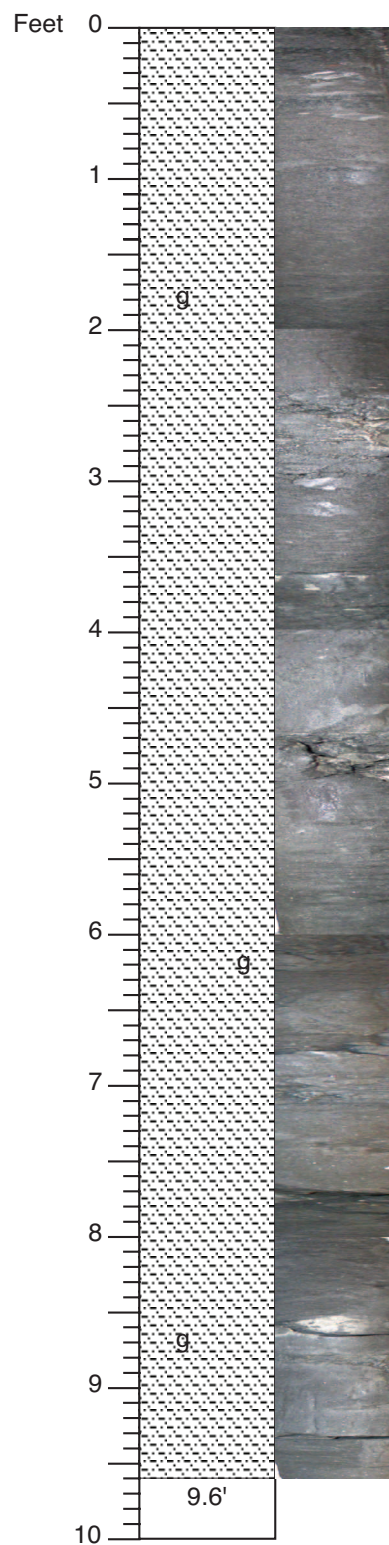
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

45



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

46

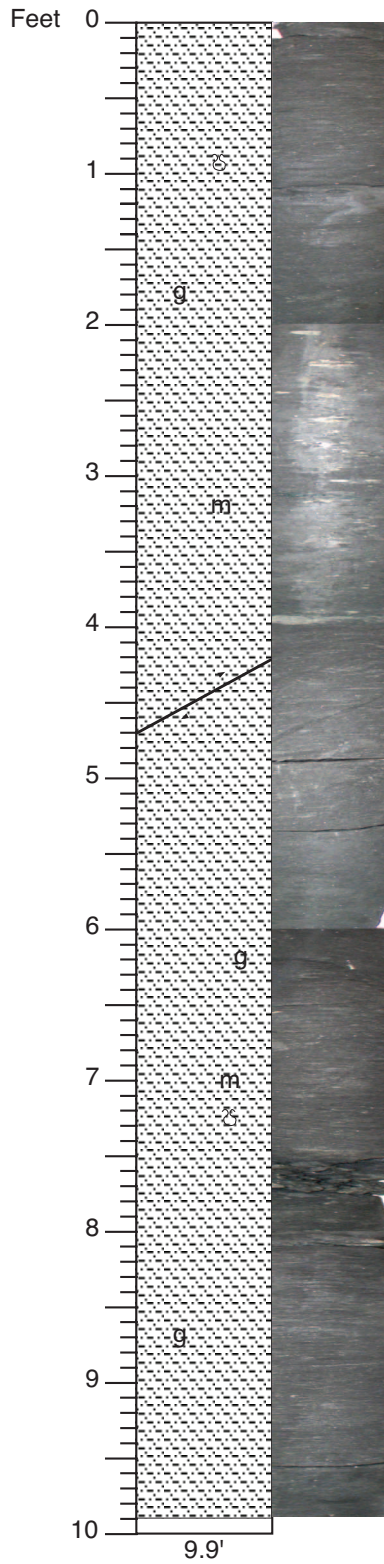


SILT; sandy at top grading to clayey at bottom, 1-3% glauconite, quartz, slightly micaceous, structureless, no obvious burrows; gray (N5/)

174AX SG
Core #46
Start depth: 390 ft
Stop depth: 400 ft
Recovery: 9.6 ft
Date: 9/30/03
Described by: JVB/AH

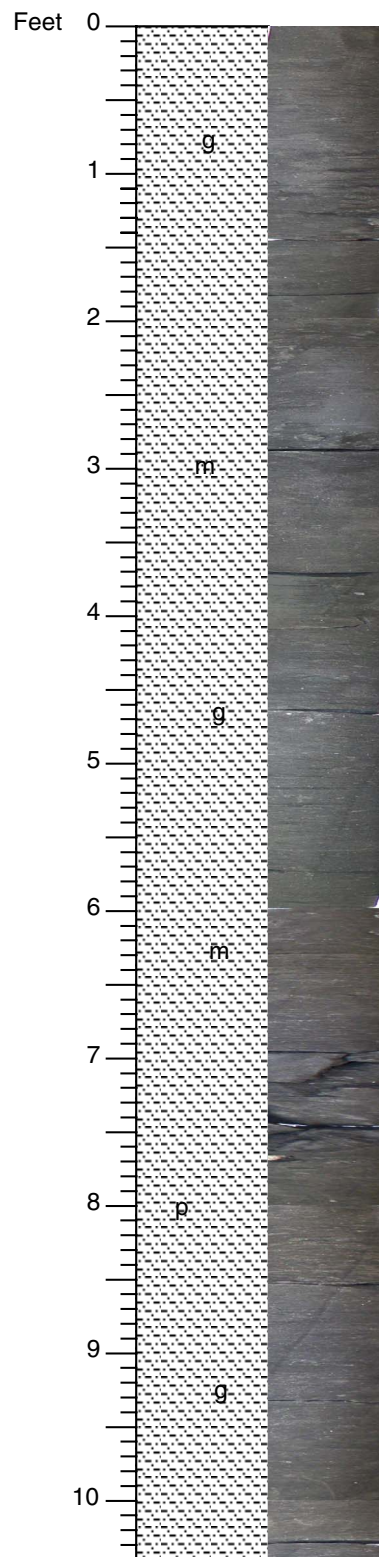
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

47



SILT; clayey, slightly glauconitic (~3%), trace to slightly micaceous, slightly very fine quartz sandy; burrowed with thin laminations ~1 cm especially in the top foot, 4.4-4.75 ft microfault; black (5Y 2.5/2)

174AX SG
 Core #47
 Start depth: 400 ft
 Stop depth: 410 ft
 Recovery: 9.9 ft
 Date: 10/1/03
 Described by: KGM/DK



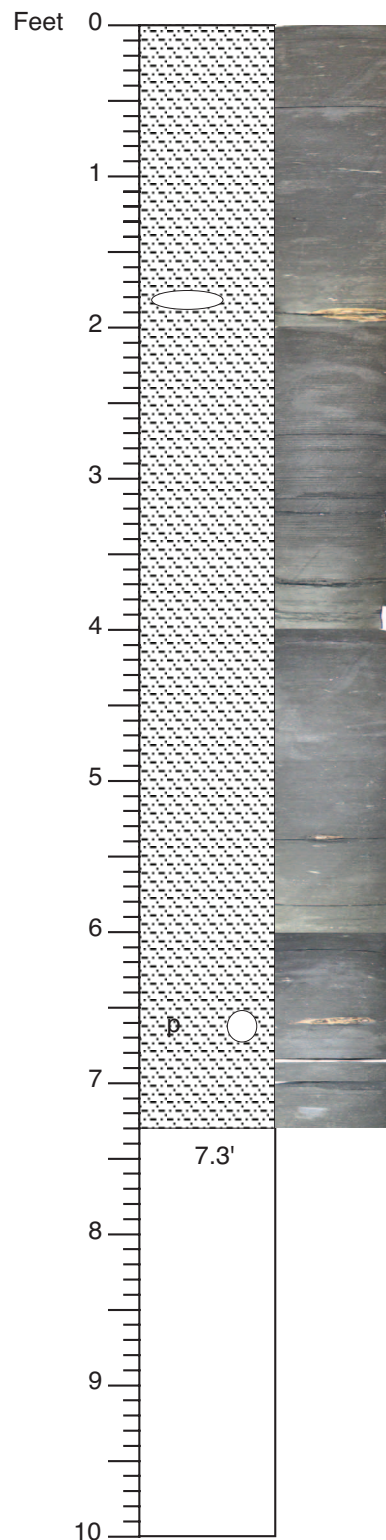
SILT; clayey, very slightly micaceous, slightly glauconitic (±2%), quartzose, (less glauconite and mica than above, slightly more quartz); bioturbated, but not as much as above; scattered pyrite and replaced shell; very dark gray to black (N3/ To N2.5/)

174AX SG
Core #48
Start depth: 410 ft
Stop depth: 420 ft
Recovery: 10.4 ft
Date: 10/1/03
Described by: KGM/DK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

49



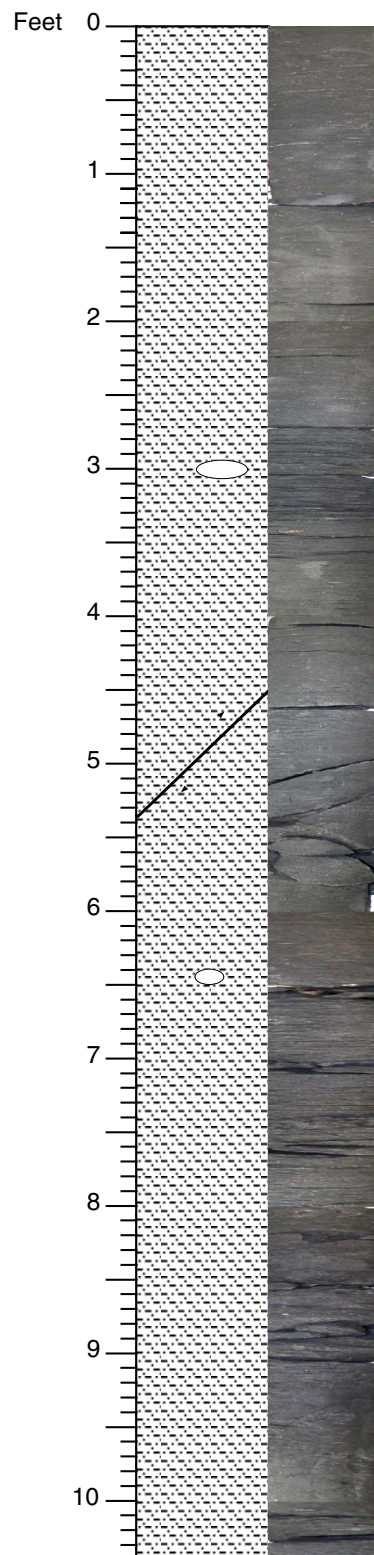
CLAY; silty to clayey SILT; very slightly micaceous, trace of quartz sand; glauconite trace to 1%; pyrite nodules and disseminated pyrite; generally massive with intervals of 1-2 mm scale laminations (2.3-4.2; and 5-6.0 ft); nodules at 1.8, 5.6, and 6.9 ft; classic subsurface Vincentown Formation, very dark gray to black (N3/ To N2.5/)

174AX SG
Core #49
Start depth: 420 ft
Stop depth: 430 ft
Recovery: 7.3 ft
Date: 10/1/03
Described by: KGM/DK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

50



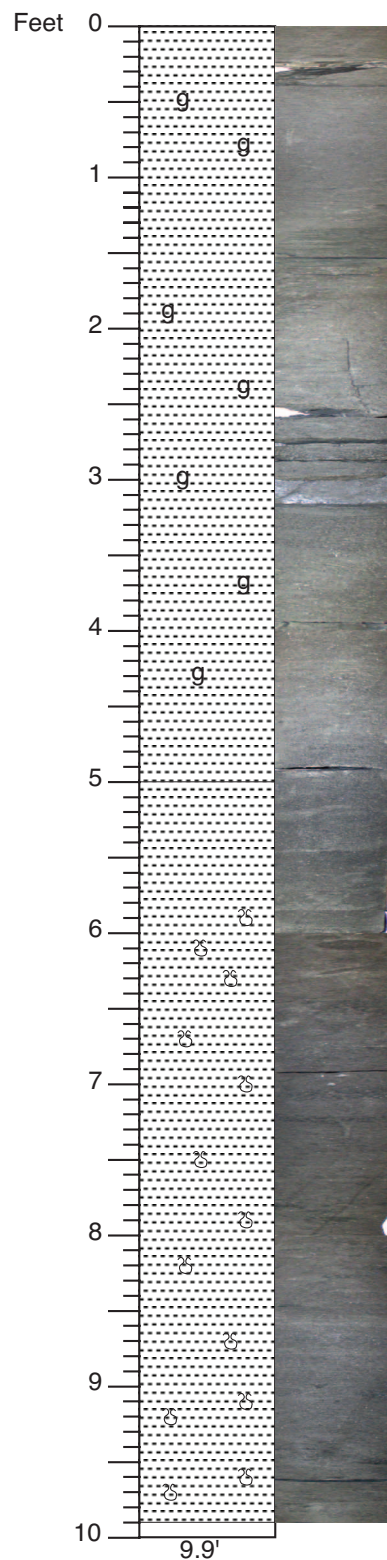
SILT; clayey, to glauconitic clayey SILT; increasing percentage of glauconite towards the bottom, ~1% glauconite from 0-4.5 ft, 3-5% glauconite from 4.5-10.05 ft; ~1% quartz, ~1% mica; 2-3 mm laminations from 2.7-3.3 ft, microfaults 4.9-5.4 ft (other than possible offset laminations, no clear offset visible); dark greenish gray (SGY 4/1)

174AX SG
Core #50
Start depth: 430 ft
Stop depth: 440 ft
Recovery: 10.4 ft
Date: 10/1/03
Described by: KGM/DK

10.4'

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

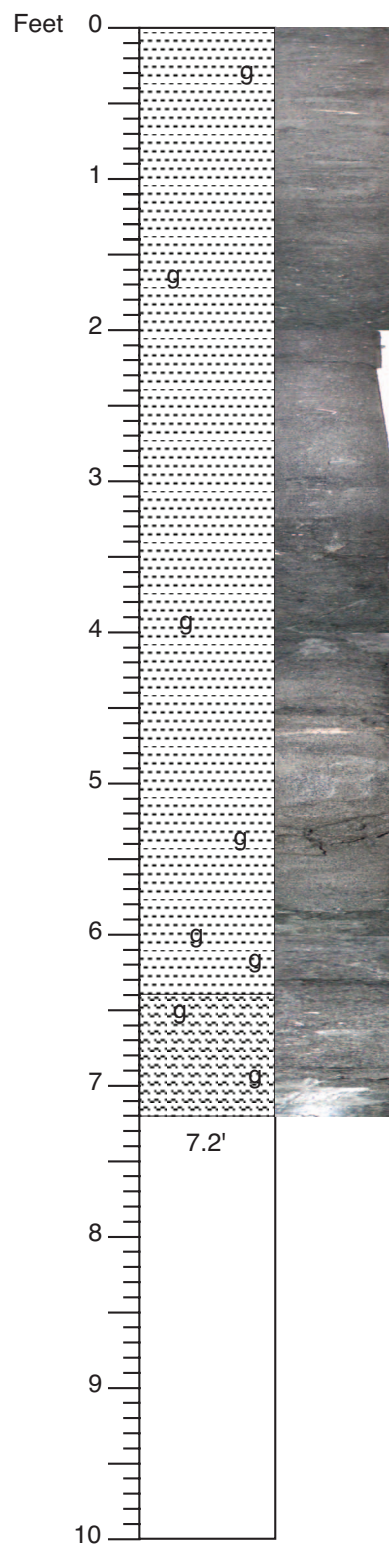
51



CLAY; silty, slightly glauconitic to glauconitic

174AX SG
 Core #51
 Start depth: 440 ft
 Stop depth: 450 ft
 Recovery: 9.9 ft
 Date: 10/1/03
 Described by: KGM/DK

CLAY; laminated (1.6-2.6 ft), to heavily bioturbated with large burrows (4.8-6.2 ft); possible contact at 5.6 ft, 5-10% glauconitic clay over slightly glauconitic clay; very heavily burrowed to well burrowed under the contact, with glauconite concentrated in burrows; dark greenish gray (5GY 4/1), burrows: very dark gray (N3/)



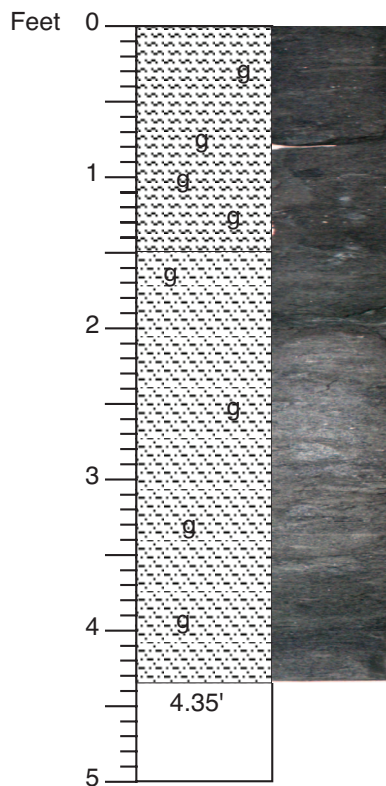
SILT; clayey, 10% glauconite sand in burrows, laminated, trace very fine mica, some benthic foraminifers, some shell hash and occasional shell layers (thin), glauconite is dark, fine to medium; glauconite increases to 20-30%; dark olive gray (5Y 3/2)

SAND; glauconite (50%), silty

174AX SG
 Core #52
 Start depth: 450 ft
 Stop depth: 460 ft
 Recovery: 7.2 ft
 Date: 10/2/03
 Described by: JVB/PJS/RKO

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

53



SAND; glauconite; silty, slightly clayey, slightly micaceous, slightly quartzose, some foraminifers; dark olive gray (5Y 3/2)

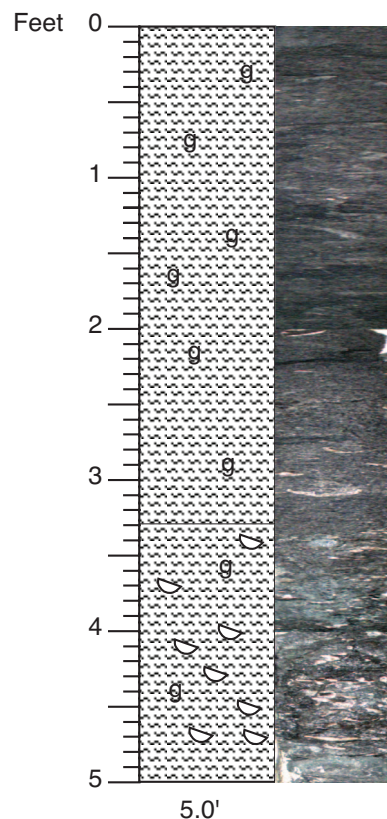
SILT; glauconitic, foraminifers, heavily bioturbated, clay filled burrows; dark, fine to medium glauconite, more glauconite at base; dark gray (N4/)

174AX SG
 Core #53
 Start depth: 460 ft
 Stop depth: 465 ft
 Recovery: 4.35 ft
 Date: 10/2/03
 Described by: JVB/PJS/RKO

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

54



SAND; glauconite; trace mica, some very fine quartz sand, some foraminifers;; clay lined burrows, common *Gryphaea* shells

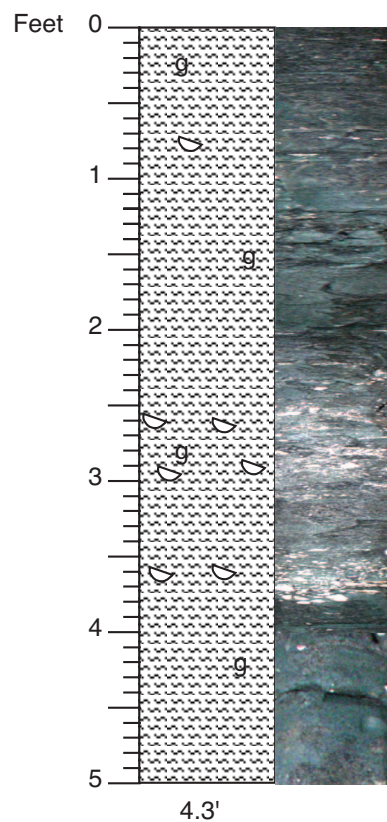
SAND; glauconite, with abundant broken shells, glauconite is very black, fine to medium, ~80%; the bottom 0.2 ft of the core is not as shelly; black (N 2.5/)

174AX SG
Core #54
Start depth: 465 ft
Stop depth: 470 ft
Recovery: 5 ft
Date: 10/2/03
Described by: JVB/PJS/RKO

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

55

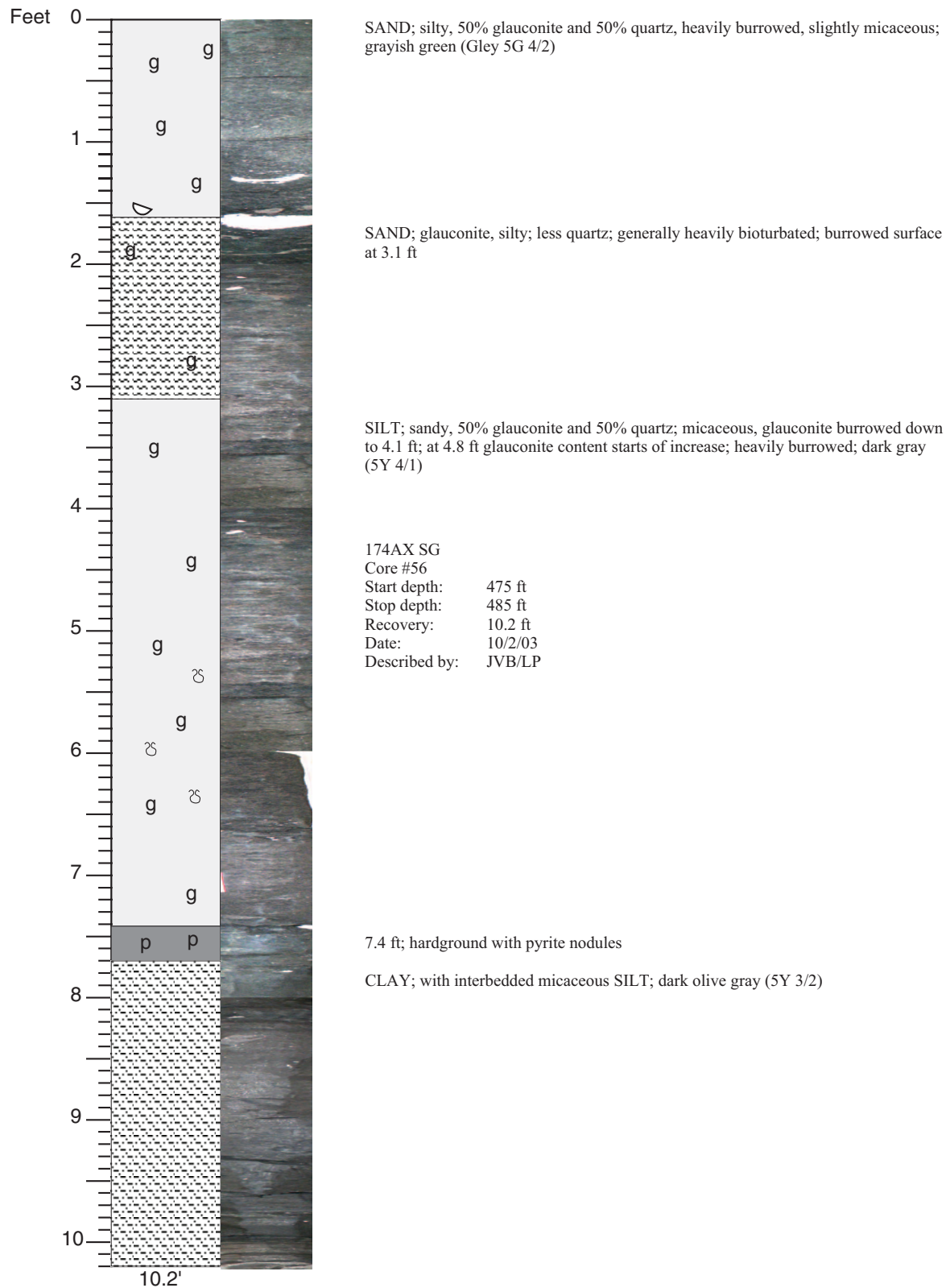


SAND; very fine to fine quartz, glauconitic (~40%), slightly silty; with bright green clay laminae; more clay-silt below 1.1 ft; clays: grayish green (5G 5/2); glauconite: sand black (N2.5/)

174AX SG
Core #55
Start depth: 470 ft
Stop depth: 475 ft
Recovery: 4.3 ft
Date: 10/2/03
Described by: JVB/PJS/RKO

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

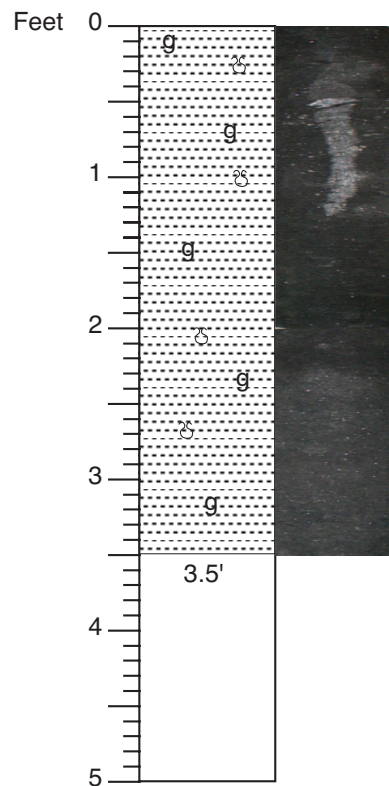
56



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

57



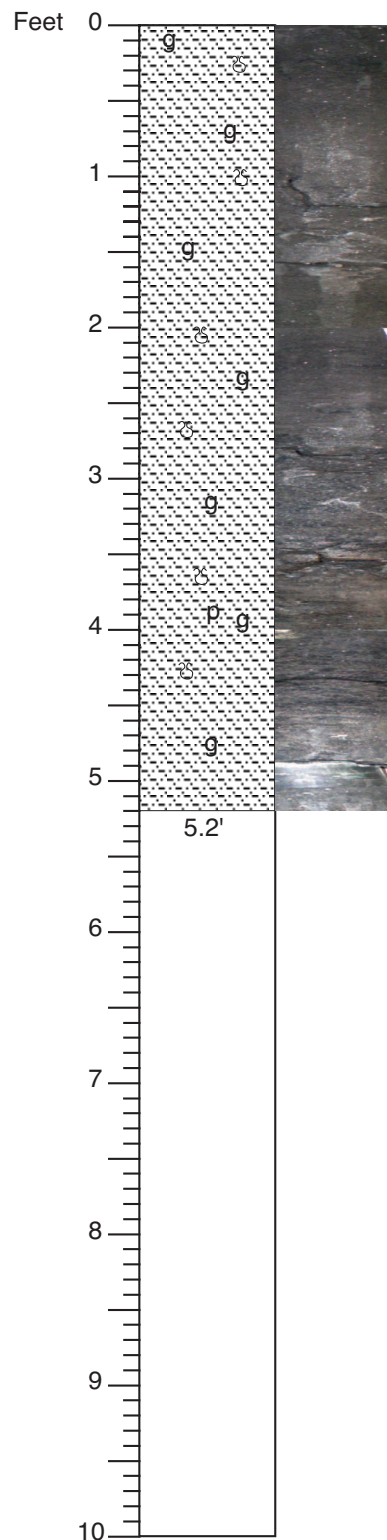
CLAY; silty with interbedded sandy SILT; heavily burrowed, some mica; abundant quartz and glauconite; the sand fraction in the sandy silty is ~50% glauconite and 50% quartz; foraminifers are present, large benthics are visible on the outside of the core; very dark gray (5Y 3/1)

174AX SG
Core #57
Start depth: 485 ft
Stop depth: 490 ft
Recovery: 3.5 ft
Date: 10/2/03
Described by: JVB/LP

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

58



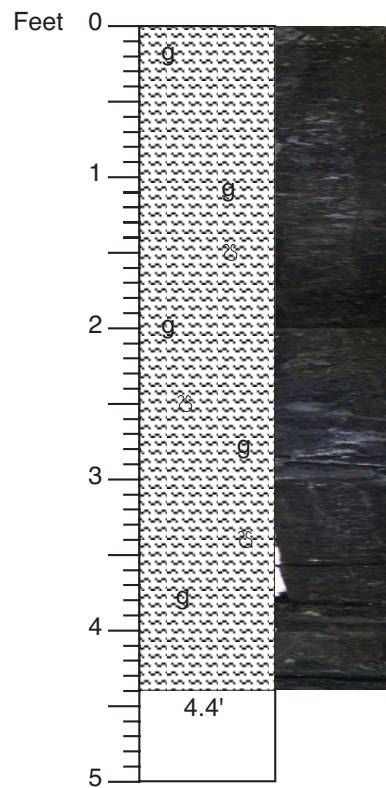
SILT; glauconitic, and interbedded silty CLAY; 50% quartz and 50% glauconite; evidence for bioturbation, micaceous; very dark gray (5Y 3/1)

174AX SG
Core #58
Start depth: 490 ft
Stop depth: 500 ft
Recovery: 5.2 ft
Date: 10/2/03
Described by: JVB/LP

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

59

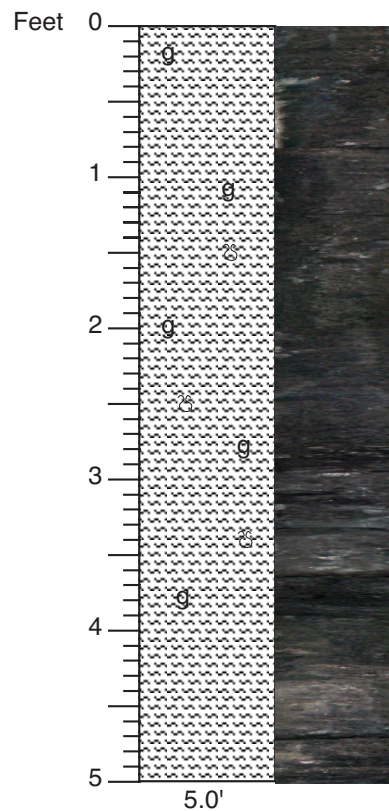


SAND; glauconite, little quartz; very clay rich (up to 40% on places); slightly micaceous; heavily bioturbated, many clay filled burrows; black (N 2.5/)

174AX SG
Core #59
Start depth: 500 ft
Stop depth: 505 ft
Recovery: 4.4 ft
Date: 10/2/03
Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

60

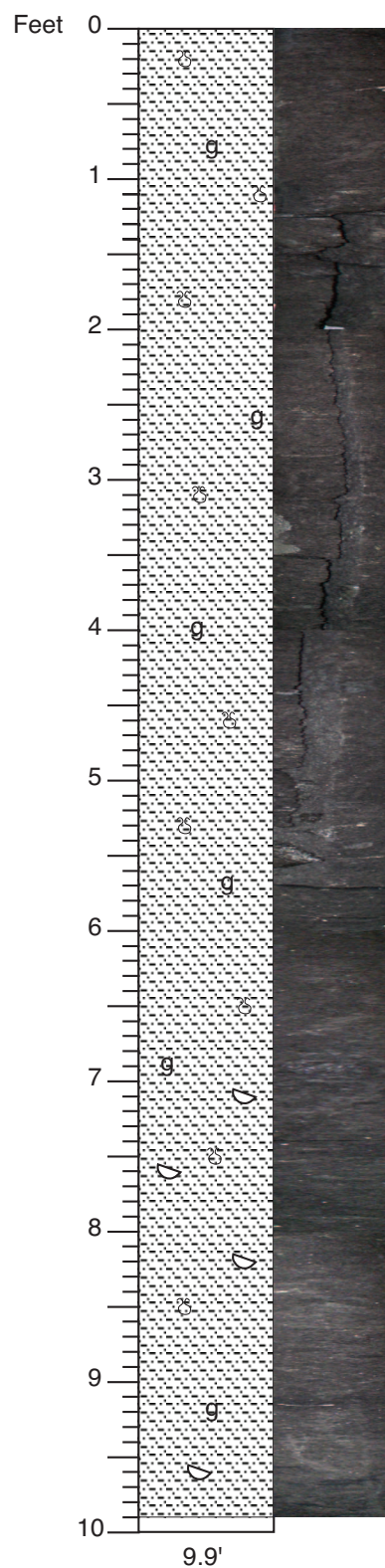


SAND; glauconite (40%, dark, very fine to fine), silty, with 1-2% very fine to fine quartz, trace of mica, some foraminifers, bioturbated, clayier at the bottom; brown clast at 4.8 ft; black (N2.5/)

174AX SG
Core #60
Start depth: 505 ft
Stop depth: 510 ft
Recovery: 5 ft
Date: 10/3/03
Described by: JVB/PJS/AH/RKO

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

61

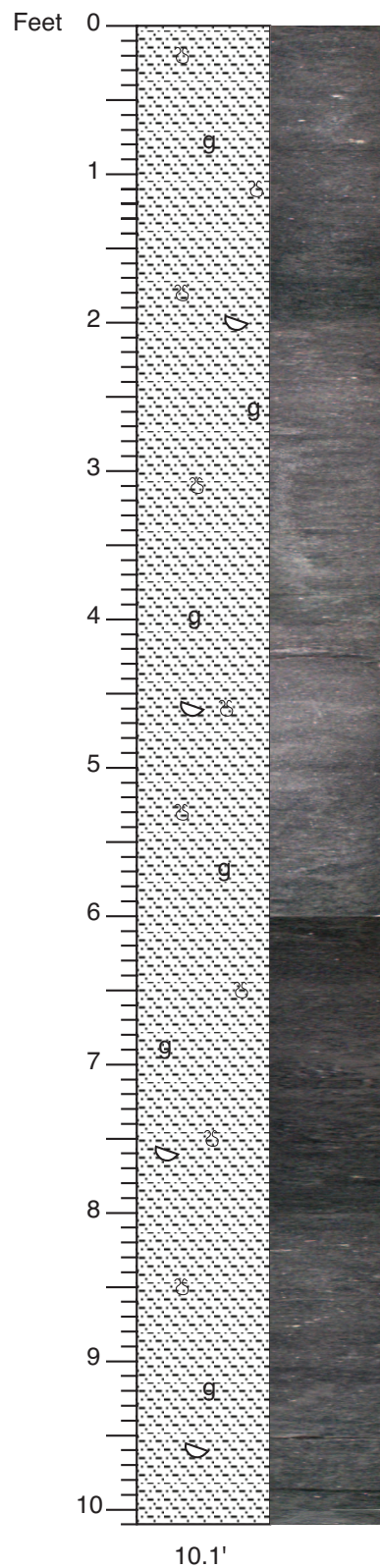


SAND; glauconite (up to 30%), silty, clayey, slightly micaceous, some fine pyrite, heavily bioturbated; shell fragments in the bottom 2.8 ft; clay lined burrows in the bottom 0.8 ft; black (N 2.5/)

174AX SG
 Core #61
 Start depth: 510 ft
 Stop depth: 520 ft
 Recovery: 9.9 ft
 Date: 10/3/03
 Described by: JVB/PJS/AH/RKO

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

62



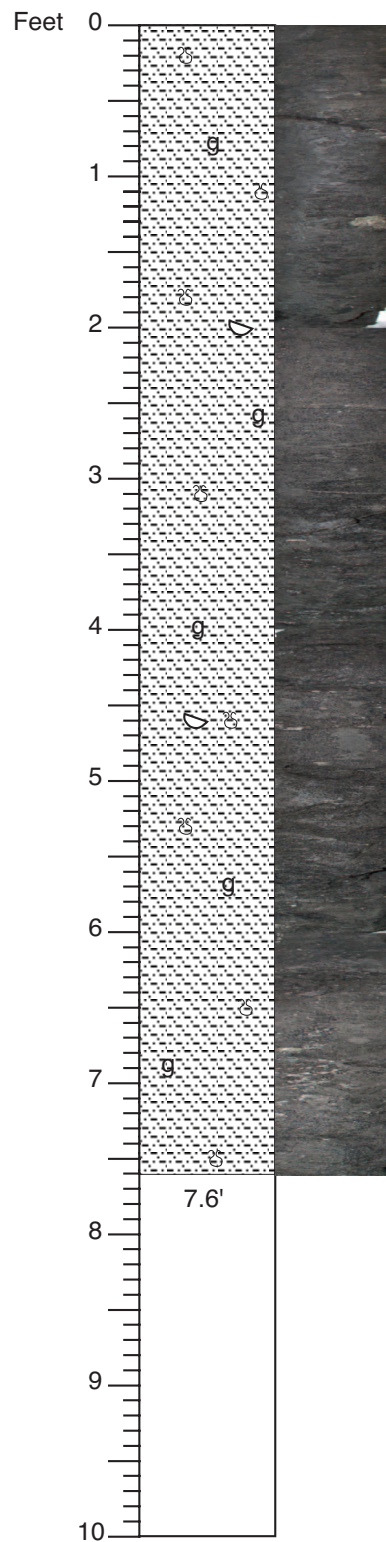
SILT; slightly clayey, glauconitic (30-50%); foraminifer rich; heavily bioturbated with clay and glauconite filled burrows; trace of mica, rare thin shells; clay increases at the base; very dark gray (Gley 10G 3/1)

174AX SG
 Core #62
 Start depth: 520 ft
 Stop depth: 530 ft
 Recovery: 10.1 ft
 Date: 10/3/03
 Described by: JVB/PJS/AH

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

63

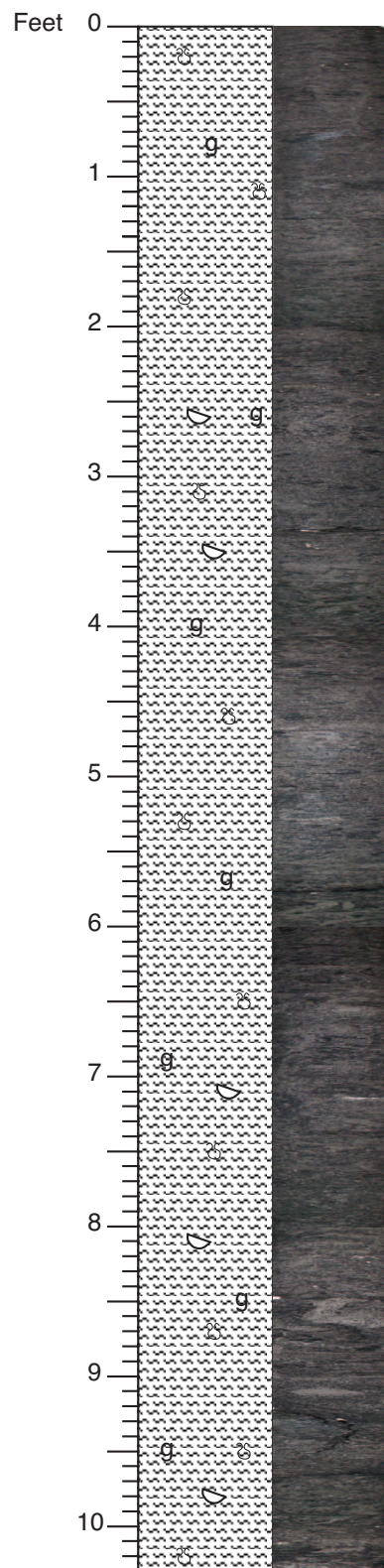


SAND; clayey; numerous glauconite filled burrows; glauconite up to 30-40%, concentrated in burrows; rare shells

174AX SG
Core #63
Start depth: 530 ft
Stop depth: 540 ft
Recovery: 7.6 ft
Date: 10/3/03
Described by: JVB/PJS/AH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

64



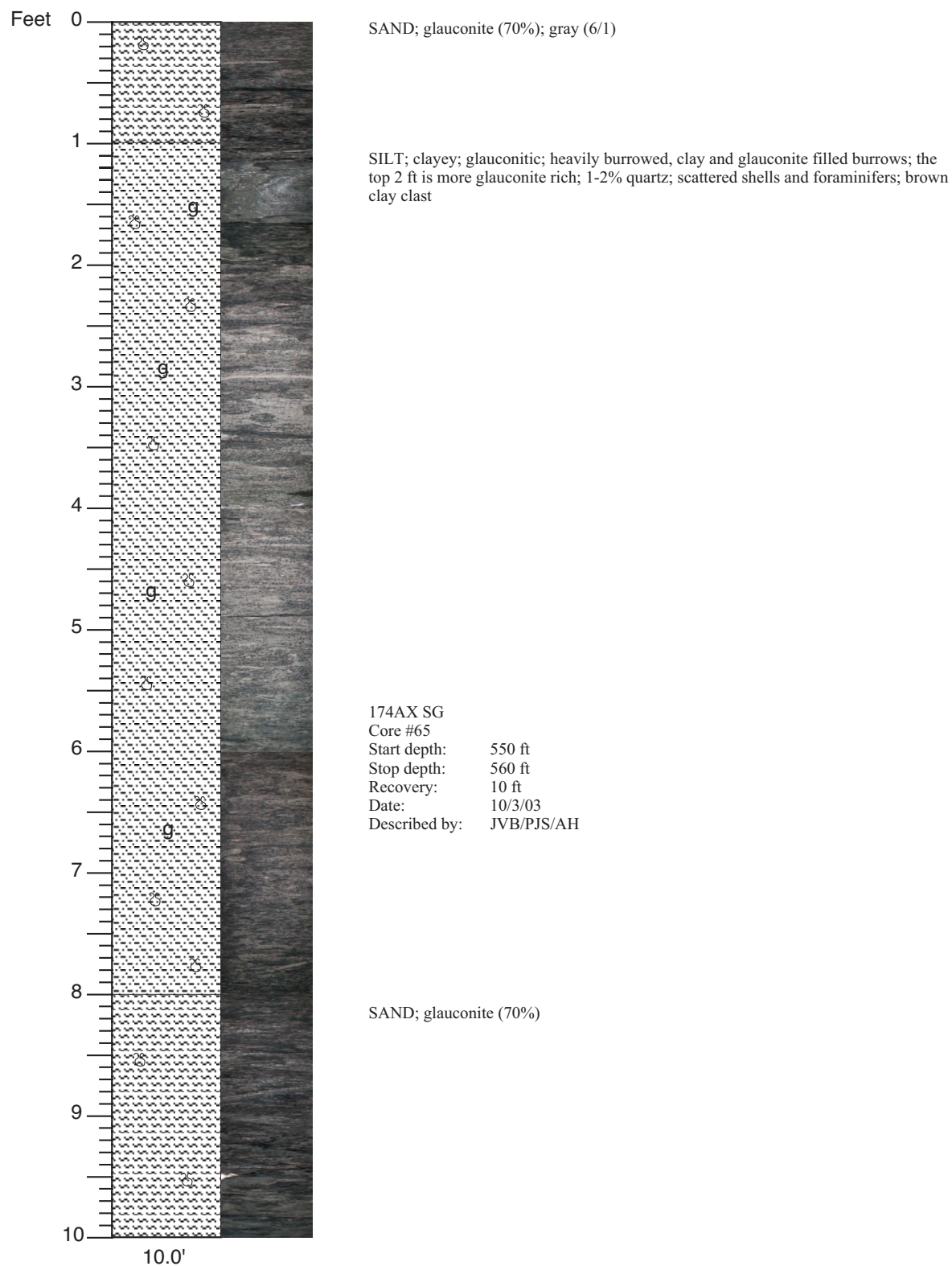
SAND; glauconite, silty; abundant clay filled burrows, heavily bioturbated, no bedding; scattered pyrite; less mica than above, scattered shells; no quartz seen; gray (5Y)

174AX SG
 Core #64
 Start depth: 540 ft
 Stop depth: 550 ft
 Recovery: 10.3 ft
 Date: 10/3/03
 Described by: JVB/PJS/AH

10.3'

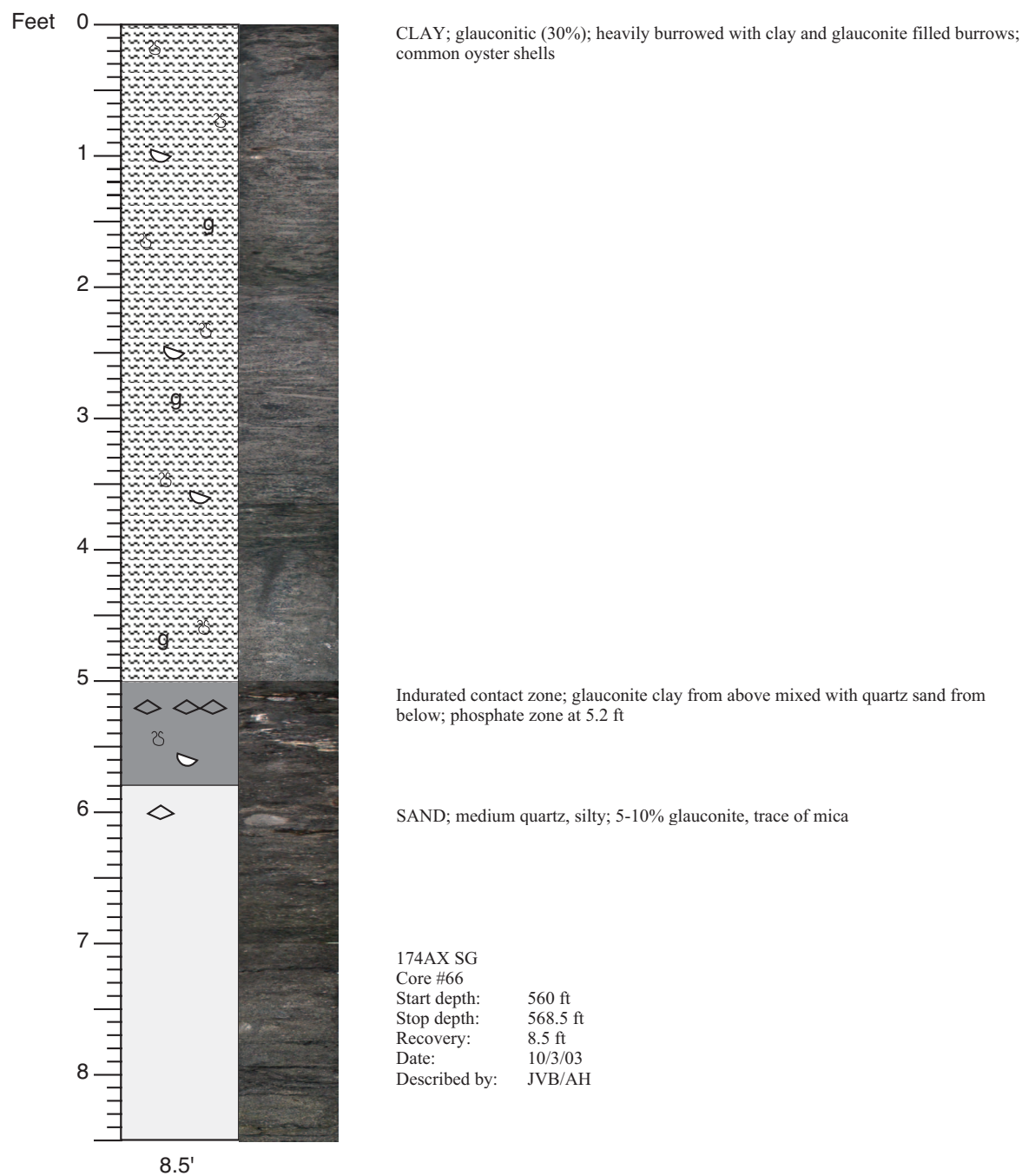
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

65



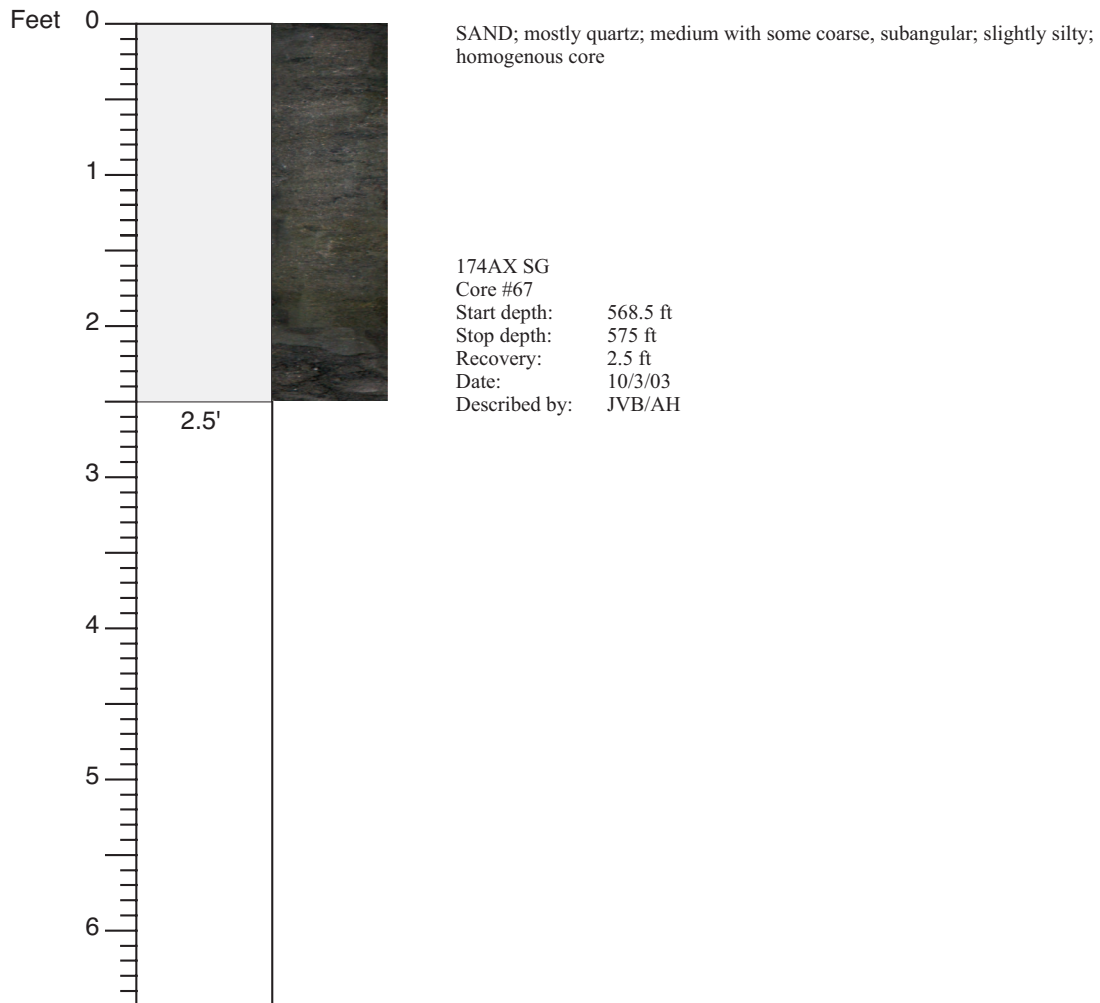
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

66



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

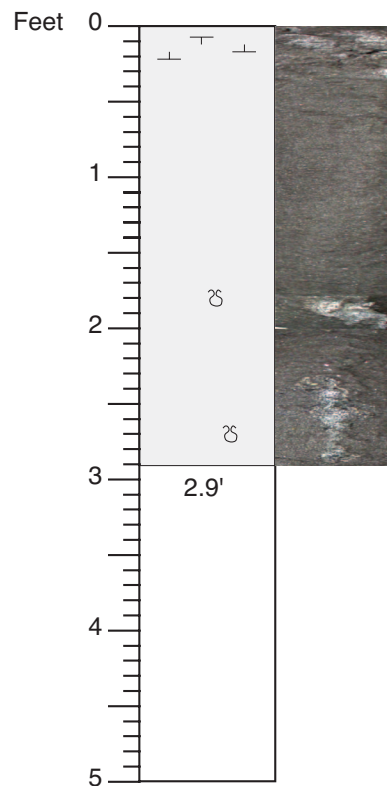
67



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

68



SAND; mostly medium, some fine, trace of coarse and granules; 1-2% fine glauconite, bioturbated with occasional very large burrows, some cross laminae, trace mica, some phosphate, 0-0.35 calcareous cemented interval; dark greenish gray (5GY 4/1); burrows: light greenish gray (5GY 8/1)

174AX SG
Core #68
Start depth: 575 ft
Stop depth: 580 ft
Recovery: 2.9 ft
Date: 10/4/03
Described by: PJS/AK



SAND; mostly medium, 1-2% thin shells, trace of mica; bioturbated, gray (5Y 5/1)

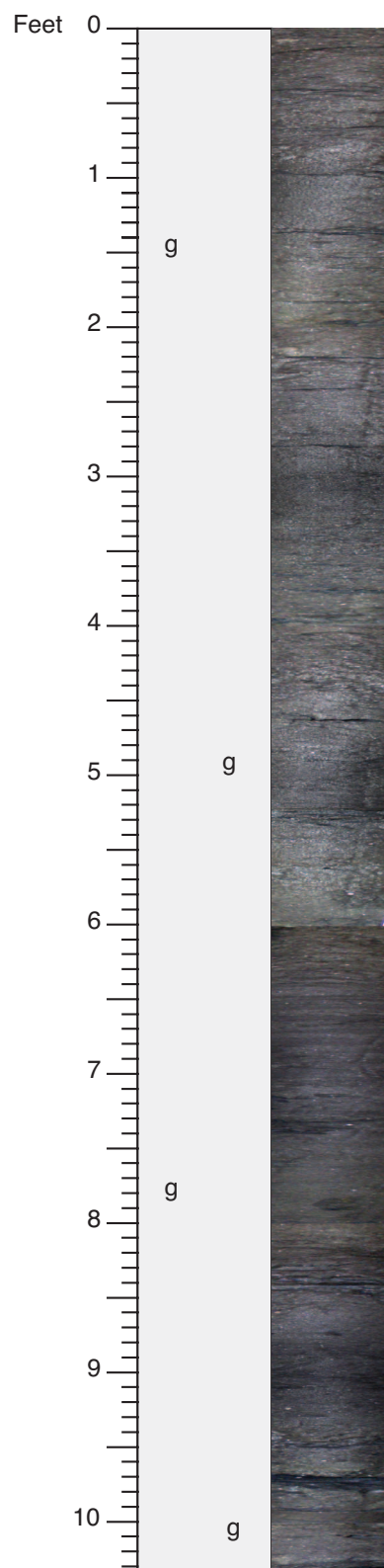
Indurated

SAND; fine to medium, micaceous, more glauconitic (2-3%); with thin interbeds of silt, bioturbated, shells are less common below 7.9 ft; very dark gray (5Y 3/1)

174AX SG
Core #69
Start depth: 580 ft
Stop depth: 590 ft
Recovery: 10.1 ft
Date: 10/4/03
Described by: PJS/AK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

70



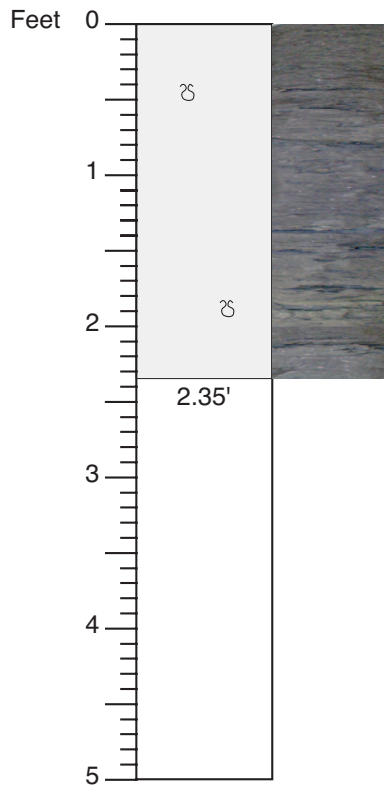
SAND; fine; silty; micaceous, trace of glauconite; with interbeds of clayey silt; interbeds get thicker towards the base; bioturbated; very dark gray (5Y 3/1)

174AX SG
Core #70
Start depth: 590 ft
Stop depth: 600 ft
Recovery: 10.35 ft
Date: 10/4/03
Described by: PJS/AK

10.35'

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

71



SAND; very fine to fine; quartz; clayey, silty, micaceous; with thin slightly glauconitic, woody, medium sand interbeds; bioturbated; very dark gray (5Y 3/1)

174AX SG
 Core #71
 Start depth: 600 ft
 Stop depth: 605 ft
 Recovery: 2.35 ft
 Date: 10/4/03
 Described by: PJS/AK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

72

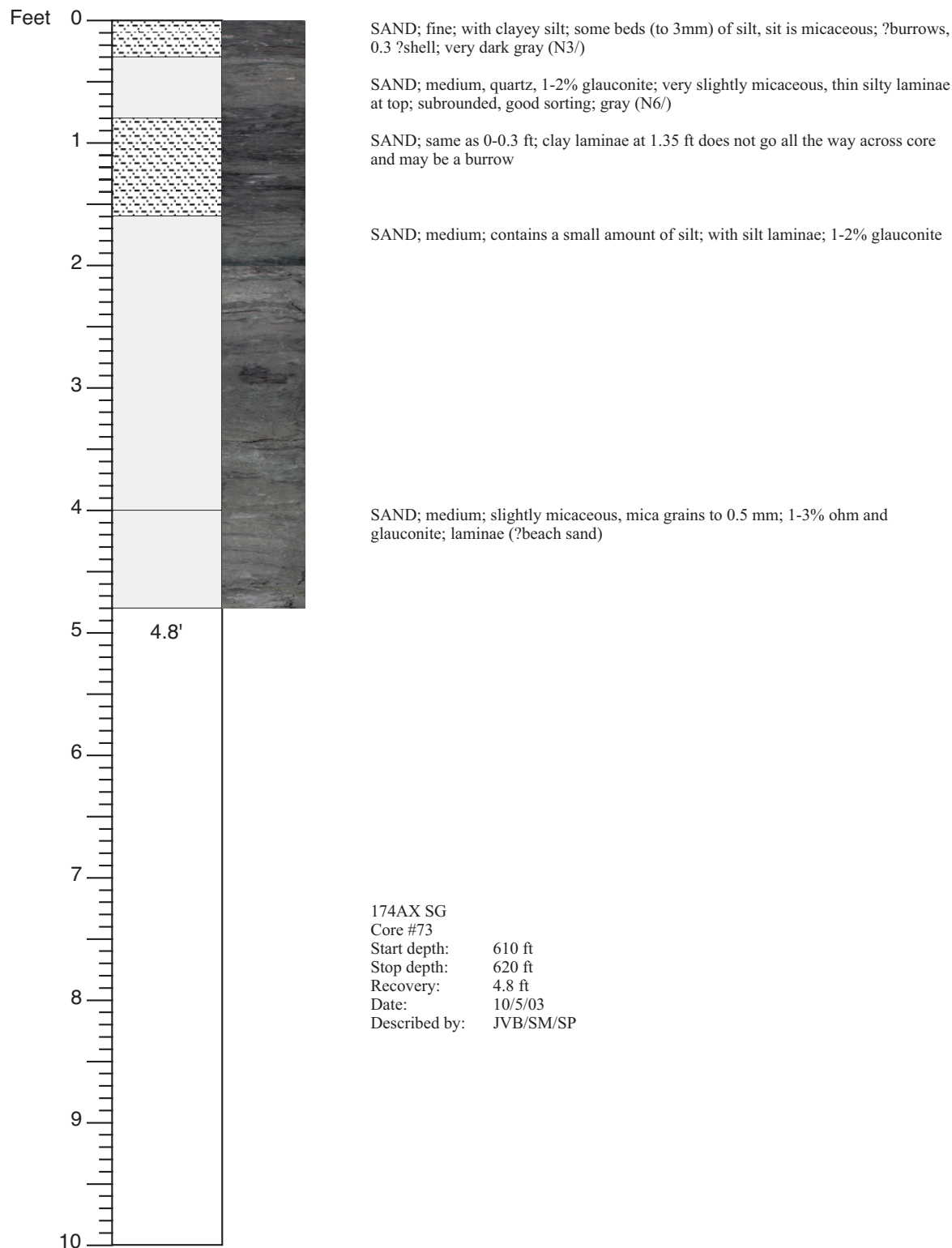


SAND; fine, slightly glauconitic; micaceous, some wood, some large burrows with interbedded dark silty clay; grayish green (5G 5/2)

174AX SG
Core #72
Start depth: 605 ft
Stop depth: 610 ft
Recovery: 5.4 ft
Date: 10/4/03
Described by: PJS/AK

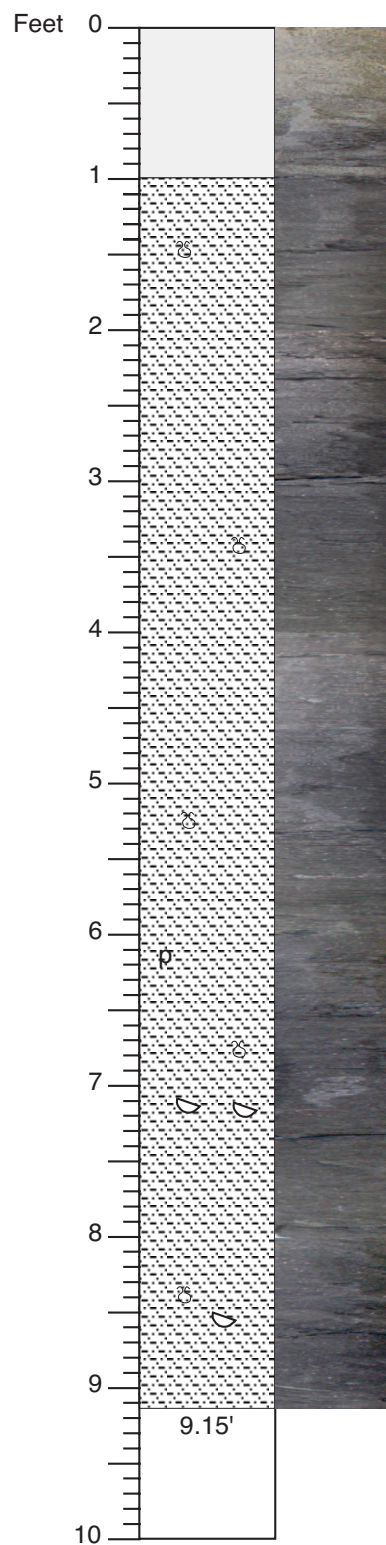
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

73



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

74



SAND; medium; some coarse; quartz, slightly glauconitic (<10%), rare feldspar; clay lamination/beds at 0.5, 0.7-0.8, and 0.8-1.0 ft; olive gray (5Y 5/2)

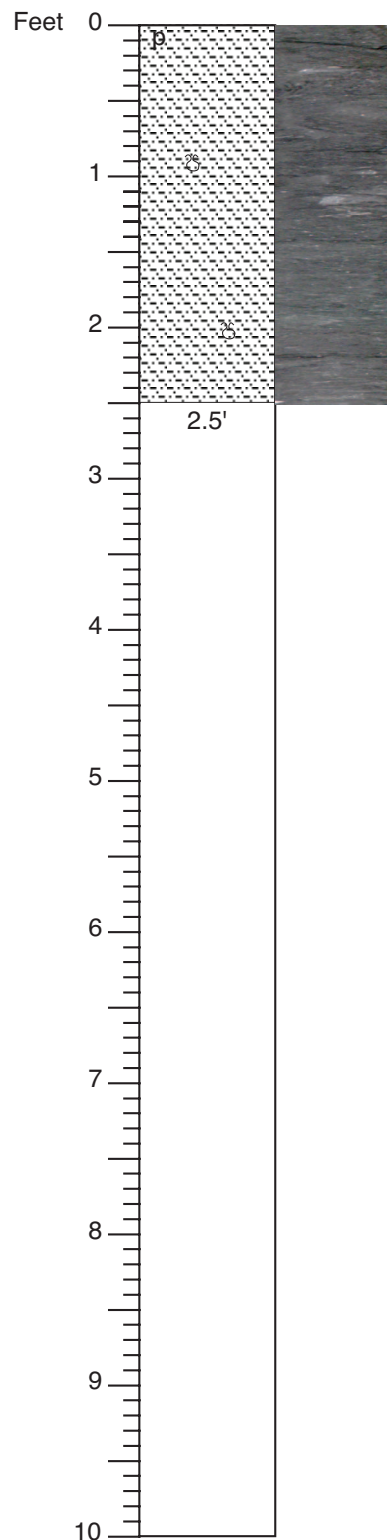
SILT; interlaminated with CLAY; silt is clayey, slightly very fine sandy, rare glauconite, micaceous; clay is silty, not as micaceous; slightly burrowed, up to 1cm diameter, clay and mica increase toward the bottom; thin shells at 7.05, 7.2 and 8.35 ft; pyrite at 6.15 ft; physical structures dominate, more bioturbation at bottom; very dark gray (5Y 3/1)

174AX SG
 Core #74
 Start depth: 620 ft
 Stop depth: 630 ft
 Recovery: 9.15 ft
 Date: 10/5/03
 Described by: JVB/SM/SP

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

75

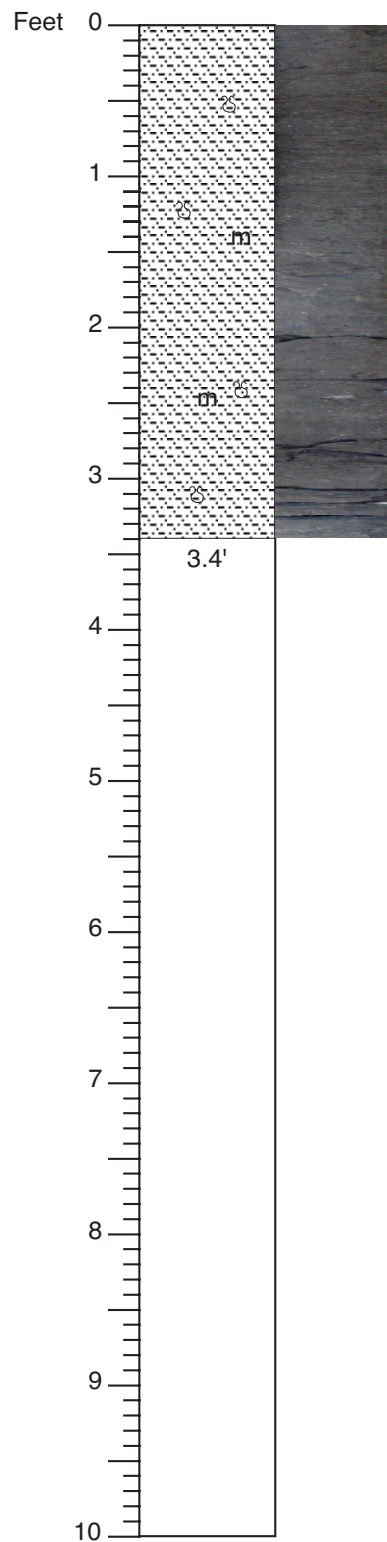


CLAY and interlaminated SILT; slightly micaceous, trace of glauconite; rare very fine sand in silt beds, clays contain mica; rare pyrite (0.3 ft); very small shell fragments at 0.25, and 2.35 ft; thinly bedded to laminated, burrowed slightly throughout (0.5-1 cm), horizontal burrows; fine quartz sand bed at 2.45 ft (?storm event); black (N2.5/)

174AX SG
Core #75
Start depth: 630 ft
Stop depth: 640 ft
Recovery: 2.5 ft
Date: 10/5/03
Described by: JVB/SM/SP

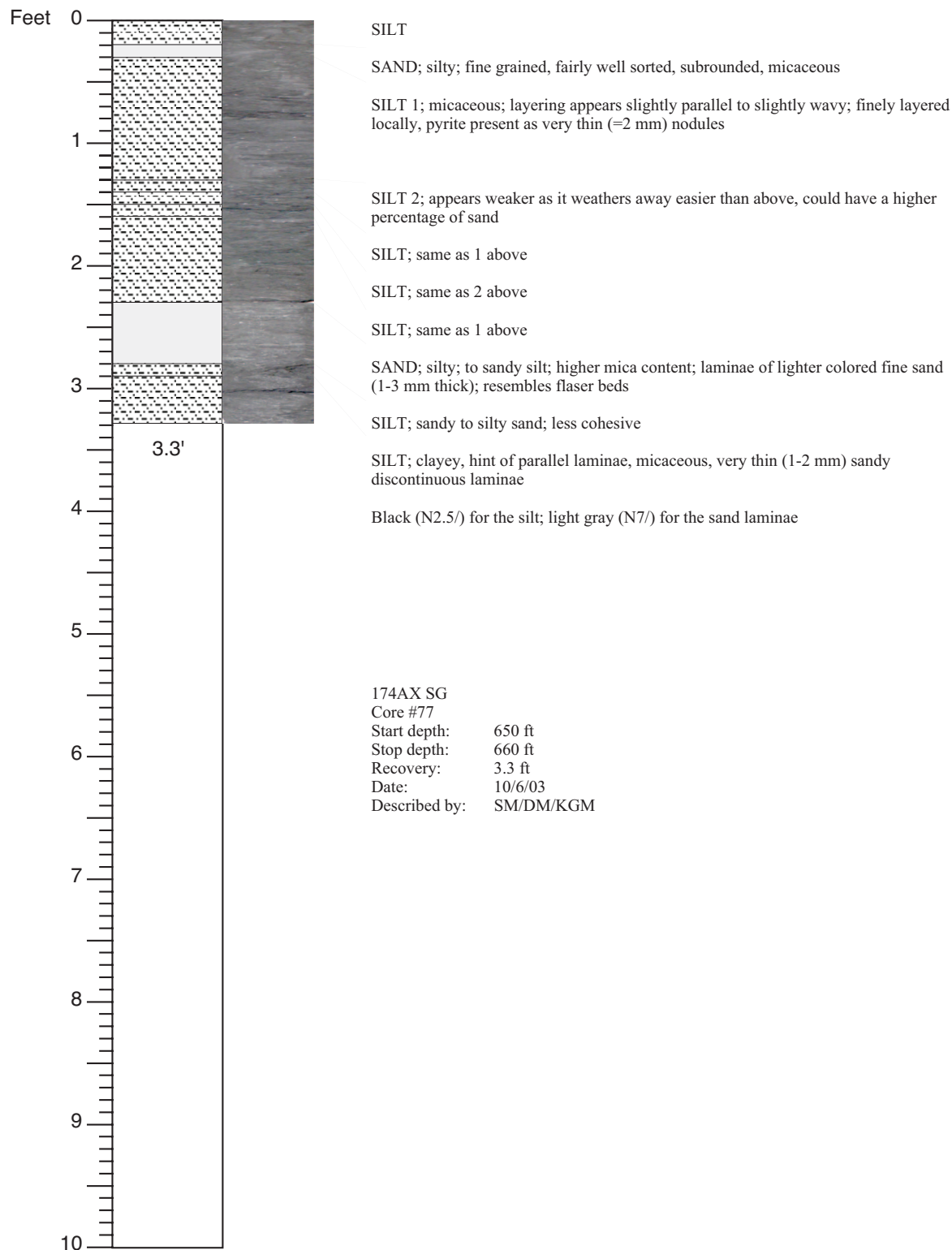
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

76



SILT; clayey and interlaminated silty CLAY; silt contains a small percentage of very fine sand, micaceous, ?chlorite; clays are darker than the silty; may be a few grains of immature glauconite, rare burrows, 1.6-1.7 ft finely laminated; black (N2.5/)

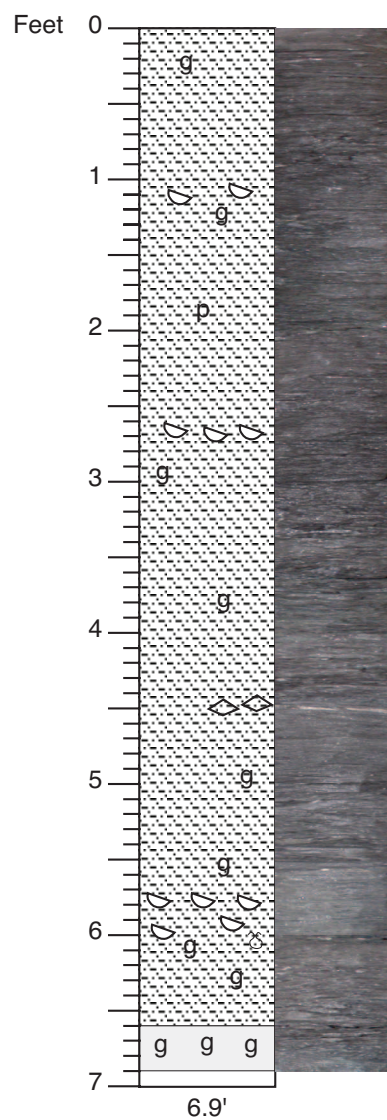
174AX SG
 Core #76
 Start depth: 640 ft
 Stop depth: 650 ft
 Recovery: 3.4 ft
 Date: 10/5/03
 Described by: JVB/SM



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

78



SILT; varies from sandy silt to clayey silt, finely interlaminated; hints of cross laminations as packets, micaceous, burrowed, rare shell-rich layers and pyrite nodules; shells are broken; glauconite content increases down core; preserved cross laminations and bioturbation increase down core; some very thin sandy interbeds at the base of the unit, black (N2.5/)

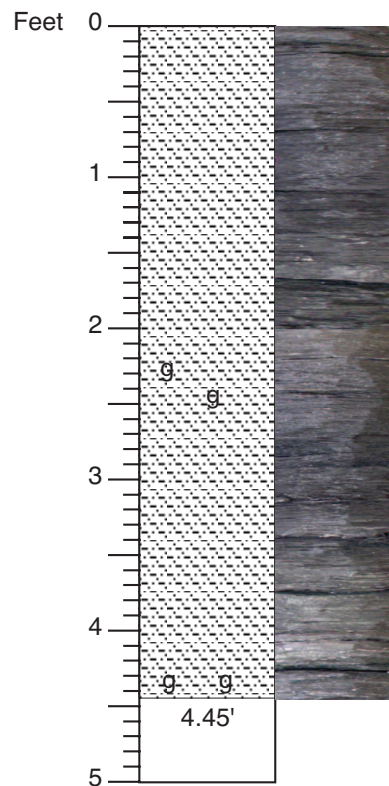
SAND; glauconitic, micaceous, black (N2.5/)

174AX SG
Core #78
Start depth: 660 ft
Stop depth: 667 ft
Recovery: 6.9 ft
Date: 10/6/03
Described by: SM/DM/KGM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

79

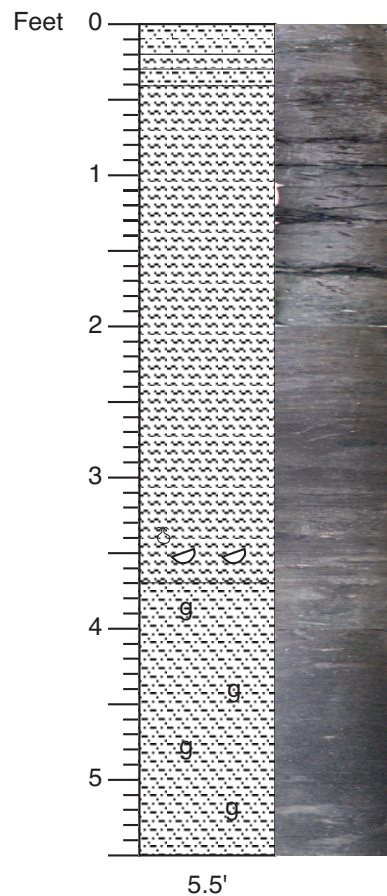


SILT; interlayered very clayey silt to silty clay and silty sand; micaceous, glauconitic, rare very small shell fragments, contains glauconite filled burrows; laminae are slightly wavy and appear more continuous than the sandy laminae (?flaser beds) in the last core; some zones have stronger bioturbation and more corresponding glauconite (2.8, 3.5, and 4.3 ft); this core appears to have been deposited in shallower paleoenvironments than the last core

174AX SG
Core #79
Start depth: 667 ft
Stop depth: 672 ft
Recovery: 4.45 ft
Date: 10/6/03
Described by: SM/DM/KGM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

80



SILT; clayey, structureless

SILT; and very silty glauconite SAND; sand content increases with depth; bioturbation increases to contact; pyrite nodules and shell fragments to the base; glauconite sand layer and large (3 cm) pyrite nodule at 1.6 ft; possible fault surface at 2.7-2.9 ft

Gradational contact

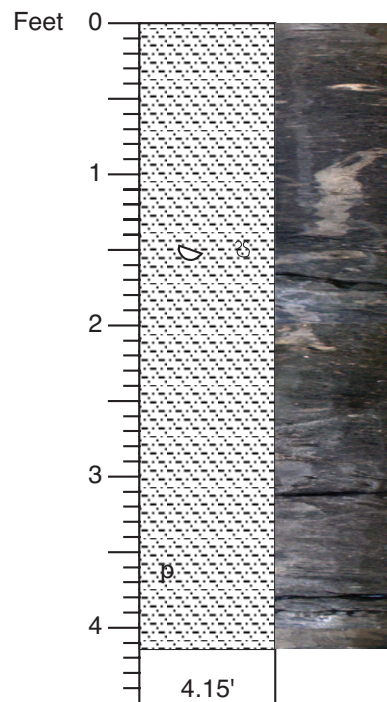
SILT; very glauconitic (~30%); glauconite content increases with depth; lacks apparent structures suggesting complete bioturbation

174AX SG
 Core #80
 Start depth: 672 ft
 Stop depth: 677.5 ft
 Recovery: 5.5 ft
 Date: 10/6/03
 Described by: SM/DM/KGM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

81

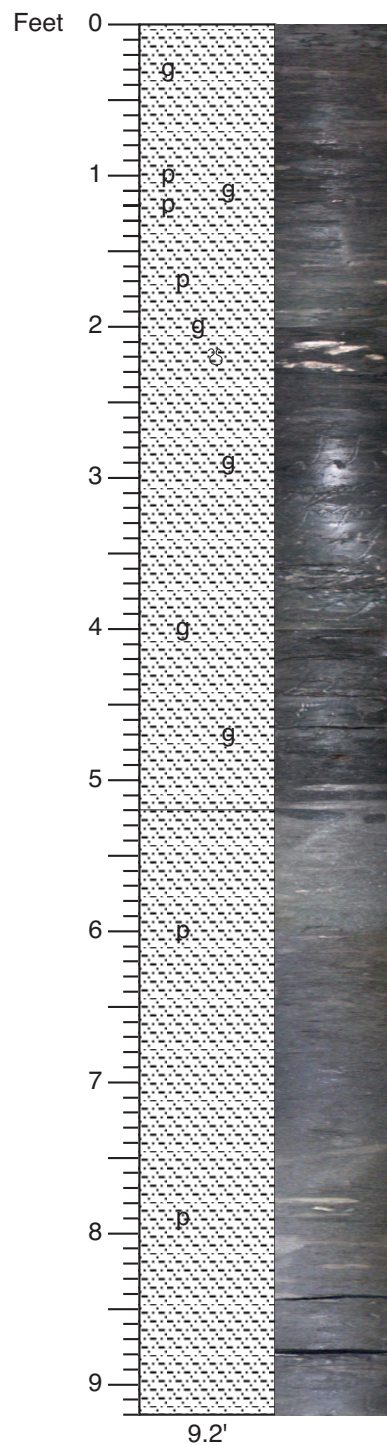


SILT; glauconitic to silty glauconite SAND; vertical and horizontal burrows, clay lined; glauconite increases down core; black (N2.5/); clay – dark gray (5Y 4/1)

174AX SG
Core #81
Start depth: 677.5 ft
Stop depth: 682 ft
Recovery: 4.15 ft
Date: 10/6/03
Described by: SM/DM/KGM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

82



SILT; clayey, glauconitic, uniform, no apparent structures suggesting high bioturbation; a few silt filled burrows at 2.2 ft (gray; 5Y 6/1); black (2.5N/)

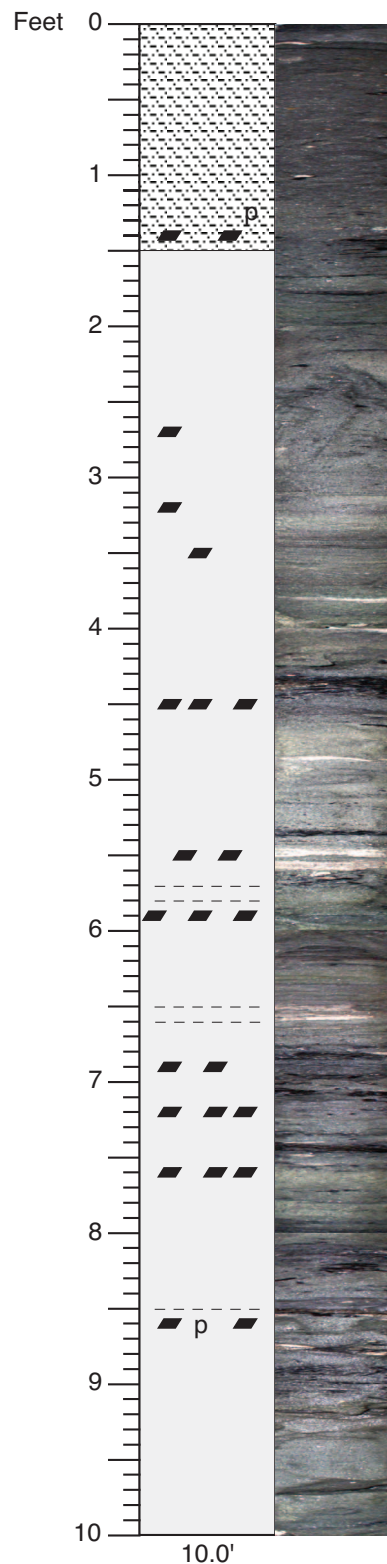
Sharp contact

SILT; sandy, micaceous, no glauconite, glauconite filled burrows at top; otherwise structureless, a few pyrite nodules and clay filled burrows, black (7.5YR 2.5/1)

174AX SG
 Core #82
 Start depth: 682 ft
 Stop depth: 690 ft
 Recovery: 9.2 ft
 Date: 10/6/03
 Described by: SM/DM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

83



SAND; fine, very silty with lignitic interbeds, slightly micaceous; black (SGY 2.5/1)

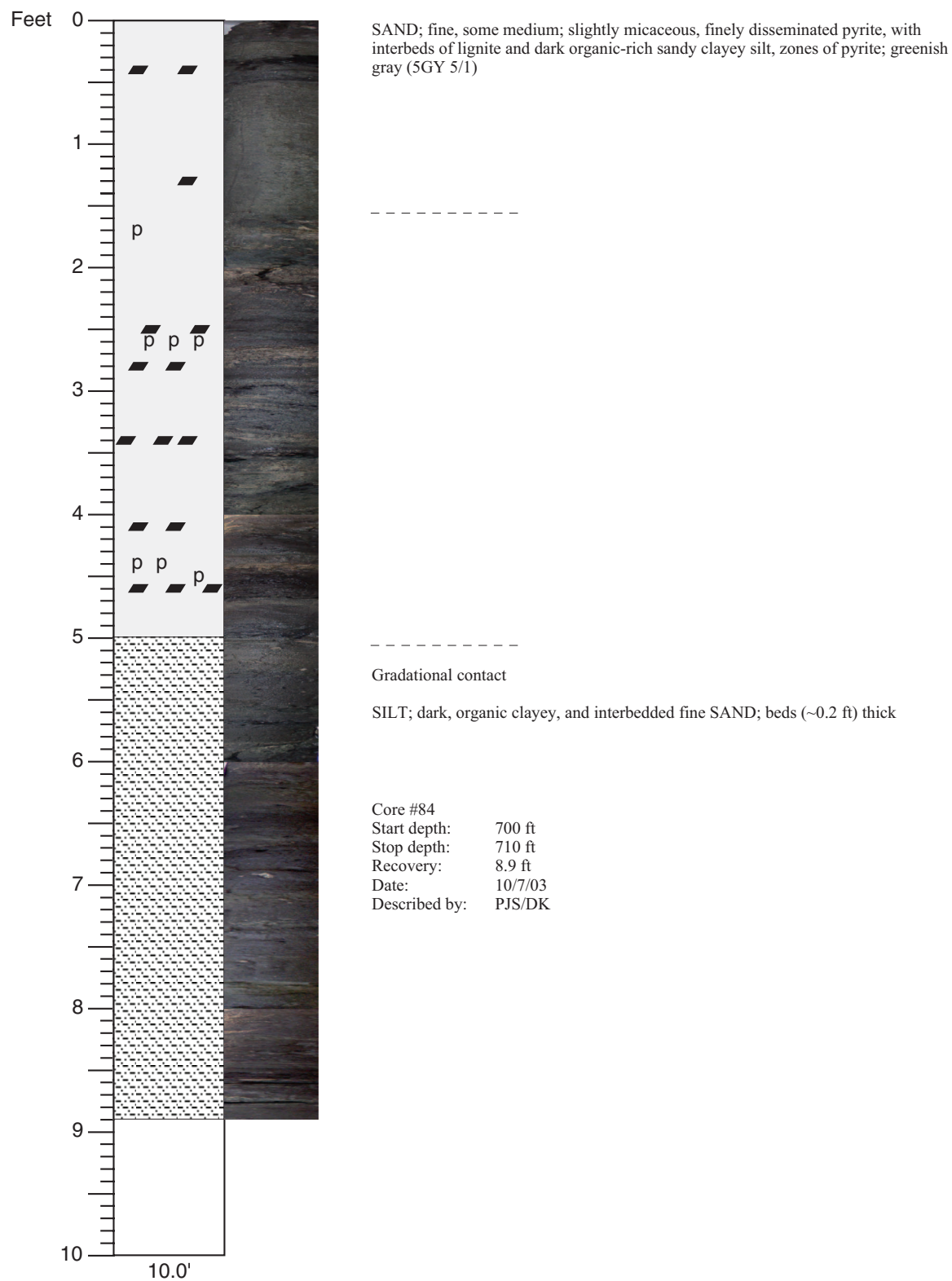
Sequence boundary

SAND; gradational change; medium, less fine, slightly micaceous, with silty lignitic laminae to thin interbeds; occasional thin brown clayey silt interbeds (0.05 ft maximum thickness); lignite beds are ~0.1-0.2 ft thick; sand becomes medium at base, sand has very fine green rounded grains (?wood); occasional thin burrows; grayish green (5G 5/2)

174AX SG
 Core #83
 Start depth: 690 ft
 Stop depth: 700 ft
 Recovery: 10 ft
 Date: 10/7/03
 Described by: PJS/DK

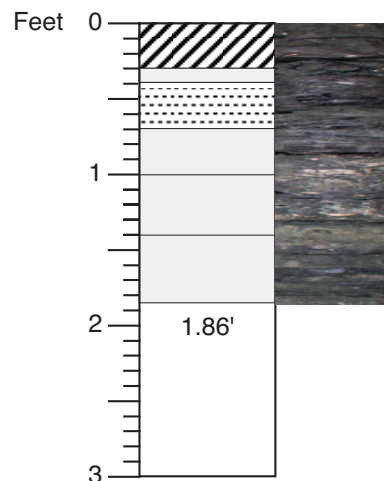
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

84



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

85



SLURRY; (vertical clay lamination, clasts)

SAND; ?in place

CLAY; silty, slightly sandy and interlaminated SAND; slightly micaceous

SAND; medium to fine with clay cross laminations

SAND; medium to fine with clay clasts (0.3-1 cm); rare quartz pebbles and lignite

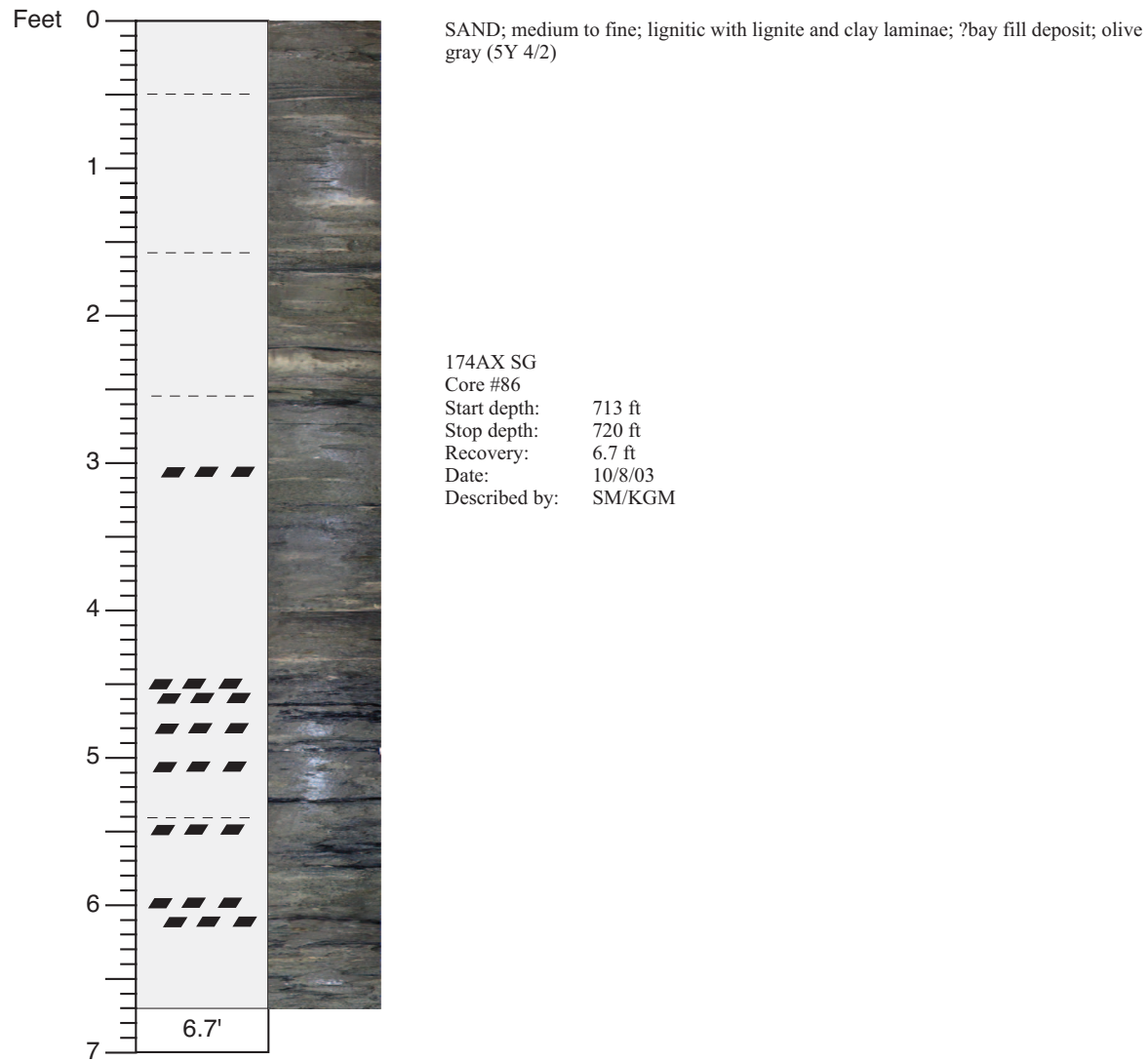
SAND; medium to fine with clay laminations, some cross laminations

Looks like a channel fill deposit (?tidal delta/estuarine); sands: dark gray (5Y 4/1); clays: black (N2.5/)

174AX SG
 Core #85
 Start depth: 710 ft
 Stop depth: 713 ft
 Recovery: 1.86 ft
 Date: 10/8/03
 Described by: SM/KGM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

86



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

87



SAND; medium, lignitic, with lignite and clay cross beds; lignite is found in laminae and cross laminae, below 7.7 ft lignite is scattered throughout core; clay rip up at 2.0-2.4 ft; greenish tint but no glauconite seen between 2.4-3.4 ft

174AX SG
 Core #87
 Start depth: 720 ft
 Stop depth: 730 ft
 Recovery: 9.0 ft
 Date: 10/8/03
 Described by: SM/KGM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

88



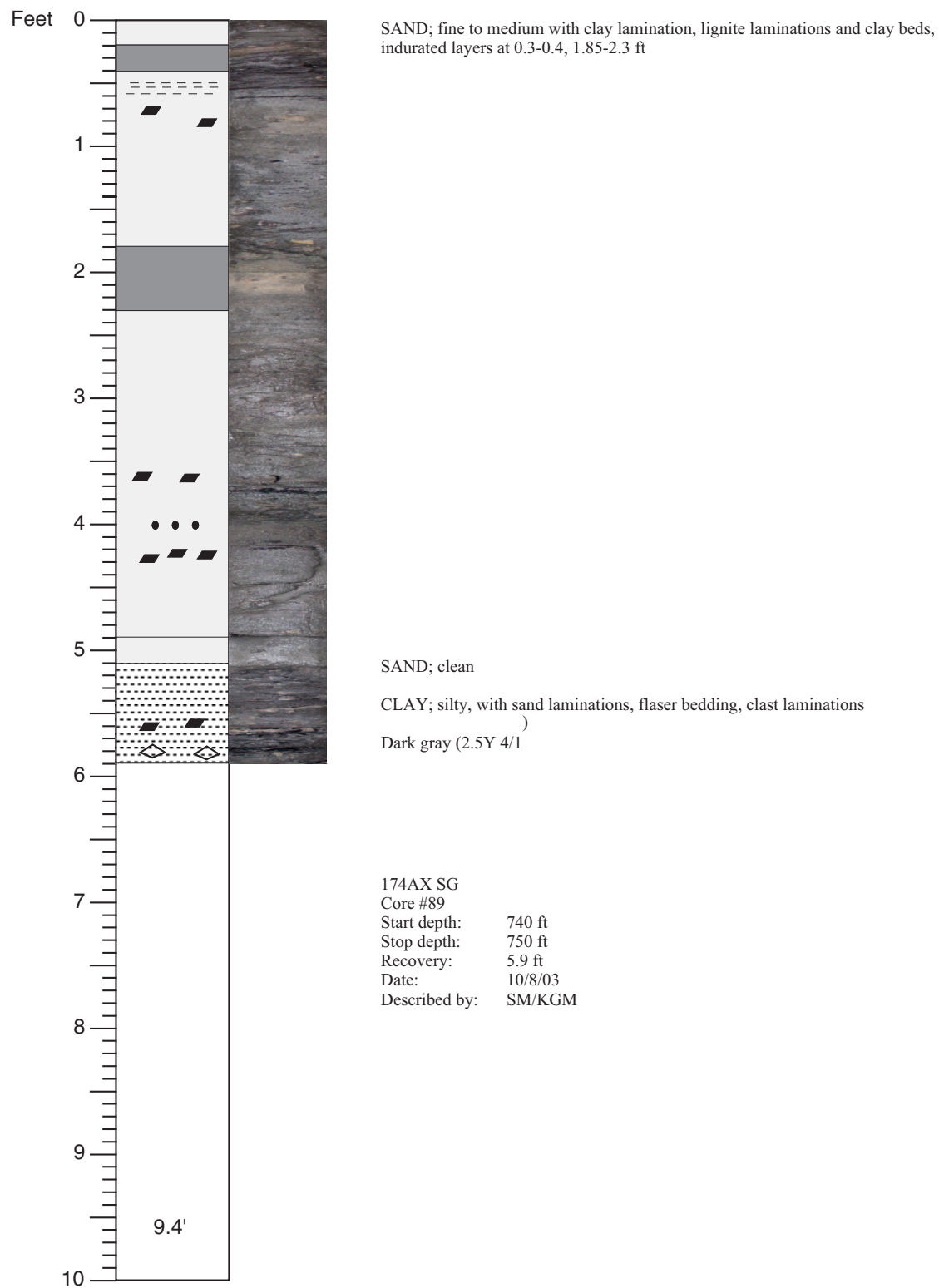
SAND; fine to coarse; lignitic, with clay laminations and angular lithic clast beds; clast bed with sand matrix; clasts up to 2 cm; clasts lithologically resemble the Passaic Formation shale

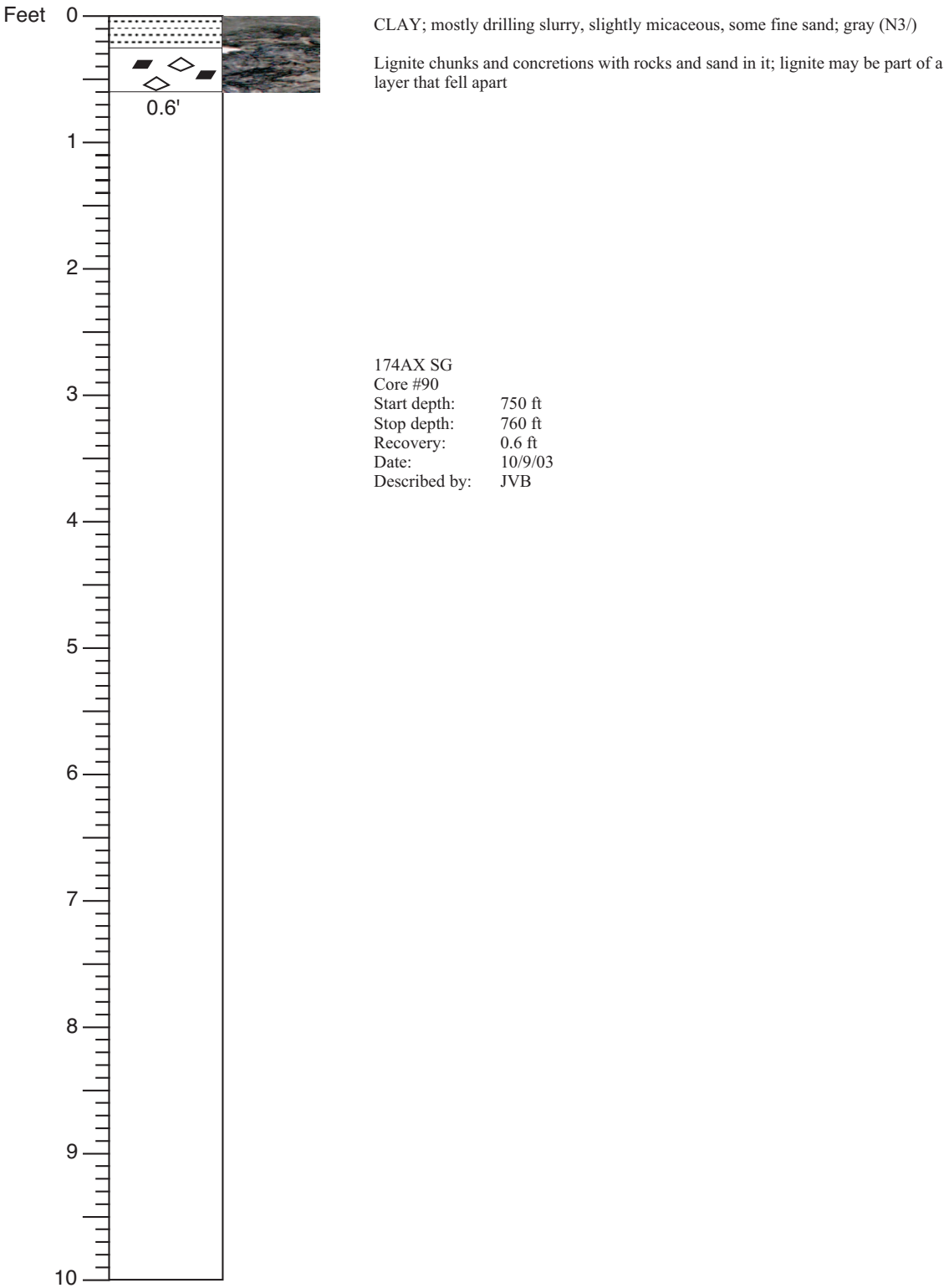
SAND; medium to coarse, poorly sorted, quartz, with clay matrix and lithic clasts, lignitic

174AX SG
 Core #88
 Start depth: 730 ft
 Stop depth: 740 ft
 Recovery: 9.4 ft
 Date: 10/8/03
 Described by: SM/KGM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

89

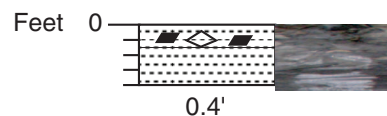




CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

91



LIGNITE; chunks, and concretions in a clay matrix, concretions are sandy and contain lignite, clay matrix, may be a clay bed at base with chunks pushed in; some fine sand; trace glauconite, slightly micaceous; dark olive gray (5Y 3/2)

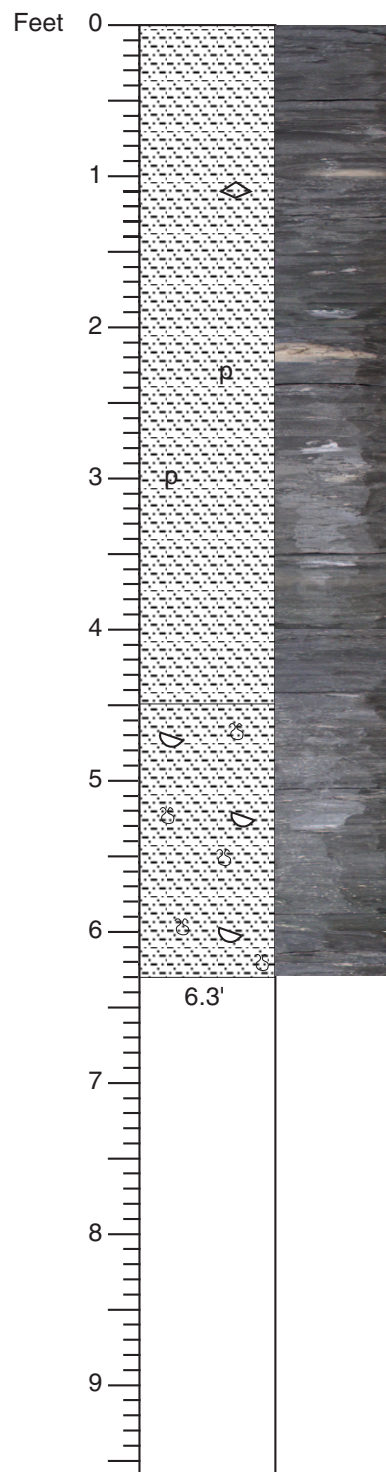
CLAY; slightly silty, slightly micaceous, much darker than above, more organics; very dark gray (5Y 3/1)

Core #91
Start depth: 760 ft
Stop depth: 760.4 ft
Recovery: 0.4 ft
Date: 10/9/03
Described by: JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

92



SILT; and interbedded silty clay; silt beds are thicker (to 5cms), clay beds to 1 cm; silts are very micaceous, slightly micaceous, foraminifers present, large pyrite chunks at 1.4, 2.4, and 3.0 ft; brownish clay concretion at 1.2-1.3 ft; very dark gray (N3/)

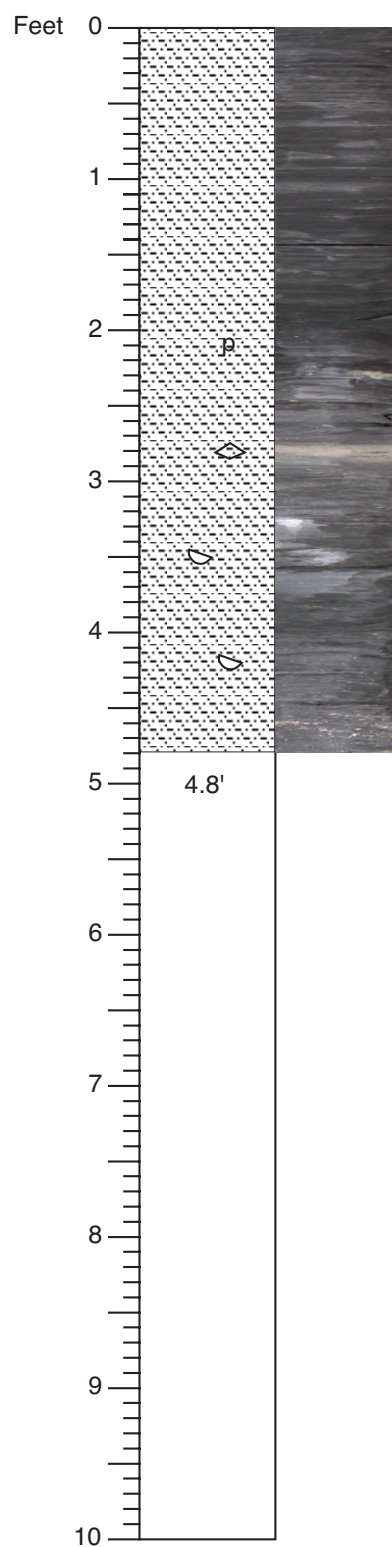
CLAY; silty, may be the same lithology as above but bioturbated together; abundant thin shell fragments, small bed of fragments at 5.9 ft; very occasional laminae of very fine sand (<1 mm); very dark gray (N3/)

174AX SG
Core #92
Start depth: 760.4 ft
Stop depth: 770 ft
Recovery: 6.3 ft
Date: 10/9/03
Described by: JVB

CORE DESCRIPTIONS

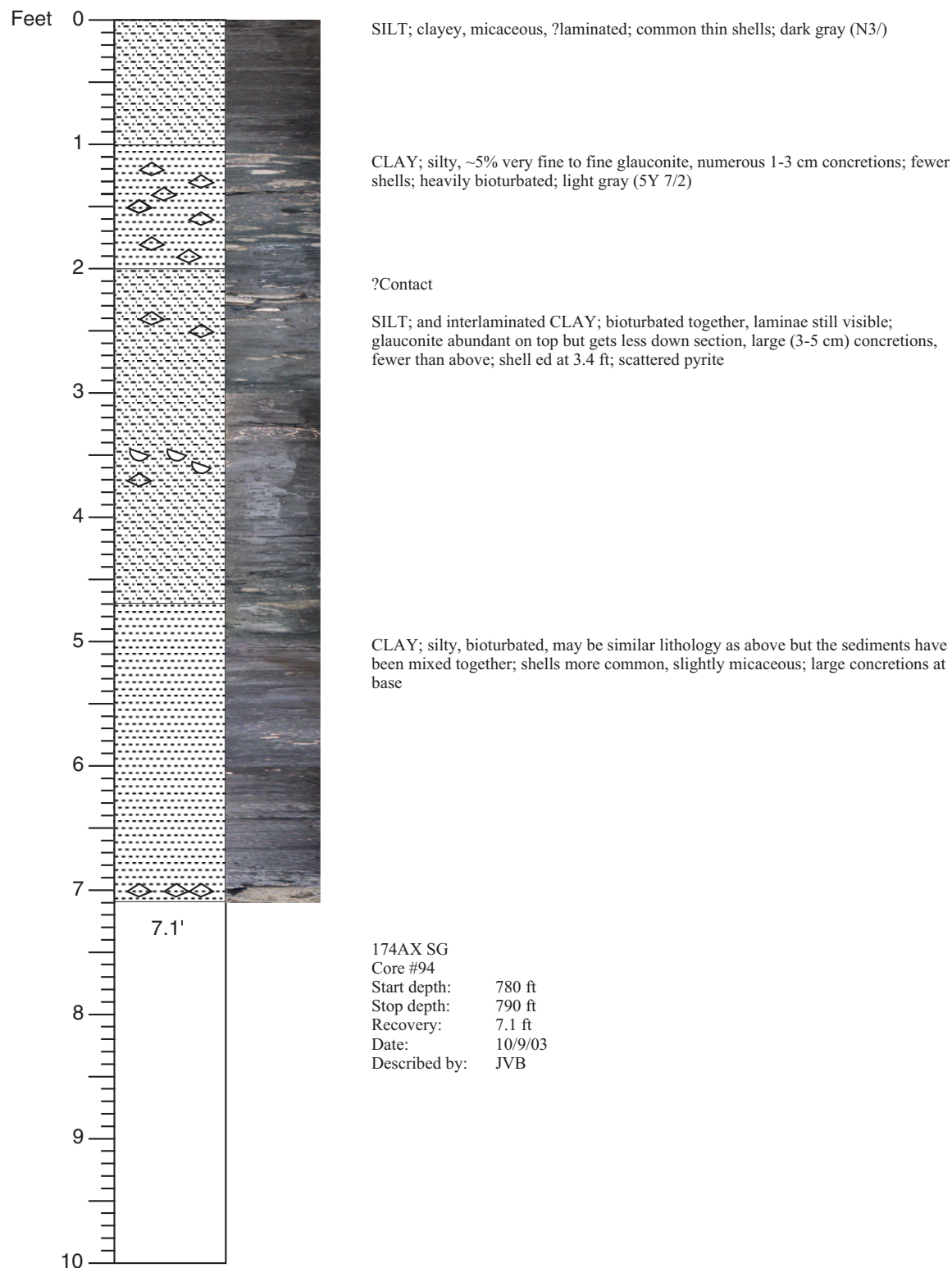
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

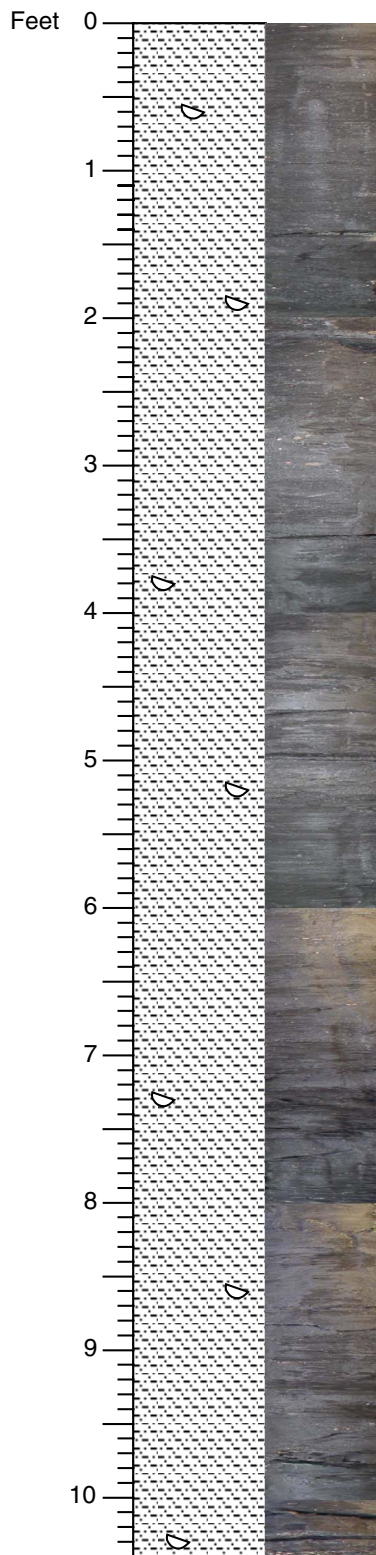
93



SILT; clayey, most likely interbedded silt and clay that has been bioturbated together, some discrete beds of sit and clay, many dark grains (?lignite); thin shell fragments common below 3.0 ft, shells are increasingly common to bottom; light brown clay concretion 2.8-2.9 ft; pyrite at 2.3-2.4 ft; slightly micaceous; very dark gray (N3/)

174AX SG
Core #93
Start depth: 770 ft
Stop depth: 780 ft
Recovery: 4.8 ft
Date: 10/9/03
Described by: JVB





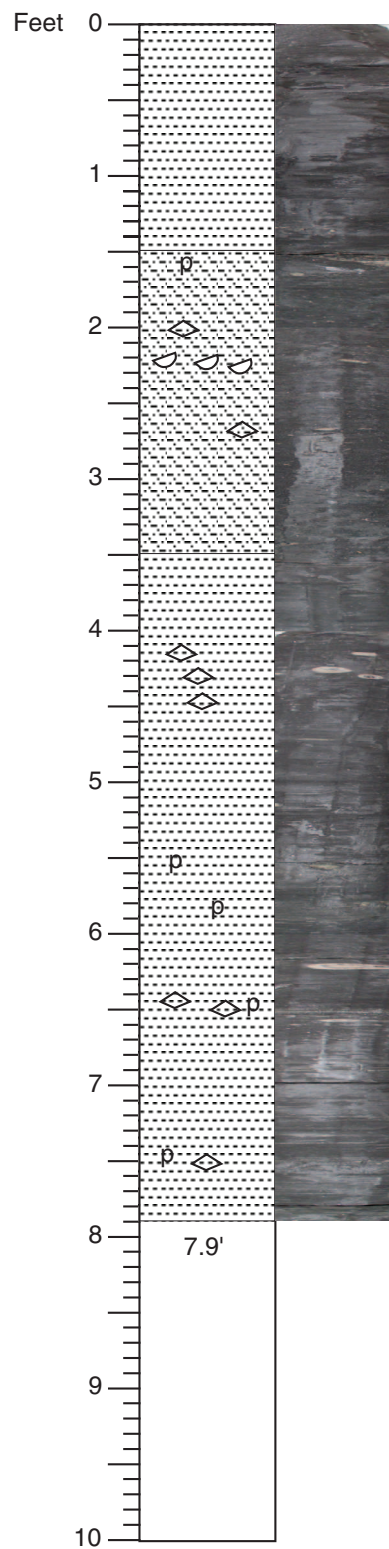
SILT, clayey; and interbedded CLAY; burrowed together, shelly, some iridescent material (?aragonite); rare pyrite and clay concretions; very dark gray (N3/)

174AX SG
Core #95
Start depth: 790 ft
Stop depth: 800 ft
Recovery: 10.4 ft
Date: 10/9/03
Described by: JVB

10.4'

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

96



CLAY; slightly silty; laminated, few thin shells first appear at 1.2 ft

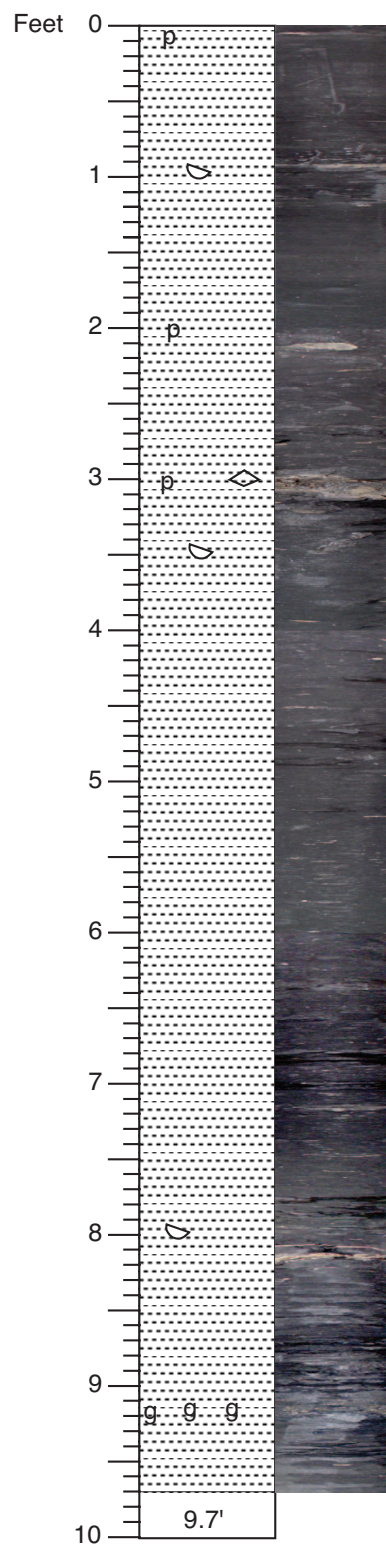
SILT, clayey; micaceous, lignitic; concretions at 2.7 and 3.3 ft; thin shells throughout, thicker than above, clayey; bioturbated, probably originally laminated but now mixed together

CLAY; little silt; lignitic silty layers at 5.75-5.85, 6.15-6.2, 6.5-6.6, concretions and pyrite at 4.2-4.2, 4.8, 5.2, 5.5, 5.8, 6.25, 6.6, and 7.5 ft

174AX SG
 Core #96
 Start depth: 800 ft
 Stop depth: 810 ft
 Recovery: 7.9 ft
 Date: 10/10/03
 Described by: JVB/DHM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

97

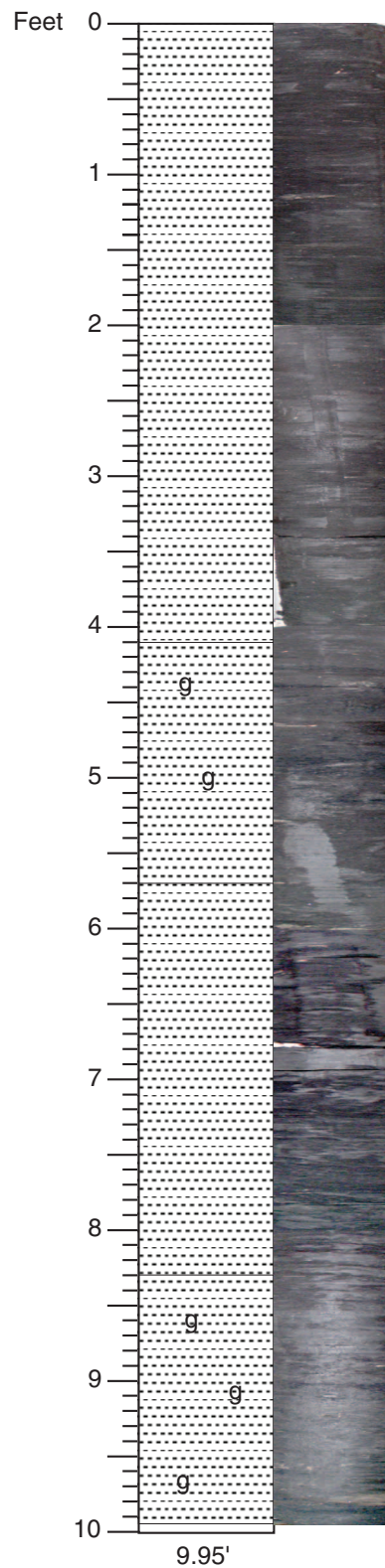


CLAY; scattered thin shells, some iridescent, glauconite ~5% at 9-9.25 ft; black (N2.5/)

174AX SG
 Core #97
 Start depth: 810 ft
 Stop depth: 820 ft
 Recovery: 9.7 ft
 Date: 10/10/03
 Described by: JVB/DHM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

98



CLAY; rare scattered shells; slightly micaceous; pyrite nodule at 1.1 ft; glauconite starts to appear near bottom; black (N2.5/)

CLAY; glauconitic; horizontal glauconite filled and clay filled burrows

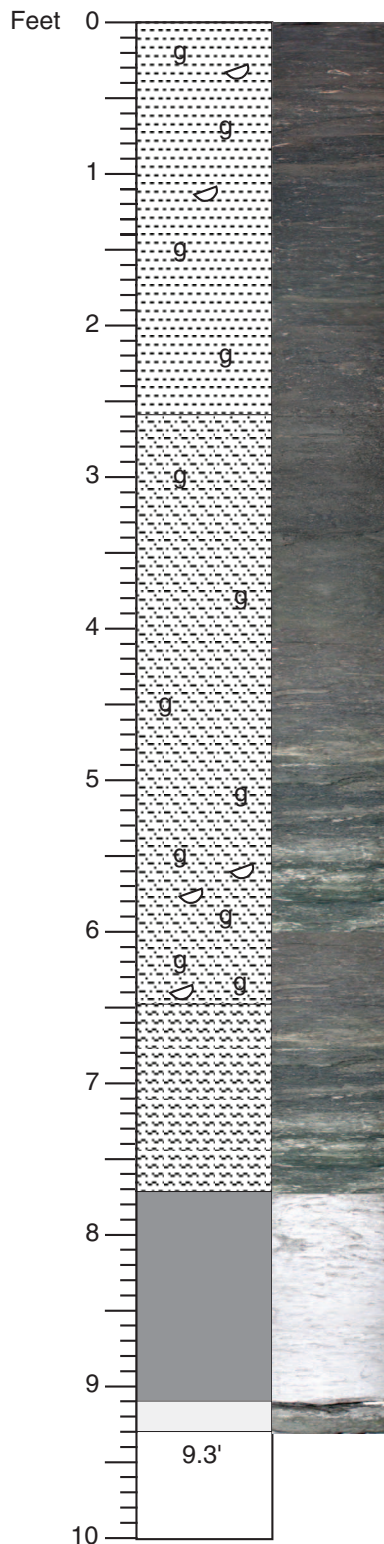
CLAY; as above but with no glauconite

174AX SG
 Core #98
 Start depth: 820 ft
 Stop depth: 830 ft
 Recovery: 9.95 ft
 Date: 10/10/03
 Described by: JVB/DHM

CLAY; glauconitic; coarser, more uniform

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

99



CLAY; glauconitic, with brown clay laminations and burrows, shelly; glauconite up to 10%, ~5% in brown clay; dark olive gray (5Y 3/2)

SAND; glauconite-quartz, shelly, clayey, to sandy CLAY; very shelly 5.7-6.5 ft; glauconite increases down core; dark greenish gray (5GY 4/1)

174AX SG
 Core #99
 Start depth: 830 ft
 Stop depth: 840 ft
 Recovery: 9.3 ft
 Date: 10/11/03
 Described by: KGM/AH

SAND; glauconite (40-50%), quartz

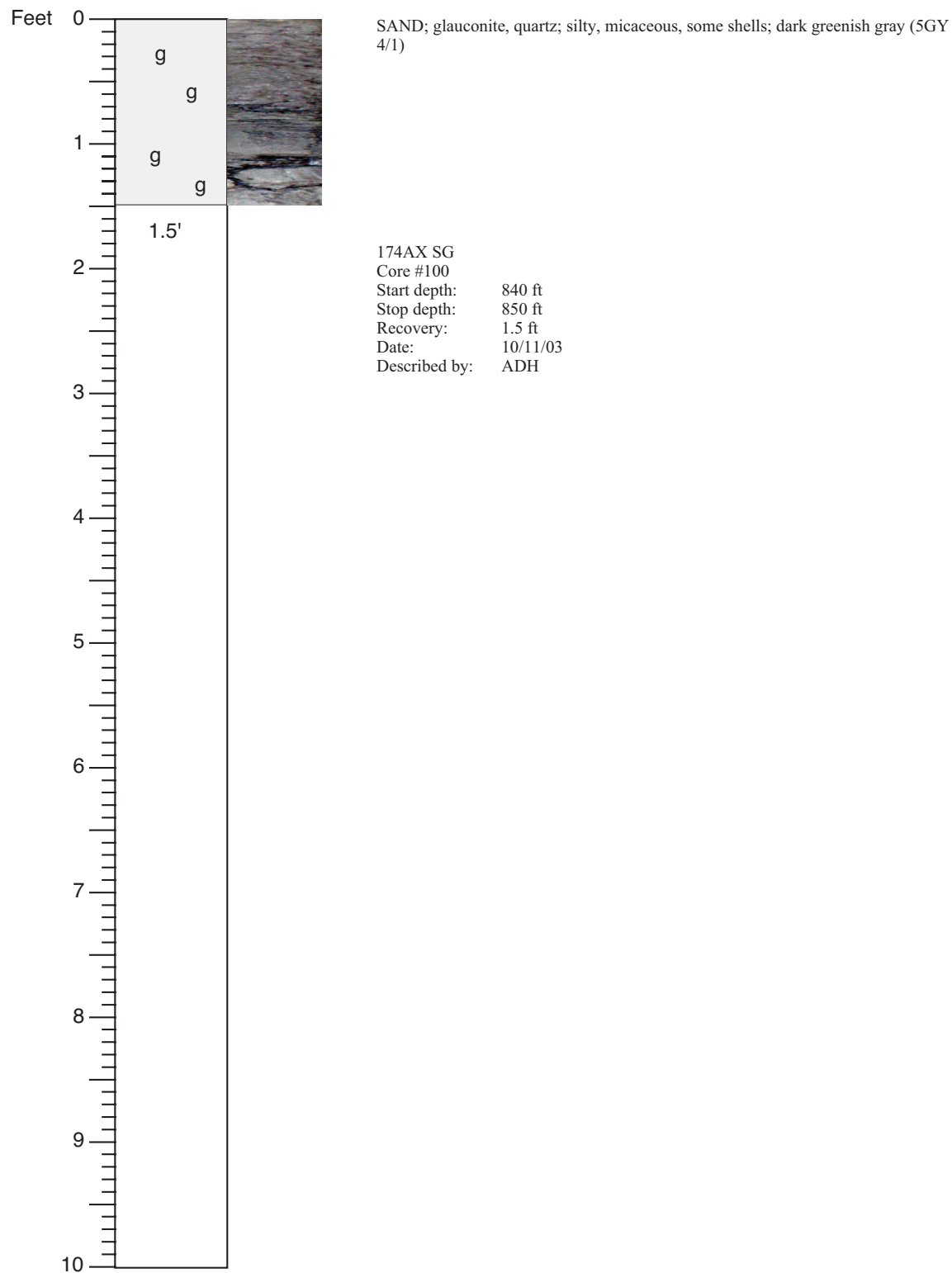
Sequence boundary at 837.7 ft

SANDSTONE; with scattered shells; light gray (N7/)

SAND; quartz; silty (not much clay); micaceous, slightly glauconitic

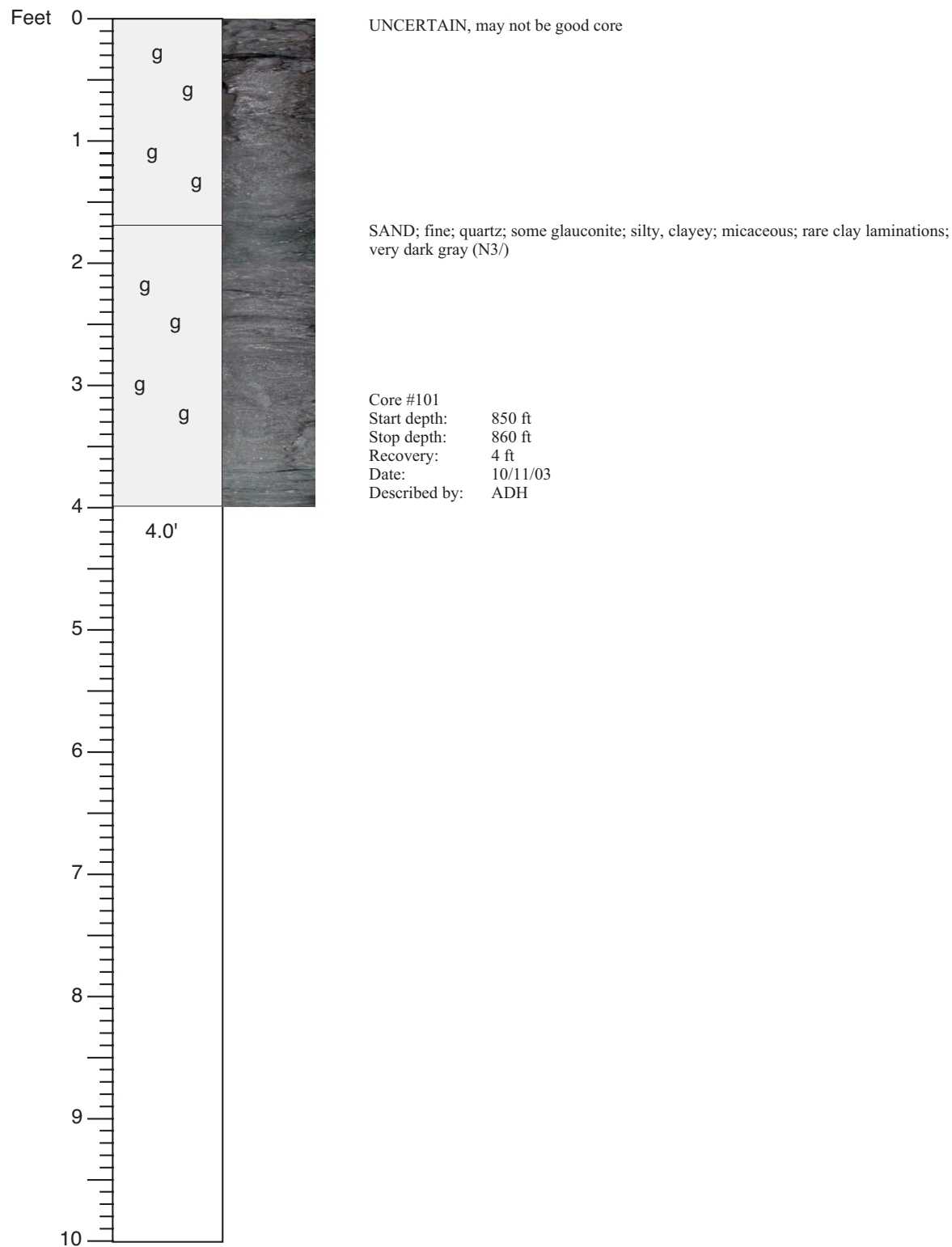
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

100



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

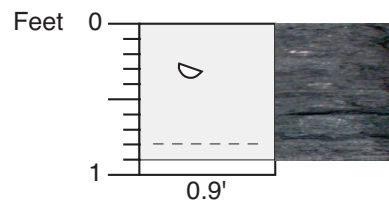
101



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

102



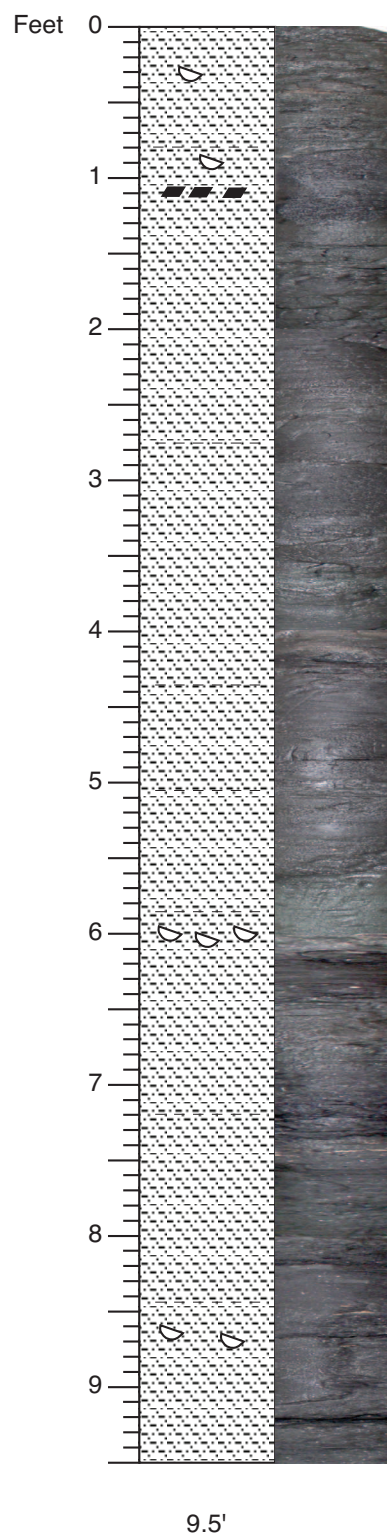
SAND; fine; micaceous (chlorite); shell at 0.3 ft; bioturbated, clay laminae at 0.87 ft;
?lower shoreface; very dark gray (N3/)

174AX SG
Core #102
Start depth: 860 ft
Stop depth: 861 ft
Recovery: 0.9 ft
Date: 10/12/03
Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

103



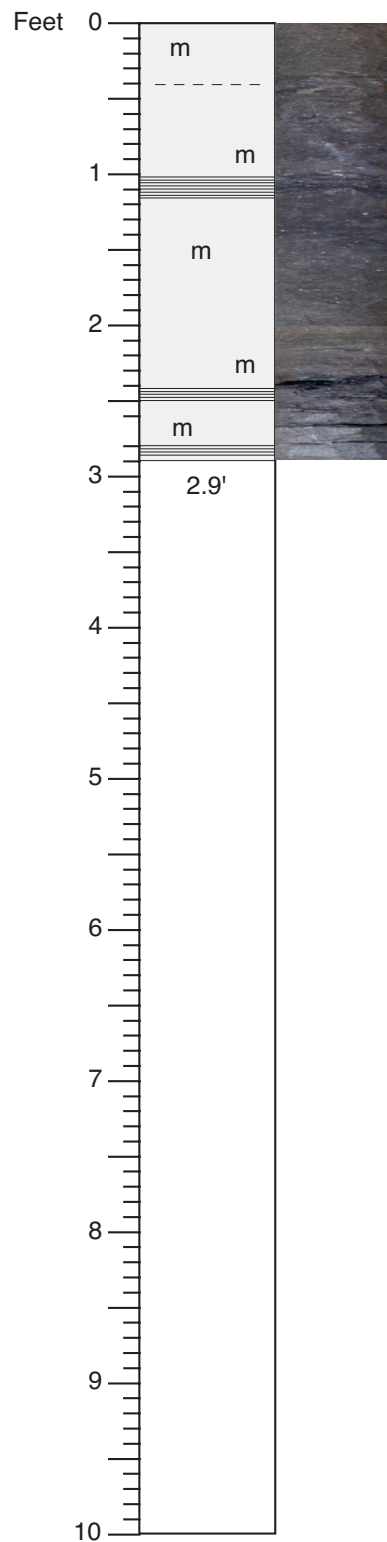
SAND; with interbedded SILT; in some places interlaminated; individual beds up to 0.2 ft thick; micaceous (chlorite); shells present and more common at bottom, shell bed at 6.0-6.1 ft, shell concentrations at 7.4, 8.4-8.5 ft lignitic laminations 1.1 ft; silts are more burrowed internally, silt: dark gray (N4/); clay: very dark gray (N3/)

174AX SG
Core #103
Start depth: 861 ft
Stop depth: 870 ft
Recovery: 9.5 ft
Date: 10/12/03
Described by: JVB/SM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

104



SILT; fine, sandy, micaceous (chlorite), slightly shelly, slightly lignitic; 0.4 ft clay lamination (4-5 mm); finely laminated at 1.2, 2.4, and 2.9 ft; generally bioturbated with a few obvious burrows; silty very fine sand beds at 2.4-2.5 and 2.8-2.9 ft

174AX SG
Core #104
Start depth: 870 ft
Stop depth: 880 ft
Recovery: 2.9 ft
Date: 10/12/03
Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

105



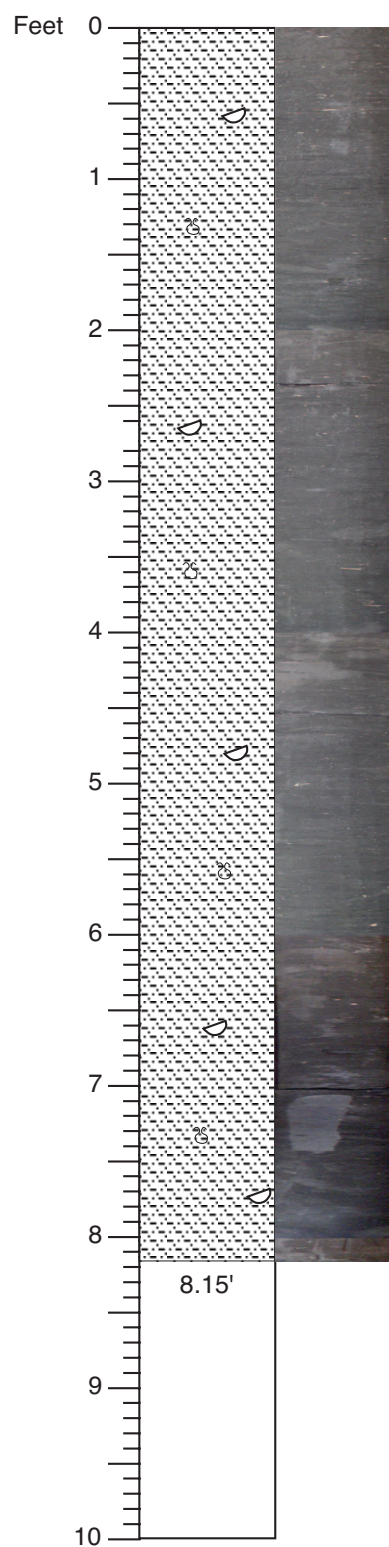
SILT; very fine sandy, micaceous; many shells, some aragonitic; cup coral (2-3 mm across); Note: this material is very gooey and may be intruded with drilling mud but it is lithologically similar to what was found in the last core; grayish green (5G 4/2)

SAND; silty; very micaceous (chlorite); slightly shelly throughout; slightly lignitic; heavily bioturbated; lignite layer at 1.2-1.4 ft; silty clay layer at 1.4-1.5 ft; shell concentration at 6.4 ft; very dark gray (N3/)

174AX SG
 Core #105
 Start depth: 880 ft
 Stop depth: 890 ft
 Recovery: 8.4 ft
 Date: 10/12/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

106



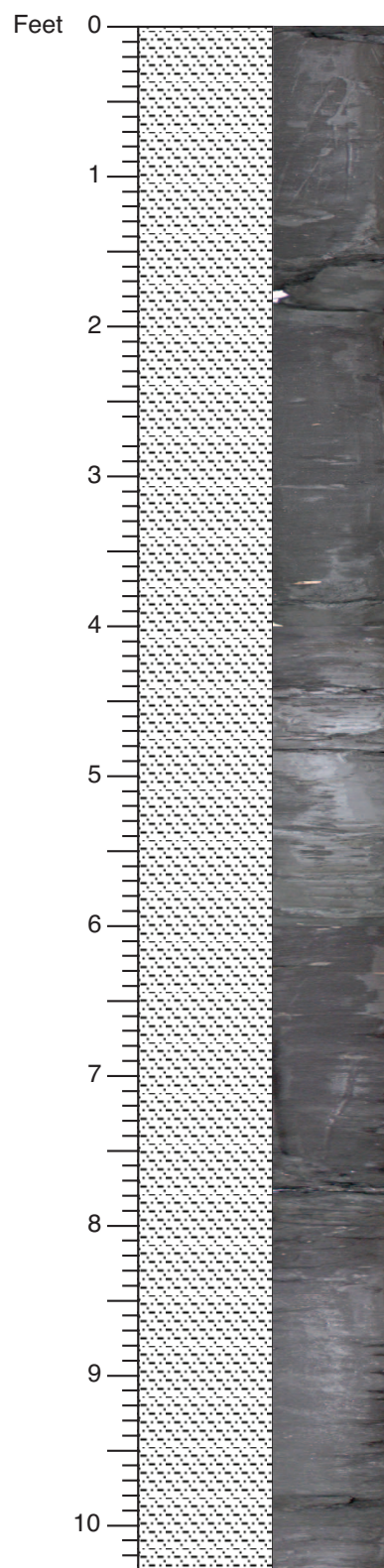
SILT; very fine sand, clayey; slightly micaceous, thin shells throughout; two clay concretions at 5.0 ft; pyrite (5 mm) at 0.8 ft; rare laminations at top; mostly burrowed; dark gray (N4/1)

174AX SG
Core #106
Start depth: 890 ft
Stop depth: 900 ft
Recovery: 8.15 ft
Date: 10/12/03
Described by: JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

107

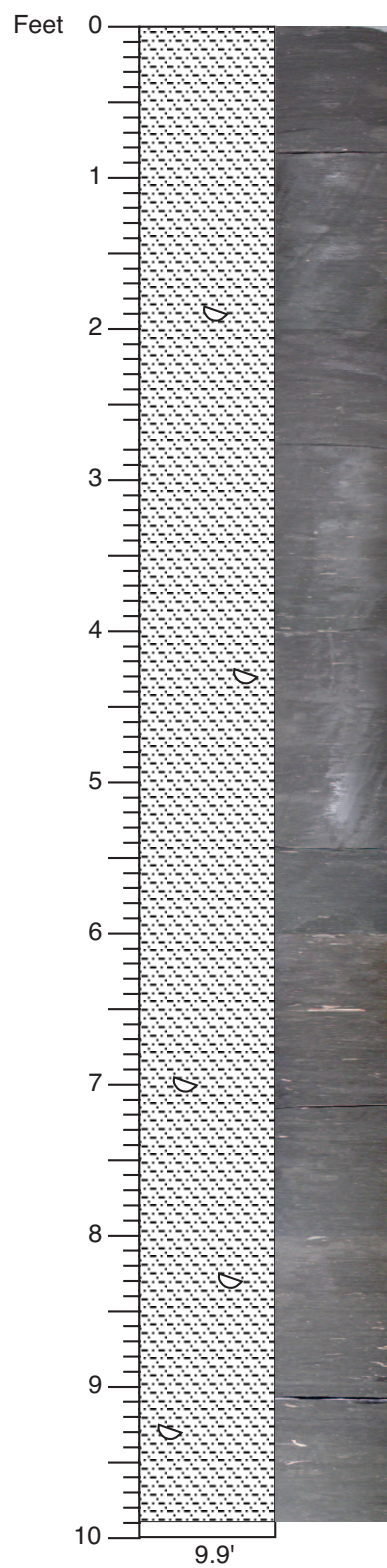


CLAY; silty to silty CLAY; very slightly shelly throughout; appears laminated at base; more bioturbated at top; change from more bioturbated to more laminated is ~4.5 ft; rare pyrite; dark gray (N4/1)

174AX SG
Core #107
Start depth: 900 ft
Stop depth: 910 ft
Recovery: 10.3 ft
Date: 10/12/03
Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

108

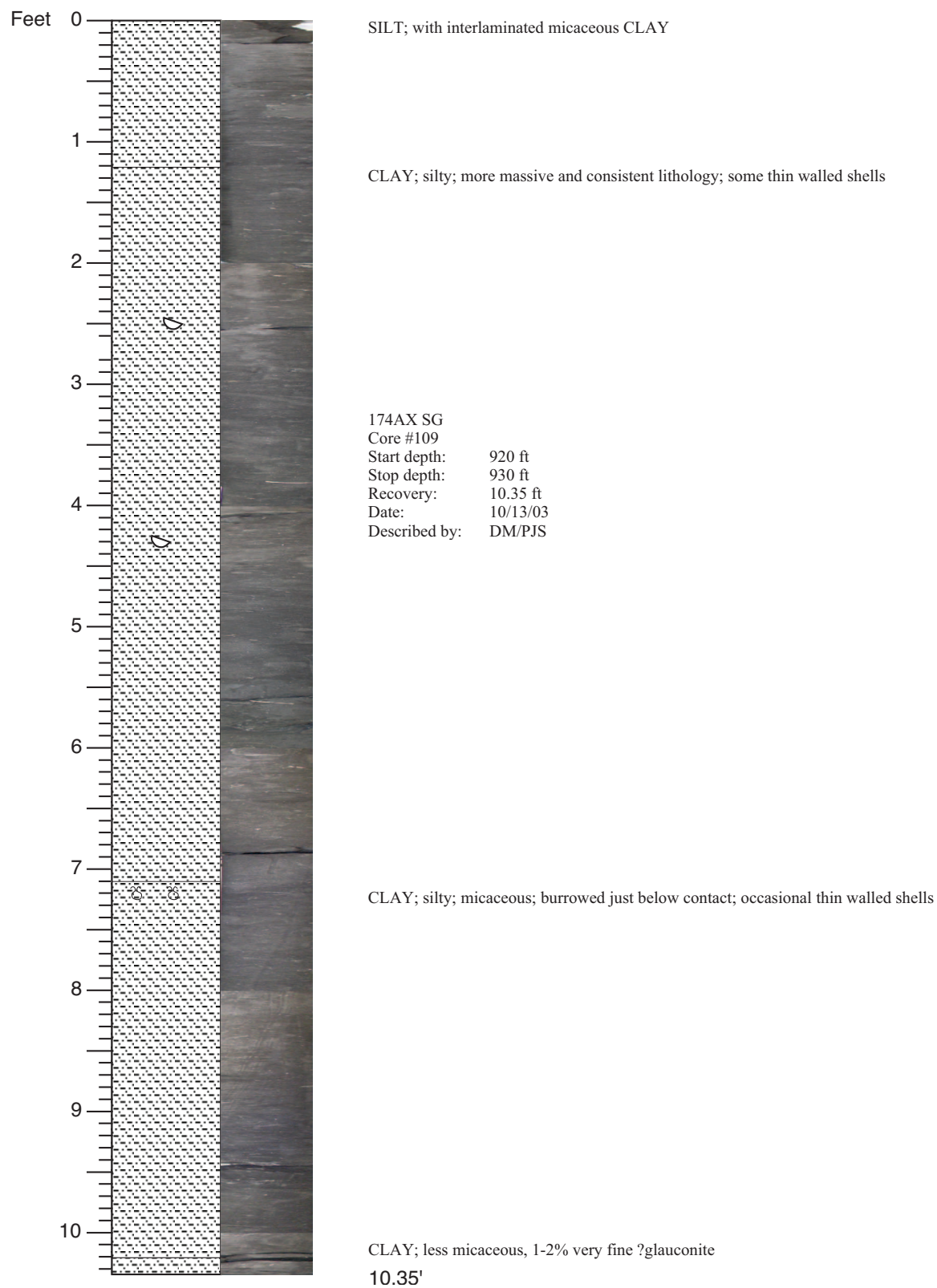


CLAY; silty, finely micaceous, some thin shells; laminated; very dark gray (2.5Y 3/1)

174AX SG
Core #108
Start depth: 910 ft
Stop depth: 920 ft
Recovery: 9.9 ft
Date: 10/13/03
Described by: KGM/PJS/DM

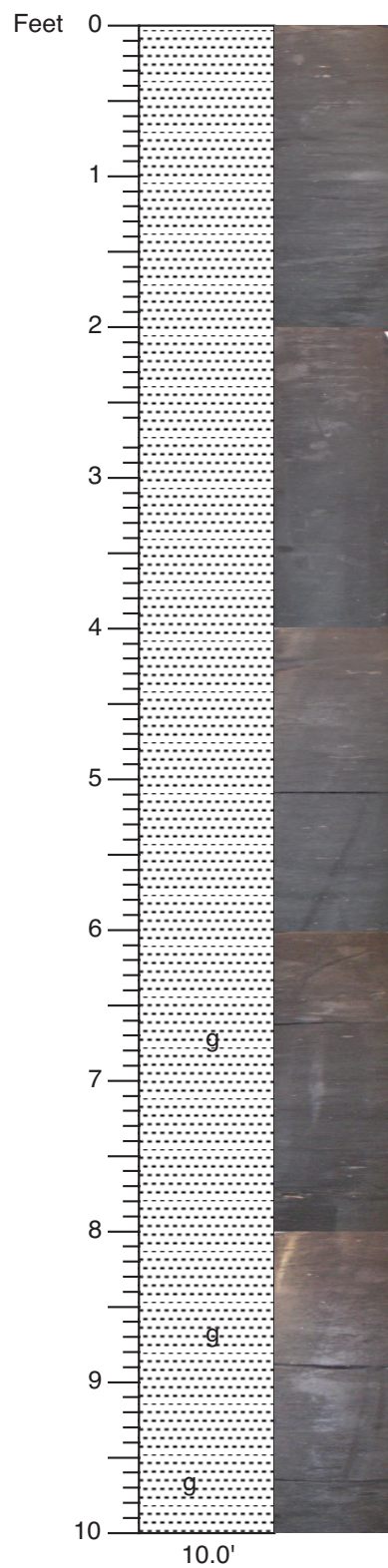
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

109



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

110



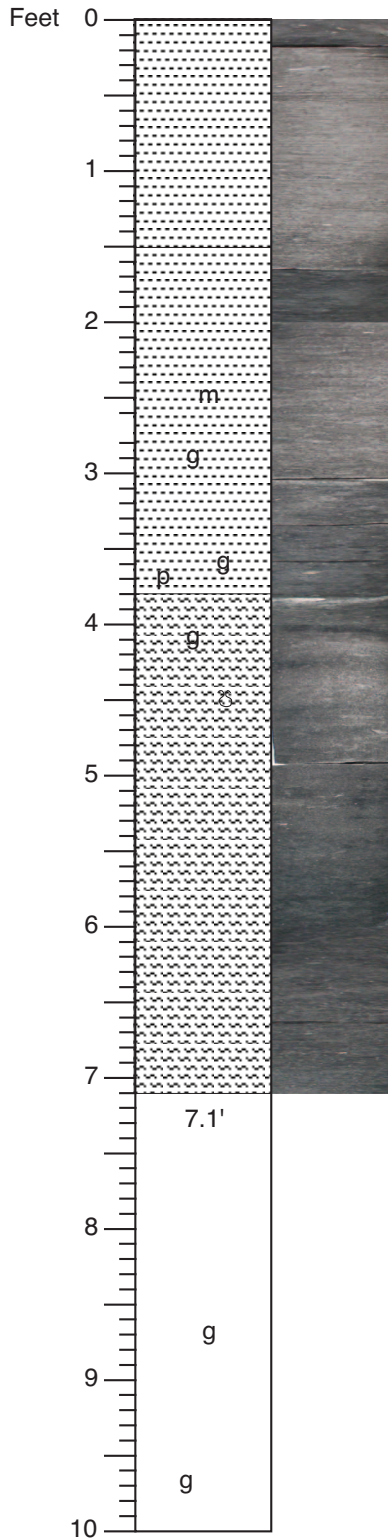
CLAY; slightly silty, slightly micaceous; glauconite increases from a trace at top 5% at the bottom; trace thin walled shells; laminated and burrowed; very dark gray (2.5Y 3/1)

174AX SG
Core #110
Start depth: 930 ft
Stop depth: 940 ft
Recovery: 10 ft
Date: 10/13/03
Described by: PJS/DM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

111

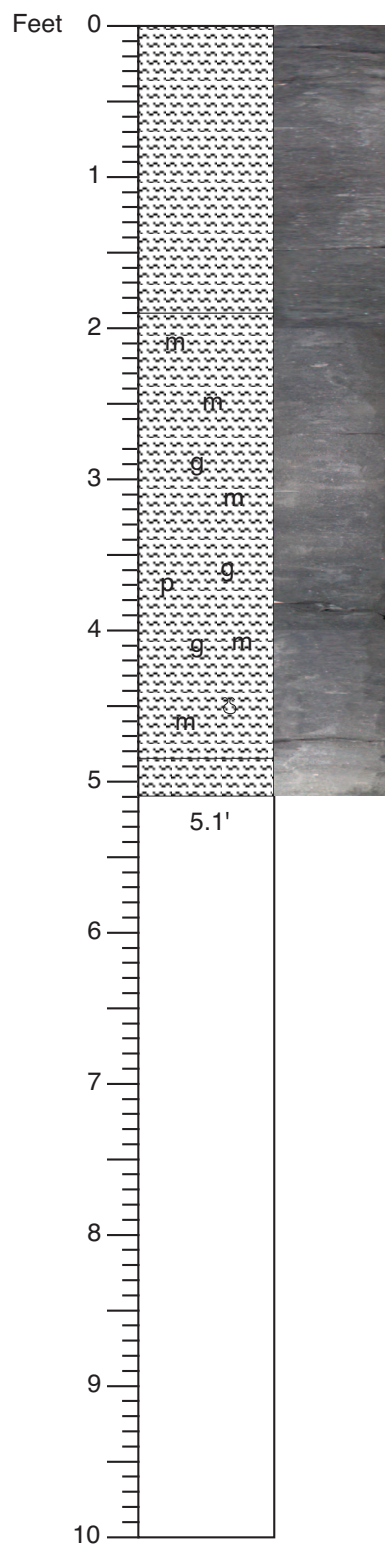


CLAY; slightly silty; micaceous, ~10% glauconite; glauconite is concentrated in burrows; 3/4 of the glauconite is black, 1/4 is lighter green; slightly shelly, foraminifers present; no visible quartz; dark greenish gray (Gley 5GY 4/1)

CLAY; micaceous, very slightly quartzose; glauconite content increases down core; glauconite is still concentrated in burrows (up to 50%); burrows to 3-4 mm diameter; this is essentially a clay facies with glauconite filled burrows

SAND; glauconite; very muddy; rare quartz; glauconite content is roughly equal to the mud content; with clay filled burrows; burrows range from 3-10 mm diameter, some are clay lined with a glauconitic core; less shells and less mica than above, many foraminifers; very dark gray (Gley N3/)

174AX SG
Core #111
Start depth: 940 ft
Stop depth: 950 ft
Recovery: 7.1 ft
Date: 10/16/03
Described by: JVB/PPMcL



SAND; glauconite, clayey, slightly micaceous; glauconite content is ~60%; minor (5% or less) fine to very fine quartz; rare shell fragments; structureless, no obvious burrows; very dark gray (Gley N3/) to black

SAND; glauconite, muddy; differs from above because: more mica; more silt; firmer (probably because of the silt); more quartz (very fine, 15-25% of the sand); light green glauconite; foraminifers present; scattered shells; many clay-lined/clay-filled burrows; very dark gray (5Y 3/1); chocolate colored

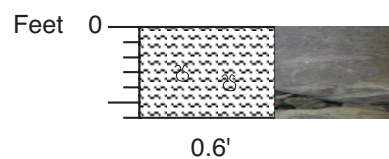
SAND; hard; clayier than above; slightly micaceous, slightly shelly; glauconite grains have a limonite rind (i.e., they appear weathered; less mica and less quartz than above; less silt and more clay

174AX SG
 Core #112
 Start depth: 950 ft
 Stop depth: 960 ft
 Recovery: 5.1 ft
 Date: 10/16/03
 Described by: JVB/PPMcL

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

113

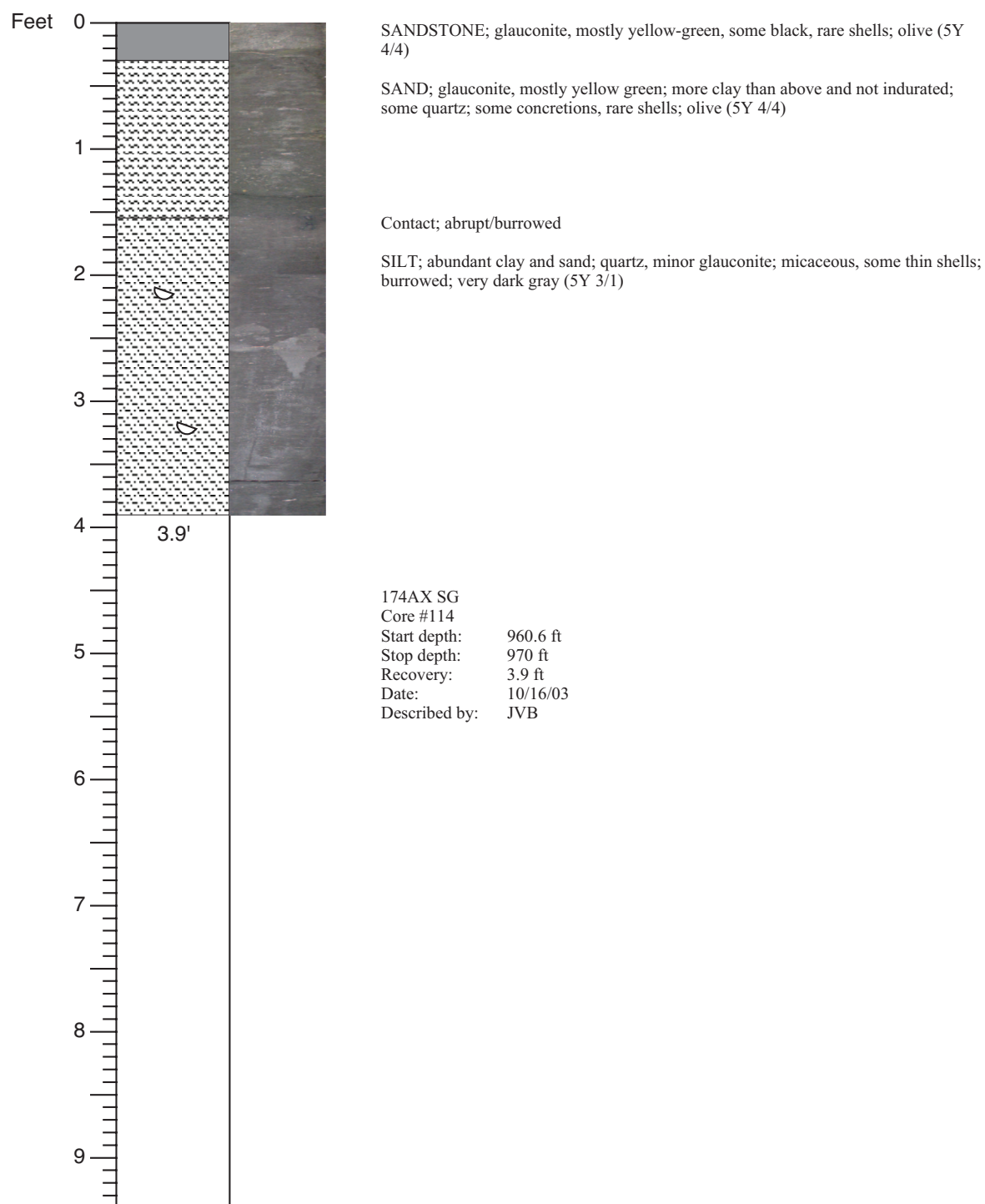


SAND; glauconite (half yellowish green; half greenish black); clayey and silty; semi-indurated; 10-15% quartz; large clay filled burrows; slightly micaceous, scattered shell fragments; some blebs of limonite (may contain pyrite); pebble (?concretion) on top of core may not be in place; color ranges from very dark gray (5Y 3/1) to olive (5Y 5/6)

174AX SG
Core #113
Start depth: 960 ft
Stop depth: 960.6 ft
Recovery: 0.6 ft
Date: 10/16/03
Described by: JVB/PPMcL

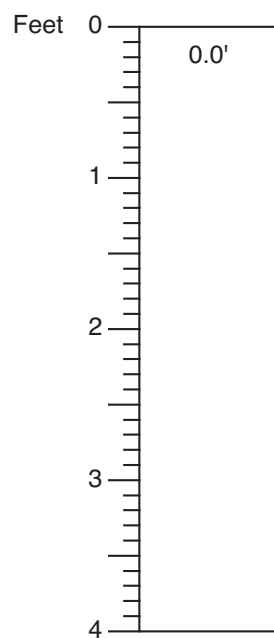
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

114



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

115



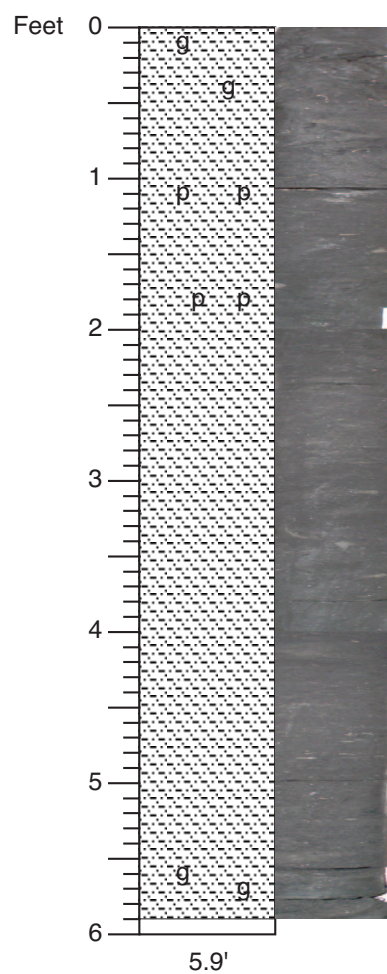
No recovery

174AX SG
Core #115
Start depth: 970 ft
Stop depth: 974 ft
Recovery: 0.0 ft
Date: 10/17/03
Described by: PJS

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

116

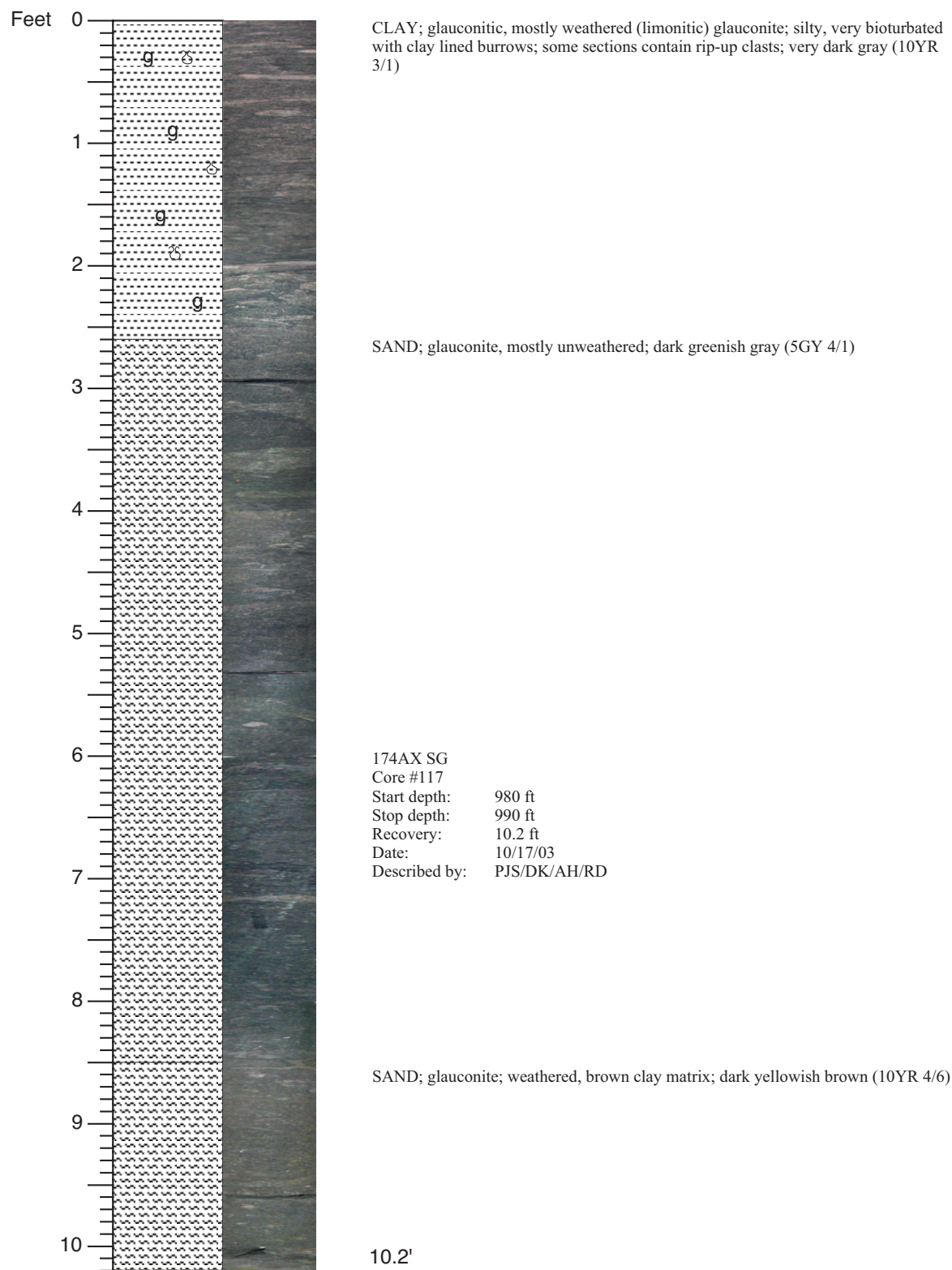


SILT; clayey to silty CLAY; dispersed shell fragments; micaceous, some pyrite nodules; glauconite is 25% between 974-975 and 979-980 ft, glauconite is 2-3% in the rest of the core; very dark gray (N3/)

174AX SG
Core #116
Start depth: 974 ft
Stop depth: 980 ft
Recovery: 5.9 ft
Date: 10/17/03
Described by: DK/AH/PJS

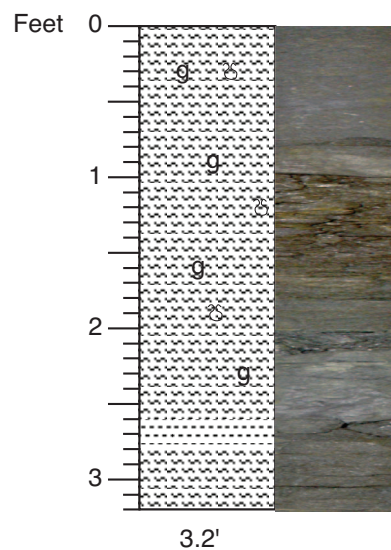
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

117



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

118



SAND; semi-indurated to indurated, very fine, silty, glauconite (two colors); clay lens at 1-1.1 and 2.6-2.75 ft; occasional very fine shell hash; browner colored fracture zone at 1.1-1.6 ft

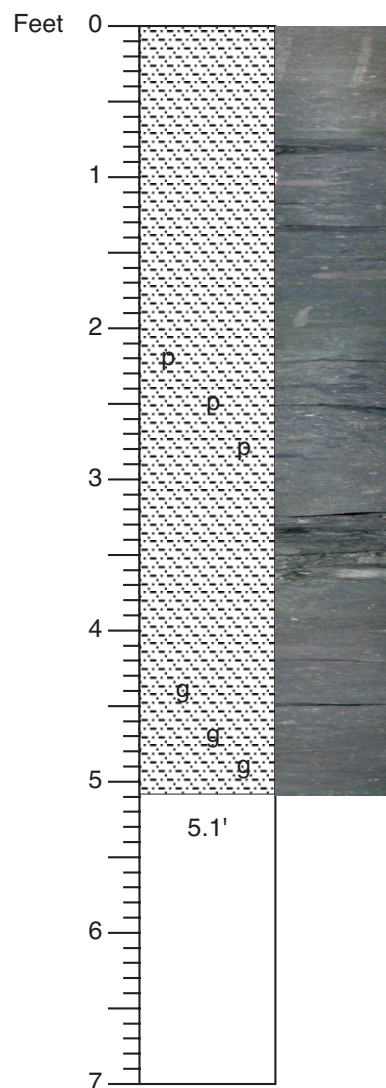
SAND; very fine, glauconitic (one colored, lighter green); very dark gray (N3/)

174AX SG
Core #118
Start depth: 990 ft
Stop depth: 993 ft
Recovery: 3.2 ft
Date: 10/17/03
Described by: PJS/DK/AH

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

119

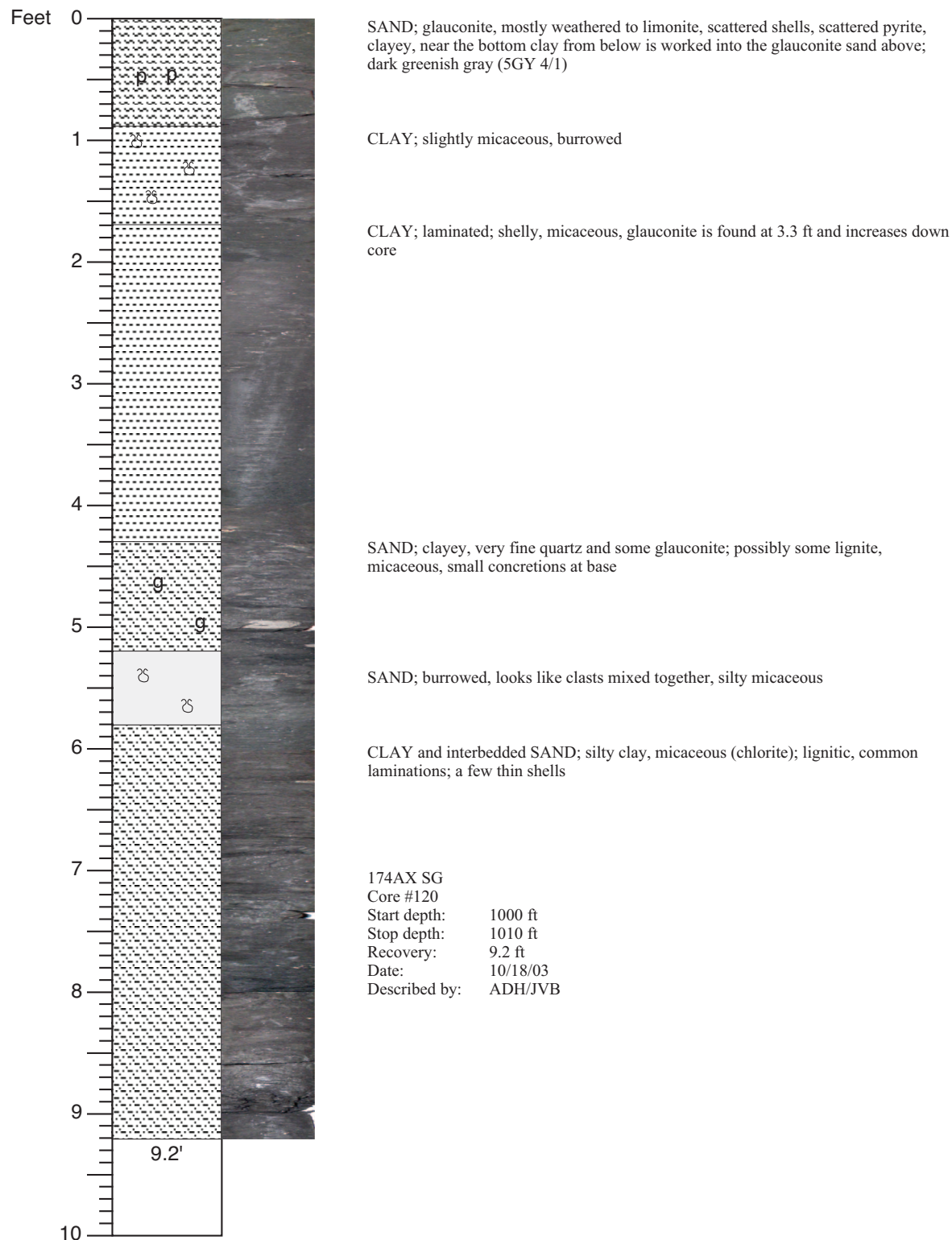


SILT; indurated to semi-indurated, very fine sandy, glauconitic; grading down core to CLAY, silty; occasional shell fragments, some pyrite zones, trace of mica, large horizontal clay filled burrows, two colored glauconite interbedded with clayey glauconite sand; dark olive gray (5Y 3/2)

174AX SG
Core #119
Start depth: 993 ft
Stop depth: 1000 ft
Recovery: 5.1 ft
Date: 10/17/03
Described by: PJS/DK/AH

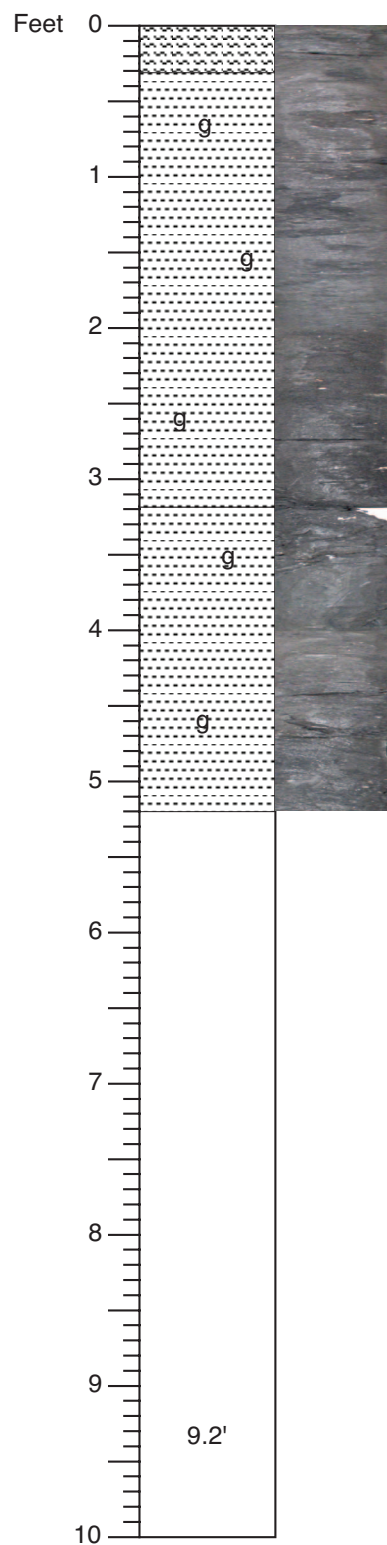
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

120



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

121



SAND; glauconite, clayey; slightly quartzose, fine; slightly micaceous

CLAY; with glauconite sand grading to glauconite SAND; slightly very fine quartzose, micaceous, large glauconite filled burrows; top : dark greenish gray (5GY 4/1), bottom: very dark gray (7.5YR 3/1)

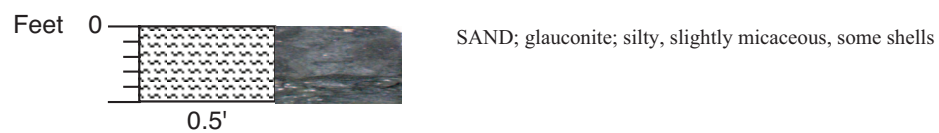
CLAY; soft, sticky, slightly glauconitic and quartzose at the base

174AX SG
 Core #121
 Start depth: 1010 ft
 Stop depth: 1020 ft
 Recovery: 5.2 ft
 Date: 10/18/03
 Described by: ADH/JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

122

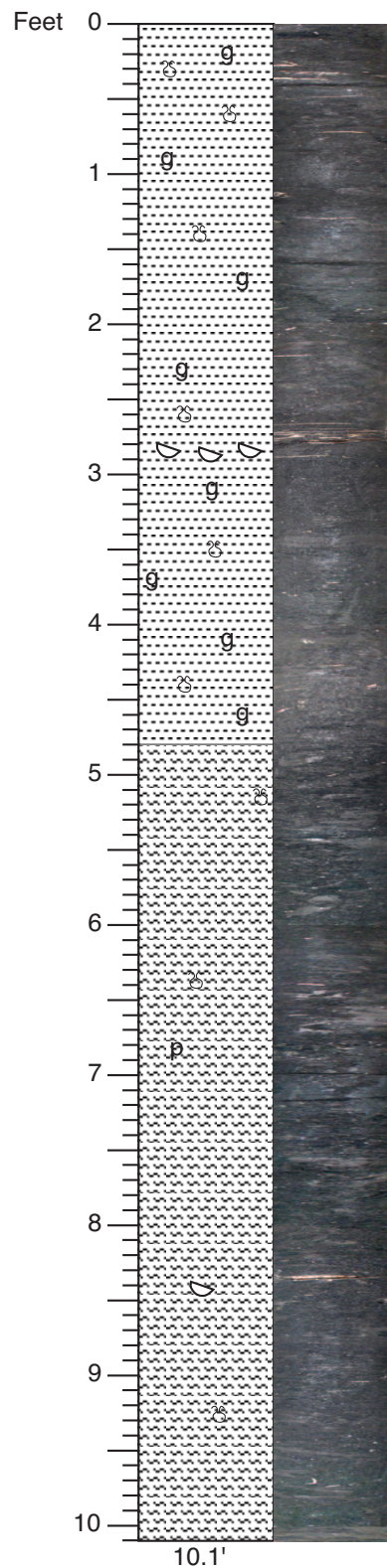


174AX SG
Core #121A
Start depth: 1015.2 ft
Stop depth: 1015.7 ft
Recovery: 0.5 ft
Date: 10/18/03
Described by: ADH/JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

123



CLAY; with glauconite sand; heavily burrowed, large shells, scattered pyrite; *Inoceramus* shells are common, micaceous; very dark gray (N3/)

Grades down to

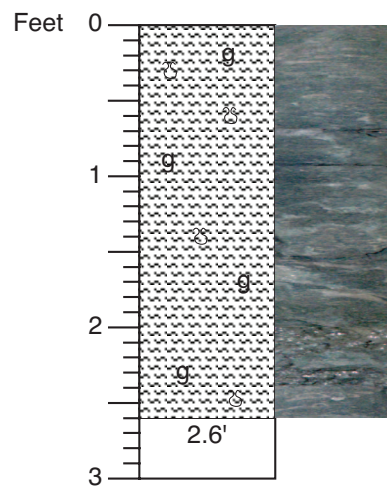
SAND; glauconite; heavily burrowed, large clay filled and clay lined burrows, scattered pyrite; slightly micaceous; scattered shells, not as many as above, core is harder at the base

174AX SG
Core #122
Start depth: 1020 ft
Stop depth: 1030 ft
Recovery: 10.1 ft
Date: 10/18/03
Described by: ADH/JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

124



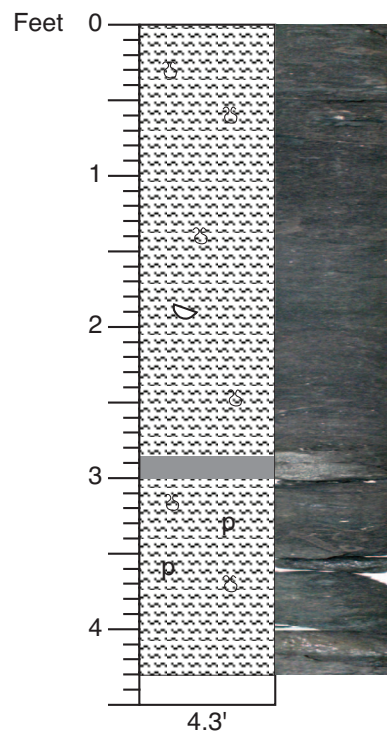
SAND; clayey, slightly micaceous; heavily burrowed, large clay filled and clay lined burrows; less pyrite than above; no shells visible; less mica than above; grayish green (5G 4/2)

174AX SG
Core #123
Start depth: 1030 ft
Stop depth: 1033 ft
Recovery: 2.6 ft
Date: 10/18/03
Described by: ADH/JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

125

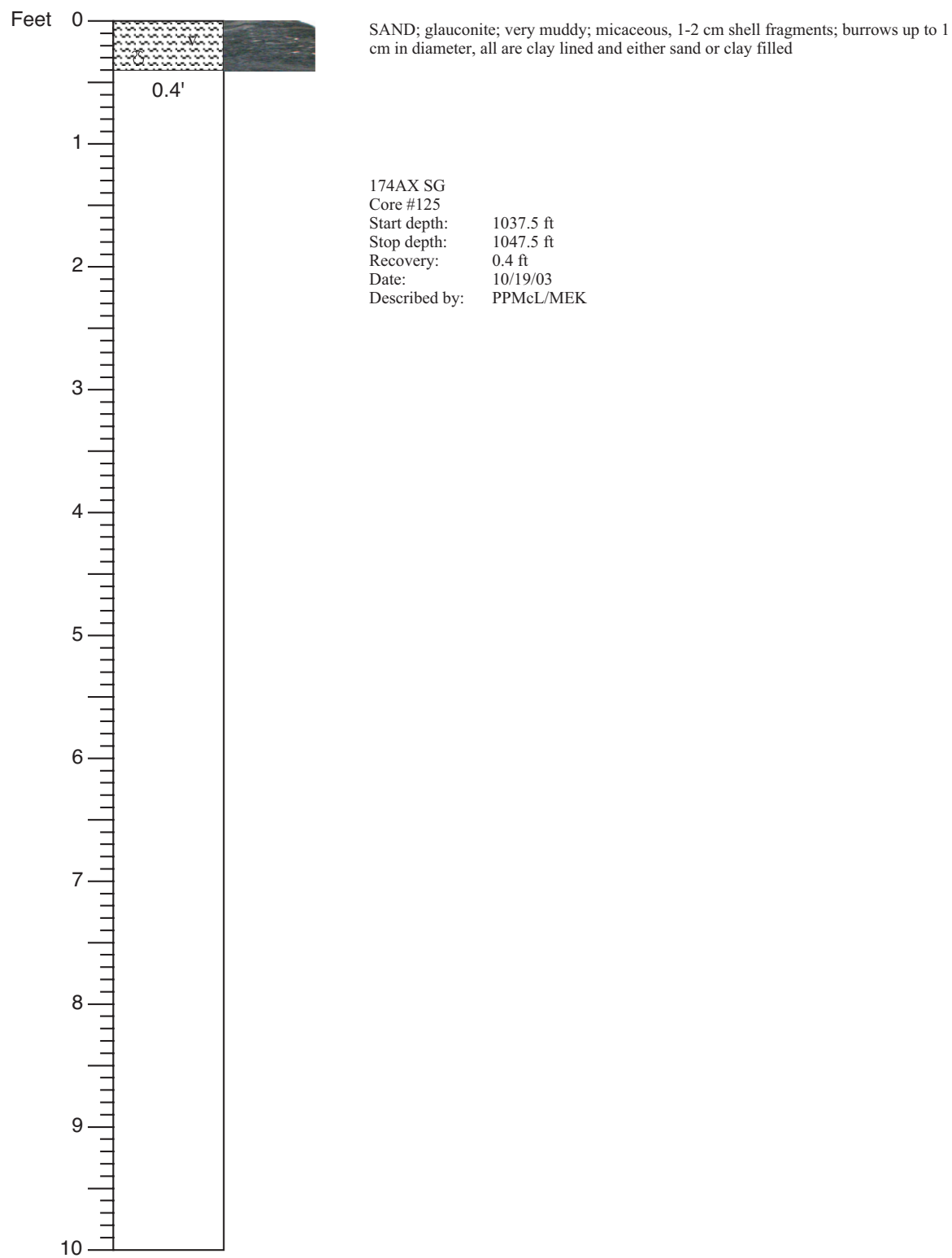


SAND; glauconite (>70%), clayey; slightly quartzose, slightly micaceous, pyrite present, few shells, heavily burrowed, numerous clay filled and clay lined burrows, indurated zone at 2.85-3.0 ft; large pyrite chunks below the indurated layer; black, (10YR 2/1)

174AX SG
Core #124
Start depth: 1033 ft
Stop depth: 1037.5 ft
Recovery: 4.3 ft
Date: 10/18/03
Described by: JVB/ADH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

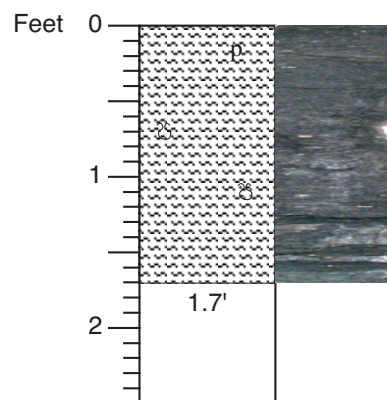
126



CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

127

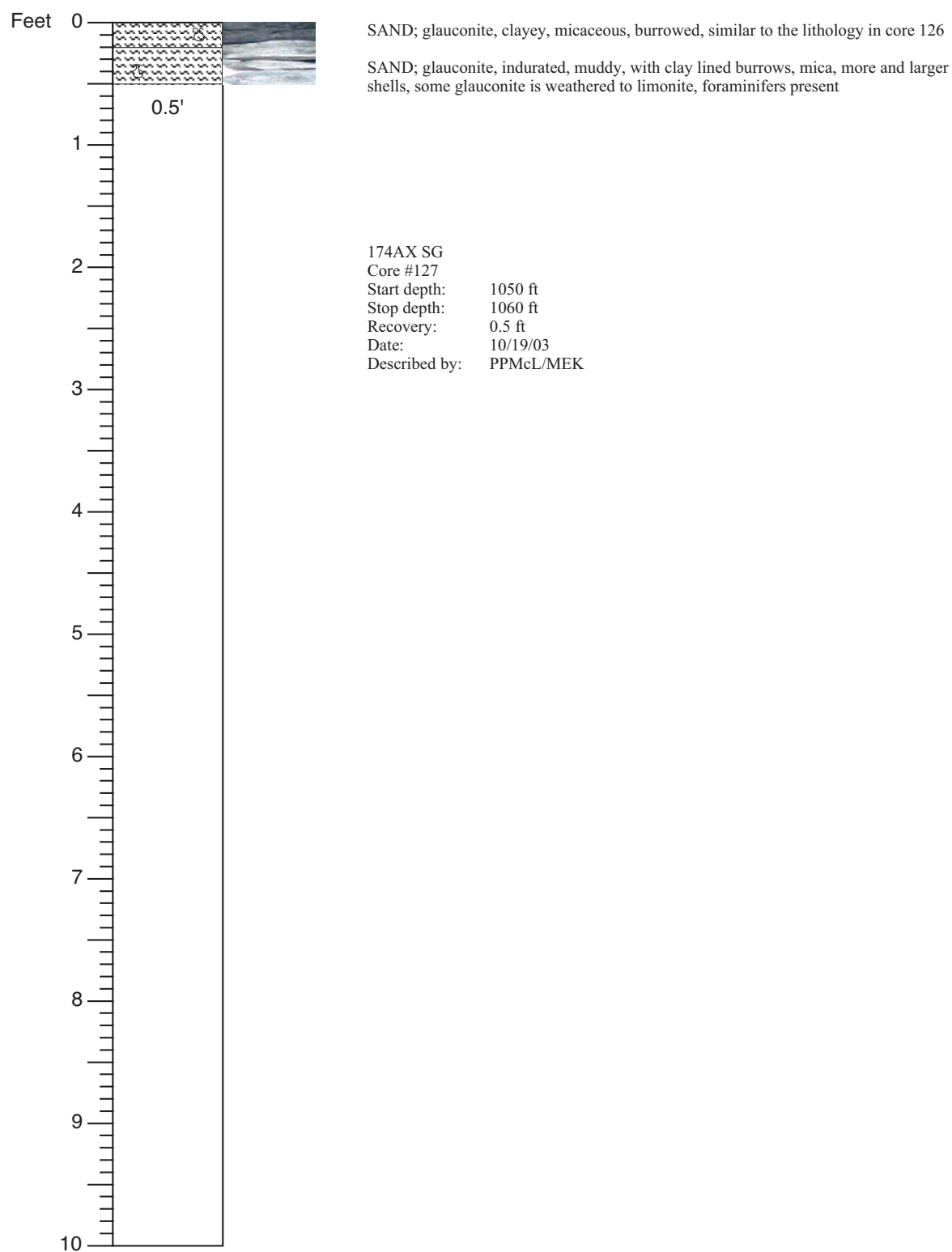


SAND; glauconite, very muddy, micaceous clay lined burrows filled with sand or clay, faint bedding traces, pyrite at 0.8 and 1.5-1.7 ft; more clay at 0.6-1.0 ft; 1 large burrow (2 cm diameter) with micaceous clay fill at 1.3-1.4 ft; shell fragments

174AX SG
Core #126
Start depth: 1047.5 ft
Stop depth: 1050 ft
Recovery: 1.7 ft
Date: 10/19/03
Described by: PPMcL/MEK

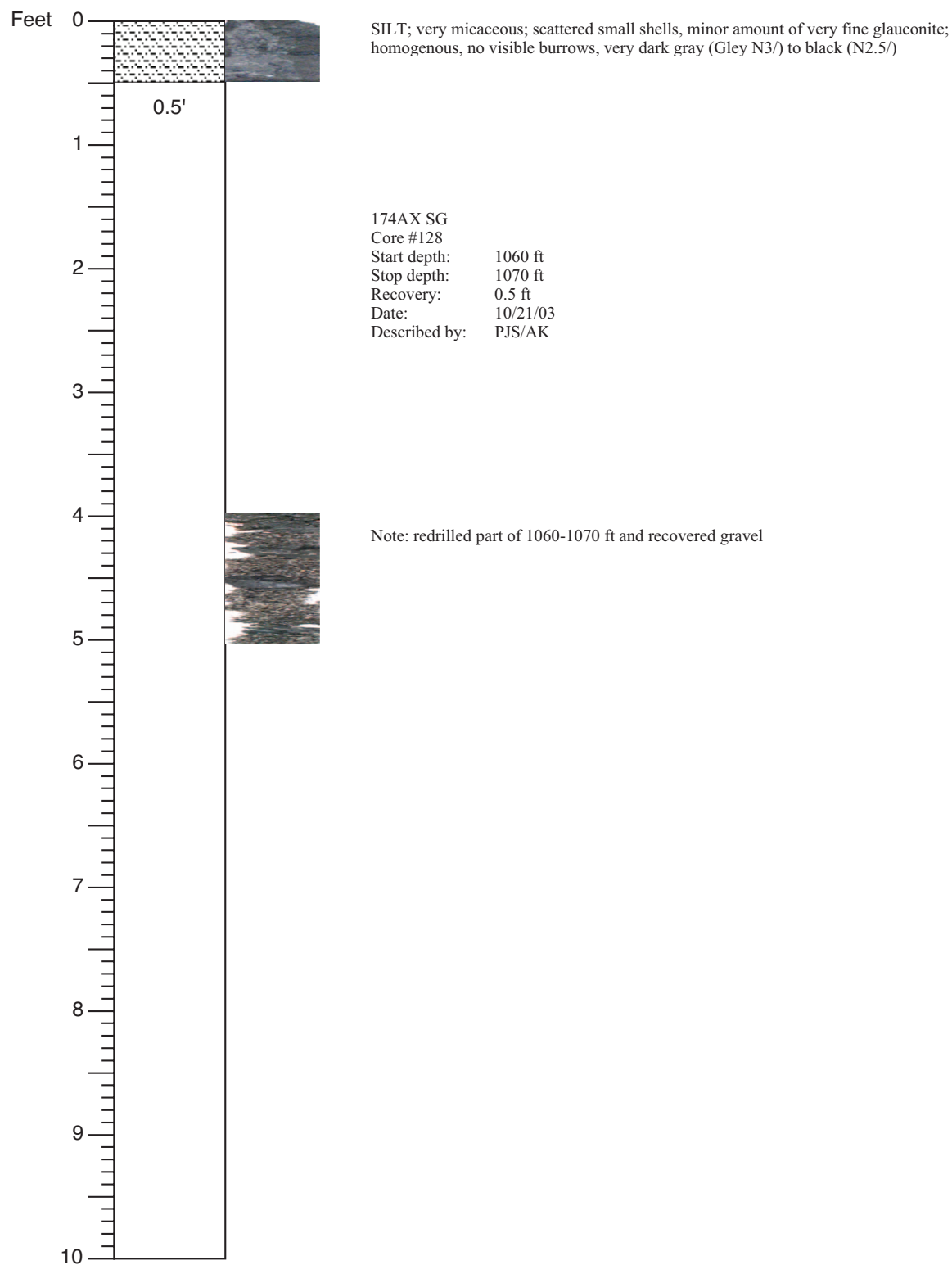
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

128



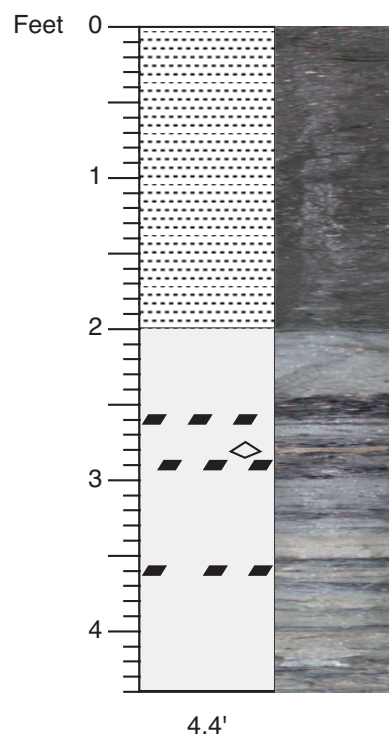
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

129



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

130



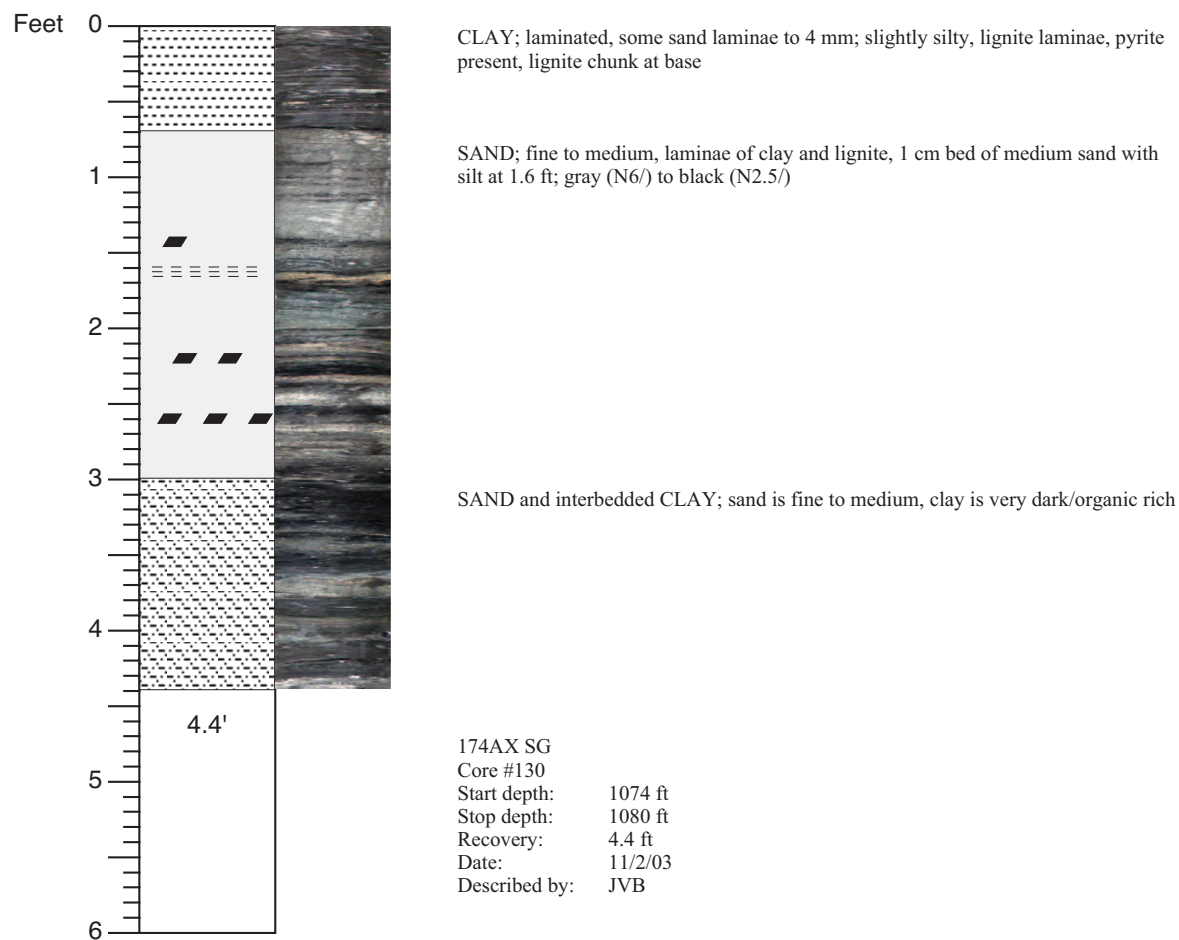
CLAY; silty, sandy, slightly micaceous, organic rich; laminated to thinly bedded
 (?deposited in standing water); black (N2.5/)

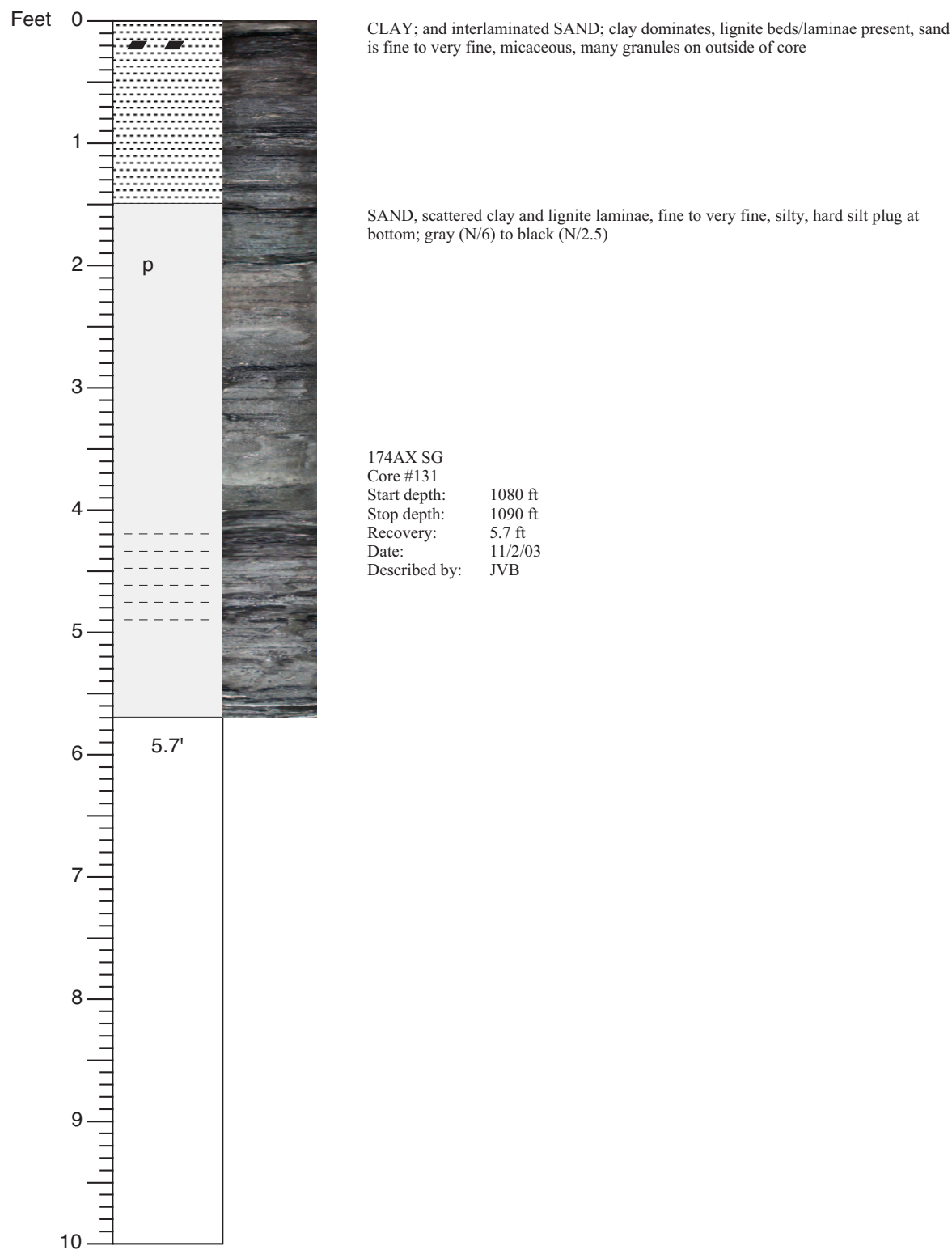
SAND; fine, some medium and very fine, very micaceous, interbedded and cross
 bedded, lignite and clay layers, lignite present throughout; clayier zones at 2.6 and
 2.9 ft, clay clast at 2.9 ft; (?deposited in running water); gray (N 6/)

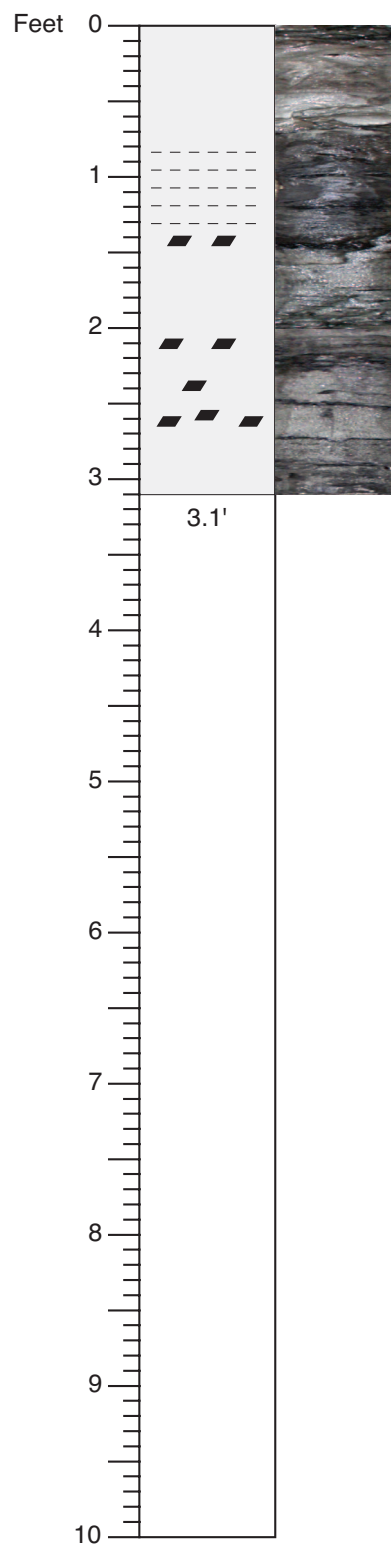
174AX SG
 Core #129
 Start depth: 1070 ft
 Stop depth: 1074 ft
 Recovery: 4.4 ft
 Date: 10/23/03
 Described by: JVB/PJS

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

131

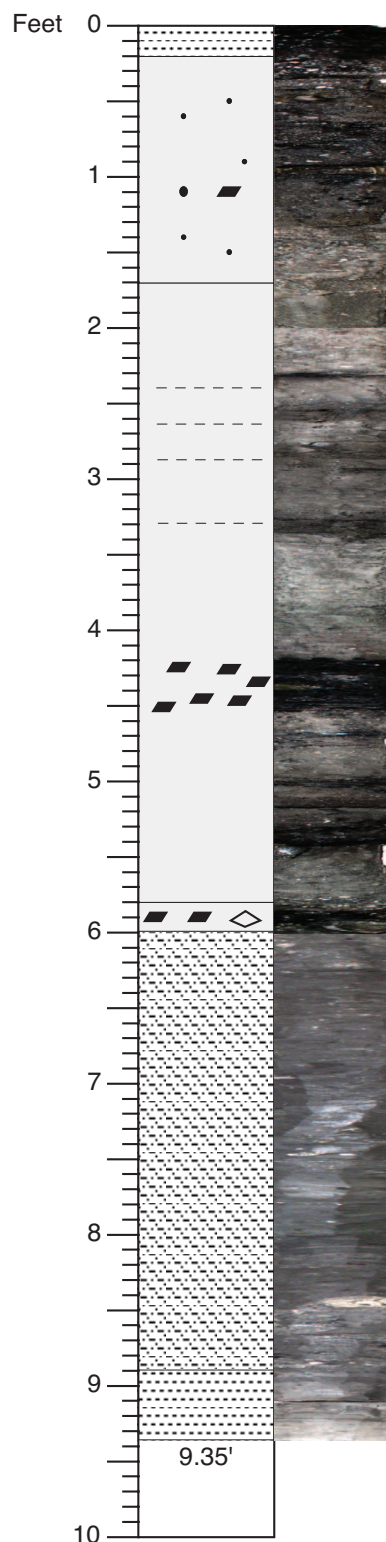






SAND; with interbedded clay and lignite, silty, micaceous, from 0-0.8 ft fine to very fine sand dominates; from 0.8-1.4 ft mostly clay with sand laminae; 1.4 ft to bottom, medium sand; gray (N/6) to black (N/2.5)

174AX SG
 Core #132
 Start depth: 1090 ft
 Stop depth: 1100 ft
 Recovery: 3.1 ft
 Date: 11/2/03
 Described by: JVB



CLAY; very organic rich, mucky; sand on outside is contamination

SAND; coarse with abundant medium, very coarse and granules, rare small pebbles, poorly sorted, nodule at 0.5 ft, subangular, quartz, rare lignite (1.2 ft); rare mica; gray (Gley N6/)

SAND; medium, well sorted, quartz, slightly micaceous, rare clay laminae (2.35, 2.6, 2.9, 3.3 ft); 4.2-4.6 ft lignitic bed, laminated large pyrite nodule at 4.4 ft; there are hints that the bed contains laminae at 0.5 ft intervals; below 5 ft silt and very fine sand increases; the core becomes more micaceous and contains more fine lignite grains; gray (Gley N6/)

SAND; lignitic, 2 cm diameter nodule (non carbonate)

CLAY; sandy on top, more laminated on top and more mixed together at bottom; sand is interlaminated (a few are >1 cm), maybe burrowed; sand is very fine, clay is sandy; some fine sand at base, very dark gray (2.5Y 3/1)

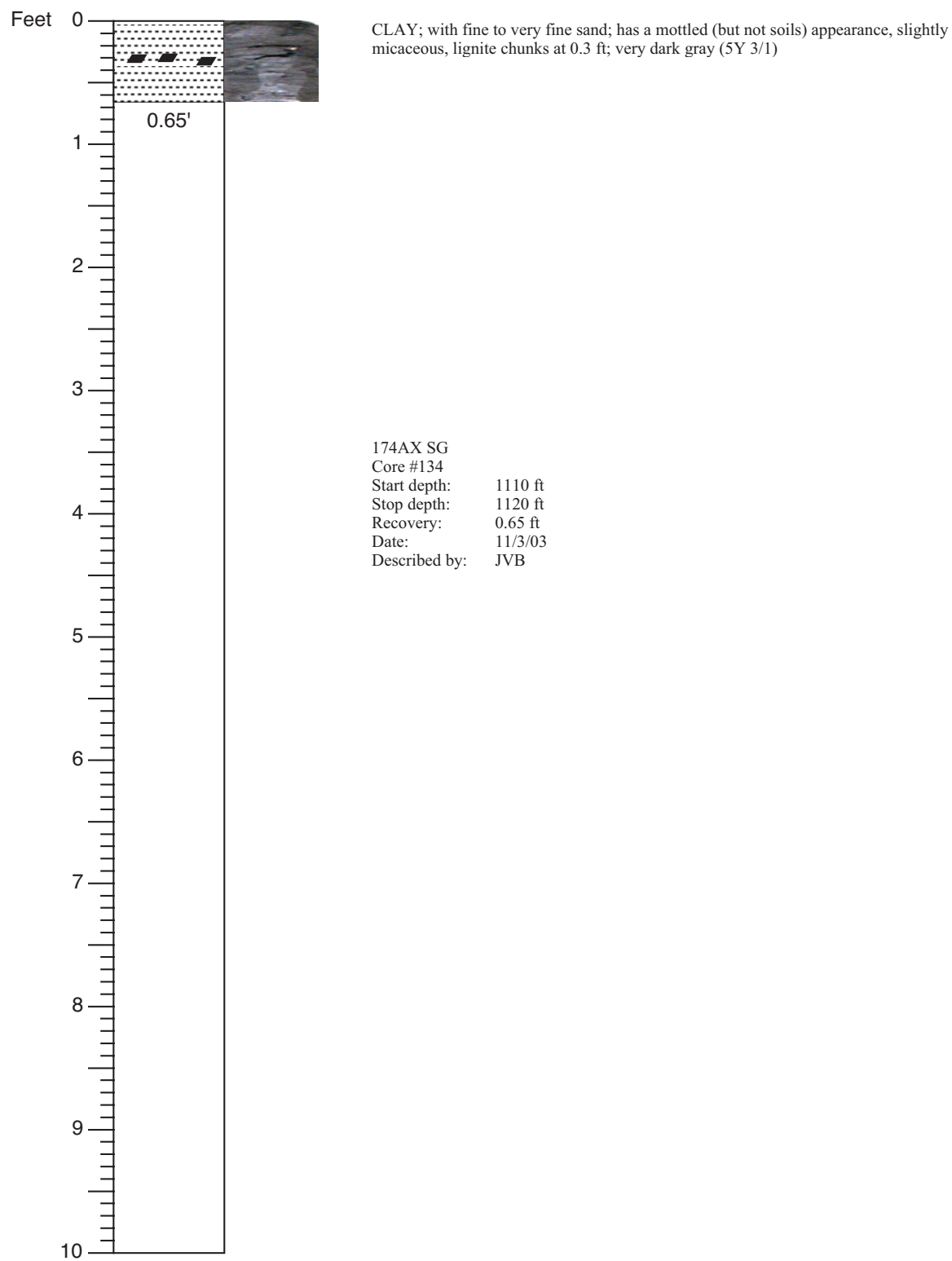
174AX SG
 Core #133
 Start depth: 1100 ft
 Stop depth: 1110 ft
 Recovery: 9.35 ft
 Date: 11/3/03
 Described by: JVB

Sharp contact

CLAY; lightly mottled (but not soils), slightly sandy/silty

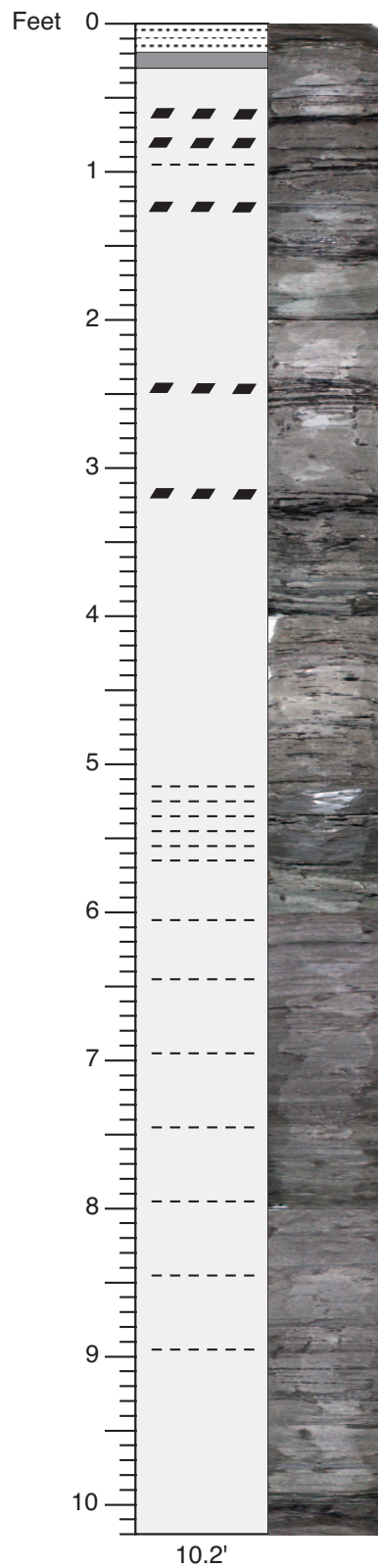
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

135



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

136



CLAY; with interbedded sand mixed in; the mixture of sand and clay gives a mottled appearance

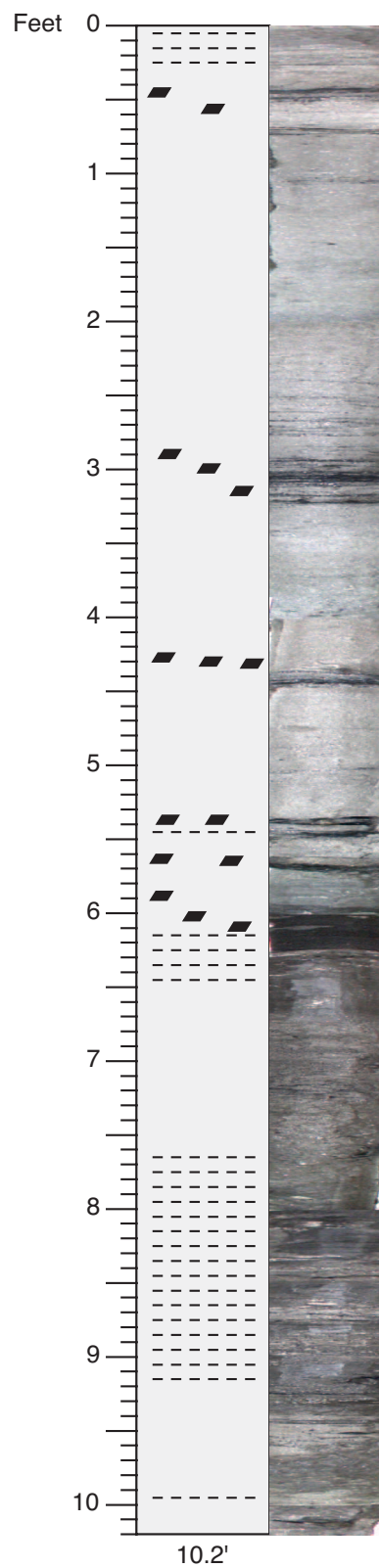
SANDSTONE; similar to the sand below but indurated

SAND; medium; moderate sorting, subangular/subrounded; some fine to very fine to silt; quartz; abundant clayey, organic rich lignitic laminae; lignite laminae are rare below 5.6 ft; a few thin lignitic laminae are present at the bottom; clay laminae (to 0.5 cm) are rare above 5.6 ft but are abundant below 5.6 ft; clay beds are mixed with sand beds between 5.1-5.6 ft; gray (Gley N6/)

174AX SG
 Core #135
 Start depth: 1120 ft
 Stop depth: 1130 ft
 Recovery: 10.2 ft
 Date: 11/3/03
 Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

137



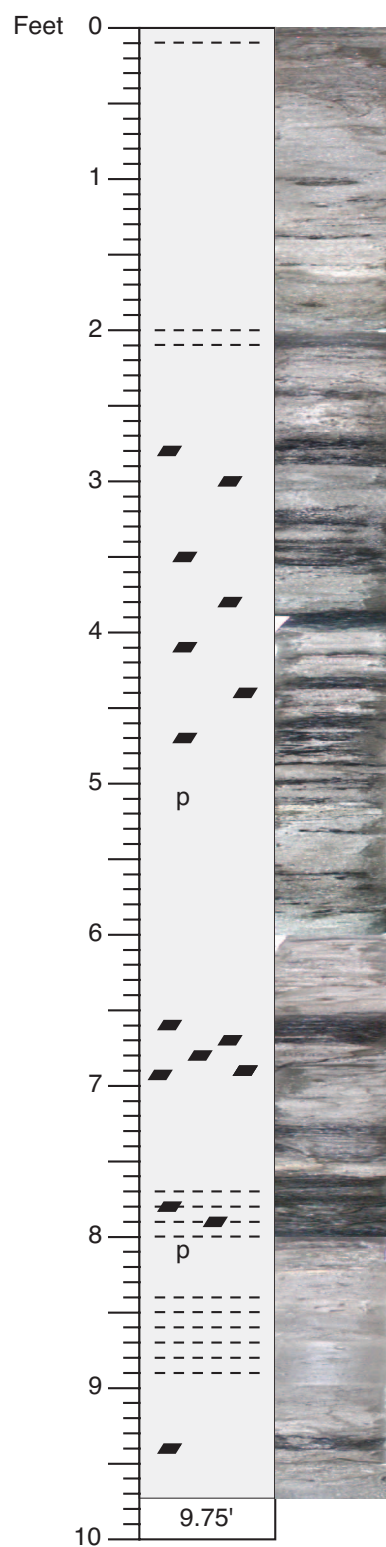
SAND; medium, some coarse, some large mica and lignite; some clay is burrowed with very fine sand; lignite is cross bedded; very dark gray (SGY 3/1)

174AX SG
 Core #136
 Start depth: 1130 ft
 Stop depth: 1140 ft
 Recovery: 10.2 ft
 Date: 11/3/03
 Described by: PJS/AK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

138

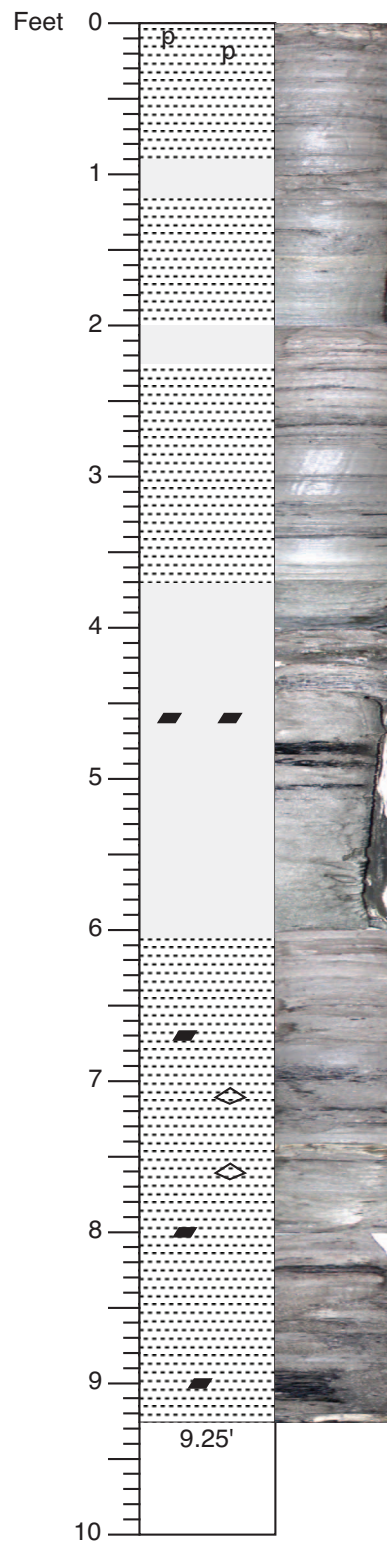


SAND; medium to coarse, micaceous with occasional cross bedded lignite, interbedded thin to thick dark clays and lignite; sand: gray (5GY 6/1), clay: very dark gray (5GY 3/1)

174AX SG
Core #137
Start depth: 1140 ft
Stop depth: 1150 ft
Recovery: 9.75 ft
Date: 11/4/03
Described by: PJS/AK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

139

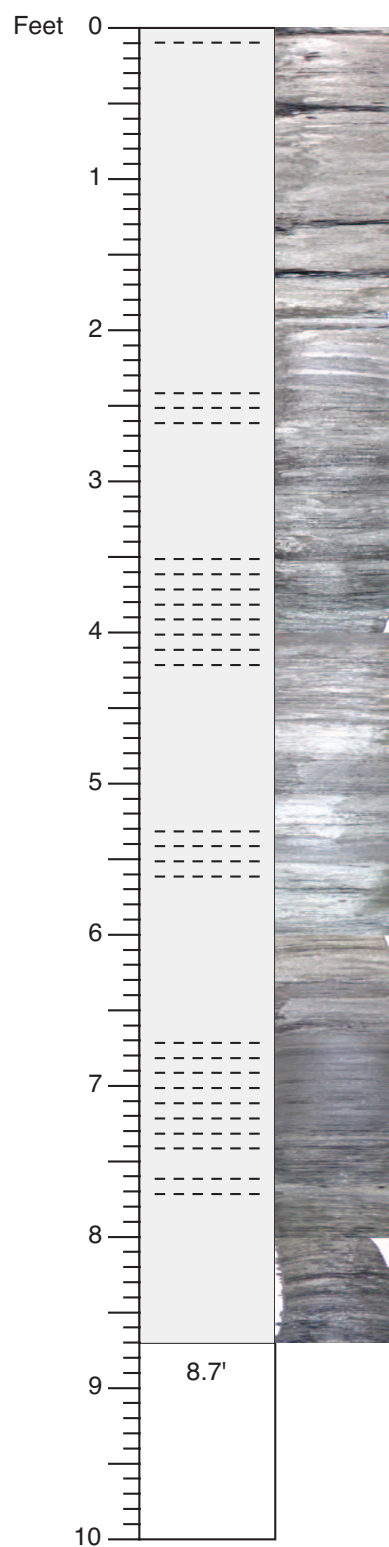


CLAY; laminated to cross laminated; with interbedded micaceous fine, sand, some medium, sands thicken and become coarser and more micaceous with depth; ?amber at 7.2 and 7.7 ft

174AX SG
 Core #138
 Start depth: 1150 ft
 Stop depth: 1160 ft
 Recovery: 9.25 ft
 Date: 11/4/03
 Described by: PJS/AK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

140



SAND; medium to coarse, slightly micaceous with some thin cross bedded lignites (0.5 ft)

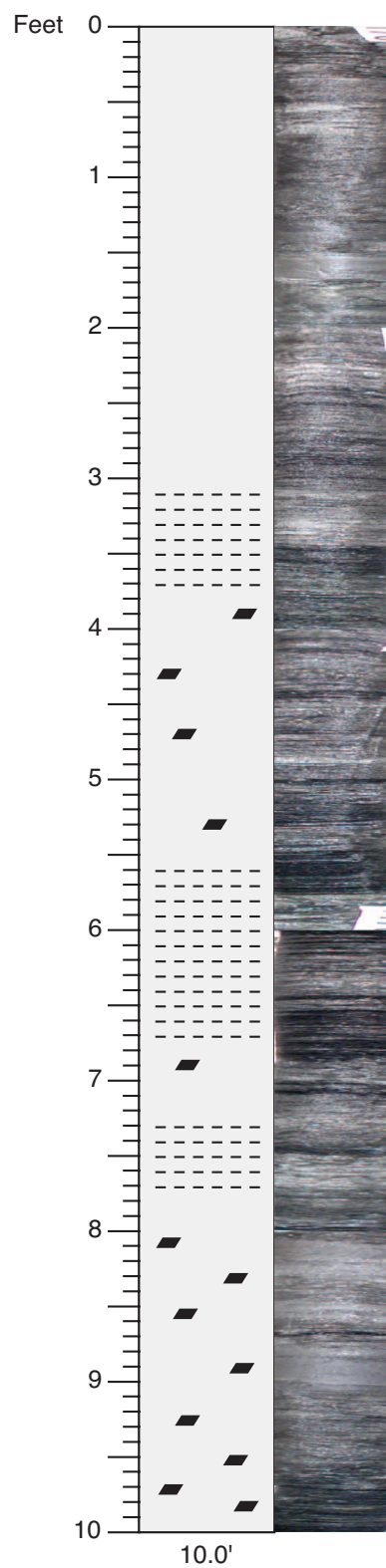
SAND; with interbedded silty CLAY; beds are 0.1-0.3 ft thick; clays are laminated, some lignite; sand: gray (5GY 5/1); clay: dark gray (5GY 4/1)

174AX SG
Core #139
Start depth: 1160 ft
Stop depth: 1170 ft
Recovery: 8.7 ft
Date: 11/4/03
Described by: PJS/DK

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

141

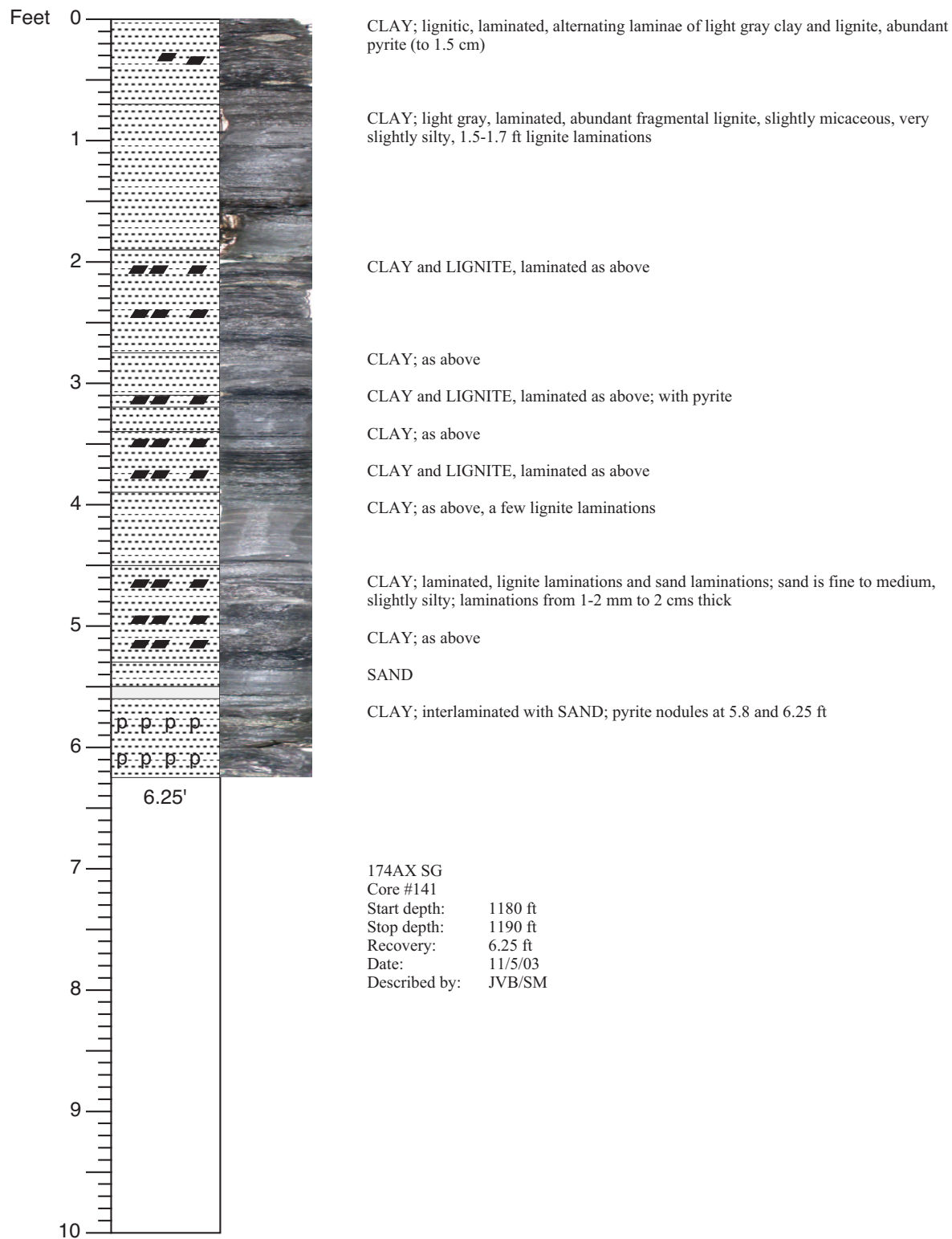


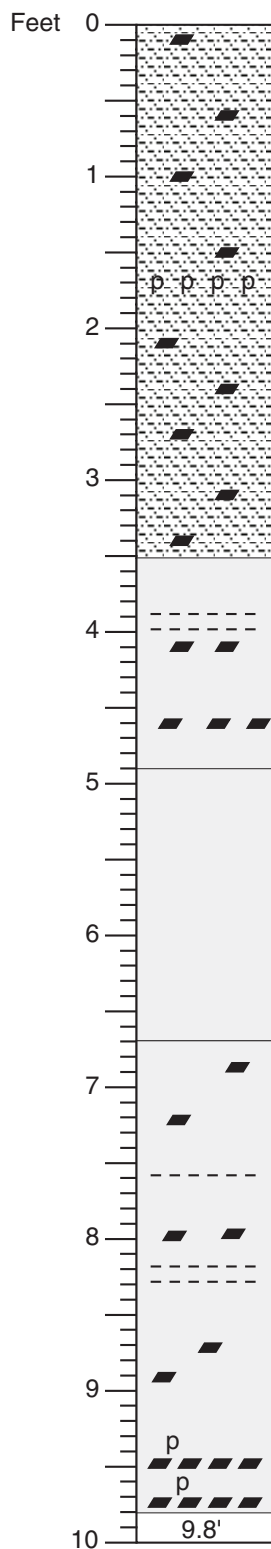
SAND; fine, silty, laminate; with lignite and occasional lignite silty beds; sand beds are as thin as 0.5 ft and laminated clay beds can be 0.2 ft; trace of pyrite throughout core; pyrite is in granular sized cubes; the bottom 2.3 ft contain more lignite than the top

174AX SG
Core #140
Start depth: 1170 ft
Stop depth: 1180 ft
Recovery: 10 ft
Date: 11/4/03
Described by: PJS/DK

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

142





CLAY; LIGNITE and SAND; interbedded/interlaminated; sand is very fine, silty, slightly micaceous; thickest sand bed at 0.25-0.35 ft; thicker clay beds at 0.6-0.9, 1.15-1.3, 2.454-2.7 ft

SAND; fine to medium (mostly fine), silty, with thin and sparse lignite and clay laminae

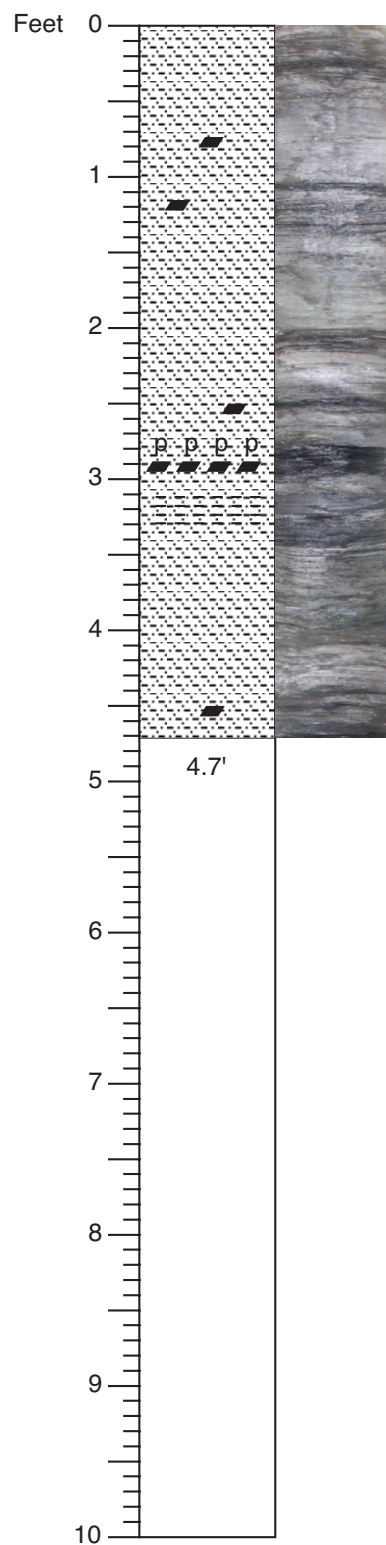
SAND; silty, mostly fine with some medium; no laminations, occasional lignite

SAND; with lignite and clay laminae, as above; sand: gray (N6/), lignite: black (N2.5/), clay: very dark gray (N3/)

174AX SG
 Core #142
 Start depth: 1190 ft
 Stop depth: 1200 ft
 Recovery: 9.8 ft
 Date: 11/5/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

144

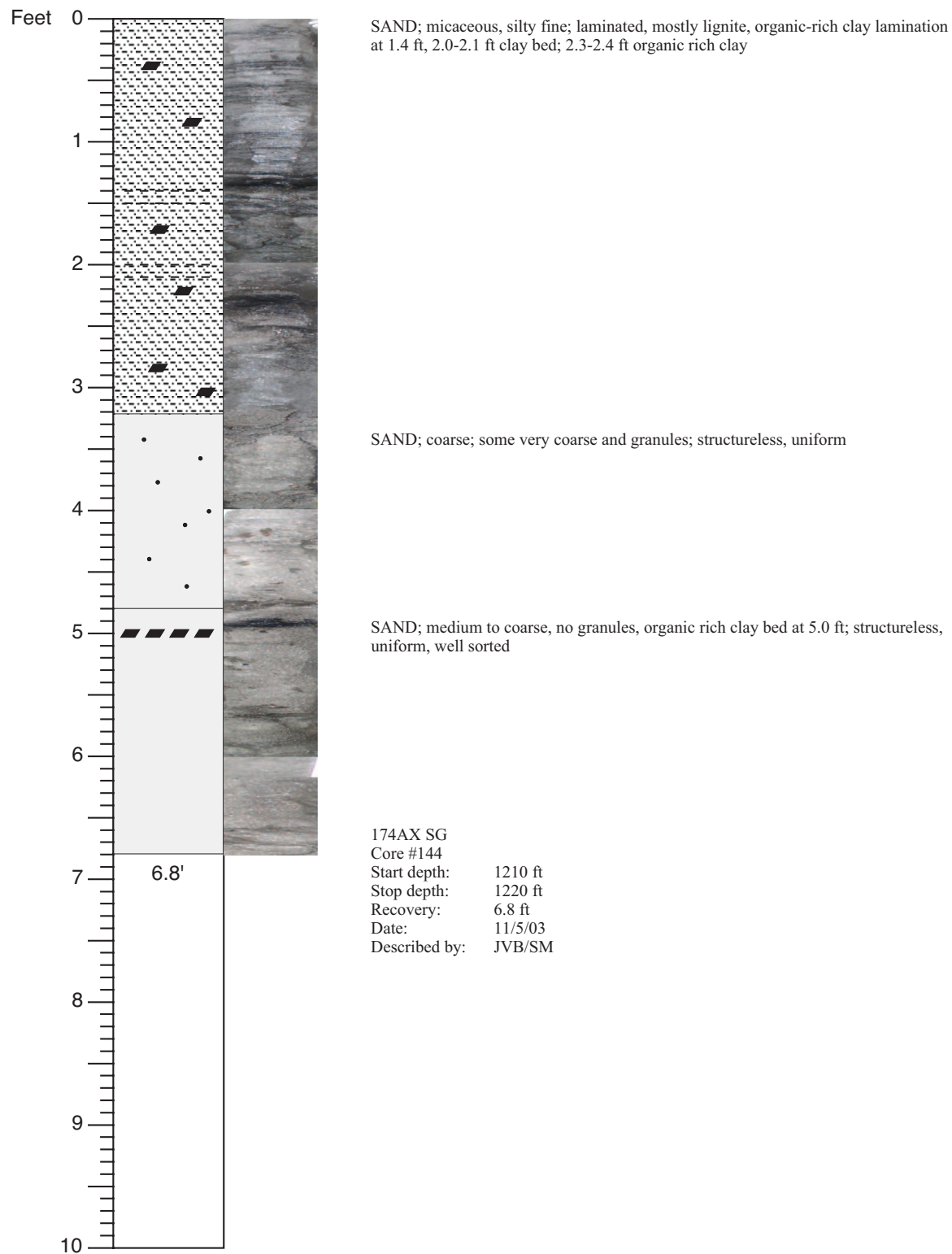


SAND; fine, silty; with interlaminated and interbedded clay and lignite; laminated silty clay with lignite at bottom; sand: gray (N6/), lignite: black (N2.5/), clay: very dark gray (N3/)

174AX SG
 Core #143
 Start depth: 1200 ft
 Stop depth: 1210 ft
 Recovery: 4.7 ft
 Date: 11/5/03
 Described by: JVB/SM

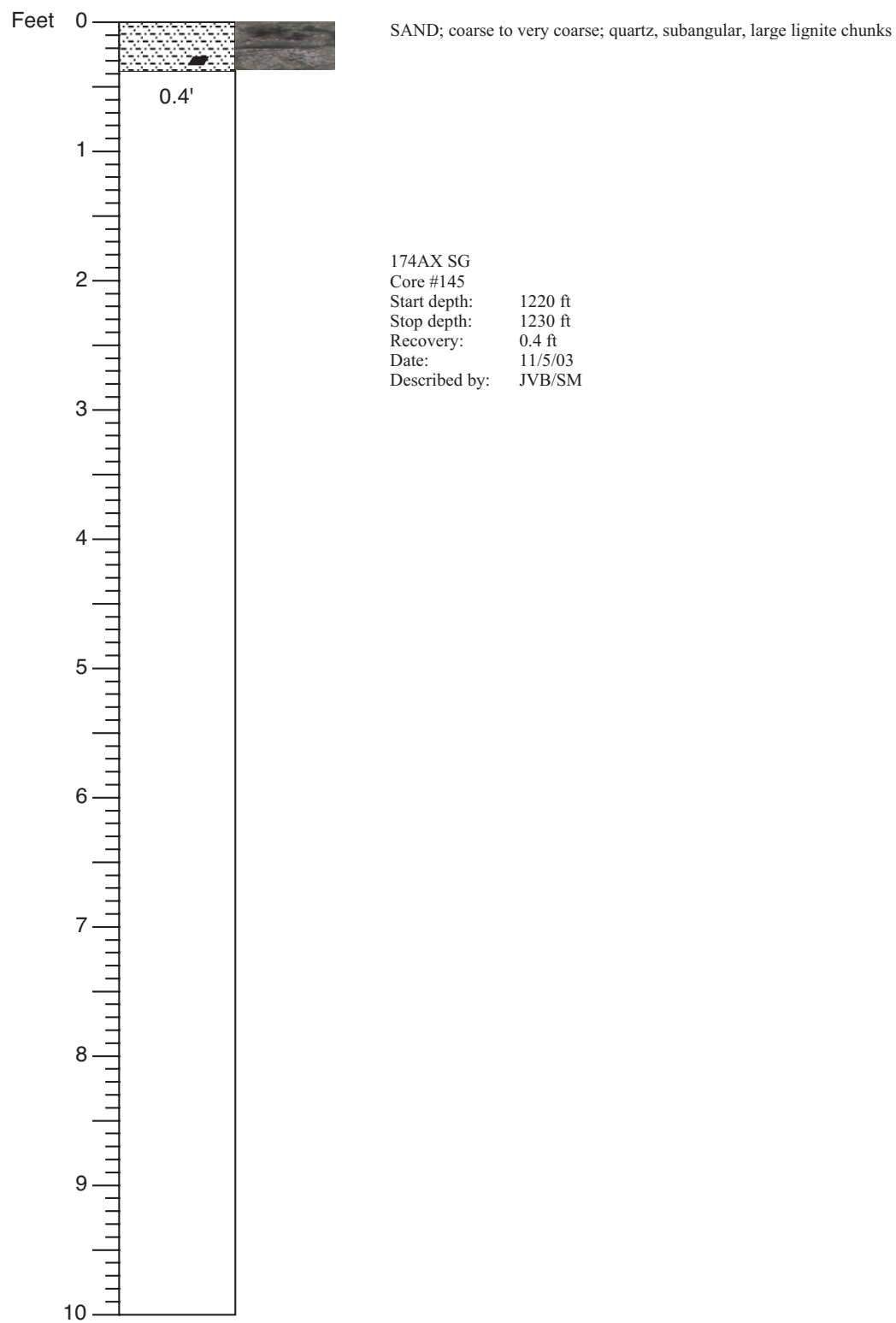
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

145



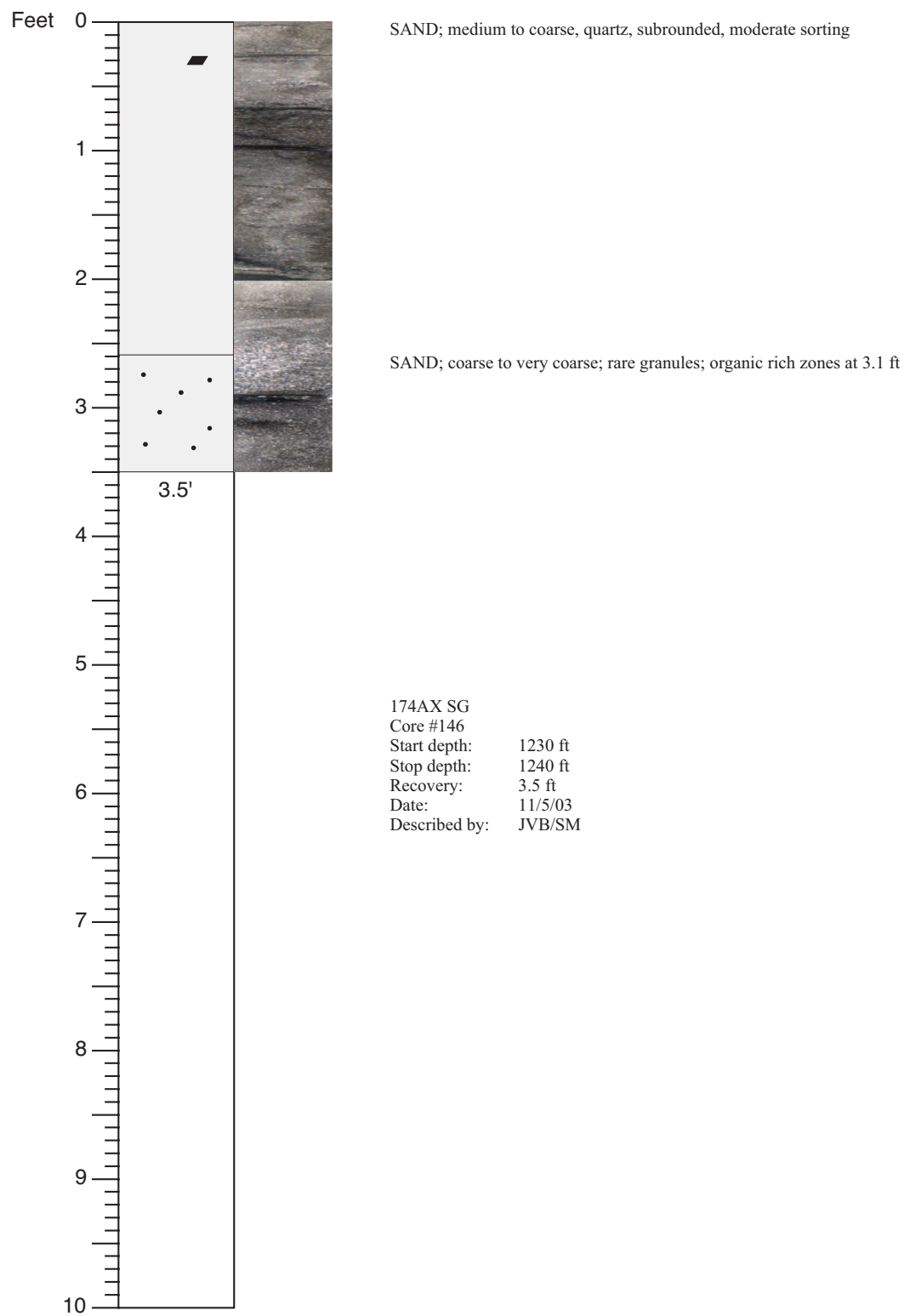
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

146



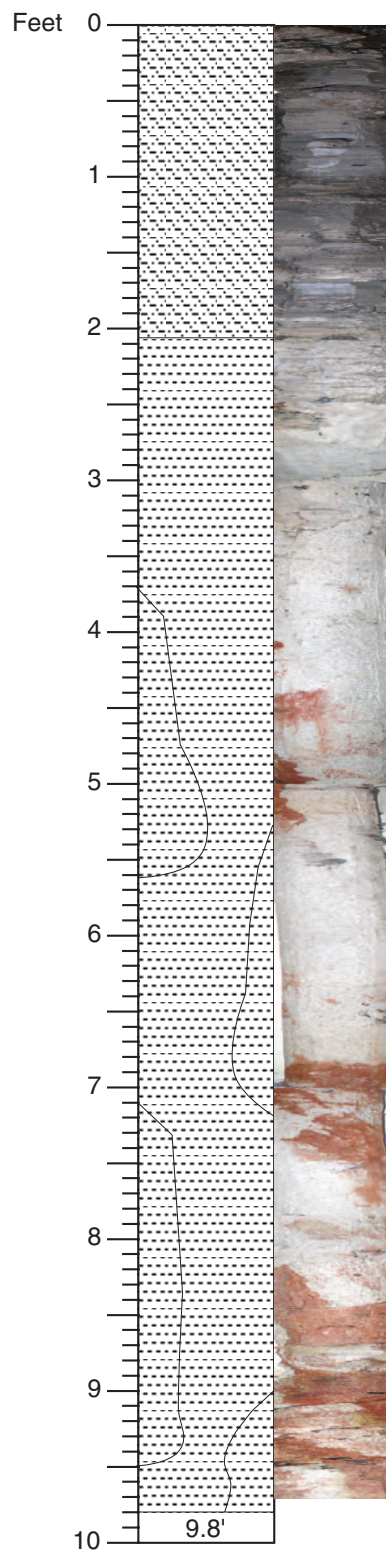
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

147



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

148



SAND; with interbedded and interlaminated CLAY; very fine to fine sand; clay has very little silt; lignite beds are generally 5 cms thick; laminae are about 1 mm thick; very slightly micaceous; gray (N4/)

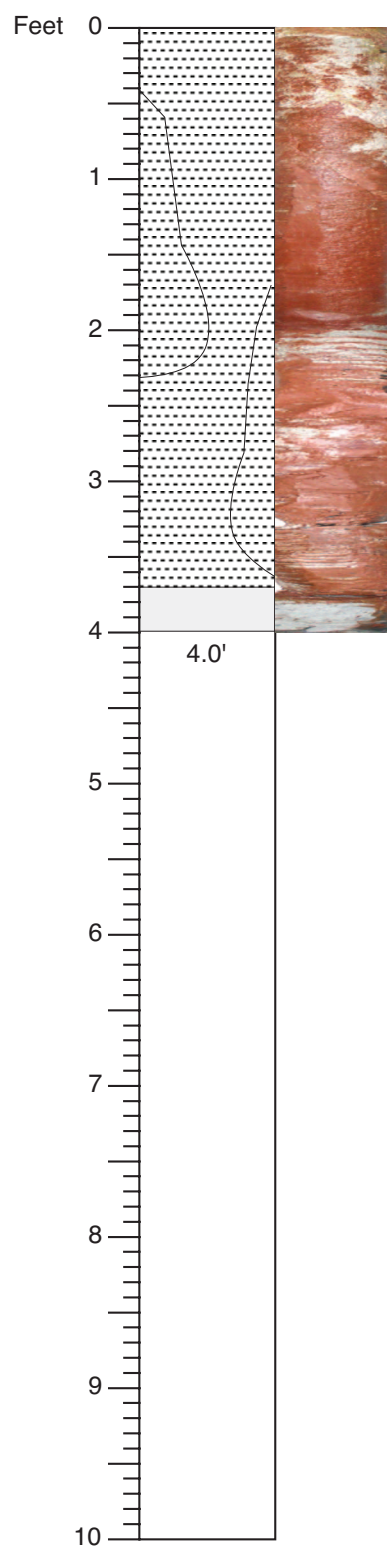
Abrupt contact

CLAY; red and white mottled paleosol; clay is very dry, slightly silty; very slightly finely micaceous; contains sphaerosiderite; red mottles start 3.7 ft and continue to the bottom of the core; there is a small amount of quartz on the outside of the core in the lower ft; the lower 2 ft is cracked and intruded with drilling mud; white: light gray N7/ , red: red 10R 5/6

Core #147
 Start depth: 1240 ft
 Stop depth: 1250 ft
 Recovery: 9.8 ft
 Date: 11/6/03
 Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

149



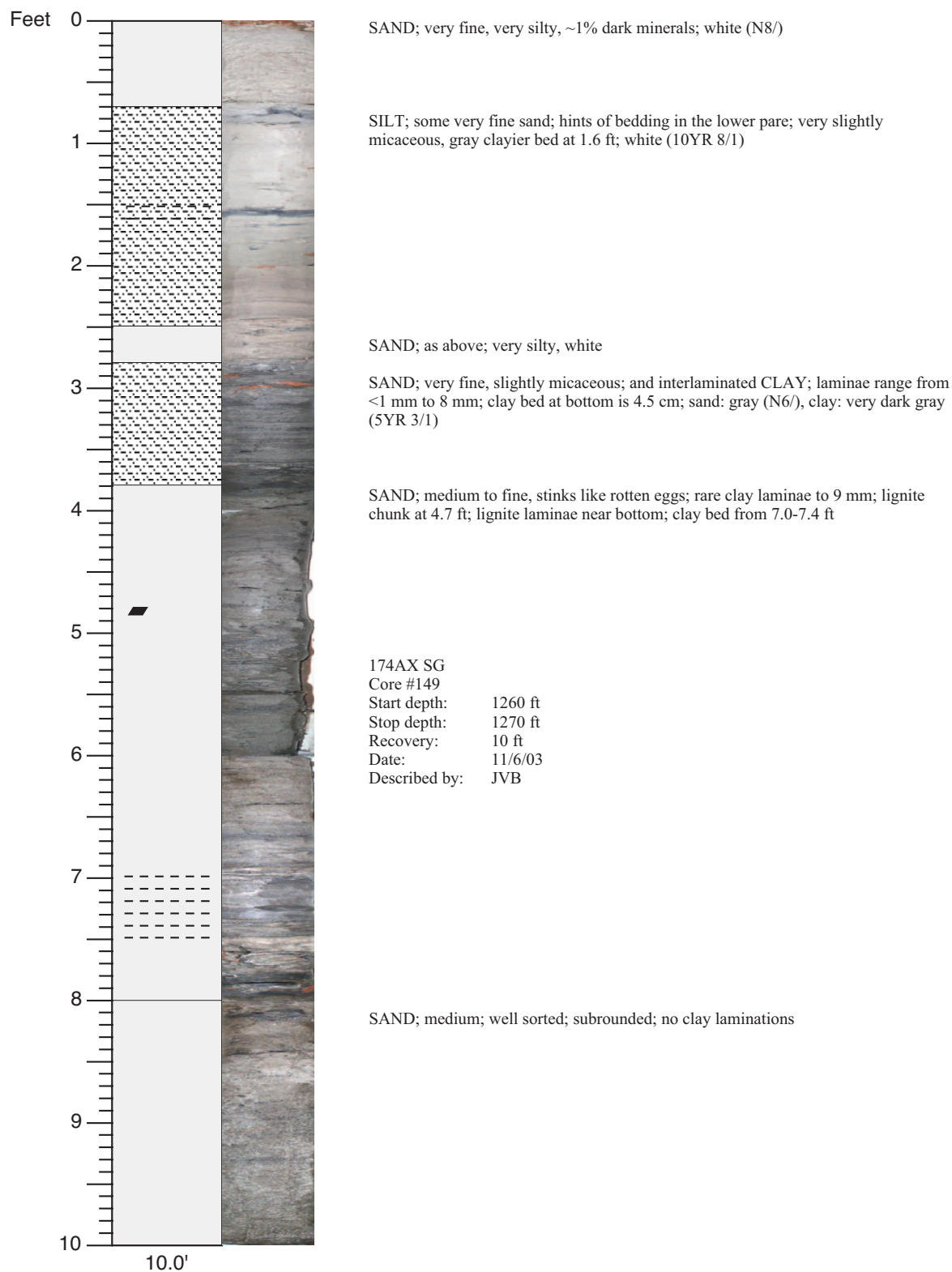
CLAY; mottled red and white; more intense mottling at the bottom; white: light gray (N7/), red: red (10R 5/6); some green/yellow color at top: yellow (2.5Y 7/6)

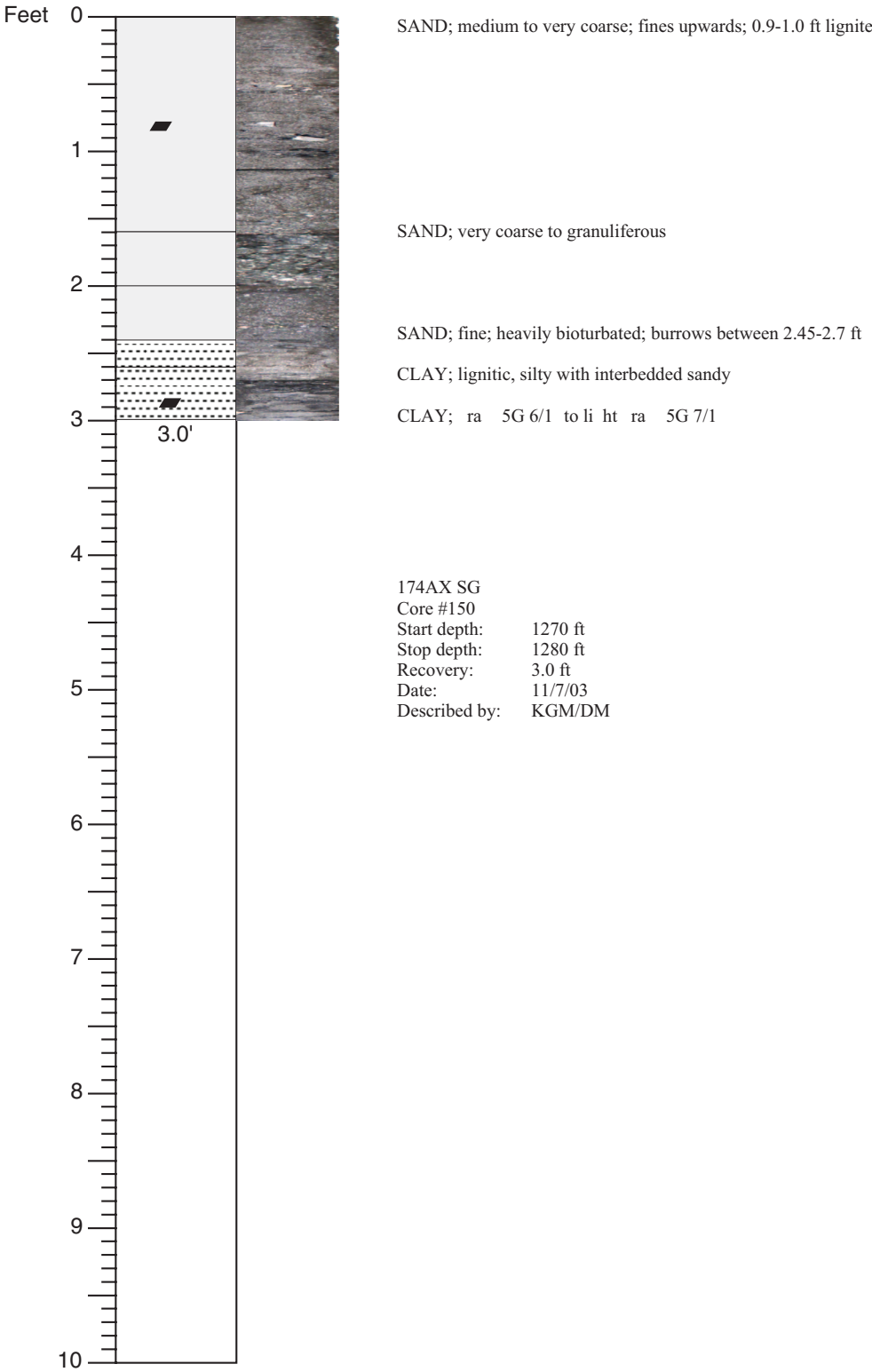
SAND; very fine, very silty; white (N8/)

174AX SG
Core #148
Start depth: 1250 ft
Stop depth: 1260 ft
Recovery: 4.0 ft
Date: 11/6/03
Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

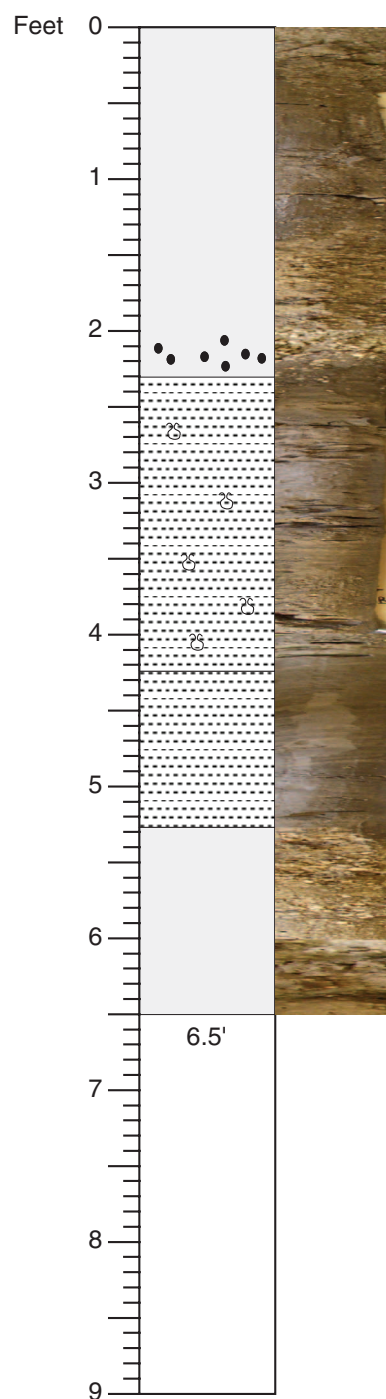
150





CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

152



SAND; medium to very coarse (fining up), and burrowed sandy silty CLAY; sands are bioturbated, poorly sorted, little clay or silt; gravel at base; sand: light gray (5G 7/1) to gray (5G 6/1), clay: dark gray (5G 4/1)

CLAY; sandy, silty; generally heavily bioturbated, with a few laminations preserved (e.g., 3.3-3.4 ft)

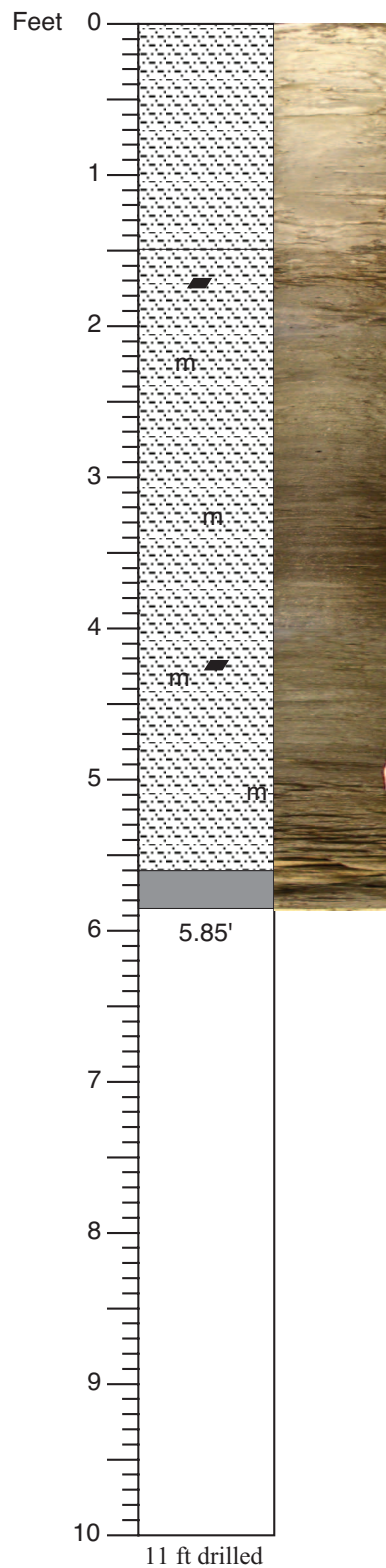
CLAY; silty, with angled color cross-laminations

SAND; ?kaolinized and clayey, poorly sorted sand, appears to fine down to clean medium sand; ?exposure

174AX SG
 Core #151
 Start depth: 1280 ft
 Stop depth: 1289 ft
 Recovery: 6.5 ft
 Date: 11/7/03
 Described by: KGM/DM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

153



SILT; white (?kaolinized), slightly sandy, micaceous, heavily bioturbated.; this might be weathered Bass River Formation; white (SGY 8/1)

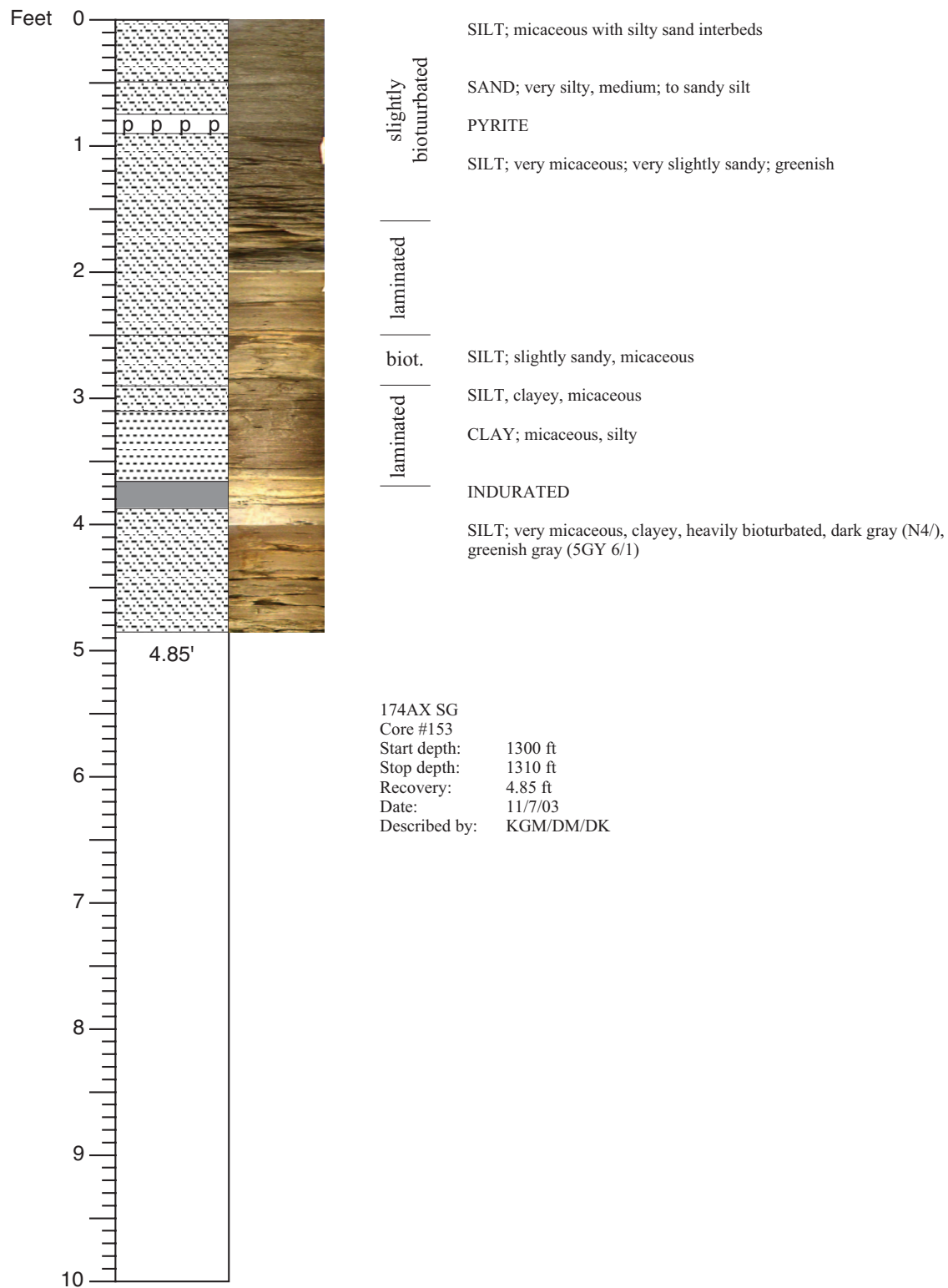
SILT; very slightly sandy clayey, micaceous; ?lignite; some white material burrowed down from above; ~3% mica including chlorite; ~3% dark grains that appear to be lignite; heavily bioturbated, "dirty, dirty shelf;" very dark gray (SGY 3/1)

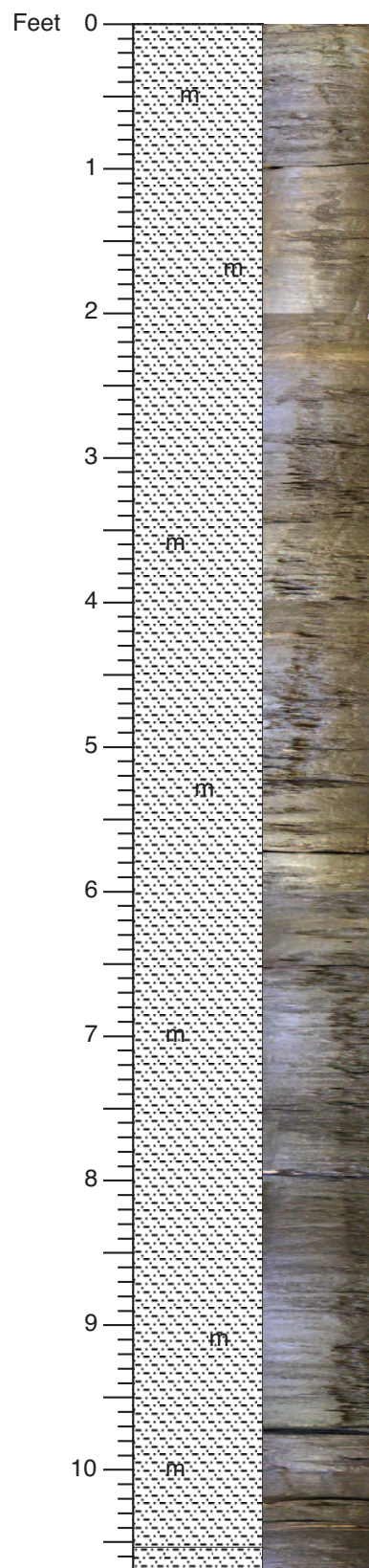
174AX SG
 Core #152
 Start depth: 1289 ft
 Stop depth: 1300 ft
 Recovery: 5.85 ft
 Date: 11/7/03
 Described by: KGM/DK/DM

SILTSTONE; indurated, clayey, micaceous, not calcium carbonate cement

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

154





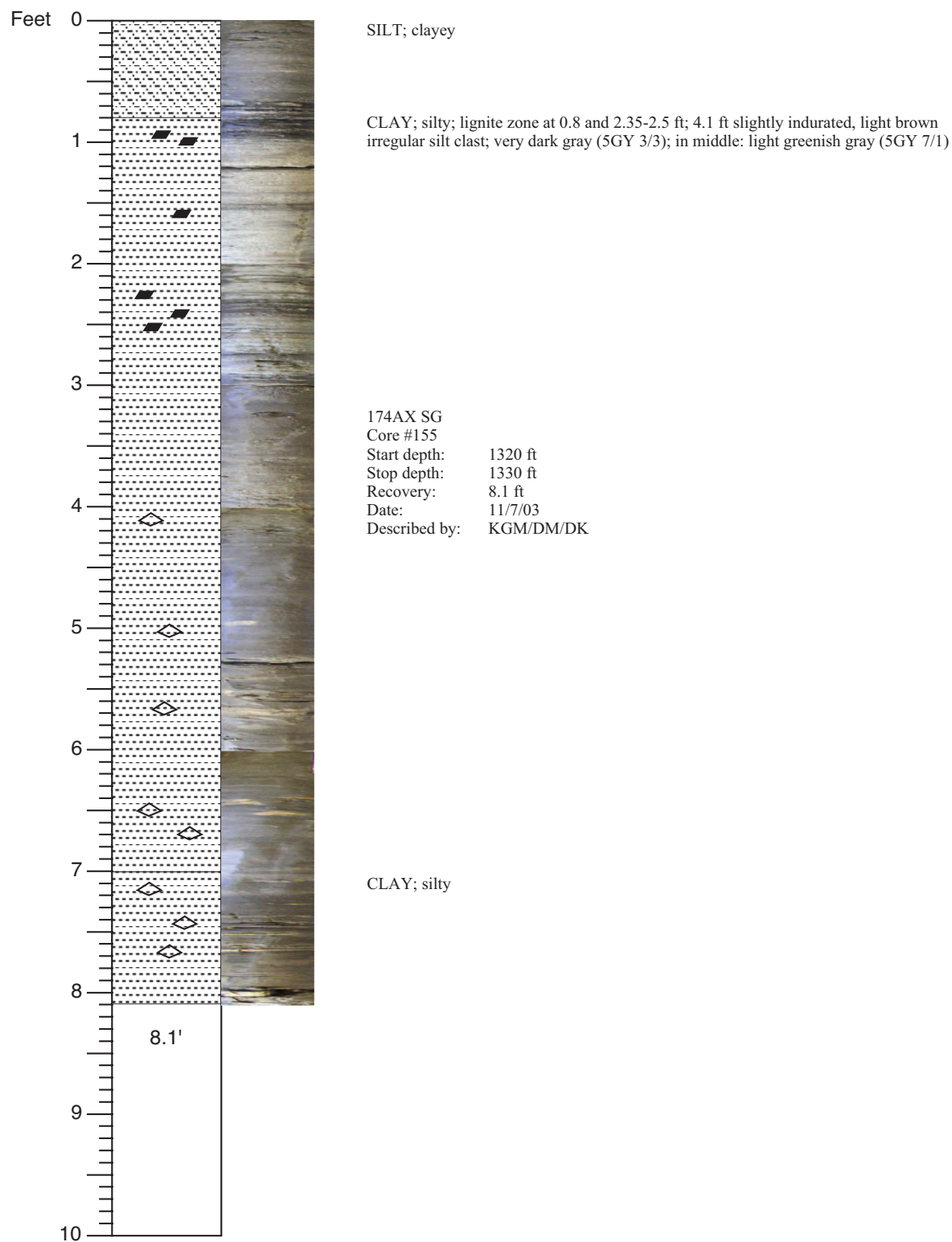
SILT; micaceous, clayey, fine to clay at 9.8 ft; bioturbated zones at 0.2-0.4, 3.8-5.3 ft; pyritized inclusion at 8.0 ft; mud lamination/rip up clast at 9.4 and 10.5 ft

174AX SG
 Core #154
 Start depth: 1310 ft
 Stop depth: 1320 ft
 Recovery: 10.7 ft
 Date: 11/7/03
 Described by: KGM/DM/DK

SILT; lignitic, micaceous, clayey
 10.7'

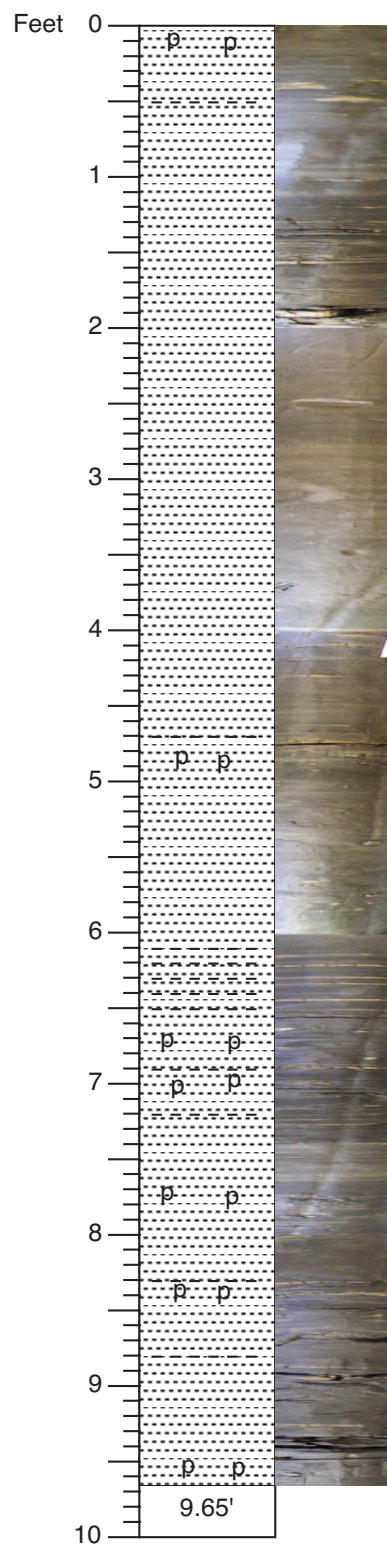
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

156



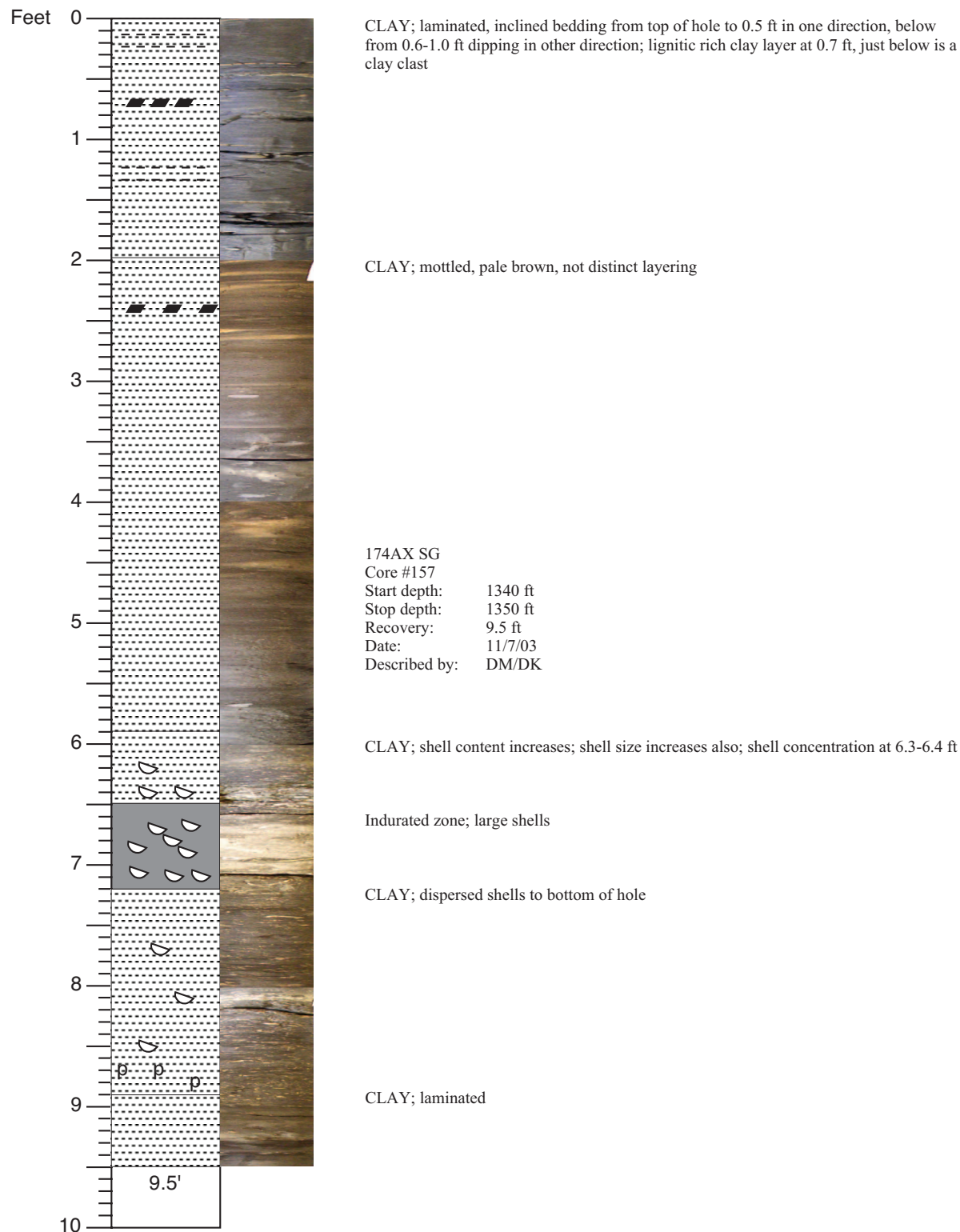
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

157



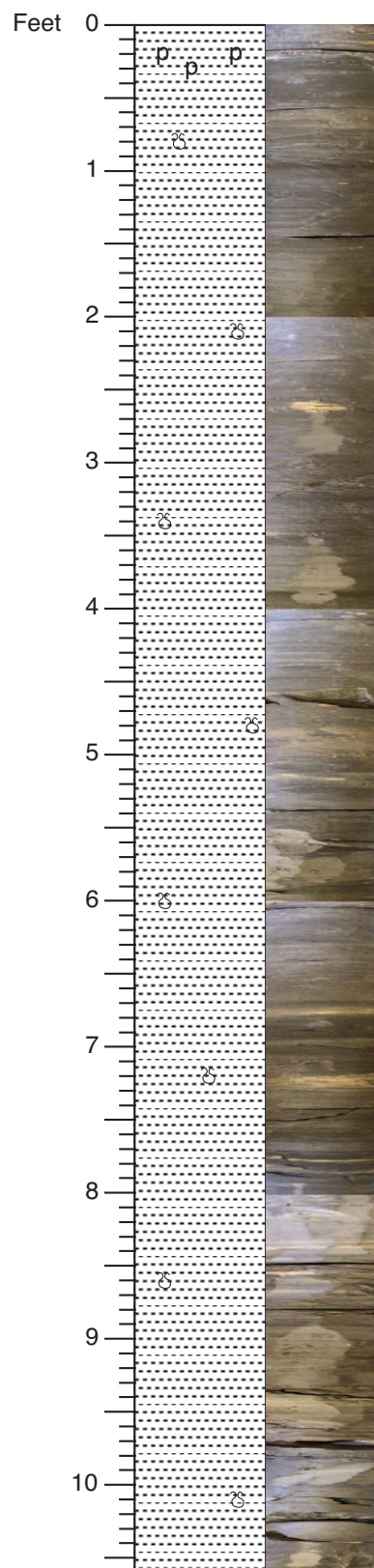
CLAY; pyrite at top of core and 0.3 ft; few laminae containing a high percentage of lignite in the upper section; a different clay (pale brown; 10YR 6/3) occurs in thin seams and clasts that do not cross the entire core; a surface is at .05 ft; thin lignitic lamina below and dramatic color change below, surface is slightly inclined; dark gray (N4/) below surface, very dark gray (N3/) above

174AX SG
 Core #156
 Start depth: 1330 ft
 Stop depth: 1340 ft
 Recovery: 9.65 ft
 Date: 11/7/03
 Described by: KGM/DM/DK



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

159



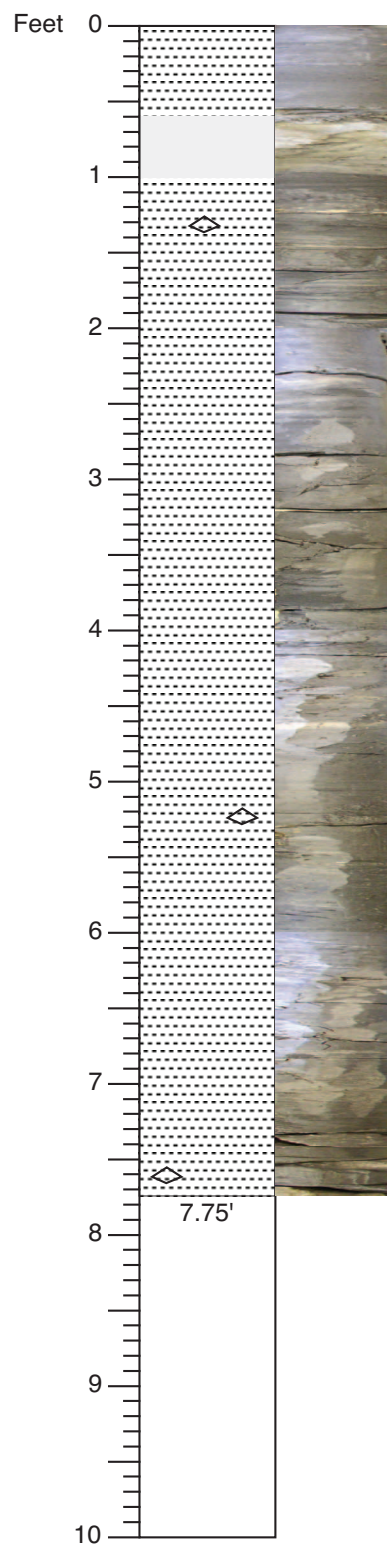
CLAY; slightly silty, slightly micaceous, scattered lignite, scattered shell fragments, no laminations, no obvious burrows, in spots there is color banding; pyrite common at top, more pyrite at 9.8 ft; numerous brownish nodules (?burrows); gray (10YR 6/1)

174AX SG
 Core #158
 Start depth: 1350 ft
 Stop depth: 1360 ft
 Recovery: 10.6 ft
 Date: 11/8/03
 Described by: JVB

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

160



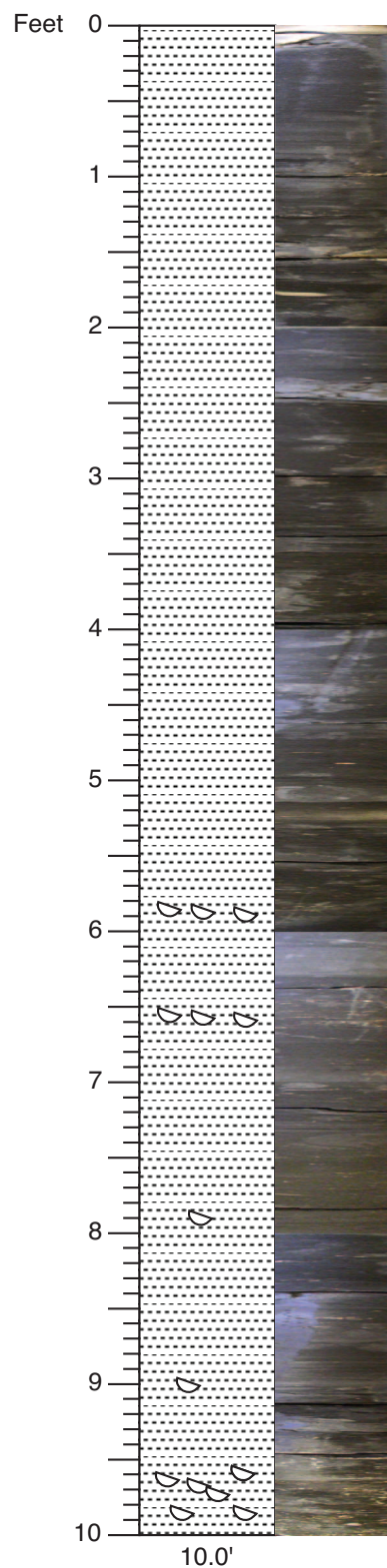
CLAY; slightly silty slightly micaceous; burrowed, few shells; foraminifers common, sand bed at 1.0 ft, silty micaceous very fine sand, slightly lignitic; nodule layers at 1.3, 5.3, and 7.7 ft; core is harder at bottom, may be indicating more clay

174AX SG
Core #159
Start depth: 1360 ft
Stop depth: 1370 ft
Recovery: 7.75 ft
Date: 11/8/03
Described by: JVB/AH

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

161

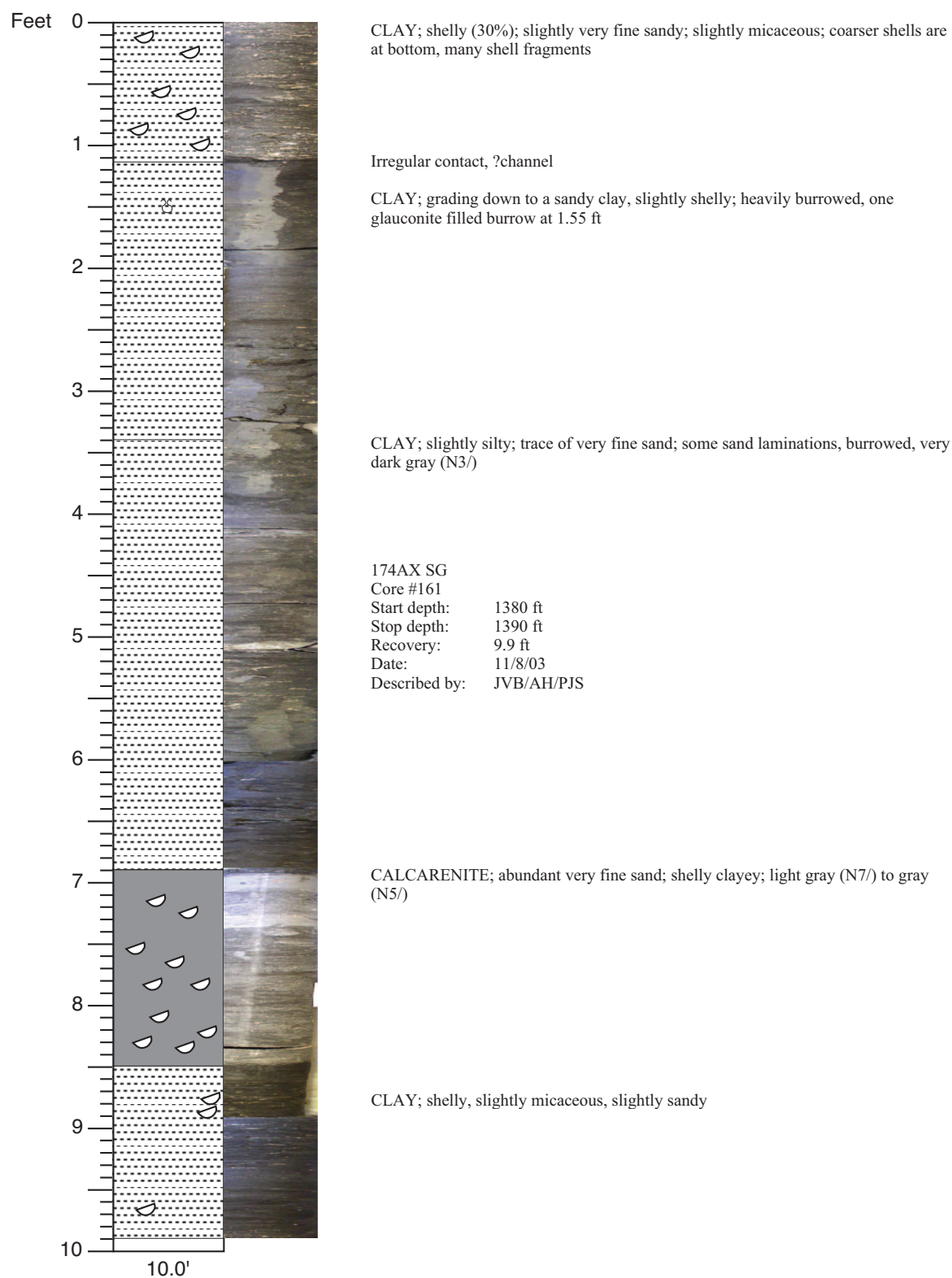


CLAY; slightly micaceous, slightly silty, numerous organic grains, shells are common below 3.5 ft; shelly beds at 5.7-5.9, 6.5-6.7, 9.5-10.0 ft; brown concretions at 0-0.15, 1.5-1.6, 1.8 ft; fine silty sand bed at 2.4-2.55 ft; a few siltier beds with bases at 1.1, 2.2, 5.15, 6.35 ft; clay: very dark gray (N3/), silt/sand: gray (N6/)

174AX SG
Core #160
Start depth: 1370 ft
Stop depth: 1380 ft
Recovery: 10.0 ft
Date: 11/8/03
Described by: JVB/AH/PJS

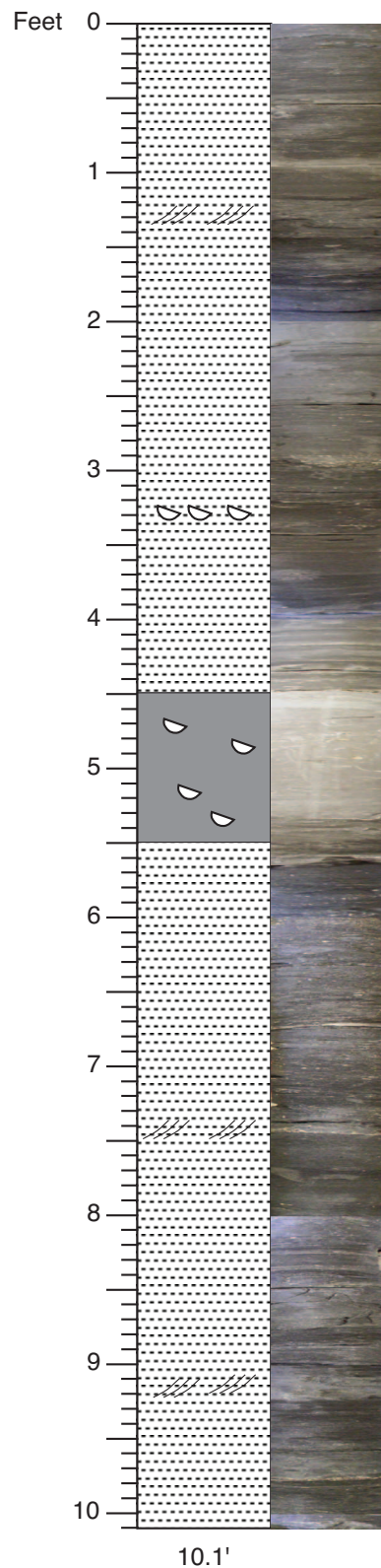
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

162



CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

163



CLAY; slightly sandy, slightly micaceous; shelly; bedded; some sandy beds, sand bed with cross beds at 1.3, 3.3, 7.4-7.5, 9.1-9.3, 9.6-9.8 ft;

174AX SG
 Core #162
 Start depth: 1390 ft
 Stop depth: 1400 ft
 Recovery: 10.1 ft
 Date: 11/8/03
 Described by: JVB/AH/PJS

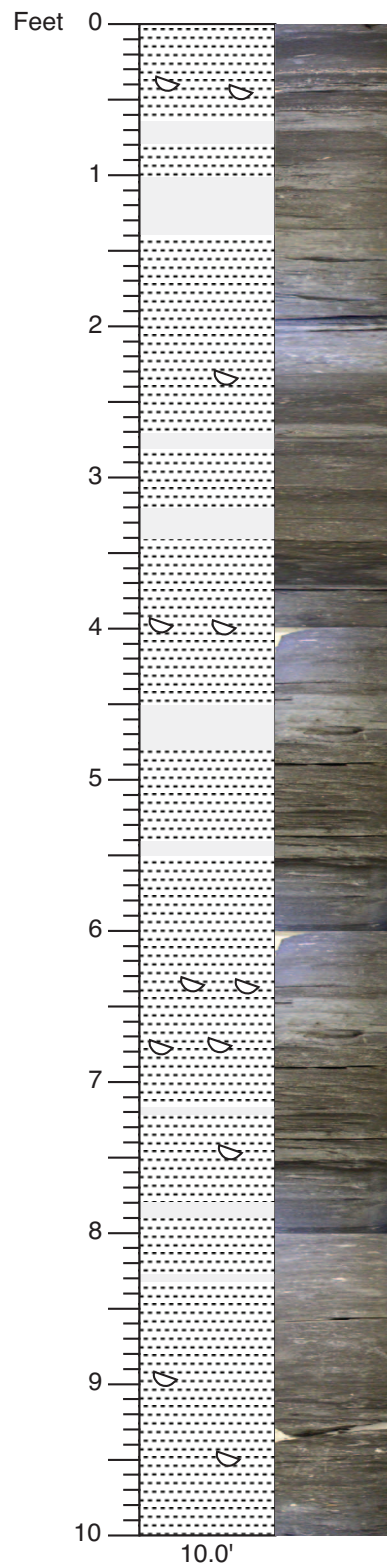
CALCARENITE; sandier, shelly

CLAY; as above, sandier units

CORE DESCRIPTIONS

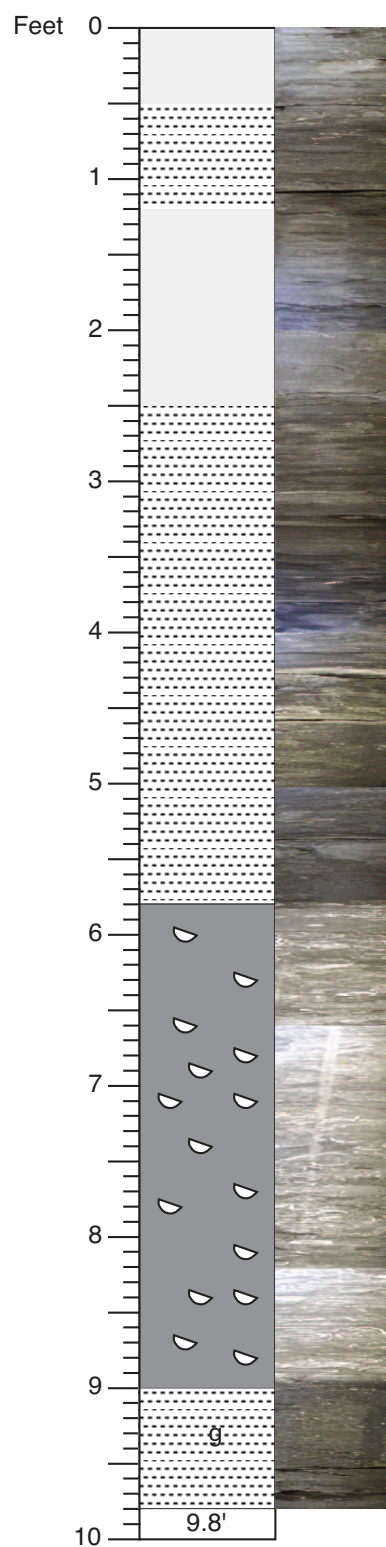
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

164



CLAY; silty; slightly sandy, micaceous; shell beds at 0.4, 4.0, 6.8 ft; large shell at 6.4 ft, shell hash throughout; fine micaceous sand beds at 0.65-0.8, 1.0-2.4, 2.7-2.8, 3.2-3.4, 4.5-4.8, 5.4-5.5, 7.2, 7.8-7.9, 8.3 ft

174AX SG
Core #163
Start depth: 1400 ft
Stop depth: 1410 ft
Recovery: 10.0 ft
Date: 11/8/03
Described by: JVB/AH/PJS



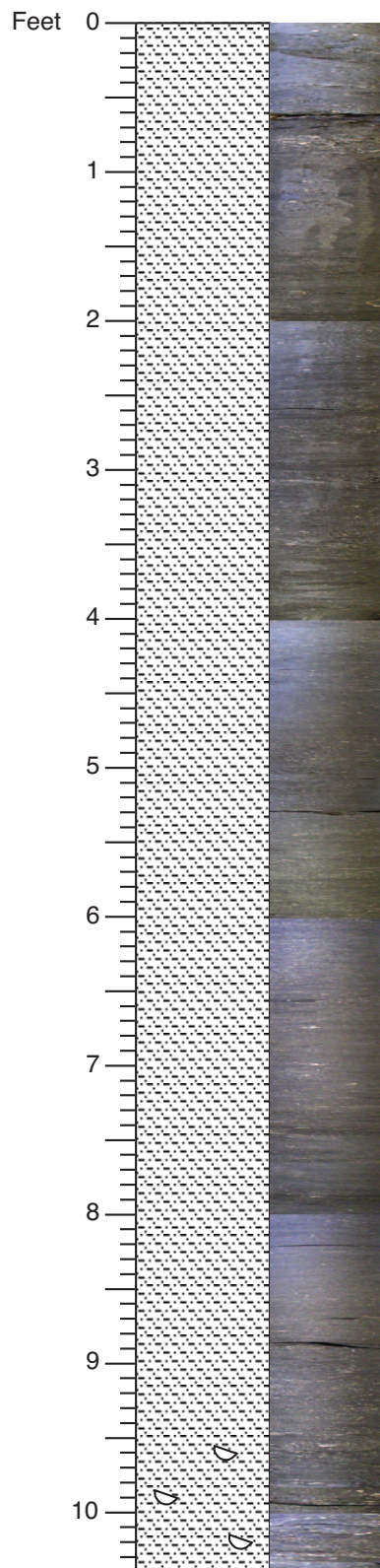
SAND; silty; with interbedded sandy CLAY; finely micaceous, shelly throughout; sand 0-0.5 ft; clay 0.5-1.2 ft; sand 1.2-2.5 ft; clay 2.5-5.8; sand is often laminated or cross bedded

174AX SG
 Core #164
 Start depth: 1410 ft
 Stop depth: 1420 ft
 Recovery: 9.8 ft
 Date: 11/8/03
 Described by: JVB/AH/PJS

CALCARENITE; fine to medium sand with abundant shells, micaceous

Sequence Boundary

SILT; sandy, clayey, very slightly glauconitic

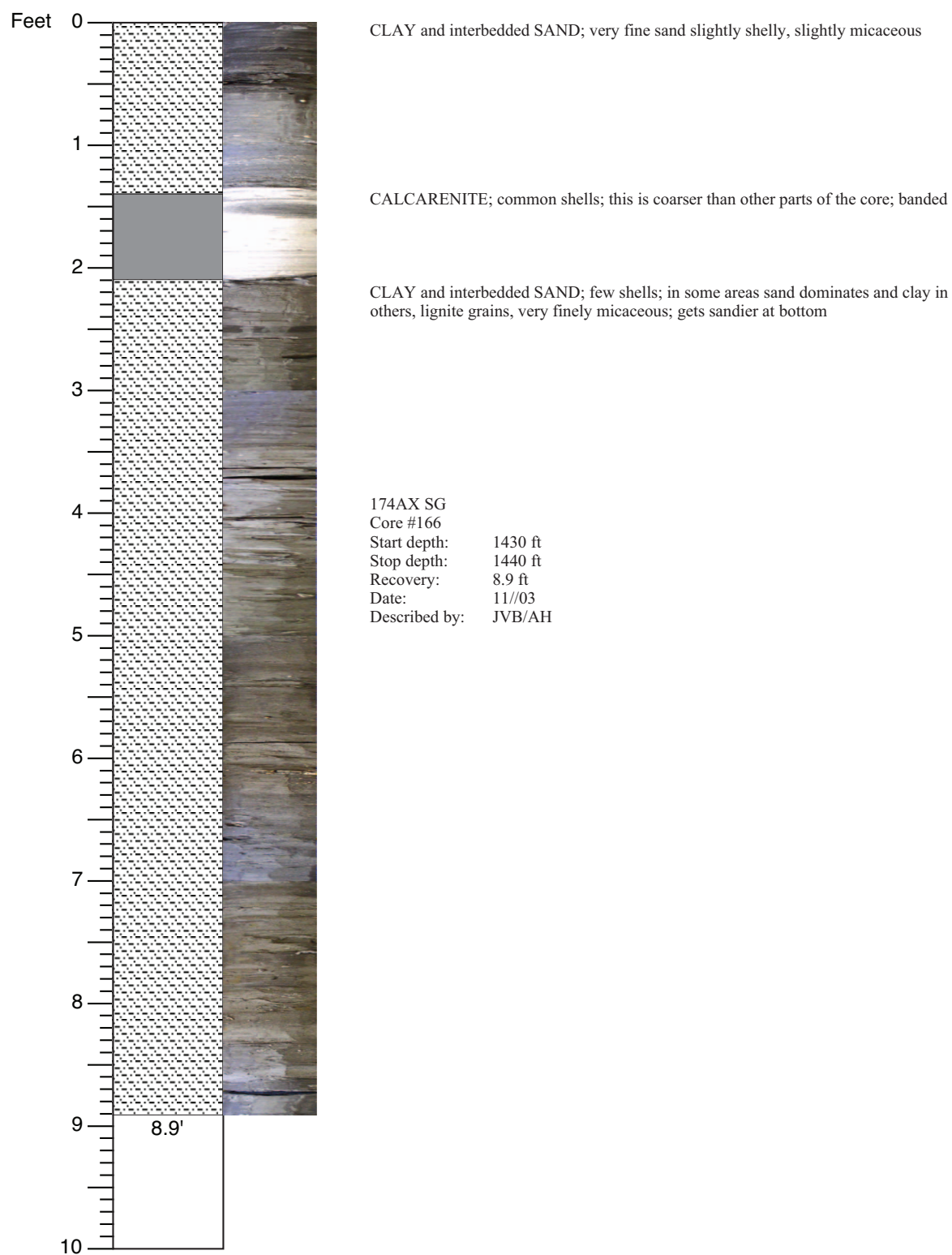


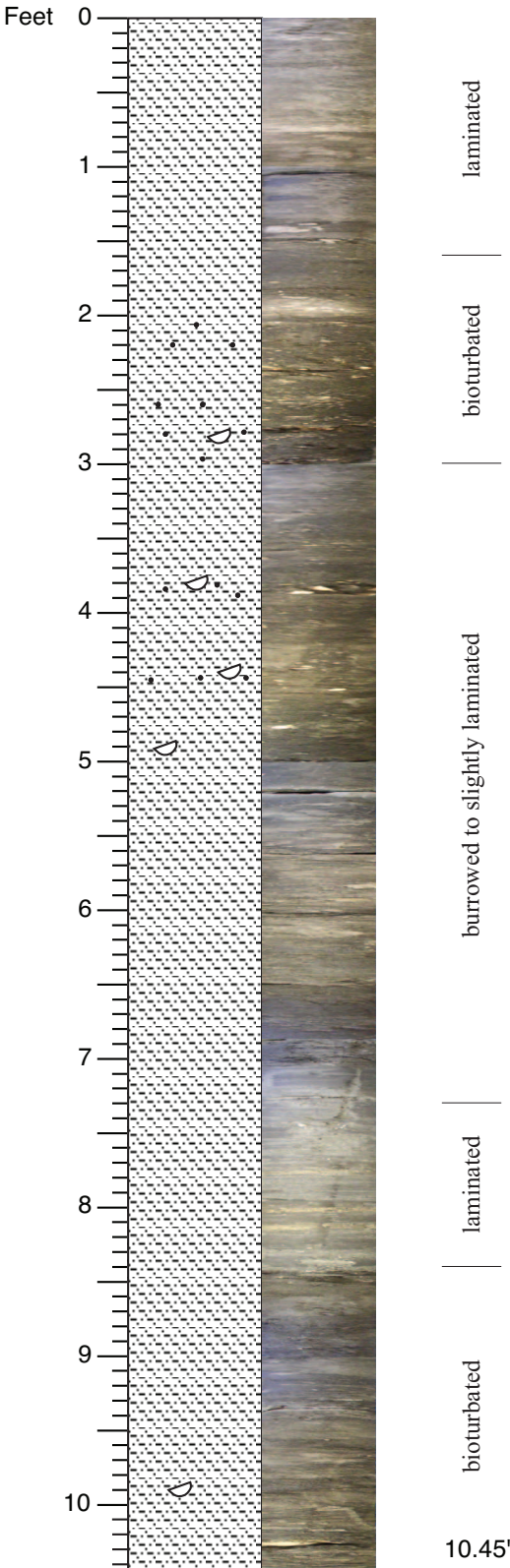
CLAY; sandy; with interbedded clayey SAND; sand is very coarse from 0-0.85 ft; clay and sand are burrowed together; shells scattered throughout, some aragonitic material, larger shells and very coarse sand grains common at the bottom, a few granules, dark greenish gray (5GY 4/1)

174AX SG
Core #165
Start depth: 1420 ft
Stop depth: 1430 ft
Recovery: 10.4 ft
Date: 11/8/03
Described by: JVB/AH/PJS

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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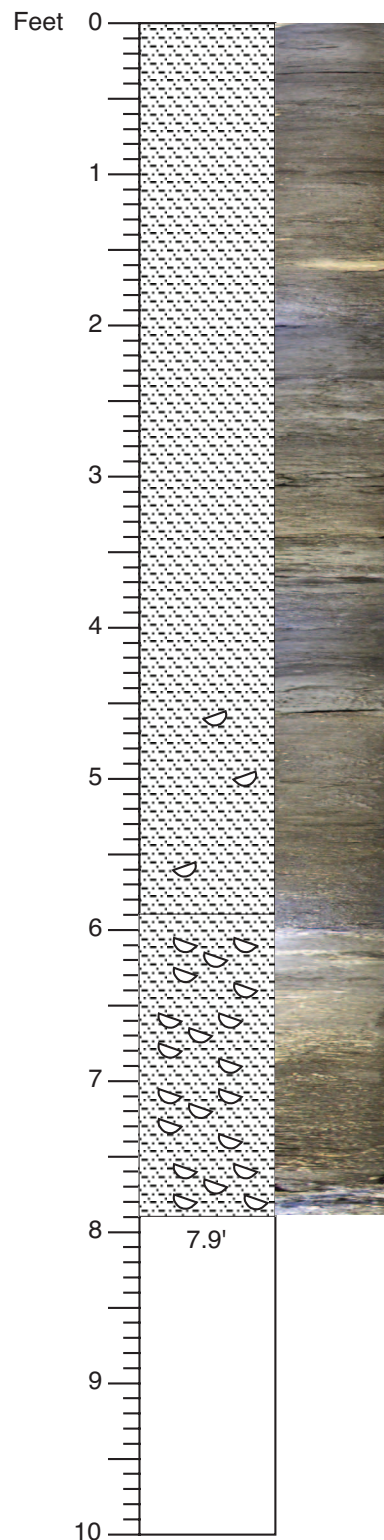
SILT; occasionally shelly, occasionally granular, scattered ignite, micaceous (chlorite), granules at 2-3 ft; shell concentration at 2.8 ft; granules tend to be associated with shell and may indicate hydrodynamic sorting; possible environment is a dirty storm dominated shelf with high silt input in between storms; indurated siltstone at base

174AX SG
Core #167
Start depth: 1440 ft
Stop depth: 1450 ft
Recovery: 10.45 ft
Date: 11/8/03
Described by: AH/KGM

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

169



SILT; very clayey, abundant mica (most is chlorite?); mica is very fine sand sized; laminated, some variability in clay and mica content on lamina scale shows lamination; scattered zones with fine disseminated organic debris; variable degrees of bioturbation; 1.5 ft nodule, 1/2 core diameter, 20x30 mm, very weak fizz with acid; first very thin shell bed at 4.5 ft; gradually more shell material at 5.5 ft

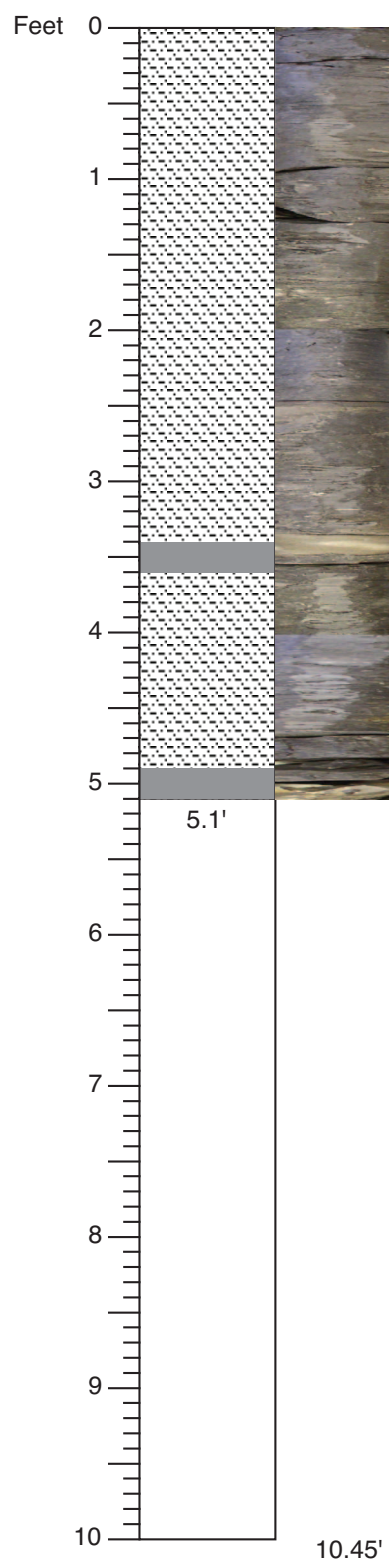
174AX SG
Core #168
Start depth: 1450 ft
Stop depth: 1460 ft
Recovery: 7.9 ft
Date: 11/8/03
Described by: KGM/AH/PPMcL

SILT; very shelly, abundant mica (including chlorite); mica is very fine sand sized; increasing amount of sand down core, especially from 6.9-7.9 ft, up to coarse sized sand

CORE DESCRIPTIONS

VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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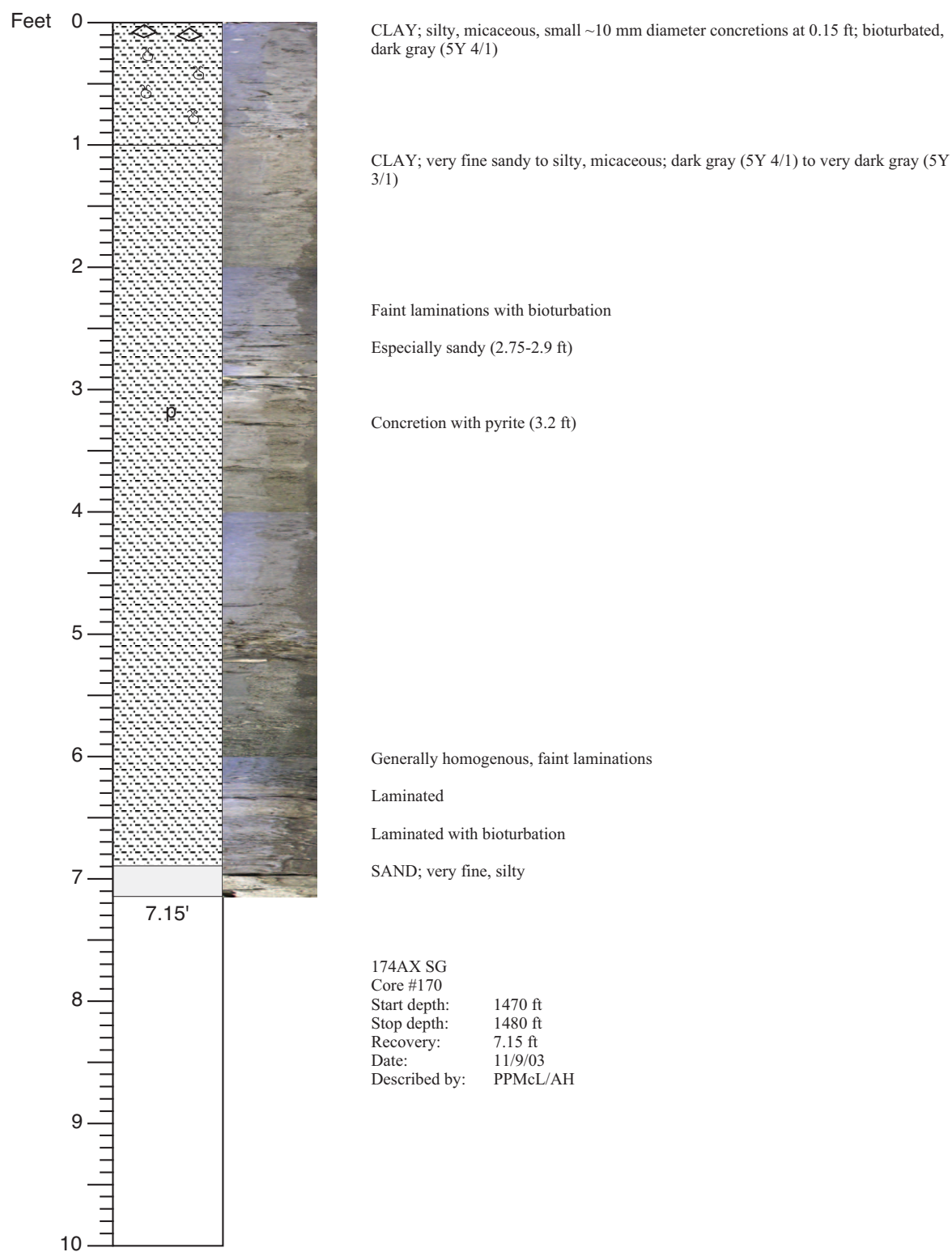


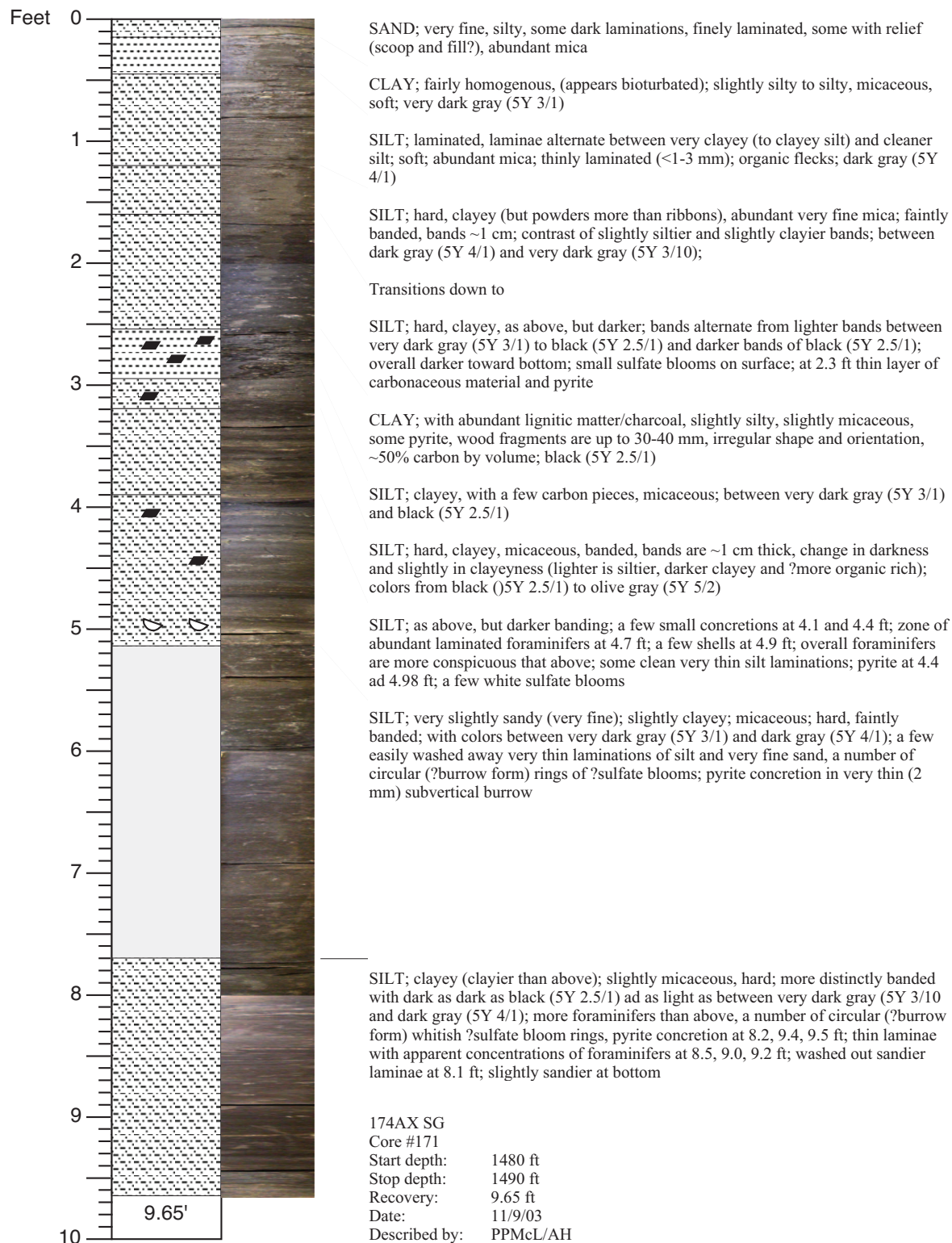
CLAY; slightly silty overall with some thin silt laminae and small silt filled burrows; some lamination evident but mostly disrupted by bioturbation; scattered flakes of finely disseminated organic debris; 2.1-2.2 ft contains very thin small shells, similar shells also scattered in other places; scattered flecks of mica; 3.4-3.55 ft indurated bed/concretion, 0.15 ft thick and diameter of core; 4.9-5.1 ft indurated bed/concretion; very dark gray (Gley N3/), silt zones are gray (Gley N6/)

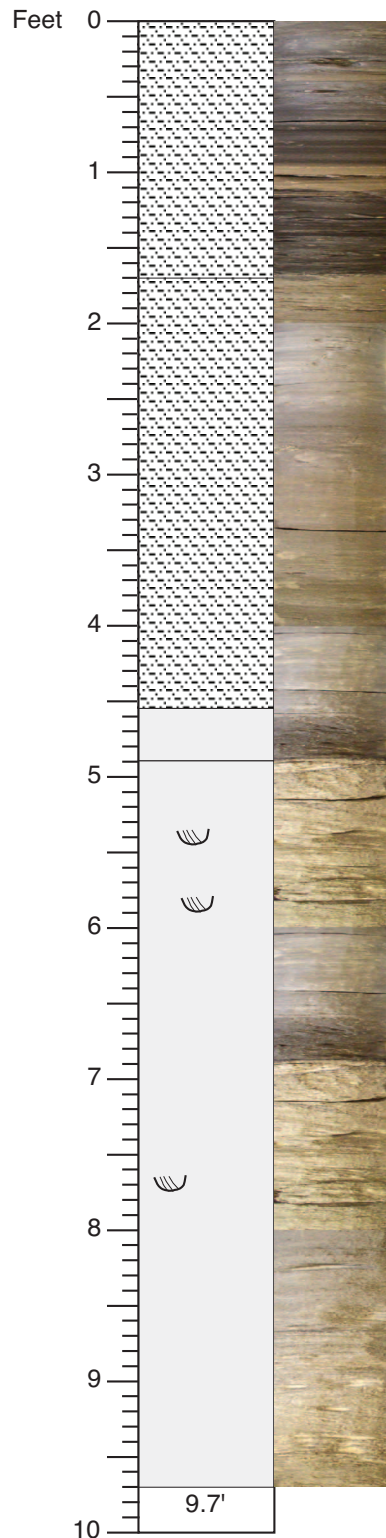
174AX SG
Core #169
Start depth: 1460 ft
Stop depth: 1470 ft
Recovery: 5.1 ft
Date: 11/9/03
Described by: PPMcL/AH

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

171







SILT; clayey, slightly micaceous, hard, abundant very fine silt-sized dispersed organics, banded from black (5Y 2.5/1) to silt: gray (5Y 5/1); some thin laminations of very fine micaceous sand/silt at 0.35, 1.1, 1.2, 1.4 ft; concretions at 1.15; (this is a continuation from the bottom of the last core); banding ranges from 10-20 mm

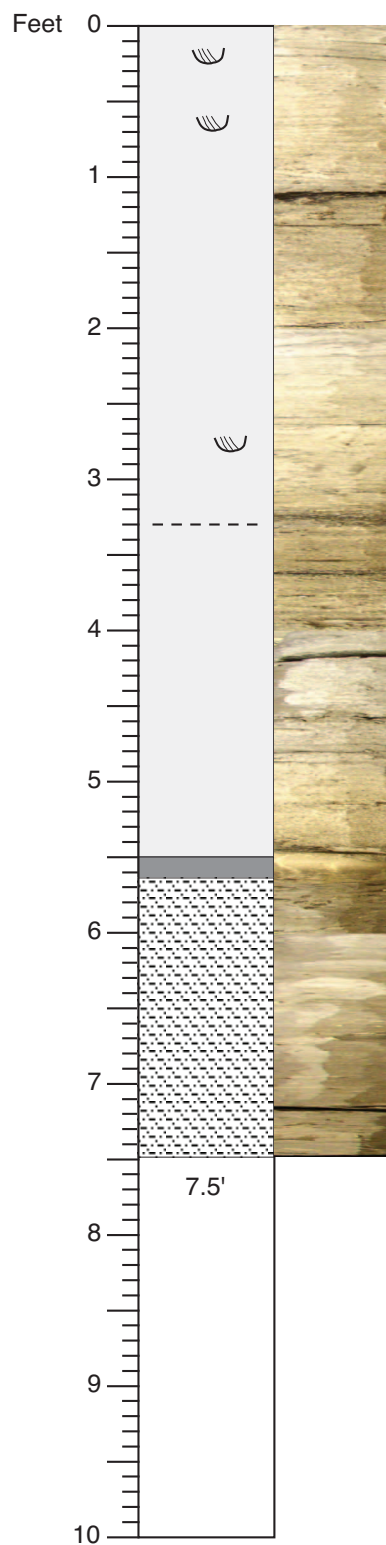
SILT; clayey (slightly but variable), slightly micaceous, firm; much lighter than above, gray (5Y 5/1); clear lamination to 2.4 ft modified by bioturbation; pyrite filled 1 mm diameter subvertical burrow at 2.3 ft; only faintly laminated below 2.4 ft; more evidence of bioturbation, not banded; several small pyrite burrows at 2.9 ft; slightly very fine sandy at 3.5-4.1 ft; "leaf" impression at 2.35 ft

Transition to

SAND; clayey and silty at base, fining up to SILT, sandy at top; sand is very fine to fine, micaceous, dark gray (5Y 4/1)

SAND; very fine to fine (more very fine); very slightly silty; abundant very fine to fine mica, cross-bedded, cross bed sets up to 0.5 ft, on some inclination appears to decrease upward, suggesting possible hummocky cross stratification; possibly slightly coarser at base

174AX SG
 Core #172
 Start depth: 1490 ft
 Stop depth: 1500 ft
 Recovery: 9.7 ft
 Date: 11/9/03
 Described by: PPMcL/AH



SAND; very fine to fine (mostly very fine); fairly clean (variable but slightly silty); micaceous, some organic-rich laminae, cross bedded to 0.8 ft; 0.8-2.3 ft slightly mottled, with bioturbated appearance; 1.1-1.5 ft dark organic-rich zone; 2.3-4.4 ft laminated very fine sand with a few thin organic clay laminations 2.5-2.8 ft; mica rich zone 3.2-3.3 ft with thin soft clay lamina at 3.3 ft; mica rich dark zones at 3.6 ft; 4.4-5.45 ft again mottled lightish and medium gray reflecting bioturbation; gray (Gley N6/)

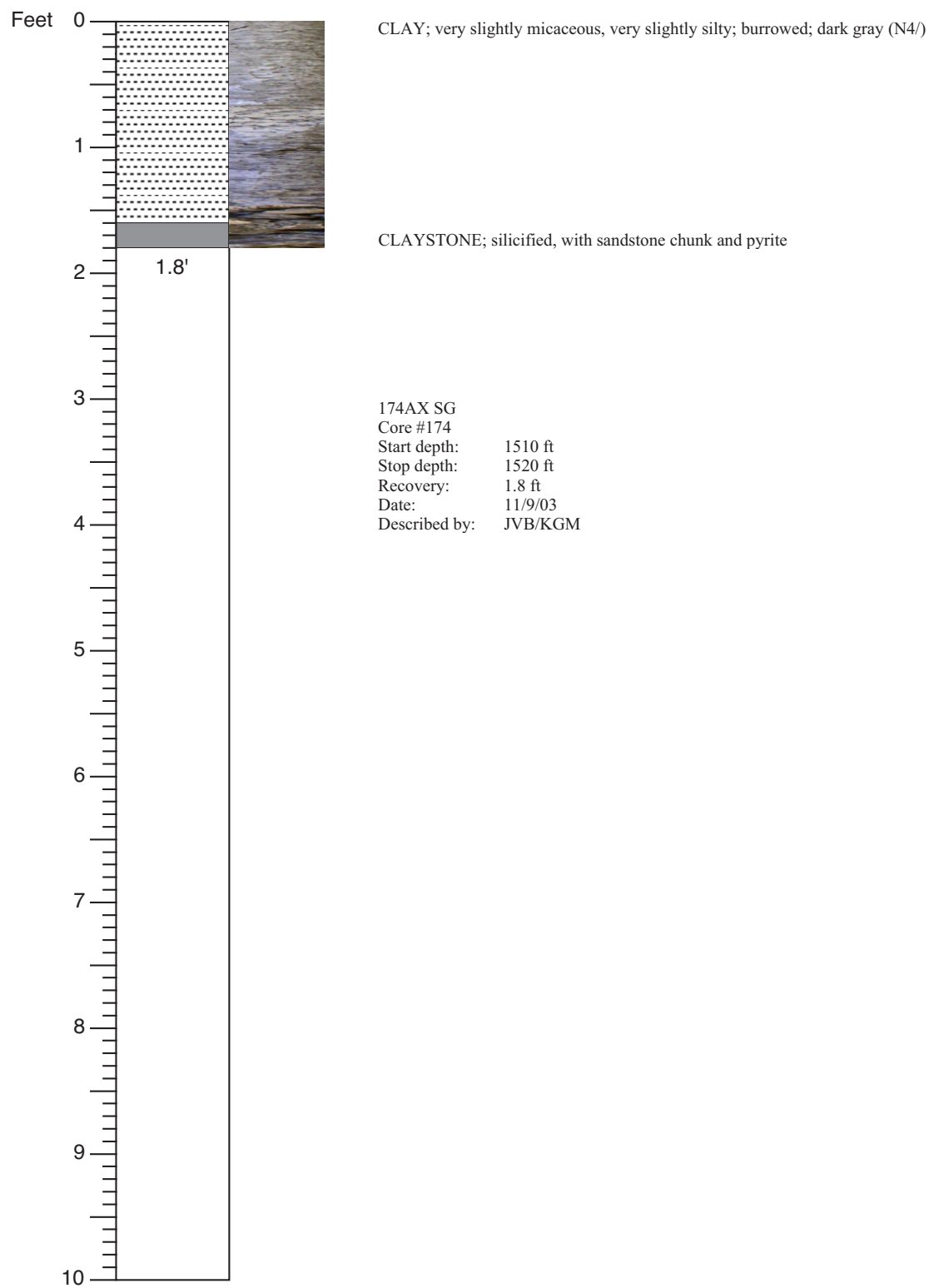
Cemented zone; no reaction with HCl (concretions?)

SILT; clayey, stiff, mottled due to bioturbation, trace very fine/silt-sized mica but less than above; burrows are small, 1-2 mm, mostly subhorizontal, fill: lighter colored (gray; 5Y 6/1), matrix: dark gray (5Y 4/1)

174AX SG
 Core #173
 Start depth: 1500 ft
 Stop depth: 1510 ft
 Recovery: 7.5 ft
 Date: 11/9/03
 Described by: PPMcL/AH

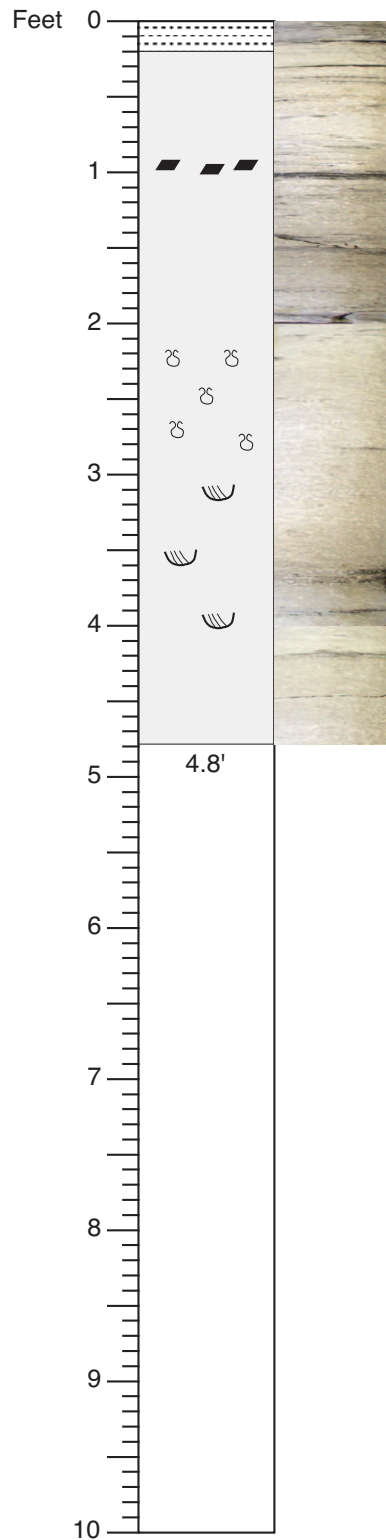
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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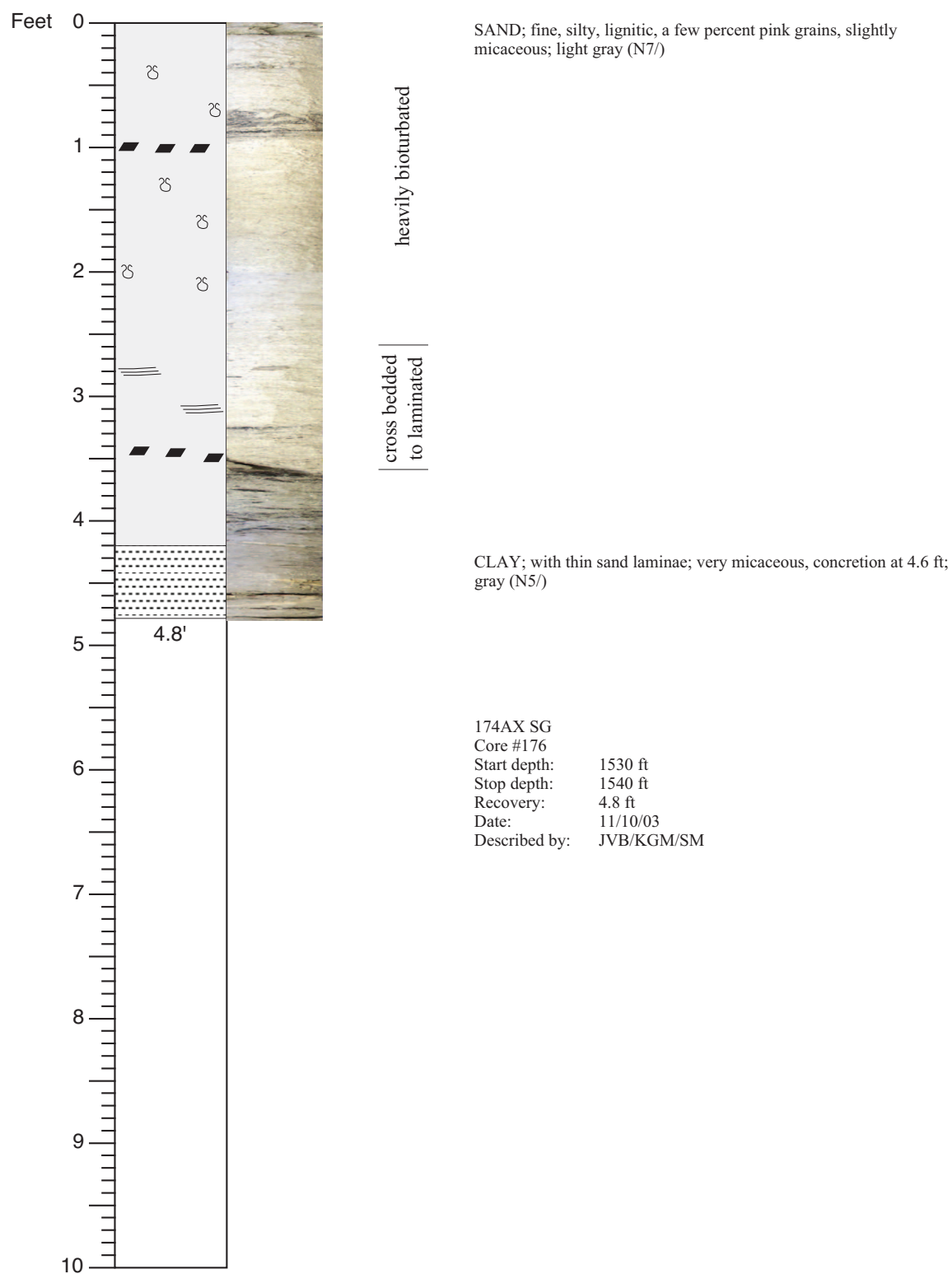
CLAY; with sand burrows, fine sand; slightly micaceous (chlorite); (note sand is similar to the sand below and may be reworked)

SAND; fine, micaceous (no chlorite); some mica grains are ~1 mm across, 10% pink grains (?feldspar); scattered lignite and lignite laminations, cross bedded, few clay drapes, slightly coarser from 0.4-0.7 ft (medium to fine sand); very rare green grains (?glauconite or chlorite); possible environment is distal upper shoreface to lower shoreface

174AX SG
 Core #175
 Start depth: 1520 ft
 Stop depth: 1530 ft
 Recovery: 4.8 ft
 Date: 11/10/03
 Described by: JVB/KGM/SM

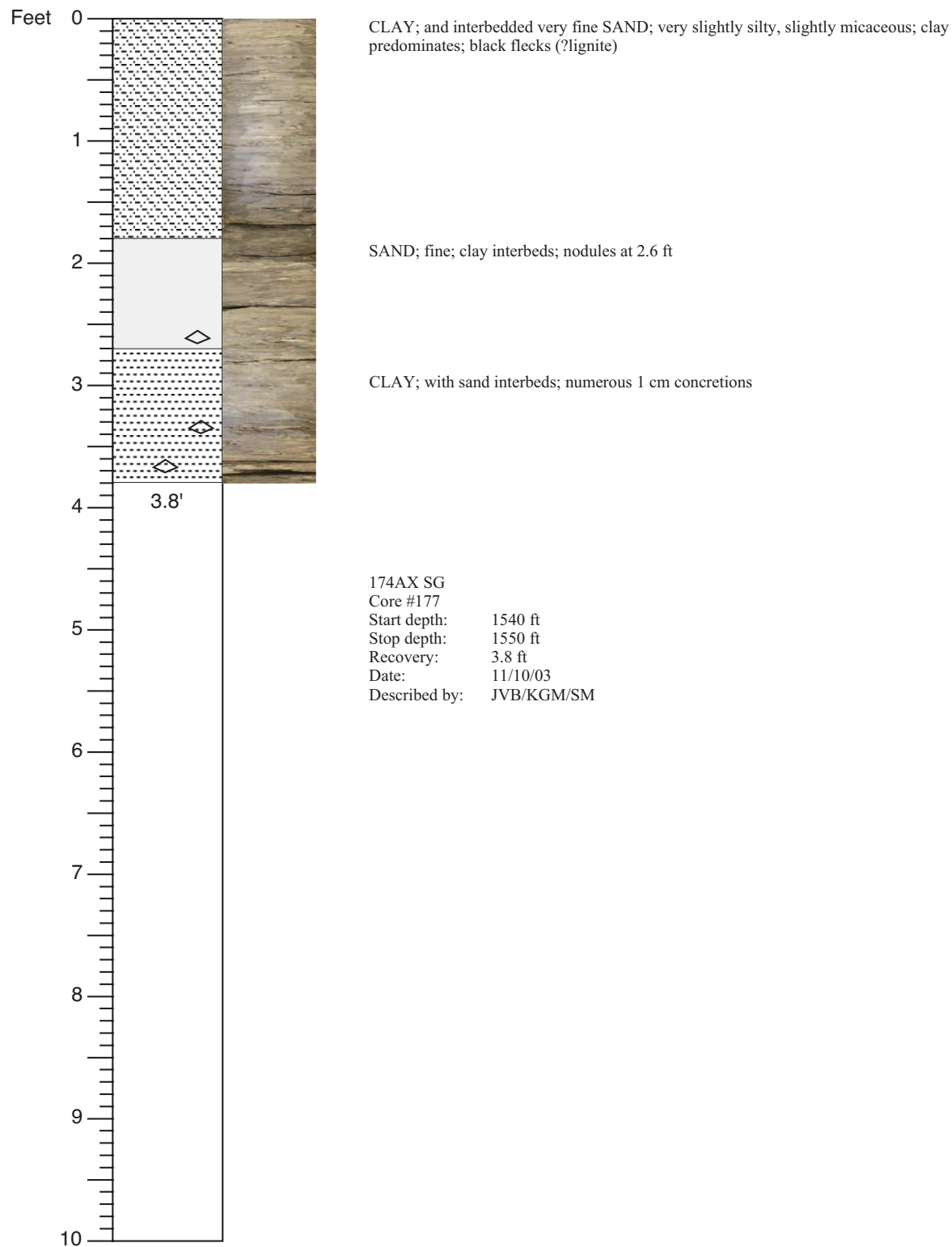
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

177



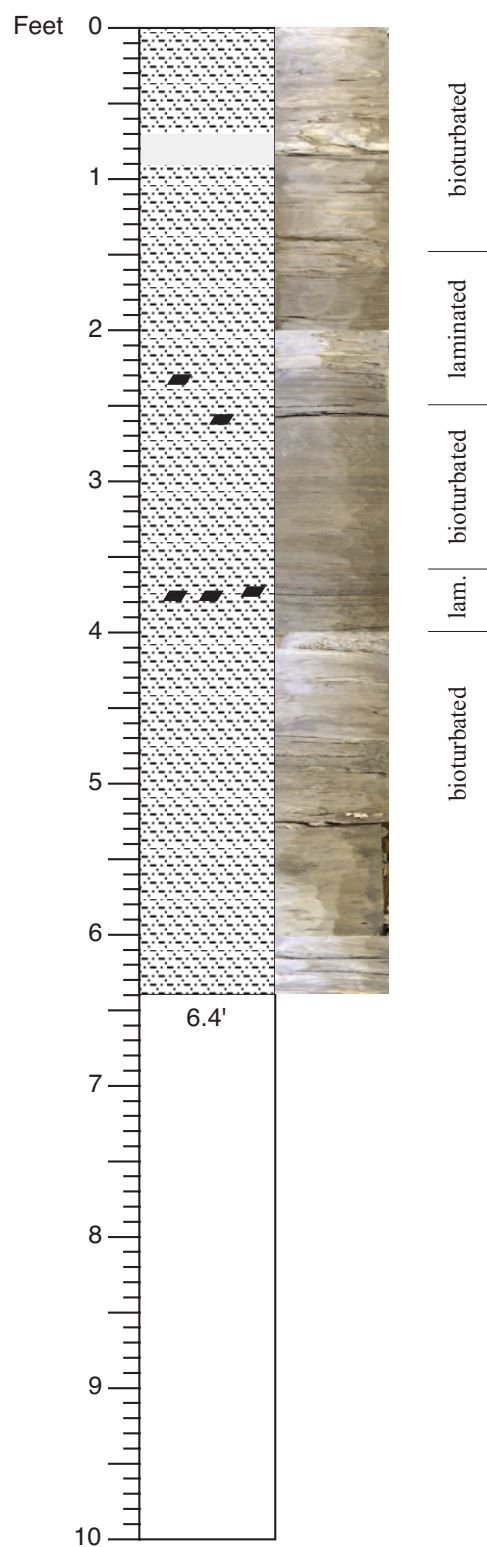
CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

179

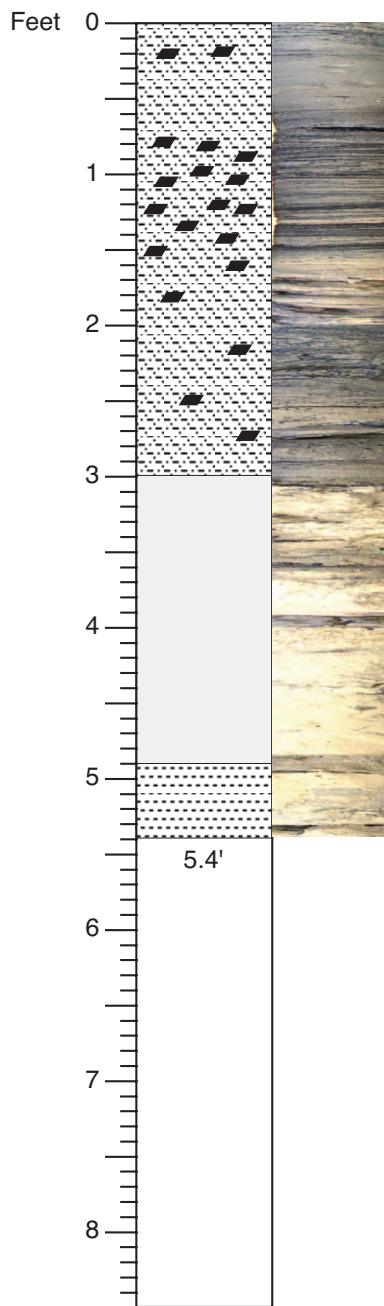


CLAY and interbedded SAND; in places finely laminated (<1 mm); in places bioturbated; 0.7-0.9 ft sugar sand (fine); most sand is very fine, slightly finely micaceous; organics are common, lignite at 2.3, 2.6, 3.7 ft; dark gray (10YR 4/1)

174AX SG
 Core #178
 Start depth: 1550 ft
 Stop depth: 1560 ft
 Recovery: 6.4 ft
 Date: 11/10/03
 Described by: JVB/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

180



CLAY; silty; lignitic; fine sugar sand; hard; lignite content varies, lignitic - 0-0.35 ft, slightly lignitic - 0.35-0.75 ft, extremely lignitic and cross-bedded - 0.75-1.55, slightly lignitic - 1.55-2.0 ft, lignitic - 2.0-2.35 ft, slightly lignitic - 2.35-3.0 ft; very dark gray (10YR 3/1)

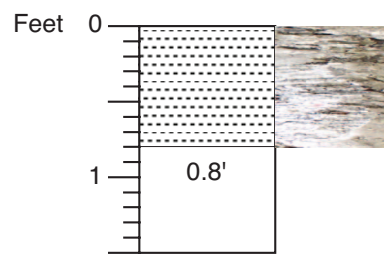
SAND; sphaerosiderite; light brownish gray (10YR 6/2)

CLAY; white; hard

174AX SG
 Core #179
 Start depth: 1560 ft
 Stop depth: 1568.5 ft
 Recovery: 5.4 ft
 Date: 11/10/03
 Described by: KGM/SM

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

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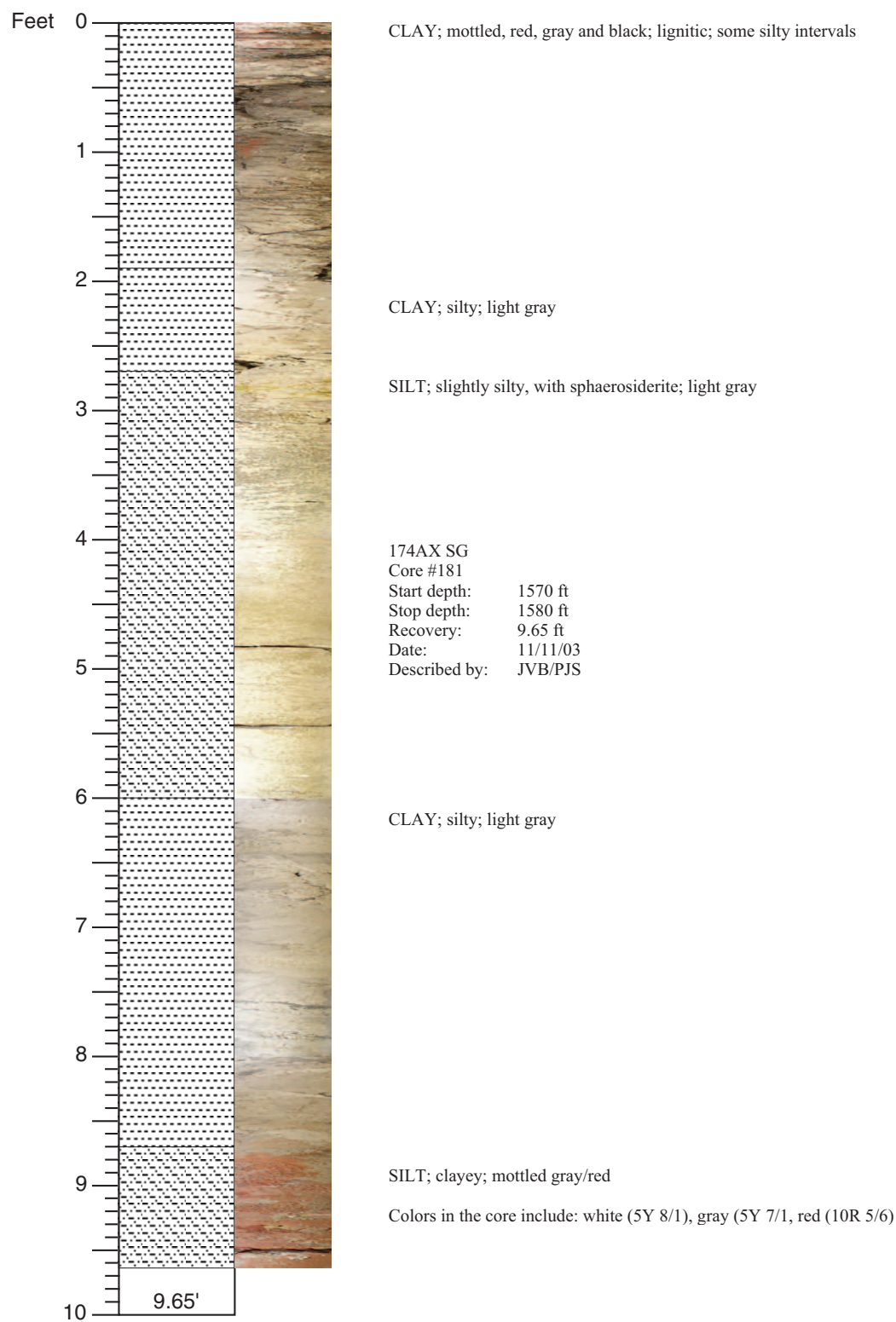


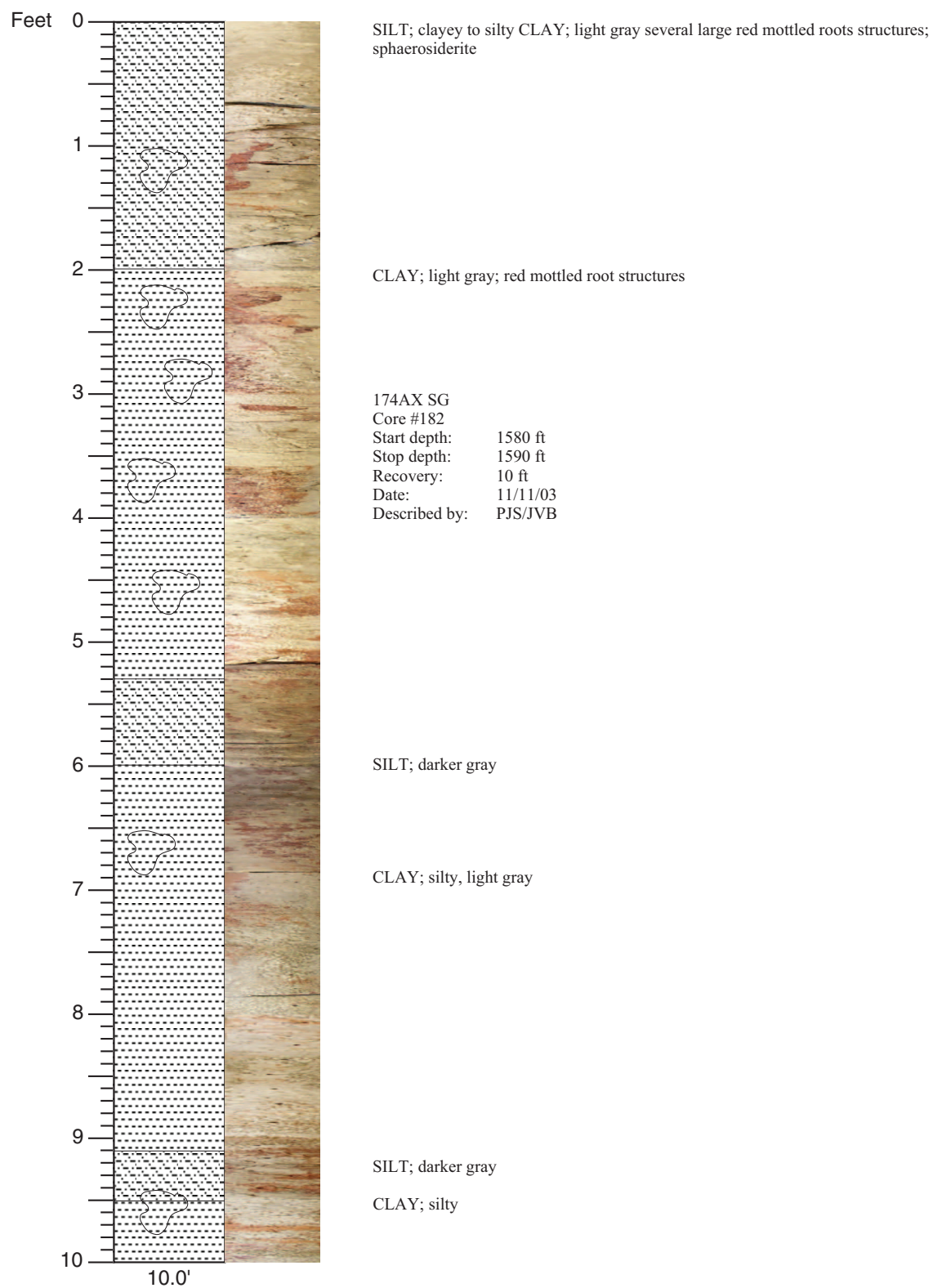
CLAY; a few red mottles; trace of fine organic material; light gray (5Y 7/1)

174AX SG
Core #180
Start depth: 1568.5 ft
Stop depth: 1570 ft
Recovery: 0.8 ft
Date: 11/11/03
Described by: JVB

CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

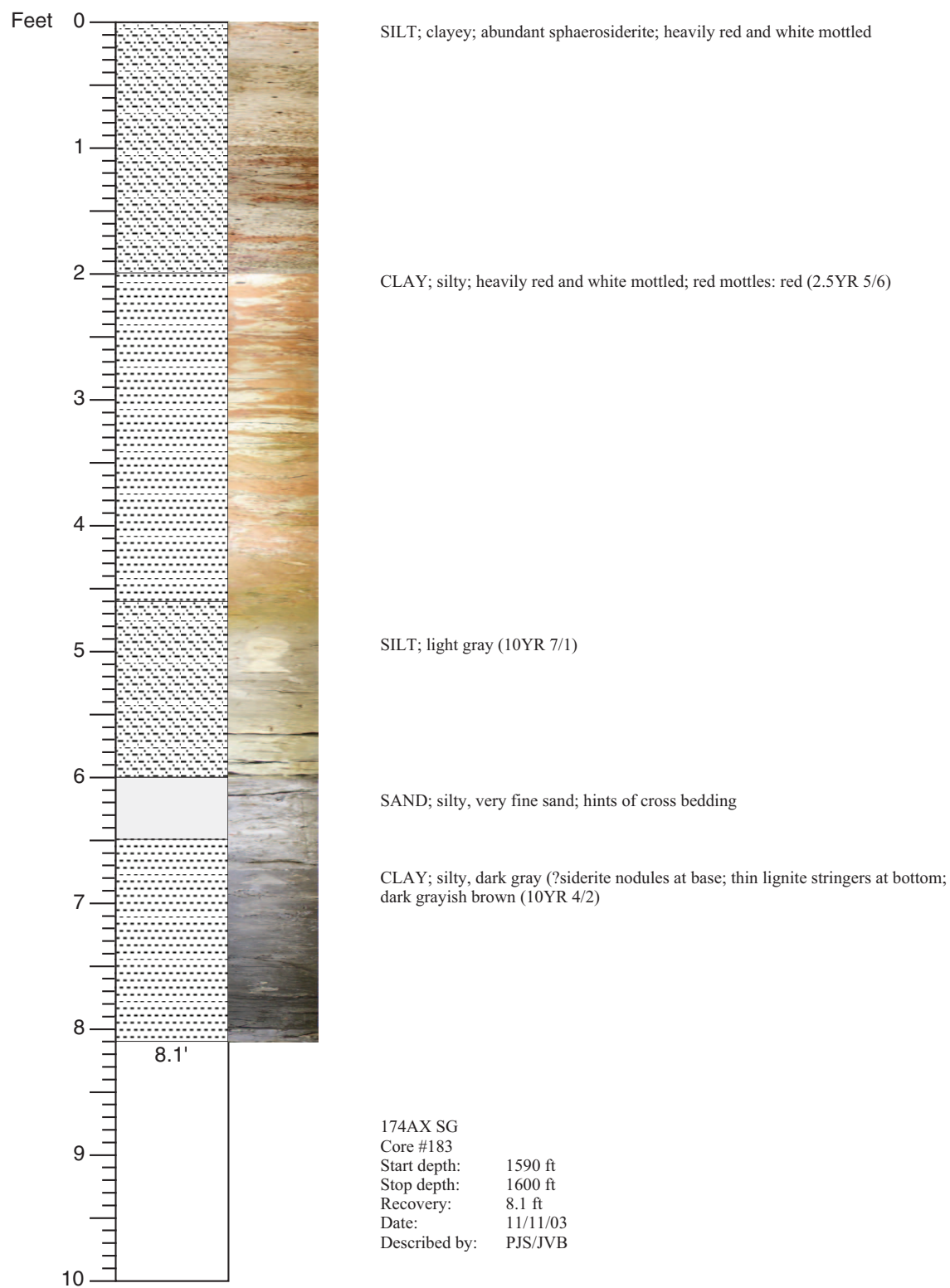
182





CORE DESCRIPTIONS
VISUAL CORE DESCRIPTIONS, SEA GIRT SITE

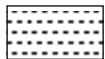
184



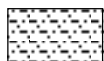
Key



Limestone



Clay



Silty sand



Glaucanite sand



Sand



Indurated



Peat/Lignite



Pebbles



Granules



Shells



Cross beds



Laminations



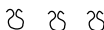
Sand laminae



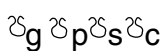
Clay laminae



Silt laminae



Burrows



Burrows filled with glauconite,
pyrite, sand or clay



Nodule



Pyrite



Foraminifers



Glaucanite



Mica



Calcite cemented



Fining upward



Coarsening upward



Sphaerosiderite nodules



Mottles



Porcellanite