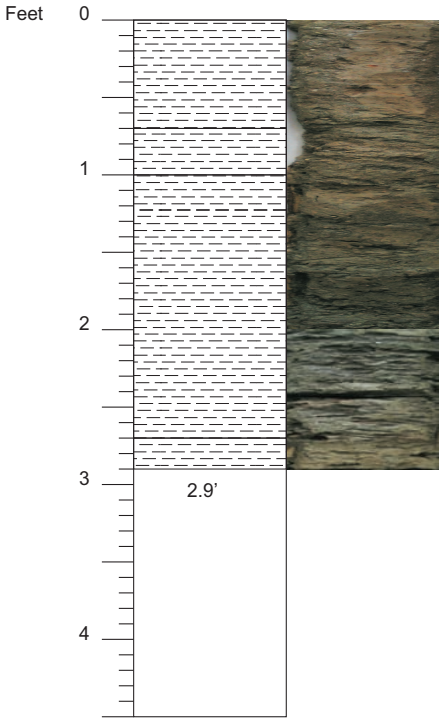


CLAY; soil horizon, glauconite sand to 40%; clay is Fe stained; numerous quartz pebble-outside only; light olive brown (2.5Y 5/4)

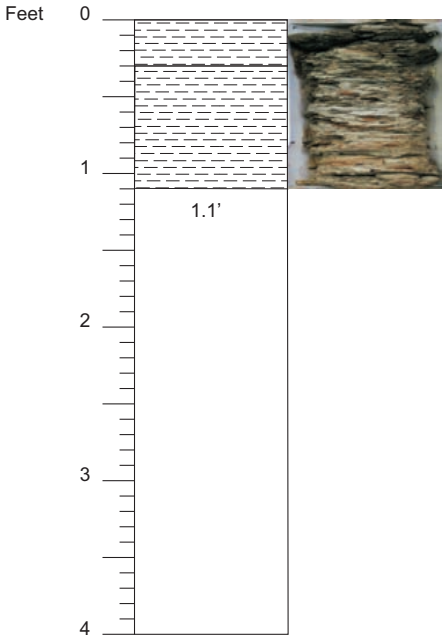
Gradational transition

CLAY; 38% glauconite sand; ~2% fine-medium quartz sand; subrounded, heavily bioturbated, small concretions to 2.5 mm; maybe in layers; core is disturbed; olive gray (5Y 4/2)

CLAY; w/ 40% fine sand, 25% glauconite, 25% quartz; olive (5Y 4/4)

174 AX Medford
Core #1

Start depth:	1.5 ft
Stop depth:	6 ft
Recovery:	2.9 ft
Date:	4/24/07
Described by:	JVB, PJS

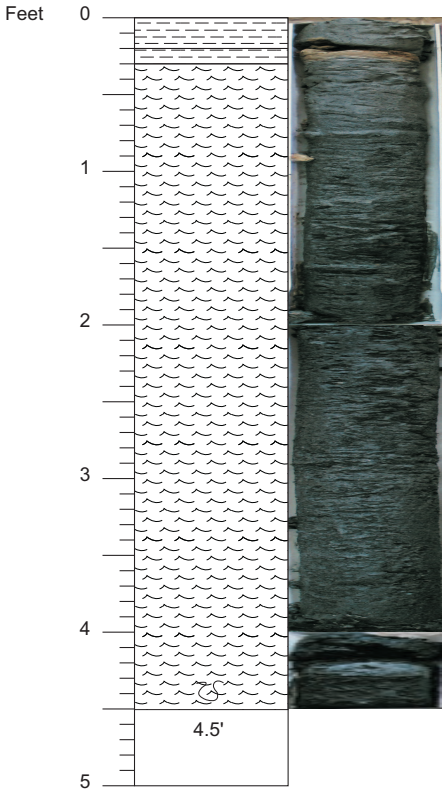


CLAY; 15% glauconite, 10% quartz, fine-very fine, subrounded, some concretions to 1 cm;olive gray (5Y 5/2)
Burrowed contact, heavily burrowed; down to 0.65 ft;

CLAY; in some places only clay, concretions to 2 cm (maybe burrows), in some places fine glauconite (5-10%); looks like contact with Manasquan and unnamed Vincentown member (PETM); light gray (5Y 7/2)

174 AX Medford
Core #2

Start depth:	6 ft
Stop depth:	10 ft
Recovery:	1.1 ft
Date:	4/24/07
Described by:	JVB, PJS



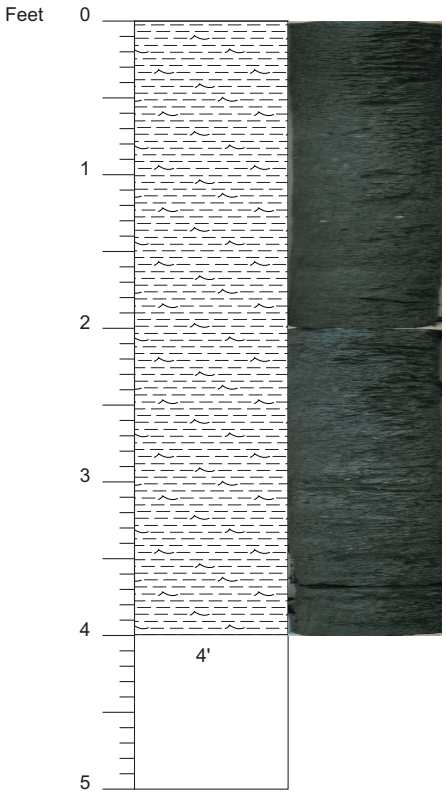
CLAY; 10-15% fine-very fine glauconite sand; greenish gray (5 GY 5/1)
CLAY; slightly silty; light olive (2.5 Y 5/6)
Gradational boundary

SAND; glauconite to clay; 30% clay, 10% quartz sand; heavily burrowed; glauconite increases downward; black (2.5 Y 2.5/1)

clay burrow

174 AX Medford
Core #3

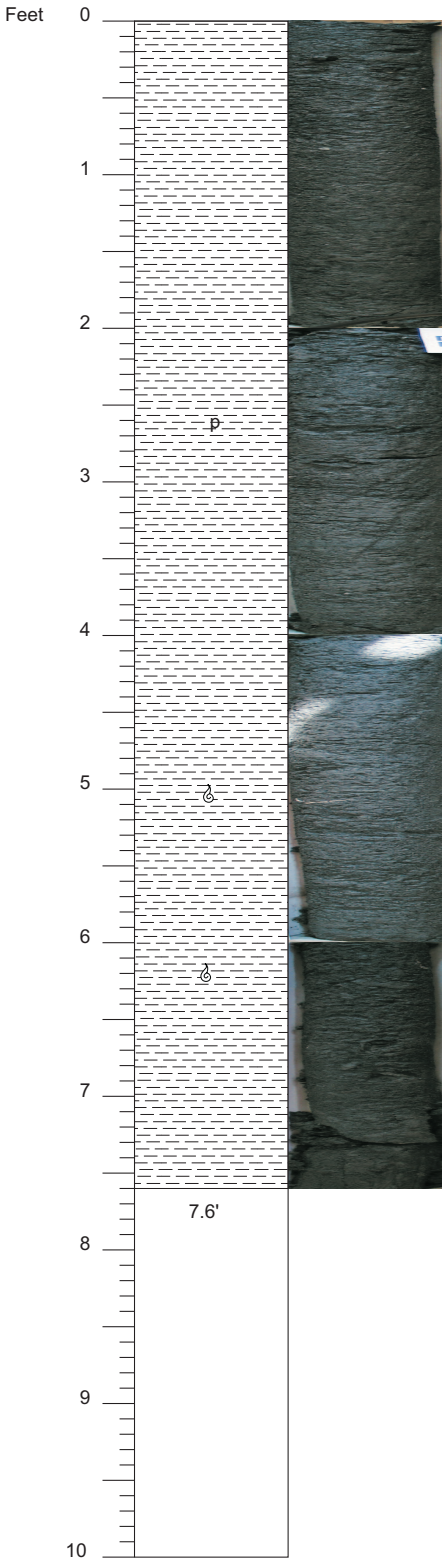
Start depth:	10 ft
Stop depth:	15 ft
Recovery:	4.5 ft
Date:	4/24/07
Described by:	JVB, PJS



CLAY; 55%, 35% glauconite sand, 10% quartz sand; fine-very fine sand, heavily burrowed, up to granules; black (2.5Y 2.5/1)

174 AX Medford
Core #4

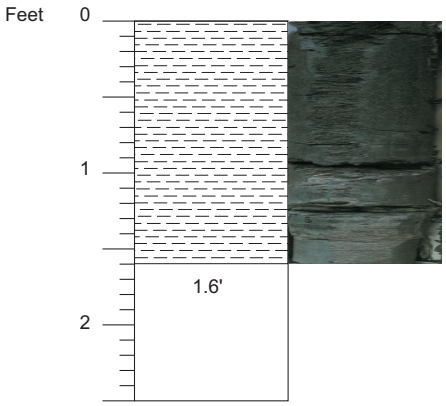
Start depth:	15 ft
Stop depth:	20 ft
Recovery:	4 ft
Date:	4/24/07
Described by:	JVB, PJS



CLAY; 20% fine to medium glauconite sand, some very fine quartz sand, occasional phosphate granules; 2.6' phosphate, 5.1' and 6.2' shell; glauconite increases to 40% by bottom; dark gray (2.5 Y 4/1)

174 AX Medford
Core #5

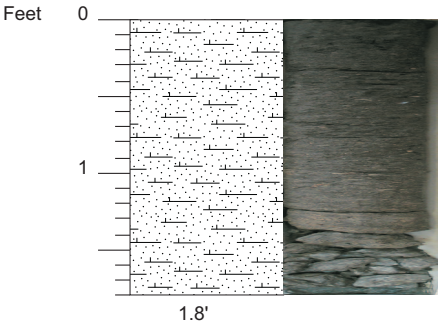
Start depth:	20 ft
Stop depth:	30 ft
Recovery:	7.6 ft
Date:	4/25/07
Described by:	PS



SAND; fine quartz, clayey, glauconitic (20% fine); below shell layer is a calcarenite with 10% glauconite; dark gray (2.5 Y 4/1)

174 AX Medford
Core #6

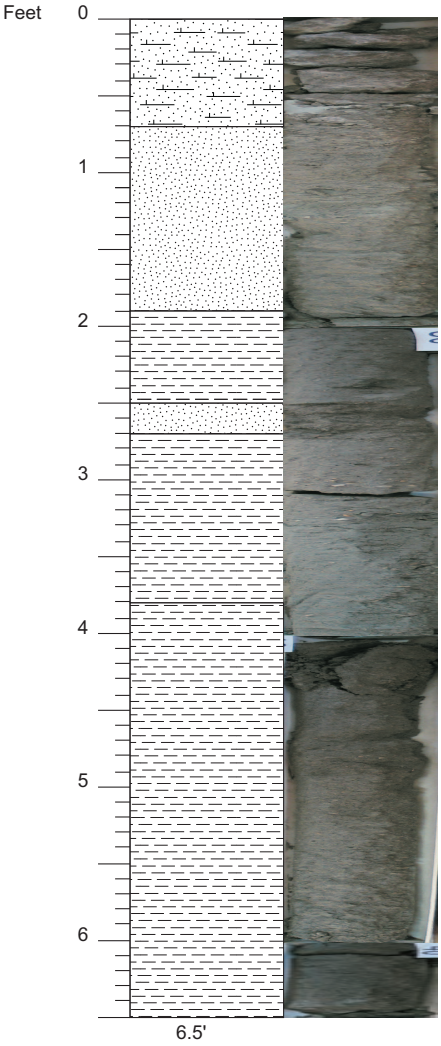
Start depth:	30 ft
Stop depth:	32.5 ft
Recovery:	1.6 ft
Date:	4/25/07
Described by:	PS



CALCARENITE; medium sand, fossil rich, massive, lithified at base; greenish gray (5GY 6/1)

174 AX Medford
Core #7

Start depth:	32.5 ft
Stop depth:	34 ft
Recovery:	1.81 ft
Date:	4/25/07
Described by:	PS, DM, HR



Calcarenite, cemented; dark greenish gray (5GY 4/1)

SAND; clayey; glauconite, fossiliferous throughout

sand layer

CLAY; sandy

SAND

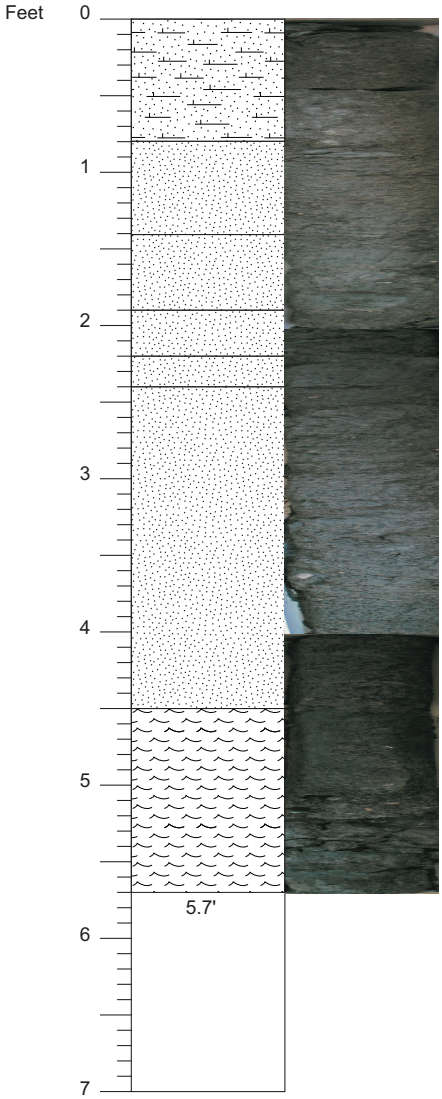
CLAY; sandy

more quartzose

more glauconitic

174 AX Medford
Core #8

Start depth:	34 ft
Stop depth:	40 ft
Recovery:	6.5 ft
Date:	4/25/07
Described by:	PS, DM, HR



SAND; cemented calcarenite, quartzose; glauconite; coarse 10%

SAND; clayey glauconite, quartz sand, 20-30% glauconite

SAND; fine sand but higher percentage of clay

SAND; clayey glauconite, quartz sand, 20-30% glauconite

SAND; fine sand but higher percentage of clay
SAND; clayey glauconite, quartz sand, 20-30% glauconite

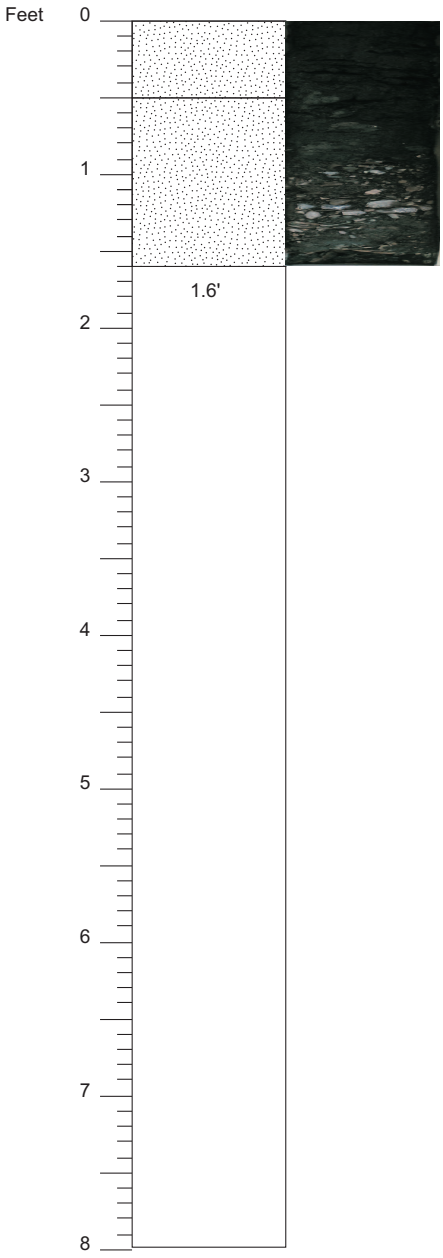
hints of stratification

4.5 possible Vincentown/Hornerstown contact

SAND; 50%-60% glauconite, fine to medium with fine sand; silty clay

174 AX Medford
Core #9

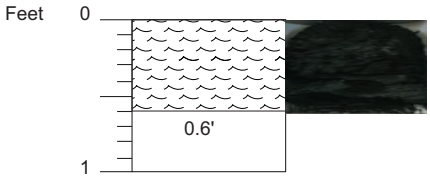
Start depth:	40 ft
Stop depth:	47 ft
Recovery:	5.7 ft
Date:	4/25/07
Described by:	PS, HR, DM



SAND; glauconitic, clayey; broken shell frags, dark bluish gray (5B 4/1)

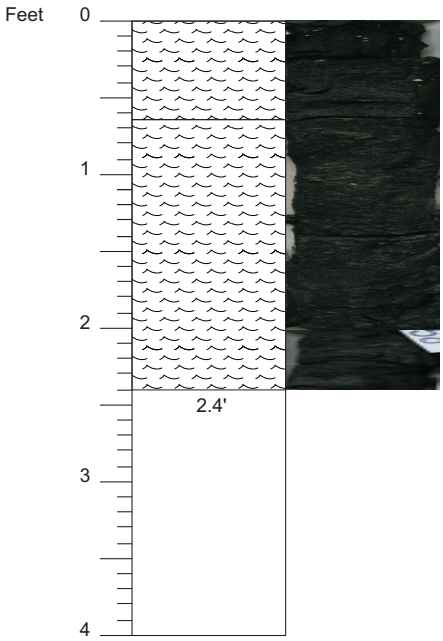
SAND; glauconitic, occasional shells, possible clay rip ups

174 AX Medford
Core #10
Start depth: 47 ft
Stop depth: 55 ft
Recovery: 1.6 ft
Date: 4/25/07
Described by: PS, DM, HR



SAND; glauconite; slightly clayey, coarse to very coarse, black

174 AX Medford
Core #11
Start depth: 55 ft
Stop depth: 56 ft
Recovery: 0.6 ft
Date: 4/25/07
Described by: PS/DM/HR

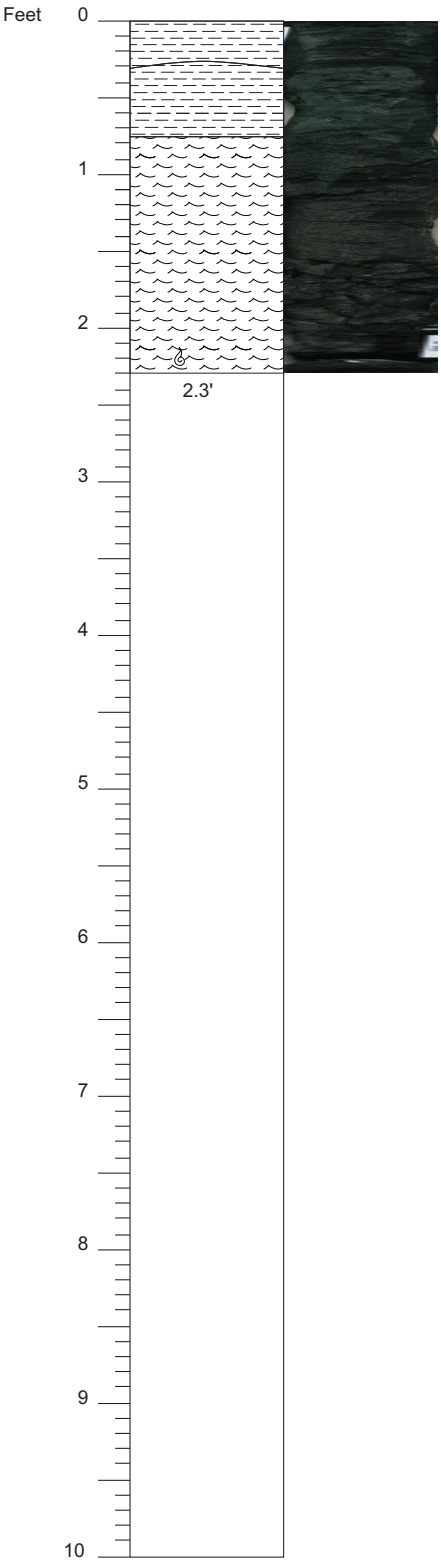


SAND; glauconite, medium to coarse grained; slightly clayey, trace shell hash,

SAND; glauconite, medium to coarse, slightly clayey; 0.6 concretion, possible slight change in color, clay, and glauconite percent; slight reaction to HCl suggesting possible microfossils

174 AX Medford
Core #12

Start depth:	56 ft
Stop depth:	60 ft
Recovery:	2.4 ft
Date:	4/25/07
Described by:	PS, DM, HR



CLAY, with interbedded glauconite sand;

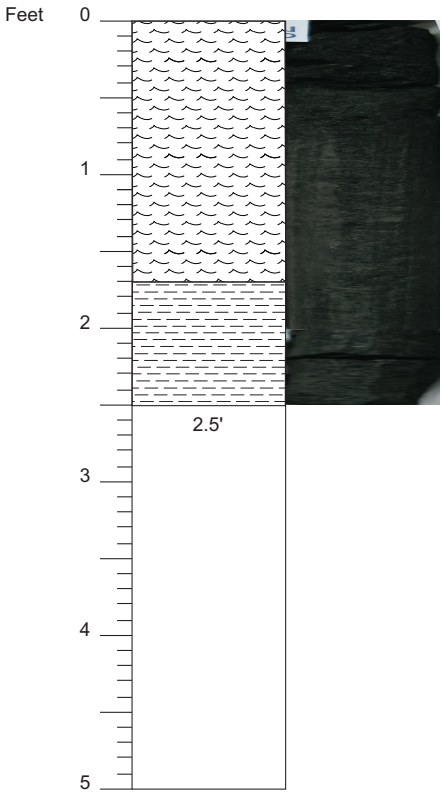
CLAY, some glauconite in burrows; greenish (5 G 4/2)

SAND; glauconite, clayey, to glauconite clay,

oyster

174 AX Medford
Core #13

Start depth:	60 ft
Stop depth:	70 ft
Recovery:	2.3 ft
Date:	4/25/07
Described by:	PS, DM, HR



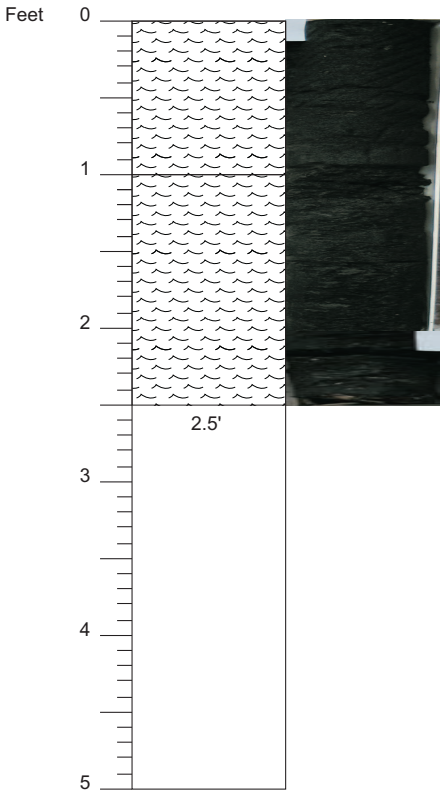
SAND; glauconite, coarse to very coarse, higher % glauconite in upper part

CLAY; glauconite sandy clay

Overall decrease in glauconite and increase in clay downwards, clay reddish-brown (2.5YR 3/1)

174 AX Medford
Core #14

Start depth:	70 ft
Stop depth:	75 ft
Recovery:	2.5 ft
Date:	4/25/07
Described by:	PS, DM, HR

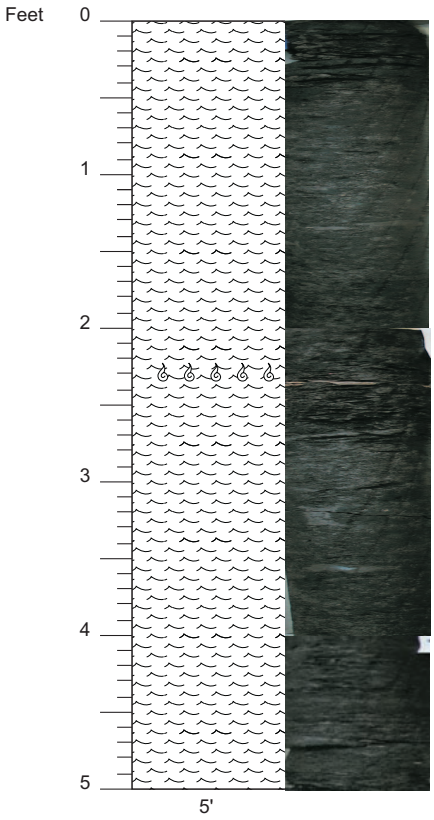


SAND; clayey glauconite, glauconite medium to coarse grained, bioturbated; pyrite on outside at 0.1, higher clay content

SAND; clayey glauconite, less clay and less resistant, highly burrowed; shells at 2.1 ft, large oyster at bottom; glauconite is medium grained

174 AX Medford
Core #15

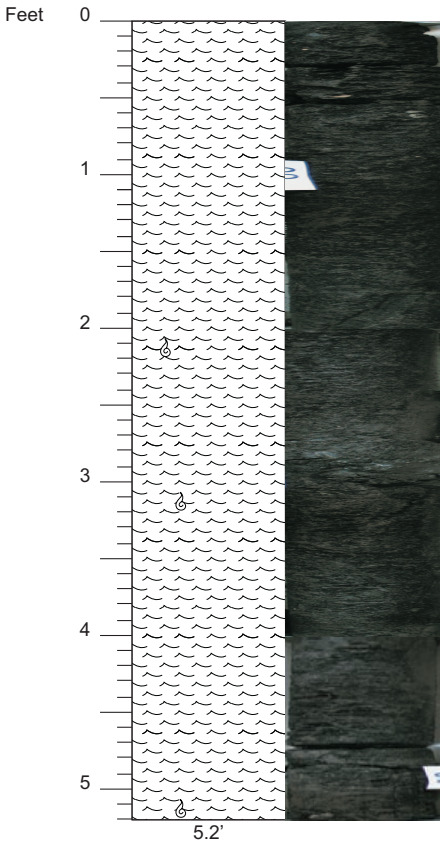
Start depth:	75 ft
Stop depth:	80 ft
Recovery:	2.5 ft
Date:	4/25/07
Described by:	DM, PS



SAND; glauconite, clayey, glauconite is medium grained, highly bioturbated with pockets of glauconite rich and other spots with clay, very dark gray (10YR 3/1), shell horizon at 2.3

174 AX Medford
Core #16

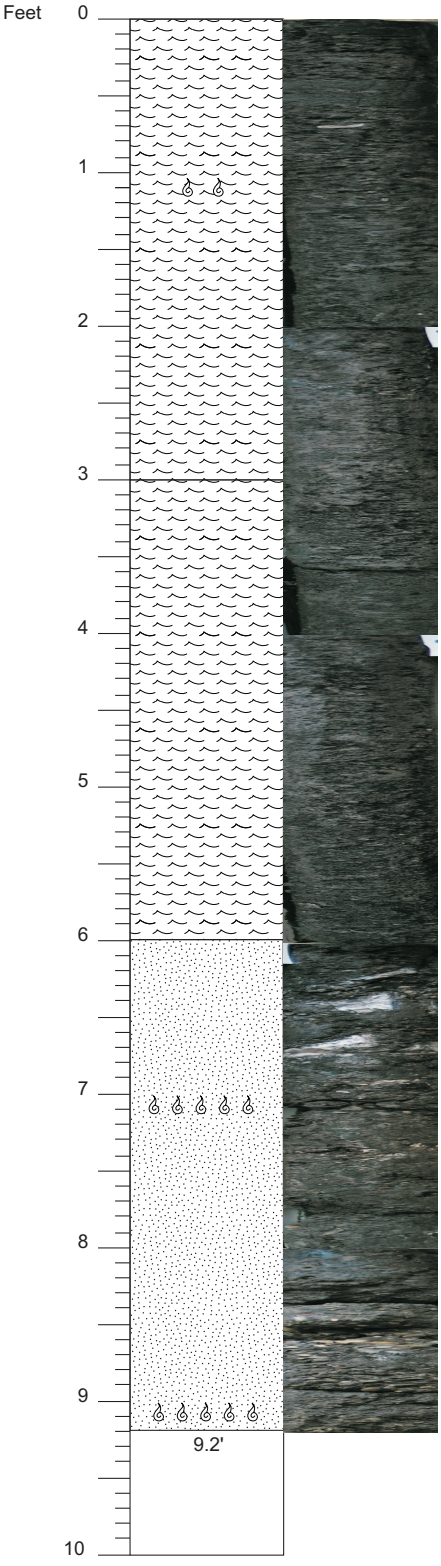
Start depth:	80 ft
Stop depth:	85 ft
Recovery:	5 ft
Date:	4/25/07
Described by:	PS, DM, HR



SAND; glauconite, clayey, pyrite, highly bioturbated, glauconite clay varies within core, medium to coarse grained; occasional shells at 2.1, 3.2 ft, and base

174 AX Medford
Core #17

Start depth:	85 ft
Stop depth:	90 ft
Recovery:	5.2 ft
Date:	4/25/07
Described by:	DM, PS



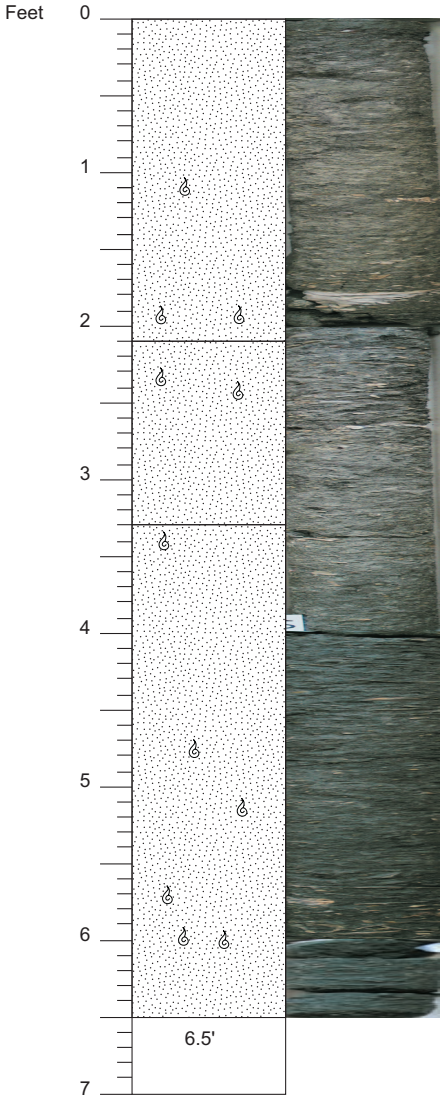
SAND; glauconite, clayey, glauconite medium to coarse, botryoidal, highly bioturbated; 1.1 ft shell frags

2-3 ft, more clay content over glauconite;

3-6 ft, more glauconite sand content

SAND; dirty sand, very poorly sorted, highly reworked, silty pebbly sand, dark reddish gray (2.5YR 4/1); shells, belemnite and possible large phosphate granules at 7.4 ft, broken shells at 8.5 ft, broken shells at bottom of core rolled out

174 AX Medford
Core #18
Start depth: 90 ft
Stop depth: 100 ft
Recovery: 9.2 ft
Date: 4/25/07
Described by: PS, DM

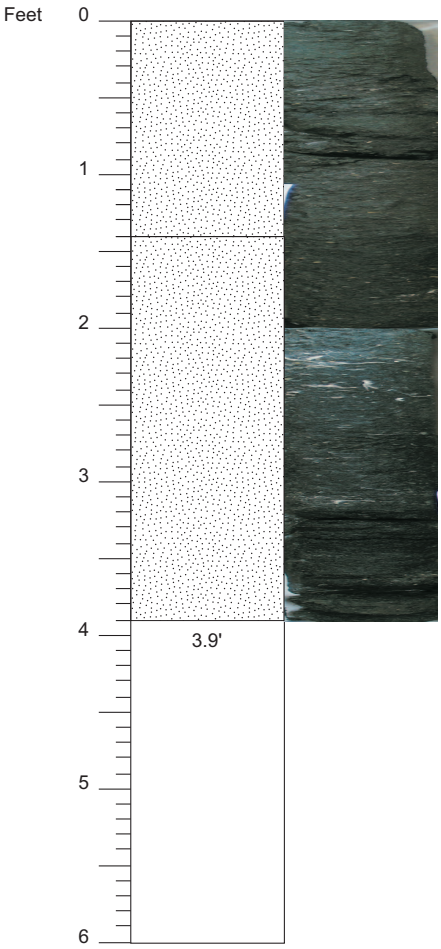


SAND; medium to very coarse; slightly silty; glauconitic (5%); olive gray (5Y 5/2); shell bed at 1.8 and 6 ft;

SAND; medium to very coarse; less silty glauconite (5% fine); slightly silty shelly glauconite (5% fine), more sand

SAND; medium to very coarse; slightly silty; glauconitic (5%); olive gray (5Y 5/2);

174 AX Medford
Core #19
Start depth: 100 ft
Stop depth: 107 ft
Recovery: 6.5 ft
Date: 4/26/07
Described by: PS

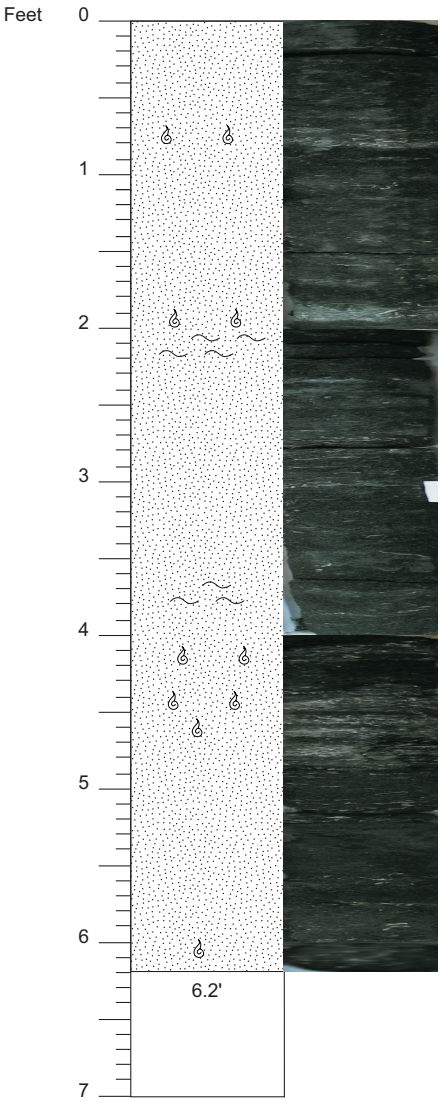


SAND; quartz; medium to very coarse; slightly silty; glauconite (5% fine); olive gray (5Y 4/2)

SAND; very coarse, with granules; quartz, very shelly, glauconitic; cemented below 1.4; shell bed at 2.2-2.3; indurated; black (5Y 2.5/2)

174 AX Medford
Core #20

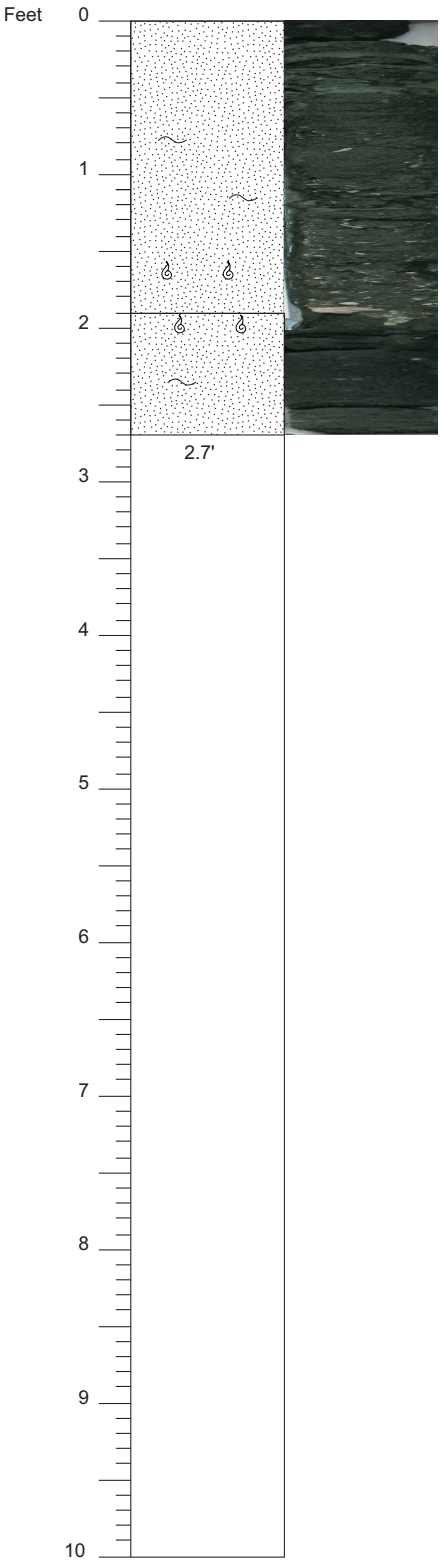
Start depth:	107 ft
Stop depth:	113 ft
Recovery:	3.9 ft
Date:	4/26/07
Described by:	PS



SAND; medium to very coarse, with granules; quartz, shelly, glauconitic (5-10%, but up to 20% in certain beds); 2.7-2.9 ft si slightly fossiliferous; 4-4.3 and 5.1-5.6 ft unconsolidated; (0-3.1 ft) Gley 1 greenish black (10GY 2.5/1), (3.1-4 ft) Gley 2 bluish-black (5B 2.5/1), (4.8-6.2 ft) Gley 1 greenish-black (10GY 2.5/1)

174 AX Medford
Core #21

Start depth:	113 ft
Stop depth:	120 ft
Recovery:	6.2 ft
Date:	4/26/07
Described by:	PS, EG, BB

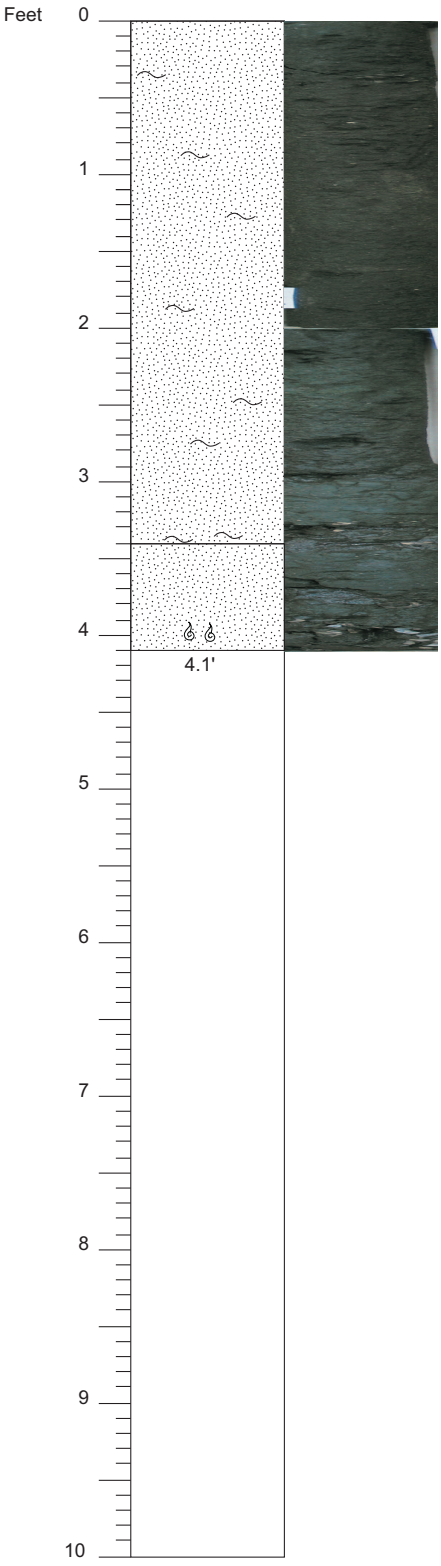


SAND; medium to very coarse; quartz, slightly glauconitic; olive gray (5Y 4/2)

SAND; medium to very coarse; quartz, slightly glauconitic; indurated; darker than above; dark olive gray (5Y 3/2)

174 AX Medford
Core #22

Start depth:	120 ft
Stop depth:	130 ft
Recovery:	2.7 ft
Date:	4/26/07
Described by:	PS, BB, EG

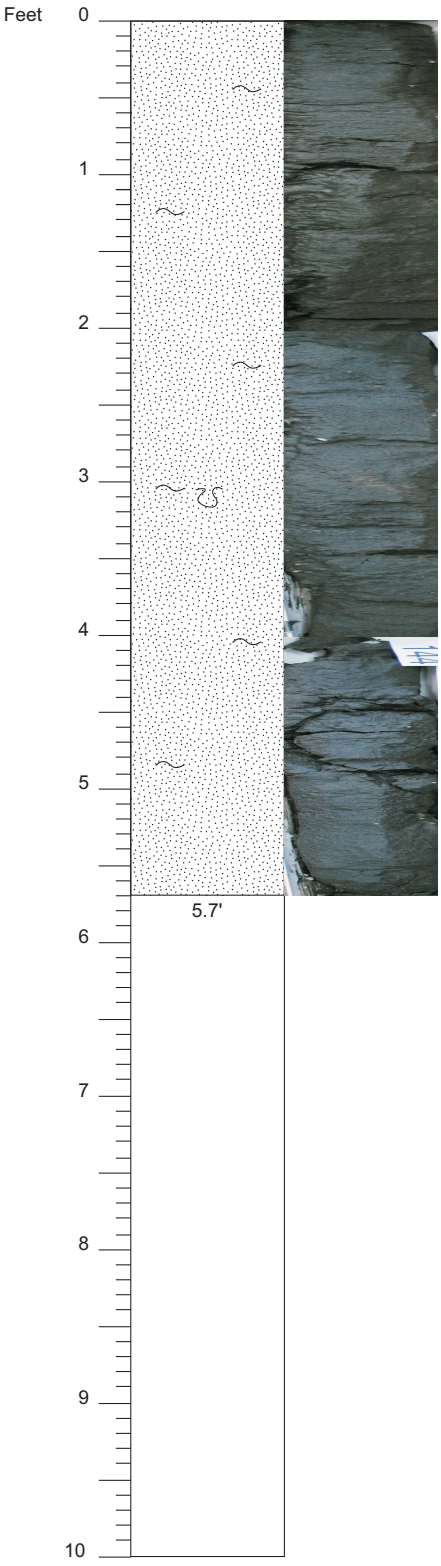


SAND; med, some fine, silt increases bwetween 2.3-2.7 ft; quartz, 10% glauconite; Gley 2 greenish-black (10BG 2.5/1)

SAND; very fine to silty; quartz, Gley 1 greenish-black (5GY 2.5/1)

174 AX Medford
Core #23

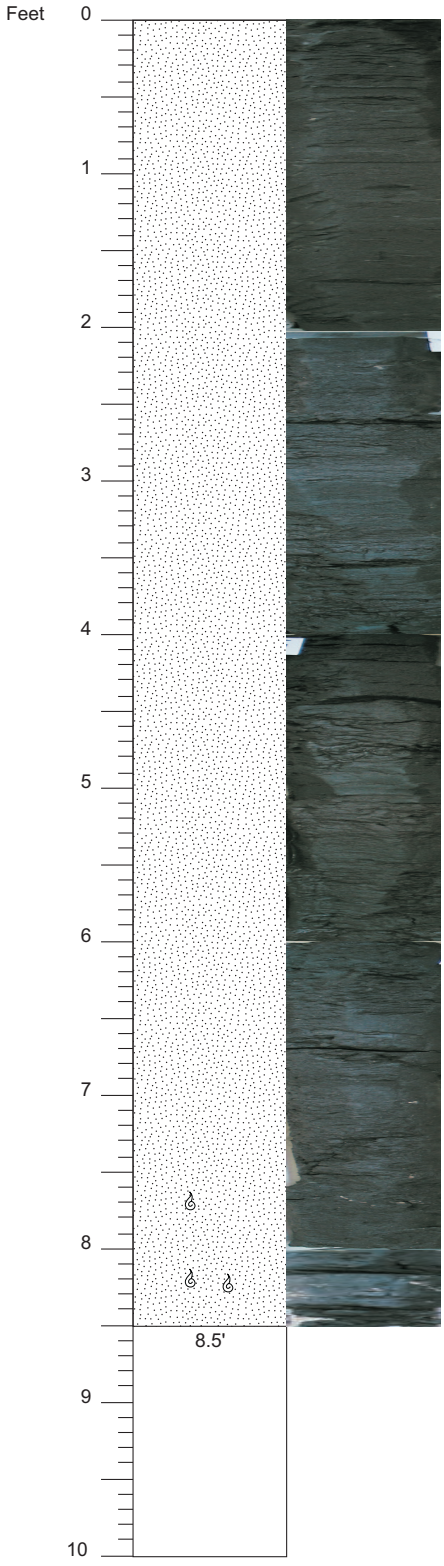
Start depth:	130 ft
Stop depth:	140 ft
Recovery:	4.1 ft
Date:	4/26/07
Described by:	PS, EG, BB



SAND; fine to medium; quartz, 2% glauconite, some clay blebs, slightly micaceous throughout, increases towards bottom; 3-3.1 ft sand filled burrow; very dark greenish gray (Gley 1 10GY 3/1)

174 AX Medford
Core #24

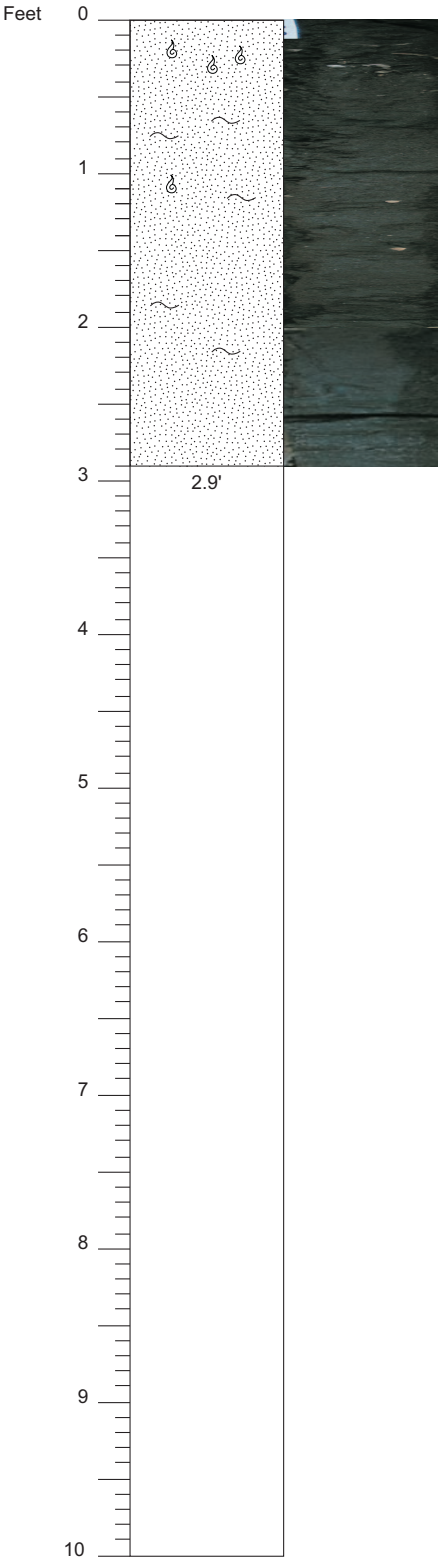
Start depth:	140 ft
Stop depth:	150 ft
Recovery:	5.7 ft
Date:	4/26/07
Described by:	PS, EG, BB



SAND; fine, silty; laminated to thin bedded; quartz, glauconitic (2-3%), trace amounts of mica; 2.1-2.5 and 6.8-7.9 ft cemented beds; 3.5-3.6 ft ~1 cm thick clay beds; shells at 7.7 and 8.3-8.4 ft; very dark greenish gray (Gley 1 5G 3/1)

174 AX Medford
Core #25

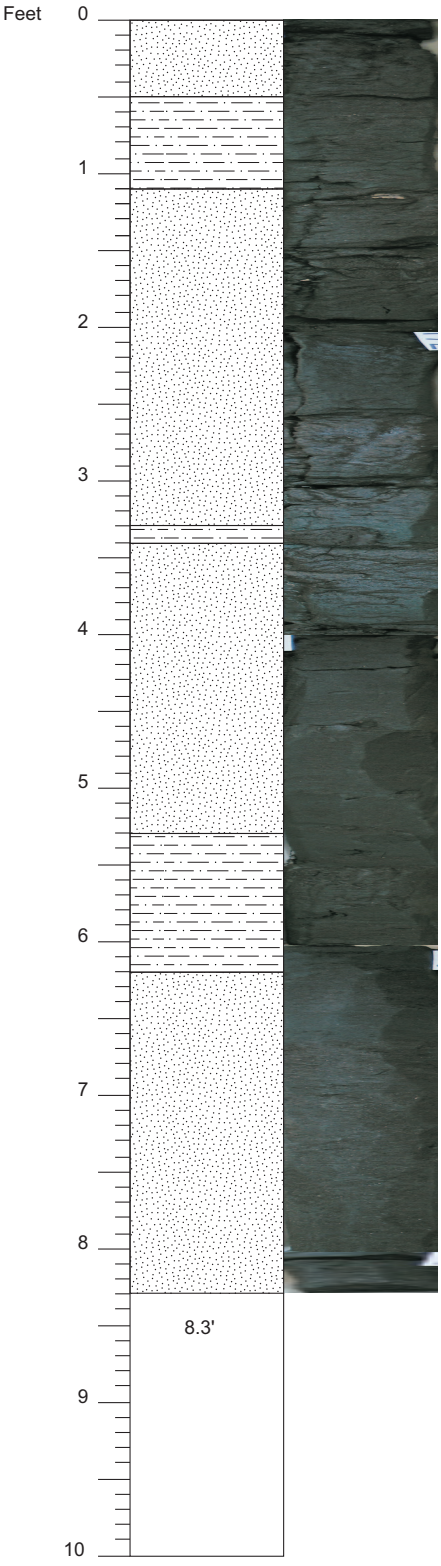
Start depth:	150 ft
Stop depth:	160 ft
Recovery:	8.5 ft
Date:	4/26/07
Described by:	PS, EG, BB



SAND; medium to fine; quartz, 10% glauconitic; 3-5 mm glauconitic clay beds; 0.2-0.4 ft some shells; 2.6-2.9 ft glauconitic clay beds increase

174 AX Medford
Core #26

Start depth:	160 ft
Stop depth:	170 ft
Recovery:	2.9 ft
Date:	4/26/07
Described by:	PS, EG, BB



SAND; very fine to fine, silty; quartz, 10% glauconitic

SAND and interlaminated SILT; about 5 mm thick; medium to fine; trace amount of mica throughout; 10% glauconite

SAND; very fine to fine, silty; quartz, 10% glauconitic

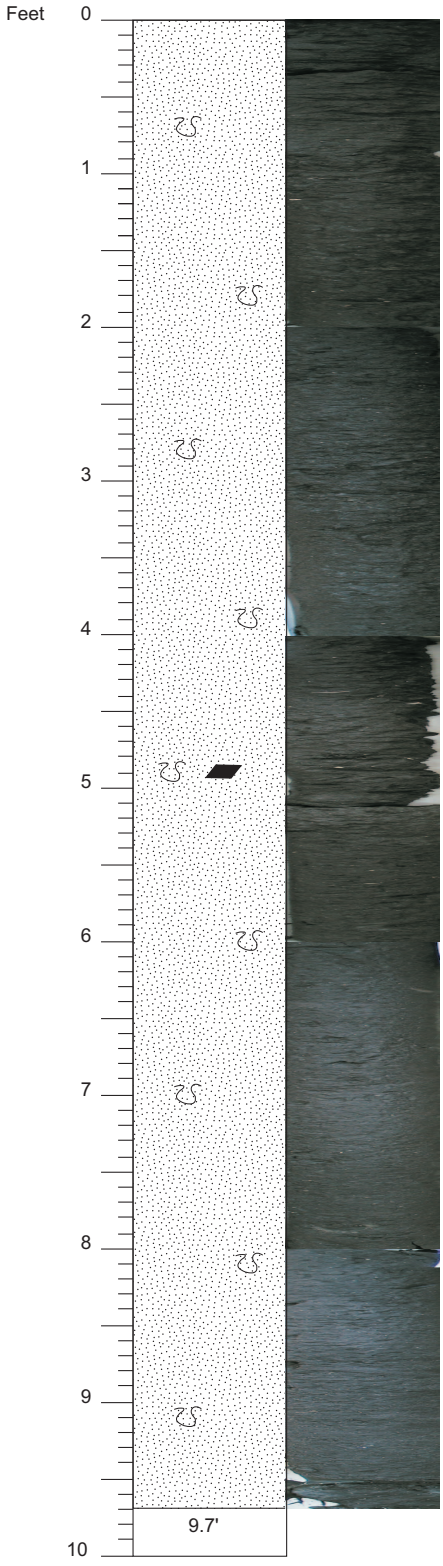
SAND; silty

SAND; very fine to fine, silty; quartz, 10% glauconitic

SAND and interlaminated SILT; about 5 mm thick; medium to fine; trace amount of mica throughout; 10% glauconite

SAND; very fine to fine, silty; quartz, 10% glauconitic

174 AX Medford
Core #27
Start depth: 170 ft
Stop depth: 180 ft
Recovery: 27 ft
Date: 4/26/07
Described by: PS, EG, BB

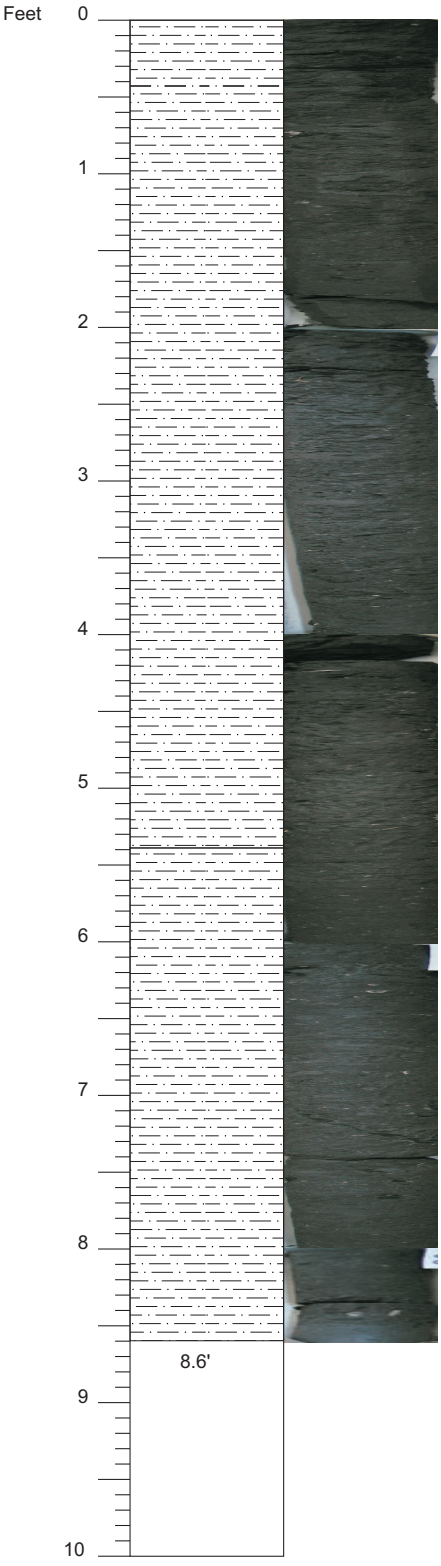


SAND; very fine, silty clay, more clayey silt towards bottom; quartz, micaceous, 20% glauconite; finally disseminated shell hash; bioturbation throughout; possilbe prodelta environment; Gley 1 greenish-black (10Y 2.5/1)

4.8 ft lignite fragment

174 AX Medford
Core #28

Start depth:	180 ft
Stop depth:	190 ft
Recovery:	9.7 ft
Date:	4/26/07
Described by:	PS, EG, BB

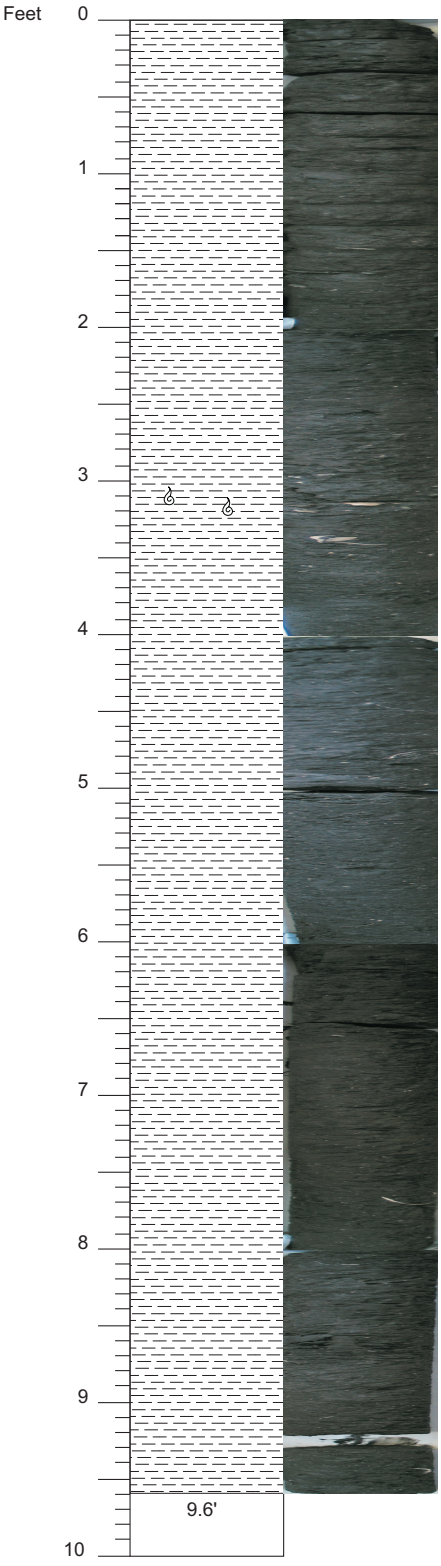


SAND; very fine,muddy; quartz, micaceous, 5% glauconite; bioturbated throughout; shell fragments at 0.7, 1.4, and 2.3 ft, shell fragments more common below 3.9 ft,

MUD; very fine sand, transition; micaceous, trace of glauconite; sand content decreases downcore; 2 pyrite chuncks (7 mm) at 8.4

174 AX Medford
Core #29

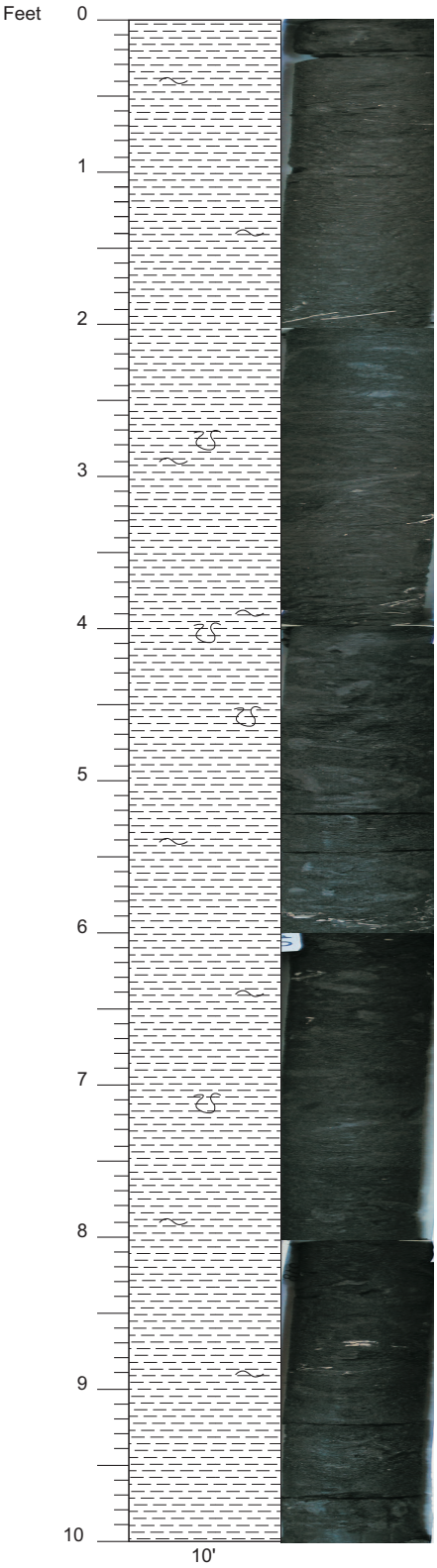
Start depth:	190 ft
Stop depth:	200 ft
Recovery:	8.6 ft
Date:	4/26/07
Described by:	BB, PS



CLAY; very fine sand, silt; 5-10% glauconite, micaceous; very dark greenish gray (10Y 3/1)

174 AX Medford
Core #30

Start depth:	200 ft
Stop depth:	210 ft
Recovery:	9.6 ft
Date:	4/26/07
Described by:	PS

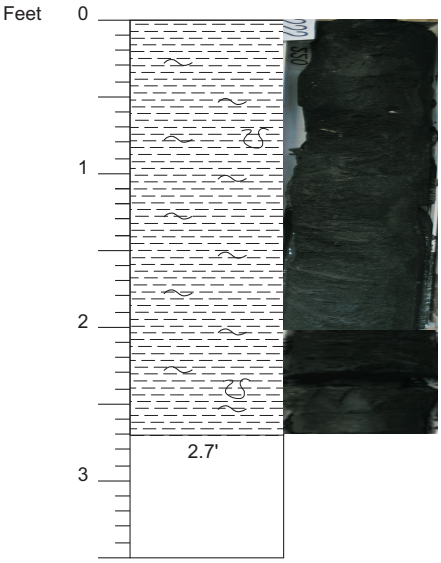


CLAY; silty, slightly sandy; glauconitic to very glauconitic (5-15% dark gray to black),, micaceous, varies from trace to 2.3%; moderately bioturbated, glauconite-filled, clay-filled, and clay-lined burrows; increased clay between 2.5-5 ft; sporadic shell fragments to whole shells; very dark greenish-gray (10Y 3/1)

6.1 ft increased glauconite; dark green and black shell hash

7.2 clay-lined, glauconite-filled burrow; 2-3% mica

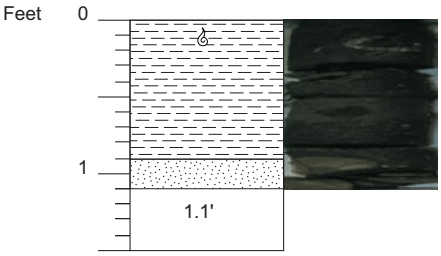
174 AX Medford
Core #31
Start depth: 210 ft
Stop depth: 220 ft
Recovery: 10 ft
Date: 4/27/07
Described by: AAK



CLAY; ~30% sand (95% glauconite, 5% quartz, trace mica), 30% silt; few scattered shells on outside; 0-1.6 ft heavily burrowed, few disrupted laminae,
1.6-2.3 ft laminated with few discrete burrows; 2.3-2.7 ft bioturbated; very dark greenish-gray (10Y 3/1)

174 AX Medford
Core #32

Start depth:	220 ft
Stop depth:	223.5 ft
Recovery:	2.7 ft
Date:	4/27/07
Described by:	JVB, AAK

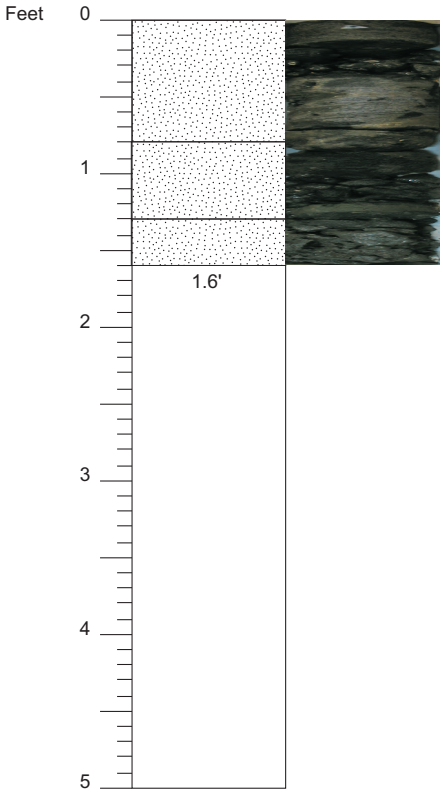


SILTY CLAY; 30% sand (60% glauconite, 40% quartz); sub-angular, fine, ranges to coarse grains; scattered small shells

irregular major contact at 0.9-1 ft; between kMT and kET –

SANDSTONE; medium to granules; quartz dominated, some glauconite; sub-angular to sub-rounded, poorly sorted; no reaction to HCl

174 AX Medford
Core #33
Start depth: 223.5 ft
Stop depth: 225 ft
Recovery: 1.1 ft
Date: 4/27/07
Described by: AAK, JVB



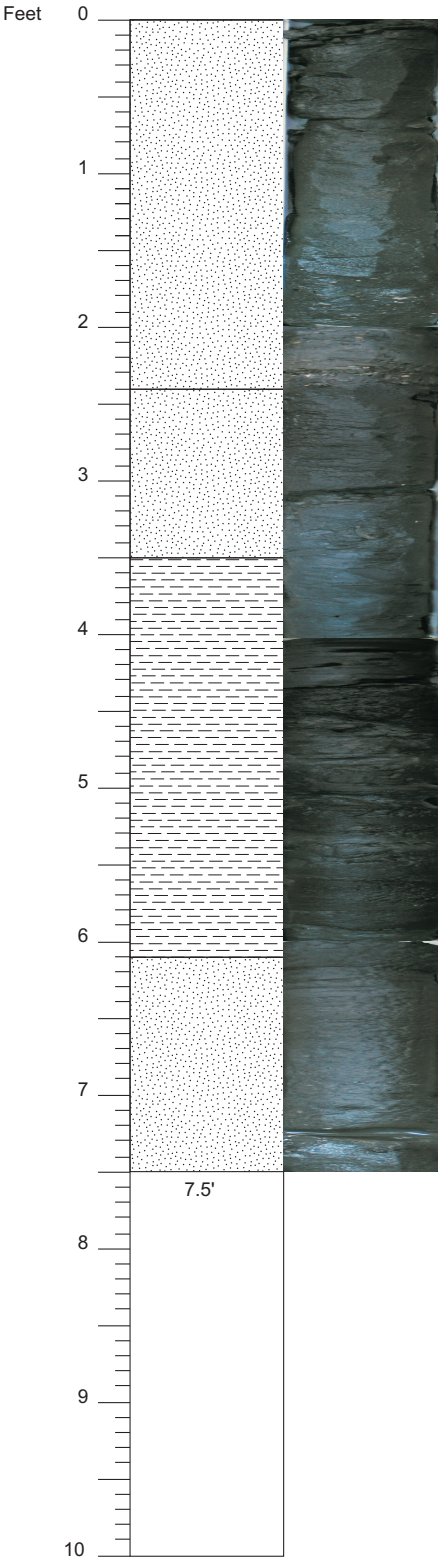
SANDSTONE; medium; sub-angular to sub-rounded, hints of lamination/bedding; predominantly quartz, 2-3% glauconite (up to 5% in isolated intervals); shell at 0.1, 0.3

SAND; medium, quartz; slightly indurated; sub-rounded/angular; rare shells

SAND; non-indurated, similar in lithology to overlying bed, kET?

174 AX Medford
Core #34

Start depth:	225 ft
Stop depth:	230 ft
Recovery:	1.6 ft
Date:	4/27/07
Described by:	JVB, AAK



SAND; fine to med, silty-clay matrix; sub-angular to sub-rounded; quartz, trace ohms, lignite, trace mica; angular quartz granules, lignite and shell fragments (1-2 mm diameter), increasingly abundant below 1.6 ft; grayish-green (5G 5/2)

contact

SAND; fine to very fine, silty; well sorted

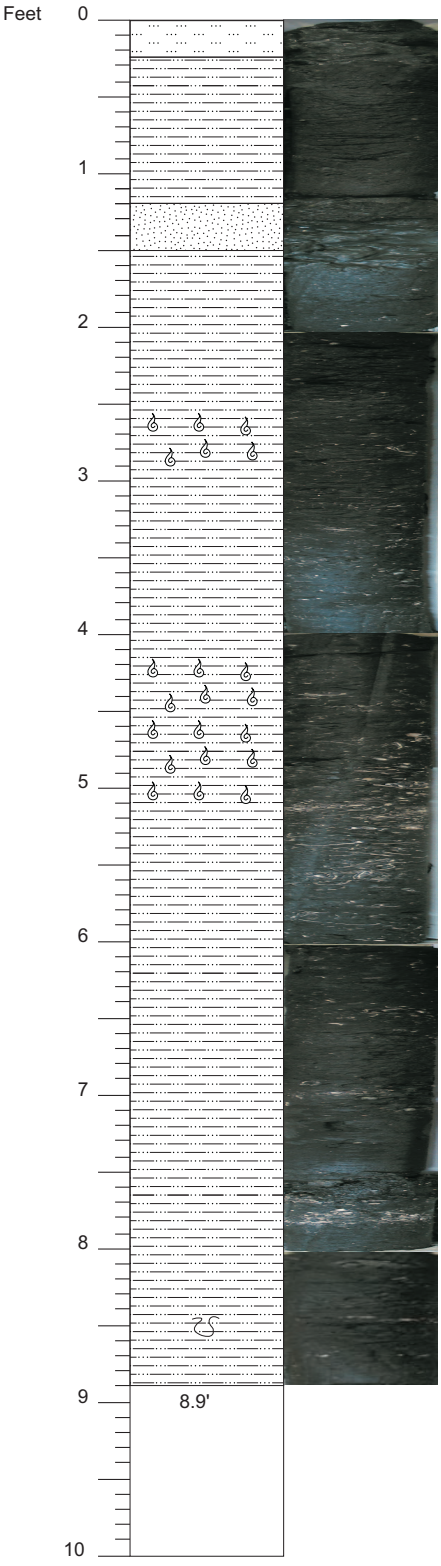
gradational contact

CLAY; silt-sized mica with interbedded sand beds; greenish-gray (5BG 5/1)

SAND; quartz, medium-fine, heavily bioturbated

174 AX Medford
Core #35

Start depth:	230 ft
Stop depth:	240 ft
Recovery:	7.5 ft
Date:	4/27/07
Described by:	JVB, AAK

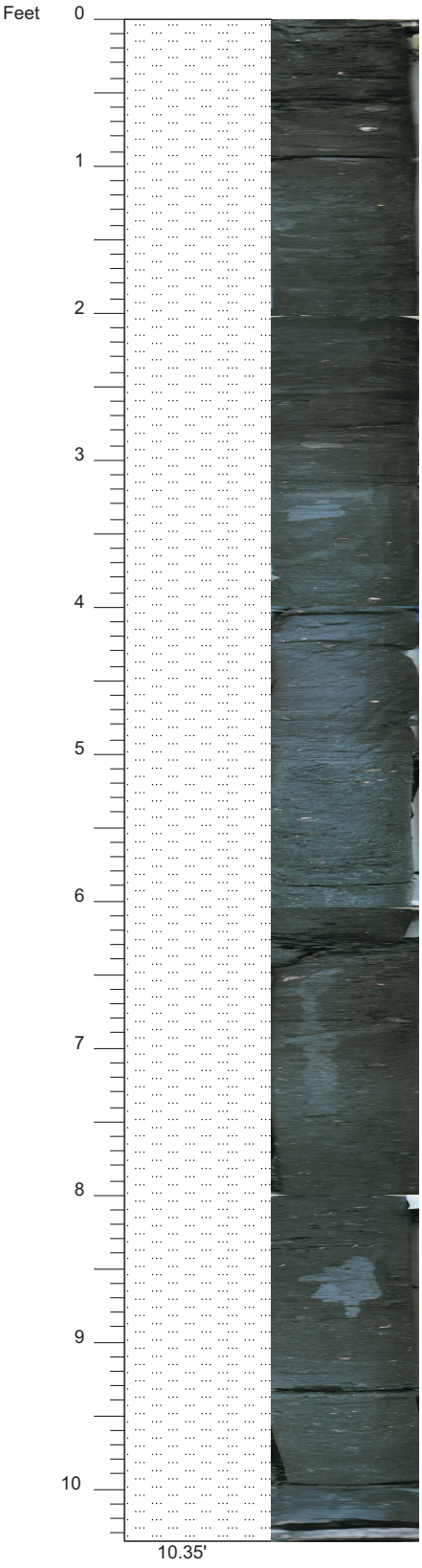


SILT; clayey; sandier than below, possible contact at 0.3

SILT; clayey; slightly sandy (fine to very fine), micaceous, chlorite visible, pyrite/pyritized burrow, trace lignite; 1.2-1.5 ft washed out sandier interval; 1.5-4 ftllightly laminated, 2.5-2.9 ft shells increase in abundance; 4-5.3 ft very shelly with thin, whole/fragments bivalves, gastropods(?), scaphopods, nested beds, possible storm influence; 8.3-8.4 ft pyritized burrows; very dark gray (N3/)

174 AX Medford
Core #36

Start depth:	240 ft
Stop depth:	250 ft
Recovery:	8.9 ft
Date:	4/27/07
Described by:	JVB, AAK

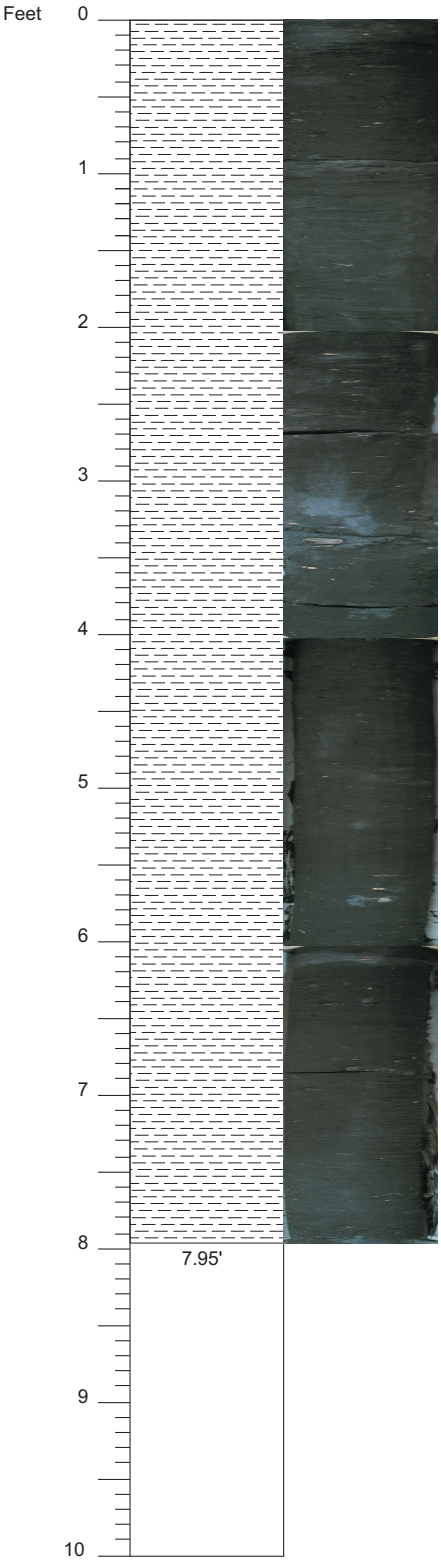


SILT; clayey, very fine sand (1-2%); slightly micaceous, discrete shells, small shell fragments scattered throughout; occasional pyrite, lignite; 3.5 and 5.5ft pyrite nodules; alternating laminated and bioturbated intervals (top 4 ft laminated, rest bioturbated); very dark gray N3/

174 AX Medford
Core #37

Start depth:	250 ft
Stop depth:	260 ft
Recovery:	10.35 ft
Date:	4/27/07
Described by:	AAK, JVB

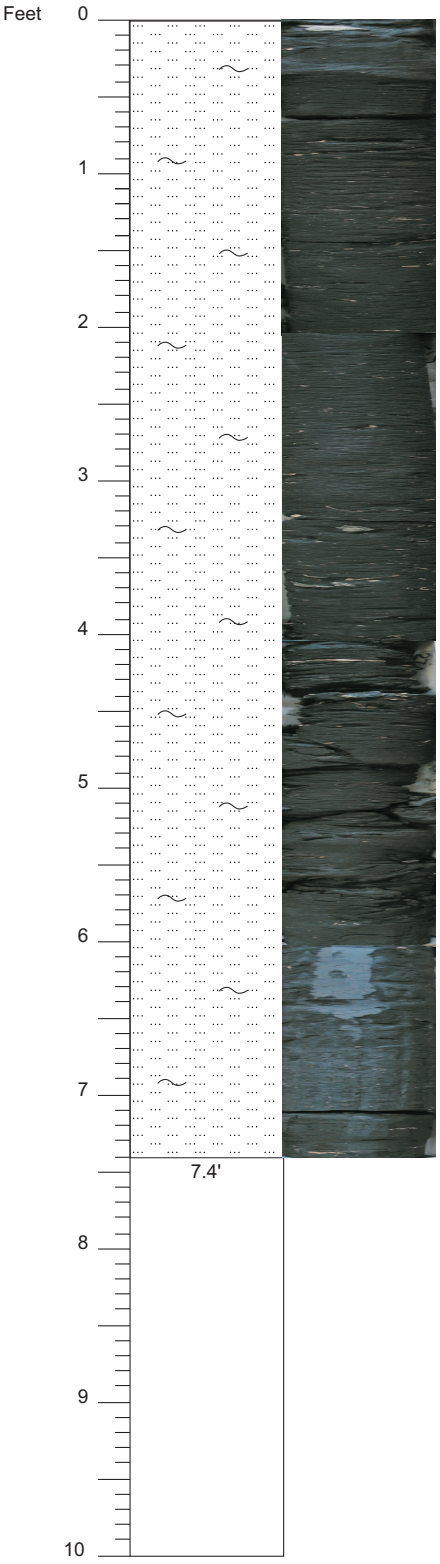
White to light gray clay clast at base; no reaction with HCl (kaolinitic clay?)



CLAY; slightly silty; scattered shell fragments; scattered mica, pyrite present; hints of laminate but appears to be bioturbated; uniform core, bottom is 2% lignite and more micaceous; very dark gray N3/

174 AX Medford
Core #38

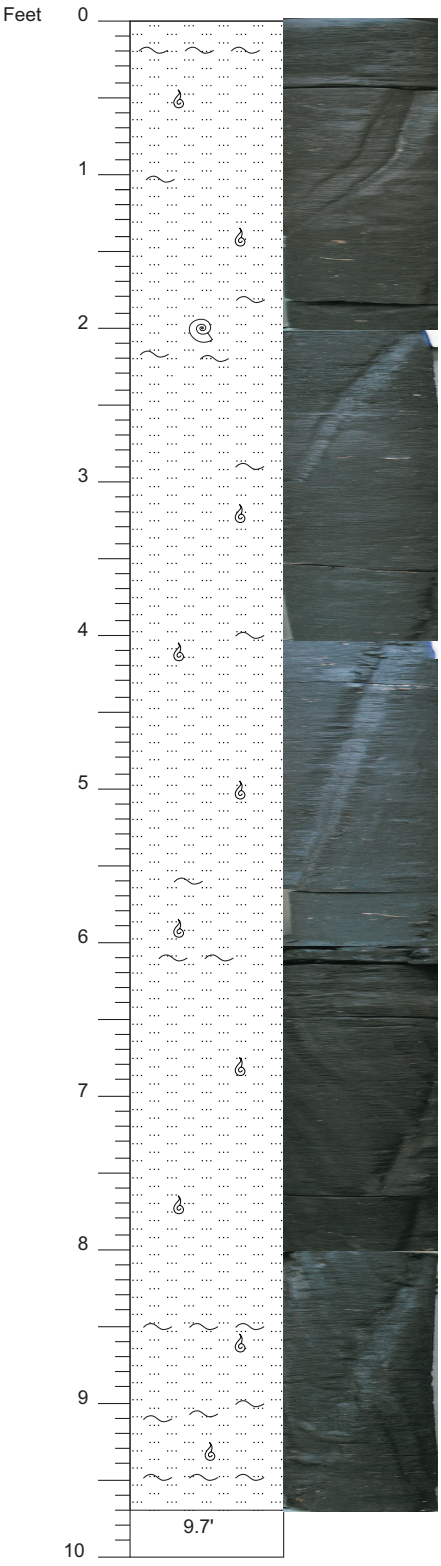
Start depth:	260 ft
Stop depth:	270 ft
Recovery:	7.95 ft
Date:	4/27/07
Described by:	JVB, AAK



SILT; clayey, some very fine sand; glauconite (5% at top increasing to 10% at bottom), shelly, slightly micaceous, some pyrite; laminated; clay at bottom

174 AX Medford
Core #39

Start depth:	270 ft
Stop depth:	280 ft
Recovery:	7.4 ft
Date:	4/28/07
Described by:	PS



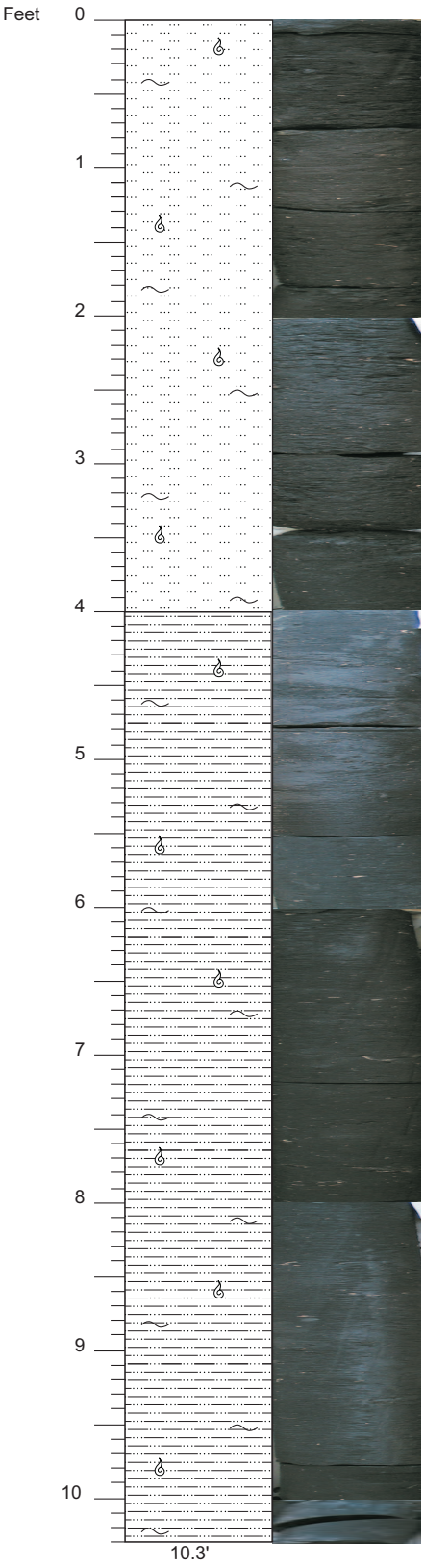
SILT; clayey to silty clay; somewhat shelly, slightly micaceous, 3-5% glauconite, with with 1-2 cm glauconite sand filled burrowed zones; laminated; very dark grayish-brown (2.5Y 3/2)

2-2.5 possible ammonite

174 AX Medford
Core #40

Start depth:	280 ft
Stop depth:	290 ft
Recovery:	9.7 ft
Date:	4/28/07
Described by:	PS, AK

8.3 ft to bottom - glauconite sand-filled burrows dominate (glauconite to 10-15%)

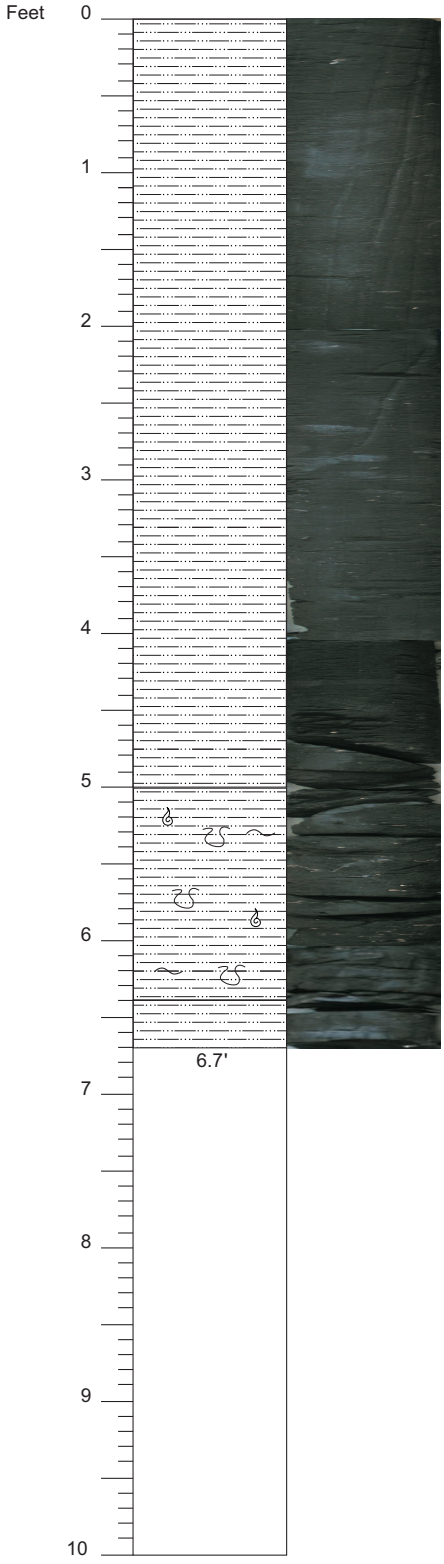


SILT, clayey; laminated; with zones of glauconite (up to 20% with very fine quartz sand)-filled burrows; shell hash and thin shells are life position

CLAY, silty; shelly; 2-3% glauconite, trace mica and very fine quartz sand; laminated; very dark gray to very dark grayish brown (2.5Y 3/2 to 2.5Y 3/1)

174 AX Medford
Core #41

Start depth:	290 ft
Stop depth:	300 ft
Recovery:	10.3 ft
Date:	4/28/07
Described by:	PS, AKK

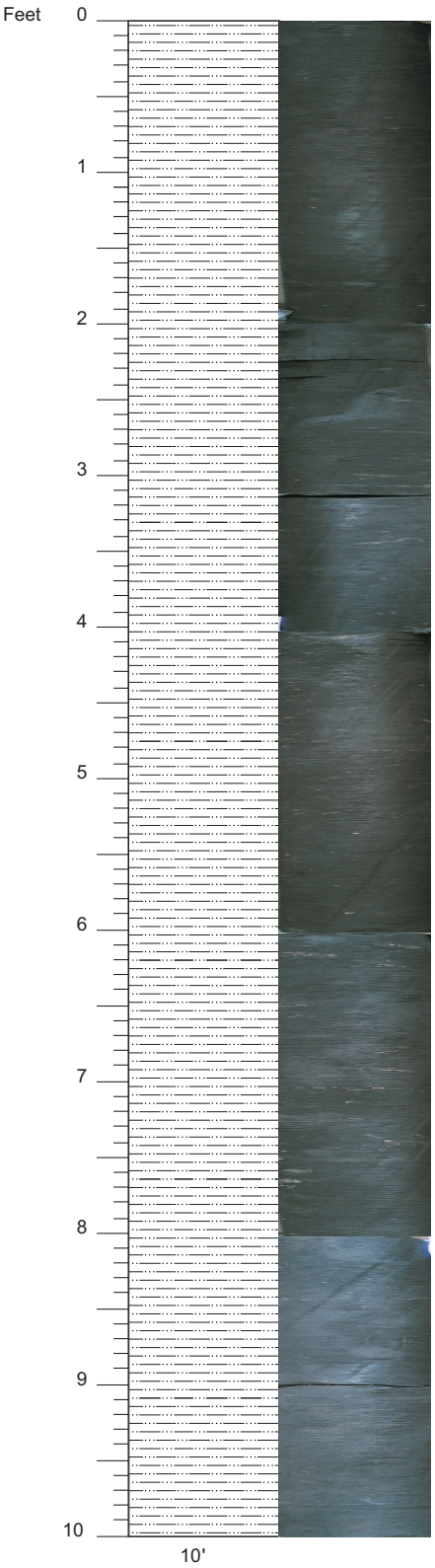


CLAY; silty, 0-5 laminated, slight micaceous; several pyritized nodules, (2.5 Y 3/1); becomes increasingly bioturbated at 5

CLAY; silty; glauconite: infilling burrows 5-15%, 2-3% outside burrows; shellier at base (some shell hash); more bioturbated than above

174 AX Medford
Core #42

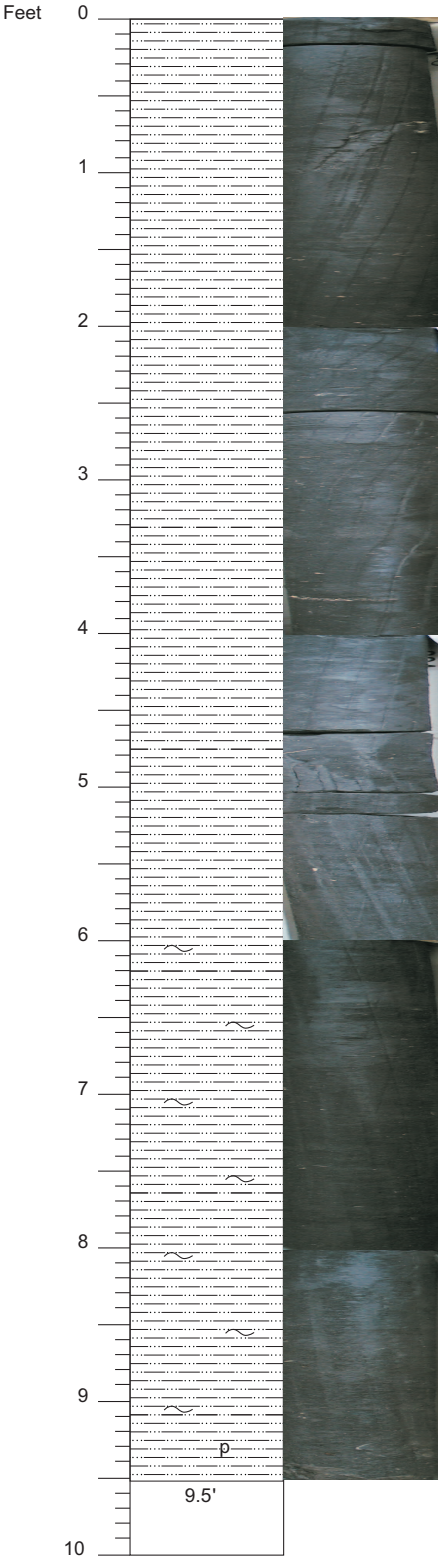
Start depth:	300 ft
Stop depth:	310 ft
Recovery:	6.7 ft
Date:	4/28/07
Described by:	PJS, AAK



CLAY, silty; laminated, slightly micaceous, trace glauconite; 0.9-1.1 shell fragments; 3.4-3.5 pyrite concentrations; very dark gray (N3/)

174 AX Medford
Core #43

Start depth:	310 ft
Stop depth:	320 ft
Recovery:	10 ft
Date:	4/28/07
Described by:	PS, AAK



SILT; clayey; scattered shell fragments/hash; trace fine quartz sand; glauconite increases downsection; Merchantvile Fm?; very dark gray (2.5 Y 3/1)

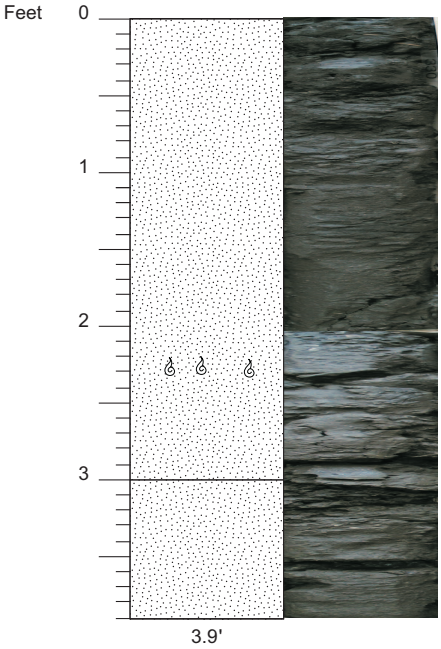
174 AX Medford
Core #44

Start depth:	320 ft
Stop depth:	330 ft
Recovery:	9.5 ft
Date:	4/28/07
Described by:	PS, AAK

5.2 - glauconite 2-3%

6.7 - glauconite 5%

CLAY; silty; 10% glauconite (coarse grained), 3% quartz sand, pyrite nodule, occasional burrows; very dark grayish brown (2.5 Y 3/2)



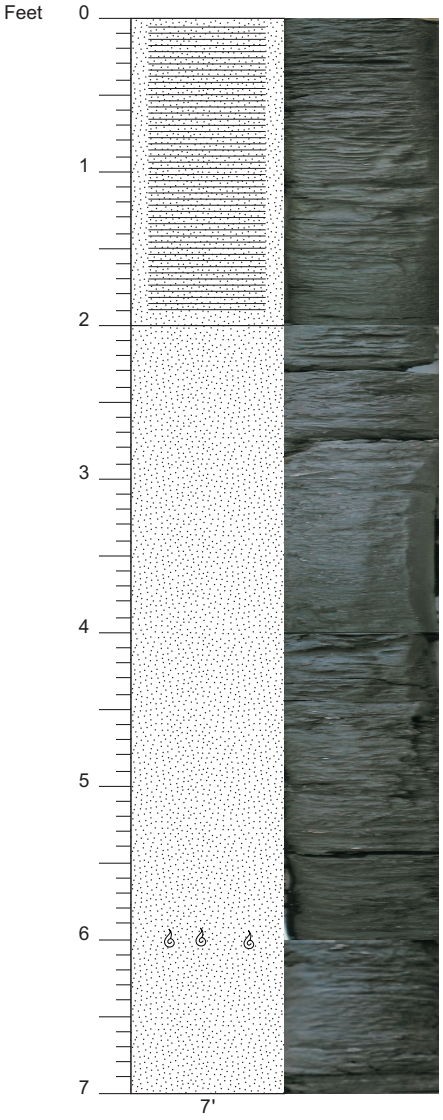
SAND; fine to medium; silty, clayey ,“dirty”, possible Cheesequake/Merchantville Fm. contact at top; slightly micaceous, bioturbated 0-1.5; grades to medium sand with less clay; “shelfy”

1.2 isolated clay beds

2.2-2.3 shell hash

SAND; medium; micaceous, “dirty”

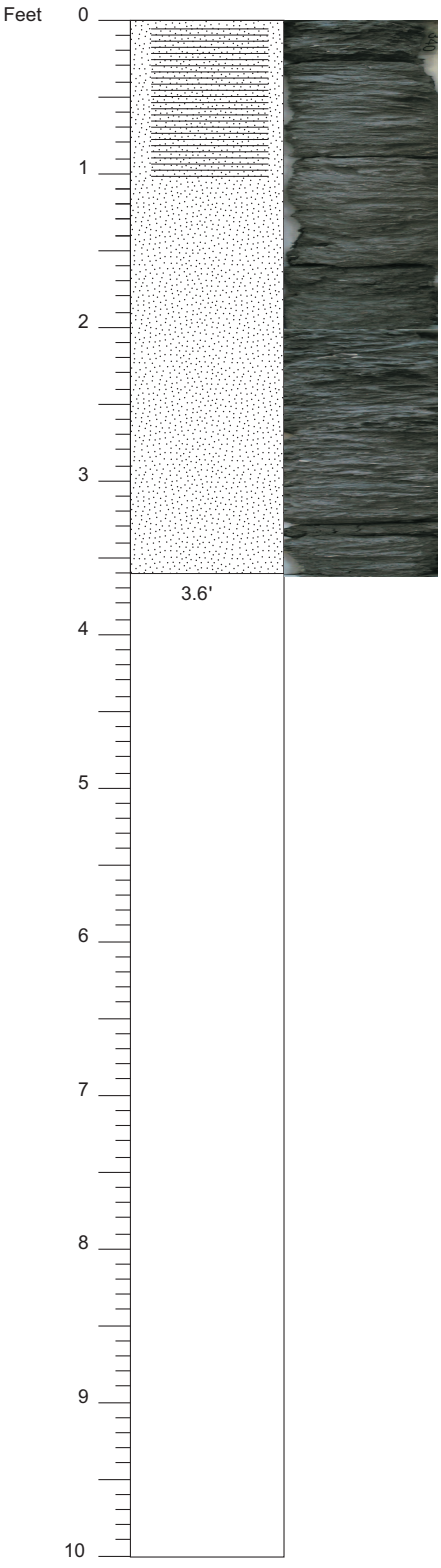
174 AX Medford
Core #45
Start depth: 330 ft
Stop depth: 333 ft
Recovery: 3.9 ft
Date: 4/28/07



SAND; fine to medium, silty; quartzose, micaceous, shell fragments; 1-2% glauconite, increasing downsection; silt laminae with 1 cm spacing in upper 2 ft; dark gray (5 Y 4/1)

6.0-6.1 shell fragments

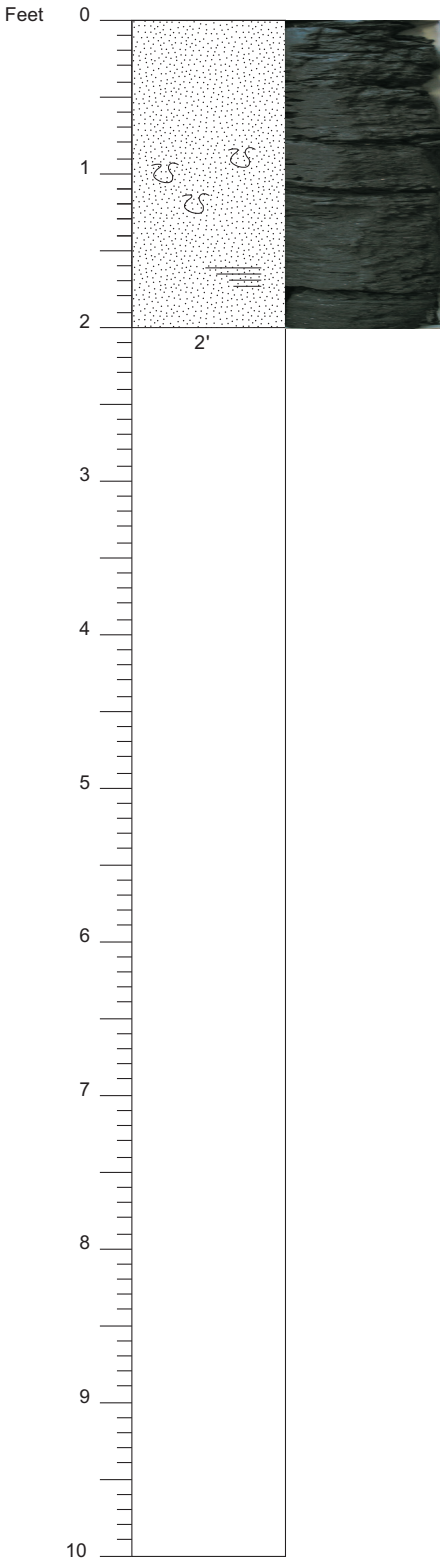
Core #46
174 AX Medford
Start depth: 333 ft
Stop depth: 340 ft
Recovery: 7 ft
Date: 4/29/07



SAND; clayey, silty; very fine; shelly at times (fragments), slightly micaceous; trace lignite at base and throughout; no visible glauconite; lower shoreface?, very heavily bioturbated (burrows contain very fine sand and clayey silt); some original laminae preserved at 3.2, upper 1 ft laminated

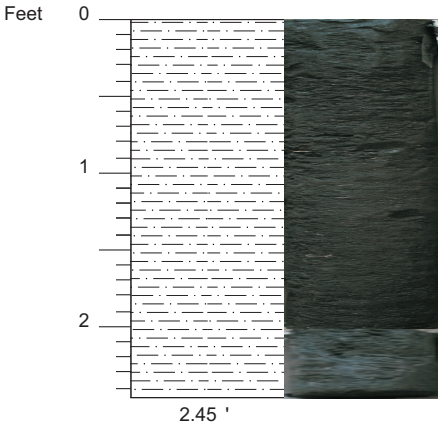
174 AX Medford
Core #47

Start depth:	340 ft
Stop depth:	350 ft
Recovery:	3.6 ft
Date:	4/28/07



SAND; fine to medium,silty; shell hash, lignite, micaceous; bioturbated, clay-lined, sand-filled burrows, occasional silt laminae, very dark, grayish-brown (2.5YR 3/2)

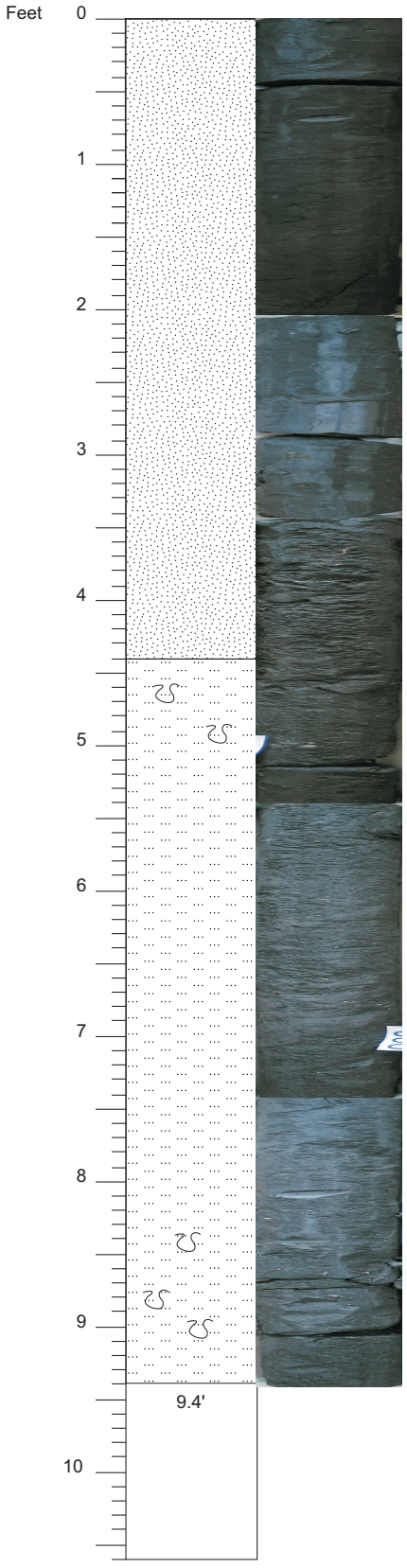
174 AX Medford
Core #48
Start depth: 350 ft
Stop depth: 360 ft
Recovery: 2 ft
Date: 4/28/07



SAND; silty and clayey, fine; quartz, scattered mica (up to coarse), 1-2% glauconite;, heavily bioturbated, clay-filled burrows up to a few mm; scattered thin-walled bivalve shells, both whole and fragmented; glauconite becomes more abundant downcore; black (2.5/1)

174 AX Medford
Core #49

Start depth:	360 ft
Stop depth:	362.45 ft
Recovery:	2.45 ft
Date:	4/29/07



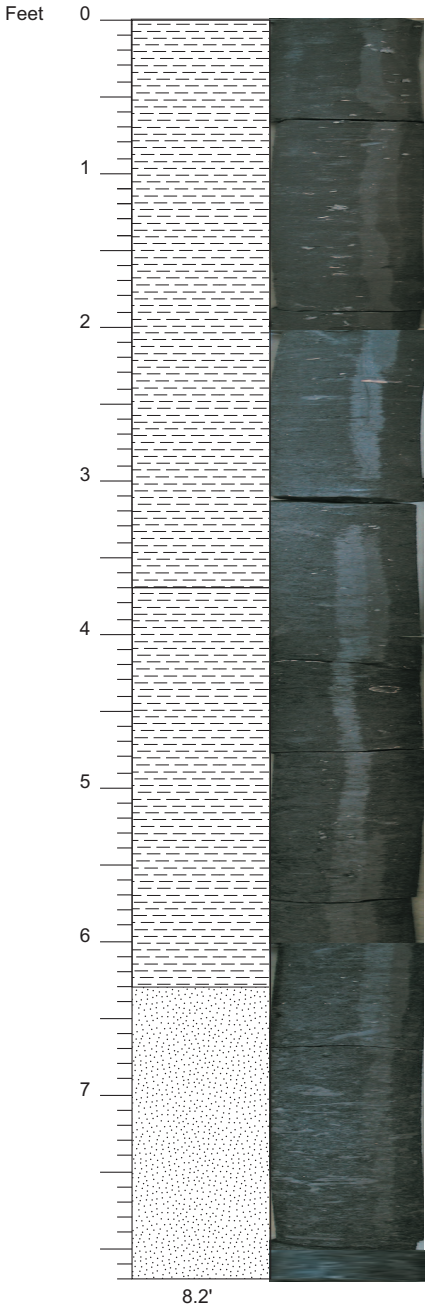
SAND; fine, mostly quartz; 5% mica, up to coarse grained, some green chlorite; 2-3% glauconite; visible forams; scattered thin-walled, fragments and whole shell; some shells aragonitic (mother of pearl); heavily bioturbated, burrows up to 1 mm across; black (N/2.5)

4.4 bioturbated contact, glauconite burrow at 5 ft 0.6 ft below contact

SILT, clayey, micaceous; chlorite grains up to medium sand sized, small % of very fine sand; scattered thin-walled shell fragments; visible forams (*Lenticulina*), heavily bioturbated; sand-filled burrows towards base, black (N 2.5)

174 AX Medford
Core #50

Start depth:	362.45 ft
Stop depth:	373 ft
Recovery:	9.4 ft
Date:	4/29/07
Described by:	JB, AP



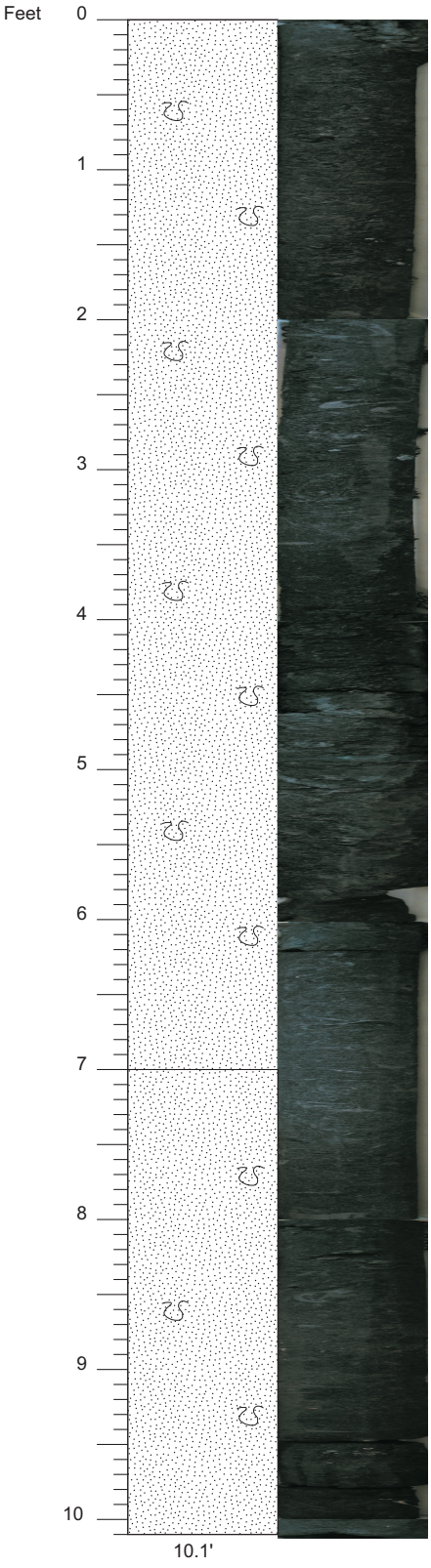
CLAY; silty, silt-sized mica; glauconite percent increasing steadily through at core; no quartz sand, no glauconite at top of core; small percent fine to coarse mica; bivalve, echinoid spine, shell fragments scaphopod; forams visible on outside core; black (N4/)

CLAY; similar to above, but increasing amounts of glauconite; ~5% glauconite, heavily bioturbated, 1-3% mica, few % shells, many forams

SAND; numerous clay-lined burrows; over 50% sand, glauconitic, no quartz visible, 55% glauconite, 50-55% clay; lower 2 ft some burrows have over 80% glauconite; some forams, some quartz grains at very base of core, Black (N 2.5/), dark-greenish gray

174 AX Medford
Core #51

Start depth:	373 ft
Stop depth:	380 ft
Recovery:	8.2 ft
Date:	4/29/07
Described by:	JVB, AP

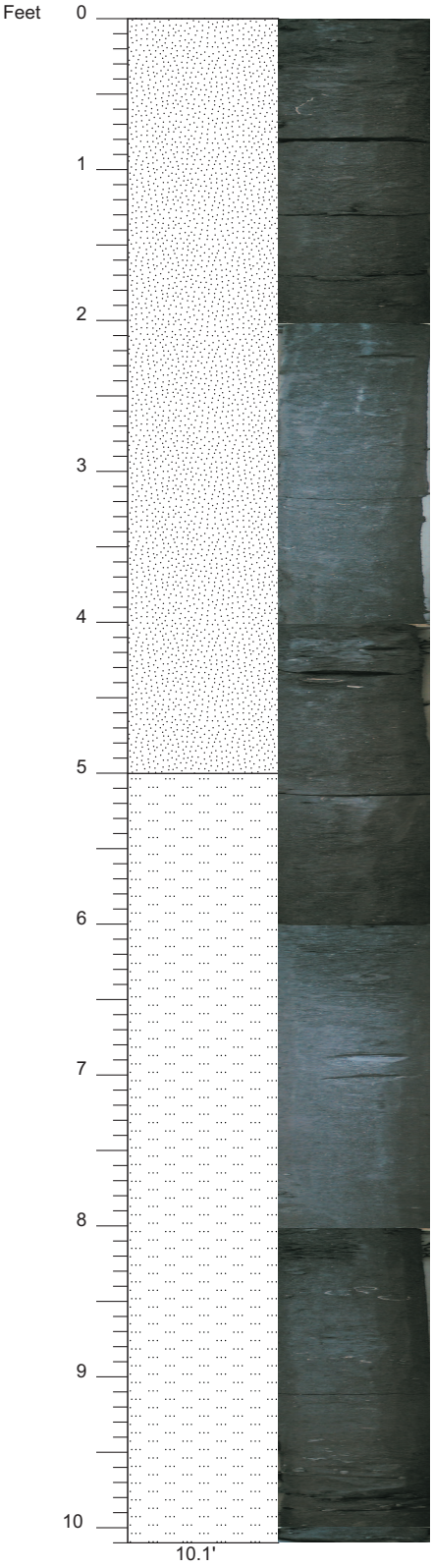


SAND; medium to fine, glauconitic; heavily bioturbated throughout; clay lined burrows up to 1 cm in diameter; below 2.6-5.9 very few clay-lined burrows, shells are rare but still heavily bioturbated; many phosphate concretions throughout core, mica becomes rare down to 5.9; 4.7-5.9 very soft core, possibly sequence boundary; very soft when recovered, more glauconitic; black (N2.5)

SAND; glauconite, clayey; mica increases at 5.9 downcore; very little carbonate, but some shells present; pyrite in bottom section, increasing downcore; number of shells increase at bottom scaphopods

174 AX Medford
Core #52

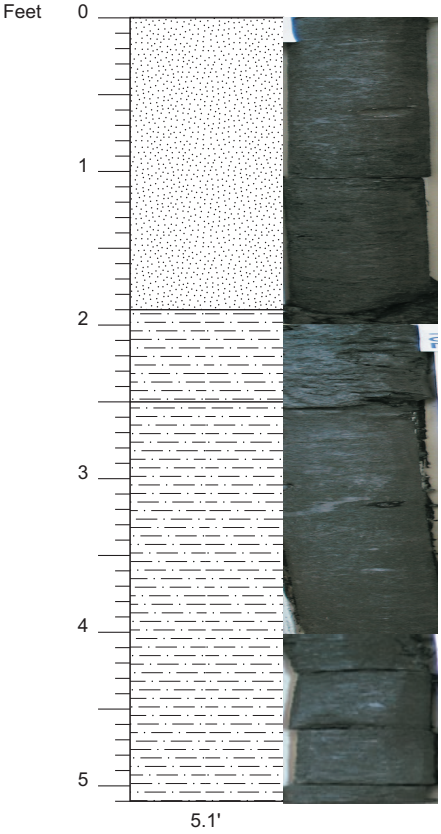
Start depth:	380 ft
Stop depth:	390 ft
Recovery:	10.1 ft
Date:	4/29/07
Described by:	JVB, AEP



SAND; coarse to very coarse; clayey and silty; micaceous, few % glauconite, scattered shells, heavily bioturbated; few forams; very dark gray (3/1)

SILT; very fine quartz sand, heavily bioturbated, clay-lined burrows; yellowish-reddish, green clay lower 1 ft; shells become more common; black (N/2.5)

174 AX Medford
Core #53
Start depth: 390 ft
Stop depth: 400 ft
Recovery: 10.1 ft
Date: 4/29/07
Described by: JVB, AEP



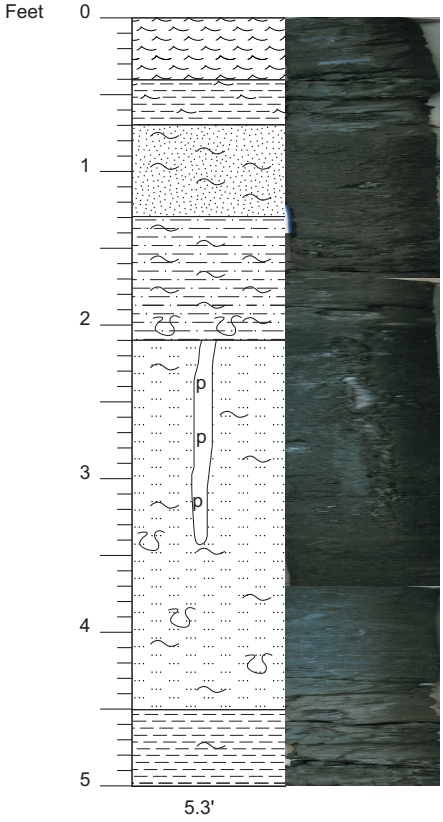
SAND; glauconitic, clay-rich; yellowish-green clay and dark-gray clay; heavily burrowed with large clay-lined burrows, rare mica; small shells until 1.9 ft; black (N2.5)

SAND; clayey, softer core; phosphate nodules; fine to medium glauconite grains

SAND; glauconitic, clay-rich; equal clay to glauconite lower 2.5 ft; 3.1 phosphate

174 AX Medford
Core #54

Start depth:	400 ft
Stop depth:	405 ft
Recovery:	5.1 ft
Date:	4/29/07
Described by:	JVB, AEP



SAND; mostly reworked glauconite, little bit of quartz; some shells; clay-rich, silty, mica

CLAY; glauconite, softer sediment; slightly micaceous, yellow; 0.6-0.7 bioturbated

SAND; clayey, silty, glauconite (green and yellow)

SAND; silty, yellow glauconite, very abundant phosphate, some mica

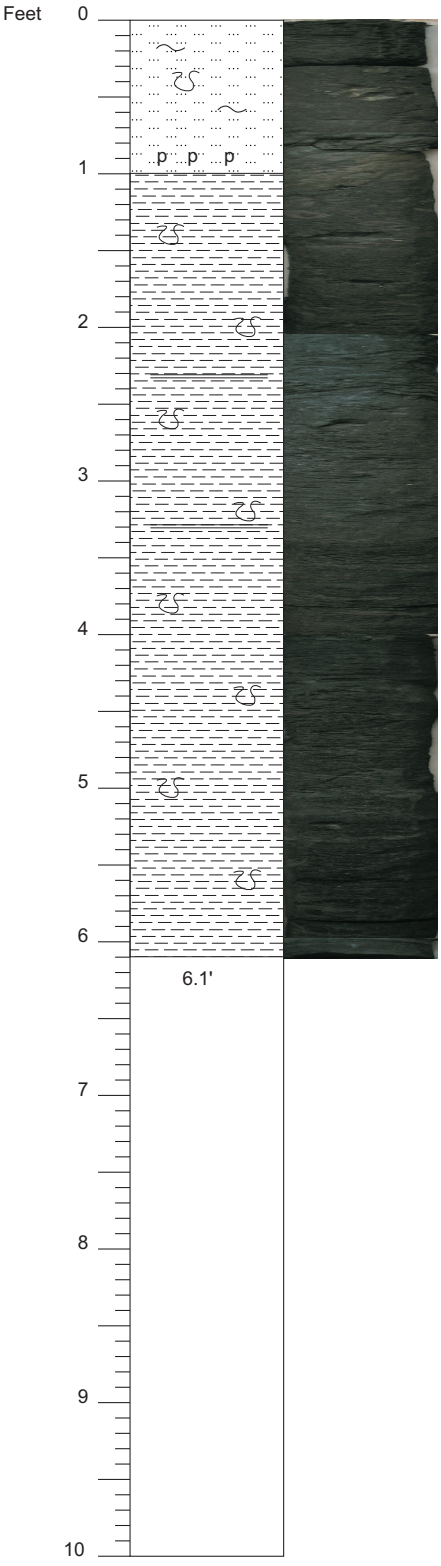
major contact at 2.05

SILT; clayey and slightly sandy; yellow and green-black glauconite; some quartz, heavily bioturbated; abundant clay, scattered phosphate nodules; long phosphate burrow

4.5 contact

CLAY; silty, softer sediment; some green and yellow glauconite; scattered mica; black (2.5/1)

174 AX Medford
Core #55
Start depth: 405 ft
Stop depth: 410 ft
Recovery: 5.3 ft
Date: 4/29/07
Described by: JVB, AEP



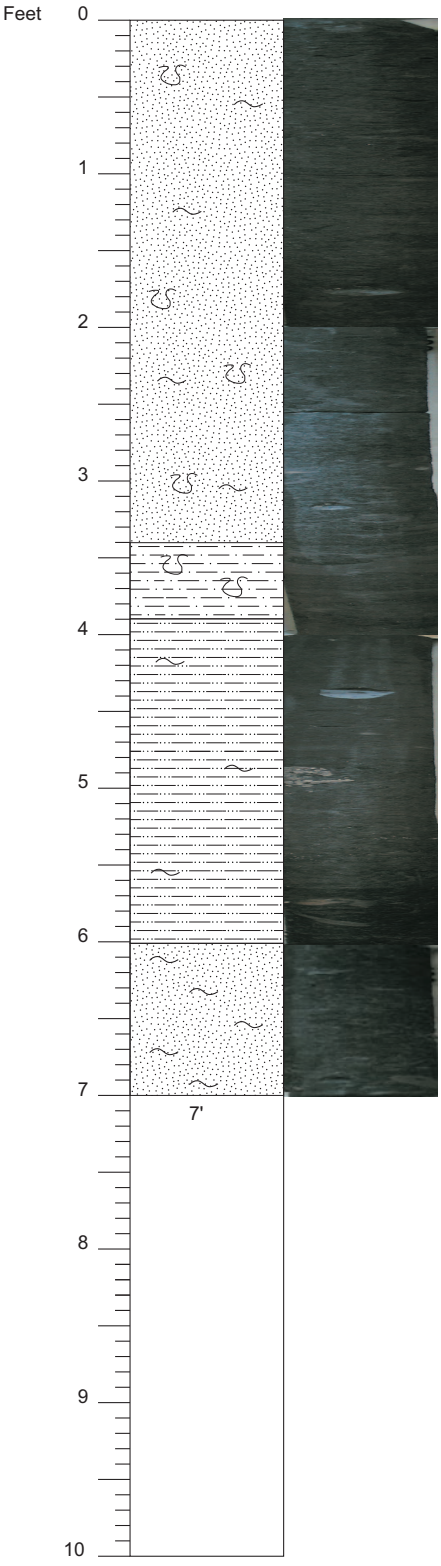
SILT; very fine quartz sand, glauconitic; bioturbated and with discrete burrows, yellow glauconite; phosphate on contact; (black N2.5)

0.95-1 ft contact

CLAY; glauconitic, limonite grains; micaceous, few percent quartz; laminated at 2.3 and 3.3 with burrows through laminae; bioturbated; more dark black glauconite towards bottom of core, black (N2.5)

174 AX Medford
Core #56

Start depth:	410 ft
Stop depth:	420 ft
Recovery:	6.1 ft
Date:	4/29/07
Described by:	JVB, AEP



SAND; quartz, glauconitic, very micaceous; many laminations at top; many burrows (clay-lined), burrows become more abundant downcore; black (N2.5)

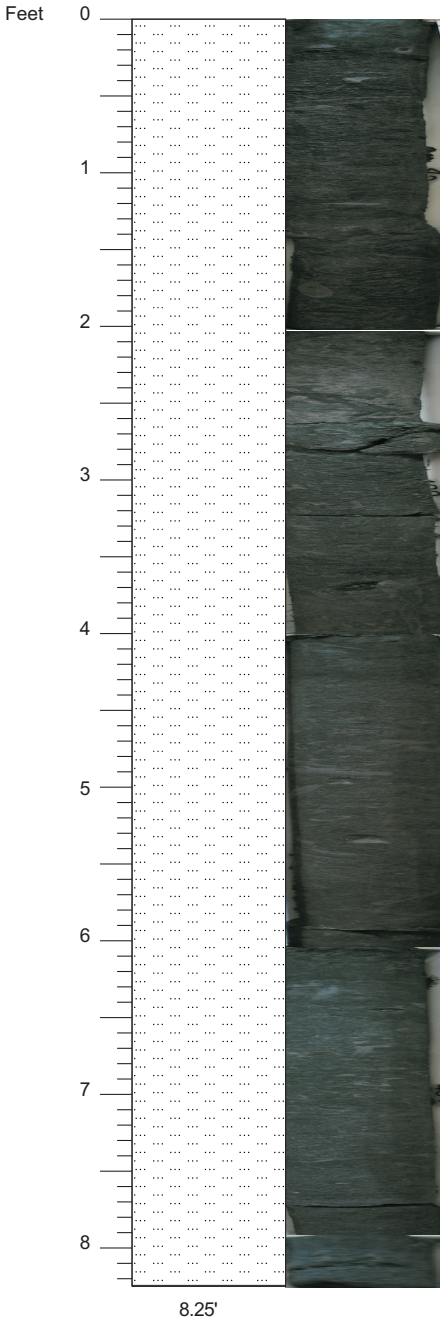
3.4 burrowed contact with rip-ups; overlying glauconite burrowed together with underlying clay

3.9 contact

CLAY; silty, micaceous, glauconite, pyrite; glauconite becomes more abundant in clay-filled burrows below 4.8; 4.85 pyrite nodule, scattered pyrite until 5.5; shelly fragment at 5.7

SAND; glauconite, sand and clay to glauconitic, clayey; traces of mica, clay-lined burrows; few percent quartz, black (N/2.5)

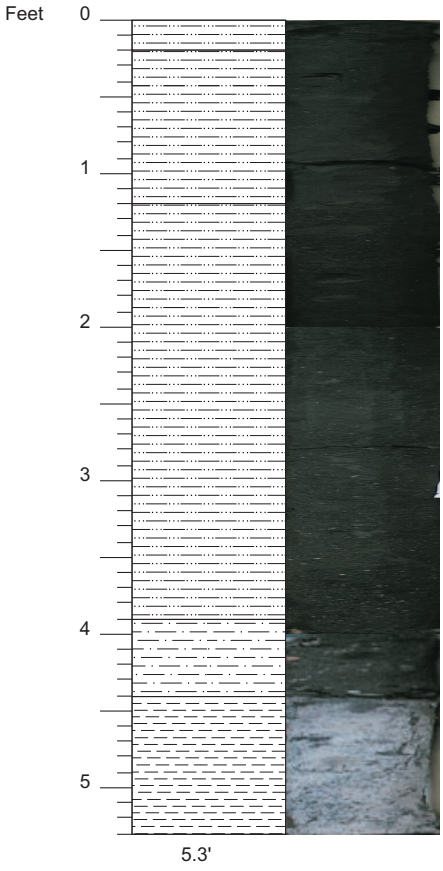
174 AX Medford
Core #57
Start depth: 420 ft
Stop depth: 430 ft
Recovery: 7 ft
Date: 4/29/07
Described by: JVB, AEP



SILT; clayey and sandy, some coarse quartz grains; 5-10% glauconite sand; few percent quartz sand, slightly micaceous; many clay-lined burrows, scattered pyrite;
2.1-2.7 is more clay-rich; very abundant, bright green glauconite grains towards bottom, some phosphate grains; black (N/2.5)

174 AX Medford
Core #58

Start depth:	430 ft
Stop depth:	435 ft
Recovery:	8.25 ft
Date:	4/29/07
Described by:	JVB, AEP



CLAY; silty, slightly sandy and micaceous, heavily bioturbated

0.2 abrupt change

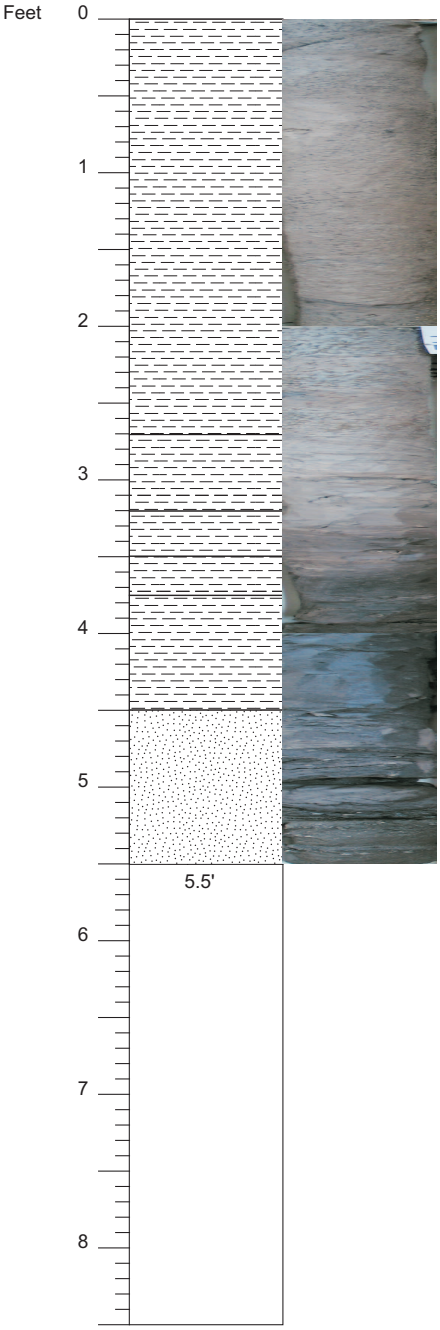
CLAY; silty, small amount of med-fine subround-round sand; some mica

CLAY, silty; heavily bioturbated, clay-lined burrows; fine to very fine quartz sand, becomes larger downcore; becomes medium to coarse and some granules; black N2.5

SAND; clayey with numerous granules and pebbles up to 1 cm; most quartz is milky or smokey, some rose

CLAY; white kaolinitic; many black spherule up to 1.2 m; paleosol; white N8/

174 AX Medford
Core #59
Start depth: 435 ft
Stop depth: 440 ft
Recovery: 5.3 ft
Date: 4/29/07
Described by: JVB, AEP



CLAY; fairly massive through hints of horizontal layering; 9-10% siderite as rounded coarse to very coarse grains, several inclined surfaces; dark gray nodules above 1.3, below light reddish-gray siderite; 1.7-1.8 pyrite and an inclined surface; 2.2 pyrite; 2.5-2.7 inclined surface; slight color banding; gray (10YR 6/1)

CLAY; uniform with one inclined dark surface; gray (10YR 6/1)

CLAY; gray (2.5Y 5/1); interbedded with fine sand lenses

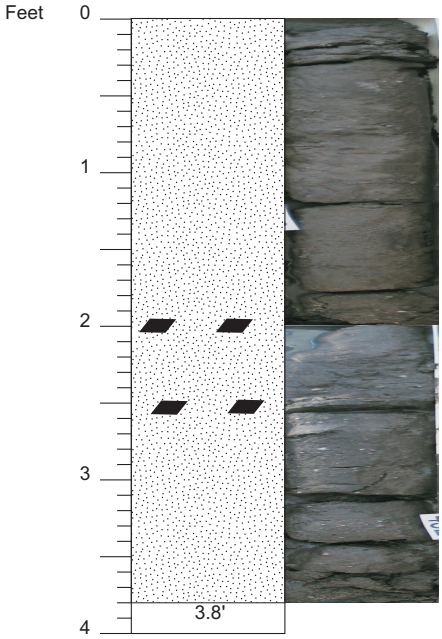
CLAY; very dense and hard, massive; trace very fine sands; very dark gray (2.5Y 3/1)

CLAY; possible horizontal banding; becoming fine sand at bottom; dark gray (N/4)

SAND; medium and fine; sub-rounded and sub-angular; very coarse sand to granule quartz; 5.4 lignite; dark gray (2.5Y 4/1)

174 AX Medford
Core #60

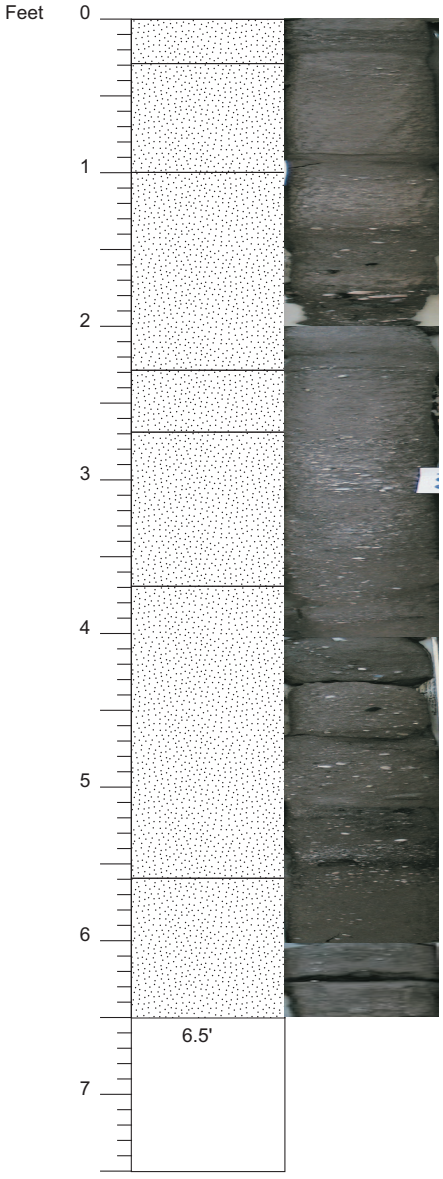
Start depth:	440 ft
Stop depth:	448.5 ft
Recovery:	5.5 ft
Date:	4/30/07
Described by:	DM, BB



SAND; medium to coarse, predominantly medium; sub-rounded, well-sorted quartz sand; white mica and ohms (possible lignite) trace to 1%; pyrite concentration at 1.5; granule, sub-angular to sub-rounded quartz going down to coarse sand varying to 5%; 2.5-2.6, 2.7-2.8 lignite; 3.1 lignite and pyrite; dark gray (2.5Y 4/1)

174 AX Medford
Core #61

Start depth:	448.5 ft
Stop depth:	452.5 ft
Recovery:	3.8 ft
Date:	4/30/07
Described by:	DM, BB



SAND; medium to very coarse, some quartz granules and lignite; sub-angular and some sub-rounded; lignite at top, poorly sorted; dark gray (5Y 4/1)

SAND; medium quartz dominates, sub-rounded, moderate sorted, banded granules in med sand; dark gray (5Y 4/1)

SAND; well-sorted, sub-rounded quartz; rare granules; local horizontal banding; trace mica; 5% lignite and very coarse sand; dark gray (5Y 4/1)

SAND; med quartz; slightly coarser than above; pyrite on outside; trace white mica, very coarse quartz sand and granules sub-rounded, rounded; dark gray (5Y 4/1)

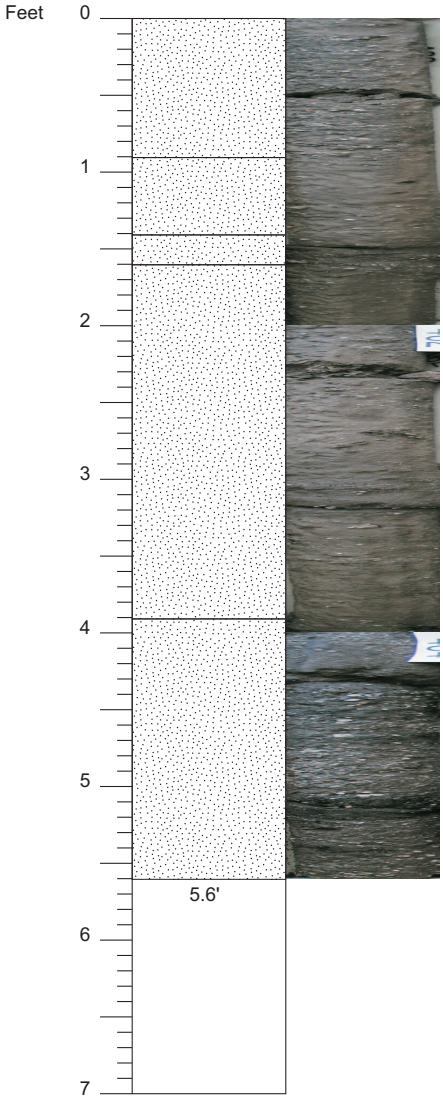
SAND; coarse at top, granules to very coarse sand (~25%); reddish quartz; subangular, subrounded; hints of layering; poor to moderate sorting; coarse at base; dark gray (5Y 4/1)

SAND; medium quartz sand, sub-rounded to rounded; 5-7%sub-angular quartz granules; better sorted than above, trace lignite to 5.1; abundant ohms 5.1-5.4, two layers; lower layer very coarse sand subangular to subrounded lignite; dark gray (5Y 4/1)

SAND; med grained quartz, sub-rounded, moderate sorting; trace to rare granules; dark gray (5Y 4/1)

174 AX Medford
Core #62

Start depth:	452.5 ft
Stop depth:	460 ft
Recovery:	6.5 ft
Date:	4/30/07
Described by:	DM, BB



SAND; matrix medium to coarse quartz sand; sub-rounded; very coarse to granule, sub-angular to subrounded; vein quartz, reddish and yellowish quartz; sand matrix becomes finer at base, slightly inclined bedding; dark gray (5Y 4/1)

SAND; medium sand, rounded, well sorted at top; trace lignite, becomes coarse sand to granules at base; dark gray (5Y 4/1)

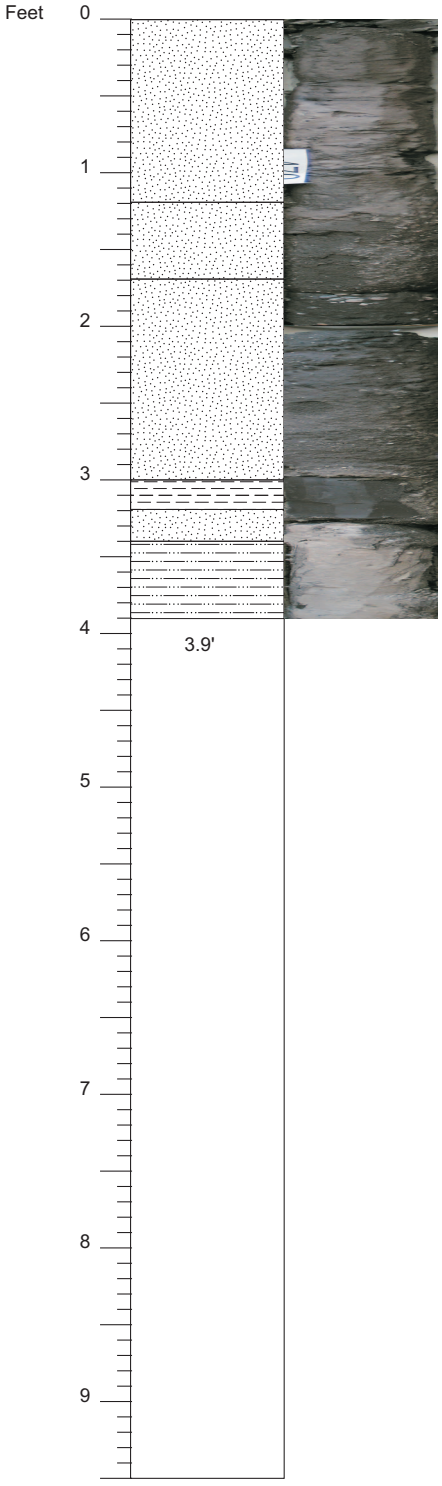
SAND; coarse to granule, moderate sorting; subangular to subrounded; dark gray (5Y 4/1)

SAND; same as bed at 0.9-1.4; slightly denser as holds together better; 2% granules, sub-rounded and sub-angular; no lignite seen, trace white mica; core is less dense, medium sand with lignite at base; dark gray (5Y 4/1)

SAND; coarse, some medium; poorly sorted, mostly rounded, some sub-rounded; granules 25-30%, some pebbles, sub-angular; lignite rich bands at 4, 4.4, 5.1, 5.4; vein quartz to reddish quartz; dark gray (5Y 4/1)

174 AX Medford
Core #63

Start depth:	460 ft
Stop depth:	467 ft
Recovery:	5.6 ft
Date:	4/30/07
Described by:	DM, BB



SAND; medium grained quartz; sub-rounded to rounded, well sorted; inclined lignitic lamina, trace ohms

SAND; medium to coarse grained quartz; coarse sand ~7% on outside and some inside core; granules at base sub-angular quartz

SAND; medium grained quartz; well sorted, sub-rounded; lignitic lamina

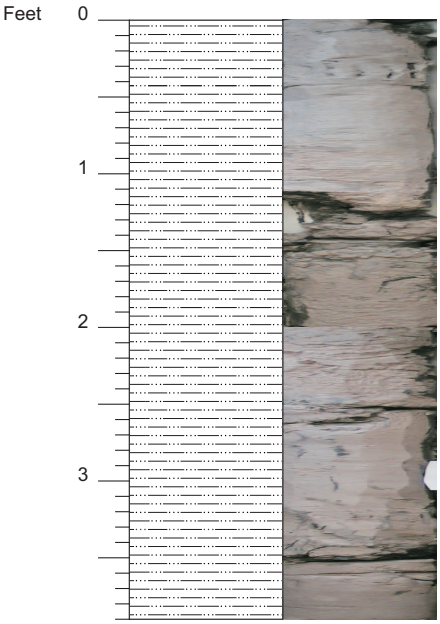
CLAY; uniform material, abrupt basal contact; greenish-black (2.5/10 Y)

SAND; medium to coarse grained; subangular and subrounded; moderately sorted; rare granules

CLAY; silty, gradational upper contact; kaolinite; gray (10YR 6/1)

174 AX Medford
Core #64

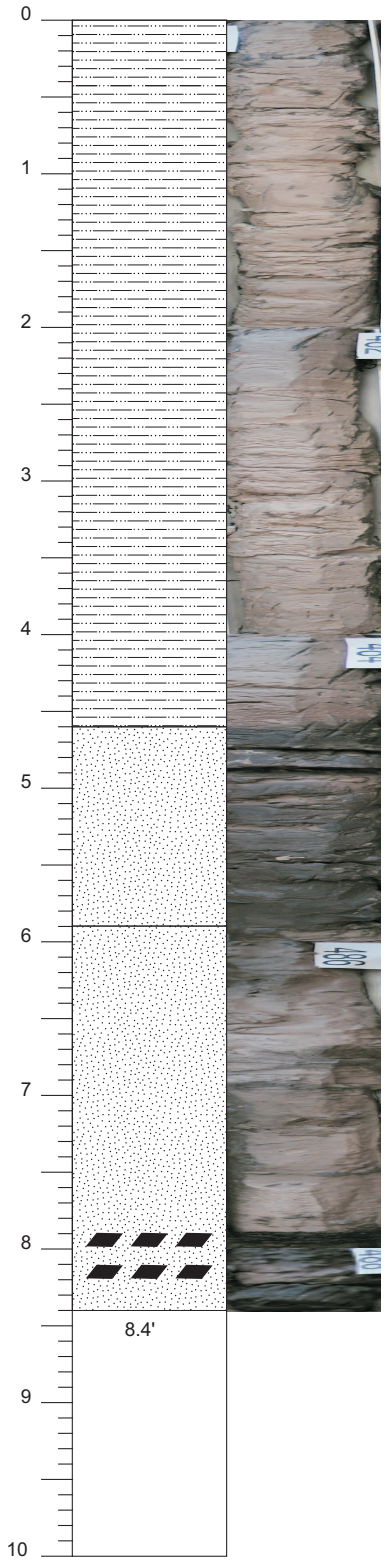
Start depth:	467 ft
Stop depth:	476.5 ft
Recovery:	3.9 ft
Date:	4/30/07
Described by:	DM, BB



CLAY; silty clay to clayey silt, varies down core; kaolinite; very fine sand lenses (e.g., 2.9-3.0, 3.2-3.3) contain siderite, siderite is 3% from 1.6-2.4; gray (2.5Y 6/1)

174 AX Medford
Core #65

Start depth:	476.5 ft
Stop depth:	480 ft
Recovery:	3.9 ft
Date:	4/30/07
Described by:	DM, BB

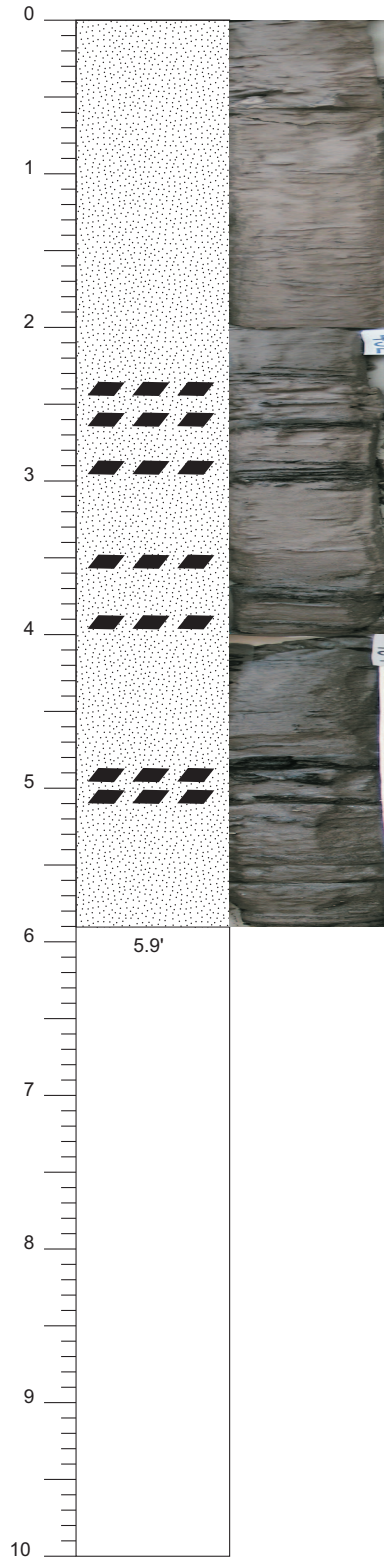


CLAY; silty clay to clayey silt; clay dominates on top and silts dominates at base; hints of horizontal laminae; gray (2.5Y 6/1)

SAND; very fine sand; contains clay-rich lenses, especially near base

SAND; fine sand, well sorted; 6.8-6.9 mm-scale clay laminae; 7.9-8.2 lignitic laminae clayey silt at base

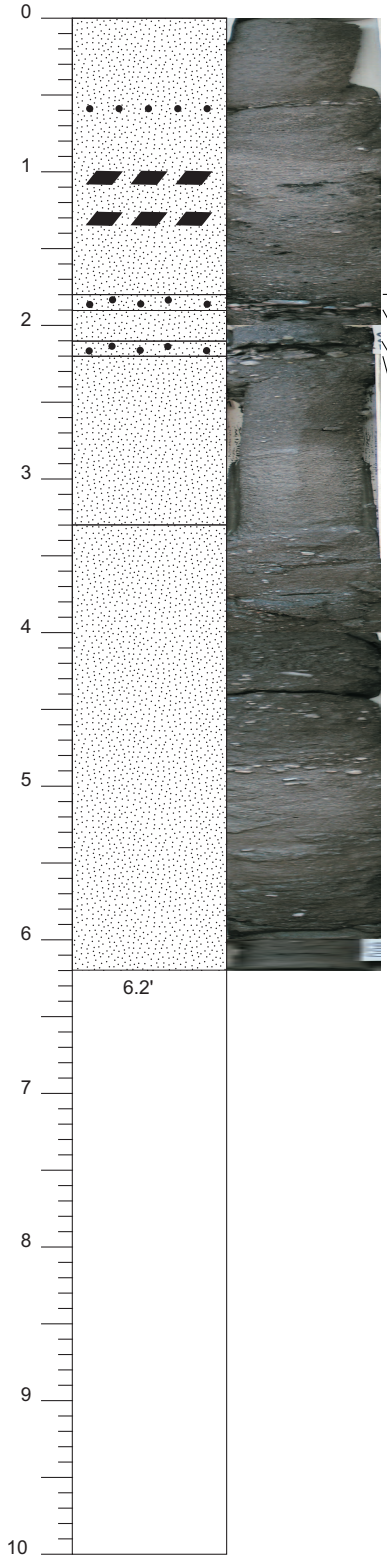
174 AX Medford
Core #66
Start depth: 480 ft
Stop depth: 490 ft
Recovery: 8.4 ft
Date: 4/30/07
Described by: DM, BB



SAND; mostly fine, some medium; quartz; well sorted; local inclined laminae; 2.3, 2.6, 2.9, 3 lignite laminae; 3.6, 3.7, 3.9, 4.9, 5 lignite lenses; gray (5Y 5/1) on top, dark gray (5Y 4/1) on bottom

174 AX Medford
Core #67

Start depth:	490 ft
Stop depth:	500 ft
Recovery:	5.9 ft
Date:	4/30/07
Described by:	DM, BB



SAND; coarse; quartz; moderate sorting, sub-rounded; dispersed lignite trace to 1%; 0.6 base of a graded bed that is pebbly at base; 1.1, 1.3 lignite laminae, lignite lamina at base; gray (5Y 5/1)

SAND; pebbles to granules; angular to sub-angular; vein quartz, quartzite, reddish quartz; gray (5Y 5/1)

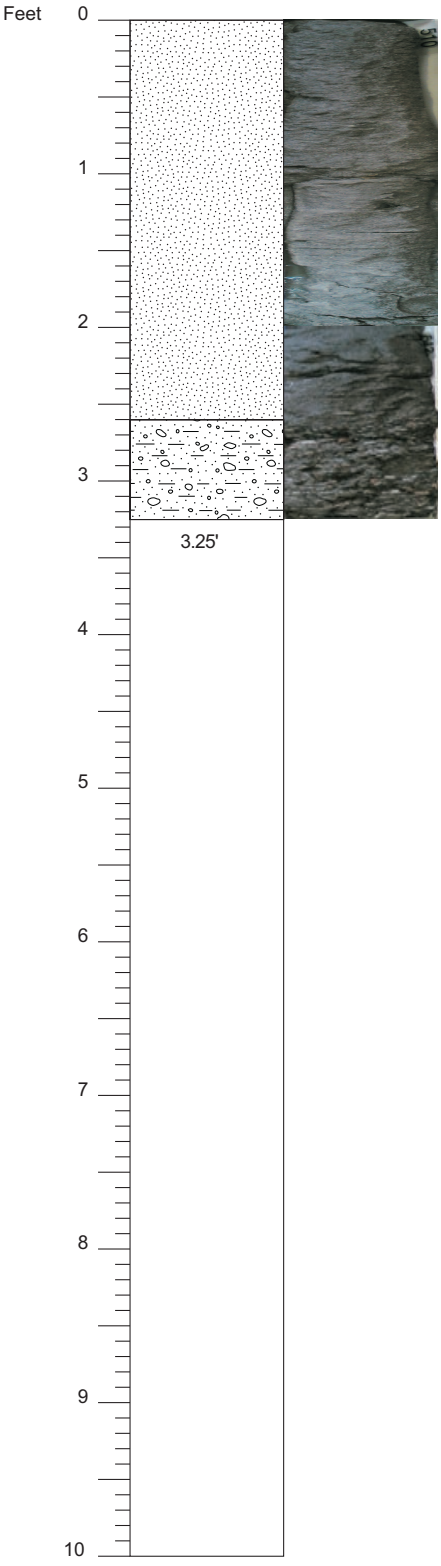
SAND; similar to top layer; some clay, clayey sand

SAND; similar to layer 2, sub-angular to sub-rounded granules and pebbles of vein quartz, yellowish quartz, and lithics

SAND; better compacted; coarse, some medium; sub-rounded; well sorted; quartz trace with mica; gray (5Y 5/1)

SAND; medium to very coarse; quartz granule and trace pebbles, dispersed ~2% coarse; grains dominated by quartz but trace lithics; gray (5Y 5/1)

174 AX Medford
Core #68
Start depth: 500 ft
Stop depth: 510 ft
Recovery: 6.2 ft
Date: 4/30/07
Described by: DM

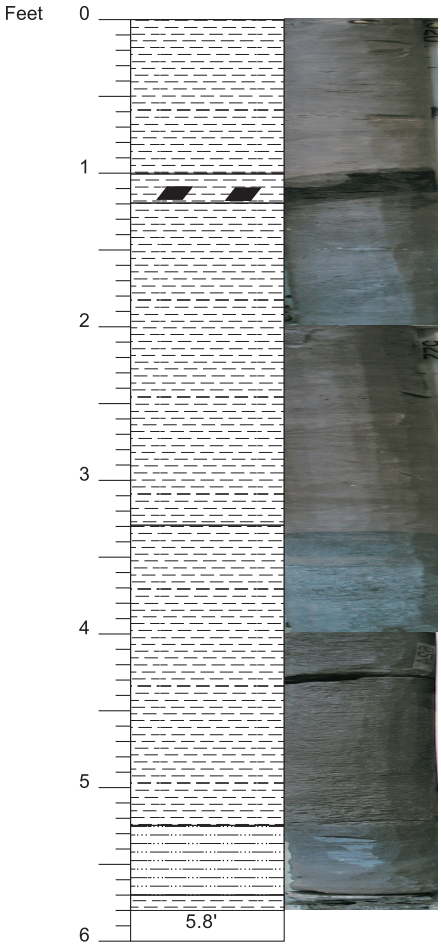


SAND; medium to coarse; rounded to sub-rounded; mostly clear quartz; 1-2% ohm (lithics), homogenized but no discrete burrows seen; scattered pyrite, rose quartz, milky quartz; scattered lignite; gray N5/

GRAVEL; grains to 1 cm, lots of drilling mud; lots of medium to very coarse sand; 2 clay lamina (>1mm, 3mm), white, kaolinitic, very sticky; ?soil or slack water in channel

174 AX Medford
Core #69

Start depth:	510 ft
Stop depth:	520 ft
Recovery:	3.25 ft
Date:	5/1/07
Described by:	JVB, KGM, JM



CLAY; (a few quartz pebbles pressed into top); trace of silt; slight blue mottling (gleyed); washed out silt laminae; gray (N/6)

CLAY; lignitci, slightly micaceous; lignite scattered to laminae; dark gray (brown) (10YR 3/1); sharp color change at 1.2

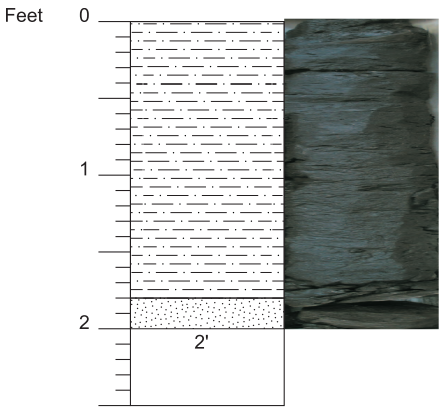
CLAY; common disseminated lignite; slightly mottled; occasional very fine sand grains; sub-horizontal mottling; amount of lignite increases up core; gray (N5/)

CLAY; silty, micaceous, rare fine grained lignite; trace very fine quartz sand; lignite decreases downsection; dark gray (N/4)

CLAY, SILT; scattered very fine quartz sand; very rare mica, little lignite;

CLAYSTONE; no reaction with HCl; dark gray (N/4)

174 AX Medford
Core #70
Start depth: 520 ft
Stop depth: 526 ft
Recovery: 5.8 ft
Date: 5/1/07
Described by: JVB, KGM

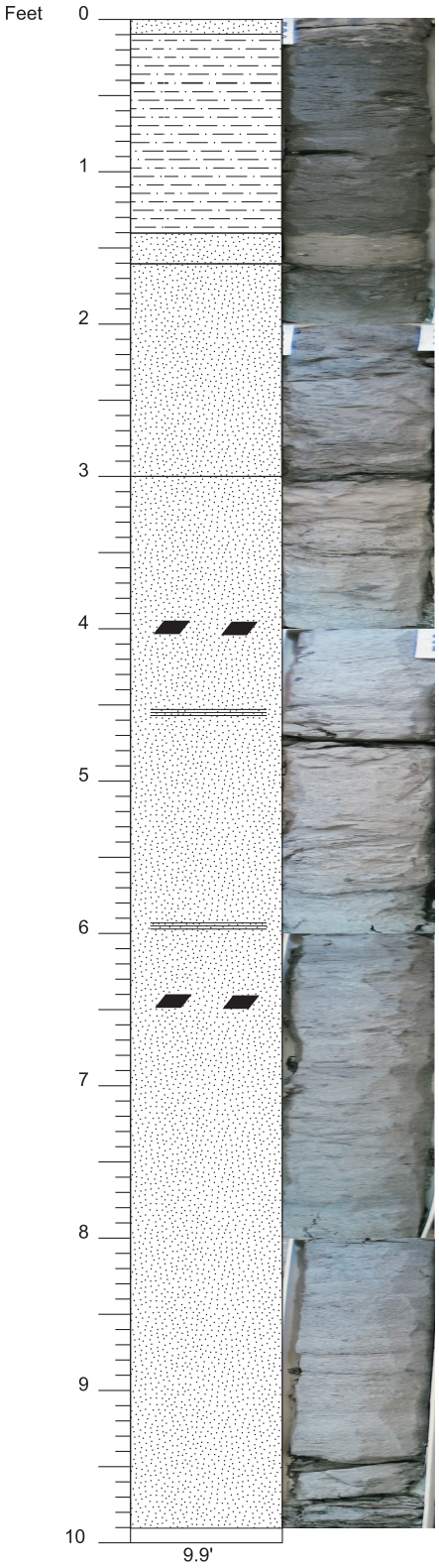


SAND; very fine, very silty and clayey; slightly micaceous; quartz (99%) sub-rounded; 1-2% ohm (?lignite); some hard chunks from last core pressed into top; dark gray 4/N

SANDSTONE; light gray (2.5Y 7/1)

174 AX Medford
Core #71

Start depth:	526 ft
Stop depth:	528.5 ft
Recovery:	2 ft
Date:	5/1/07
Described by:	JVB



SANDSTONE; same as above; light gray (2.5Y 7/1)

SAND; silty clay matrix, micaceous; mostly quartz, very fine to fine (small amount); sub-rounded, few sandy lenses washed out; very dark gray (3/N)

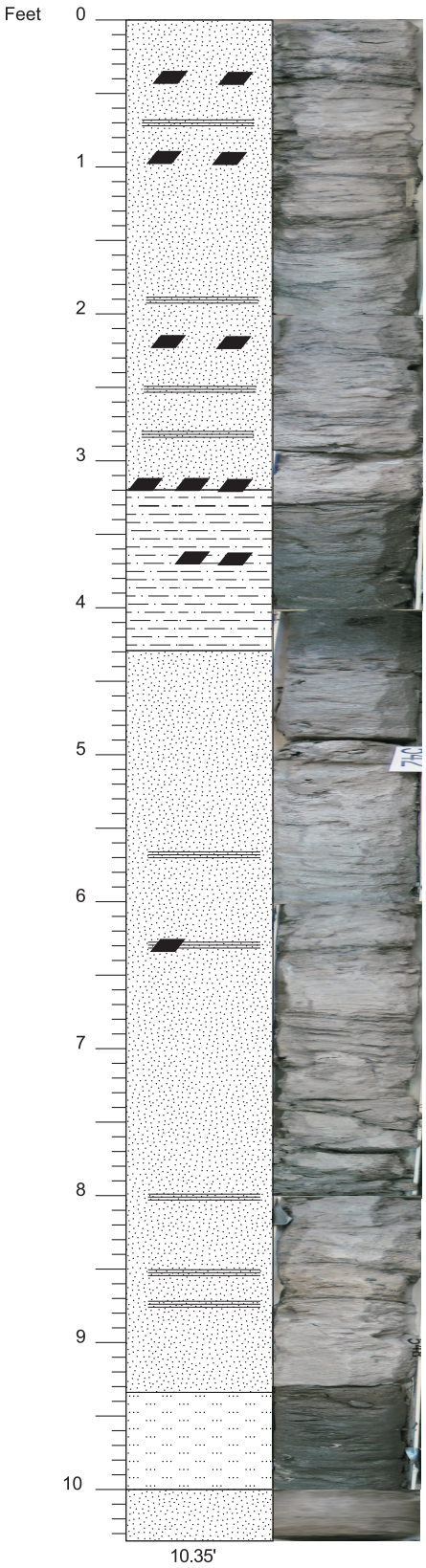
SANDSTONE; no HCl reaction; clayey, lignitic; dark gray (N5/)

SAND; medium; clay lens at top; organic at top and darker; micaceous, mottled; lignite bed at 3 ft; gray N6/

SAND; very fine, slightly silty, sub-rounded, scattered lignite, slightly micaceous; “birch logs”; light gray (N7)

174 AX Medford
Core #72

Start depth:	528.5 ft
Stop depth:	539 ft
Recovery:	9.9 ft
Date:	5/1/07
Described by:	JVB, SVM



SAND; fine to medium; sub-angular; some lignite laminae; slightly silty; micaceous; silt beds to silt laminae; clay is lignitic; dark gray-gray (N/5, N/6)

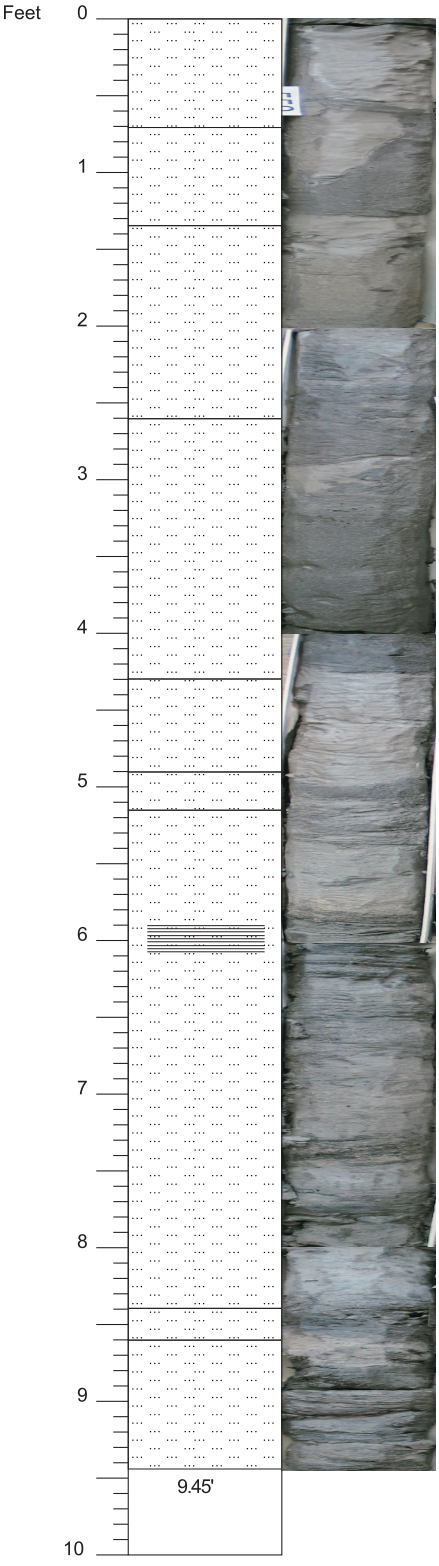
SAND; very silty, angular, micaceous; some lignite chunks but no laminae; siltier down corw, and it is finer; 4.3 abrupt color change; dark gray N4/

SAND; fine to medium, lignitic; silt content changes and some places there is very fine sand to silt

174 AX Medford
Core #73
Start depth: 539 ft
Stop depth: 549.5 ft
Recovery: 10.35 ft
Date: 5/1/07
Described by: JVB, SVM

SILT; clayey, micaceous, lignitic

SANDSTONE; medium, lignitic



SILT; micaceous, trace very fine sand; gray (N6/)

SILT; more organic rich; gray N(5/)

SILT; micaceous, trace very fine sand; gray (N6/)

SILT; more organic rich; gray N(5/)

SILT; micaceous, trace very fine sand; gray (N6/)

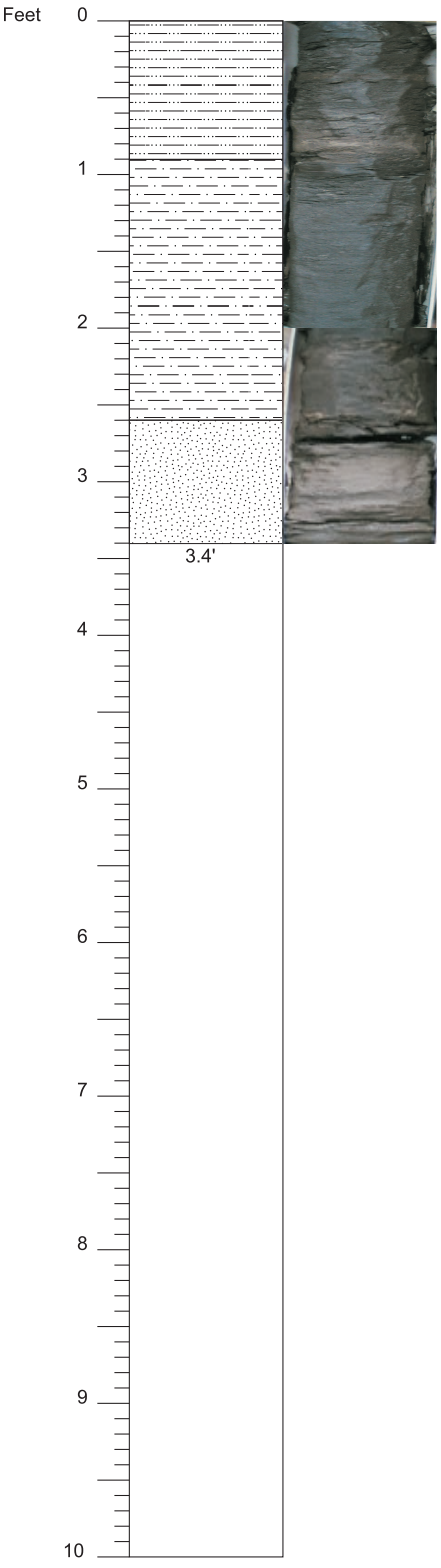
SILT; more organic rich; gray N(5/)

SILT; micaceous, trace very fine sand; 5.9-6.3 lignite and medium sand laminations and cross laminae; 7.8 clay plug; gray (N6/)

SILT; more organic mich, gray N5/

SILT; micaceous, trace vf sand, gray N6/

174 AX Medford
Core #74
Start depth: 549.5 ft
Stop depth: 560 ft
Recovery: 9.45 ft
Date: 5/1/07
Described by: JVB, SM



Interbedded silty clay and silty sand, micaceous; dark gray N4

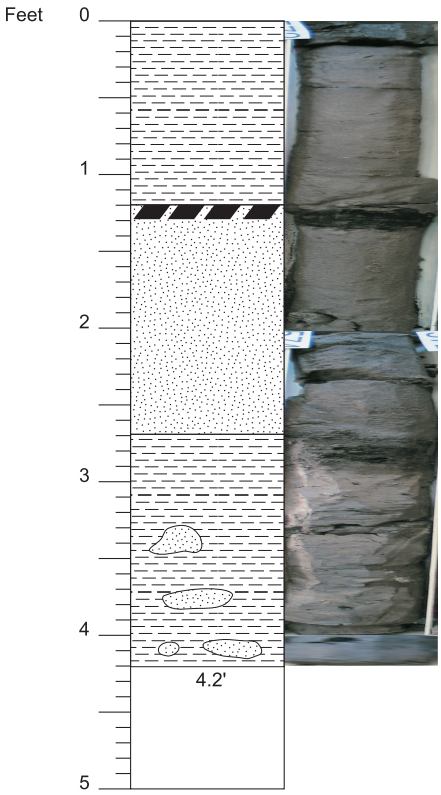
Silty sand; same as above with no clay; clay: very dark gray (N3); silt: dark gray (N4)

Indurated fragments tore up shoe

SAND; medium, quartz; rounded, few ohm; gray (N6)

174 AX Medford
Core #75

Start depth:	560 ft
Stop depth:	570 ft
Recovery:	3.4 ft
Date:	5/1/07
Described by:	JVB



CLAY; coarse to very coarse sand; slightly micaceous; dark gray (10YR 4/1)

1.2-1.3 black lignite

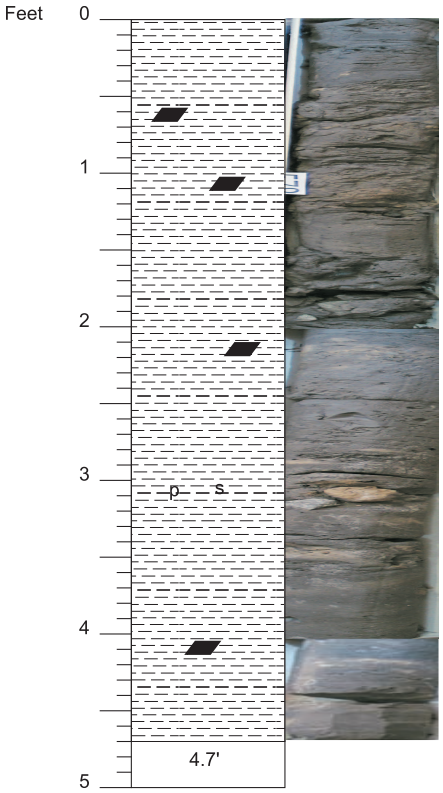
SAND; coarse to very coarse, slightly micaceous

Magothy/Raritan contact?

CLAY, burrows of fine sand; some lignite; very dark grayish-brown (10YR 3/2)

174 AX Medford
Core #76

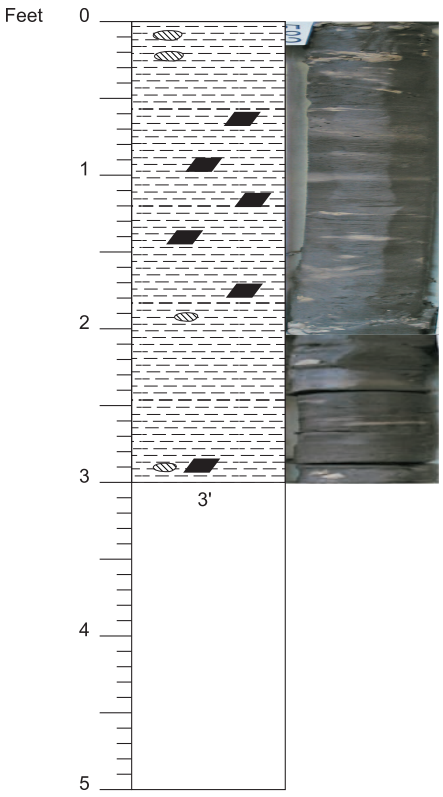
Start depth:	570 ft
Stop depth:	575 ft
Recovery:	4.2 ft
Date:	5/2/07
Described by:	PS, EG



CLAY; laminated with burrowed and occasionally laminated very fine sand; pyrite filled burrowed at 1.7-1.8 and 3.1, siderite at 3.1; finely diseminated lignite; some mica; grayish-brown (10 YR 5/2)

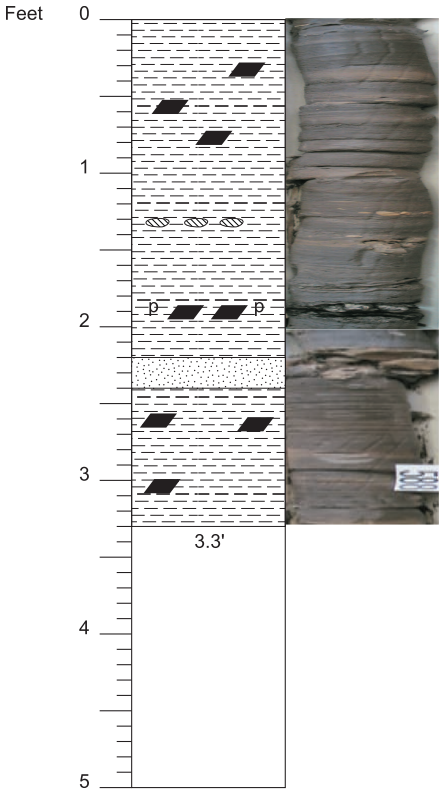
174 AX Medford
Core #77

Start depth:	575 ft
Stop depth:	580 ft
Recovery:	4.7 ft
Date:	5/2/07
Described by:	PS, EG



CLAY; slightly lignitic, slightly woody with some concretions (pyrite), siderite? or clay rip up clasts; grayish-brown (10YR 3/2)

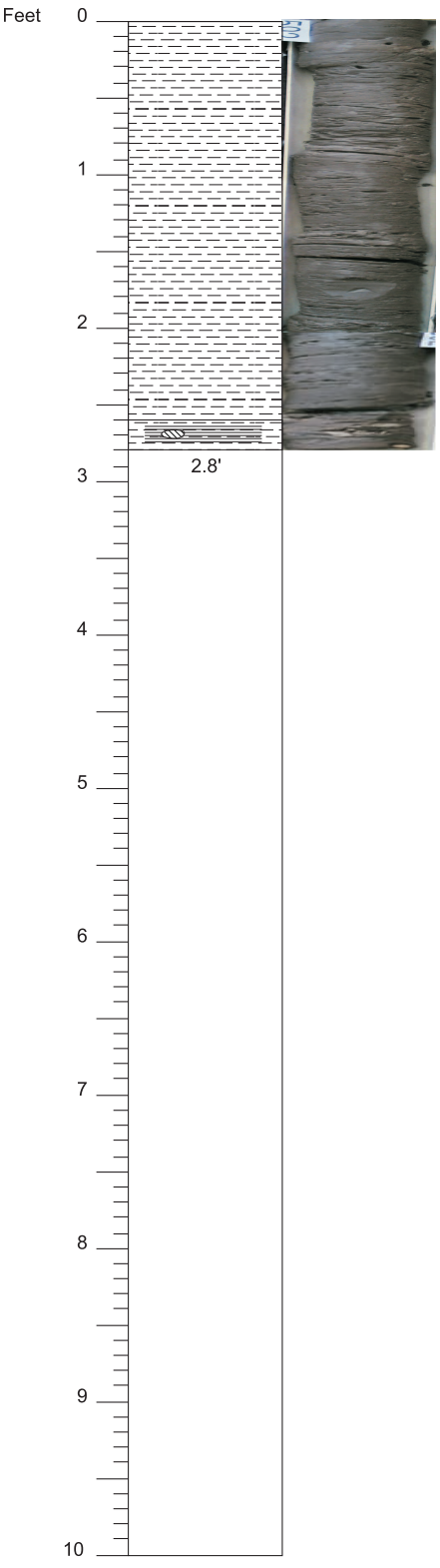
174 AX Medford
Core #78
Start depth: 580 ft
Stop depth: 585 ft
Recovery: 3 ft
Date: 5/2/07
Described by: PS, EG



CLAY; laminated, variegated; lignitic in fine flakes; concretions, sideite or clay chips; 1.8-1.9 pyrite and lignite; 2.2-2.4 rock, light brown shale; dark gray (10YR 4/1) and dark grayish brown (10YR 4/2)

174 AX Medford
Core #79

Start depth:	585 ft
Stop depth:	590 ft
Recovery:	3.3 ft
Date:	5/2/07
Described by:	PS, EG

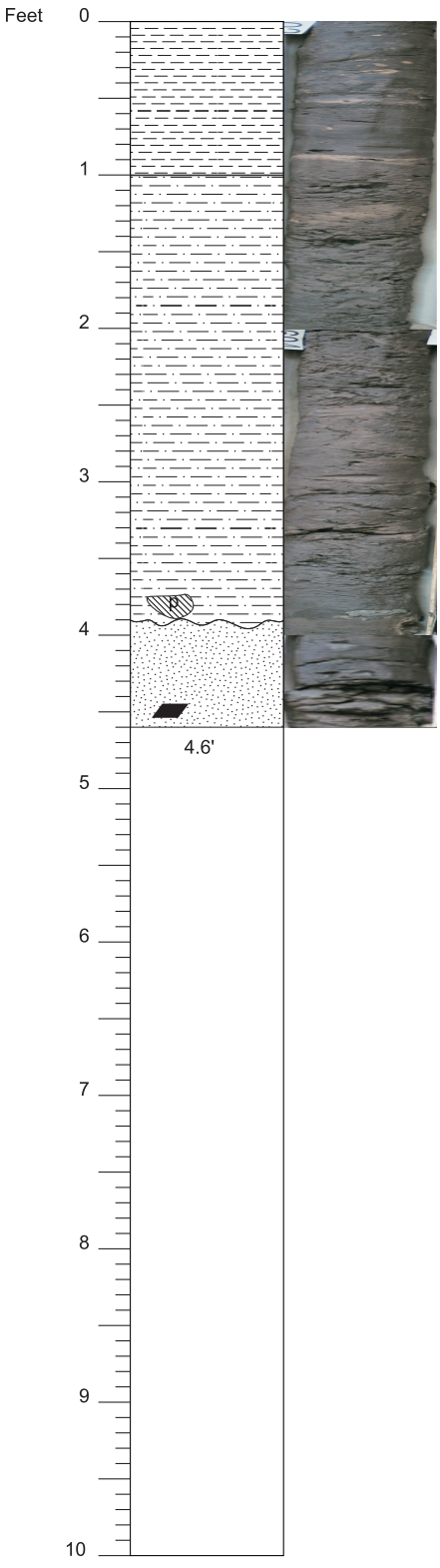


CLAY; laminated with silt; some very fine sand (in burrows?), some cross-laminae; rare pyrite, trace finely disseminated lignite; grayish-brown (10Y 5/2)

CLAY; concretions, sphaerosiderite; laminated with lignite

174 AX Medford
Core #80

Start depth:	590 ft
Stop depth:	600 ft
Recovery:	2.8 ft
Date:	5/2/07
Described by:	PS, EG



CLAY; concretions

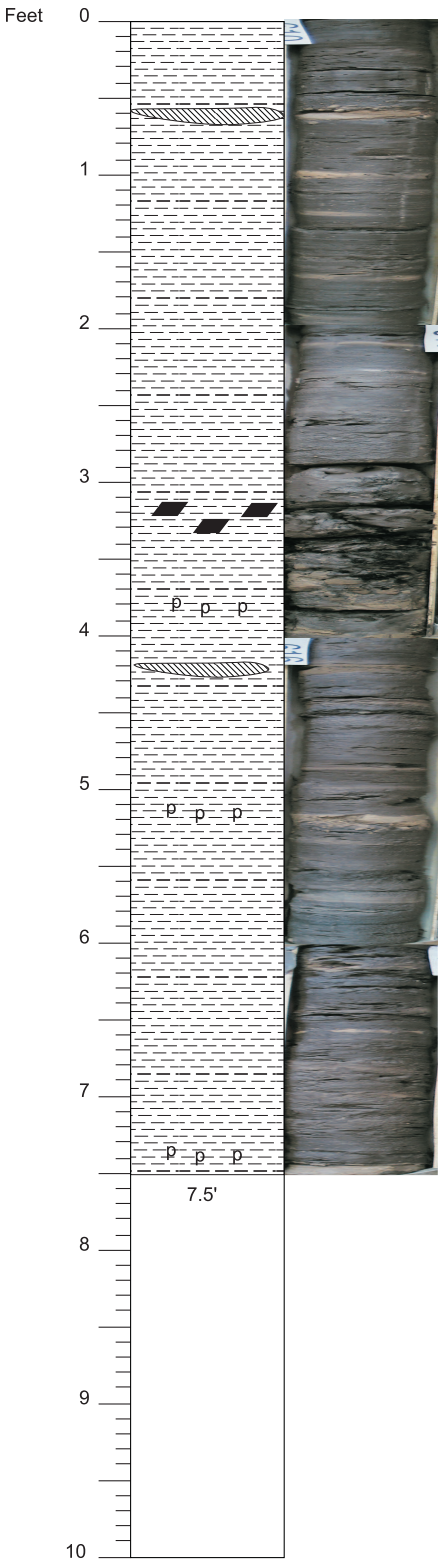
SILT; laminated, with very fine sand and clay; to silty, very fine SAND; soft sediment deformation features; some very fine mica; dark gray (10YR 4/1);

Pyrite at wavy surface with color change (?possible sequence boundary)

SAND; medium, silty, with lignite chips; dark grayish brown (10YR 4/2)

174 AX Medford
Core #81

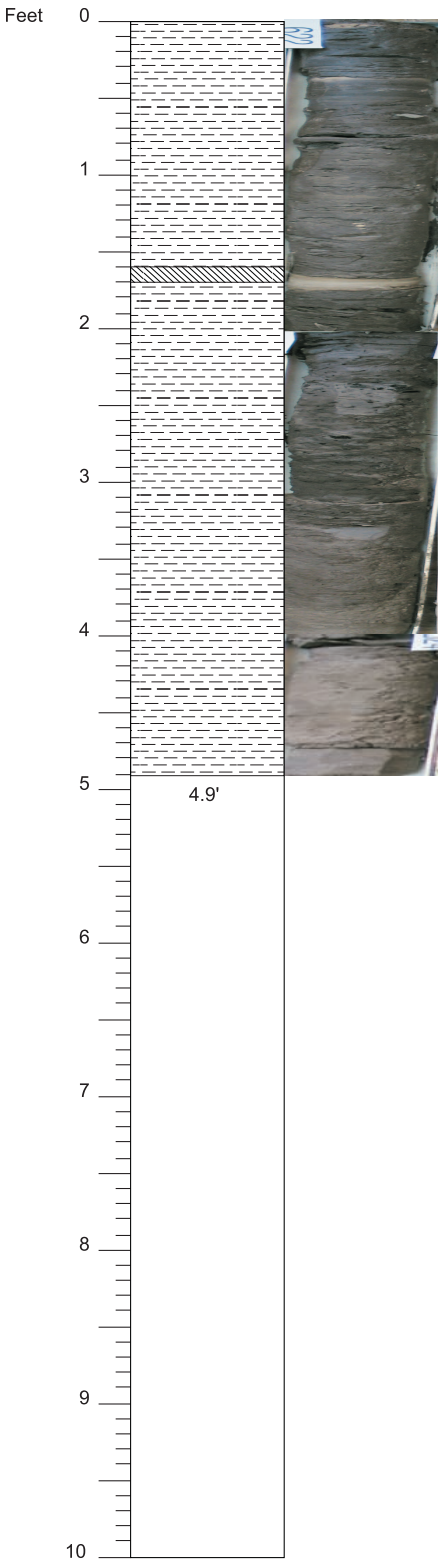
Start depth:	600 ft
Stop depth:	610 ft
Recovery:	4.6 ft
Date:	5/2/07
Described by:	PS, EG



CLAY; silty; thin-bedded to laminated, with thin very fine sand stringers; 3.2-3.5 lignitic silty fine sand; siderite or pyrite at 3.8-3.9, 5.2-5.3, and 7.4-7.5; concretions at 0.5 and 4.3; very dark gray (10YR 3/1)

174 AX Medford
Core #82

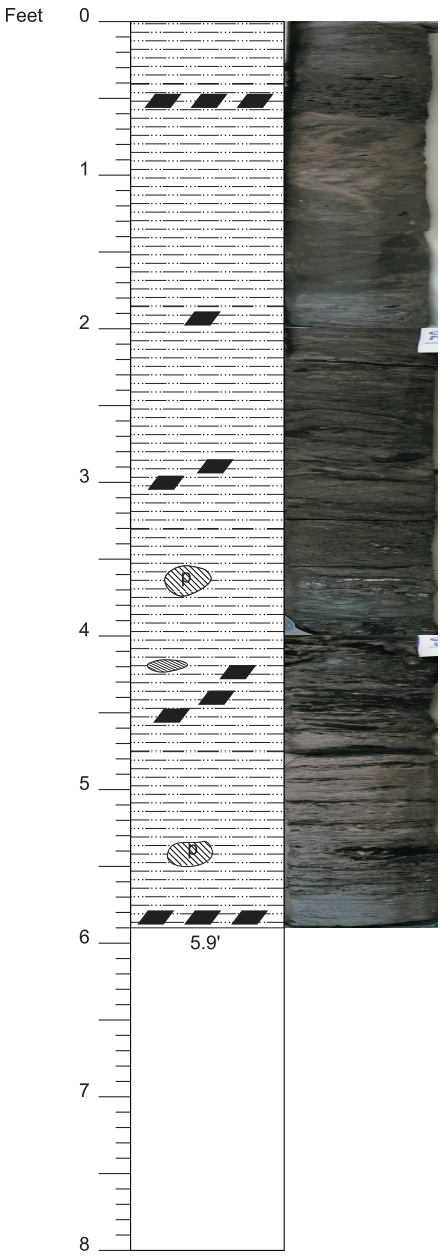
Start depth:	610 ft
Stop depth:	620 ft
Recovery:	7.5 ft
Date:	5/2/07
Described by:	PS, EG



CLAY; laminated; with uncommon very fine sand filled burrows, slightly lignitic, 1.6-1.7 cemented rock; dark grayish-brown (10YR 4/2)

174 AX Medford
Core #83

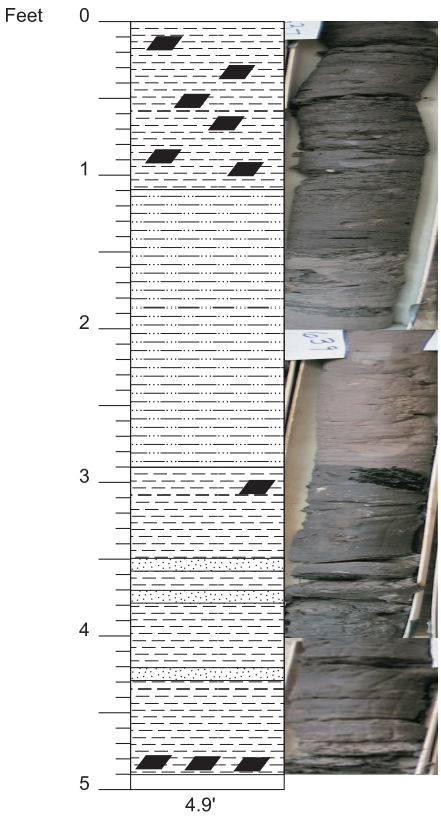
Start depth:	620 ft
Stop depth:	627 ft
Recovery:	4.9 ft
Date:	5/3/07
Described by:	PS, HR



SILT; clayey; some clay beds, very lignitic, one silty very fine sand bed; lignite is in cross-laminae or beds; pyrite at 3.6, 4.2, 5.3; dark grayish brown (10YR 4/2)

174 AX Medford
Core #84

Start depth:	627 ft
Stop depth:	635 ft
Recovery:	5.9 ft
Date:	5/3/07
Described by:	PS, HR, SM

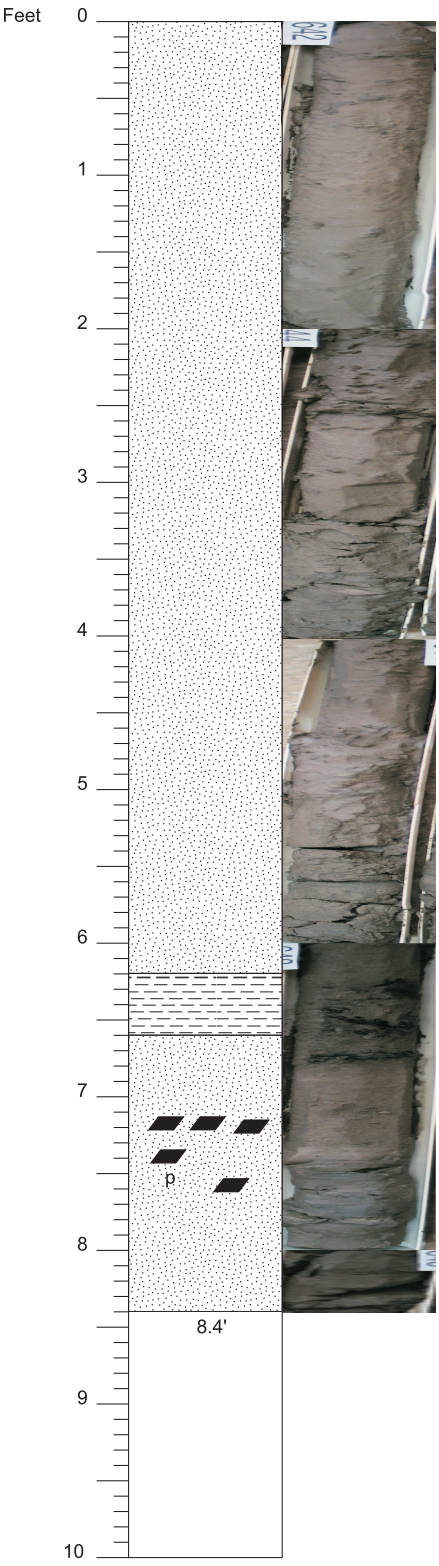


CLAY; slightly silty, common lignite and lignite beds; gray (10YR 6/1)

CLAY; silty; gray (10YR 6/1)

CLAY; slightly silty, big chunk of lignite at 2.9, sand beds at 3.6, 3.7, and medium silty sand at 4.3; lignite layers at bottom; dark grayish brown (10YR 4/2)

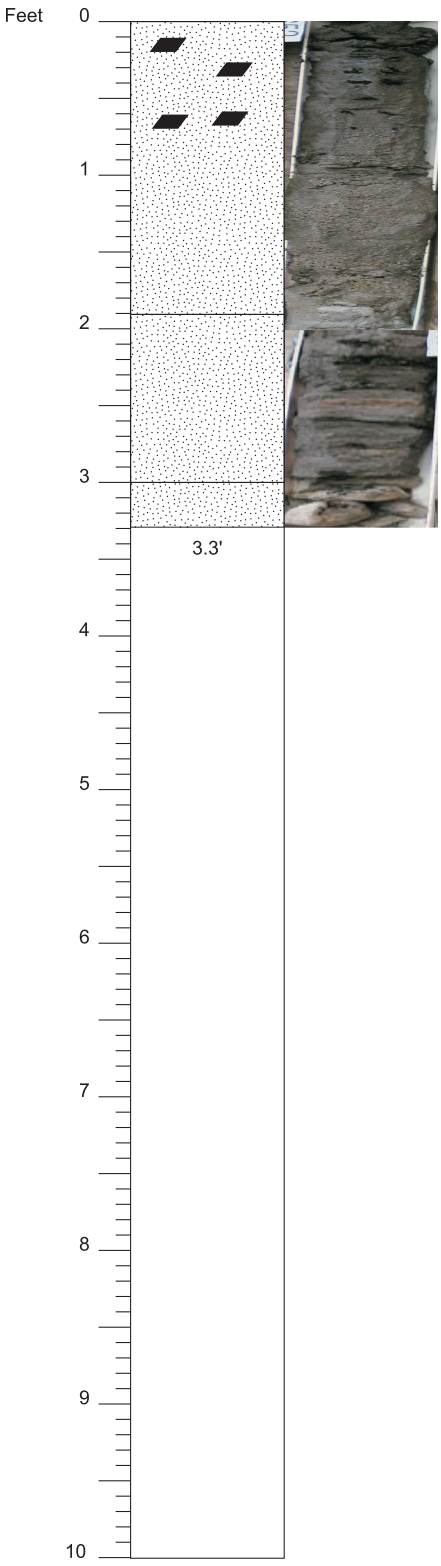
174 AX Medford
Core #85
Start depth: 635 ft
Stop depth: 640 ft
Recovery: 4.9 ft
Date: 5/3/07
Described by: PS, HR, SM



SAND; fine-medium, traces of very fine sand, clay beds at 2.4-2.5; quartz, occasional lignite with chunks of lignite and pyrite at 7.2-7.7 ft; gray (10YR 6/1)

CLAY

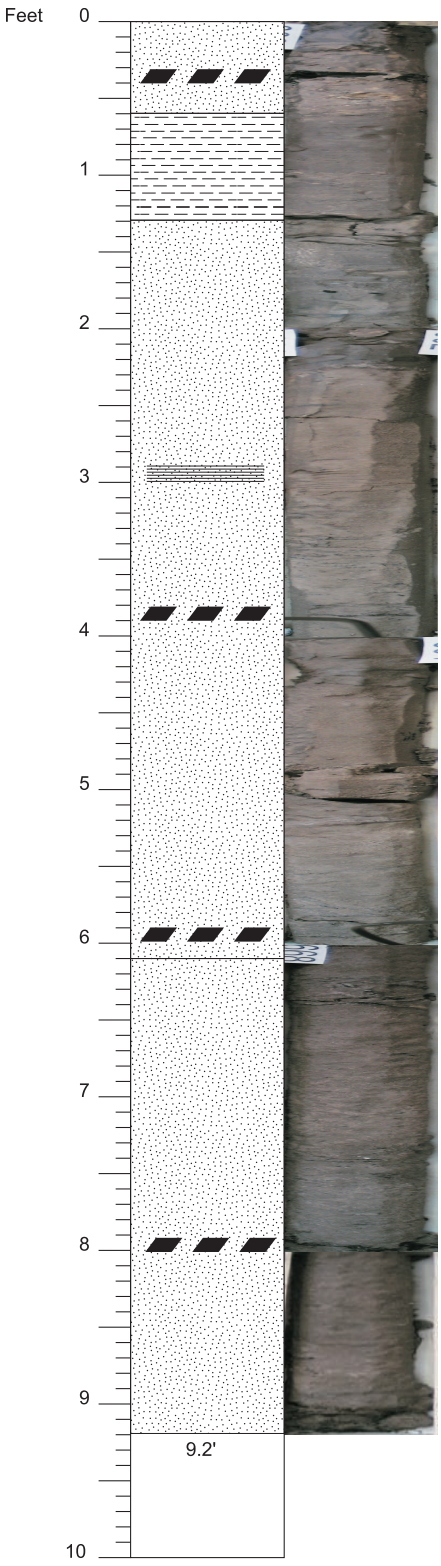
174 AX Medford
Core #86
Start depth: 640 ft
Stop depth: 650 ft
Recovery: 8.4 ft
Date: 5/3/07
Described by: PS, SM, HR



SAND; quartz, with lignite pieces in top 0.7

SAND, coarse, poorly sorted, clay matrix; channel sands from 1.9-3.0; very variable lithology, lignite; basal 0.3 ft is indurated; gray (10YR 5/1)

174 AX Medford
Core #87
Start depth: 650 ft
Stop depth: 660 ft
Recovery: 3.3 ft
Date: 5/3/07
Described by: PS, HR, SM



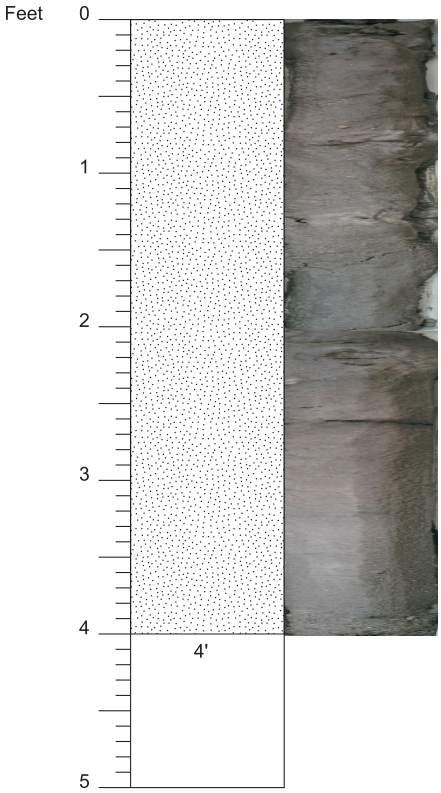
SAND; silt mixed interval, little concretion zone, some burrows, prominent lignite layer

CLAY; fine-medium, silty; gray (10YR 5/1)

SAND; fine-medium, silty on top, micaceous; laminations at 2.9-3; lignite at 3.7, 5.9; clay crossbeds 5-5.7

SAND; fine-medium, micaceous; lignite at 7.9

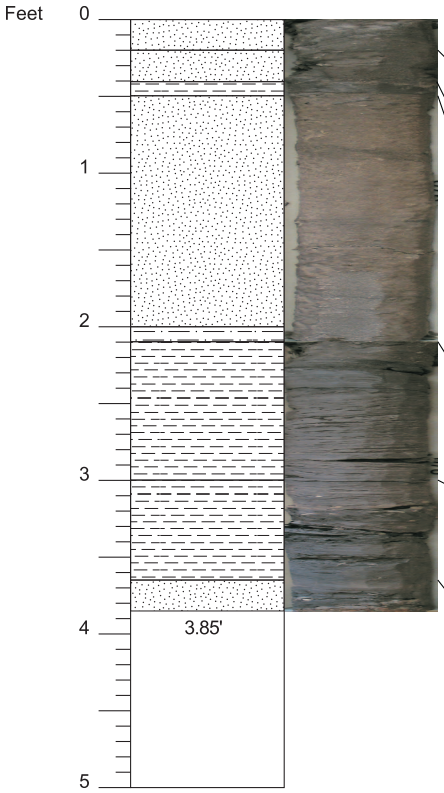
174 AX Medford
Core #88
Start depth: 660 ft
Stop depth: 670 ft
Recovery: 9.2 ft
Date: 5/3/07
Described by: PS, HR, MS



SAND; medium; quartz; clay chip at 0.1, occasional mica, lignite, siderite, grades to medium coarse at bottom; gray (10YR 5/1)

174 AX Medford
Core #89

Start depth:	670 ft
Stop depth:	675 ft
Recovery:	4 ft
Date:	5/3/07
Described by:	PS, HR, MS



SAND; slightly muddy, few dark laminae, mostly fine, some medium; mostly quartz, ~5% ohm, very rare mica; gley 1 dark greenish gray (10Y 4/1)

SAND; cleaner, medium-ineg, very slightly silty; mostly quartz, ~3% ohm, rare mica (including dark mica), few chunks of charcoal; gley 1 dark greenish gray (10Y 5/1)

CLAY; somewhat silty, some plant material; very dark greenish gray (10Y 3/1)

SAND; relatively clean, very slightly muddy; mostly quartz, some rose, ~3% ohm, very rare mica; very faintly laminated with irregular suface probably reflecting bioturbation; clay blebs at top due to burrowing(?); scattered charcoal; quartz sub-angular and sub-rounded; very rare small pyrite

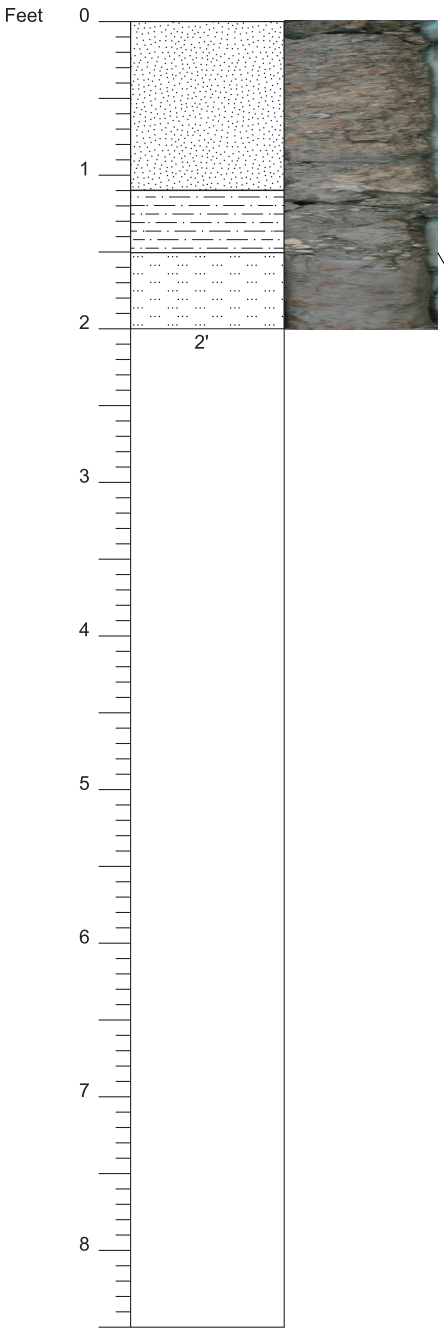
SAND; very muddy, a couple thin clay lams (1 good), medium (some fine), mostly quartz

CLAY; sticky, silty, fine dissembled plant debris, distinct laminated appearance, thin slightly irregular 1-2 mm laminae of very fine sand; occasional scattered small burrows (1-5 mm); note surface at ~2.25 ft where lams change orientation; colors vary by laminae from very dark greenish gray to dark greenish gray (gley 1 10Y 3/1 to 10Y 4.1)

CLAY; sticky, silty, fine disseminated plant debris, lacks lamination above; abundant pyrite and charcoal; a few washed-out sandy laminae; in bottom 0.1 ft, clay includes sphaerosiderite nodules up to ~1 mm and quartz granules up to 3 mm (from below); colors more irregular from gley 1, very dark greenish gray (10Y 4/1) to light brownish gray (10YR 6/2)

SAND; reworked lag of paleosol, sand and quartz granules up to ~2 mm with small pieces/fragments of red mud in tannish silty matrix; grayish-brown (2.5Y 5/2)

174 AX Medford
Core #90
Start depth: 675 ft
Stop depth: 680 ft
Recovery: 3.85 ft
Date: 5/4/07
Described by: PPMcL, CCV, JVB



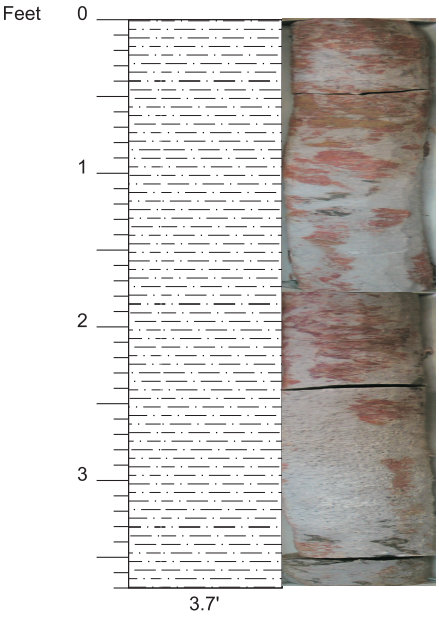
SAND; very poorly sorted, including quartz from fine to granule; ~1 mm dia sphaerosiderite, reddish mudclasts from ~1mm to ~1cm (red 10R 4/6) in muddy matrix of tannish color (2.5Y 5/2); granules sub-angular, larger dark brown clay clast ay ~0.9; scattered woody debris and fine ohm; gley 1, dark greenish gray (10Y 4/1)

SAND(?); in abundant clay matrix; fine-very coarse; quartz, fine ohm, sphaerosiderite nodules 1-2 mm; larger siderite nodules, irregular, up to 2 cm dia (one with preserved wood structure); rare red clay clasts, clay matrix (probably >10% volume) is dark gray (gley 1, N 4/1)

SILT; very clayey, abundant very small (mostly <0.25 mm) sphaerosiderite; mottled, greenish gray (gley 1 10Y 6/1) and red (10R 4/6)

174 AX Medford
Core #91

Start depth:	680 ft
Stop depth:	688.5 ft
Recovery:	2 ft
Date:	5/4/07
Described by:	PPMcL, CCV

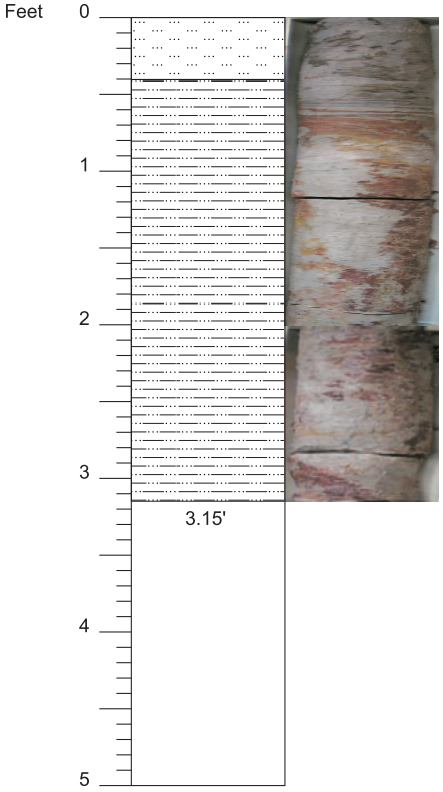


SILT; very clayey; abundant microsphaerosiderite (<1 mm diameter); slightly more clay above 2.5 ft, slightly less (more silty) below 2.5 ft; siderite more abundant in less clayey lithology below 2.5 ft; mottled; red, gray, and blackish-olive; reddish mottling has remnant lamination; grayish zones structurless; gray (gley 1 N6/1), red (10R 4/6), olive (5Y 5/4), dark olive gray (5Y 3/2); red mottling commonly arranged in sub-vertical strips, more red on top

Core 92 is bottom justified base of this core 686.3

174 AX Medford
Core #92

Start depth:	688.5 ft
Stop depth:	690 ft
Recovery:	3.7 ft
Date:	5/4/07
Described by:	PPMcL, CCV



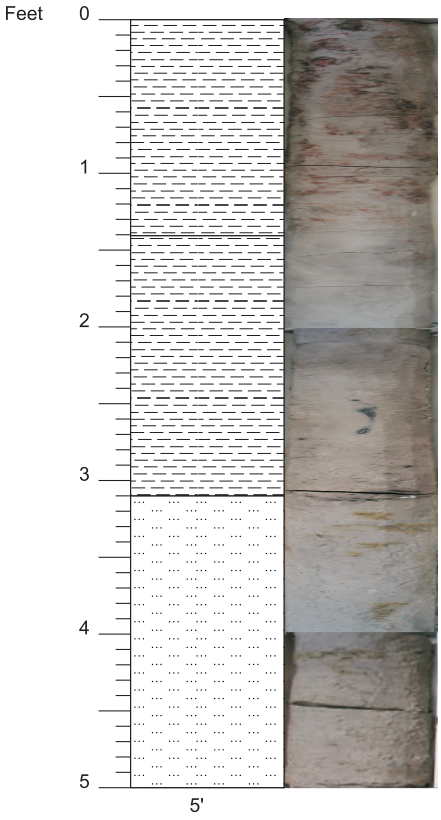
SILT; clayey, microsphaerosiderite; greenish gray (gley 1 10 Y 5/1); mottled dark olive gray (5Y 3/2); blackish mottled

CLAY; silty; microsphaerosiderite; greenish gray (gley 1 10 Y 5/1); silt at bottom; bands of red (10R 4/6), olive (5Y 5/4); dark olive gray (5Y 3/2) at top (0.5-2 mm thick); hematite starts appearing at 1.6 ft from top; red mottling ranges from weak red (10R 4/2) to (10R 4/1), some mottling olive (5Y 5/6); manganese-iron concretions?, blackish mottle 0.3 ft from botom

Bands become distorted 0.62 ft from top, mottling shows vrtical orientation from 0.62 to bottom

174 AX Medford
Core #93

Start depth:	690 ft
Stop depth:	695 ft
Recovery:	3.5 ft
Date:	5/4/07
Described by:	CCV

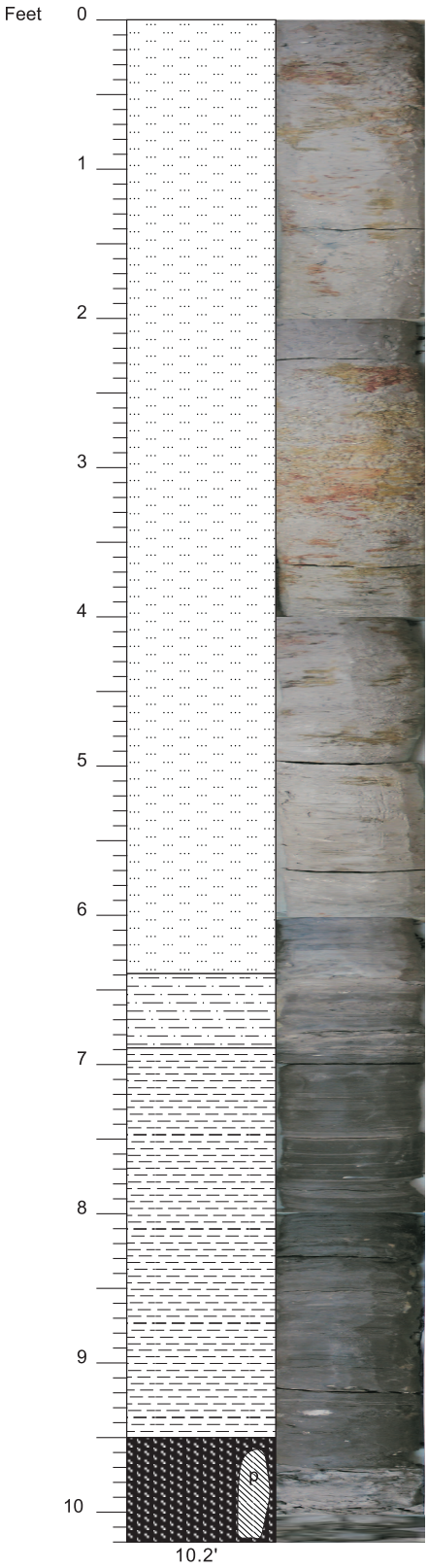


CLAY; very silty, mottled, rare sand grains; vertical-trending; red mottled 3 ores, with wormy structure in matrix of gray; greenish-gray (gley 1 10Y 5/1); red mottles include dusky red (10R 3/2), red (10R 4/6); some olive (5Y 5/6), small (<1 mm) hematite nodules (irregular), up to 1 mm sphaerosiderite nodules

CLAY; silty, mostly structureless, scattered sand grains; dark gray root-like vertical structure 2.5-2.7, below few other organic flecks; below 2.7, pick up sphaerosiderite up to 1 mm dia, bottom 1 cm is especially sandy @ contact granules up to 8 mm; some enrichment of dark material in streaks (carbon? organic?); sand including coarse grained; greenish gray (gley 1 10Y 5/1)

SILT; clayey, scattered (<5%); fine-medium sand disseminated in silt; common sphaerosiderite, generally ~1 mm and slightly smaller; mostly structurless, some faint darker streaking, few olive mottles (5Y 5/4) in overall matrix greenish gray (gley 1 10Y 6/1)

174 AX Medford
Core #94
Start depth: 695 ft
Stop depth: 700 ft
Recovery: 5 ft
Date: 5/4/07
Described by: PPMcL, CCV



SILT; clayey, mottled, dominantly greenish gray; 0-0.8 more mottles, olive and lesser red, sphaerosiderite; 0.8-2.3 less mottles, less sphaerosiderite; 2.3-3.3 more mottles, red and olive, abundant big 1-2 mm sphaerosiderite; grays are greeenish gray (gley 1 10Y 5/1), reds weak red (10R 4/4), olives (5Y 5/4), dark olive gray (5Y 4/2)

3.3-4.9 less mottles, same sphaerosiderite
4.9-6.4 rare mottles, rare sphaerosiderite

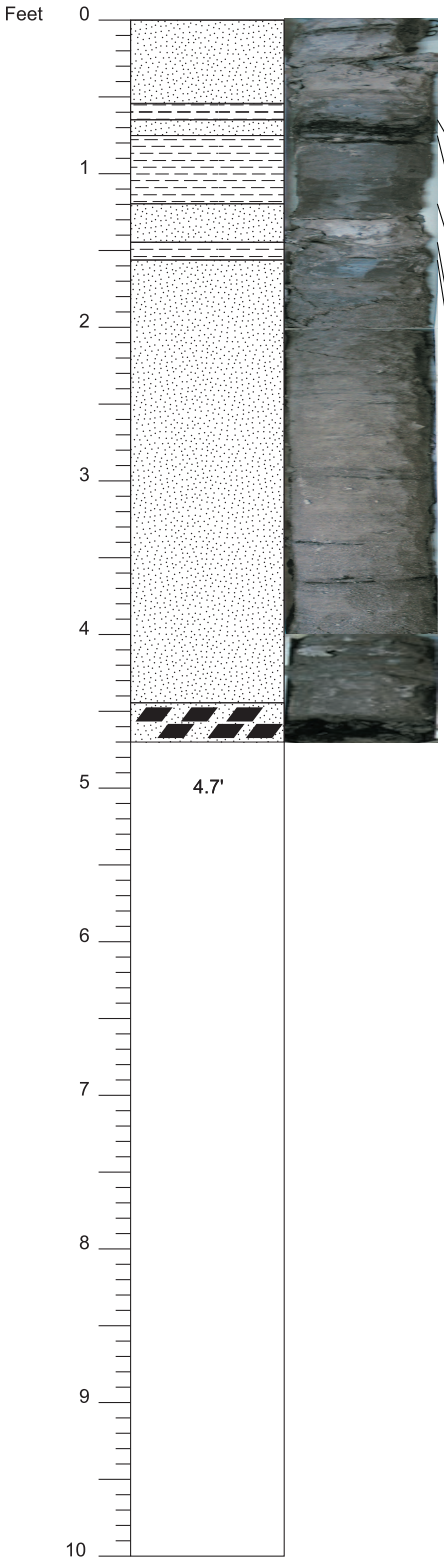
174 AX Medford
Core #95

Start depth:	700 ft
Stop depth:	710 ft
Recovery:	10.2 ft
Date:	5/4/07
Described by:	PPMcL, CCV

SAND and SILTY CLAY; interlaminated, micaceous, fine, top 2 cm sand, some of sand laminae under that are contorted; laminae <1 mm to ~2 mm thick, contains disseminated plant fragments; clay is silty, contains disseminated plant debris (fine); zone transitional in color between above and below; sand grayish brown (2.5Y 5/2), clay dark gray (gley 1 N4/1)

CLAY; slightly silty, abundant disseminated plant debris; thin light color silty laminae and thin (<1 mm) laminae of very fine sand, some lignite/charcoal, pyrite, and sulfur; some of very thin sand laminae are discont, some contorted or wavy; mostly very dark gray (gley 1 N4/1); sand streaks/laminae (2.5Y 5/2); few sand blebs near bottom (burrow or root fill?), sand at base

SAND; fine, mostly quartz, few percent ohm and plant fragments, greenish gray (gley 1 N6/1); soft, clean, crumbly, some slightly darker zones that look to have slightly muddy matrix; 3 x 6 cm pyrite-cemented sand concretion at bottom of run



SAND; fine, mostly quartz, greeish gray (gley N6/1); soft, very slightly silty, some lamination evident from variation in abundant of plant debris

CLAY; silty, few very thin <1 mm very fine sand laminae; dark greenish gray (gley 1 N 4/1); some mica

SAND; fine organic-rich, plant debris makes black, also some pyrite; quartz sand; black (gley 1 N2.5/1), few cleaner sand laminae

CLAY; sandy silty clay (above 0.96) to slightly silty clay (below 0.96); thin wispy laminae of very fine sand; upper (gley 1 N3/1), lower (gley 1 N4/1)

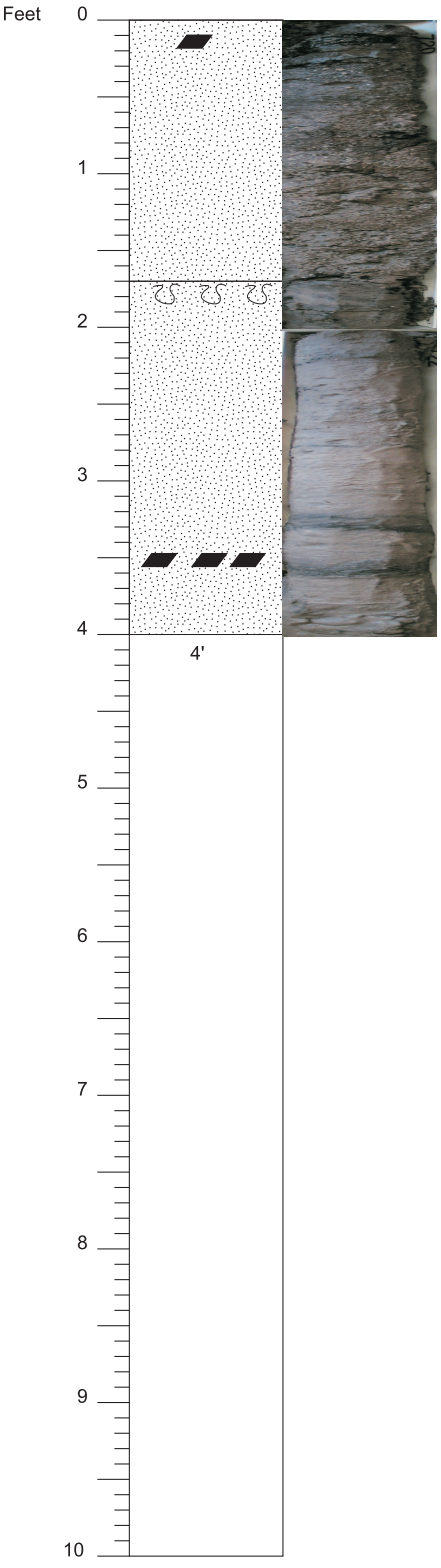
SAND; fine to lower-medium, very soft (easily washes away); mostly quartz, 1-2% ohm, faint laminae; possibly slightly concorted, rare mica, light color (light greenish-gray gley 1 N 7/1), smells sulfury

CLAY; as above clay with distinct slightly micaceous very fine sand laminae

SAND; medium to coarse, fines-upward, slightly silty in most places (few cleaner zones that wash out easier); stickier muddy zones at 1.7-1.85 (thin), 2.45 (thin), 2.9, 3.3, and 3.53 (darker with organics), 4-4.07; faintly laminated; dark gray (5Y 4/1) (in places slightly lighter or darker)

LIGNITE; with interlaminated sand, black plant debris and woody material intermixed; sand coarse as above

174 AX Medford
Core #96
Start depth: 710 ft
Stop depth: 720 ft
Recovery: 4.7 ft
Date: 5/4/07
Described by: PPMcL, CCV



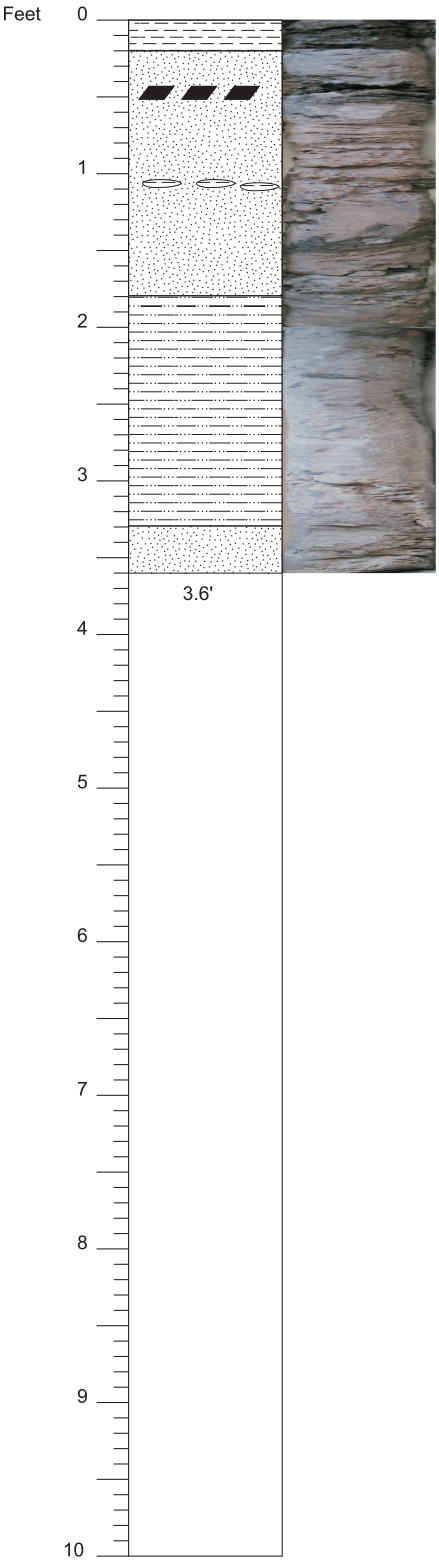
SAND; coarse to very coarse, some granules, poorly sorted; 0.1-0.3 lignite

burrowed boundary with very fine clay laminae

SAND; fine to medium, some very fine sand, some lignite, trace of mica; 2.9-3.2 dark layers; 3.4-3.6 lignite

174 AX Medford
Core #97

Start depth:	720 ft
Stop depth:	730 ft
Recovery:	4 ft
Date:	5/5/07
Described by:	PS, AP



CLAY; occasional lignite, clay clasts between silt matrix; dark gray (N4/1)

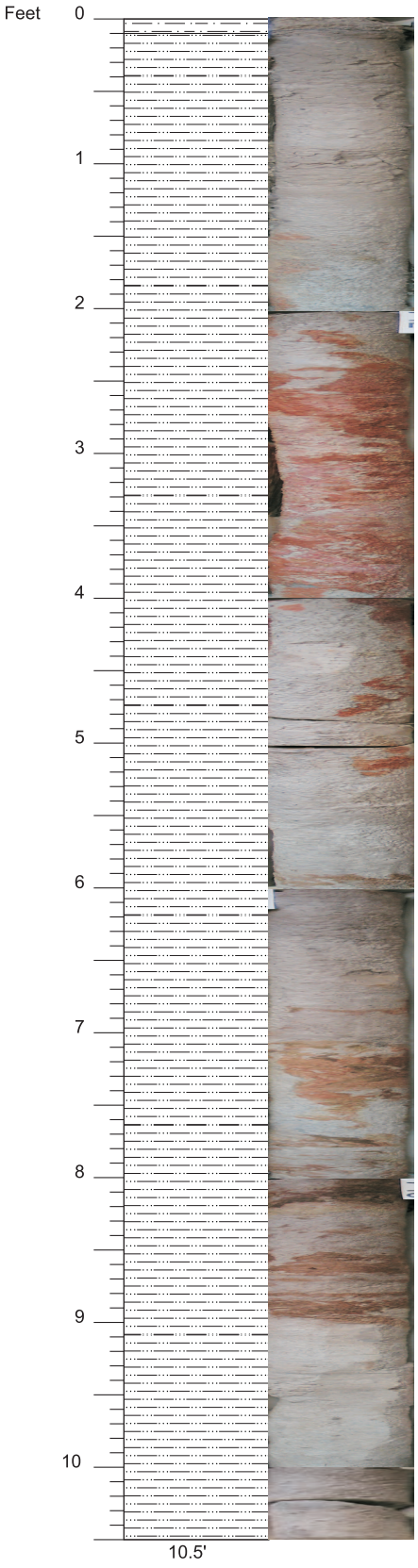
SAND; fine to medium; silty, laminated or burrowed, clay clasts with very fine lignite; light gray (7/1)

SILT; clayey, laminated; spharosiderite, evidence of root traces

SAND; silty fine to medium, laminated traces of lignite and mica

174 AX Medford
Core #98

Start depth:	730 ft
Stop depth:	740 ft
Recovery:	3.6 ft
Date:	5/5/07
Described by:	PS, AP

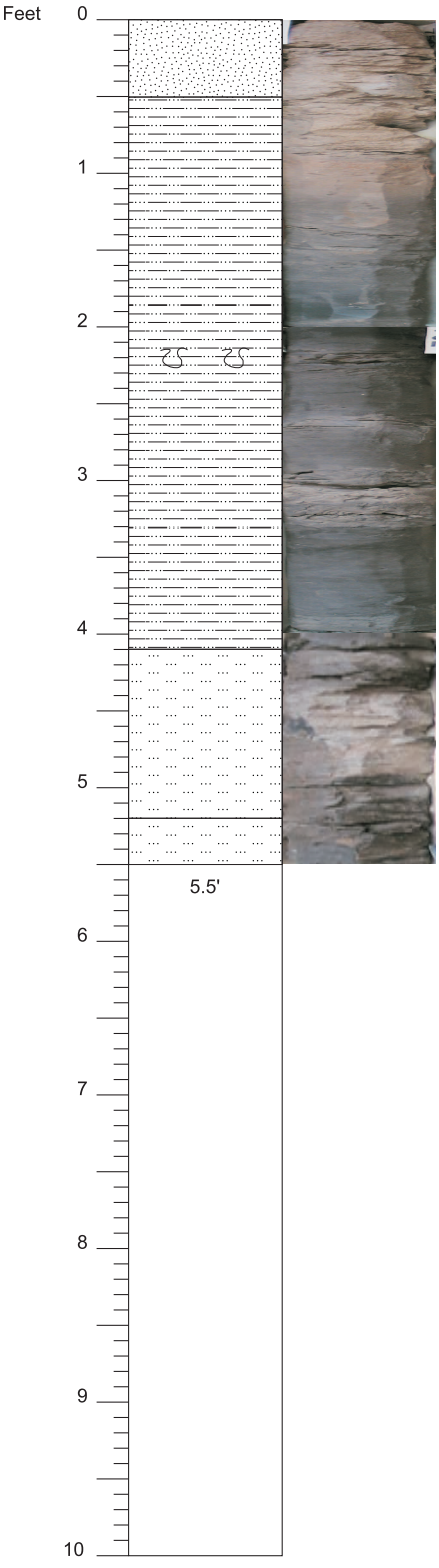


SAND; clayey

SILT; clayey with very fine sand;1.5-2 sphaerosiderite, 3.9-4 fine sands with burrows; red (10R 4/6), red (10R 5/8), light gray (10R 7/1)

174 AX Medford
Core #99

Start depth:	740 ft
Stop depth:	750 ft
Recovery:	10.5 ft
Date:	5/5/07
Described by:	PS, AP



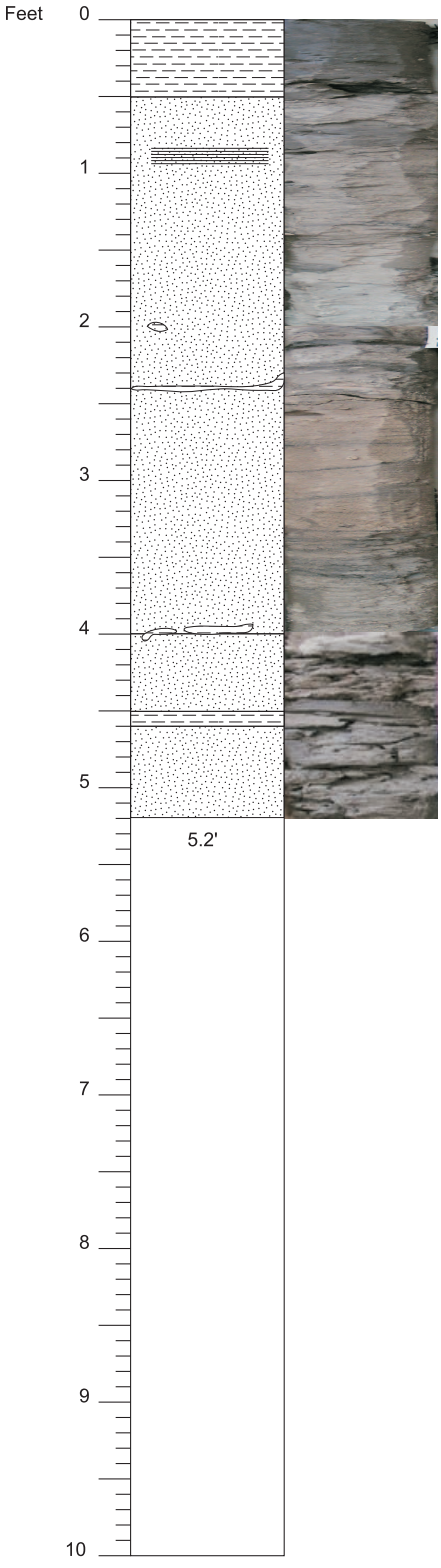
SAND; silty, very fine-medium; slightly lignitic, occasionally laminated, traces of mica; sphaerosiderite at 1 ft; light gray (10R 7/1)

CLAY; silty, laminated with occasional (up to 10 mm thick) sandy silt laminae; 2.2 burrowed layer; dark gray (7.5YR 4/1)

SILT; fine-medium sand, some finely dispersed lignite; traces of mica; 4.9-5 clay lens; light gray (10R 7/1)

SILT; clayey; dark gray (7.5YR 4.1)

174 AX Medford
Core #100
Start depth: 750 ft
Stop depth: 760 ft
Recovery: 5.5 ft
Date: 5/5/07
Described by: PS, AP



CLAY; traces of fine sand in burrows or laminae, dark gray (7.5YR 4/1)

SAND; silty, fine; micaceous; thin bedded-laminated, more laminations near to; clay bleb at 2 ft, 2.4 layer of clay; gray (5 YR 6/1)

SAND; silty, fine to medium; clay layer at 2.4 ft, dark gray (7.5YR 4/1)

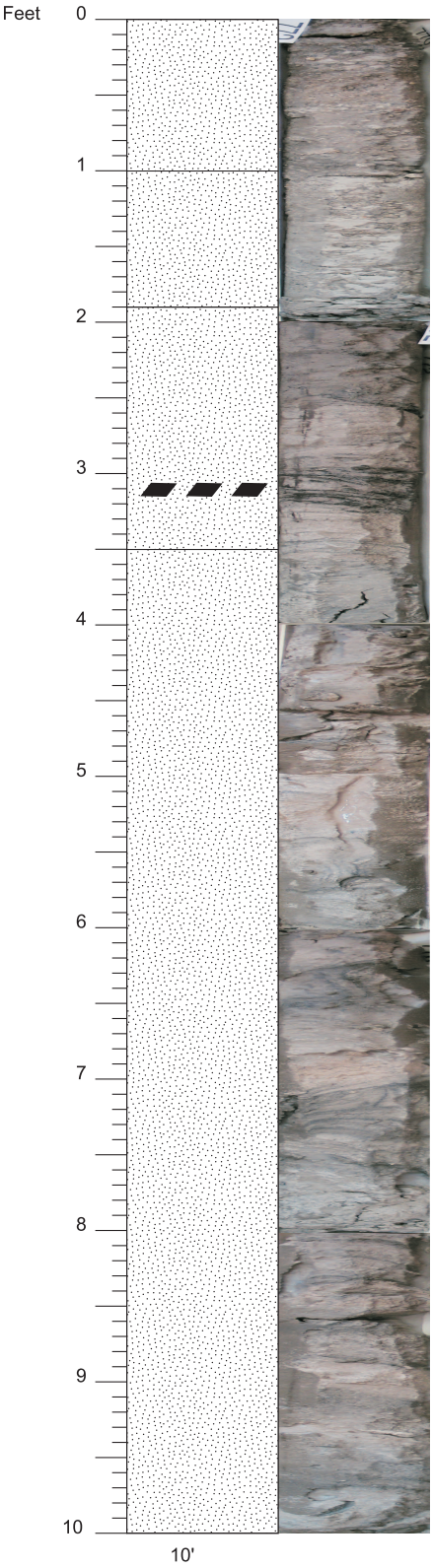
smeared clay at 4 may be burrows

SAND; medium-coarse, 4.5-4.6 clay bed

SAND; silty, fine-medium; dark gray (7.5YR 4/1)

174 AX Medford
Core #101

Start depth:	760 ft
Stop depth:	770 ft
Recovery:	5.2 ft
Date:	5/5/07
Described by:	PS, AP



SAND; medium-coarse, poorly sorted; clay rip ups, lignite, rare quartz

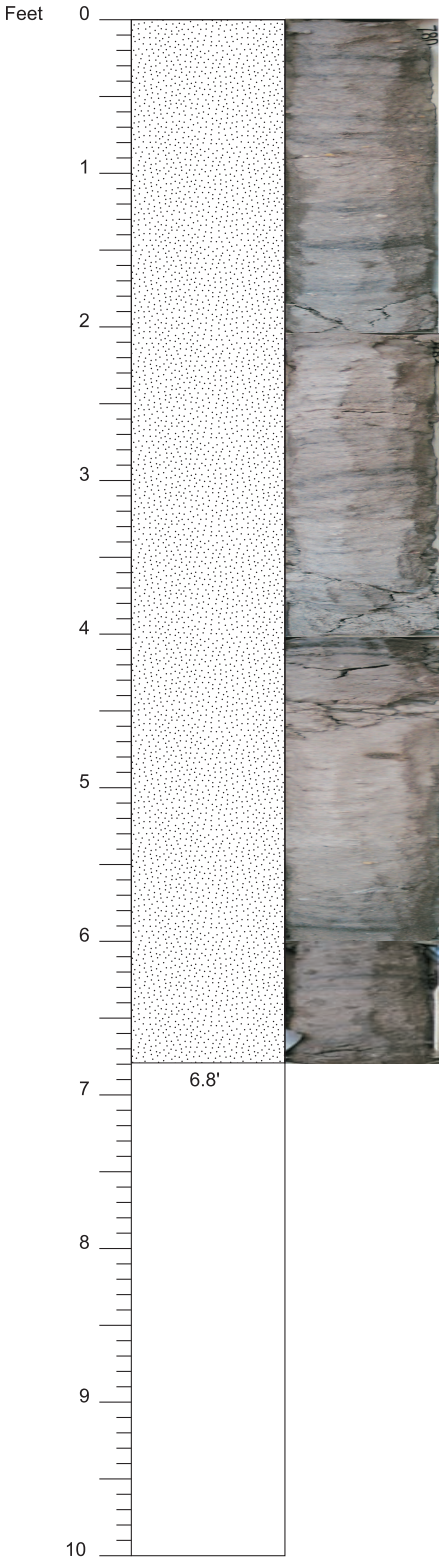
SAND; many kaolinite rip-up cclasts lignitic; channel base (1.9)

SAND; silty, fine, laminated to thin bedded; lignite cross beds

SAND; medium with lignitic placer; slightly coarser (medium-coarse) beds, particularly lower part; bedding massive to laminated, lignite disseminated to scattered laminae, massive may be due to burrowing; 9.4 clay drapes; gray (gley N/6)

174 AX Medford
Core #102

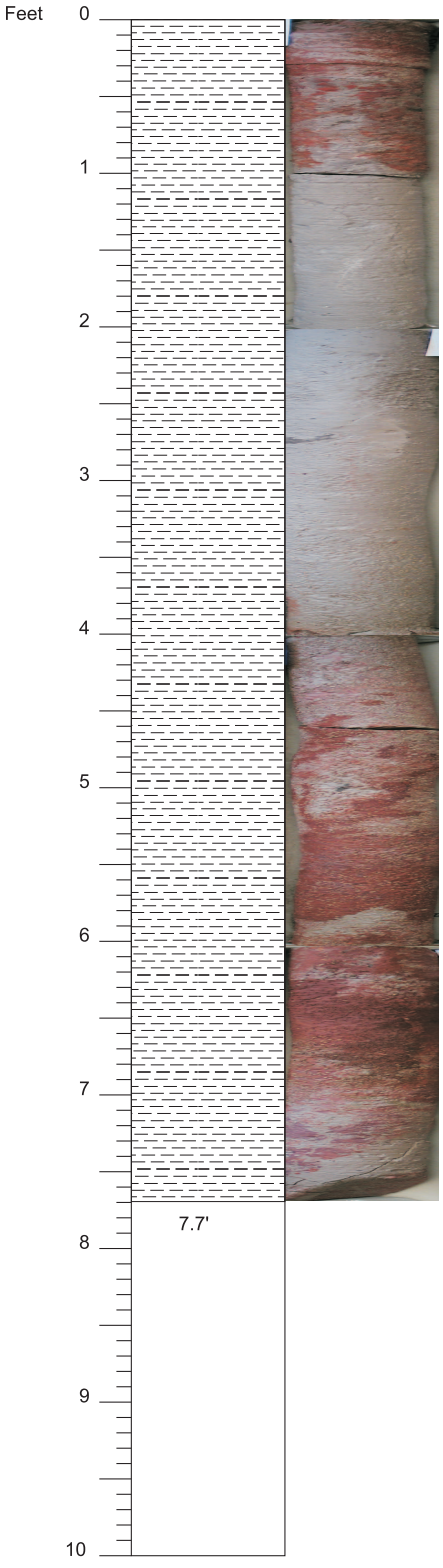
Start depth:	770 ft
Stop depth:	780 ft
Recovery:	10 ft
Date:	5/5/07
Described by:	PS, AP, KGM



SAND; medium-coarse, some occasional lignite (1.9 especially), some cross-laminated; some very coarse sand at 5 ft; gray (10Y 6/1)

174 AX Medford
Core #103

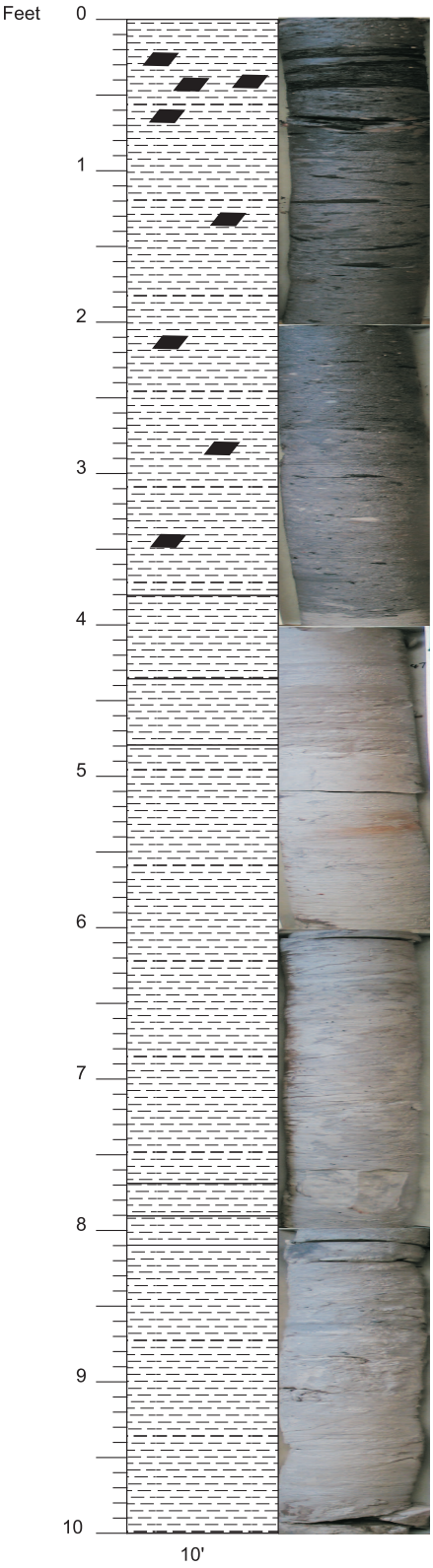
Start depth:	780 ft
Stop depth:	790 ft
Recovery:	6.8 ft
Date:	5/5/07
Described by:	PS, AP



CLAY; gradational boundary at 1.0 and 4.0; sphaerosiderite nodules ~5%; mottled red (10R 4/8), light gray (N/7)

174 AX Medford
Core #104

Start depth:	790 ft
Stop depth:	800 ft
Recovery:	7.7 ft
Date:	5/7/07
Described by:	DM



CLAY; contains large rip up of clay and lignite, local inclined laminae; large concentration of lignite inclined at 0.2-0.5, and at 0.65; tan, brown and medium gray shale rip up; dark gray N4

sharp boundary

CLAY; no more lignite; gray (10YR 6/1)

sharp boundary

CLAY; reddish gray (2.5YR 6/1)

sharp boundary

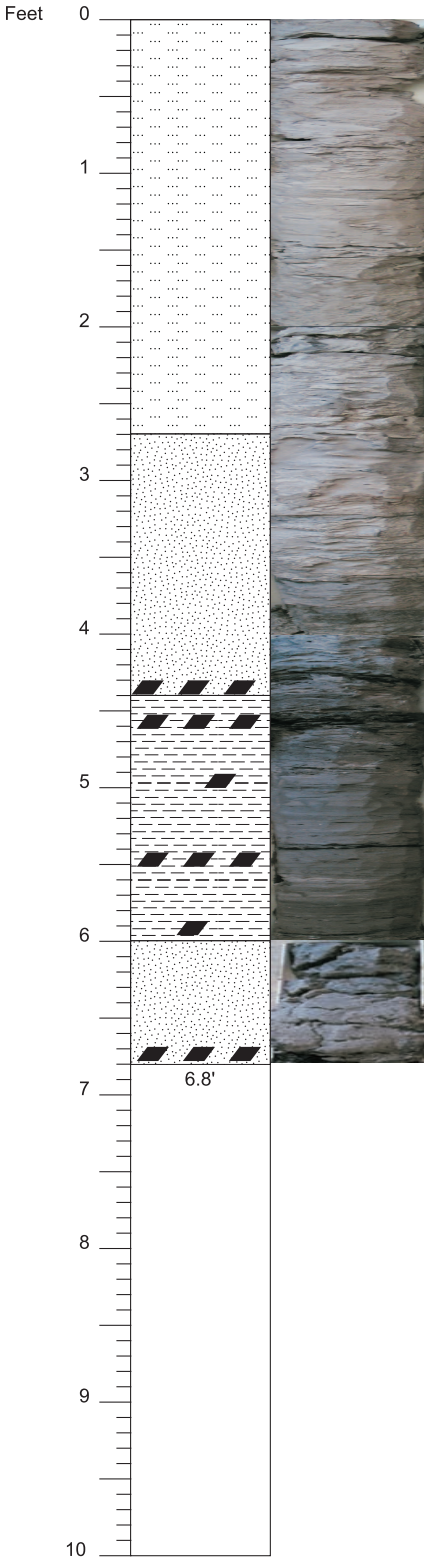
CLAY; color change; gray (10YR 6/1)

CLAY; reddish gray (2.5YR 6/1)

CLAY; white (10YR 8/1); rare siderite

CLAY; reddish gray (2.5YR 6/1); rare siderite

174 AX Medford
Core #105
Start depth: 800 ft
Stop depth: 810 ft
Recovery: 10 ft
Date: 5/7/07
Described by: DM



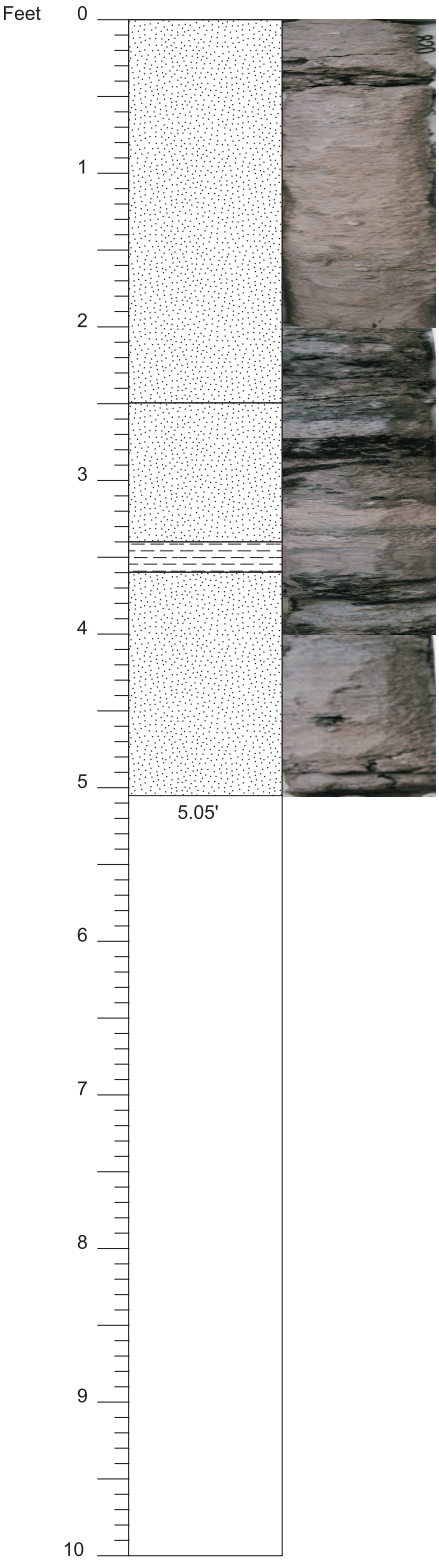
SILT; very clayey, slightly micaceous; many clay laminations, some inclined; rare rip-ups; common ohm (lignite?), some fine sand beds; gray (N/6)

SAND; fine-very fine, mostly quartz; slightly micaceous,some laminations (silt), some inclined; lignite, concentration is variable (to 5%) very fine; some soft sediment deformation of laminae, moderate-well sorted, sub-rounded; 4.3 lignite; light gray (N7)

CLAY; lignitic; heavily laminated, silty laminae and silt laminae, micaceous; sand is very fine, some fine, well sorted, subangular-subround; lignitic throughout; some inclined layers, some laminae look graded; 5.4 lignite; dark gray (5Y 4/1)

SAND; medium, swamp smell, locally coarse, mostly quartz, subrounded (some subangular); <1% finer lignite, micaceous (very rare); some yellow, pink quartz; light gray (N/7)

174 AX Medford
Core #106
Start depth: 810 ft
Stop depth: 820 ft
Recovery: 6.8 ft
Date: 5/7/07
Described by: JVB, DHM



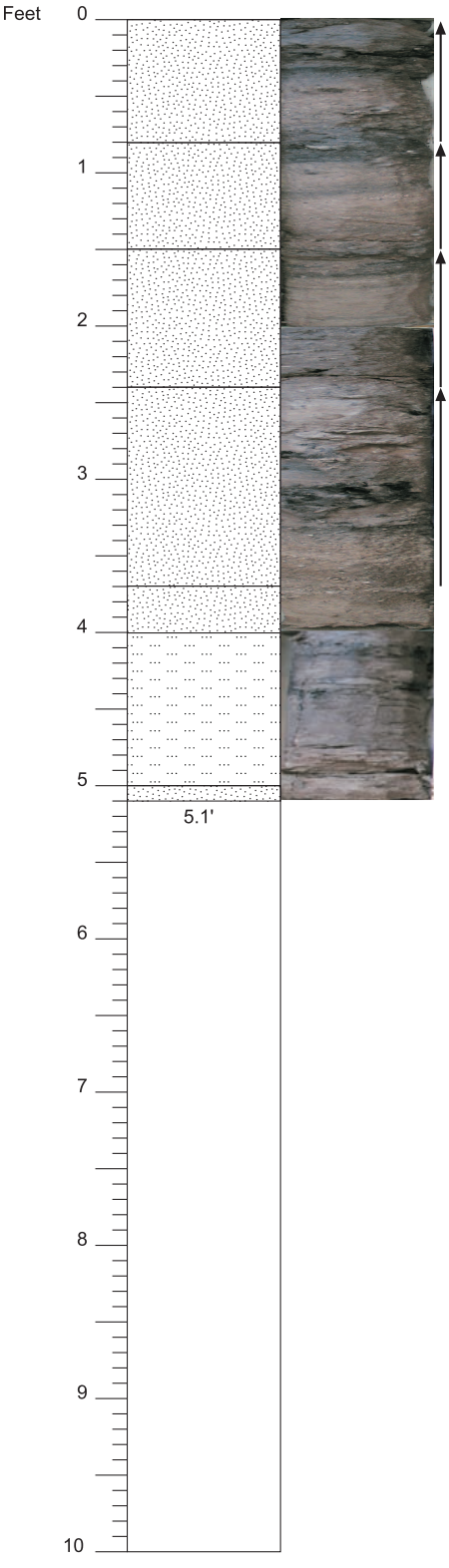
SAND; quartz, subangular-subrounded, poorly sorted (coarse-inef); granules at top down to 0.7, trace of white mica and lignite in layers to 0.47; very coarse sand at top, overall coarsens down; 2.1 granules; 2.1-2.5 very coarse sand, sub-rounded; poorly sorted, quartz

SAND; similar to above with lignite layers and clay layers; some lignite inclined at 3 ft

CLAY; laminated; lignitic/silt layers

SAND; coarse-very coarse, similar to top; becomes medium-coarse down, uniform color; grayish brown (2.5Y 5/2)

174 AX Medford
Core #107
Start depth: 820 ft
Stop depth: 830 ft
Recovery: 5.05 ft
Date: 5/7/07
Described by: JVB, DSM



SAND; channels fining upward; coarse down to very coarse/granule; sub-angular, lithics; trace mica; pyrite in lignite layers at 0.9, 1.4; gray (2.5Y 5/1)

SAND; medium, moderate sorting, subangular/subrounded; trace lignite, trace red quartz

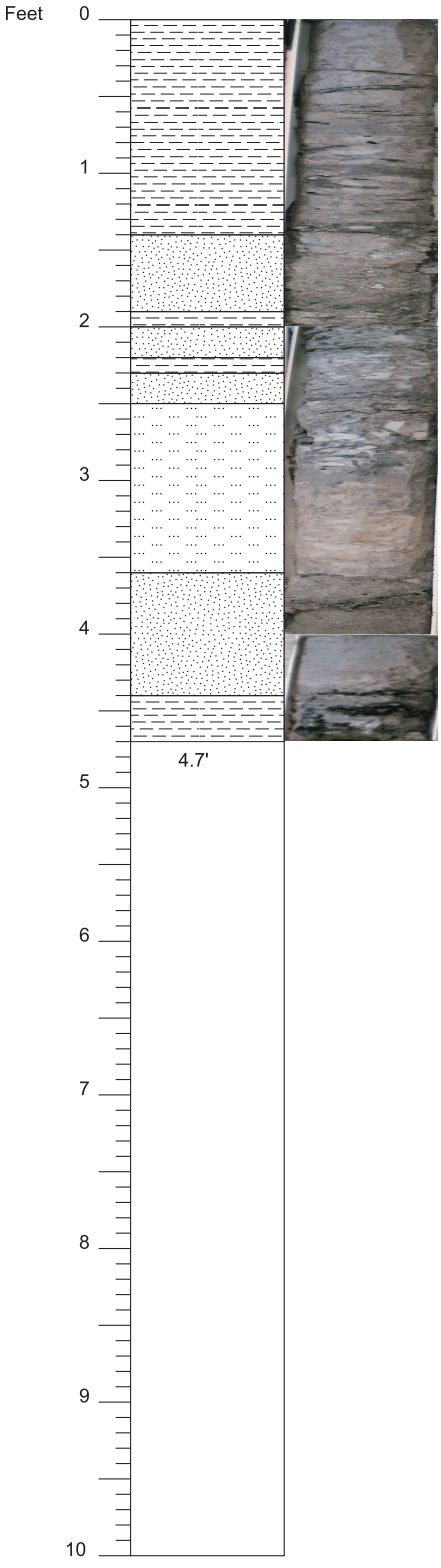
sharp contact at 4 ft

SILT; sandy, with silt lams; clay blebs, ?burrows or ?roots; very lignitic; coarsens downward, very laminated at base; parallel/horizontal

SAND: medium-fine, well sorted, rounded quartz

174 AX Medford
Core #108

Start depth:	830 ft
Stop depth:	840 ft
Recovery:	5.1 ft
Date:	5/7/07
Described by:	JVB, DM



CLAY; silty laminations, sand between 0.6-0.75; mod sorting, laminated to x-laminated; lignite, subang-subround, clay is mottled and has silt/silt laminae; lams are inclined, near bottom rip-ups, ?burrows;

1.9 sharp break

SAND; medium-coarse; poor-moderate sorting, subangular-subround, quartz; some pyrite, ?pink feldspar

CLAY lens

SAND; medium-coarse, poorly sorted; ?lignite (fine), subrounded

CLAY; mottled with sand

SAND; coarse-medium; granules near base, some clay rip-ups at bottom

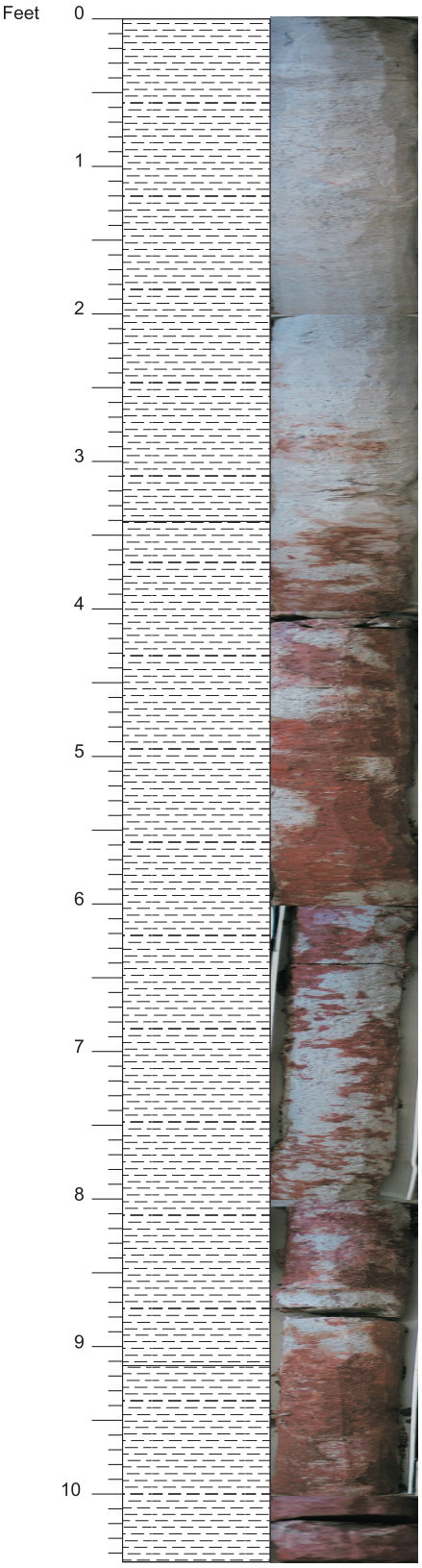
SILT; sandy, poorly sorted, coarse sand-silt; more silt below 3.2; slilt and clay are mixed together; ?bioturbation

SAND; clay on top; fines down from coarse to medium/coarse; quartz; better sorting at bottom; lignite

CLAY; lignitic

174 AX Medford
Core #109

Start depth:	840 ft
Stop depth:	850 ft
Recovery:	4.7 ft
Date:	5/7/07
Described by:	JVB, DM



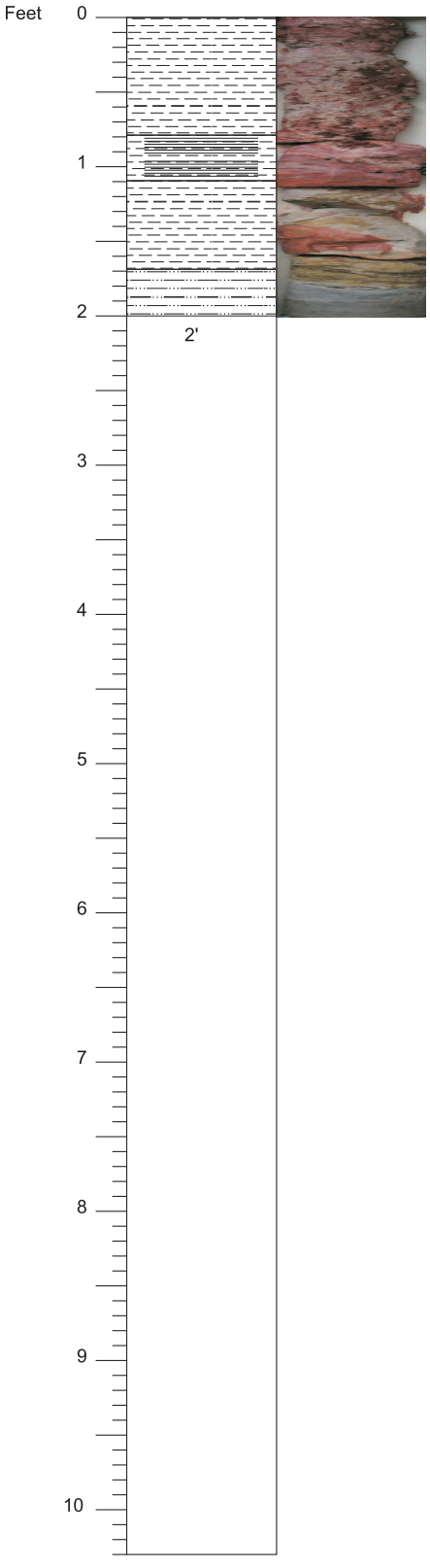
CLAY; abundant sphaerosiderite, more at top than at bottom; some faint black mottling; few to no red mottles; light gray (10YR 7/1)

CLAY; mottled red and gray, gray and red have sphaerosiderite; dark red (2.5YR 4/6), light gray (10YR 7/1)

174 AX Medford
Core #110
Start depth: 850 ft
Stop depth: 859 ft
Recovery: 10.45 ft
Date: 5/7/07
Described by: JVB, DSM

CLAY; dominated by red, little gray; sphaerosiderite present, some layers

10.45'



CLAY; 0-0.4 siderite nodules; red (2.5YR 4/6)

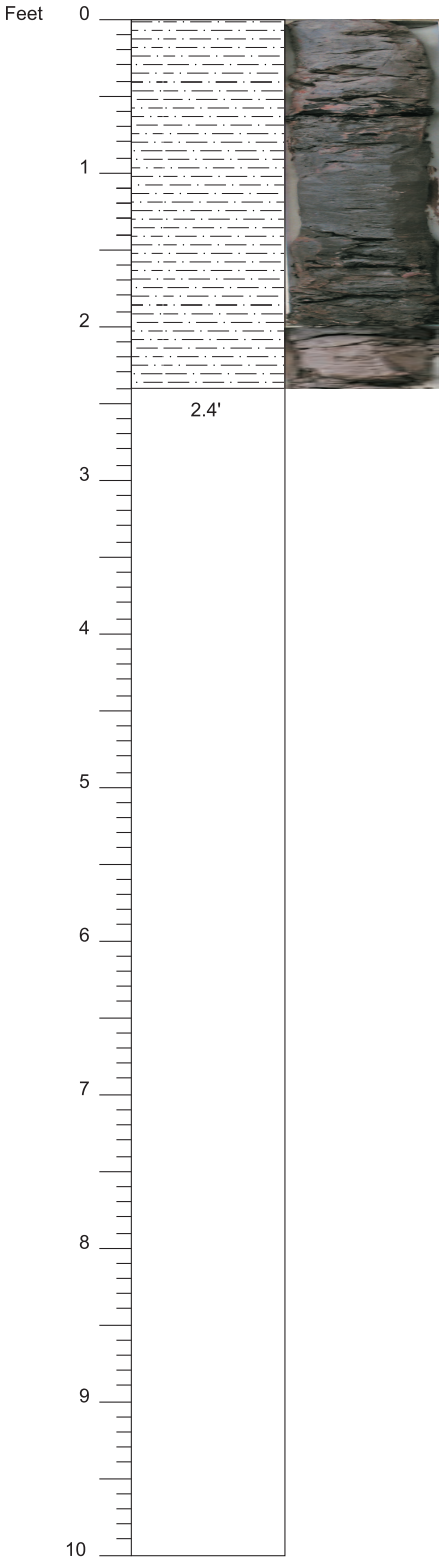
CLAY; laminated red and gray

CLAY; brown; 1.6-1.7 siderite nodules; 1.7 clays laminated; 1.8 pyrite

CLAY; silty; gray (2.5Y 5/1)

174 AX Medford
Core #111

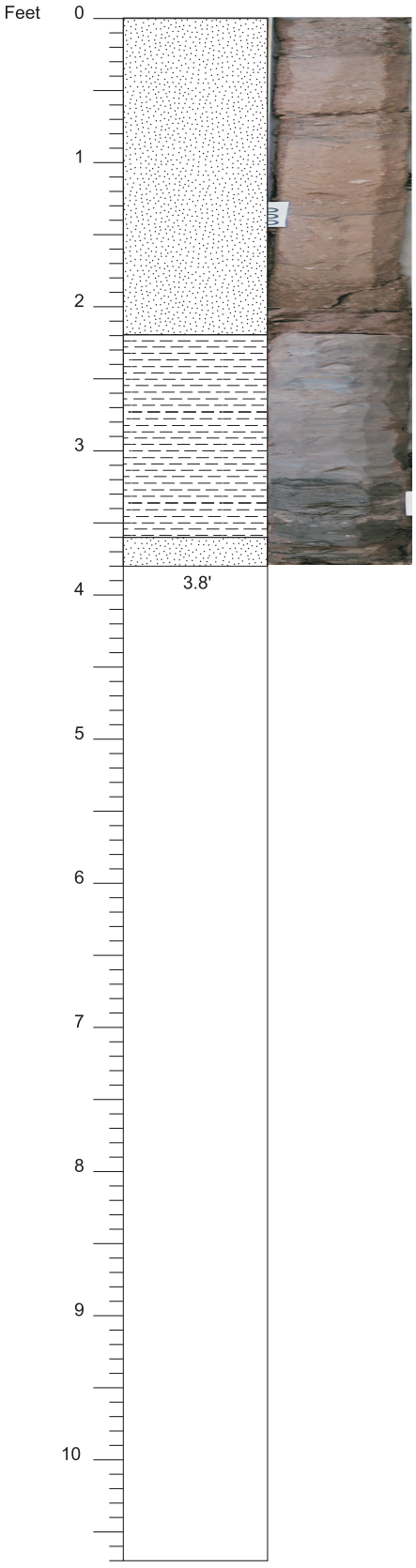
Start depth:	859 ft
Stop depth:	869.3 ft
Recovery:	2 ft
Date:	5/8/07
Described by:	PS, BB



SAND; fine, silty; lignite zones at 0.5 and 1.4-1.5, clayey in spots, very fine sand in burrows?; coarsens down to fine-med sand, pyrite at 2.0; 0-0.3 gray (2.5Y 6/1); 0.4-2.1 dark gray (2.5Y 4/1); 2.1-2.4 light gray (2.5Y 7/1)

174 AX Medford
Core #112

Start depth:	869.3 ft
Stop depth:	879.3 ft
Recovery:	2.4 ft
Date:	5/8/07
Described by:	PS, BB



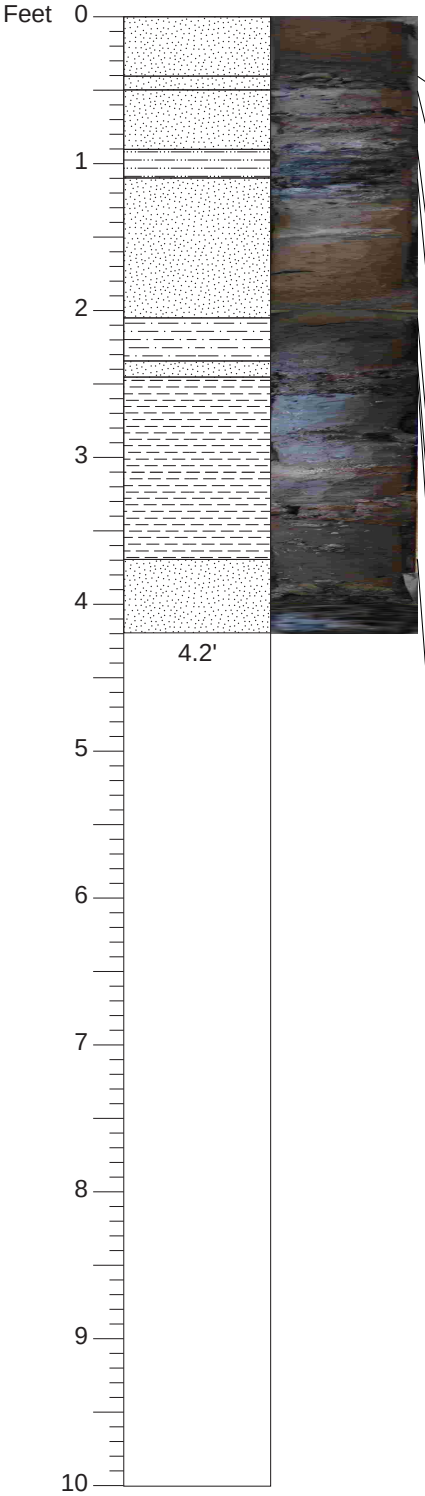
SAND; very coarse-medium with some rip-up clasts of clay sub-rounded to rounded; mostly quartz; 1.1 rip-up clay bleb 1 cm; 1.3 cross laminated sands; 1.3-1.8 medium sand, contains only sub-rounded to rounded quartz sand; light gray (2.5Y 6/1)

CLAY; silty in places; fining downward, trace mica; 3.2-3.8 laminated beds of lignite; 3.5 pyrite; dark gray (2.5 Y 4/1)

SAND; medium, rounded, mostly quartz with bands of lignite

174 AX Medford
Core #113

Start depth:	879.3 ft
Stop depth:	890 ft
Recovery:	3.8 ft
Date:	5/8/07
Described by:	PS, BB



SAND; fine, well sorted, some very fine sand; subangular, mostly quartz, ~3% ohm; inclined laminae (?coring or sedimentary structure), muddy below 0.3 ft, soft; upper part light yellowish-brown (10YR 6.4); muddy lower part dark gray (10YR 4/1)

SAND; very muddy, mostly fine quartz; less well sorted than above (more very fine sand); also carbonaceous matter present, many pyrite-cemented sandy nodules up to 1 cm diameter; dark gray (4/N)

SAND; fine with lesser medium, slightly silty; moderate sorted; subangular-subrounded; mostly quartz, <3% ohm, few mica and pink grains (garnet), some very fine pyrite?; common carbonaceous material, some as laminated carbonaceous muds, some woody/fiberous, more carbon in lower 0.1 ft; softer zone (medium grained) 0.7-0.8; gray (10YR 6/1), carbonaceous material: black (10YR 2/1)

MUD; sandy, very fine-fine, silt and clay, abundant carbon especially in lower 0.1 ft; sand is mostly quartz but with conspicuous very fine mica; some carbon fibrous with some very fine pyrite; black (10YR 2/1) and very dark gray (10YR 3/1)

SAND; medium-fine (varies vertically, possibly in fining-upward packages, especially at 1.4), silty, well sorted; subrounded; mostly quartz, some mica, 1-3% ohm; some clay and carbon blebs in upper 0.2 ft; streak of muddy sand @ 1.5, carbonaceous streak at 1.7; thin muddy bed at 1.9, these beds/laminae somewhat inclined (?coring or sedimentary structure); lighter fine zone: light gray (10YR 7/1); darker medium grained zone: gray (10YR 6/1) and gray (10YR 5/1)

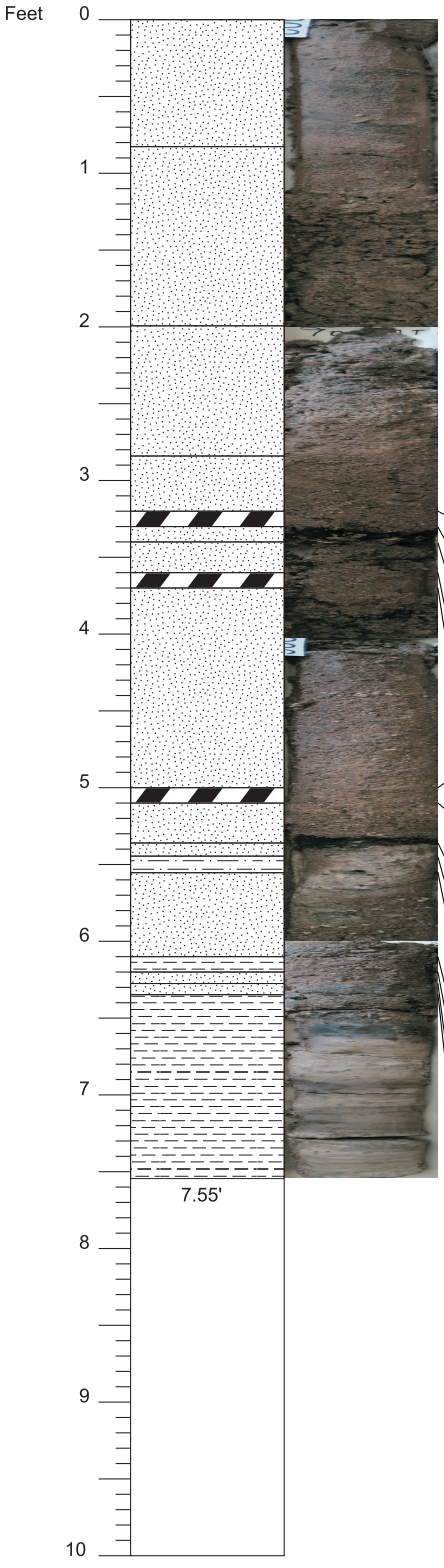
sandy CLAY and muddy SAND; interlaminated sand quartz, fine grained; clay is sticky; sand: brown (10YR 4/3), clay: dark gray (10YR 4/1)

SAND; very silty, fine-very coarse, poorly sorted; quartz, with common carbonaceous chunks; very dark brown (10YR 2/2) to black (10YR 2.1)

CLAY; stiff, very slightly silty, structureless to faintly laminated, flecks of carbon; very dark gray (10YR 3/1); three thin beds of soft sand (injected with mud) @ 2.7-2.8, 2.9-3, 3.2-3.3 (<0.1 thick); upper one: muddy, fine, with some coarse grains, some mica (10YR 4/1); second: cleaner, medium fine, moderately sorted, subrounded to subangular, quartz; trace opaques light brownish gray (10YR 6/2); third: grayish-brown (10YR 5/2), fine-coarse, <1% ohm, quartz

SAND; fine, subangular quartz, abundant carbon with fibrous plant debris including mm-size chunks arranged in organic-rich laminae, woody fragments up to 15 mm; sand cleaner near top, slightly silty, light (milky) matrix; fewer organics in upper 2 cm; gray (10YR 6/1)

174 AX Medford
Core #114
Start depth: 890 ft
Stop depth: 900 ft
Recovery: 4.2 ft
Date: 5/9/07
Described by: PPMcL, JU, CCV, JLT



SAND; medium, subangular; brown (10YR 4/3); charcoal fragments (5%), mica flakes (minor), well sorted

SAND; medium to coarse, moderately sorted, charcoal fragments (<5%); more layered

SAND; well sorted, coarse with 10% medium, small organic fibers; grayish-brown (10YR 5/2)

SAND; bimodal (fine and coarse); dark grayish-brown (10YR 4/2); coarsing upwards sequence

LIGNITE; with pyrite bedded with coarse sand, black

SAND; very coarse

SAND; coarse to medium with 5% very coarse, no opaques, organic fragments disseminated (10YR 6/2)

LIGNITE; with pyrite bedded with coarse sand, black

SAND; coarse to medium with 5% very coarse, no opaques, organic fragments disseminated; light brownish gray (10YR 6/2)

LIGNITE; with pyrite

SAND; medium-very fine silty matrix (milky), poorly sorted, no opaques, organic layer; ; light gray (10YR 7/2)

SAND; grayish-brown, poorly sorted (10YR 6/2)

SAND; poorly sorted with clay; grayish brown (10YR 5/2)

SAND; coarse, poorly sorted, some chunks of organics (~0.6 cm), sand subround; grayish-brown (10YR 5/2); drilling mud

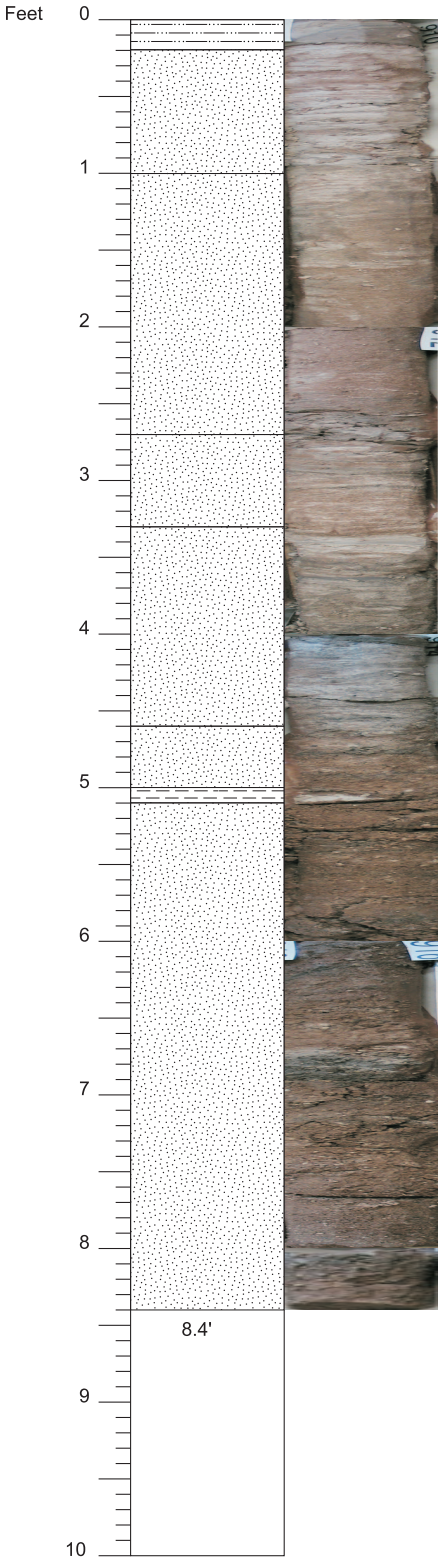
CLAY; silty (ripped up from below?); very dark gray (10YR 3/1)

SAND; coarse, poorly sorted, some chunks of organics (~0.6 cm), sand subround; grayish-brown (10YR 5/2); drilling mud

SAND; with organics, coarse

CLAY; very dark gray (10YR 3/1); silty, slightly sandy (very fine sand), interbedded with clay (no silt), 1-2 mm very thin laminae; whispy draped appearance; lighter layers more silty, darker layers more clayey; lower section is more micaceous, 5-10% organics in silty clay

174 AX Medford
Core #115
Start depth: 900 ft
Stop depth: 910 ft
Recovery: 7.55 ft
Date: 5/9/07
Described by: JT, PPM, CV, JU



SILT and CLAY; interlaminated, moderately sorted, sub-angular to sub-rounded; very pale brown (10YR 8/2), same as base of previous core

SAND, silty, fine; laminated (mm scale, irregular), variable angles, opaques and mica

SAND; as above, but medium sand slightly thicker laminae

SAND; laminated (mm scale, irregular at variable angles, silty), fine,opaques and mica

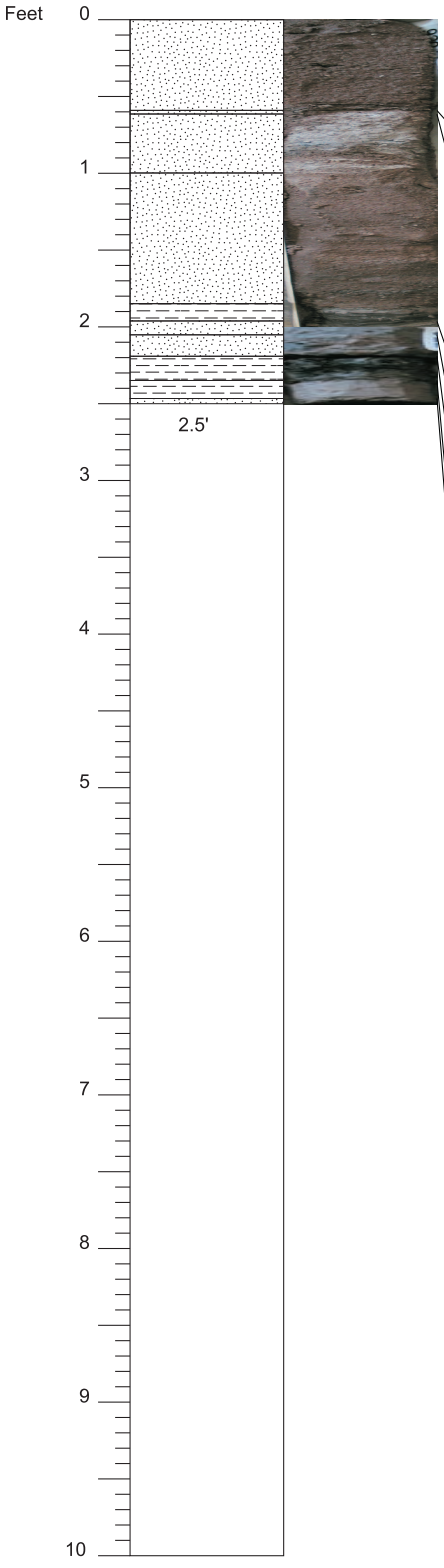
SAND; as above but muddier, laminations become very irregular (almst mottled)

SAND; not well sorted, 3% ohms, coarse sand to silt; light brownish-gray (10YR 6/2) mud invaded, sub-angular to sub-rounded

CLAY; bed or clast; light gray (10YR 7/1)

SAND; fine to coarse (coarsening downard) with common very coarse and granule sized grains; very poorly sorted, extensively invaded by drilling mud; subangular to subroundednd grains, mostly quartz with rare ohm; slightly middier from 6.7-6.8; pale brown (10YR 6/3)

174 AX Medford
Core #116
Start depth: 910 ft
Stop depth: 920 ft
Recovery: 8.4 ft
Date: 5/9/07
Described by: JT, HU, CV, PPMcL



SAND; coarse, well sorted, sub-rounded; opaques <1%, rock fragments 2-3%, rest quartz sand invaded by drilling mud; clay layer at base; yellowish-brown (10YR 5/4) mud effected

SAND; very coarse, 0.25'' thick; (10YR 5/4)

SAND; very coarse-fine with silty matrix, poorly sorted; quartz; sub-angular to sub-rounded; light gray (10YR 7/2), unit appears contorted in drilling at lower contact

SAND; not well sorted, coarse to medium, quartz, sub-angular to sub-rounded; yellowish brown (10YR 5/4); invaded by drilling mud

CLAY; silty, slightly sandy; laminated/banded, alternating between light gray (10YR 7/1), gray (10YR 5/1), and dark gray (10YR 3/1); medium gray is slightly siltier; color laminae are discontinuous across core (drilling?, sediment change?)

SAND; fine to medium, rounded to sub-rounded; silty matrix, 1% rock fragments, rest quartz; brown (10YR 5/3)

SAND; medium-coarse, rounded to sub-rounded; 1% ohm, moderately muddy; not well-sorted, mainly quartz; grayish-brown (10YR 5/2)

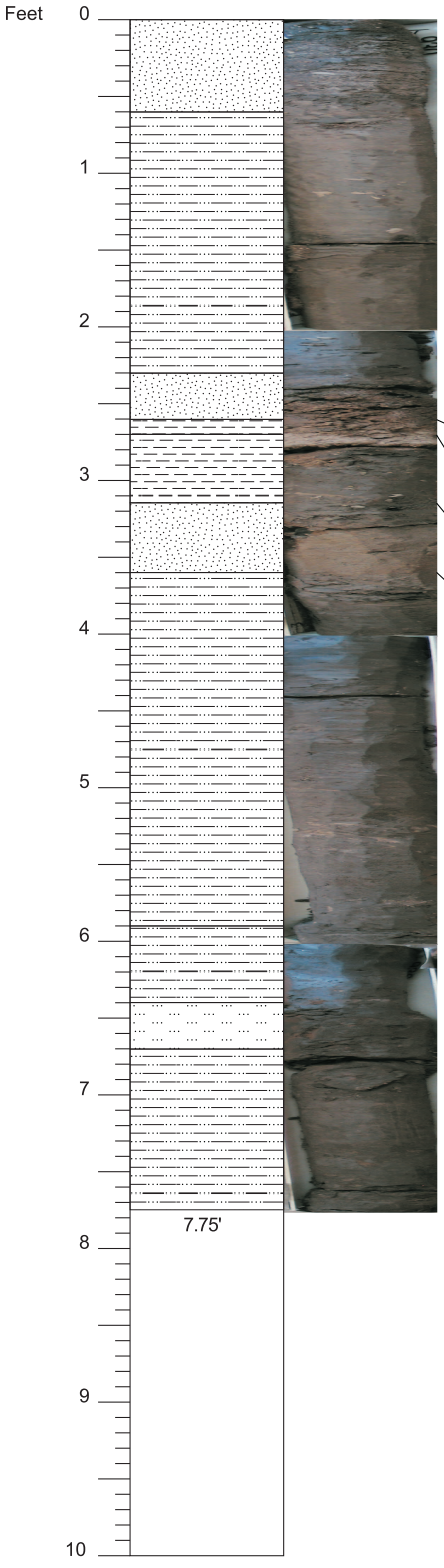
CLAY; silty and sandy, sandy fraction is very poorly sorted (fine-very coarse); possible coarse sand dropped from unit above; 2.25 organic layer with pyrite, plant fibers

CLAY; silty, mottled texture; dark grayish brown (10YR 4/2)

SAND; very poorly sorted quartz, very fine-granule; matrix same color as clay above

174 AX Medford
Core #117

Start depth:	920 ft
Stop depth:	930 ft
Recovery:	2.5 ft
Date:	5/9/07
Described by:	PPMcL



SAND; very poorly sorted quartz sand, very fine-granular in size; 0.1, 0.35 clay layers; extremely muddy matrix; dark graish brown (10YR 4/2)

CLAY; silty, numerous fine sand partings with ranging thickness from mm-cm, micaceous; 2.05-2.2 carbonaceous zone with fragments 1-3 mm in diameter; dark gray (10YR 4/1)

SAND; poorly sorted, medium-very coarse; 3% rock fragments, rest quartz; 2.35 organic material, peaty, clayey; gray (10YR 5/1)

CLAY; very fine sand, light brownish gray (10YR 6/2)

CLAY; sand partings, sand medium-fine; very dark grayish-brown (10YR 3/2); micaceous

SAND; fine-medium, muddy; subangular-subround; moderate sorted, grayish brown (10YR 5/2)

CLAY; silty, upper section mm scale lamination, whole section fines upward; overall coarsening down from moderate at top to clayey sandy silt at bottom; 4.2 fewer laminae below, less prominent; 5 ft blotchy laminae dissapear; 5-6.35 slighty clayey, slightly sandy silt; very dark grayish brown (10YR 3/2); unit more homogenous in texture and structure; fine sand in burrows light brownish gray (10YR 6/2)

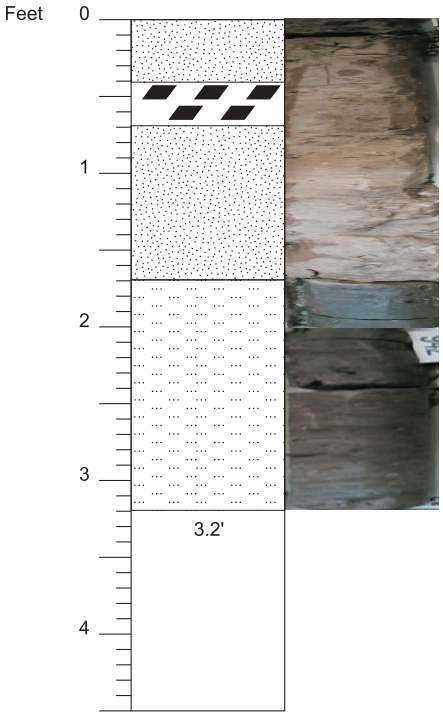
MUD; homogenous, some burrows infilled with sand; colors same as above clay

SILT; slightly clayey and sandy; fining upward sequence without lamination as above

MUD; very small ant silt, homogenous, few burrows from middle to bottom of unit; very dark grayish brown (10YR 3/2); burrow in fill brown (10YR 5/3); 7.6-7.75 fine sand laminae in silty mud

174 AX Medford
Core #118

Start depth:	930 ft
Stop depth:	940 ft
Recovery:	7.75 ft
Date:	5/9/07
Described by:	JT, CV, PM, JU



SAND; clean quartz

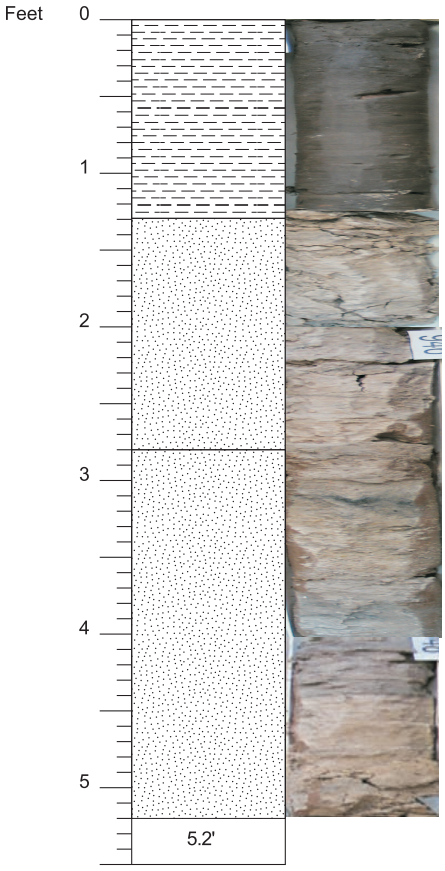
Lignite

SAND; clean; quartz; light gray (5Y 7/1)

SILT; clayey; laminated, laminae expressed in color variations; occasional lignite, mica, quartz; dark gray (5Y 4/1), gray (5Y 5/1)

174 AX Medford
Core #119

Start depth:	940 ft
Stop depth:	944.5 ft
Recovery:	3.2 ft
Date:	5/10/07
Described by:	PS, SM



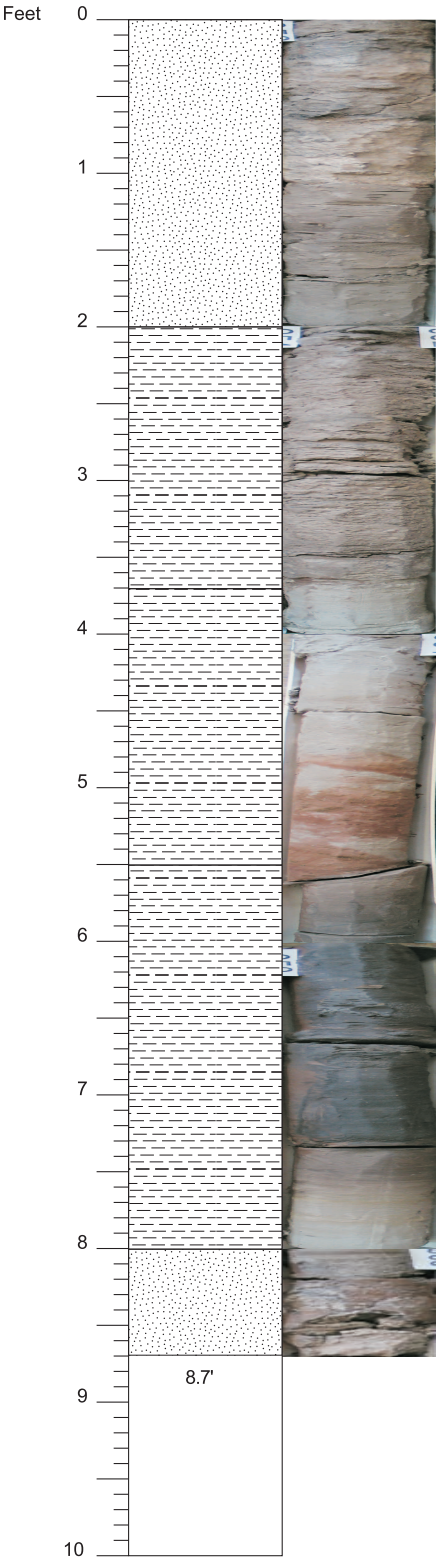
CLAY; laminated; laminations expressed in color variation, some sand burrows; dark gray-gray (5Y 4/1-5/1)

SAND; fine-medium; quartz, lignite laminations shows cross-bedding pattern; 2.3 grain size increases to coarse; 3.5-3.6 small bed of sandy clay (~1-1.5 cm) appears

SAND; fine-medium; with occasional lignite from 3~3.7; medium-coarse at bottom 4.9-5.2; sand distributary channels and clay probably from interdistributary plains; light gray (5Y 7/1)

174 AX Medford
Core #120

Start depth:	944.5 ft
Stop depth:	950 ft
Recovery:	5.2 ft
Date:	5/10/07
Described by:	PS, SM



SAND; quartz, channel deposit; 2 lignite; light gray (5Y 7/1)

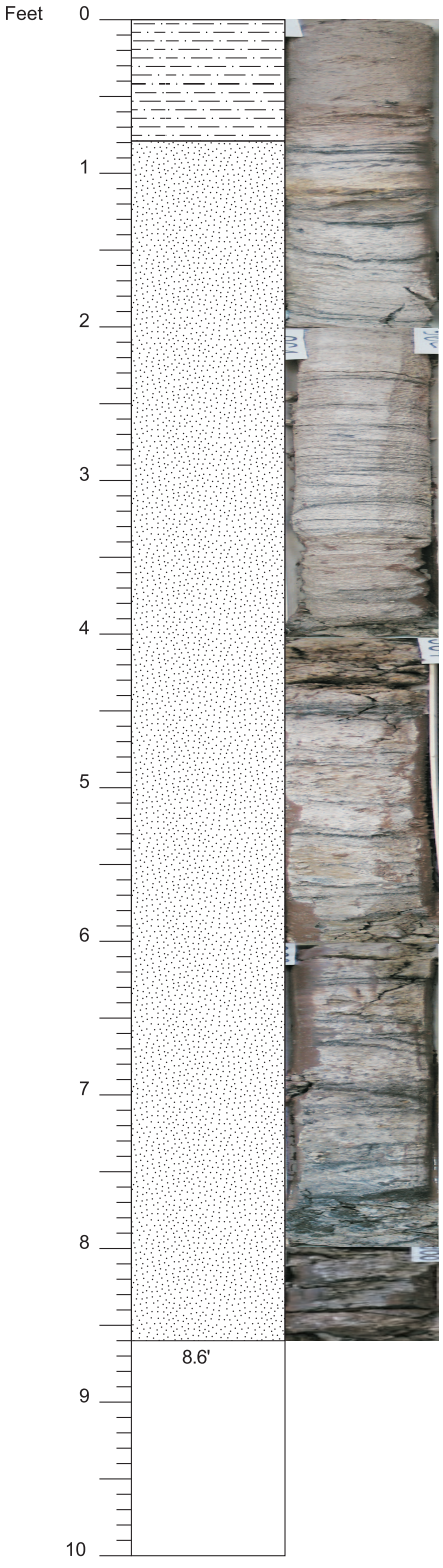
CLAY; laminated (< 1 cm); gray (5Y 5/1) to light gray (5Y 7/1)

CLAY; paleosols; brown (7.5 YR 4/3)

CLAY; cross laminated (color variation), 6.4 lignite lamination; clay dark gray (5Y 4/1), gradual color change down core from grayish-brown (10YR 5/2) to light gray (5Y 7/1)

SAND; coarse; light gray (5Y 7/1)

174 AX Medford
Core #121
Start depth: 950 ft
Stop depth: 960 ft
Recovery: 8.7 ft
Date: 5/10/07
Described by: PS, SM



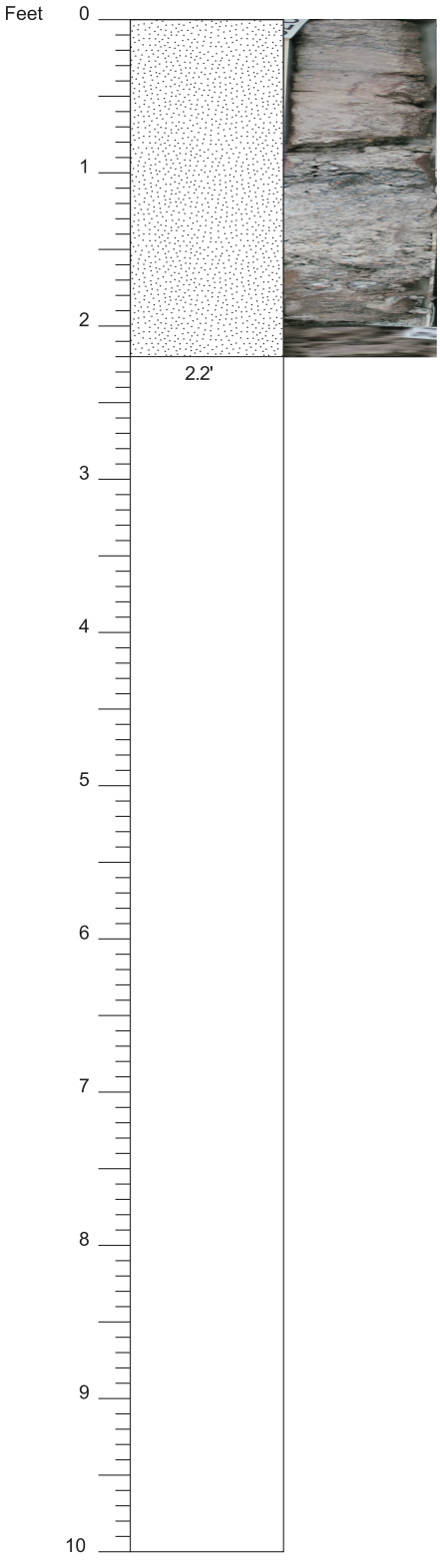
SAND; muddy, silty, medium, light gray (5 Y 7/1)

0.8 possible contact

SAND; medium-coarse, with dark colored crossbeds; very dark gray (5Y 3/1); 3.3 grain size decreases to medium, mud content increases; same muddy silty medium sand as at top; 4-4.4 very coarse clean sand; gray (5Y 6/1); muddy medium-coarse sand; 7.8 pyrite cemented sand, some siderite; light gray (5Y 6/1); sand dark gray (5Y 3/1)

174 AX Medford
Core #122

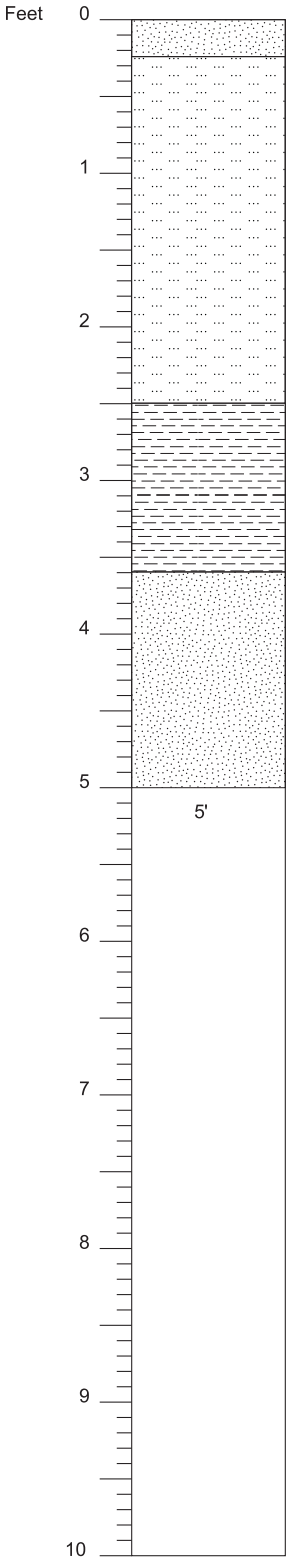
Start depth:	960 ft
Stop depth:	970 ft
Recovery:	8.6 ft
Date:	5/10/07
Described by:	PS, MS



SAND; fine-medium, some gravel; possible channel deposition, cross lamination of dark gray material; occasional light color clay layers, mud content increases to bottom, color becomes darker; light gray (5Y 7/1), bottom section: dark gray (5Y 4/1)

174 AX Medford
Core #123

Start depth:	970 ft
Stop depth:	980 ft
Recovery:	2.2 ft
Date:	5/10/07
Described by:	MS, PS



SAND; fine, muddy, light gray

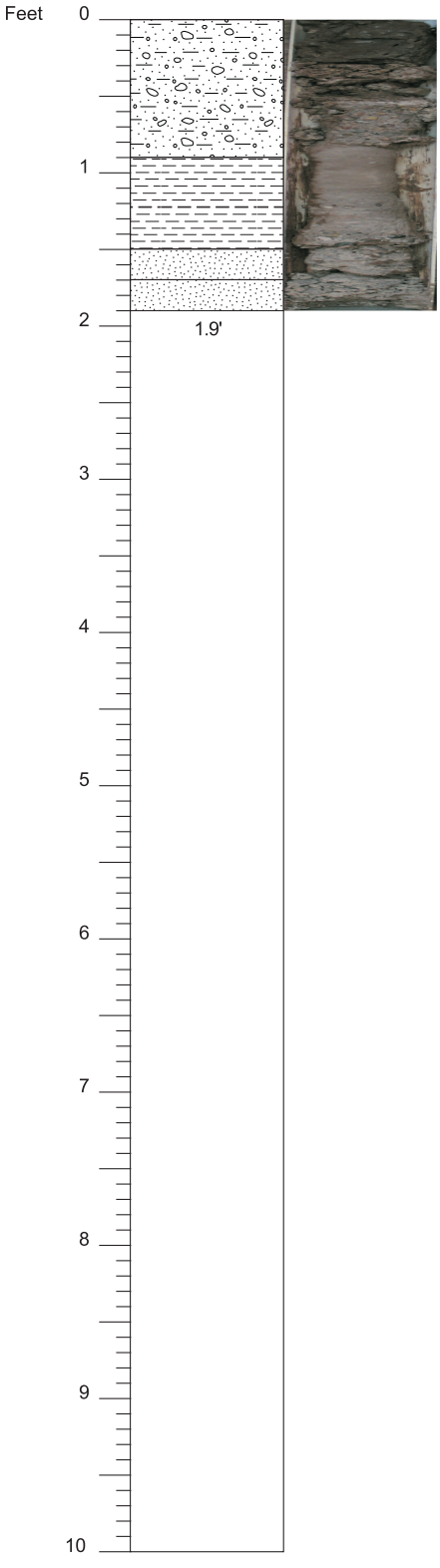
SILT, clayey, with lignite laminae; dark gray

CLAY; massive, laminated, burrowed; light gray

SAND; medium-very coarse, gravel; light gray

174 AX Medford
Core #124

Start depth:	980 ft
Stop depth:	990 ft
Recovery:	5 ft
Date:	5/10/07
Described by:	PS

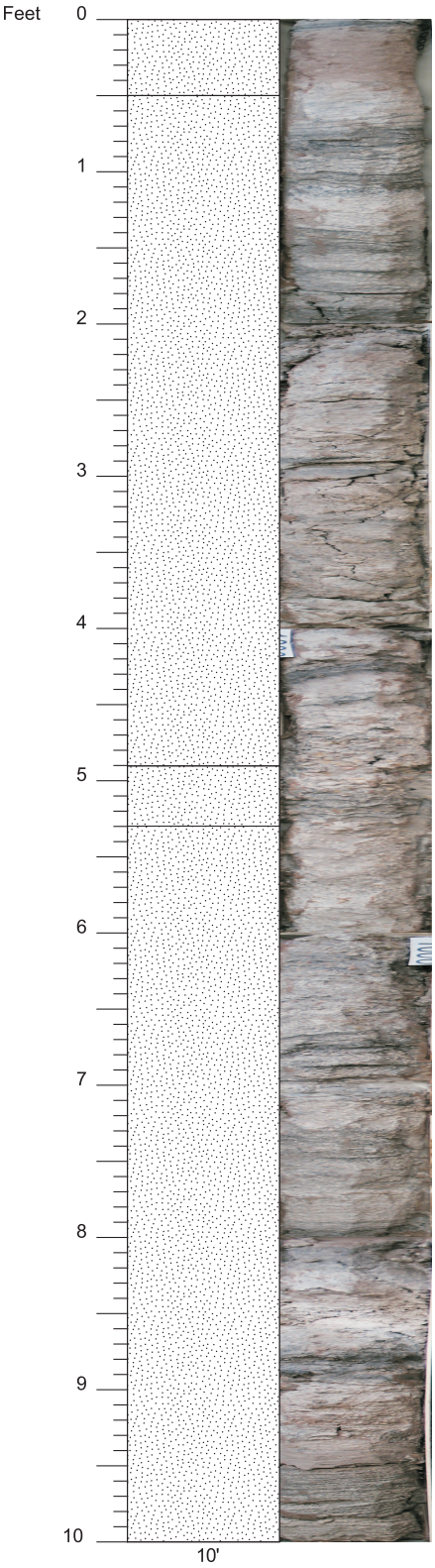


GRAVEL; angular to sub-rounded, with very coarse sand, clayey; Potomac Formation

CLAY; wisps of fine sand to very fine sand (some dark ohms?); gley 1, light gray (7/1)

SAND; medium-fine, quartz, clayey with large subangular-angular 2-5 mm pebbles (quartz, ohms)
SAND; coarse-medium, quartz with granules

174 AX Medford
Core #125
Start depth: 990 ft
Stop depth: 1000 ft
Recovery: 1.9 ft
Date: 5/11/07
Described by: AAK, AP



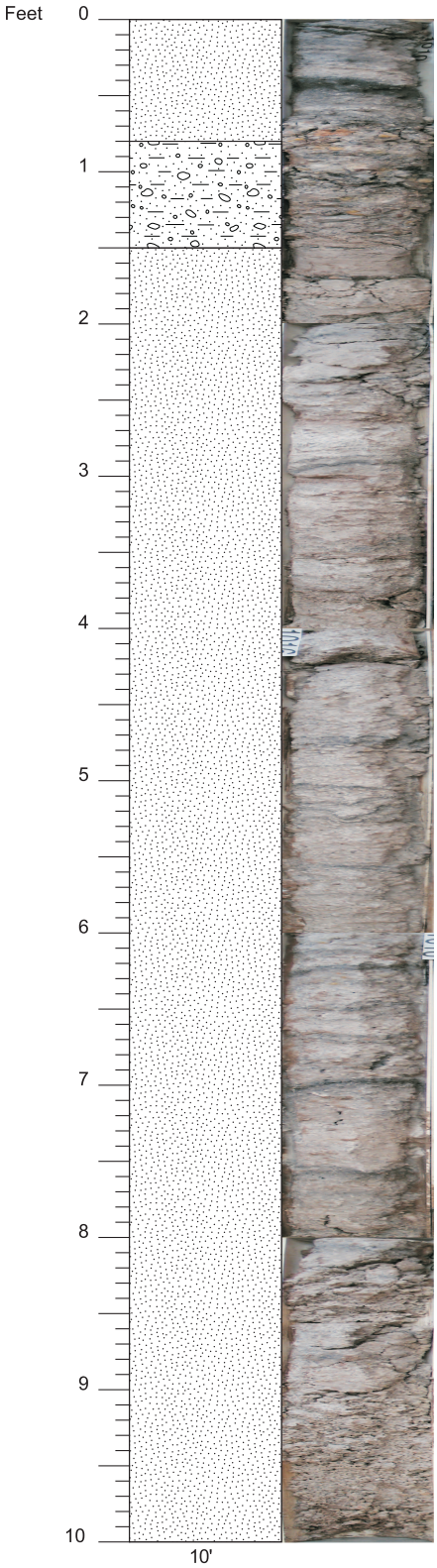
SAND; well sorted, medium, quartz

SAND; clayey, medium-very coarse; occasionally laminated dark silty clay (not lignite); laminations are inclined, 1.9 pebble; gley light gray (7/1)

SAND; very coarse-granuliferous, with 2-4 mm diameter pebbles; mostly quartz, rose quartz

SAND; (same as above), clayey, medium-very coarse; occasionally laminated dark silty clay (not lignite); laminations are inclined, 1.9 pebble; gley light gray (7/1)

174 AX Medford
Core #126
Start depth: 1000 ft
Stop depth: 1010 ft
Recovery: 10 ft
Date: 5/11/07
Described by: AAK, AP

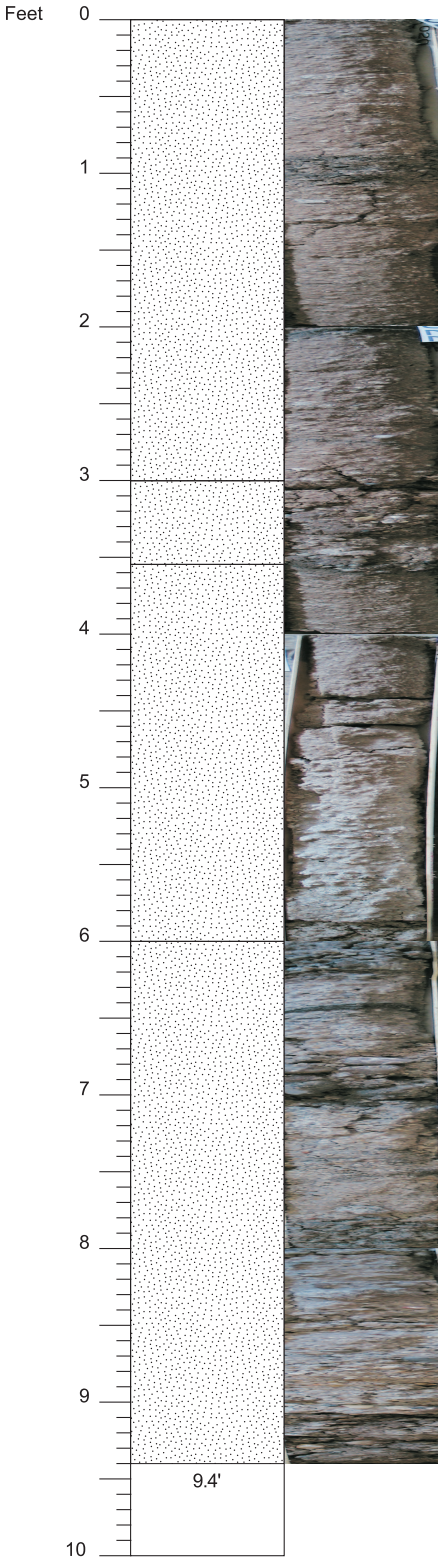


SAND: very coarse-medium, clayey, slightly granuliferous, occasional 1-2 mm diameter; pebbles-quartzose, black mafic?; trace mica, 4.5, 7.7, 8.2 dark grey laminations; slightly coarser at base of core

Gravel

174 AX Medford
Core #127

Start depth:	1010 ft
Stop depth:	1020 ft
Recovery:	10 ft
Date:	5/11/07
Described by:	AAK, AP



SAND; very coarse-medium, poorly sorted, soft; muddy matrix makes it stick together; several zones of darker clayey inclined laminae; 0.8-1, 2.1, 2.8 slightly clayey dark cross-laminae, small (<1 cm) clasts of whitish sandy clay included in beds in places

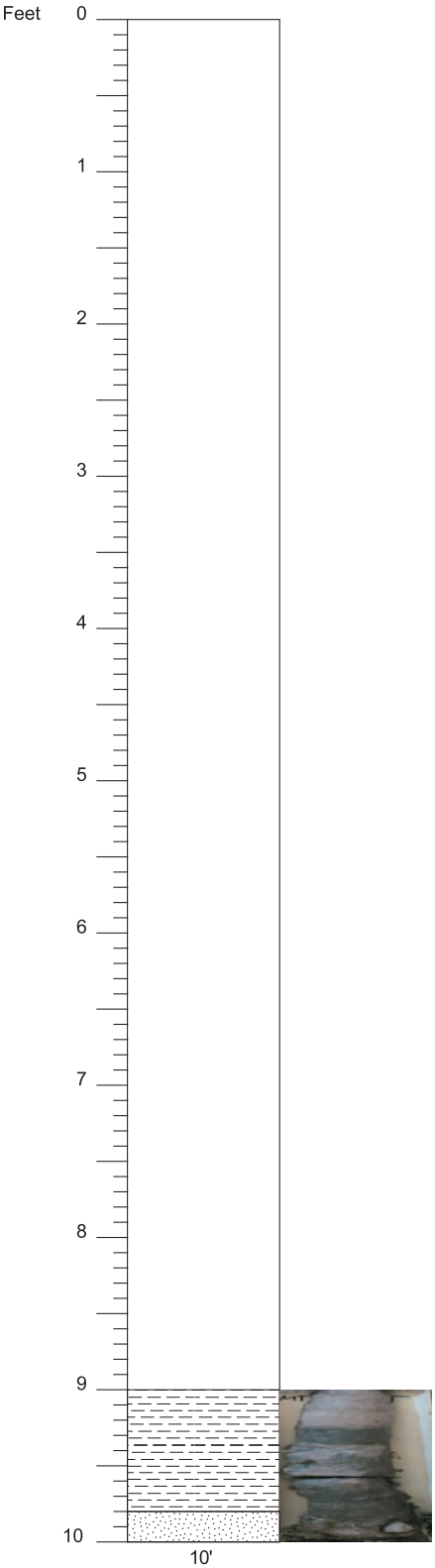
SAND; more heterogenous, poorly sorted, mostly coarse; granules and pebbles up to 1 cm; clasts of white sandy clay up to 2 cm bedded appearance; muddy matrix, dark muddy clayey laminae at base; sand subangular-angular; quartz

SAND; similar to above but softer; more easily washed out, lighter color; mostly coarse, very poorly sorted wth fine to granule size grains; slightly silty matrix (not as sticky); tends to get slghtly clearer and coarser (very coarse-granules) at base; subangular-angular, quartz

174 AX Medford
Core #128

Start depth:	1020 ft
Stop depth:	1030 ft
Recovery:	9.4 ft
Date:	5/11/07
Described by:	PPMcL

SAND; zones of gravel, gravelly zones at 6-6.2 (up to 15 mm), 6.7-7 (up to 25 mm pebbles), 7.9-8.1 (~10 mm common), increasing pebble content and size below 9 ft, with largest pebbles at 20 mm at bottom; quartz sand, subangular-angular, poorly sorted; coarse grained near top and coarser downward with average being very coarse near bottom with abd granules (besides pebbles); changes downward from slightly muddy and cohesive to fairly clean and loose



first 9 ft lost; appeared similar to previous core

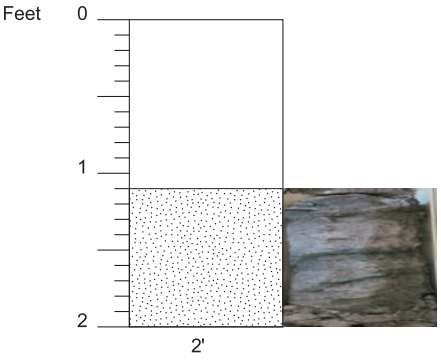
174 AX Medford
Core #129

Start depth:	1030 ft
Stop depth:	1040 ft
Recovery:	1 ft
Date:	5/12/07
Described by:	PPMcL

CLAY; variably sandy, silty, very thinly to thinly bedded lighter and darker tannish/brownish gray; 0-0.1 laminated, slightly sandy clay

0.1-0.2 lighter clay with very thin sandy lams and carbon specks
0.2-0.3 dark clay; sandy (very fine), abundant dissem very fine plant debris
0.3-0.55 slightly jumbled lighter sandy (very fine-fine) clay with streaks of charcoal/plant debris
0.55-0.8 dark clay, very sandy (very fine-fine), abundant plant debris, fine

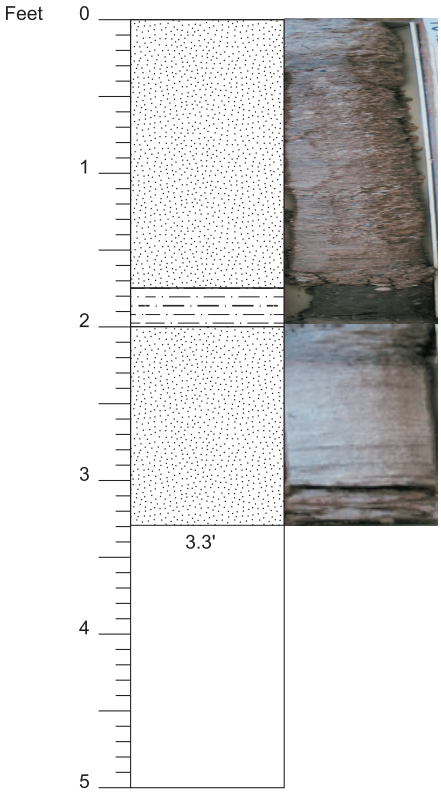
SAND; jumbled with some bits of overlying clay; coarse-very coarse, poorly sorted; large pebble (~20 mm); similar to previous core



0-1.1 missing, part of previous core

SAND; banded (tiger-striped); coarse-medium, poorly sorted, mostly quartz, grains mostly subangular-subround; 1-2% ohm, ~1% well rounded pinkish-orange grains (probably quartz); varies from slightly to very muddy matrix, muddier laminae more cohesive; matrix varies from whitish to dark gray at lamina scale; laminae slightly inclined and wavy (almost gneissic look), bottom 0.2 ft from core catcher the same but possibly slightly cleaner; dark laminae have more dark grains (charcoal?)

174 AX Medford
Core #130
Start depth: 1040 ft
Stop depth: 1042 ft
Recovery: 0.9 ft
Date: 5/12/07
Described by: PPMcL



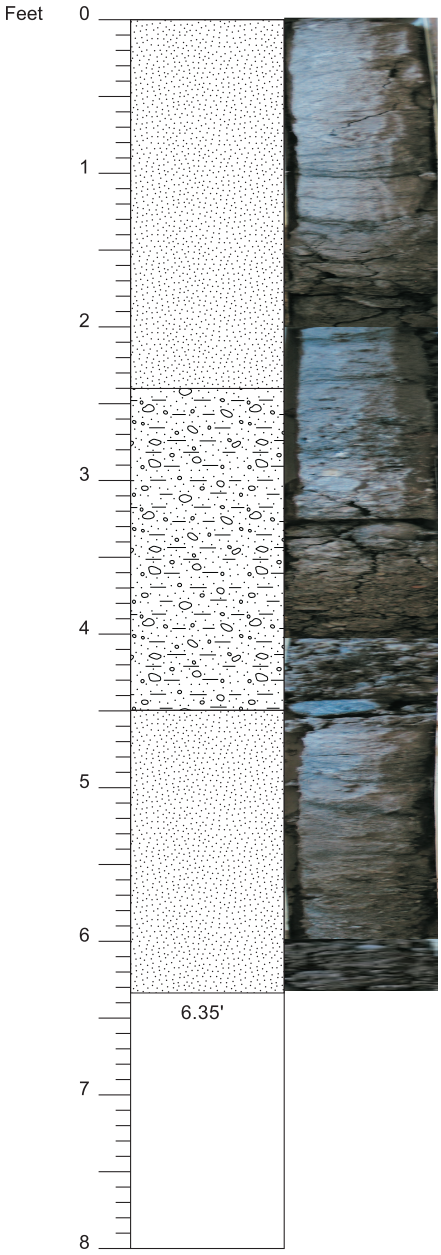
SAND: coarse, poorly sorted with grains fine-vcg; fer granules and pebbles at bottom; horizontal laminae, tighter/muddier from 0-0.2 ft, whitish matrix; still reasonable cohesive below 0.2 ft but slightly less muddy; pebbles at base up to 2 cm; mostly quartz, subangular-subround; 1-2% ohm

CLAY; very sandy and silty, very fine; some mica, abd black plant debris from very fine-2 cm long; 2 ft not abrupt/sharp

SAND; banded (tiger-striped) bedding; silty, preserving cohesiveness; coarsens downwards from very fine at top, moderate sorting (some fine mixed in) to fine-medium at base, lamination unclear from 2-2.3, slightly contorted 2.3-2.4; inclined (cross-beds?) 2.4-3.3; dark laminae (stripes) look to have darker matrix (organics?) that smears; lighter laminae have whitish matrix ~3% ohm (maybe plant); mostly subangular-subround quartz; few of pinkish-orange grains, well rounded

174 AX Medford
Core #131

Start depth:	1042 ft
Stop depth:	1047 ft
Recovery:	3.3 ft
Date:	5/12/07
Described by:	PPMcL

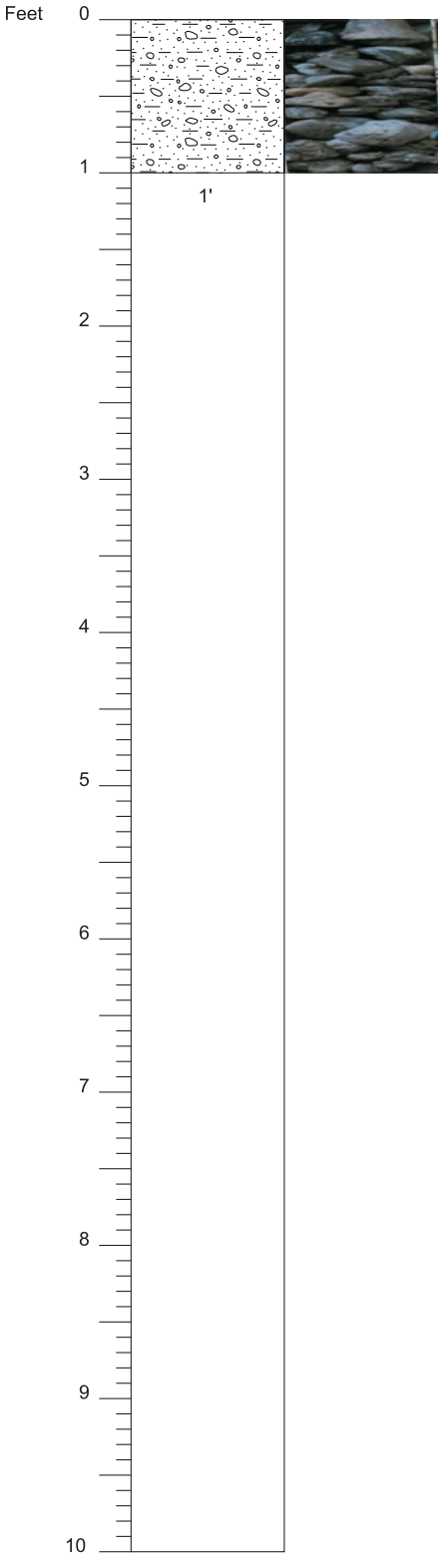


SAND; banded/cross-bedded with inclined to irregular dark laminae; mostly med grained but mod-poor sorted, inclined fine-coarse grains; mostly quartz, subround-subangular, ~1-2% ohm; muddy (silt and clay) whitish matrix; with dark tint of dark laminae possibly due to plant debris or darker mud

SAND w/GRAVEL; very poorly sorted, more coarse than other sizes but range from fine-very coarse, granules, and pebbles up to 3 cm; slightly muddy matrix and makes cohesive; pebbles mostly quartz but include other lithologies such as sandstone, some reddish

SAND; coarsens downward, moderate-poorly sorted, medium grained sand at top; passing to poorly sorted coarse sand with granules and mostly small pebbles near bottom; slightly silty (and clayey) makes cohesive; some dark laminae, slightly inclined; ~3%(?) dark sand size plant or charcoal fragments

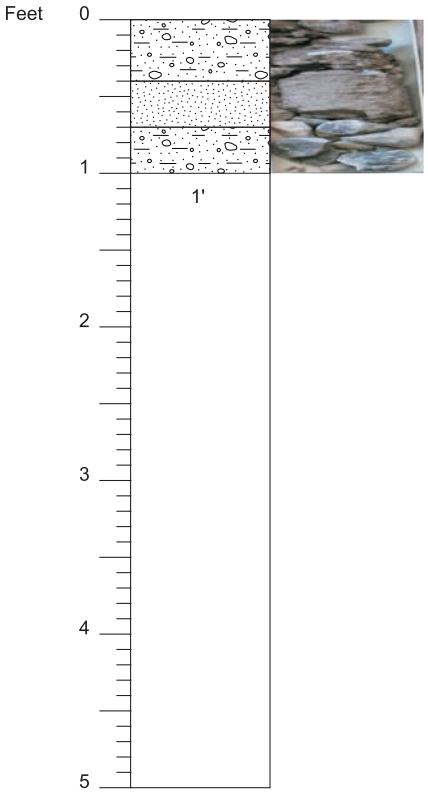
174 AX Medford
Core #132
Start depth: 1047 ft
Stop depth: 1055 ft
Recovery: 6.35 ft
Date: 5/12/07
Described by: PPMcL



PEBBLES; small to large, some in muddy sand matrlx of type seen in previous cores (remains of what washed out of this core run, some of which were cut by bit); inclned quartz, quarzite/sandstone; some very black lithology; arbitrary thickness

174 AX Medford
Core #133

Start depth:	1055 ft
Stop depth:	1065 ft
Recovery:	1 ft
Date:	5/12/07
Described by:	PPMcL

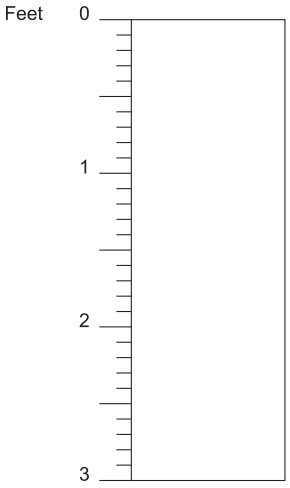


PEBBLES; quartz, coarse sand matrix

SAND; coarse

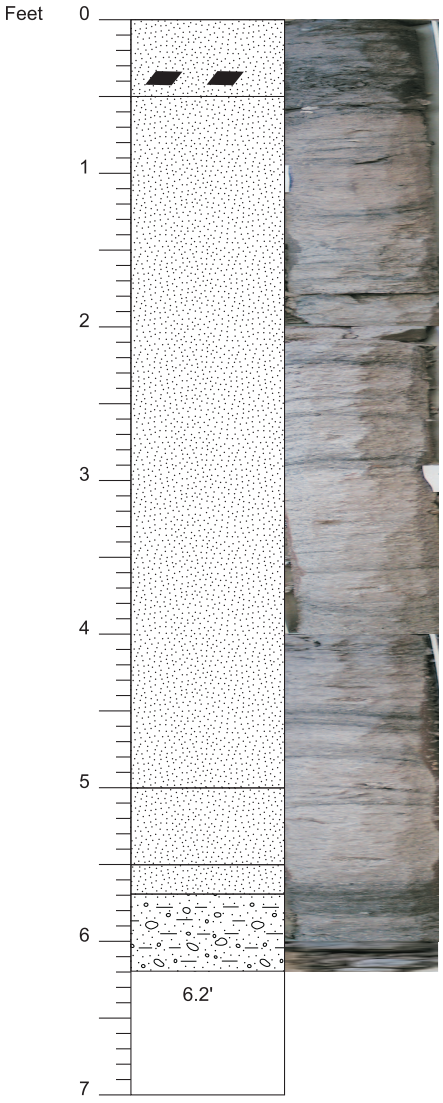
PEBBLES; quartz; subround-subangular; 1.5-5 cm

174 AX Medford
Core #134
Start depth: 1065 ft
Stop depth: 1070 ft
Recovery: 1 ft
Date: 5/13/07
Described by: BB



NO RECOVERY; barrel never latched in

174 AX Medford
Core #135
Start depth: 1070 ft
Stop depth: 1073 ft
Recovery: 0.0 ft
Date: 5/13/07
Described by: BB



SAND; medium; small chunks of lignite

SAND; medium-coarse, fining upward sucession, rounded quartz; laminated black streaks, fairly evenly spaced throughout core

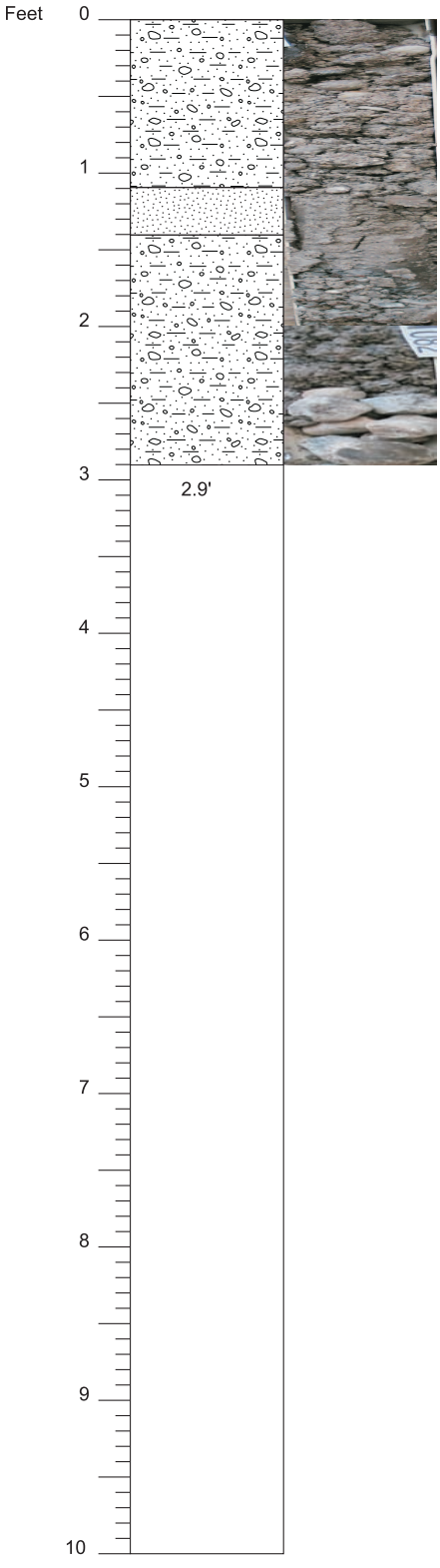
SAND; coarse, no black streaks

SAND; mostly medium, tight bands of dark streaks; strong sulfur smell in last 0.5 ft of core

PEBBLES; two, quartz; in bottom, subround-subangular, 3-5 cm

174 AX Medford
Core #136

Start depth:	1073 ft
Stop depth:	1080 ft
Recovery:	6.2 ft
Date:	5/14/07
Described by:	BB



SAND AND PEBBLES; poorly sorted , coarse-very coarse

SAND; medium-coarse, some black streaks; strong sulfur smell, most pebbles sub-rounded

PEBBLES; 1-5 cm

174 AX Medford
Core #137

Start depth:	1080 ft
Stop depth:	1090 ft
Recovery:	2.9 ft
Date:	5/14/07
Described by:	BB

Key


sand
sandy clay/silt
silty clay/clayey silt
silt
clay
pebbles/granules
indurated
calcarenite
glauconite sand
glauconitic clay
peat/lignite
pebbles/granules
shells
cross beds
laminations
burrows
p
pyrite
glauconite