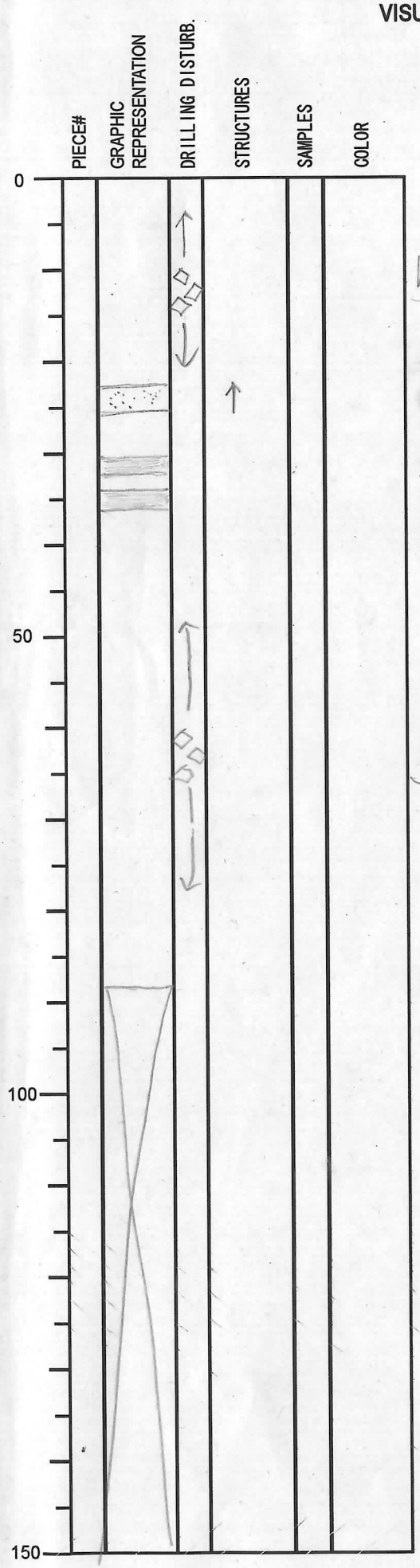
DRILLING

INTEGRATED OCEAN ~~DRILLIGN~~ PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 08 / 09 / 2005
EXP: 322
SITE/HOLE: C0011B
CORE: 01
SECTION: 01
OBSERBER: RS/SVE/KTO/HN



SECTION DESCRIPTION

greenish mudstone w/graded fine sand and green clay layers

brecciated

26.0-22.5 cm SILT

32.5 – 30.0 cm GREEN LAYER
37.0 – 33.5 cm GREEN LAYER
39cm XRF, XRD, CARB

brecciated

87.0 cm CORE ENDS

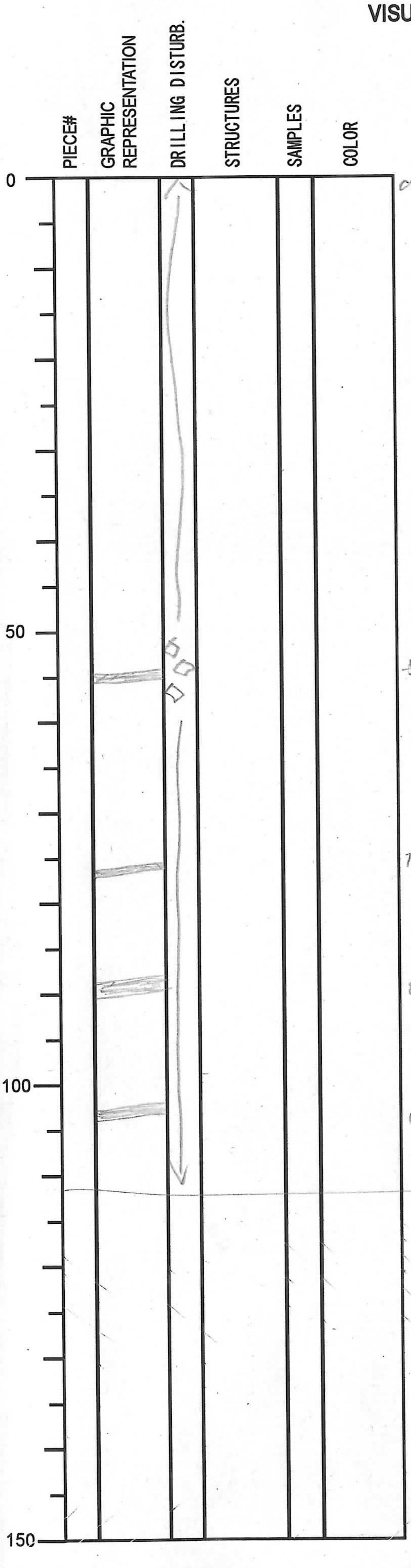
? THOROUGHLY BIOTURBATED SSS

MODERATE BIOTURBATION S

THOROUGHLY BIOTURBATED SSS

INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 08 / Sept / 20
EXP: 322
SITE/HOLE: C0011B
CORE: 01
SECTION: 2
OBSERBER: RS / HW



SECTION DESCRIPTION

all

Heavily Bioturbated (0–~14)

26–26.5 cm XRD, XRF, CARB

Grayish mudstone,

54.5–55.0 cm green layer

Moderate bioturbation?

77–77.5 cm green layer

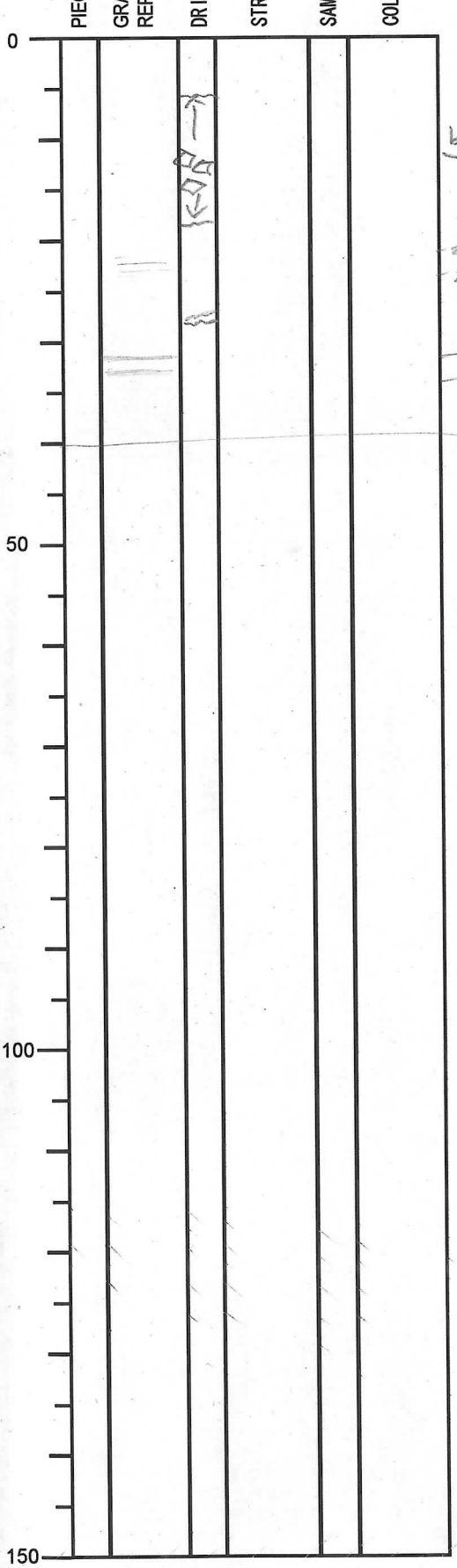
89.5–90.5 cm green layer
89.5–90.5 XRD, XRF, CARB

103.5–104.5 cm green layer

112 cm Core ends

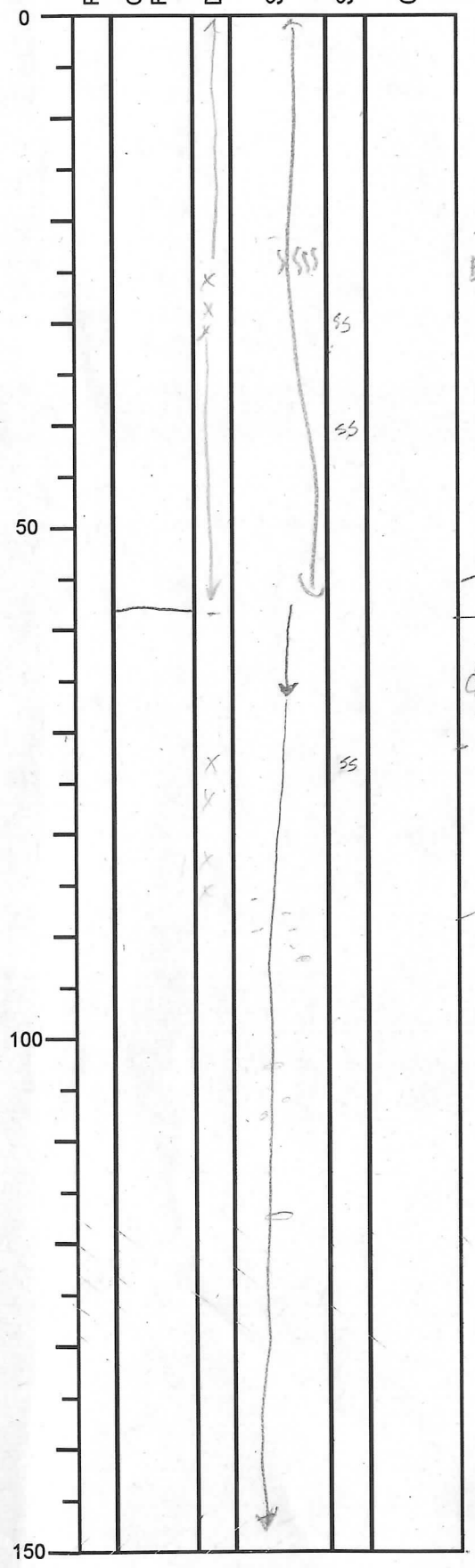
INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 08/Sep/20
EXP: 322
SITE/HOLE: C0011B
CORE: 1
SECTION: CC
OBSERBER: RS



INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 09 / 09 / 2009
EXP: 322
SITE/HOLE: C0011B
CORE: 2R
SECTION: 1
OBSERBER: RS/SK/HN



SECTION DESCRIPTION

Greenish gray silty clay

Alternation of green layers is presence

Brecciated

Bioturbation - Moderate (4)

58cm
59cm
grading from Silty clay to Sandstone
drilling disturbance 64
70
→ finer brecciation

80

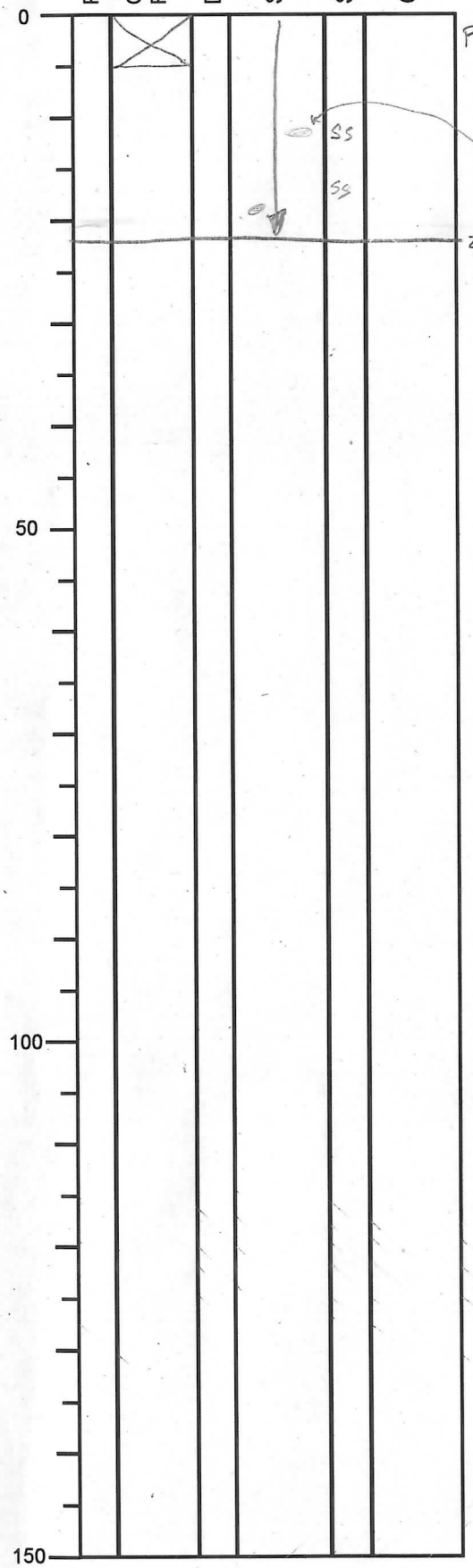
Dark gray Sandstone

ash lenses (mm size → cm size)
ash content increasing down core (greenish beds to light gray/white)

SS
74.5 cm (Sandstone)
32 (shells?)
40 (silty clay)

INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 09/09/2009
EXP: 322
SITE/HOLE: C0011B
CORE: 2R
SECTION: CC
OBSERBER:



light Ash throughout lenses
(4.2 is Cm largest lens others mostly Cm size)

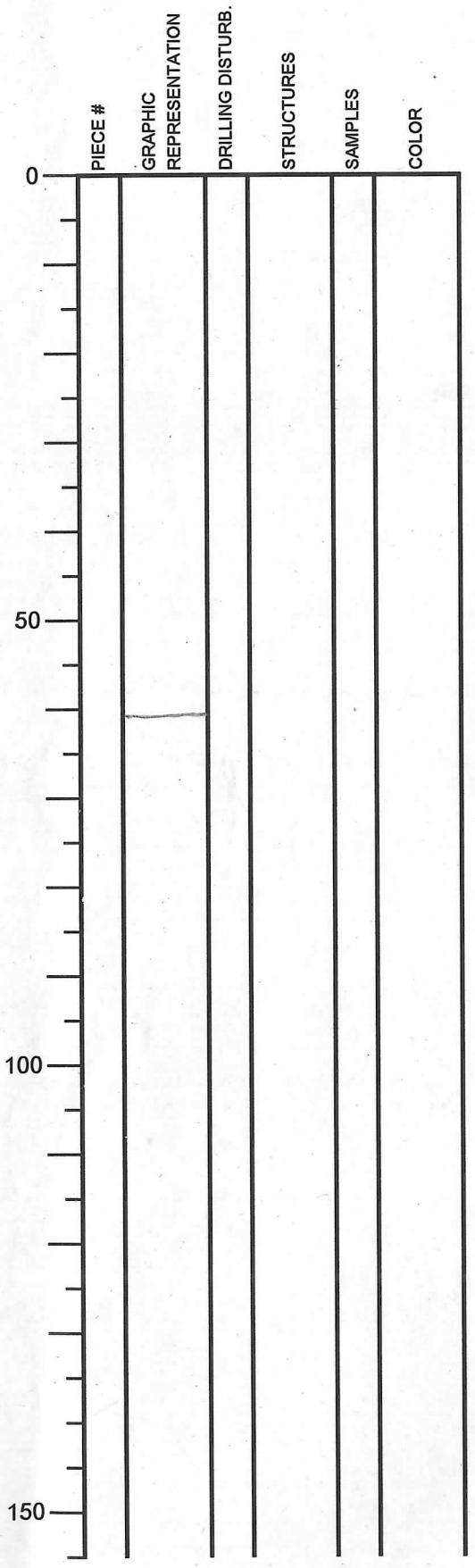
SS
11cm (ash)
16.5 cm

Ver.0.10_071109

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C011B
CORE: 3
SECTION: 1
OBSERBER: KCP/SK



SECTION DESCRIPTION

MAJOR
GREENISH GRAY SILTY CLAY

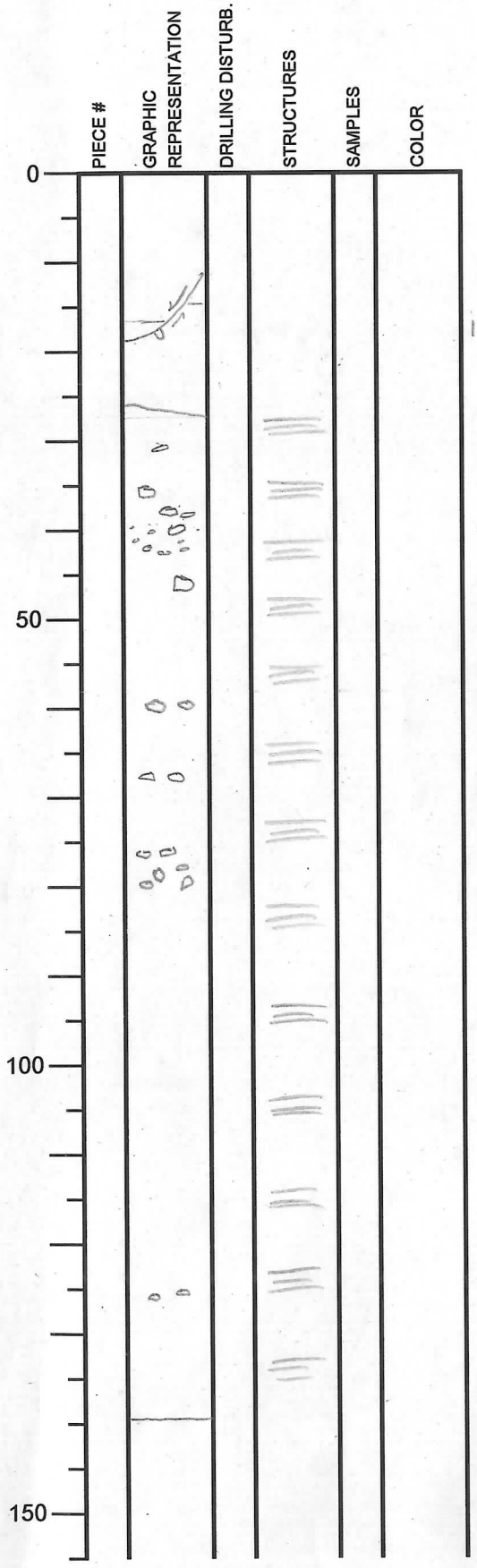
BIOTURKATION
5 (INTENSE

61 cm = END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2005
EXP.: 322
SITE/HOLE: C011B
CORE: 3
SECTION: 3
OBSERBER: KTA/SK



SECTION DESCRIPTION

MAJOR
GREENISH GRAY SILTY CLAY

BIOTURBATION 5 (INTENSE)

17-10,5 SEDIMENTARY FAULT + OFFSET 1.7 cm. TRUNCATES BURROW

27 cm (INCLINED CONTACT N10°)

44-29 cm LARGE PUMICE CLASTS 0.8 cm max a-axis

46 cm GREEN CLAST 0.8 cm a-axis

60-59 cm 0.5 cm PUMICE CLASTS

67.5 cm 0.3 cm PUMICE CLASTS

80.0-76.0 cm 0.3 cm PUMICE CLASTS
VOLCANIC SST. THOROUGHLY STRATIFIED (138-27 cm)

BIOTURBATION 0

ESTIMATED BULK MEAN GRAIN SIZE 0.5-1 mm

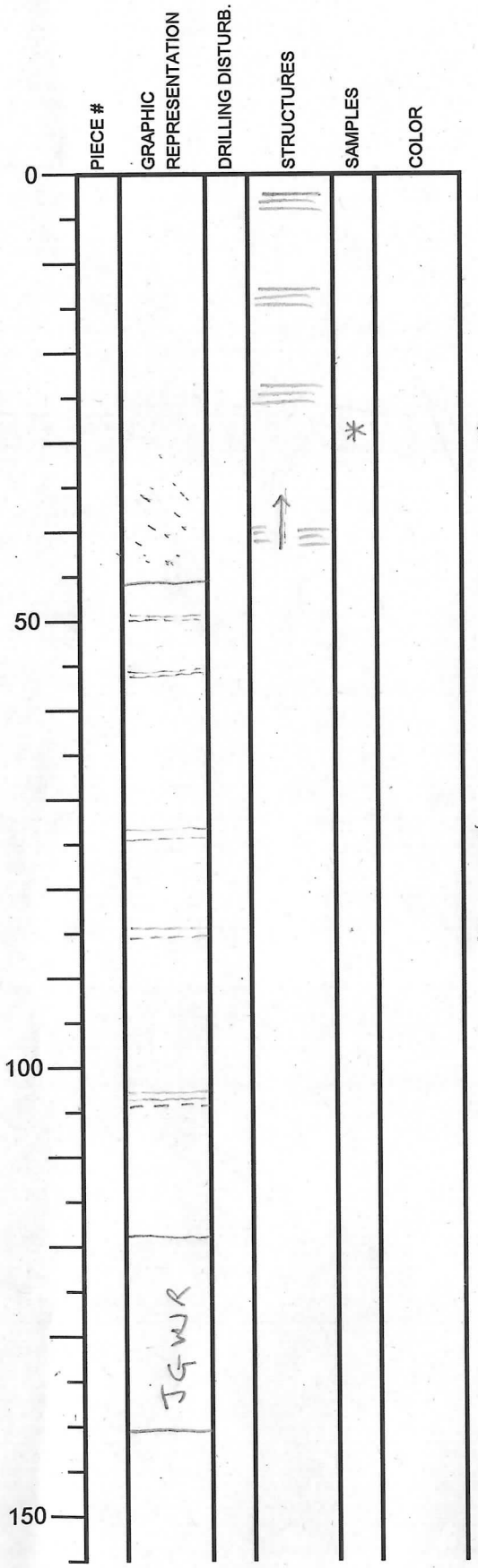
126-125 cm PUMICE CLASTS 0.2 cm

138 cm = END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C011B
CORE: 3
SECTION: 4
OBSERBER: KTP/SK



SECTION DESCRIPTION

VOLCANIC SST. THOROUGHLY STRATIFIED

BIOTURBATION 0

*28 cm SS

46-39 cm MORE VISIBLE LITHICS (light-colored)

46 cm
49 GSC (1-2 mm thick)

56-55.5 GREEN SILTY CLAY (GSC)

BIOTURBATION 5 (INTENSE)

74-73.0 GSC MAJOR GREENISH GRAY SILTY CLAY

85-84.5 GSC MINOR GREEN MM-SCALE SILTY CLAY (GSC)

103-102.5 GSC
104 cm

GRAY SILTY CLAY (118-104 cm)

BIOTURBATION 5 INTENSE

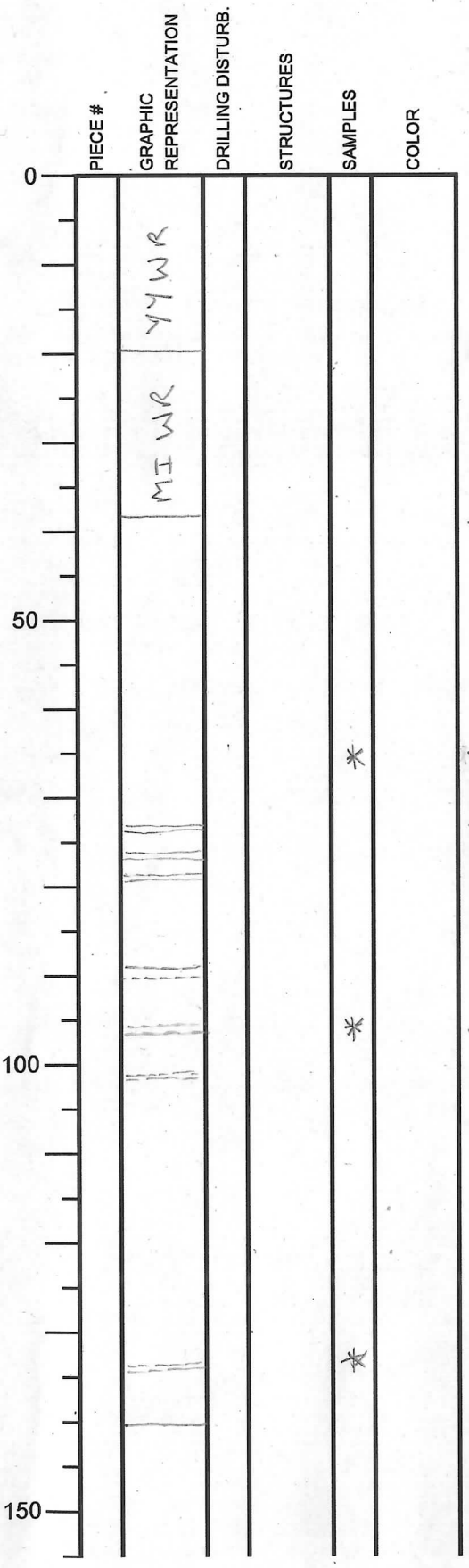
118 cm = END

140.0-118.3 cm JGWR

Integrated Ocean Drilling Program

Visual Core Description

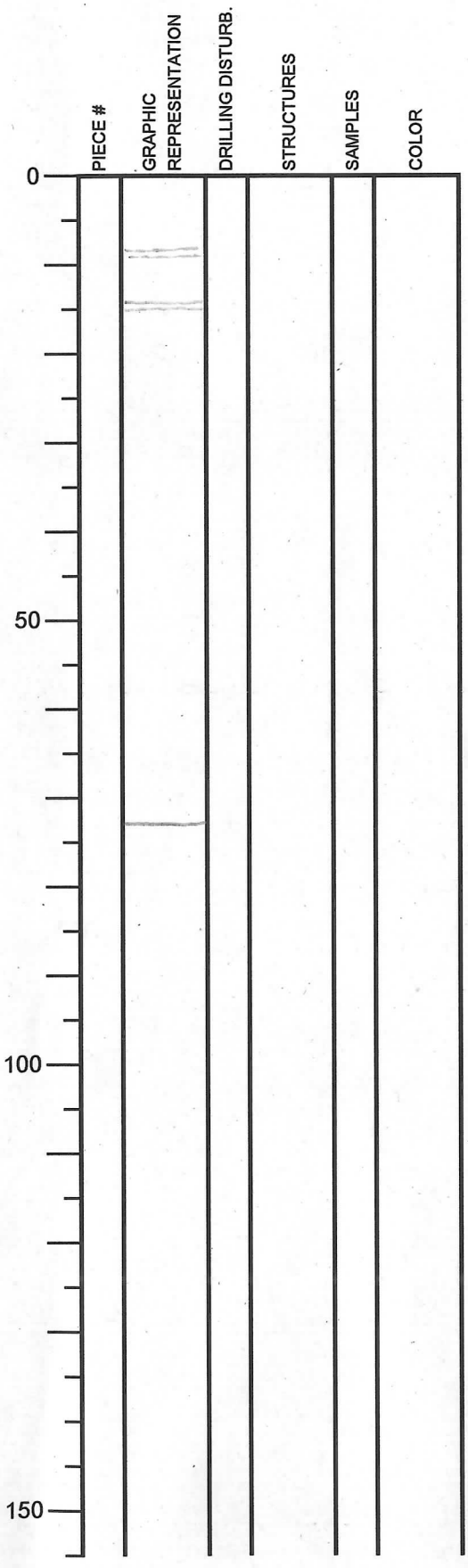
NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C0118
CORE: 3
SECTION: 5
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C0118
CORE: 3
SECTION: 6
OBSERBER: KTP/SK



SECTION DESCRIPTION

8-7.5 GSC (bioturbated)

14.3-14 GSC

MAJOR
GREENISH GREY SILTY CLAY
MINOR
GREEN MM-SCALE SILTY CLAY

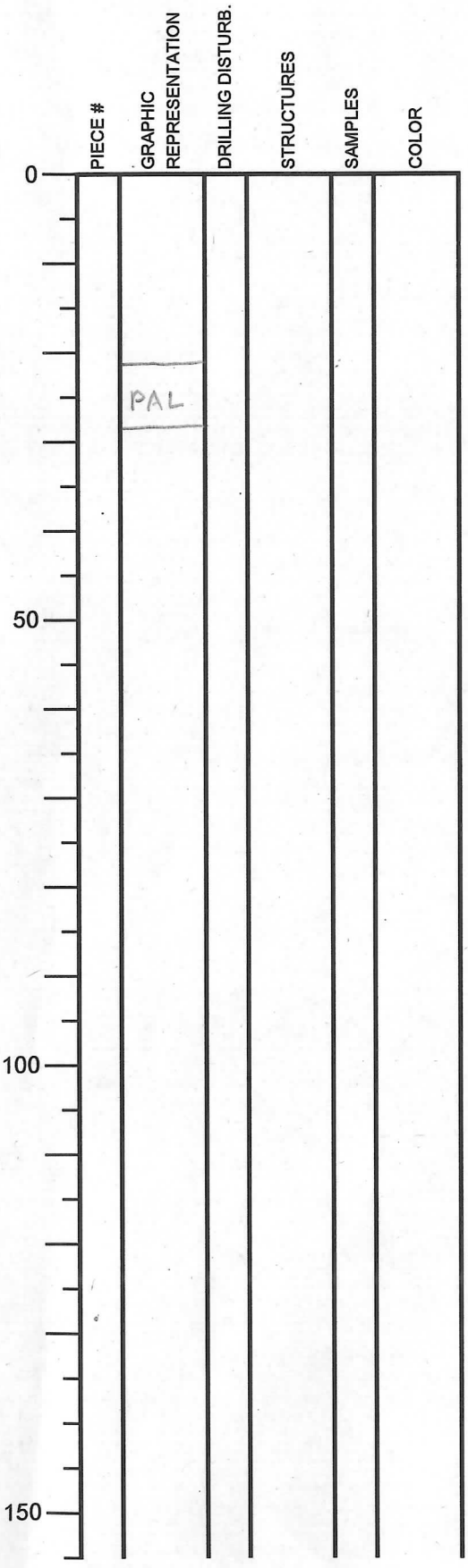
BIOTURBATION
5 (INTENSE)

73.0 cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/04/2009
EXP.: 322
SITE/HOLE: C0118
CORE: 3
SECTION: CC
OBSERBER: KTP/SK



SECTION DESCRIPTION

MAJOR
GREENISH GRAY SILTY CLAY
MINOR
GREEN MM-SCALE SILTY CLAY

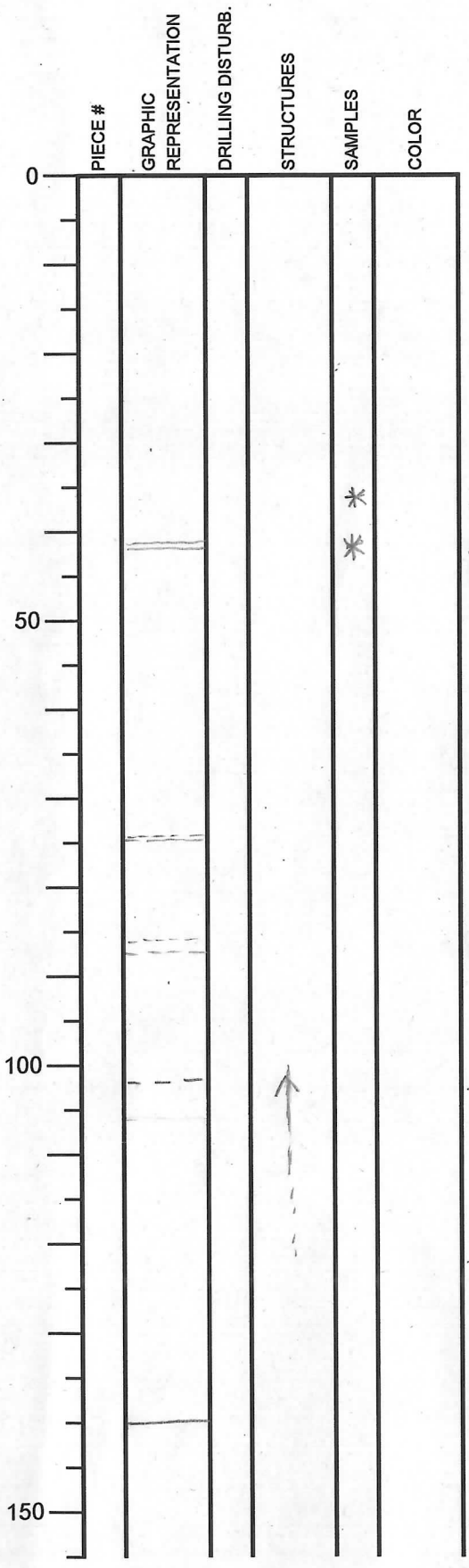
12.0 cm END
17.0 cm

BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 4
SECTION: 1
OBSERBER: KTP/SK



SECTION DESCRIPTION

36 cm SS

42 cm BLACK LAYER (5mm)
*42 cm SS

74.5 cm (2mm) GSC

87.5-86 cm GSC

----102 cm---

140 cm END

MAJOR
GREEN-GRAY SILTY CLAY

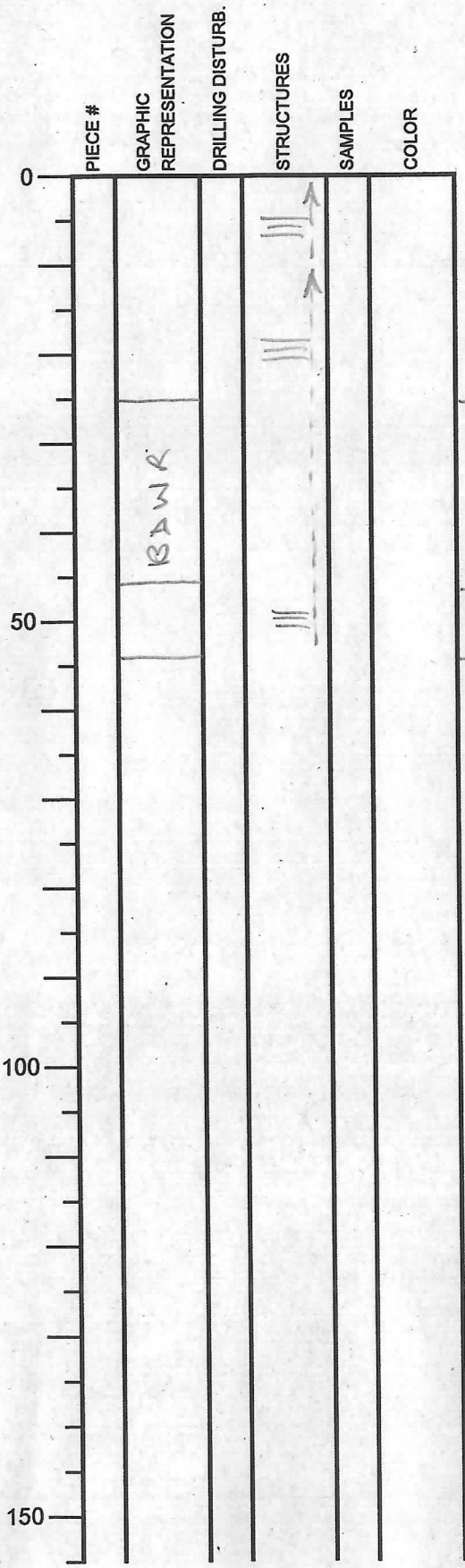
MINOR
GREEN mm-SCALE SILTY CLAY LAYERS (GSC)

BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/07/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 4
SECTION: 2
OBSERBER: KTP/SK



SECTION DESCRIPTION

GREEN-GRAY MUDDY SILTSTONE
OVERALL NORMALLY GRADED

BIOTURBATION 0

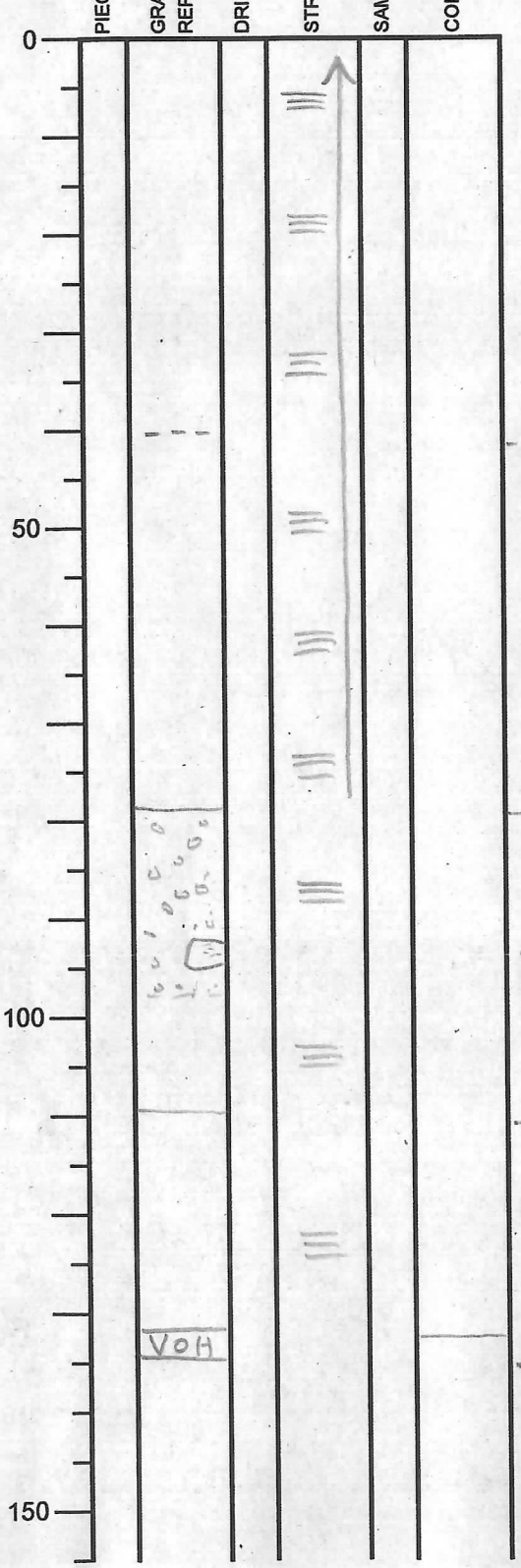
GREEN GRAY VERY FINE MUDDY SST

BIOTURBATION 0

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 4
SECTION: 4
OBSERBER: KTP/SK



SECTION DESCRIPTION

MEDIUM-TO-FINE GRAINED SST

GREEN-GRAY SANDSTONE.

40cm

BIOTURBATION
0

COARSE-GRAINED VOLCANIC SST

78cm

109-78 cm GRIT/SMALL PEBBLE VOLCANIC SANDSTONE GRADE

94-92cm 3 cm a-axis PUMICE
96-77cm ASH + RICH INTERNAL† (0.5-1.5 cm typical a-axis of larger clasts) INCLUDES GREEN-GRAY CLAY CLASTS TO 2 cm a-axis

109cm

86 & 80 cm VOLCANICLASTICS (BLACK)

BIOTURBATION
0

131-109cm MEDIUM GRADE GREEN-GRAY VOLCANIC SST.

131 cm END
134cm

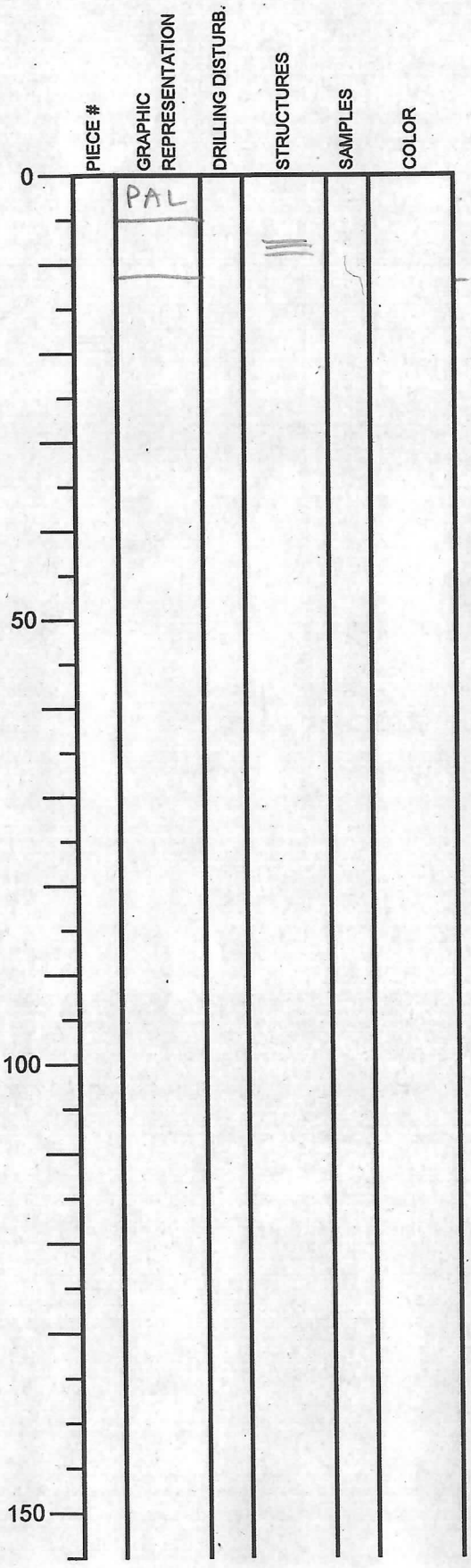
ANDESITE OR BASALT?

†Ash superficially looks like pumice but ash lenses & clasts

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 10/07/2009
EXP.: 322
SITE/HOLE: C0011 B
CORE: 4
SECTION: CC
OBSERBER: KTP/SK



SECTION DESCRIPTION

GRIT/VERY COARSE VOLCANIC SST.

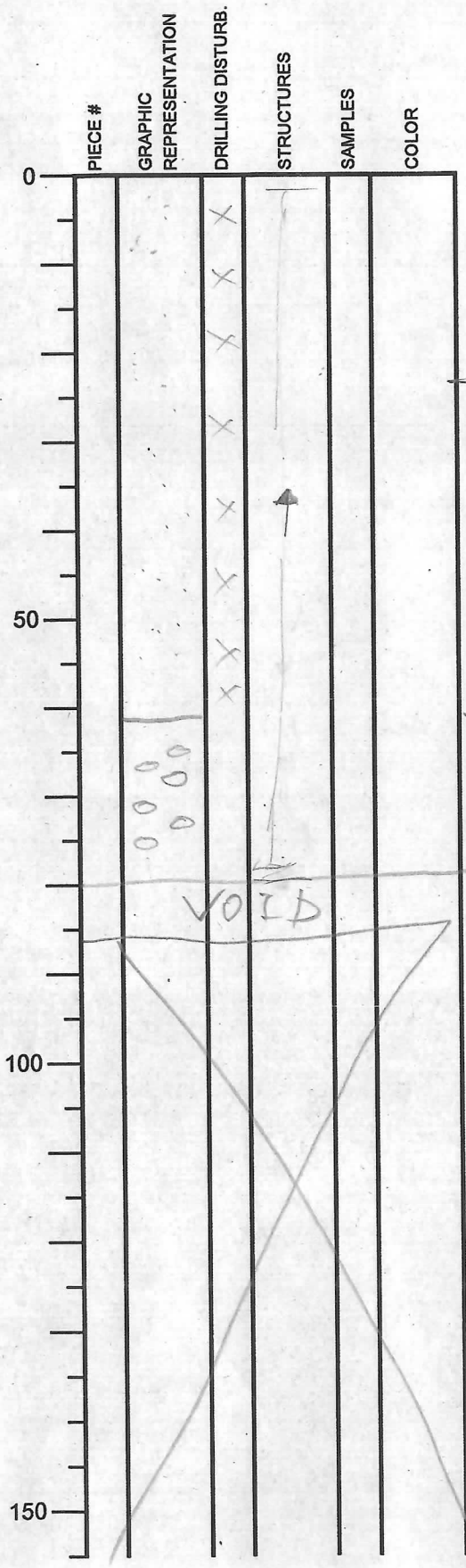
12 cm END

BIOTURBATION
0

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: / /20
EXP.: 322
SITE/HOLE: C0011B
CORE: 5R
SECTION: 1
OBSERBER: Hajime. IY.



SECTION DESCRIPTION

Major: Volcanic sandstone

no bio-tarbo.

medium grained volcanic sandstone

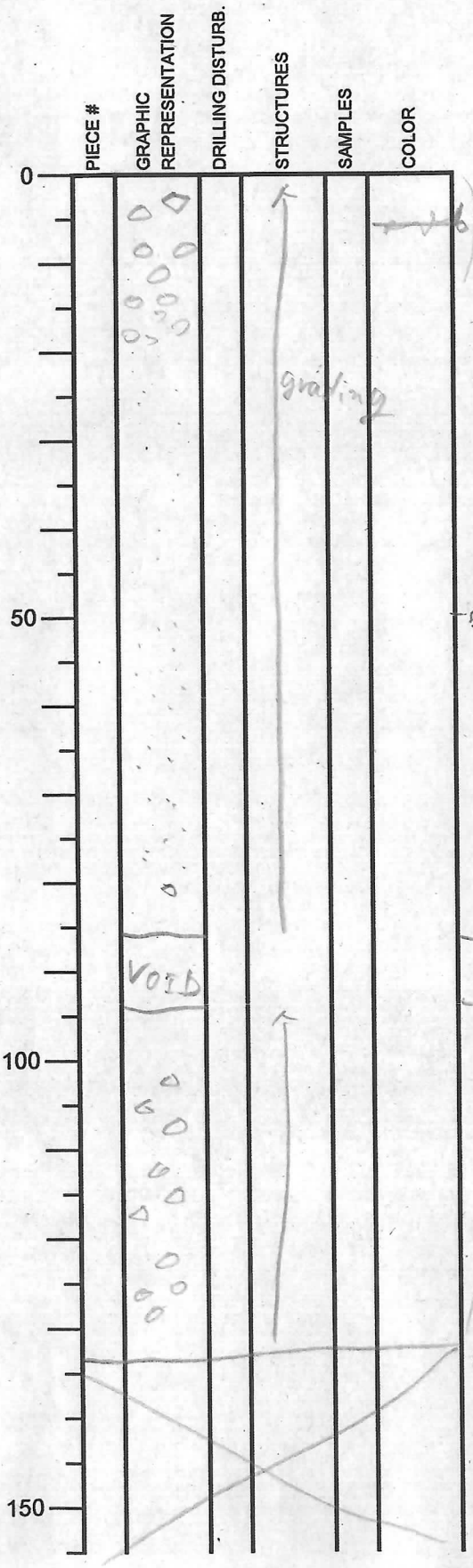
volcanic sandstone w/ (lower) pumice and ash fragments (0.5-2.5 cm diameter)

SS
22.5 cm → sand stone

Integrated Ocean Drilling Program

Visual Core Description

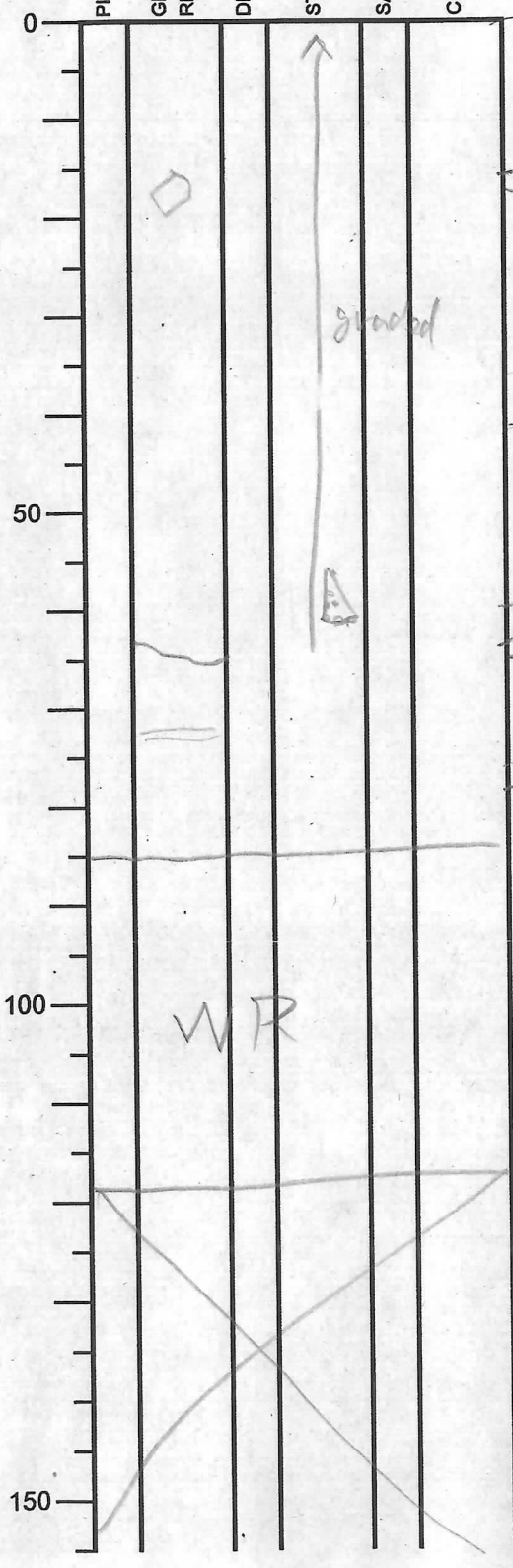
NO.
DATE: 9/10/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 5R
SECTION: 3
OBSERBER: M. Naruse



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: / /20
EXP.: 322
SITE/HOLE: C0011B
CORE: 5R
SECTION: 4
OBSERBER: H. Narase



SECTION DESCRIPTION

More ash/pumice
15.5 SS
16cm ash fragment
Major: Volcaniclastic sandstone
◎ graded
◎ ash fragment included
42
57
63 SS
64cm erosional contact
(gravel) very coarse Volcaniclastic Sandstone
Minor: Greenish gray Silty clay
73 a green layer (5mm thick)
77.5 SS black
◎ color banding (73-80cm)

no bioturbation

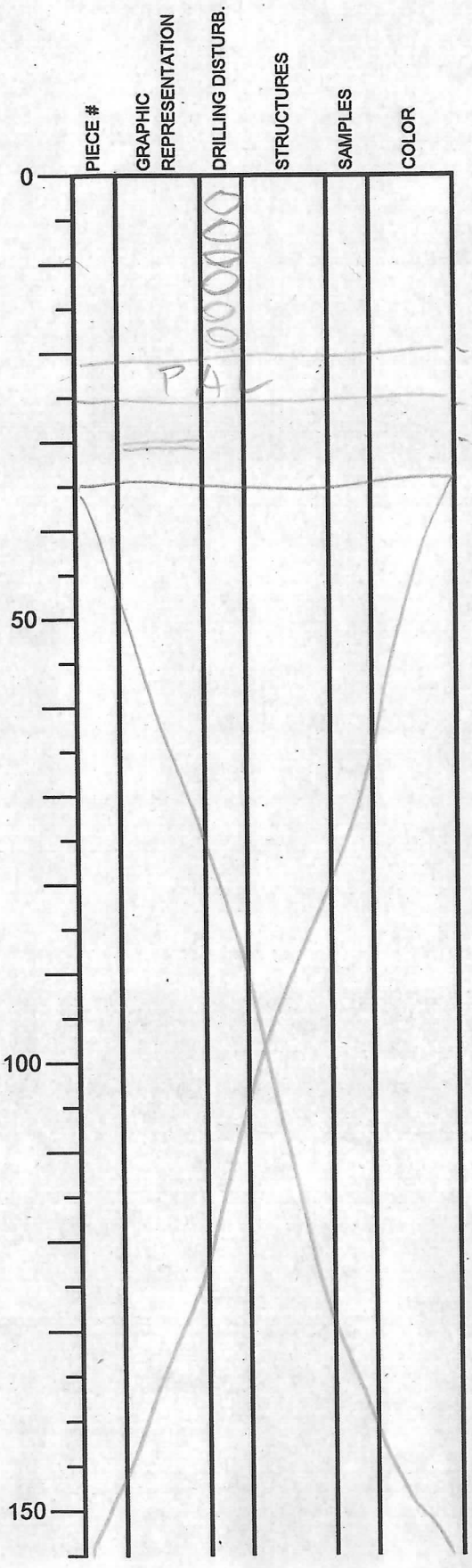
Heavy bioturb. (5)

SS
15.5cm → ash
63cm → Very coarse sandstone
77.5 → Silty clay

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9 / 1 / 2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 5R
SECTION: CC
OBSERBER: H. Narusc



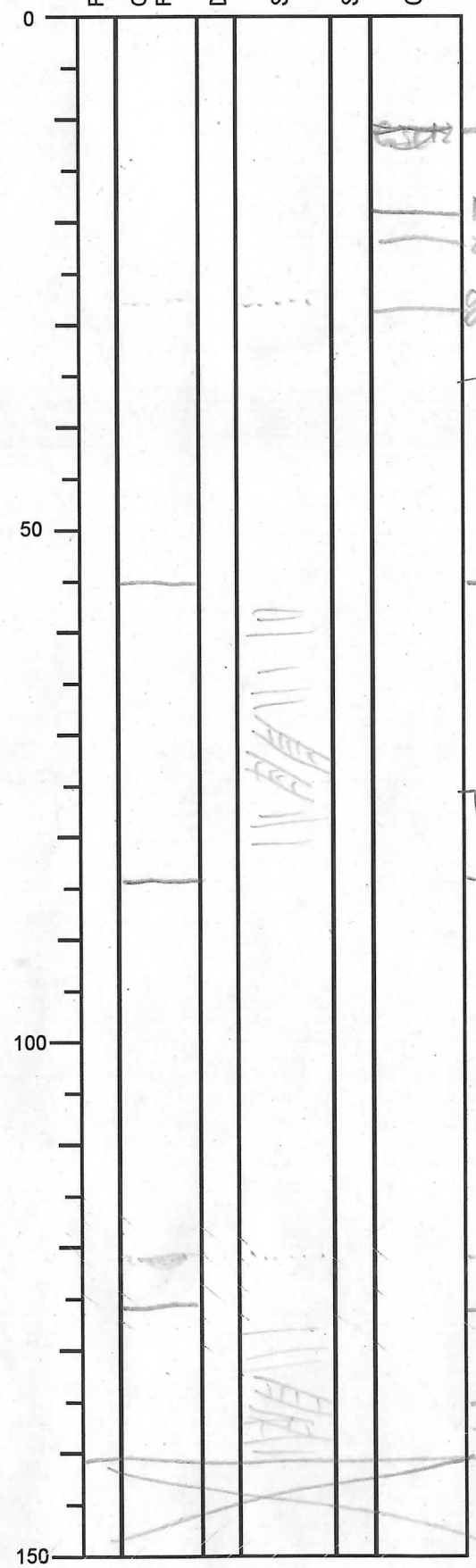
SECTION DESCRIPTION

Major: Greenish gray silty clay

Heavy bioturbation (5)

INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 9 / 10 / 2009
EXP: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 1
OBSERBER: H. Naruse



SECTION DESCRIPTION

Major: Greenish gray silty clay diffuse color banding

12.5 GSC

19.5

22.5

green layer (5mm thick) 28cm

36cm (ss)

Heavy bioturbation (5)

62cm diffuse boundary, gray laminated clay

Zoophycos (68-80)

76cm (ss)

slight bioturbation (2)

84cm sharp boundary

Greenish gray silty clay diffuse color banding

Heavy b.t. (5)

green layer (5mm thick) 122cm

126cm diffuse boundary

Zoophycos laminated gray clay

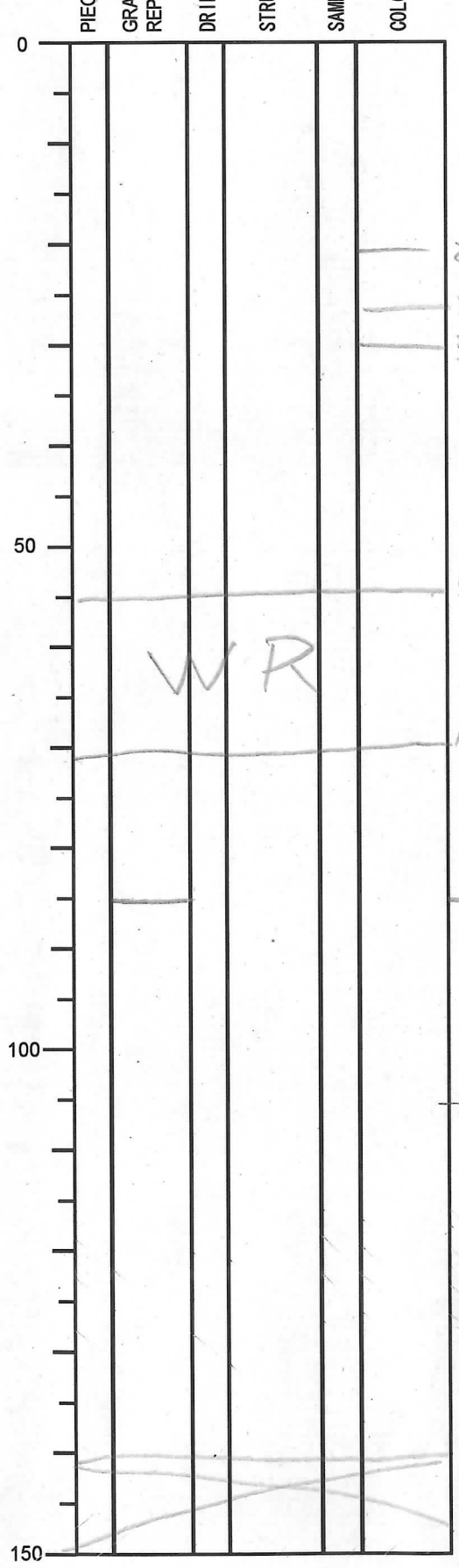
141

slight bioturbation (2)

Ver.0.10_071109

INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 9 / 10 / 2009
EXP: 322
SITE/HOLE: C
CORE: 6R
SECTION: 2
OBSERBER: H. Naruse



SECTION DESCRIPTION

Major: Greenish gray silty clay
diffuse color banding

Heavy bioturb. (5)

slight bioturb. (1)

structureless gray clay

sharp boundary

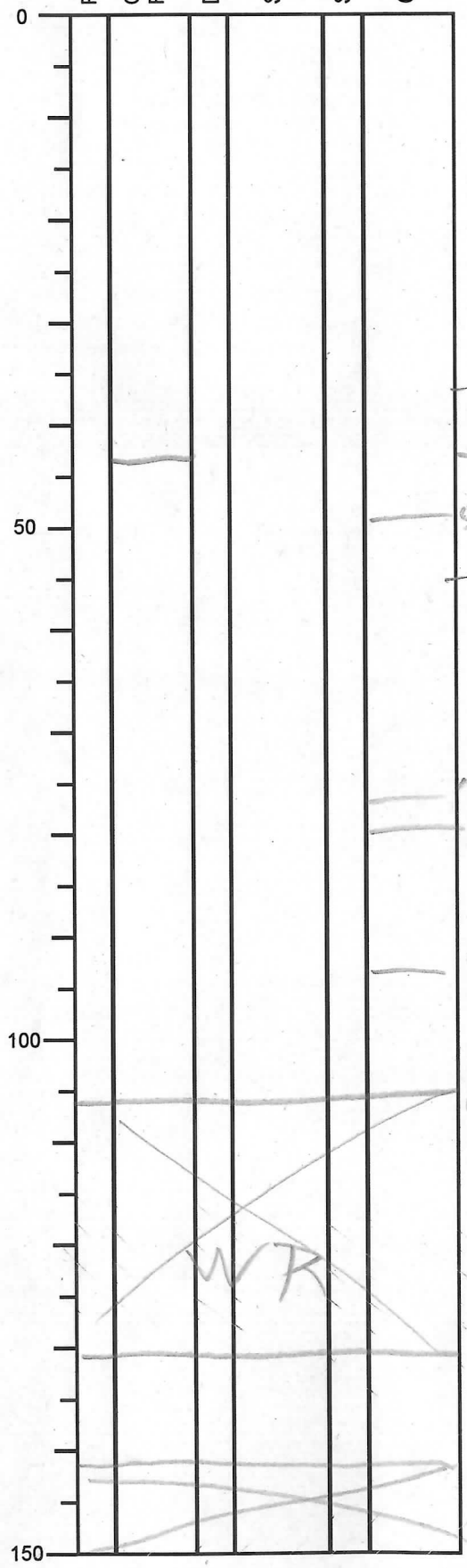
Major: Greenish gray silty clay

Heavy bioturb. (5)

Ver.0.10_071109

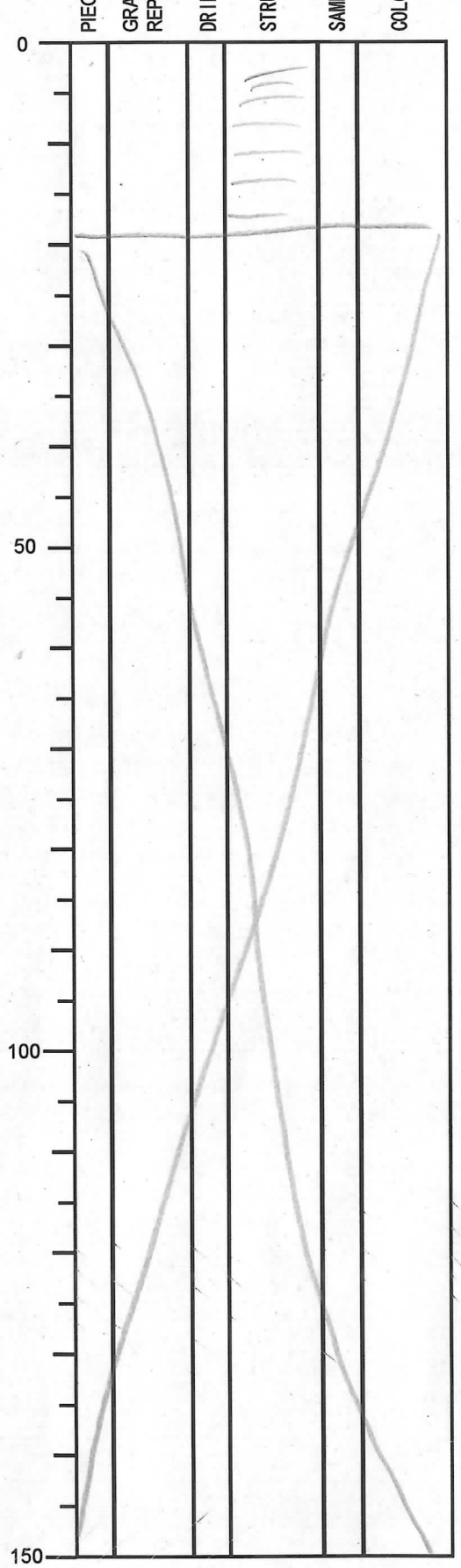
INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 9/10/2009
EXP: 32
SITE/HOLE: C0011B
CORE: 6R
SECTION: 3
OBSERBER: H. Naruse



INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

NO.
DATE: 9 / 10 / 20 09
EXP: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 4
OBSERBER: H. Naruse



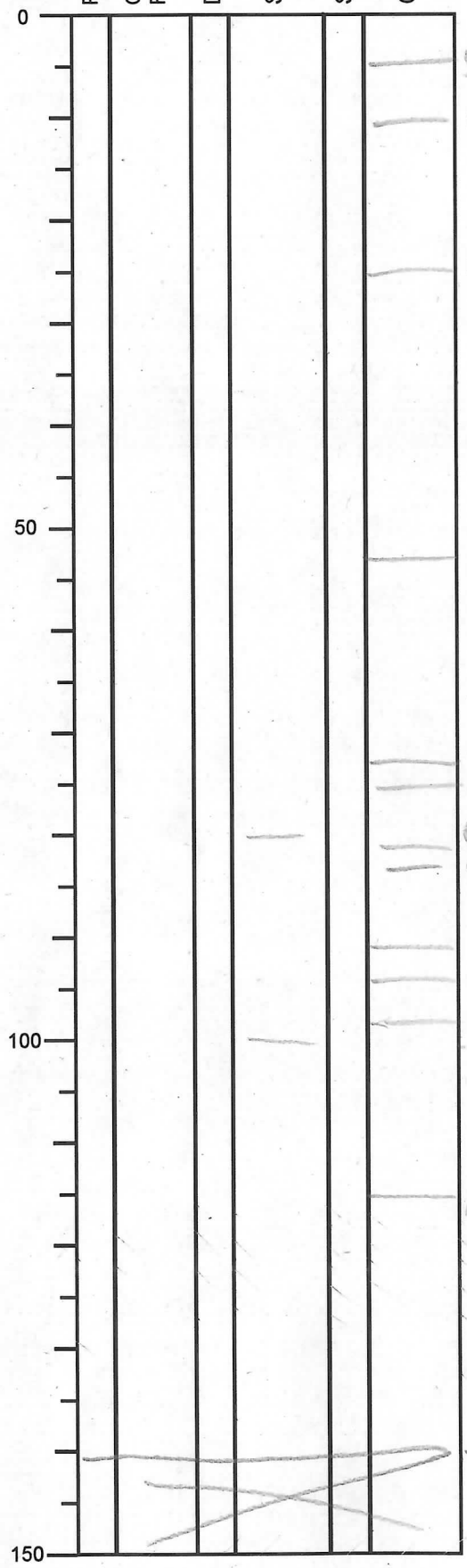
SECTION DESCRIPTION

laminated gray clay
w/ large burrows

slight bioturb (2)

INTEGRATED OCEAN DRILLIGN PROGRAM
VISUAL CORE DESCRIPTION

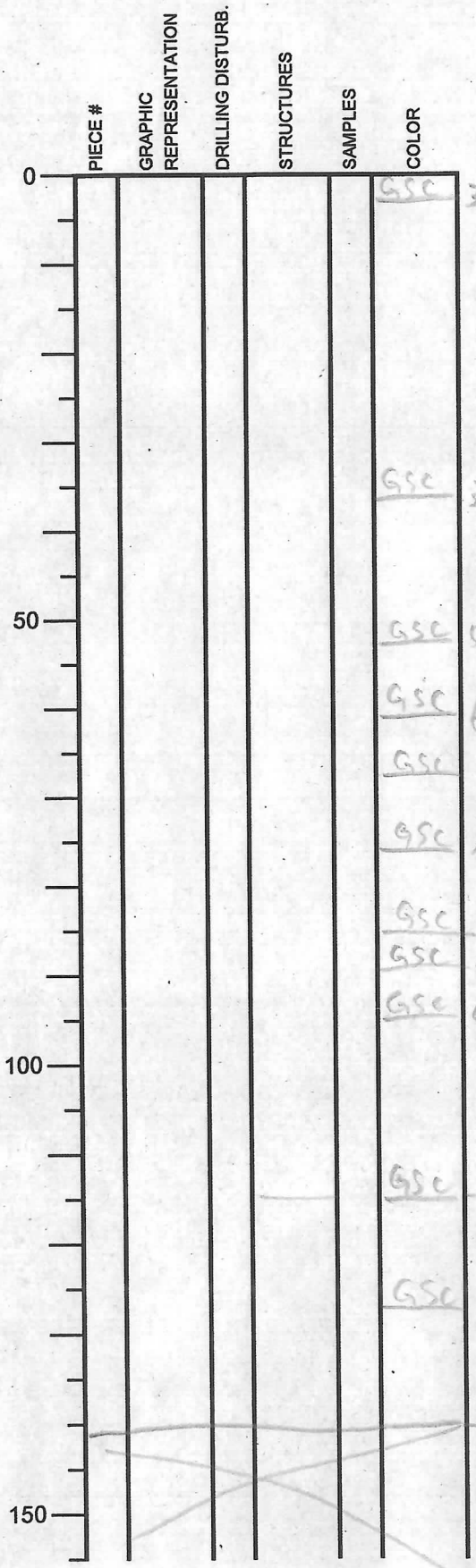
NO.
DATE: 9/10/2009
EXP: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 6
OBSERBER: H. Haruse



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/6/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 7
OBSERBER: H. Naruse



SECTION DESCRIPTION

Major: Greenish gray silty clay

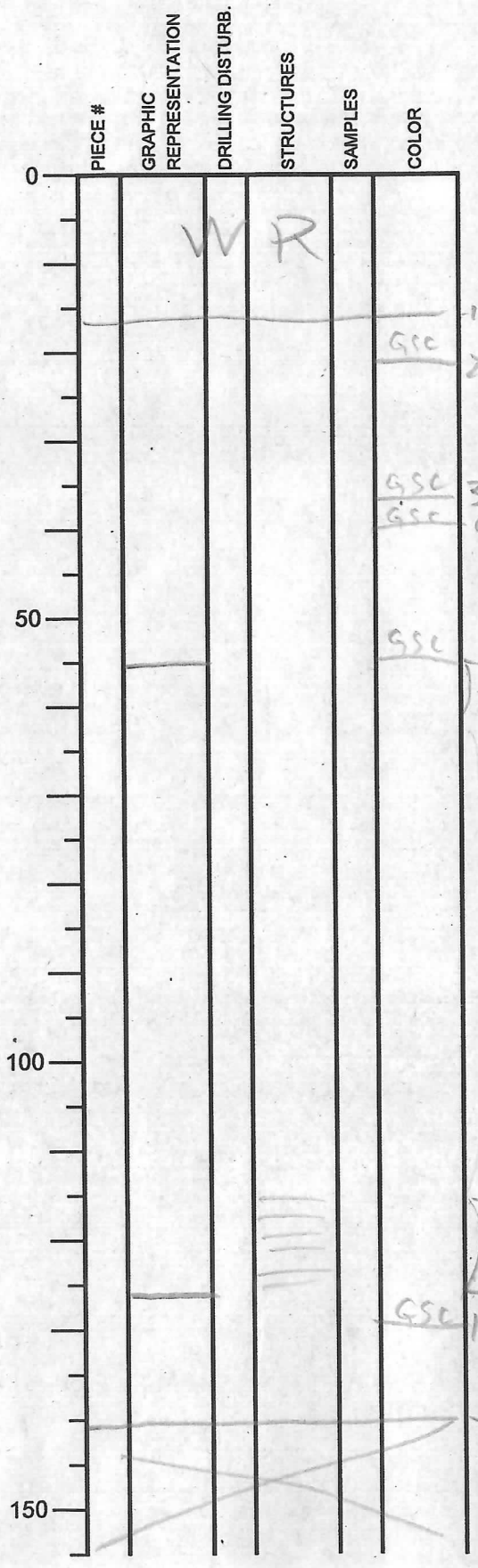
diffuse color banding

Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 8
OBSERBER: H. Naruse



SECTION DESCRIPTION

Major: Greenish gray silty clay

Heavy bioturb (5)

diffuse boundary

dark layer

No bioturb (1)

laminated gray clay

diffuse laminae

distinct laminae

126.5 — sharp boundary w/ black lamina

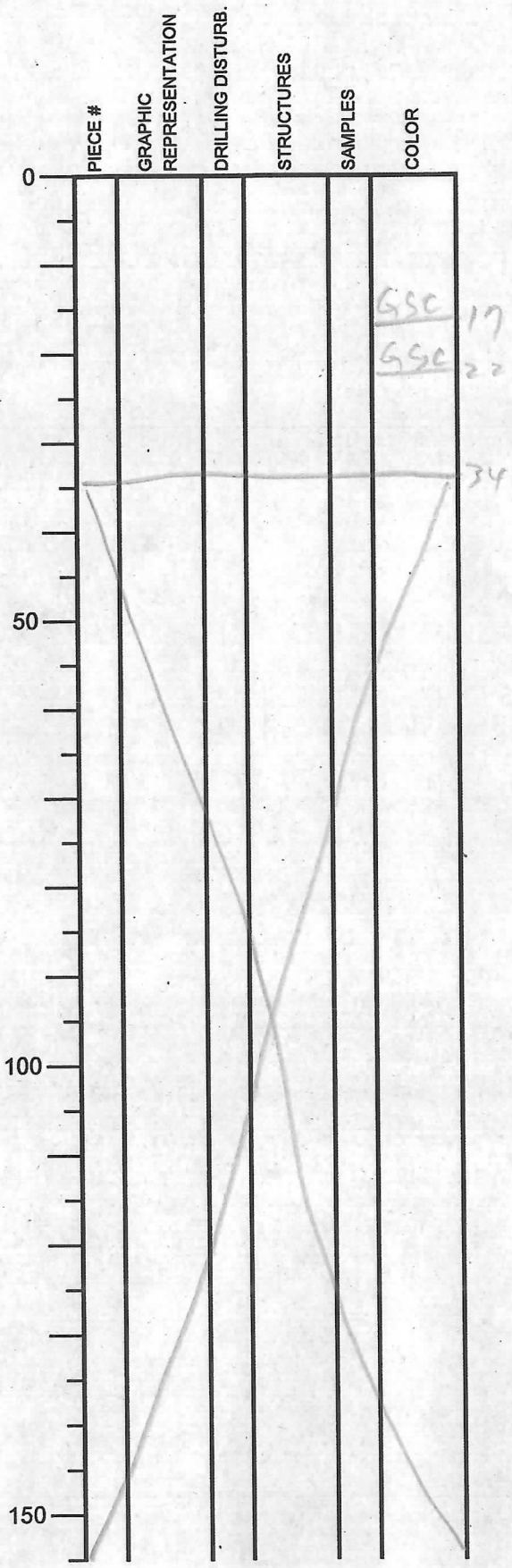
Greenish gray silty clay

Heavy (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/10/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: 9
OBSERBER: H. Naruse



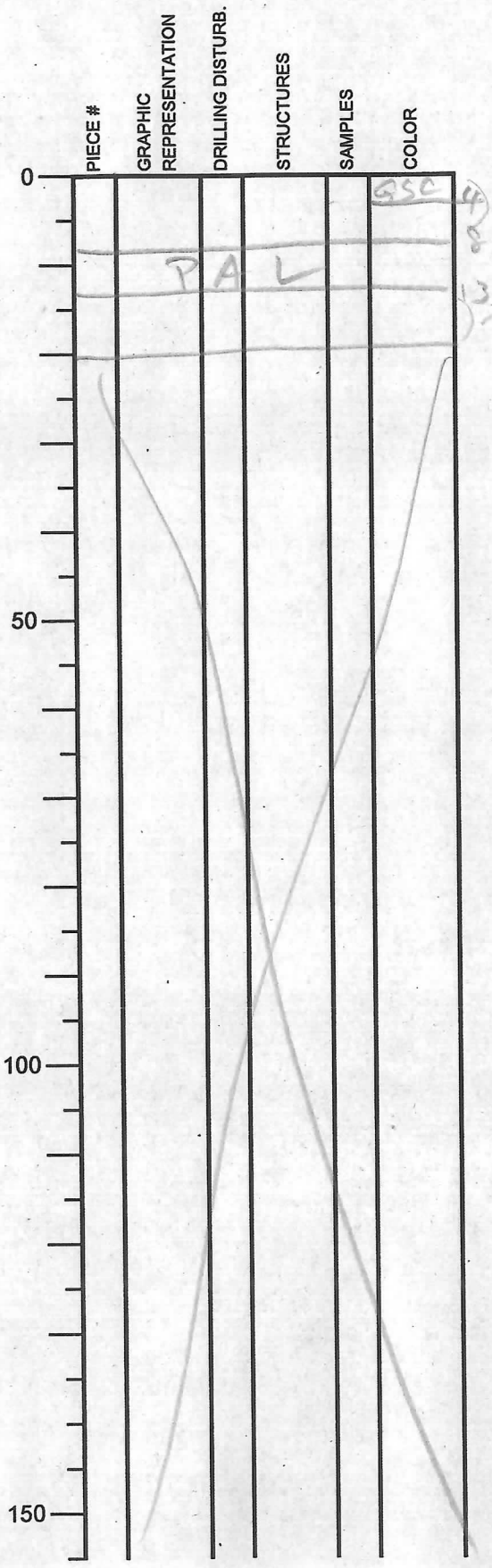
SECTION DESCRIPTION

Greenish gray silty clay | Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/01/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 6R
SECTION: CC
OBSERBER: H. Haruse



SECTION DESCRIPTION

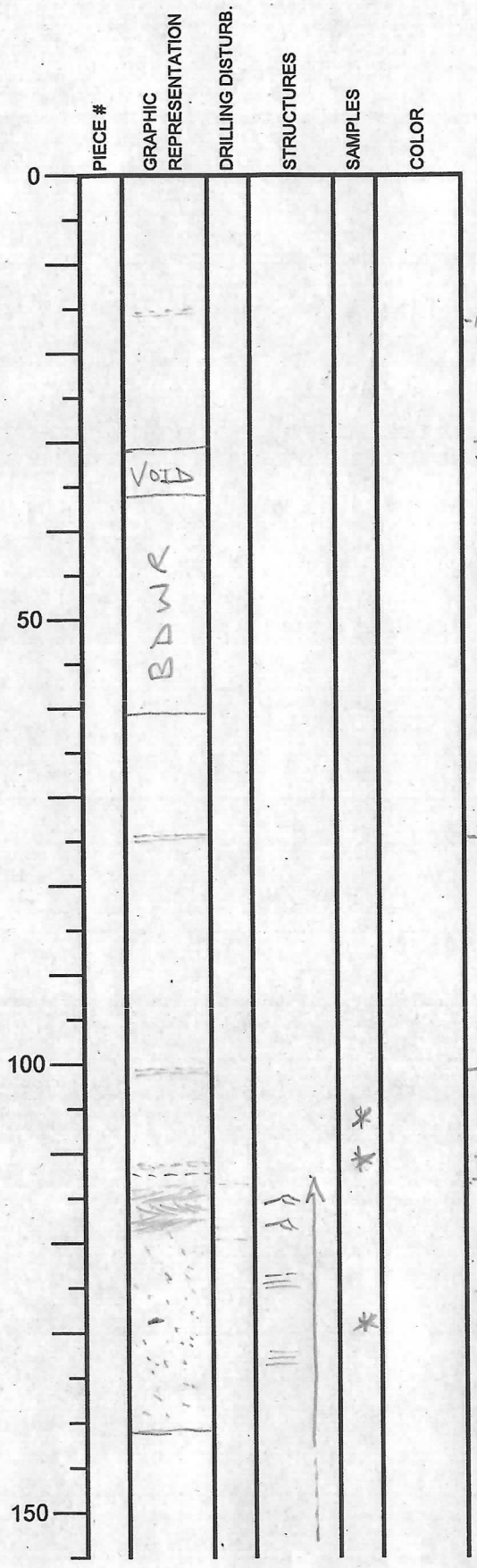
Greenish gray silty clay

Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/19/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: 1
OBSERBER: KTD/SK



SECTION DESCRIPTION

MAJOR
GREEN-GRAY SILTY CLAY (GGSC)
MINOR
GREEN MM-SCALE SILTY CLAY (GSC)

BIOTURBATION 5 (INTENSE)

15 cm GSC
31.0 cm
36.0 cm
38.0 cm
60.5 cm
74 cm GSC
101 cm GSC
106 cm SS
110.5 cm SS
112.5 cm
123 cm
127 cm SS
WOOD
141.0 cm END

MAJOR GGSC
MINOR GSC

BIOTURBATION 5 (INTENSE)

111 cm GSC
200PHYCOS at boundary
113-118 cm CURRENT RIPPLES

BIOTURBATION 2 (SLIGHT)

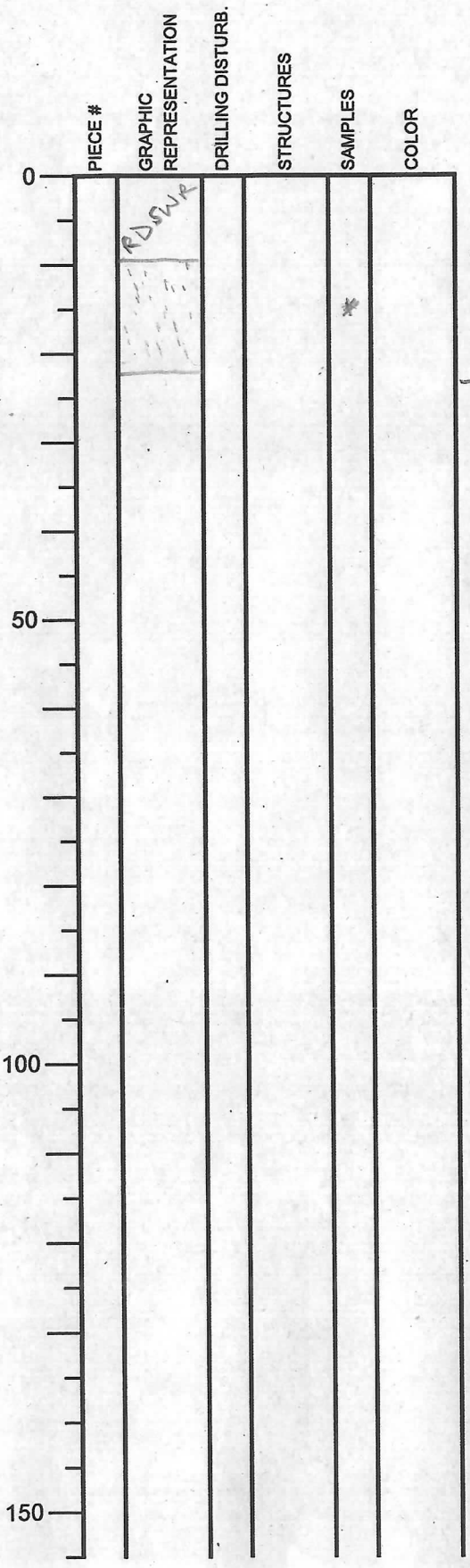
MAJOR
GRAY-GREEN
MEDIUM VOLCANICLASTIC SST.
127 cm WOODY FRAGMENT? (VHX IMAGE)

BIOTURBATION 1 (SLIGHT)

Integrated Ocean Drilling Program

Visual Core Description

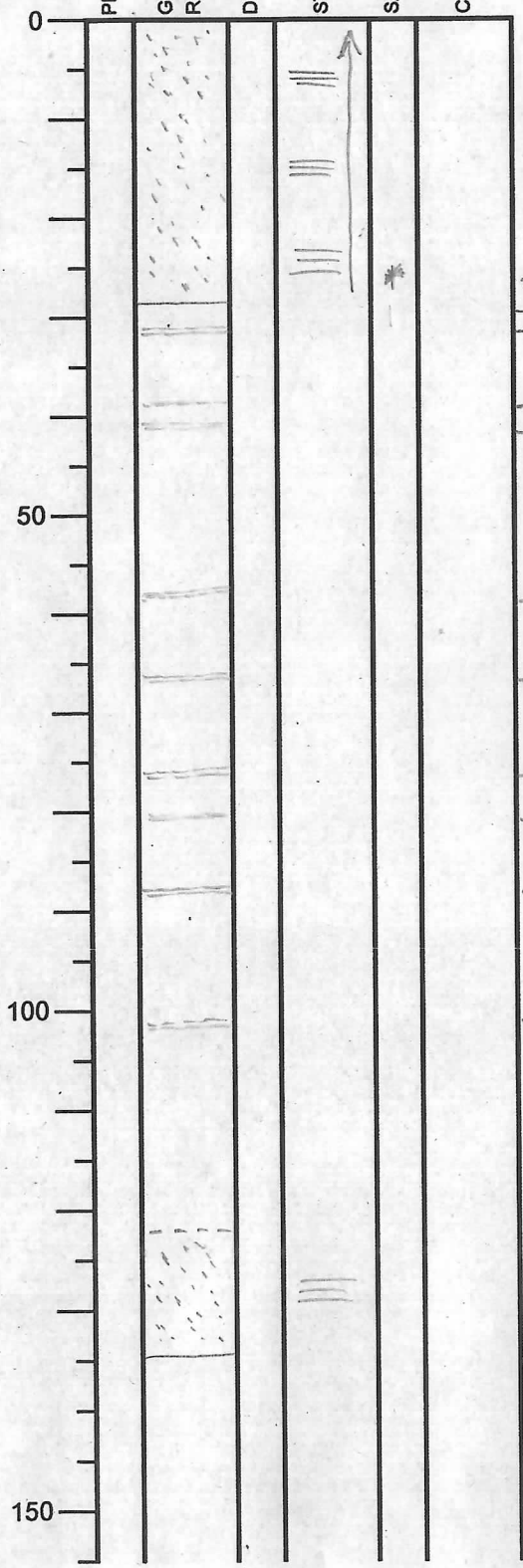
NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: 2
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: 4
OBSERBER: KTP/SK



SECTION DESCRIPTION

MEDIUM-GRAINED TO FINE-GRAINED NORMALLY GRADED GRAY VOLCANIC SANDSTONE

BIOTURBATION 0

27

*26.0 cm SS
27 cm
31 cm GSC
38 cm GSC
42 cm GSC
48 cm GSC
67 cm GSC
76 cm GSC
80 cm GSC
87 cm GSC
101 cm GSC

MAJOR GREEN-GRAY SILTY CLAY

MINOR GREEN mm-SCALE SILTY CLAY. (GSC)

BIOTURBATION 5 (INTENSE)

122 cm

V. COARSE GRAINED GRAY VOLCANIC SANDSTONE (SHELL FRAGMENTS, ASH LENSES, GSC CAST 0.8 cm)

122

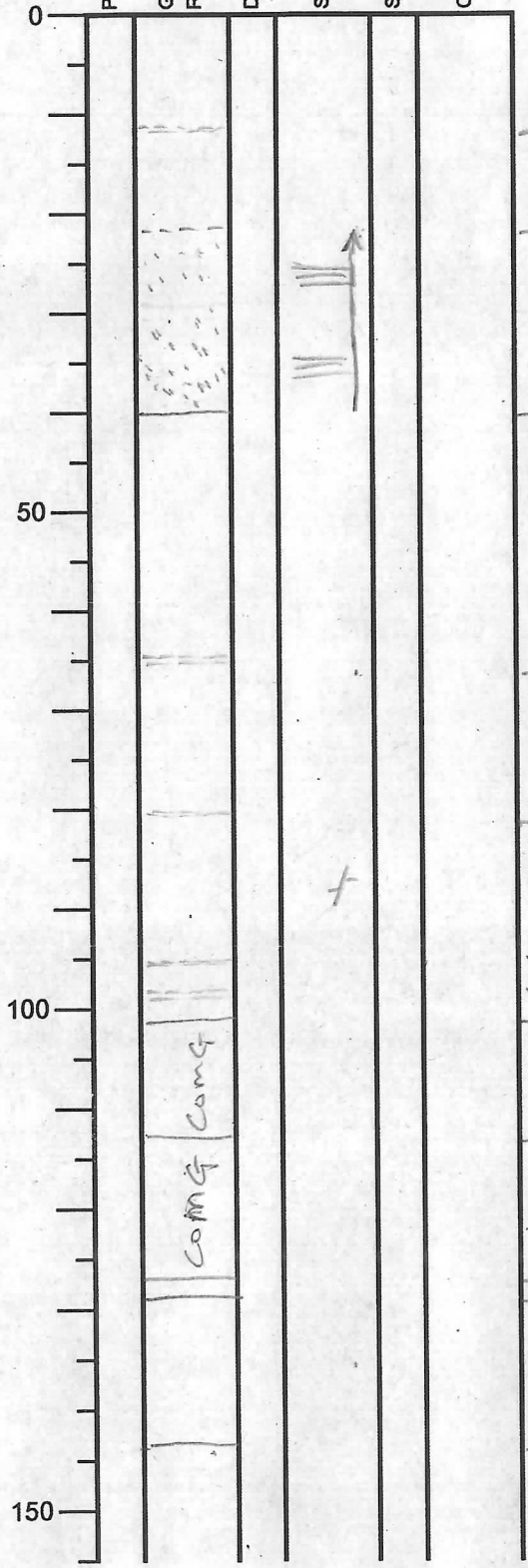
BIOTURBATION 1 (SLIGHT)

134 cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: 5
OBSERBER: KTP/SK



SECTION DESCRIPTION

MAJOR GREEN-GRAY SILTY CLAY (GGSc)
MINOR GREEN mm-SCALE SILTY CLAY (GSc)
BIOTURBATION 5 (INTENSE)

11 cm GSc

21 cm

GREEN-GRAY VERY COARSE VOLCANIC SANDSTONE (GRADED, LAMINATED)
BIOTURBATION 4 (MODERATE)

40 cm

MAJOR GGSc
MINOR GSc

64 cm GSc

BIOTURBATION 5 (INTENSE)

80 cm GSc

91-89 cm FAULT ? SEDIMENTARY

95 cm GSc
98 cm GSc
101 cm

112.5 cm

127 cm ?
129 cm ?

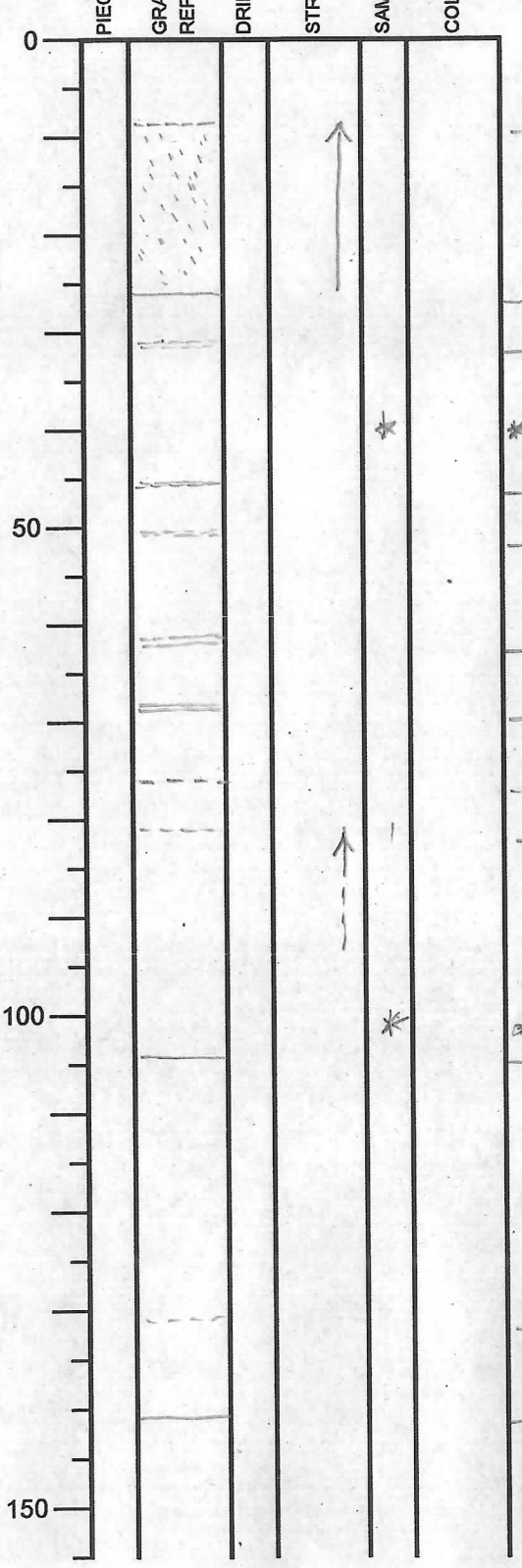
MAJOR GGSc
MINOR GSc
BIOTURBATION 5 (INTENSE)

143 cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: Co011B
CORE: 7
SECTION: 6
OBSERBER: KTP/SK



SECTION DESCRIPTION

GREEN-GRAY SILTY CLAY — BIOTURBATION 5 (INTENSE)

8cm

NORMALLY GRADED GRAY VERY FINE-GRAINED TO SILTY SANDSTONE (APPARENTLY STRUCTURELESS) — BIOTURBATION 1 (SLIGHT)

26cm

32cm GSC

*39.5cm SS

MAJOR GREEN-GRAY SILTY CLAY (GGSC)

46cm GSC

50cm GSC

MINOR GREEN MM-SCALE SILTY CLAY (SGC) — BIOTURBATION 5 (INTENSE)

62cm GSC

68cm GSC

76cm

81cm — DARK GRAY SILTY CLAY — 5 (INTENSE)

GRAY SILTY CLAY — BIOTURBATION 5 (INTENSE)

*99.0cm SS

104cm

MAJOR GGSC

MINOR GSC

BIOTURBATION 5 (INTENSE)

131cm — GRAY SILT — 200 PHYCOS COMMON — 5 (INTENSE)

141cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: 7
OBSERBER: KTP/SK

SECTION DESCRIPTION

MAJOR GREEN-GRAY SILTY CLAY (GGSC)
MINOR GREEN mm-SCALE SILTY CLAY (GSC)
19-25 cm STRUCTURELESS GRAY SILT
30-24 cm GRAY VERY COARSE GRAINED VOLCANIC SANDSTONE (DISRUPTED - BLACK CLAST)
↳ ? INJECTION
53-47 cm FOLDED GSC

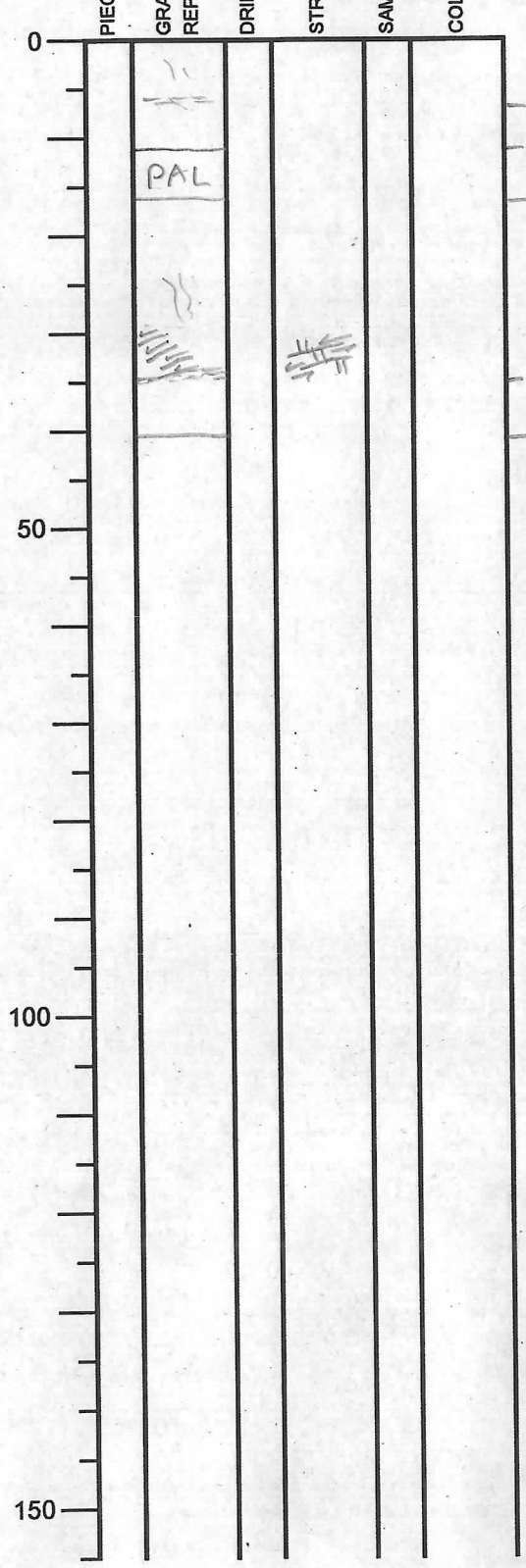
MAJOR GGSC
MINOR GSC

BIOTURBATION 5 (INTENSE)
BIOTURBATION 0
BIOTURBATION 5 (INTENSE)
BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/6/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 7
SECTION: CC
OBSERBER: KTP/SK



SECTION DESCRIPTION

- 6 cm GSC
- 11.5 cm
- 16.5 cm
- 33 cm GSC
- 40.5 cm · END

MAJOR GREEN-GRAY SILTY CLAY (SGGC)

BIOTURBATION 5 (INTENSE)

MINOR GREEN MM-SCALE SILTY CLAY (SGC)

? SEDIMENT SLIDE ?

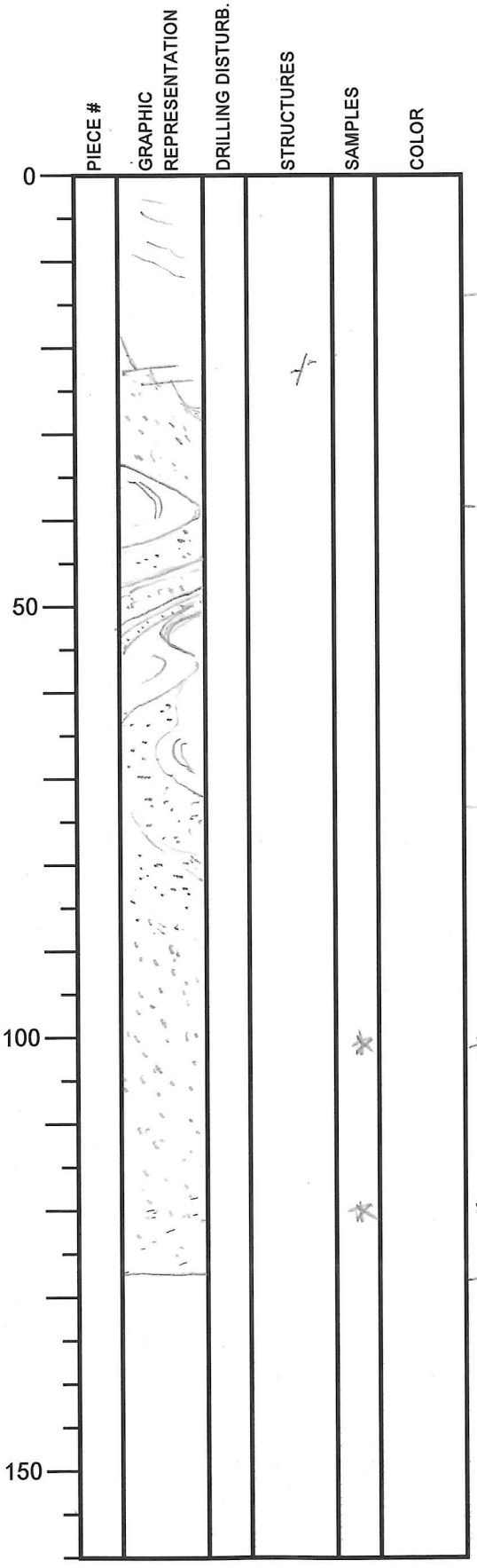
34 - 29 cm FAULTED (SUB HORIZONTAL) [SEDIMENTARY FAULTS ?]

BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 1
OBSERBER: KTA/SK



SECTION DESCRIPTION

MAJOR GREEN-GRAY → (GGSC) SILTY MUDSTONE
MINOR GREEN-mm-SCALE SILTY CLAY LAYERS (SGC)

BIOTURBATION 5 (INTENSE)

SEDIMENT DEFORMATION INT. BIOTURBATED GGSC/GSC@5 (INTENSE)

SEDIMENT SLIDE OR "IN-SITU" SEDIMENT DEFORMATION

SEDIMENT

GRAY-GREEN GRANULE-GRADE VOLCANIC SANDSTONE

INCLUDING DEFORMED GGSC/GSC WITHIN SECTION ABOVE ~ 72 cm

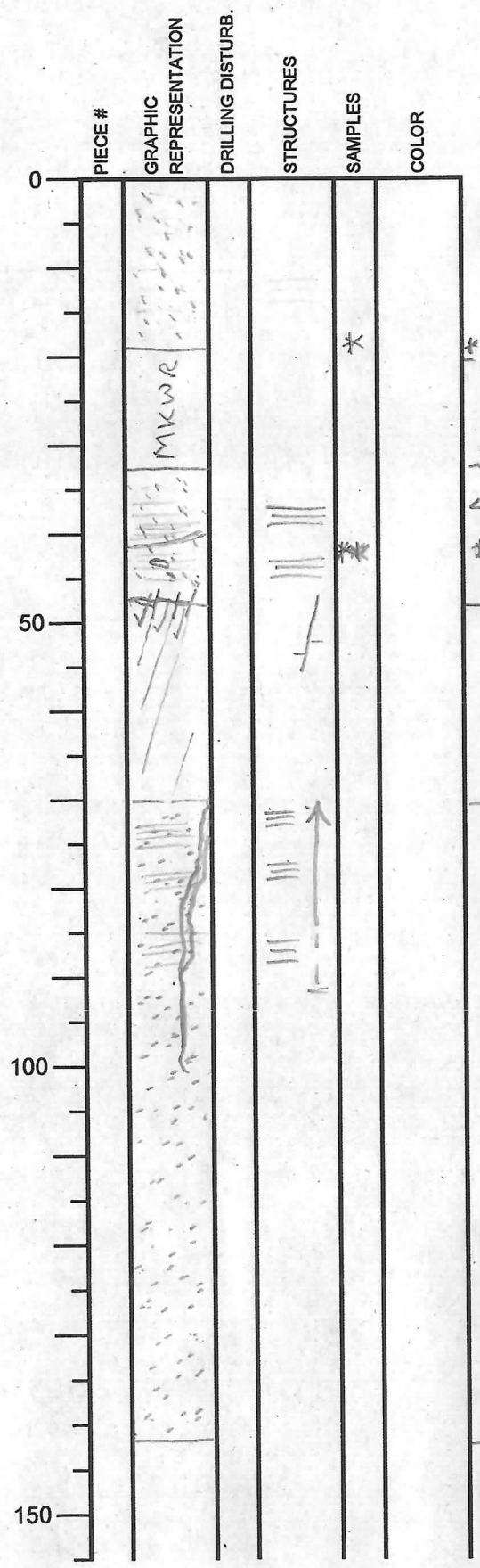
BIOTURBATION 0

SILTY CLAY

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/9/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 3
OBSERBER: KTP/SK



SECTION DESCRIPTION

[STRUCTURELESS] GRAY-GREEN MEDIUM-GRAINED VOLCANIC SANDSTONE

BIOTURBATION 2 (SLIGHT)

*19cm SS
19 cm

IS THIS BASE OF SEDIMENT SLIDE ???

32cm

GRAY-GREEN MEDIUM-GRAINED VOLCANIC SST.

42cm SS x 2

*ASH CLASTS TO 0.8 cm. MANY 2-3mm

47cm = base of sandstone

BIOTURBATION 1 (SLIGHT)

Compression zone

Emplacement of sst. caused faulting

58-47cm SEDIMENTARY FAULTS

MAJOR GREEN-GRAY SILTY CLAY

BIOTURBATION 5 (INTENSE)

MINOR mm-SCALE GREEN SILTY CLAY

70cm = top sst.

90-70 cm NORMALLY-GRADED SUB-PARALLEL LAMINATION

large escape burrow? 95-72 cm

GRAY-GREEN MEDIUM-TO-FINE-GRAINED VOLCANIC SANDSTONE

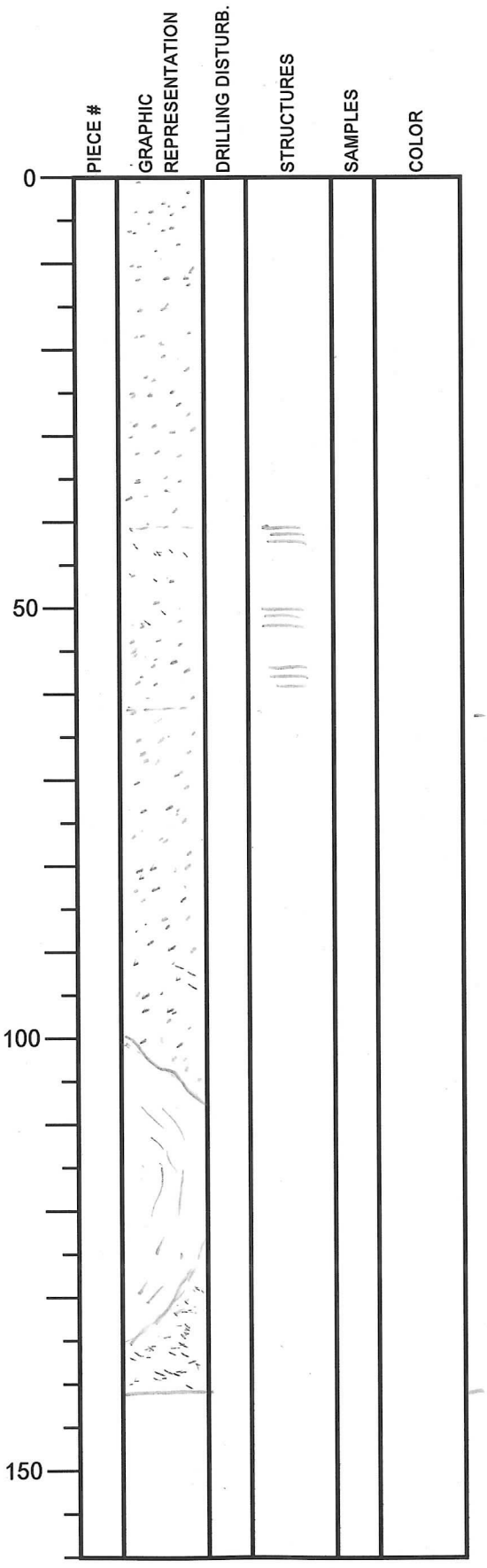
BIOTURBATION 1 (SLIGHT)

142cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 4
OBSERBER: KTP/SK



SECTION DESCRIPTION

STRUCTURELESS, POSSIBLY DUE TO LIQUEFACTION/FLUIDIZATION ?

GRAY-GREEN MEDIUM/COARSE-GRAINED VOLCANIC SANDSTONE

60-40 cm LAMINATED
62-0 cm ? IN SITU BED

-- 62 cm - PROBABLE BASE OF BED ABOVE SEDIMENT SLIDE

BIOTURBATION 1 (SLIGHT)

141-~62 cm SEDIMENT SLIDE

[STRUCTURELESS BELOW ~62 cm]
GREEN-GRAY SILTY CLAY & GREEN-mm-SCALE SILTY CLAY FOLDED INTO SANDSTONE

BIOTURBATION 5 (INTENSE)

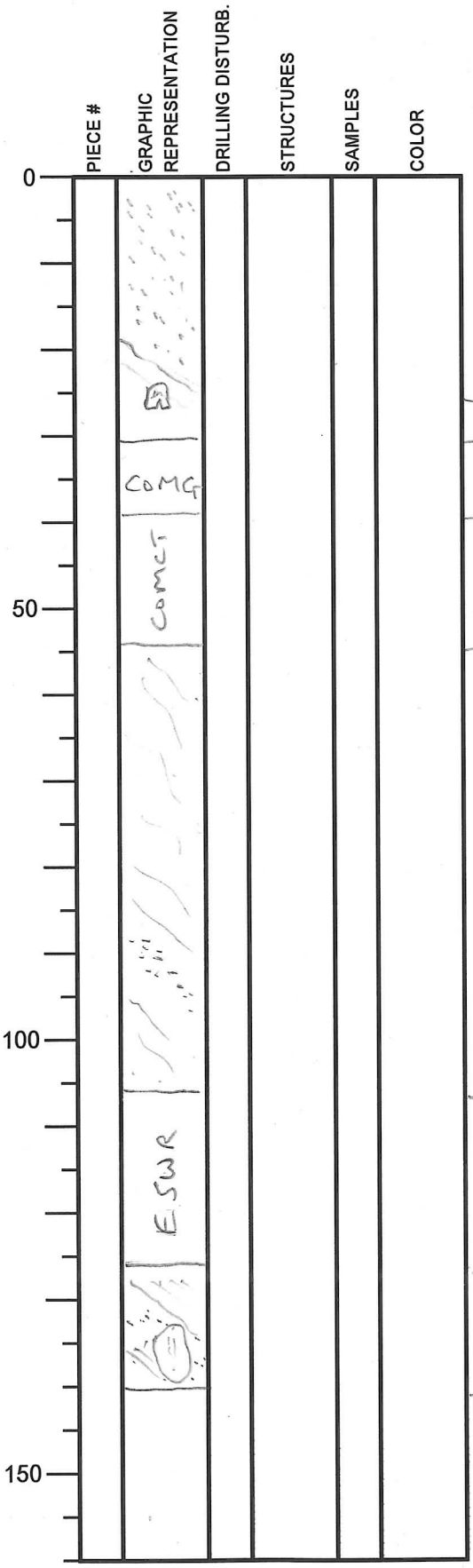
BIOTURBATION

-141 cm END

Integrated Ocean Drilling Program

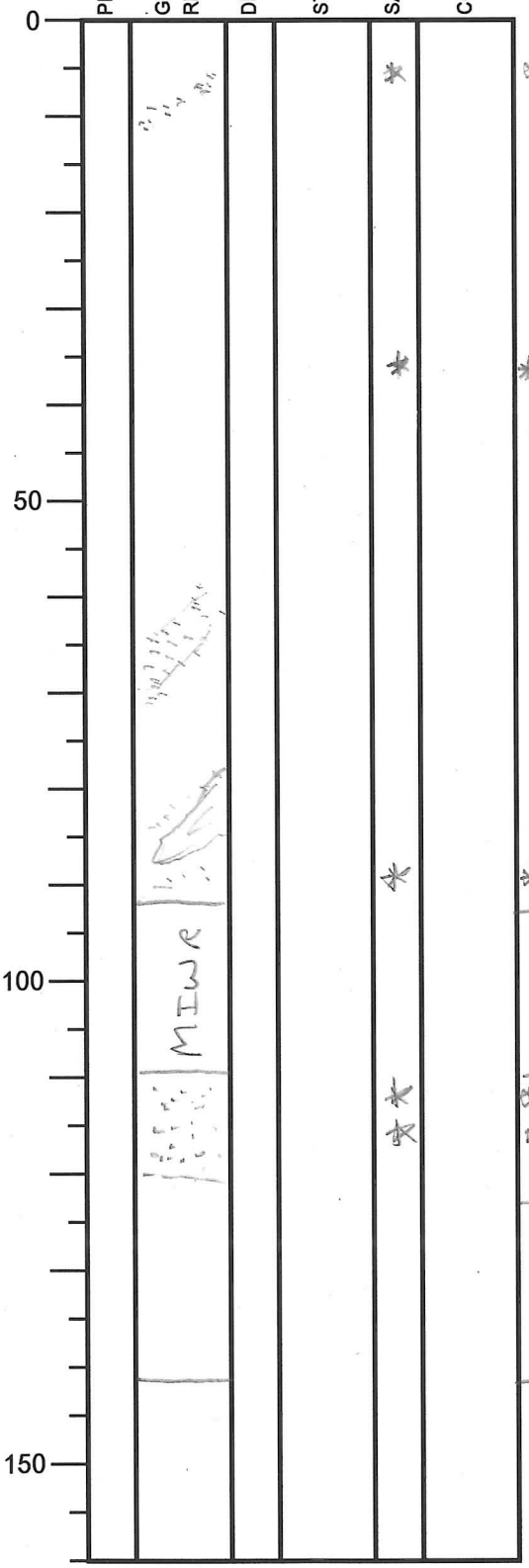
Visual Core Description

NO.
DATE: 11 / 09 / 2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 5
OBSERBER: KHP/SK



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 6
OBSERBER: KM/SK



* SS ASH POT (5.5 cm)

*36 cm (ASH POT) SS

? MTC ?
granule-grade volcanic
SST, GGCS, GCS

BIOTURBATION
IRRELEVANT

* 87cm SS SAND LENS
-92cm

-109 cm
* 112 cm SS (ASH POT)
* 115cm SS MATRIX of COARSE GRAINED SAND

-120 cm = base of granule grade volcanic SST.

GGCS/GCS

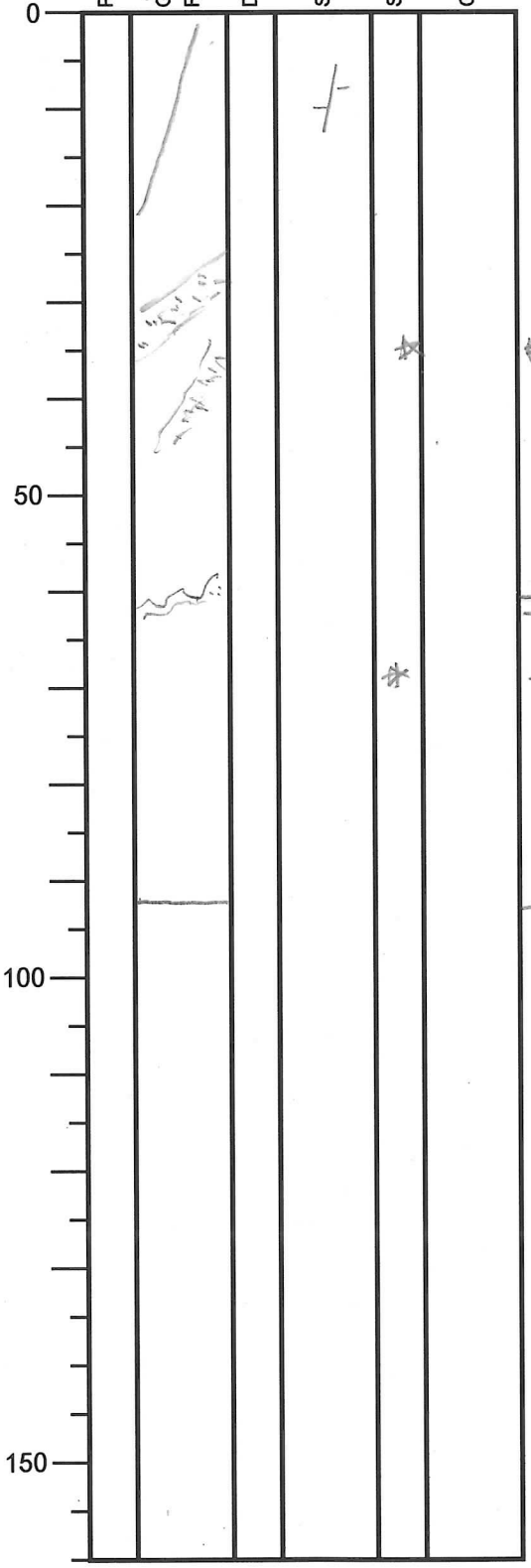
BIOTURBATION
S (INTENSE

-142cm RMD

Integrated Ocean Drilling Program

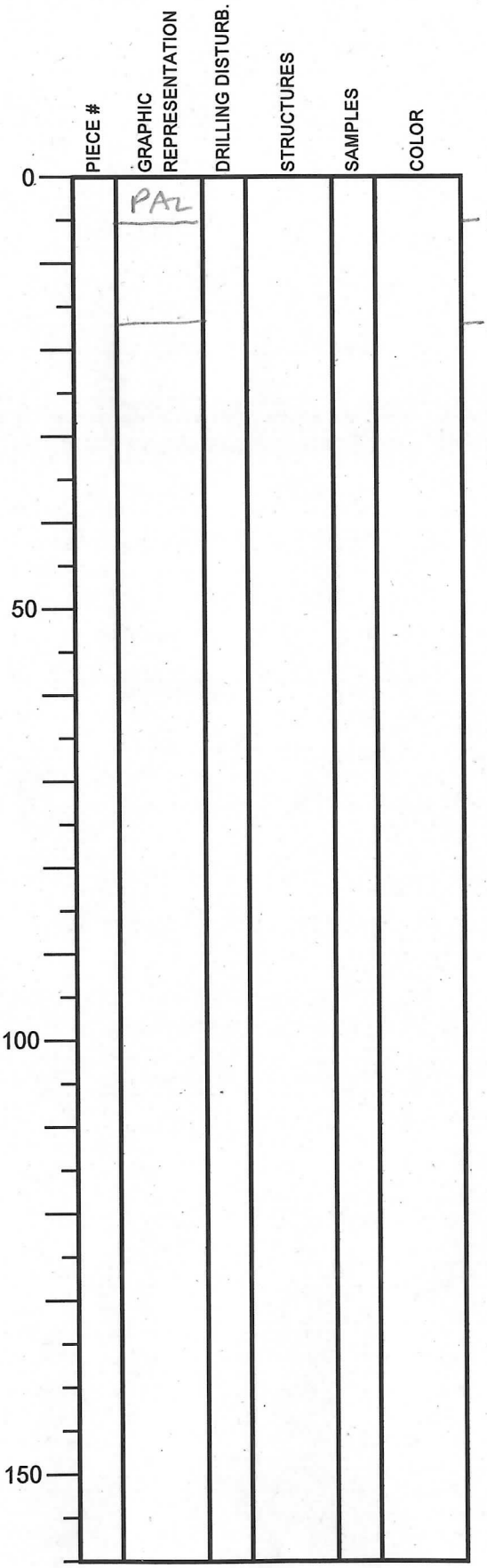
Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: 7
OBSERBER: KMP/SK



Integrated Ocean Drilling Program
Visual Core Description

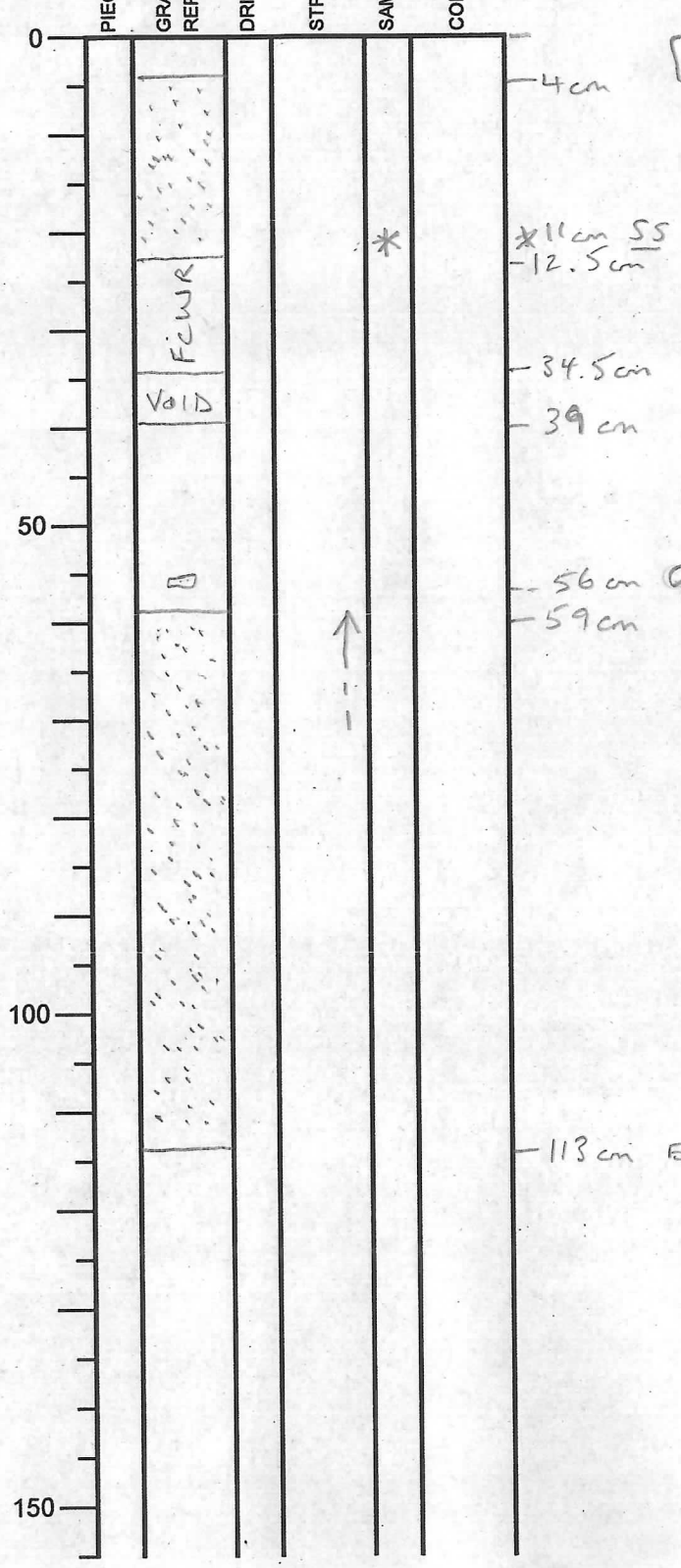
NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 8
SECTION: CC
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/19/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 9
SECTION: 1
OBSERBER: KTF/SK



SECTION DESCRIPTION

[GRAYISH] GSC

GRAY-GREEN MEDIUM-GRAINED VOLCANIC SST.

BIOTURBATION 5 (INTENSE)

BIOTURBATION

MAJOR GREEN-GRAY SILTY CLAY (GGSC)

MINOR GREEN MM-SCALE SILTY CLAY LAYERS (GSC)

BIOTURBATION

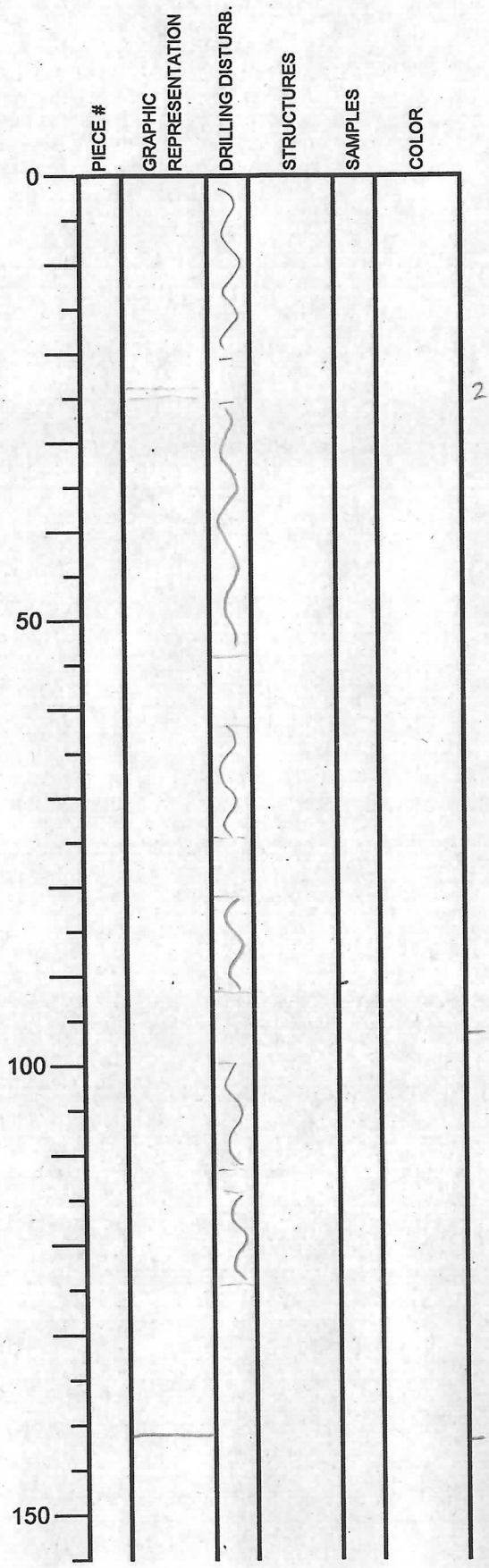
GRAY-GREEN MEDIUM/COARSE-GRAINED VOLCANIC SANDSTONE

BIOTURBATION 1 (SLIGHT)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 9
SECTION: 3
OBSERBER: KGP/SK



SECTION DESCRIPTION

25-24 cm GSC

MAJOR
GREEN-GRAY SILTY CLAY

MINOR
GREEN mm-SCALE SILTY CLAY (GSC)
ZOOPHYCOS COMMON

BIOTURBATION 5 (INTENSE)

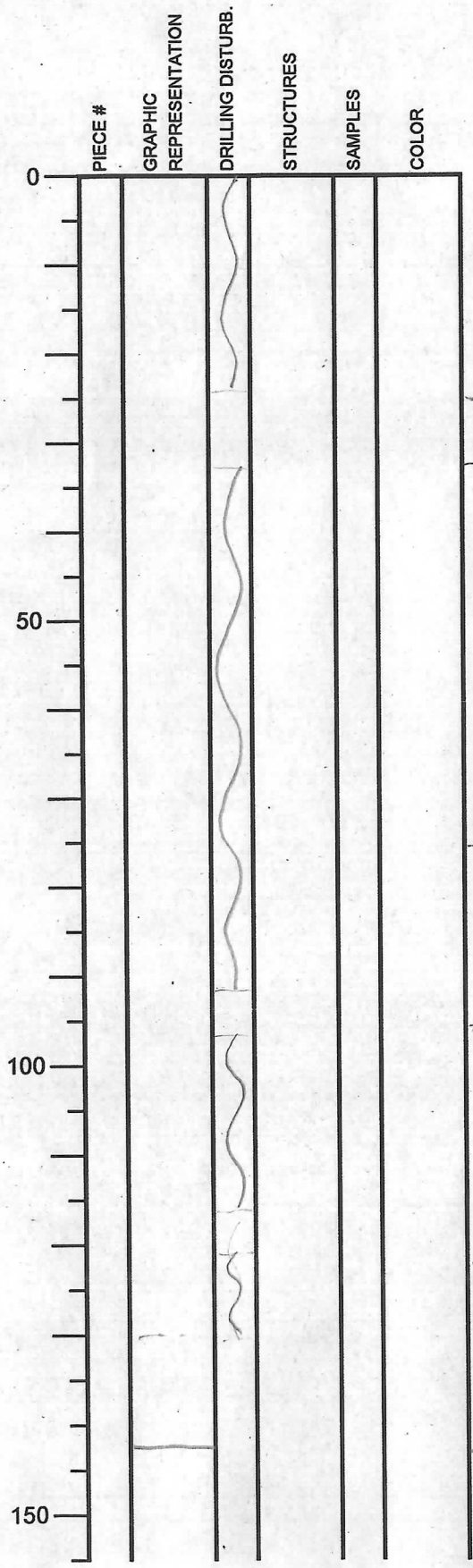
96 cm GSC

141 cm END

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 9
SECTION: 4
OBSERBER: KGP/SK



MAJOR GREEN-GREY SILTY CLAY

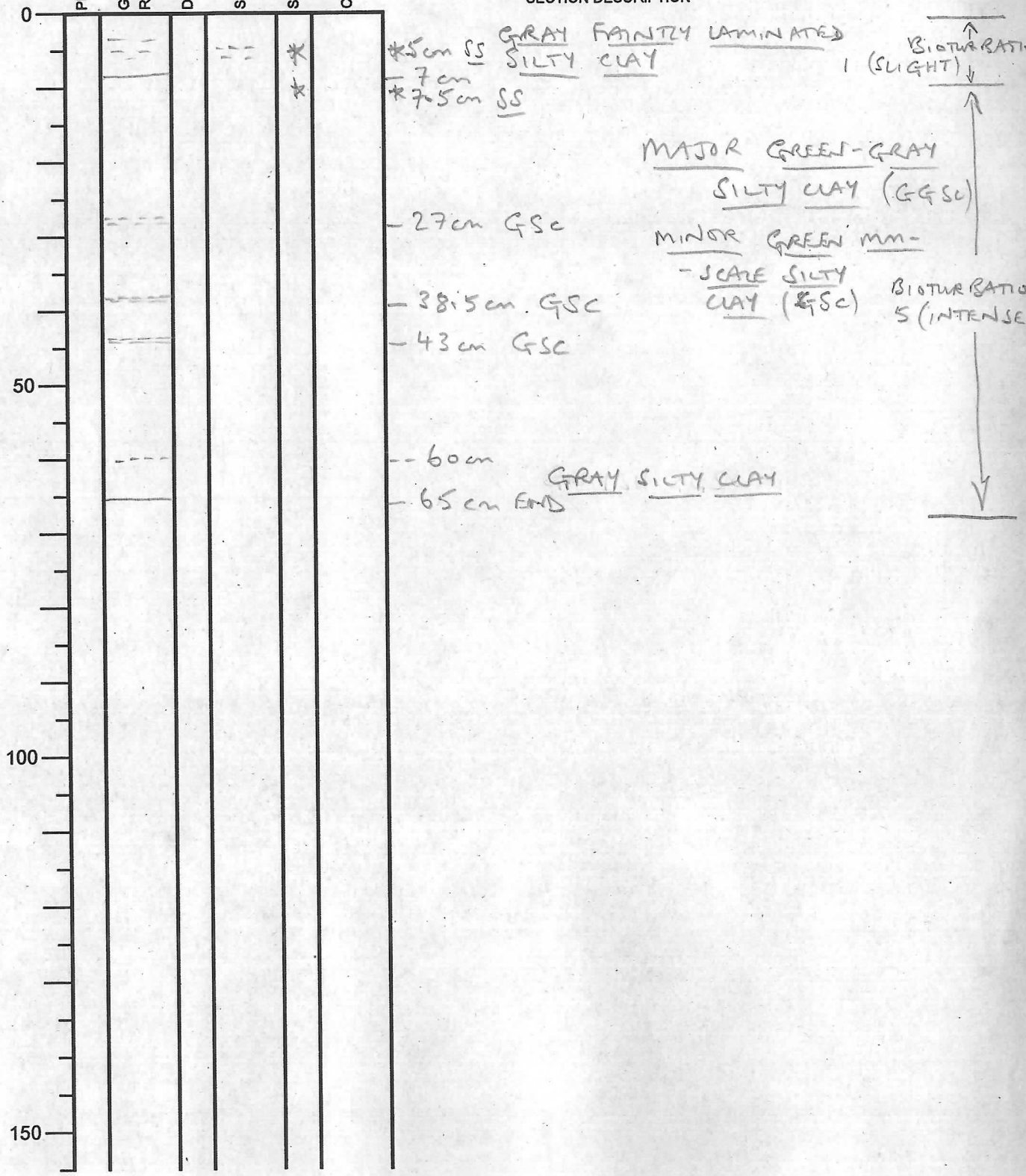
MINOR GREEN MM-SCALE SILTY CLAY (GSC)

BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

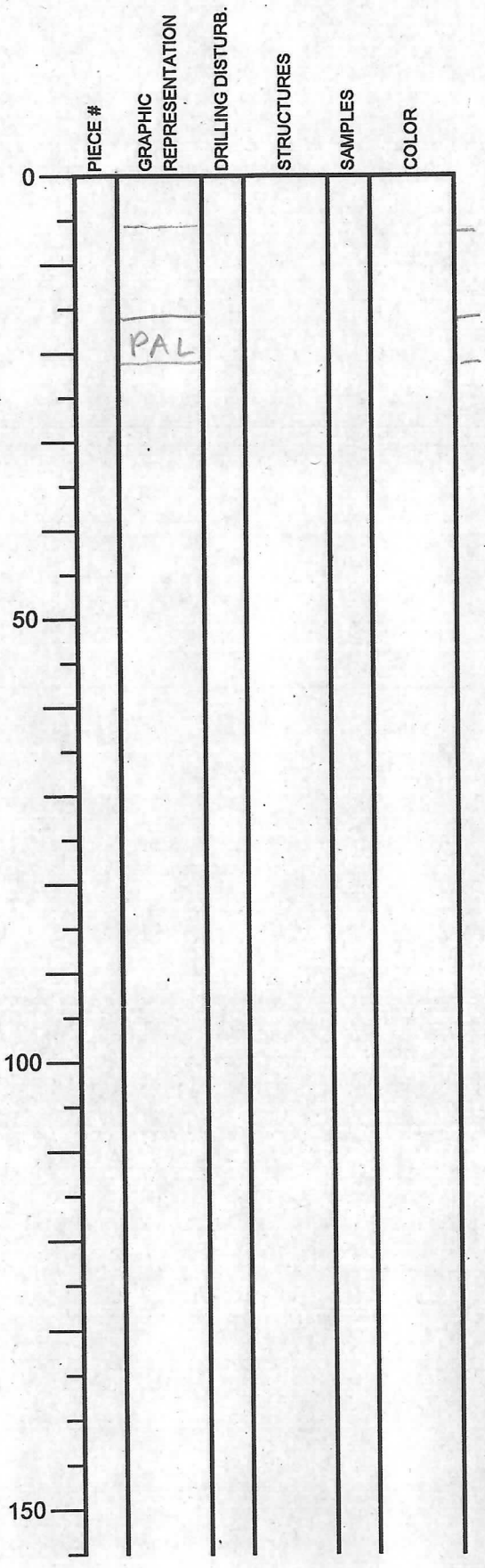
NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 9
SECTION: 5
OBSERBER: KGP/SR



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 1/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 9
SECTION: CC
OBSERBER: KGP/SK



SECTION DESCRIPTION

MAJOR GREEN-GRAY SILTY CLAY

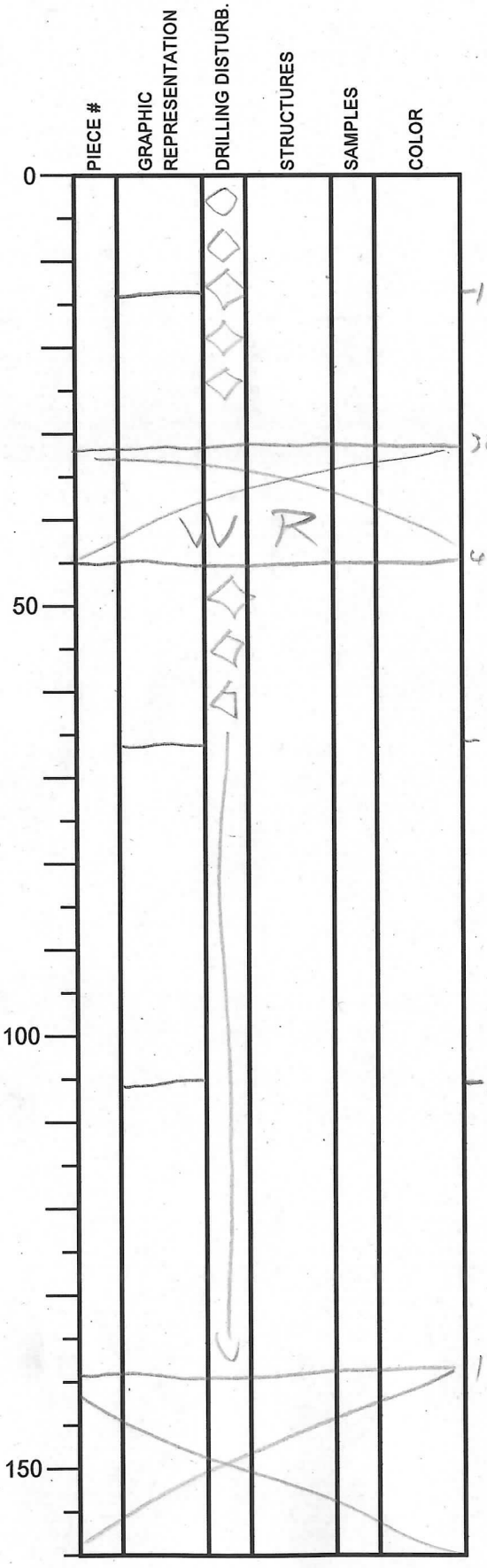
MINOR GREEN mm-SCALE SILTY CLAY LAYERS (bioturbated)

BIOTURBATION 5 (INTENSE)

6-0 cm = GRAY SILTY CLAY

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 7/10/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 10R
SECTION: 1
OBSERBER: H. Hamuse / RS



SECTION DESCRIPTION

Gray structureless clay — moderate bioturb. (3)

Green-gray silty clay — Heavy bioturb (5)

green-gray silty clay — Heavy bioturb. (5)

gray laminated clay — slight bioturb. (1)

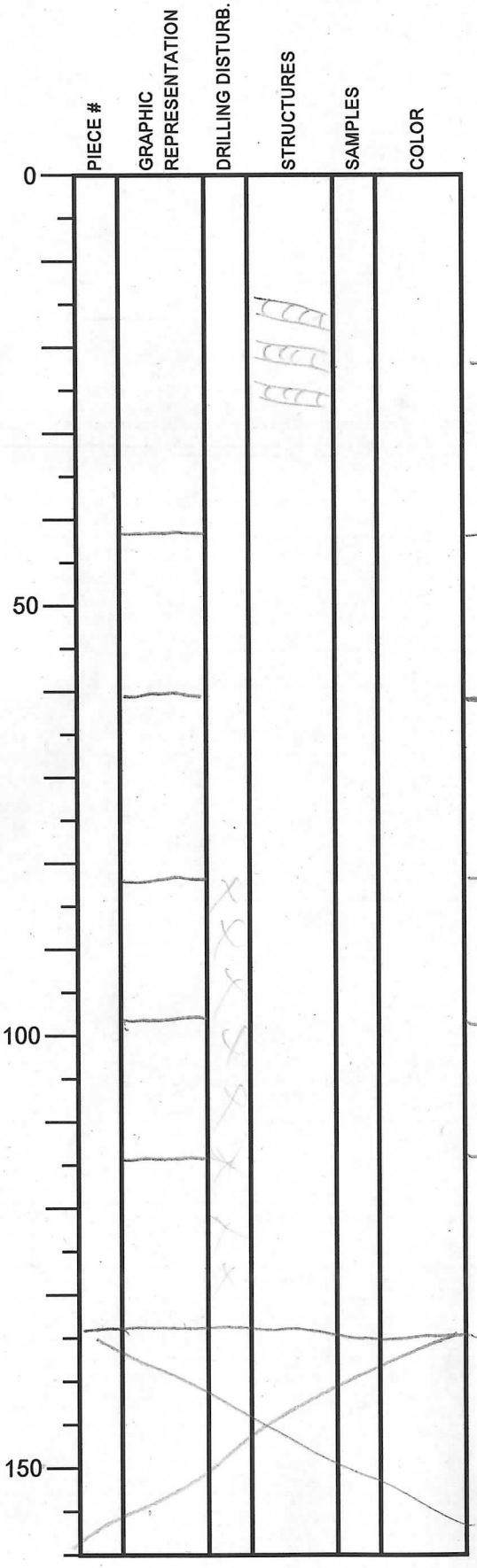
inclined boundary

green-gray silty clay — Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 11/sept/20
EXP.: 322
SITE/HOLE: C0011B
CORE: 10R
SECTION: 2
OBSERBER: HW/RS



SECTION DESCRIPTION

gray laminated clay

zoophycos (26-42cm)

moderate bioturb (3)

42 – sharp boundary

green-gray silty clay

Heavy bioturb. (5)

60 – gradual boundary

laminated gray clay

slight bioturb. (2)

82 – sharp boundary

green-gray silty clay

Heavy bioturb. (5)

98 – gradual boundary

structureless gray clay

slight bioturb (2)

114 – sharp boundary?

green-gray silty clay

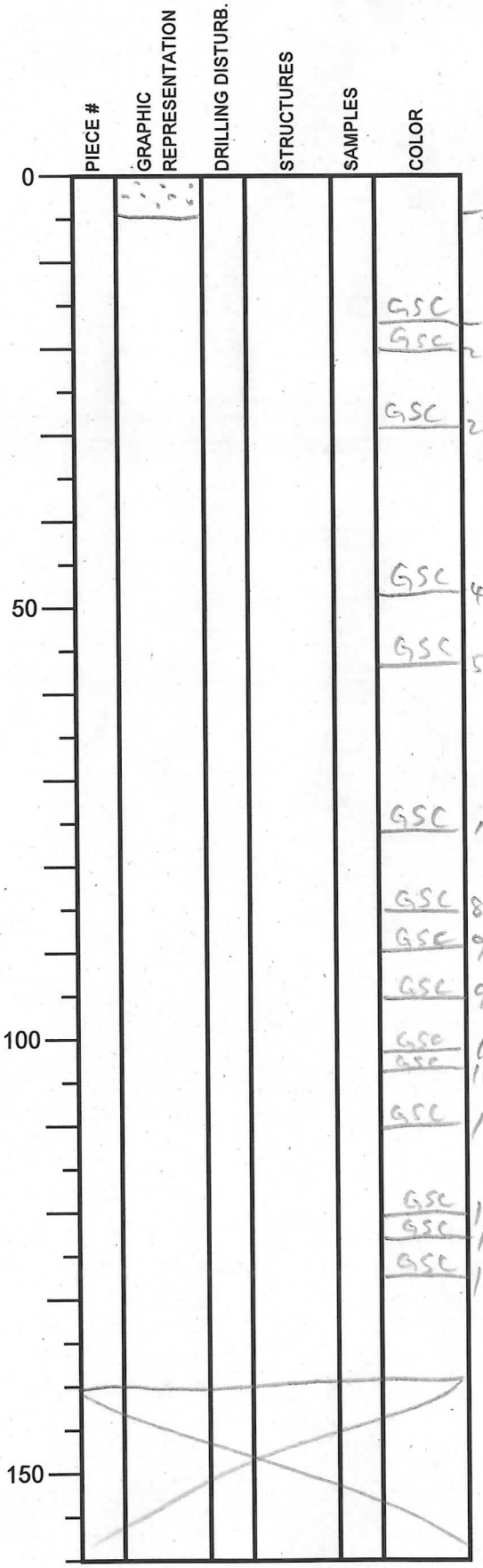
Heavy bioturb (5)

134 end

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 1
OBSERBER: H. Naruse|RS



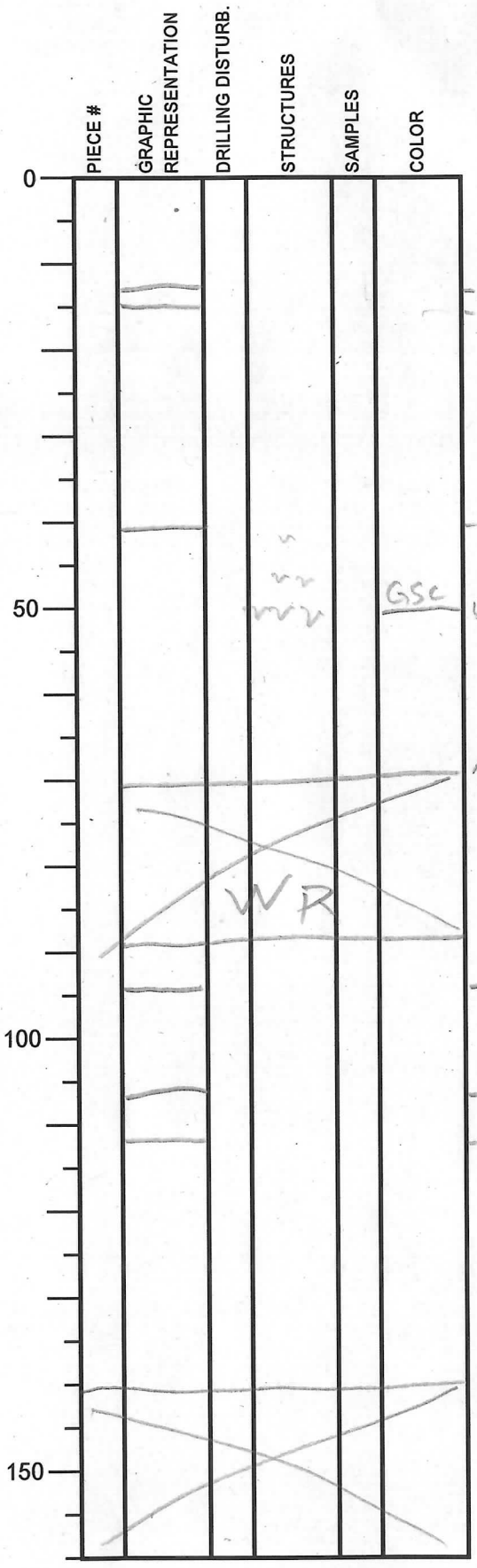
Green-gray silty clay

Heavy bioturb (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 2
OBSERBER: H. Naruse/RS



SECTION DESCRIPTION

Major: Green-gray silty clay

Heavy bio. (5)

13 – sharp boundary
15 – sharp boundary

laminated to structureless gray clay

No biotarb. (0)

41 – sharp boundary

50

green-gray silty clay

Heavy biotur (5)

70.5

88

94 – sharp boundary

structureless gray clay

slight biotur (2)

107 – sharp boundary

112 – sharp boundary

green-gray silty clay

Heavy biotur

structureless gray clay

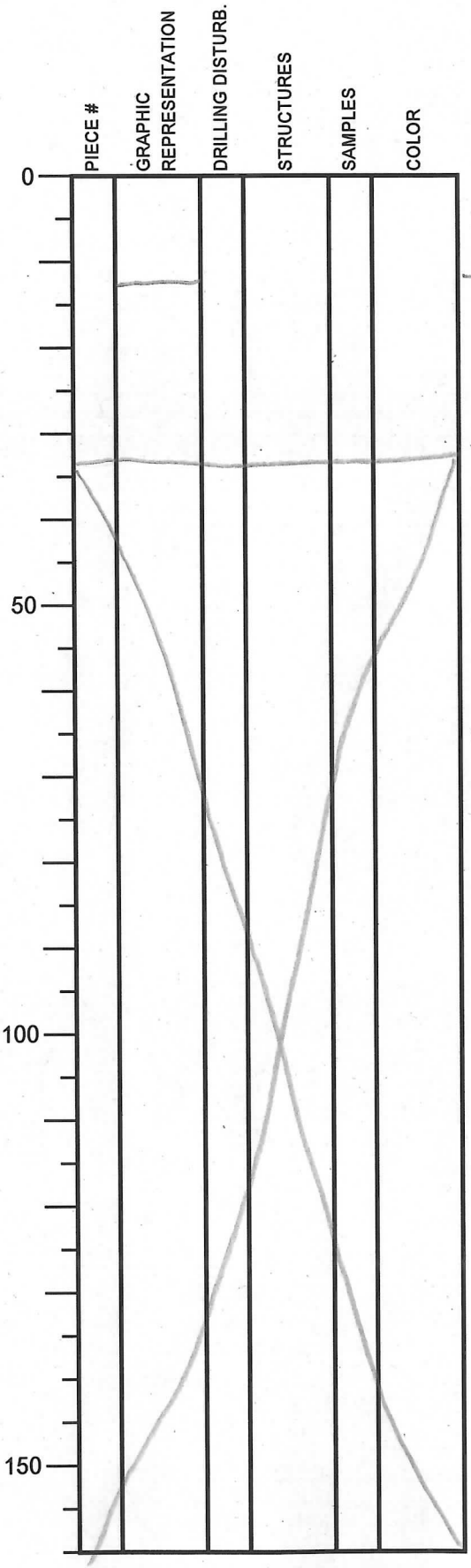
slight biotur (1)

141 end

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 3
OBSERBER: H. Haruso/RS



SECTION DESCRIPTION

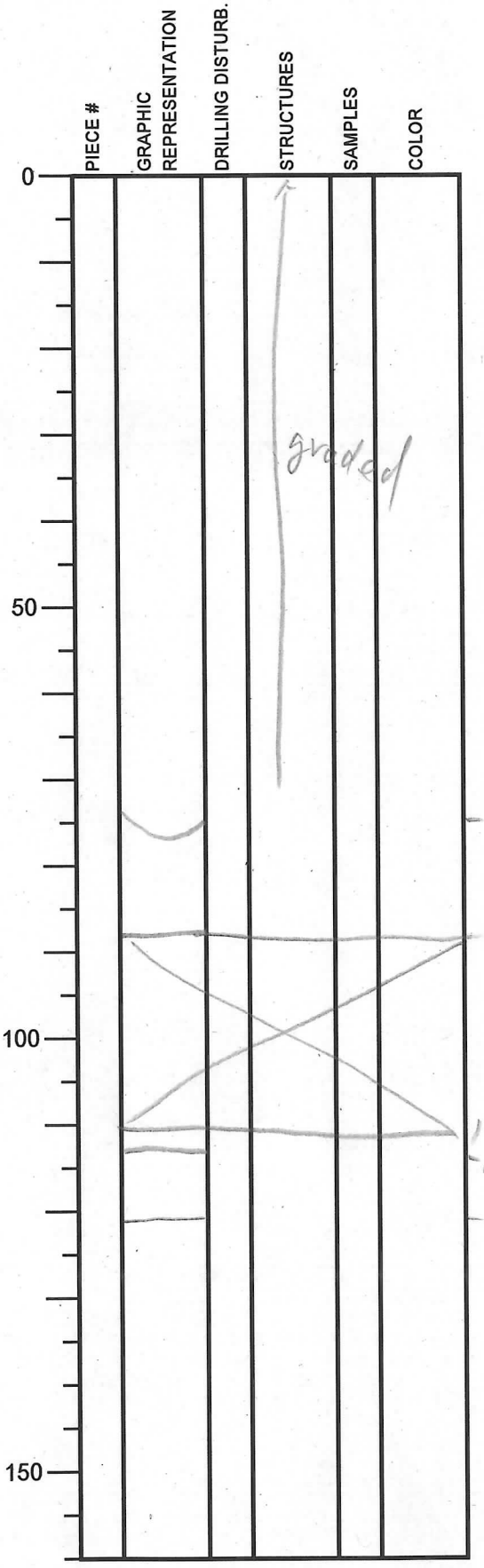
structureless gray clay
13 - gradual boundary
structureless clayey silt w/ wood particles?
33 end

No bioturb (0)
No bioturb (0)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9 / 09 / 20
EXP.: 322
SITE/HOLE: C0011B
CORE: 11
SECTION: 5
OBSERBER: H. Naruse/KS



SECTION DESCRIPTION

graded volcaniclastic very coarse to silty sandstone poorly sorted

No bioturbation (0)

76 — erosional boundary

green-gray silty clay

Heavy bioturbation (5)

110
112 — sharp boundary

structureless gray clay

slight bioturb. (2)

122 — sharp boundary

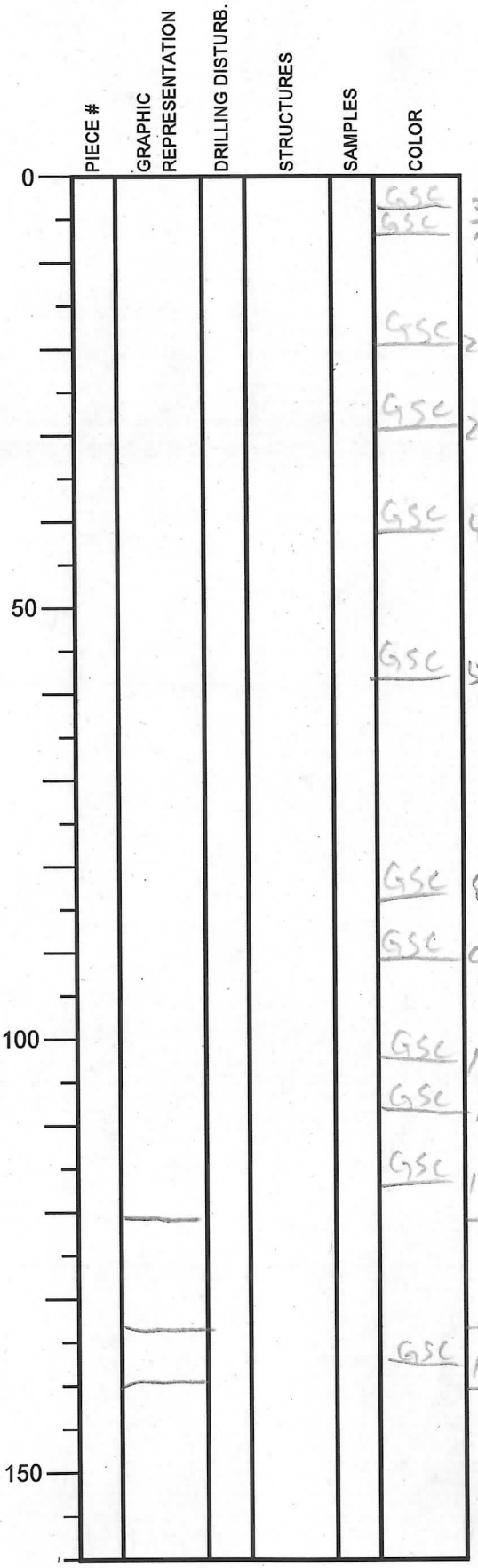
green-gray silty clay

Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 6
OBSERBER: H. Naruse/RS



SECTION DESCRIPTION

green-gray silty clay

(Heavy bioturb. (5))

121 – gradual boundary

structureless dark gray clay

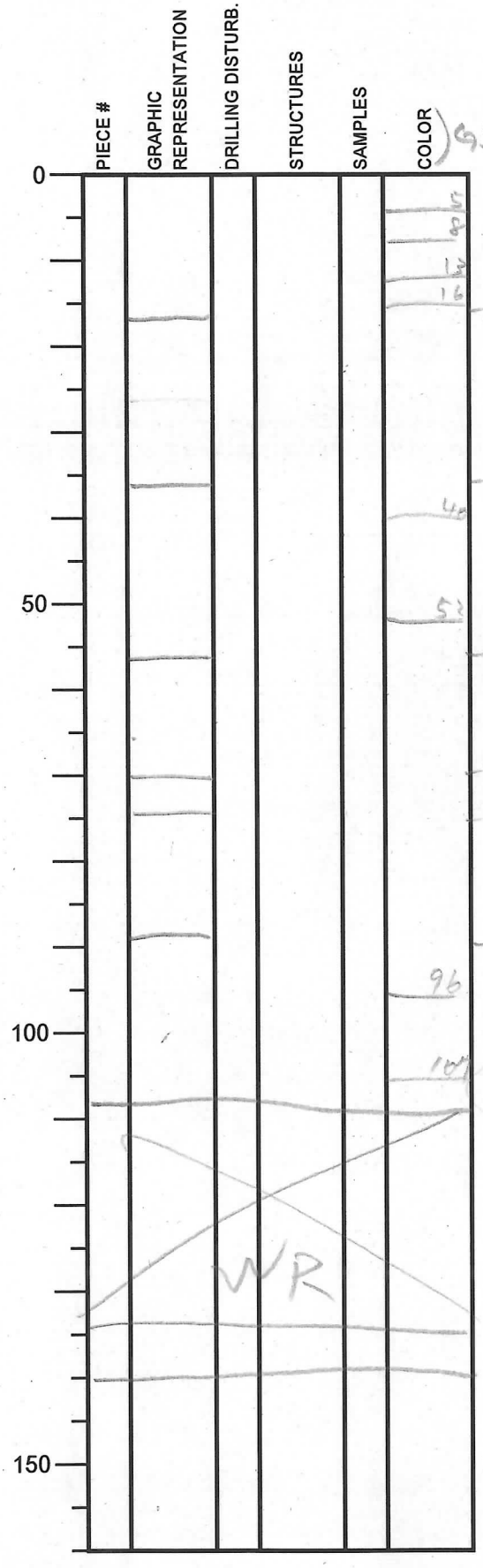
133 – sharp boundary

green-gray silty clay

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: / /20
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 7
OBSERBER: H. Haruse / R



SECTION DESCRIPTION

green-gray silty clay — Heavy bioturb. (5)

17 sharp boundary

laminated dark gray clay — Slight (1)

37 sharp boundary

green-gray silty clay — Heavy (5)

57 gradual boundary

structureless dark gray clay — Slight (2)

70 sharp boundary

74 gradual boundary

green-gray silty clay — Heavy (5)

structureless dark gray clay — moderate (3)

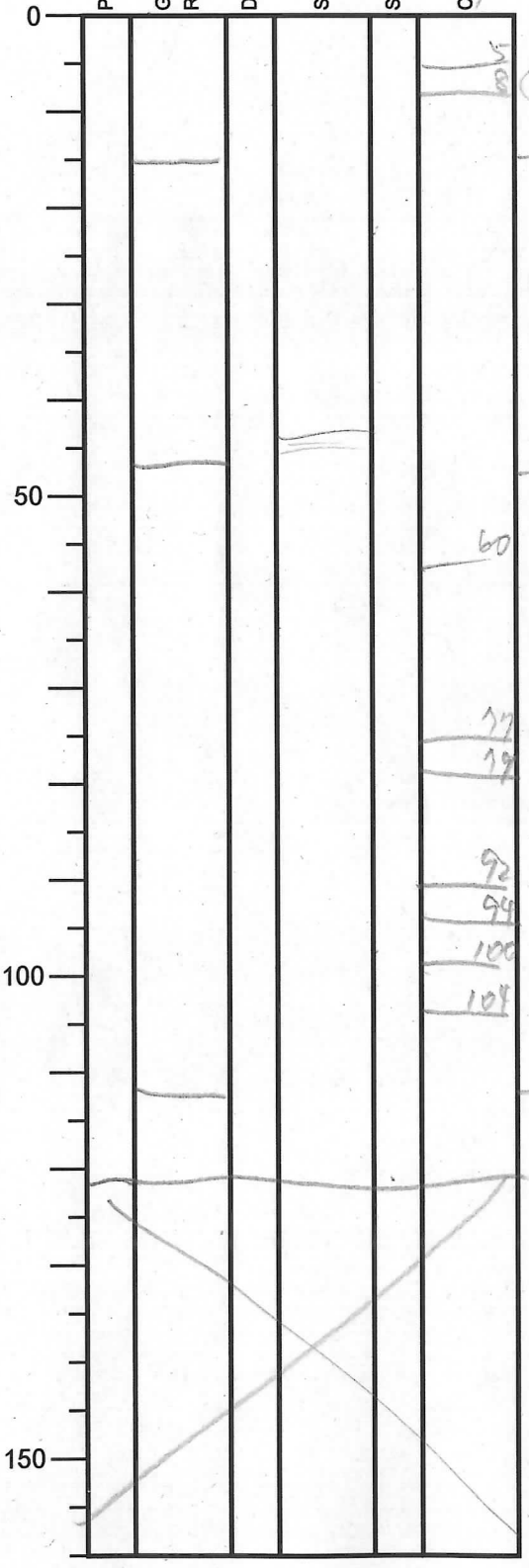
89 sharp boundary

green-gray silty clay — Heavy (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 11R
SECTION: 8
OBSERBER: H. Naruse / RS



GSC

SECTION DESCRIPTION

green-gray silty clay

Heavy (5)

15 – sharp boundary

structureless dark gray clay.

slight (2)

47 – sharp boundary

60

green-gray silty clay

Heavy (5)

92
94
100
104

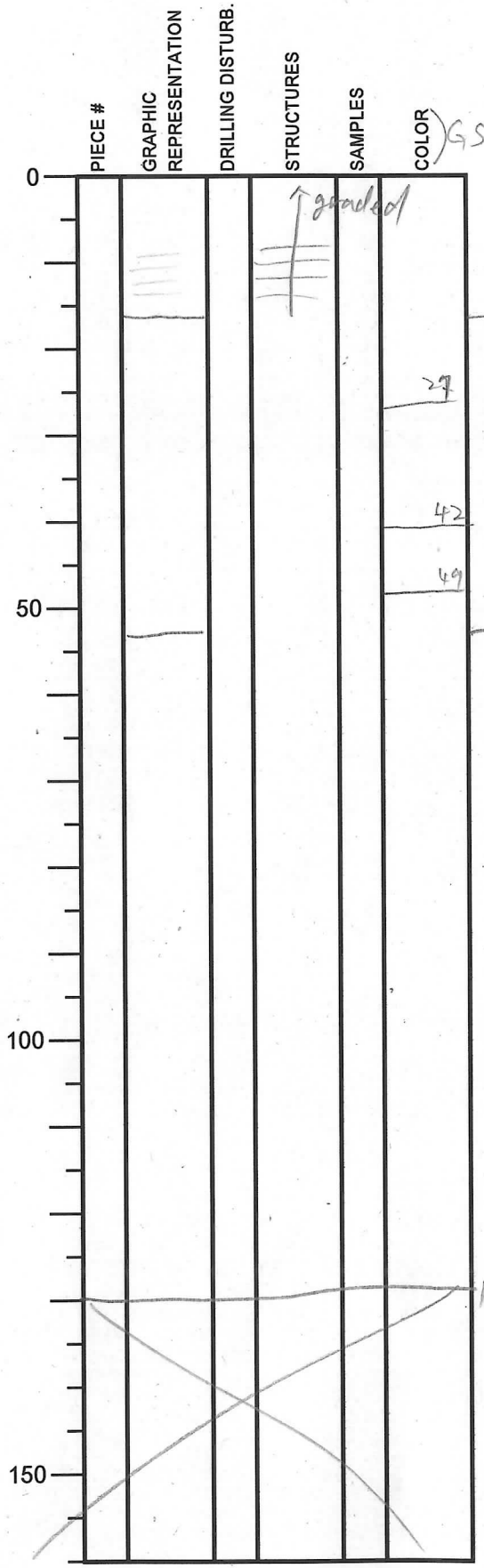
112 – gradual boundary

122 end

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 1
OBSERBER: H. Namse/RS



SECTION DESCRIPTION

laminated dark-gray clay w/ black lamination

16 — sharp boundary —

green-gray silty clay

53 — gradual boundary —

laminated dark-gray clay

slight (1)

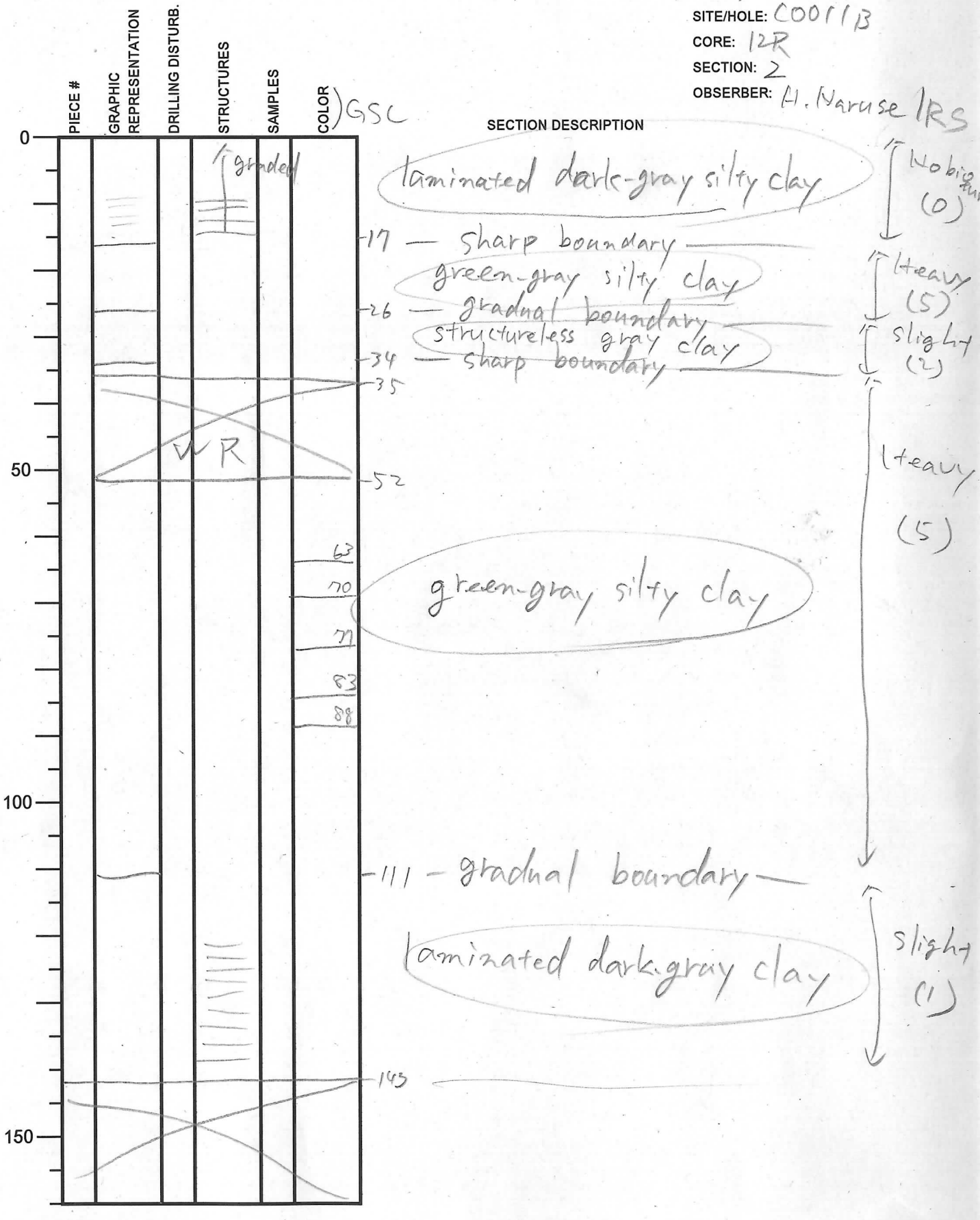
Heavy (5)

slighy (1)

Integrated Ocean Drilling Program

Visual Core Description

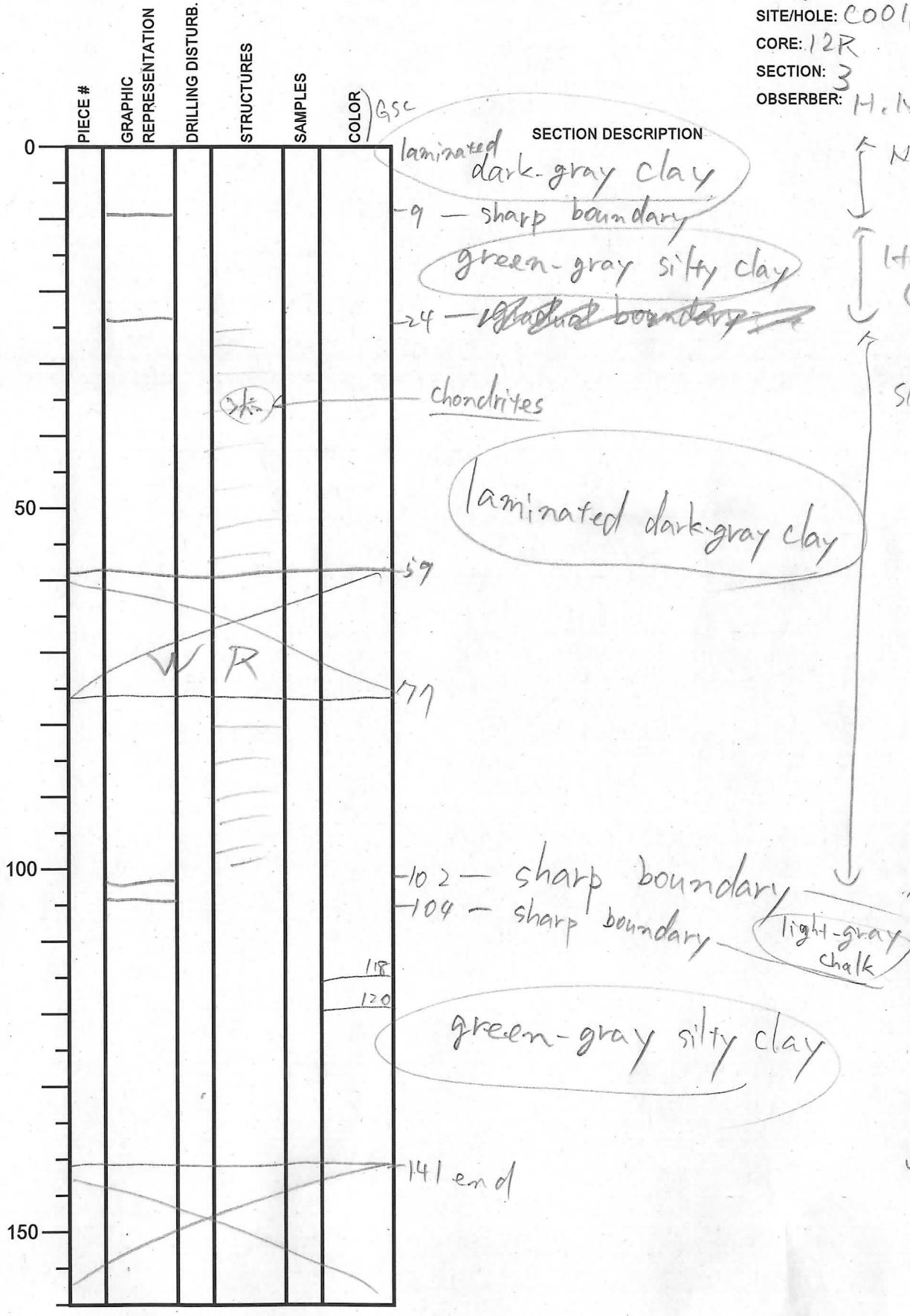
NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 2
OBSERBER: H. Naruse / RS



Integrated Ocean Drilling Program

Visual Core Description

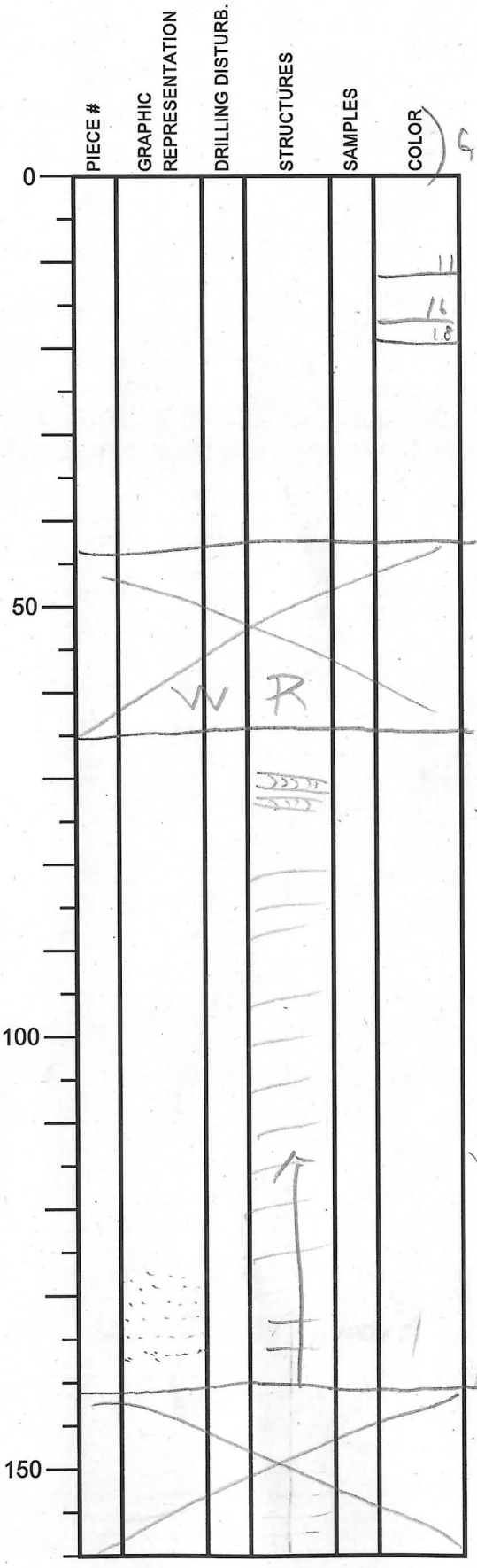
NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 3
OBSERBER: H. Naruse / RS



Integrated Ocean Drilling Program

Visual Core Description

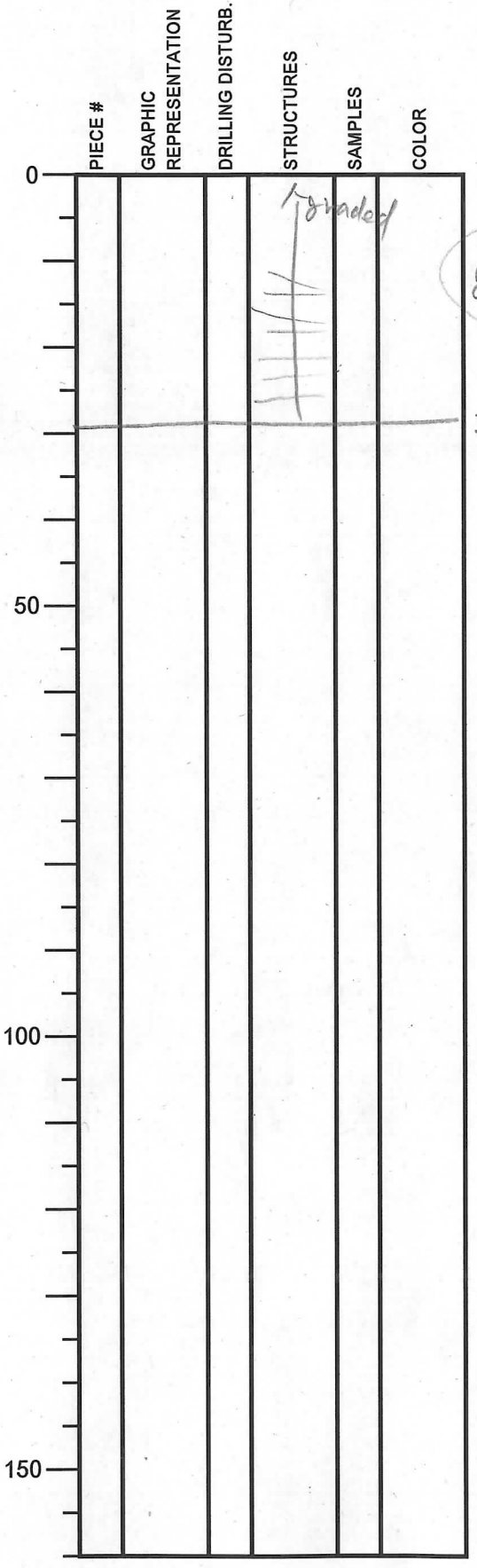
NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 4
OBSERBER: H. Yamase/RS



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 5
OBSERBER: H. Yamase / RS



SECTION DESCRIPTION

graded medium to very fine gray volcanic sandstone

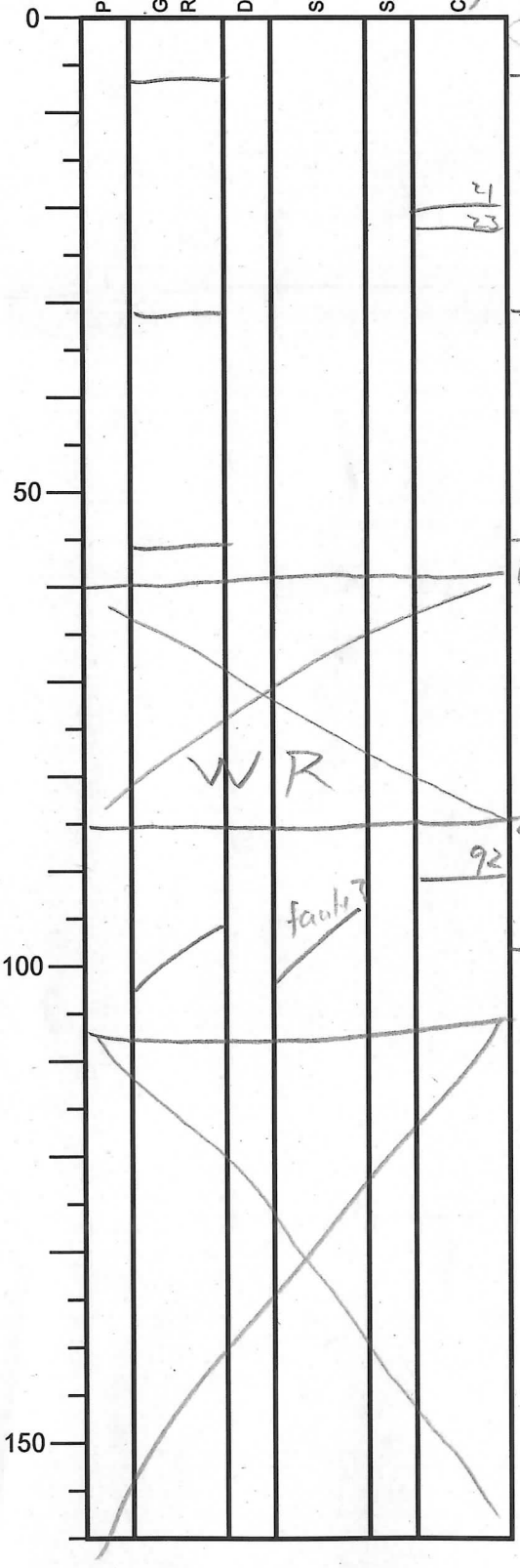
parallel laminated

No bioturbation (0)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: 7
OBSERBER: H. Naruse/RS



SECTION DESCRIPTION

laminated gray volcaniclastic sandstone — No bioturb (0)

6 — Sharp boundary

green-gray silty clay — Heavy bioturb. (5)

31 ~~Sharp boundary~~

laminated dark-gray clay — slight bioturbation (1)

57 — sharp boundary

60

green-gray silty clay — Heavy bioturbation (5)

85

92

100 — fault?

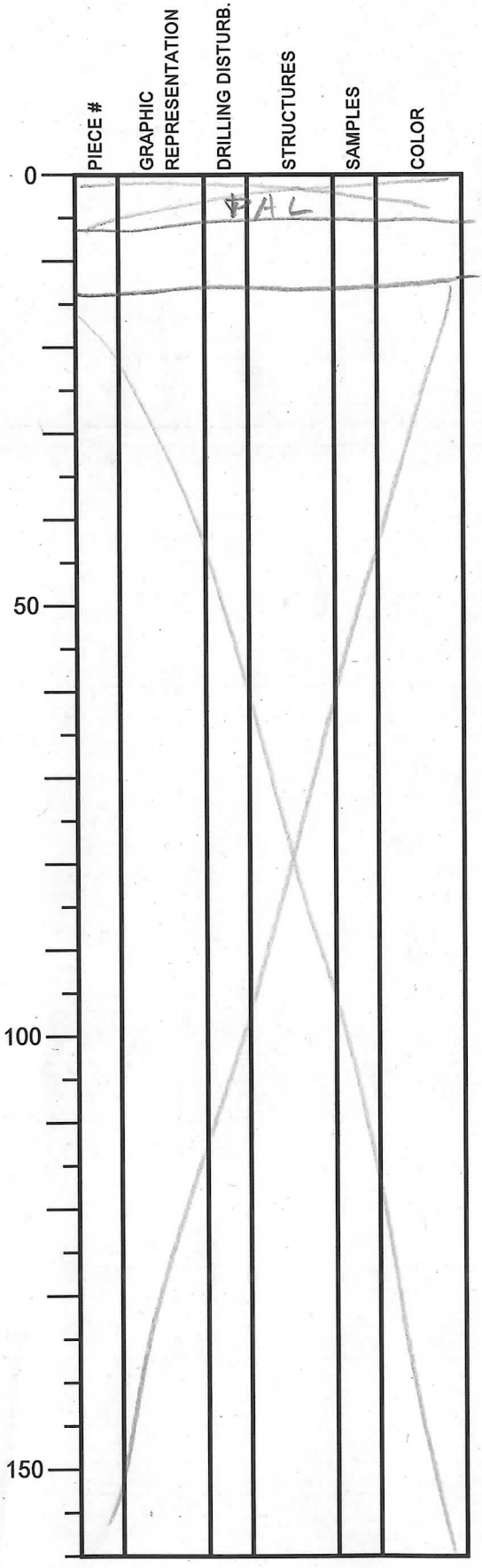
structureless dark-gray clay — slight (1)

101 end

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/1[illegible]/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 12R
SECTION: CC
OBSERBER: H.Naruse/RS

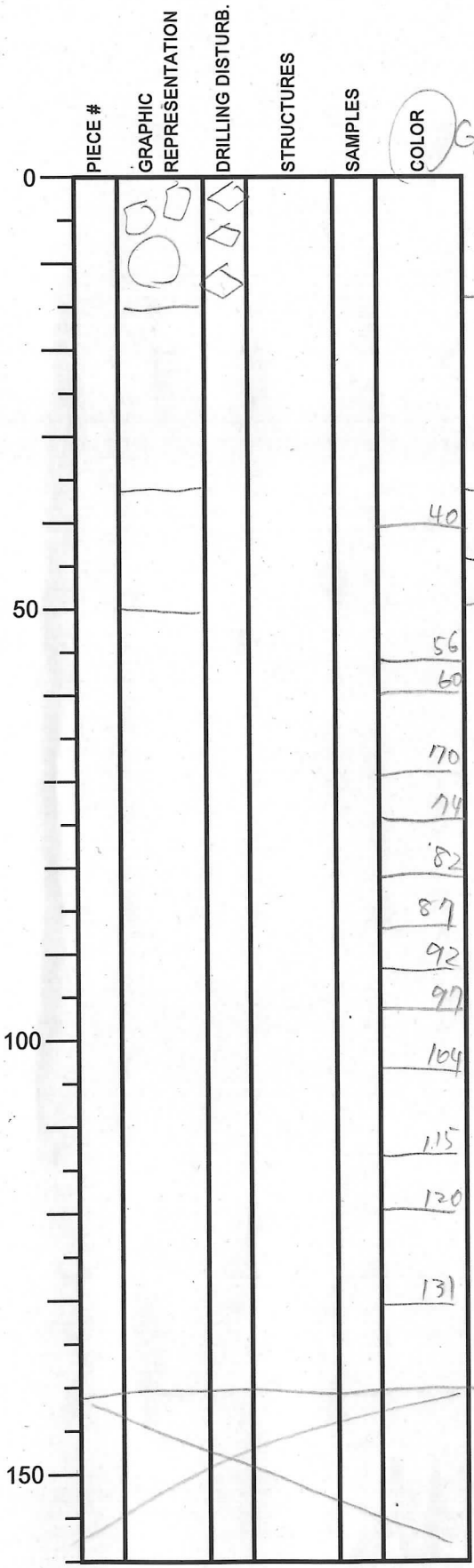


SECTION DESCRIPTION

Structureless dark-gray clay [No bioturb. (0)

Integrated Ocean Drilling Program
Visual Core Description

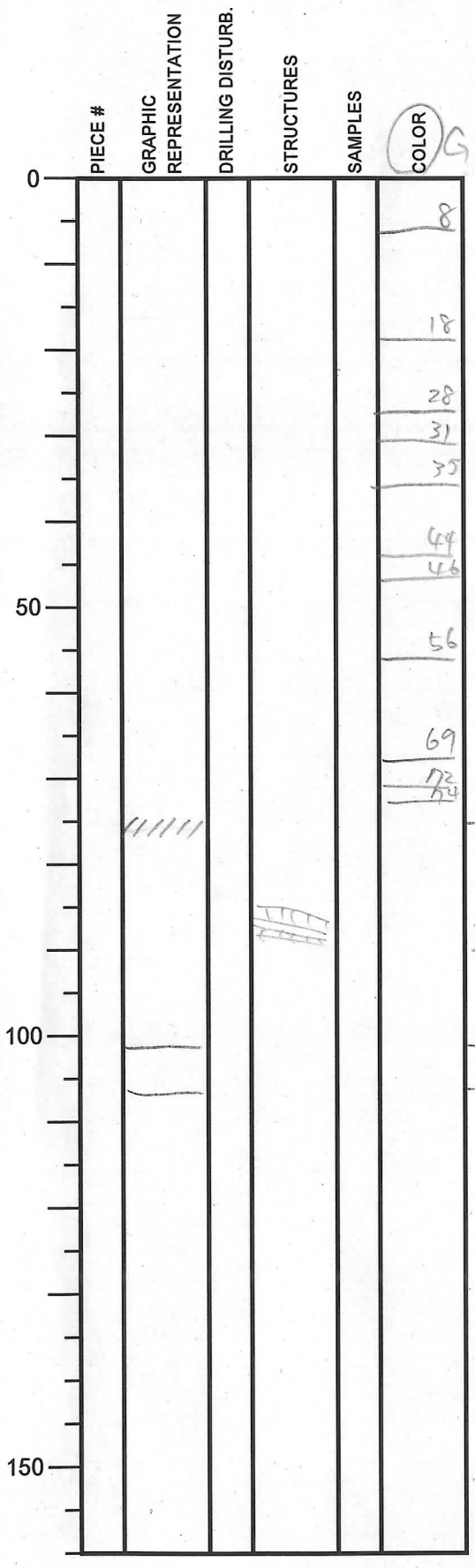
NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 1
OBSERBER: H. Narusе / RS



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 2
OBSERBER: H. Haruse/RS



SECTION DESCRIPTION

Heavy bioturbation (5)

green-gray silty clay

76 – gradual boundary

laminated dark-gray clay

Zoophycos

slight bioturb. (2)

102 – sharp boundary

107 – gradual boundary

green-gray silty clay

Heavy bioturb.

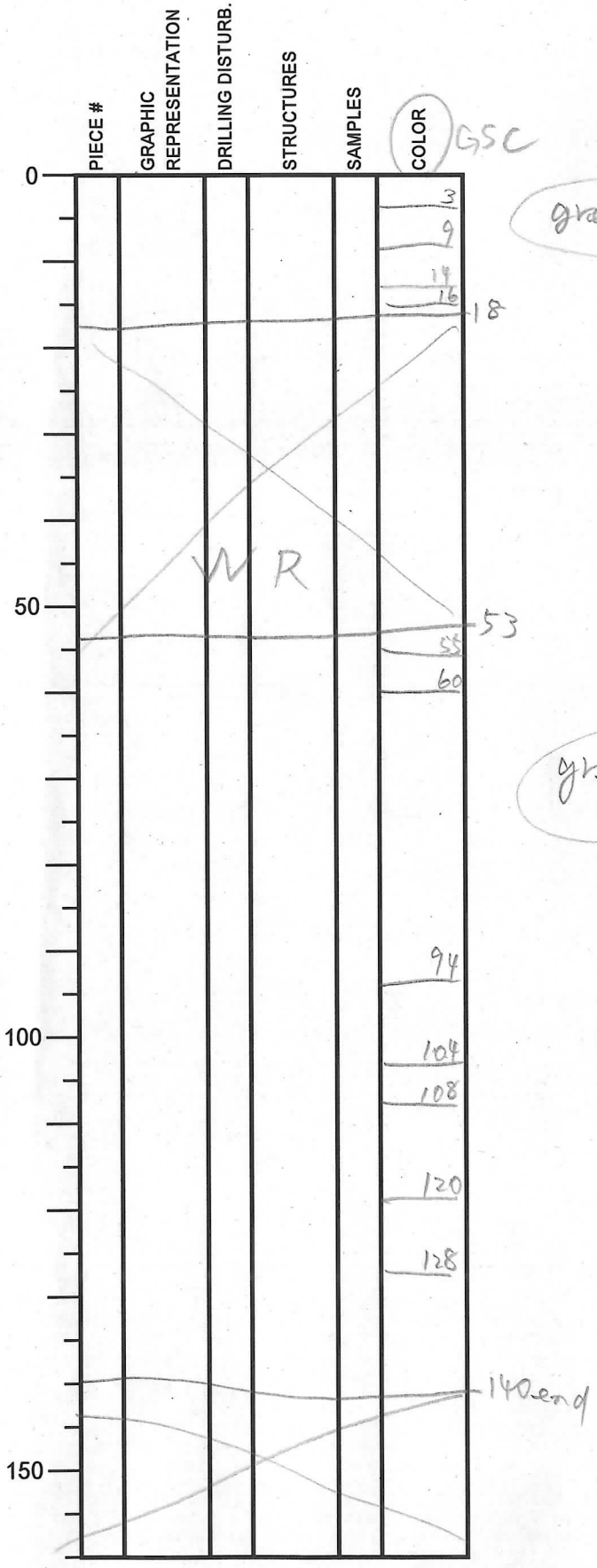
slight (1)

laminated dark-gray silty clay

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 4
OBSERBER: H. Naruse/RS



SECTION DESCRIPTION

green-gray silty clay

Heavy bioturb. (5)

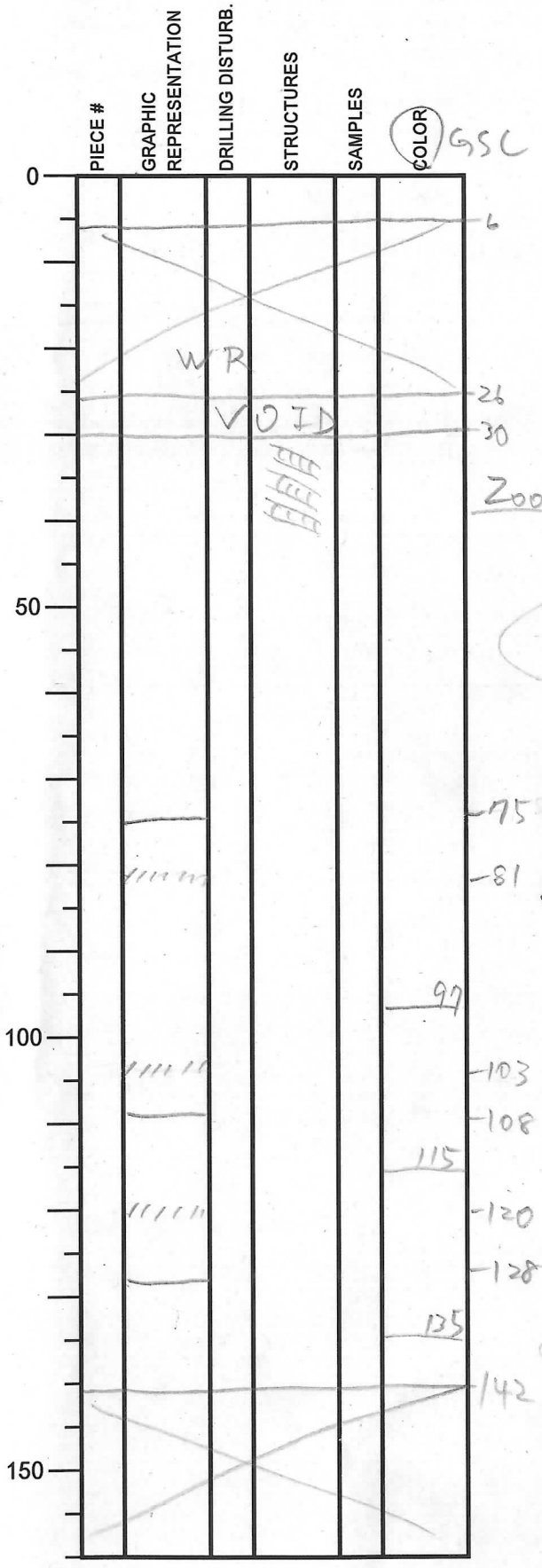
green-gray silty clay

Heavy bioturb. (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 5
OBSERBER: H. Naruse/RS



SECTION DESCRIPTION

green-gray silty clay — Heavy b. (5)

Slight bioturbation (1)

laminated dark-gray clay

carbonaceous light-gray clay — Heavy (5)

Heavy (5)

structureless dark-gray clay — moderate (3)

green-gray silty clay — Heavy (5)

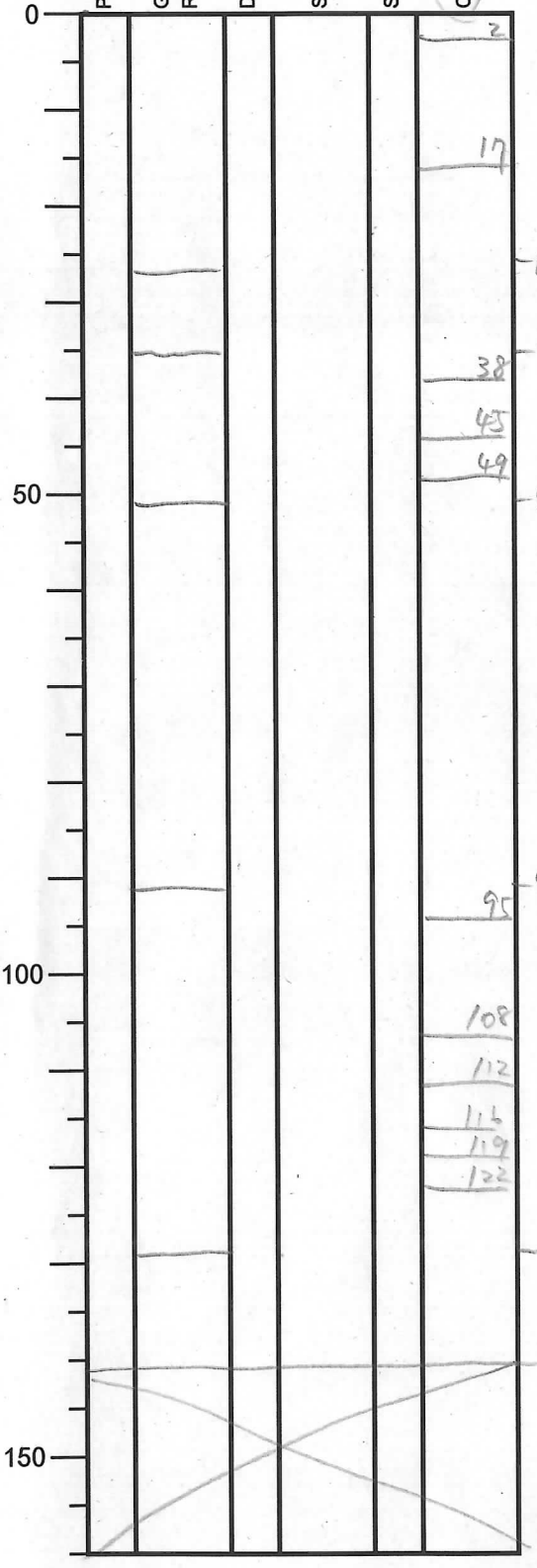
structureless dark-gray clay — Slight (2)

green-gray silty clay — Heavy (5)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/1/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 6
OBSERBER: H. Hamuse/KS



SECTION DESCRIPTION

green-gray silty clay — Heavy bioturb. (5)

17 —

structureless dark-gray clay — slight b. (1)

35 — sharp

green-gray silty clay — Heavy bioturb. (5)

51 — gradual boundary

laminated dark-gray clay — Slight bioturb. (1)

91 — sharp b.

green-gray silty clay — Heavy bioturb (5)

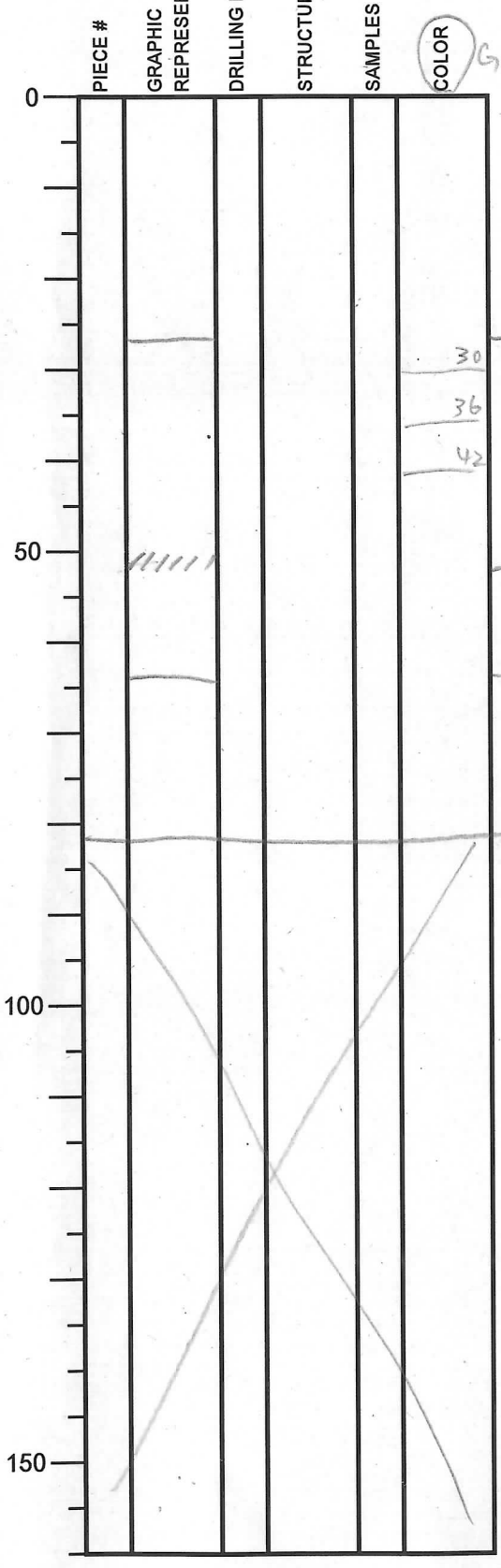
129 — gradual b.

structureless dark-gray clay — slight b. (2)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/11/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: 7
OBSERBER: H. Harnse/RS



SECTION DESCRIPTION

Structureless dark-gray clay

No bioturb. (0)

24 — sharp boundary

green-gray silty clay

Heavy b. (5)

51 — gradual b.

laminated dark-gray clay

Slight b. (1)

64 — sharp b.

green-gray silty clay

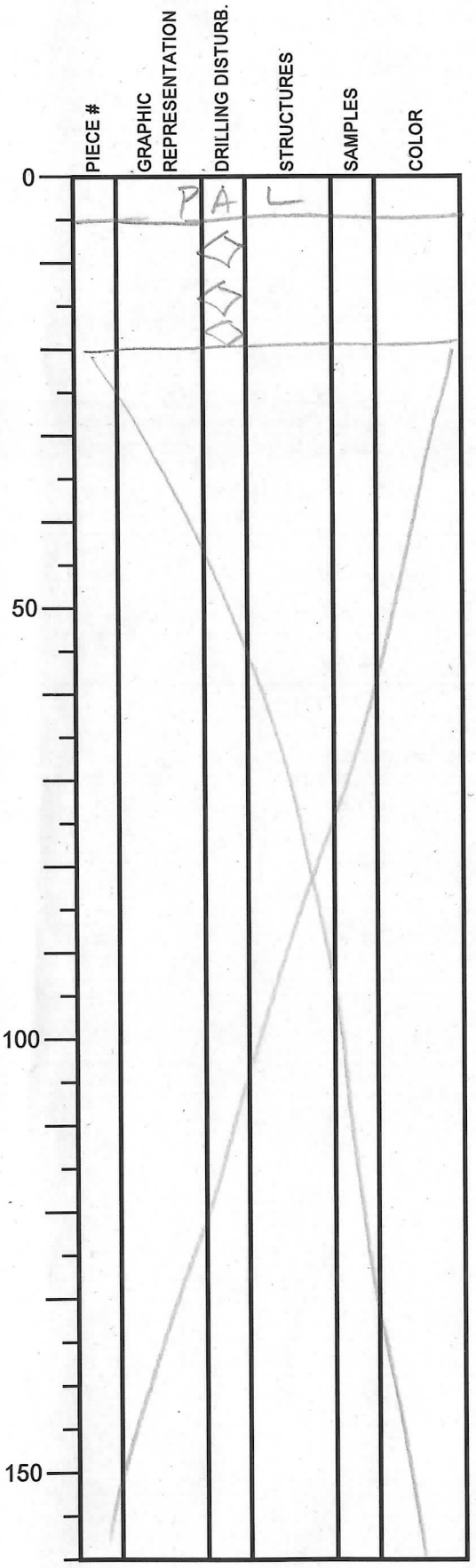
Heavy (5)

82 end

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/4/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 13R
SECTION: CC
OBSERBER: H. Haruse/RS



SECTION DESCRIPTION

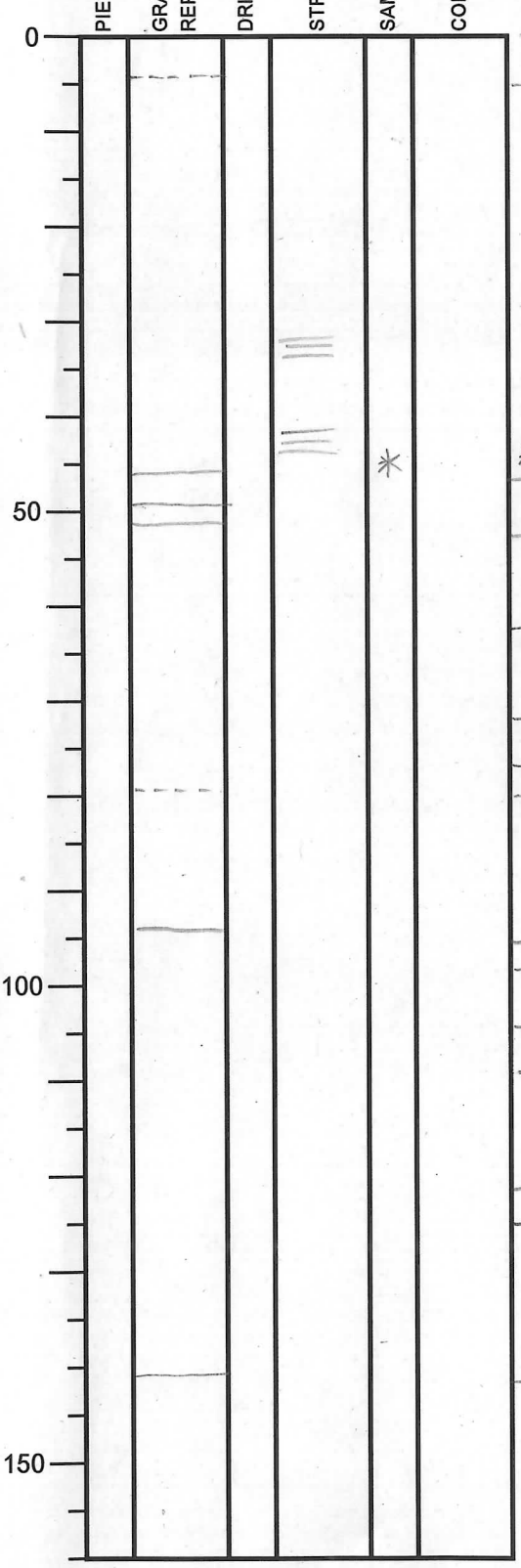
structureless
dark-gray clay

No bioturb. (0)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 12 / 09 / 2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: 1
OBSERBER: KGP/SK



SECTION DESCRIPTION

GGSc — 4 cm

BIOTURBATION 5 (INTENSE)

MUDDY GRAY-GREEN / SILTSTONE (ind. fossils)
Sharp base / diffuse top with bioturbation increasing downwards (1 EVENT?)

BIOTURBATION 1 (SLIGHT)

*44cm SS
46 cm

CARBONATE (basal dissolution?)

BIOTURBATION 0

51 cm — 62cm GSc — GGSc / GSc

BIOTURBATION 5 (INTENSE)

71 cm GSc
76cm GSc
78 cm

MUDDY GRAY-GREEN / SILTSTONE
Sharp base / diffuse top (1 EVENT?) with bioturbation increasing downwards

BIOTURBATION 1 (SLIGHT)

93 cm
97 cm GSc
103 cm GSc
107 cm GSc — MAJOR GGSc
MINOR GSc
120 cm GSc
124 cm GSc

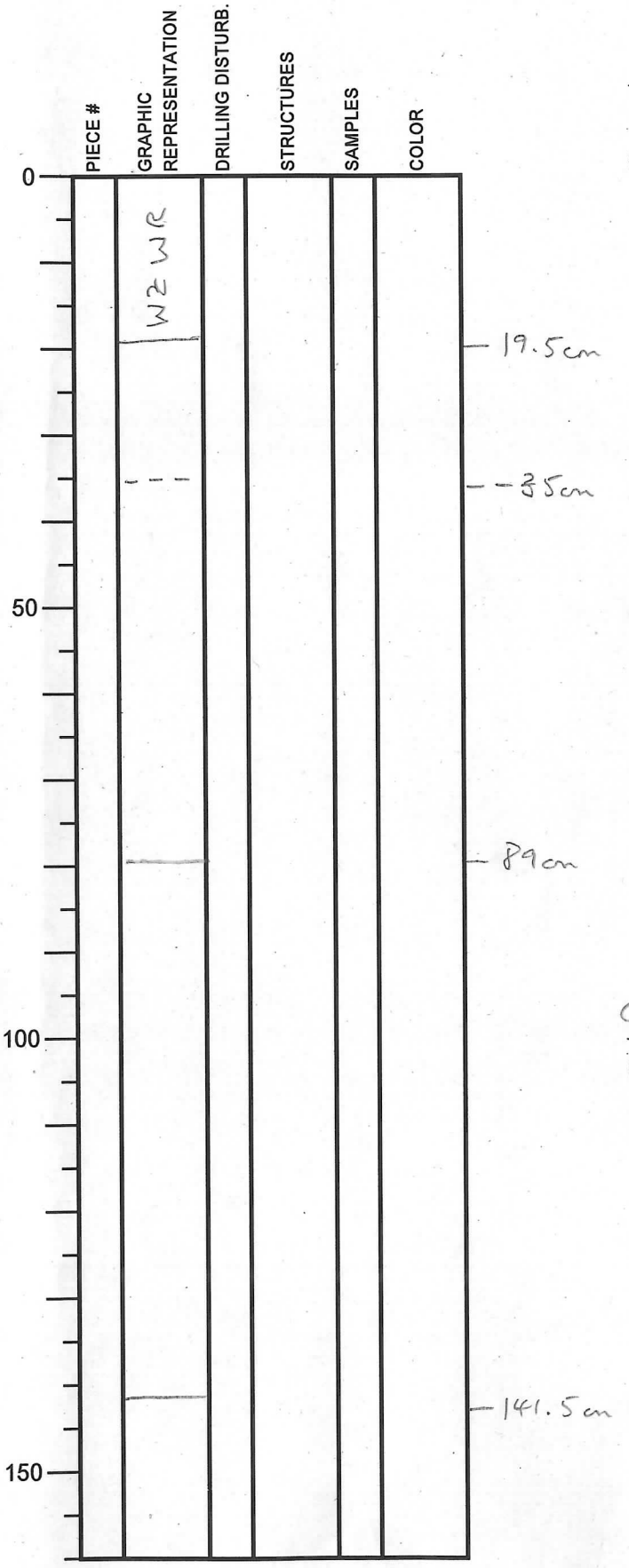
BIOTURBATION 5 (INTENSE)

141 cm END

Integrated Ocean Drilling Program

Visual Core Description

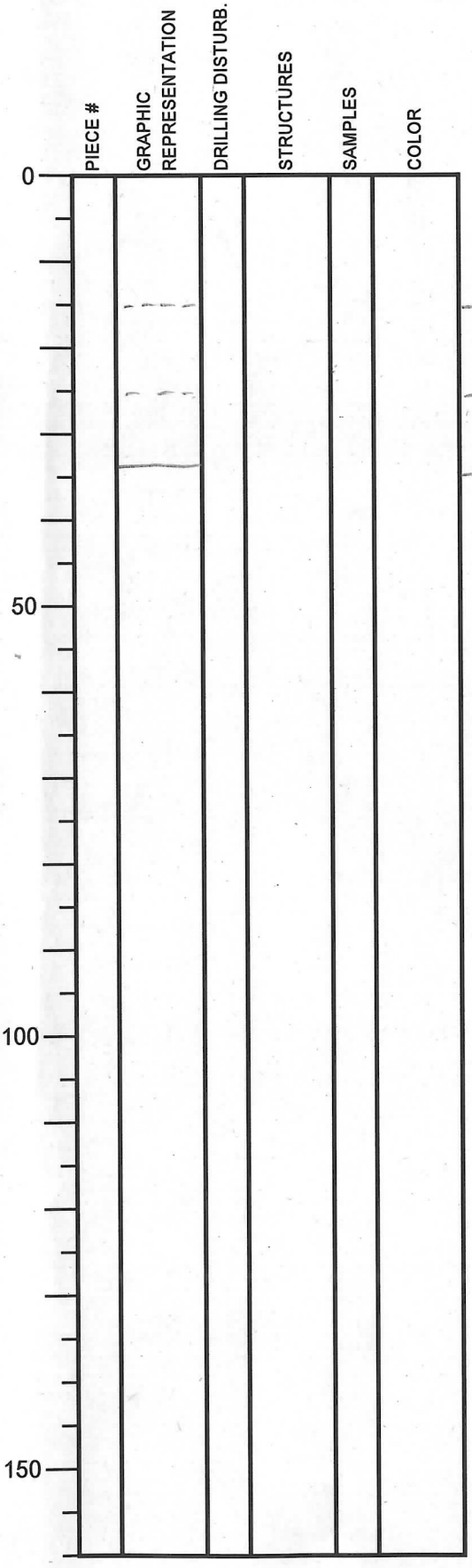
NO.
DATE: 12/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: 2
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 12 / 07 / 2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: 3
OBSERBER: KTP / SK



SECTION DESCRIPTION

MUDDY GRAY SILTSTONE

BIOT. 1

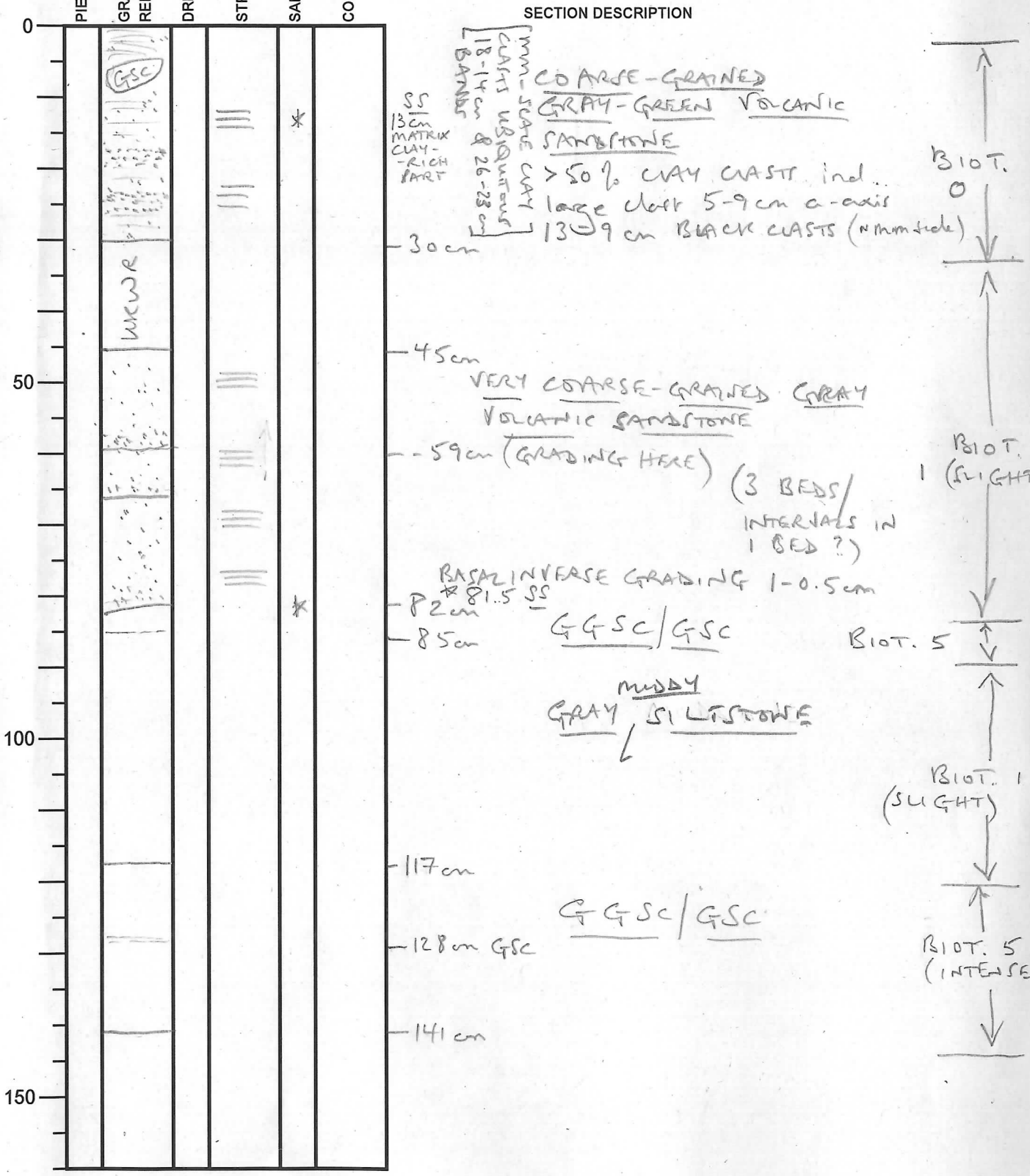
BIOT 3

BIOT. 1

Integrated Ocean Drilling Program

Visual Core Description

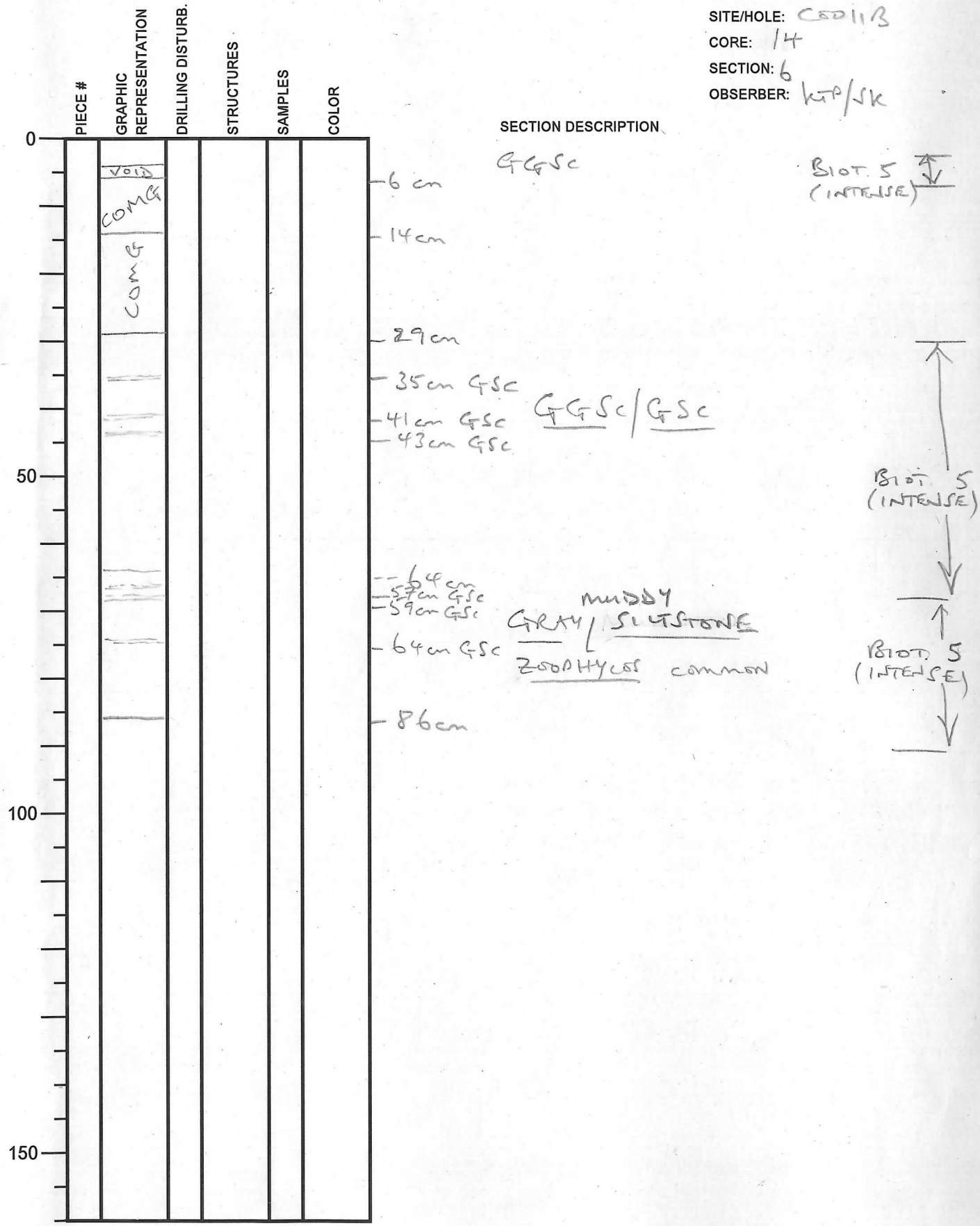
NO.
DATE: 12/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: 5
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

Visual Core Description

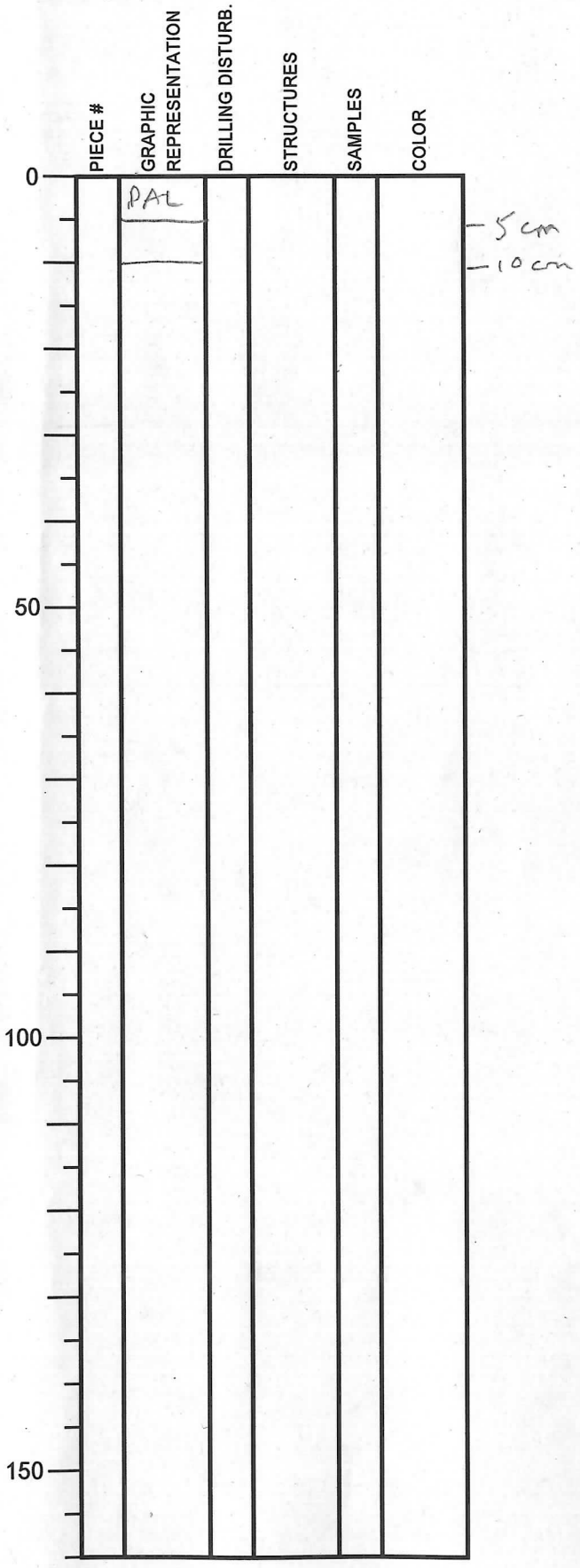
NO.
DATE: 12/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: 6
OBSERBER: KTP/SK



Integrated Ocean Drilling Program

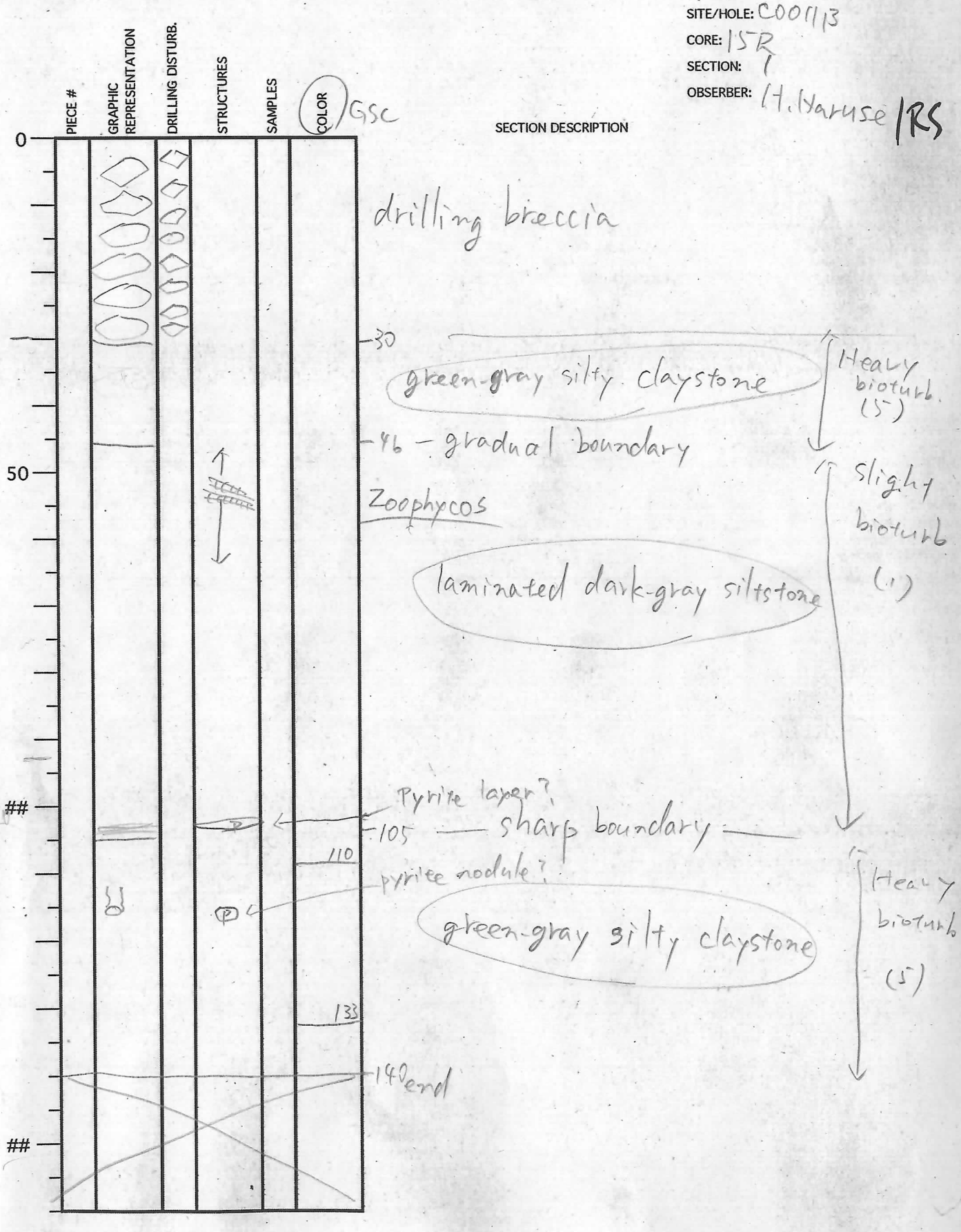
Visual Core Description

NO.
DATE: 12 / 09 / 20 09
EXP.: 322
SITE/HOLE: C0011B
CORE: 14
SECTION: cc
OBSERBER: KAP / SK



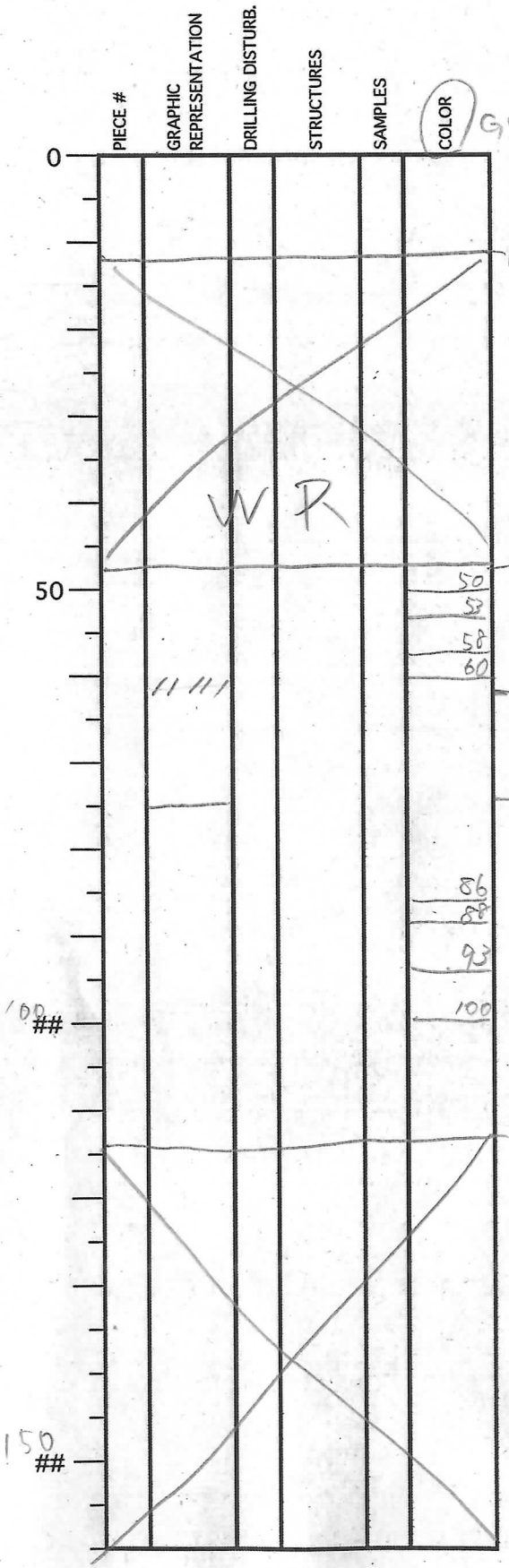
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 15R
SECTION: 1
OBSERBER: H. Yamase IRS



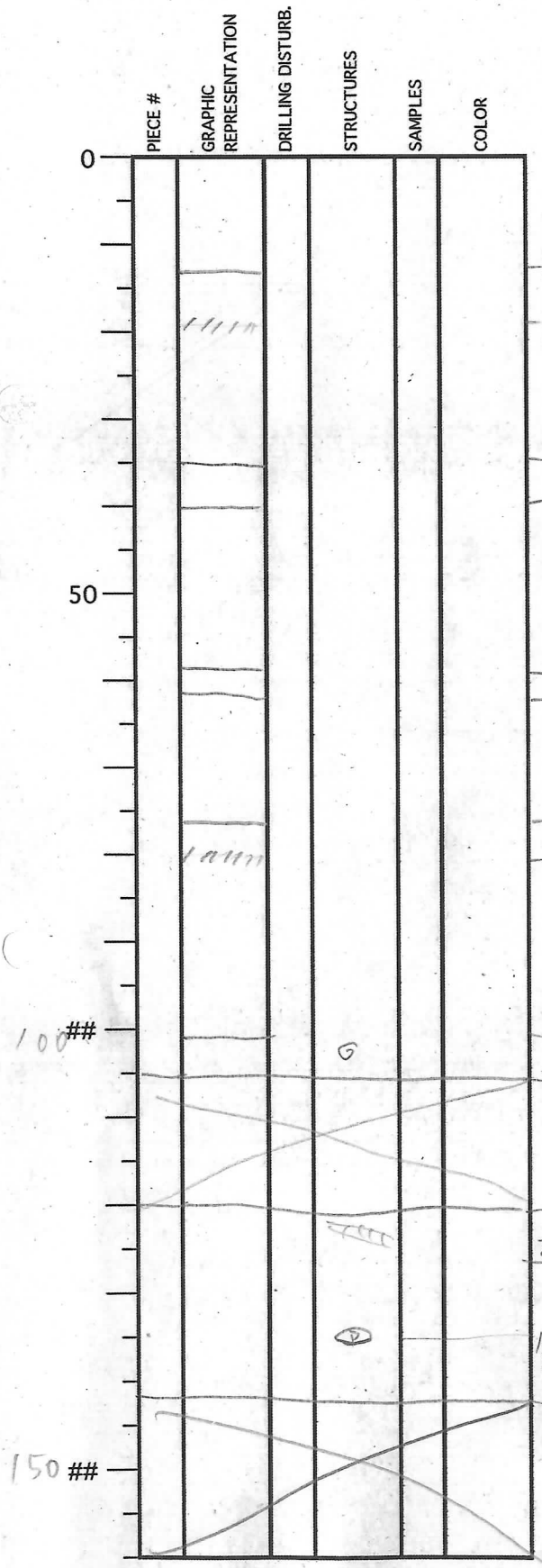
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 1 5R
SECTION: 2
OBSERBER: H. Naruse RS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 15R
SECTION: 4
OBSERBER: H. Harase IRS

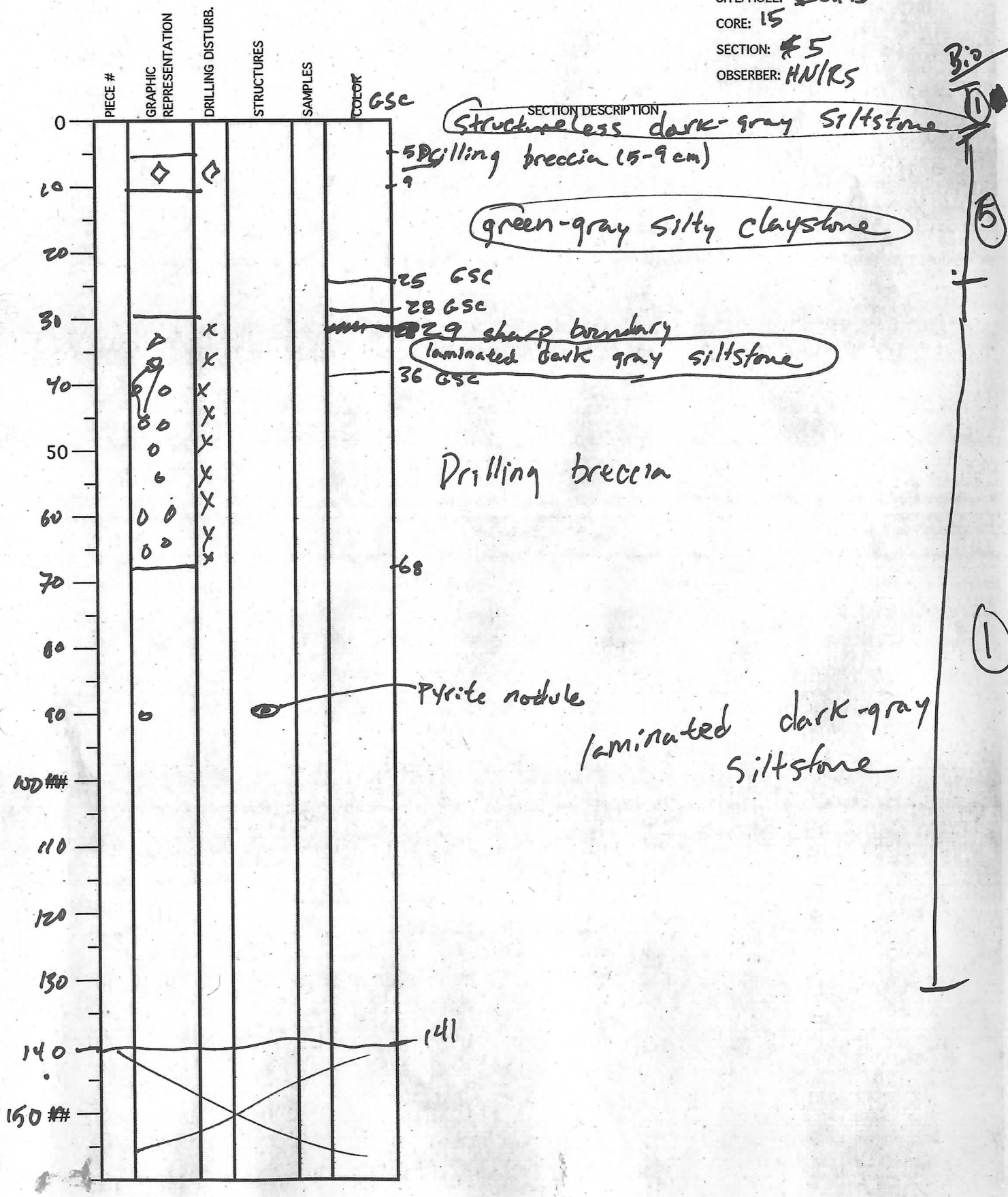


☆ Pyrite nodule filling burrows

☆ Microfossils are common (foram?)

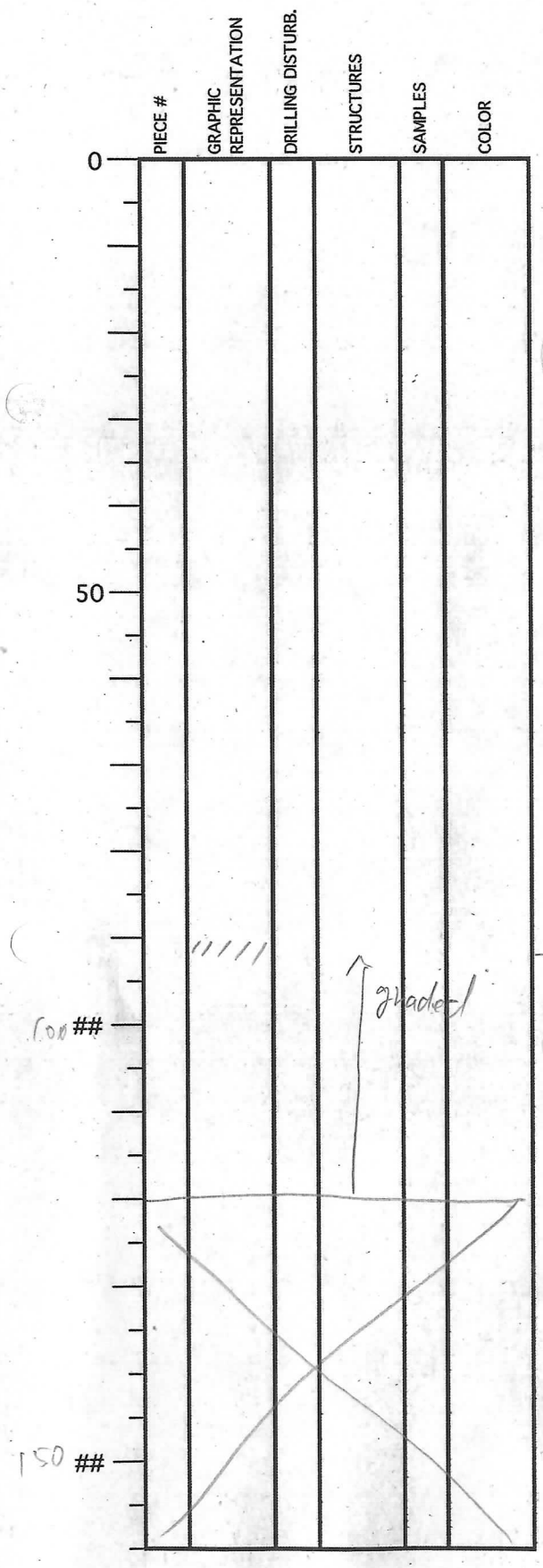
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/20
EXP.: 322
SITE/HOLE: U1511B
CORE: 15
SECTION: #5
OBSERBER: HN/RS



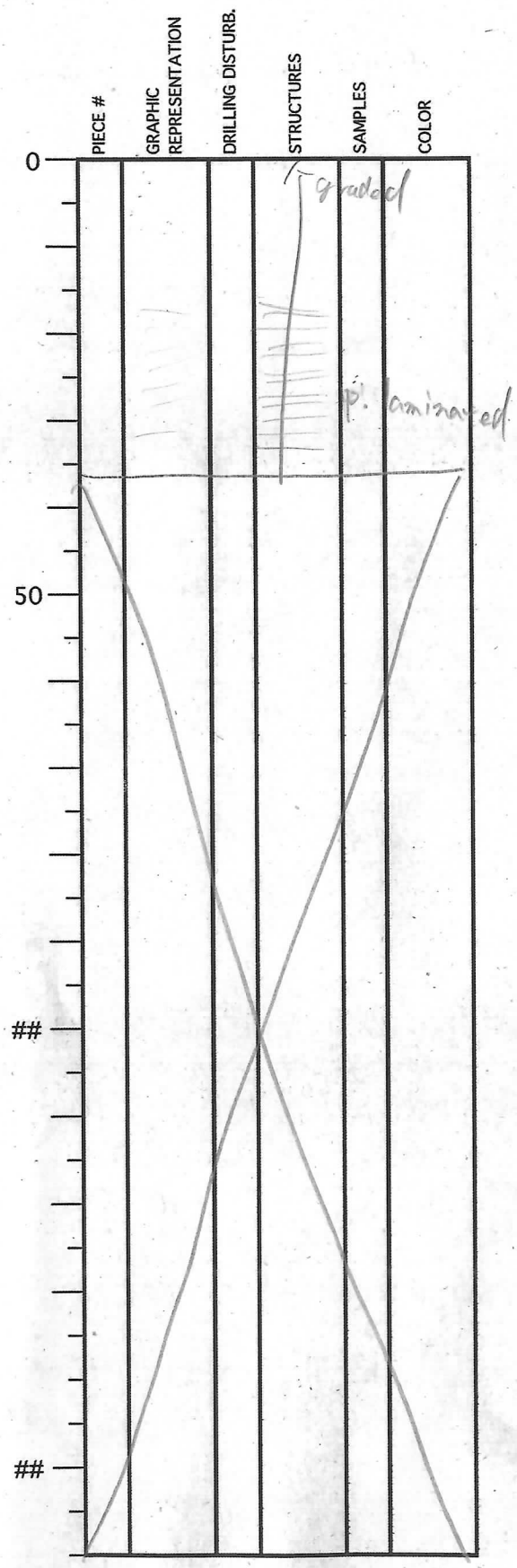
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 15R
SECTION: 6
OBSERBER: H. Naruse IRS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 15R
SECTION: 7
OBSERBER: H. Naruse IRS



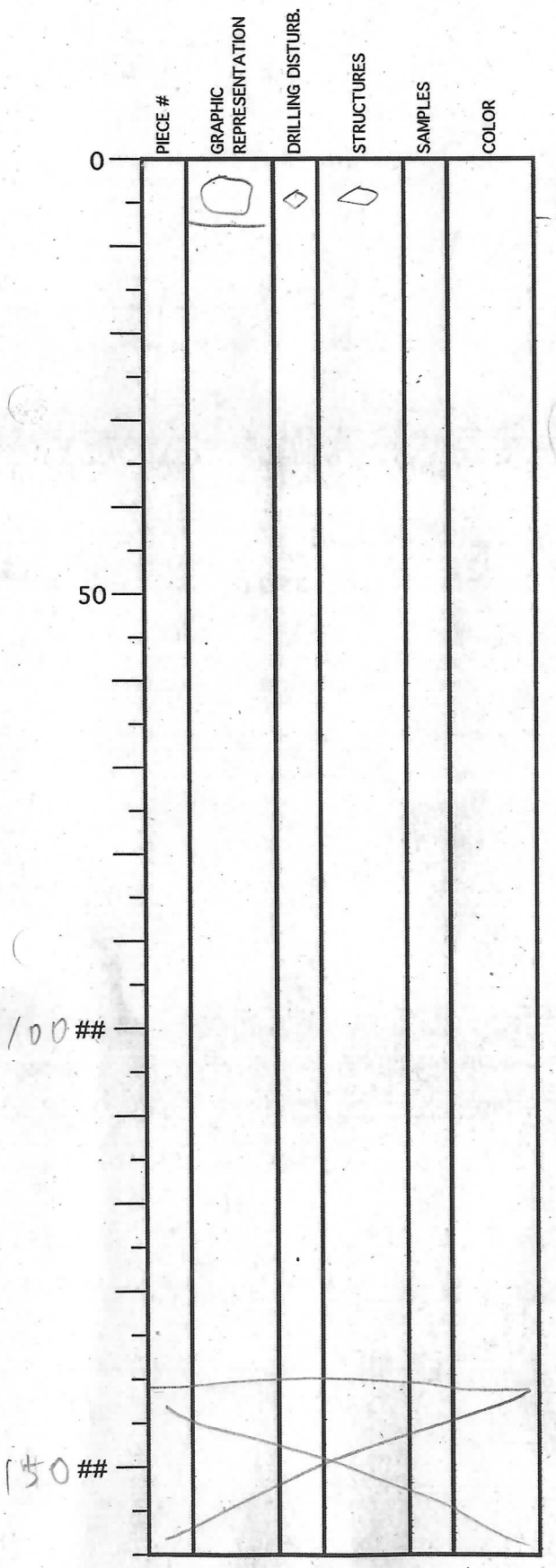
SECTION DESCRIPTION

medium to fine graded taffeceous sandstone

No bioturb. (0)

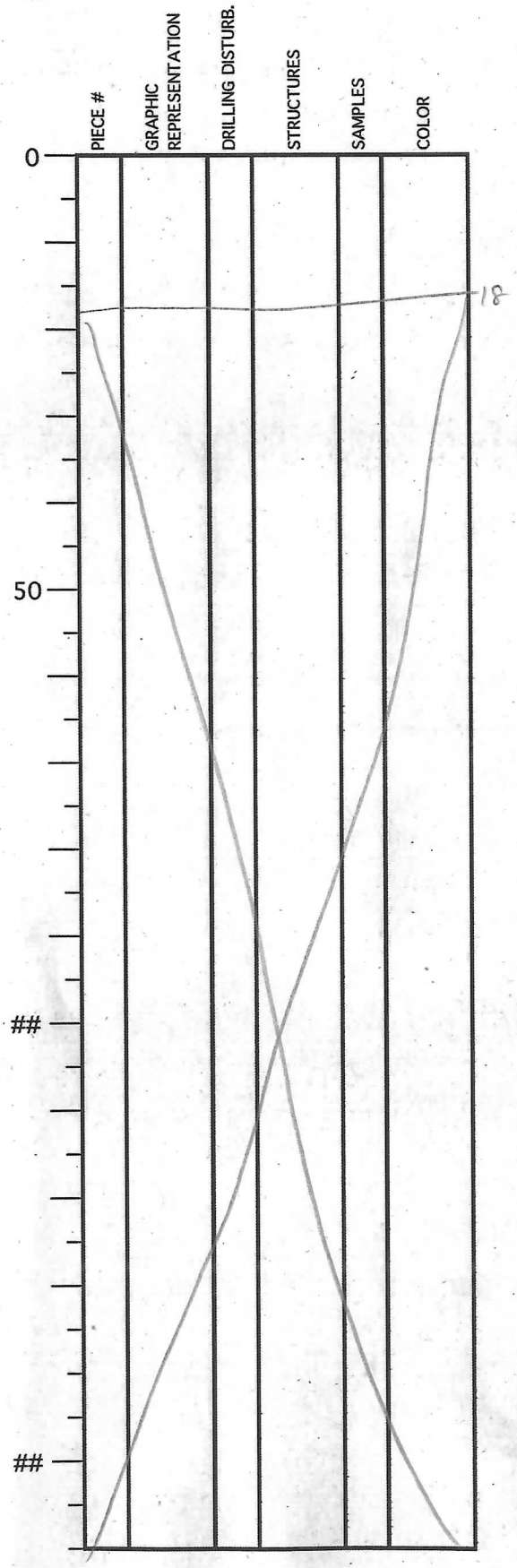
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 16R
SECTION: 1
OBSERBER: H. Naruse IRS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 16R
SECTION: 3
OBSERBER: H. Haruse IRS



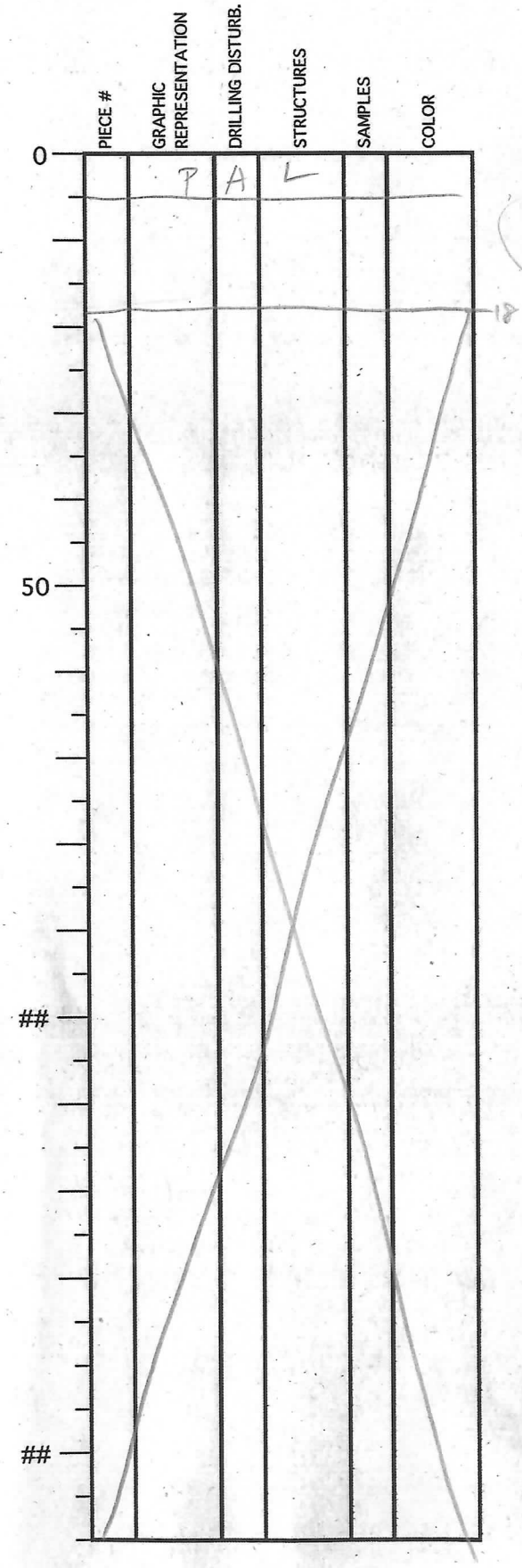
SECTION DESCRIPTION

gray, medium tuffaceous sandstone

↑ No bioturb. (0) ↓

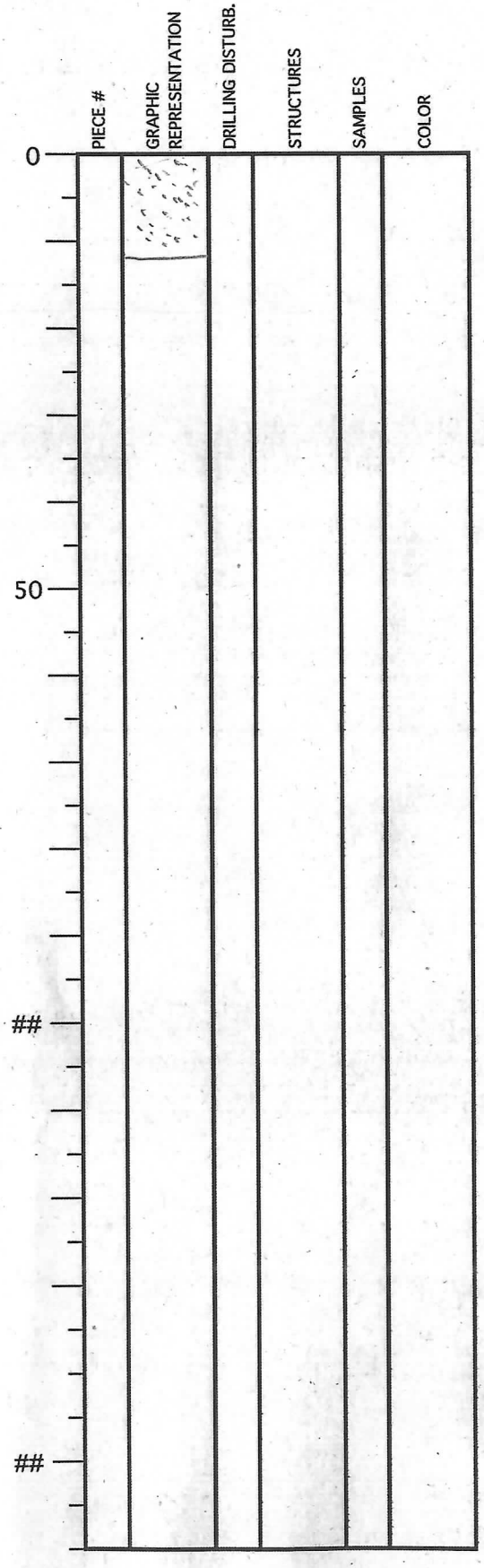
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 16R
SECTION: CC
OBSERBER: H. Naruse IRS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 12/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 17
SECTION: CC
OBSERBER: KMP/SK



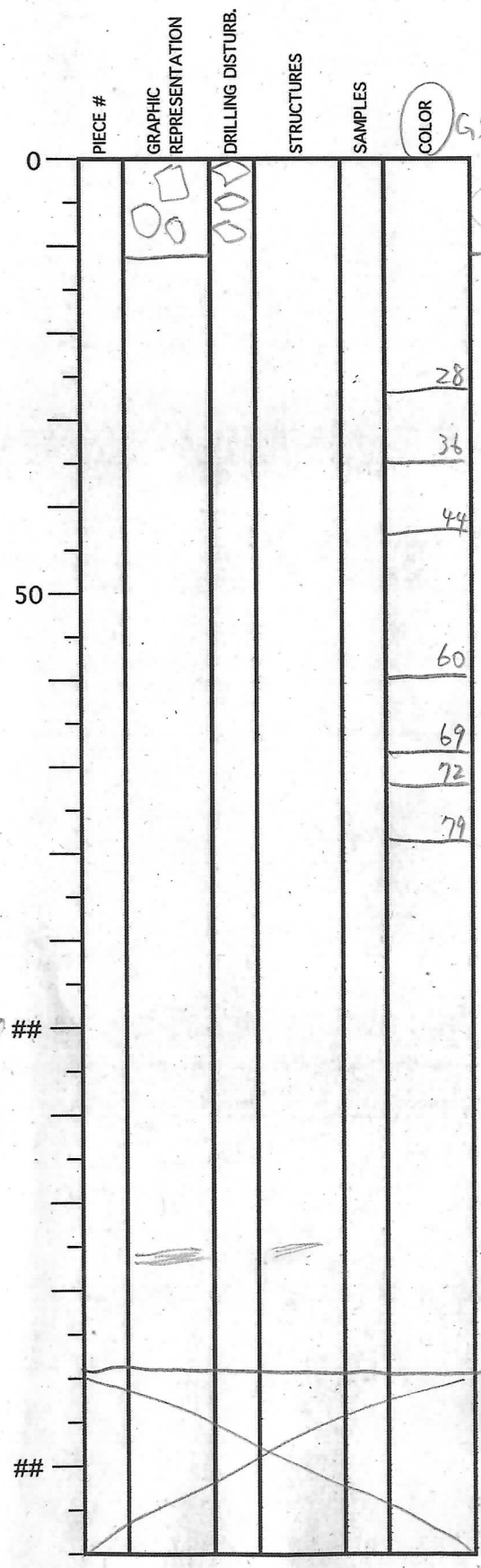
SECTION DESCRIPTION

GRANULE-GRADE GRAY-GREEN SANDSTONE (Tightly cemented)

6 cm

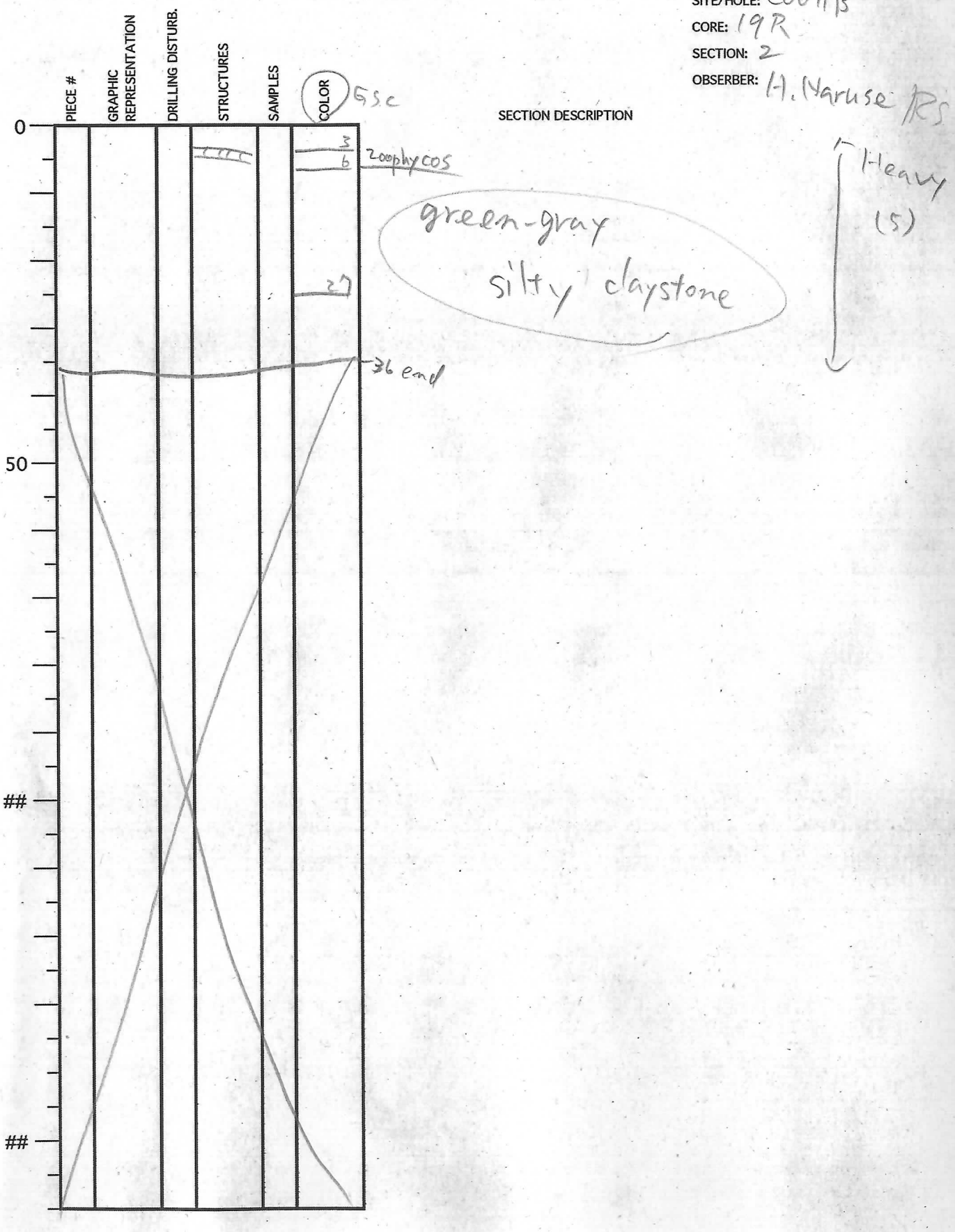
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: 1
OBSERBER: H. Narusе/RSp



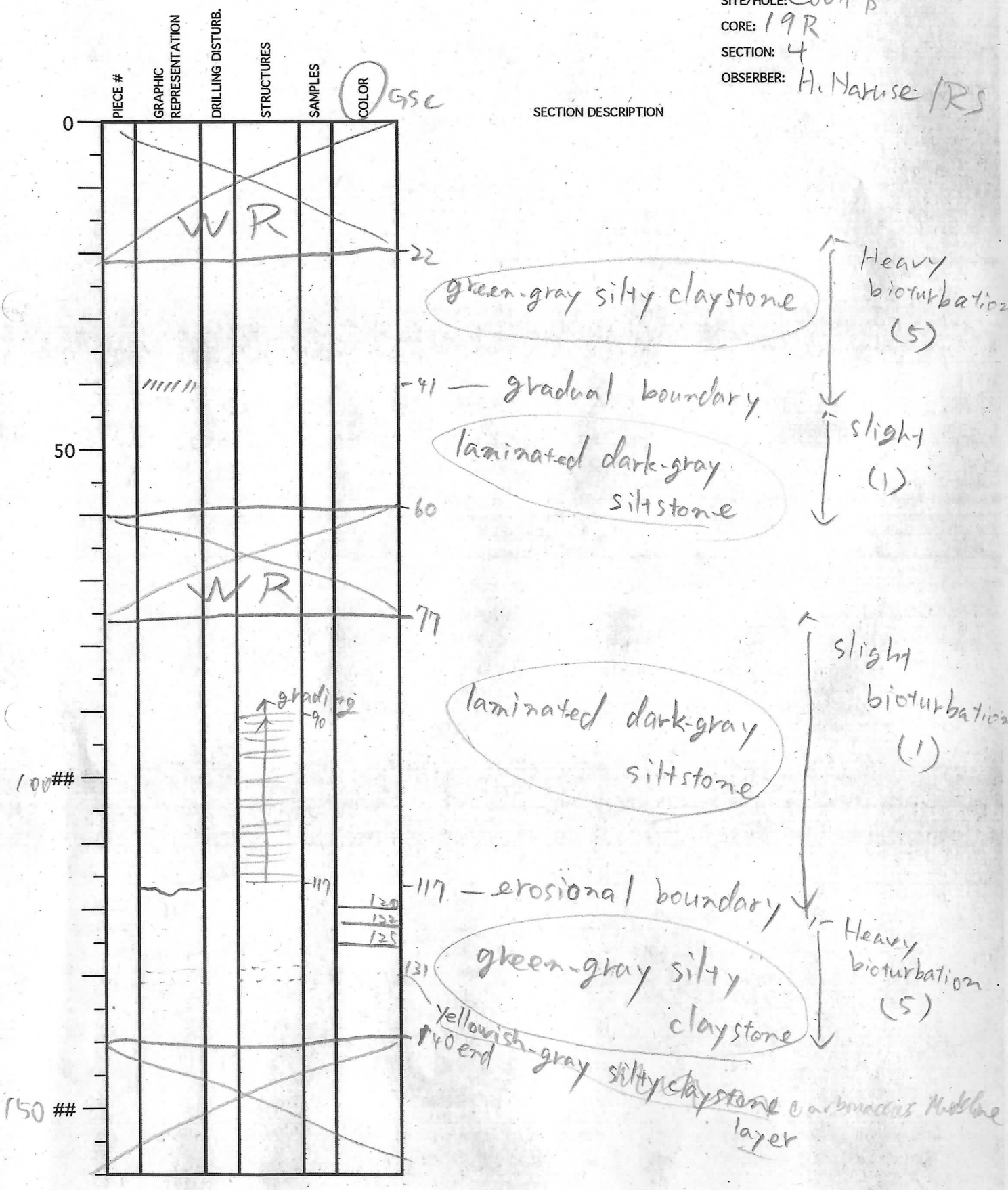
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: 2
OBSERBER: H. Naruse RS



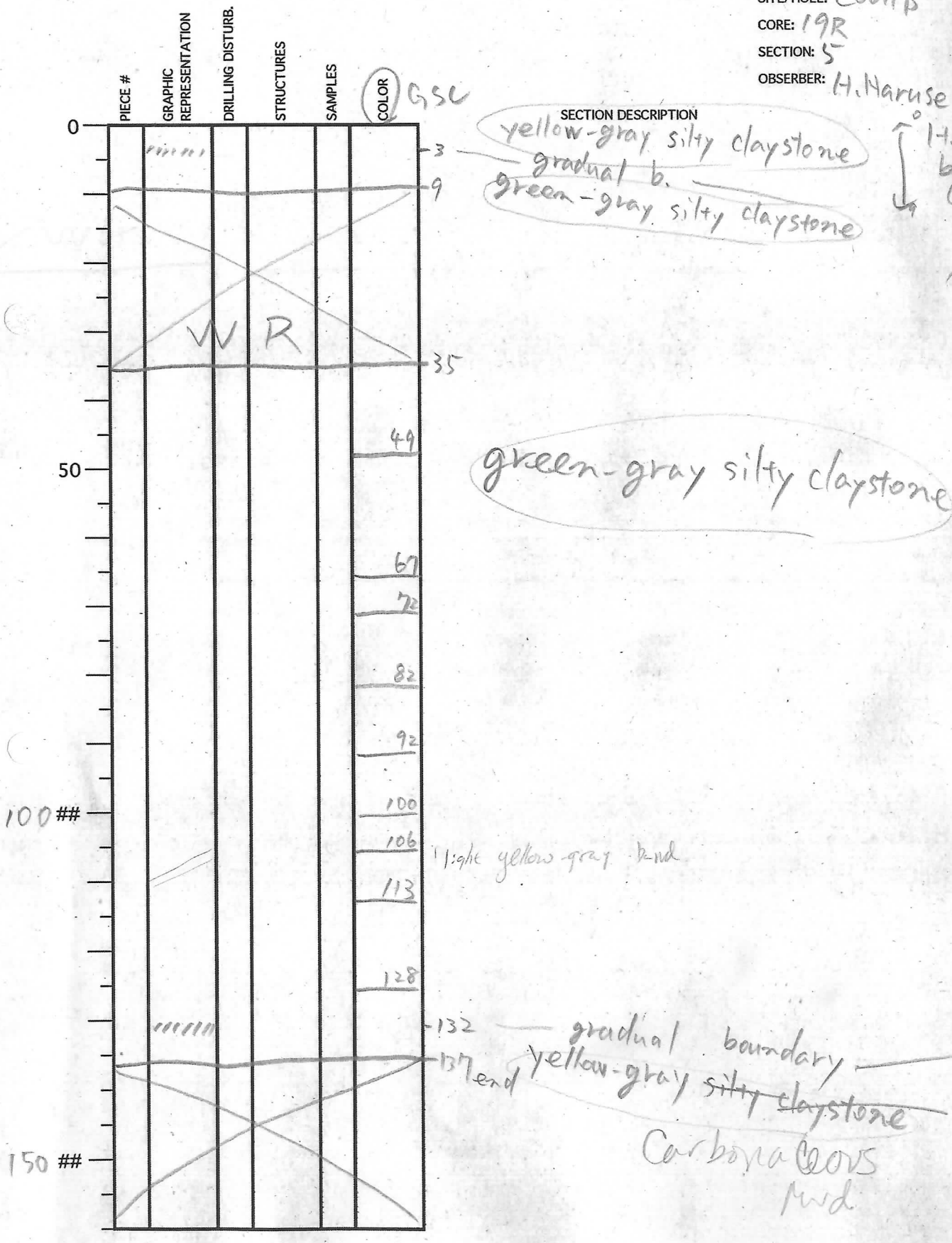
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011 B
CORE: 19R
SECTION: 4
OBSERBER: H. Hatuse / RS



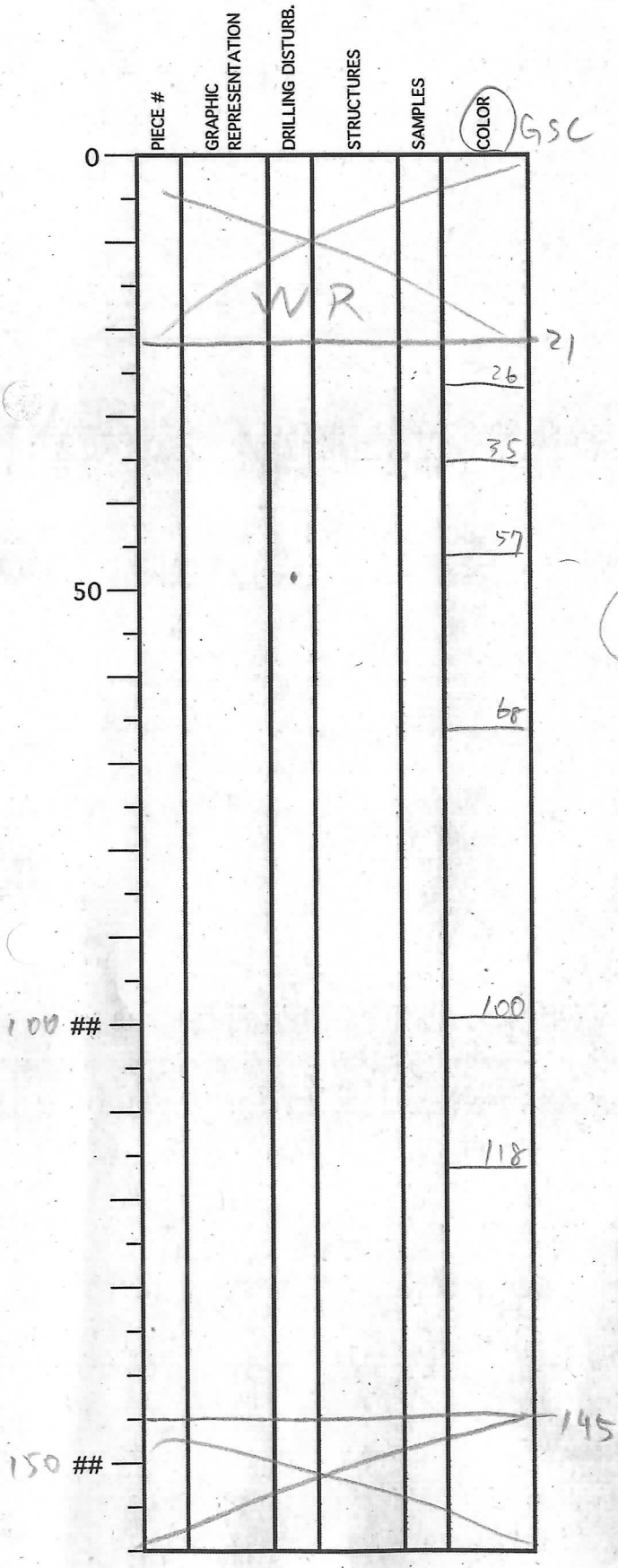
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/17/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: 5
OBSERBER: H. Haruse IKS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: 6
OBSERBER: M. Maruse RS



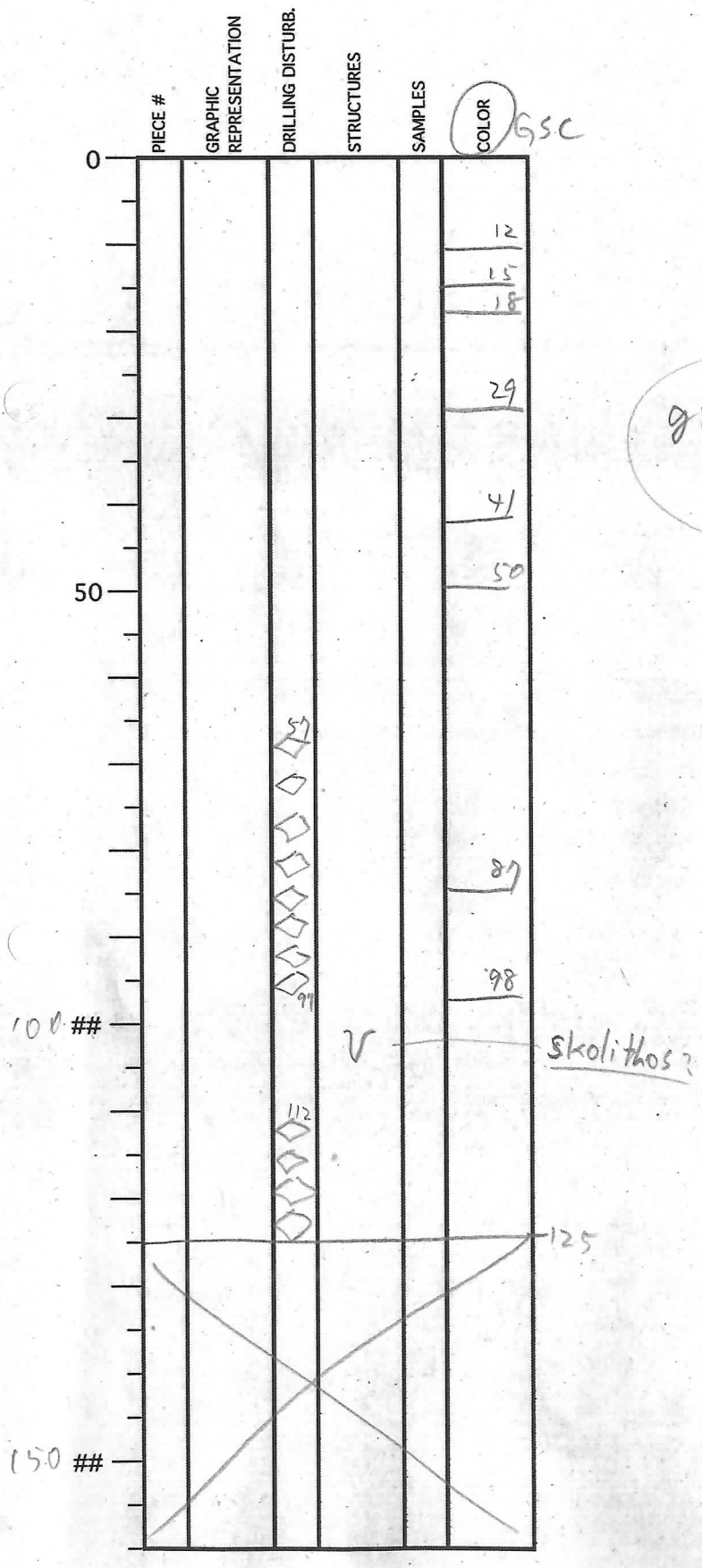
SECTION DESCRIPTION

green-gray silty claystone

Heavy bioturbation (5)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: 7
OBSERBER: H. Haruse / RS



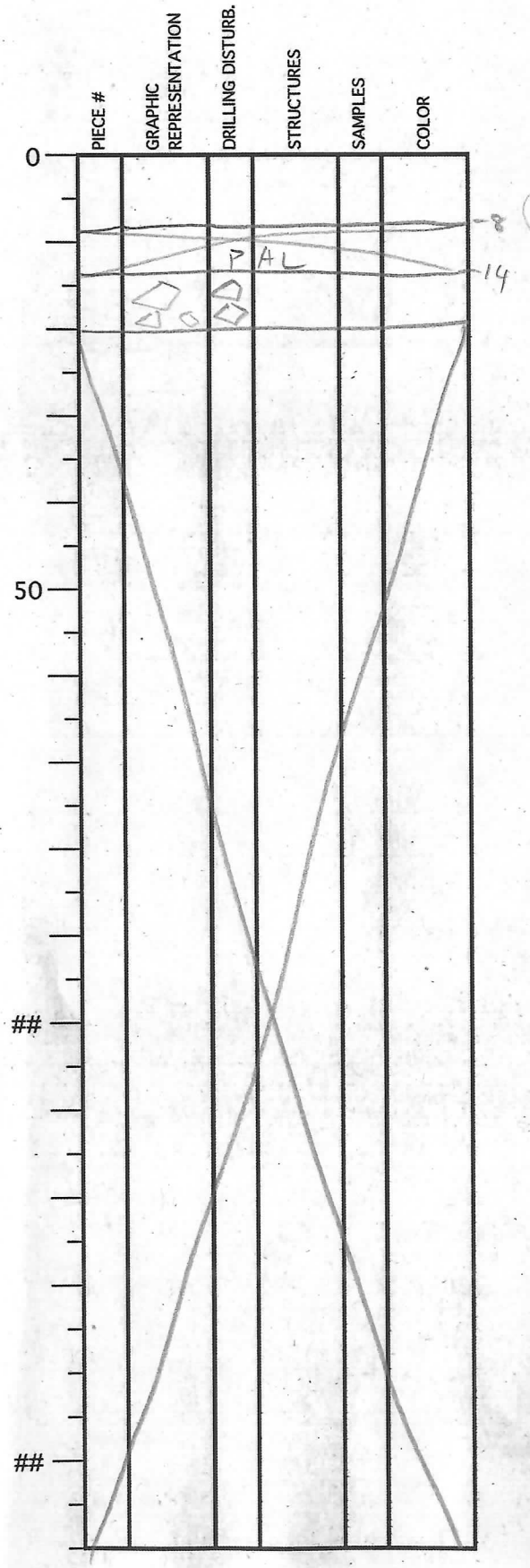
SECTION DESCRIPTION

green-gray silty claystone

Heavy bioturbation (5)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 19R
SECTION: CC
OBSERBER: H. Haruse / TCS



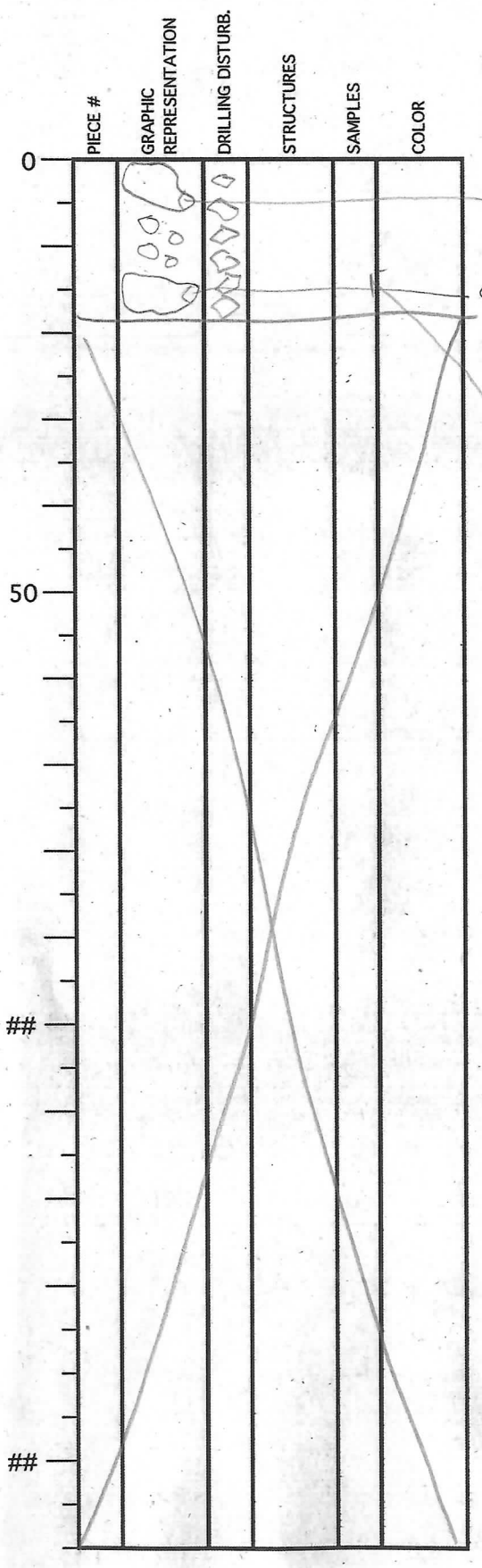
SECTION DESCRIPTION

green-gray silty claystone

Heavy bioturbation (5)

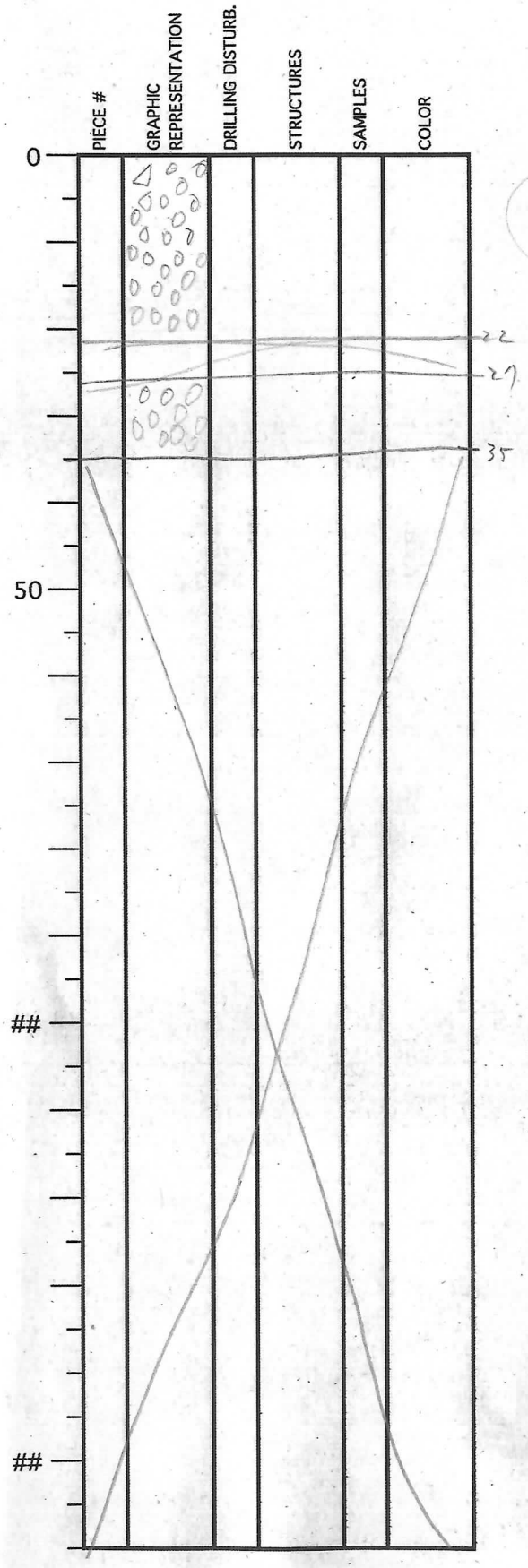
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 20R
SECTION: 1
OBSERBER: H. Naruse



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 20
SECTION: CC
OBSERBER: H. Haruse

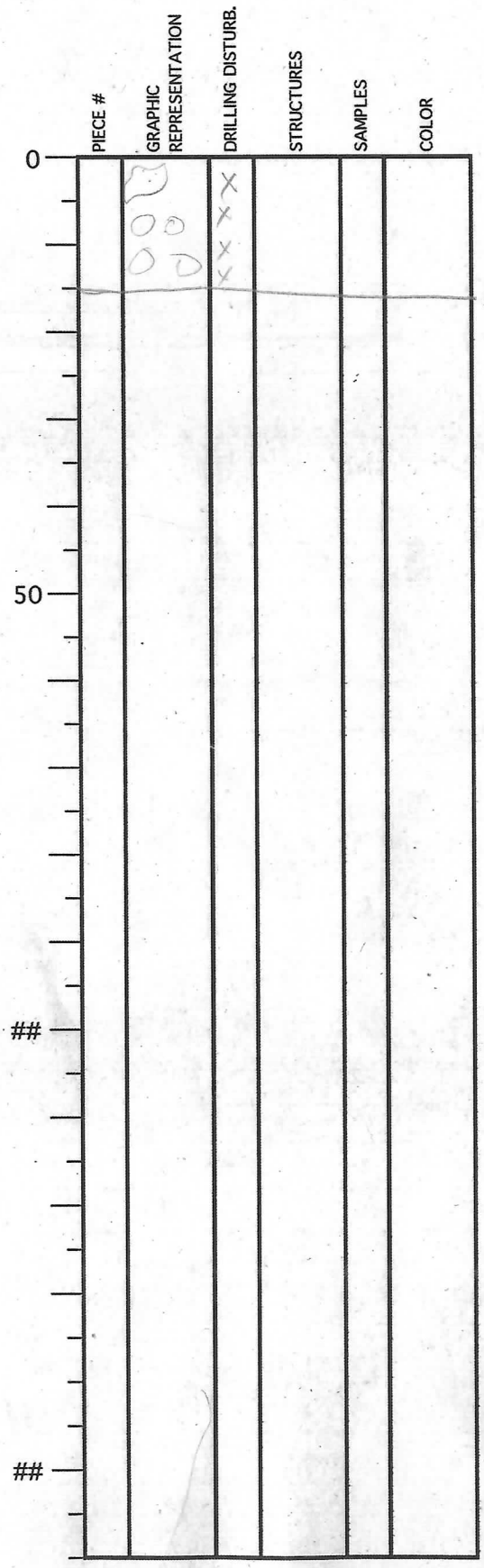


SECTION DESCRIPTION

All drilling breccia (powder) composed of green-gray silty claystone

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 1
OBSERBER: RS/HN



SECTION DESCRIPTION

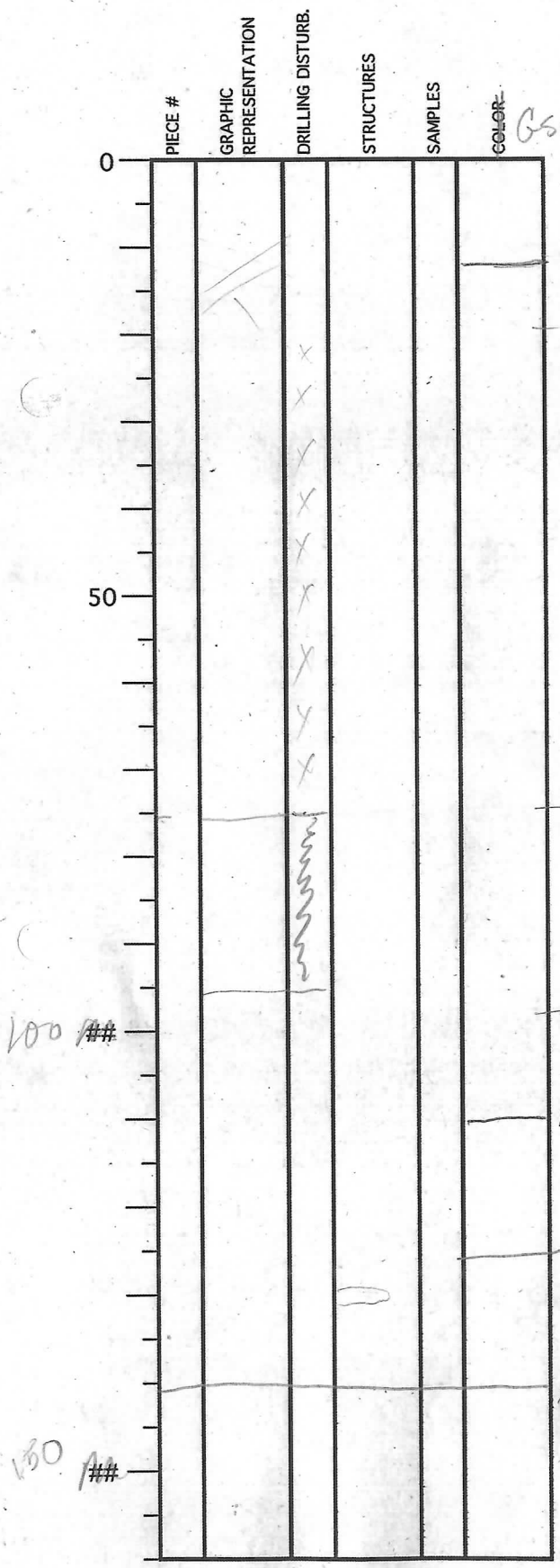
Green gray silty claystone drilling breccia

15 end

Bioturb: 5 → heavy

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 3
OBSERBER: RS/HN



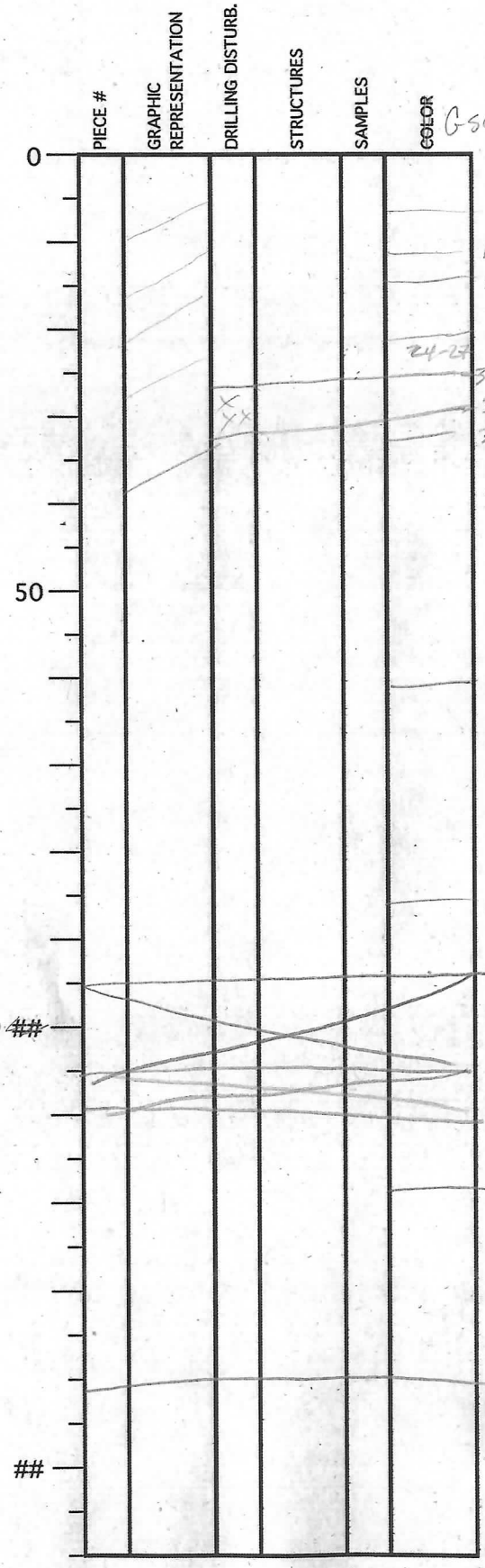
Major: Green Gray Silty Claystone

Minor: Green Silty Claystone

Bioturb: 5 heavy

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 4
OBSERBER: RS/HN



Major:
Green gray silty claystone

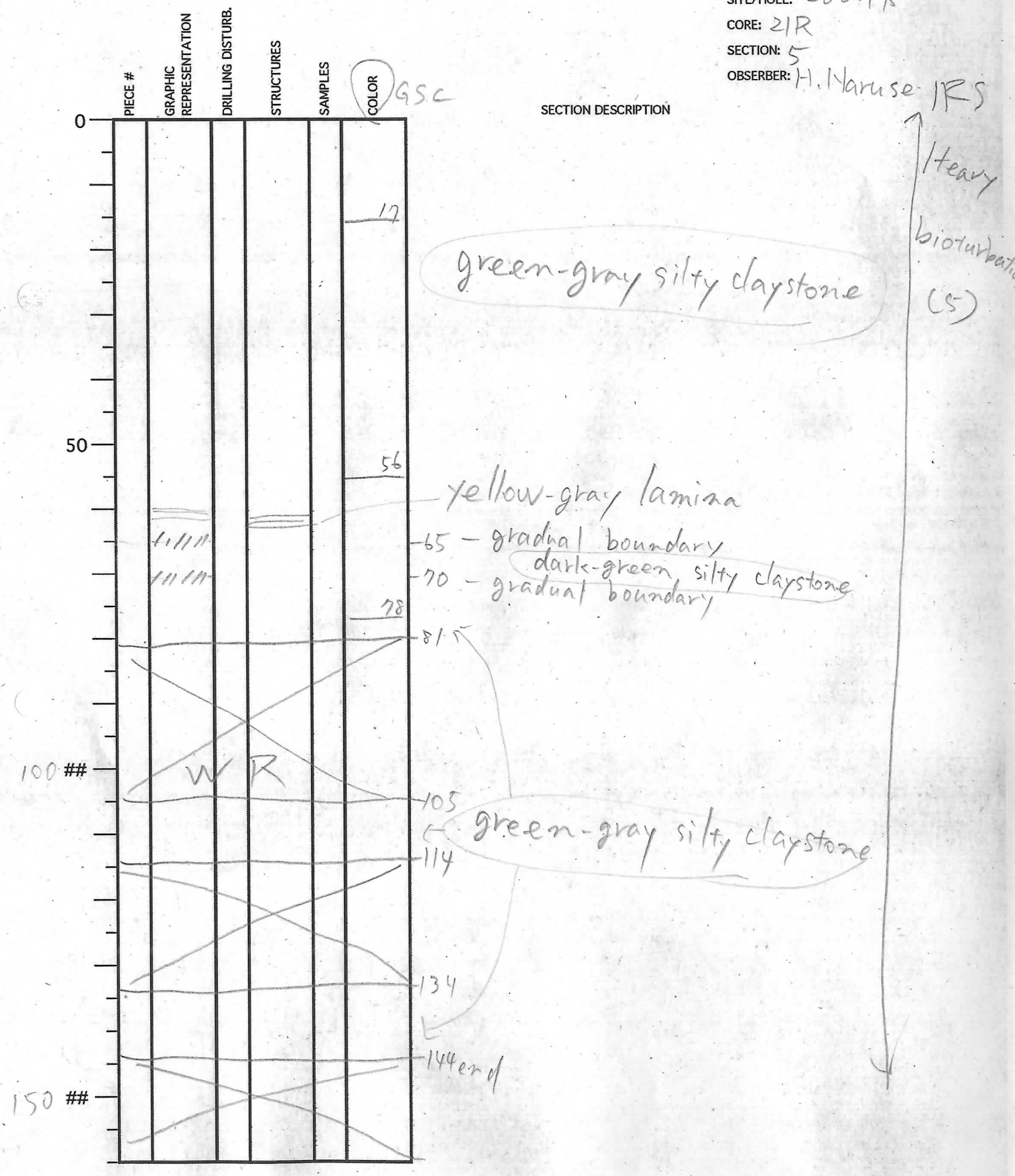
Minor:
Green silty claystone

Bioturb: 5 heavy

GGSC/GSC

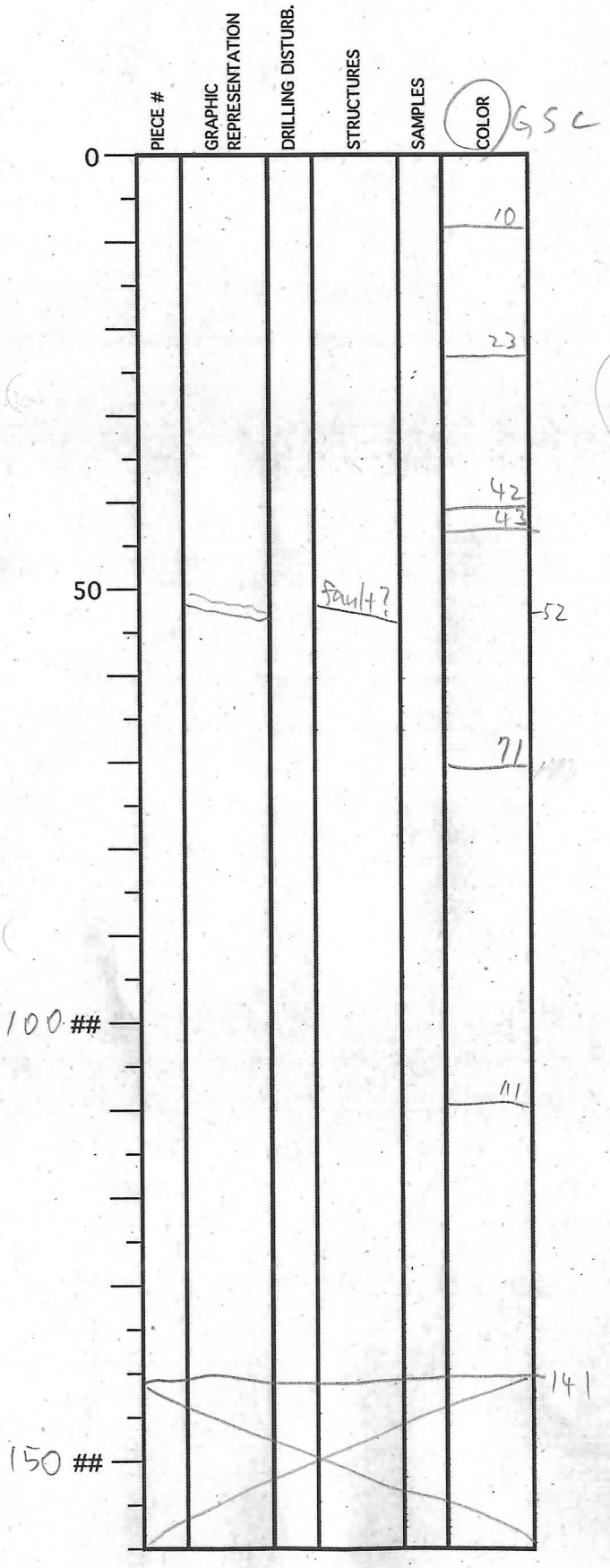
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 5
OBSERBER: H. Haruse IRS



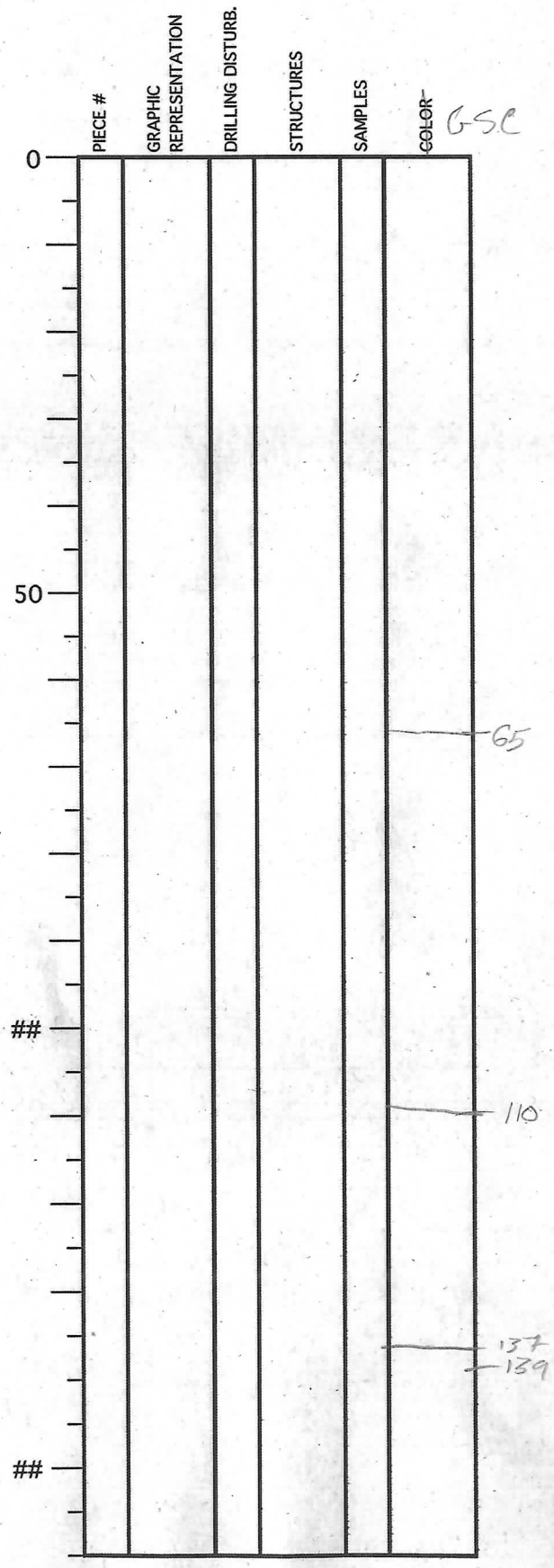
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 6
OBSERBER: H. Naruse/IRS



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: 7
OBSERBER: RS/HN

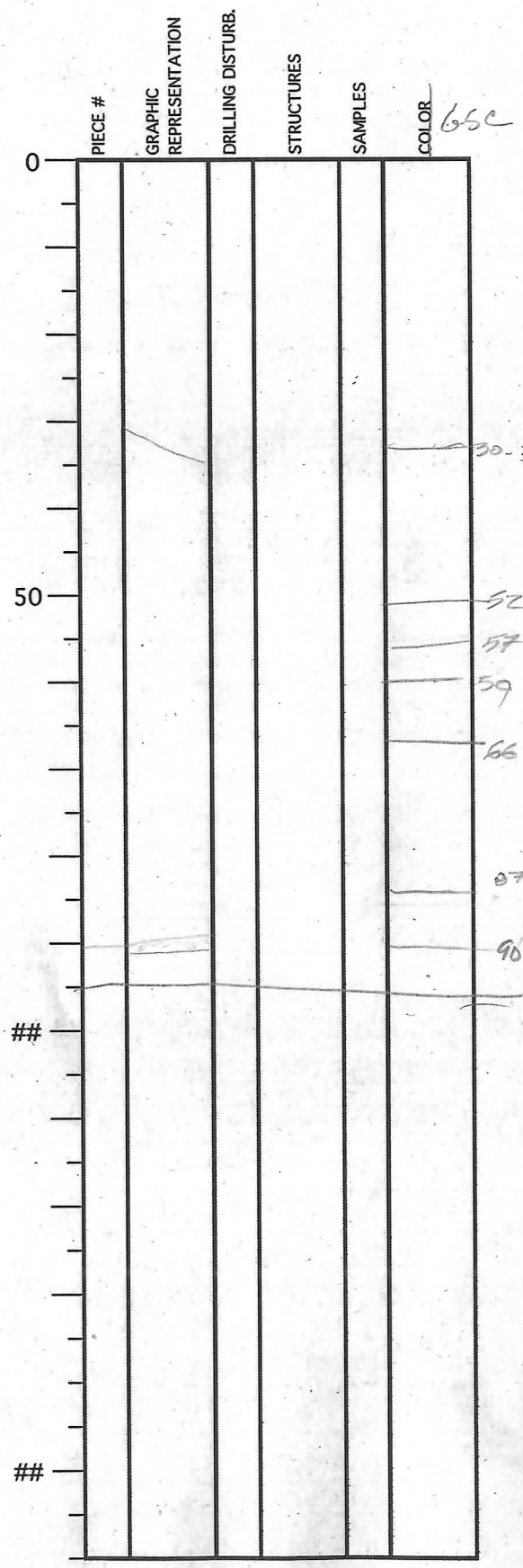


Major:
Green-gray Silty Claystone

Minor:
Green Silty Claystone
bioturb: 5 (heavy)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/13/2009
EXP.: 322
SITE/HOLE: C0071D
CORE: 21R
SECTION: 8
OBSERBER: RS



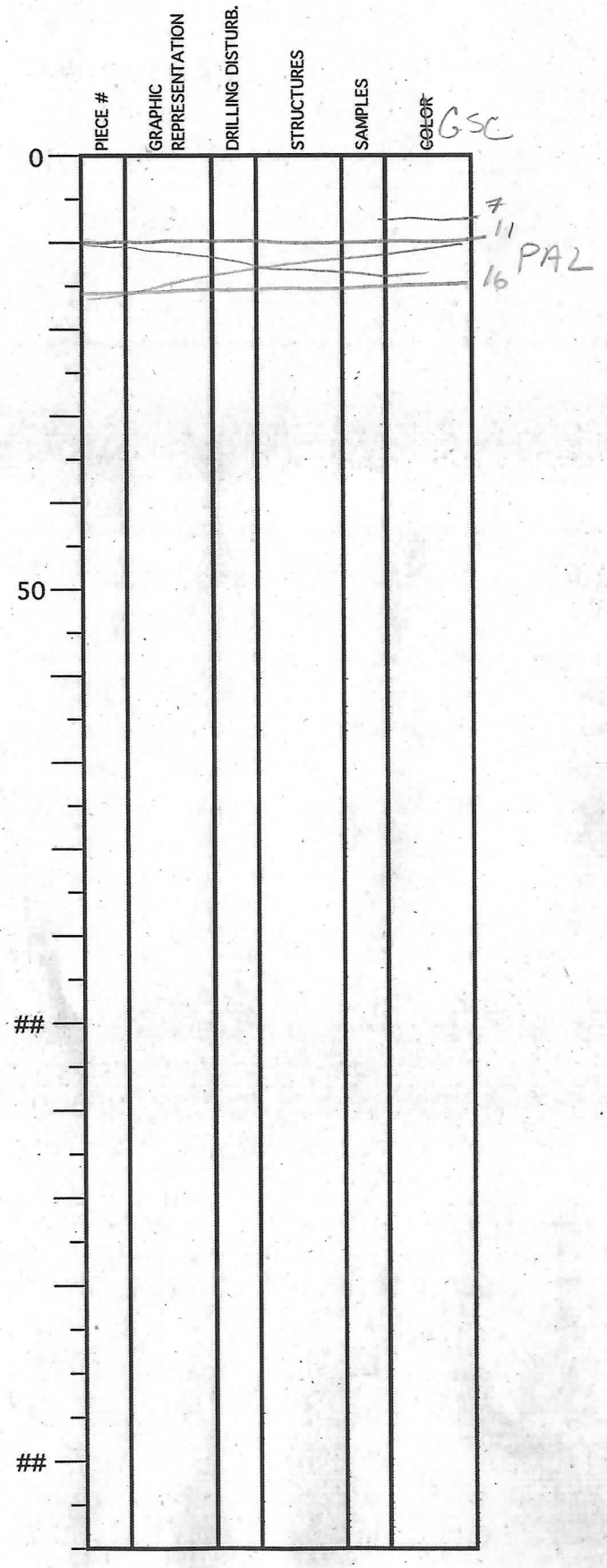
Major:
Green-gray silty claystone

Minor:
Green silty claystone

bioturb: 5 (heavy)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/13/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 21R
SECTION: CC
OBSERBER: RS



SECTION DESCRIPTION

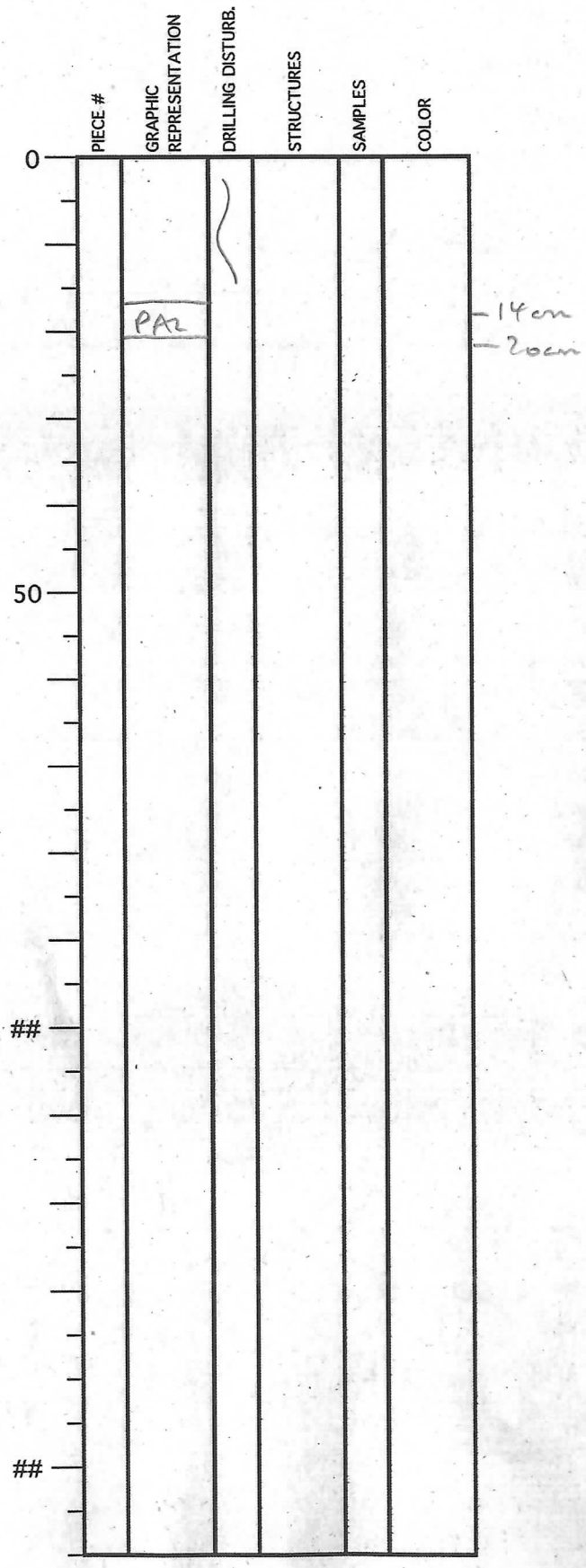
Major:
Green-Gray Silty Claystone

Minor:
Green Silty Claystone

Bioturb: 5 (heavy)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 11/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 22
SECTION: CC
OBSERBER: KGM/GK



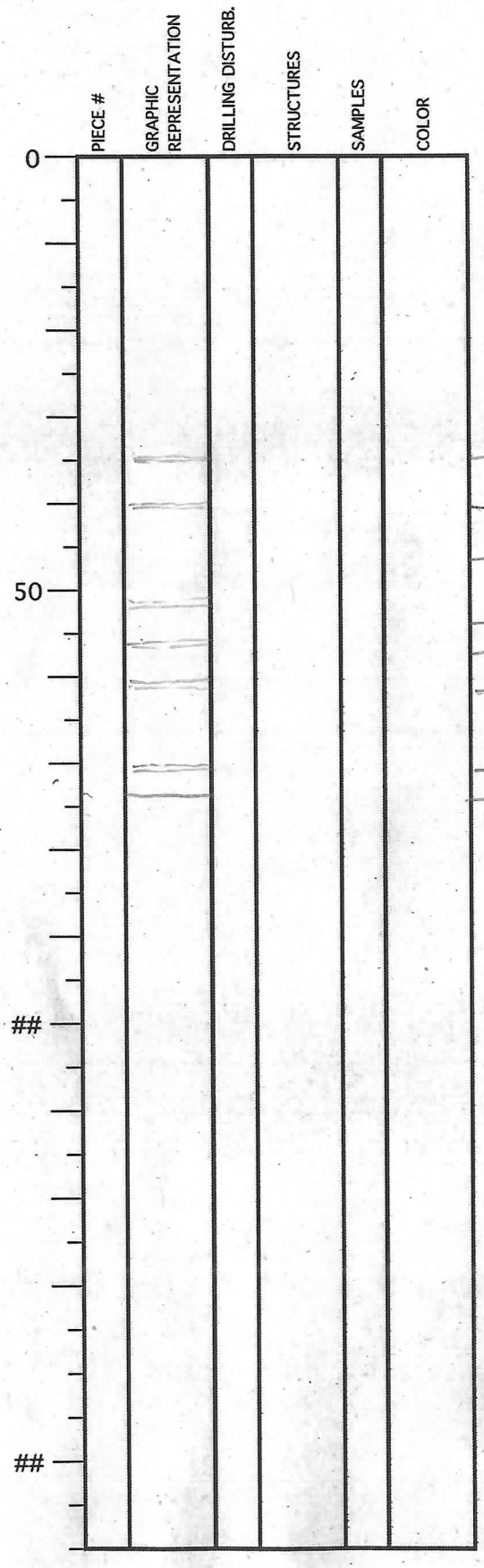
SECTION DESCRIPTION

GGSC

BIOT. (INTENSE) 5

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 1
OBSERBER: KH/JK



SECTION DESCRIPTION

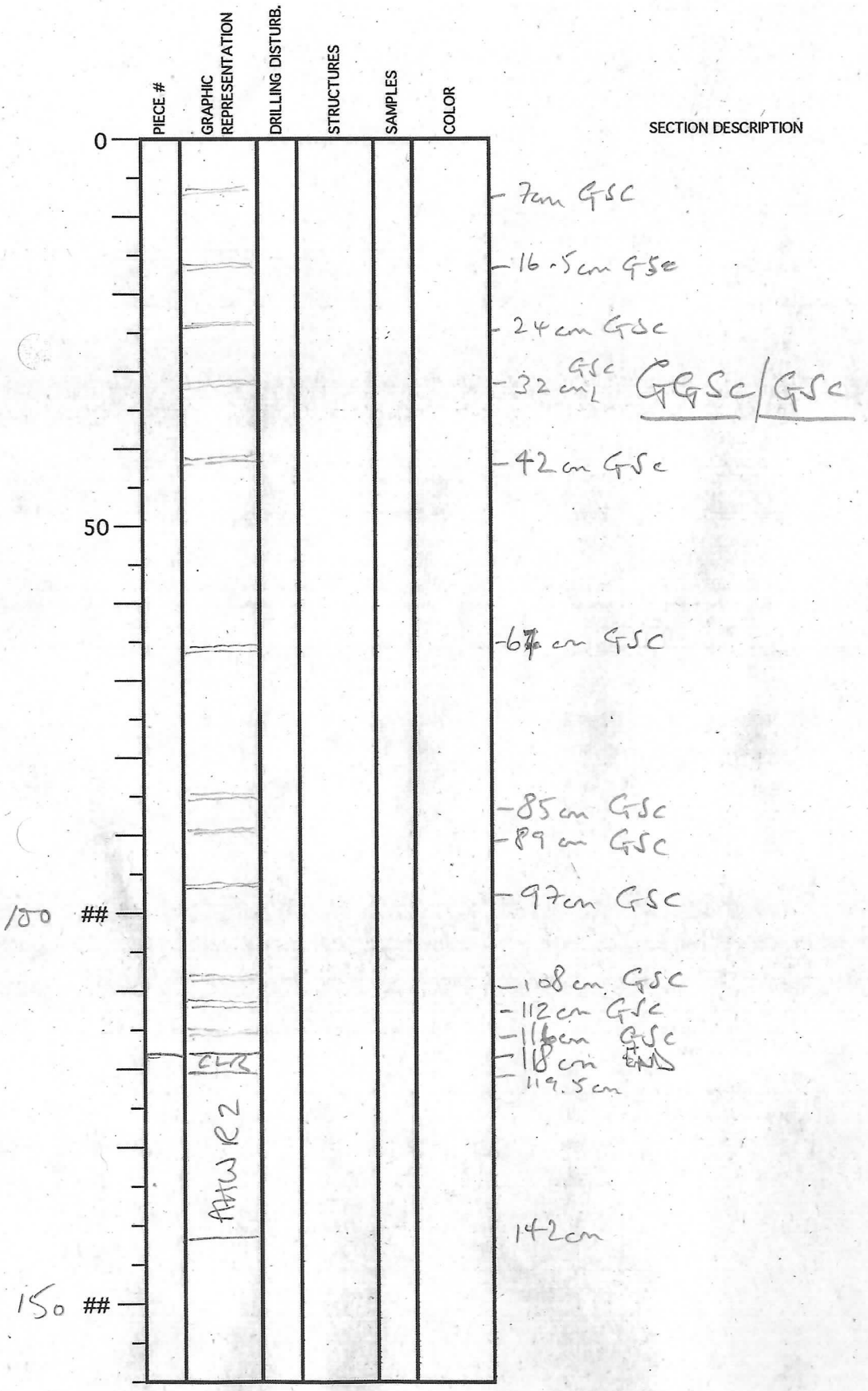
GFSC/GSC

- 34 cm GSC
- 40 cm GSC
- 45 cm GSC
- 52 cm GSC
- 56.5 cm GSC
- 60.5 cm GSC
- 70.5 cm GSC
- 74 cm FAULT

BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program
Visual Core Description

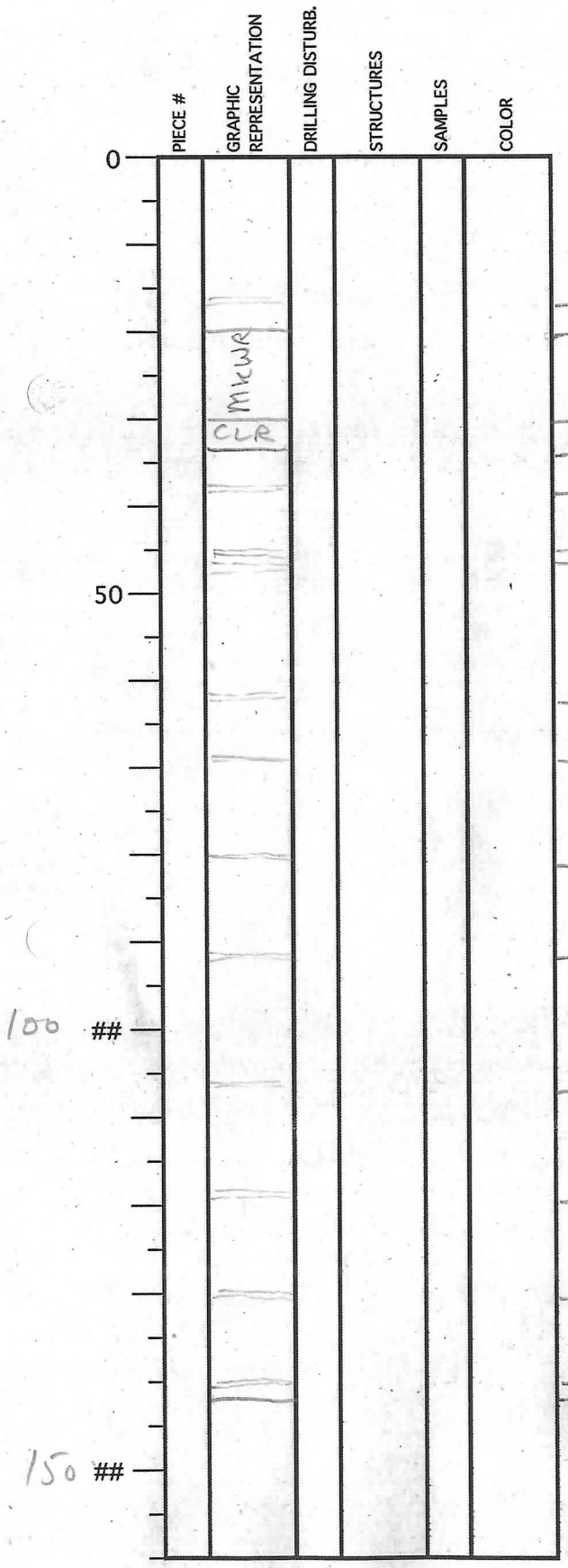
NO.
DATE: 19/09/2009
EXP.: 322
SITE/HOLE: 1100 B
CORE: 23
SECTION: 3
OBSERBER: KTP/SK



BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 4
OBSERBER: KTF/SK



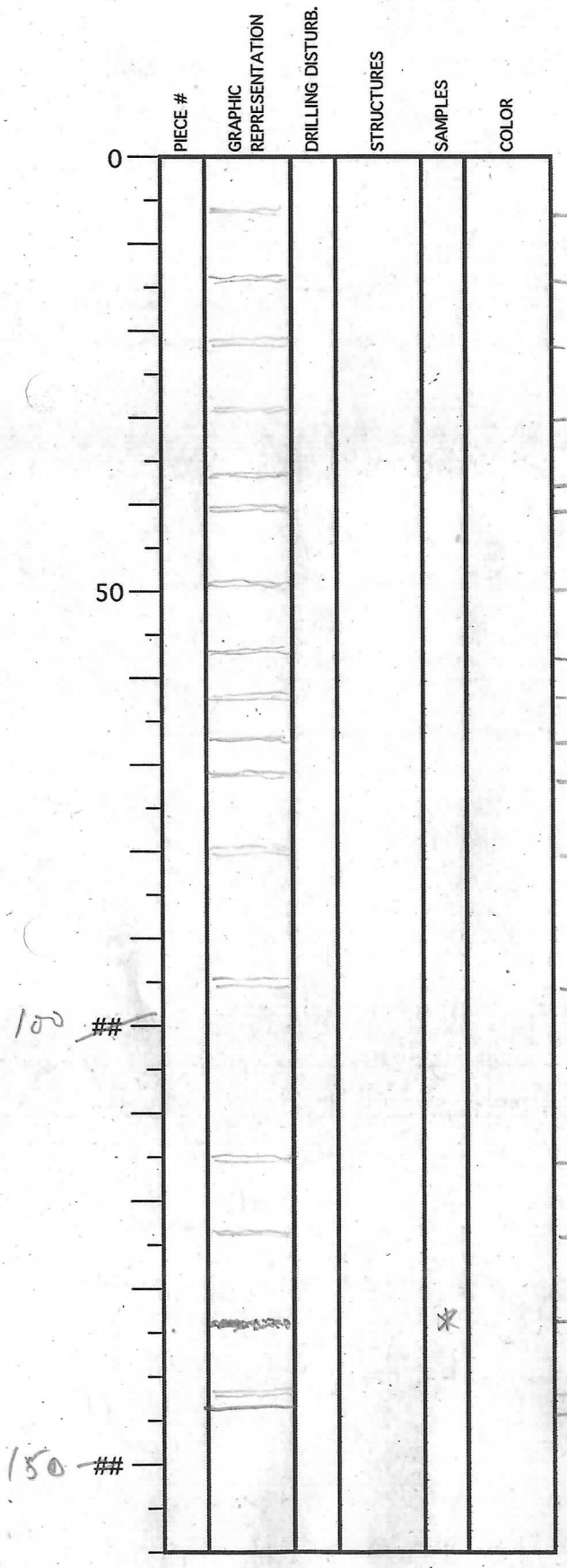
GGSc/GSc

BIOTURB.
5 (INTENSE)

BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 09/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 5
OBSERBER: Lave/dic



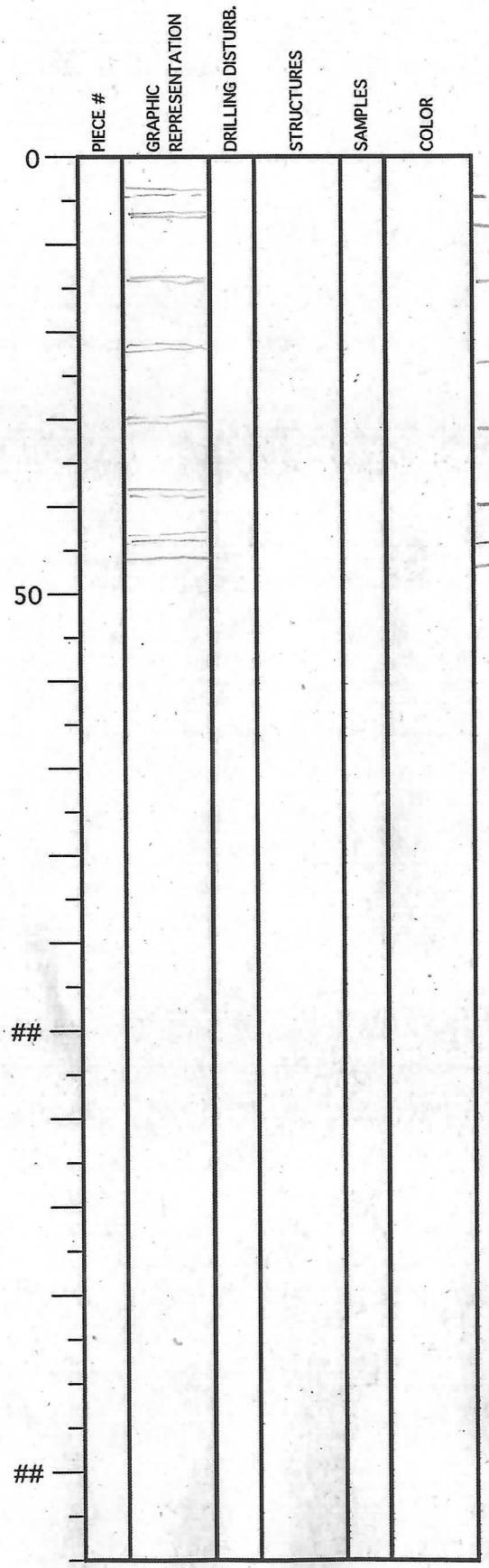
GGSC/GSC

BIOTURBATION 5 (INTENSE)

SS (Dark mineral cryst irregular surface 3 cm thick)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 6
OBSERBER: KM/SK

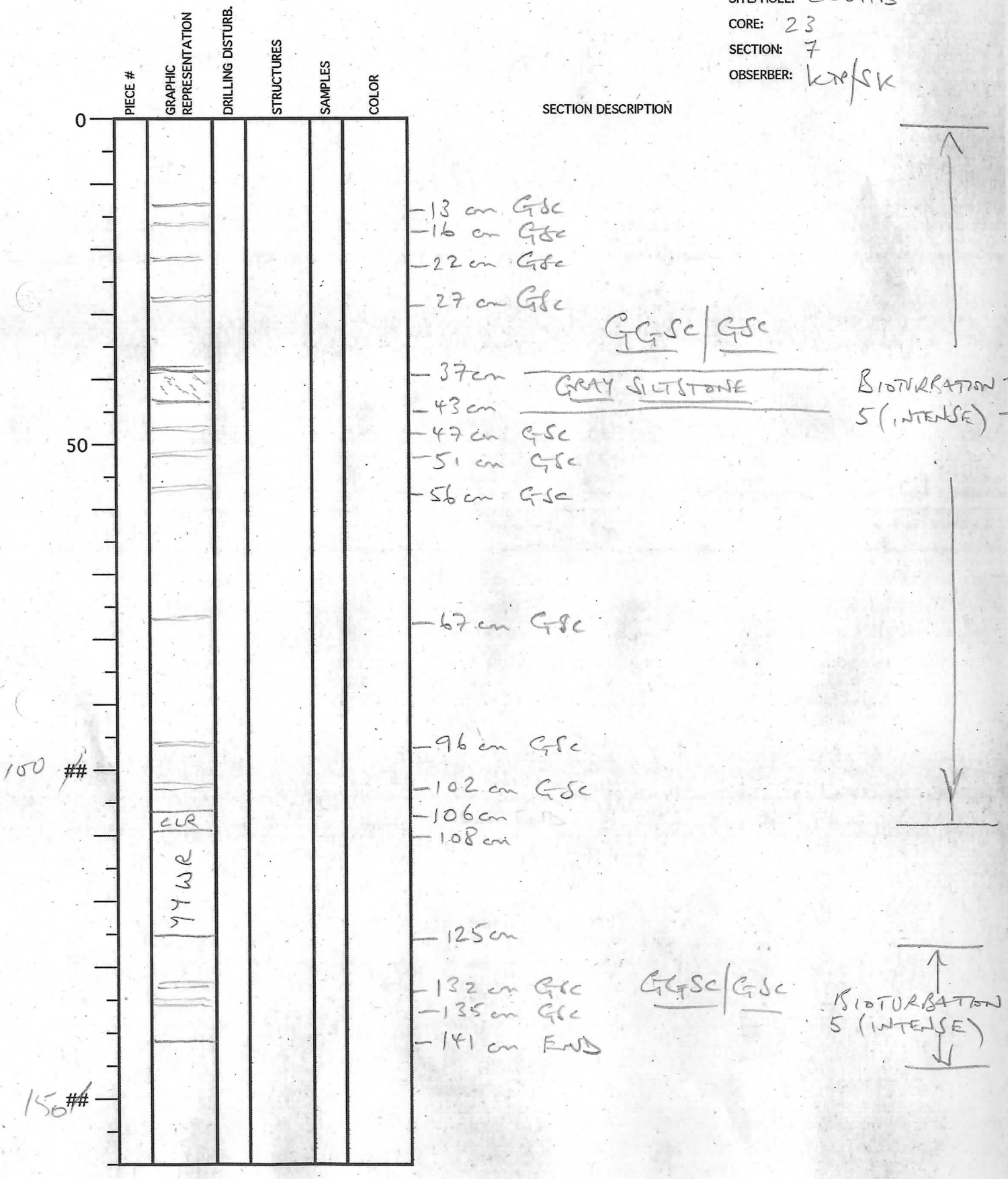


GGSc/GSc

BIOTURRATION
5 (INTENSE)

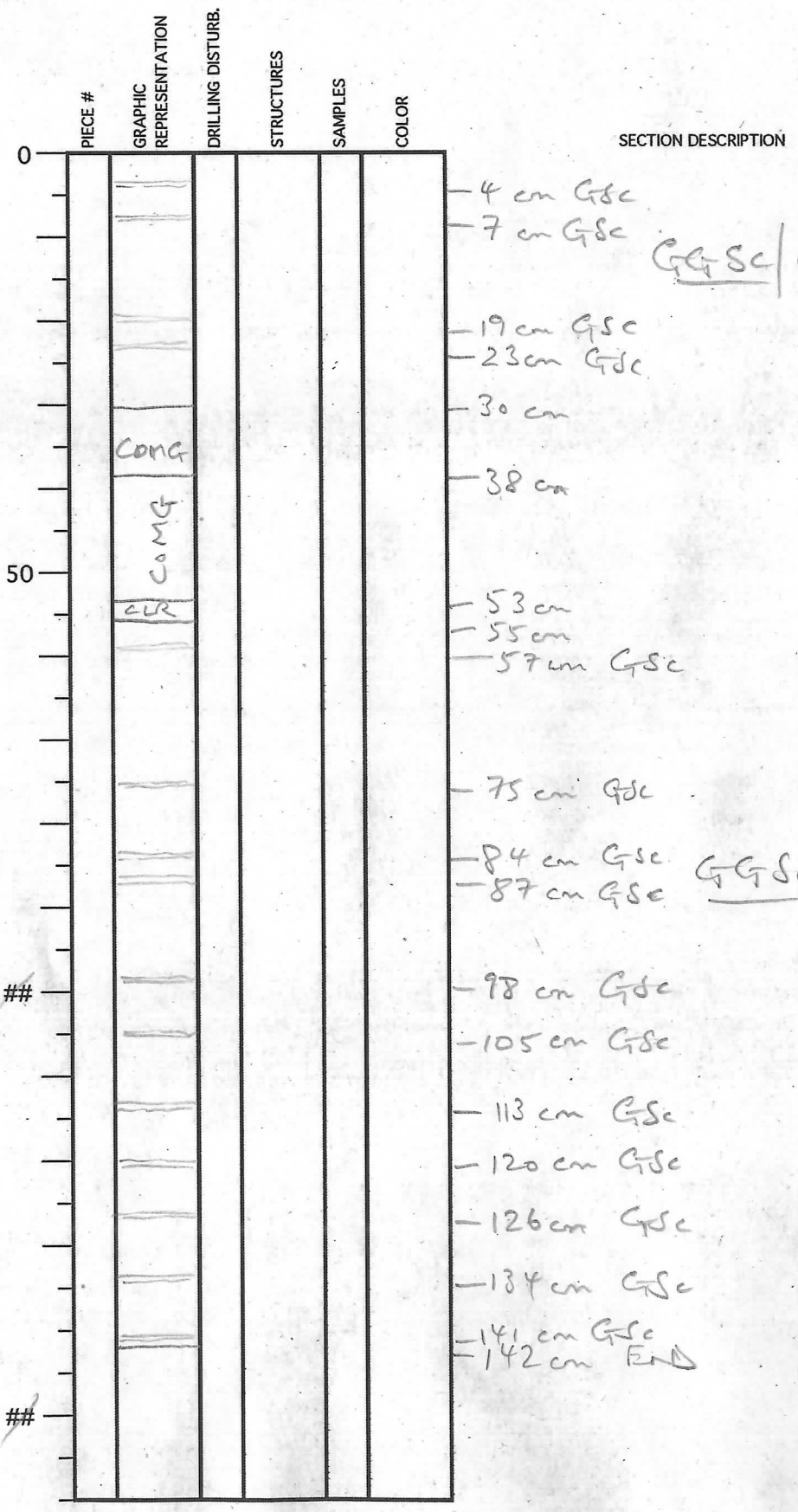
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 7
OBSERBER: KTP/SK



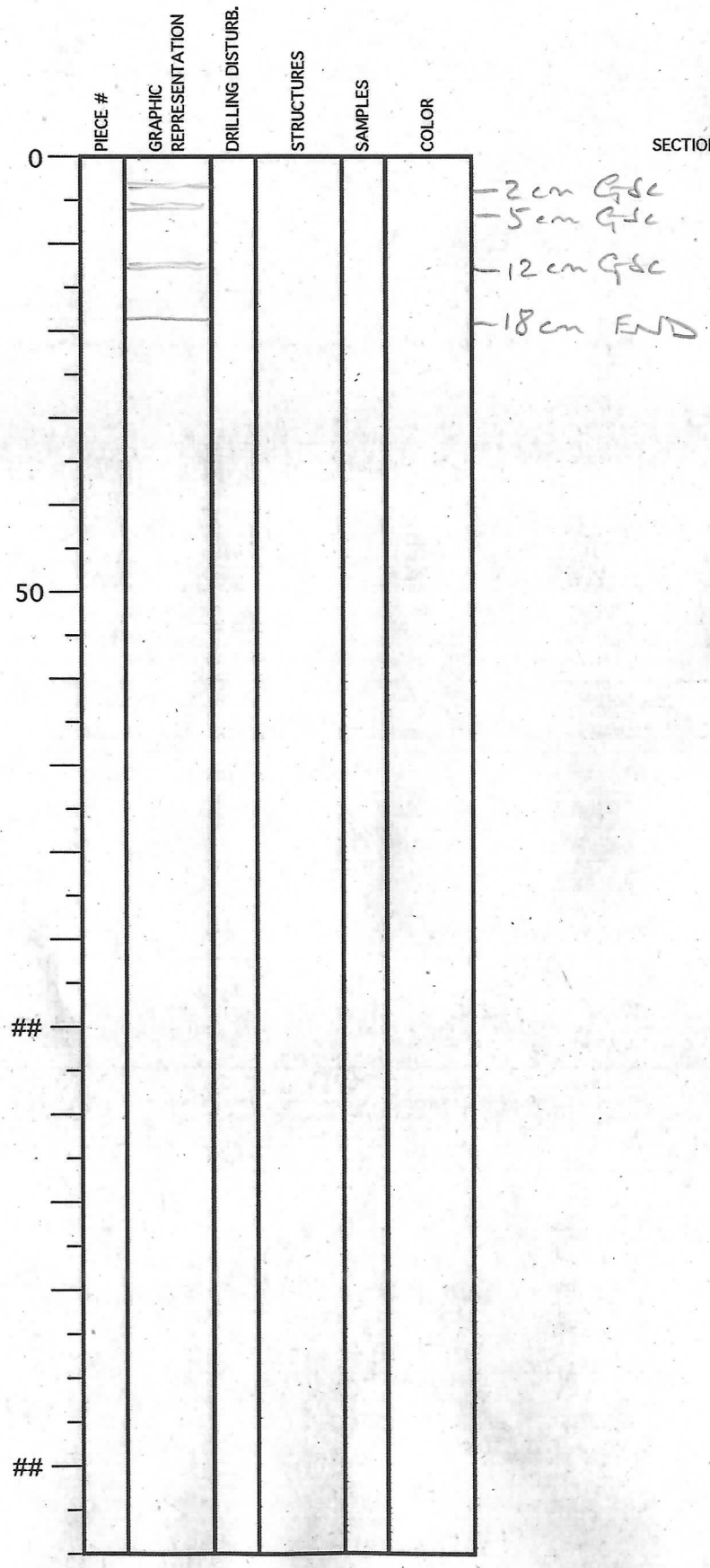
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 8
OBSERBER: KTP/SK



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/05/2007
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: 9
OBSERBER: KTF/JK

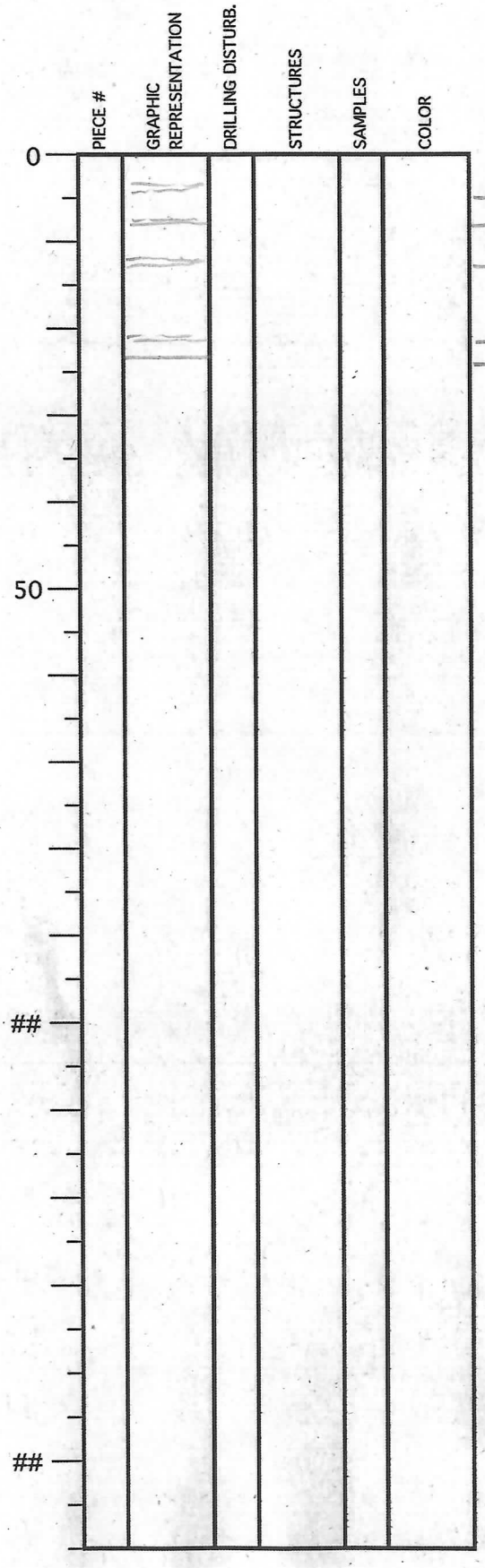


GGSC/GSC

BIOTURBATION
5 (INTENSE)

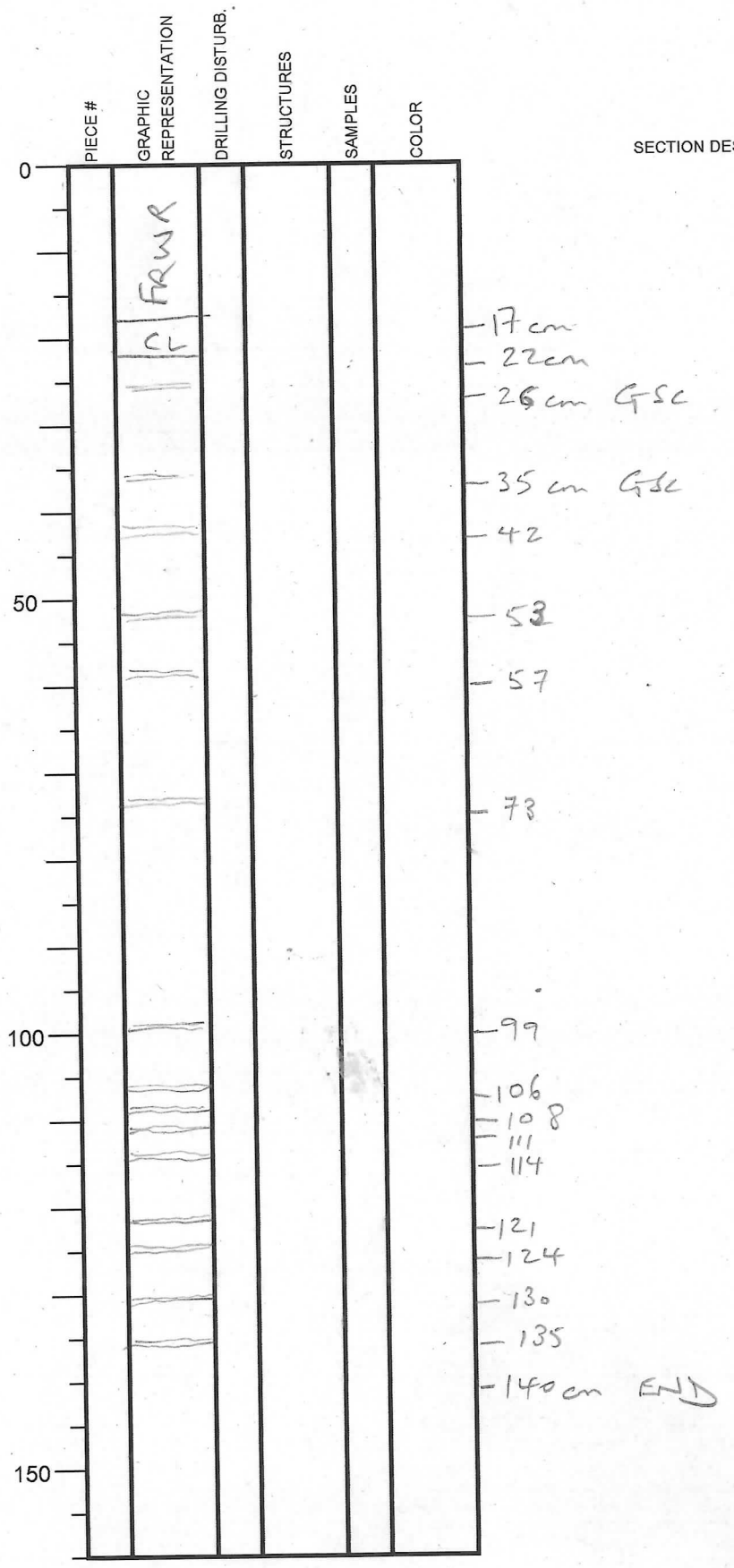
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 23
SECTION: CC
OBSERBER: KTO/SK



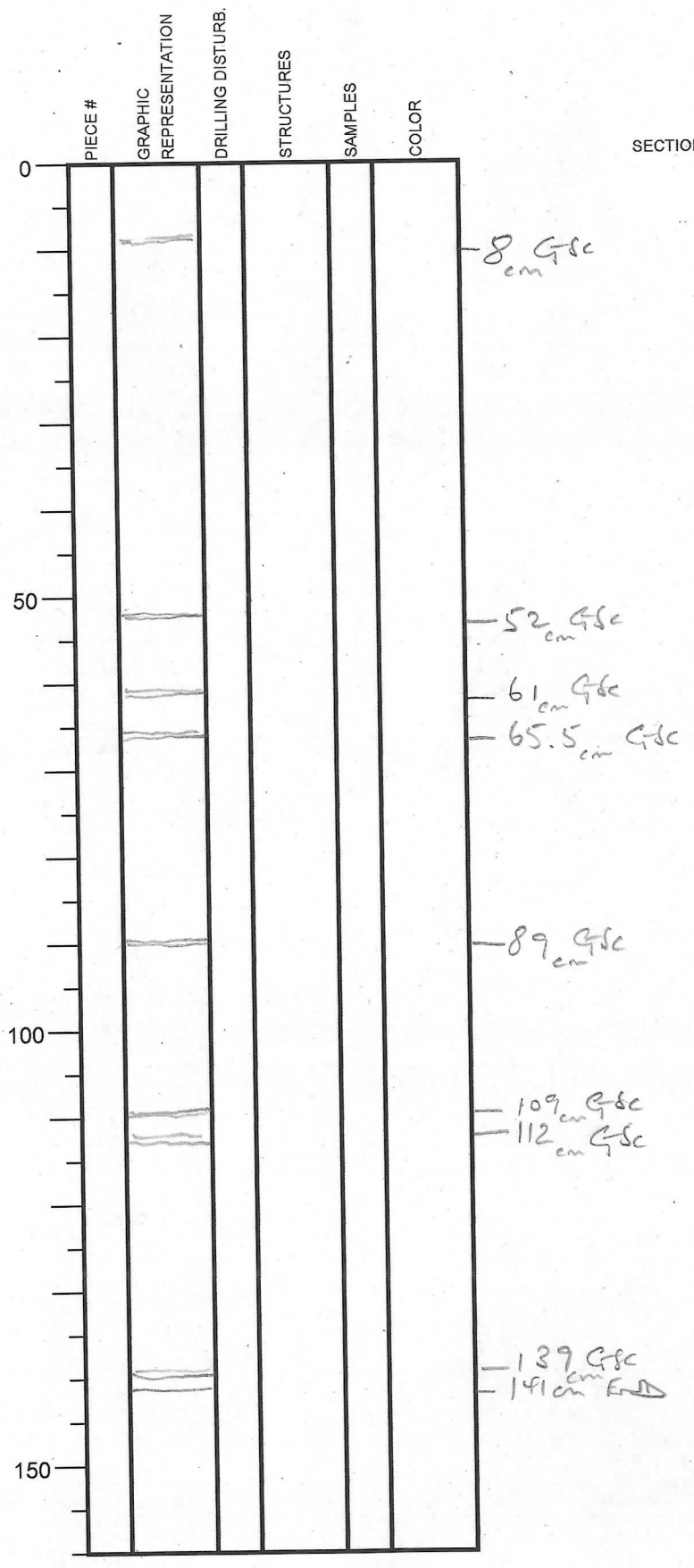
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/8/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 24
SECTION: 2
OBSERBER: KTP/SK



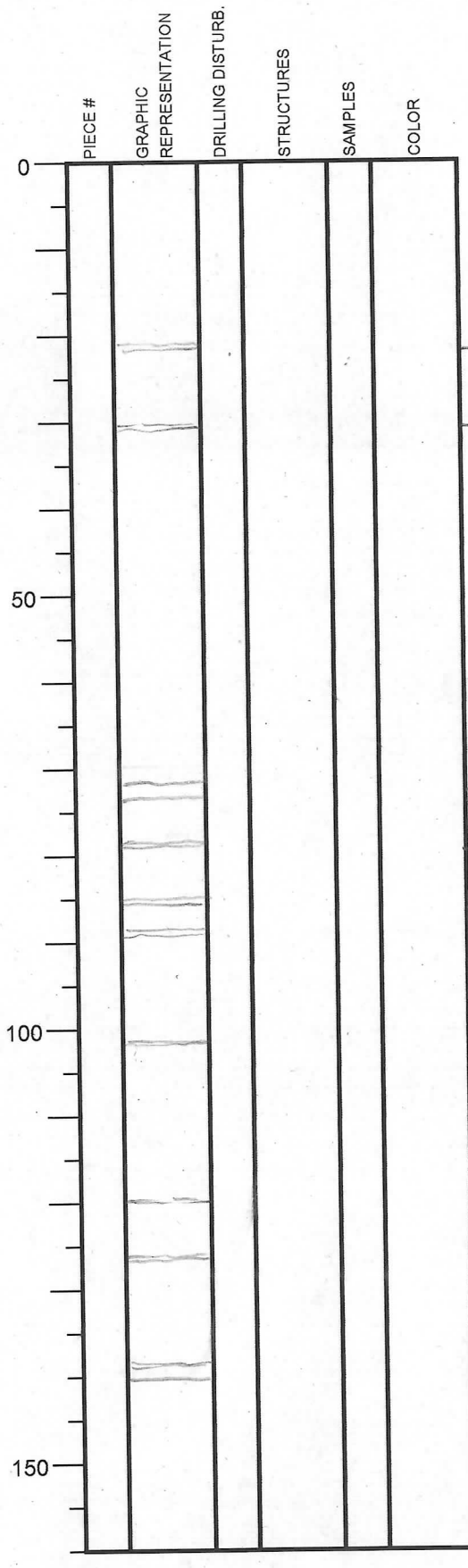
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/8/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 24
SECTION: 3
OBSERBER: KTP/SLC



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/18/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 24
SECTION: 4
OBSERBER: KGP/SK

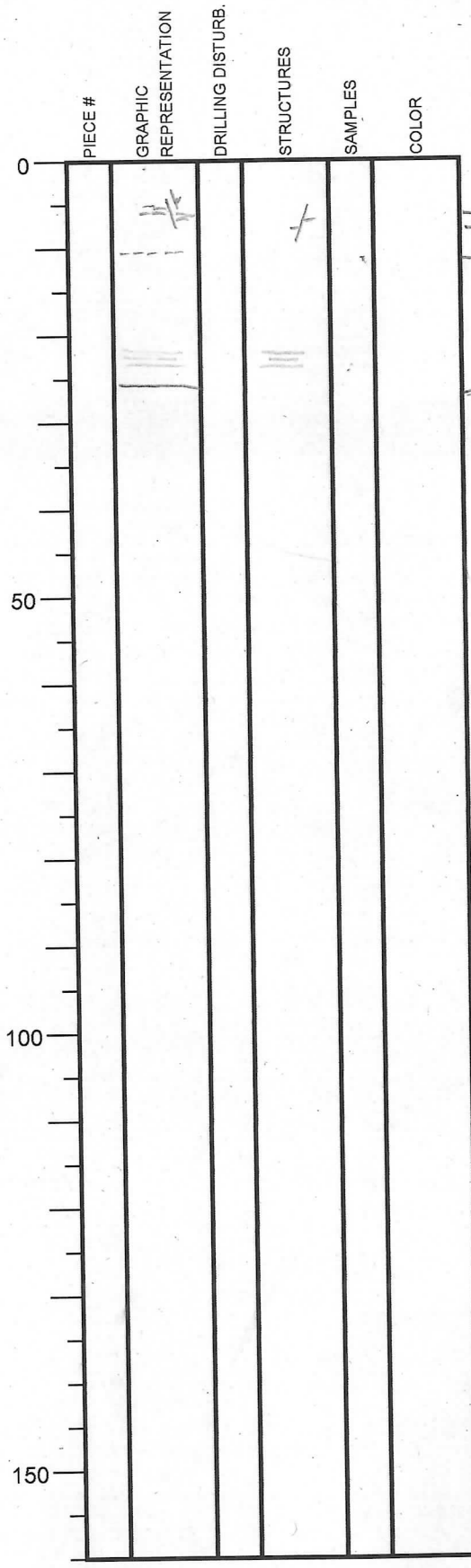


GGSC/GSC

BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/8/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 24
SECTION: 5
OBSERBER: KTP/SK



SECTION DESCRIPTION

GGSC/GSC 6-6.5 cm SEDIMENTARY FABRIC

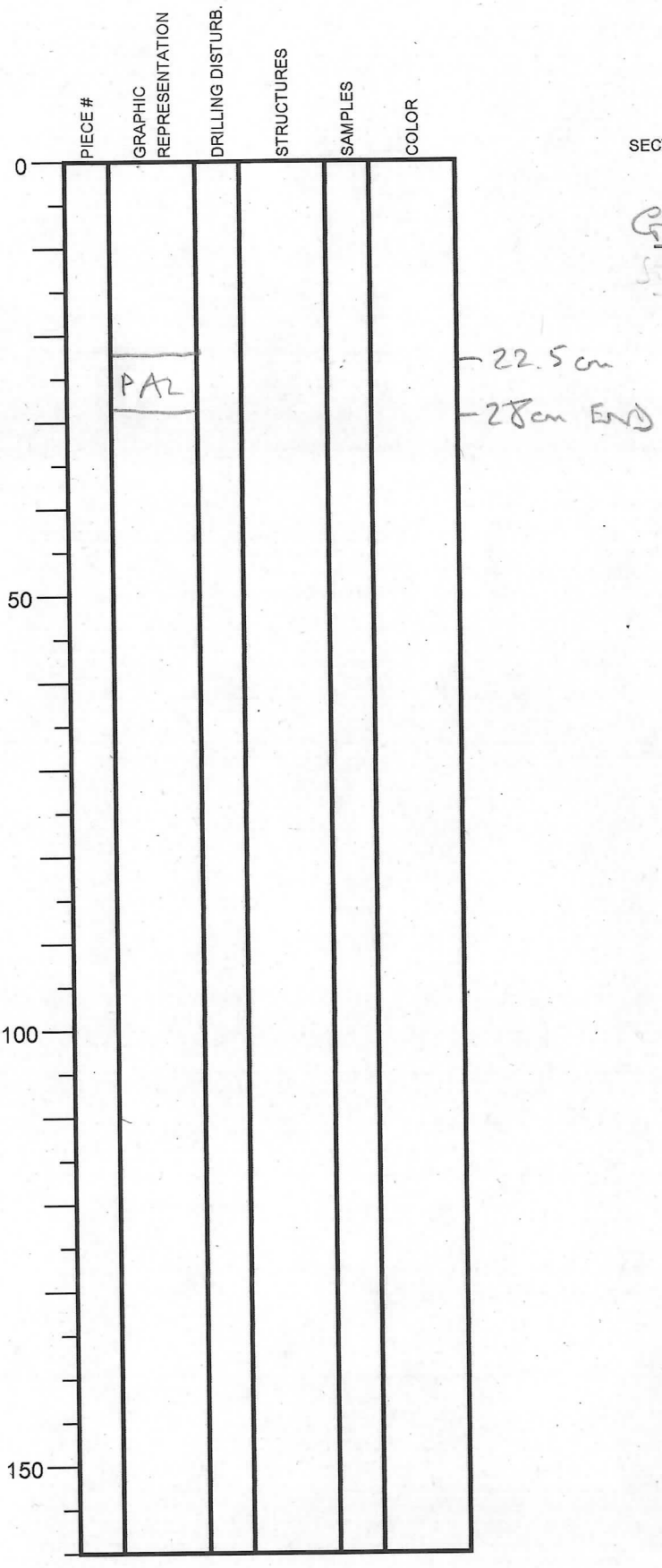
GRAY LAMINATED SILTSTONE

BIOTURBATION 5 (INTENSE)

BIOTURBATION 1 (SLIGHT)

Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 4/5/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 24
SECTION: CC
OBSERBER: KM/FK



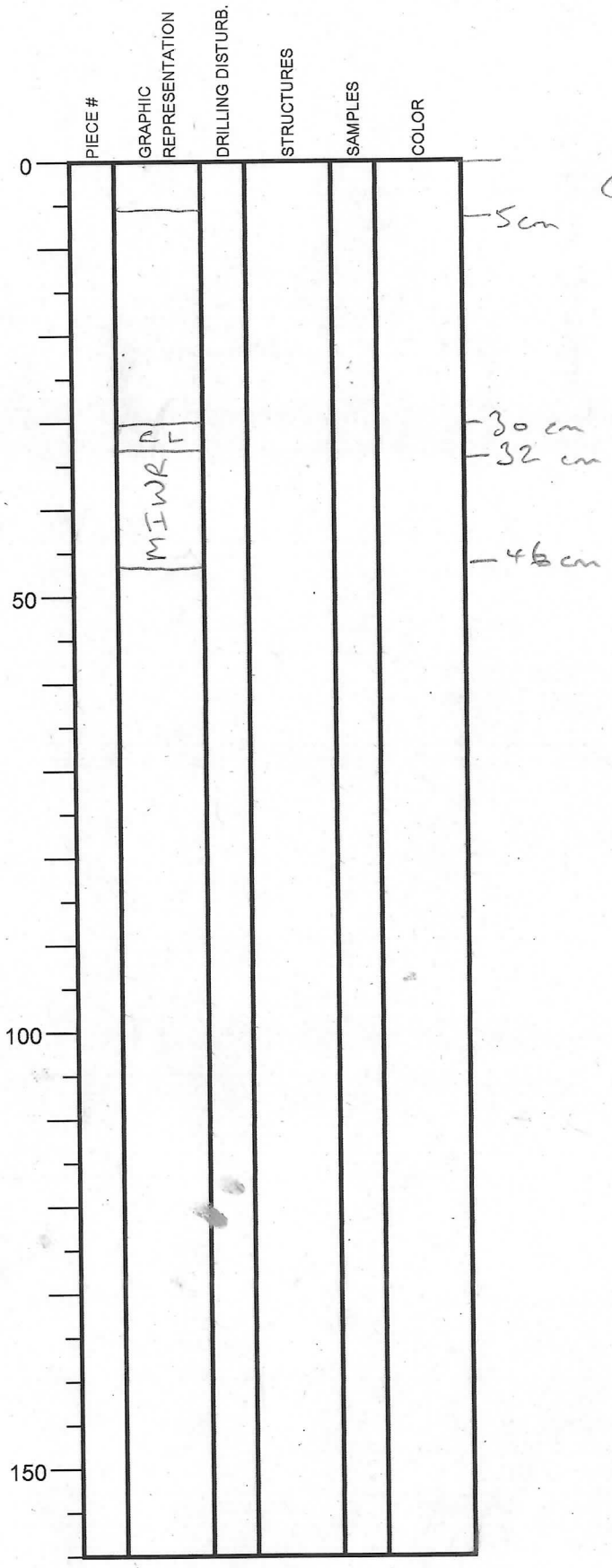
SECTION DESCRIPTION

GRAY LAMINATED
SILTSTONE

BIOTURBATION
5 (INTENSE)

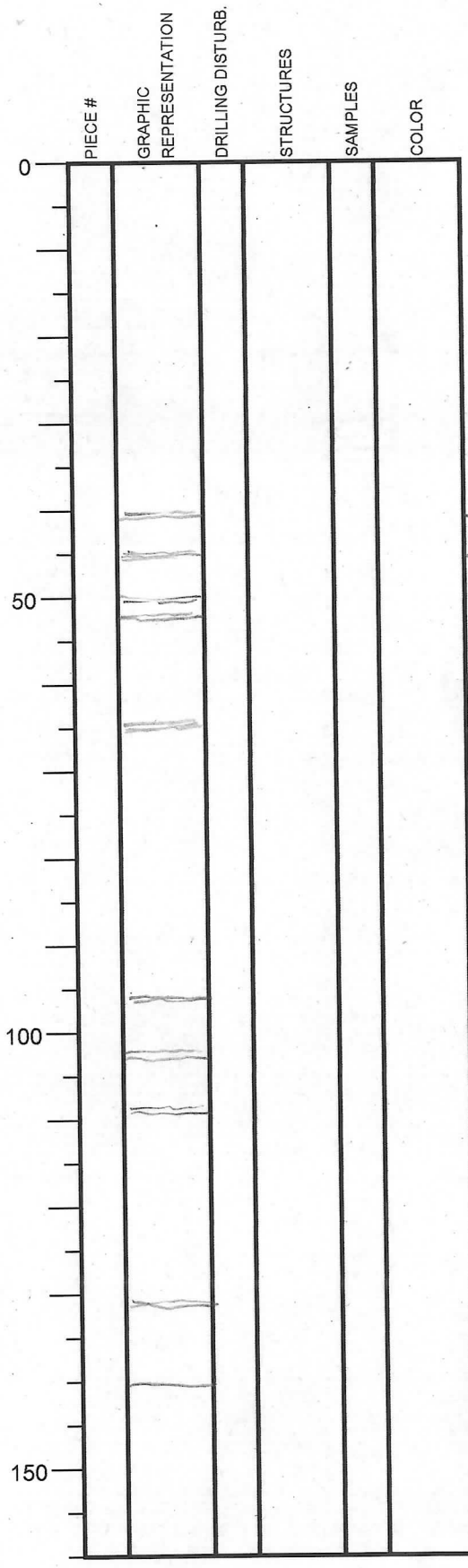
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 1/6/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 25
SECTION: 1
OBSERBER: KCR/SH



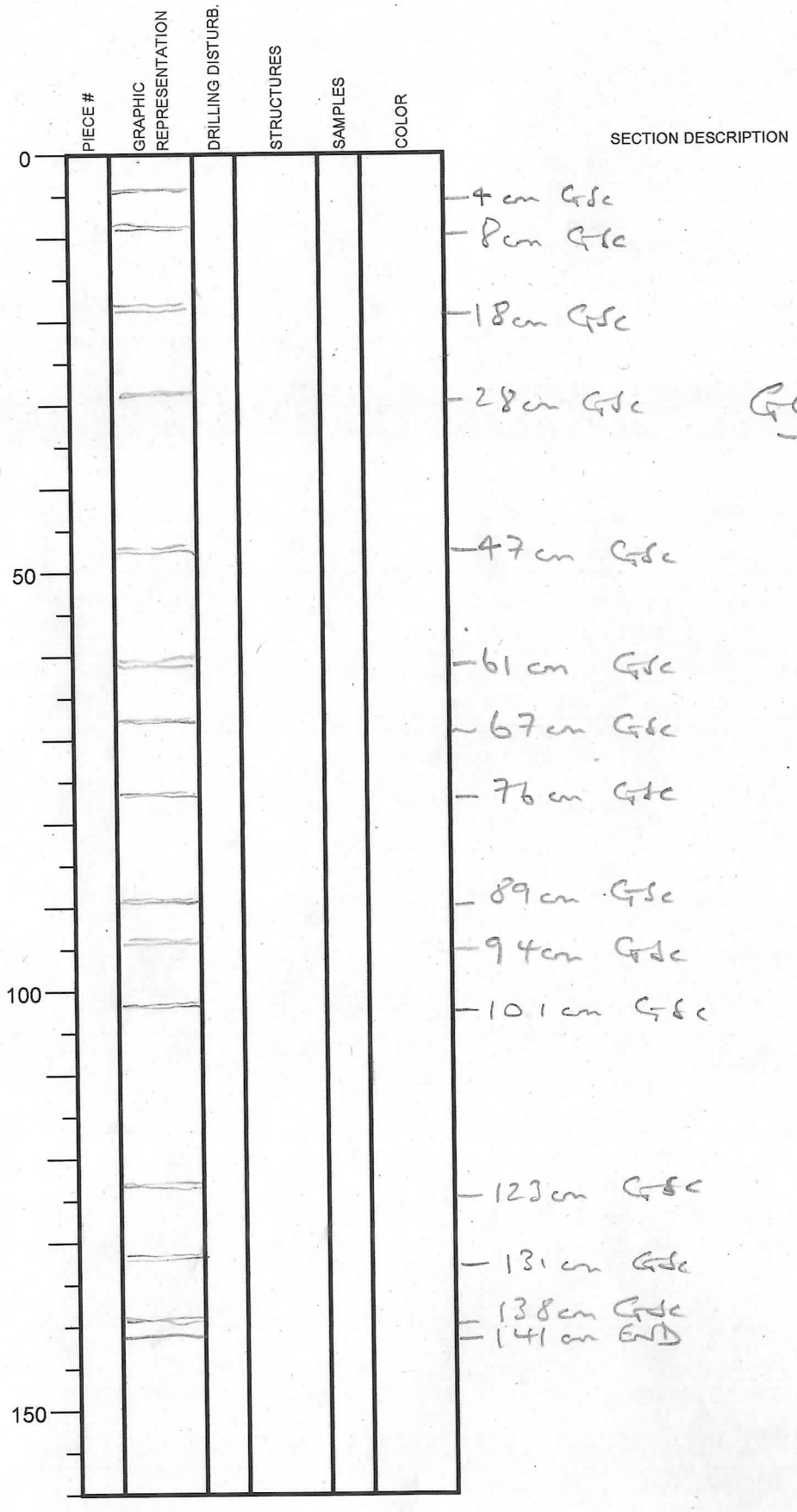
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 6/18/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 25
SECTION: 3
OBSERBER: kmp/sk



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 14/8/2009
EXP.: 322
SITE/HOLE: COD 1B
CORE: 25
SECTION: 4
OBSERBER: KVP/FK



BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 14/12/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 25
SECTION: 5
OBSERBER: KTP/SK

PIECE #	GRAPHIC REPRESENTATION	DRILLING DISTURB.	STRUCTURES	SAMPLES	COLOR

SECTION DESCRIPTION

0, 50, 100, 150

5 cm GSc GGSc / GSc

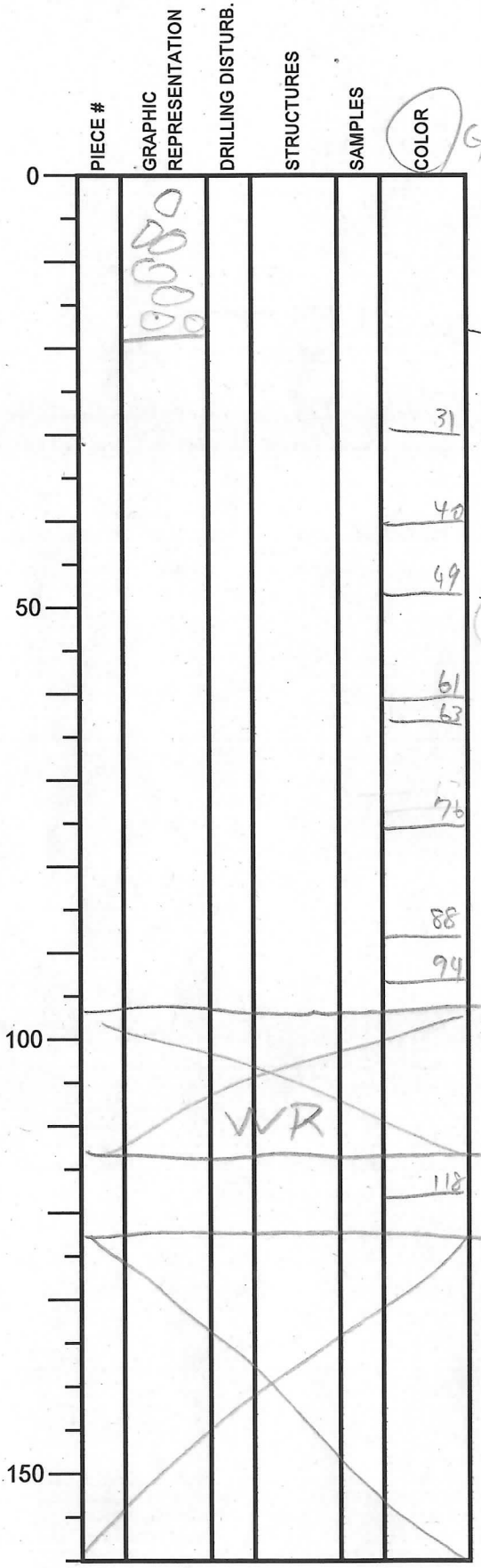
17cm

BIOTURBATION 5 (INTENSIVE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: 1
OBSERBER: M. Nakase



SECTION DESCRIPTION

drilling disturbance

green-gray silty claystone

Heavy bioturb. (5)

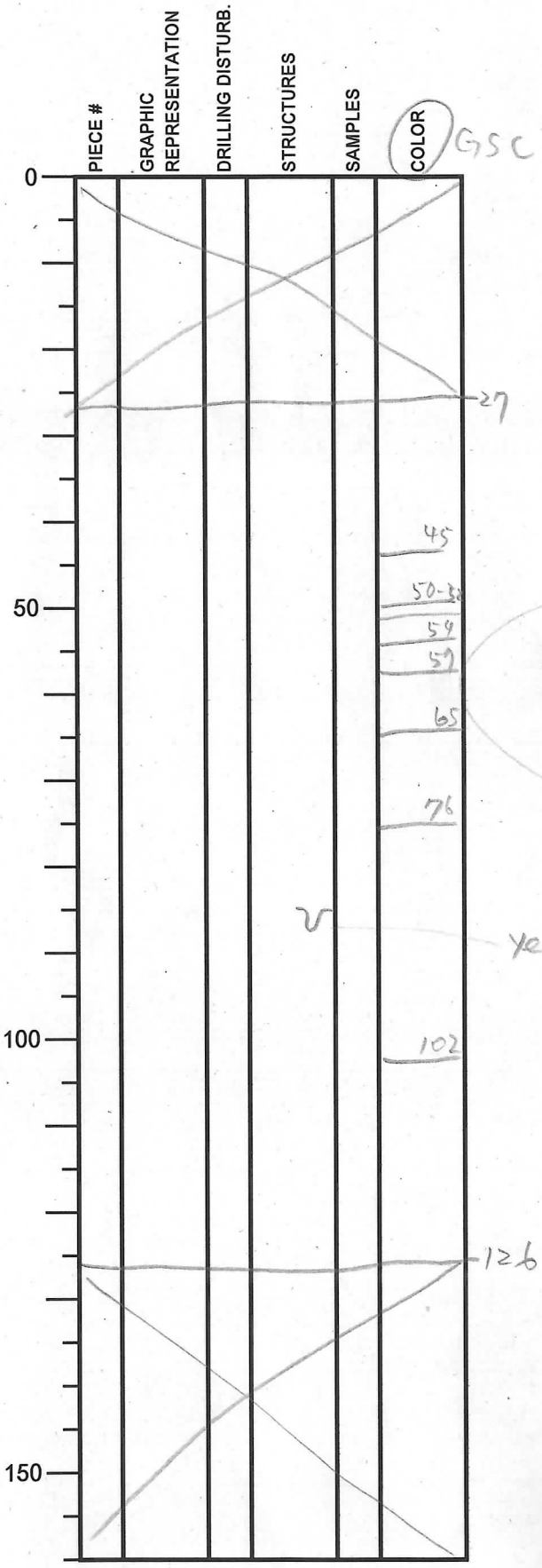
green-gray silty claystone

M. to H. (4.5)

Integrated Ocean Drilling Program

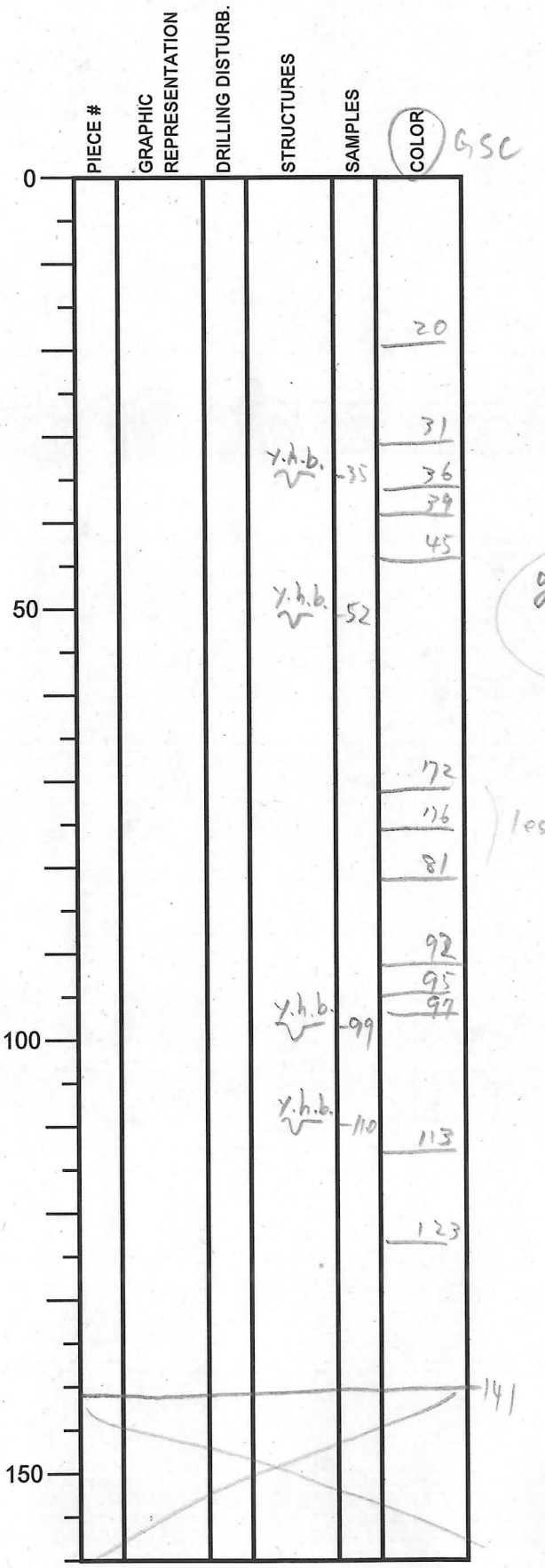
Visual Core Description

NO.
DATE: 9/19/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: 3
OBSERBER: H. Maruso



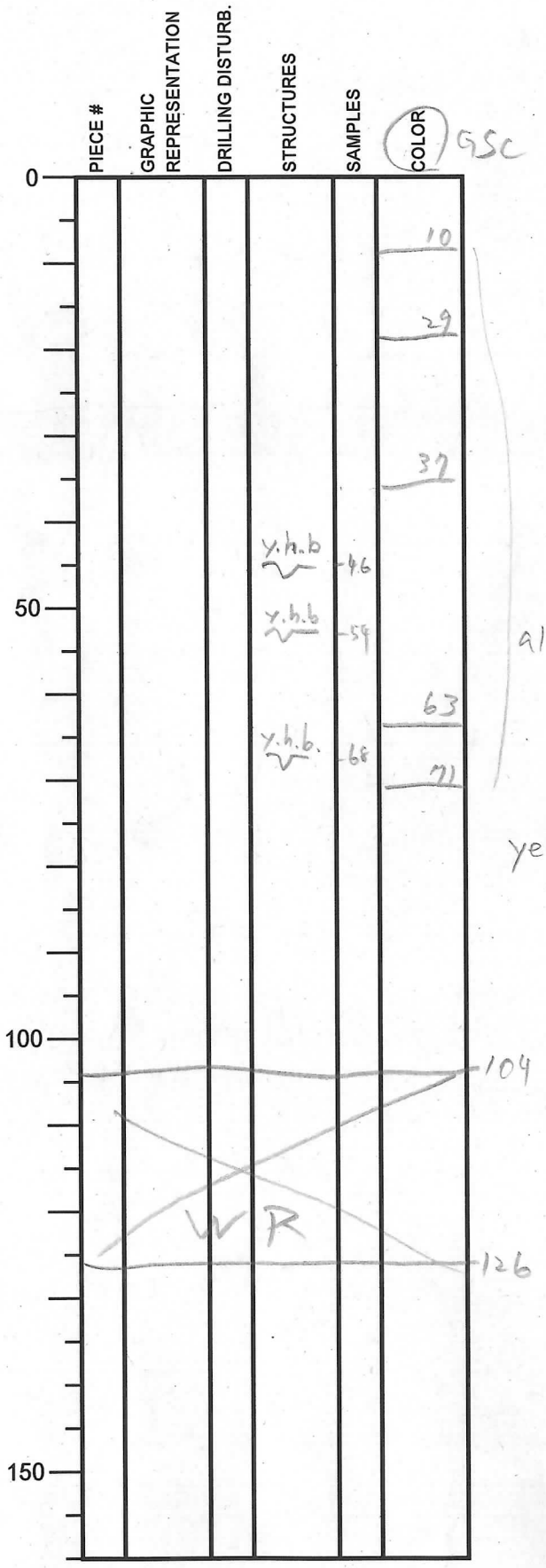
Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011 B
CORE: 26R
SECTION: 4
OBSERBER: H. Narluse



Integrated Ocean Drilling Program
Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: 5
OBSERBER: H.Haruse



SECTION DESCRIPTION

green-gray silty claystone

Moderate to H. bioturbation (4.5)

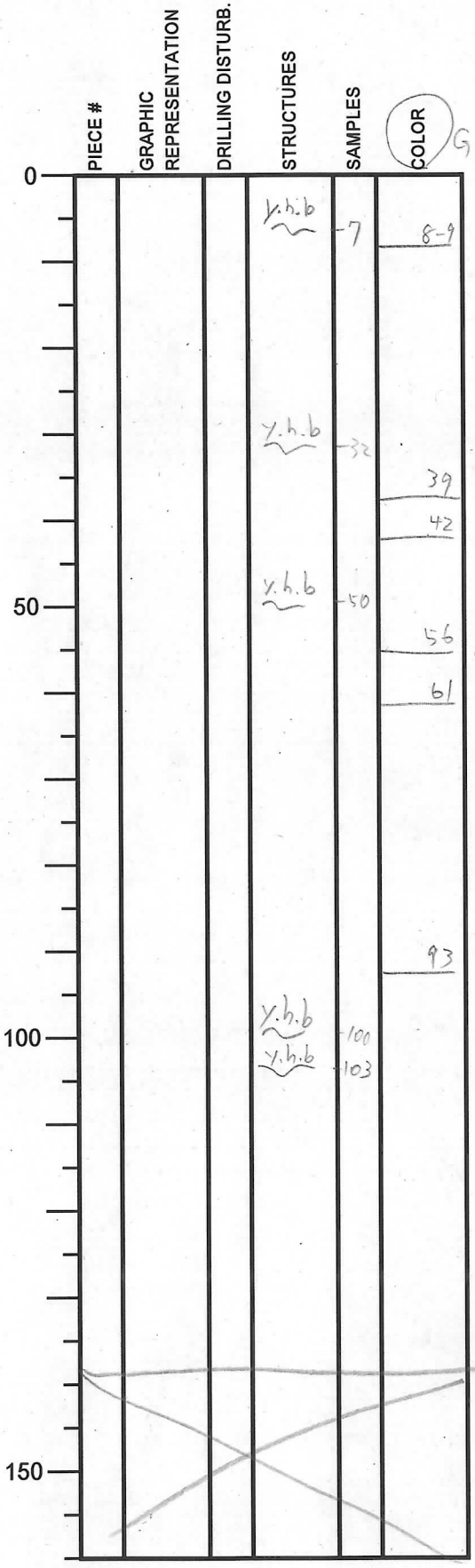
all groom layers are less bioturbated

yellowish-gray horizontal burrows are common

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: 6
OBSERBER: H. Naruse



SECTION DESCRIPTION

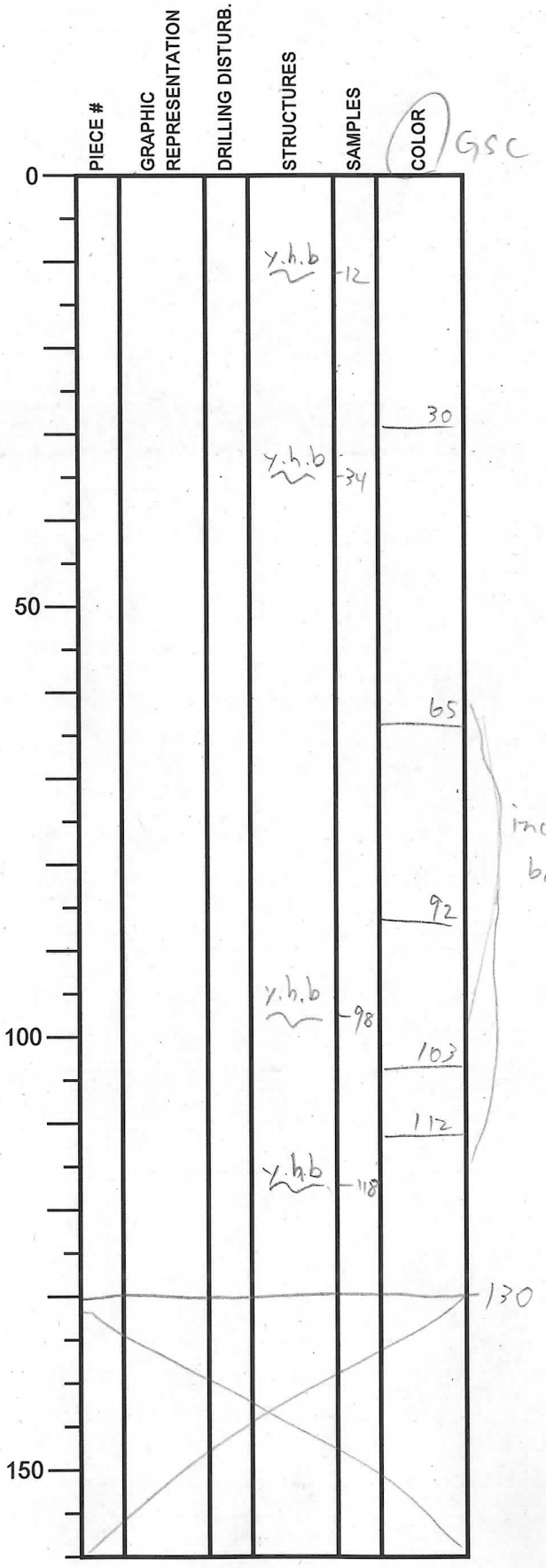
green-gray silty claystone

M. to H. bioturbation (4.5)

Integrated Ocean Drilling Program

Visual Core Description

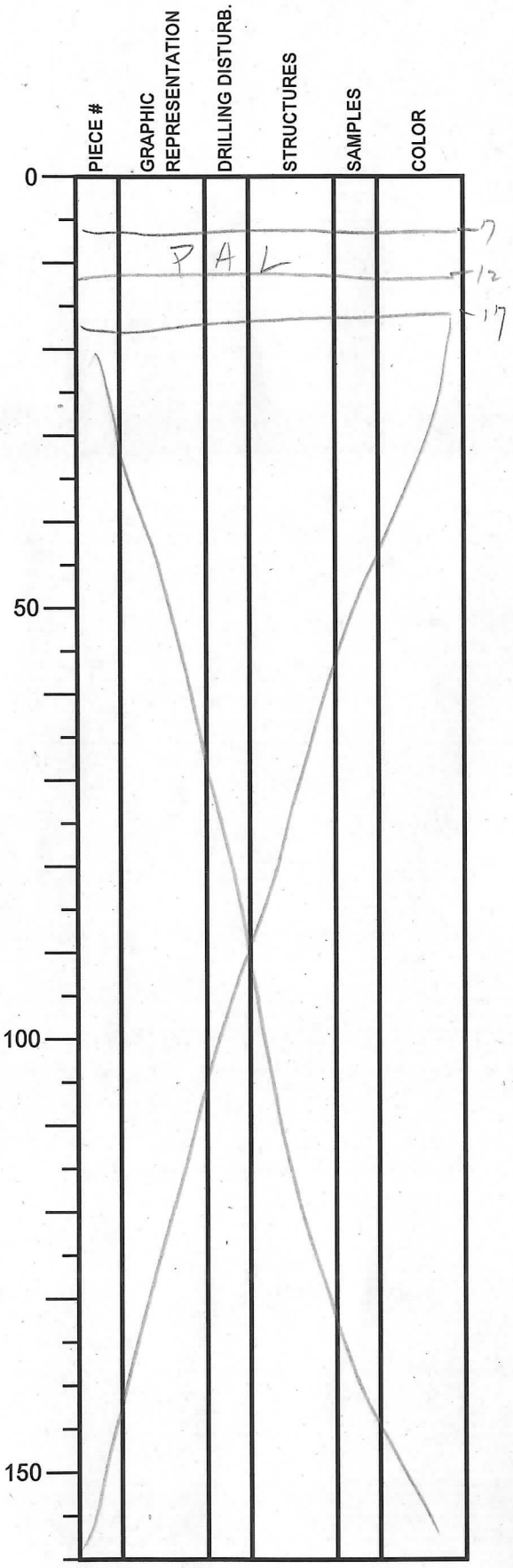
NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: 7
OBSERBER: H. Haruse



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 26R
SECTION: CC
OBSERBER: H. Hanase



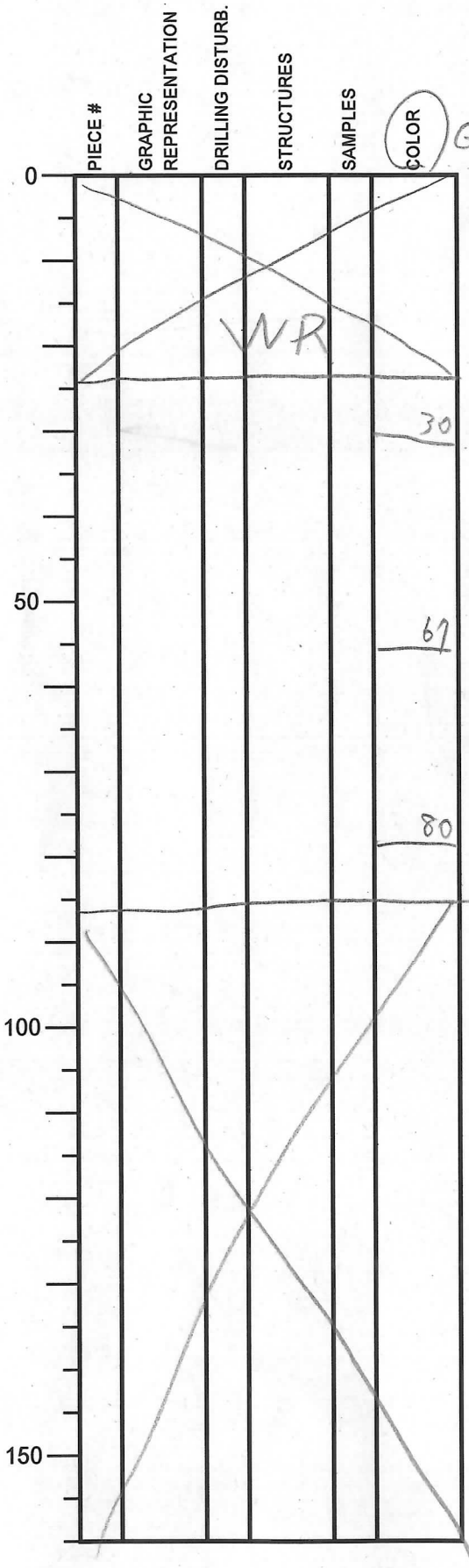
SECTION DESCRIPTION

drilling breccia
composed of green-gray
siltstone

Integrated Ocean Drilling Program

Visual Core Description

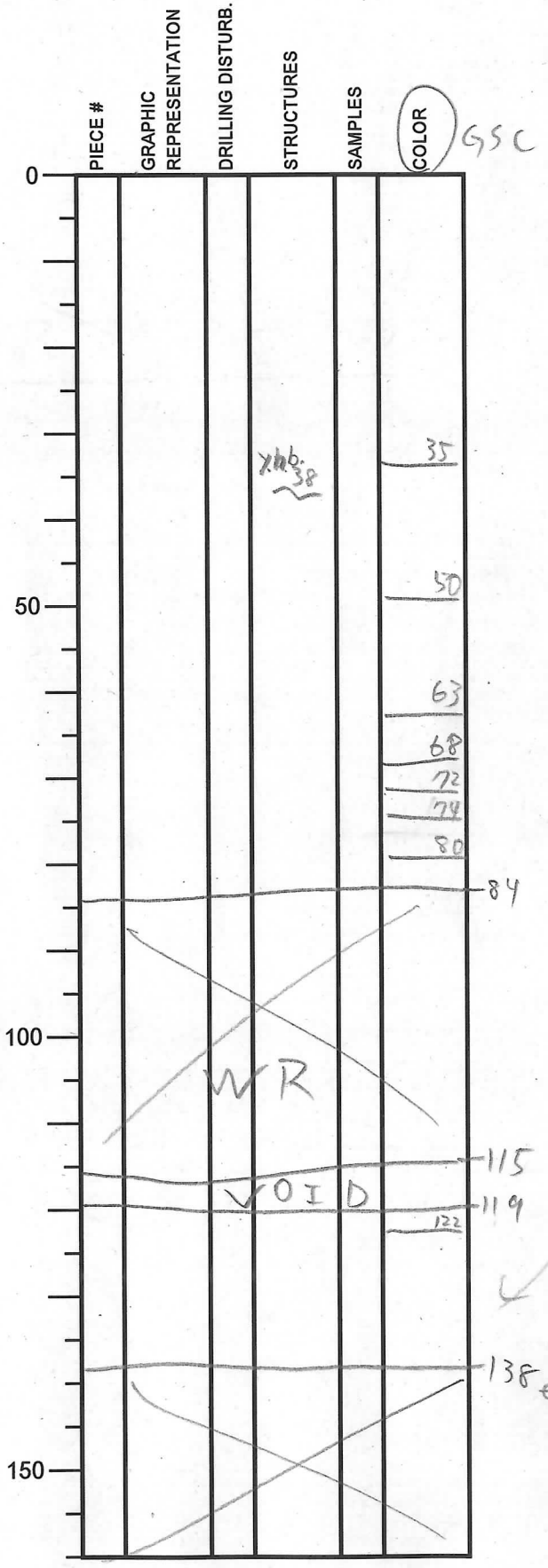
NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 27R
SECTION: 1
OBSERBER: H. Ivanisevics



Integrated Ocean Drilling Program

Visual Core Description

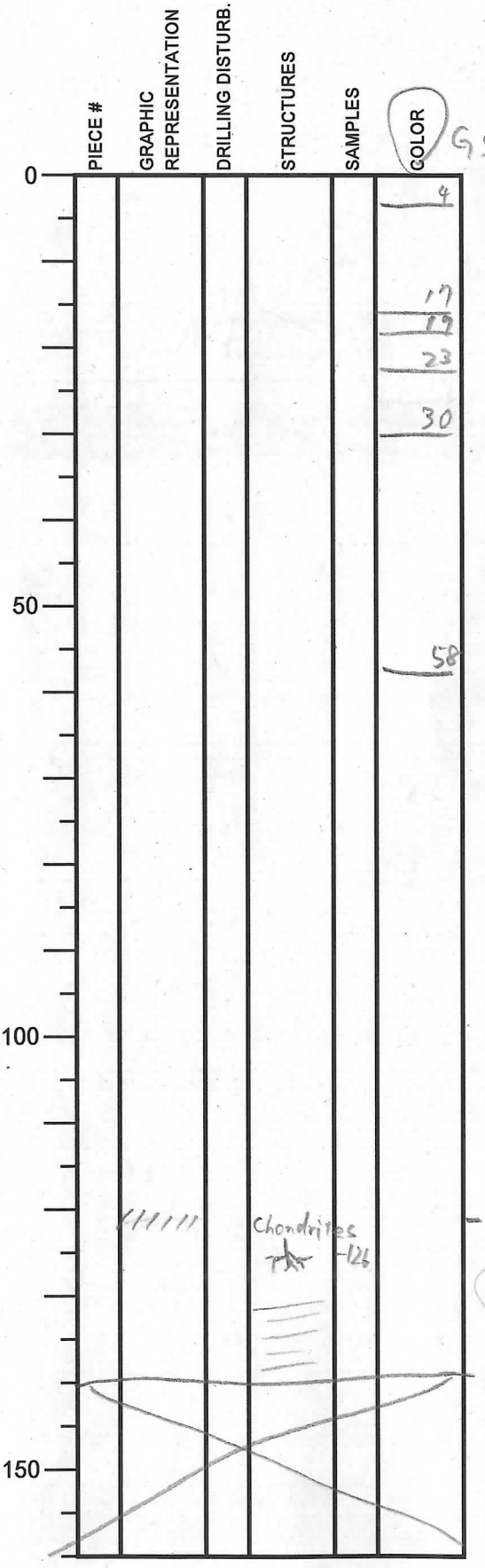
NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 27R
SECTION: 3
OBSERBER: M. Haruse / RS



Integrated Ocean Drilling Program

Visual Core Description

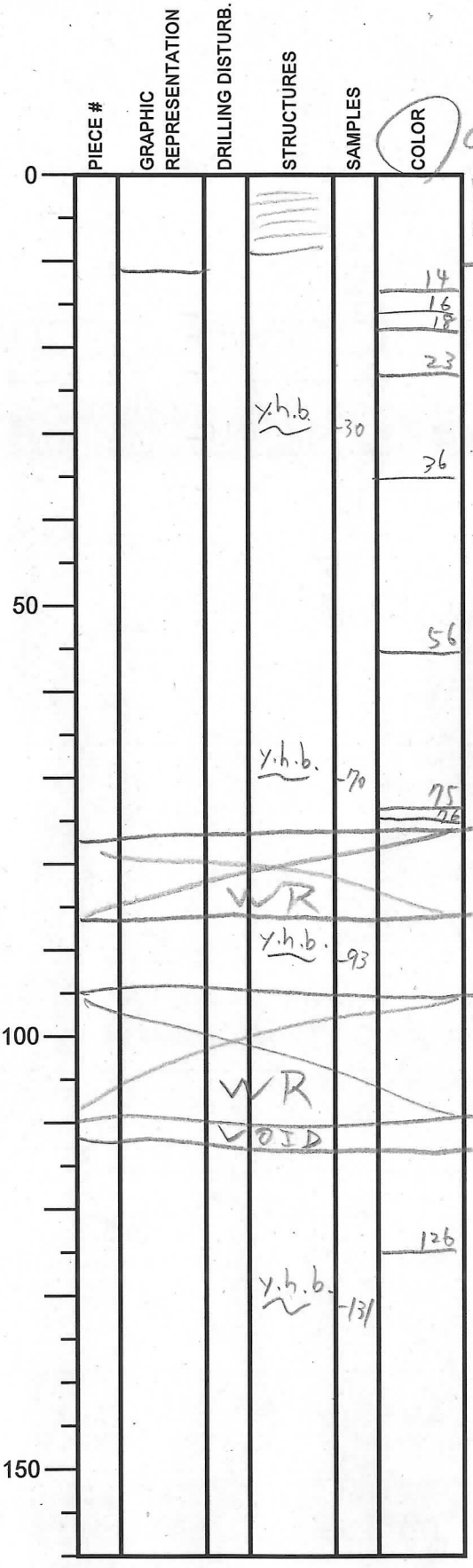
NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 27
SECTION: 4
OBSERBER: H. Haruse RS



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: / /20
EXP.:
SITE/HOLE:
CORE: 27R
SECTION: 5
OBSERBER: H. Naruse / RS

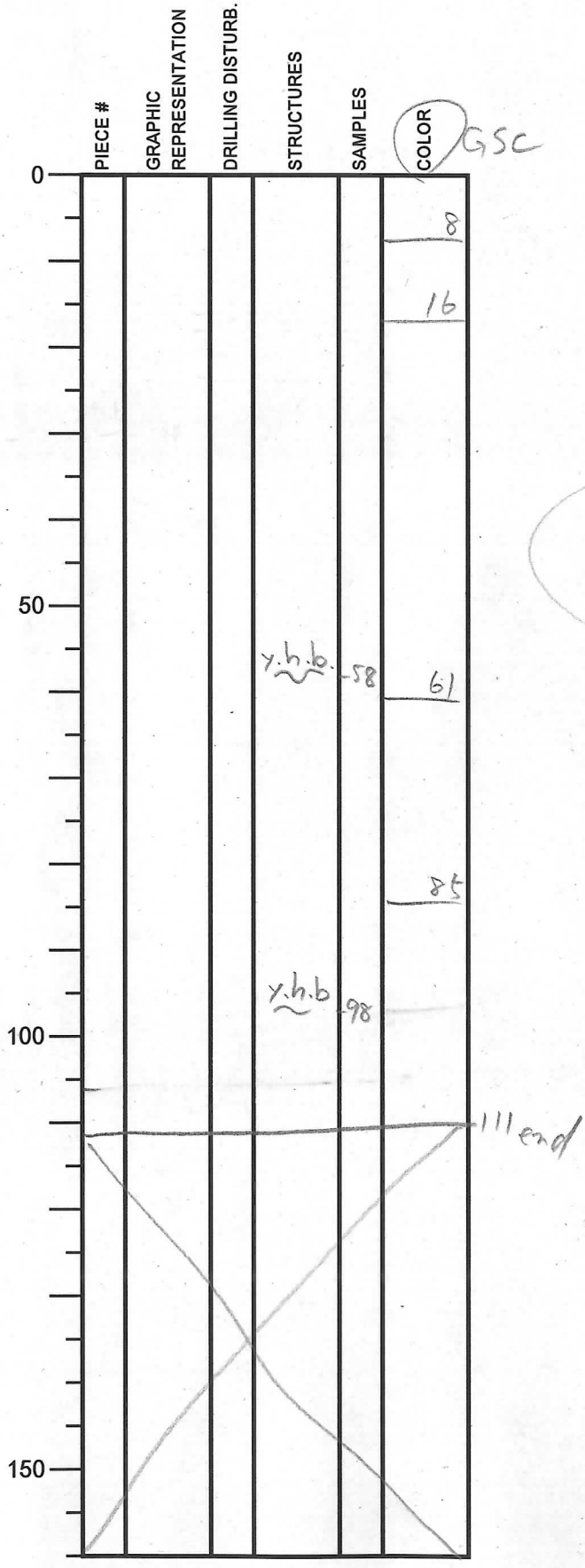


slight bio. (1)

Heavy bioturbation (5)

Integrated Ocean Drilling Program
Visual Core Description

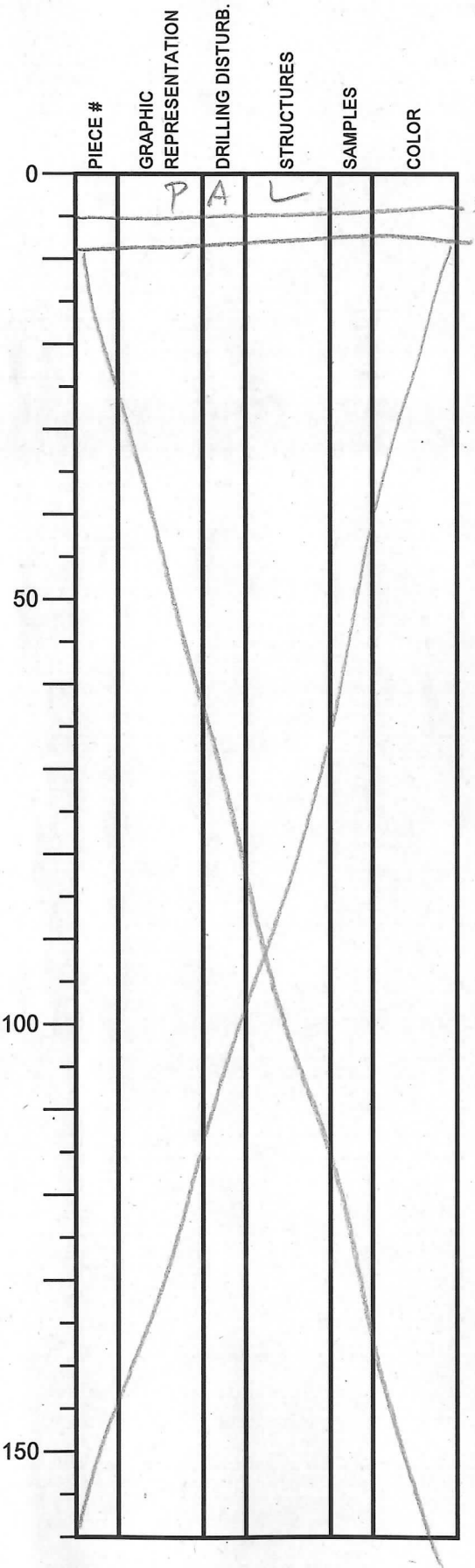
NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 27R
SECTION: 6
OBSERBER: H. Haruse / KS



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 27R
SECTION: CC
OBSERBER: H. Haruse/RS



SECTION DESCRIPTION

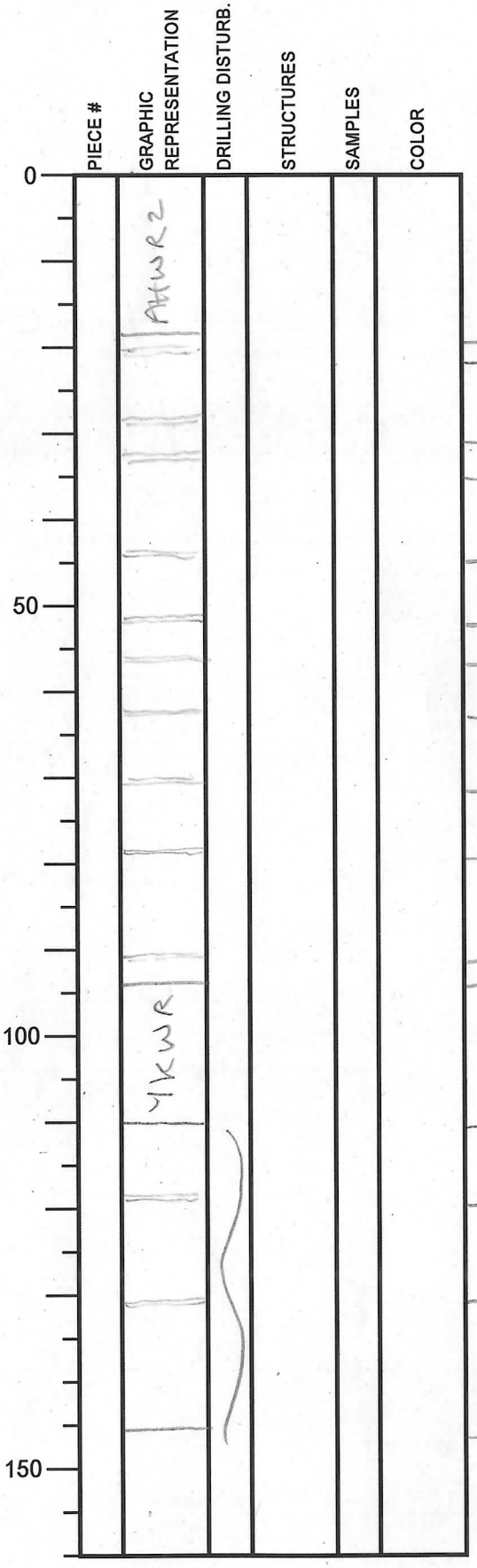
5
9 end

green-gray silty claystone [Heavy (5)

Integrated Ocean Drilling Program

Visual Core Description

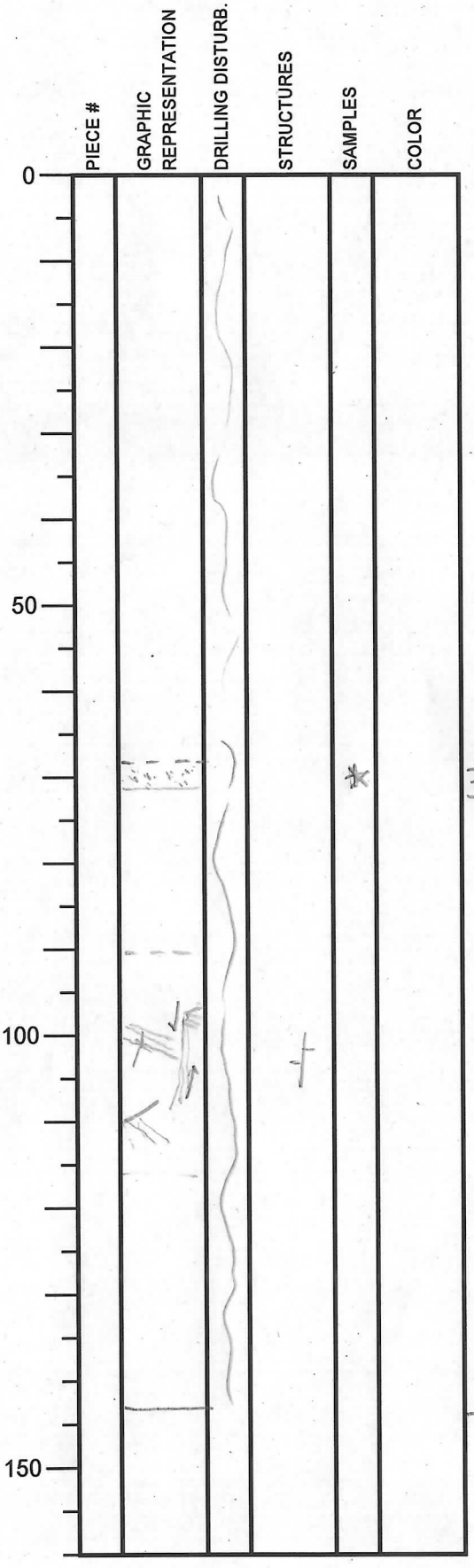
NO.
DATE: 15/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 28
SECTION: 1
OBSERBER: KM/SK



Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 5/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 28
SECTION: 3
OBSERBER: KTP/SK



SECTION DESCRIPTION

GGSC/GSC

BIOTURBATIO
5 (INTENSE)

[*69cm SS]
67cm
SS
71 cm DARK GRAY SILTSTONE

BIOT

GGSC/GSC

BIOTURBATI
5 (INTENSE)

90cm

Faulted/deformed (folded/inclined) interval
Fault offset ~4 cm. SYNSEDIMENTARY DEF.

GGSC

BRECCIATED ZONE
PROBABLY PARTLY FUNCTION OF SED. DEF.

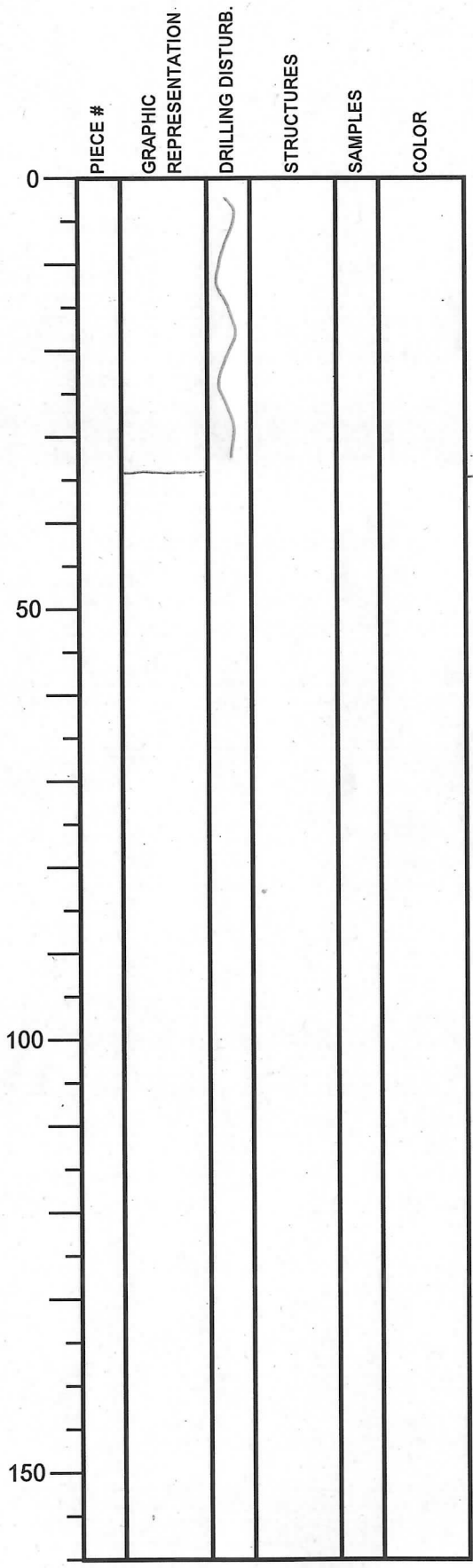
BIOTURBATI
5 (INTENSE)

143 cm ENDS

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 15/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 28
SECTION: 4
OBSERBER: KMB/SK



SECTION DESCRIPTION

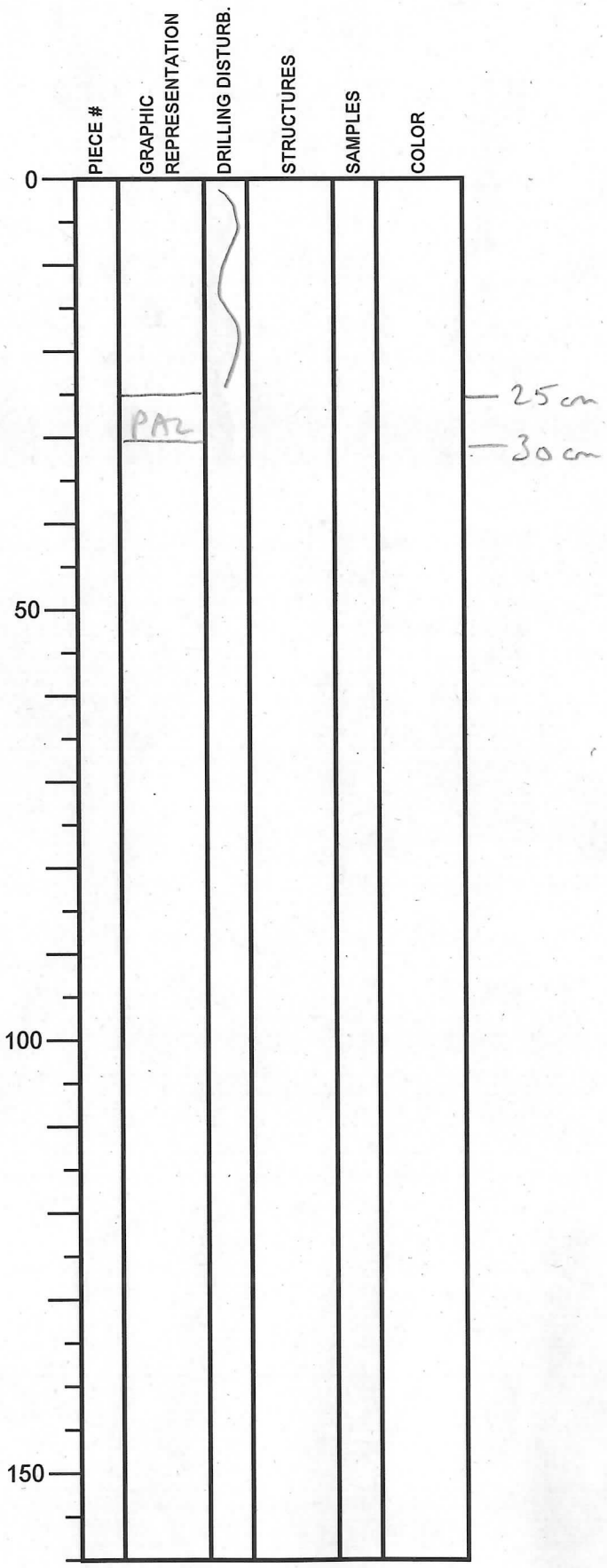
GGSc/GSc

BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 15/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 28
SECTION: CC
OBSERBER: KTP/SK



SECTION DESCRIPTION

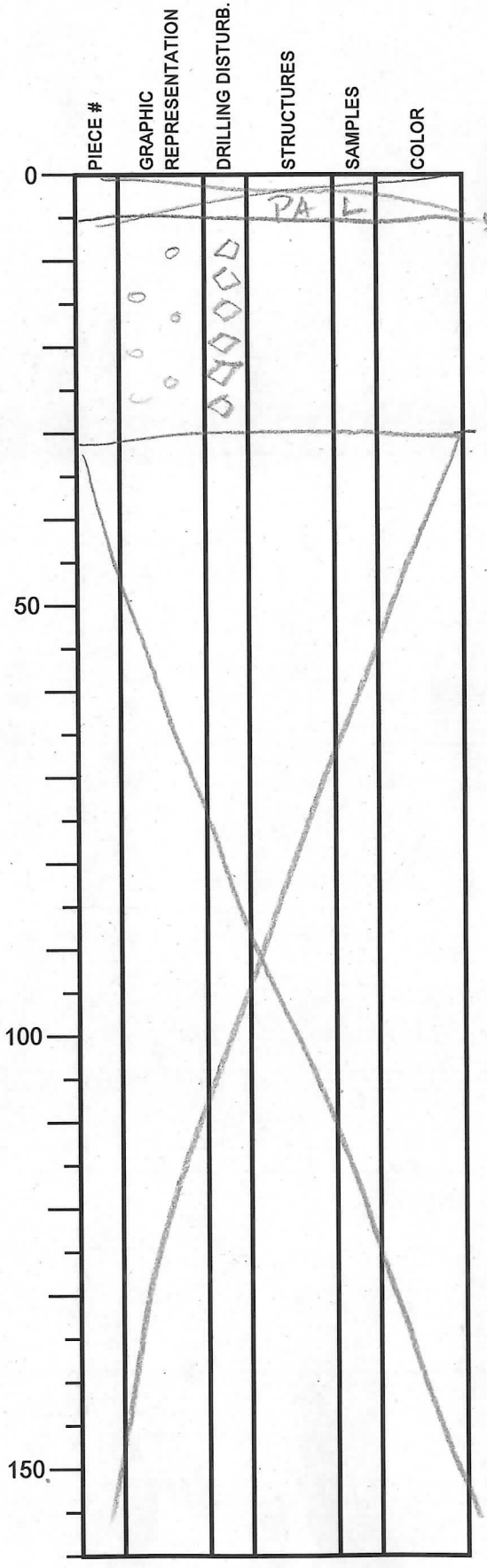
GGSC | GSC

BIOTURBATION
5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 9/14/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 29R
SECTION: CC
OBSERBER: H. Naruse

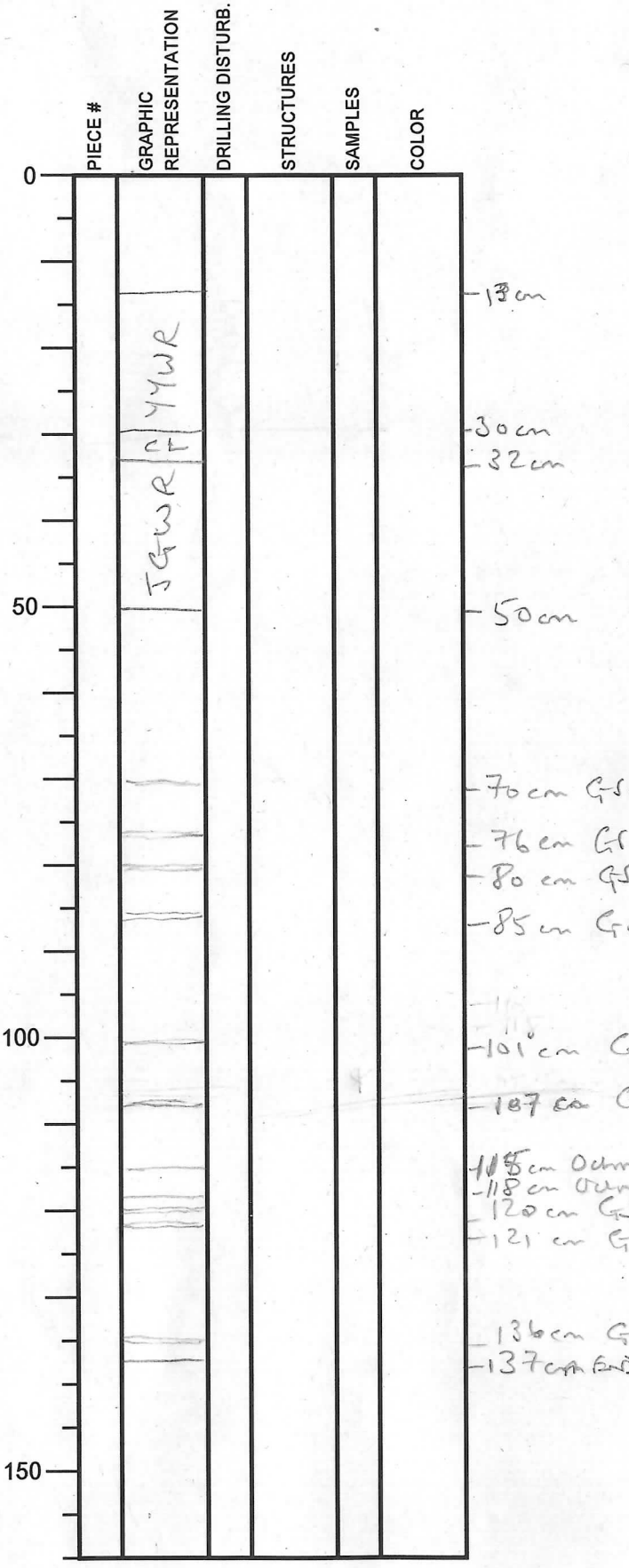


"drilling mud"
drilling disturbance is intense.
all blocks are now powder.

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 15/09/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 30
SECTION: 1
OBSERBER: KGP/SK



SECTION DESCRIPTION

GGSc/GSc

BIOTURBATION 5 (INTENSE)

GGSc/GSc

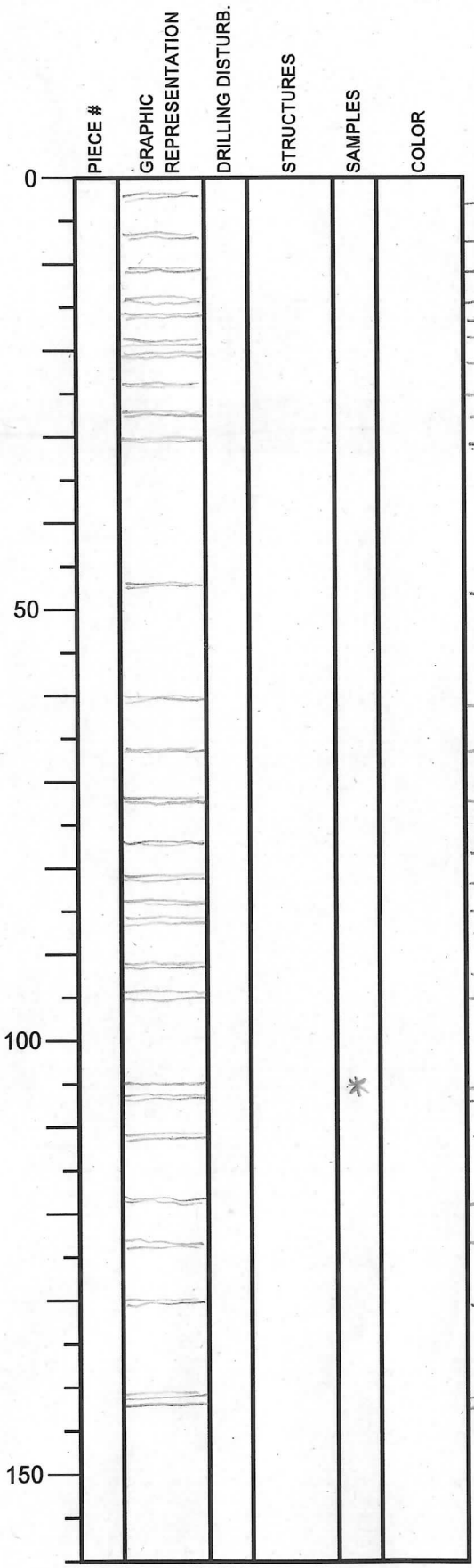
BIOTURBATION 5 (INTENSE)

NB. 2-5cm spacing of ochre-coloured layer that are continuous around core & commonly bioturbated but not totally destroyed. ?? Carbonate-rich. These layer occur throughout easier cover above but not separately recorded. CHECK [STARTS CORE 27R]

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 15/09/2007
EXP.: 322
SITE/HOLE: C0011B
CORE: 30
SECTION: 3
OBSERBER: KMP/SK



SECTION DESCRIPTION

- 2 cm GSC
- 7 cm GSC
- 11 cm GSC
- 14 cm GSC
- 15 cm GSC
- 17 cm GSC
- 20 cm GSC
- 23 cm GSC
- 27 cm GSC
- 30 cm GSC

GGSC/GSC

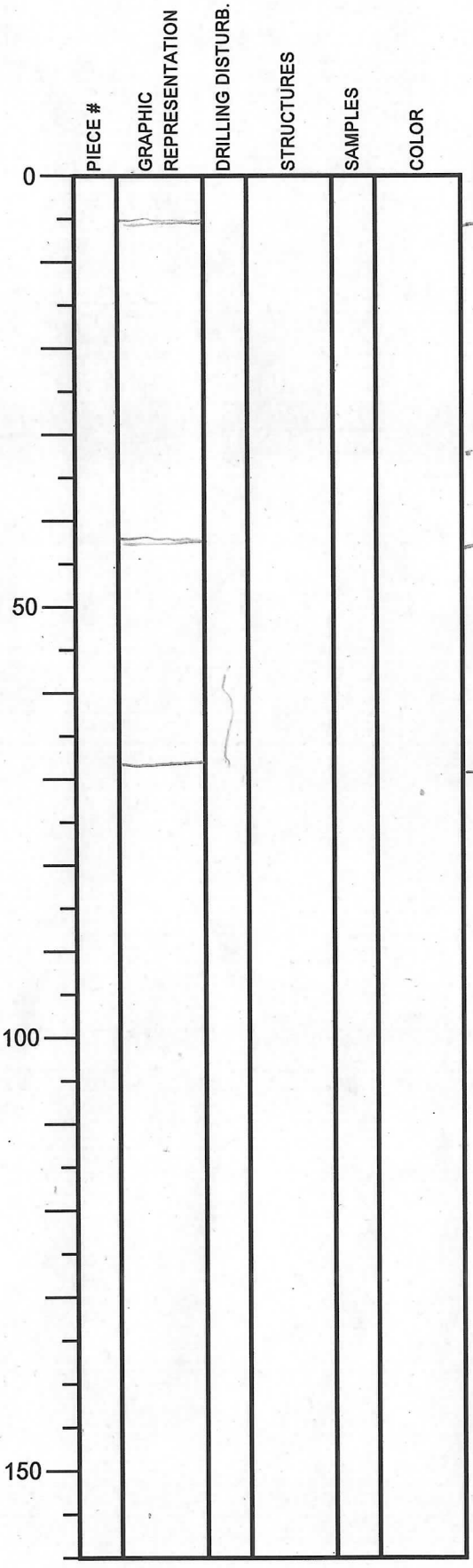
- 47 cm GSC
- 60 cm GSC
- 67 cm GSC
- 72 cm GSC
- 77 cm GSC
- 81 cm GSC
- 84 cm GSC
- 86 cm GSC
- 92 cm GSC
- 95 cm GSC
- *105.5 cm SS (ochre-coloured layer)
- 107 cm GSC
- 111 cm GSC
- 117 cm GSC
- 124 cm GSC
- 130 cm GSC
- 141 cm GSC
- 142 cm NB

BIOTURBATION 5 (INTENSE)

Integrated Ocean Drilling Program

Visual Core Description

NO.
DATE: 15/07/2009
EXP.: 322
SITE/HOLE: C0011B
CORE: 30
SECTION: 4
OBSERBER: VCTP/SK



SECTION DESCRIPTION

5 cm GSC

GGSC/GSC

42 cm GSC

mm. PYRITE FRAMBOIDS AT 50, 56 cm

68cm Ext>

BIOTURBATION 5 (INTENSE)