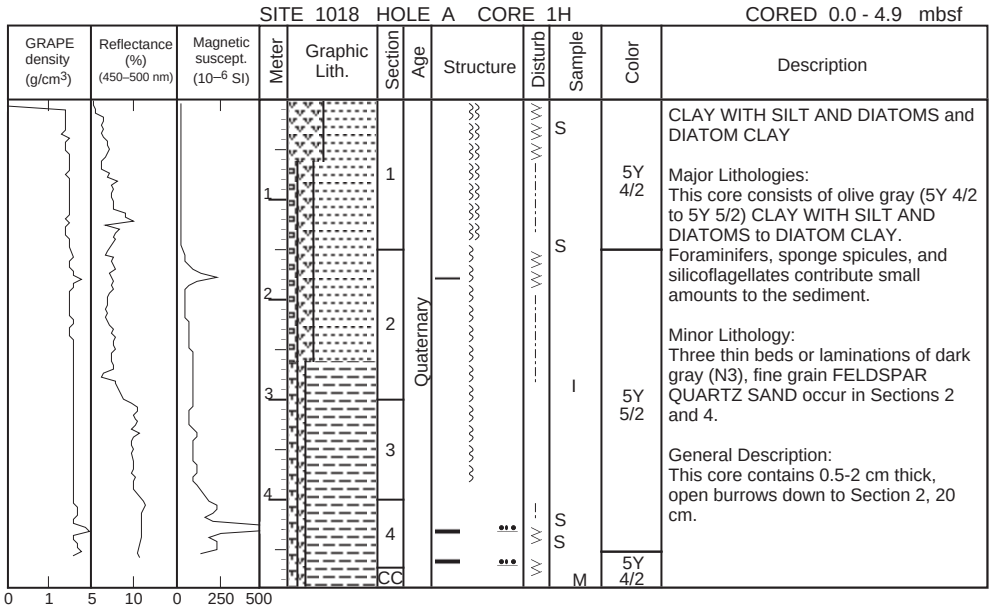
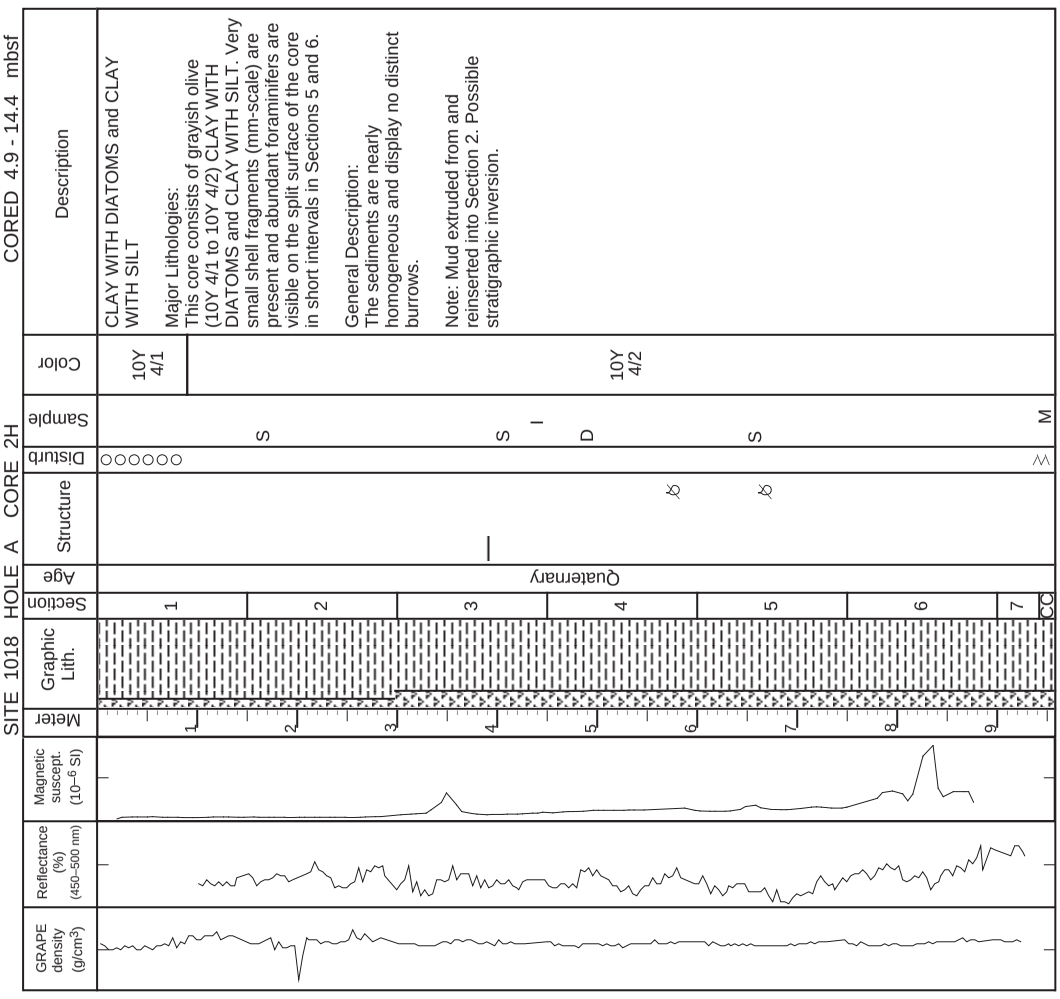
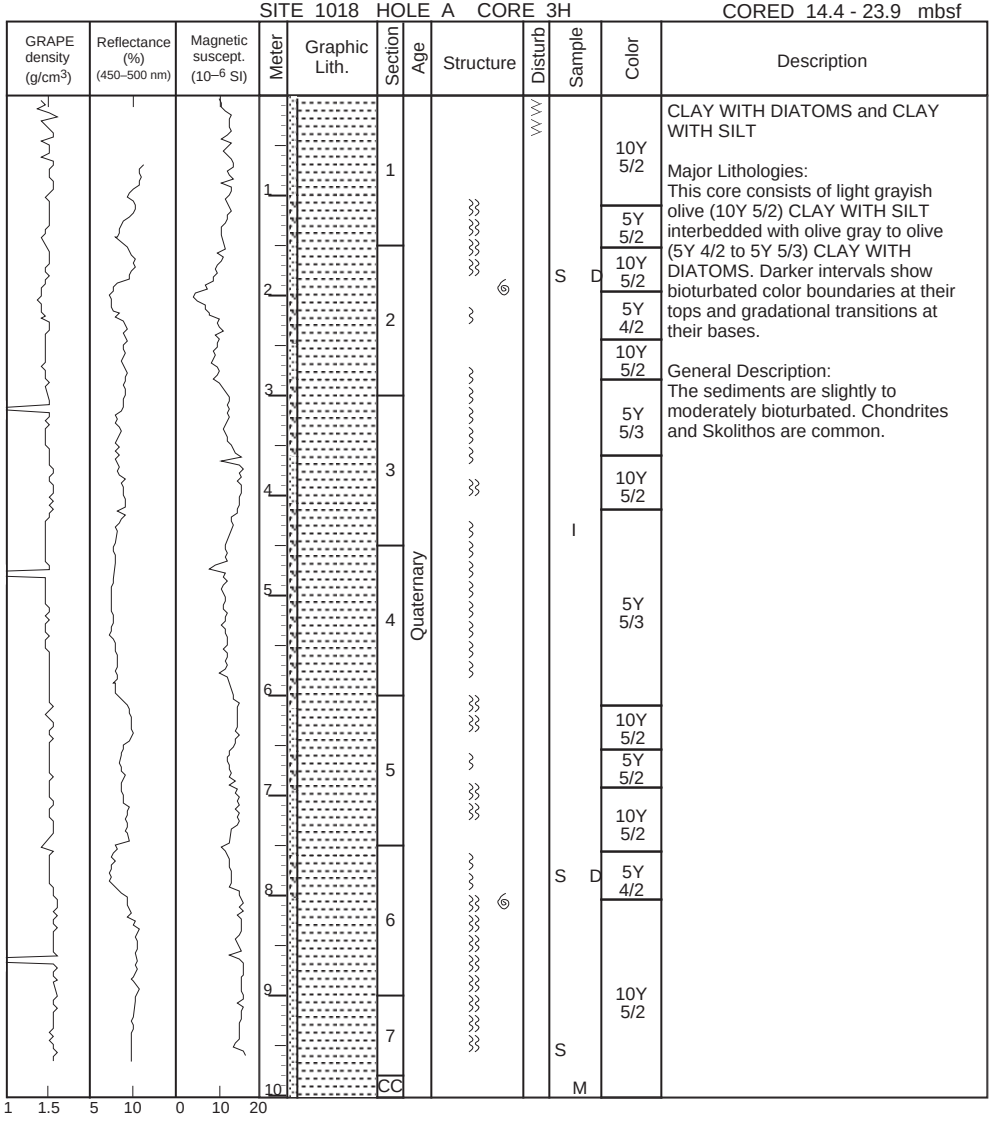
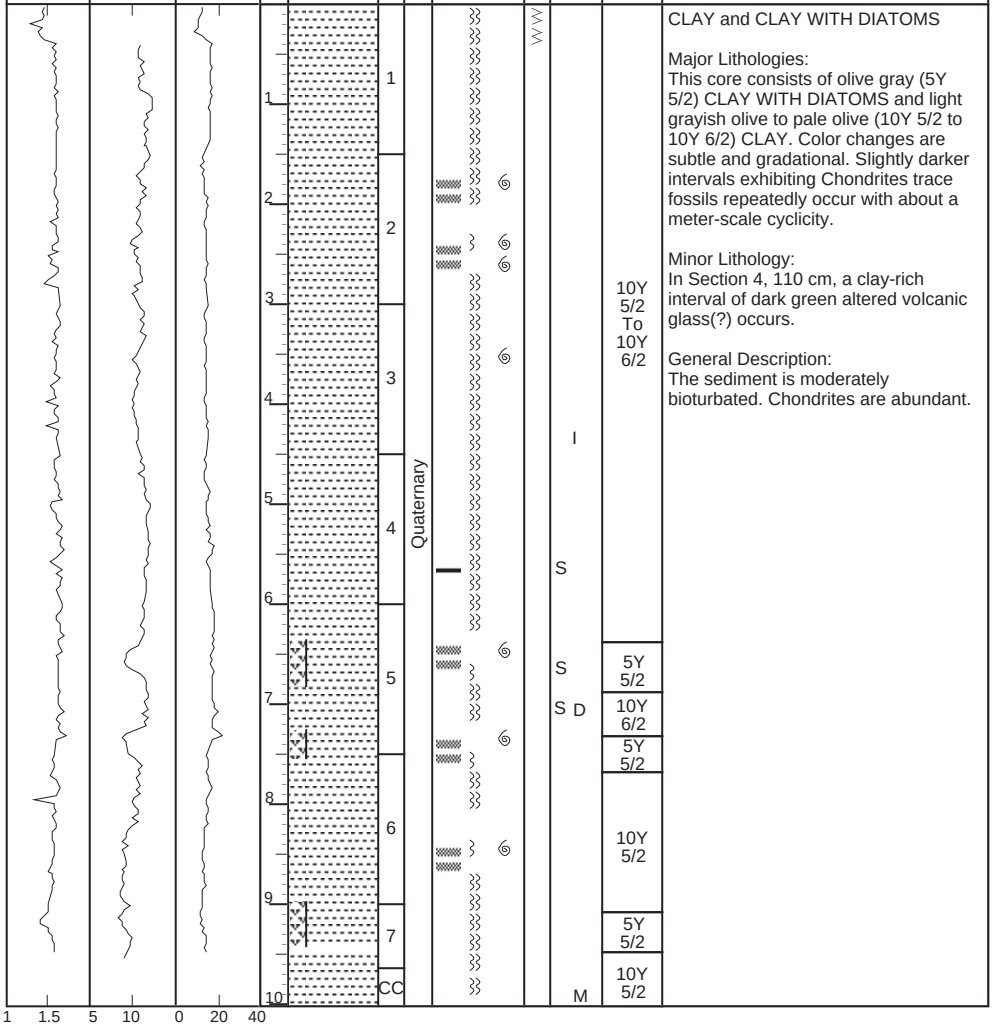

SITE 1018 HOLE A CORE 1H
CORED 0.0 - 4.9 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
0 1 5 10 0 250 500
1 2 3 4
1 2 3 4 CC
Quaternary
S S I S S M
5Y 4/2
5Y 5/2
5Y 4/2
CLAY WITH SILT AND DIATOMS and DIATOM CLAY
Major Lithologies:
This core consists of olive gray (5Y 4/2 to 5Y 5/2) CLAY WITH SILT AND DIATOMS to DIATOM CLAY. Foraminifers, sponge spicules, and silicoflagellates contribute small amounts to the sediment.
Minor Lithology:
Three thin beds or laminations of dark gray (N3), fine grain FELDSPAR QUARTZ SAND occur in Sections 2 and 4.
General Description:
This core contains 0.5-2 cm thick, open burrows down to Section 2, 20 cm.


SITE 1018 HOLE A CORE 2H CORED 4.9 - 14.4 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
10Y 4/1
10Y 4/2
CLAY WITH DIATOMS and CLAY WITH SILT
Major Lithologies:
This core consists of grayish olive (10Y 4/1 to 10Y 4/2) CLAY WITH DIATOMS and CLAY WITH SILT. Very small shell fragments (mm-scale) are present and abundant foraminifers are visible on the split surface of the core in short intervals in Sections 5 and 6.
General Description:
The sediments are nearly homogeneous and display no distinct burrows.
Note: Mud extruded from and reinserted into Section 2. Possible stratigraphic inversion.

SITE 1018 HOLE A CORE 3H CORED 14.4 - 23.9 mbsf



SITE 1018 HOLE A CORE 4H CORED 23.9 - 33.4 mbsf



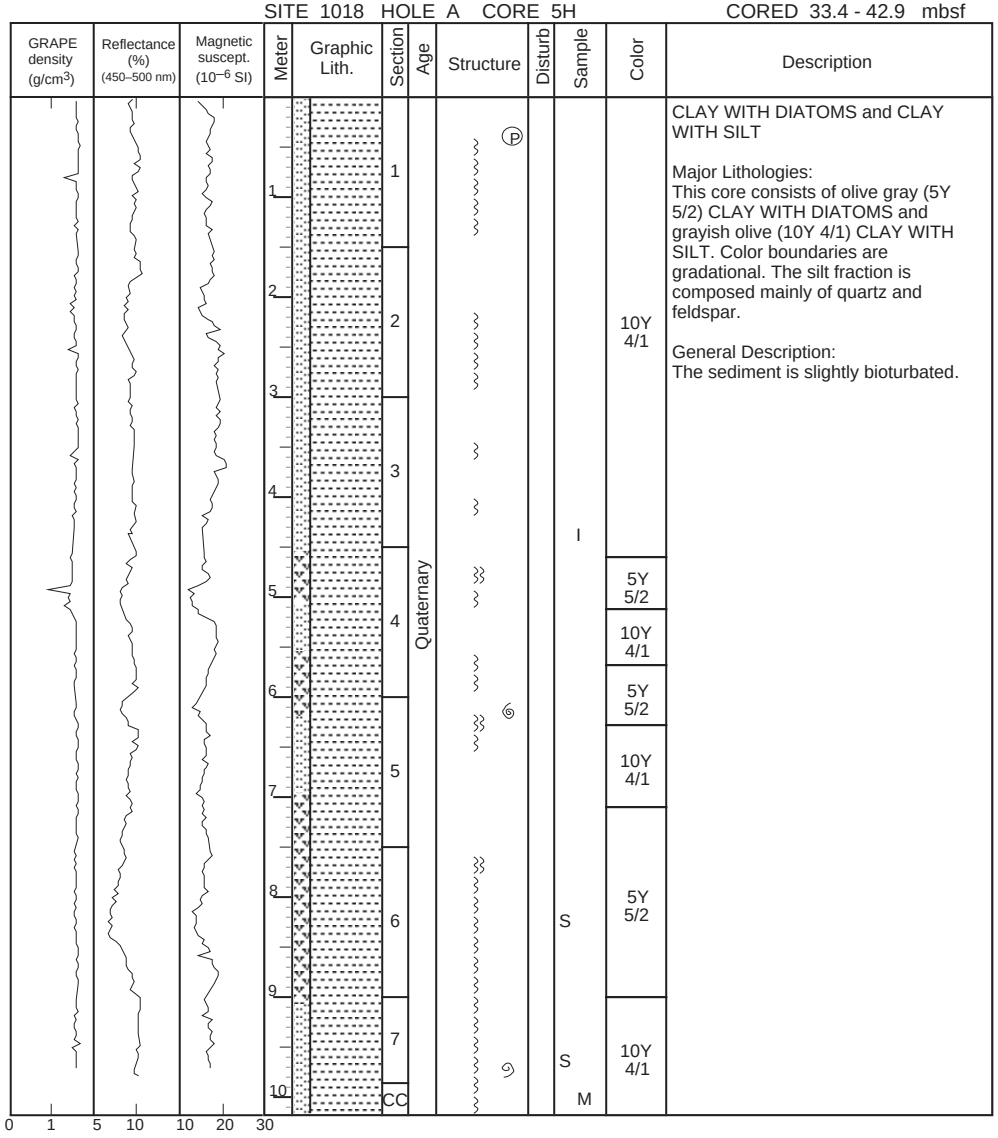
CLAY and CLAY WITH DIATOMS

Major Lithologies:
This core consists of olive gray (5Y 5/2) CLAY WITH DIATOMS and light grayish olive to pale olive (10Y 5/2 to 10Y 6/2) CLAY. Color changes are subtle and gradational. Slightly darker intervals exhibiting Chondrites trace fossils repeatedly occur with about a meter-scale cyclicity.

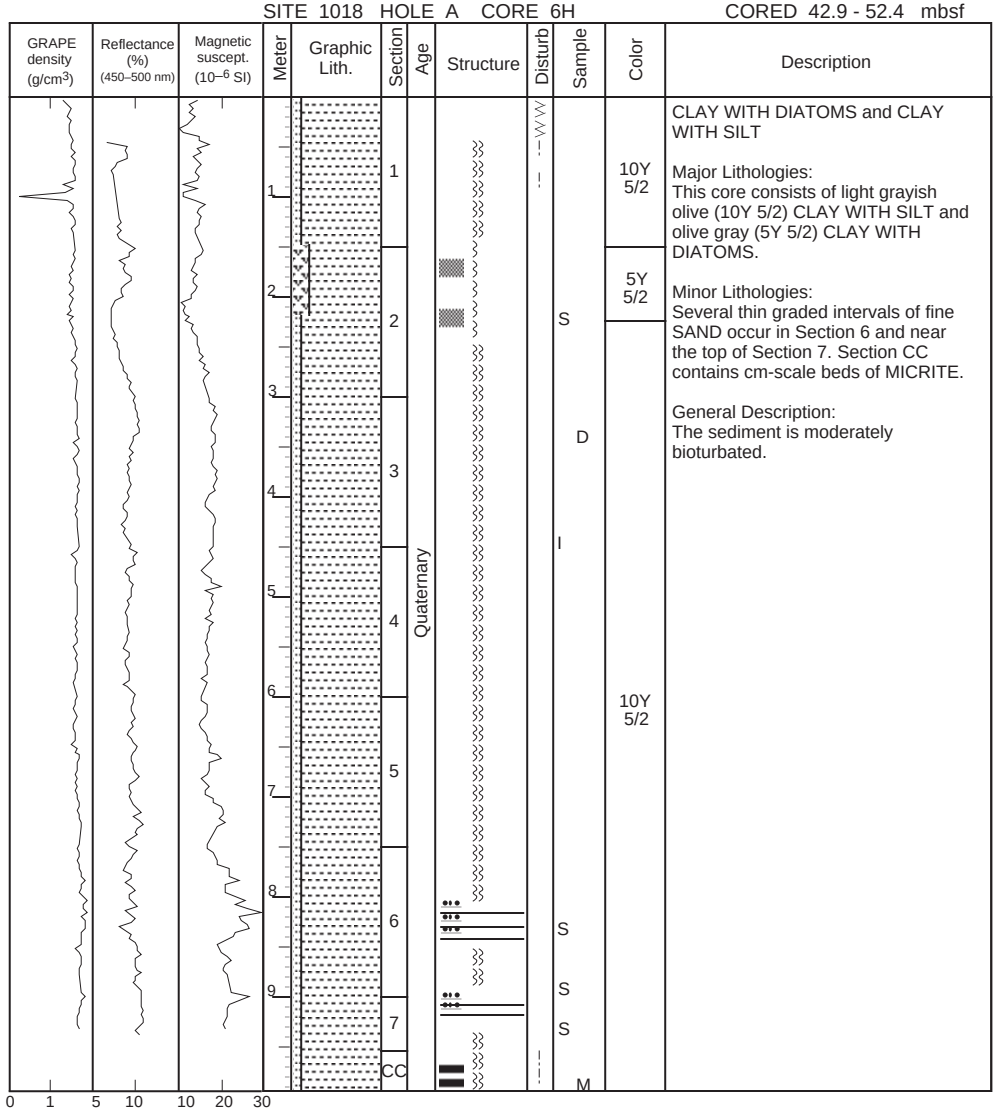
Minor Lithology:
In Section 4, 110 cm, a clay-rich interval of dark green altered volcanic glass(?) occurs.

General Description:
The sediment is moderately bioturbated. Chondrites are abundant.

SITE 1018 HOLE A CORE 5H CORED 33.4 - 42.9 mbsf



SITE 1018 HOLE A CORE 6H CORED 42.9 - 52.4 mbsf



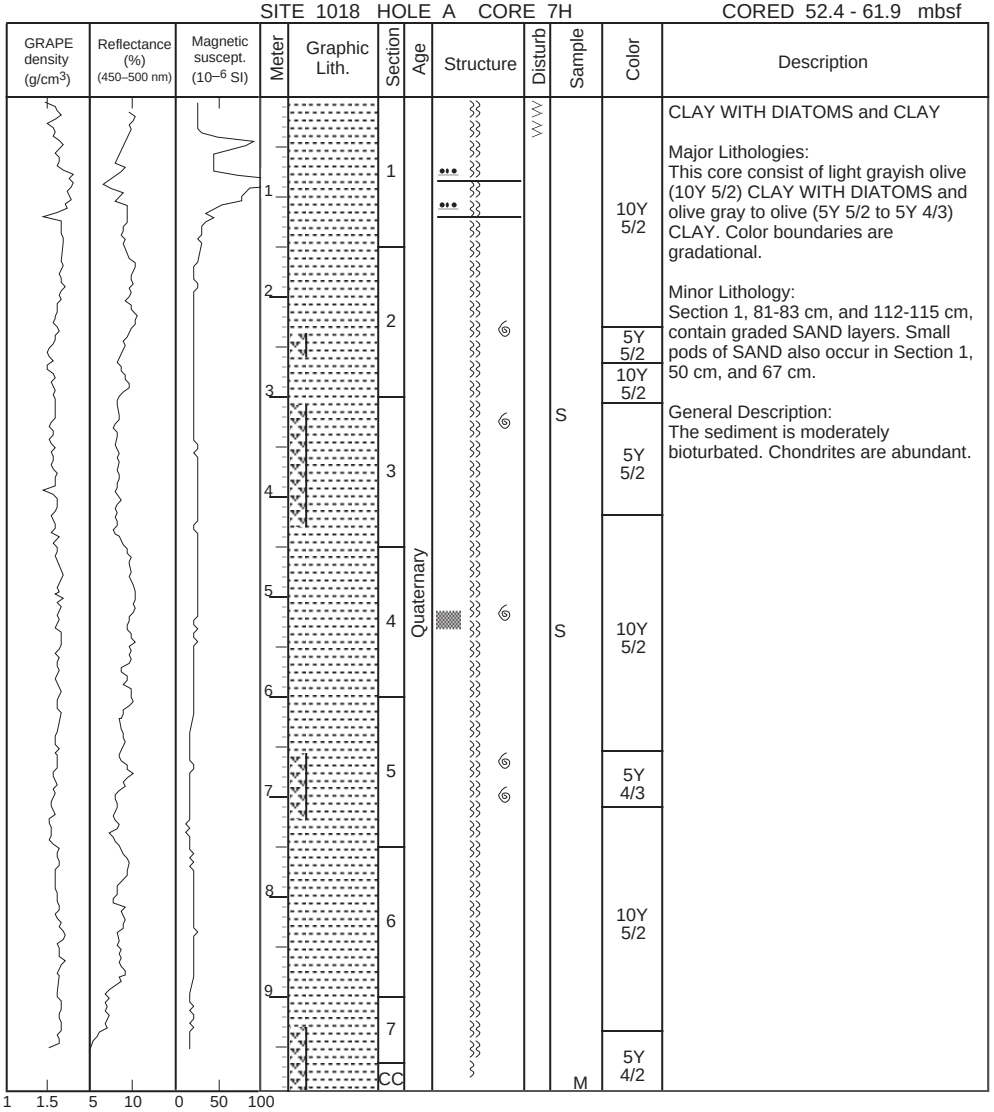
CLAY WITH DIATOMS and CLAY WITH SILT

Major Lithologies:
This core consists of light grayish olive (10Y 5/2) CLAY WITH SILT and olive gray (5Y 5/2) CLAY WITH DIATOMS.

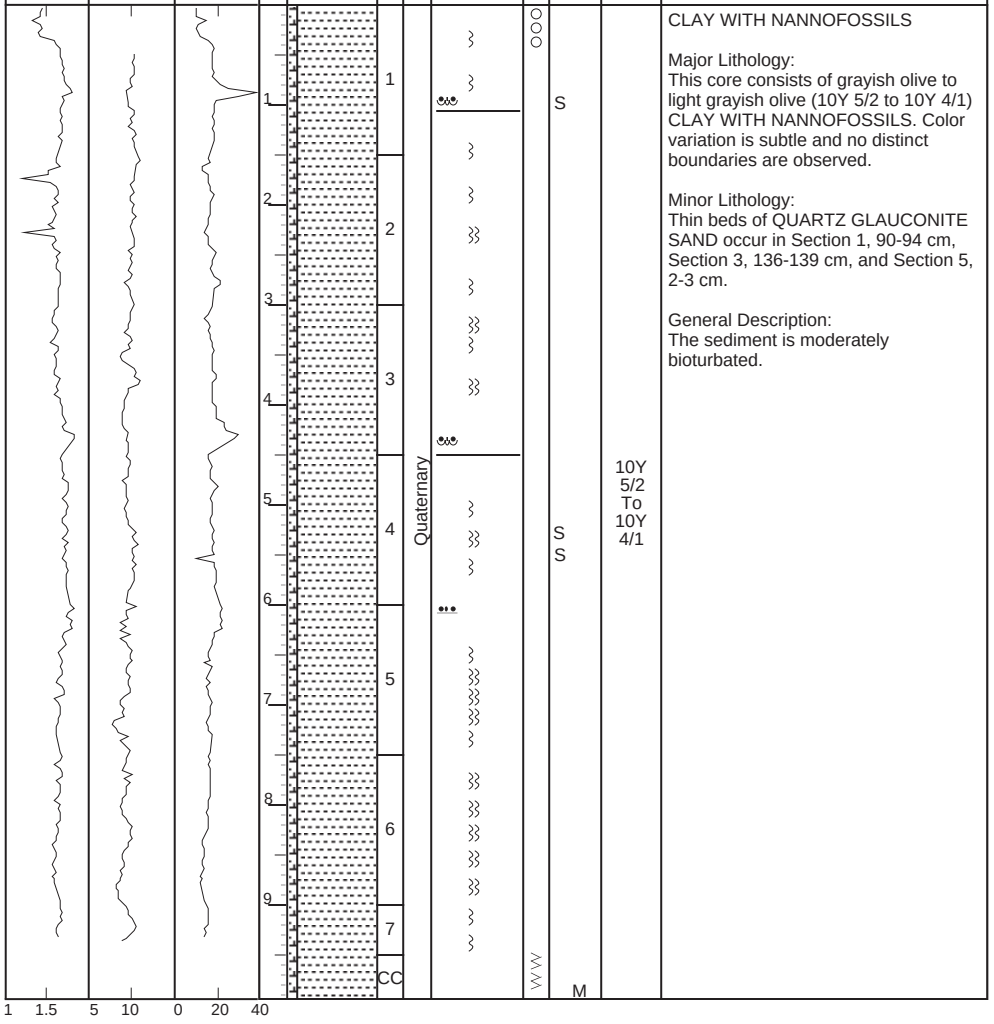
Minor Lithologies:
Several thin graded intervals of fine SAND occur in Section 6 and near the top of Section 7. Section CC contains cm-scale beds of MICRITE.

General Description:
The sediment is moderately bioturbated.

SITE 1018 HOLE A CORE 7H CORED 52.4 - 61.9 mbsf



SITE 1018 HOLE A CORE 8H CORED 61.9 - 71.4 mbsf



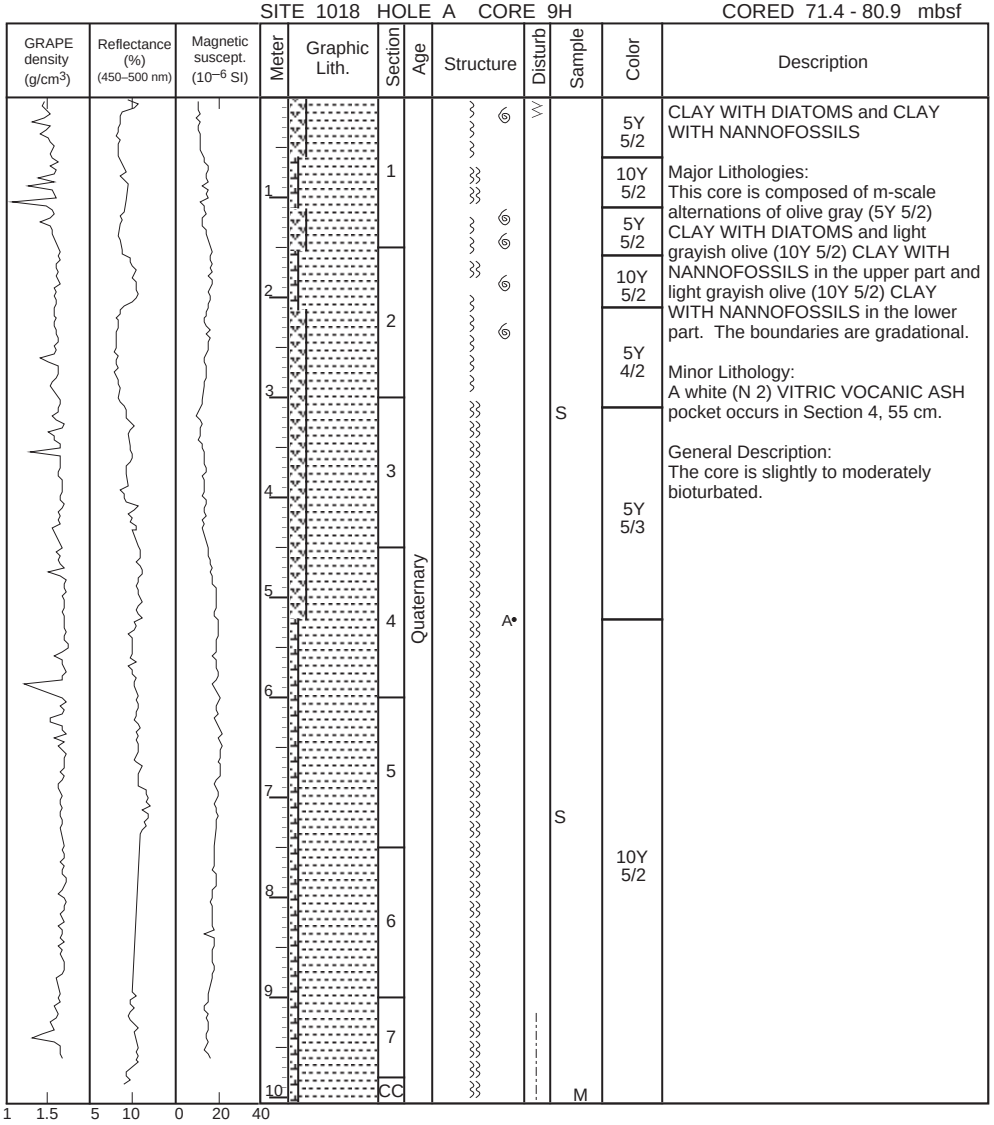
CLAY WITH NANNOFOSSILS

Major Lithology:
This core consists of grayish olive to light grayish olive (10Y 5/2 to 10Y 4/1) CLAY WITH NANNOFOSSILS. Color variation is subtle and no distinct boundaries are observed.

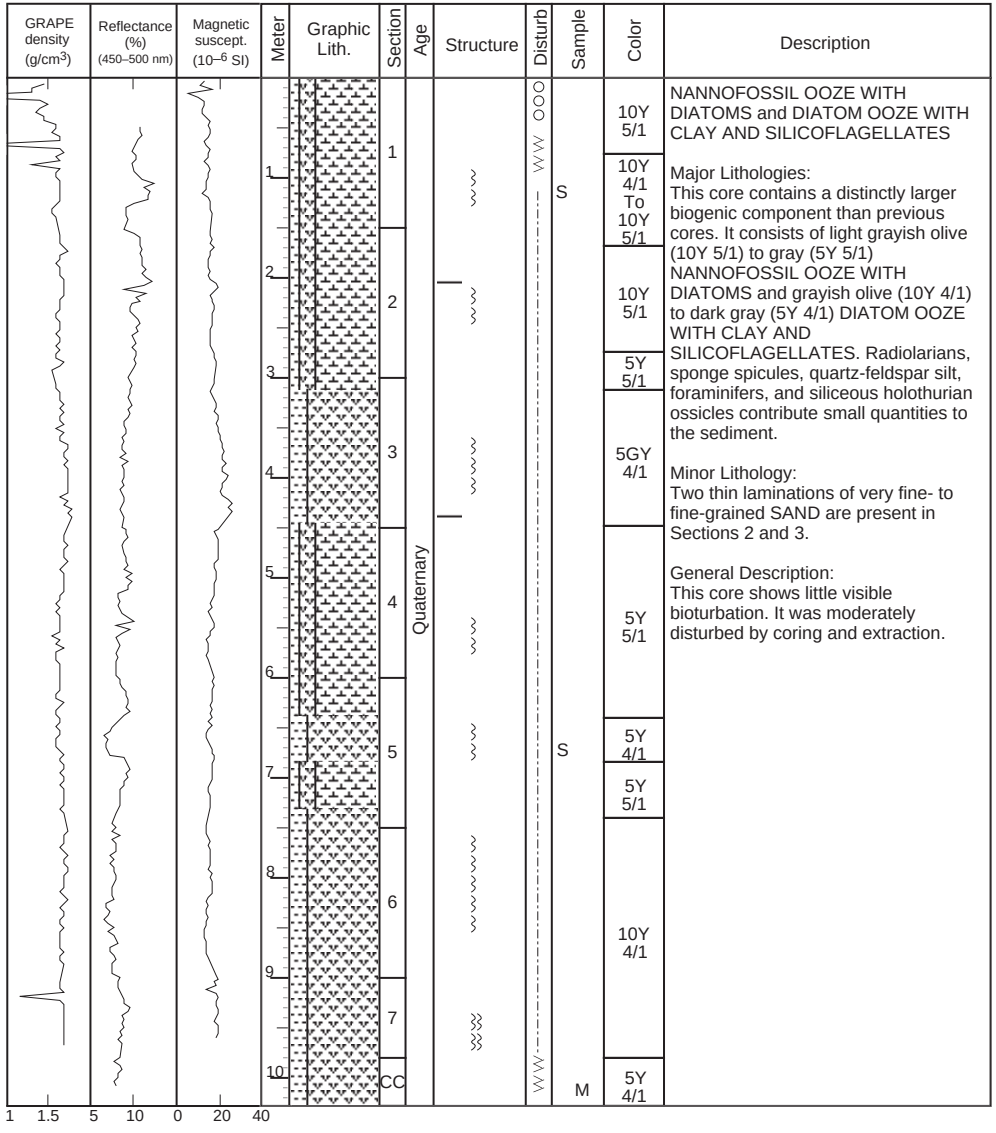
Minor Lithology:
Thin beds of QUARTZ GLAUCONITE SAND occur in Section 1, 90-94 cm, Section 3, 136-139 cm, and Section 5, 2-3 cm.

General Description:
The sediment is moderately bioturbated.

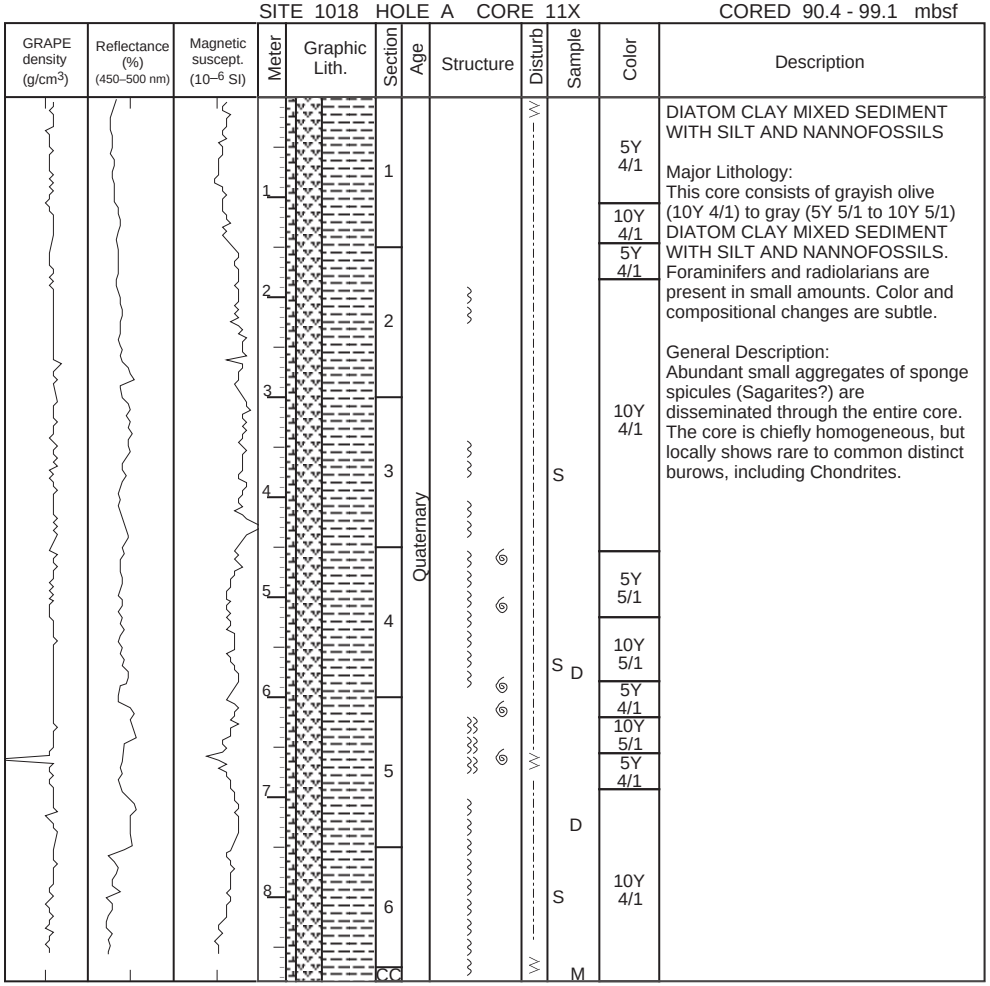
SITE 1018 HOLE A CORE 9H CORED 71.4 - 80.9 mbsf



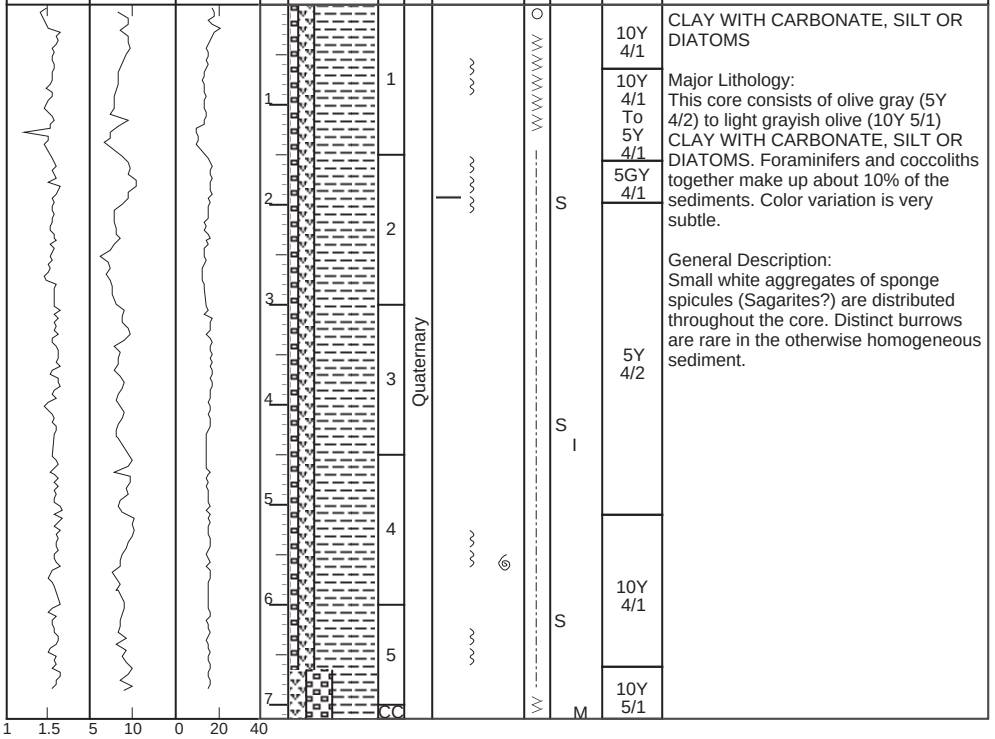
SITE 1018 HOLE A CORE 10H CORED 80.9 - 90.4 mbsf



SITE 1018 HOLE A CORE 11X CORED 90.4 - 99.1 mbsf



SITE 1018 HOLE A CORE 12X CORED 99.1 - 108.7 mbsf

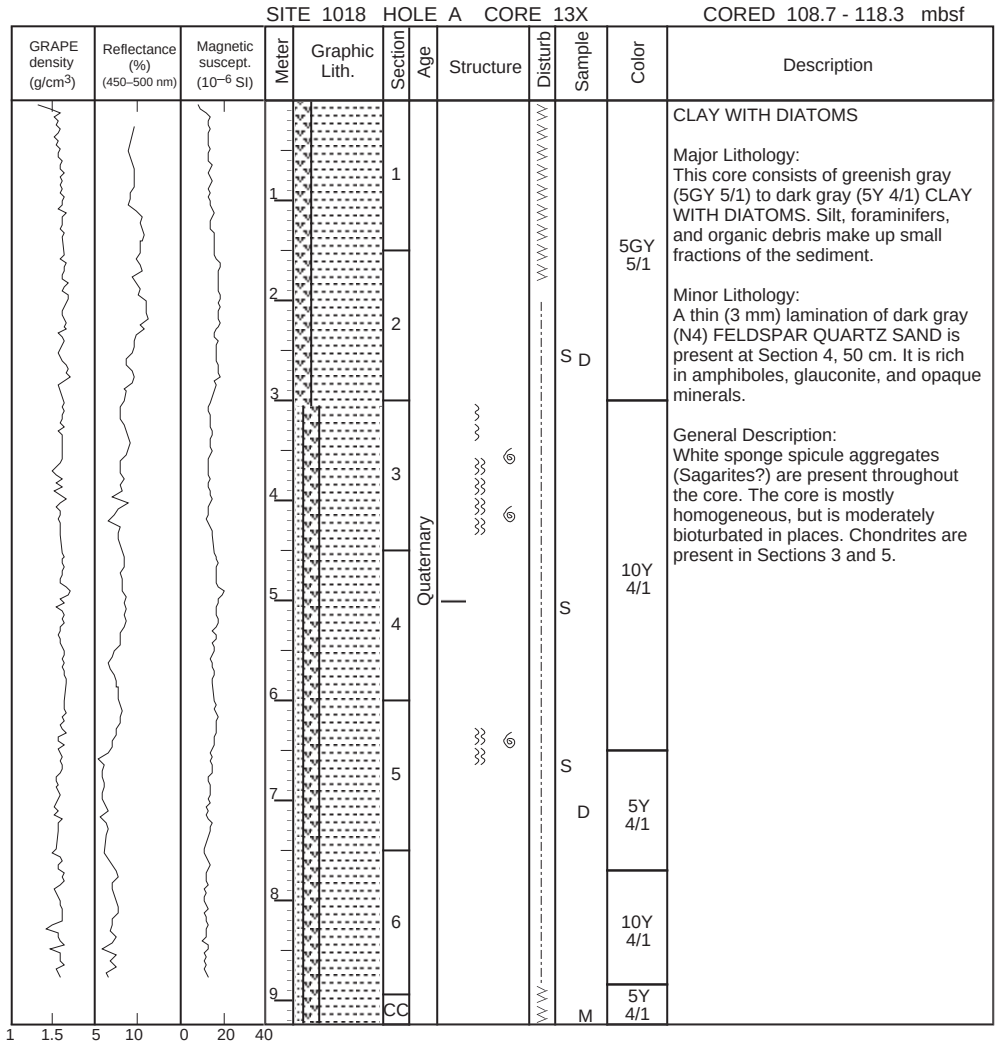


CLAY WITH CARBONATE, SILT OR DIATOMS

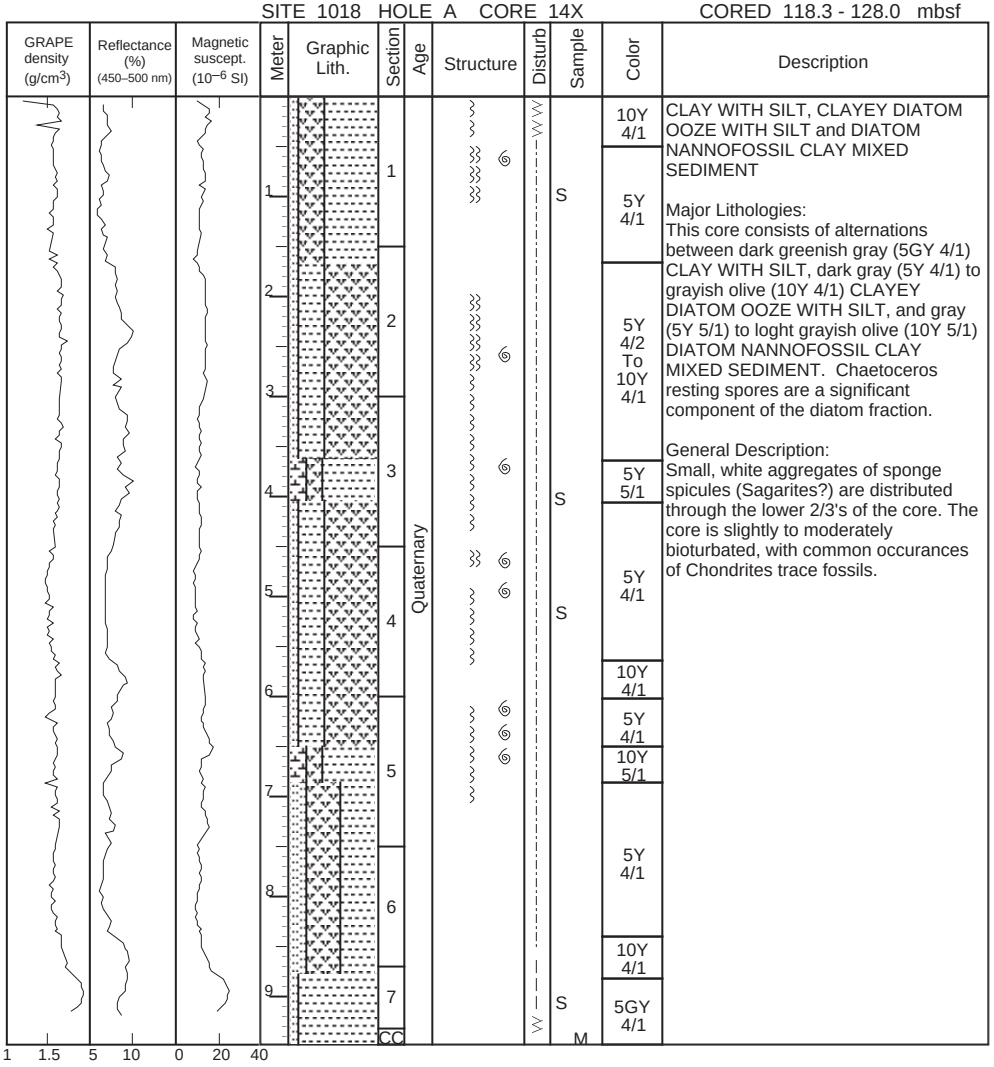
Major Lithology:
This core consists of olive gray (5Y 4/2) to light grayish olive (10Y 5/1) CLAY WITH CARBONATE, SILT OR DIATOMS. Foraminifers and coccoliths together make up about 10% of the sediments. Color variation is very subtle.

General Description:
Small white aggregates of sponge spicules (Sagarites?) are distributed throughout the core. Distinct burrows are rare in the otherwise homogeneous sediment.

SITE 1018


SITE 1018 HOLE A CORE 13X
CORED 108.7 - 118.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
1 1.5 5 10 0 20 40
1 2 3 4 5 6 7 8 9
CC
Quaternary
S D
S
S
D
M
5GY 5/1
10Y 4/1
5Y 4/1
10Y 4/1
5Y 4/1
CLAY WITH DIATOMS
Major Lithology:
This core consists of greenish gray (5GY 5/1) to dark gray (5Y 4/1) CLAY WITH DIATOMS. Silt, foraminifers, and organic debris make up small fractions of the sediment.
Minor Lithology:
A thin (3 mm) lamination of dark gray (N4) FELDSPAR QUARTZ SAND is present at Section 4, 50 cm. It is rich in amphiboles, glauconite, and opaque minerals.
General Description:
White sponge spicule aggregates (Sagarites?) are present throughout the core. The core is mostly homogeneous, but is moderately bioturbated in places. Chondrites are present in Sections 3 and 5.

SITE 1018 HOLE A CORE 14X CORED 118.3 - 128.0 mbsf

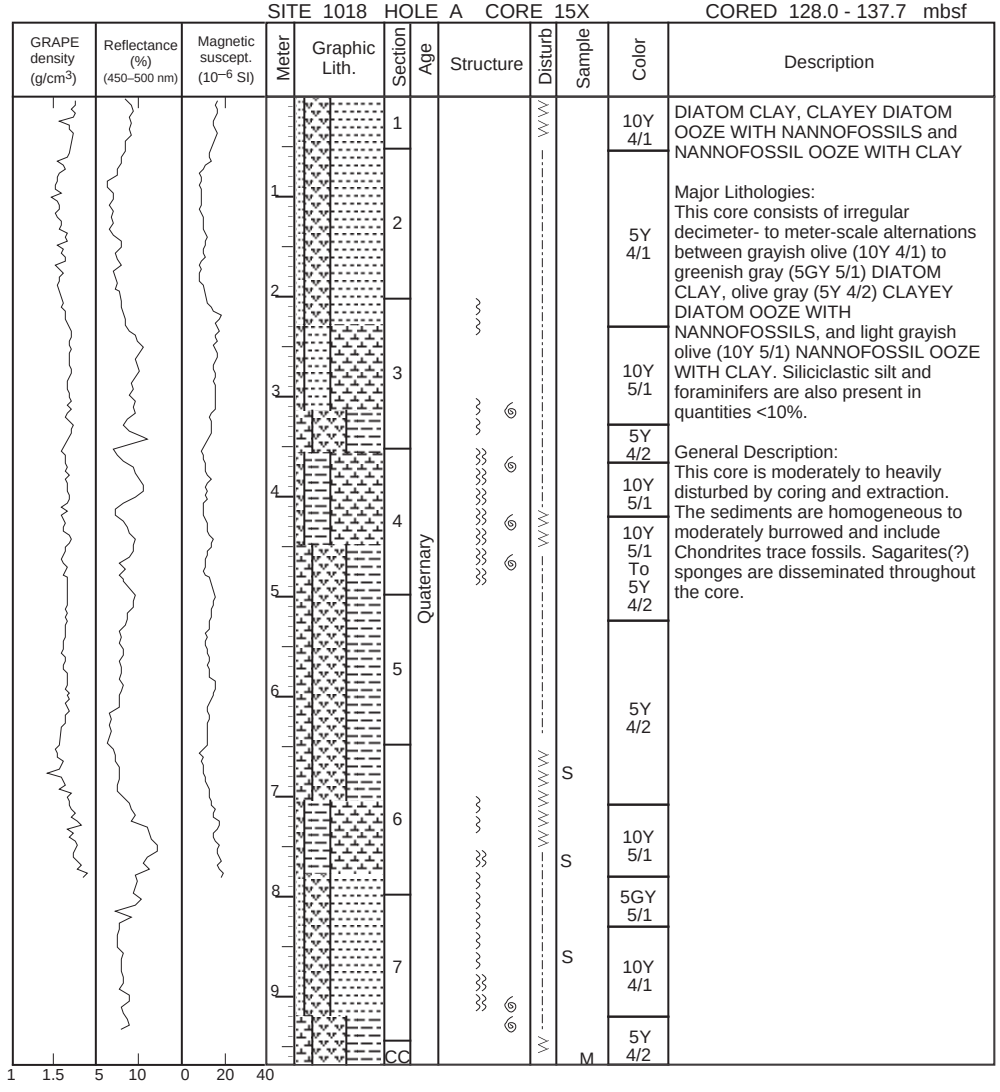


CLAY WITH SILT, CLAYEY DIATOM OOZE WITH SILT and DIATOM NANNOFOSSIL CLAY MIXED SEDIMENT

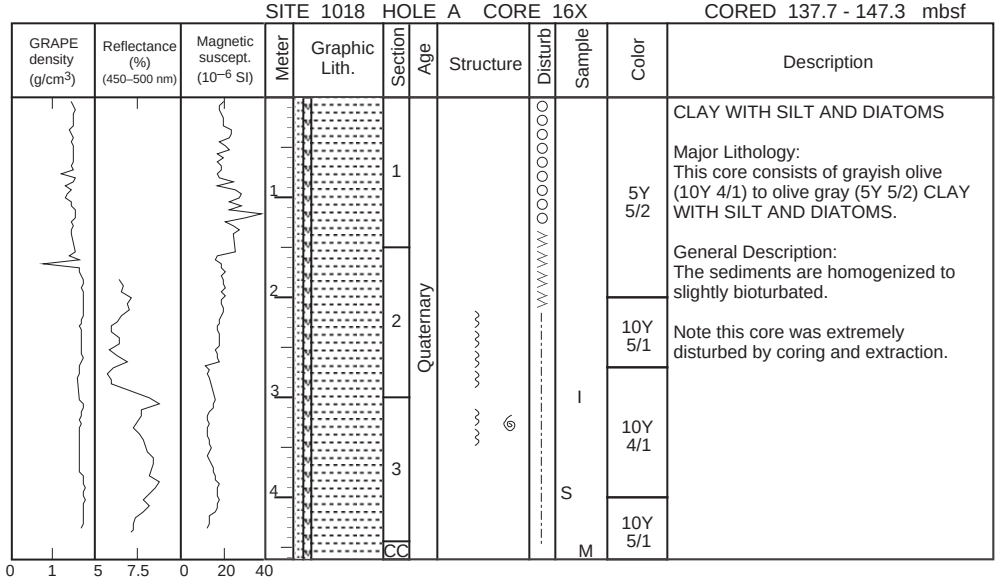
Major Lithologies:
This core consists of alternations between dark greenish gray (5GY 4/1) CLAY WITH SILT, dark gray (5Y 4/1) to grayish olive (10Y 4/1) CLAYEY DIATOM OOZE WITH SILT, and gray (5Y 5/1) to loght grayish olive (10Y 5/1) DIATOM NANNOFOSSIL CLAY MIXED SEDIMENT. Chaetoceros resting spores are a significant component of the diatom fraction.

General Description:
Small, white aggregates of sponge spicules (Sagarites?) are distributed through the lower 2/3's of the core. The core is slightly to moderately bioturbated, with common occurances of Chondrites trace fossils.

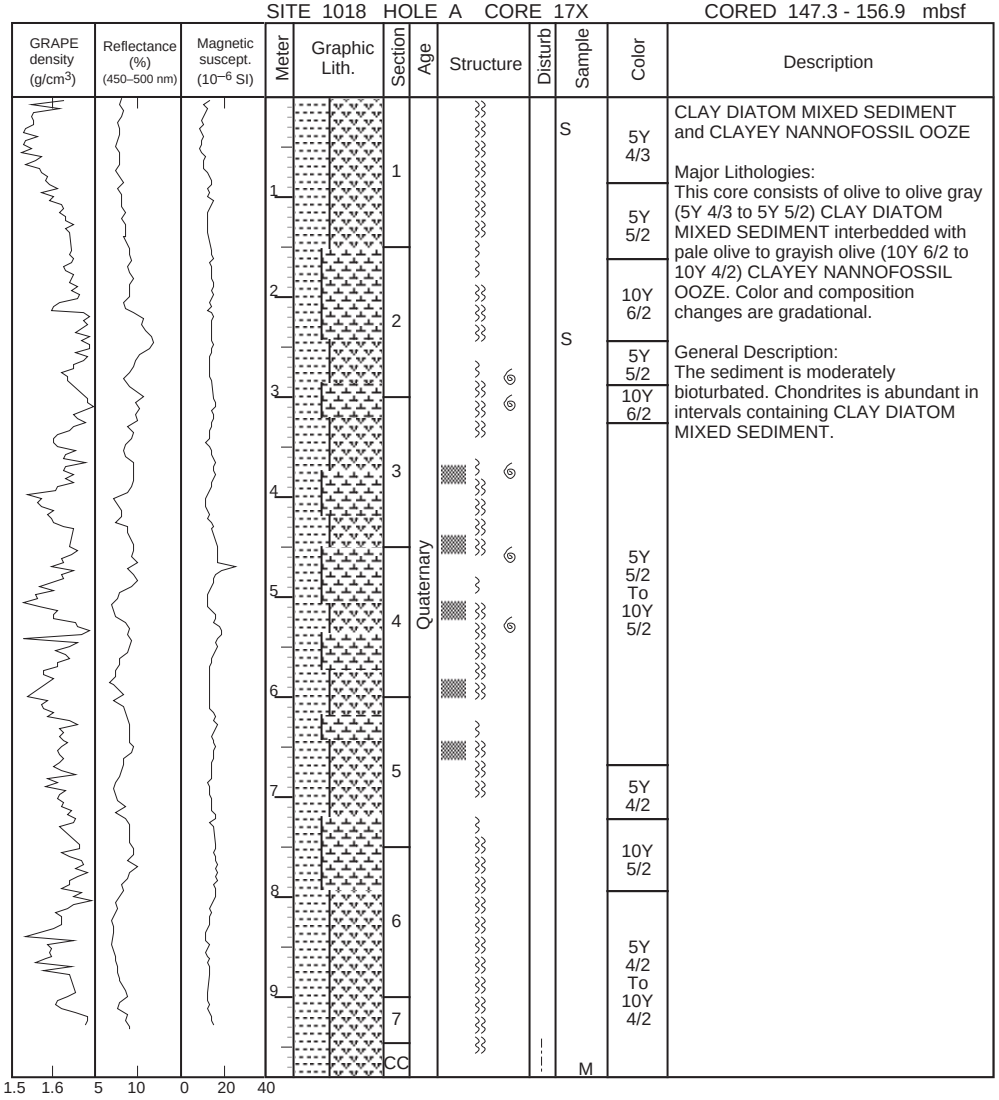
SITE 1018 HOLE A CORE 15X CORED 128.0 - 137.7 mbsf



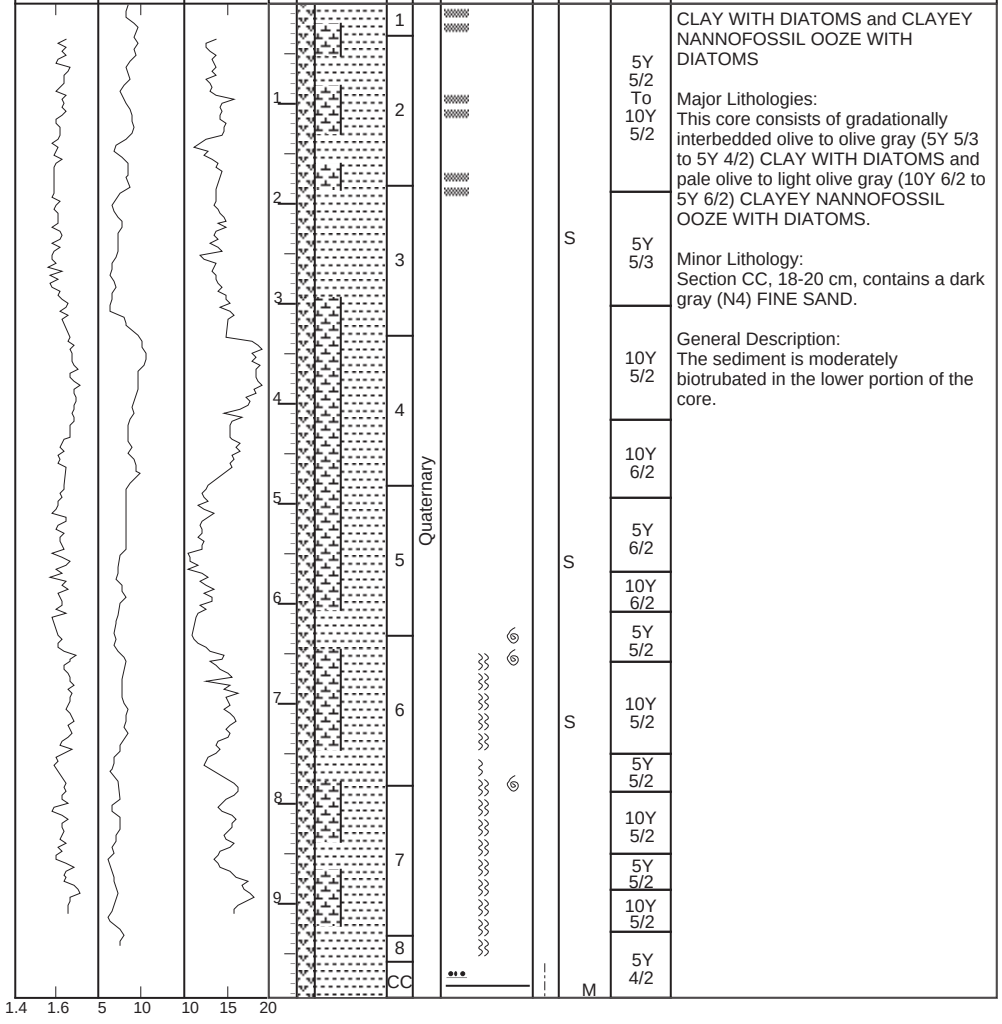
SITE 1018 HOLE A CORE 16X CORED 137.7 - 147.3 mbsf



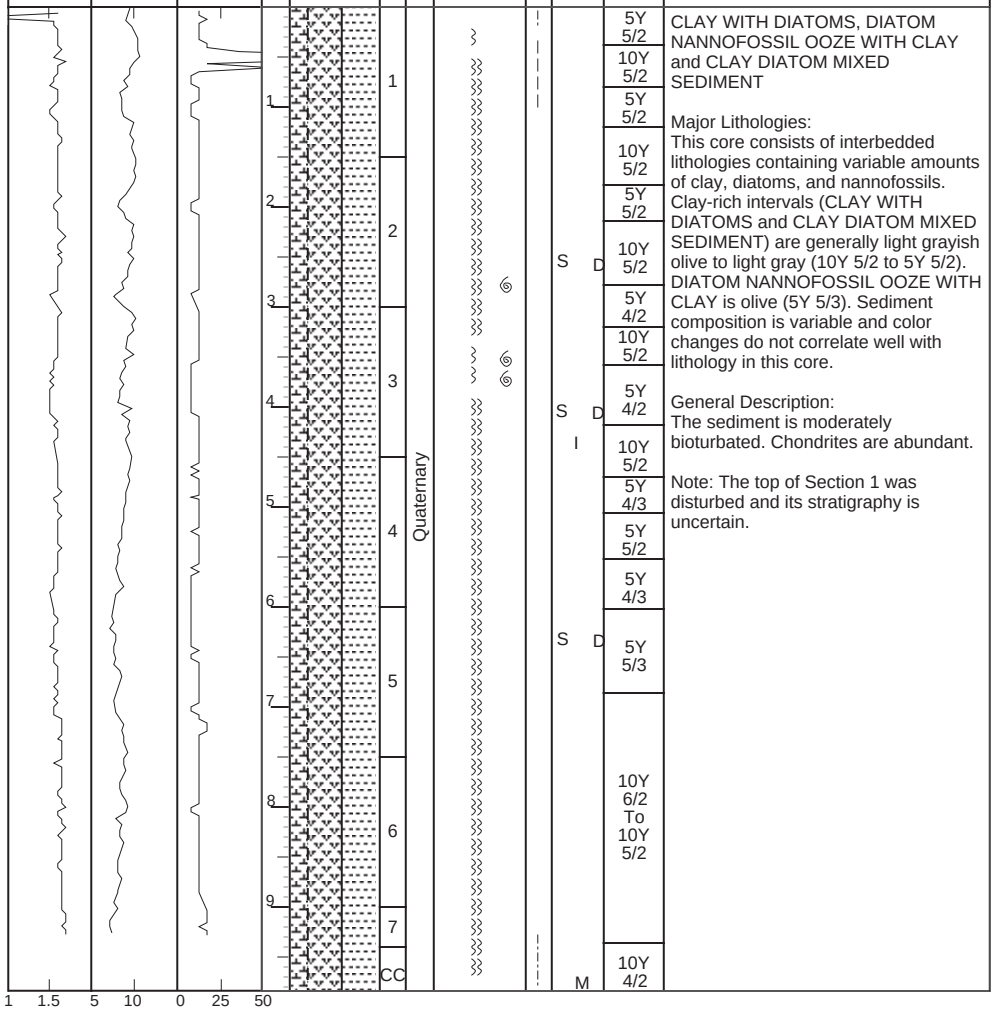
SITE 1018 HOLE A CORE 17X CORED 147.3 - 156.9 mbsf



SITE 1018 HOLE A CORE 18X CORED 156.9 - 166.5 mbsf



SITE 1018 HOLE A CORE 19X CORED 166.5 - 176.1 mbsf



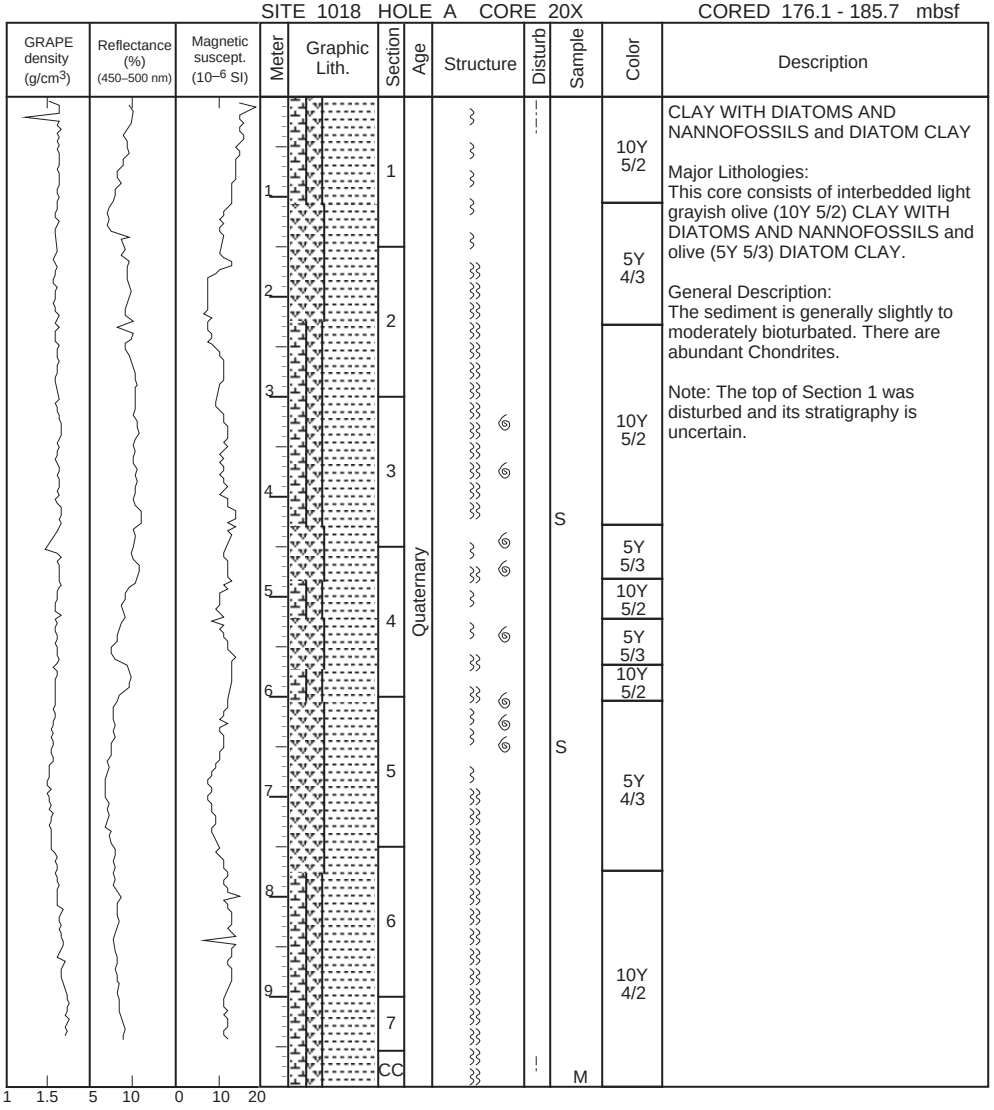
CLAY WITH DIATOMS, DIATOM NANNOFOSSIL OOZE WITH CLAY and CLAY DIATOM MIXED SEDIMENT

Major Lithologies:
This core consists of interbedded lithologies containing variable amounts of clay, diatoms, and nannofossils. Clay-rich intervals (CLAY WITH DIATOMS and CLAY DIATOM MIXED SEDIMENT) are generally light grayish olive to light gray (10Y 5/2 to 5Y 5/2). DIATOM NANNOFOSSIL OOZE WITH CLAY is olive (5Y 5/3). Sediment composition is variable and color changes do not correlate well with lithology in this core.

General Description:
The sediment is moderately bioturbated. Chondrites are abundant.

Note: The top of Section 1 was disturbed and its stratigraphy is uncertain.

SITE 1018 HOLE A CORE 20X CORED 176.1 - 185.7 mbsf



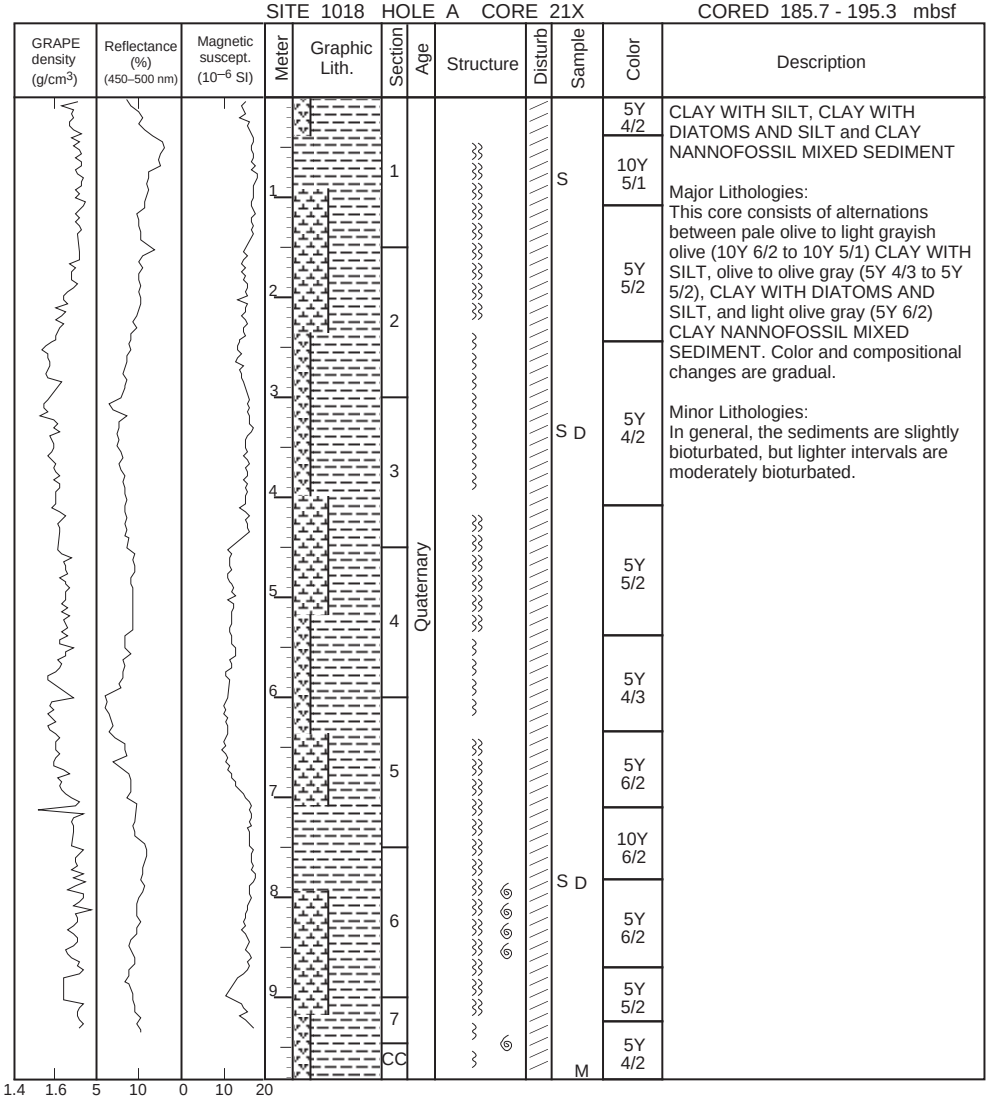
CLAY WITH DIATOMS AND NANNOFOSSILS and DIATOM CLAY

Major Lithologies:
This core consists of interbedded light grayish olive (10Y 5/2) CLAY WITH DIATOMS AND NANNOFOSSILS and olive (5Y 5/3) DIATOM CLAY.

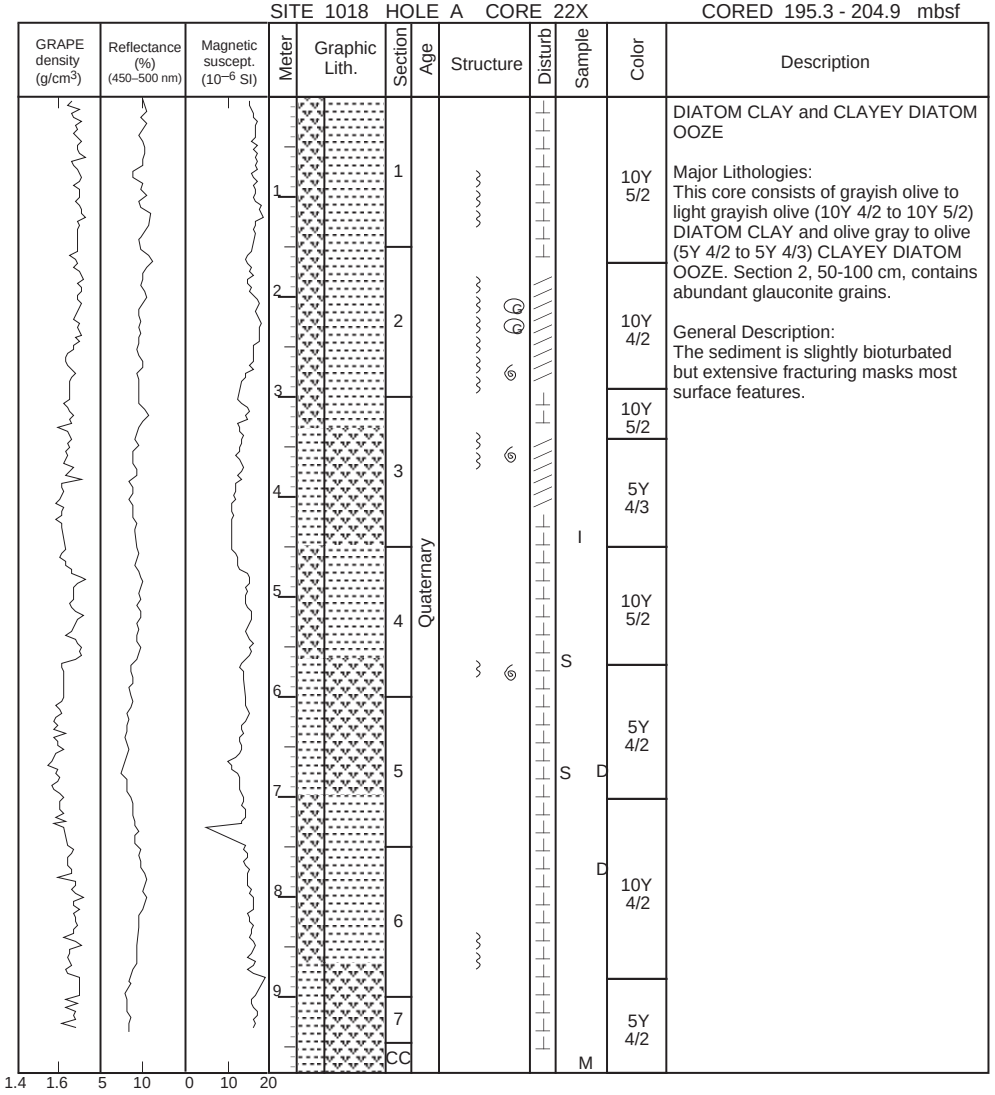
General Description:
The sediment is generally slightly to moderately bioturbated. There are abundant Chondrites.

Note: The top of Section 1 was disturbed and its stratigraphy is uncertain.

SITE 1018 HOLE A CORE 21X CORED 185.7 - 195.3 mbsf



SITE 1018 HOLE A CORE 22X CORED 195.3 - 204.9 mbsf

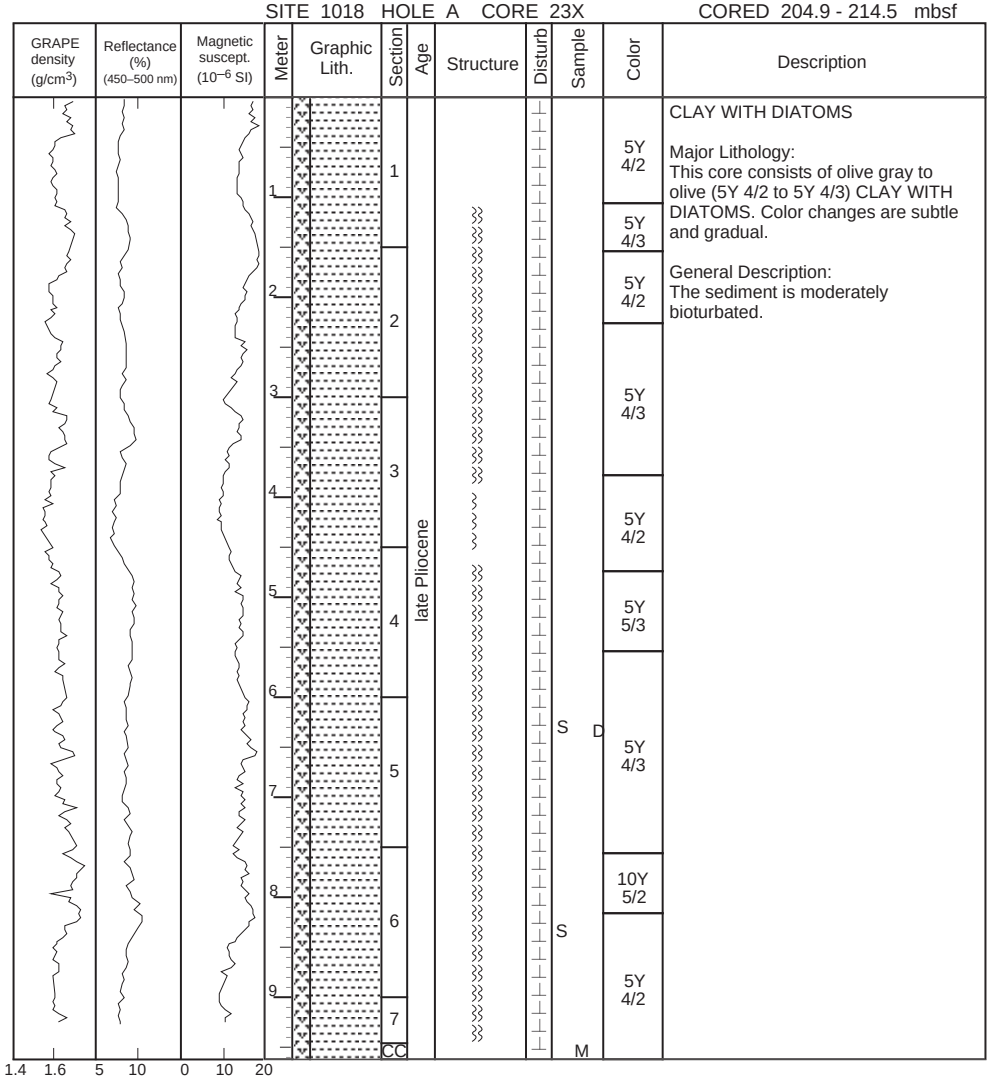


DIATOM CLAY and CLAYEY DIATOM OOZE

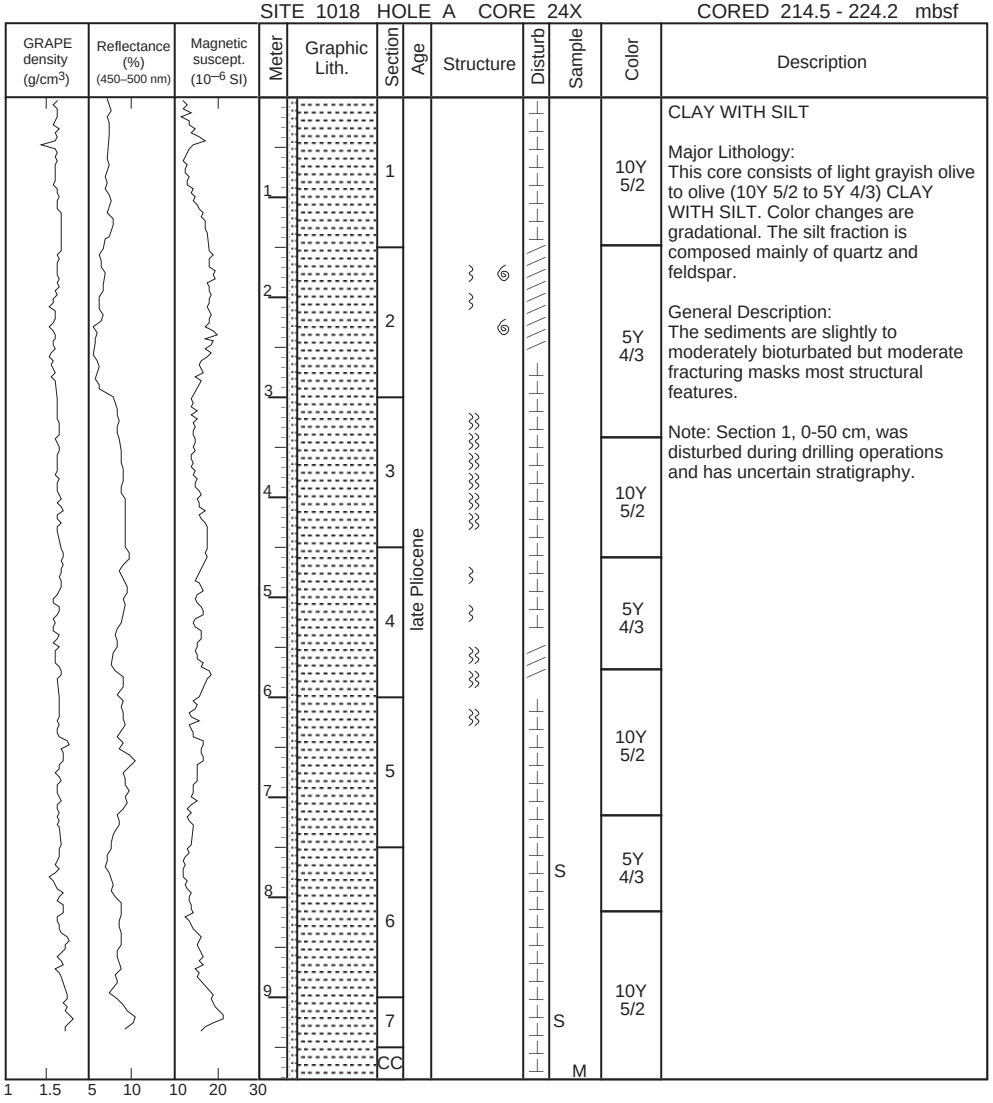
Major Lithologies:
This core consists of grayish olive to light grayish olive (10Y 4/2 to 10Y 5/2) DIATOM CLAY and olive gray to olive (5Y 4/2 to 5Y 4/3) CLAYEY DIATOM OOZE. Section 2, 50-100 cm, contains abundant glauconite grains.

General Description:
The sediment is slightly bioturbated but extensive fracturing masks most surface features.

SITE 1018 HOLE A CORE 23X CORED 204.9 - 214.5 mbsf



SITE 1018 HOLE A CORE 24X CORED 214.5 - 224.2 mbsf



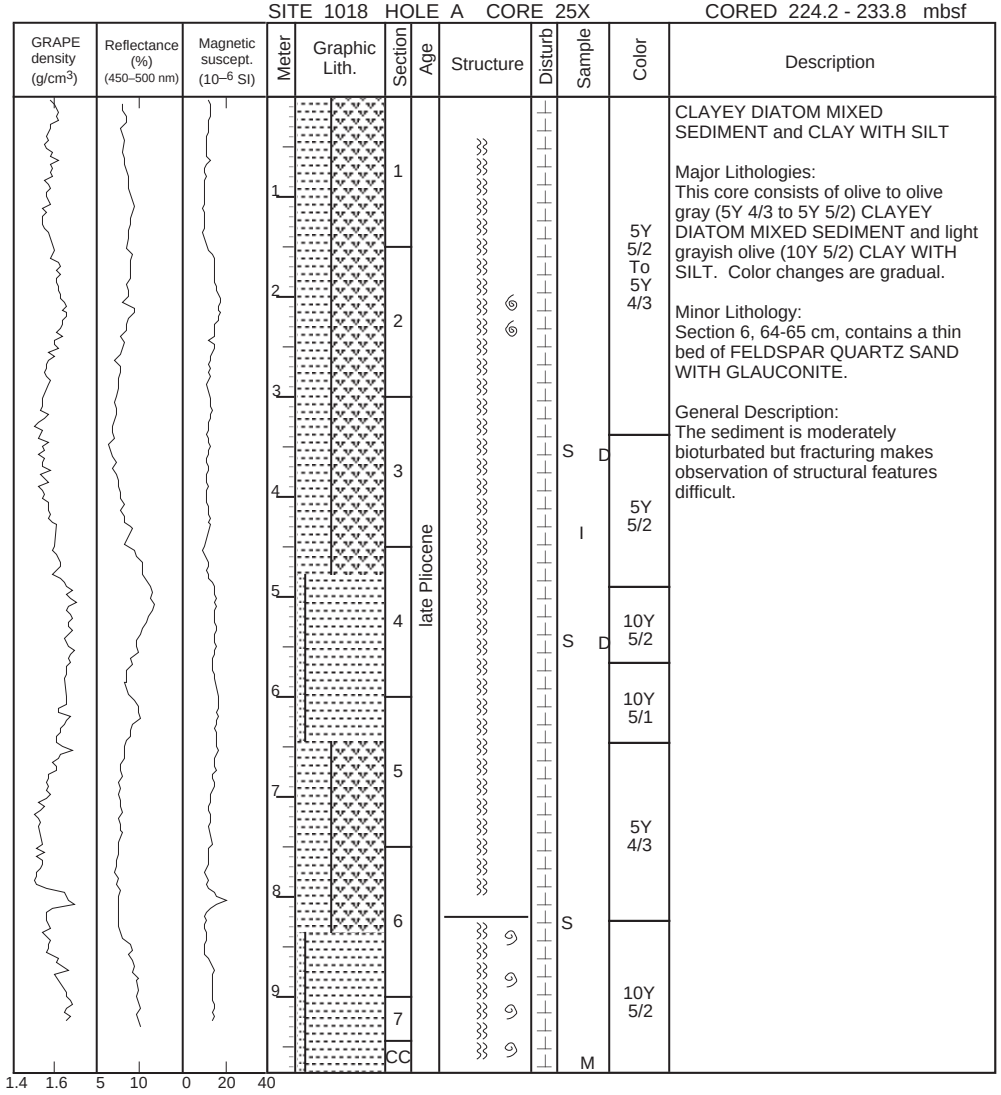
CLAY WITH SILT

Major Lithology:
This core consists of light grayish olive to olive (10Y 5/2 to 5Y 4/3) CLAY WITH SILT. Color changes are gradational. The silt fraction is composed mainly of quartz and feldspar.

General Description:
The sediments are slightly to moderately bioturbated but moderate fracturing masks most structural features.

Note: Section 1, 0-50 cm, was disturbed during drilling operations and has uncertain stratigraphy.

SITE 1018 HOLE A CORE 25X CORED 224.2 - 233.8 mbsf



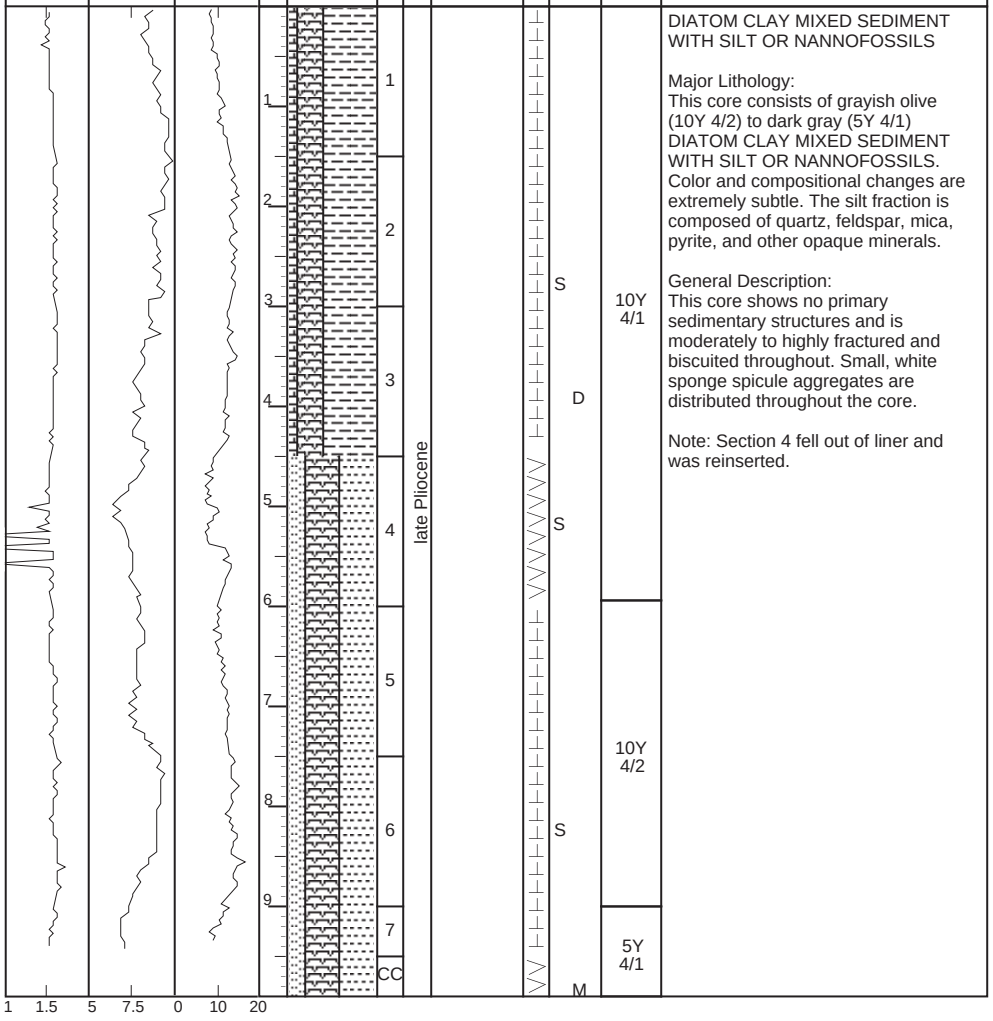
CLAYEY DIATOM MIXED SEDIMENT and CLAY WITH SILT

Major Lithologies:
This core consists of olive to olive gray (5Y 4/3 to 5Y 5/2) CLAYEY DIATOM MIXED SEDIMENT and light grayish olive (10Y 5/2) CLAY WITH SILT. Color changes are gradual.

Minor Lithology:
Section 6, 64-65 cm, contains a thin bed of FELDSPAR QUARTZ SAND WITH GLAUCONITE.

General Description:
The sediment is moderately bioturbated but fracturing makes observation of structural features difficult.

SITE 1018 HOLE A CORE 26X CORED 233.8 - 243.5 mbsf



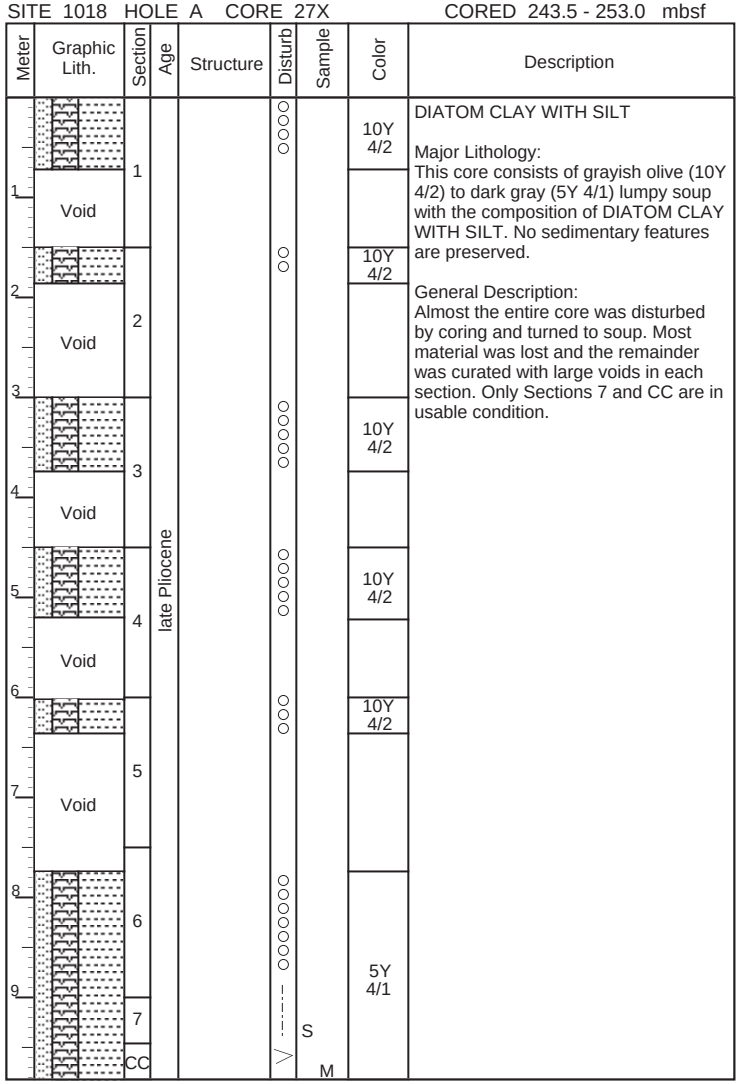
DIATOM CLAY MIXED SEDIMENT WITH SILT OR NANNOFOSSILS

Major Lithology:
This core consists of grayish olive (10Y 4/2) to dark gray (5Y 4/1) DIATOM CLAY MIXED SEDIMENT WITH SILT OR NANNOFOSSILS. Color and compositional changes are extremely subtle. The silt fraction is composed of quartz, feldspar, mica, pyrite, and other opaque minerals.

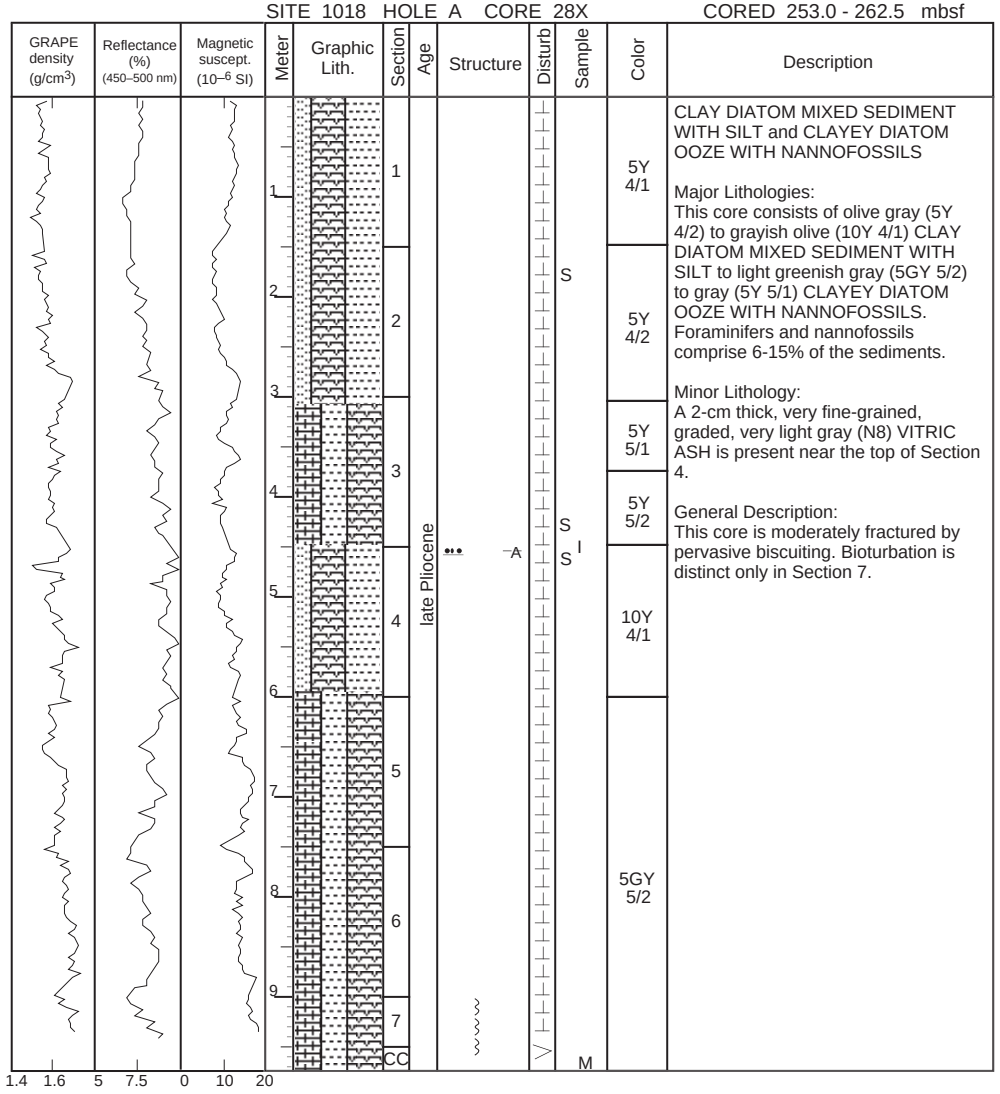
General Description:
This core shows no primary sedimentary structures and is moderately to highly fractured and biscuited throughout. Small, white sponge spicule aggregates are distributed throughout the core.

Note: Section 4 fell out of liner and was reinserted.

SITE 1018 HOLE A CORE 27X CORED 243.5 - 253.0 mbsf



SITE 1018 HOLE A CORE 28X CORED 253.0 - 262.5 mbsf



CLAY DIATOM MIXED SEDIMENT WITH SILT and CLAYEY DIATOM OOZE WITH NANNOFOSSILS

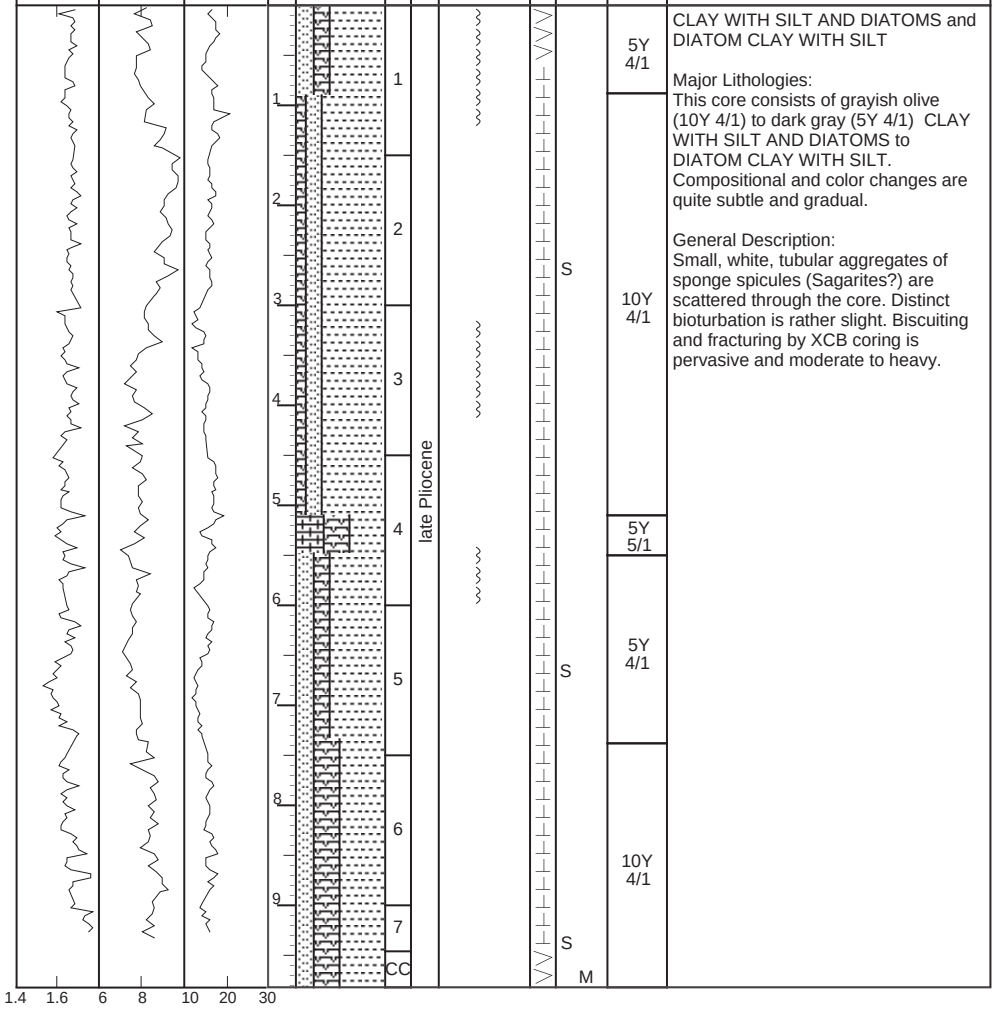
Major Lithologies:
This core consists of olive gray (5Y 4/2) to grayish olive (10Y 4/1) CLAY DIATOM MIXED SEDIMENT WITH SILT to light greenish gray (5GY 5/2) to gray (5Y 5/1) CLAYEY DIATOM OOZE WITH NANNOFOSSILS. Foraminifers and nannofossils comprise 6-15% of the sediments.

Minor Lithology:
A 2-cm thick, very fine-grained, graded, very light gray (N8) VITRIC ASH is present near the top of Section 4.

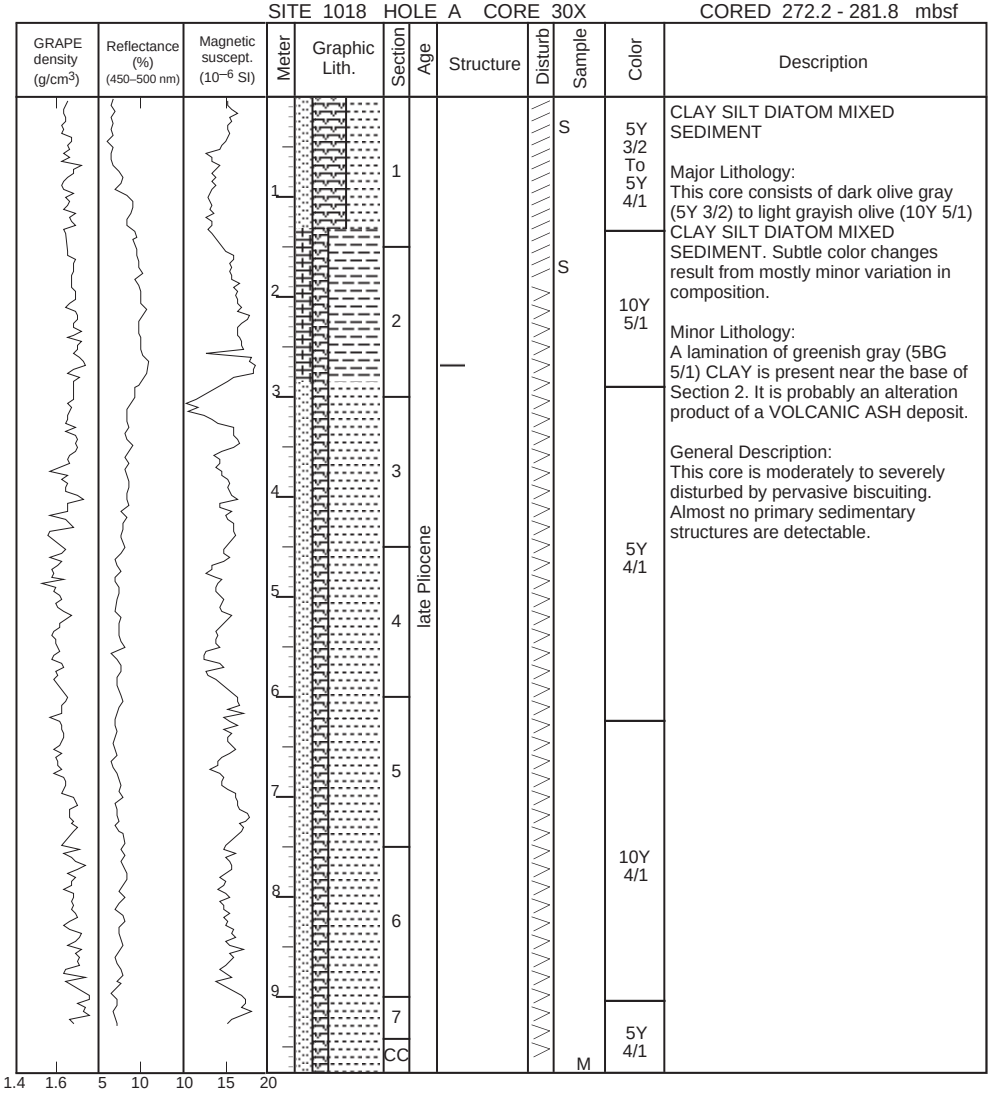
General Description:
This core is moderately fractured by pervasive biscuiting. Bioturbation is distinct only in Section 7.

SITE 1018

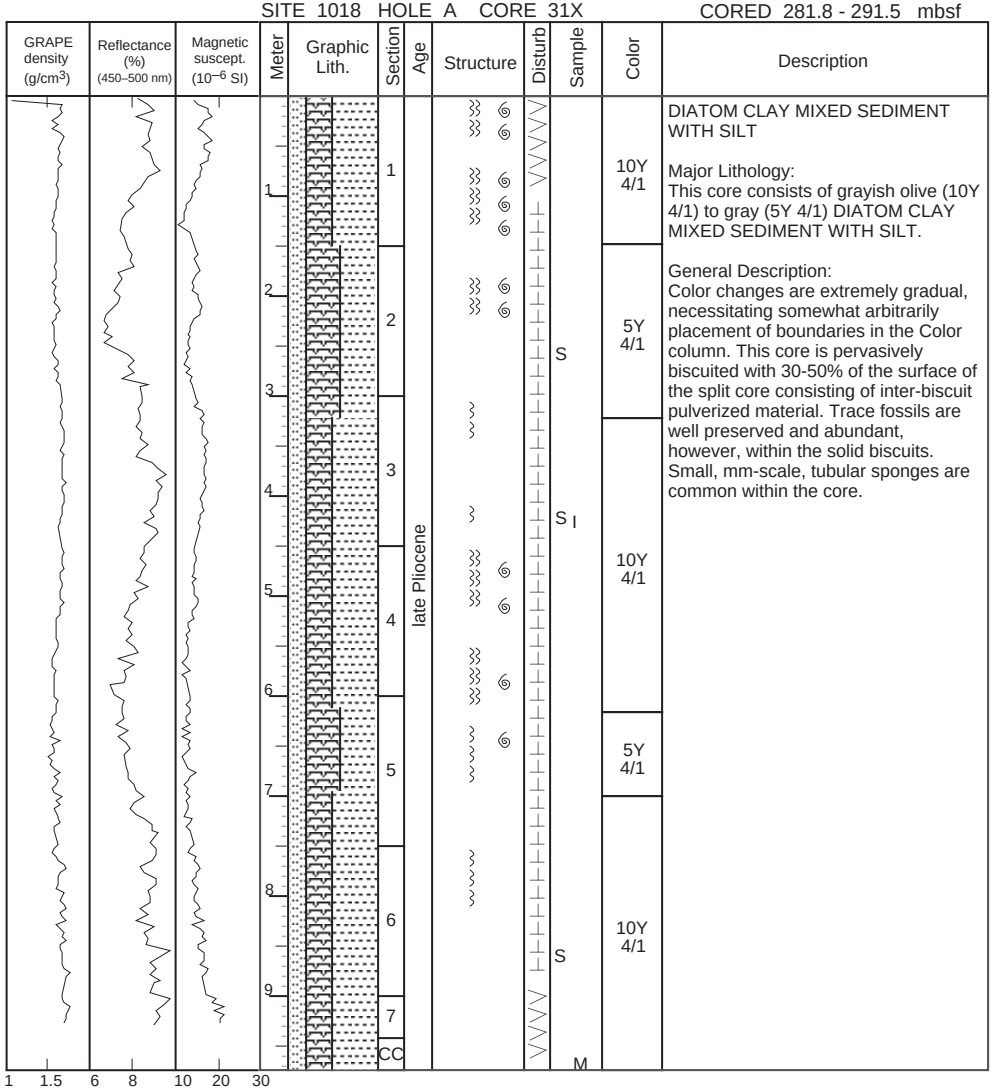
SITE 1018 HOLE A CORE 29X CORED 262.5 - 272.2 mbsf



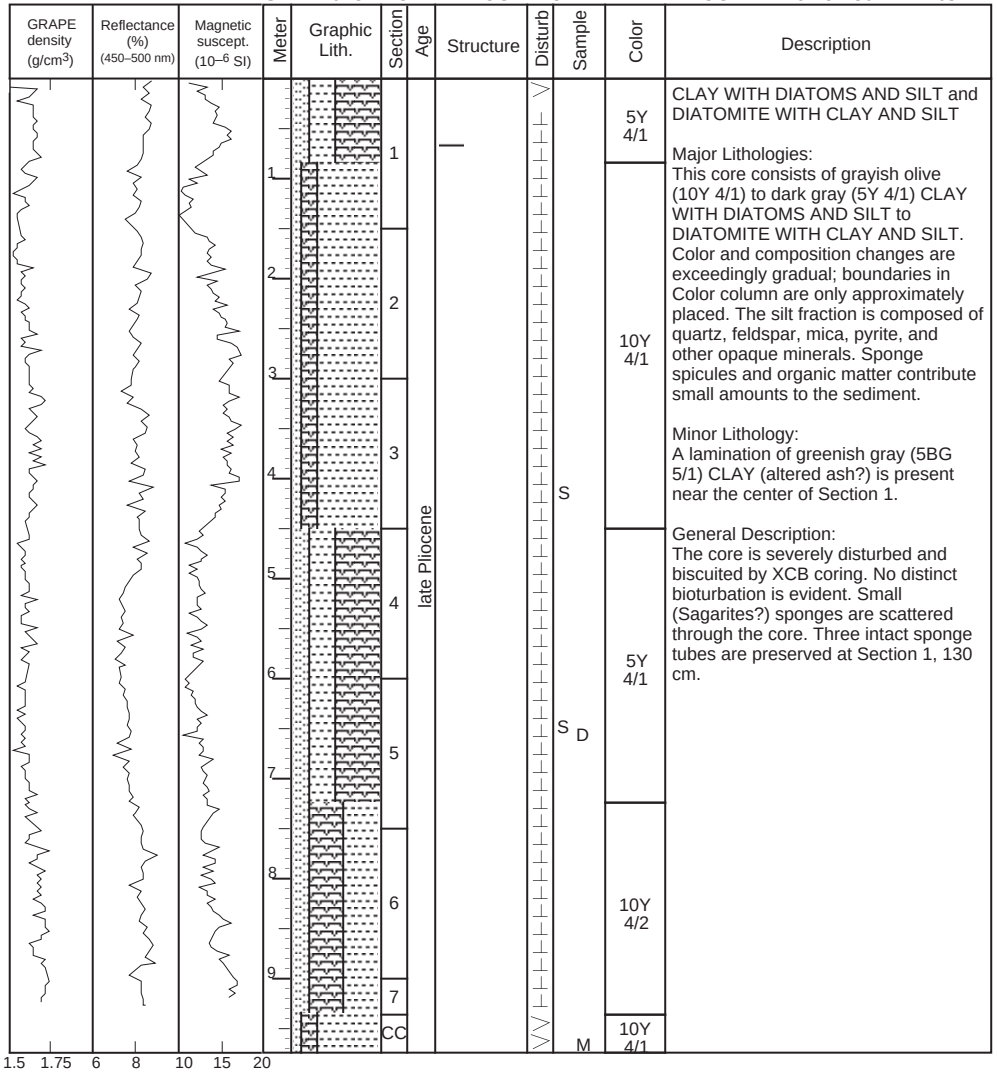
SITE 1018 HOLE A CORE 30X CORED 272.2 - 281.8 mbsf



SITE 1018 HOLE A CORE 31X CORED 281.8 - 291.5 mbsf



SITE 1018 HOLE A CORE 32X CORED 291.5 - 301.1 mbsf



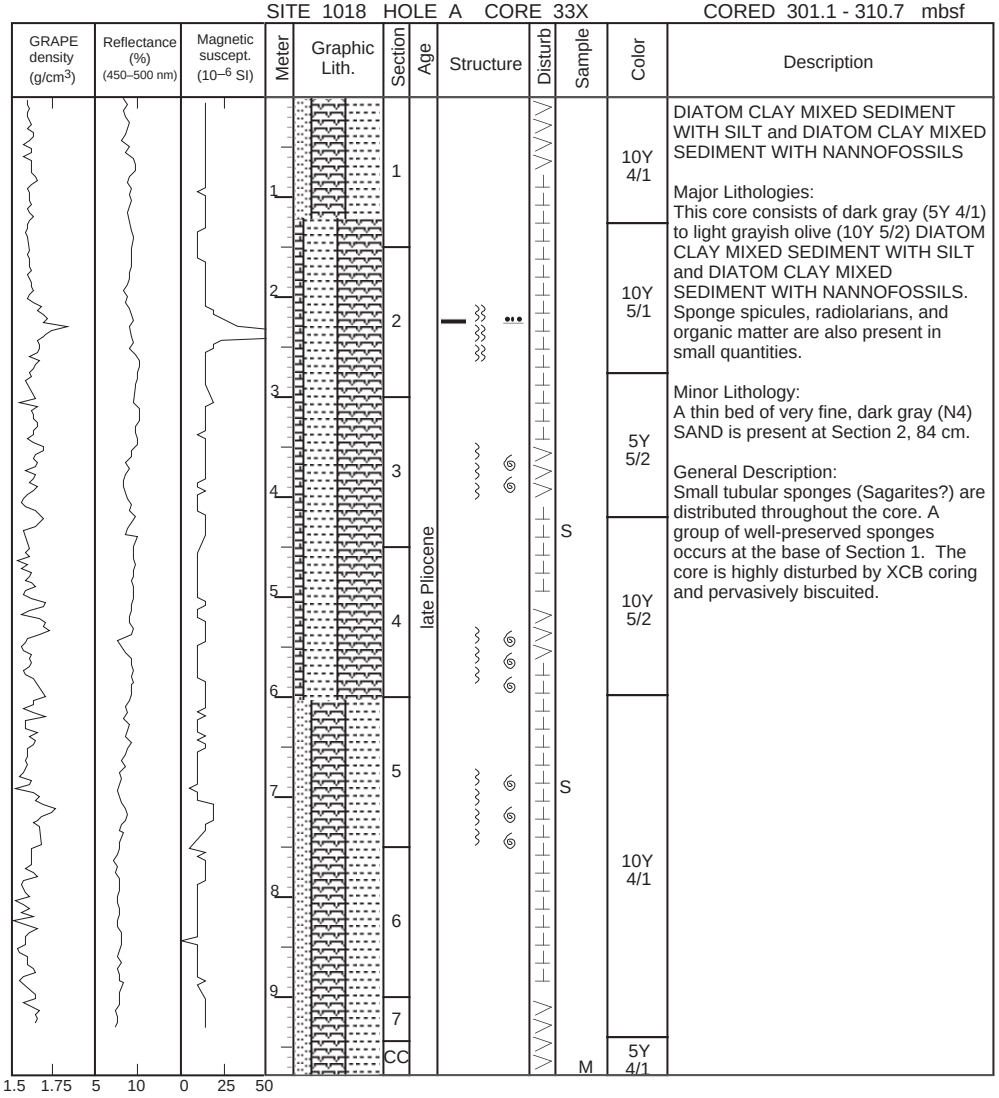
CLAY WITH DIATOMS AND SILT and DIATOMITE WITH CLAY AND SILT

Major Lithologies:
This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) CLAY WITH DIATOMS AND SILT to DIATOMITE WITH CLAY AND SILT. Color and composition changes are exceedingly gradual; boundaries in Color column are only approximately placed. The silt fraction is composed of quartz, feldspar, mica, pyrite, and other opaque minerals. Sponge spicules and organic matter contribute small amounts to the sediment.

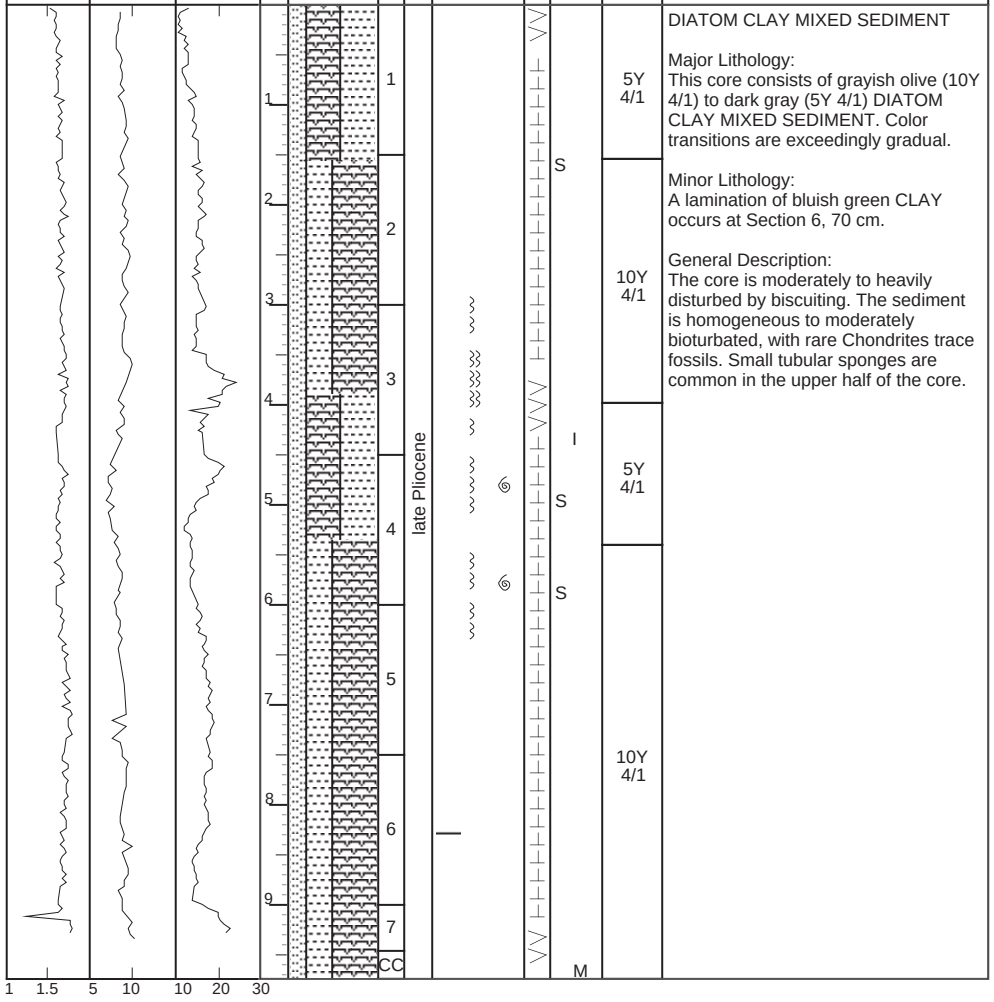
Minor Lithology:
A lamination of greenish gray (5BG 5/1) CLAY (altered ash?) is present near the center of Section 1.

General Description:
The core is severely disturbed and biscuited by XCB coring. No distinct bioturbation is evident. Small (Sagarites?) sponges are scattered through the core. Three intact sponge tubes are preserved at Section 1, 130 cm.

SITE 1018 HOLE A CORE 33X CORED 301.1 - 310.7 mbsf



SITE 1018 HOLE A CORE 34X CORED 310.7 - 320.3 mbsf



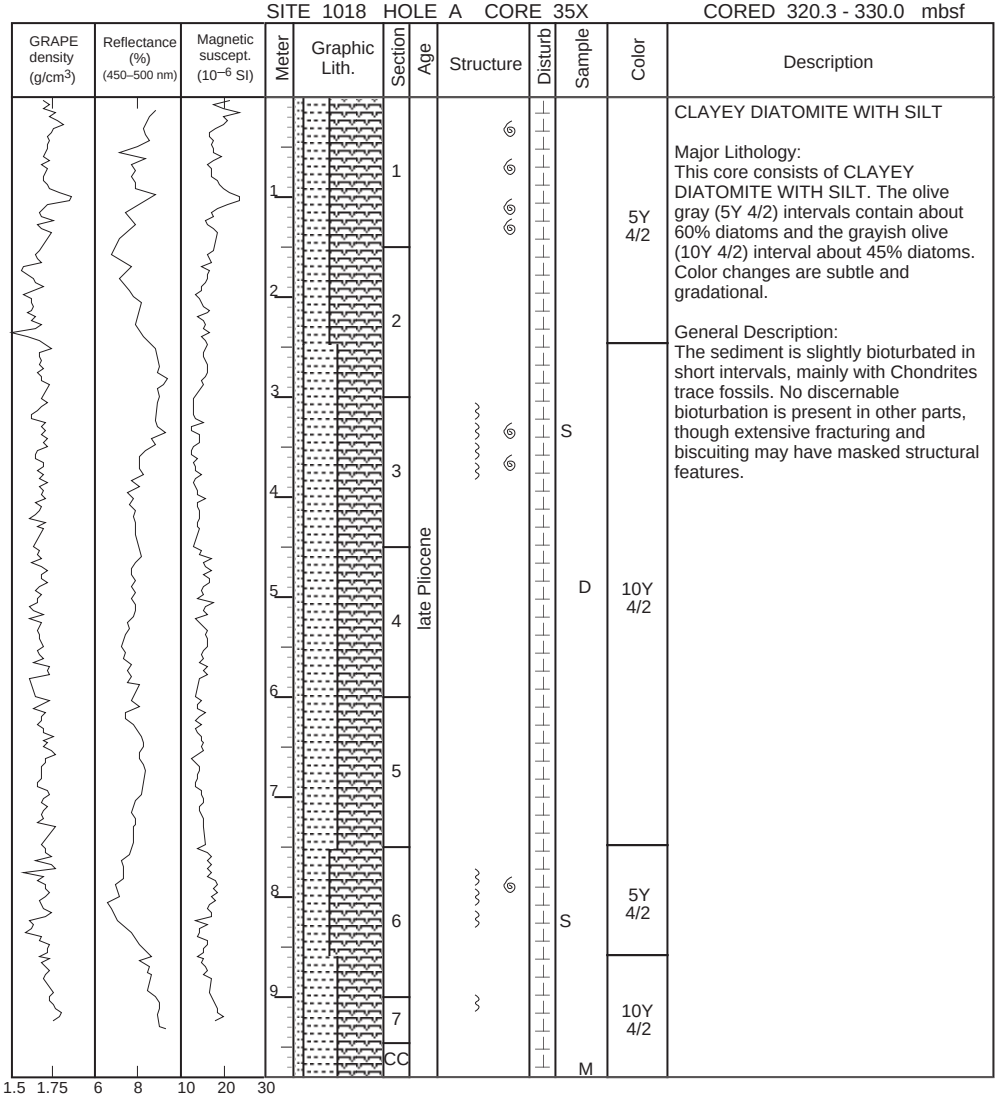
DIATOM CLAY MIXED SEDIMENT

Major Lithology:
This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) DIATOM CLAY MIXED SEDIMENT. Color transitions are exceedingly gradual.

Minor Lithology:
A lamination of bluish green CLAY occurs at Section 6, 70 cm.

General Description:
The core is moderately to heavily disturbed by biscuiting. The sediment is homogeneous to moderately bioturbated, with rare Chondrites trace fossils. Small tubular sponges are common in the upper half of the core.

SITE 1018 HOLE A CORE 35X CORED 320.3 - 330.0 mbsf

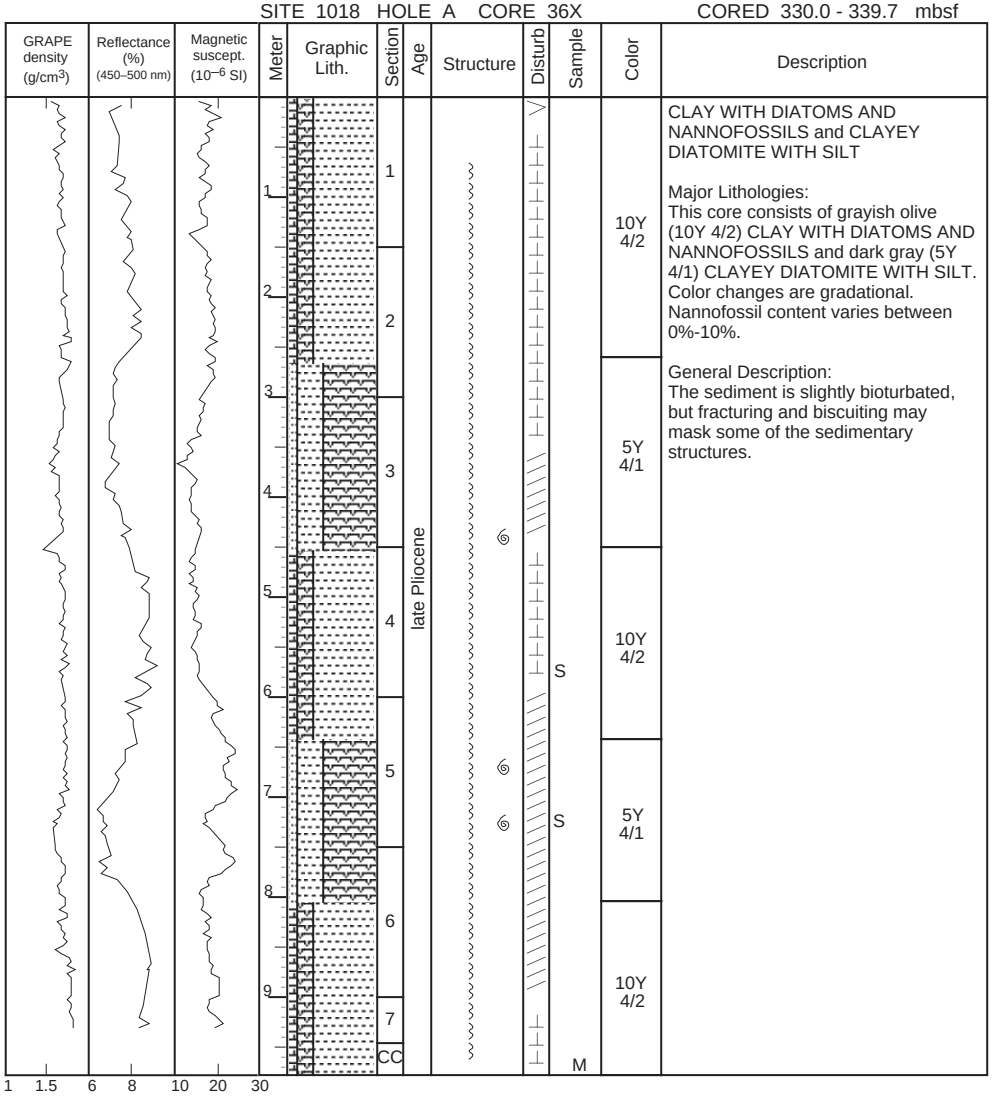


CLAYEY DIATOMITE WITH SILT

Major Lithology:
This core consists of CLAYEY DIATOMITE WITH SILT. The olive gray (5Y 4/2) intervals contain about 60% diatoms and the grayish olive (10Y 4/2) interval about 45% diatoms. Color changes are subtle and gradational.

General Description:
The sediment is slightly bioturbated in short intervals, mainly with Chondrites trace fossils. No discernable bioturbation is present in other parts, though extensive fracturing and biscuiting may have masked structural features.

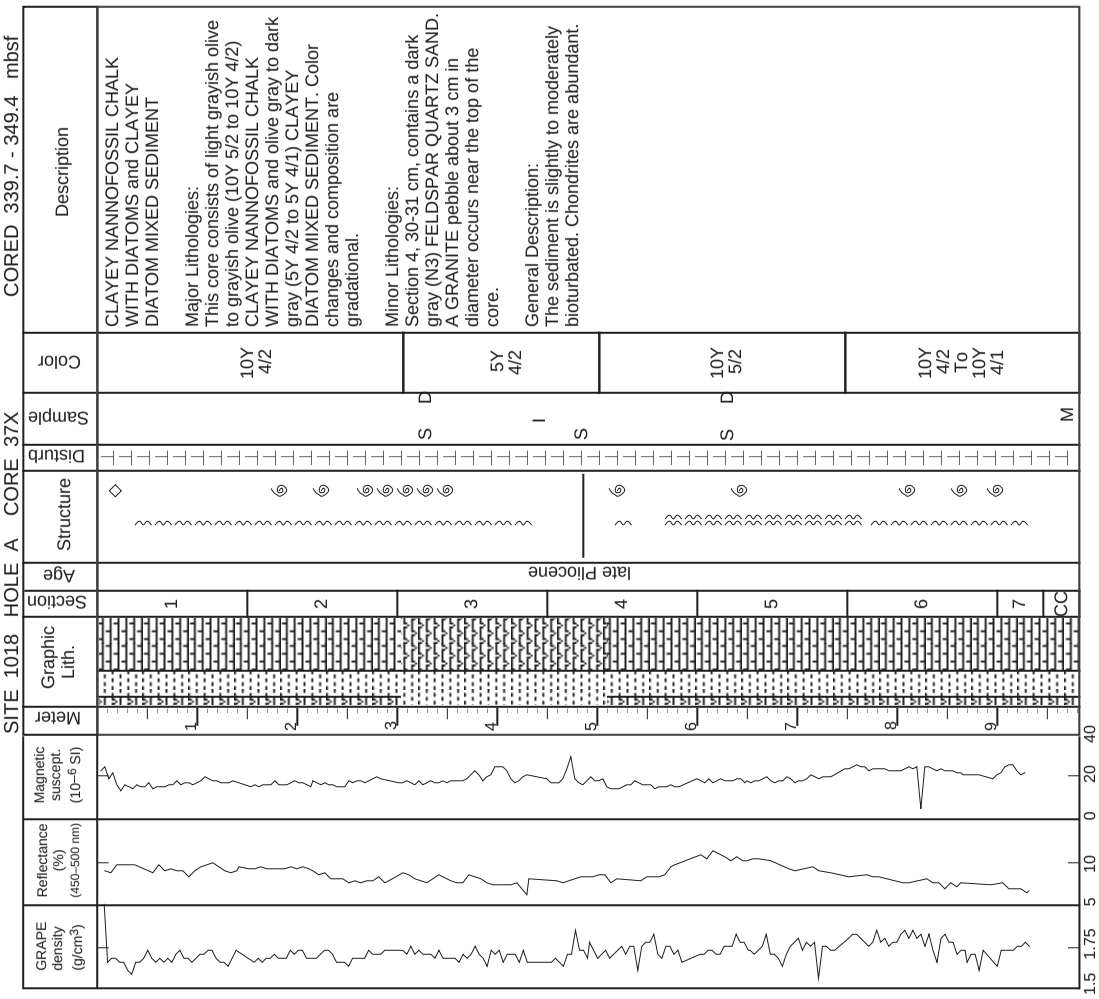
SITE 1018 HOLE A CORE 36X CORED 330.0 - 339.7 mbsf



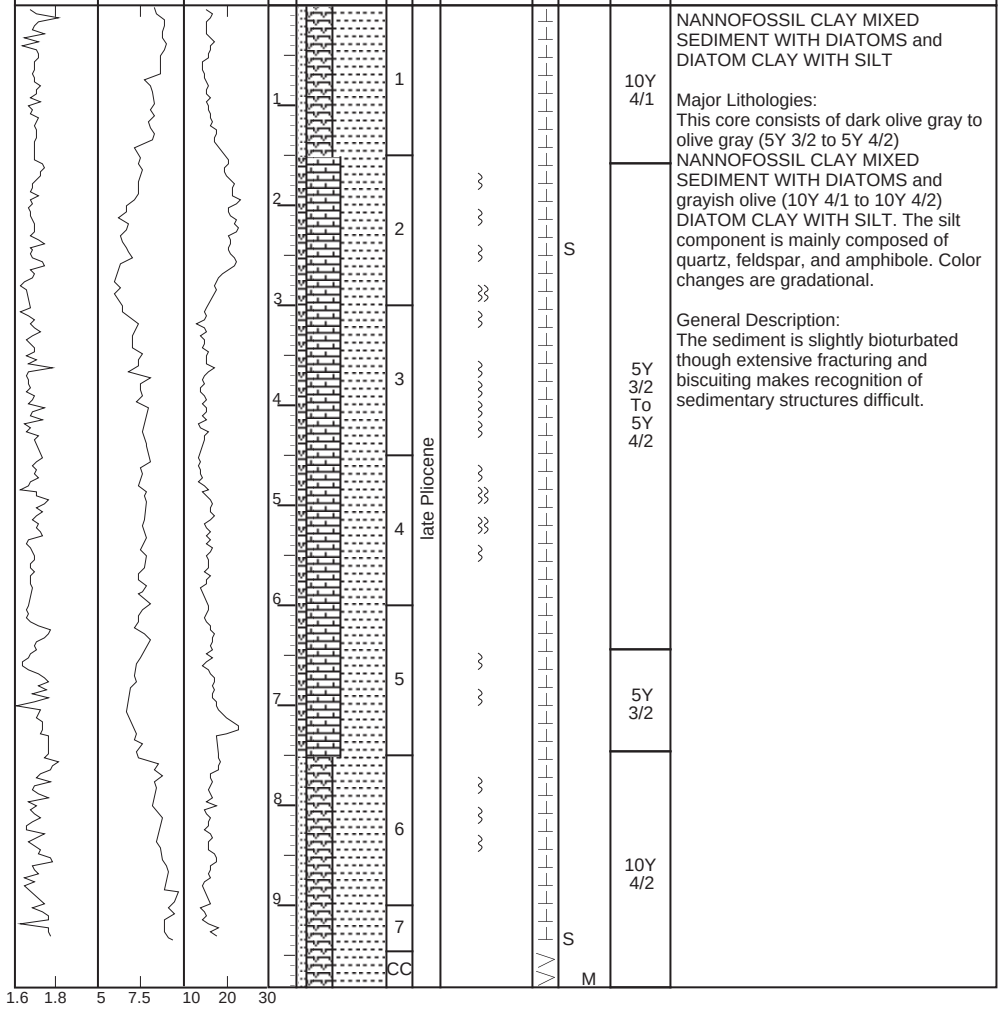
CLAY WITH DIATOMS AND NANNOFOSSILS and CLAYEY DIATOMITE WITH SILT

Major Lithologies:
This core consists of grayish olive (10Y 4/2) CLAY WITH DIATOMS AND NANNOFOSSILS and dark gray (5Y 4/1) CLAYEY DIATOMITE WITH SILT. Color changes are gradational. Nannofossil content varies between 0%-10%.

General Description:
The sediment is slightly bioturbated, but fracturing and biscuiting may mask some of the sedimentary structures.


SITE 1018 HOLE A CORE 37X CORED 339.7 - 349.4 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
10Y 4/2
5Y 4/2
10Y 5/2
10Y 4/2 To 10Y 4/1
CLAYEY NANNOFOSSIL CHALK WITH DIATOMS and CLAYEY DIATOM MIXED SEDIMENT
Major Lithologies:
This core consists of light grayish olive to grayish olive (10Y 5/2 to 10Y 4/2) CLAYEY NANNOFOSSIL CHALK WITH DIATOMS and olive gray to dark gray (5Y 4/2 to 5Y 4/1) CLAYEY DIATOM MIXED SEDIMENT. Color changes and composition are gradational.
Minor Lithologies:
Section 4, 30-31 cm, contains a dark gray (N3) FELDSPAR QUARTZ SAND. A GRANITE pebble about 3 cm in diameter occurs near the top of the core.
General Description:
The sediment is slightly to moderately bioturbated. Chondrites are abundant.

SITE 1018 HOLE A CORE 38X CORED 349.4 - 359.0 mbsf

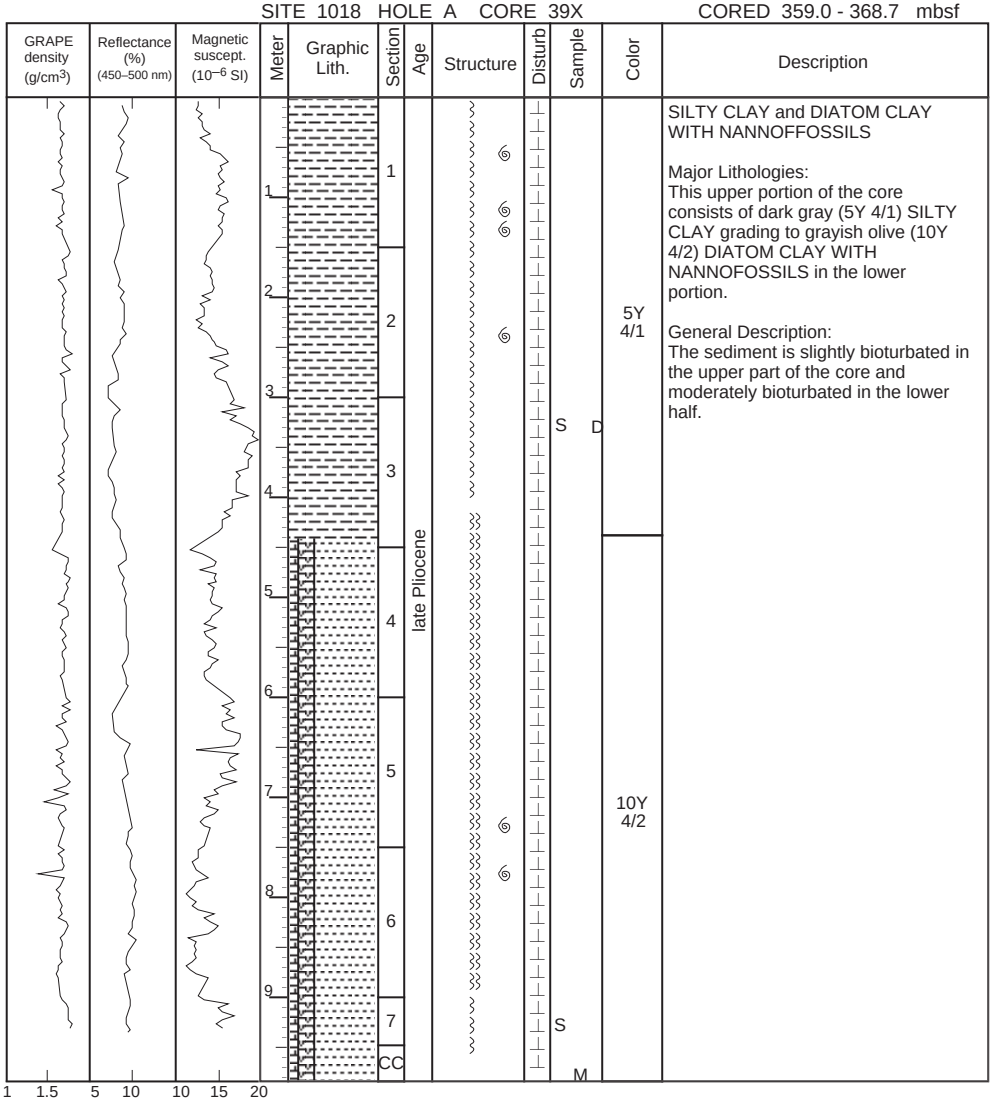


NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS and DIATOM CLAY WITH SILT

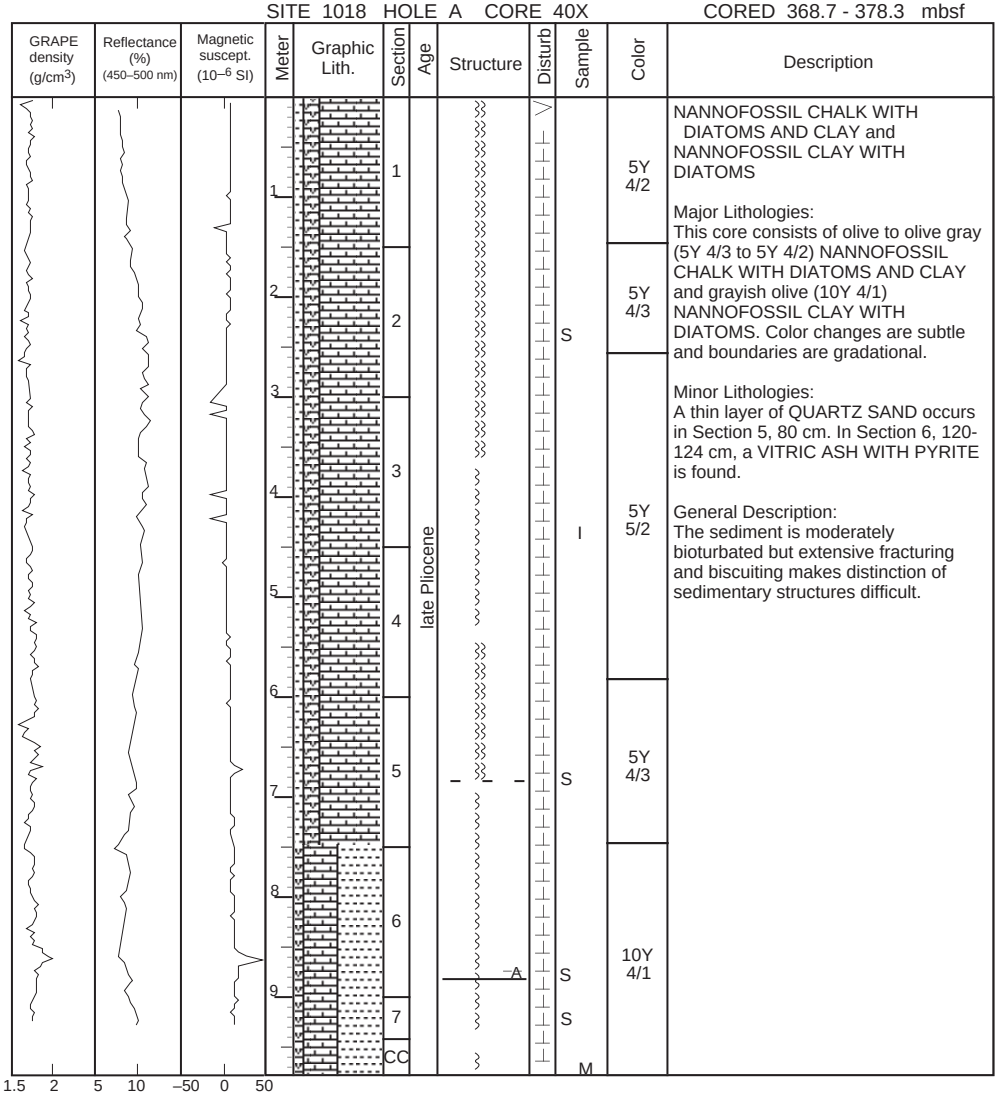
Major Lithologies:
This core consists of dark olive gray to olive gray (5Y 3/2 to 5Y 4/2) NANNOFOSSIL CLAY MIXED SEDIMENT WITH DIATOMS and grayish olive (10Y 4/1 to 10Y 4/2) DIATOM CLAY WITH SILT. The silt component is mainly composed of quartz, feldspar, and amphibole. Color changes are gradational.

General Description:
The sediment is slightly bioturbated though extensive fracturing and biscuiting makes recognition of sedimentary structures difficult.

SITE 1018 HOLE A CORE 39X CORED 359.0 - 368.7 mbsf



SITE 1018 HOLE A CORE 40X CORED 368.7 - 378.3 mbsf

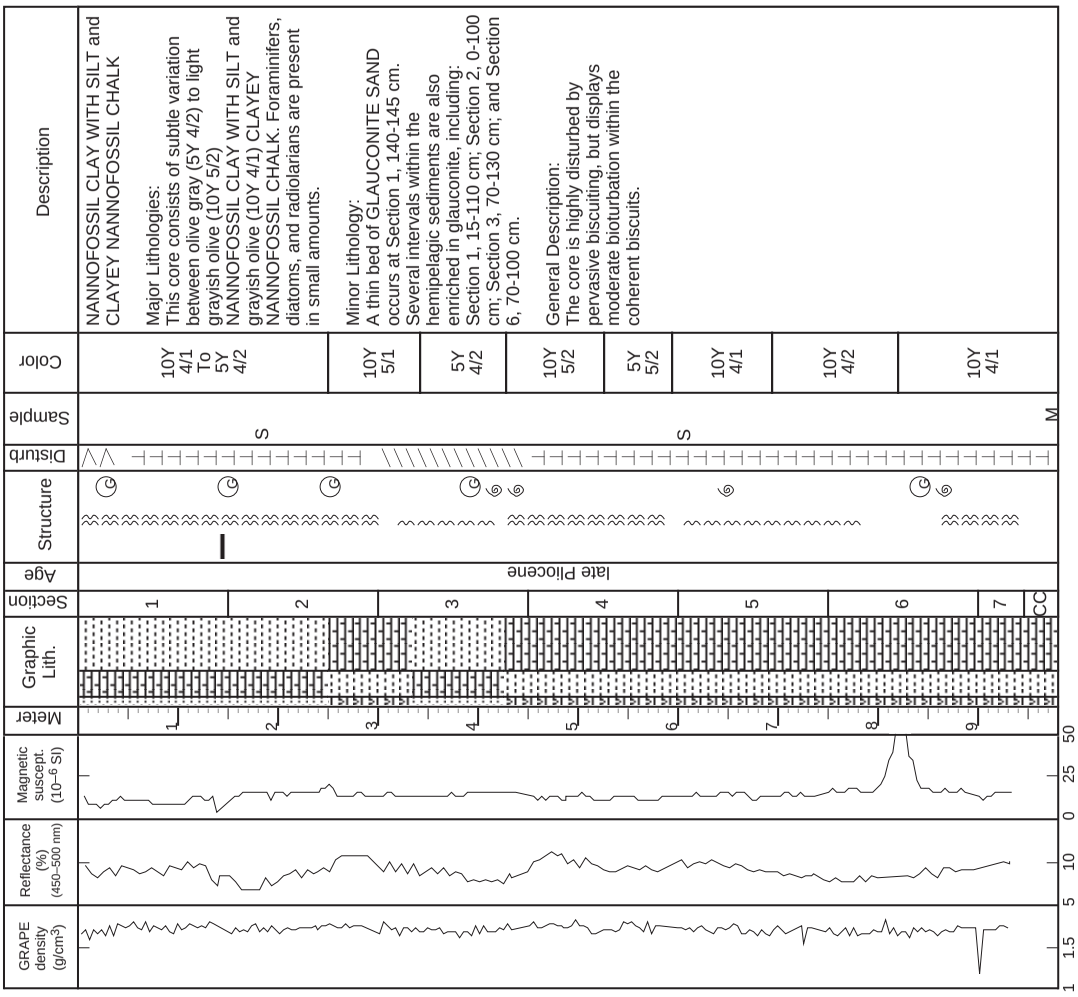


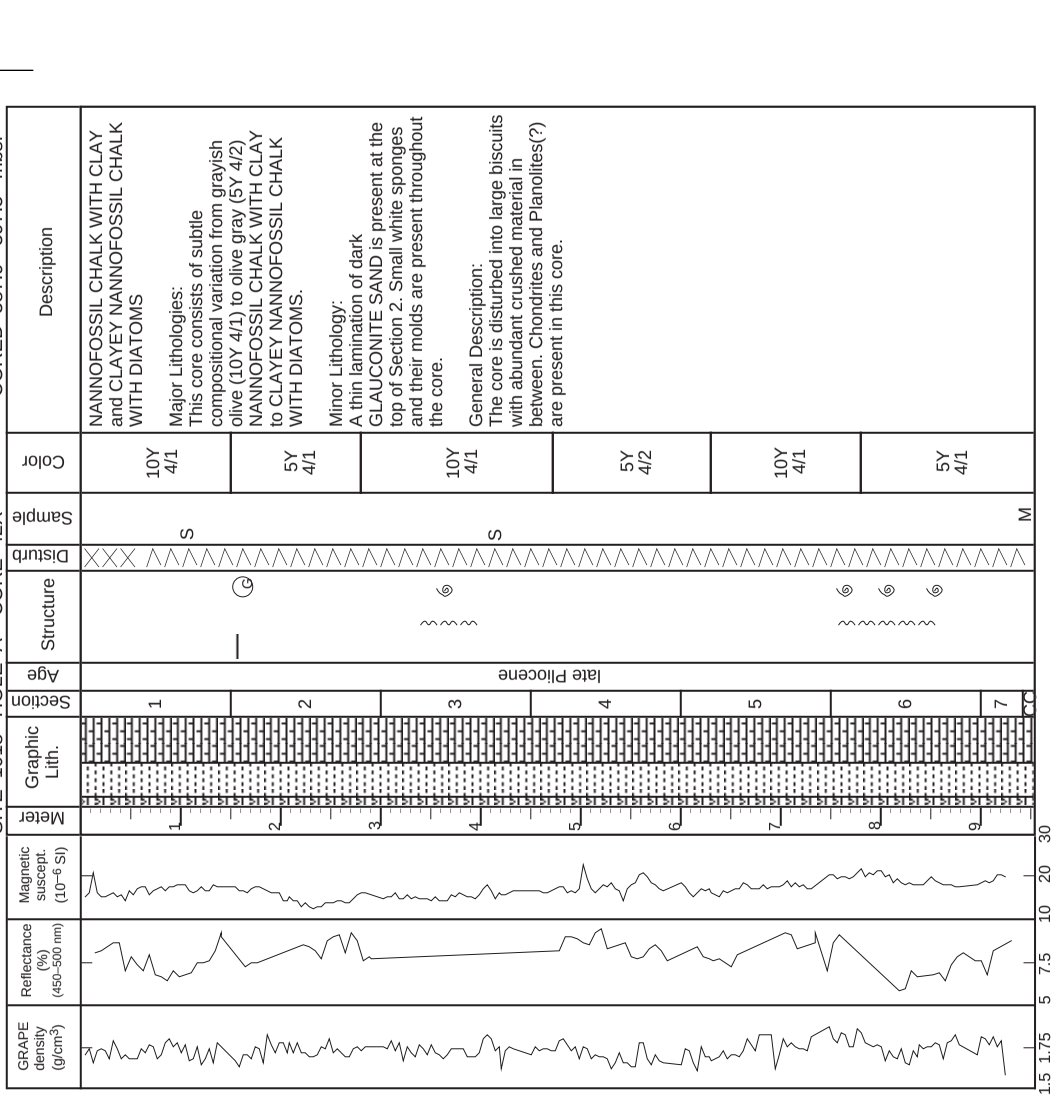
NANNOFOSSIL CHALK WITH DIATOMS AND CLAY and NANNOFOSSIL CLAY WITH DIATOMS

Major Lithologies:
This core consists of olive to olive gray (5Y 4/3 to 5Y 4/2) NANNOFOSSIL CHALK WITH DIATOMS AND CLAY and grayish olive (10Y 4/1) NANNOFOSSIL CLAY WITH DIATOMS. Color changes are subtle and boundaries are gradational.

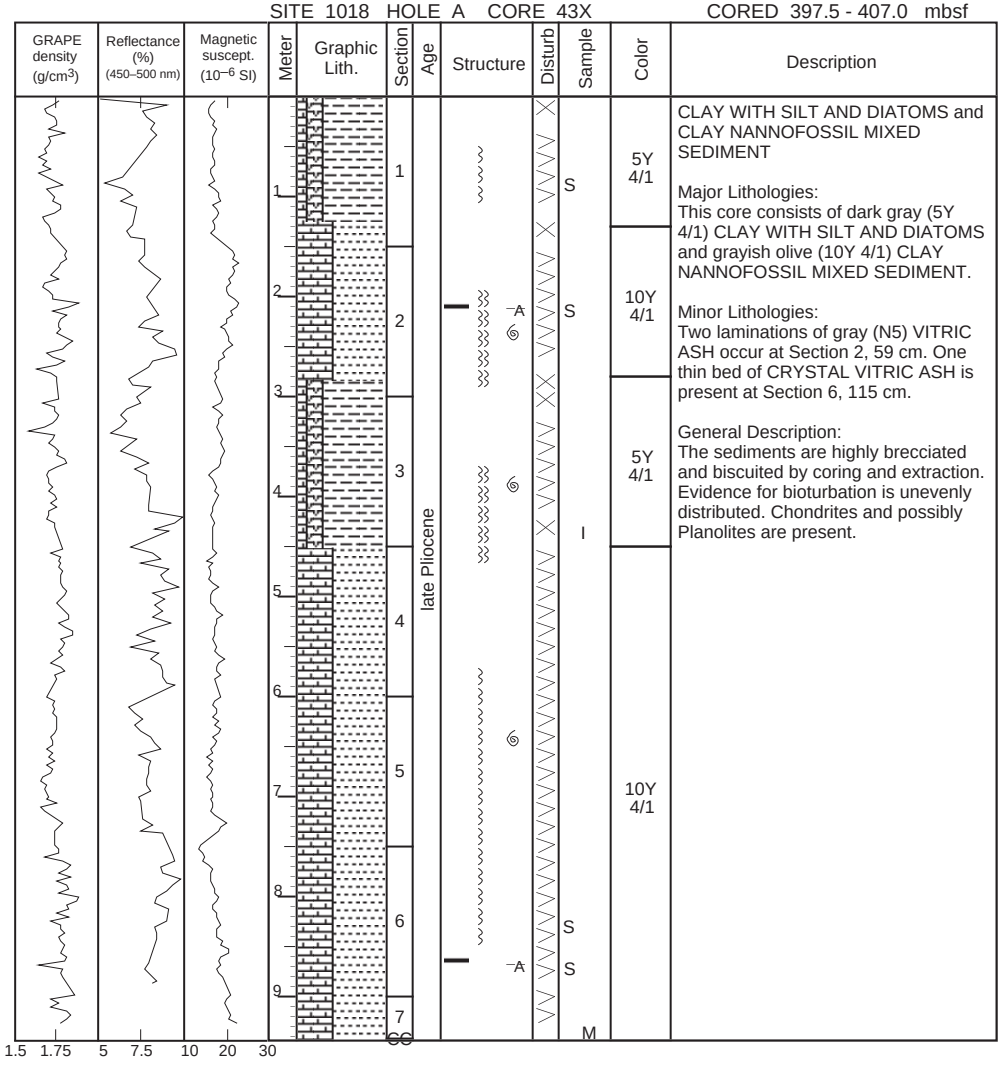
Minor Lithologies:
A thin layer of QUARTZ SAND occurs in Section 5, 80 cm. In Section 6, 120-124 cm, a VITRIC ASH WITH PYRITE is found.

General Description:
The sediment is moderately bioturbated but extensive fracturing and biscuiting makes distinction of sedimentary structures difficult.


SITE 1018 HOLE A CORE 41X CORED 378.3 - 387.9 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
NANNOFOSSIL CLAY WITH SILT and CLAYEY NANNOFOSSIL CHALK
Major Lithologies:
This core consists of subtle variation between olive gray (5Y 4/2) to light grayish olive (10Y 5/2) NANNOFOSSIL CLAY WITH SILT and grayish olive (10Y 4/1) CLAYEY NANNOFOSSIL CHALK. Foraminifers, diatoms, and radiolarians are present in small amounts.
Minor Lithology:
A thin bed of GLAUCONITE SAND occurs at Section 1, 140-145 cm.
Several intervals within the hemipelagic sediments are also enriched in glauconite, including: Section 1, 15-110 cm; Section 2, 0-100 cm; Section 3, 70-130 cm; and Section 6, 70-100 cm.
General Description:
The core is highly disturbed by pervasive biscuiting, but displays moderate bioturbation within the coherent biscuits.
10Y 4/1 To 5Y 4/2
10Y 5/1
5Y 4/2
10Y 5/2
5Y 5/2
10Y 4/1
10Y 4/2
10Y 4/1
S
S
M
CC


SITE 1018 HOLE A CORE 42X CORED 387.9 - 397.5 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
10Y 4/1
5Y 4/1
10Y 4/1
5Y 4/2
10Y 4/1
5Y 4/1
NANNOFOSSIL CHALK WITH CLAY and CLAYEY NANNOFOSSIL CHALK WITH DIATOMS
Major Lithologies:
This core consists of subtle compositional variation from grayish olive (10Y 4/1) to olive gray (5Y 4/2) NANNOFOSSIL CHALK WITH CLAY to CLAYEY NANNOFOSSIL CHALK WITH DIATOMS.
Minor Lithology:
A thin lamination of dark GLAUCONITE SAND is present at the top of Section 2. Small white sponges and their molds are present throughout the core.
General Description:
The core is disturbed into large biscuits with abundant crushed material in between. Chondrites and Planolites(?) are present in this core.

SITE 1018 HOLE A CORE 43X CORED 397.5 - 407.0 mbsf



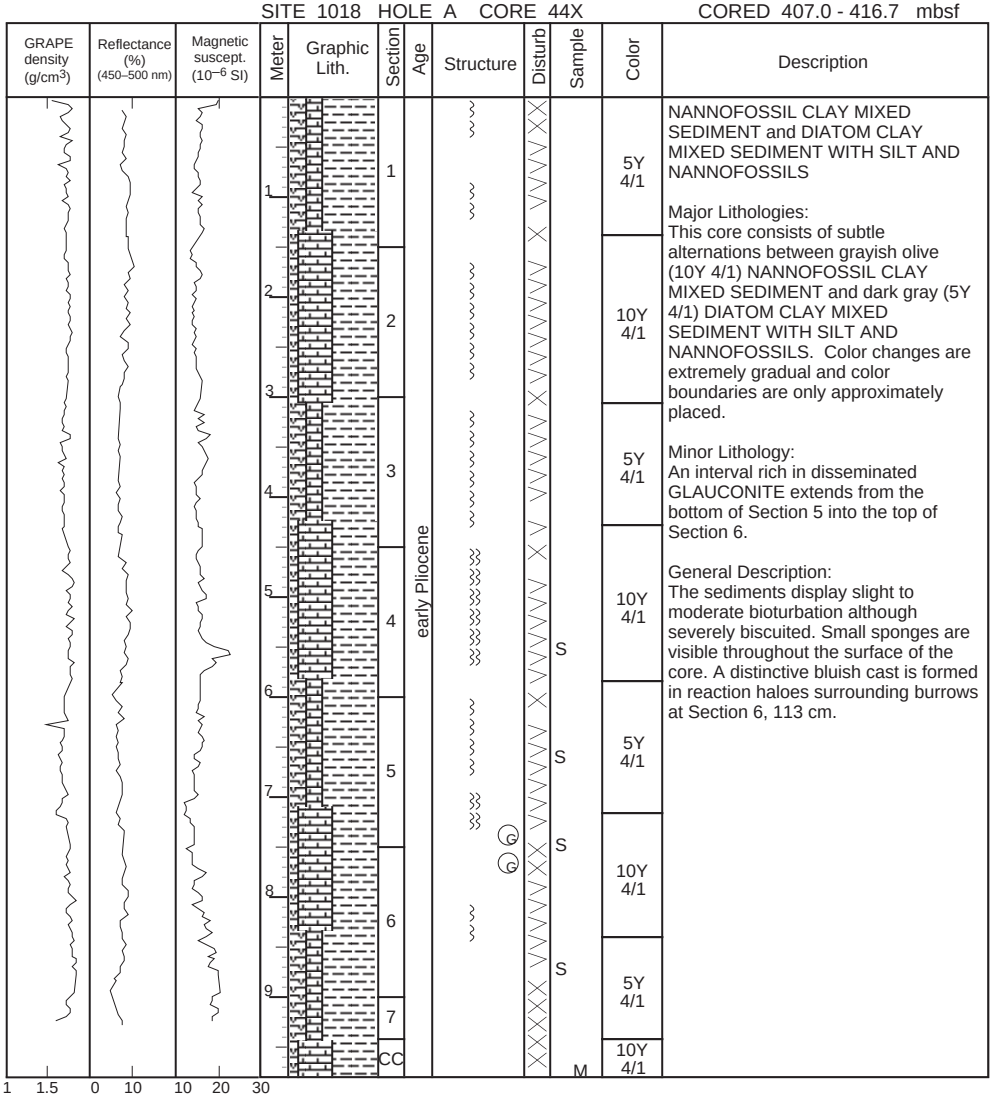
CLAY WITH SILT AND DIATOMS and CLAY NANNOFOSSIL MIXED SEDIMENT

Major Lithologies:
This core consists of dark gray (5Y 4/1) CLAY WITH SILT AND DIATOMS and grayish olive (10Y 4/1) CLAY NANNOFOSSIL MIXED SEDIMENT.

Minor Lithologies:
Two laminations of gray (N5) VITRIC ASH occur at Section 2, 59 cm. One thin bed of CRYSTAL VITRIC ASH is present at Section 6, 115 cm.

General Description:
The sediments are highly brecciated and biscuited by coring and extraction. Evidence for bioturbation is unevenly distributed. Chondrites and possibly Planolites are present.

SITE 1018 HOLE A CORE 44X CORED 407.0 - 416.7 mbsf

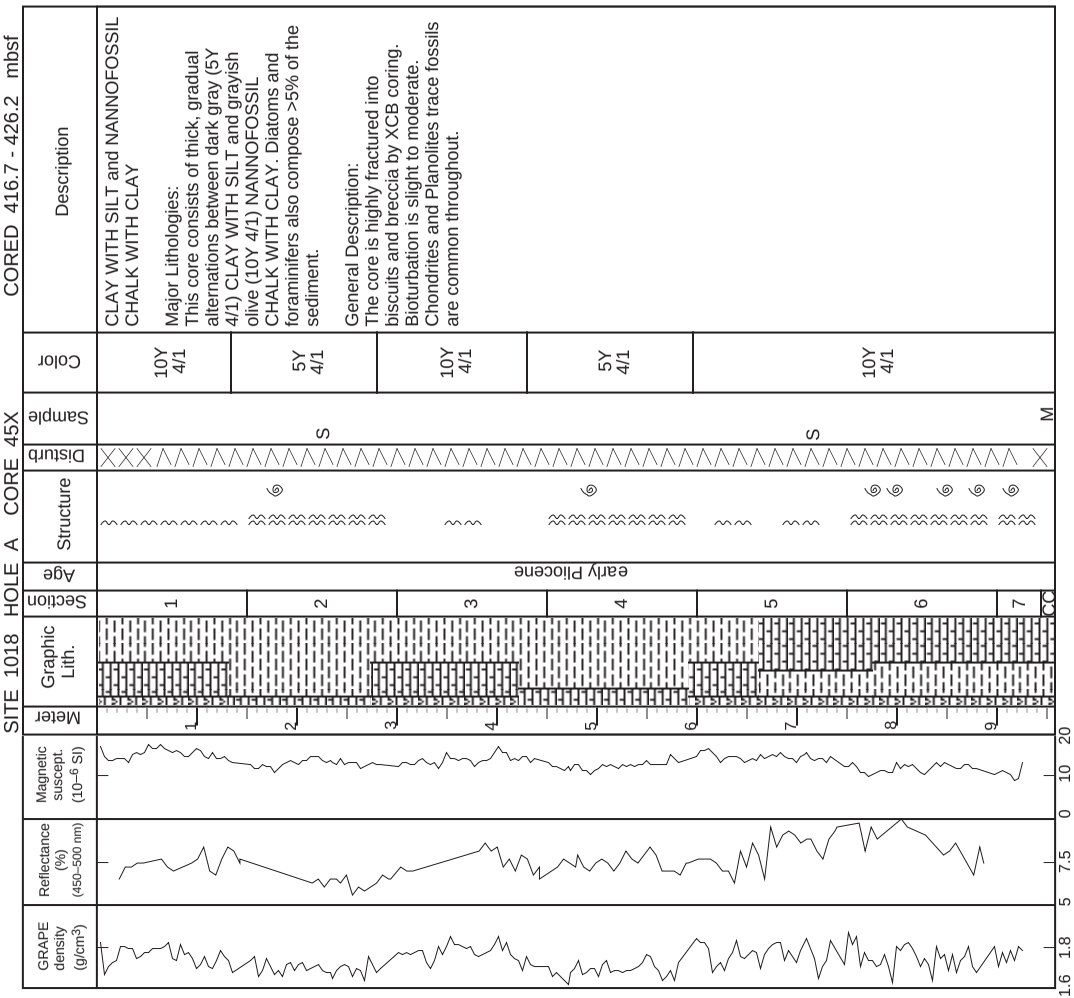


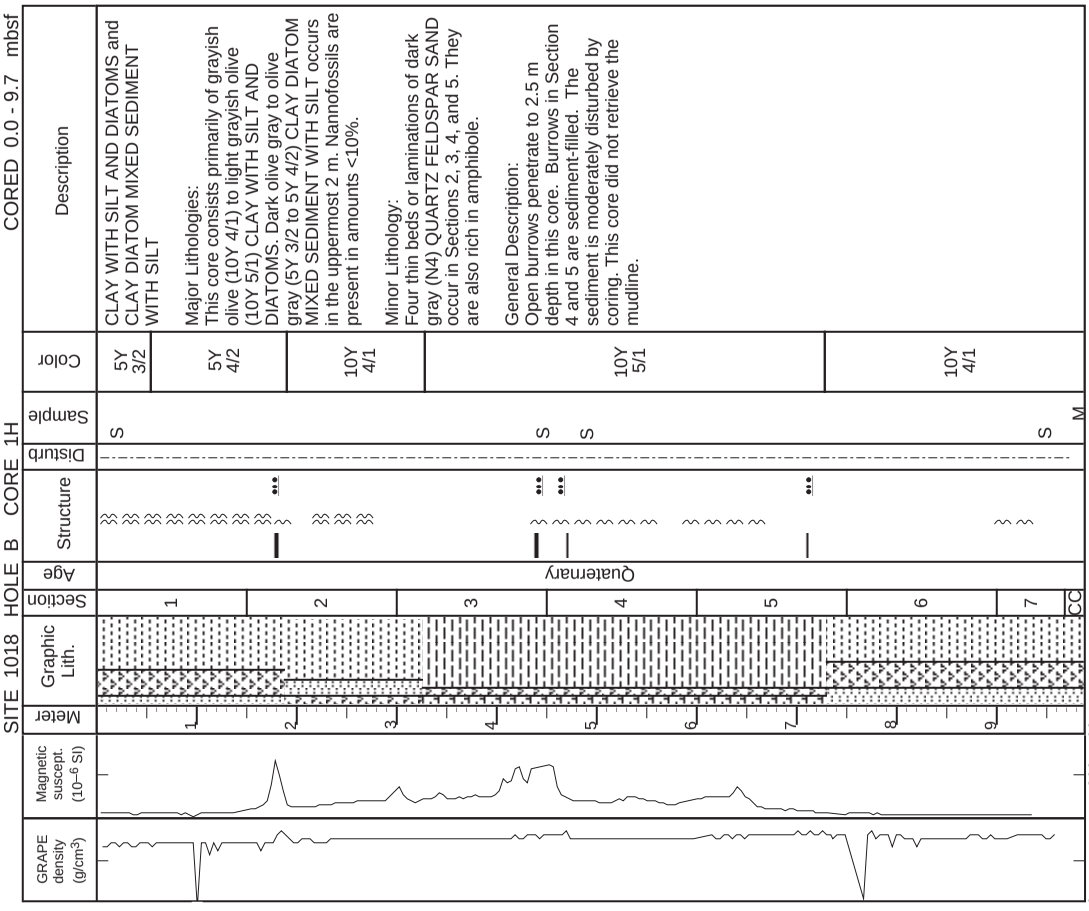
NANNOFOSSIL CLAY MIXED SEDIMENT and DIATOM CLAY MIXED SEDIMENT WITH SILT AND NANNOFOSSILS

Major Lithologies:
This core consists of subtle alternations between grayish olive (10Y 4/1) NANNOFOSSIL CLAY MIXED SEDIMENT and dark gray (5Y 4/1) DIATOM CLAY MIXED SEDIMENT WITH SILT AND NANNOFOSSILS. Color changes are extremely gradual and color boundaries are only approximately placed.

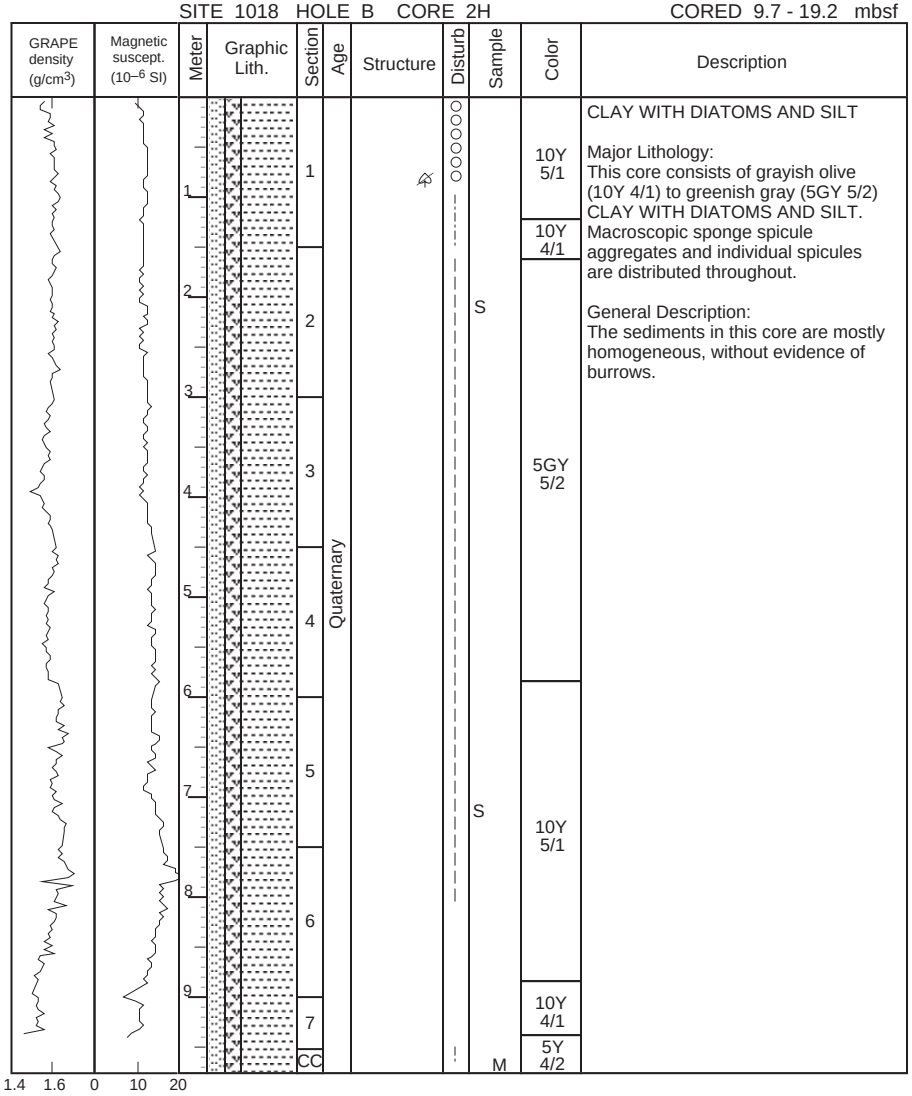
Minor Lithology:
An interval rich in disseminated GLAUCONITE extends from the bottom of Section 5 into the top of Section 6.

General Description:
The sediments display slight to moderate bioturbation although severely biscuited. Small sponges are visible throughout the surface of the core. A distinctive bluish cast is formed in reaction haloes surrounding burrows at Section 6, 113 cm.


SITE 1018 HOLE A CORE 45X CORED 416.7 - 426.2 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
early Pliocene
10Y 4/1
5Y 4/1
10Y 4/1
5Y 4/1
10Y 4/1
CLAY WITH SILT and NANNOFOSSIL CHALK WITH CLAY
Major Lithologies:
This core consists of thick, gradual alternations between dark gray (5Y 4/1) CLAY WITH SILT and grayish olive (10Y 4/1) NANNOFOSSIL CHALK WITH CLAY. Diatoms and foraminifers also compose >5% of the sediment.
General Description:
The core is highly fractured into biscuits and breccia by XCB coring.
Bioturbation is slight to moderate.
Chondrites and Planolites trace fossils are common throughout.


SITE 1018 HOLE B CORE 1H CORED 0.0 - 9.7 mbsf
GRAPE density (g/cm³)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
CC
5Y 3/2
5Y 4/2
10Y 4/1
10Y 5/1
10Y 4/1
CLAY WITH SILT AND DIATOMS and CLAY DIATOM MIXED SEDIMENT WITH SILT
Major Lithologies:
This core consists primarily of grayish olive (10Y 4/1) to light grayish olive (10Y 5/1) CLAY WITH SILT AND DIATOMS. Dark olive gray to olive gray (5Y 3/2 to 5Y 4/2) CLAY DIATOM MIXED SEDIMENT WITH SILT occurs in the uppermost 2 m. Nannofossils are present in amounts <10%.
Minor Lithology:
Four thin beds or laminations of dark gray (N4) QUARTZ FELDSPAR SAND occur in Sections 2, 3, 4, and 5. They are also rich in amphibole.
General Description:
Open burrows penetrate to 2.5 m depth in this core. Burrows in Section 4 and 5 are sediment-filled. The sediment is moderately disturbed by coring. This core did not retrieve the mudline.

SITE 1018 HOLE B CORE 2H CORED 9.7 - 19.2 mbsf

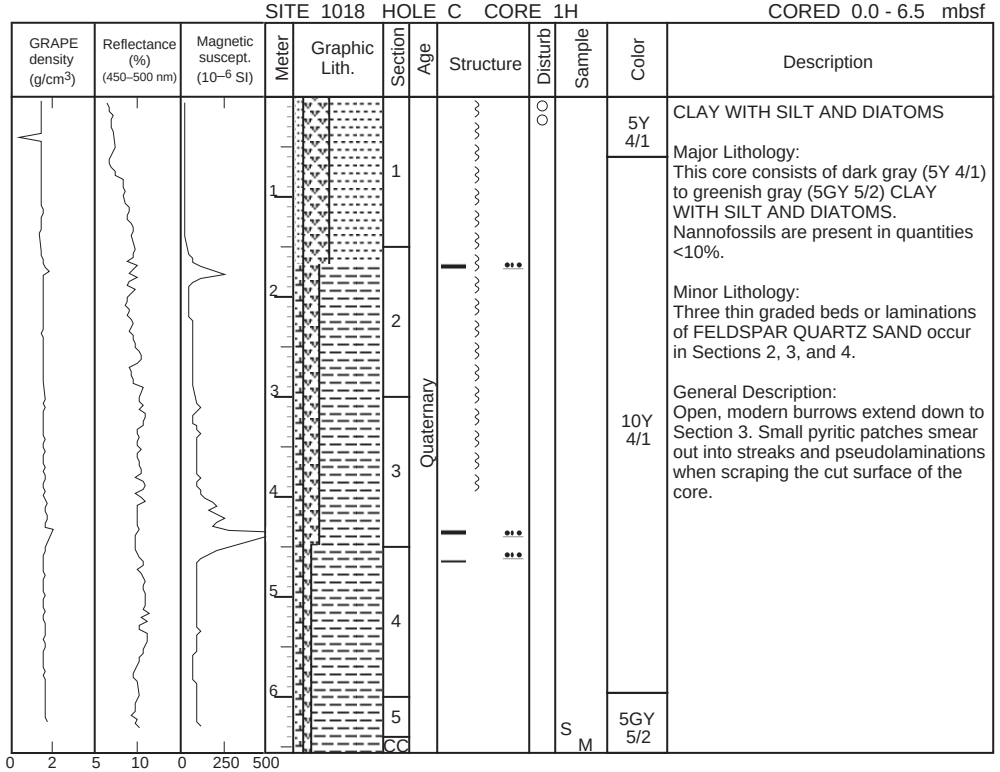


CLAY WITH DIATOMS AND SILT

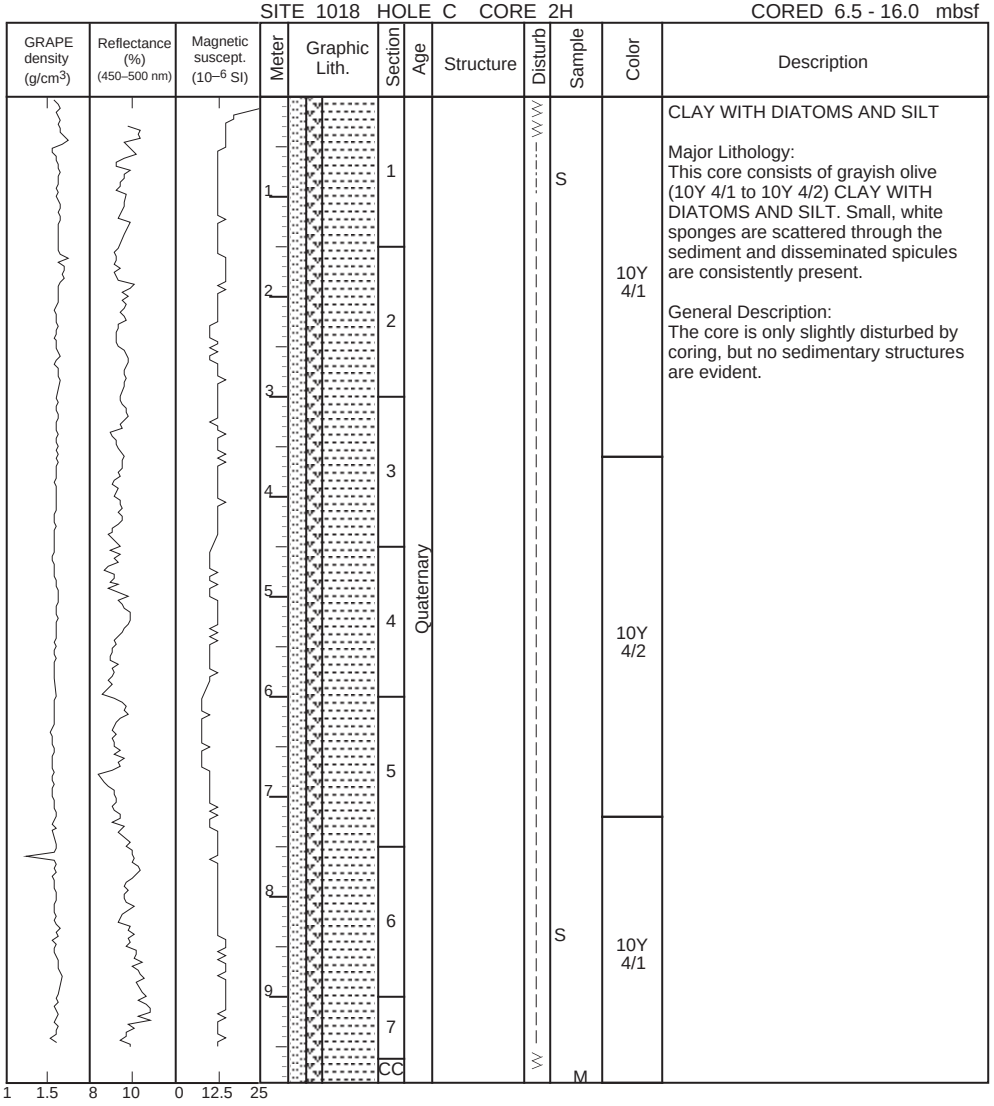
Major Lithology:
This core consists of grayish olive (10Y 4/1) to greenish gray (5GY 5/2) CLAY WITH DIATOMS AND SILT. Macroscopic sponge spicule aggregates and individual spicules are distributed throughout.

General Description:
The sediments in this core are mostly homogeneous, without evidence of burrows.

SITE 1018 HOLE C CORE 1H CORED 0.0 - 6.5 mbsf



SITE 1018 HOLE C CORE 2H CORED 6.5 - 16.0 mbsf

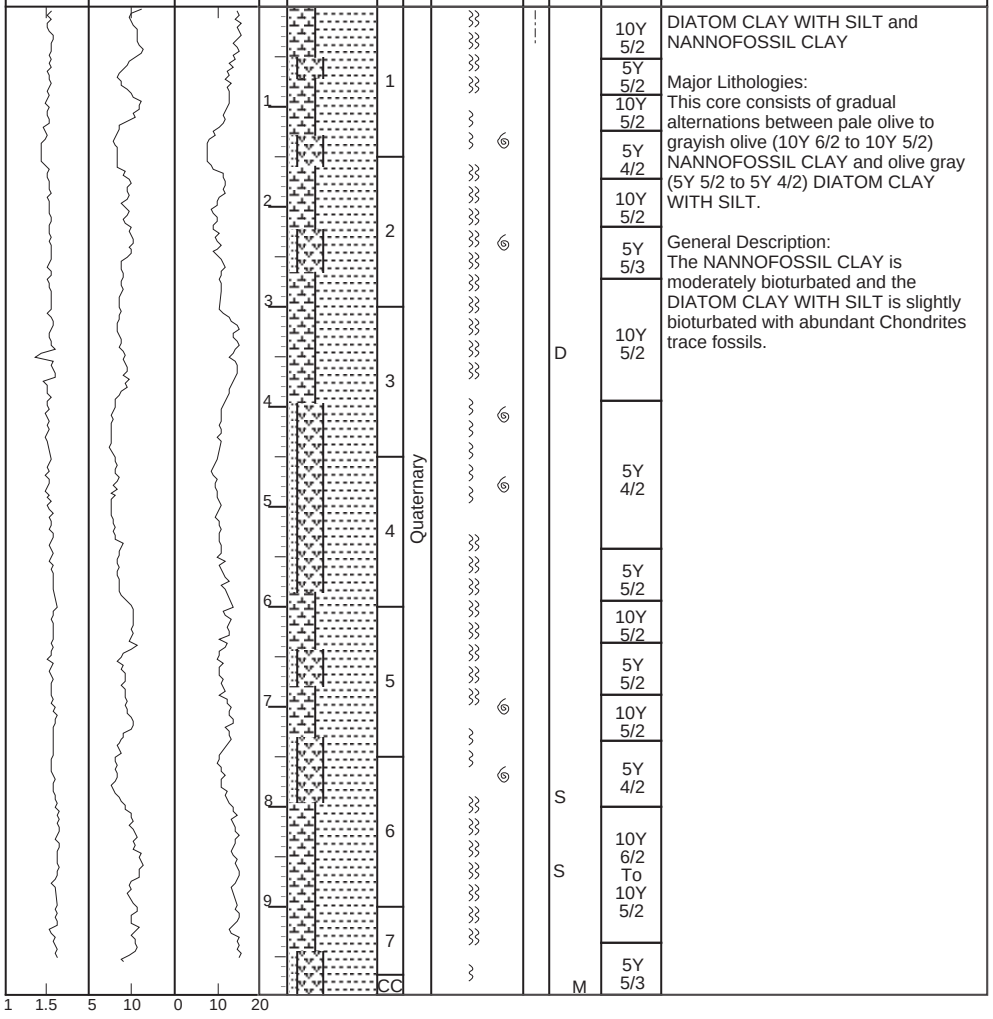


CLAY WITH DIATOMS AND SILT

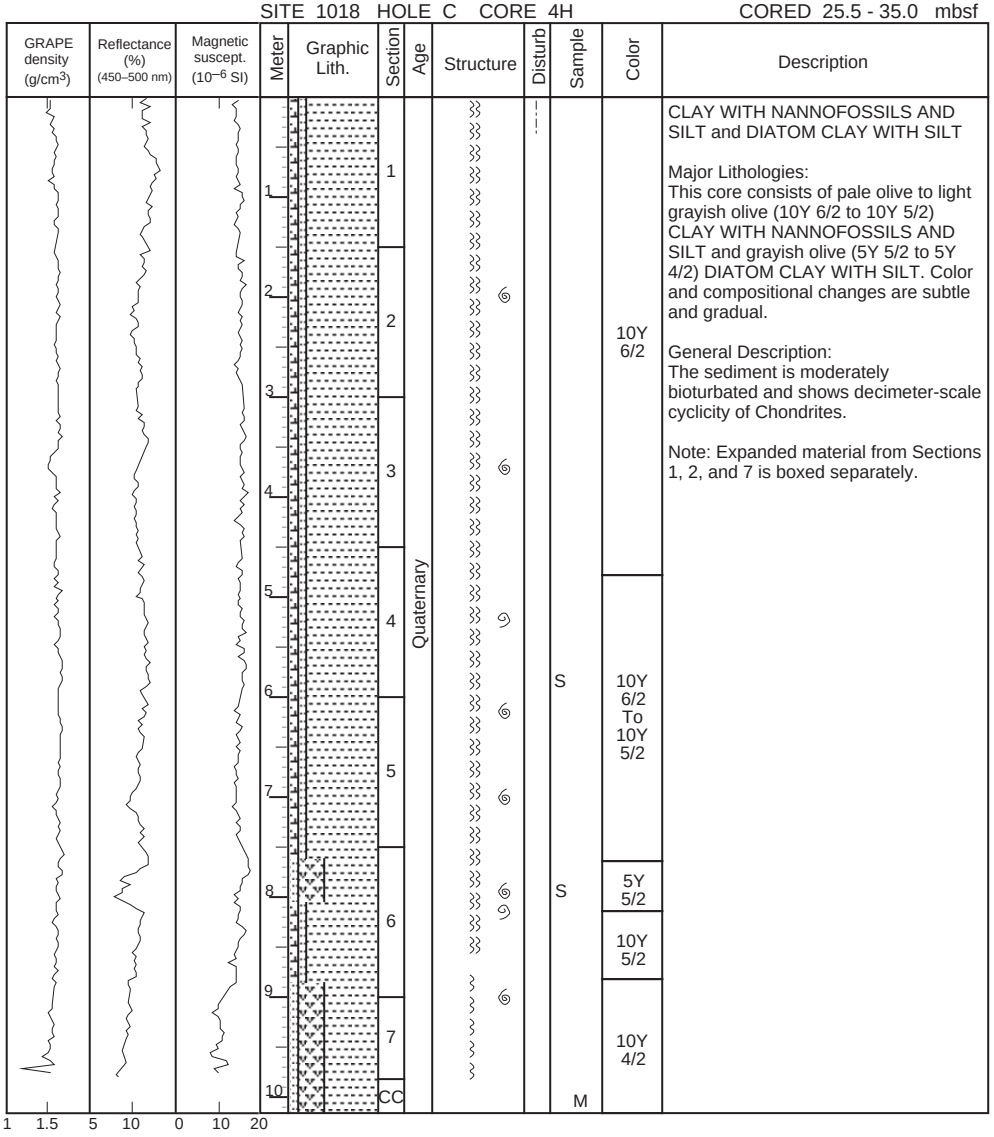
Major Lithology:
This core consists of grayish olive (10Y 4/1 to 10Y 4/2) CLAY WITH DIATOMS AND SILT. Small, white sponges are scattered through the sediment and disseminated spicules are consistently present.

General Description:
The core is only slightly disturbed by coring, but no sedimentary structures are evident.

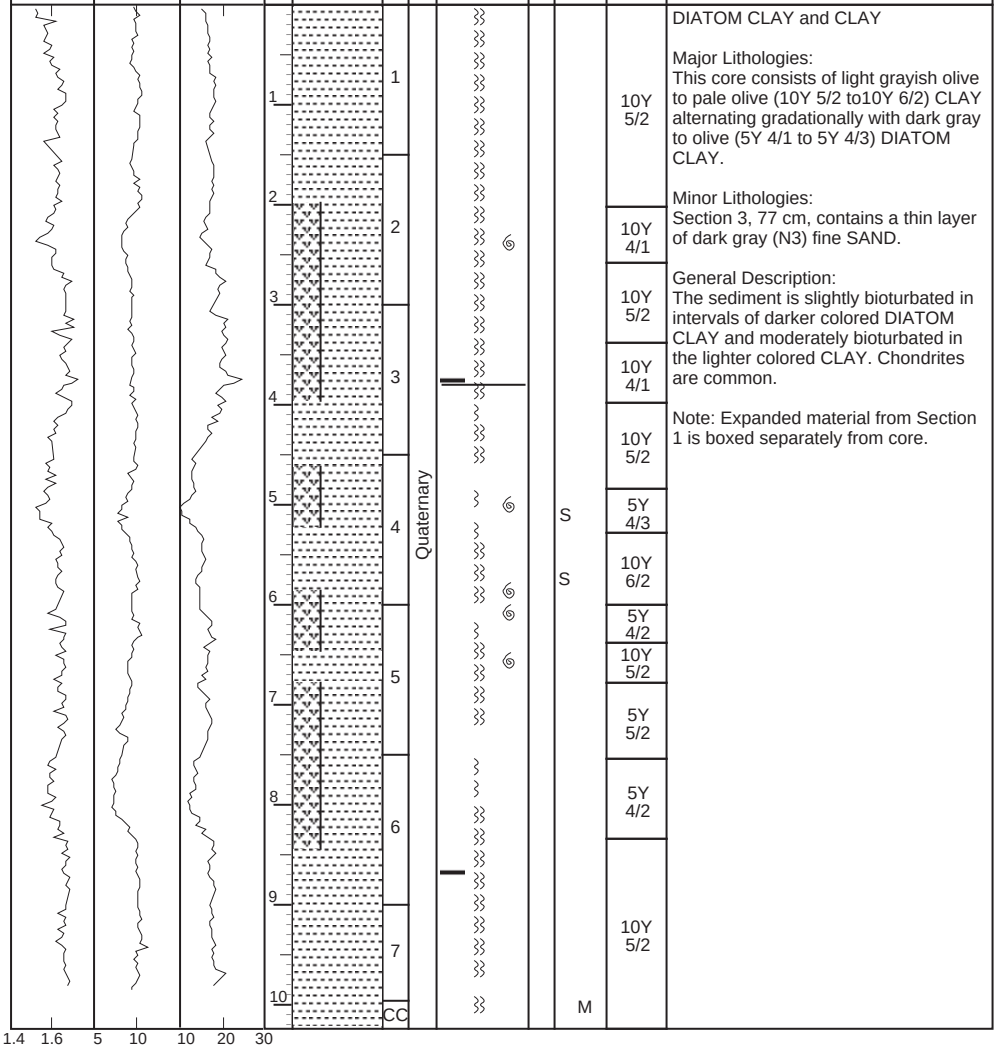
SITE 1018 HOLE C CORE 3H CORED 16.0 - 25.5 mbsf



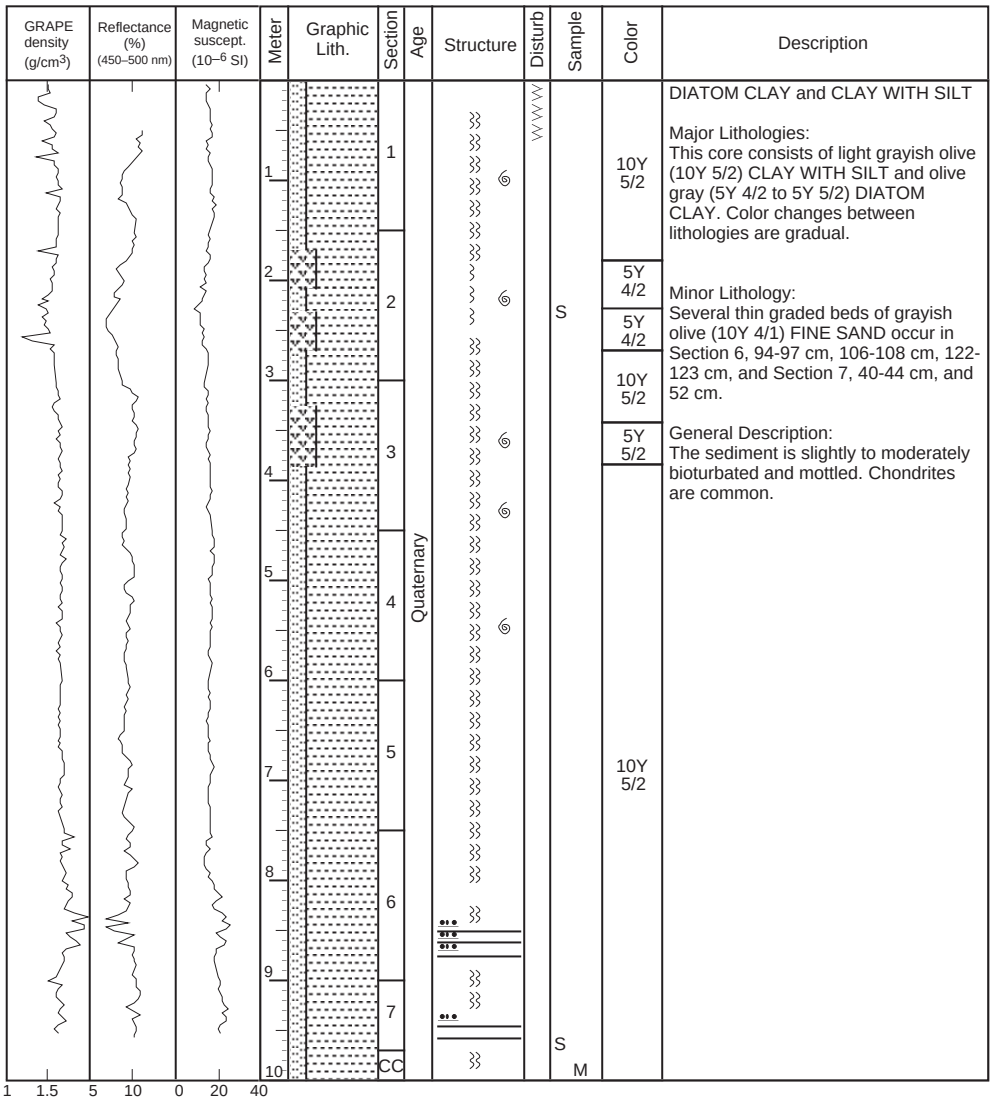
SITE 1018 HOLE C CORE 4H CORED 25.5 - 35.0 mbsf



SITE 1018 HOLE C CORE 5H CORED 35.0 - 44.5 mbsf



SITE 1018 HOLE C CORE 6H CORED 44.5 - 54.0 mbsf



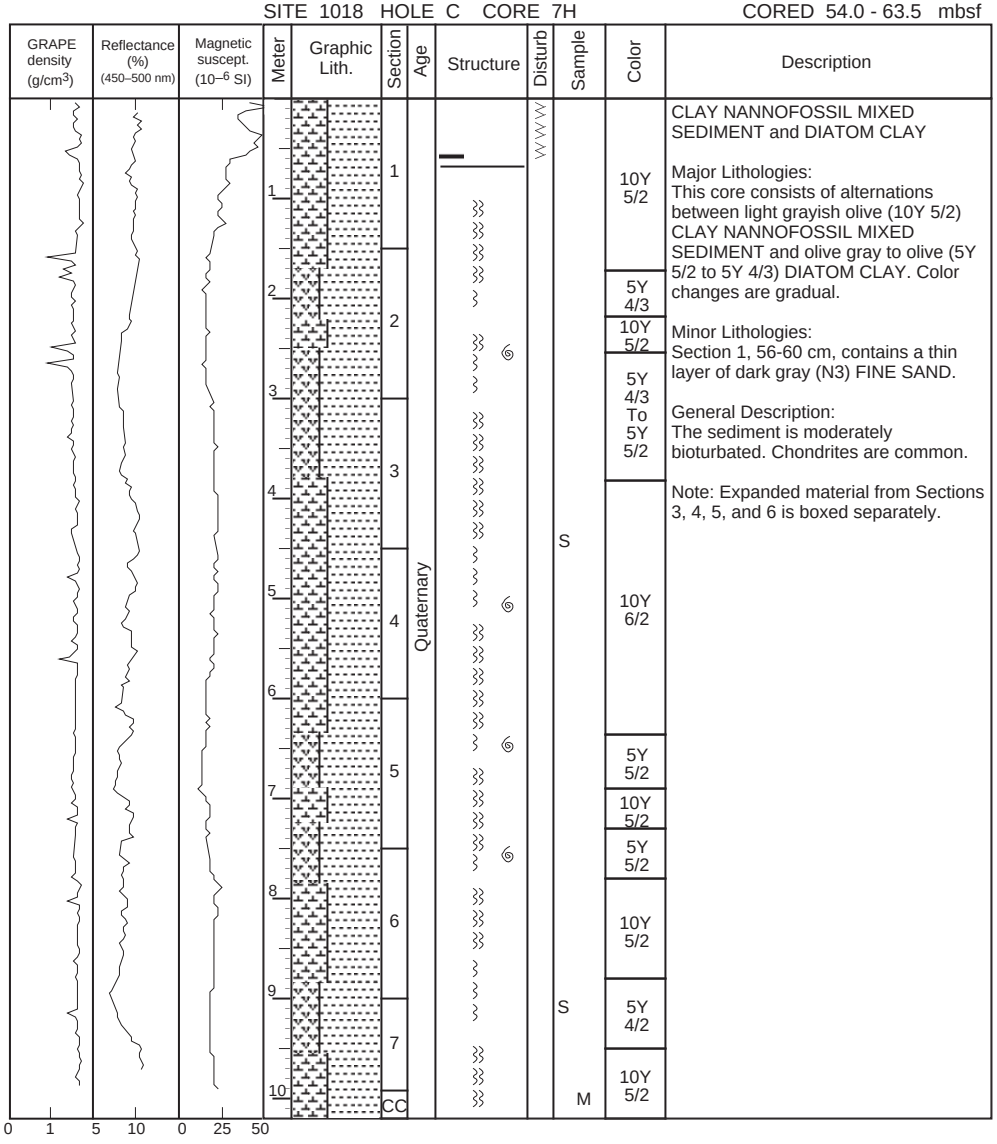
DIATOM CLAY and CLAY WITH SILT

Major Lithologies:
This core consists of light grayish olive (10Y 5/2) CLAY WITH SILT and olive gray (5Y 4/2 to 5Y 5/2) DIATOM CLAY. Color changes between lithologies are gradual.

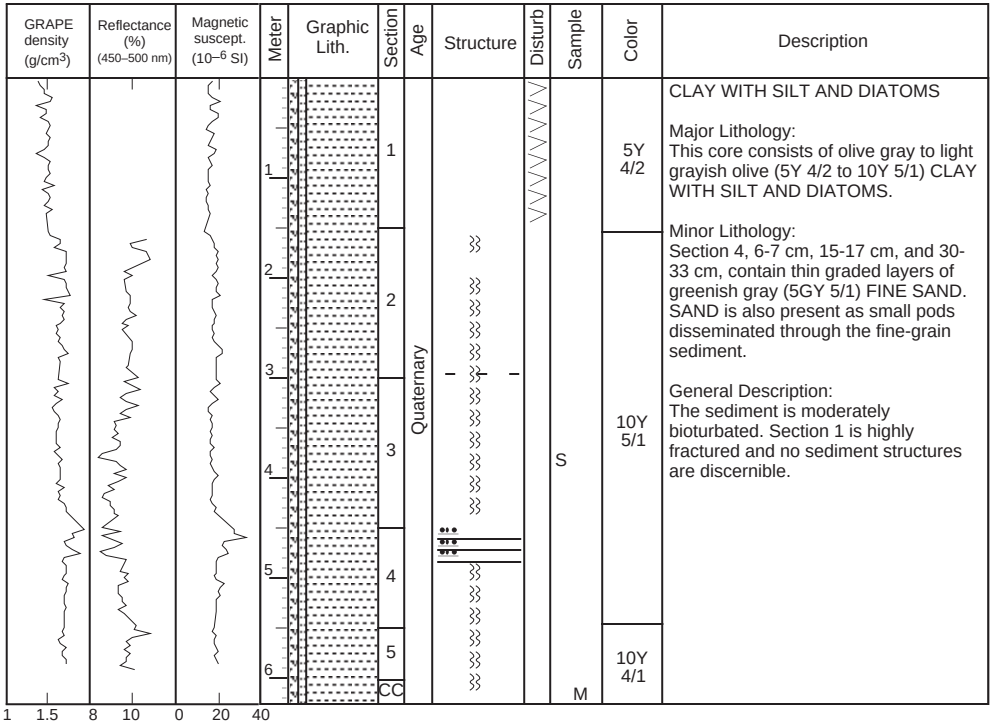
Minor Lithology:
Several thin graded beds of grayish olive (10Y 4/1) FINE SAND occur in Section 6, 94-97 cm, 106-108 cm, 122-123 cm, and Section 7, 40-44 cm, and 52 cm.

General Description:
The sediment is slightly to moderately bioturbated and mottled. Chondrites are common.

SITE 1018 HOLE C CORE 7H CORED 54.0 - 63.5 mbsf



SITE 1018 HOLE C CORE 8H CORED 63.5 - 69.5 mbsf

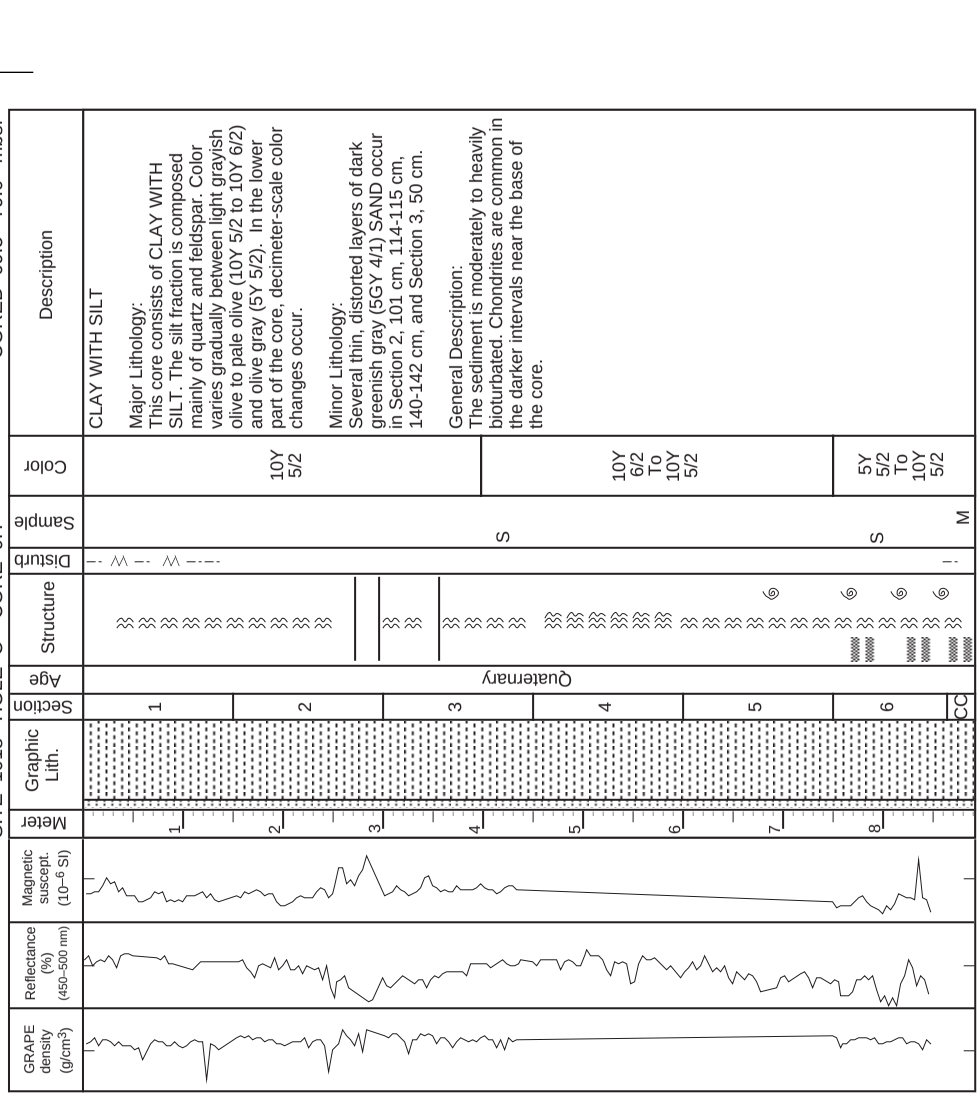


CLAY WITH SILT AND DIATOMS

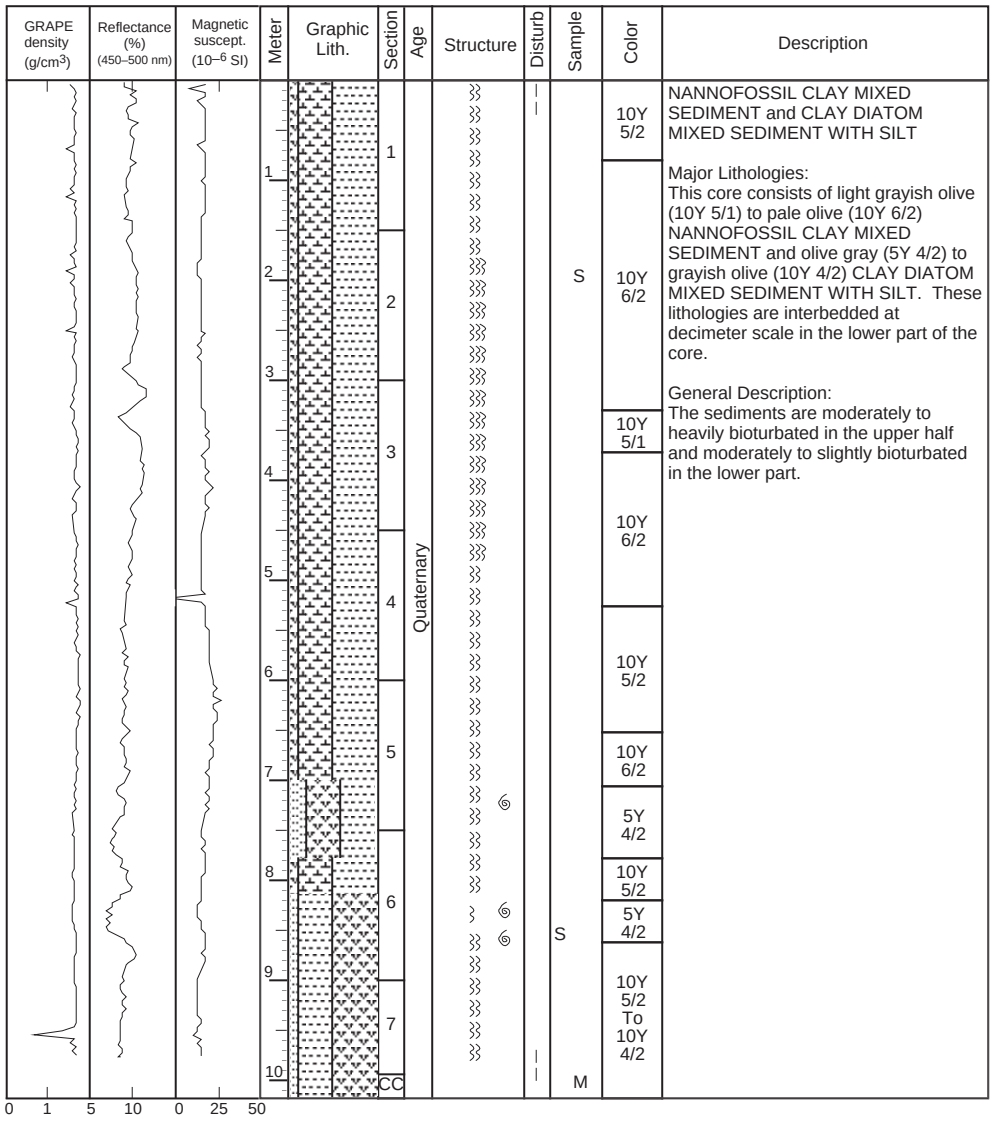
Major Lithology:
This core consists of olive gray to light grayish olive (5Y 4/2 to 10Y 5/1) CLAY WITH SILT AND DIATOMS.

Minor Lithology:
Section 4, 6-7 cm, 15-17 cm, and 30-33 cm, contain thin graded layers of greenish gray (5GY 5/1) FINE SAND. SAND is also present as small pods disseminated through the fine-grain sediment.

General Description:
The sediment is moderately bioturbated. Section 1 is highly fractured and no sediment structures are discernible.


SITE 1018 HOLE C CORE 9H
CORED 69.5 - 79.0 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10–6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
CLAY WITH SILT
Major Lithology:
This core consists of CLAY WITH SILT. The silt fraction is composed mainly of quartz and feldspar. Color varies gradually between light grayish olive to pale olive (10Y 5/2 to 10Y 6/2) and olive gray (5Y 5/2). In the lower part of the core, decimeter-scale color changes occur.
Minor Lithology:
Several thin, distorted layers of dark greenish gray (5GY 4/1) SAND occur in Section 2, 101 cm, 114-115 cm, 140-142 cm, and Section 3, 50 cm.
General Description:
The sediment is moderately to heavily bioturbated. Chondrites are common in the darker intervals near the base of the core.
10Y 5/2
10Y 6/2 To 10Y 5/2
5Y 5/2 To 10Y 5/2
S
M
CC

SITE 1018 HOLE C CORE 10H CORED 79.0 - 88.5 mbsf

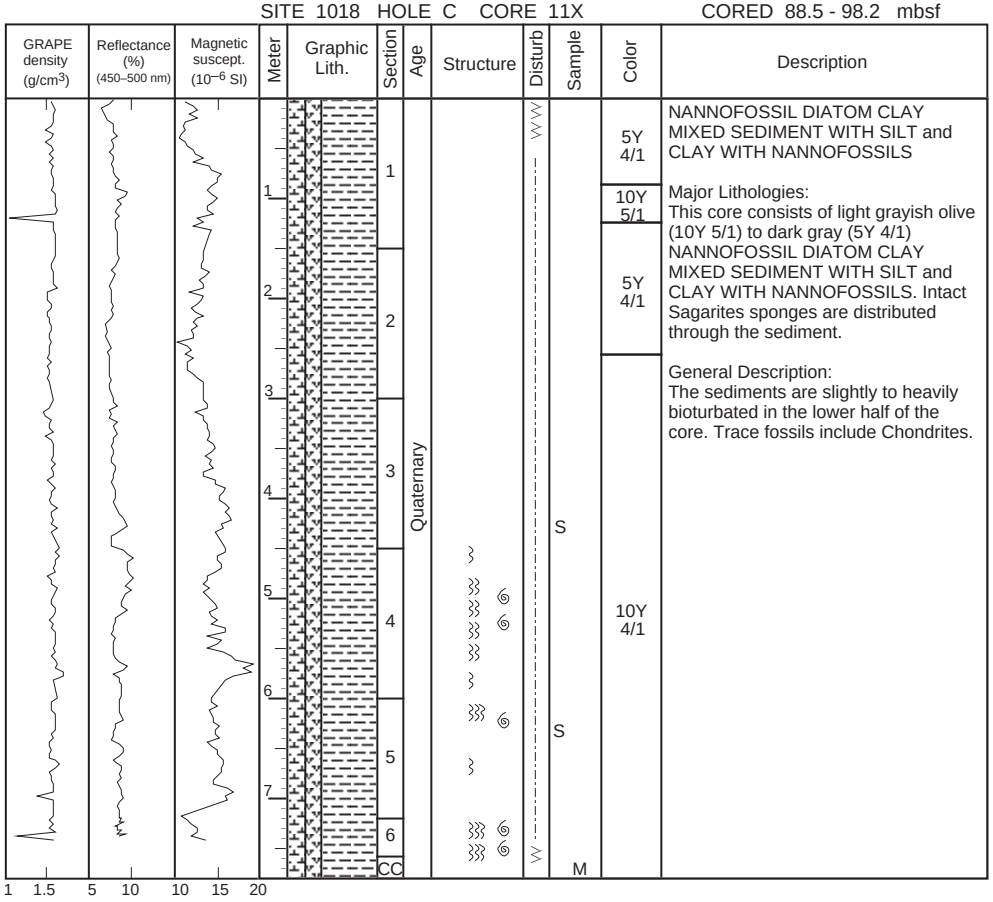


NANNOFOSSIL CLAY MIXED SEDIMENT and CLAY DIATOM MIXED SEDIMENT WITH SILT

Major Lithologies:
This core consists of light grayish olive (10Y 5/1) to pale olive (10Y 6/2) NANNOFOSSIL CLAY MIXED SEDIMENT and olive gray (5Y 4/2) to grayish olive (10Y 4/2) CLAY DIATOM MIXED SEDIMENT WITH SILT. These lithologies are interbedded at decimeter scale in the lower part of the core.

General Description:
The sediments are moderately to heavily bioturbated in the upper half and moderately to slightly bioturbated in the lower part.

SITE 1018 HOLE C CORE 11X CORED 88.5 - 98.2 mbsf

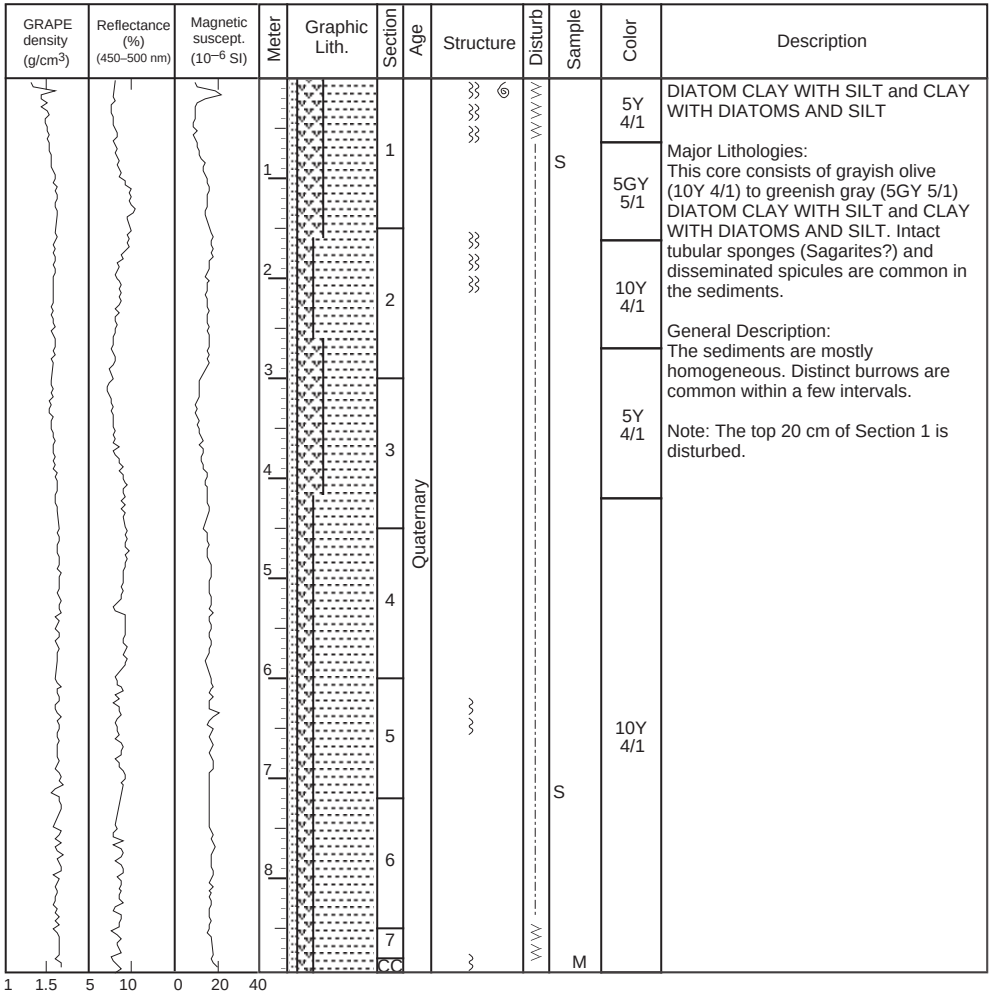


NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT WITH SILT and CLAY WITH NANNOFOSSILS

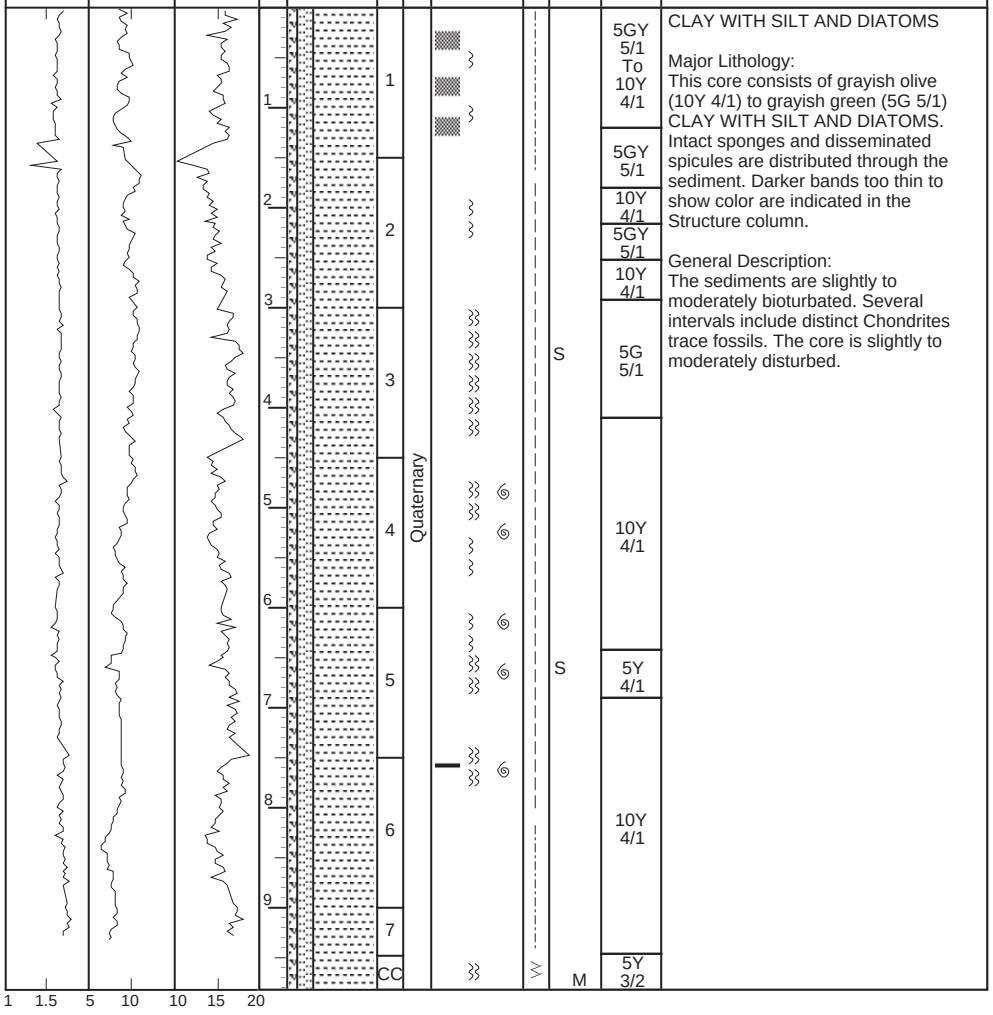
Major Lithologies:
This core consists of light grayish olive (10Y 5/1) to dark gray (5Y 4/1) NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT WITH SILT and CLAY WITH NANNOFOSSILS. Intact Sagarites sponges are distributed through the sediment.

General Description:
The sediments are slightly to heavily bioturbated in the lower half of the core. Trace fossils include Chondrites.

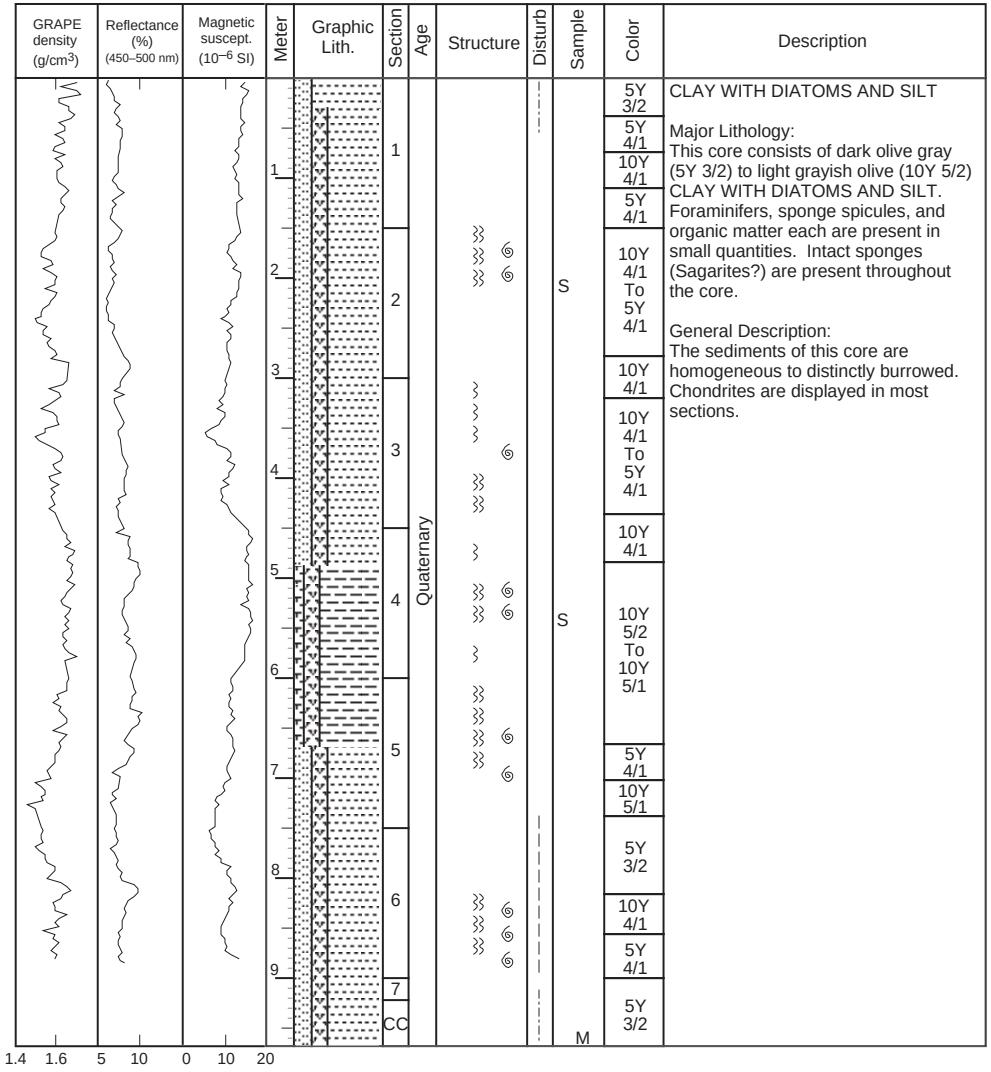
SITE 1018 HOLE C CORE 12X CORED 98.2 - 107.9 mbsf



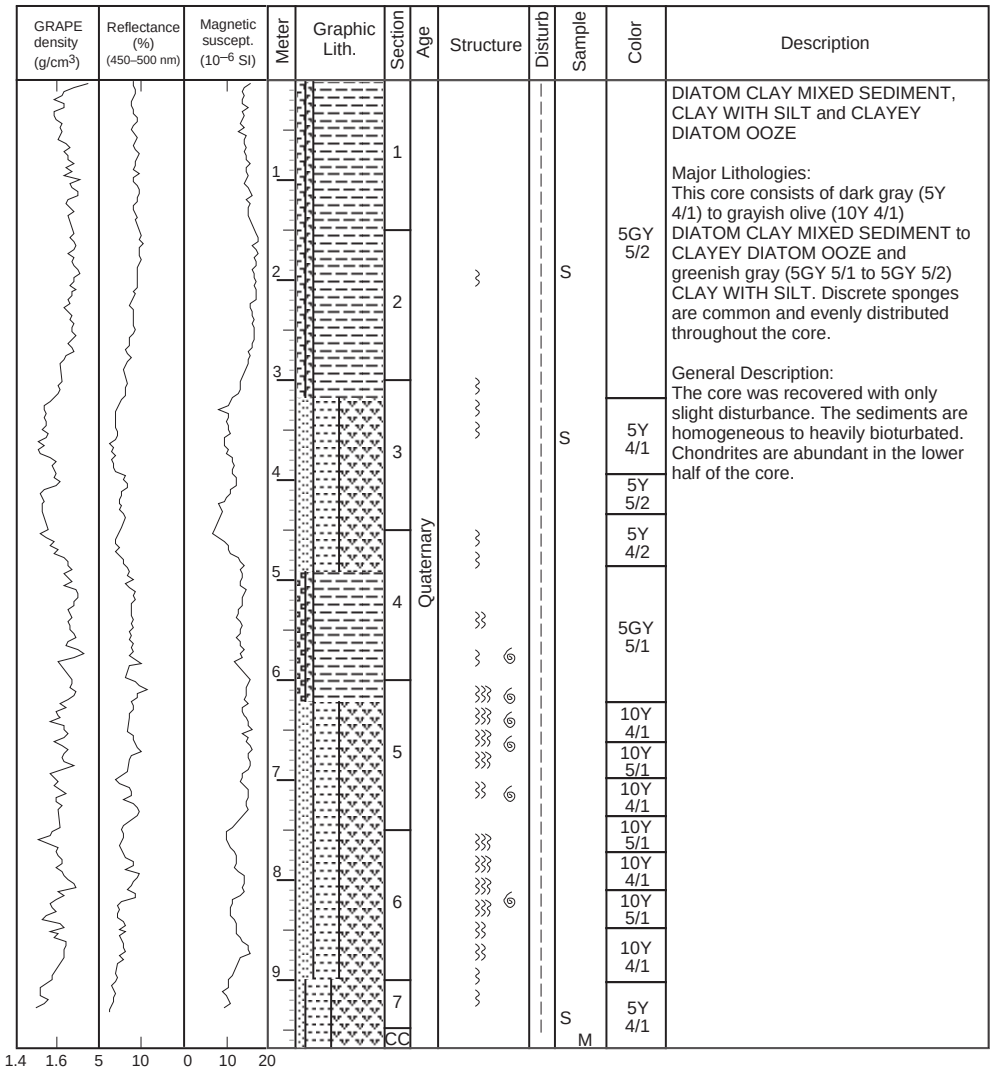
SITE 1018 HOLE C CORE 13X CORED 107.9 - 117.5 mbsf



SITE 1018 HOLE C CORE 14X CORED 117.5 - 127.2 mbsf



SITE 1018 HOLE C CORE 15X CORED 127.2 - 136.9 mbsf

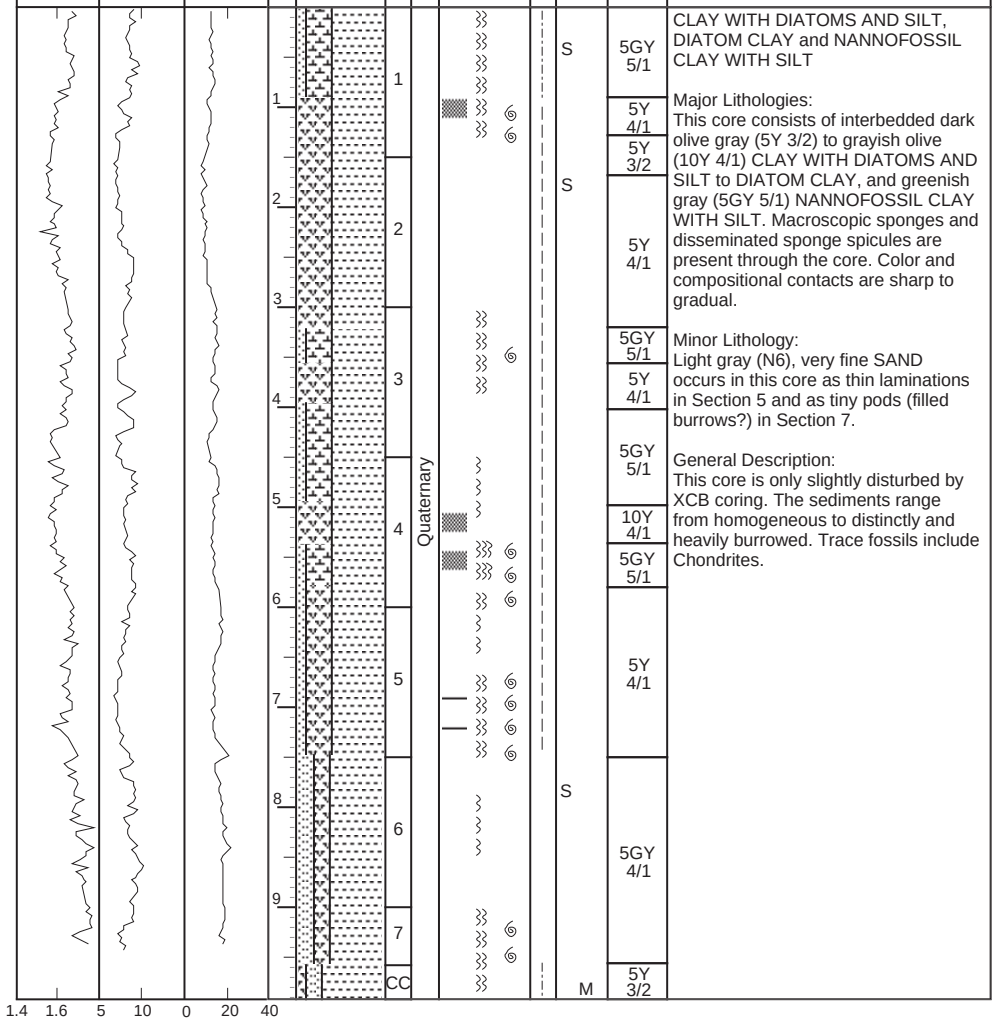


DIATOM CLAY MIXED SEDIMENT, CLAY WITH SILT and CLAYEY DIATOM OOZE

Major Lithologies:
This core consists of dark gray (5Y 4/1) to grayish olive (10Y 4/1) DIATOM CLAY MIXED SEDIMENT to CLAYEY DIATOM OOZE and greenish gray (5GY 5/1 to 5GY 5/2) CLAY WITH SILT. Discrete sponges are common and evenly distributed throughout the core.

General Description:
The core was recovered with only slight disturbance. The sediments are homogeneous to heavily bioturbated. Chondrites are abundant in the lower half of the core.

SITE 1018 HOLE C CORE 16X CORED 136.9 - 146.6 mbsf



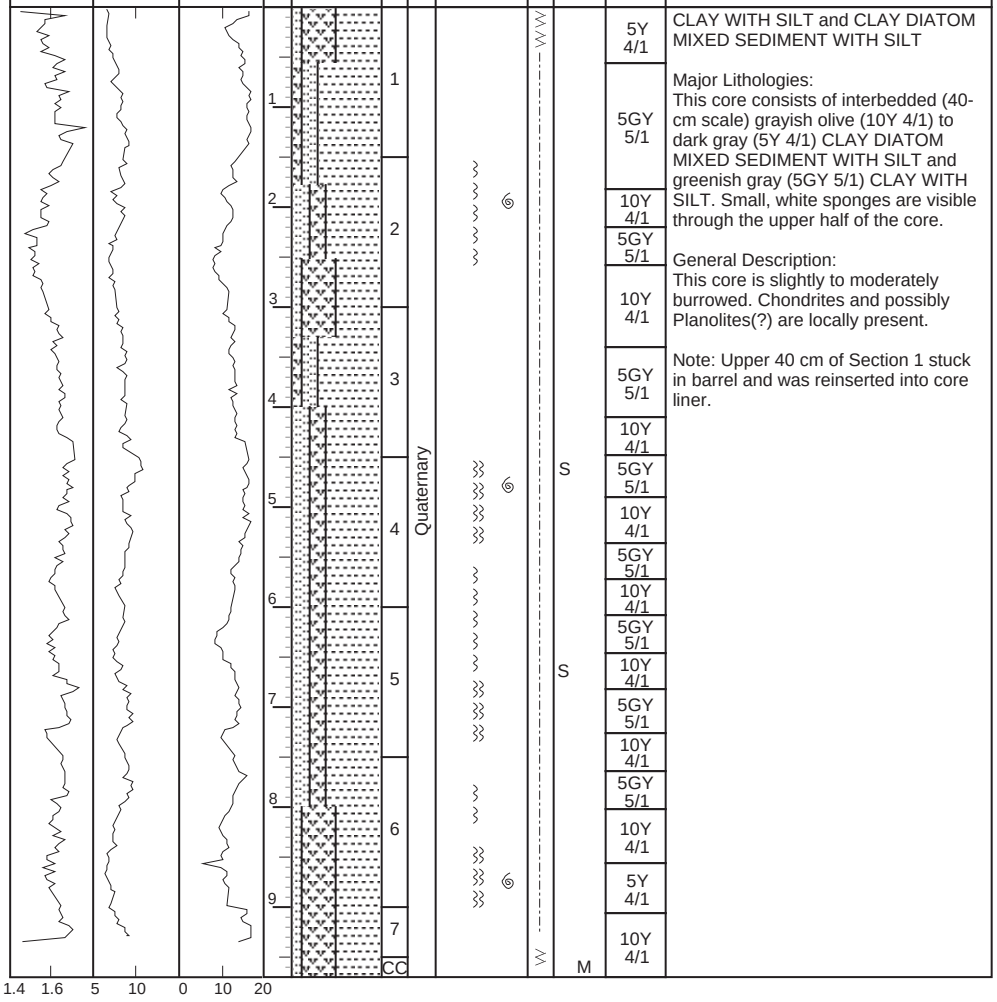
CLAY WITH DIATOMS AND SILT, DIATOM CLAY and NANNOFOSSIL CLAY WITH SILT

Major Lithologies:
This core consists of interbedded dark olive gray (5Y 3/2) to grayish olive (10Y 4/1) CLAY WITH DIATOMS AND SILT to DIATOM CLAY, and greenish gray (5GY 5/1) NANNOFOSSIL CLAY WITH SILT. Macroscopic sponges and disseminated sponge spicules are present through the core. Color and compositional contacts are sharp to gradual.

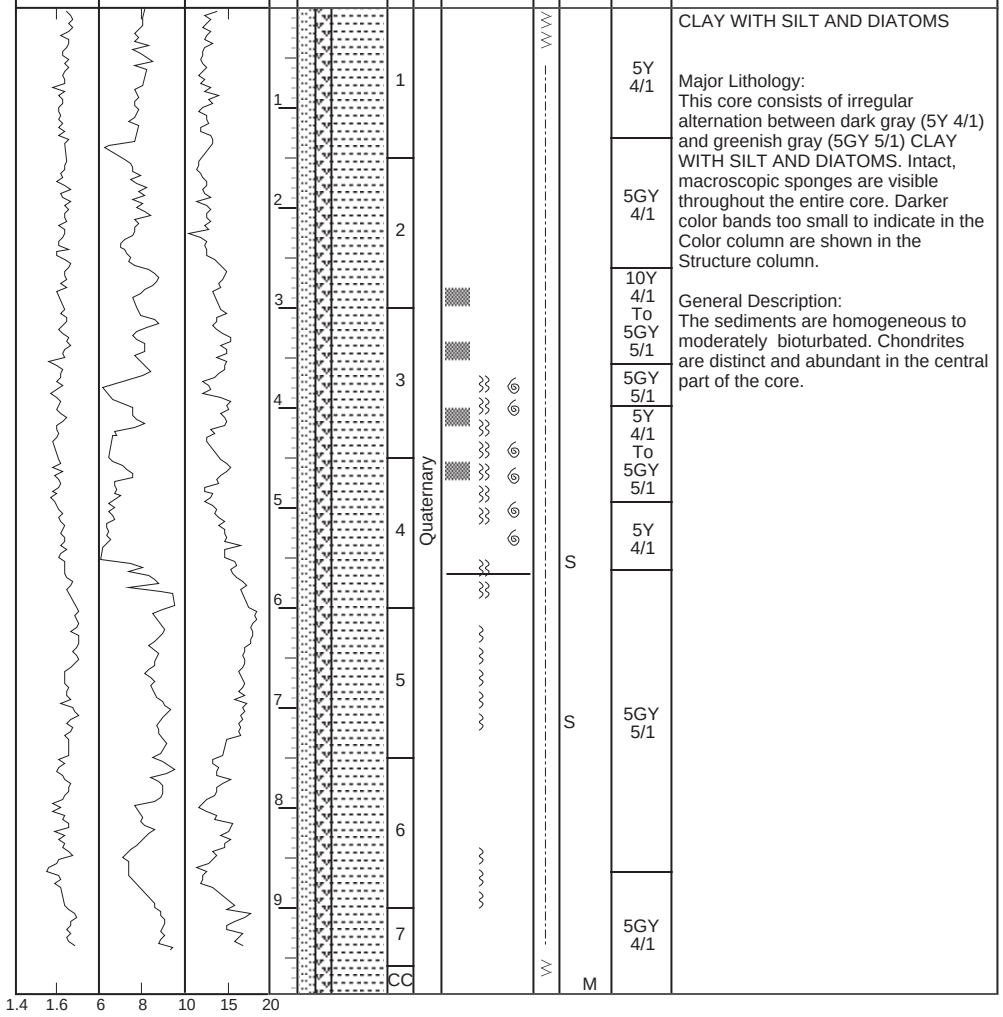
Minor Lithology:
Light gray (N6), very fine SAND occurs in this core as thin laminations in Section 5 and as tiny pods (filled burrows?) in Section 7.

General Description:
This core is only slightly disturbed by XCB coring. The sediments range from homogeneous to distinctly and heavily burrowed. Trace fossils include Chondrites.

SITE 1018 HOLE C CORE 17X CORED 146.6 - 156.3 mbsf



SITE 1018 HOLE C CORE 18X CORED 156.3 - 165.9 mbsf

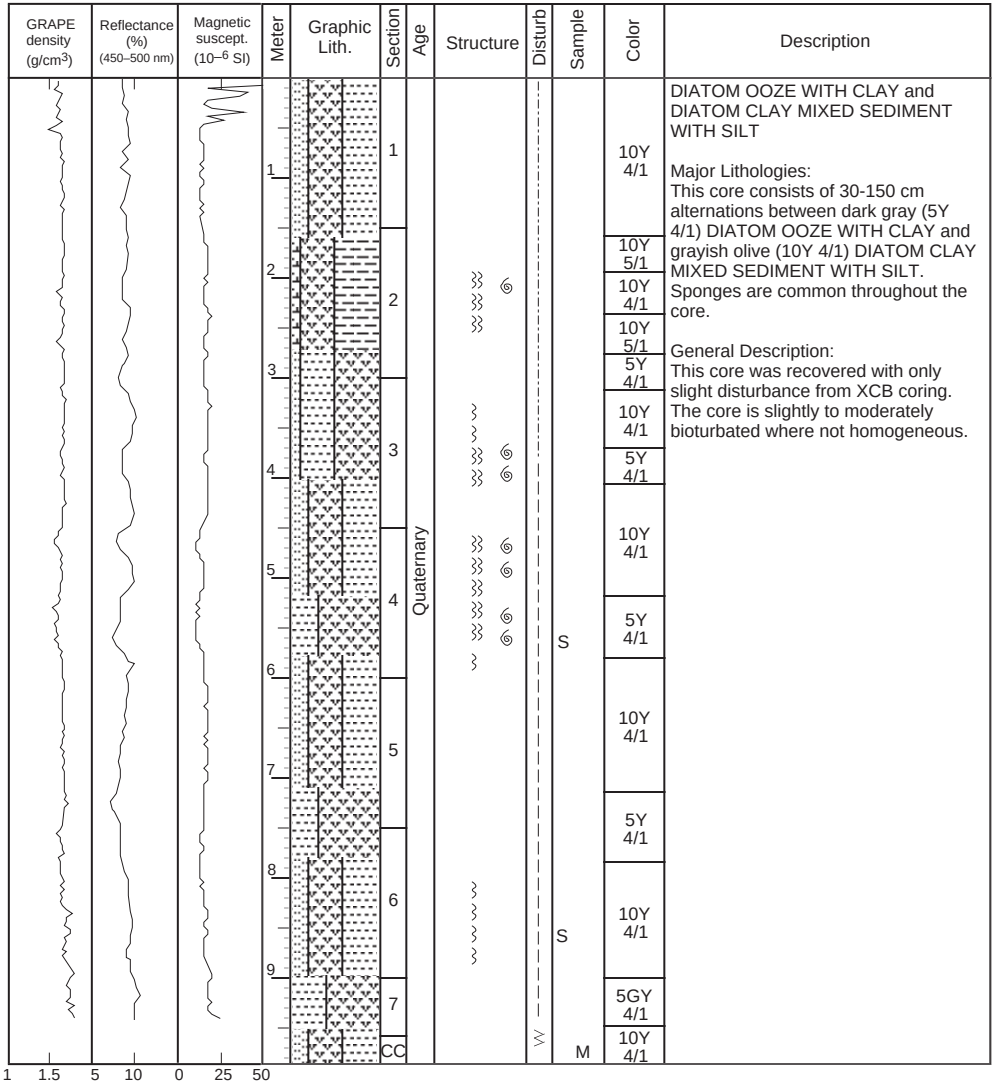


CLAY WITH SILT AND DIATOMS

Major Lithology:
This core consists of irregular alternation between dark gray (5Y 4/1) and greenish gray (5GY 5/1) CLAY WITH SILT AND DIATOMS. Intact, macroscopic sponges are visible throughout the entire core. Darker color bands too small to indicate in the Color column are shown in the Structure column.

General Description:
The sediments are homogeneous to moderately bioturbated. Chondrites are distinct and abundant in the central part of the core.

SITE 1018 HOLE C CORE 19X CORED 165.9 - 175.5 mbsf

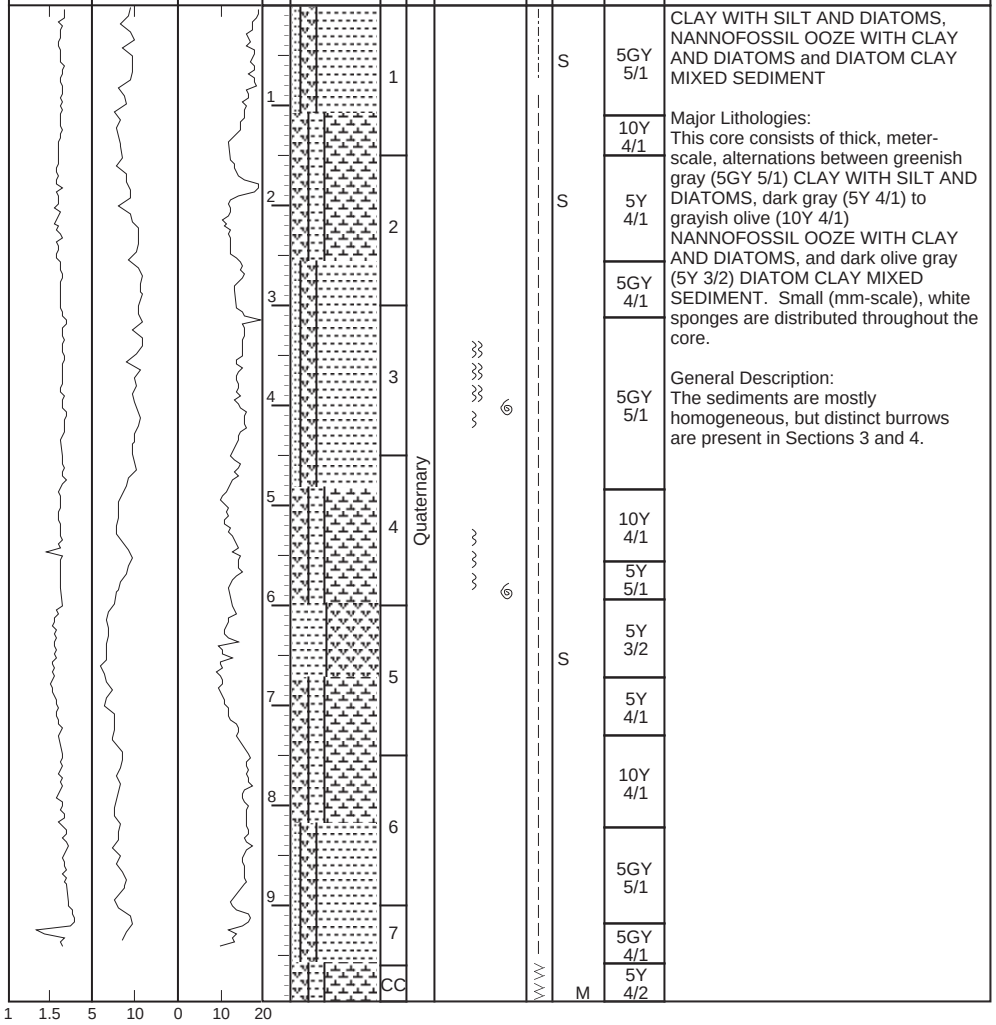


DIATOM OOZE WITH CLAY and DIATOM CLAY MIXED SEDIMENT WITH SILT

Major Lithologies:
This core consists of 30-150 cm alternations between dark gray (5Y 4/1) DIATOM OOZE WITH CLAY and grayish olive (10Y 4/1) DIATOM CLAY MIXED SEDIMENT WITH SILT. Sponges are common throughout the core.

General Description:
This core was recovered with only slight disturbance from XCB coring. The core is slightly to moderately bioturbated where not homogeneous.

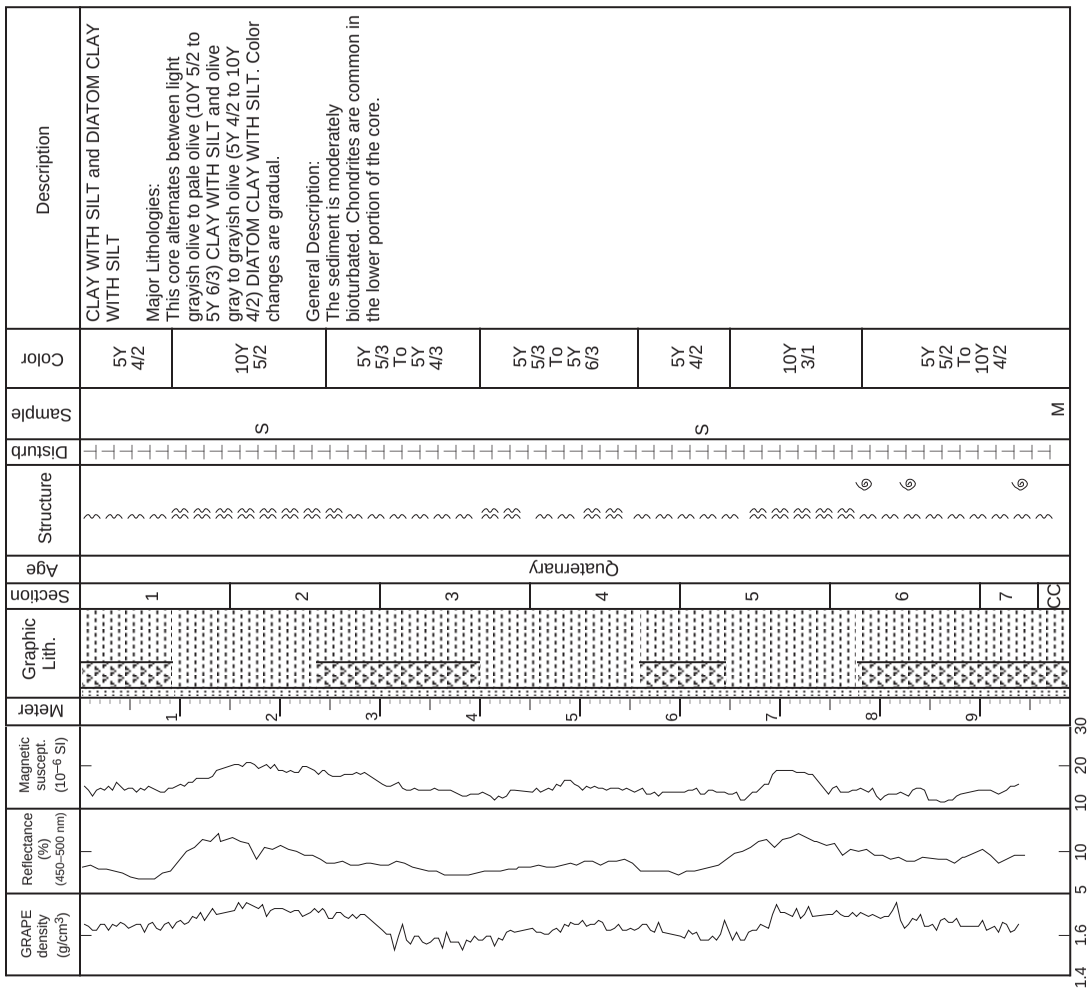
SITE 1018 HOLE C CORE 20X CORED 175.5 - 185.2 mbsf



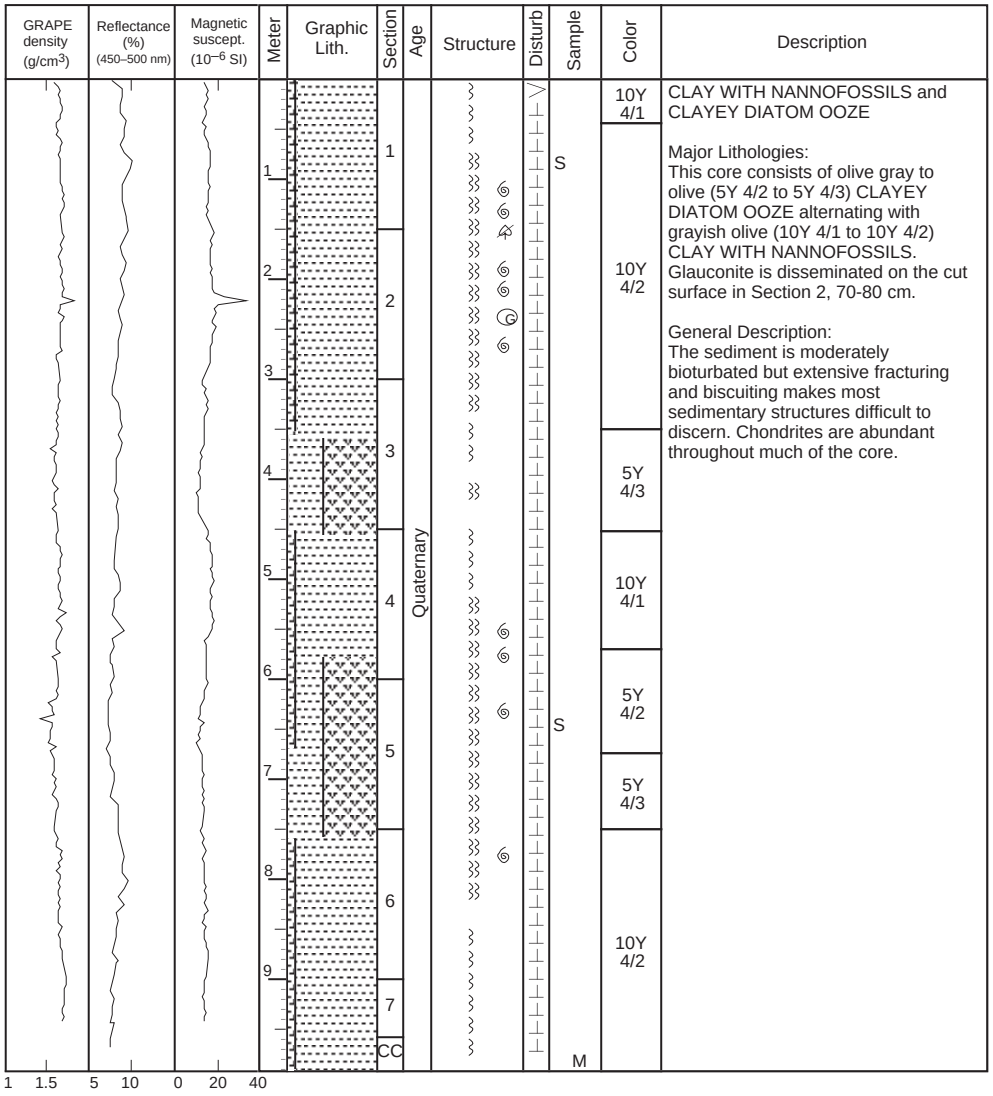
CLAY WITH SILT AND DIATOMS, NANNOFOSSIL OOZE WITH CLAY AND DIATOMS and DIATOM CLAY MIXED SEDIMENT

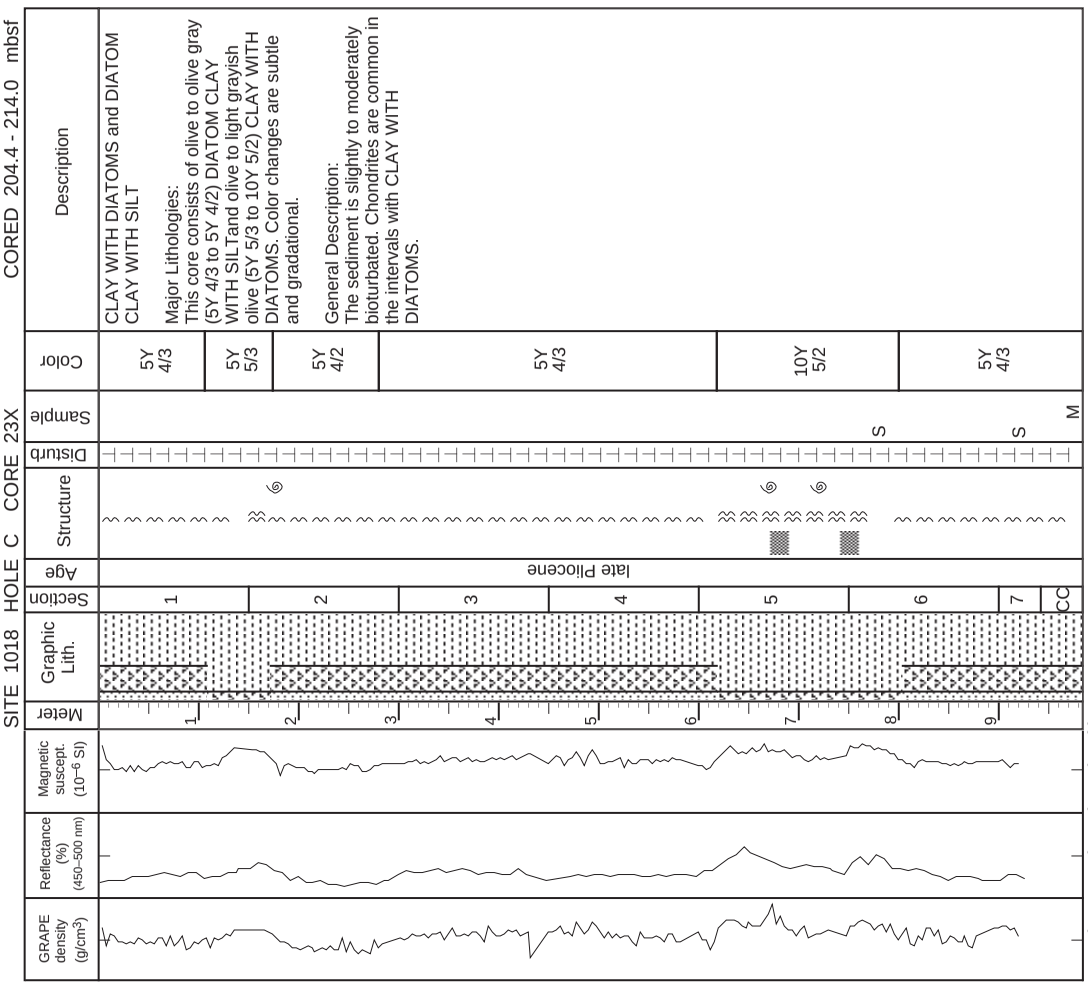
Major Lithologies:
This core consists of thick, meter-scale, alternations between greenish gray (5GY 5/1) CLAY WITH SILT AND DIATOMS, dark gray (5Y 4/1) to grayish olive (10Y 4/1) NANNOFOSSIL OOZE WITH CLAY AND DIATOMS, and dark olive gray (5Y 3/2) DIATOM CLAY MIXED SEDIMENT. Small (mm-scale), white sponges are distributed throughout the core.

General Description:
The sediments are mostly homogeneous, but distinct burrows are present in Sections 3 and 4.

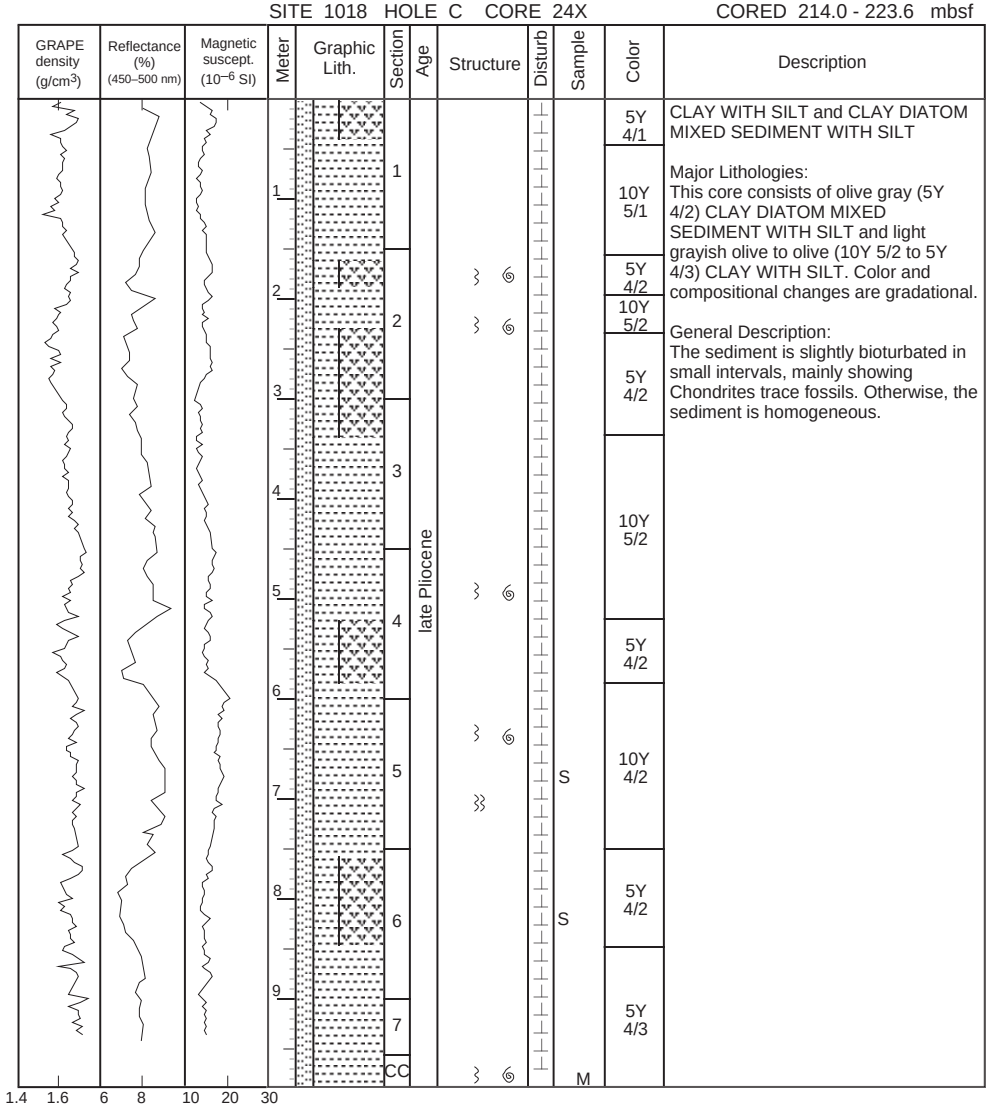

SITE 1018 HOLE C CORE 21X
CORED 185.2 - 194.7 mbsf
GRAPE density (g/cm³)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10⁻⁶ SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
Quaternary
5Y 4/2
10Y 5/2
5Y 5/3 To 5Y 4/3
5Y 5/3 To 5Y 6/3
5Y 4/2
10Y 3/1
5Y 5/2 To 10Y 4/2
CLAY WITH SILT and DIATOM CLAY WITH SILT
Major Lithologies:
This core alternates between light grayish olive to pale olive (10Y 5/2 to 5Y 6/3) CLAY WITH SILT and olive gray to grayish olive (5Y 4/2 to 10Y 4/2) DIATOM CLAY WITH SILT. Color changes are gradual.
General Description:
The sediment is moderately bioturbated. Chondrites are common in the lower portion of the core.

SITE 1018 HOLE C CORE 22X CORED 194.7 - 204.4 mbsf

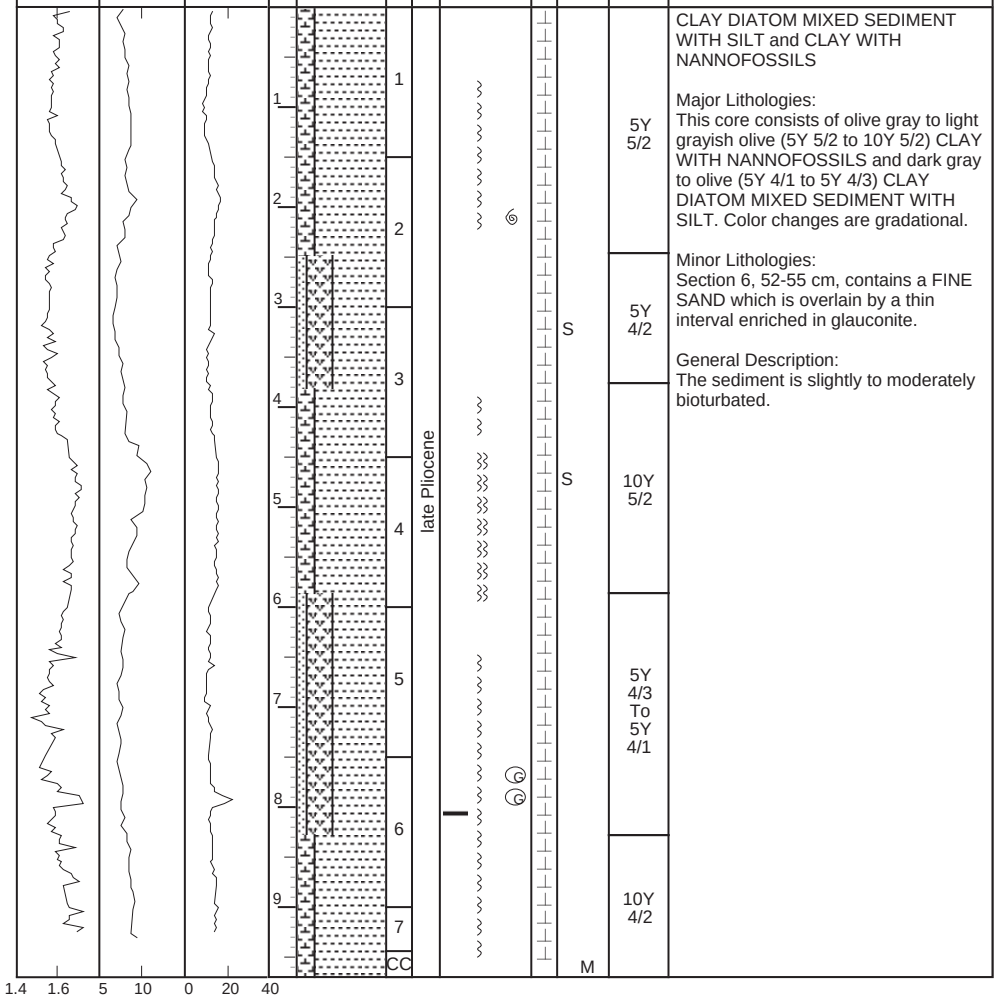



SITE 1018 HOLE C CORE 23X CORED 204.4 - 214.0 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10−6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
1
2
3
4
5
6
7
CC
5Y 4/3
5Y 5/3
5Y 4/2
5Y 4/3
10Y 5/2
5Y 4/3
S
S
M
CLAY WITH DIATOMS and DIATOM CLAY WITH SILT
Major Lithologies:
This core consists of olive to olive gray (5Y 4/3 to 5Y 4/2) DIATOM CLAY WITH SILTand olive to light grayish olive (5Y 5/3 to 10Y 5/2) CLAY WITH DIATOMS. Color changes are subtle and gradational.
General Description:
The sediment is slightly to moderately bioturbated. Chondrites are common in the intervals with CLAY WITH DIATOMS.

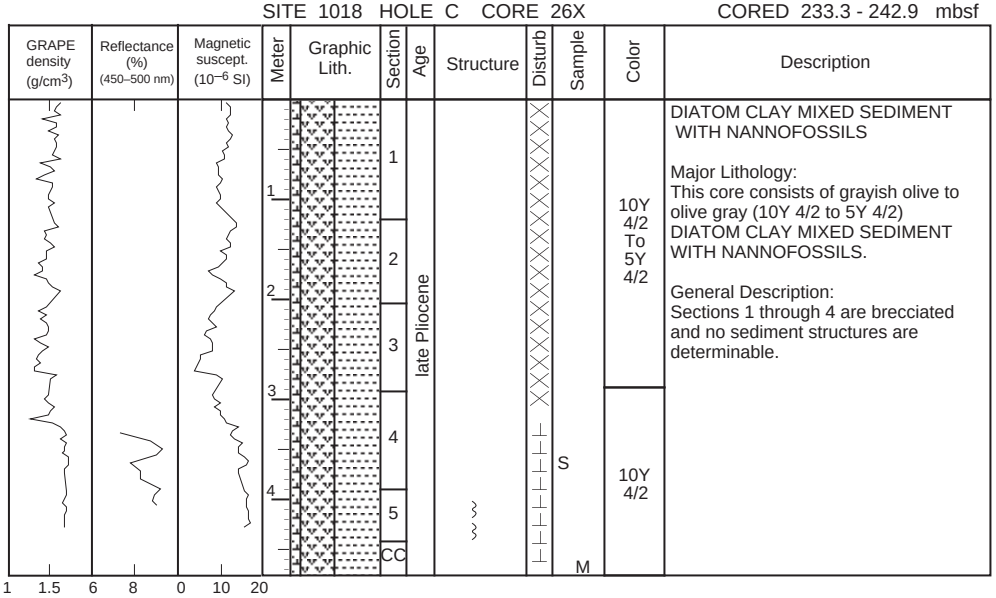
SITE 1018 HOLE C CORE 24X CORED 214.0 - 223.6 mbsf



SITE 1018 HOLE C CORE 25X CORED 223.6 - 233.3 mbsf



SITE 1018 HOLE C CORE 26X CORED 233.3 - 242.9 mbsf

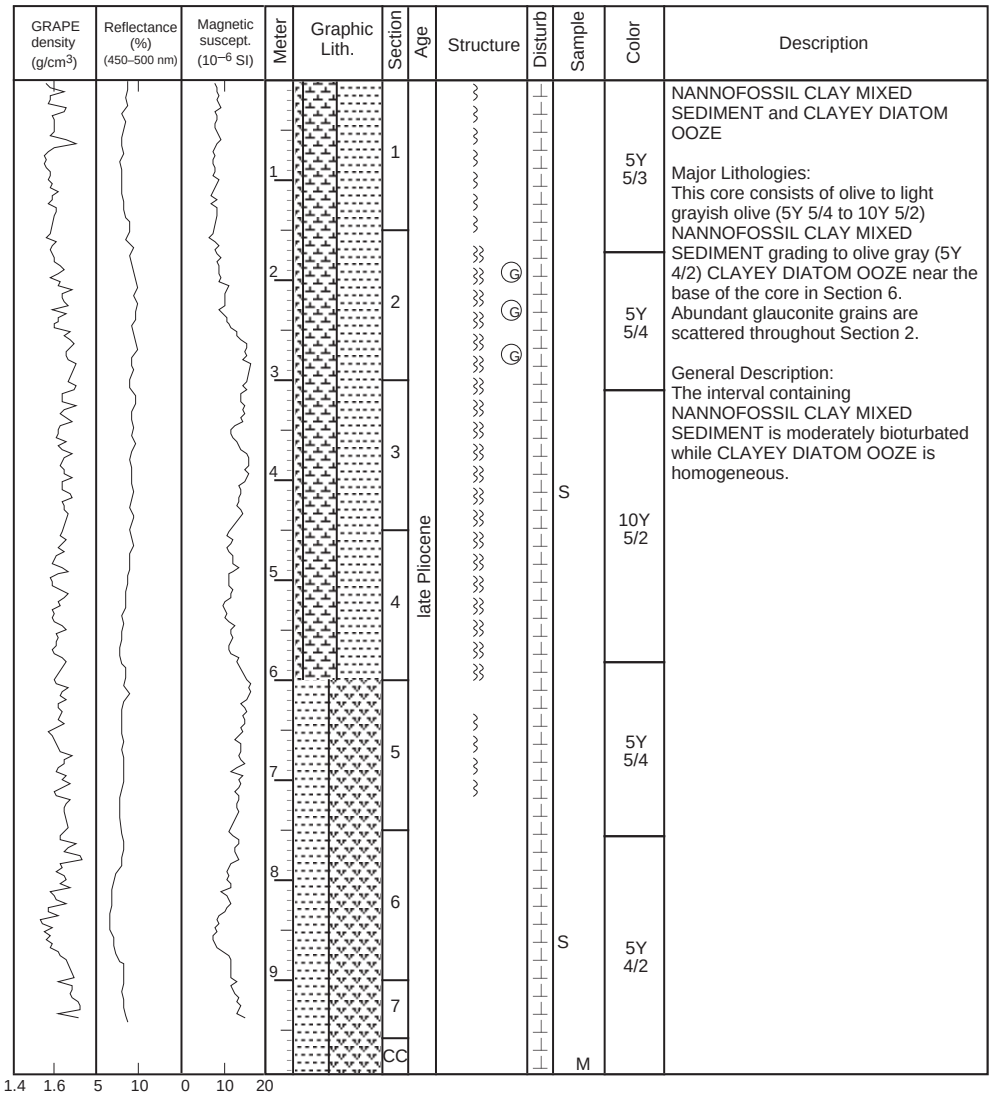


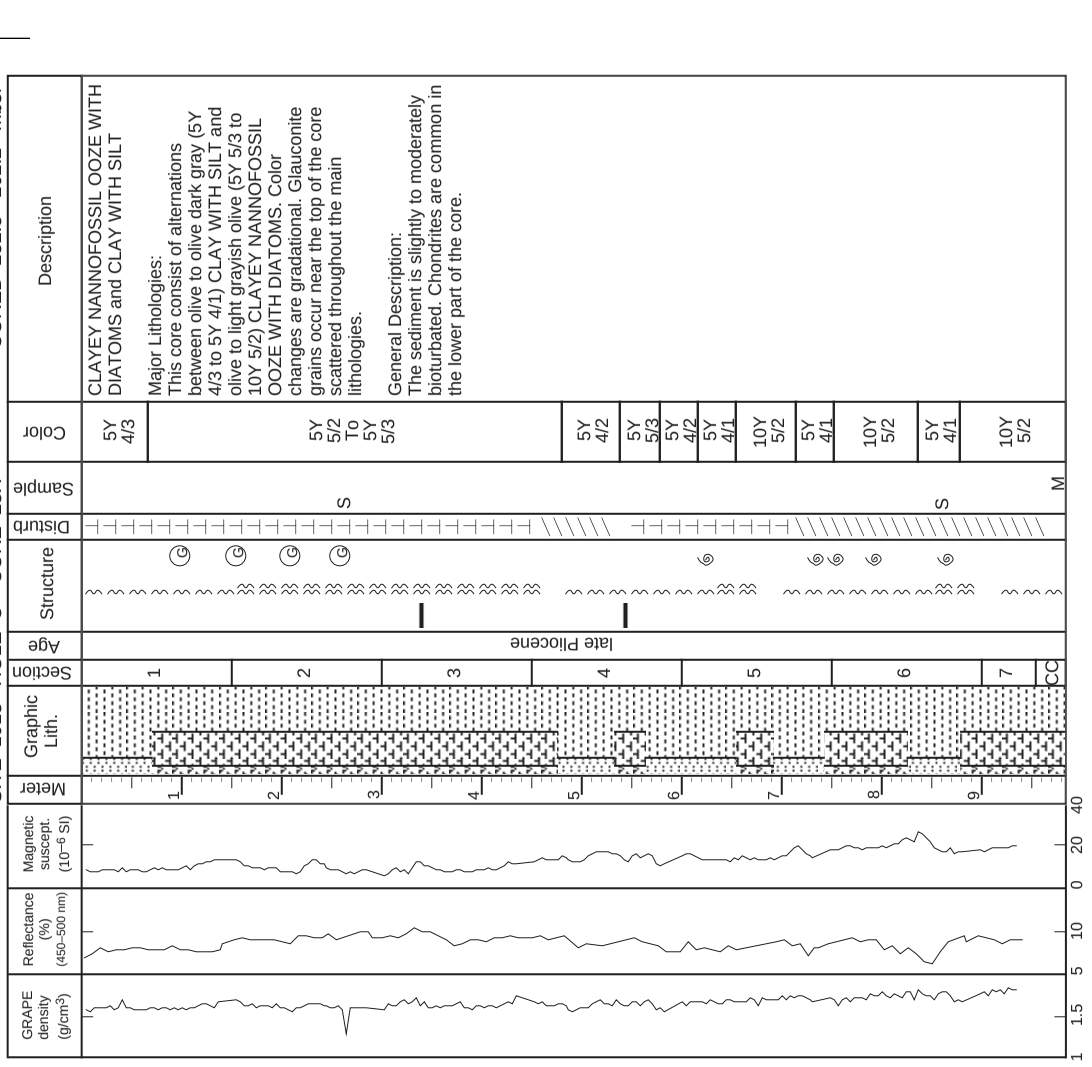
DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS

Major Lithology:
This core consists of grayish olive to olive gray (10Y 4/2 to 5Y 4/2) DIATOM CLAY MIXED SEDIMENT WITH NANNOFOSSILS.

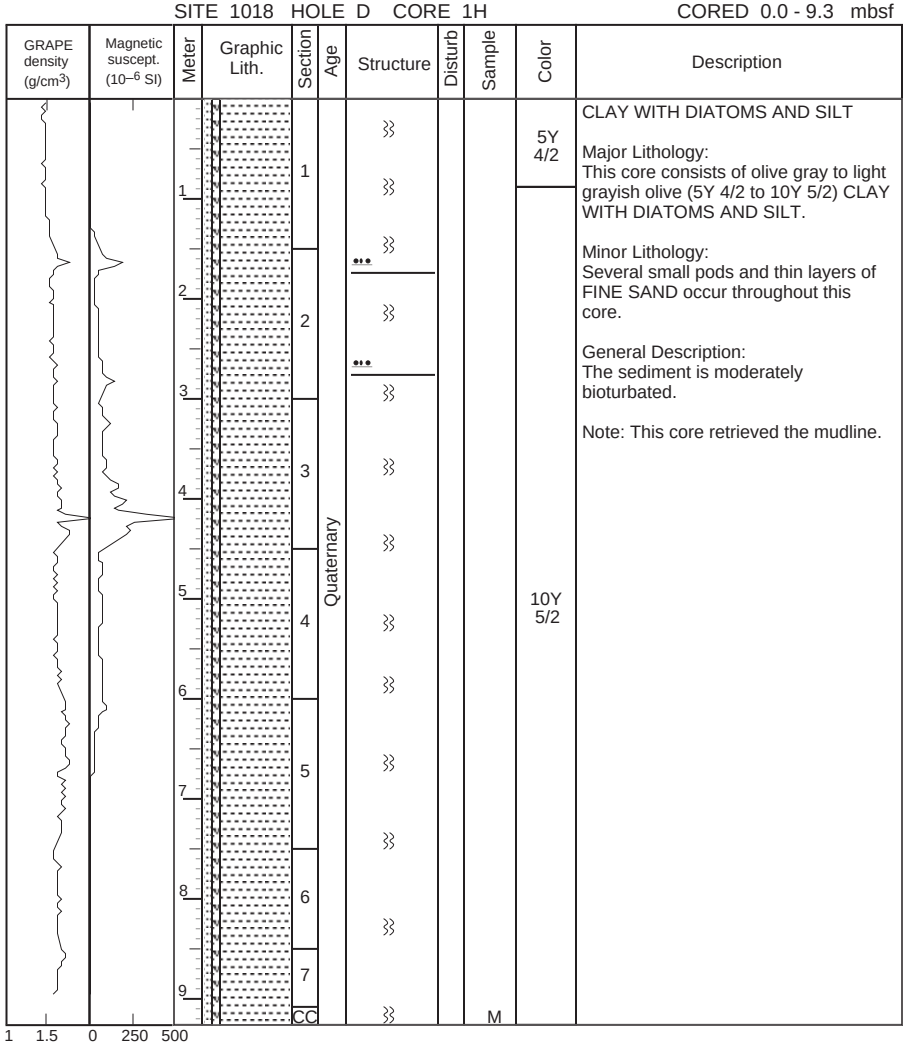
General Description:
Sections 1 through 4 are brecciated and no sediment structures are determinable.

SITE 1018 HOLE C CORE 27X CORED 242.9 - 252.5 mbsf




SITE 1018 HOLE C CORE 28X CORED 252.5 - 262.2 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10−6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
late Pliocene
CLAYEY NANNOFOSSIL OOZE WITH DIATOMS and CLAY WITH SILT
Major Lithologies:
This core consist of alternations between olive to olive dark gray (5Y 4/3 to 5Y 4/1) CLAY WITH SILT and olive to light grayish olive (5Y 5/3 to 10Y 5/2) CLAYEY NANNOFOSSIL OOZE WITH DIATOMS. Color changes are gradational. Glauconite grains occur near the top of the core scattered throughout the main lithologies.
General Description:
The sediment is slightly to moderately bioturbated. Chondrites are common in the lower part of the core.
5Y 4/3
5Y 5/2 To 5Y 5/3
5Y 4/2
5Y 5/3
5Y 4/2
5Y 4/1
10Y 5/2
5Y 4/1
10Y 5/2
5Y 4/1
10Y 5/2
1 1.5 5 10 0 20 40
1 2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 CC
S S M

SITE 1018 HOLE D CORE 1H CORED 0.0 - 9.3 mbsf



CLAY WITH DIATOMS AND SILT

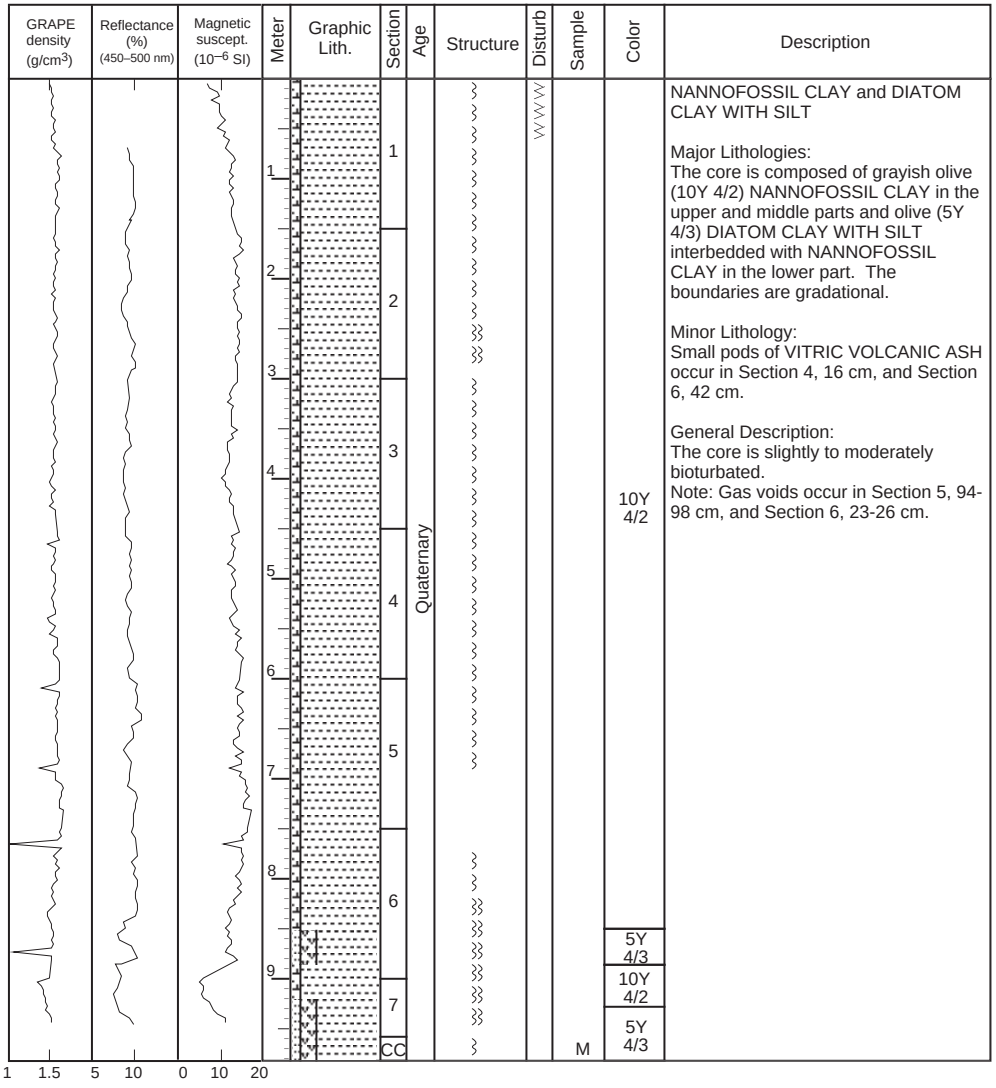
Major Lithology:
This core consists of olive gray to light grayish olive (5Y 4/2 to 10Y 5/2) CLAY WITH DIATOMS AND SILT.

Minor Lithology:
Several small pods and thin layers of FINE SAND occur throughout this core.

General Description:
The sediment is moderately bioturbated.

Note: This core retrieved the mudline.

SITE 1018 HOLE D CORE 2H CORED 9.3 - 18.8 mbsf



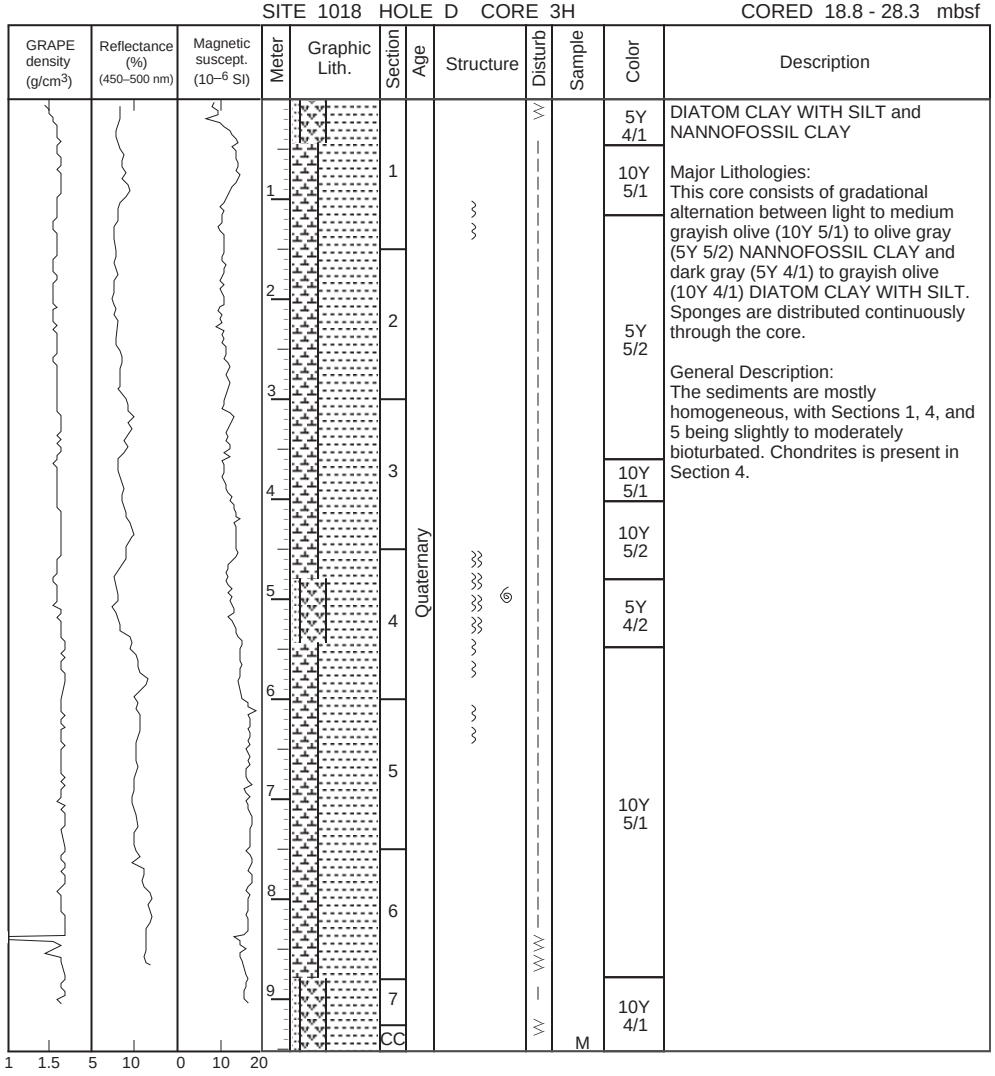
NANNOFOSSIL CLAY and DIATOM CLAY WITH SILT

Major Lithologies:
The core is composed of grayish olive (10Y 4/2) NANNOFOSSIL CLAY in the upper and middle parts and olive (5Y 4/3) DIATOM CLAY WITH SILT interbedded with NANNOFOSSIL CLAY in the lower part. The boundaries are gradational.

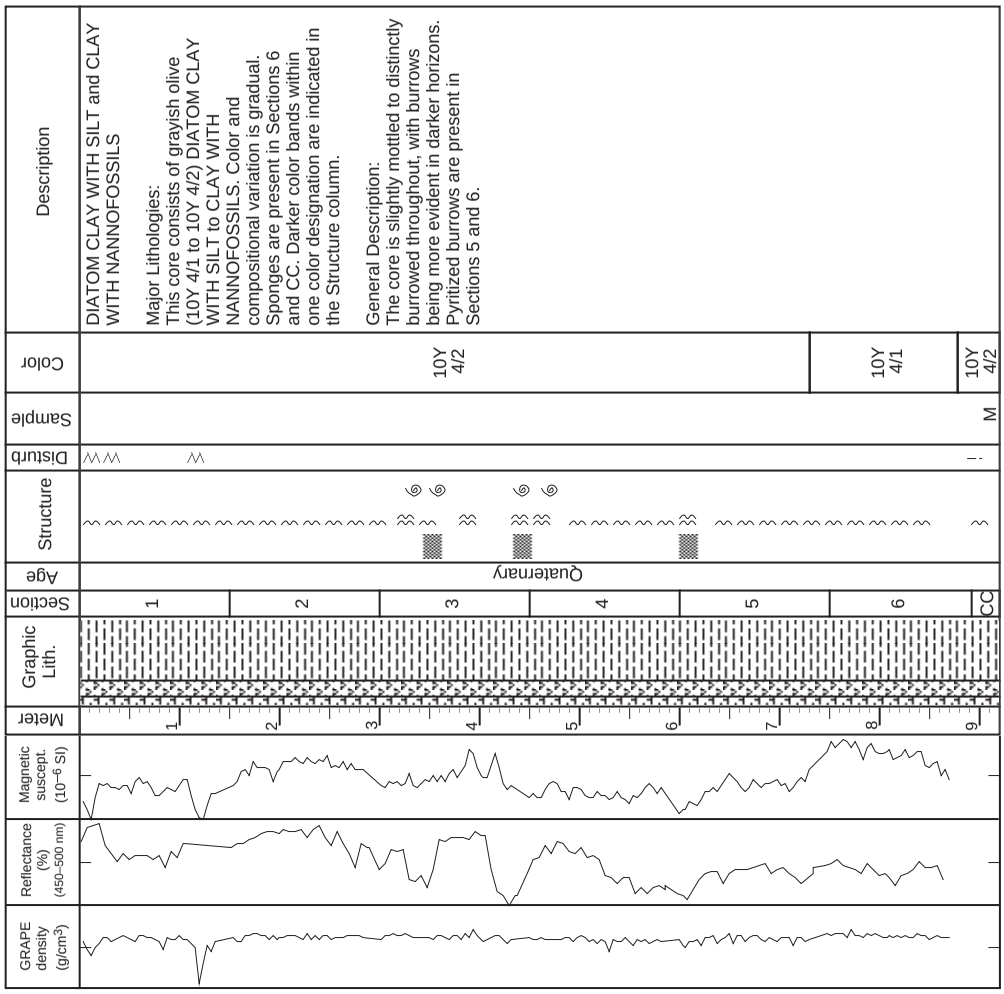
Minor Lithology:
Small pods of VITRIC VOLCANIC ASH occur in Section 4, 16 cm, and Section 6, 42 cm.

General Description:
The core is slightly to moderately bioturbated.
Note: Gas voids occur in Section 5, 94-98 cm, and Section 6, 23-26 cm.

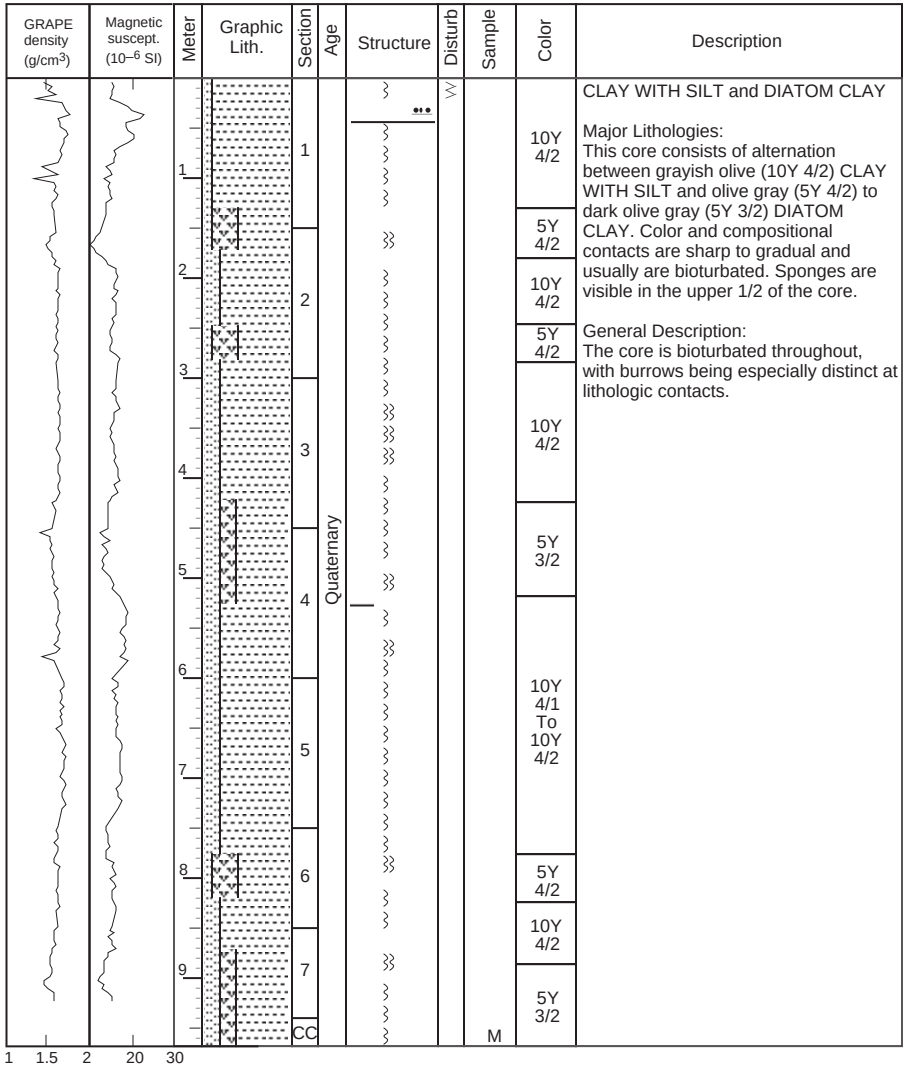
SITE 1018 HOLE D CORE 3H CORED 18.8 - 28.3 mbsf



SITE 1018 HOLE D CORE 4H CORED 28.3 - 37.8 mbsf



SITE 1018 HOLE D CORE 5H CORED 37.8 - 47.3 mbsf

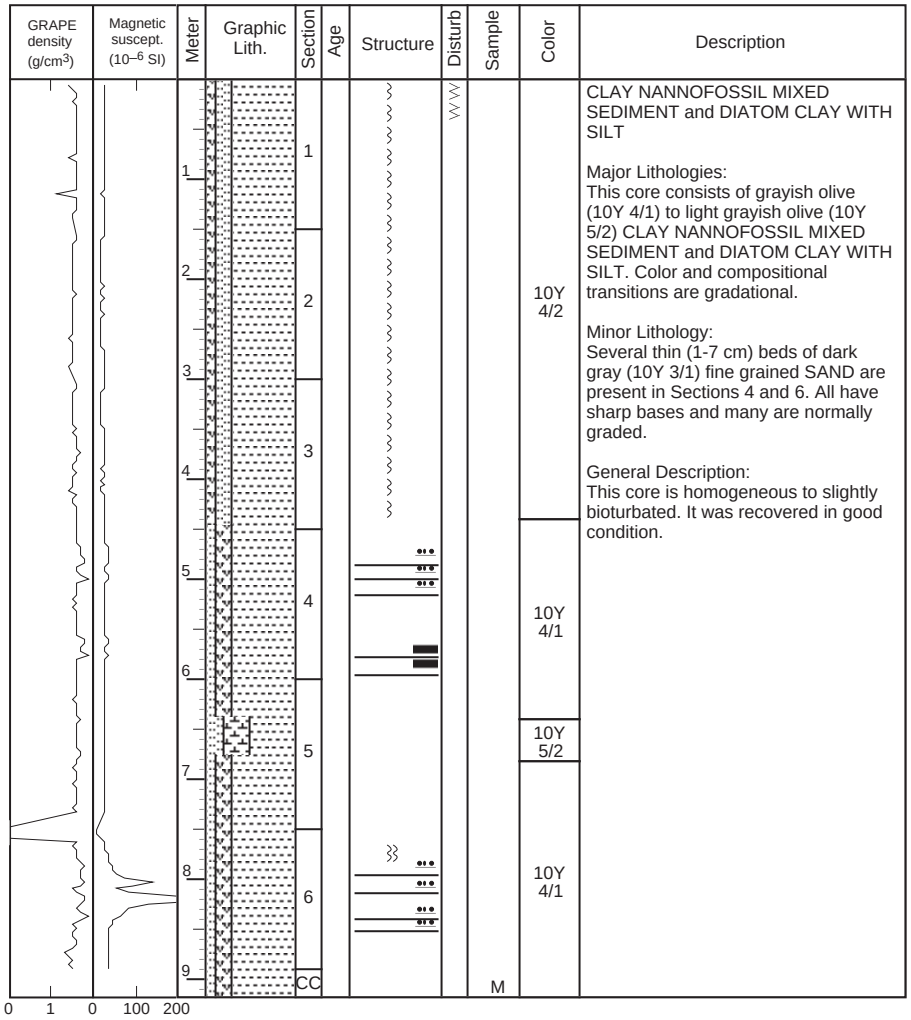


CLAY WITH SILT and DIATOM CLAY

Major Lithologies:
This core consists of alternation between grayish olive (10Y 4/2) CLAY WITH SILT and olive gray (5Y 4/2) to dark olive gray (5Y 3/2) DIATOM CLAY. Color and compositional contacts are sharp to gradual and usually are bioturbated. Sponges are visible in the upper 1/2 of the core.

General Description:
The core is bioturbated throughout, with burrows being especially distinct at lithologic contacts.

SITE 1018 HOLE D CORE 6H CORED 47.3 - 56.8 mbsf



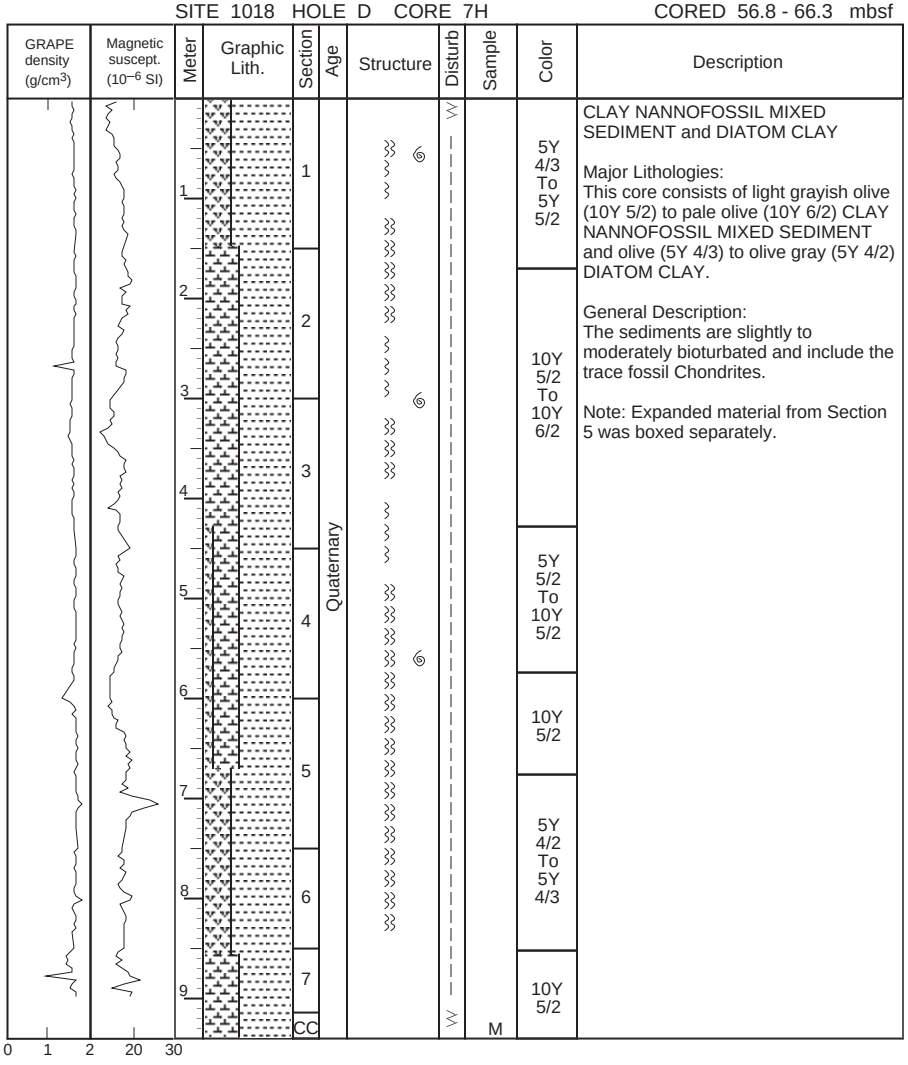
CLAY NANNOFOSSIL MIXED SEDIMENT and DIATOM CLAY WITH SILT

Major Lithologies:
This core consists of grayish olive (10Y 4/1) to light grayish olive (10Y 5/2) CLAY NANNOFOSSIL MIXED SEDIMENT and DIATOM CLAY WITH SILT. Color and compositional transitions are gradational.

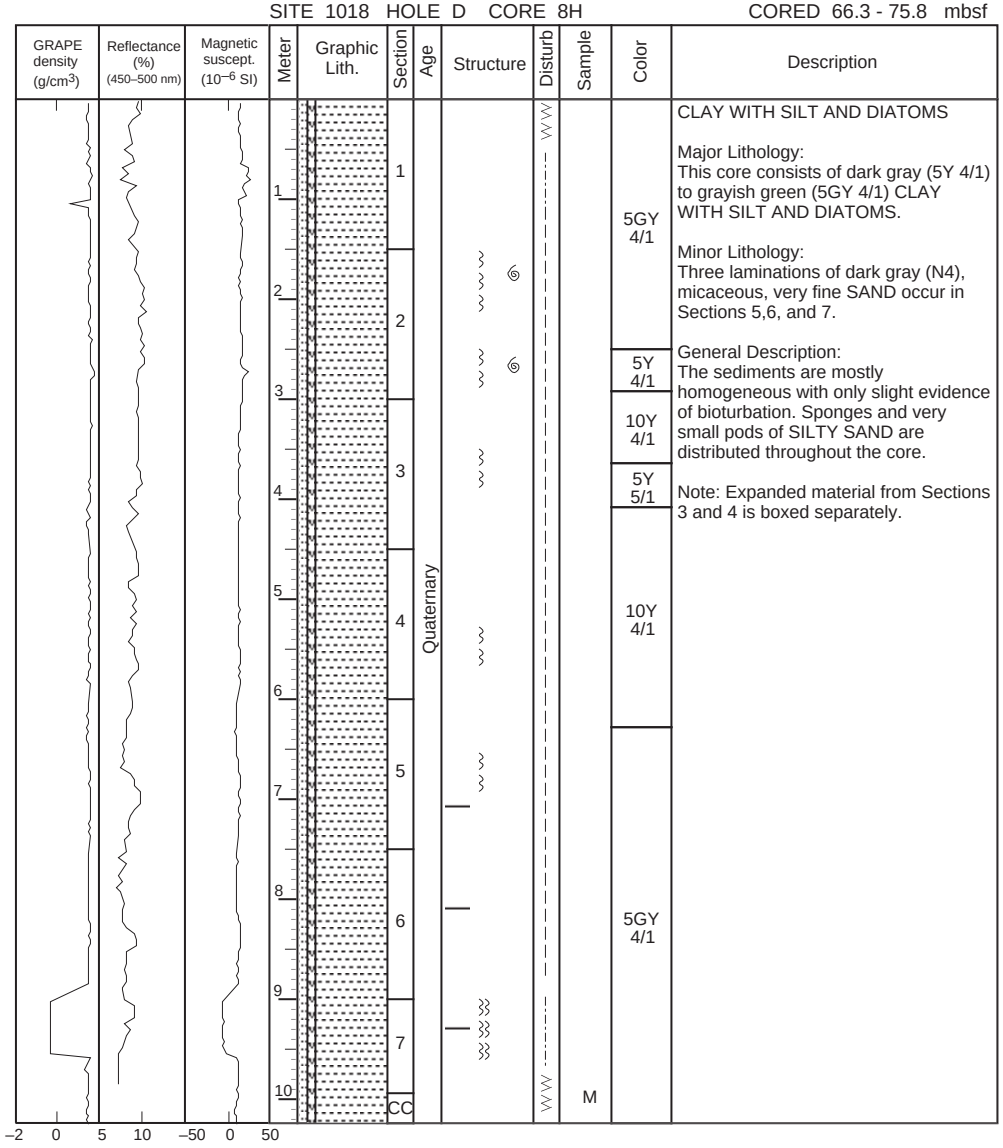
Minor Lithology:
Several thin (1-7 cm) beds of dark gray (10Y 3/1) fine grained SAND are present in Sections 4 and 6. All have sharp bases and many are normally graded.

General Description:
This core is homogeneous to slightly bioturbated. It was recovered in good condition.

SITE 1018 HOLE D CORE 7H CORED 56.8 - 66.3 mbsf



SITE 1018 HOLE D CORE 8H CORED 66.3 - 75.8 mbsf



CLAY WITH SILT AND DIATOMS

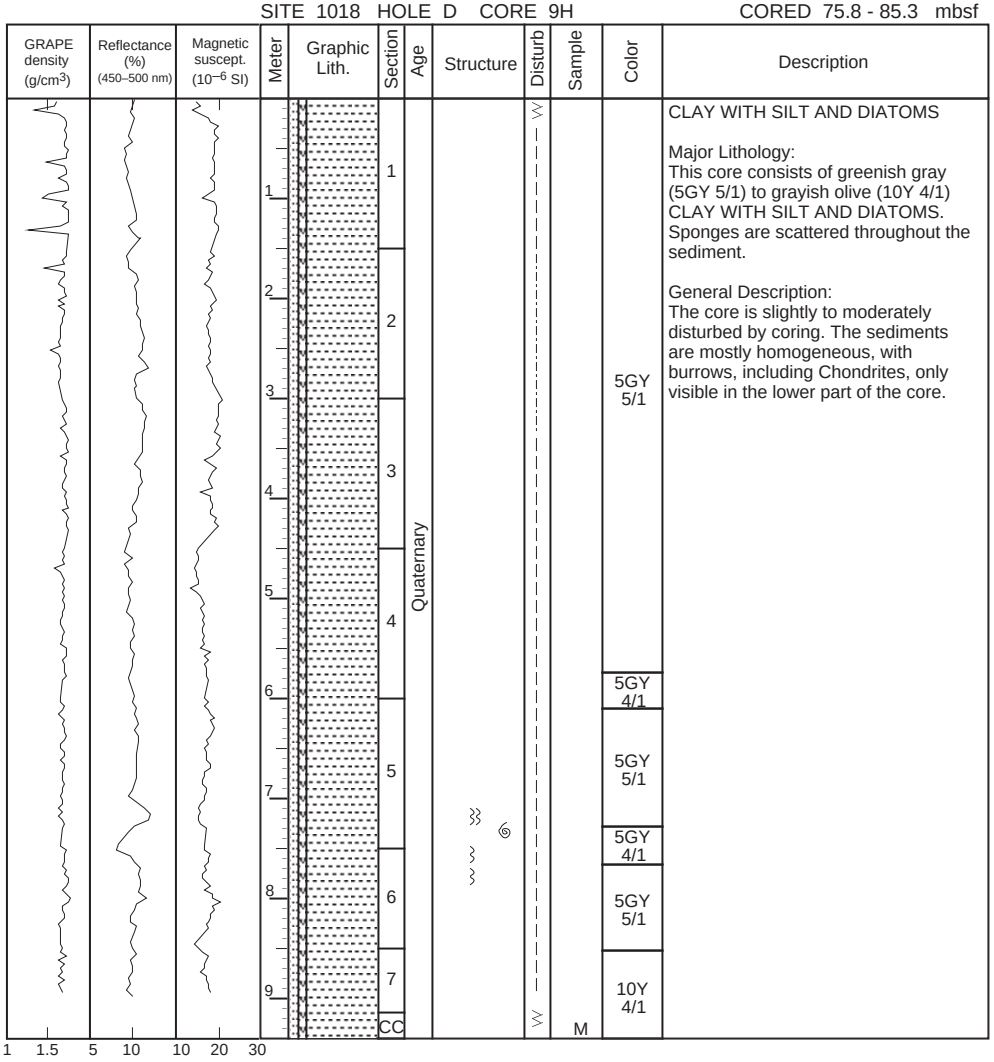
Major Lithology:
This core consists of dark gray (5Y 4/1) to grayish green (5GY 4/1) CLAY WITH SILT AND DIATOMS.

Minor Lithology:
Three laminations of dark gray (N4), micaceous, very fine SAND occur in Sections 5,6, and 7.

General Description:
The sediments are mostly homogeneous with only slight evidence of bioturbation. Sponges and very small pods of SILTY SAND are distributed throughout the core.

Note: Expanded material from Sections 3 and 4 is boxed separately.

SITE 1018 HOLE D CORE 9H CORED 75.8 - 85.3 mbsf

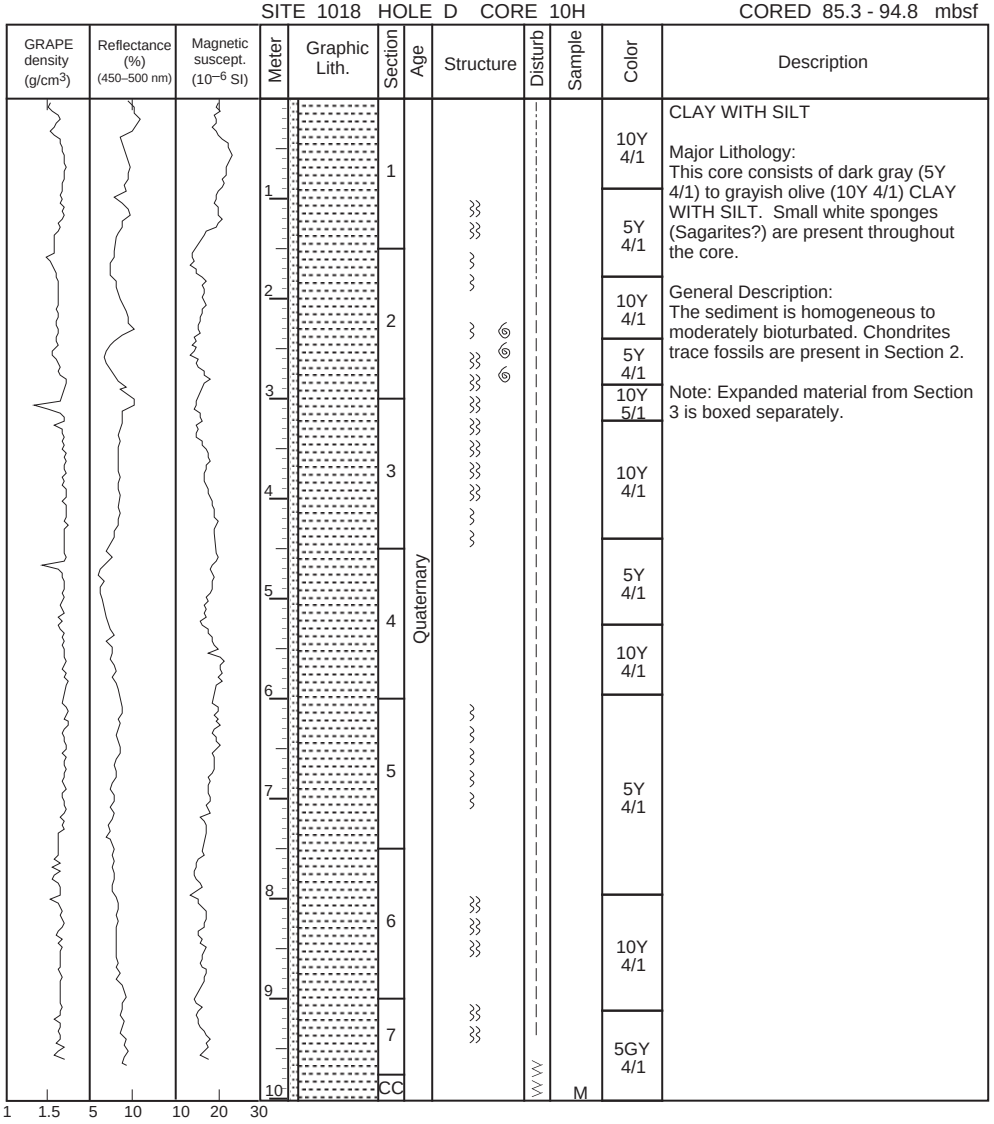


CLAY WITH SILT AND DIATOMS

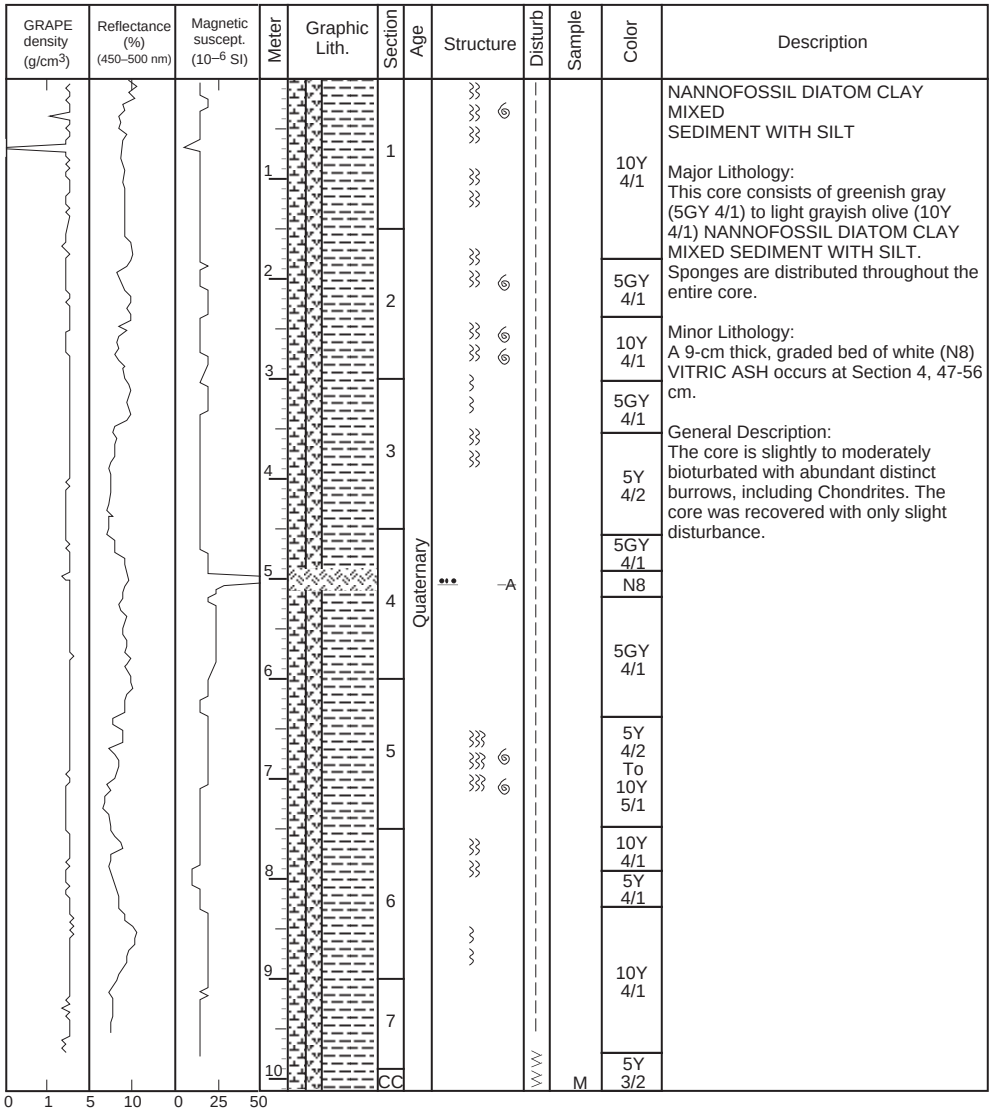
Major Lithology:
This core consists of greenish gray (5GY 5/1) to grayish olive (10Y 4/1) CLAY WITH SILT AND DIATOMS. Sponges are scattered throughout the sediment.

General Description:
The core is slightly to moderately disturbed by coring. The sediments are mostly homogeneous, with burrows, including Chondrites, only visible in the lower part of the core.

SITE 1018 HOLE D CORE 10H CORED 85.3 - 94.8 mbsf



SITE 1018 HOLE D CORE 11H CORED 94.8 - 104.3 mbsf



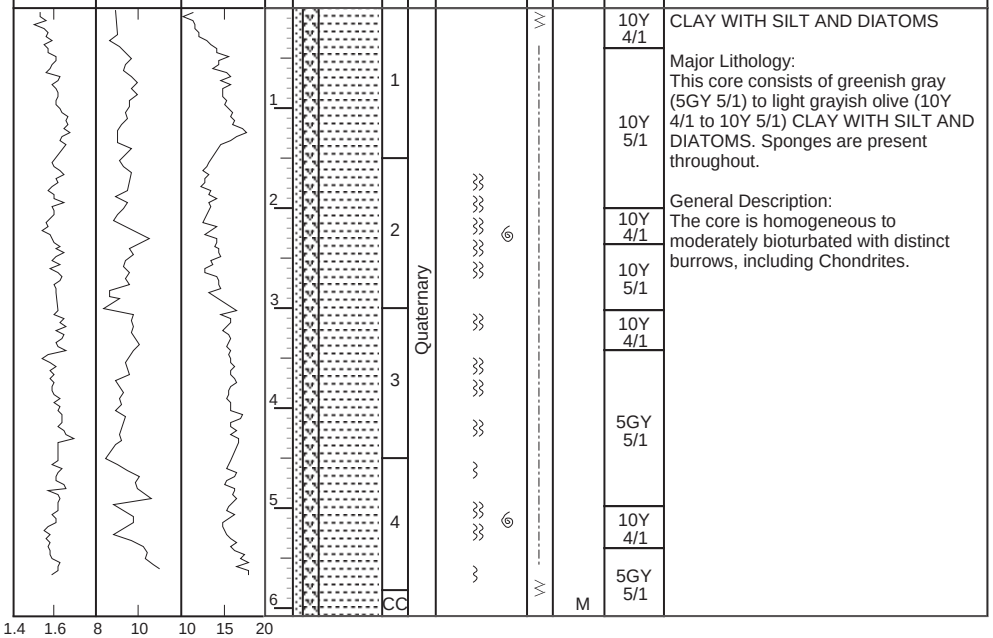
NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT WITH SILT

Major Lithology:
This core consists of greenish gray (5GY 4/1) to light grayish olive (10Y 4/1) NANNOFOSSIL DIATOM CLAY MIXED SEDIMENT WITH SILT. Sponges are distributed throughout the entire core.

Minor Lithology:
A 9-cm thick, graded bed of white (N8) VITRIC ASH occurs at Section 4, 47-56 cm.

General Description:
The core is slightly to moderately bioturbated with abundant distinct burrows, including Chondrites. The core was recovered with only slight disturbance.

SITE 1018 HOLE D CORE 12X CORED 104.3 - 110.1 mbsf

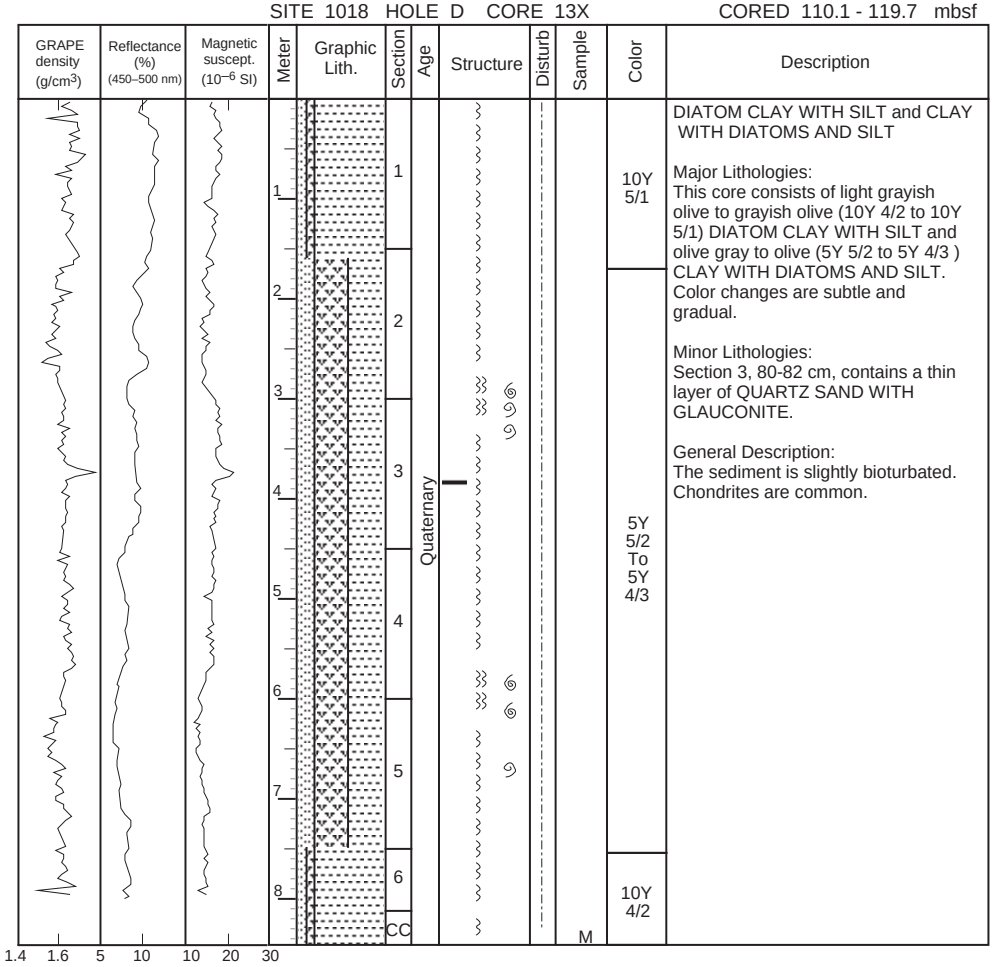


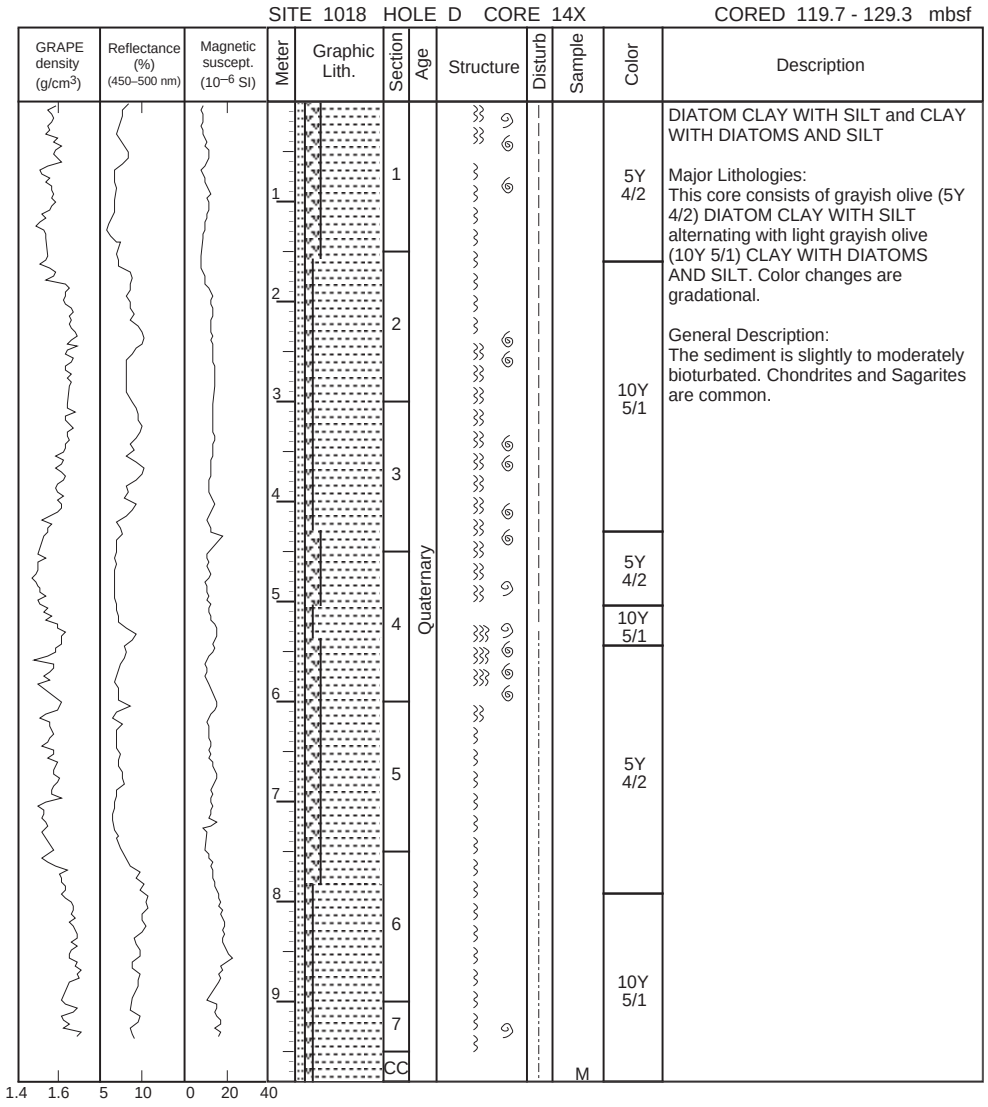
CLAY WITH SILT AND DIATOMS

Major Lithology:
This core consists of greenish gray (5GY 5/1) to light grayish olive (10Y 4/1 to 10Y 5/1) CLAY WITH SILT AND DIATOMS. Sponges are present throughout.

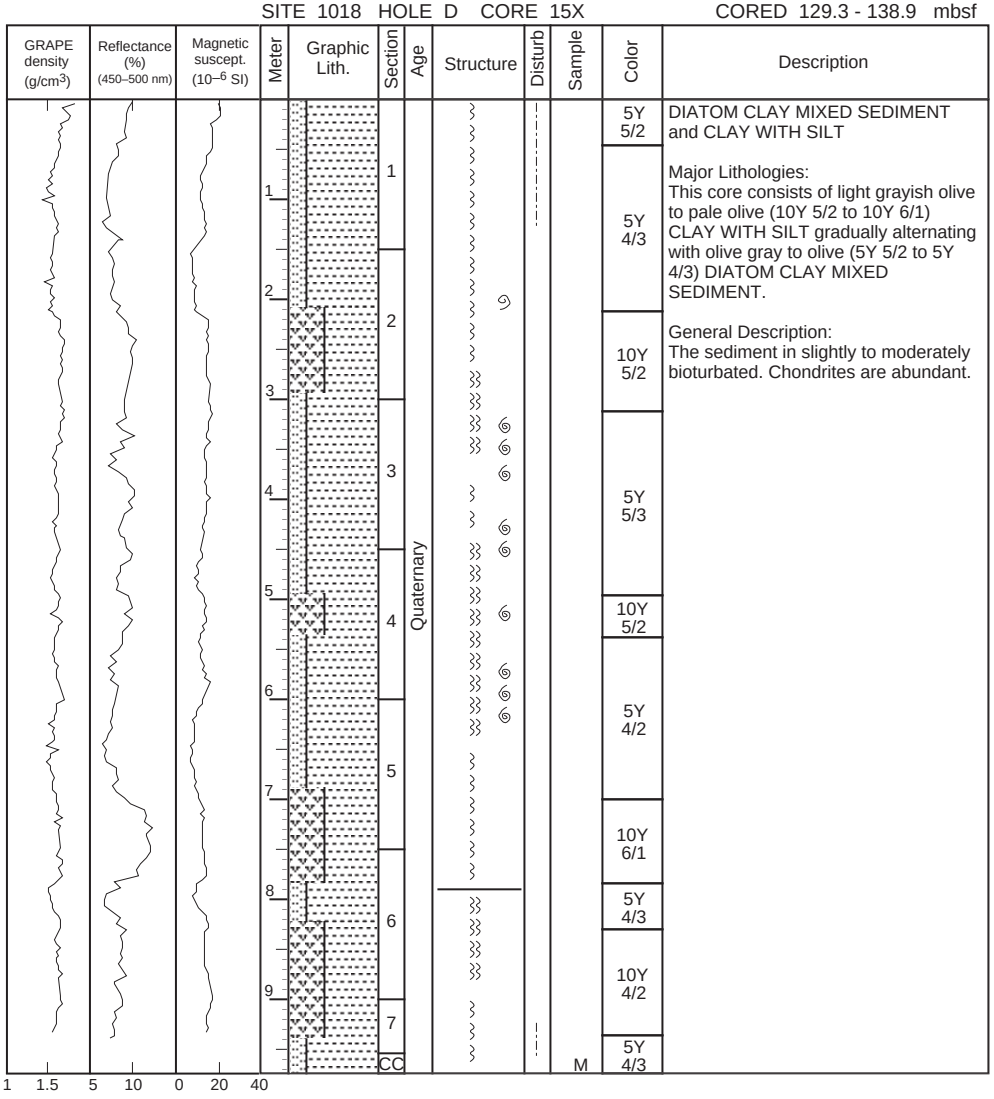
General Description:
The core is homogeneous to moderately bioturbated with distinct burrows, including Chondrites.

SITE 1018 HOLE D CORE 13X CORED 110.1 - 119.7 mbsf




SITE 1018 HOLE D CORE 14X
CORED 119.7 - 129.3 mbsf
GRAPE density (g/cm3)
Reflectance (%) (450–500 nm)
Magnetic suscept. (10−6 SI)
Meter
Graphic Lith.
Section
Age
Structure
Disturb
Sample
Color
Description
1.4 1.6
5 10
0 20 40
1 2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 CC
Quaternary
M
5Y 4/2
10Y 5/1
5Y 4/2
10Y 5/1
5Y 4/2
10Y 5/1
DIATOM CLAY WITH SILT and CLAY WITH DIATOMS AND SILT
Major Lithologies:
This core consists of grayish olive (5Y 4/2) DIATOM CLAY WITH SILT alternating with light grayish olive (10Y 5/1) CLAY WITH DIATOMS AND SILT. Color changes are gradational.
General Description:
The sediment is slightly to moderately bioturbated. Chondrites and Sagarites are common.

SITE 1018 HOLE D CORE 15X CORED 129.3 - 138.9 mbsf

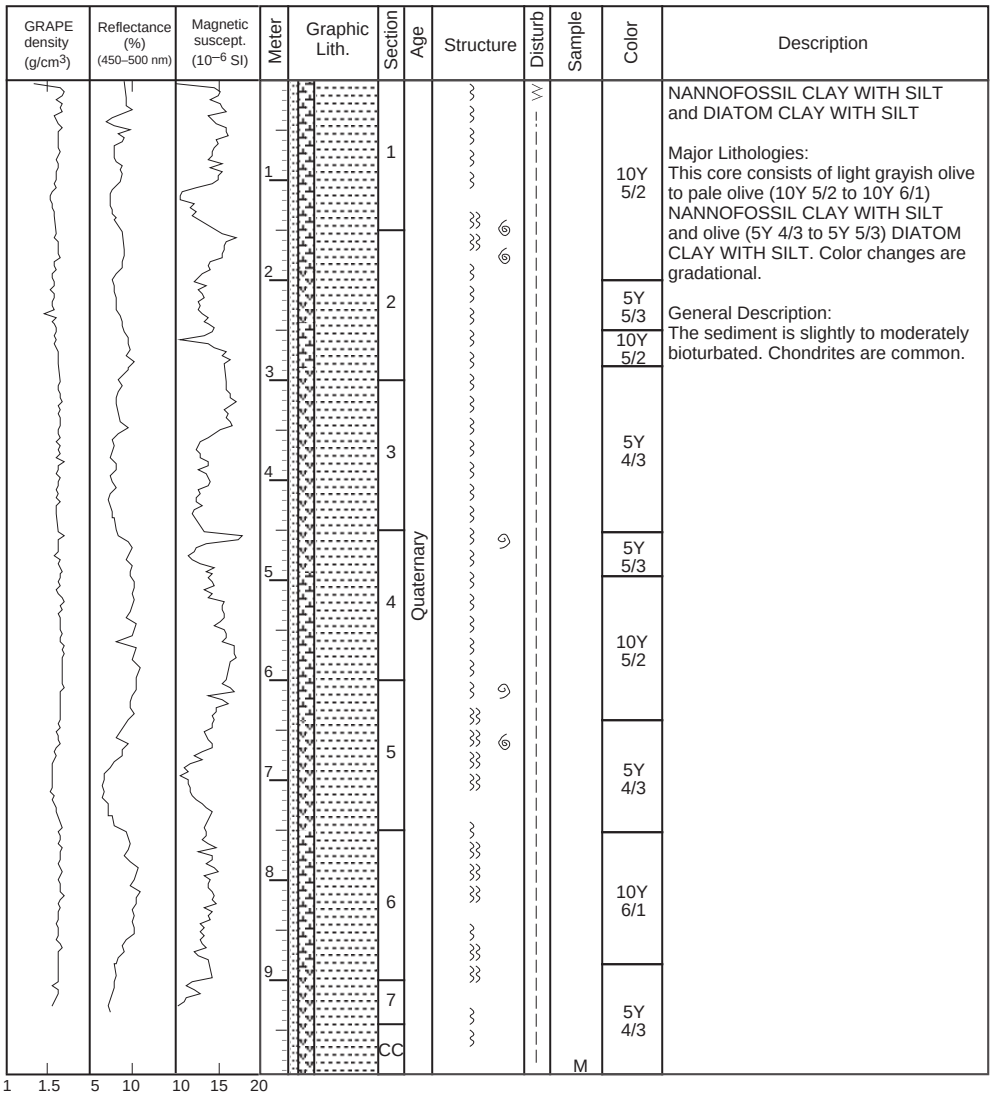


DIATOM CLAY MIXED SEDIMENT and CLAY WITH SILT

Major Lithologies:
This core consists of light grayish olive to pale olive (10Y 5/2 to 10Y 6/1) CLAY WITH SILT gradually alternating with olive gray to olive (5Y 5/2 to 5Y 4/3) DIATOM CLAY MIXED SEDIMENT.

General Description:
The sediment in slightly to moderately bioturbated. Chondrites are abundant.

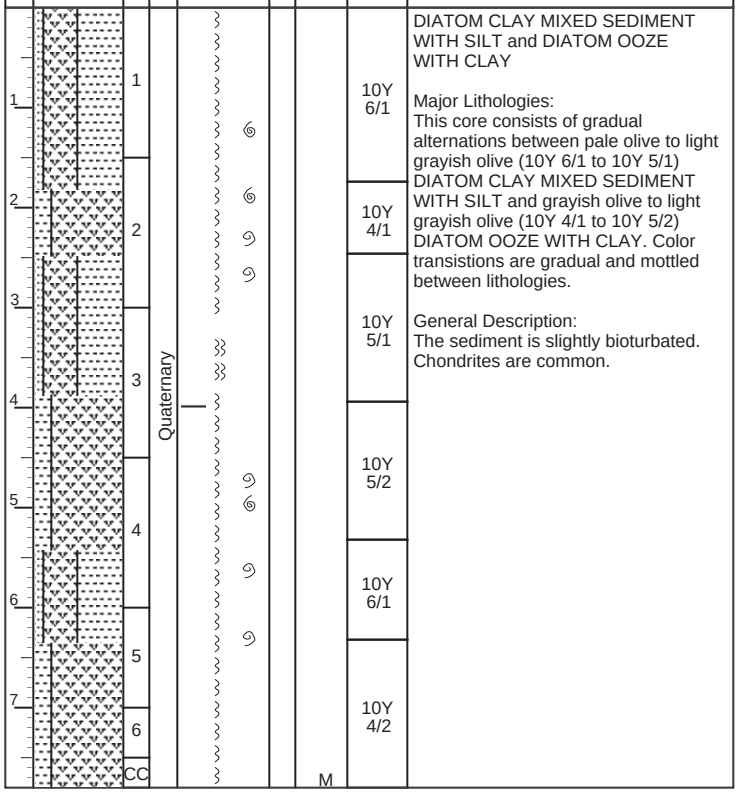
SITE 1018 HOLE D CORE 16X CORED 138.9 - 148.5 mbsf



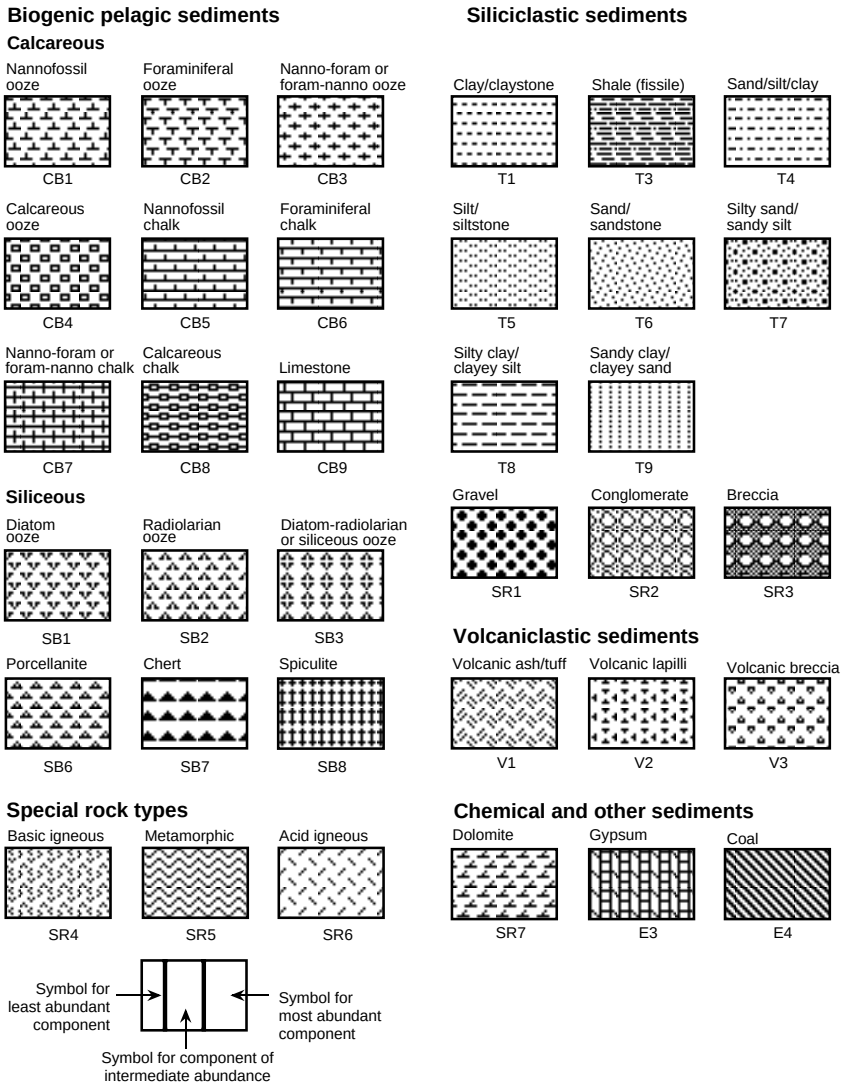
SITE 1018 HOLE D CORE 17X CORED 148.5 - 158.1 mbsf

Meter	Graphic Lith.	Section	Age	Structure	Disturb	Sample	Color	Description
1–9		1	Quaternary				5Y 4/3	CLAY WITH SILT and CLAY DIATOM MIXED SEDIMENT Major Lithologies: This core consists of grayish olive to light grayish olive (10Y 4/2 to 10Y 5/2) CLAY WITH SILT alternating with olive to olive gray (5Y 4/3 to 5Y 5/2) CLAY DIATOM MIXED SEDIMENT. Color changes are gradual. General Description: The sediment is moderately bioturbated. Sagarites are common throughout Sections 1 and 2.
		2					10Y 5/2	
							5Y 4/3	
		3					10Y 5/2	
							5Y 4/2	
		4					10Y 4/2	
							5Y 4/3	
							10Y 5/2	
		5					5Y 4/3	
		6					5Y 5/3	
		7				M		
		CC						

SITE 1018 HOLE D CORE 18X CORED 158.1 - 167.7 mbsf

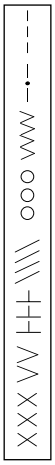


Key to symbols used in the “Graphic Lithology” column on the core description sheets.



Key to symbols used in the "Structures" column on the core description sheets.

Drilling disturbance symbols



Soft sediments

- Slightly disturbed
- Moderately disturbed
- Highly disturbed
- Soupy

Hard sediments

- Slightly fractured
- Moderately fractured
- Highly fragmented
- Drilling breccia

Sedimentary structures

- Burrows, rare (<30% surface area)
- Burrows, common (30%–60% surface area)
- Burrows, abundant (>60% surface area)
- Discrete *Zoophycos* trace fossil
- Discrete *Chondrites* trace fossil
- *Sagarites* sponge
- Gastropods
- Other bivalves
- Shell fragments
- Wood framents
- Fish debris

Sedimentary structures cont.

- Fining-upward sequence
- Interval over which primary sedimentary structure occur
- Planar laminae
- Wedge-planar laminae/beds
- Graded bedding (normal)
- Graded bedding (reversed)
- Sharp contact
- Gradational contact
- Scoured, sharp contact
- Scoured contact with graded bed
- Thick color bands (sharp contact)
- Thick color bands (gradational contact)
- Medium color bands (sharp contact)
- Medium color bands (gradational contact)
- Thin color bands (sharp contact)
- Thin color bands (gradational contact)
- Laminations (mm scale)
- Individual thick color band
- Individual medium color band
- Individual thin color band
- Individual lamination
- Wavy lamination
- Cross laminae
- Cross stratification
- Cross bedding
- Convoluted/contorted bedding
- Flaser bedding
- Graded interval, normal
- Veins
- Water escape structure
- Scour

- Isolated pebbles/cobbles
- Isolated mud clasts
- Slump blocks or slump folds
- Contorted slump
- Probable compaction fracture
- Microfault (normal)
- Microfault (thrust)
- Macrofault
- Fracture
- Totally fractured
- Vein structures
- Color mottles
- Dolomite nodule/concretion
- D — Disseminated dolomite
- P — Pyrite nodule/concretion
- P — Disseminated pyrite
- G — Glauconite
- Concretions/nodules
- Ba — Barite nodule/concretion
- Ba — Disseminated barite
- Ca — Calcite nodule/concretion
- C — Carbonate nodule/concretion
- Ch — Chert nodule/concretion
- A — Ash/pumice pods
- A — Ash layer