

Previous Chapter

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| | | SIT | E 1019 | | LE | B COR | | | | CORED 0.0 - 10.1 mbsf |
|------------------------------------------|-----------------------------------------------|----------|------------------|---------|------------|----------------------------------------|---------|--------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| } | { | 1 | | 1 | | | 000 | S | 10Y 4/1 | CLAY WITH SILT, NANNOFOSSILS, FORAMINIFERS, OR DIATOMS Major Lithology: This core consists primarily of light grayish olive (10Y 5/1) to dark gray (5Y 4/1) CLAY WITH SILT, |
| } | } | 2_ | | | | ## AX | 1 1 1 1 | S | 5Y 4/1 | NANNÓFOSSILS, FORAMINIFERS, OR DIATOMS. mm-scale charcoal fragments and fish scales are distributed throughout. Pyritized |
| | } | 3_ | | 2 | | ## ## ## ## ## ## ## ## ## ## ## ## ## | | S | 10Y 4/1 | burrows are present in Section 4. Minor Lithology: Dark to medium gray (N3 to N5), fine |
| | | | | 3 | | # ••• # | | | | to very fine FELDSPAR QUARTZ SAND AND SILT are intercalated as thin beds and laminations. Most are sharp-based and many are graded. |
| } | } | 4_ | | | ıry | # ••• ⇔ ₩ | | | 10Y 5/1 | The thin bed at Section 2, 80-84 cm, is distinctly lighter in color. General Description: The sediments are mostly |
| } | | 5 | | 4 | Quaternary | | | | | homogeneous with distinct burrows only present in Section 4. A few gelatinous to oily patches are present in Section 6. A 2-cm thick, mm-scale |
| } | } | 6 | | | | } | | | | laminated interval occurs at Section 2, 58-60 cm. |
| | | 7 | | 5 | | 8 8 | | | | |
| } | | 8_ | | | | | | | 10Y 4/1 | |
| } | | | | 6 | | | | S | 11 /1 | |
| } | | 9 | | 7 | | | / | | | |
| 1 2 | 0 200 40 | 10 00 | | СС | | | > | M | | |

| | | | SIT | E 1019 | $\overline{}$ | LE | C COR | | | | CORED 0.0 - 8.3 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|---------------|------------|----------------------------------------|---------|--------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | } | | | 1 | | }} }} }} ** | 0000000 | 0 | 5Y 4/1 | CLAY DIATOM NANNOFOSSIL SILT MIXED SEDIMENT and DIATOM OOZE WITH SILT AND CLAY |
| | | | 3 | | 2 | Quaternary | ************************************** | 00 | <i>o o</i> – | 10Y 4/1 | Major Lithologies: This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) DIATOM OOZE WITH SILT AND CLAY to CLAY DIATOM NANNOFOSIL SILT MIXED SEDIMENT. Foraminifers are also common in quantities of ~5%. Minor Lithology: A few laminations and thin beds of dark to medium gray (N3 to N5) FELDSPAR QUARTZ SAND AND SILT with sharp bases are present in this core. Two in Section 5 are graded. General Description: The sediments contain open, 1-1.5 cm diameter burrows in the uppermost |
| | | | 5 | | 4 | | ≣ | | S | 5Y 4/2 | two sections. No other sediment-filled burrows are visible. mm to cm-scale laminations are present at Section 4, 64-90 cm, and Section 5, 115-125 cm. |
| | } | } | 6 | | | | <u>•••</u> | | | 5Y 4/1 | |
| | | { | 7 | | 5 | | <u></u> | | | 5Y 4/2 | |
| } | | } | Ω - | | 6 | | | | | 10Y 4/1 | |
| 1 2 | 5 10 (|) 20 4 | 0 | | СС | | | ≥ | М | 5Y 3/2 | |

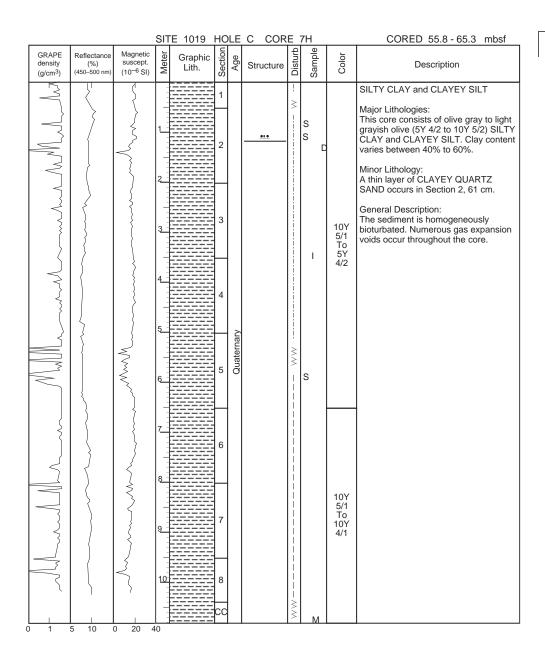
| | | | SIT | E 1019 | | LE | C COR | | 2H | | CORED 8.3 - 17.8 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|------------------|------------------|---------|------------|------------------------------------------------------------------------------------------------------------------|---------|--------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | JAMA | } | 1 | | 1 | | 910 910 8 | 000 | SD | 10Y 4/1 | CLAY WITH SILT and CLAY DIATOM MIXED SEDIMENT WITH NANNOFOSSILS AND FORAMINIFERS Major Lithologies: This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) CLAY |
| Man | | | 2 | | 2 | | 33 AV | | 3 0 | 5Y 4/1 | WITH SILT to CLAY DIATOM MIXED SEDIMENT WITH NANNOFOSSILS AND FORAMINIFERS. Several mmdiameter, black (N1) charcoal fragments are concentrated in restricted intervals in Sections 1-4. |
| WMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM | | | 4 | | 3 | nary | ≡ ≈ ≈ ≡ 33 33 35 36 37 37 37 38 38 38 38 38 38 38 38 38 38 | | s - | | Oval black (N1) burrows are of similar size, but are black due to abundant framboidal pyrite. Minor Lithologies: Thin beds and laminations of dark gray (N3) SAND AND SILT are distributed through the upper half of the core. Some are graded. A 2 cm thick light gray (N5) SILTY CLAY layer at Section |
| MMMM | Jan Jane | } | 6 | | 4 | Quaternary | Ø | | | 10Y 4/1 | 1, 146 cm, contains charcoal and abundant unidentified clay-size acicular crystallites. General Description: The sediments are homogeneous to moderately burrowed. |
| WWW WWW | | | 7 - - 8 | | 6 | | | | S | | |
| Jam | | | 9 | | 7 8 | | | | | | |
| .5 1.75 8 | 3 10 0 | 200 40 | 1 <u>0</u> 00 | ₩≕≕ | CC | | | L | М | | |

| | | | SIT | E 1019 | HC | LE | C | COR | | | | CORED 17.8 - 27.3 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|----------|------------------|---------|------------|----------|----------|----------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Struc | ture | Disturb | Sample | Color | Description |
| 7 | ξ' | } ' | П | \\ \\ | | | | | \wedge | | | SILTY CLAY WITH FORAMINIFERS |
| | | } | 1 | T 0 | 1 | | | Ø | W | | 5Y 4/1 | Major Lithology: This core consists of dark gray (5Y 4/1) to grayish olive (10Y 4/1) SILTY CLAY WITH FORAMINIFERS. Diatoms and nannofossils are also present in <10% quantities. Some |
| | } | | 2 | TV | 2 | | | | | | | intervals are slightly to moderately sandy. Charcoal fragments are disseminated in Sections 1, 4, and 7. |
| } | | } | 3_ | TV | | | ••• | δ | | D | | Minor Lithologies: Laminations to medium thick beds of dark to medium gray (N3 to N5) FELDSPAR QUARTZ SAND and GLAUCONITIC SAND WITH QUARTZ AND FELDSPAR are intercalated with |
| | | } | 4 | 7 | 3 | | | | | S I | 5Y 5/1 | the major lithology. GLAUCONITIC SAND WITH QUARTZ AND FELDSPAR forms both pure beds or is mixed with clay. Thicker layers are present in Sections 4 and 5. |
| | | | 5 | | 4 | Quaternary | *** | 99 | | | | General Description: The sediments are homogeneous to moderately burrowed. Fish scales are concentrated at the base of a sand layer in Section 3. |
| | { | \$ | 6_ | | | | 3 | Ø | /// | | | |
| { | } | | | M | ١ | | 3 | | - | | | |
| | | } | 7 | | 5 | | ** ** | 666 | | S | 5Y 4/1 | |
| } | \ \ \ | | 8 | | 6 | | 3 | | | S | | |
| | | | 9_ | | | | | <u>@</u> | | 5 | 10Y 4/1 | |
| { | | > | | | 7 | | | <u> </u> | | D | | |
| 1 2 | 0 10 (| 0 50 1 | 10 00 | | CC | | } | - 1 | > | М | 5Y 4/2 | |

| | | | SIT | E 1019 | <u>HC</u> | LE | C COR | | 4H | | CORED 27.3 - 36.8 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|----------|------------------|-----------|------------|-------------|---------|--------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450-500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 1 | | 1 | | <u>•••</u> | ~~~~~ | D | 10Y 5/1 To N3 | CLAY WITH SILT Major Lithology: This core consists of grayish olive (10Y 4/1) to greenish gray (5GY 4/1) |
| } | } | } | | | _ | | | | | 5Y 5/1 | CLAY WITH SILT. Minor Lithologies: Several thin beds and laminations of |
| W. Carlotte | | } | 2 | | 2 | | | | | 5Y 4/1 | dark gray (N3) SAND occur within the thicker beds in Section 1. A thin bed of light brown (5Y 7/3) VITRIC ASH occurs in Section 4. |
| } | } | { | 3 | | _ | | — -A | | | 5Y | General Description: Two hard, cemented sandstone clasts or irregular horizons occur in Section 1 and CC. A large (4 cm) gastropod was |
| } | } | | 4_ | | 3 | | | | S | 5/2 10Y | found in Section 5. The sediments are homogeneous and no distinct burrows are visible. |
| } | } | | 5 | | 4 | Quaternary | _ | | I S | 4/1 | |
| } | } | } | 6_ | | | ð | | | | 5./ | |
| { | } | | 7_ | | 5 | | B | | | 5Y 4/1 | |
| | } | | | | _ | | _ | | | | |
| } | } | | 8 | | 6 | | | | | 10Y 4/1 | |
| | | } | 9 - | | 7 | | ••• | | S | 5GY | |
| 1 2 | 0 10 0 | 50 10 | 10 00 | | CC | | - | > | MΩ | 4/1 | |

| | | | SIT | ΓΕ 1019 | | | | | 5H | | CORED 36.8 - 46.3 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|----------------------------|------------------|---------------|------------|-----------|---------|--------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| Mulmmannama Mulmman | 5 TO | 0 50010 | 2 3 4 5 6 8 | | 3 3 5 6 6 CCC | Quaternary | * | | S | 10Y 4/1 | SILTY CLAY Major Lithology: This core consists of grayish olive (10Y 4/1) SILTY CLAY. Grains of feldspar, quartz, and rock fragments compose most of the silt fraction. Minor Lithology: Dispersed pockets of LITHIC SAND composed of metamorphic rock fragments and mineral grains are common in Sections 1 and 2. A small (4 cm) LIMESTONE fragment (possibly a thin layer?) is found in Section 3, 30 cm. General Description: The sediment is homogeneously bioturbated. Gas expansion has moderately disturbed this core and created numerous small voids throughout. |

| | | | SIT | E 1019 | | LE | C COR | | 6H | | CORED 46.3 - 55.8 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|---------|------------|-----------|---------|--------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 1 | { ' | } | - | | | | | - | | 5Y 5/2 | CLAYEY SILT and CLAY WITH SILT |
| | | | 1 | | 2 | | | | S | 10Y 6/1 | Major Lithologies: This core consists of pale olive to light grayish olive (10Y 6/1 to 5Y 5/2) CLAY WITH SILT gradually alternating with olive gray to grayish olive (5Y 4/2 to 10Y 4/1) CLAYEY SILT. Color changes are subtle and seem to reflect changes in the relative abundance of silt/clay. |
| | { | } | - | | | | | > | ا دا | 5Y 5/2 | Minor Lithologies: |
| | | | 3 4 5 | | 3 | Quaternary | (P) | | S | 5Y 4/2 To 5Y 5/2 | A thin bed of pale olive (5Y 6/3) DOLOMITIC MICRITE occurs in Section 2, 90-102 cm. General Description: The sediment is homogeneously bioturbated. Numerous voids and moderate disturbance occur because of gas expansion throughout the core. |
| \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | | 6 | | 5 | | | | S | 5Y 4/2 | |
| 0 1 | 5 10 | 0 20 4 | 9 - | | 7 CC | | | | M | 10Y 4/1 | |

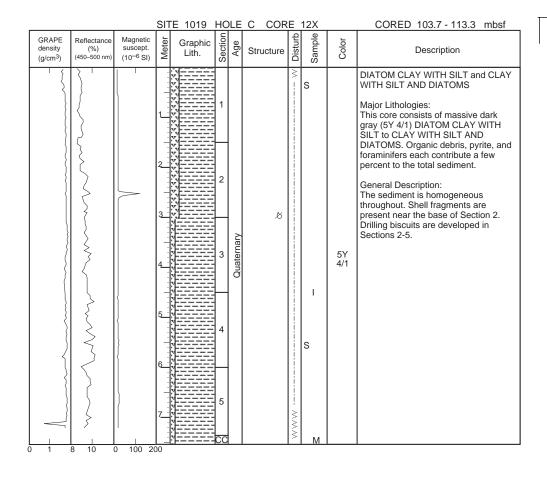


| | | | SIT | E 1019 | НΟ | LE | C COR | | | | CORED 65.3 - 74.8 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|---------|------------|-----------|---------|--------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| WIN WALL | | | 2 | Void | 3 4 5 | Quaternary | 8 | | S | 5Y 5/2 To 10Y 5/1 | CLAYEY SILT WITH DIATOMS, SILTY CLAY and CLAYEY SILT Major Lithologies: This core consists of SILTY CLAY and CLAYEY SILT. The sediment in the upper portion from Section 1 through 6 is olive gray to light grayish olive (5Y 5/2 to 10Y 5/1) CLAYEY SILT WITH DIATOMS. Minor Lithology: Section 7 through 8 contain dark greenish gray (5GY 4/1) CHARCOAL disseminated throughout SILTY CLAY. General Description: The sediment is homogenously bioturbated. The core is moderately disturbed and contains numerous voids related to gas expansion. |
| | | | 9 | | 7 | | | | | 10Y 4/1 | |
| 0 1 | 8 10 | 0 20 4 | 10 | | 8 CC | | | | S M | 5GY 4/1 | |

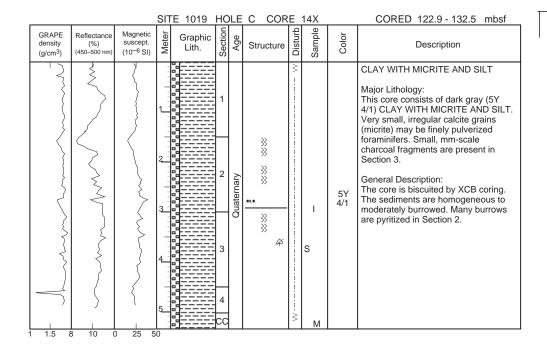
| | | | SIT | E 1019 | | _ | | | | | CORED 74.8 - 84.5 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------------|------------------|---------|------------|----------------------------------------|---------|--------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 1 | | 1 | | ************************************** | M | | 10Y 4/1 | CLAYEY SILT Major Lithology: This core consists of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/1) CLAYEY SILT. The silt fraction is composed mainly of quartz and feldspaninerals. Minor Lithologies: At the base of the core starting at Section CC, 17 cm, is a light gray (N7) VITRIC ASH. CHARCOAL fragments are abundantly disseminated throughou Section 1, 93-123 cm. |
| | } | } | 3_ | | 3 | Quaternary | 3 | | S | 10Y 5/1 | General Description: The sediment is slightly bioturbated. |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | 5 6 7 | | 4 5 | Quate | } } } | | S | 10Y 4/1 | |

| | | SITE 1019 | HOLE | C COR | E | 10X | | CORED 84.5 - 94.1 mbsf |
|-------------|-----------------------------------------------|---------------|-----------------------------------------------|------------------|----------|------------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| density (%) | Magnetic suscept. (10 ⁻⁶ SI) | Graphic Lith. | Section | Structure | Disturb | Sample | Color | Description |
| | | 3 | 1 2 2 3 3 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | 3 8 3 8 | www | <i>o</i> – | 10Y 5/1 | SILTY CLAY and CLAYEY SILT Major Lithologies: This core consists of light grayish olive to dark olive gray (10Y 5/1 to 5Y 3/2) SILTY CLAY and CLAYEY SILT. Clay content varies between 30% to 60%. Several horizons containing abundant shell fragments occur throughout the cored interval. General Description: The sediment is slightly bioturbated. |
| | | 7 | 6 | } | | S | 5Y 3/2 To 10Y 5/1 | |
| 0 1 5 10 0 | 20 40 | 8 | cc | | <u>}</u> | М | 10Y 4/1 | |

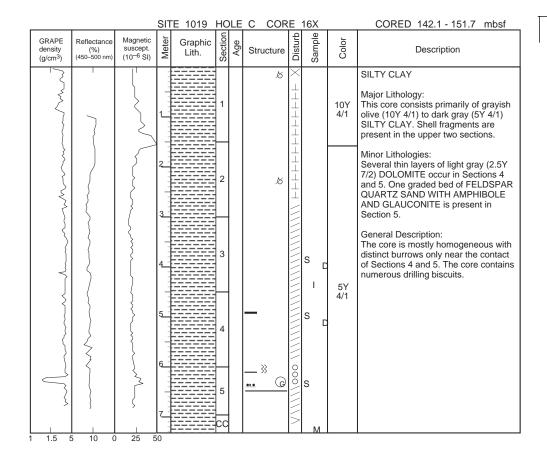
| | | | SIT | E 1019 | HC | LE | C COR | | 11X | | CORED 94.1 - 103.7 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|---------------------------------------|---------|------------|-----------|---------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | } | | | 1 | | } | | S | 5Y 4/2 | SILTY CLAY WITH DIATOMS and SILTY CLAY Major Lithologies: |
| | | | 2 | | 2 | | 3 | | S | 10Y 4/1 | This core consists of olive gray (5Y 4/2) SILTY CLAY WITH DIATOMS and grayish olive (10Y 4/1) SILTY CLAY. Color boundaries are gradational. Charcoal is common as disseminated fragments in Section 1, 90 cm, through Section 2, 90 cm. Minor Lithology: Section 5, 6-10 cm, contains a CARBONATE CONCRETION. |
| | | | 4 | | 3 | ıary | } | | _ | | General Description: The sediment is slightly bioturbated. Coring disturbance has fractured the sediment into biscuits but most sediment remains relatively undisturbed. |
| | | | 5 | | 4 | Quaternary | } | | | | |
| | | | 8 | V | 6 | | ©a | | s D | 5Y 4/2 | |
| 0 1 | 5 10 0 |) 25 5 | 9 | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | 7 CC | | | | М | | |



| CLAY WITH SILT AND DIATOMS Major Lithology: This core consists of dark gray (5Y 4/1) grayish olive (10Y 4/1) CLAY WITH SILT AND DIATOMS. Small shell fragments are distributed through the core. General Description: The sediments are homogeneous to moderately burrowed. Chondrites are present in the Core Catcher. | | | | SIT | E 1019 | | | c co | | | | CORED 113.3 - 122.9 mbsf |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----|----------|-------|--------|---------------|------------|---------------------------------------------------------------------------------------------|-------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Lithology: This core consists of dark gray (5Y 4/1) gray/sh olive (10Y 4/1) CLAY WITH SILT AND DIATOMS. Small shell fragments are distributed through the core. General Description: The sediments are homogeneous to moderately burrowed. Chondrites are present in the Core Catcher. | density | (%) | suscept. | Meter | | Section | Age | Structure | | Sample | Color | Description |
| 2 | | | | | X | 1 | | | W.W | | 5Y 4/1 | Major Lithology: This core consists of dark gray (5Y 4/1) grayish olive (10Y 4/1) CLAY WITH SILT AND DIATOMS. Small shell fragments are distributed through |
| | - Mur Juny | | | 3 | | 3 4 CCC | Quaternary | & & & & & & & & & & & & & & & & & & & | M M M | S | 4/1 5Y | General Description: The sediments are homogeneous to moderately burrowed. Chondrites are |

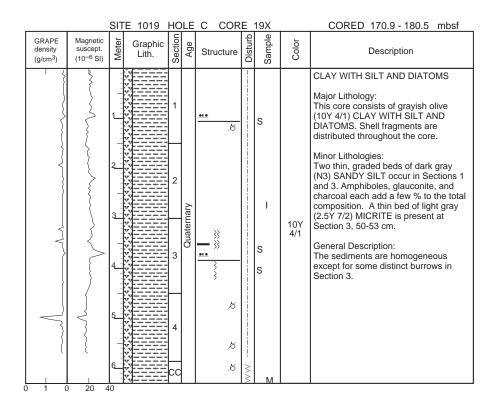


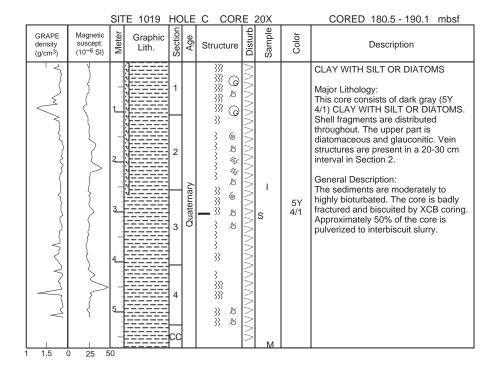
| | | | SIT | E 1019 | | LE | C COR | | 15X | | CORED 132.5 - 142.1 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-----------------------------------------|------------------|----------------|------------|-----------|---------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | 5 10 | 0 50 10 | 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - | | 1 2 3 4 5 6 CC | Quaternary | 2 | | s s m | 5Y 4/1 | CLAY WITH SILT and SILTY CLAY Major Lithologies: This core consists primarily of dark gray (5Y 4/1) CLAY WITH SILT to SILTY CLAY. Shell fragments are distributed throughout the upper part of the core. Diatoms are usually present in small amounts. Minor Lithology: Several thin beds and laminations of dark gray (N4) QUARTZ FELDSPAR SAND WITH GLAUCONITE AND AMPHIBOLE occur throughout the core. Some beds are graded and planar laminated. General Description: The core is mostly homogeneous. Burrows are generally rare and are pyritized in Section 1. |



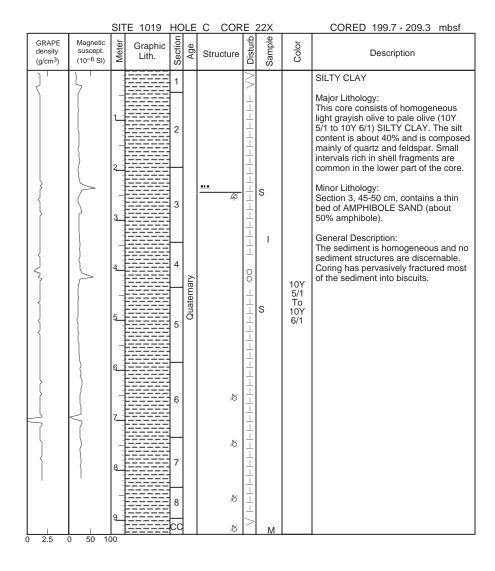
| | | | SIT | E 1019 | | | C COR | _ | | | CORED 151.7 - 161.3 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|------------|------------|--------------------|---------|--------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | -8 | - 20 2 | 3 | | 1 2 3 5 CC | Quaternary | <i>ර</i> ර ර | | S I | 5Y 4/1 | CLAYEY SILT and CLAY WITH SILT AND DIATOMS Major Lithologies: This core consists of dark gray (5Y 4/1) to grayish olive (10Y 4/1) CLAYEY SILT to CLAY WITH SILT AND DIATOMS. Shell fragments are distributed throughout the core. General Description: The sediments are homogeneous without any evidence of discrete burrows. This core is moderately disturbed, but not apparently biscuited as shallower cores were. |

| | | SIT | TE 1019 | | | C COR | E | | | CORED 161.3 - 170.9 mbsf |
|------------------------------------------|-----------------------------------------------|-------|------------------|---------------|----------|------------------------------|----------|--------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 1.5 | 0 50 11 | 1 | | 1 2 3 4 5 CCC | Cenozoic | — ර හ හ හ හ හ | WWWWWWWW | S - S | 10Y 4/1 | SILTY CLAY and CLAY WITH SILT AND DIATOMS Major Lithologies: This core consists of grayish olive (10Y 4/1) CLAY WITH SILT AND DIATOMS to SILTY CLAY. Shell fragments are distributed throughout the core. Minor Lithology: Two thin beds or laminations of dark gray (N3) SANDY SILT occur in Sections 2 and 3. Both contain feldspar, quartz, glauconite, and amphiboles. General Description: The sediments are homogeneous with no visible burrows. This core is moderately to very disturbed, but not biscuited. |
| | | - | | | | | | | | |





| | S | SIT | E 1019 | | LE | C COR | | | | CORED 190.1 - 199.7 mbsf |
|-----------|---------------------------------------------|-----------------------------------------------------------------------------------------------|------------------|--------------|------------|---------------|------------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| density s | lagnetic uscept. 10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 2 | | 1 | | | HHHHHHHHHH | | 10Y 4/1 | SILTY CLAY WITH DIATOMS Major Lithology: This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) SILTY CLAY WITH DIATOMS. No structures are visible. Shell fragments are present in Sections 4, 5, and 6. Minor Lithology: A thin bed of light gray (5Y 7/2) |
| | | 3 | | 3 | Quaternary | Ø | <u> </u> | D | 5Y 4/1 | MICRITIC CLAY occurs at the top of Section 6. General Description: The sediments are homogenized and no sedimentary structures are visible. The core is badly fractured by XCB coring and displays pervasive biscuiting. |
| | | 5 - - - - - - - - - - - - - - - - - - - | | 5 | ŏ | ,8 | HHHHH | I | 10Y 4/1 | |
| | | 8 - | | 6 7 CC | | – & | XXXX | S | 5Y 4/1 | |



| | | SIT | E 1019 | | LE | C COR | | | | CORED 209.3 - 219.0 mbsf |
|------------------------------------------|-----------------------------------------------|-------|------------------|-------------|------------|-----------|---------|--------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 1 1.5 | 0 20 3 | 2 | | 1 2 3 4 CCC | Quaternary | | | <i>s</i> – × | 10Y 5/1 | SILTY CLAY Major Lithology: This core consists of light grayish olive (10Y 5/1) SILTY CLAY composed of about 30% quartz, 10% feldspar, and 60% clay. General Description: No discernable sediment structures occur in this core, although extensive fracturing makes recognition of features difficult. |
| 1 1.5 | 0 20 3 | | | | | | | | | |

| SILTY CLAY and CLAY WITH SILT AND DIATOMS Major Lithologies: This core consists of olive gray (5Y 4/2) CLAY WITH SILT AND DIATOM and grayish olive (10Y 4/1) SILTY CLAY. The color and compositional changes are gradational. General Description: General Description: | | SIT | ΓΕ 1019 Ι | | LE | C COR | E | 24X | | CORED 219.0 - 228.6 mbsf |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------|------------------|----------------|------------|----------------------------------------|---------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AND DIATOMS Major Lithologies: This core consists of olive gray (5Y 4/2) CLAY WITH SILT AND DIATOM and grayish olive (10Y 4/1) SILTY CLAY. The color and compositional changes are gradational. General Description: The codiment is clightly big by the bed | density sus | ignetic scept. p-6 SI) | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| however, extensive fracturing has created numerous biscuits and may have masked most sedimentary structures. Note: Sediment from Section 1 is fissile and soft while the rest of the core is firm. 1 | | 3 4 2 30 30 | | 1 2 3 3 4 5 CC | Quaternary | `````````````````````````````````````` | | - v | 4/2 10Y | AND DIATOMS Major Lithologies: This core consists of olive gray (5Y 4/2) CLAY WITH SILT AND DIATOMS and grayish olive (10Y 4/1) SILTY CLAY. The color and compositional changes are gradational. General Description: The sediment is slightly bioturbated, however, extensive fracturing has created numerous biscuits and may have masked most sedimentary structures. Note: Sediment from Section 1 is fissile and soft while the |

| | | SI | ΓΕ 1019 | | | C COR | E | 25X | | CORED 228.6 - 238.2 mbsf |
|------------------------------------------|-----------------------------------------------|---------|------------------|---------|------------|-----------------------------------------------------------------------------------------------------|---------|--------|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 2 3 4 4 | | 3 | Quaternary | * @ * | | 00 00 | 10Y 4/1 To 10Y 5/1 | SILTY CLAY Major Lithology: This core consist of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/1) SILTY CLAY. Color changes are subtle and gradual. Minor Lithology: A MICRITE concretion about 4 cm in diameter occurs in Section 3, 33 cm. General Description: The sediment is slightly bioturbated, however, extensive fracturing has created numerous biscuits and may have masked most sedimentary structures. |
| | 20 4 | 5 | | 6 7 | nO | 333333333 | | I | 10Y 4/1 | |

| | 5 | SIT | E 1019 | HC | LE | C COR | | 26X | | CORED 238.2 - 247.8 mbsf |
|------------|-------------------------------------------|-------|------------------|--------------|-----|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| density su | agnetic uscept. 0 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| -W | . 1 | 22- | | 2 | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | \vdash | 0 | 5Y 4/1 | CLAY WITH SILT AND DIATOMS and SILTY CLAY Major Lithologies: This core consists of dark gray to medium dark gray (5Y 4/1 to N4) CLAY WITH SILT AND DIATOMS and grayish olive (10Y 4/1) SILTY CLAY. A thin interval showing black stringers of mud veins(?) occurs in Section 2, at about 70 cm. General Description: The sediment is slightly to moderately bioturbated, however, extensive fracturing has created numerous biscuits which masks most sedimentary structures. |
| | | 4 | | 5 | | | | ı | N4 | |
| | 50 100 | 8 - | | 6 7 CC | | ********* | $\forall \exists \exists$ | S | 10Y 4/1 | |

| | | | SIT | E 1019 | HC | LE | D COR | E | 1H | | CORED 0.0 - 3.6 mbsf |
|---|------------------------------------------|-----------------------------------------------|-------------|------------------|--------------|------------|-----------|---------|--------|-----------|-----------------------------------------------------------------------------------------------------------------------------------------|
| | GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 1 | | 1 | ry | | 0 | | 5Y 4/3 | DIATOM CLAY WITH SILT Major Lithology: This core consists of homogeneous olive gray to olive (5Y 4/2 to 5Y 4/3) DIATOM CLAY WITH SILT. |
| | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | 2 2 3 | | 2 3 CC | Quaternary | | | S | 5Y 4/2 | General Description: The sediment is homogeneously bioturbated. |
| 1 | .4 1.6 | 20 4 | 40 | | | | | | | | |

| | | SIT | E 1019 | НС | LE | D COR | | | | CORED 3.6 - 13.1 mbsf |
|------------------------------------------|-----------------------------------------------|-------|------------------|--------------|------------|-----------|---------|--------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 1 | | 2 | | <u></u> | | S | 5Y 4/3 | CLAY WITH DIATOMS AND NANNOFOSSILS and SILTY CLAY Major Lithologies: This core consists of olive to olive gray (5Y 4/3 to 5Y 5/2) CLAY WITH DIATOMS AND NANNOFOSSILS and grayish olive (10Y 4/2) SILTY CLAY. An interval enriched in disseminated charcoal occurs between Section 4, 64 cm, and Section 6, 140 cm. Faintly laminated intervals occur in Section 1, 4, and 6. |
| | | 3_ | | | | ••• | | s | 5Y 4/4 | Minor Lithologies: Numerous thin, graded beds of SILT |
| | | 5 | | 3 | Quaternary | | | | 10Y 4/2 5Y 5/2 | and SAND occur throughout the core. These beds range in color from black (N3) to medium dark gray (N4). An interval showing increased foraminifer content occurs in Section 2, 140 cm, through Section 3, 10 cm. General Description: The sediments show no discernable bioturbation. |
| 1.5 2 (| 200 4 | 9 - | | 6 7 CC | | | | S | 10Y 4/2 | |

| | | SIT | TE 1019 | HC | LE | D C | COR | | | | CORED 13.1 - 22.6 mbsf |
|------------------------------------------|-----------------------------------------------|-------|------------------|--------------|------------|--------|-------|---------|--------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Struc | ture | Disturb | Sample | Color | Description |
| | | 23 | | 2 | | | | | Ø | 5Y 5/3 | SILTY CLAY and SANDY SILT WITH CLAY Major Lithologies: This core consists of olive (5Y 5/3) to light grayish olive (10Y 5/2) SILTY CLAY with <10% foraminifers. Indistinct laminations are present in Section 3, some of which contain abundant foraminifers. The sediment changes to grayish olive (10Y 4/1) glauconitic SANDY SILT WITH CLAY in Sections 6, 7, and CC. Minor Lithology: A graded bed of fine black (N2) SAND occurs at the top of Section 5. General Description: The sediment shows slight bioturbation in the sand-rich interval in the lower. |
| | | 5 | | 4 | Quaternary | 3 — | | | Ø | 10Y 5/2 | in the sand-rich interval in the lower portion of the core and is homogeneous elsewhere. Note: Additional material expanded beyond core liners in Sections 4, 5, and 6 is boxed seperately. |
| 0 1 | 0 50 1 | 9 10 | | 6 7 CC | | 3 3 | 9 9 9 | | S | 10Y 4/1 | |

| | SI | TE 1019 | | LE | D C | OR | E | | | CORED 22.6 - 32.1 mbsf |
|-----------------------------------------------|--------------------------------|------------------|-----------------------------|---------------------------|--------|-----|---------|--------|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE Magnetic suscept. (10 ⁻⁶ SI) | Į t | Graphic Lith. | Section | Age | Struct | ure | Disturb | Sample | Color | Description |
| density suscept. | 3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 | | 1 2 2 3 3 3 4 4 4 5 5 5 CCC | Quaternary Quaternary Age | Struct | | Distu | Samp | 10Y 4/1 5Y 4/1 10Y 5/1 5Y 4/1 10Y 5/1 5Y 4/1 10Y 5/1 10Y 5/1 10Y 5/1 N3 10Y 5/1 N3 10Y 5/1 10Y 4/1 | SILTY CLAY Major Lithology: This core consists of grayish olive (10Y 5/1) to dark gray SILTY CLAY. Glauconite and other sand-sized material is locally intermixed with the major lithology. Minor Lithologies: The major lithology is interbedded with numerous beds of dark gray (N3) to light grayish olive (10Y 5/1) SILTY GLAUCONITE SAND to FELDSPAR QUARTZ SAND WITH GLAUCONITE AND MICA. Most layers are sharp-based and normally graded. One, at the top of Section 3, is reverse graded. Many have been intermixed with finer sediments. Three pale olive (10Y 6/1) to very light gray (10Y 7/1) beds of DOLOSTONE occur in Sections 3, 5, and 7. General Description: The core is moderately disturbed by coring and slightly bioturbated in the upper half. |

| | | SIT | E 1019 | | LE | D COR | E | 5H | | CORED 32.1 - 41.6 mbsf |
|------------------------------------------|-----------------------------------------------|-------|---------------------|---------|------------|-----------------------------------------|-----------------------------------------|--------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 2 - 3 | | 2 | | | | S | 5Y 4/1 | FELDSPAR QUARTZ SAND WITH GLAUCONITE AND AMPHIBOLES and CLAY WITH NANNOFOSSILS, SILT, AND DIATOMS Major Lithologies: This core consists of very disturbed gray to dark gray (N5 to N4) FELDSPAR QUARTZ SAND WITH GLAUCONITE AND AMPHIBOLES overlain by dark gray to gray (5Y 4/1 to 5Y 5/1) CLAY WITH NANNOFOSSILS, SILT, AND DIATOMS. General Description: The core was recovered and extracted in very poor condition. Sections 3 through CC are extremely disturbed. |
| AN MAR | | 5 | | 4 | Quaternary | 0000000000000 | 000000000000000000000000000000000000000 | | N5 | |
| Mumming | | 6 | | 6 | 7 | 09 090909090909090909090909090909090909 | 000000000000000000000000000000000000000 | | N4 | |
| 1 1.5 (| 20 4 | 0 | <u> perenerenen</u> | CC | _ | 0 | | M | | |

| | | SIT | E 1019 | | LE | D CO | | | | | CORED 41.6 - 51.1 mbsf |
|------------------------------------------|-----------------------------------------------|-------|---------------------------------------|--------------|------------|----------------|--------------|--------|---|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | e Dieturb | Sample | - | Color | Description |
| | | 1 | V V V V V V V V V V V V V V V V V V V | 1 | | - - - | | S | | 10Y 4/1 5Y 4/2 | SILTY CLAY and SILTY CLAY WITH DIATOMS Major Lithologies: This core consists of light grayish olive (10Y 5/1) to dark gray (5Y 4/1) SILTY CLAY to SILTY CLAY WITH DIATOMS. Minor Lithologies: Several thin beds and laminations of |
| } | | - | | 2 | | <u>***</u> | - : | | | 5/1 5Y | very fine to fine-grained, grayish olive (10Y 4/1) SAND WITH GLAUCONITE are present in Sections 2, 3, and 4. A |
| | } | 3 | | | | — _₹ | | | H | 4/1 | thin bed of light olive gray (5Y 6/2) DOLOMITE WITH CLAY is present in |
| \ | \ \ | - | | 3 | ary | - ~~ | | | | 5Y 4/2 | Section 4. General Description: |
| | | 5 | 4 | | Quaternary | | | S | | 10Y 5/1 | The sediments are homogeneous to slightly bioturbated. The core is moderately disturbed by coring. |
| 1 15 | 0 20 4 | 7 | | 5 6 CC | | | | S | | 10Y 4/1 | |

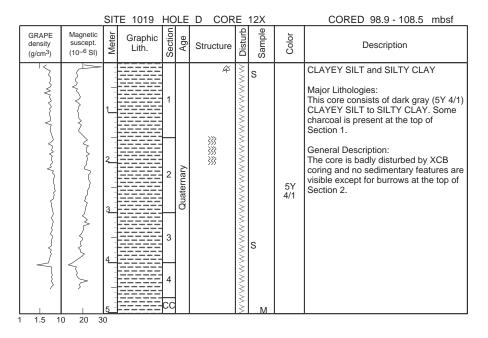
| | | SIT | E 1019 | НС | LE | D COR | E | 7H | | CORED 51.1 - 60.6 mbsf |
|------------------------------------------|-----------------------------------------------|-------|------------------|---------|------------|-----------|---------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 2 | | 2 | | Ø | | | 5Y 4/1 | SILTY CLAY and CLAY WITH NANNOFOSSILS AND SILT Major Lithologies: This core consists of dark gray (5Y 4/1) SILTY CLAY and grayish olive (10Y 4/1) CLAY WITH NANNOFOSSILS AND SILT. Shell fragments are present in the sediment in Sections 2, 3, and 4. Minor Lithology: Two small SAND pods are present near the top of Section 7. |
| | | 4 | | 3 | Quaternary | <i>8</i> | | S | 10Y 4/1 | General Description: The sediment is homogeneous with no distinct burrows. Note: Material expanded beyond core liners in Sections 4 and 5 is boxed separately. |
| 1 Manual Malan | 0 20 3 | 6 | | 5 6 | | | <i></i> | S | 5Y 4/1 | |

| | | SIT | E 1019 | | LE | D COR | | | | CORED 60.6 - 70.1 mbsf | |
|------------------------------------------|-----------------------------------------------|--------------------------------------------|---------------------------------------|---------|-----|------------|------------------|--------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description | |
| } | | 1_ | | 1 | | | | | 10Y 4/1 | CLAY WITH SILT Major Lithology: This core consists primarily of olive gray (5Y 5/2) to light grayish olive (10Y 4/1) CLAY WITH SILT. Shell fragments are incorporated in the | |
| } | | 2 - 2 - - - - - - 3 - | | 2 | ary | ~ | | S | 10Y 5/1 | sediment. Minor Lithologies: A thin, graded bed of dark gray (N4) CLAYEY SILT WITH DIATOMS occur near the top of Section 3. A 2 cm thicl interval of mm-scale laminations occurs at Section 3, 94 cm. They are | |
| \} | } | | X X | 3 | 3 | Quaternary | ••• <u>&</u> | | S | N4 | composed of olive (5Y 4/4) and black (N1) DIATOM OOZE. General Description: |
| | | 56 | X X X X X X X X X X X X X X X X X X X | 4 | - | * | | S | 5Y 5/1 | The core is moderately disturbed by coring and extraction. The sediments are homogeneous to slightly bioturbated. | |
| 1.5 | 20 4 | 0 | | 5 CC | | | M | М | 5Y 5/2 | | |

| | | SIT | E 1019 | HC | LE | D COR | | | | CORED 70.1 - 79.6 mbsf |
|------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------|------------------|--------------|------------|-----------------------------------------|---------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 3 | | 2 | Quaternary | _ & & & & & & & & & & & & & & & & & & & | | S | 5Y 4/1 | DIATOM CLAY AND SILT and CLAY WITH SILT AND DIATOMS Major Lithologies: This core consists of grayish olive (10Y 4.1) to dark gray (5Y 4/1) DIATOM CLAY AND SILT to CLAY WITH SILT AND DIATOMS. Shell fragments are distributed through Sections 1 to 4. Charcoal fragments are present in Section 5. General Description: The sediments are homogeneous to intensely bioturbated. Burrows are pryritized in Section 4. The core was recovered with moderate disturbance. |
| | | 5 | | 4 | | — ^{\$\$} | | S | 10Y 4/1 | |
| 1 1.5 | 0 20 3 | 7 7 - - - - - - - - - - - - - - - - | | 5 6 CC | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | ·· | M | 5Y 4/1 | |

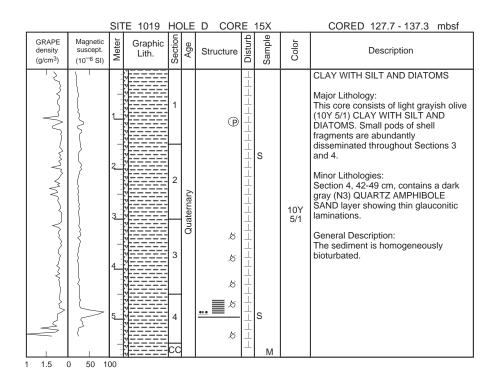
| GRAPE density (g/cm³) (10-6 SI) Graphic (g/cm³) Structure Graphic Grap | | | SIT | E 1019 | HC |)LE | D COR | Е | 10X | | CORED 79.6 - 89.2 mbsf |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------|-------|----------|---------|------------|-----------|---------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Lithology: This core consists of massive grayish olive (10Y 4/1) to dark gray (5Y 4/1) SILTY CLAY WITH DIATOMS. General Description: The sediments are entirely homogeneous without any detectable sedimentary features. The core is moderately disturbed. | density | suscept. | Meter | | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | Mwww | 1 | | 2 | Quaternary | | M | S | 4/1 10Y | Major Lithology: This core consists of massive grayish olive (10Y 4/1) to dark gray (5Y 4/1) SILTY CLAY WITH DIATOMS. General Description: The sediments are entirely homogeneous without any detectable sedimentary features. The core is |
| | 14 16 | 15 20 1 | | <u> </u> | CC | | | Ĺ | M | | |

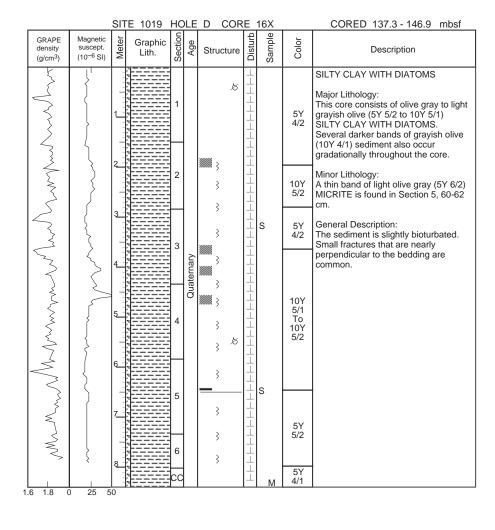
| | SI | E 1019 | HO | LE | D COR | Ε | 11X | | CORED 89.2 - 98.9 mbsf |
|---------------------------------------------------------|------|------------------|---------|------------|-----------|---------|--------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE Magn susce (g/cm ³) (10 ⁻⁶ | ept. | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | 2 | | 1 2 CC | Quaternary | ß S | | S | 5Y 4/1 10Y 4/1 5Y 4/1 | DIATOM SILTY CLAY and CLAY WITH SILT AND DIATOMS Major Lithologies: This core consists of dark gray (5Y 4/1) to grayish olive (10Y 4/1) DIATOM SILTY CLAY to CLAY WITH SILT AND DIATOMS. A few shell fragments are scattered throughout the core. General Description: The sediments are homogeneous with no evidence of distinct burrows. The core is broken and biscuited by XCB coring. |
| 1 1.5 0 20 | 0 40 | | | | | | | | |



| | | SIT | E 1019 | НС | LE | D COR | Е | 13X | | CORED 108.5 - 118.1 mbsf |
|------------------------------------------|-----------------------------------------------|------------------|------------------|---------|------------|-----------|------------------------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 1 1.5 1 | 0 20 3 | 2 3 4 5 | | 2 3 | Quaternary | | \/\/\/\/\/\/\/\/\/\/\/ | S | 5Y 4/1 | SILTY CLAY Major Lithology: This core consists of dark gray (5Y 4/1) SILTY CLAY. Minor amounts of foraminifers, diatoms, and nannofossils are also present. General Description: The sediment is homogeneously bioturbated. |

| | | SIT | E 1019 | | LE | D COR | | 14X | | CORED 118.1 - 127.7 mbsf |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------|------------------|-------------|------------|------------------|---------|--------|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| James | | 2 | | 2 | ۲ | © © • | | S | 10Y 4/1 To 10Y 5/2 | SILTY CLAY and DIATOM CLAY WITH SILT Major Lithologies: This core consists of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/2) SILTY CLAY and olive gray (5Y 5/2) DIATOM CLAY WITH SILT. Color changes are gradual. Minor Lithologies: Thin, graded beds of SAND occur in Section 3, 23-26 cm, Section 4, 123-125 cm, and Section 5, 124-126 cm. General Description: The sediment is slightly bioturbated. |
| 1 | { | 5 | | | Quaternary |) } } | | S | 5Y 5/2 | |
| | 0 20 4 | 6 | | 5 6 7 | | **** | | М | 10Y 4/2 To 10Y 5/2 | |





| SI | ΓΕ 1019 | HC | LE | D COR | Ε | 17X | | CORED 146.9 - 156.5 mbsf |
|-------|------------------|--------------|------------|-----------|-----------------------|--------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 2 | | 1 2 CC | Quaternary | | WWWWWWWWWWWWWWWWWWWWW | S | 10Y 4/1 | SILTY CLAY WITH DIATOMS Major Lithology: The sediment from this core is grayish olive (10Y 4/1) SILTY CLAY WITH DIATOMS. Note: There is NO STRATIGRAPHIC ORDER to the sediment in this core. |

| | | SI | ΓΕ 1019 | HC | LE | D COR | E | 18X | | CORED 156.5 - 166.1 mbsf |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-------|------------------|-------------|------------|----------------------------------------|---------------------------------------------------|--------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| density | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| formall more than the same of | | 234 | | 2 | | ** ** ** ** ** ** ** ** ** ** ** ** ** | +++++++++++++++++++++++++++++++++++++++ | Ø | 10Y 5/2 | SILTY CLAY and CLAY WITH DIATOMS AND SILT Major Lithologies: This core consists of light grayish olive (10Y 5/2) SILTY CLAY and olive gray (5Y 4/2) CLAY WITH DIATOMS AND SILT. Black color mottles (charcoal?) occur in the upper half of the core. Minor Lithology: Section 2, 130 cm, and Section 4, 68 cm, contain thin beds of SILTY SAND. General Description: The sediments are slightly to moderately bioturbated in the upper half of the core and homogeneously bioturbated in the lower portion. |
| \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | 50 11 | 5 | | 4 5 6 | Quaternary | *** | | S | 5Y 4/2 | |

| | | SIT | E 1019 | HC | LE | D COR | | 19X | | CORED 166.1 - 175.7 mbsf |
|------------------------------------------|-----------------------------------------------|-------------------|------------------|---------------------|------------|-----------|-----------------------------------------|--------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 2 3 4 5 5 7 8 8 0 | | 3 3 4 4 5 5 6 6 CCC | Quaternary | © © | VV FFFFFFFFFFFFFF \\\\\\\\\\\\\\\\\\\\\ | <i>s s</i> ≥ | 10Y 4/1 | SILTY CLAY WITH DIATOMS Major Lithology: This core consists of grayish olive (10Y 4/1) SILTY CLAY WITH DIATOMS. Minor Lithology: Thin intervals of black AMPHIBOLE QUARTZ SAND occur in Section 5, 15-16 cm, and Section 6, 103-107 cm. General Description: The sediment is slightly bioturbated, however, the sediments are moderately fractured into biscuits which masks most sedimentary structure. |

| 2 2 3 3 4 4 4 4 5 5 10 10 10 10 10 10 10 10 10 10 10 10 10 | | SI | ΓΕ 1019 | | | D COR | | | | CORED 175.7 - 185.3 mbsf |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------|------------------|---------|------------|----------------------------------------|-----------------------------------------|----------------|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SILTY CLAY and DIATOM CLAY WITH SILT Major Lithologies: This core consists of light grayish olive to medium dark gray (10Y 5/1 to N4) SILTY CLAY and gray (5Y 5/1) DIATOM CLAY WITH SILT. Color changes are gradational. General Description: The sediment is moderately bioturbated with small, very dark gray, predominately subparallel burrows. | density suscept. | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ | | 4 | | 3 | Quaternary | ************************************** | | S | 5/1 5Y 5/1 | WITH SILT Major Lithologies: This core consists of light grayish olive to medium dark gray (10Y 5/1 to N4) SILTY CLAY and gray (5Y 5/1) DIATOM CLAY WITH SILT. Color changes are gradational. General Description: The sediment is moderately bioturbated with small, very dark gray, |
| 1 1.5 0 25 50 | | 7_ | | cc | | ************************************** | \perp \perp \perp \perp \perp | s _M | N4 | |

| | SI | ΓΕ 1019 | | LE | D COR | | 21X | | CORED 185.3 - 194.9 mbsf |
|-------------------------------------------------------------------|----------------------------|------------------|------------------------|------------|----------------------------------------|---------|--------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE Magnetic suscept. (g/cm ³) (10 ⁻⁶ SI | <u>t</u> | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | 3 3 4 5 7 7 | | 3 3 4 4 5 5 6 6 7 CCCC | Quaternary | · ************************************ | HHH | S | 10Y 5/1 | CLAY WITH SILT AND DIATOMS and SILTY CLAY Major Lithologies: This core consists of light grayish olive to grayish olive (10Y 5/1 to 10Y 4/1) SILTY CLAY and dark gray (5Y 4/1) CLAY WITH SILT AND DIATOMS. Minor Lithology: A thin bed of pale olive (5Y 6/3) MICRITE occurs in Section 3, 57-61 cm. General Description: The sediment is moderately bioturbated. Note: The stratigraphy of sediment from Section 1 is unknown. |

| | SI | ΓΕ 1019 | HC |)LE | D COR | | | | CORED 194.9 - 204.5 mbsf |
|--------------------------------------------------------------------|-----------------------------------------|------------------|---------------|------------|----------------------------------------|-------------|----------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE Magnetic suscept. (g/cm ³) (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | 3 3 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | | 1 2 3 4 5 CCC | Quaternary | » » »» »» »» » » » » » » » » » » » » » | | <i>s</i> | 10Y 4/2 To 10Y 5/2 | SILTY CLAY WITH DIATOMS Major Lithology: This core consists of grayish olive to light grayish olive (10Y 4/2 to 10Y 5/2) SILTY CLAY WITH DIATOMS. Minor Lithology: A thin bed of medium dark gray (N4) FINE SAND occurs in Section 4, 78-82 cm. General Description: The sediment is slightly bioturbated mainly by small, subhorizontal burrows. |

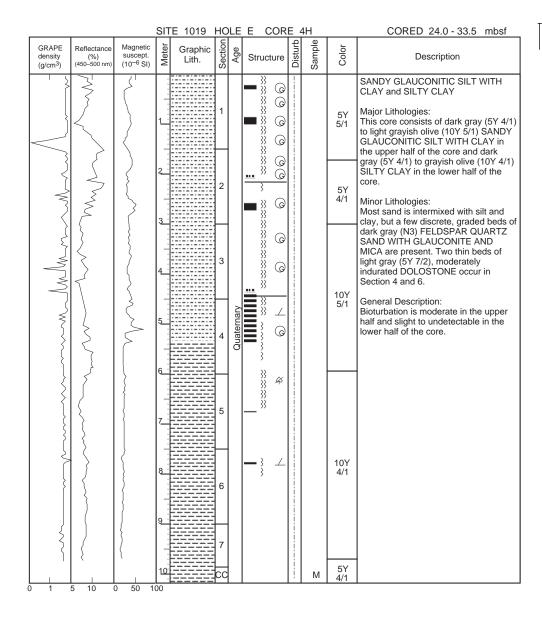
| | | SIT | TE 1019 | | LE | D COR | | | | CORED 204.5 - 214.2 mbsf |
|------------------------------------------|-----------------------------------------------|----------------------------|------------------|--------------|------------|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | 3 3 4 5 8 8 | | 1 2 3 4 5 CC | Quaternary | »»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»»» | $ \langle \langle$ | S | 10Y 4/1 | SILTY CLAY Major Lithology: This core consists of grayish olive (10Y 4/1) SILTY CLAY. Minor Lithologies: Section 5, 6-9 cm, contains a thin bed of black QUARTZ AMPHIBOLE SAND. In Section CC, 1-8 cm, is medium gray (N5) SILTY CLAY WITH PYRITE. General Description: The sediment is slightly bioturbated. |

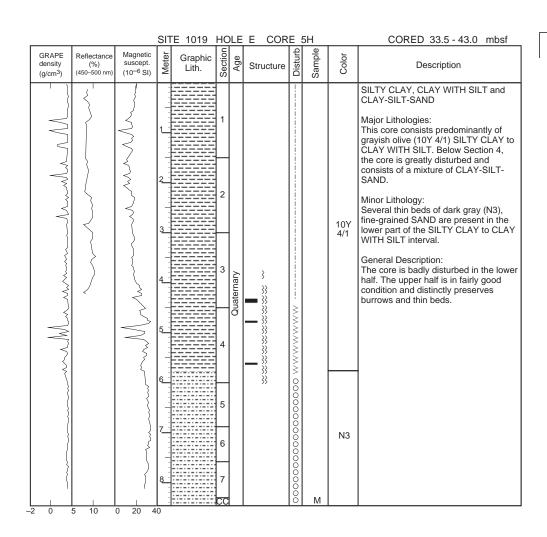
| | | SI | TE 1019 | | LE | D COR | | 24X | | CORED 214.2 - 223.8 mbsf |
|------------------------------------------|-----------------------------------------------|-------|---------------------------------------------------------------------------------|---------|------------|-----------|---------------------------------------------|--------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | } | | X = = = = = = = = = = = = = = = = = = = | 1 | | | $\bigvee \bigvee \bigvee \bigvee$ | | 5Y 4/1 | CLAY WITH DIATOMS AND SILT Major Lithology: This core consists of olive gray (5Y |
| | | 1 | X X X X | 2 | | | $\wedge \wedge \wedge \wedge \wedge \wedge$ | | | 5/2 to 5Y 4/2) CLAY WITH DIATOMS AND SILT. Small pods of shell fragments occur in Sections 6, and CC. |
| } | | 3 | | 3 | | | \wedge | | 5Y 4/2 | General Description: The sediment is predominantly homogeneous but the core is extensively fractured into biscuits and most structural features are difficult to discern. |
| | } | 4 | X | | ary | } | + | S | 5Y | Note: Material in Sections 1 and 2 is recovered from rig floor. The stratigraphic order or orientation is unknown. |
| | } | 5_ | ×, ×, ×, ×, ×, ×, ×, ×, ×, ×, ×, ×, ×, × | 4 | Quaternary | | \dashv | | 5/2 | |
| | | 6 | ў ў | 5 | | | $\wedge \wedge \wedge \wedge \wedge$ | | | |
| | | 7 | Š | 6 | | Ø | ^ ⊣⊣⊣⊣- | | 5Y 4/2 | |
| | | 8_ | | 7 | | | 444444 | | | |
| 0 0.5 0 | 20 4 | 0 | Š | cc | | Ø | \perp | М | | |

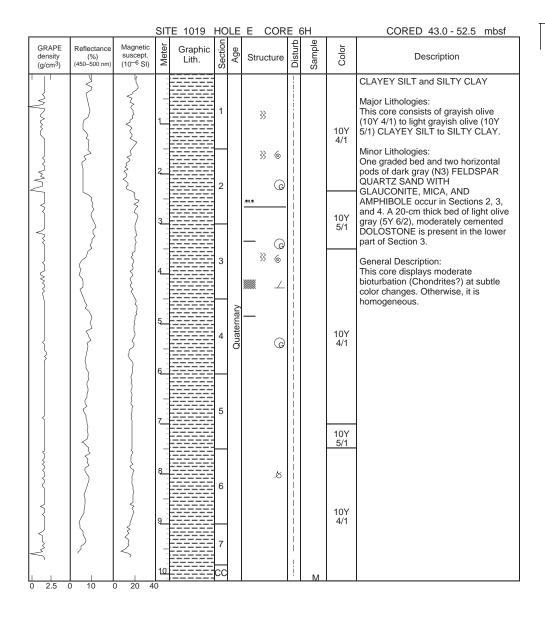
| | | | SII | E 1019 | | F F CO | | | | CORED 0.0 - 5.0 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|----------------------|----------|---------|--------|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450-500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Structur | Disturb | Sample | Color | Description |
| | | 20 44 | 3 | | 1 2 3 3 4 <u>CCC</u> | | M | W | 5Y 4/3 | DIATOM CLAY WITH SILT AND FORAMINIFERS Major Lithology: This core consists of olive (5Y 4/3 to 5Y 5/3) DIATOM CLAY WITH SILT AND FORAMINIFERS. Diatom preservation is best in the uppermost section. General Description: Abundant open burrows are present in Section 1 and one at the top of Section 3. |

| | | | SIT | E 1019 | HO | LE | E COR | | | | CORED 5.0 - 14.5 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|------------------------------------------|------------------|---------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3 | | 1 2 3 4 5 6 7 | Quaternary | **** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ** *** *** *** *** *** *** *** *** *** *** *** *** ** *** *** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** ** * | MMM | W | 5Y 4/2 | CLAY WITH SILT, NANNOFOSSILS, AND DIATOMS Major Lithology: This core consists primarily of grayish olive (10Y 4/1) to olive gray (5Y 5/2) CLAY WITH SILT, NANNOFOSSILS, AND DIATOMS. Macroscopic pieces of charcoal, shell fragments, and pyritized burrows are present in the sediment. Minor Lithology: Dark to medium gray (N3 to N5) FELDSPAR QUARTZ SAND AND SILT are intercalated throughout the core as laminations and thin graded beds. Two thin beds in Section 4 are distinctly lighter gray and contain unidentified acicular grains. General Description: The sediments are slightly burrowed throughout, and include Chondrites and pyritized mm-scale burrows. Note: Expanded material from Section 7 was boxed separately. |
| 1 2 | 5 10 | 0 200 4 | 10 | . | СС | | | - | М | 5Y 4/2 | |

| | | | SIT | E 1019 | | LE | E COR | Ε : | | | CORED 14.5 - 24.0 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|----------------------------|------------------|--------------------------|------------|-----------|---------|--------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| 15. | 5 10 | | 3 3 5 6 8 7 | | 1 2 2 3 3 4 4 5 5 6 6 CC | Quaternary | | 000 | М | 10Y 4/1 10Y 3/1 10Y 4/1 10Y 3/1 | SILTY CLAY and SANDY SILT WITH CLAY Major Lithologies: This core consists of grayish olive (10Y 4/1) SILTY CLAY and dark grayish olive (10Y 3/1) SANDY SILT WITH CLAY. Foraminifers and glauconite are common in the coarser intervals. Minor Lithologies: Several laminations and thin beds of dark greenish gray (5GY 3/1) GLAUCONITIC SAND are present in Sections 5 to 7. A 2-cm thick, moderately indurated bed of pale olive (10Y 6/2) DOLOMITE is present at Section 5, 36 cm. General Description: The sediments are homogeneous to moderately burrowed in the lower half of the core. Note: Expanded material from Sections 2, 3, 4, and 5 was boxed separately. |







| GRAPE dereity (%) Magnetic suscept. (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10-4 8) (10 | | | | SIT | E 1019 | | | E COR | | ′H | | CORED 52.5 - 62.0 mbsf |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------------------------------|----------|-------|--------|---------|------------|-----------|---------|--------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Major Lithologies: This core consists of grayish olive (107 4/1) to dark gray (5Y 4/1) SILTY CLAY to CLAYEY SILT. Minor Lithologies: A thin layer of hard, well-cemented, very light gray (N7) SANDSTONE is at the top of the core and may be slough from uphole. A thin bed of dark gray (N3) SAND WITH AMPHIBOLE AND GLAUCONITE is present in Section 4. 10Y 4/11 Feneral Description: The seatiments are entirely homogeneous, except for the sandy layer in Section 7. Note: Section 1 was disturbed during coring and has an uncertain stratigraphy. | density | Reflectance (%) (450–500 nm) | suscept. | Meter | | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | | 7 | | 2 3 | Quaternary | (e) | MM | M | 4/1 5Y | Major Lithologies: This core consists of grayish olive (10Y 4/1) to dark gray (5Y 4/1) SILTY CLAY to CLAYEY SILT. Minor Lithologies: A thin layer of hard, well-cemented, very light gray (N7) SANDSTONE is at the top of the core and may be slough from uphole. A thin bed of dark gray (N3) SAND WITH AMPHIBOLE AND GLAUCONITE is present in Section 4. General Description: The sediments are entirely homogeneous, except for the sandy layer in Section 7. Note: Section 1 was disturbed during coring and has an uncertain |

| | | | SIT | E 1019 | HC |)LE | E (| COR | E | BH. | | CORED 62.0 - 71.5 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|-------------------|------------|----------|----------------|----------|--------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | | Struc | | urb | Sample | Color | Description |
| | } | } | | | 1 | | | Ø | | | 5Y 4/1 | CLAY WITH SILT Major Lithology: This core consists of light grayish olive |
| A | } | } | 1_ | | ľ | | ••• | Ø | | | 5Y 5/1 | (10Y 4/1) to dark gray (5Y 4/1) CLAY WITH SILT. Shell fragments and minor fish scales and wood fragments are |
| | | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | 3 | | 2 | | ≡ | \$ \$ \$ | | W | 5Y 4/1 | distributed throughout the core. Minor Lithologies: Several thick laminations of pale yellow (5Y 7/4) DIATOM OOZE occur in Sections 3, 4, and 5. mm-scale laminations of olive (5Y 4/4) and black (N1) DIATOM OOZE also occur at Section 2, 54-58 cm. A graded bed of SILT is present near the base of Section 1. |
| | | | 4 | | 3 | | ■ | Ø | | | 5Y 5/1 | General Description: The core displays no evidence of bioturbation. |
| | 5 10 | | 5 | | 4 5 6 CC | Quaternary | _ | 8 | <i>γ</i> | М | 10Y 4/1 | |

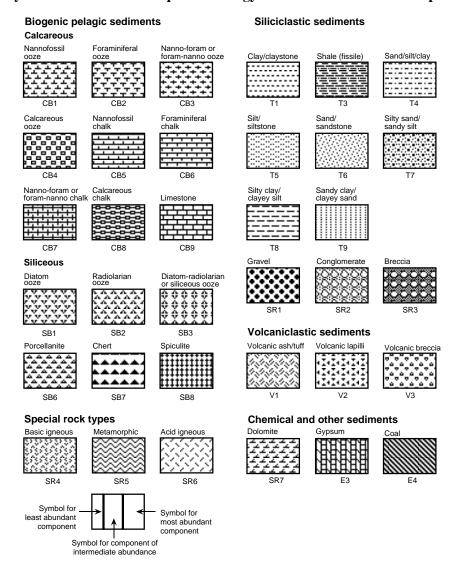
| | | | SIT | E 1019 | | LE | E COR | | ЭН | | CORED 71.5 - 81.0 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|------------|----------------------------------------|---------|------------|----------------------------------------|---------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | }' | { | | | | | }} }} | | | 5Y 4/1 | DIATOM CLAY WITH SILT and CLAY WITH SILT AND DIATOMS |
| | | | 1 | | 1 | | ************************************** | | | 5Y 5/1 | Major Lithologies: This core consists of dark gray (5Y 4/1) to light grayish olive (10Y 5/1) DIATOM CLAY WITH SILT to CLAY WITH SILT AND DIATOMS. Shell fragments are present in Section 3. |
| | | } | 2 | | 2 | | *** | | | 10Y 4/1 | General Description: The core is slightly to moderately bioturbated. The burrows in Section 3 are very distinct due to their |
| | | | 3_ | | | | ** × | | | 5Y 5/2 | pyritization. |
| | | { | 4 | | 3 | | *** | | | 10Y 5/1 | |
| } | | } | 5 | | 4 | Quaternary | » » » | | | 5Y 4/1 | |
| | } | } | 6 | ×××××××××××××××××××××××××××××××××××××× | _ | | 3 | | | 5Y 5/1 | |
| | | | 8 - 9 - 10 | | 6 7 | | | | M | 5Y 4/1 | |

| | | | SIT | E 1019 | | LE | E COR | | 10H | | CORED 81.0 - 90.5 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|--------------------------------|------------------|---------|------------|----------------|---------|--------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ | | | 1 | | 1 | | - A | 0000 | | 5Y 4/1 N7 5Y 4/1 | SILTY CLAY and CLAYEY SILT Major Lithologies: This core consists of homogeneous dark gray (5Y 4/1) to light grayish olive (10Y 5/1) SILTY CLAY to CLAYEY SILT. Shell fragments are distributed throughout the core. |
| | | | 3 | | 2 | | \$ \$ \$ | | | 10Y 4/1 | Minor Lithology: A very light gray (N7) VITRIC ASH is present in Section 1, 33-60 cm. General Description: The core liner of this core was badly damaged. Section 1 was crushed, greatly disturbing the position of sediment, especially in the upper half. |
| | \\ | | 5 | | | Quaternary | <i>8</i> | | | 5Y 5/1 | |
| } | | | 6 | | 4 | Qu | | | | 10Y 5/1 5Y 5/1 | |
| | | } | 7 | | 5 | | | | | 10Y 5/1 | |
| | | *** | 8 - - - - 9 - - | | 7 | | Ø | | | 5Y 4/1 | |
| 0 2.5 | 5 10 | 0 20 4 | 10 ⁻ | | СС | | | ! | M | | |

| | | | SIT | E 1019 | | LE | E COR | | 11H | | CORED 90.5 - 100.0 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|-------|------------------|---------|------------|----------------------------------------|---------|--------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450-500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 2 | | 1 | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | 5Y 4/1 | SILTY CLAY WITH DIATOMS and SILTY CLAY Major Lithologies: This core consists of dark gray (5Y 4/1) SILTY CLAY WITH DIATOMS and grayish olive (10Y 4/1) SILTY CLAY. Shell fragments are distributed throughout. General Description: The core is moderately to intensely |
| | | | 3 | | 3 | ry | ************************************** | | | 10Y 4/1 | bioturbated. Burrows are distinctly black and pyritized in Section 3 and include a few with diameter >1 cm. |
| My Many Many | | | 5 7 8 | | 5 6 | Quaternary | ** & & *** | | | 5Y 4/1 | |
| 0 1 | 6 8 0 |) 50 1 | 00 | | СС | | | > | М | 5Y 3/1 | |

| | | | SIT | TE 1019 | | | E COR | | | | CORED 100.0 - 109.5 mbsf |
|------------------------------------------|------------------------------------|-----------------------------------------------|---------------------------------------------------------------------------------------------|------------------|--------------|------------|-----------|---------|--------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GRAPE density (g/cm ³) | Reflectance (%) (450–500 nm) | Magnetic suscept. (10 ⁻⁶ SI) | Meter | Graphic Lith. | Section | Age | Structure | Disturb | Sample | Color | Description |
| | | | 3 | Void | 3 | Quaternary | | WW.W | | 10Y 4/1 | SILTY CLAY Major Lithology: This core consists of grayish olive to light grayish olive (10Y 4/1 to 10Y 5/1) SILTY CLAY. Color change is subtle and gradual. General Description: The sediment is slightly bioturbated. |
| 0 1 | 6 8 | 0 20 4 | 6 - - - 7 - - - - - - - - - - - - - - | | 5 6 CC | | ****** | | M | 10Y 5/1 | |

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.

| | rilling disturbance rmbols | Sec | dimentary structures cont | • | |
|----------------------------|-------------------------------------------|--------------------|---------------------------------------------------------|----------------------------|-----------------------------|
| | Soft sediments | | | | |
| | Slightly disturbed | ∱F | Fining-upward sequence | ♦ | Isolated pebbles/cobbles |
| ļ | Madaratah diaturkad | ↑ | Interval over which primary sedimentary structure occur | • | Isolated mud clasts |
| <u> </u> | Moderately disturbed | | Planar laminae | | Slump blocks or slump folds |
| > | Highly disturbed | \leq | Wedge-planar laminae/beds | 2 | Contorted slump |
| 0 | | ••• | Graded bedding (normal) | X | Probable compaction |
| 00 | Soupy | ••• | Graded bedding (reversed) | | fracture |
| | Hard sediments | | Sharp contact | // _/ | Microfault (normal) |
| 2 | Slightly fractured | | Gradational contact | 1/2 | Microfault (thrust) |
| | 3 7 | w | Scoured, sharp contact | _ | , |
| 土 | Moderately fractured | ••• | Scoured contact with graded bed | - | Macrofault |
| \geq | Highly fragmented | | Thick color bands (sharp contact) | | Fracture |
| \times | Drilling breccia | **** | Thick color bands (gradational contact) | × | Totally fractured |
| $\stackrel{\sim}{\times}$ | Drilling breccia | | Medium color bands (sharp contact) | X | Vein structures |
| Sec | limentary structures | 3000000 3000000 | Medium color bands (gradational contact) | ₹3 | Color mottles |
| 3 | Burrows, rare (<30% surface area) | \equiv | Thin color bands (sharp contact) | <u> </u> | Dolomite nodule/concretion |
| 33 | Burrows, common (30%–60% surface area) | ****** | Thin color bands (gradational contact) | D | Disseminated dolomite |
| 333 | Burrows, abundant (>60% surface area) | | Laminations (mm scale) | P | Pyrite nodule/concretion |
| >>> | Discrete Zoophycos trace fossil | | Individual thick color band | Р | Disseminated pyrite |
| 6 | Discrete Chondrites trace fossil | | Individual medium color band Individual thin color band | G | Glauconite |
| 9 | Sagarites sponge | | Individual lamination | | Concretions/nodules |
| 1 | Gastropods | *** | Wavy lamination | | |
|) \(\frac{1}{\sqrt{2}} \) | Other bivalves | -11 | Cross laminae | (Ba) | Barite nodule/concretion |
| | | \mathbb{Z} | Cross stratification | Ва | Disseminated barite |
| 8 | Shell fragments | ₩ 777 | Cross bedding Convoluted/contorted bedding | Ca | Calcite nodule/concretion |
| # | Wood framents | ی | Flaser bedding | (c) | Carbonate nodule/concretion |
| δ | Fish debris | Δ | Graded interval, normal | | |
| | | | Veins | (Ch) | Chert nodule/concretion |
| 8 | | | Water escape structure | A∙ | Ash/pumice pods |
| | | | Scour | - A | Ashlayer |