Major lithology: Foraminifera-rich GRAINSTONE. Fine- to medium-grained, grayish brown. Planktic foraminifer are abundant. Benthic foraminifer, gastropods, and pteropods are common. Halimeda plates, bivalve fragments, organic matter are present, echinoid spines are few. Skeletal components and bioclasts are commonly orange/yellow stained. Minor lithology: None. Remarks: Sieved fraction >65 µ examined.
Hole 359-U1470A Core 2H, Interval 2.1-10.34 m (CSF-A)

Major lithology: Foraminifera-rich GRAINSTONE. Fine- to medium-grained, grayish brown. Interlayered medium to coarse grained GRAINSTONE (light gray) interval from 2H-5, 39 cm to 2H-6, 72 cm. Large particles of organic matter are common at the upper gradational color change. Planktic foraminifer are abundant. Benthic foraminifer and pteropods are common with the latter becoming larger down core. Halimeda plates, bivalve fragments, gastropods, organic matter are present, echinoid spines are few. Skeletal components and bioclasts are less stained than 1H. Locally grainsize is medium-coarse. Minor lithology: None. Remarks: Sieved fraction >65 µ examined.
Hole 359-U1470A Core 3H, Interval 11.6-19.84 m (CSF-A)

Major lithology: Foraminifera-rich GRAINSTONE. Medium-grained, grayish brown to light brownish gray. Planktic foraminifer are abundant. Benthic foraminifer and pteropods are common with the latter becoming larger down core. Halimeda plates, bivalve fragments, gastropods, otoliths and organic matter are present (common to abundant in 3H-2, 00-40 cm). Larger components (up to 2 mm) and lithoclasts are common from 3H-1, 00 cm to 132 cm. Remarks: Sieved fraction >65 µ examined. Minor lithology: None. Remarks: Sieved fraction >65 µ examined.
Major lithology: Un lithified planktic foraminifera-rich GRAINSTONE to POORLY WASHED GRAINSTONE. Coarse- to medium-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common, few ooliths and rare pteropod fragments and echinoderm spines (only identified in sieved samples), Halimeda is present. Light brownish gray to light gray. Minor lithology: Un lithified planktic foraminifera-rich PACKSTONE. Medium- to coarse-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Light gray with occasional dark layers. Remarks: Smear slide at 359-U1470A-4H-3, 124 cm, in a dark (organic matter rich?) horizon. Some bioturbation is present but cannot be clearly define.
Major lithology: Un lithified to partially lithified planktic foraminifera-rich PACKSTONE to GRAINSTONE. Medium- to Coarse-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera, rare ootoliths. White to light gray. Minor lithology: None. Remarks: N/A
Major lithology: Unlithified planktic foraminifera-rich PACKSTONE. to, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Pteropods are present. Light gray to white. Minor lithology: Partially lithified planktic foraminifera-rich GRAINSTONE. Medium- (to coarse-) grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Pteropods are present. Light gray to white. Remarks: Locally some of the lithification seems to occur in burrows.
Hole 359-U1470A Core 7H, Interval 49.6-57.37 m (CSF-A)

Major lithology: Unlithified planktic foraminifera-rich PACKSTONE to WACKSESTONE. Medium-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Pteropods are present. Light gray to white. Minor lithology: Partially lithified planktic foraminifera-rich PACKSTONE to GRAINSTONE. Coarse- to medium-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Pteropods are present. Light gray to white. Remarks: Smear slide at 359-U1470A-7H-3, 125 cm.
Hole 359-U1470A Core 8H, Interval 59.1-67.98 m (CSF-A)

Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE to GRAINSTONE. Medium-grained, well-sorted. Planktic foraminifera and bioclastic grains are abundant, benthic foraminifera are common. Pteropods are present. Minor lithology: None. Remarks: Bioclasts appears to by recrystallized.
Hole 359-U1470A Core 9H, Interval 68.6-75.54 m (CSF-A)

Major lithology: Unlithified to slightly indurated planktic foraminifera-rich PACKSTONE. Medium-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common, echinoderm spines are present. Minor lithology: None. Remarks: Some, bioclasts appears to by recrystallized.

Visual core descriptions

Site U1470 core descriptions

Core image

Graphical lithology and texture

Grain size

Boundary

Bioturbation intensity rank

Non-skeletal components

Structures

Diagenesis

Magnetic susceptibility

Point (SI)

Natural gamma radiation (cps)

Core length (cm)

Depth CSF-A (m)

Section

Core disturbance

Shipboard samples

Core.
Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE. Medium-grained, moderately- to well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. White. Minor lithology: None. Remarks: N/A
Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE. Coarse- to medium-grained, moderately- to well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Few Aggregates, echinoderm spines are rare. White. Minor lithology: None. Remarks: highly recrystallized. Cave in top 24 cm.
Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE. Medium-grained, moderately- to well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Few Aggregates, echinoderm spines are rare. White. Minor lithology: None. Remarks: highly recrystallized. Cave in top 26 cm.
Major lithology: Un lithified to partially lithified planktic foraminifera-rich PACKSTONE. (Fine-) Medium- to coarse-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera and bioclastic grains are common. Echinoderm spines are rare. White. Minor lithology: None. Remarks: Cave in top 30 cm.
Hole 359-U1470A Core 14H, Interval 116.1-125.59 m (CSF-A)

Major lithology: Unlithified to lithified planktic foraminifera-rich PACKSTONE. Medium- to coarse-grained, well-sorted. Planktic foraminifera are abundant, benthic foraminifera are common. Shell fragments are present. White. Minor lithology: None. Remarks: Cave in top 24 cm.
Hole 359-U1470A Core 15H, Interval 125.6-134.76 m (CSF-A)

Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE. Fine- to medium-grained, well-sorted, white to light gray. Planktic foraminifera are abundant, benthic foraminifera are common. Aggregate grains and shell fragments are common and few echinoid spines. Components poorly preserved with calcite crystal overgrowth and are commonly yellow/brown stained White. Minor lithology: Medium- to coarse-grained partially lithified GRAINSTONE, common as burrow infills. Remarks: Cave in top 10 cm.
Major lithology: Unlithified to partially lithified planktic foraminifera-rich PACKSTONE to GRAINSTONE. Medium-grained, well-sorted, white to light gray. Planktic foraminifera are abundant, and aggregate grains and echinoid spines are common. Benthic foraminifera (some large), organic matter and mollusk fragments are few. Components poorly preserved recrystallized. Bioturbation is present to moderate and often represented by lithified burrows (Thalassinoides). Minor lithology: None. Remarks: None.
Site U1470 core descriptions

Hole 359-U1470A Core 17H, Interval 144.6-148.37 m (CSF-A)

Major lithology: Unlithified to partially lithified, red algae-rich and coral-rich GRAINSTONE to PACKSTONE with a minor mud matrix. Medium to coarse-grained and granular. Planktic foraminifera are abundant, and aggregate grains are common. Benthic foraminifera and organic matter are present and mollusk fragments are few. Components are poorly preserved with calcite overgrowths. Bioturbation is present to moderate and often represented by lithified burrows (Thalassinoides). Lithified PACKSTONE to GRAINSTONE, medium grained (17H-3, 16 - 28 cm). Lithified GRAINSTONE, medium to coarse-grained with a sharp basal contact (17H-3, 28 - 36 cm). Lithified GRAINSTONE, medium- to coarse grained (17H-3, 28 - 36 cm). Lithified GRAINSTONE, very coarse- to granular. Fining-up sequence from granular to very-coarse and into overlying medium-grained unit (17H-3, 36 - 50 cm). Lithified FLOATSTONE (Dolomite). Granular grained. Red algae fragments, shell fragments, bivalve and gastropods (often as molds) are abundant. Bio-erosion is present. Minor lithology: Minor mud matrix from 17H-1, 00 cm to 17H-3, 16 cm. Remarks: Transition into reef top sequence.
Hole 359-U1470A Core 18X, Interval 148.4-148.57 m (CSF-A)

Major lithology: Lithified FLOATSTONE. Granular grained, Red algae fragments, shell fragments, bivalve and gastropods (often as molds) are abundant. Bioerosion is present. 10yr 7/2. Minor lithology: None. Remarks: Highly fragmented.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Magnetic susceptibility (Point)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core image</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Graphic lithology and texture
- Grain size
- Bioturbation intensity rank
- Lithification
- Non-skeletal components
- Skeletal components
- Structures
- Diagenesis
- Unlithified
- Partially lithified
- Fully lithified

Site U1470 core descriptions

Visual core descriptions
<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Sclerobiont components</th>
<th>Non-skeletal components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Site U1470 core descriptions**

**Visual core descriptions**

Hole 359-U1470A Core 19X, Interval 158.2-158.2 m (CSF-A)

NO RECOVERY
**Hole 359-U1470A Core 20F, Interval 163.0-164.71 m (CSF-A)**

Major lithology: Lithified coral-rich RUDSTONE (Dolomite). Granular grained, white to very pale brown. Composed of platform material and completely fragmented. Coral fragments, echinoid fragments, bivalves, gastropods are abundant. Bryozoan and red algae are common. Lithophaga bivalve are present abundant and encrusting red algae are present. Interlayered unlithified white MUDSTONE (20F-2, 28-29 cm). Very-fine grained (clay sized). Lithified GRAINSTONE, coarse-grained, very pale brown (20F-2, 29 - 40 cm). Bioclast fragments are common. Lithified RUDSTONE, granular sized, very pale brown (20F-2, 29 - 40 cm). Fining up into the overlying unit. Coral fragments and bivalves are abundant, gastropods common. Large coral fragment up to 5 cm. Lithophaga boring bivalves are rare. Minor lithology: None. Remarks: Completely fragmented.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
</tr>
</thead>
<tbody>
<tr>
<td>163</td>
<td>0</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>164</td>
<td>100</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Visual core descriptions**

- **Graphic lithology and texture:** Mudstone, Wackestone, Packstone, Grainstone, Floatstone, Rudstone, Boundstone.
- **Core image:** Visual core images showing the physical characteristics of the core samples.
- **Magnetic susceptibility Point (SI):** Values range from 18 to 8 in steps of -2.
- **Natural gamma radiation (cps):** Values range from 37 to 22 in steps of -7.
- **Lithification:** Partial.
- **Bioturbation intensity rank:** Values range from 5 to 1 in steps of 4.
- **Non-skeletal components:** Clay, Silt, VF sand, Fine sand, Med. sand, Coarse sand, Gravel.
Hole 359-U1470A Core 21F, Interval 165.0-166.9 m (CSF-A)

Major lithology: Lithified coral-rich FLOATSTONE (Dolomite). Granular grained, very pale brown. Composed of platform material and completely fragmented. Coral fragments are abundant. Red algae (some branching), echinoid spines, bivalve fragments and bio-erosion (Lithophaga) are common. Minor lithology: None. Remarks: None.
Site U1470 core descriptions

<table>
<thead>
<tr>
<th>Hole 359-U1470A Core 22X, Interval 167.0-167.07 m (CSF-A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major lithology: Lithified coral-rich RUDSTONE (Dolomite). Granular grained, very pale brown. Coral fragments are abundant and gastropods and red algae are common. Platy corals cemented together. Red algae encrusting coral fragments. Minor lithology: None. Remarks: None</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Lithification</th>
<th>Bioturbation intensity rank</th>
<th>Skeletal components</th>
<th>Non-skeletal components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>167</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Mudstone</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-19</td>
<td>0</td>
</tr>
</tbody>
</table>

Visual core descriptions

22
<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Section</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO RECOVERY</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graphic lithology and texture**

- Mudstone
- Wackestone
- Packstone
- Grainstone
- Roodstone
- Boundstone
- Clay
- VF sand
- Fine sand
- Coarse sand
- Gravel

**Bioturbation intensity rank**

- 5
- 4
- 3
- 2
- 1

**Natural radiation (cps)**

- 1
- 0.75
- 0.5
- 0.25
- 0

**Magnetic susceptibility (SI)**

- 1
- 0.75
- 0.5
- 0.25
- 0
**Hole 359-U1470A Core 24X, Interval 180.3-180.45 m (CSF-A)**

**Major lithology:** Lithified coral-rich RUDSTONE. Granular grained, very pale brown. Completely fragmented. Coral fragments are abundant. Red algae encrusting coral, echinoid spines, bivalve fragments and bio-erosion (Lithophaga) are common. Bryozoan and rhodoliths are present.

**Minor lithology:** None. Remarks: None.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>180.3-180.45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Graphic lithology and texture**
- Mudstone
- Wackestone
- Packstone
- Grainstone
- Floatstone
- Rudstone
- Boundstone

**Magnetic susceptibility**
- Point (SI)
  - 10
  - 10.25
  - 10.5
  - 10.75
  - 11

**Skeletal components**
- Natural gamma radiation (cps)
  - 0
  - 0.25
  - 0.5
  - 0.75
  - 1

**Non-skeletal components**
- Boundary
- Clay
- Silt
- VF sand
- Fine sand
- Med. sand
- Coarse sand
- Granule
- Gravel

**Lithification**
- Unlithified
- Partial
- Lithified

**Diagenesis**
- Unlithified
- Partial
- Lithified

**Bioturbation intensity rank**
- 5
- 4
- 3
- 2
- 1

**Structures**

**Shipboard samples**

- a*
  - 4.6
  - 3.6
  - 2.6

- b*
  - 5.5
  - 3
  - 0.5
  - -2
  - -4.5

- L*
  - 60
  - 50
  - 40
  - 30
  - 20

- 10
- 10.5
- 10.75
- 11
- 0
- 0.25
- 0.5
- 0.75
### Hole 359-U1470B Core 11, Interval 0.0-0.0 m (CSF-A)

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core length (cm)</td>
<td>1</td>
<td>0.25</td>
</tr>
<tr>
<td>Section Core disturbance</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Shipboard samples</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Core image</td>
<td>0.25</td>
<td></td>
</tr>
<tr>
<td>Graphi</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>limeology and texture</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Grain size</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Boundary</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Lithification</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bioturbation intensity rank</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Non-skeletal components</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Skeletal components</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Structures</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Diagenesis</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

#### Graphic lithology and texture
- Mudstone
- Wackestone
- Packstone
- Grainstone
- Floatstone
- Rudstone
- Boundstone

#### Grain size
- Bioturbation intensity rank

#### Non-skeletal components
- Boundary
- Clay
- Silt
- VF sand
- Fine sand
- Med. sand
- Coarse sand
- Granule
- Gravel

#### Diagenesis
- Lithification
- Unlithified
- Partially lithified
- Lithified

#### Site U1470 core descriptions

#### Visual core descriptions

DRILLED INTERVAL
**Hole 359-U1470B Core 2R, Interval 168.9-169.14 m (CSF-A)**

Major lithology: Red algae-rich BOUNDSTONE. Encrusting and branching red algae rhodoliths, massive coral. Light gray to pale yellow. Minor lithology: Dolomitic gastropod-rich WACKESTONE. Abundant small gastropods (as molds), bivalve (as molds), possible large benthic foraminifera. Light gray. Remarks: Fragments of both lithology, mixed. Highly fragmented, CC only.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioerosion intensity rank</th>
<th>Lithification</th>
<th>Skeletal components</th>
<th>Non-skeletal components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>169.14</td>
<td>0</td>
<td>CC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.25</td>
<td>0.75</td>
</tr>
</tbody>
</table>

**Visual core descriptions**

Site U1470 core descriptions

---

**Core image**

Core images showing the visual characteristics of the core samples.
Hole 359-U1470B Core 3R, Interval 178.6-178.73 m (CSF-A)

Major lithology: Red algae-rich RUDSTONE. Encrusting red algae, large benthic foraminifera and gastropods, some as fragments and moldic porosity. Minor lithology: None. Remarks: Highly fragmented, CC only.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Partial dissolution</th>
<th>Non-skeletal components</th>
<th>Non-skeletal components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Magnetic susceptibility Point (SI)**
  - 0
  - 0.25
  - 0.5
  - 0.75

- **Natural gamma radiation (cps)**
  - 0
  - 0.25
  - 0.5
  - 0.75
Hole 359-U1470B Core 4R, Interval 188.3-188.43 m (CSF-A)


<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>122</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Marine, Pedalid, Graveline, and Rudistide</td>
<td>Wackestone</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Visual core descriptions

Shipboard samples
**Site U1470 Core Descriptions**

**Hole 359-U1470B Core 5R, Interval 198.0-201.46 m (CSF-A)**

Major lithology: Bioclastics-rich GRAINSTONE to RUDSTONE. Medium-grained, well-sorted. Bioclastic grains are abundant, large benthic foraminifera are common and are the primarily recognizable fossils. Red algae and Possible green (Halimeda) algae. Corals are present. Recrystallized. Bioturbation is unresolvable. Minor lithology: None. Remarks: Top (sections 1-2) possibly fining upwards, base (section 3 and CC) coarsening upwards.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Section</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Boundary</th>
<th>Lithification</th>
<th>Bio-</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>198</td>
<td>0</td>
<td>1</td>
<td>N</td>
<td></td>
<td></td>
<td>Unlithified</td>
<td>L</td>
<td>1</td>
<td>Unlithified</td>
<td>1</td>
<td>2</td>
<td>-6.8</td>
<td>27</td>
</tr>
<tr>
<td>199</td>
<td>100</td>
<td>2</td>
<td>N</td>
<td></td>
<td></td>
<td>Unlithified</td>
<td>L</td>
<td>1</td>
<td>Unlithified</td>
<td>1</td>
<td>2</td>
<td>-8.8</td>
<td>32</td>
</tr>
<tr>
<td>200</td>
<td>200</td>
<td>3</td>
<td>N</td>
<td></td>
<td></td>
<td>Unlithified</td>
<td>L</td>
<td>1</td>
<td>Unlithified</td>
<td>1</td>
<td>2</td>
<td>-10.8</td>
<td>27</td>
</tr>
<tr>
<td>201</td>
<td>300</td>
<td>CC</td>
<td>N</td>
<td></td>
<td></td>
<td>Unlithified</td>
<td>L</td>
<td>1</td>
<td>Unlithified</td>
<td>1</td>
<td>2</td>
<td>-12.8</td>
<td>27</td>
</tr>
</tbody>
</table>

**Visual Core Descriptions**
Site U1470 core descriptions

Hole 359-U1470B Core 6R, Interval 207.7-208.68 m (CSF-A)

Major lithology: Dolomitic red algae-rich BOUNDSTONE. Encrusting red algae, rhodoliths, common gastropods and mollusks. Minor lithology: Dolomitic coral-rich BOUNDSTONE. Branching and massive corals, large benthic foraminifera. Remarks: N/A

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Boundary</th>
<th>Lithification</th>
<th>Bioturbation intensity rank</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>208</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Magnetic susceptibility**: Negative values indicate ferromagnetic minerals, positive values indicate paramagnetic minerals.
- **Natural gamma radiation (cps)**: Values indicate the level of radioactive activity.

**Visual core descriptions**

- **Shipboard samples**: Visual inspection of core samples.
- **Core image**: Detailed images of core sections.
- **Core disturbance**: Evaluation of sample integrity.
- **Bioturbation intensity rank**: Scale from 1 (low) to 5 (high) for bioturbation impact.

**Shipboard samples**

- **Skeletal components**: Presence of skeletal remains.
- **Non-skeletal components**: Non-skeletal particles in the sediment.

**Graphic lithology and texture**

- **Mudstone**: Fine-grained sedimentary rock.
- **Wackestone**: Fine-grained sediment with varying amounts of bioclasts.
- **Packstone**: Coarse-grained sediment with a lower ratio of grains to matrix.
- **Grainstone**: Fine- to coarse-grained sediment with minimal matrix.
- **Floatstone**: Sediment with a high proportion of grains.
- **Rudstone**: Sediment with a high proportion of bioclasts.
- **Boundstone**: Sediment with a high proportion of encrusting organisms.

**Diagenesis**

- **Lithification**: Stages of rock formation, from un lithified to fully lithified.
- **Non-skeletal components**: Identification of non-biological sedimentary components.
Hole 359-U1470B Core 7R, Interval 217.4-218.0 m (CSF-A)

Major lithology: Large mollusk-rich FLOATSTONE. Very poor sorting. Large mollusks (Oysters?) red algae, large benthic foraminifera, branching corals and other bioclasts. All grains are fragmented. Minor lithology: Dolomitized bioclastic PACKSTONE. Corals, large and small benthic foraminifera (including miliolids) and other bioclasts. Highly fragmented. Remarks: CC only.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Section</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Skeletal components (%)</th>
<th>Non-skeletal components (%)</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Site U1470 core descriptions

Visual core descriptions
Hole 359-U1470B Core 8R, Interval 227.1-227.16 m (CSF-A)

Major lithology: Three lithologies identified in the four pieces of rock recovered. (1) Bioclastic FLOATSTONE (10YR 7/2). Benthic foraminifera and red algae are abundant. Common mollusk fragments preserved as molds which are partially to totally infilled with cement. Reacts with HCl. (2) Bioclastic FLOATSTONE to PACKSTONE (10YR 8/1). Abundant benthic foraminifera. Red algae as fragments and encrusting mollusk fragments. Mollusk fragments preserved as molds (partially to completely infilled with calcite cement). Coral molds are present. (3) Oyster fragment encrusted by serpulids with bioerosion (in working half). Bioclastic PACKSTONE (10YR 8/1) between the oyster ribs. Reacts with HCl. Limestone to dolomitic limestone. Minor lithology: None. Remarks: Fragmented with four pieces of rock recovered.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Boundary</th>
<th>Lithification</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>60</td>
<td>Sedimentary Components</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>0.25</td>
<td>60</td>
<td>Sedimentary Components</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>60</td>
<td>Sedimentary Components</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
<td>0.05</td>
</tr>
<tr>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
<td>0.75</td>
<td>60</td>
<td>Sedimentary Components</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0.25</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Shipboard samples:
- Sedimentary Components
- Non-skeletal components

Magnetic susceptibility:
- Point (SI)
- Natural gamma radiation (cps)

Graphic lithology and texture:
- Mudstone
- Wackestone
- Packstone
- Grainstone
- Floatstone
- Rudstone
- Boundstone

Boundaries:
- Unlithified
- Partially lithified
- Lithified

Diagenesis:
- Non-skeletal components
- Boundary
- Clay
- Silt
- VF sand
- Fine sand
- Med. sand
- Coarse sand
- Granule
- Gravel

Bioturbation intensity rank:
- 0
- 1
- 2
- 3
- 4
- 5

Site U1470 core descriptions

Visual core descriptions
### Site U1470 Core Descriptions

#### Hole 359-U1470B Core 9R, Interval 236.8-236.8 m (CSF-A)

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core Length (cm)</th>
<th>Core Disturbance</th>
<th>Shipboard Samples</th>
<th>Core Image</th>
<th>Graphic Lithology and Texture</th>
<th>Grain Size</th>
<th>Bioturbation Intensity Rank</th>
<th>Soluble Components</th>
<th>Non-Skeletal Components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic Susceptibility Point (SI)</th>
<th>Natural Gamma Radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO RECOVERY</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Visual Core Descriptions:**

1. **Mudstone**
2. **Wackestone**
3. **Packstone**
4. **Grainstone**
5. **Floatstone**
6. **Rudstone**
7. **Boundstone**

**Boundary:**

- Site U1470 core descriptions

**Grain size:**

- *b*<sup>+</sup><br>- *l*<sup>-</sup><br>- *s*<sup>-</sup><br>- *m*<sup>-</sup><br>- *f*<sup>-</sup><br>- *g*<sup>-</sup><br>- *h*<sup>-</sup><br>- *i*<sup>-</sup><br>- *j*<sup>-</sup>

**Bioturbation intensity rank:**

- *0*<sup>-</sup><br>- *0.25*<sup>-</sup><br>- *0.5*<sup>-</sup><br>- *0.75*<sup>-</sup><br>- *1*<sup>-</sup>

**Magnetic susceptibility point (SI):**

- *0*<sup>-</sup><br>- *0.25*<sup>-</sup><br>- *0.5*<sup>-</sup><br>- *0.75*<sup>-</sup><br>- *1*<sup>-</sup>

**Natural gamma radiation (cps):**

- *0*<sup>-</sup><br>- *0.25*<sup>-</sup><br>- *0.5*<sup>-</sup><br>- *0.75*<sup>-</sup><br>- *1*<sup>-</sup>
Major lithology: Two rock pieces of limestone. (1) Bioclastic PACKSTONE to RUDSTONE (10YR 6/2). Abundant benthic foraminifera. Serpulids and red algae are present. Majority of bioclasts are preserved as molds which are partially to totally infilled by cement. (2) Amphistegina rich WACKESTONE with large dark colored lithoclasts. Benthic foraminifera are abundant and red algae common. Mollusk fragments coral fragments are present as molds. Minor lithology: None. Remarks: Fragmented with four pieces of rock recovered.
**Hole 359-U1470B Core 11R, Interval 256.2-256.2 m (CSF-A)**

**NO RECOVERY**

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Solid components</th>
<th>Non-skeletal components</th>
<th>Structures</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.00 0.25 0.5 0.75</td>
<td>0.00 0.25 0.5 0.75</td>
</tr>
</tbody>
</table>
Hole 359-U1470B Core 12R, Interval 265.9-265.96 m (CSF-A)

Major lithology: Bioclastic FLOATSTONE (Limestone). Bivalve and coral fragments are common as molds, partially to totally infilled with cement. Serpulids and red algae are present. Red algae occurs as nodules and encrustations. Minor lithology: None. Remarks: Fragmented.

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Bioturbation intensity rank</th>
<th>Non skeletal components</th>
<th>Non skeletal components</th>
<th>Structures</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>265.9</td>
<td>125</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>265.96</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Hole 359-U1470B Core 13R, Interval 275.6-275.89 m (CSF-A)

Bioclastic PACKSTONE to FLOATSTONE. Abundant bivalve fragments and bioclasts. Gastropods, coral fragments and red algae are common. Moldic porosity is totally or partially infilled with cement. Minor lithology: None. Remarks: Fragmented. Some fragmented pieces are poorly cemented and others well cemented.
Granular-grained, lithified bioclastic FLOATSTONE. Bivalves, gastropods and coral fragments are common as molds, partially to totally infilled with cement. Minor lithology: None. Remarks: Fragmented.
Granular-grained, lithified bioclastic PACKSTONE. Abundant bioclasts (as molds). Bivalves and gastropods are common as molds. Molds are partially to totally infilled with cement. Minor lithology: None. Remarks: Fragmented. Reacts with HCl in the pores (calcite cement). Four rock fragments and one intensely cemented and the others poorly cemented.
**Core image**

**Core length (cm)** | **Core disturbance** | **Graphic lithology and texture** | **Grain size** | **Lithification** | **Bioturbation intensity rank** | **Non-skeletal components** | **Skeletal components** | **Structures** | **Magnetic susceptibility Point (SI)** | **Natural gamma radiation (cps)**
---|---|---|---|---|---|---|---|---|---|---
Core CSF-A (m) | Section | Column | Core Fabian E568 | Granular-grained, lithified bioclastic FLOATSTONE. Abundant red algae and bioclasts (as molds). Bivalves and gastropods are common as molds. Coral fragments are present. Well cemented. Micrite matrix. Minor lithology: None. Remarks: Fragmented.
Hole 359-U1470B Core 17R, Interval 314.5-314.7 m (CSF-A)

Granular-grained, lithified bioclastic PACKSTONE to GRAINSTONE. Mollusk fragments are abundant. Branching coral fragments and red algae are present. Bioclasts preserved as molds and partially infilled by cement. Well cemented. Minor lithology: None. Remarks: Fragmented.
Granular-grained, lithified bioclastic PACKSTONE to GRAINSTONE (18R-1, 00 - 22 cm). Mollusk fragments are abundant. Coral fragments are present. Bioclasts preserved as molds and partially infilled by cement. Red algae FLOATSTONE (Dolostone; 18R-1, 22 - 53 cm). Red algae is abundant (nodules and encrustations). Coral fragments, bivalves and gastropods are common as molds. Benthic foraminifera, echinoid spines and bryozoan are present. Minor lithology: None. Remarks: Fragmented.

### Visual core descriptions

<table>
<thead>
<tr>
<th>Depth CSF-A (m)</th>
<th>Core length (cm)</th>
<th>Core disturbance</th>
<th>Shipboard samples</th>
<th>Core image</th>
<th>Graphic lithology and texture</th>
<th>Grain size</th>
<th>Boundary</th>
<th>Lithification</th>
<th>Diagenesis</th>
<th>Magnetic susceptibility Point (SI)</th>
<th>Natural gamma radiation (cps)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unlithified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Magnetic susceptibility</td>
<td>Natural gamma radiation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Unlithified</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>SI -3.2 b -5.2 -7.2 -9.2</td>
<td></td>
</tr>
</tbody>
</table>

**Site U1470 core descriptions**
Granular-grained, lithified, coral-rich FLOATSTONE. Abundant massive coral. Medium- to coarse-grained bioclasts are commons and bivalve fragments are present. Well cemented. Minor lithology: bioclast-rich PACKSTONE. Remarks: Fragmented. Almost the entire sample is coral, with some micritic patches and bioclast-rich PACKSTONE.