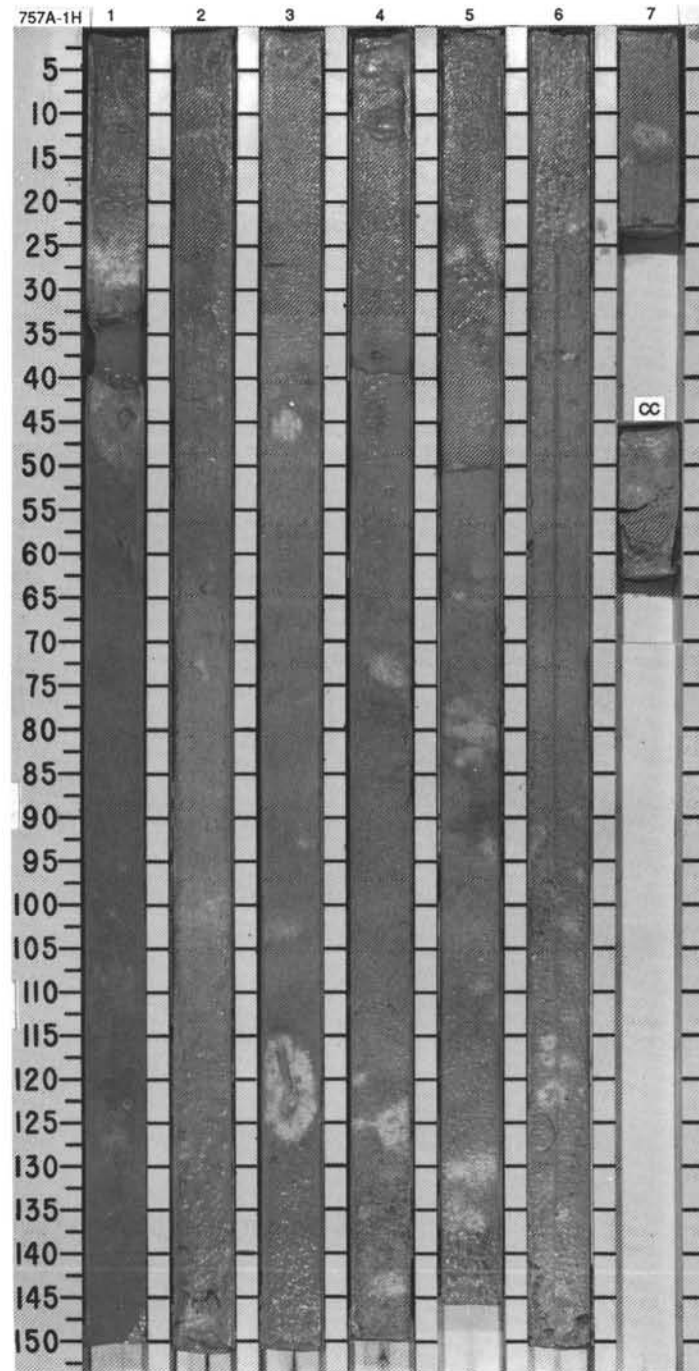


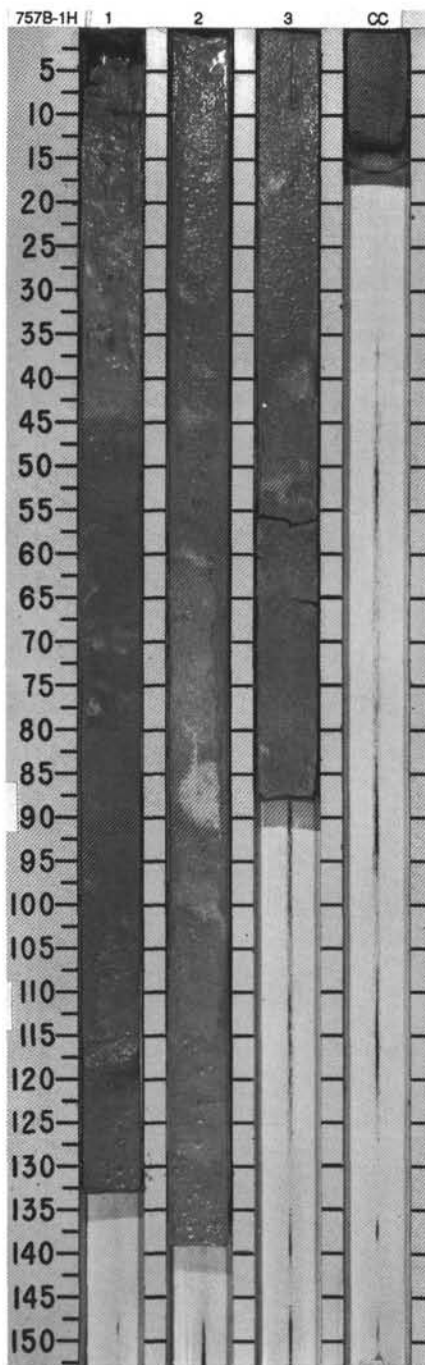
SITE 757 HOLE A CORE 1H CORED INTERVAL 0-9.4 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|----------------|------------------|-----------|---------|--------|-------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |                  |           |         |        |                   |                   |                 |         |   |
| PLEISTOCENE    | N22<br>CN13                         |              |              | Indeterminate  |                  |           |         | 0.5    | +                 | o                 | o               | o       | FORAMINIFER NANNOFOSSIL OOZE<br>The core is slightly soupy.<br>Major lithology: FORAMINIFER NANNOFOSSIL OOZE Pale brown (10YR 6/3) to very pale brown (10YR 7/3 and 10YR 7/4) with white (10YR 8/2) mottles. Mottles often exhibit light gray (2.5Y 7/0) and dark gray (10 YR 6/4) centers. The core is strongly bioturbated and, where not mottled, is homogeneous.<br>SMEAR SLIDE SUMMARY (%):<br>* 2.09<br>D<br>TEXTURE:<br>Sand 25<br>Silt 65<br>Clay 10<br>COMPOSITION:<br>Foraminifers 30<br>Nannofossils 69<br>Glass 1 |
|                |                                     |              |              |                |                  |           |         | 1.0    | +                 | o                 | o               | o       |   |
|                |                                     |              |              |                |                  |           |         | 1      | +                 | o                 | o               | o       |   |
|                |                                     |              |              |                |                  |           |         | 2      | +                 | o                 | o               | o       |   |
|                |                                     |              |              |                |                  |           |         | 3      | +                 | o                 | o               | o       |   |
|                |                                     |              |              |                |                  |           |         | 4      | +                 | o                 | o               | o       |   |
|                |                                     |              |              |                |                  |           |         | 5      | +                 | o                 | o               | o       |   |
| 6              | +                                   | o            | o            | o              |                  |           |         |        |                   |                   |                 |         |   |
| 7              | +                                   | o            | o            | o              |                  |           |         |        |                   |                   |                 |         |   |
|                |                                     |              |              |                |                  |           |         |        |                   |                   |                 |         |   |

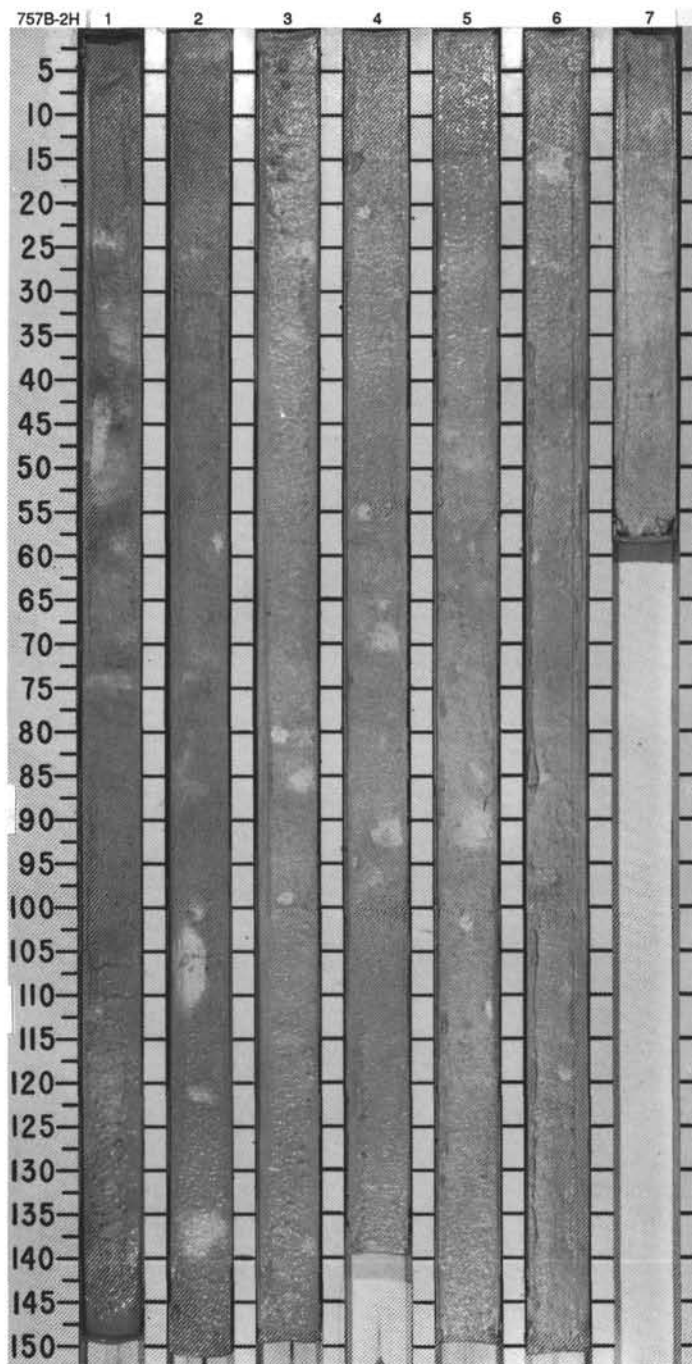


## SITE 757 HOLE B CORE 1H CORED INTERVAL 0-4.5 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |                         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SEP. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |
|----------------|-------------------------------------|--------------|-------------------------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|---|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS<br>DIATOMS |                |                  |           |         |        |                      |                   |                 |         |   |  |
| PLEISTOCENE    | N22                                 |              |                         | Indeterminate  |                  |           | 1       | 0.5    | +                    | O                 |                 |         | <p>FORAMINIFER NANNOFOSSIL OOZE</p> <p>The top 133 cm of the core is completely disturbed, and the remainder is strongly disturbed to soupy.</p> <p>Major lithology: FORAMINIFER NANNOFOSSIL OOZE. Very pale brown (10YR 7/3) with some white (10YR 8/2) and very pale brown (10YR 8/3) mottles. The core is strongly bioturbated.</p> <p>Grain Size: The mean grain size for Section 2, 70 cm is 30.5 <math>\mu\text{m}</math>, and for the CC is 51.8 <math>\mu\text{m}</math>.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="margin-left: 40px;">2, 70<br/>D</p> <p>TEXTURE:</p> <p>Sand 25<br/>Silt 70<br/>Clay 5</p> <p>COMPOSITION:</p> <p>Foraminifers 30<br/>Micrite Tr<br/>Nannofossils 70</p> |  |
|                | A/G                                 | CN14b - 15a  |                         |                |                  |           |         | 1.0    | +                    | O                 |                 |         |   |  |
|                |                                     | A/G          | CN13a - 14a             |                |                  |           |         | VOID   | +                    | O                 |                 |         |   |  |
|                |                                     | R/P          | R/P                     |                |                  |           |         | 2      | +                    | O                 |                 |         |   |  |
|                |                                     |              |                         | 3              | +                | O         |         |        |                      |                   |                 |         |   |  |
|                |                                     |              |                         | CC             | +                | O         |         |        |                      |                   |                 |         |   |  |



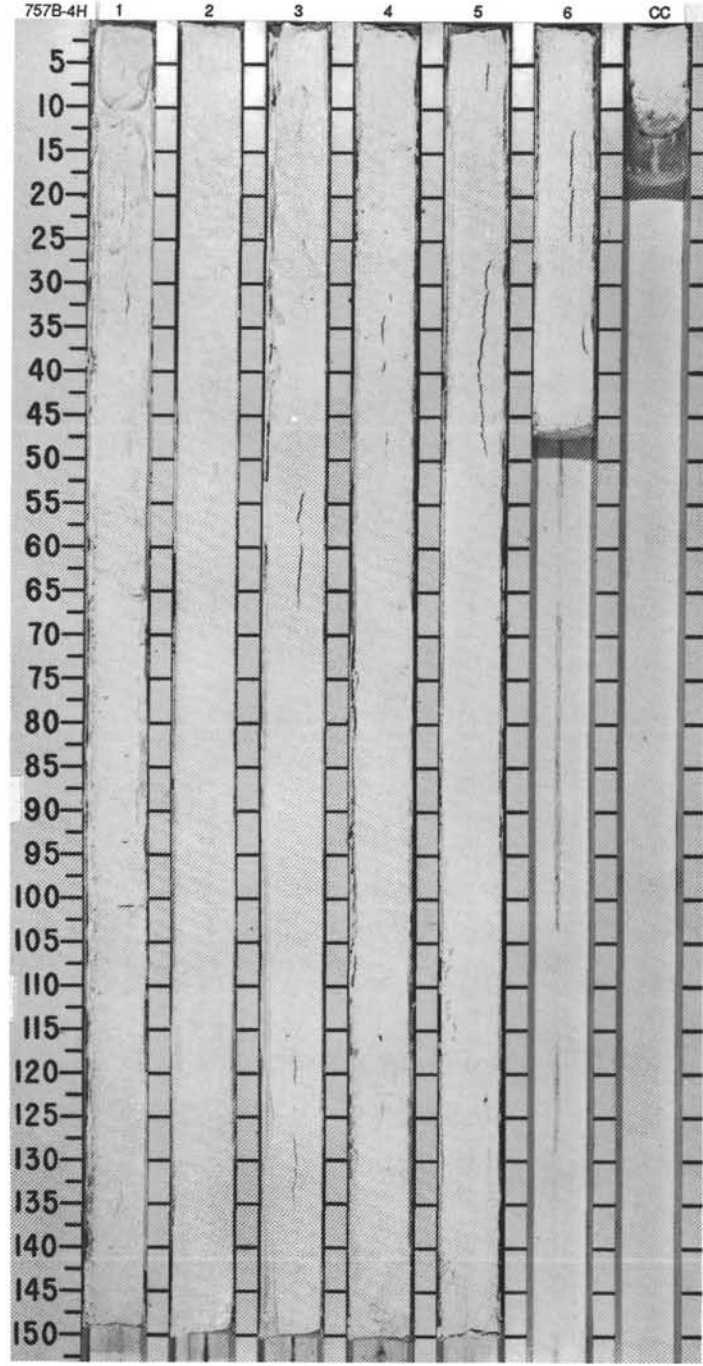
| TIME-ROCK UNIT      |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         | PALEOMAGNETICS | PHYS. PROPERTIES            | CHEMISTRY        | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|---------------------|--------------|-------------------------------------|---------|----------------|-----------------------------|------------------|---------|------------|----------------------|--------------------------------------|---------|---|
| FORAMINIFERS        | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |                |                             |                  |         |            |                      |                                      |         |   |
| PLEISTOCENE         |              | N21                                 |         | Indeterminate  | ● 97.7<br>● 91.7<br>● 81.53 | ● 95.0<br>● 94.4 | 1       | 0.5<br>1.0 | +                    | O                                    | O       | FORAMINIFER NANNOFOSSIL OOZE  |
| (UPPER PLEISTOCENE) |              | CN13b - 14a                         |         |                |                             |                  |         |            |                      |                                      |         |   |
| A/G                 |              |                                     |         | Indeterminate  | ● 87.1<br>● 71.61           | ● 95.0<br>● 94.4 | 2       |            | +                    | O                                    | O       | The upper section of the core is soupy, and the remainder is slightly disturbed.  |
| A/G                 |              | CN13a                               |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              | Barren                              |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           | 3       |            | +                    | O                                    | O       | Major lithology: FORAMINIFER NANNOFOSSIL OOZE. Very pale brown (10YR 7/3) with some faint white (10YR 8/2) mottles. The core is strongly bioturbated and homogeneous. |
|                     |              | Barren                              |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 87.1<br>● 71.61           | ● 95.0<br>● 94.4 | 4       |            | +                    | O                                    | O       | Grain size: The mean grain size for Section 2, 90 cm is 49.1 μm, for Section 4, 90 cm it is 36.8 μm, and for the CC II is 28.9 μm.                                    |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           | 5       |            | +                    | O                                    | O       | SMEAR SLIDE SUMMARY (%):  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           | 6       |            | +                    | O                                    | O       | TEXTURE:  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           | 7       |            | +                    | O                                    | O       | * Sand 35   |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Silt 60   |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Clay 5  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | COMPOSITION:  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Foraminifers 40   |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Glass Tr  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Nannofossils 55   |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | Spicules Tr   |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |
|                     |              |                                     |         | Indeterminate  | ● 86.1<br>● 71.53           | ● 94.4           |         |            | +                    | O                                    | O       | PP  |
|                     |              |                                     |         |                |                             |                  |         |            |                      |                                      |         |   |



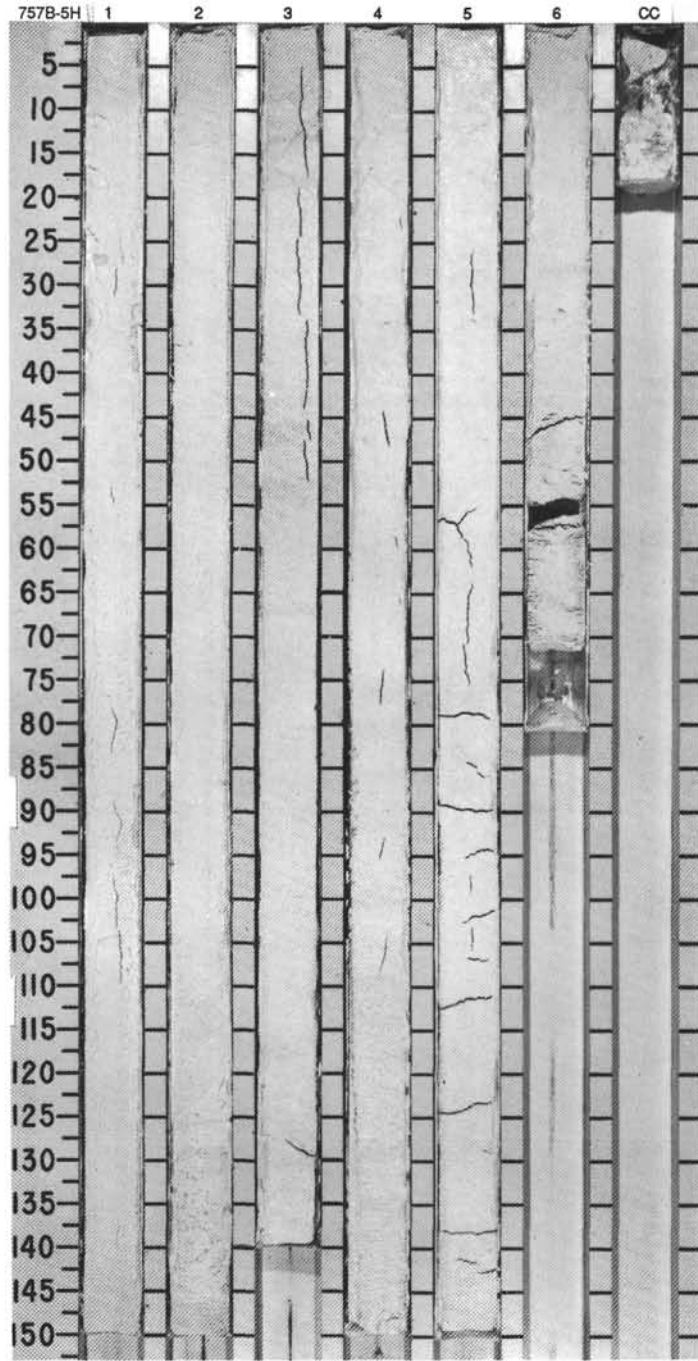




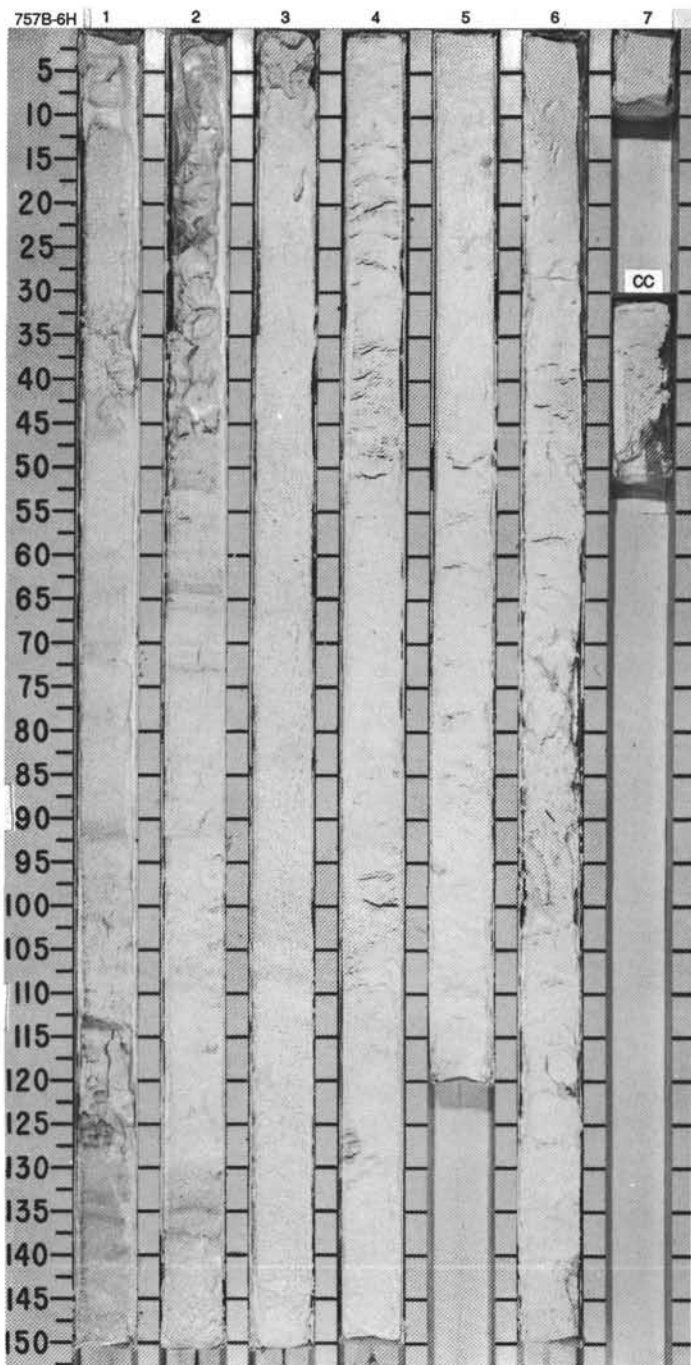
| TIME-ROCK UNIT |                 | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-----------------|-------------------------------------|--------------|----------------|------------------|-----------|----------------|-------------------|-------------------|-----------------|---------|---|
| LOWER PLIOCENE | MIDDLE PLIOCENE | FORAMINIFERS                        | NANNOFOSSILS |                |                  |           |                |                   |                   |                 |         |   |
| A/G            |                 |                                     |              |                |                  |           | 0.5            |                   |                   |                 |         | <p>NANNOFOSSIL OOZE WITH FORAMINIFERS</p> <p>The core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS. The core is stark white (10YR 8/1), strongly bioturbated and homogeneous.</p> <p>Grain size: The mean grain size for Section 2, 90 cm is 26.0 μm; Section 4, 90 cm, is 18.5 μm; and Section 6, 20 cm, is 25.6 μm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">2. 90<br/>D</p> <p>TEXTURE:</p> <p>Sand 10<br/>Silt 80<br/>Clay 10</p> <p>COMPOSITION:</p> <p>Foraminifers 10<br/>Glass Tr<br/>Nannofossils 85</p> |
| N18 - 19       | CN11            |                                     |              |                |                  |           | 1.0            |                   |                   |                 |         |   |
| CN10           |                 |                                     |              |                |                  |           | 2              |                   |                   |                 |         |   |
| Barren         |                 |                                     |              |                |                  |           | 3              |                   |                   |                 |         |   |
| Barren         |                 |                                     |              |                |                  |           | 4              |                   |                   |                 |         |   |
|                |                 |                                     |              |                |                  |           | 5              |                   |                   |                 |         |   |
|                |                 |                                     |              |                |                  |           | 6              |                   |                   |                 |         |   |
|                |                 |                                     |              |                |                  |           | CC             |                   |                   |                 |         |   |



| TIME-ROCK UNIT |                | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS |  | PHYS. PROPERTIES |  | CHEMISTRY |     | SECTION<br>METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES  | LITHOLOGIC DESCRIPTION |       |   |  |      |    |      |    |              |   |         |    |              |    |
|----------------|----------------|-------------------------------------|--------------|--------------|----------------|--|------------------|--|-----------|-----|-------------------|----------------------|-------------------|-----------------|--|------------------------|-------|---|--|------|----|------|----|--------------|---|---------|----|--------------|----|
| UPPER MIocene  | LOWER PLIOCENE | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIAZONES       |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| A/G            |                | N18                                 |              |              |                |  |                  |  |           |     | 0.5               |                      |                   |                 | <p>NANNOFOSSIL OOZE</p> <p>The core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE. Stark white (10YR 8/1) with some faint pale yellow (5Y 8/3) bands, 1-2 cm thick, otherwise the core is very homogeneous and strongly bioturbated throughout.</p> <p>Grain size: The mean grain size for Section 2, 90 cm is 23.7 μm, for section 3, 90 cm is 17.3 μm, and for the CC is 18.4 μm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr> <td></td> <td>2, 90</td> </tr> <tr> <td>D</td> <td></td> </tr> </table> <p>TEXTURE:</p> <table border="0"> <tr> <td>Silt</td> <td>90</td> </tr> <tr> <td>Clay</td> <td>10</td> </tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr> <td>Foraminifers</td> <td>1</td> </tr> <tr> <td>Micrite</td> <td>Tr</td> </tr> <tr> <td>Nannofossils</td> <td>95</td> </tr> </table> |                        | 2, 90 | D |  | Silt | 90 | Clay | 10 | Foraminifers | 1 | Micrite | Tr | Nannofossils | 95 |
|                | 2, 90          |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| D              |                |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Silt           | 90             |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Clay           | 10             |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Foraminifers   | 1              |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Micrite        | Tr             |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Nannofossils   | 95             |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| A/M            |                | CN10b - c                           |              |              |                |  |                  |  |           | 1.0 |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Barren         |                |                                     |              |              |                |  |                  |  |           | 2   |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| Barren         |                |                                     |              |              |                |  |                  |  |           | 3   |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
|                |                |                                     |              |              |                |  |                  |  |           | 4   |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
|                |                |                                     |              |              |                |  |                  |  |           | 5   |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
|                |                |                                     |              |              |                |  |                  |  |           | 6   |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |
| CC             |                |                                     |              |              |                |  |                  |  |           |     |                   |                      |                   |                 |  |                        |       |   |  |      |    |      |    |              |   |         |    |              |    |

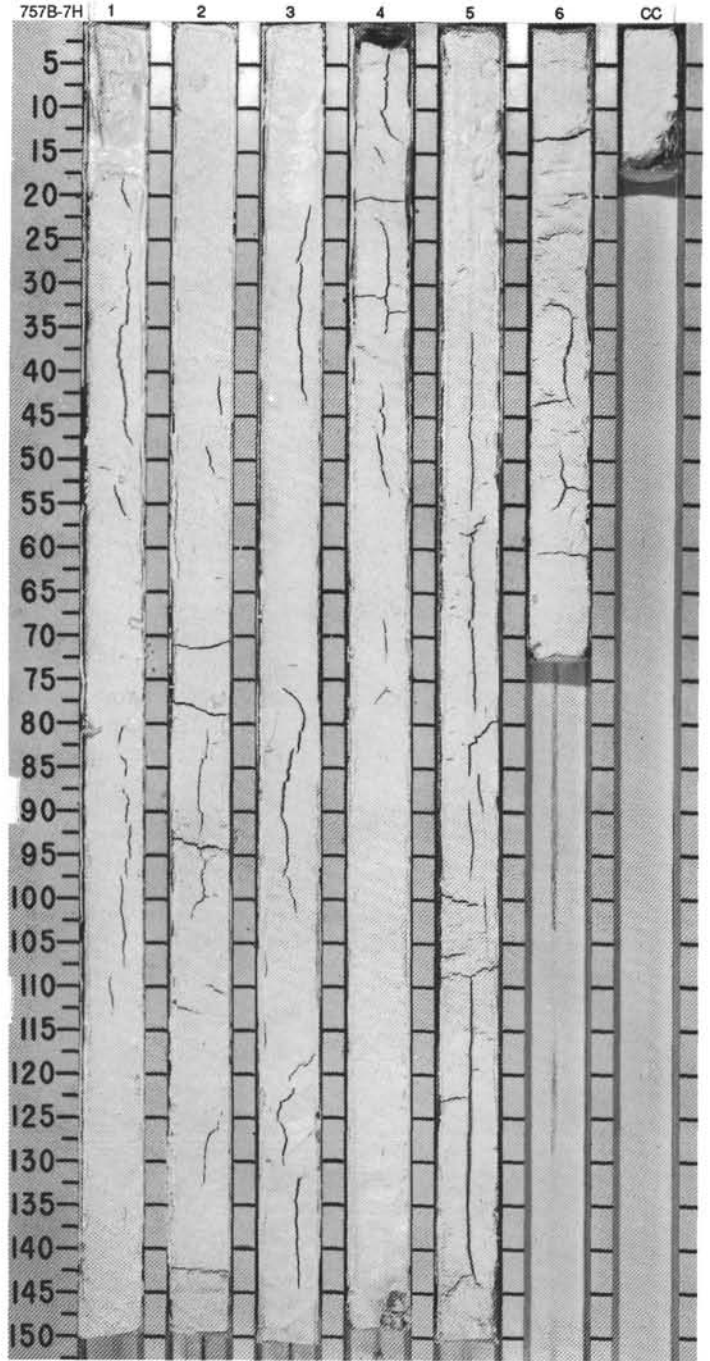


| TIME-ROCK UNIT |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         | PALEOMAGNETICS   |           | PHYS. PROPERTIES  |  | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
|----------------|--------------|-------------------------------------|---------|------------------|-----------|---|--|---------|--------|----------------------|-------------------|-----------------|---------|---|--|-------|--------|---|--|---|------|---|----|------|----|----|------|----|----|--------------|----|----|-------|----|----|---------|----|----|--------------|----|----|----------|----|---|
| FORAMINIFERS   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS | PHYS. PROPERTIES | CHEMISTRY |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| UPPER MIOCENE  |              | N17<br>CN9b                         |         | Indeterminate    |           | 63.9<br>71.69<br>96.3<br><br>60.2<br>71.71<br>94.9<br><br>55.0<br>71.83<br>96.5 |  |         |        |                      |                   |                 |         | <p><b>NANNOFOSSIL OOZE</b></p> <p>The core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE. Stark white (10YR 8/1) with very pale brown intervals (10YR 8/3), 1-5 cm thick, in Section 1 and the top of section 2. Light gray intervals N 7/ persist through the remainder of the core (1-5 cm) and have a higher foraminifer content than the dominant lithology. Moderately to strongly bioturbated in non-laminated zones.</p> <p>Grain size: The mean grain size for Section 3, 95 cm is 20.3 µm, for Section 5, 95 cm is 14.4 µm, and for the CC, 5 cm it is 18.1 µm.</p> <p>*<br/>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>2, 20</td> <td>2, 135</td> </tr> <tr> <td>D</td> <td></td> <td>M</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>—</td> <td>10</td> </tr> <tr> <td>Silt</td> <td>90</td> <td>80</td> </tr> <tr> <td>Clay</td> <td>10</td> <td>10</td> </tr> </table> <p>*<br/>COMPOSITION:</p> <table border="1"> <tr> <td>Foraminifers</td> <td>Tr</td> <td>15</td> </tr> <tr> <td>Glass</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Micrite</td> <td>20</td> <td>10</td> </tr> <tr> <td>Nannofossils</td> <td>75</td> <td>70</td> </tr> <tr> <td>Spicules</td> <td>Tr</td> <td>—</td> </tr> </table> |  | 2, 20 | 2, 135 | D |  | M | Sand | — | 10 | Silt | 90 | 80 | Clay | 10 | 10 | Foraminifers | Tr | 15 | Glass | Tr | Tr | Micrite | 20 | 10 | Nannofossils | 75 | 70 | Spicules | Tr | — |
|                | 2, 20        | 2, 135                              |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| D              |              | M                                   |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Sand           | —            | 10                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Silt           | 90           | 80                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Clay           | 10           | 10                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Foraminifers   | Tr           | 15                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Glass          | Tr           | Tr                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Micrite        | 20           | 10                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Nannofossils   | 75           | 70                                  |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Spicules       | Tr           | —                                   |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| A/G            |              |                                     |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| A/M            | CN10a        |                                     |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Barren         |              |                                     |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
| Barren         |              |                                     |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |
|                |              |                                     |         |                  |           |   |  |         |        |                      |                   |                 |         |   |  |       |        |   |  |   |      |   |    |      |    |    |      |    |    |              |    |    |       |    |    |         |    |    |              |    |    |          |    |   |

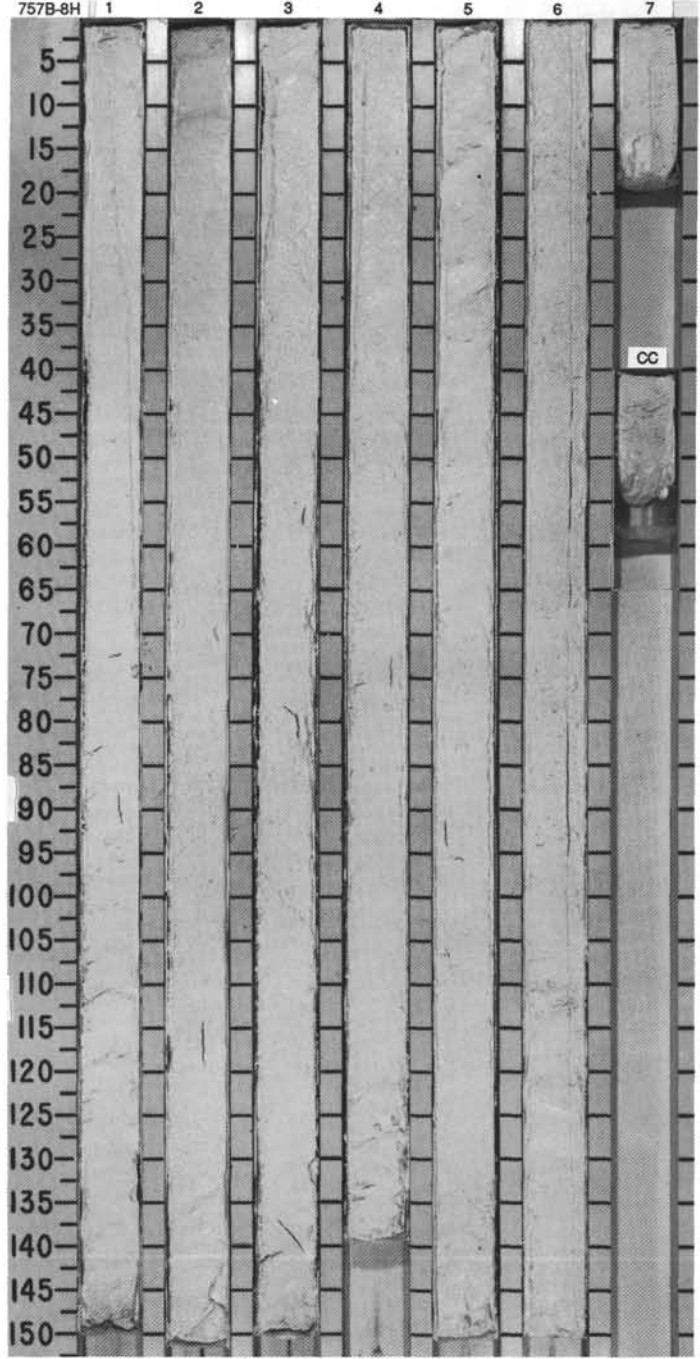


SITE 757 HOLE B CORE 7H CORED INTERVAL 52.5-62.2 mbsf

| TIME-ROCK UNIT |  | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS   |           | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES  | LITHOLOGIC DESCRIPTION |
|----------------|--|-------------------------------------|--------------|--------------|---------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|--|------------------------|
| UPPER MIOCENE  |  | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIALOMS | PHYS. PROPERTIES | CHEMISTRY |         |        |                      |                   |                 |  |                        |
| A/G            |  | N16                                 |              |              |         | 0-59.2<br>1-1.79 |           | 1       | 0.5    |                      |                   |                 | <p>NANNOFOSSIL OOZE</p> <p>The core is slightly disturbed.</p> <p>Major lithology: Nannofossil ooze. Stark white (10YR 8/1), strongly bioturbated and homogeneous.</p> <p>Grain size: The mean grain size of Section 2, 90 cm is 20.4 μm, for Section 4, 90 cm is 19.6 μm, and for the CC is 24.5 μm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">2, 90<br/>D</p> <p>TEXTURE:</p> <p>Silt 90<br/>Clay 10</p> <p>COMPOSITION:</p> <p>Foraminifers 1<br/>Glass Tr<br/>Micrite 5<br/>Nannofossils 93<br/>Spicules 1</p> |                        |
| A/G            |  | CN9a                                |              |              |         | 0-56.2<br>1-1.83 |           | 2       | 1.0    |                      |                   |                 |  |                        |
| Barren         |  |                                     |              |              |         |                  |           | 3       |        |                      |                   |                 |  |                        |
| Barren         |  |                                     |              |              |         |                  |           | 4       |        |                      |                   |                 |  |                        |
|                |  |                                     |              |              |         |                  |           | 5       |        |                      |                   |                 |  |                        |
|                |  |                                     |              |              |         |                  |           | 6       |        |                      |                   |                 |  |                        |
|                |  |                                     |              |              |         |                  |           | CC      |        |                      |                   |                 |  |                        |



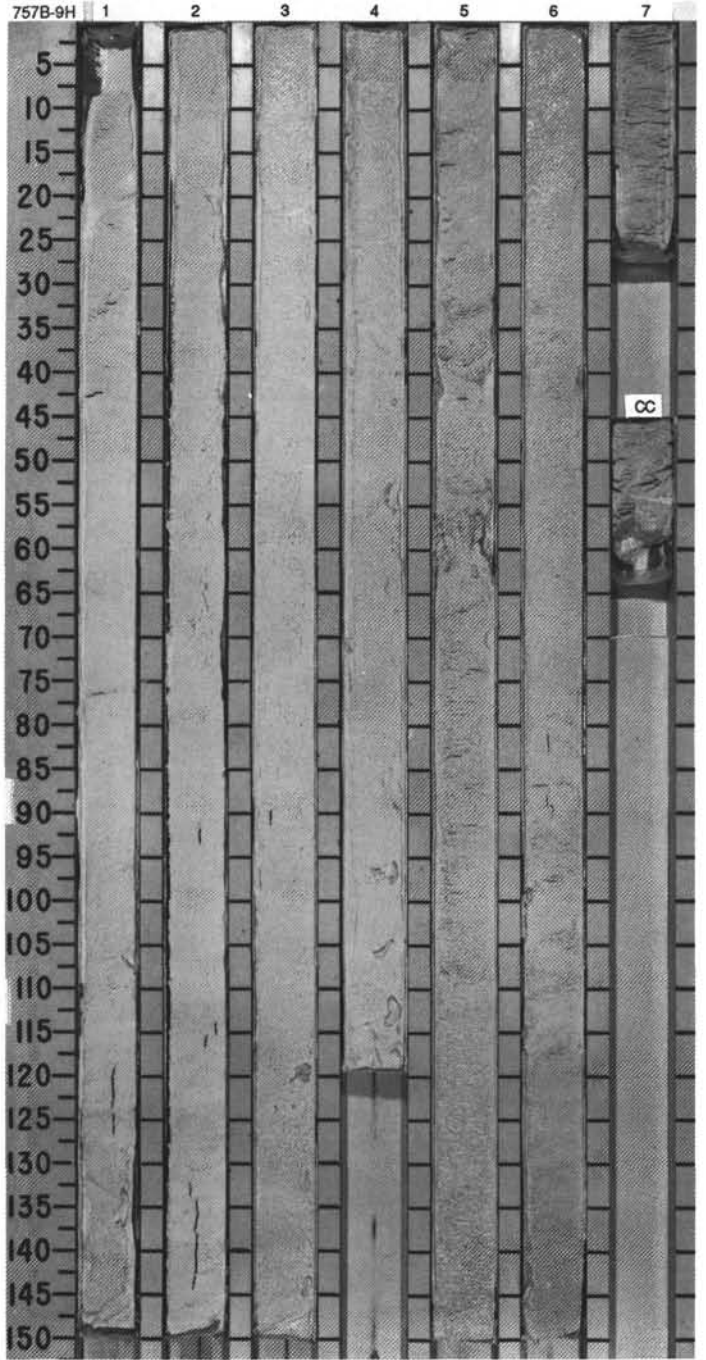
| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |                         | PALEOMAGNETICS<br>PHYS. PROPERTIES | CHEMISTRY | SECTION<br>METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION |
|----------------|-------------------------------------|--------------|-------------------------|------------------------------------|-----------|-------------------|----------------------|--------------------------------------|---------|------------------------|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS<br>DIATOMS |                                    |           |                   |                      |                                      |         |                        |
| UPPER MIOCENE  |                                     |              |                         |                                    |           |                   |                      |                                      |         |                        |
| A/G            | N15                                 |              |                         |                                    |           |                   |                      |                                      |         |                        |
| A/P            | CN8                                 |              |                         |                                    |           |                   |                      |                                      |         |                        |
| Barren         |                                     |              |                         |                                    |           |                   |                      |                                      |         |                        |
| Barren         |                                     |              |                         |                                    |           |                   |                      |                                      |         |                        |
| (CN7)          | Indeterminate                       |              |                         |                                    |           |                   |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.1<br>● 96.2<br>● 96.3         |           | 1                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.4<br>● 96.5<br>● 96.6         |           | 2                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.7<br>● 96.8<br>● 96.9         |           | 3                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.10<br>● 96.11<br>● 96.12      |           | 4                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.13<br>● 96.14<br>● 96.15      |           | 5                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.16<br>● 96.17<br>● 96.18      |           | 6                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.19<br>● 96.20<br>● 96.21      |           | 7                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.22<br>● 96.23<br>● 96.24      |           | 8                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.25<br>● 96.26<br>● 96.27      |           | 9                 |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.28<br>● 96.29<br>● 96.30      |           | 10                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.31<br>● 96.32<br>● 96.33      |           | 11                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.34<br>● 96.35<br>● 96.36      |           | 12                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.37<br>● 96.38<br>● 96.39      |           | 13                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.40<br>● 96.41<br>● 96.42      |           | 14                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.43<br>● 96.44<br>● 96.45      |           | 15                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.46<br>● 96.47<br>● 96.48      |           | 16                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.49<br>● 96.50<br>● 96.51      |           | 17                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.52<br>● 96.53<br>● 96.54      |           | 18                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.55<br>● 96.56<br>● 96.57      |           | 19                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.58<br>● 96.59<br>● 96.60      |           | 20                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.61<br>● 96.62<br>● 96.63      |           | 21                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.64<br>● 96.65<br>● 96.66      |           | 22                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.67<br>● 96.68<br>● 96.69      |           | 23                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.70<br>● 96.71<br>● 96.72      |           | 24                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.73<br>● 96.74<br>● 96.75      |           | 25                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.76<br>● 96.77<br>● 96.78      |           | 26                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.79<br>● 96.80<br>● 96.81      |           | 27                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.82<br>● 96.83<br>● 96.84      |           | 28                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.85<br>● 96.86<br>● 96.87      |           | 29                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.88<br>● 96.89<br>● 96.90      |           | 30                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.91<br>● 96.92<br>● 96.93      |           | 31                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.94<br>● 96.95<br>● 96.96      |           | 32                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.97<br>● 96.98<br>● 96.99      |           | 33                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.100<br>● 96.101<br>● 96.102   |           | 34                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.103<br>● 96.104<br>● 96.105   |           | 35                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.106<br>● 96.107<br>● 96.108   |           | 36                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.109<br>● 96.110<br>● 96.111   |           | 37                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.112<br>● 96.113<br>● 96.114   |           | 38                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.115<br>● 96.116<br>● 96.117   |           | 39                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.118<br>● 96.119<br>● 96.120   |           | 40                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.121<br>● 96.122<br>● 96.123   |           | 41                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.124<br>● 96.125<br>● 96.126   |           | 42                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.127<br>● 96.128<br>● 96.129   |           | 43                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.130<br>● 96.131<br>● 96.132   |           | 44                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.133<br>● 96.134<br>● 96.135   |           | 45                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.136<br>● 96.137<br>● 96.138   |           | 46                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.139<br>● 96.140<br>● 96.141   |           | 47                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.142<br>● 96.143<br>● 96.144   |           | 48                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.145<br>● 96.146<br>● 96.147   |           | 49                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.148<br>● 96.149<br>● 96.150   |           | 50                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.151<br>● 96.152<br>● 96.153   |           | 51                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.154<br>● 96.155<br>● 96.156   |           | 52                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.157<br>● 96.158<br>● 96.159   |           | 53                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.160<br>● 96.161<br>● 96.162   |           | 54                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.163<br>● 96.164<br>● 96.165   |           | 55                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.166<br>● 96.167<br>● 96.168   |           | 56                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.169<br>● 96.170<br>● 96.171   |           | 57                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.172<br>● 96.173<br>● 96.174   |           | 58                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.175<br>● 96.176<br>● 96.177   |           | 59                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.178<br>● 96.179<br>● 96.180   |           | 60                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.181<br>● 96.182<br>● 96.183   |           | 61                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.184<br>● 96.185<br>● 96.186   |           | 62                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.187<br>● 96.188<br>● 96.189   |           | 63                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.190<br>● 96.191<br>● 96.192   |           | 64                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.193<br>● 96.194<br>● 96.195   |           | 65                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.196<br>● 96.197<br>● 96.198   |           | 66                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.199<br>● 96.200<br>● 96.201   |           | 67                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.202<br>● 96.203<br>● 96.204   |           | 68                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.205<br>● 96.206<br>● 96.207   |           | 69                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.208<br>● 96.209<br>● 96.210   |           | 70                |                      |                                      |         |                        |
|                |                                     |              |                         | ● 96.211<br>● 96.212<br>● 96.213   |           | 71                |                      |                                      |         |                        |



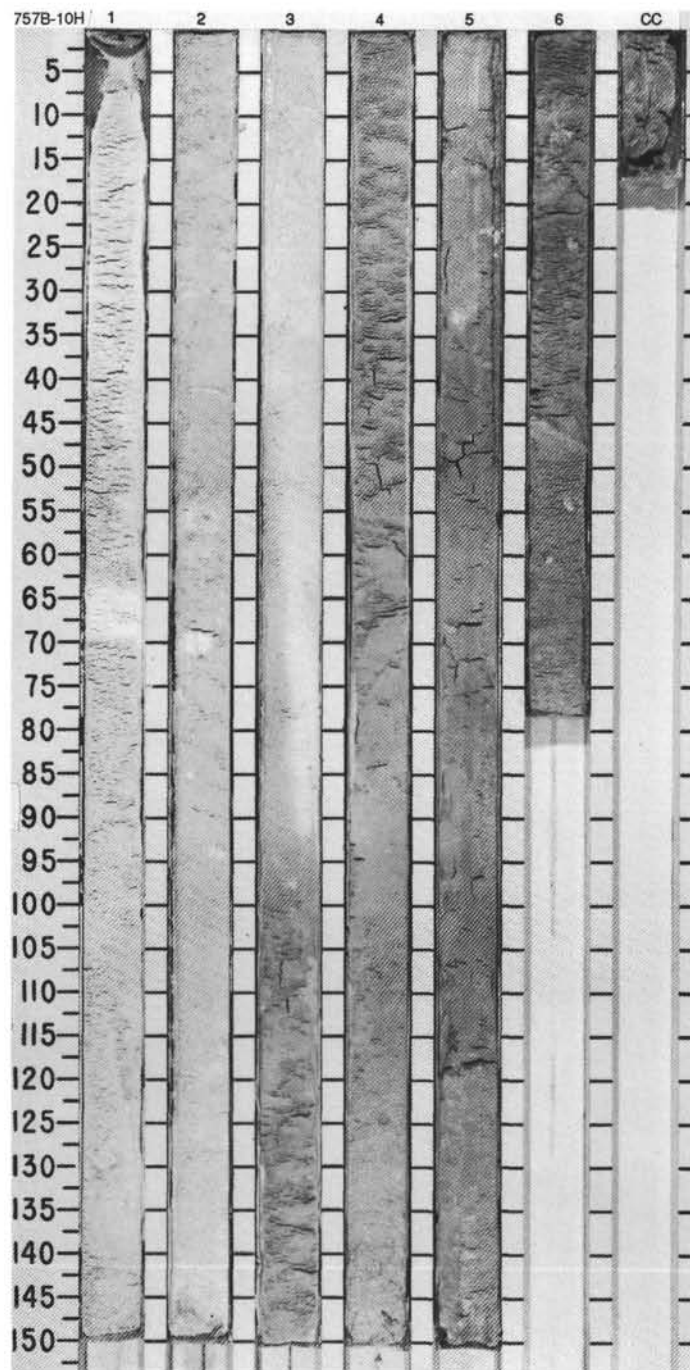


SITE 757 HOLE B CORE 9H CORED INTERVAL 71.8-81.5 mbsf

| TIME-ROCK UNIT                 |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         |  | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
|--------------------------------|--------------|-------------------------------------|---------|--|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|---|--|-------|-------|---|---|---|------|---|---|------|----|----|------|---|---|--------------|---|----|-------|----|----|---------|---|---|--------------|----|----|
| FORAMINIFERS                   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| MIDDLE MIOCENE (UPPER MIOCENE) |              |                                     |         |  |                |                  |           |         |        |                      |                   |                 |         | <p>NANNOFOSSIL OOZE</p> <p>The core is undisturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE, stark white to white (10YR 8/1), homogeneous, and strongly bioturbated.</p> <p>Grain size: The mean grain size of Section 2, 94 cm is 28.8 μm, Section 4, 94 cm is 21.8 μm, and the CC is 15.0 μm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>4, 93</td> <td>7, 10</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>5</td> <td>2</td> </tr> <tr> <td>Silt</td> <td>86</td> <td>90</td> </tr> <tr> <td>Clay</td> <td>9</td> <td>8</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Foraminifers</td> <td>7</td> <td>Tr</td> </tr> <tr> <td>Glass</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Micrite</td> <td>3</td> <td>4</td> </tr> <tr> <td>Nannofossils</td> <td>90</td> <td>96</td> </tr> </table> |  | 4, 93 | 7, 10 | D | D | D | Sand | 5 | 2 | Silt | 86 | 90 | Clay | 9 | 8 | Foraminifers | 7 | Tr | Glass | Tr | Tr | Micrite | 3 | 4 | Nannofossils | 90 | 96 |
|                                | 4, 93        | 7, 10                               |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| D                              | D            | D                                   |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Sand                           | 5            | 2                                   |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Silt                           | 86           | 90                                  |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Clay                           | 9            | 8                                   |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Foraminifers                   | 7            | Tr                                  |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Glass                          | Tr           | Tr                                  |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Micrite                        | 3            | 4                                   |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Nannofossils                   | 90           | 96                                  |         |  |                |                  |           |         |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| A/G                            | N14          |                                     |         |  |                |                  |           | 1       | 0.5    |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| A/P                            | CN6          | CN7                                 |         |  |                |                  |           | 2       | 1.0    |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Barren                         |              |                                     |         |  |                |                  |           | 3       |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| Barren                         |              |                                     |         |  |                |                  |           | 4       |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
|                                | (CN5)        |                                     |         |  |                |                  |           | 5       |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
|                                |              |                                     |         |  |                |                  |           | 6       |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |
| CC                             |              |                                     |         |  |                |                  |           | 7       |        |                      |                   |                 |         |   |  |       |       |   |   |   |      |   |   |      |    |    |      |   |   |              |   |    |       |    |    |         |   |   |              |    |    |



| TIME-ROCK UNIT |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         |     | PALEOMAGNETICS |               | PHYS. PROPERTIES |        | CHEMISTRY |        | SECTION |   | METERS |            | GRAPHIC<br>LITHOLOGY |  | DRILLING DISTURB. |  | SED. STRUCTURES |  | SAMPLES |  | LITHOLOGIC DESCRIPTION   |
|----------------|--------------|-------------------------------------|---------|-----|----------------|---------------|------------------|--------|-----------|--------|---------|---|--------|------------|----------------------|--|-------------------|--|-----------------|--|---------|--|--|
| FORAMINIFERS   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |     |                |               |                  |        |           |        |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
| LOWER MIOCENE  |              |                                     |         |     |                |               |                  |        |           |        |         |   |        |            |                      |  |                   |  |                 |  |         |  | <p>NANNOFOSSIL OOZE</p> <p>The core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE, grading from white (10YR 8/1) to very pale brown (10YR 8/3) in Section 1, to light gray (10YR 7/2) and very pale brown (10YR 7/3) towards the base of the core. Some mottles and sharp contacts, based on color change, occur throughout the core but the majority of the sediment is homogeneous and strongly bioturbated.</p> <p>Grain size: The mean grain size of Section 2, 92 cm is 16.6 µm, Section 4, 92 cm is 18.9 µm, and the CC is 16.0 µm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">4, 93<br/>D</p> <p>TEXTURE:</p> <p>Sand 4<br/>Silt 90<br/>Clay 6</p> <p>COMPOSITION:</p> <p>Foraminifers 8<br/>Glass 1<br/>Micrite 3<br/>Nannofossils 88</p> |
| A/G            | N8           | CN4                                 |         | CN5 |                | Indeterminate |                  | ● 95.6 |           | ● 95.6 |         | 1 |        | 0.5<br>1.0 |                      |  |                   |  |                 |  |         |  |  |
| A/P            | (CN3)        |                                     |         |     |                | ● 94.3        |                  | ● 94.3 |           | 2      |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
| Barren         |              |                                     |         |     |                |               |                  |        |           | 3      |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
| Barren         |              |                                     |         |     |                |               |                  |        |           | 4      |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
|                |              |                                     |         |     |                |               |                  |        |           | 5      |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
|                |              |                                     |         |     |                |               |                  |        |           | 6      |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |
|                |              |                                     |         |     |                |               |                  |        |           | CC     |         |   |        |            |                      |  |                   |  |                 |  |         |  |  |

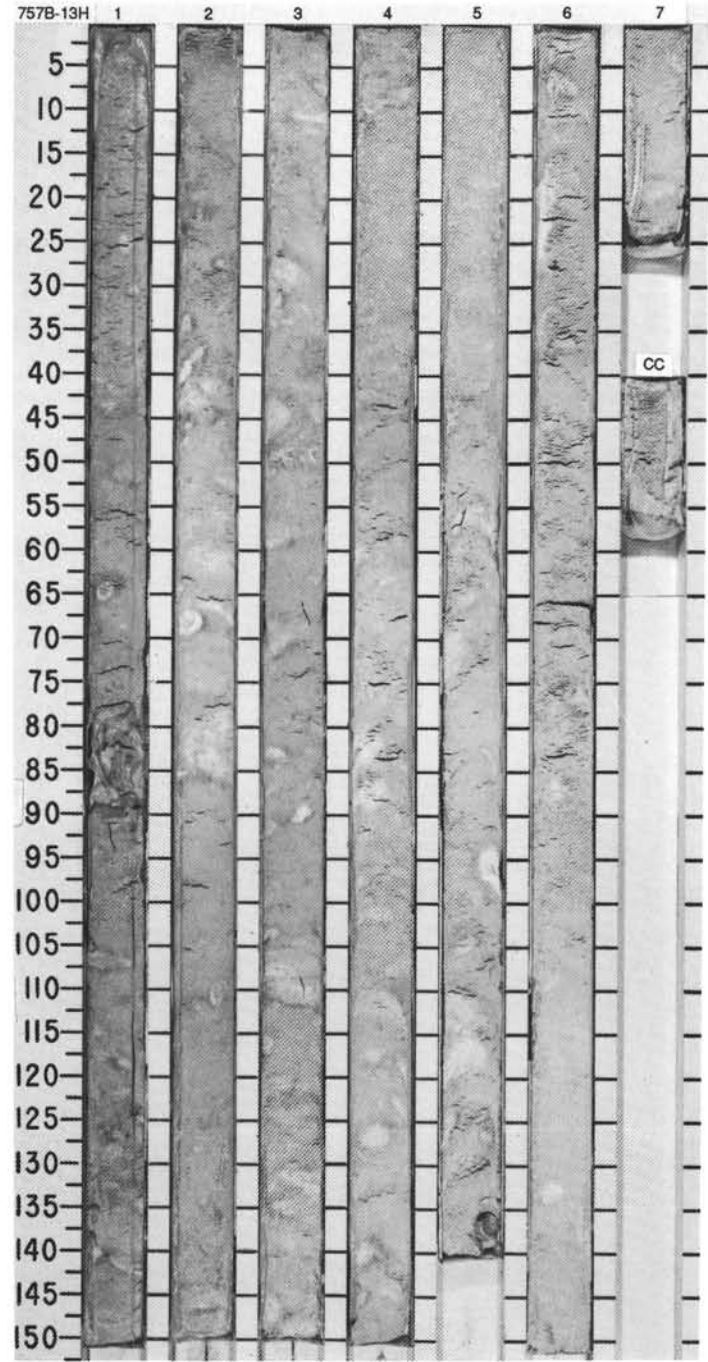






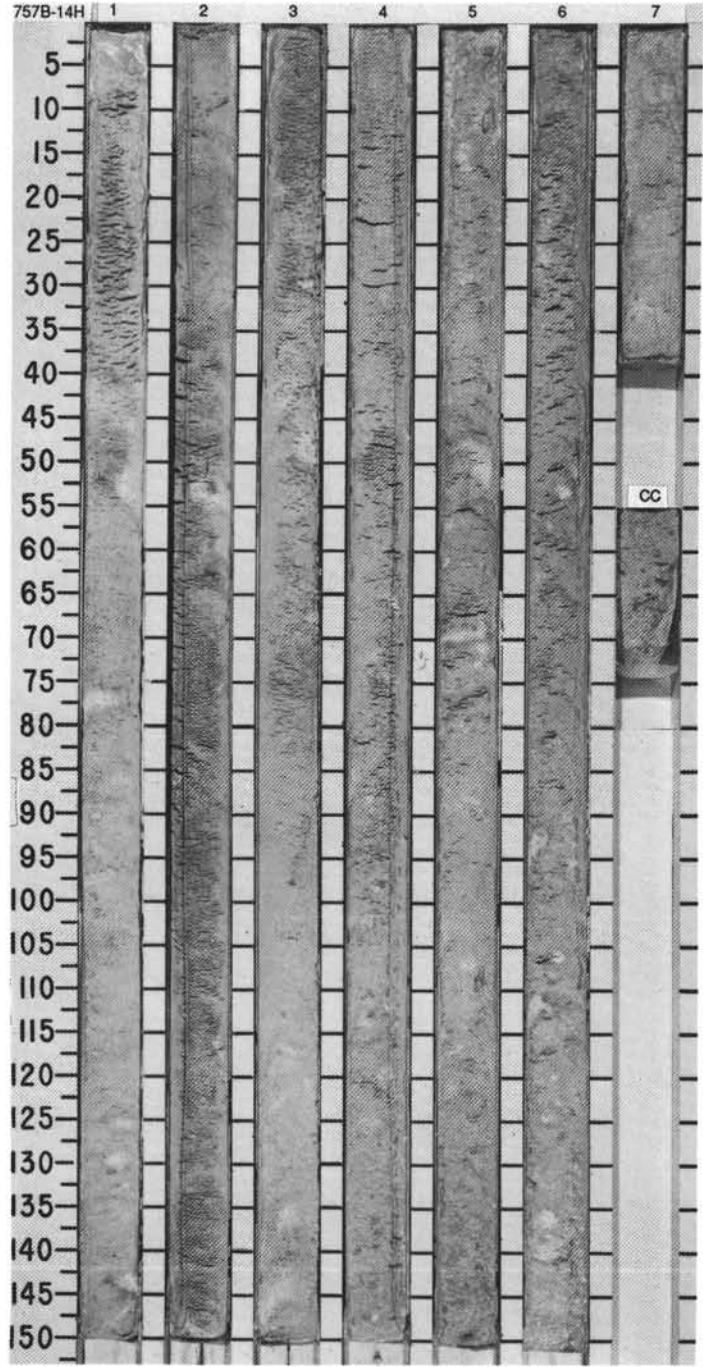
SITE 757 HOLE B CORE 13H CORED INTERVAL 110.5-120.1 mbsf

| TIME-ROCK UNIT   | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |        | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|------------------|-------------------------------------|--------------|--------------|--------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|--|-------|---|------|---|------|----|------|----|--------------|---|-------|----|---------|---|--------------|----|
|                  | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DITOMS |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| MIDDLE OLIGOCENE | P18-19                              | CP17         |              |        |                |                  |           |         |        |                      |                   |                 |         | <p>NANNOFOSSIL OOZE</p> <p>Parts of Section 1 and the CC are moderately to very disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE very pale brown (10YR 7/3) in all Sections except the CC, which is light gray (10YR 7/2). The sediment is mottled white (10YR 8/2) in a few places and some mottles exhibit light gray "halos" (10YR 7/2). The core is strongly bioturbated.</p> <p>Grain size: The mean grain size of Section 2, 92 cm is 14.5 <math>\mu</math>m, Section 4, 92 cm is 14.1 <math>\mu</math>m, and the CC is 9.6 <math>\mu</math>m.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr><td>4, 93</td></tr> <tr><td>D</td></tr> </table> <p>TEXTURE:</p> <table border="0"> <tr><td>Sand</td><td>3</td></tr> <tr><td>Silt</td><td>77</td></tr> <tr><td>Clay</td><td>20</td></tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr><td>Foraminifers</td><td>3</td></tr> <tr><td>Glass</td><td>Tr</td></tr> <tr><td>Micrite</td><td>1</td></tr> <tr><td>Nannofossils</td><td>96</td></tr> </table> | 4, 93 | D | Sand | 3 | Silt | 77 | Clay | 20 | Foraminifers | 3 | Glass | Tr | Micrite | 1 | Nannofossils | 96 |
| 4, 93            |                                     |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| D                |                                     |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Sand             | 3                                   |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Silt             | 77                                  |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Clay             | 20                                  |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Foraminifers     | 3                                   |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Glass            | Tr                                  |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Micrite          | 1                                   |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| Nannofossils     | 96                                  |              |              |        |                |                  |           |         |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 0.5     |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 1       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 2       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 3       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 4       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 5       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
| LOWER OLIGOCENE  | CP1b/c                              |              |              |        |                |                  |           | 6       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | 7       |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |
|                  |                                     |              |              |        |                |                  |           | CC      |        |                      |                   |                 |         |  |       |   |      |   |      |    |      |    |              |   |       |    |         |   |              |    |



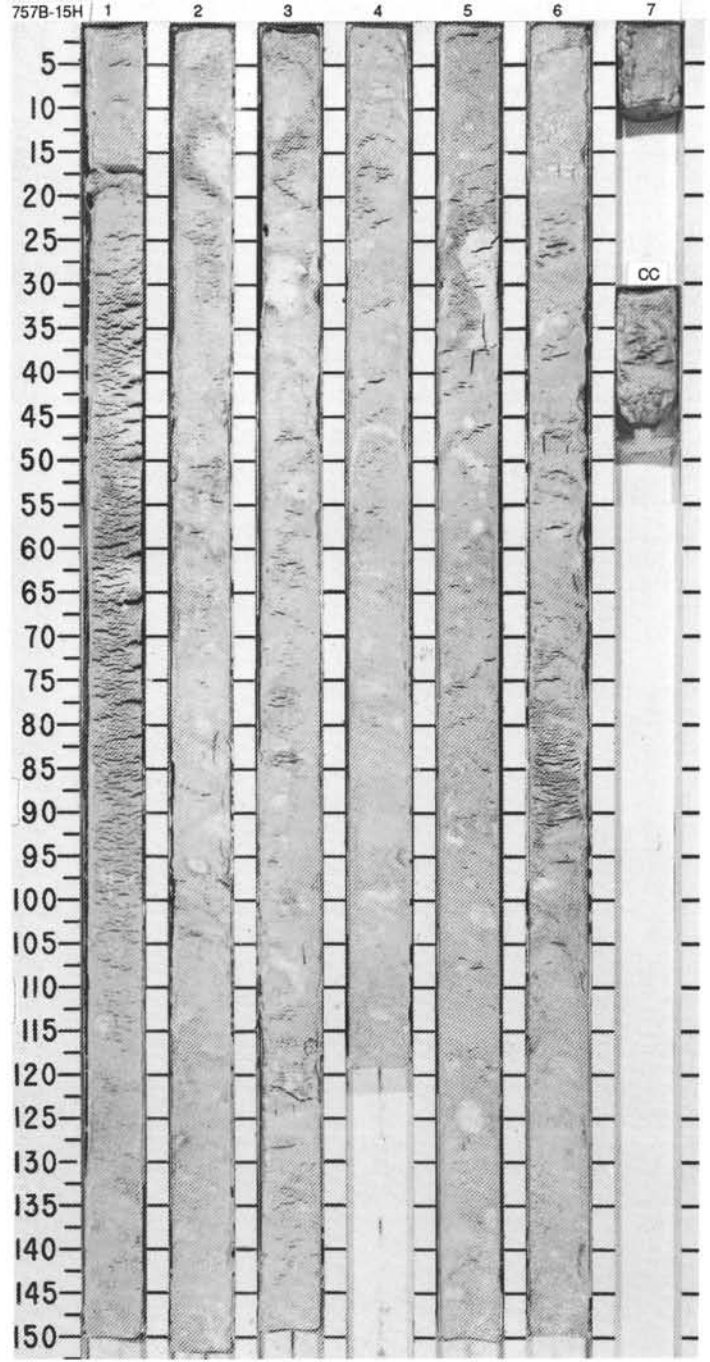


| TIME-ROCK UNIT |                 | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION<br>METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
|----------------|-----------------|-------------------------------------|--------------|----------------|------------------|-----------|-------------------|----------------------|-------------------|-----------------|---------|---|--|------|---|--|------|---|------|----|------|----|--------------|---|-------|----|---------|---|--------------|----|----------|----|
| UPPER EOCENE   | LOWER OLIGOCENE | FORAMINIFERS                        | NANNOFOSSILS |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| A/P            | P15             | CP15a                               | CP15b        |                |                  |           |                   |                      |                   |                 |         | <p>NANNOFOSSIL OOZE</p> <p>Slightly disturbed</p> <p>Major lithology: NANNOFOSSIL OOZE, bioturbated and light gray (10YR 7/2) with scattered mottles of white (10YR 8/2).</p> <p>Grain size: The mean grain size of Section 2, 92 cm is 12.7 <math>\mu</math>m, Section 4, 92 cm is 14.0 <math>\mu</math>m, and the CC is 13.4 <math>\mu</math>m.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="0"> <tr> <td></td> <td>4.93</td> </tr> <tr> <td>D</td> <td></td> </tr> </table> <p>TEXTURE:</p> <table border="0"> <tr> <td>Sand</td> <td>1</td> </tr> <tr> <td>Silt</td> <td>84</td> </tr> <tr> <td>Clay</td> <td>15</td> </tr> </table> <p>COMPOSITION:</p> <table border="0"> <tr> <td>Foraminifers</td> <td>1</td> </tr> <tr> <td>Glass</td> <td>Tr</td> </tr> <tr> <td>Micrite</td> <td>2</td> </tr> <tr> <td>Nannofossils</td> <td>97</td> </tr> <tr> <td>Spicules</td> <td>Tr</td> </tr> </table> |  | 4.93 | D |  | Sand | 1 | Silt | 84 | Clay | 15 | Foraminifers | 1 | Glass | Tr | Micrite | 2 | Nannofossils | 97 | Spicules | Tr |
|                | 4.93            |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| D              |                 |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Sand           | 1               |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Silt           | 84              |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Clay           | 15              |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Foraminifers   | 1               |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Glass          | Tr              |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Micrite        | 2               |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Nannofossils   | 97              |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Spicules       | Tr              |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| A/P            | P17             | CP16a - b                           |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Barren         |                 |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| Barren         |                 |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
|                |                 |                                     |              | Indeterminate  |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
|                |                 |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |
| CC             |                 |                                     |              |                |                  |           |                   |                      |                   |                 |         |   |  |      |   |  |      |   |      |    |      |    |              |   |       |    |         |   |              |    |          |    |

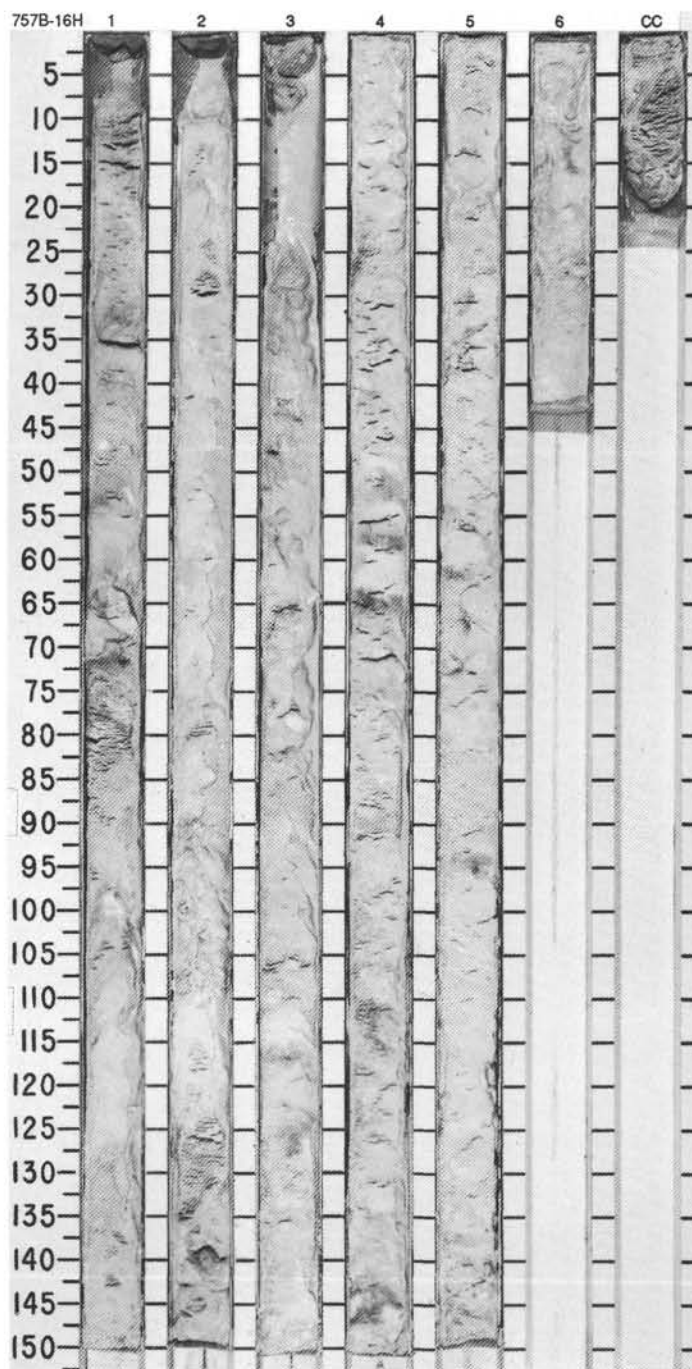


SITE 757 HOLE B CORE 15H CORED INTERVAL 129.8-139.5 mbsf

| TIME-ROCK UNIT |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         |  | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|--------------|-------------------------------------|---------|--|----------------|------------------|-----------|---------|------------|----------------------|-------------------|-----------------|---------|--|
| FORAMINIFERS   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |  |                |                  |           |         |            |                      |                   |                 |         |  |
| UPPER EOCENE   |              | CP15a                               |         |  |                |                  |           | 1       | 0.5<br>1.0 |                      |                   |                 |         | <p>NANNOFOSSIL OOZE</p> <p>The core is slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE, white (10YR 8/2) and light gray (10YR 7/2). Some mottles of the lighter sediment occur in the darker intervals. The core is strongly bioturbated and slightly lithified so that pull-apart structures occur upon splitting.</p> <p>Grain size: The mean grain size of Section 2, 92 cm is 15.7 <math>\mu</math>m, Section 4, 92 cm is 13.0 <math>\mu</math>m, and the CC is 10.7 <math>\mu</math>m.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">4, 93<br/>D</p> <p>TEXTURE:</p> <p>Sand 3<br/>Silt 79<br/>Clay 18</p> <p>COMPOSITION:</p> <p>Foraminifers 7<br/>Glass Tr<br/>Miche 5<br/>Nannofossils 88<br/>Opaques Tr</p> |
| MIDDLE EOCENE  |              | Indeterminate                       |         |  |                |                  |           | 2       |            |                      |                   |                 |         |  |
| A/P            | P14          |                                     |         |  |                |                  |           | 3       |            |                      |                   |                 |         |  |
| A/P            | CP14         |                                     |         |  |                |                  |           | 4       |            |                      |                   |                 |         |  |
| Barren         |              |                                     |         |  |                |                  |           | 5       |            |                      |                   |                 |         |  |
| Barren         |              |                                     |         |  |                |                  |           | 6       |            |                      |                   |                 |         |  |
|                |              |                                     |         |  |                |                  |           | 7       |            |                      |                   |                 |         |  |
|                |              |                                     |         |  |                |                  |           | CC      |            |                      |                   |                 |         |  |

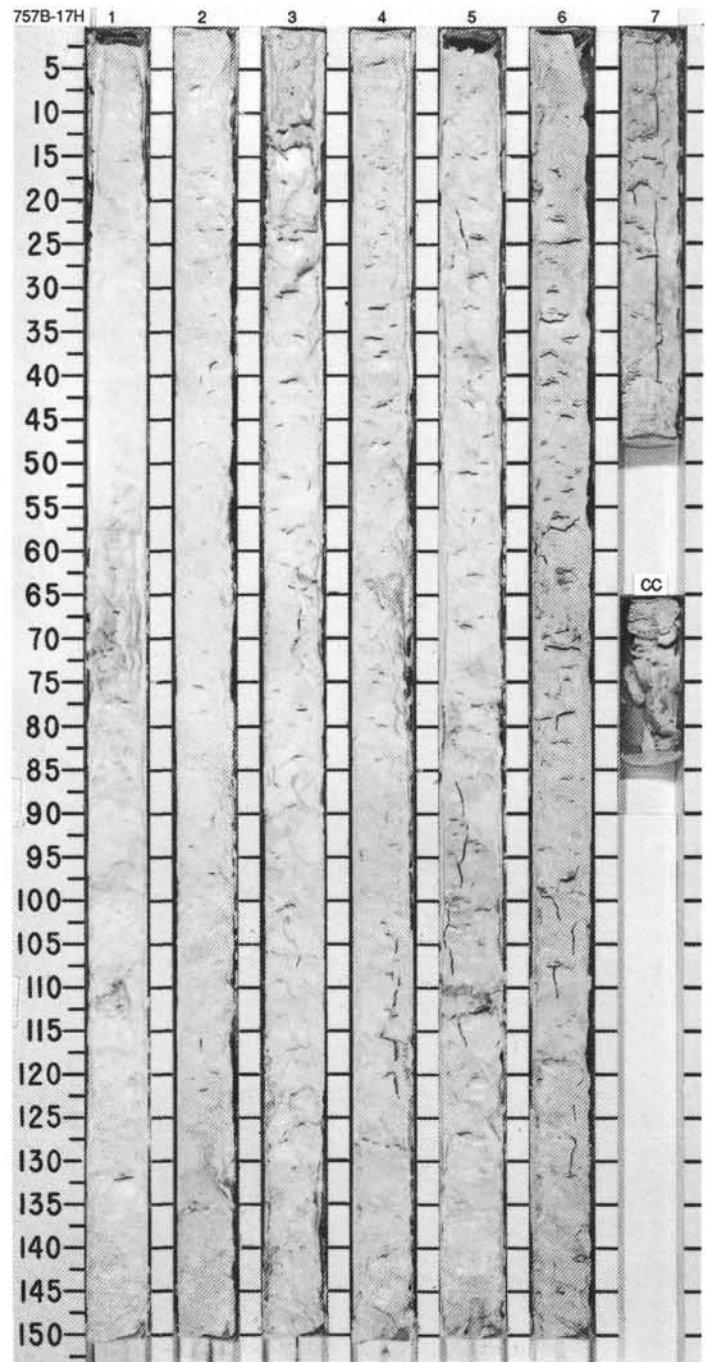


| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY   | SECTION | METERS                           | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|----------------|------------------|---|---------|----------------------------------|----------------------|-------------------|-----------------|---------|---|
| MIDDLE EOCENE  | P13 - 14<br>CP14                    |                |                  | Indeterminate<br>● 9.46.5<br>● 7.1.97<br>● 9.49.3<br>● 7.1.91<br>● 93.3<br>● 95.6 |         | 1<br>2<br>3<br>4<br>5<br>6<br>CC | VOID<br>VOID<br>VOID |                   |                 |         | <p>NANNOFOSSIL OOZE WITH MICRITE</p> <p>Soupy to slightly disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE, white (10YR 8/3) to very pale brown (10YR 8/3). Some mottles of darker colored sediment. Strongly bioturbated with slight lithification resulting in pull-apart structures.</p> <p>Grain size: The mean grain size of Section 3, 135 cm is 13.8 µm, Section 4, 92 cm is 12.9 µm, and the CC is 7.7 µm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">4.93<br/>D</p> <p>TEXTURE:</p> <p>Sand 3<br/>Silt 87<br/>Clay 10</p> <p>COMPOSITION:</p> <p>Foraminifers 3<br/>Glass 2<br/>Micrite 15<br/>Nannofossils 80</p> |



SITE 757 HOLE B CORE 17H CORED INTERVAL 149.1-158.8 mbsf

| TIME-ROCK UNIT |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         |  |  | PALEOMAGNETICS   | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SEP. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION |
|----------------|--------------|-------------------------------------|---------|--|--|------------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|------------------------|
| FORAMINIFERS   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
| MIDDLE EOCENE  |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
| A/P            | P10          |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
| A/P            | CP14         |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
| Barren         | CP13c        |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
| Barren         |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              | Indeterminate                       |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  | ● 48.3<br>● 1.94 |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  | ● 45.0<br>● 1.97 |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  | ● 47.0<br>● 1.95 |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |  |  |                  |                  |           |         |        |                      |                   |                 |         |                        |



| TIME-ROCK UNIT |              | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |         | PALEOMAGNETICS | PHYS. PROPERTIES   | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION |
|----------------|--------------|-------------------------------------|---------|----------------|--------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|------------------------|
| FORAMINIFERS   | NANNOFOSSILS | RADIOLARIANS                        | DIATOMS |                |                    |           |         |        |                      |                   |                 |         |                        |
| MIDDLE EOCENE  |              |                                     |         |                |                    |           |         |        |                      |                   |                 |         |                        |
| A/P            | P10          |                                     |         |                |                    |           |         |        |                      |                   |                 |         |                        |
| A/P            | CP13b        | CP13c                               |         |                |                    |           |         |        |                      |                   |                 |         |                        |
| Barren         |              |                                     |         |                |                    |           |         |        |                      |                   |                 |         |                        |
| Barren         |              |                                     |         |                |                    |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |                | Indeterminate      |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |                | ● 94.2-5<br>● 94.4 |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |                | ● 94.1-3<br>● 95.0 |           |         |        |                      |                   |                 |         |                        |
|                |              |                                     |         |                | ● 97.7<br>● 97.0   |           |         |        |                      |                   |                 |         |                        |
| CC             |              |                                     |         |                |                    |           |         |        |                      |                   |                 |         |                        |

CALCAREOUS NANNOFOSSIL OOZE

The core is moderately disturbed.

Major lithology: CALCAREOUS NANNOFOSSIL OOZE, very pale brown (10YR 8/3) with mottles, streaks, and blebs that are various shades of white (10YR 8/2), grayish brown (10YR 5/2), and pale brown (10YR 6/3). The core is very cohesive and strongly bioturbated throughout.

Grain size: The mean grain size of Section 2, 95 cm is 12 µm. Section 95 cm it is 14.1 µm and the CC is 28.7 µm.

SMEAR SLIDE SUMMARY (%):

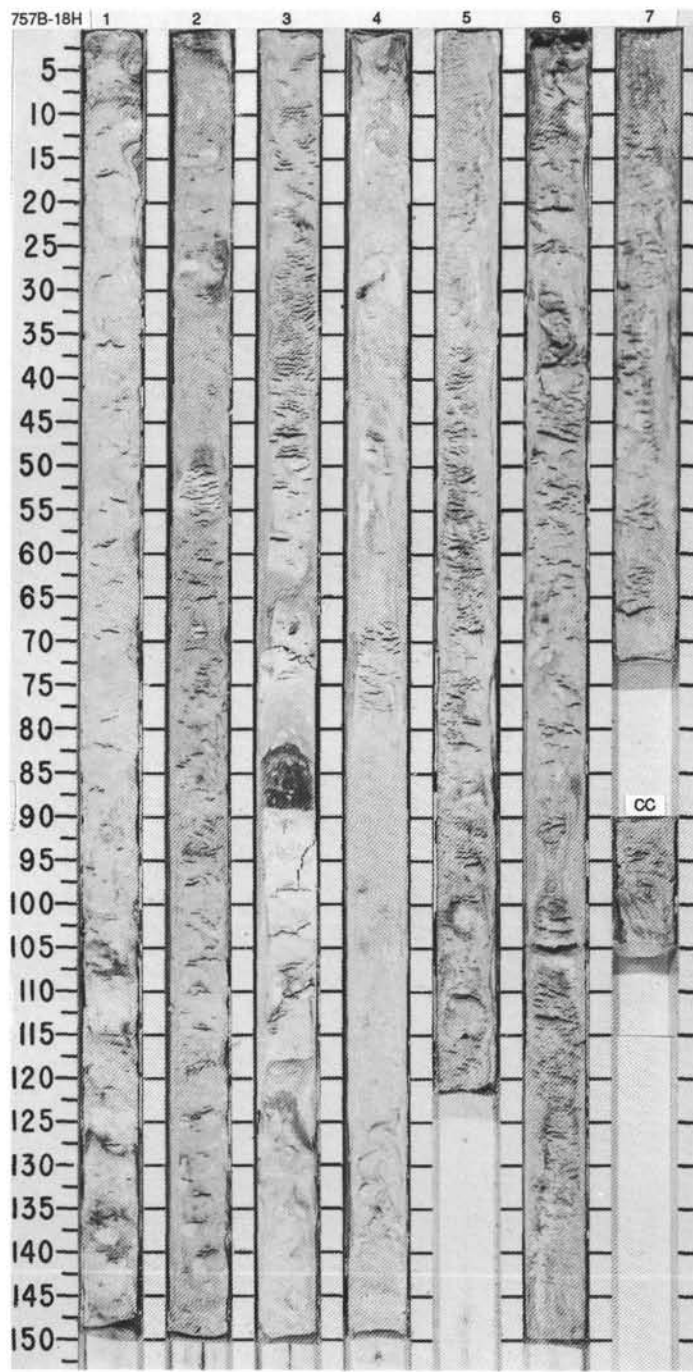
|   |       |       |
|---|-------|-------|
|   | 3, 85 | 6, 95 |
| D |       | D     |

TEXTURE:

|      |    |    |
|------|----|----|
| Silt | 90 | 90 |
| Clay | 10 | 10 |

COMPOSITION:

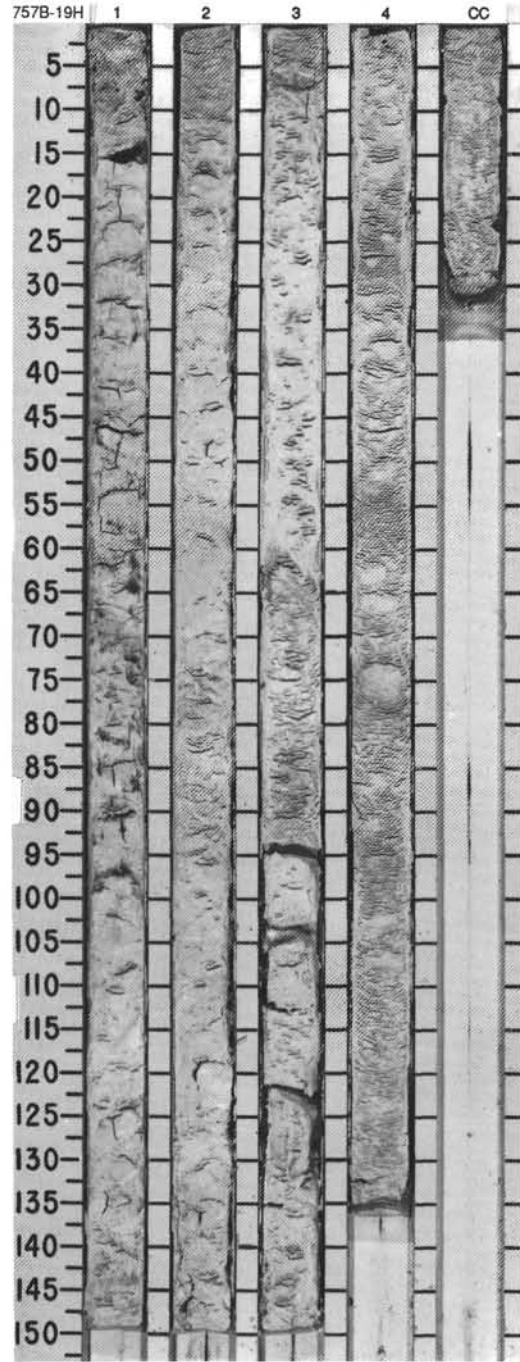
|              |    |    |
|--------------|----|----|
| Glass        | 6  | —  |
| Micrite      | 40 | 35 |
| Nannofossils | 50 | 60 |
| Quartz       | Tr | Tr |



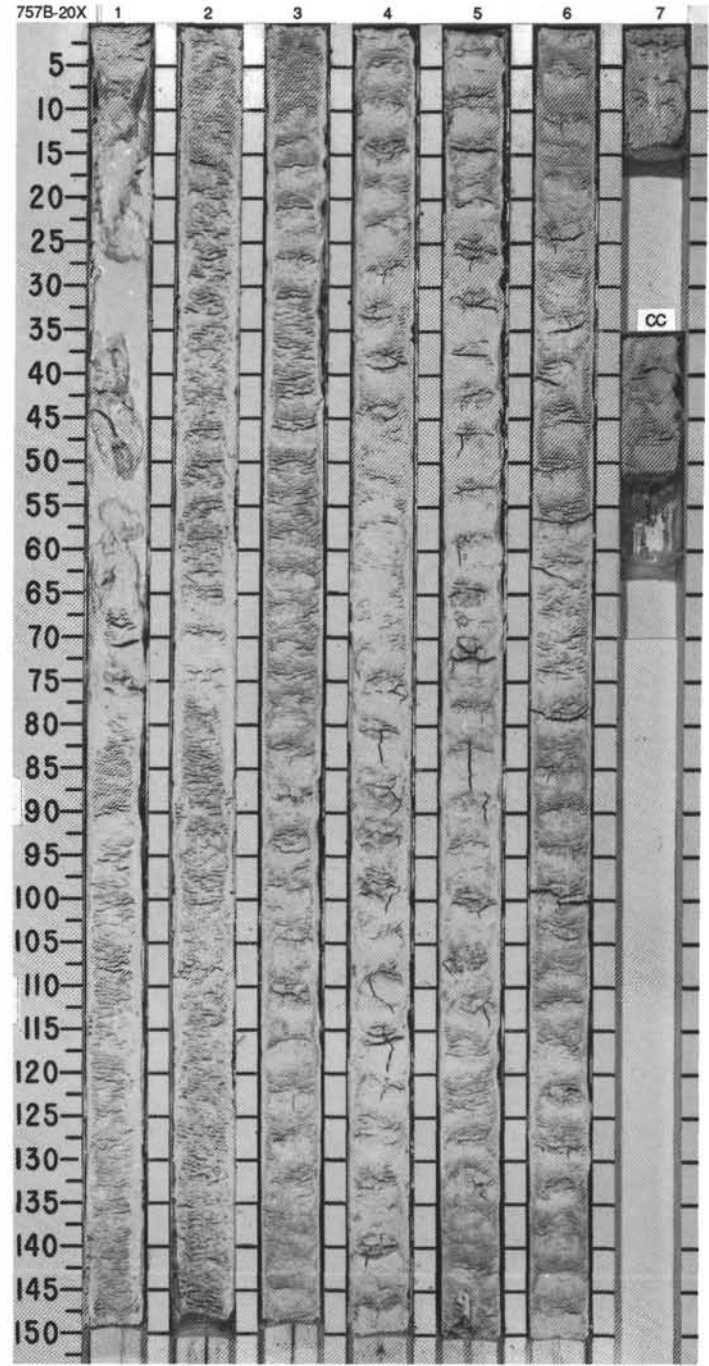


SITE 757 HOLE B CORE 19H CORED INTERVAL 168.5-174.7 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|--------|-------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |        |                   |                   |                 |         |  |
| LOWER EOCENE   | A/M                                 | P9           |              |         |                |                  |           |         |        |                   |                   |                 |         | <p>NANNOFOSSIL CALCAREOUS OOZE</p> <p>The core is slightly to moderately disturbed.</p> <p>Major lithology: NANNOFOSSIL CALCAREOUS OOZE. Very pale brown (10YR 8/3) with some grayish brown (10YR 5/2) streaks and mottles in Section 1. Small black blebs are visible in Section 4, 65-70 cm. Otherwise the core is very homogeneous, and strongly bioturbated.</p> <p>Grain size: The mean grain size of Section 2, 95 cm is 14.6 µm, Section 4, 95 cm is 13.1 µm, and the CC is 9.1 µm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">*                      2, 95</p> <p>TEXTURE:</p> <p>Silt                      90</p> <p>Clay                      10</p> <p>COMPOSITION:</p> <p>Micrite                      50</p> <p>Nannofossils                      45</p> <p>Quartz                      Tr</p> <p>Spicules                      Tr</p> |
|                | G/P                                 | CP13a        |              |         |                |                  |           | 1       | 0.5    |                   |                   |                 |         |  |
|                | B                                   |              |              |         |                |                  |           | 2       |        |                   |                   |                 |         |  |
|                | B                                   |              |              |         |                |                  |           | 3       |        |                   |                   |                 |         |  |
|                |                                     |              |              |         |                |                  |           | 4       |        |                   |                   |                 |         |  |
|                |                                     |              |              |         |                |                  |           | CC      |        |                   |                   |                 |         |  |



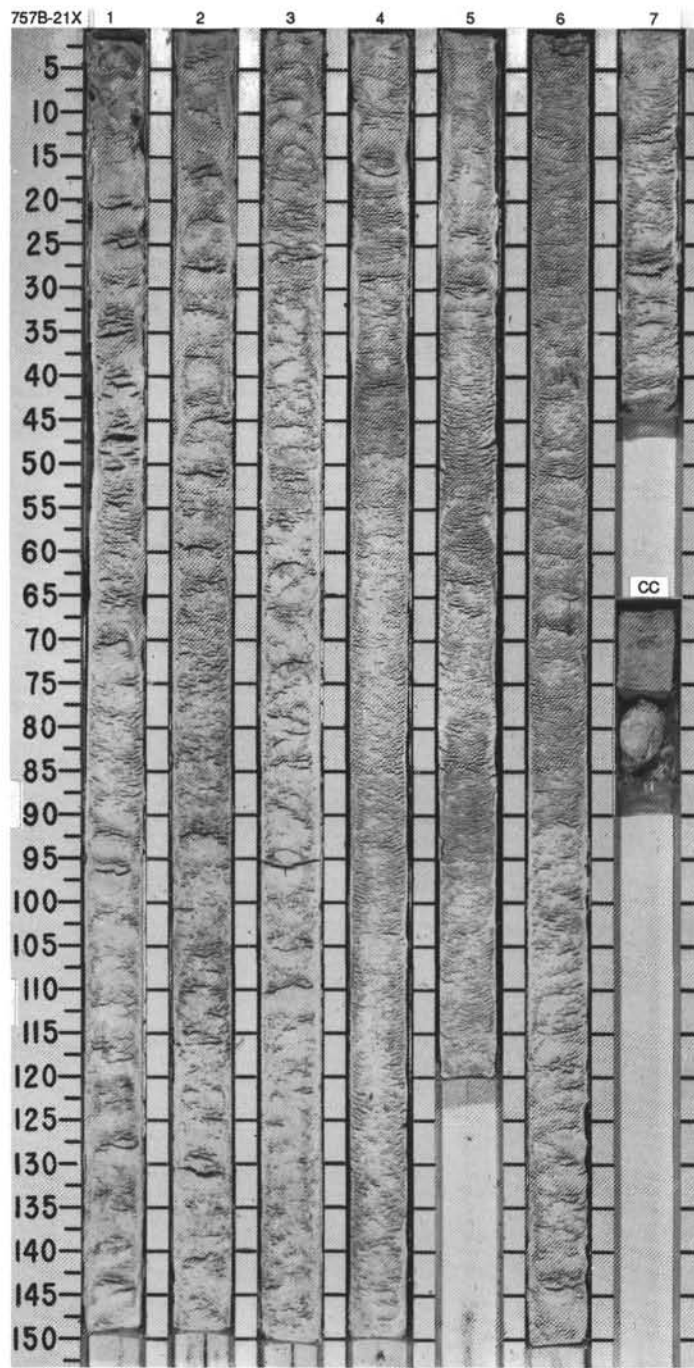
| TIME-ROCK UNIT | BIOSTRAT. ZONE/ FOSSIL CHARACTER |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|----------------------------------|--------------|----------------|------------------|-----------|----------------|-------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                     | NANNOFOSSILS |                |                  |           |                |                   |                   |                 |         |  |
|                | RADIOLARIANS                     | DIATOMS      |                |                  |           |                |                   |                   |                 |         |  |
| LOWER EOCENE   | P9                               |              |                |                  |           | 0.5<br>1.0     |                   |                   |                 |         | NANNOFOSSIL CALCAREOUS OOZE<br>The core is moderately disturbed.<br>Major lithology: NANNOFOSSIL CALCAREOUS OOZE. Very pale brown (10YR 8/3), homogeneous and strongly bioturbated throughout.<br>Grain size: The mean grain size of Section 2, 95 cm is 5.8 μm; Section 4, 95 cm is 7.4 μm; Section 6, 95 cm is 8.8 μm.<br>SMEAR SLIDE SUMMARY (%):<br>Silt 80<br>D 85<br>Clay 15<br>COMPOSITION:<br>Micrite 60<br>Nannofossils 35<br>Spicules Tr |
| A/M            | CP12                             |              |                |                  | 1         |                |                   |                   |                 |         |  |
| A/P            |                                  |              |                |                  | 2         |                |                   |                   |                 |         |  |
| Barren         |                                  |              |                |                  | 3         |                |                   |                   |                 |         |  |
| Barren         |                                  |              |                |                  | 4         |                |                   |                   |                 |         |  |
|                |                                  |              |                |                  | 5         |                |                   |                   |                 |         |  |
|                |                                  |              |                |                  | 6         |                |                   |                   |                 |         |  |
|                |                                  |              |                |                  | 7         |                |                   |                   |                 |         |  |



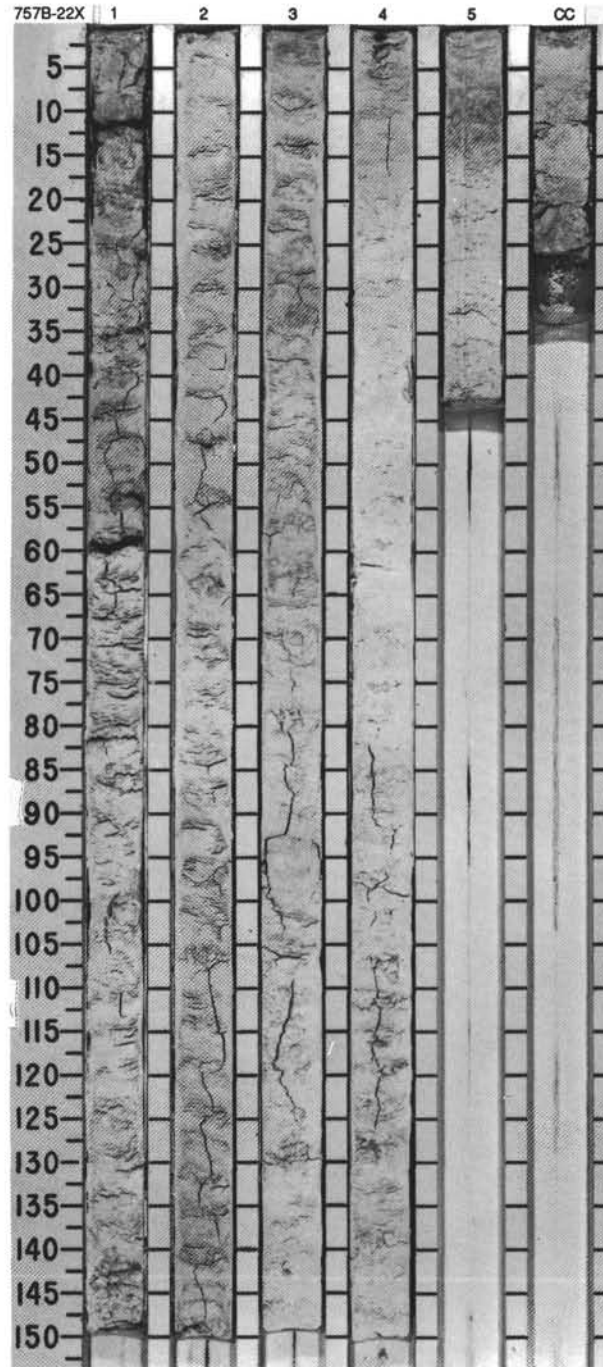
SITE 757

SITE 757 HOLE B CORE 21X CORED INTERVAL 182.7-192.4 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SEC. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|---------|--------|----------------------|-------------------|-----------------|---------|---|
| LOWER EOCENE   |                                     |         |        |                      |                   |                 |         |   |
| A/P            | P8                                  |         | 0.5    |                      |                   |                 |         | CALCAREOUS OOZE WITH NANNOFOSSILS<br>The core is moderately to slightly disturbed.<br>Major lithology: CALCAREOUS OOZE with NANNOFOSSILS. Very pale brown (10YR 8/3) to white (10YR 8/2 and 10YR 8/3). The core is strongly bioturbated and homogeneous except for some faint light gray (10YR 7/1) and very dark gray (7.5YR 3/1) mottles.<br>Grain size: The mean grain size of Section 2, 95 cm is 12.1 $\mu\text{m}$ ; Section 4, 95 cm is 7.6 $\mu\text{m}$ ; Section 6, 95 cm, is 7.0 $\mu\text{m}$ .<br>SMEAR SLIDE SUMMARY (%):<br>Silt 4, 95<br>Clay D<br>TEXTURE:<br>Silt 85<br>Clay 15<br>COMPOSITION:<br>Micrite 75<br>Nannofossils 20<br>Quartz Tr |
| A/P            | CP11                                | CP12    | 1.0    |                      |                   |                 |         |   |
| Barren         |                                     |         | 2.0    |                      |                   |                 |         |   |
| Barren         |                                     |         | 3.0    |                      |                   |                 |         |   |
|                | Indeterminate                       |         | 4.0    |                      |                   |                 |         |   |
|                |                                     |         | 5.0    |                      |                   |                 |         |   |
|                |                                     |         | 6.0    |                      |                   |                 |         |   |
|                |                                     |         | 7.0    |                      |                   |                 |         |   |
| CC             |                                     |         |        |                      |                   |                 |         |   |

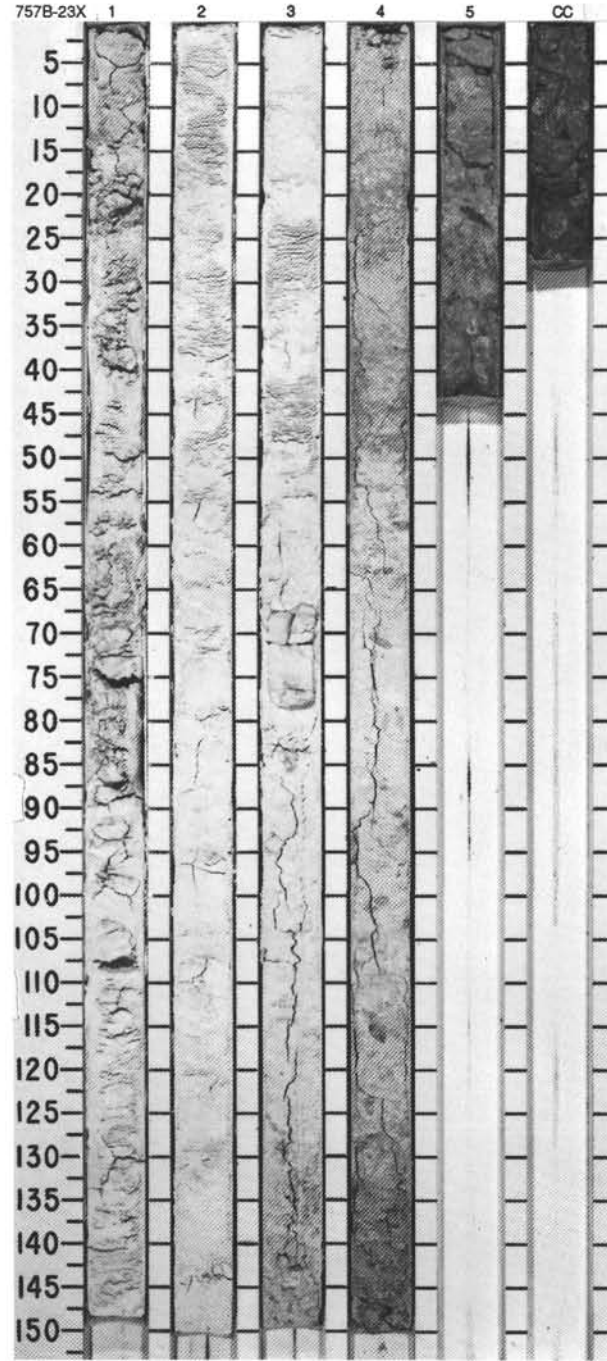


| TIME-ROCK UNIT |       | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER | PALEOMAGNETICS   | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
|----------------|-------|-------------------------------------|------------------|------------------|-----------|---------|------------|----------------------|-------------------|-----------------|---------|--|-------|-------|-------|---|--|---|------|----|----|------|----|----|-------|----|----|---------|----|----|--------------|----|----|
| A/M            | A/P   |                                     |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| LOWER EOCENE   |       | P7 - 9<br>CP11<br>Barren<br>Barren  | Normal           | ● 35.0<br>● 2.14 | ● 95.6    | 1       | 0.5<br>1.0 |                      | ---               | ---             | *       | <p>CALCAREOUS OOZE WITH NANNOFOSSILS</p> <p>Section 1 is very disturbed, and the remainder of the core is slightly to moderately disturbed.</p> <p>Major lithology: CALCAREOUS OOZE with NANNOFOSSILS. White (10YR 8/1) grading into a stark white (10YR 8/1) in Section 4, with a very pale brown (10YR 8/3) interval in Section 5, 6-14 cm. The core is strongly bioturbated, and very homogeneous throughout.</p> <p>Minor lithology: Calcareous ash with nannofossils. Dark yellowish brown (10YR 4/4) layer in Section 1, 11 cm.</p> <p>Grain size: The mean grain size for Section 2, 95 cm is 9.6 μm, and for Section 4, 95 cm is 13.2 μm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 10</td> <td>2, 95</td> </tr> <tr> <td>M</td> <td></td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Silt</td> <td>85</td> <td>80</td> </tr> <tr> <td>Clay</td> <td>15</td> <td>20</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Glass</td> <td>45</td> <td>Tr</td> </tr> <tr> <td>Micrite</td> <td>35</td> <td>70</td> </tr> <tr> <td>Nannofossils</td> <td>15</td> <td>25</td> </tr> </table> |       | 1, 10 | 2, 95 | M |  | D | Silt | 85 | 80 | Clay | 15 | 20 | Glass | 45 | Tr | Micrite | 35 | 70 | Nannofossils | 15 | 25 |
|                | 1, 10 |                                     |                  |                  |           |         |            |                      |                   |                 |         |  | 2, 95 |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| M              |       |                                     |                  |                  |           |         |            |                      |                   |                 |         |  | D     |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| Silt           | 85    |                                     |                  |                  |           |         |            |                      |                   |                 |         |  | 80    |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| Clay           | 15    |                                     |                  |                  |           |         |            |                      |                   |                 |         |  | 20    |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| Glass          | 45    | Tr                                  |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| Micrite        | 35    | 70                                  |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
| Nannofossils   | 15    | 25                                  |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
|                |       | Reversed                            | ● 15.6<br>● 2.00 | ● 95.6           | 2         | 3       | 4          |                      | ---               | ---             | *       |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
|                |       |                                     |                  |                  |           |         |            |                      |                   |                 |         |  | 5     | CC    |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
|                |       |                                     |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |
|                |       |                                     |                  |                  |           |         |            |                      |                   |                 |         |  |       |       |       |   |  |   |      |    |    |      |    |    |       |    |    |         |    |    |              |    |    |

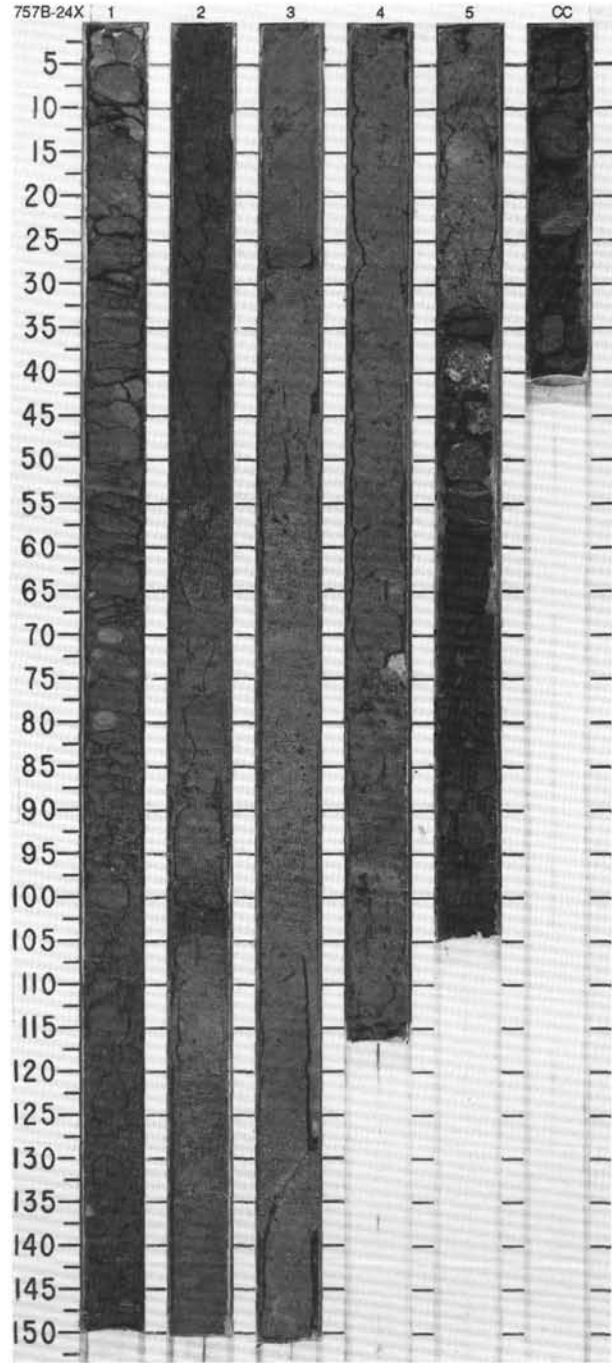
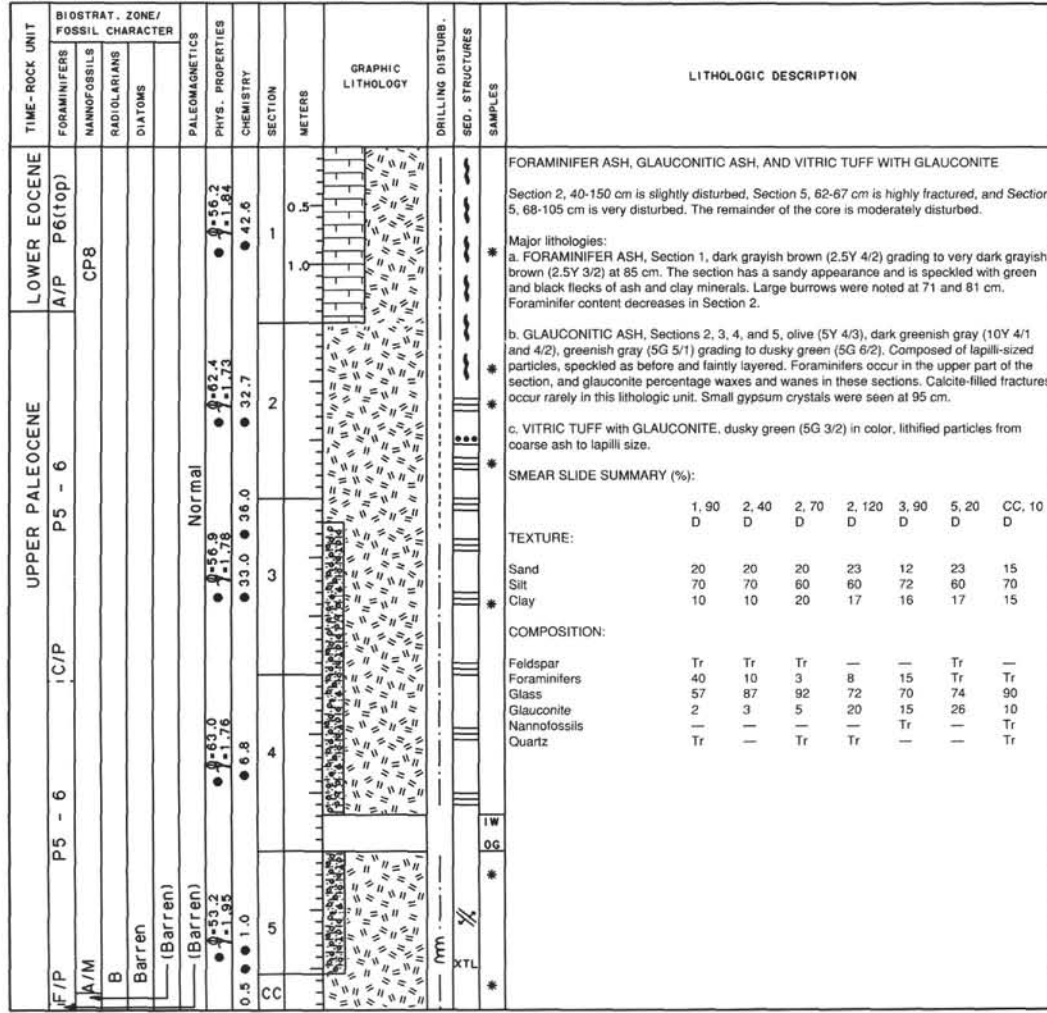


SITE 757 HOLE B CORE 23X CORED INTERVAL 202.0-211.7 mbsf

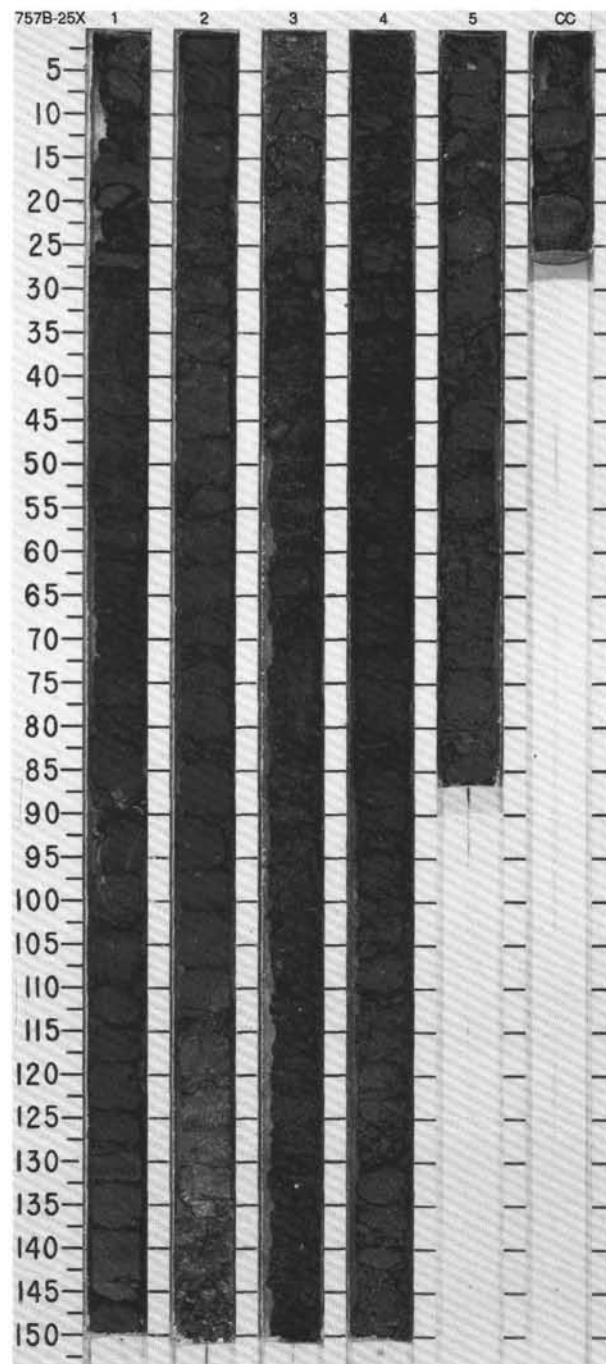
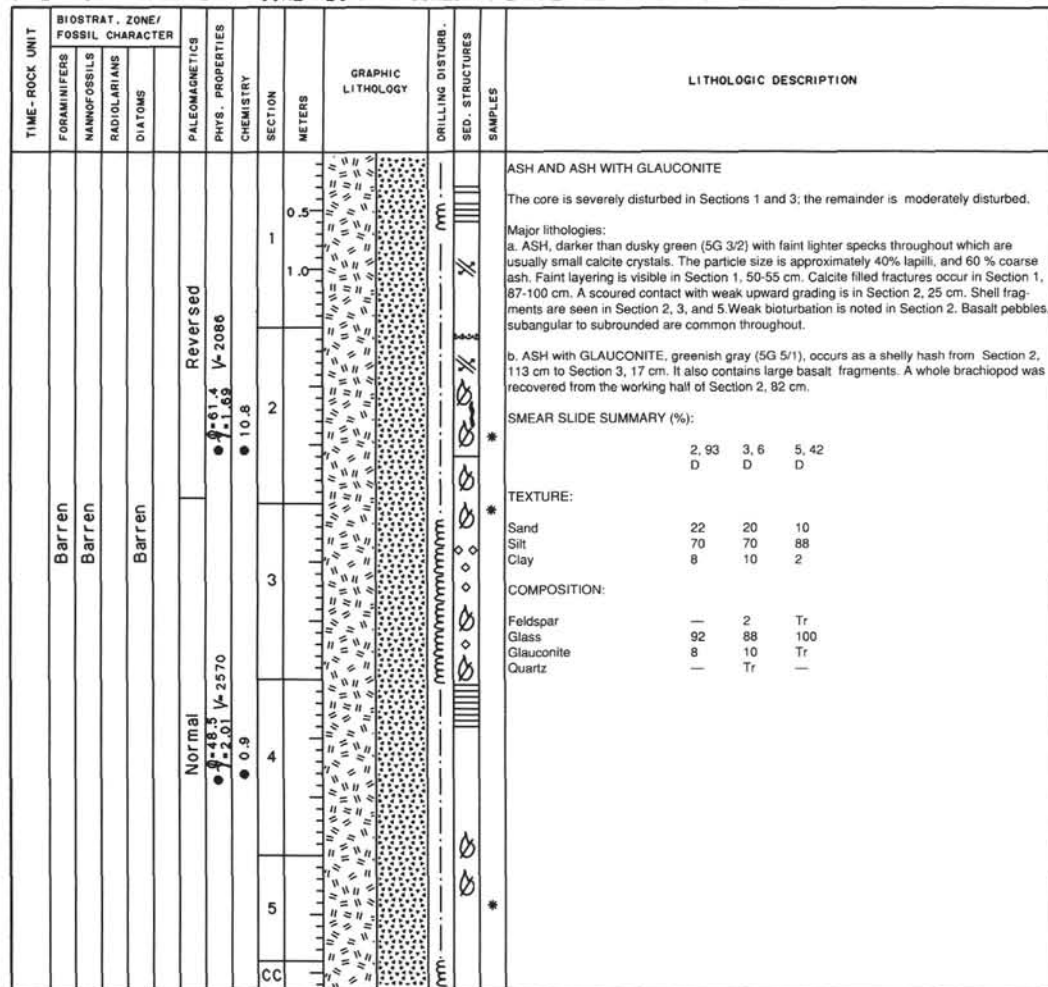
| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES                         | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|--|-----------|---------|--------|----------------------|-------------------|-----------------|---------|------------------------|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |  |           |         |        |                      |                   |                 |         |                        |
| LOWER EOCENE   |                                     |              |              |         |                |  |           |         |        |                      |                   |                 |         |                        |
| A/P            | P6                                  |              |              |         |                |  |           |         |        |                      |                   |                 |         |                        |
| A/M            | CP10                                | CP11         |              |         |                |  |           |         |        |                      |                   |                 |         |                        |
| Barren         |                                     |              |              |         |                |  |           |         |        |                      |                   |                 |         |                        |
| Barren         |                                     |              |              |         |                |  |           |         |        |                      |                   |                 |         |                        |
|                |                                     |              |              |         | Reversed       |  |           |         |        |                      |                   |                 |         |                        |
|                |                                     |              |              |         |                | V-1702 ● 9-44.5<br>● 94.2                |           |         |        |                      |                   |                 |         |                        |
|                |                                     |              |              |         |                | ● V-2140 ● 9-50.24<br>● 7-1.93<br>● 89.5 |           |         |        |                      |                   |                 |         |                        |
| CC             |                                     |              |              |         |                |  |           |         |        |                      |                   |                 |         |                        |





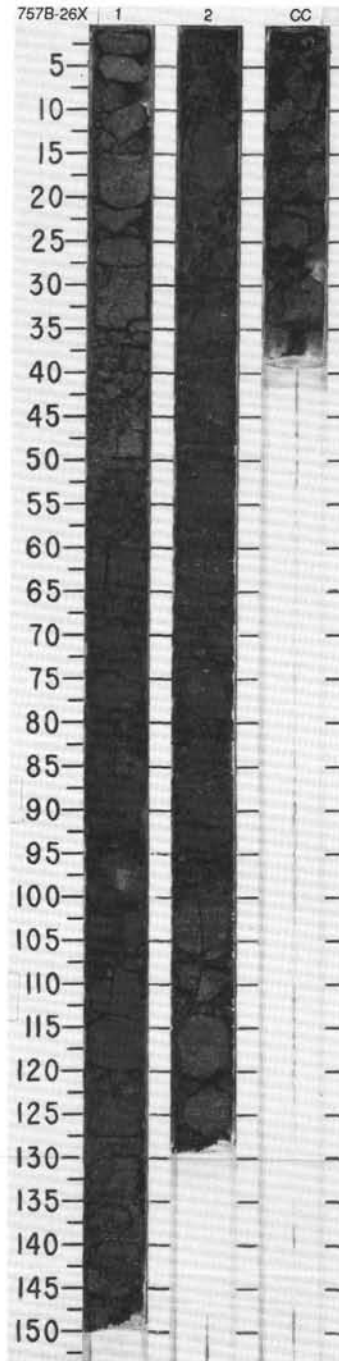


SITE 757 HOLE B CORE 25X CORED INTERVAL 221.4-231.0 mbsf



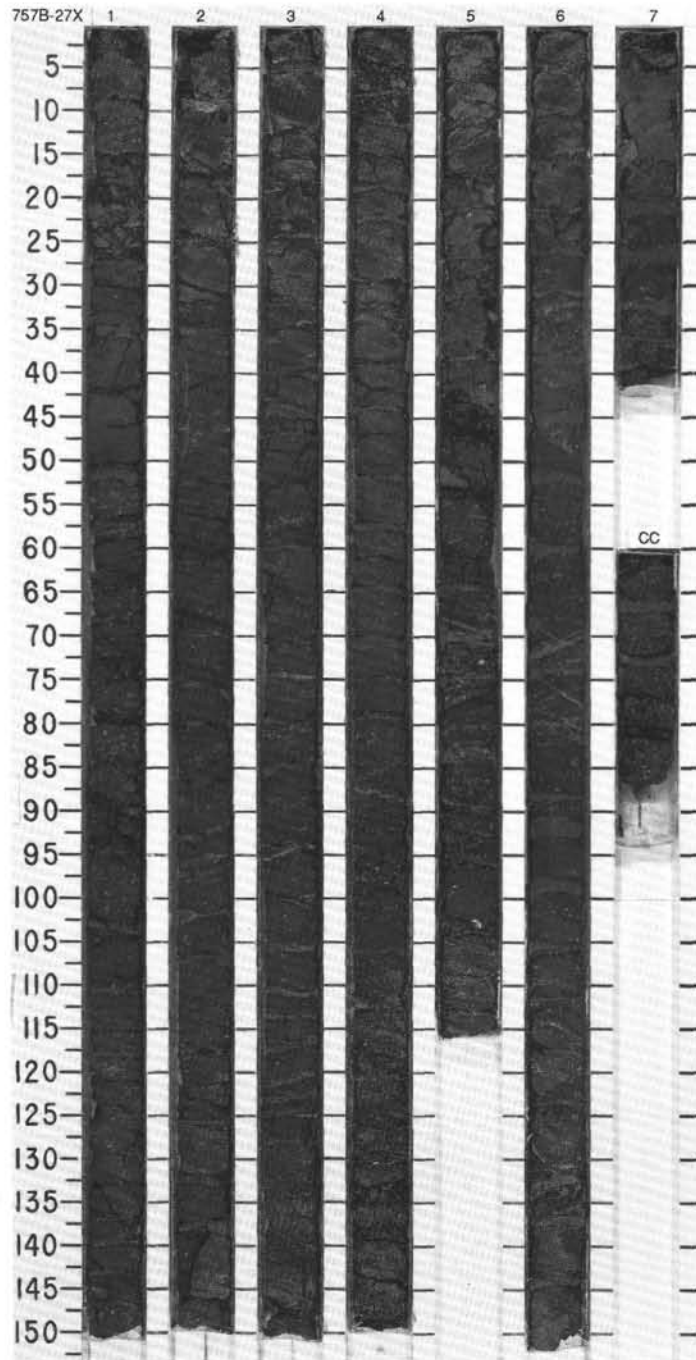
SITE 757 HOLE B CORE 26X CORED INTERVAL 231.0-240.7 mbsf

| TIME - ROCK UNIT   | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES           | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
|--------------------|-------------------------------------|--------------|--------------|---------|----------------|----------------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|--|--|-------|-------|--------|--------|---|---|---|---|---|------|---|----|---|---|------|---|----|---|----|------|---|---|---|---|--------------------|----|---|----|----|---------|----|---|----|---|--------|----|---|---|---|------|----|---|---|---|----------|----|---|----|---|--------------|---|----|---|----|-------|---|---|---|---|------------|----|----|----|-----|---------|---|---|----|---|-------------|---|----|---|---|--------|---|---|----|---|---------------|----|---|---|----|--|----|---|---|---|
|                    | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
|                    | Barren                              | Barren       | Barren       |         | Normal         | 30.4<br>1.82<br>3.3<br>0.7 |           | 2       |        |                      |                   |                 |         | <p>LAPILLI TUFF</p> <p>The core is moderately fractured in Section 1, and moderately disturbed in Section 2.</p> <p>Major lithology: LAPILLI TUFF, no available color for this core, described as much darker than: dusky green (5G 3/2), dark bluish gray (5B 4/1), and grayish olive green (5GY 3/2). The core appears as drilling biscuits in a mud matrix. The grains achieve a maximum diameter of 8 mm with no apparent size grading. Sub-spherical millimeter-scale basalt pebbles are common, as are laminae and microlaminae. Calcite and other minerals fill veins in the top of Section 2.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 32</td> <td>1, 45</td> <td>1, 110</td> <td>2, 102</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>—</td> <td>15</td> <td>—</td> <td>9</td> </tr> <tr> <td>Silt</td> <td>—</td> <td>80</td> <td>—</td> <td>82</td> </tr> <tr> <td>Clay</td> <td>—</td> <td>5</td> <td>—</td> <td>9</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Accessory Minerals</td> <td>Tr</td> <td>—</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Calcite</td> <td>15</td> <td>—</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Cement</td> <td>10</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Clay</td> <td>Tr</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Feldspar</td> <td>20</td> <td>—</td> <td>35</td> <td>—</td> </tr> <tr> <td>Foraminifers</td> <td>—</td> <td>Tr</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Glass</td> <td>—</td> <td>—</td> <td>—</td> <td>—</td> </tr> <tr> <td>Glauconite</td> <td>40</td> <td>99</td> <td>50</td> <td>100</td> </tr> <tr> <td>Opaques</td> <td>—</td> <td>1</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Plagioclase</td> <td>—</td> <td>Tr</td> <td>—</td> <td>—</td> </tr> <tr> <td>Quartz</td> <td>5</td> <td>—</td> <td>10</td> <td>—</td> </tr> <tr> <td>Rock Fragment</td> <td>Tr</td> <td>—</td> <td>3</td> <td>Tr</td> </tr> <tr> <td></td> <td>10</td> <td>—</td> <td>2</td> <td>—</td> </tr> </table> |  | 1, 32 | 1, 45 | 1, 110 | 2, 102 | D | D | D | D | D | Sand | — | 15 | — | 9 | Silt | — | 80 | — | 82 | Clay | — | 5 | — | 9 | Accessory Minerals | Tr | — | Tr | Tr | Calcite | 15 | — | Tr | — | Cement | 10 | — | — | — | Clay | Tr | — | — | — | Feldspar | 20 | — | 35 | — | Foraminifers | — | Tr | — | Tr | Glass | — | — | — | — | Glauconite | 40 | 99 | 50 | 100 | Opaques | — | 1 | Tr | — | Plagioclase | — | Tr | — | — | Quartz | 5 | — | 10 | — | Rock Fragment | Tr | — | 3 | Tr |  | 10 | — | 2 | — |
|                    | 1, 32                               | 1, 45        | 1, 110       | 2, 102  |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| D                  | D                                   | D            | D            | D       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Sand               | —                                   | 15           | —            | 9       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Silt               | —                                   | 80           | —            | 82      |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Clay               | —                                   | 5            | —            | 9       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Accessory Minerals | Tr                                  | —            | Tr           | Tr      |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Calcite            | 15                                  | —            | Tr           | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Cement             | 10                                  | —            | —            | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Clay               | Tr                                  | —            | —            | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Feldspar           | 20                                  | —            | 35           | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Foraminifers       | —                                   | Tr           | —            | Tr      |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Glass              | —                                   | —            | —            | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Glauconite         | 40                                  | 99           | 50           | 100     |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Opaques            | —                                   | 1            | Tr           | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Plagioclase        | —                                   | Tr           | —            | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Quartz             | 5                                   | —            | 10           | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
| Rock Fragment      | Tr                                  | —            | 3            | Tr      |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |
|                    | 10                                  | —            | 2            | —       |                |                            |           |         |        |                      |                   |                 |         |  |  |       |       |        |        |   |   |   |   |   |      |   |    |   |   |      |   |    |   |    |      |   |   |   |   |                    |    |   |    |    |         |    |   |    |   |        |    |   |   |   |      |    |   |   |   |          |    |   |    |   |              |   |    |   |    |       |   |   |   |   |            |    |    |    |     |         |   |   |    |   |             |   |    |   |   |        |   |   |    |   |               |    |   |   |    |  |    |   |   |   |



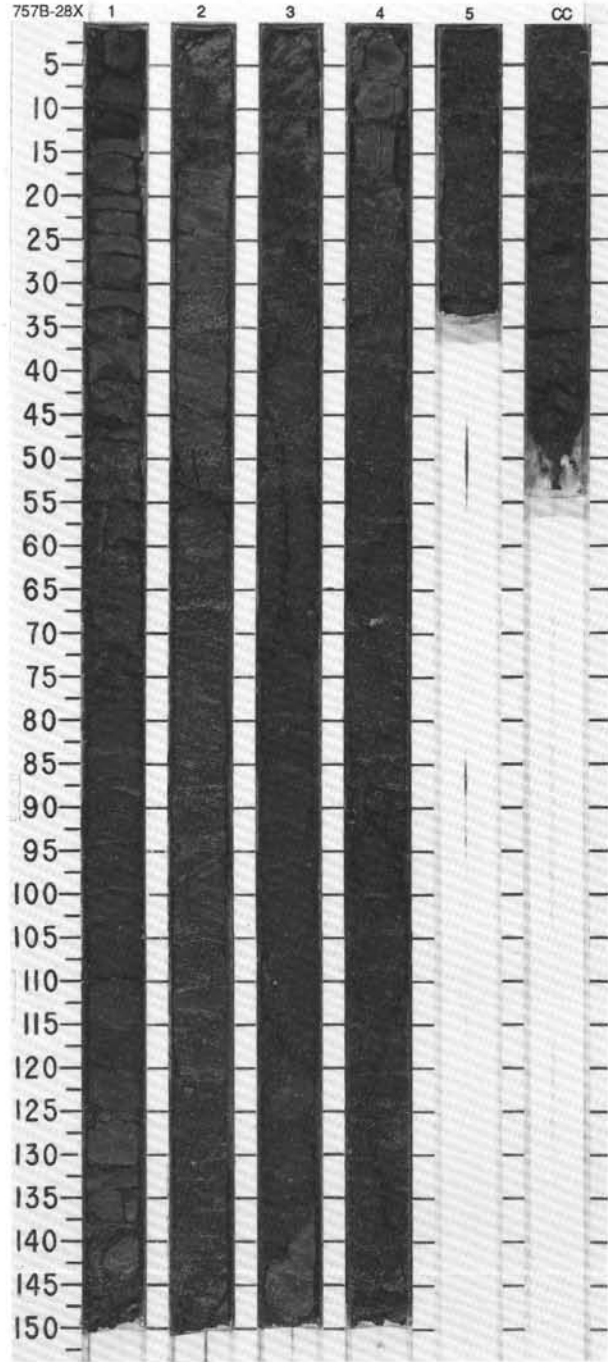
SITE 757 HOLE B CORE 27X CORED INTERVAL 240.7-250.4 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/ FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC LITHOLOGY | DRILLING DISTURB. SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|----------------|----------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|--------|-------------------|-----------------------------------|---------|---|--|------|-----|---|---|---|------|----|---|------|----|---|------|----|---|----------|---|---|---------|----|----|------|---|----|--------------|---|---|-------|----|----|------------|---|----|-------------|---|---|----------|---|----|--------|----|---|---------------|---|---|
|                | FORAMINIFERS                     | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                | Barren                           | Barren       | Barren       |         |                |                  |           |         |        |                   |                                   |         | <p>ASH WITH LAPILLI</p> <p>The entire core is moderately disturbed with drilling biscuits in a mud matrix.</p> <p>Major lithology: ASH with LAPILLI, dusky green (5G 3/2) or darker with lapilli of light greenish gray dark (5G 5/1). Laminae and layers of lapilli are common, and sometimes cross-bedded within a single biscuit. Mineral filled fractures, and shell fragments are found throughout the core. The lapilli are round, of equal size, and usually have a dark inner core with light-colored rims.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table style="margin-left: 40px;"> <tr> <td></td> <td>3.93</td> <td>6.7</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table style="margin-left: 40px;"> <tr> <td>Sand</td> <td>10</td> <td>—</td> </tr> <tr> <td>Silt</td> <td>75</td> <td>—</td> </tr> <tr> <td>Clay</td> <td>15</td> <td>—</td> </tr> </table> <p>COMPOSITION:</p> <table style="margin-left: 40px;"> <tr> <td>Bioclast</td> <td>—</td> <td>1</td> </tr> <tr> <td>Calcite</td> <td>Tr</td> <td>13</td> </tr> <tr> <td>Clay</td> <td>—</td> <td>50</td> </tr> <tr> <td>Foraminifers</td> <td>3</td> <td>—</td> </tr> <tr> <td>Glass</td> <td>92</td> <td>30</td> </tr> <tr> <td>Glauconite</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Plagioclase</td> <td>5</td> <td>5</td> </tr> <tr> <td>Pyroxene</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Quartz</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Rock Fragment</td> <td>—</td> <td>1</td> </tr> </table> |  | 3.93 | 6.7 | D | D | D | Sand | 10 | — | Silt | 75 | — | Clay | 15 | — | Bioclast | — | 1 | Calcite | Tr | 13 | Clay | — | 50 | Foraminifers | 3 | — | Glass | 92 | 30 | Glauconite | — | Tr | Plagioclase | 5 | 5 | Pyroxene | — | Tr | Quartz | Tr | — | Rock Fragment | — | 1 |
|                | 3.93                             | 6.7          |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| D              | D                                | D            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Sand           | 10                               | —            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Silt           | 75                               | —            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Clay           | 15                               | —            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Bioclast       | —                                | 1            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Calcite        | Tr                               | 13           |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Clay           | —                                | 50           |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Foraminifers   | 3                                | —            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Glass          | 92                               | 30           |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Glauconite     | —                                | Tr           |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Plagioclase    | 5                                | 5            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Pyroxene       | —                                | Tr           |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Quartz         | Tr                               | —            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
| Rock Fragment  | —                                | 1            |              |         |                |                  |           |         |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         | Normal         |                  |           | 0.5     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 1.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 2.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 3.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 4.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 5.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 6.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | 7.0     |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |
|                |                                  |              |              |         |                |                  |           | CC      |        |                   |                                   |         |   |  |      |     |   |   |   |      |    |   |      |    |   |      |    |   |          |   |   |         |    |    |      |   |    |              |   |   |       |    |    |            |   |    |             |   |   |          |   |    |        |    |   |               |   |   |



SITE 757 HOLE B CORE 28X CORED INTERVAL 250.4-260.0 mbsf

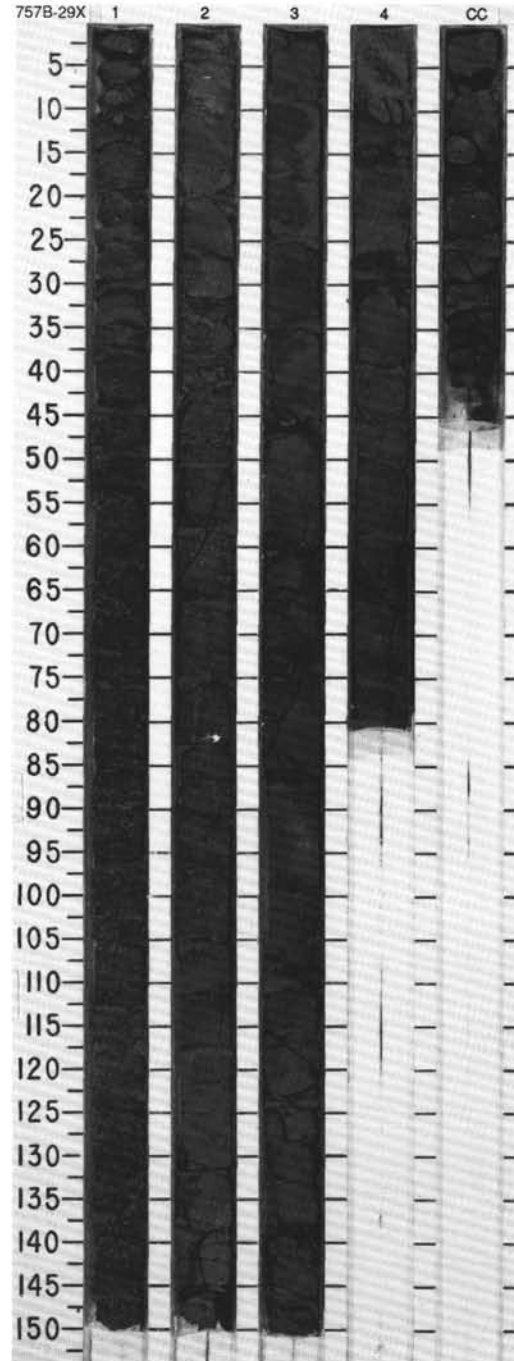
| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES            | CHEMISTRY      | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|----------------|-----------------------------|----------------|---------|------------|----------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NAKNOFOSSILS | RADIOLARIANS |                |                             |                |         |            |                      |                   |                 |         |   |
|                | Barren                              | Barren       | Barren       | Normal         | ● 9-16.3 V=2448<br>● 7-1.86 | ● 1.3<br>● 9.9 | 1       | 0.5<br>1.0 |                      | ⊕                 |                 |         | <p>TUFF WITH LAPILLI AND LAPILLI TUFF</p> <p>The core is moderately fractured in Sections 1 and 2 and in large biscuits. The remainder is drilling breccia and is very disturbed.</p> <p>Major lithology: TUFF with LAPILLI and LAPILLI TUFF, very dark greenish gray (5G 2.5/2) with discrete layers of 2-4 mm-sized lapilli. Calcareous material or cement is present in many of the lapilli layers. Rounded basalt pebbles 1 cm in size are common throughout. Two or three shell fragments per section are often visible. A chert pebble was noted in Section 1, 17 cm.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="margin-left: 40px;">2, 93<br/>D</p> <p>TEXTURE:</p> <p>* Sand 15<br/>Silt 70<br/>Clay 15</p> <p>COMPOSITION:</p> <p>Accessory Minerals Tr<br/>Feldspar Tr<br/>Foraminifers Tr<br/>Glass 85<br/>Glauconite 5<br/>Opauques 10</p> |
|                |                                     |              |              |                |                             |                | 2       |            |                      | ⊕                 |                 |         |   |
|                |                                     |              |              |                |                             |                | 3       |            |                      | ⊕                 |                 |         |   |
|                |                                     |              |              |                |                             |                | 4       |            |                      | ⊕                 |                 |         |   |
|                |                                     |              |              |                |                             |                | 5       |            |                      | ⊕                 |                 |         |   |
|                |                                     |              |              |                |                             |                | CC      |            |                      | ⊕                 |                 |         |   |





SITE 757 HOLE B CORE 29X CORED INTERVAL 260.0-269.7 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS          | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|-----------------|----------------------|--------------------------------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |                 |                      |                                      |         |   |
|                | Barren                              | Barren       | Barren       |         | Normal         |                  |           |         | 0.5<br>1<br>1.0 |                      |                                      |         | TUFF WITH LAPILLI AND TUFF<br>The core is moderately disturbed.<br>Major lithology: TUFF, very dark green (5G 2.5/2), in biscuit form with lapilli extending from the top of Section 1 to Section 2, 100 cm. The remainder of the core is essentially without lapilli. Thin beds in the ash of Section 2, 10-25 cm are discernable. White shell fragments and black, rounded basalt pebbles occur sporadically throughout the core. Grain size changes to a coarser size fraction in the bottom 15 cm of Section 2 and continues coarse to the end of the core. A color change to black coincides with the grain size increase at the bottom of Section 2, but green returns in the top of Section 3. |
|                |                                     |              |              |         |                |                  |           | 2       |                 |                      |                                      |         | SMEAR SLIDE SUMMARY (%):<br>Sand 3, 92<br>Silt D<br>Clay 13   |
|                |                                     |              |              |         |                |                  |           | 3       |                 |                      |                                      |         | TEXTURE:<br>Sand 13<br>Silt 74<br>Clay 13<br>COMPOSITION:<br>Accessory Minerals Tr<br>Feldspar 1<br>Glass 96<br>Opagues 3<br>Quartz Tr  |
|                |                                     |              |              |         |                |                  |           | 4       |                 |                      |                                      |         |   |
|                |                                     |              |              |         |                |                  |           | CC      |                 |                      |                                      |         |   |

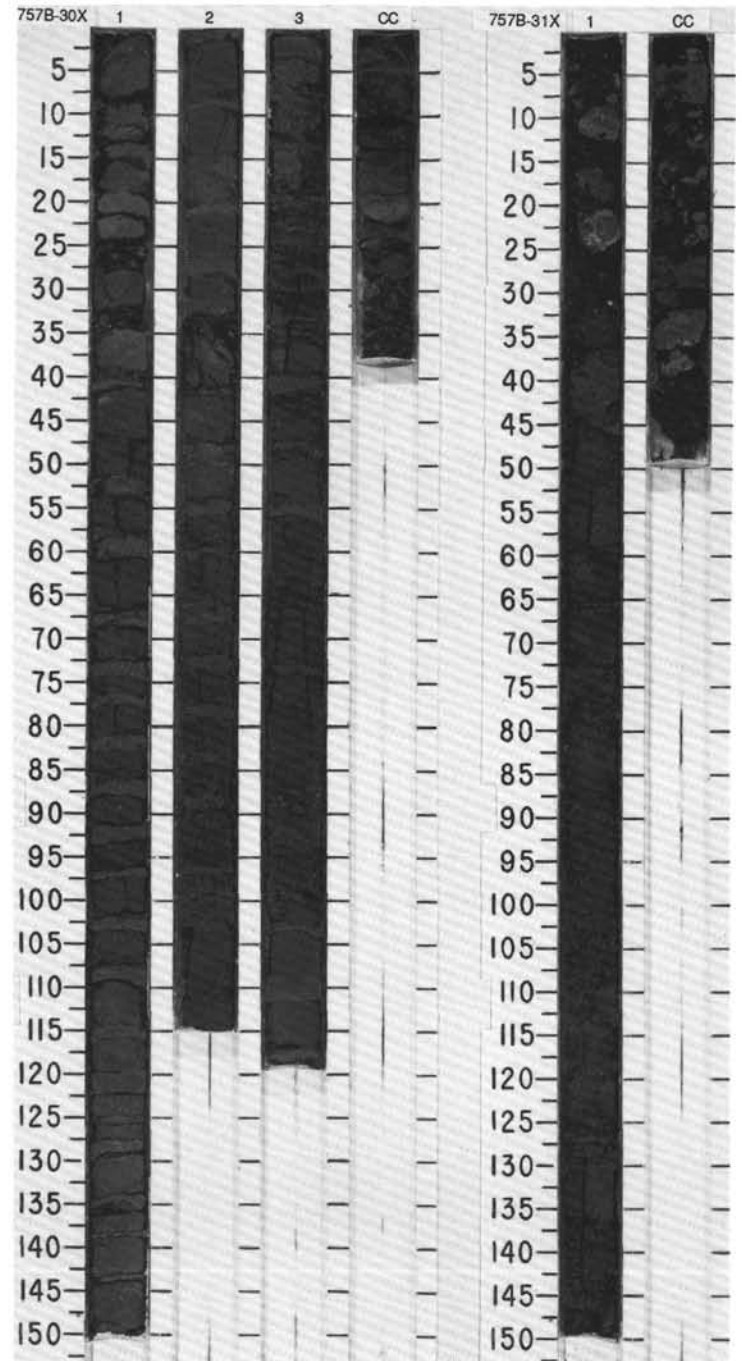


SITE 757 HOLE B CORE 30X CORED INTERVAL 269.7-279.4 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES  | CHEMISTRY | SECTION | METERS     | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|----------------|---|-----------|---------|------------|-------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |   |           |         |            |                   |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Normal         | V-46.9<br>● 2.1.87<br>V-2742<br>● 34.5<br>● 14.9<br>● 2.3 |           | 1       | 0.5<br>1.0 |                   |                   |                 |         | TUFF AND TUFF WITH LAPILLI<br>The core is moderately fractured, with drilling biscuits in a mud matrix.<br>Major lithology: TUFF and TUFF with LAPILLI, very dark grayish green (5G 2.5/2) with scattered lapilli forming weak layers. In Section 2 to 3 the lapilli increase to greater than 20% of the volume of the core. Basalt pebbles are noted in Section 1, 25 and 41 cm. Red and brown flecks and pebbles are common throughout the core. Shell fragments were noted in the core catcher.<br>SMEAR SLIDE SUMMARY (%):<br>D 1, 99 2, 93<br>D D<br>TEXTURE:<br>Sand — 5<br>Silt — 85<br>Clay — 10<br>COMPOSITION:<br>Accessory Minerals — 1<br>Calcite 20 —<br>Clay 38 —<br>Glass 40 95<br>Glauconite — Tr<br>Opaques — 2<br>Plagioclase 2 2<br>Quartz — Tr |
|                | Barren                              | Barren       | Barren       | Normal         | V-46.9<br>● 2.1.87<br>V-2742<br>● 34.5<br>● 14.9<br>● 2.3 |           | 2       | 0.5<br>1.0 |                   |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Normal         | V-46.9<br>● 2.1.87<br>V-2742<br>● 34.5<br>● 14.9<br>● 2.3 |           | 3       | 0.5<br>1.0 |                   |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Normal         | V-46.9<br>● 2.1.87<br>V-2742<br>● 34.5<br>● 14.9<br>● 2.3 |           | CC      |            |                   |                   |                 |         |  |

SITE 757 HOLE B CORE 31X CORED INTERVAL 279.4-289.0 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES                             | CHEMISTRY | SECTION | METERS     | GRAPHIC LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|----------------|--|-----------|---------|------------|-------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |  |           |         |            |                   |                   |                 |         |   |
|                | Barren                              | Barren       | Barren       | Normal         | V-2227<br>● 1.0<br>● 1.86<br>V-30.1<br>● 0.6 |           | 1       | 0.5<br>1.0 |                   |                   |                 |         | TUFF WITH LAPILLI<br>The top 10 cm of the core is drilling breccia, and the remainder is highly fragmented into drilling biscuits.<br>Major lithology: TUFF with LAPILLI. Very dark grayish green (5G 2.5/2), with some planar laminae. Lapilli zones become more prominent in the core catcher.<br>SMEAR SLIDE SUMMARY (%):<br>D 1, 50<br>D D<br>TEXTURE:<br>Silt 85<br>Clay 15<br>COMPOSITION:<br>Glass 94<br>Micrite Tr<br>Nannofossils Tr<br>Opaques Tr<br>Quartz 1 |
|                | Barren                              | Barren       | Barren       | Normal         | V-2227<br>● 1.0<br>● 1.86<br>V-30.1<br>● 0.6 |           | CC      |            |                   |                   |                 |         |   |



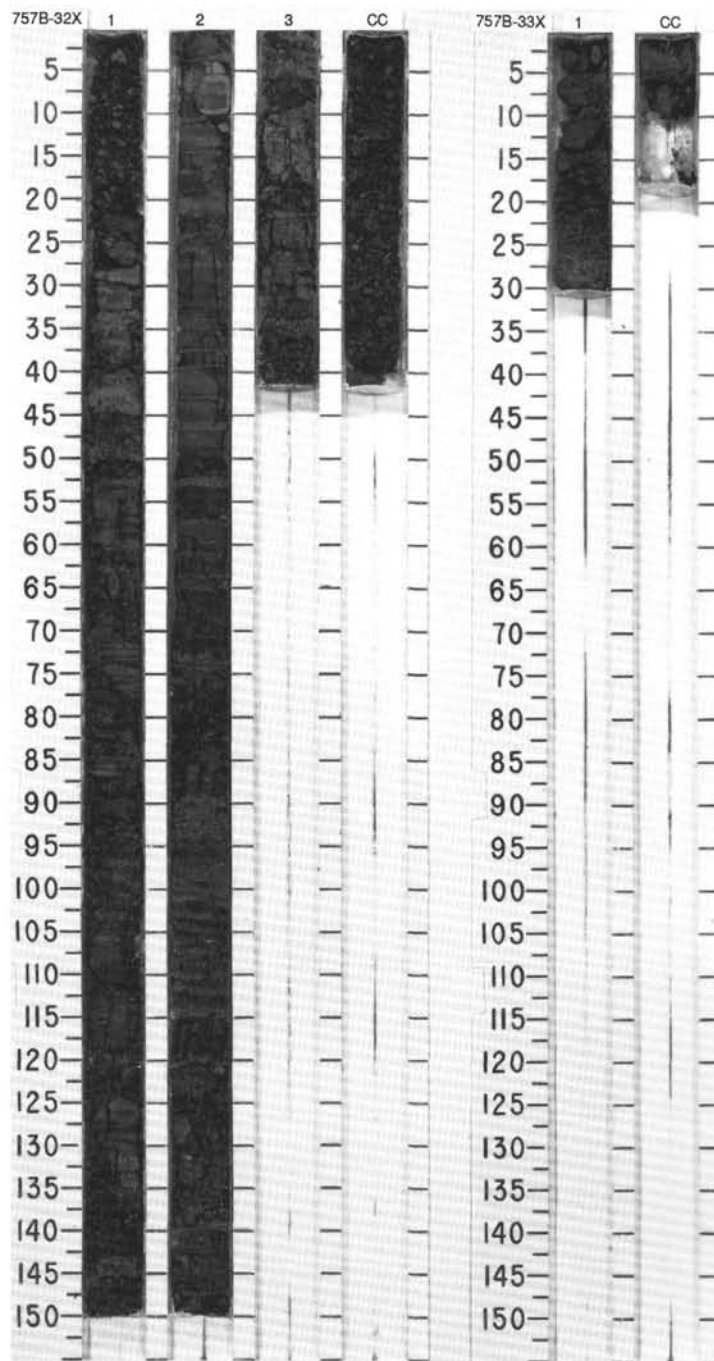
SITE 757

SITE 757 HOLE B CORE 32X CORED INTERVAL 289.0-298.6 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY  | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|------------|---------|------------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |            |         |            |                      |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Barren  | Normal         | 48.3<br>2.01     | 0.5<br>0.8 | 1       | 0.5<br>1.0 |                      | X                 |                 |         | <p>TUFF WITH LAPILLI</p> <p>Drilling biscuits with drilling breccia in Section 1, 0-20 cm and in the CC.</p> <p>Major lithology: TUFF with LAPILLI. Dark grayish green (5G 2.5/2) color, with planar laminae throughout. Lapilli are visible in horizontal layers.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="margin-left: 40px;">2 60<br/>D</p> <p>TEXTURE:</p> <p>Silt 90<br/>Clay 10</p> <p>COMPOSITION:</p> <p>Glass 95<br/>Micrite Tr<br/>Nannofossils Tr<br/>Opales 2<br/>Quartz Tr</p> |

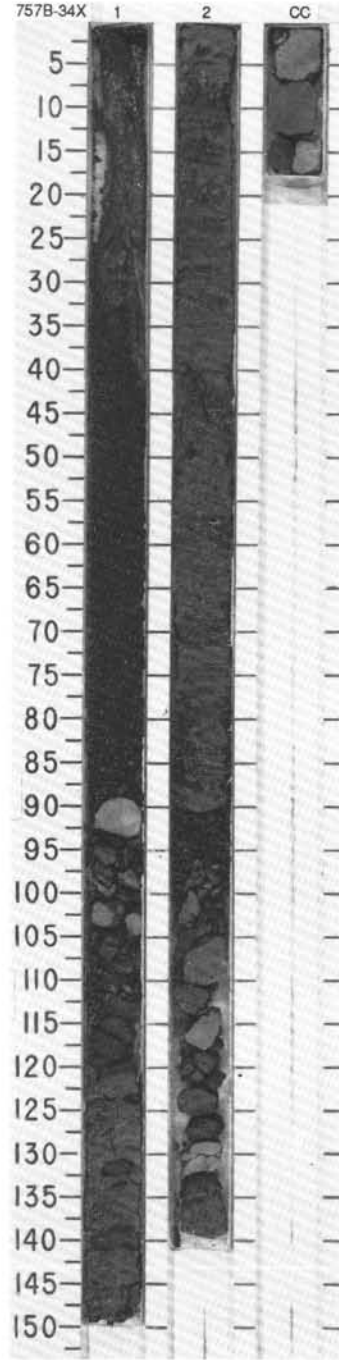
SITE 757 HOLE B CORE 33X CORED INTERVAL 298.6-308.3 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |        |                      |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Barren  | not measured   | 57.4<br>1.85     | 0.7       | 1       | CC     |                      | X                 |                 |         | <p>TUFF WITH LAPILLI</p> <p>Drilling biscuits with drilling breccia occur in Section 1, 0-20 cm and in the CC.</p> <p>Major lithology: TUFF with lapilli. Dark grayish green (5G 2.5/2) color, with planar laminae throughout. Lapilli are visible in horizontal layers.</p> <p>121-757B-37X</p> <p>TUFF</p> <p>Core consists of moderately to highly fragmented biscuits surrounded by drilling slurry. Section 1, 0-30 cm is drilling breccia.</p> <p>Major lithology. TUFF. Very dark grayish green (5G 2.5Y) homogeneous biscuits interspersed in a drilling slurry. Section 3, 40-70 cm and CC, 0-35 cm have shell hash throughout. Drilling breccia in Section 1, 0-30 cm consists of ash, chert and basalt pebbles.</p> |



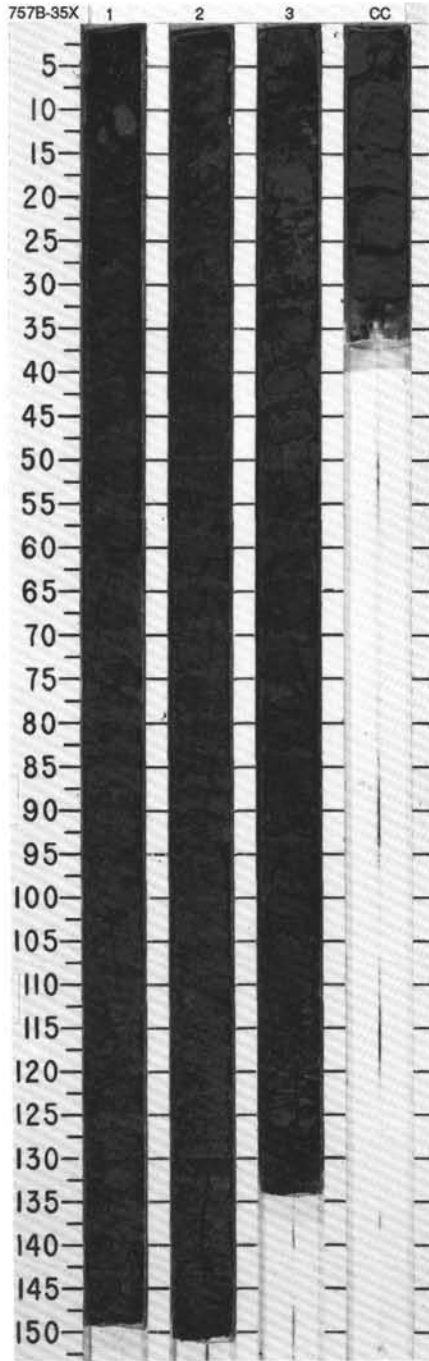
SITE 757 HOLE B CORE 34X CORED INTERVAL 308.3-317.9 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |                  |           |         |        |                      |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       |                |                  |           | 1       | 0.5    |                      | X                 |                 |         | <p>TUFF</p> <p>Drilling biscuits with soupy drilling breccia occur in Section 1, 0-90 cm and drilling slurry in Section 2, 0-90 cm.</p> <p>Major lithology: TUFF. Very dark grayish green (5G 2.5Y/2). Dark bluish gray (5B 4/1) basalt cobbles in Section 1, 90-120 cm. Drilling breccia contains clasts of chert, shell fragments and basalt pebbles. Lapilli are present in the core catcher.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">2, 110</p> <p>TEXTURE:</p> <p>Silt 90<br/>Clay 10</p> <p>COMPOSITION:</p> <p>Glass 95<br/>Quartz Tr<br/>Glauconite Tr<br/>Nannofossils Tr</p> |
|                |                                     |              |              | not measured   | ● $\chi = 1.86$  | ● 0.7     | 2       | 1.0    |                      | X                 |                 |         |  |
|                |                                     |              |              |                |                  |           | CC      |        |                      | X                 |                 |         |  |



SITE 757 HOLE B CORE 35X CORED INTERVAL 317.9-327.6 mbsf

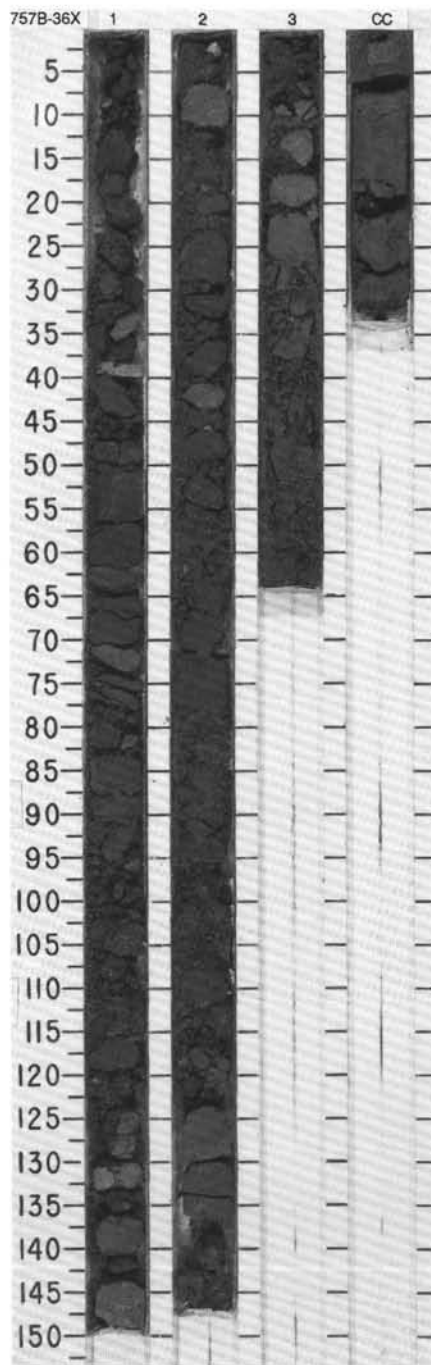
| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |  |
|----------------|-------------------------------------|--------------|--------------|----------------|------------------|-----------|---------|------------|----------------------|-------------------|-----------------|---------|--|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |                  |           |         |            |                      |                   |                 |         |  |  |
|                | Barren                              | Barren       | Barren       | Reversed       |                  |           | 1       | 0.5<br>1.0 |                      | X                 |                 |         | <p>TUFF</p> <p>Most of core is composed of drilling slurry with biscuits scattered throughout. Drilling breccia in Section 1, 0-20 cm.</p> <p>Major lithology: TUFF. Very dark greenish gray (5G 2.5/2). Biscuits are homogeneous with few lapilli. Drilling breccia contains chert, basalt and ash pebbles and cobbles.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <p style="text-align: right;">2, 70</p> <p>TEXTURE:</p> <p>Silt                    85<br/>Clay                    15</p> <p>* COMPOSITION:</p> <p>Glass                    95<br/>Opales                    1<br/>Quartz                    Tr<br/>Glauconite                Tr<br/>Micrite                    Tr</p> |  |
|                |                                     |              |              |                |                  | 2         |         |            |                      | X                 |                 |         |  |  |
|                |                                     |              |              |                |                  | 3         |         |            |                      | X                 |                 |         |  |  |
|                |                                     |              |              |                |                  | CC        |         |            |                      | X                 |                 |         |  |  |





SITE 757 HOLE B CORE 36X CORED INTERVAL 327.6-337.3 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS               | PHYS. PROPERTIES | CHEMISTRY      | SECTION           | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES   | LITHOLOGIC DESCRIPTION |
|----------------|-------------------------------------|--------------|--------------|------------------------------|------------------|----------------|-------------------|------------|----------------------|-------------------|-----------------|---|------------------------|
|                | FORAMINIFERS                        | MANNOFOSSILS | RADIOLARIANS |                              |                  |                |                   |            |                      |                   |                 |   |                        |
|                |                                     |              |              |                              |                  |                |                   |            |                      |                   |                 |   |                        |
|                |                                     |              |              |                              |                  |                |                   |            |                      |                   |                 |   |                        |
|                | Barren                              | Barren       | Barren       | Reversed<br>● 51.1<br>● 1.81 | ● 2369<br>● 2366 | ● 2.0<br>● 2.2 | 1<br>N<br>3<br>CC | 0.5<br>1.0 |                      | X                 |                 | TUFF<br>Core consists of moderately to highly fragmented biscuits surrounded by drilling slurry.<br>Major lithology. TUFF. Very dark grayish green (5G 2.5/2) homogeneous biscuits interspersed in drilling slurry. |                        |

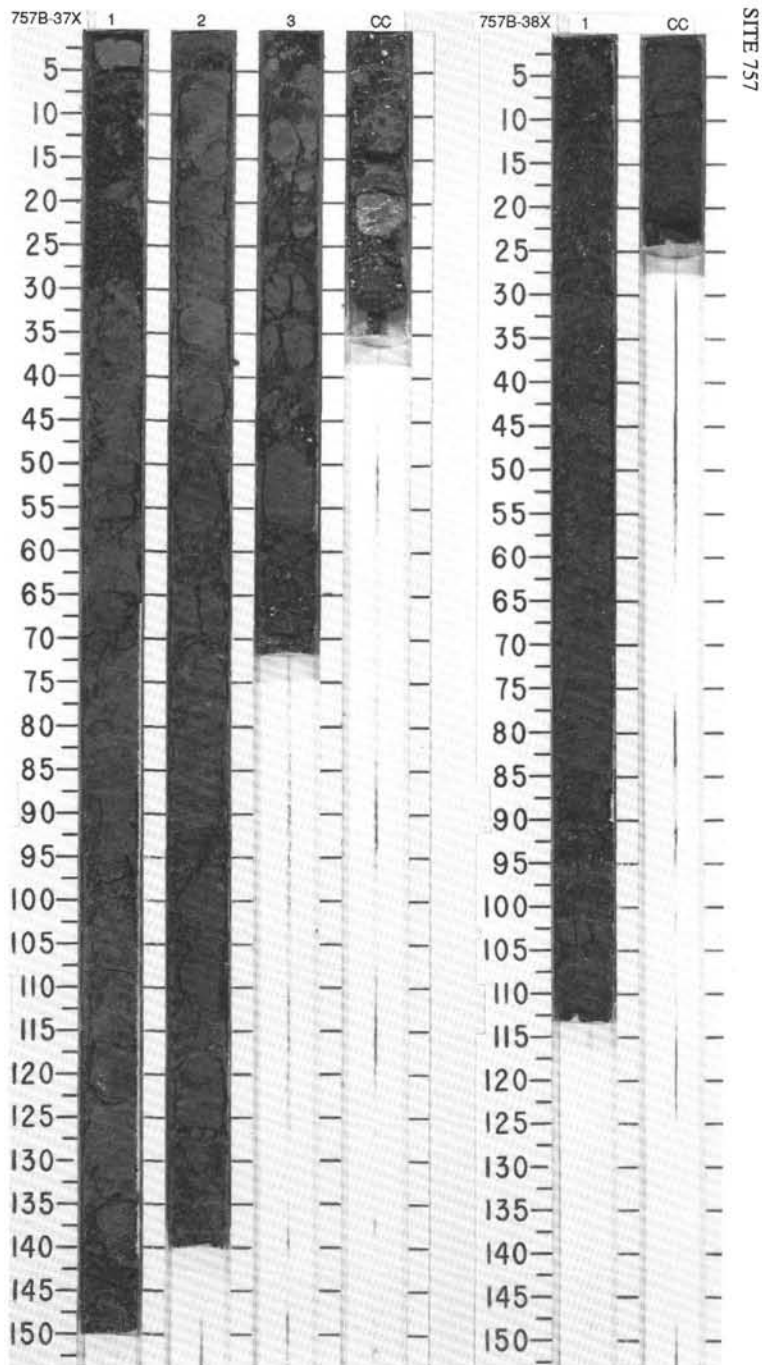


## SITE 757 HOLE B CORE 37X CORED INTERVAL 337.3-346.9 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES   | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|--------------|--------------|----------------|--|-----------|---------|------------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |  |           |         |            |                      |                   |                 |         |  |
|                | Barren                              | Barren       | Barren       | Reversed       | $\chi = 49.9$<br>$\chi = 2298$<br>$\chi = 2407$<br>$\chi = 1.81$<br>$\chi = 3.8$ |           | 1       | 0.5<br>1.0 |                      | X                 | X               |         | TUFF<br>Core consists of moderately to highly fragmented biscuits surrounded by drilling slurry. Section 1, 0-30 cm is drilling breccia.<br>Major lithology, TUFF. Very dark grayish green (5G 2.5Y) homogeneous biscuits interspersed in a drilling slurry. Section 3, 40-70 cm and CC, 0-35 cm have shell hash throughout. Drilling breccia in Section 1, 0-30 cm consists of ash, chert and basalt pebbles. |
|                | Barren                              | Barren       | Barren       | Reversed       | $\chi = 49.5$<br>$\chi = 2203$<br>$\chi = 0.8$<br>$\chi = 3.8$                   |           | 2       |            |                      | X                 | X               |         |  |
|                | Barren                              | Barren       | Barren       | Reversed       | $\chi = 49.5$<br>$\chi = 2203$<br>$\chi = 0.8$<br>$\chi = 3.8$                   |           | 3       |            |                      | X                 | X               |         |  |
|                | Barren                              | Barren       | Barren       | Reversed       | $\chi = 49.5$<br>$\chi = 2203$<br>$\chi = 0.8$<br>$\chi = 3.8$                   |           | CC      |            |                      | X                 | X               |         |  |

## SITE 757 HOLE B CORE 38X CORED INTERVAL 346.9-356.6 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES                               | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|----------------|--|-----------|---------|------------|----------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |  |           |         |            |                      |                   |                 |         |   |
|                | Barren                              | Barren       | Barren       | Normal         | $\chi = 49.5$<br>$\chi = 2203$<br>$\chi = 1.0$ |           | 1       | 0.5<br>1.0 |                      | X                 | X               |         | TUFF<br>The core consists of moderately-to highly-fragmented biscuits.<br>Major lithology, TUFF. Very dark grayish green (5G 2.5Y) homogeneous biscuits interspersed in a drilling slurry. Section 1, 82-85 cm. |
|                | Barren                              | Barren       | Barren       | Normal         | $\chi = 49.5$<br>$\chi = 2203$<br>$\chi = 1.0$ |           | CC      |            |                      | X                 | X               |         |   |

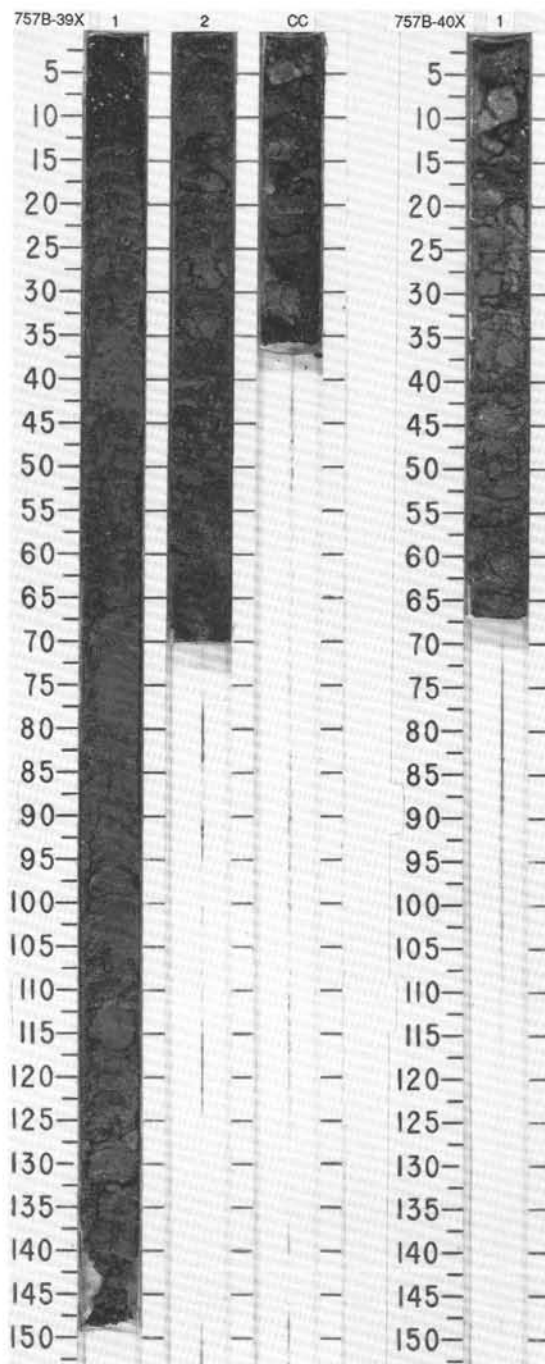


SITE 757 HOLE B CORE 39X CORED INTERVAL 356.6-366.3 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |             |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|-------------|--------------|----------------|------------------|-----------|---------|------------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NAUPOSSILLS | RADIOLARIANS |                |                  |           |         |            |                      |                   |                 |         |  |
|                | Barren                              | Barren      | Barren       | not measured   | ● 49.7<br>● 2.00 | ● 0.7     | 1       | 0.5<br>1.0 |                      | X                 | X               | X       | TUFF<br>The core consists of moderately to highly fragmented biscuits. Section 1, 0-10, is drilling breccia.<br><br>Major lithology: TUFF. Very dark grayish green (5G 2.5/Y) homogeneous biscuits interspersed in a drilling slurry. Section 1, 0-10 cm is a drilling breccia consisting of shell hash, and ash, chert, and basalt pebbles. |
|                |                                     |             |              |                |                  |           | N       |            |                      | X                 | X               | X       |  |
|                |                                     |             |              |                |                  |           | CC      |            |                      | X                 | X               | X       |  |

SITE 757 HOLE B CORE 40X CORED INTERVAL 366.3-369.3 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |             |              | PALEOMAGNETICS | PHYS. PROPERTIES           | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|----------------|-------------------------------------|-------------|--------------|----------------|----------------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|--|
|                | FORAMINIFERS                        | NAUPOSSILLS | RADIOLARIANS |                |                            |           |         |        |                      |                   |                 |         |  |
|                | Barren                              | Barren      | Barren       | Indeterminate  | ● 51.3<br>● 1.93<br>V-2229 | ● 0.5     | 1       | 0.5    |                      | /                 | /               | /       | TUFF WITH LAPILLI AND BASALT<br>The core is highly fragmented.<br><br>Major lithology: TUFF with LAPILLI. Very dark grayish green (5G 2.5/2) and bluish gray (5G 5/1) biscuits with white (10YR 8/2) pumice blebs. Lapilli are common throughout. A yellowish brown (10YR 3/6) interval occurs in Section 1, 54-55 cm. Shell fragments are common in Section 1. A sharp contact separates the overlying tuff from the underlying basalt. The basalt biscuit is dark bluish gray (5B 4/1) with large white phenocrysts. |
|                |                                     |             |              |                |                            |           | CC      |        |                      | /                 | /               | /       |  |



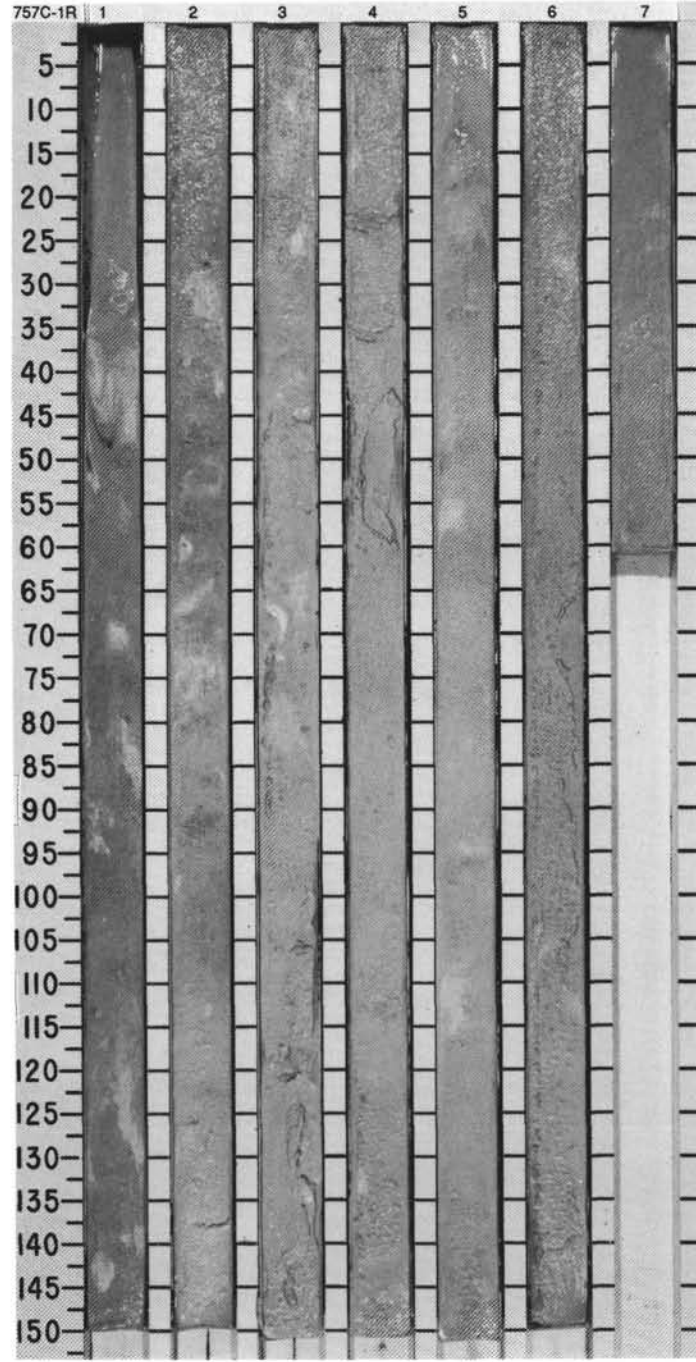
SITE 757 HOLE C CORE 1R CORED INTERVAL 0-9.7 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION |  |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|------------------------|--|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |        |                      |                   |                 |         |                        |  |
|                | not measured                        |              |              |         |                |                  |           |         |        |                      |                   |                 |         |                        |  |
|                |                                     |              |              |         |                |                  |           |         |        |                      |                   |                 |         |                        |  |
| PLEISTOCENE    | N22                                 | CN14         | Barren       |         |                |                  |           |         |        |                      |                   |                 |         |                        |  |
| A/G            |                                     |              |              |         |                |                  | 1         | 0.5     |        |                      |                   |                 |         |                        |  |
| A/G            |                                     |              |              |         |                |                  | 2         |         |        |                      |                   |                 |         |                        |  |
| R/P            |                                     |              |              |         |                |                  | 3         |         |        |                      |                   |                 |         |                        |  |
| B              |                                     |              |              |         |                |                  | 4         |         |        |                      |                   |                 |         |                        |  |
|                |                                     |              |              |         |                |                  | 5         |         |        |                      |                   |                 |         |                        |  |
|                |                                     |              |              |         |                |                  | 6         |         |        |                      |                   |                 |         |                        |  |
|                |                                     |              |              |         |                |                  | 7         |         |        |                      |                   |                 |         |                        |  |

FORAMINIFER NANNOFOSSIL OOZE

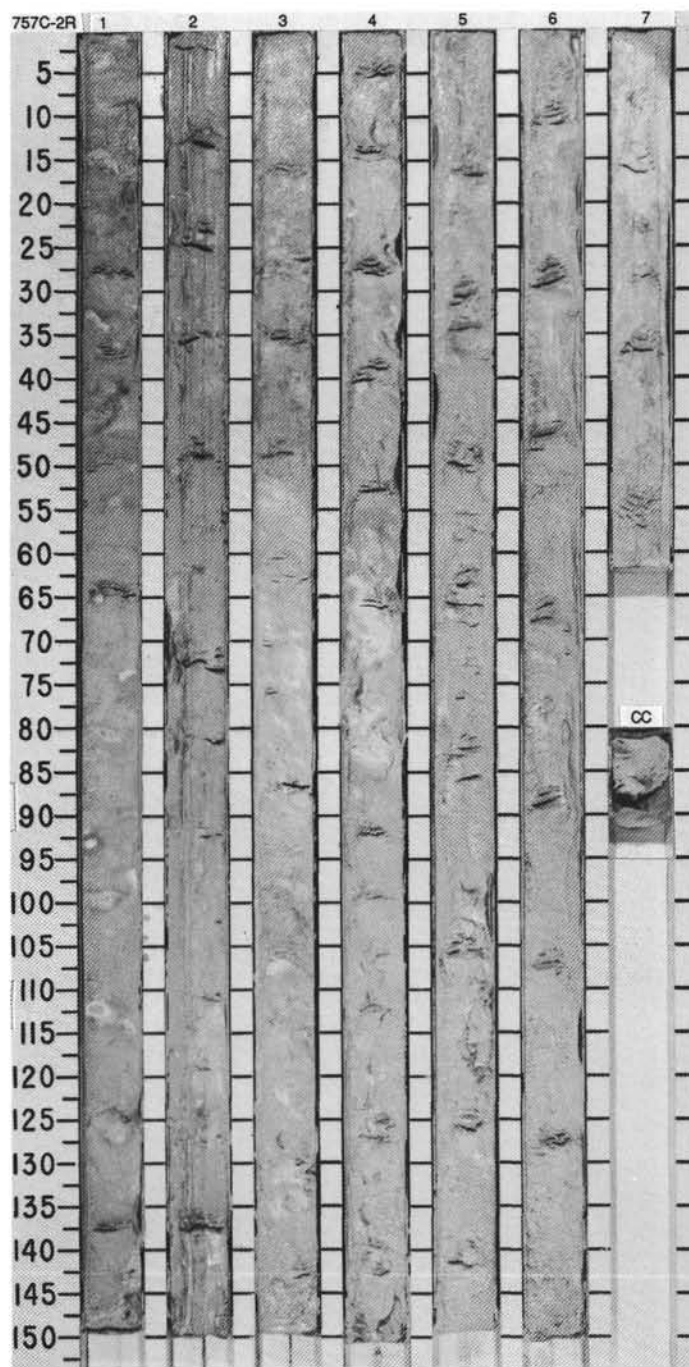
The core is soupy in Section 1, 0-60 cm, moderately disturbed in Section 1, 60-150 cm, and slightly disturbed in the remaining sections.

Major lithology: FORAMINIFER NANNOFOSSIL OOZE. Very pale brown (10YR 7/3) with some white (10YR 8/2) mottles. The core is strongly bioturbated and homogeneous.



SITE 757 HOLE C CORE 2R CORED INTERVAL 121.5-131.1 mbsf

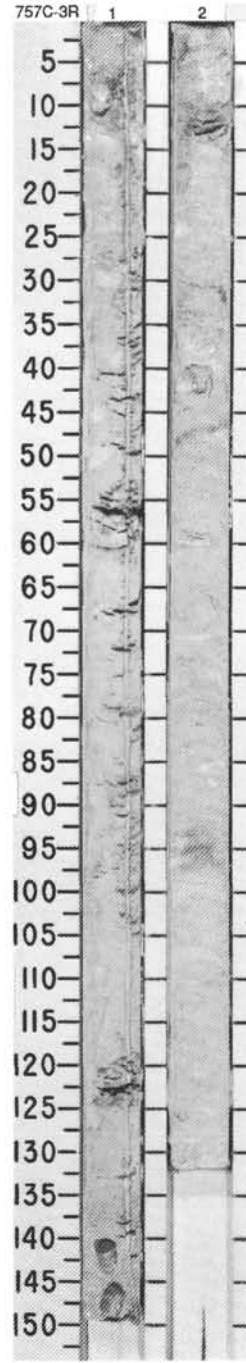
| TIME-ROCK UNIT  | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION   |
|-----------------|-------------------------------------|--------------|--------------|----------------|------------------|-----------|---------|--------|----------------------|--------------------------------------|---------|--|
|                 | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |                  |           |         |        |                      |                                      |         |  |
| LOWER OLILOCENE |                                     |              |              |                |                  |           |         |        |                      |                                      |         |  |
| A/G             | P18                                 |              |              |                |                  |           | 1       | 0.5    |                      |                                      |         | <p>NANNOFOSSIL OOZE WITH FORAMINIFERS</p> <p>The core is slightly to moderately disturbed.</p> <p>Major lithology: NANNOFOSSIL OOZE with FORAMINIFERS. Very pale brown (10YR 7/3) with some white (10YR 8/2) streaks and mottles. Otherwise the core is very homogeneous and strongly bioturbated.</p> |
| A/P             | CP16                                |              |              |                |                  |           | 1       | 1.0    |                      |                                      |         |  |
| B               |                                     |              |              |                |                  |           | 2       |        |                      |                                      |         |  |
| B               | Barren                              |              |              |                |                  |           | 3       |        |                      |                                      |         |  |
|                 |                                     |              |              |                |                  |           | 4       |        |                      |                                      |         |  |
|                 |                                     |              |              |                |                  |           | 5       |        |                      |                                      |         |  |
|                 |                                     |              |              |                |                  |           | 6       |        |                      |                                      |         |  |
|                 |                                     |              |              |                |                  |           | 7       |        |                      |                                      |         |  |
|                 |                                     |              |              |                |                  |           |         |        |                      |                                      |         |  |



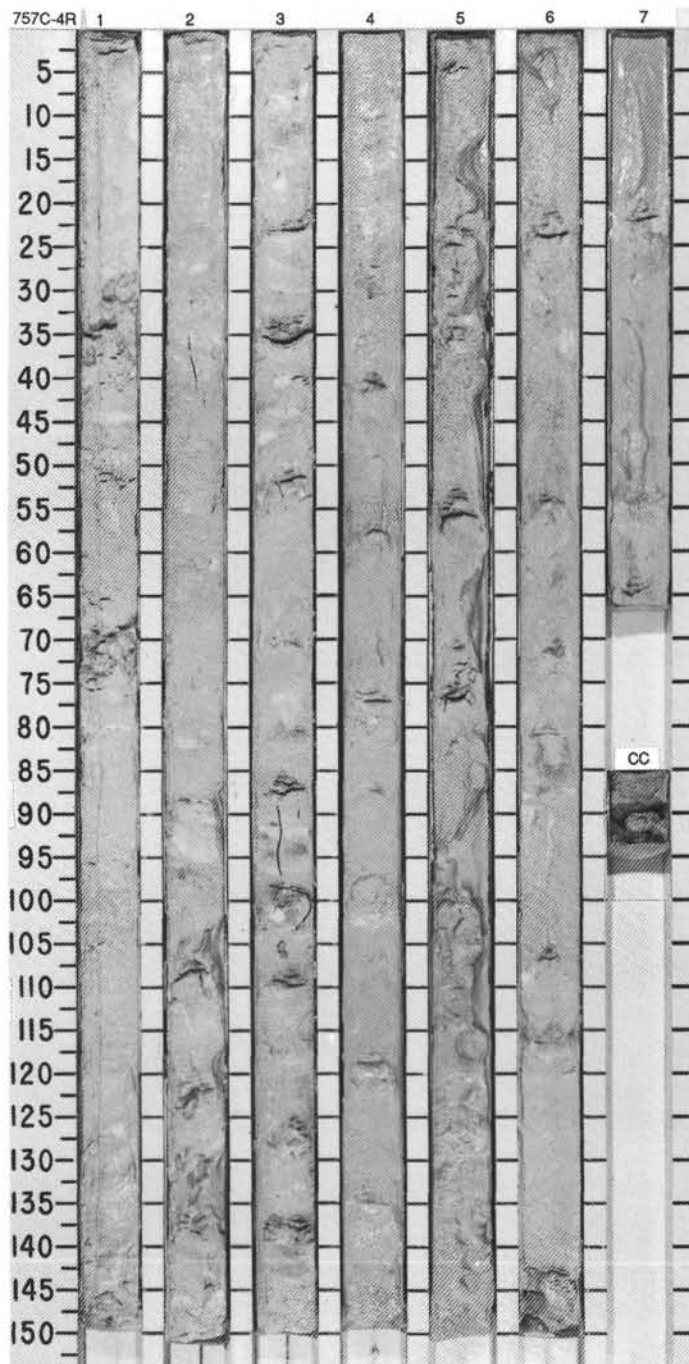


SITE 757 HOLE C CORE 3R CORED INTERVAL 131.1-140.8 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |                         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|-------------------------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS<br>DIATOMS |                |                  |           |         |        |                      |                   |                 |         |   |
| UPPER EOCENE   |                                     |              |                         |                |                  |           |         |        |                      |                   |                 |         |   |
| A/P            | P15                                 |              |                         |                |                  |           | 1       | 0.5    |                      |                   |                 |         | NANNOFOSSIL OOZE<br>The core is slightly disturbed.<br>Major lithology: NANNOFOSSIL OOZE. Very pale brown with some faint white (10YR 8/2) mottles. The core is strongly bioturbated and homogeneous. |
| A/M            | CP15                                |              |                         |                |                  |           | 2       | 1.0    |                      |                   |                 |         |   |
|                |                                     | Barren       |                         |                |                  |           |         |        |                      |                   |                 |         |   |
|                |                                     |              |                         | not measured   |                  |           |         |        |                      |                   |                 |         |   |

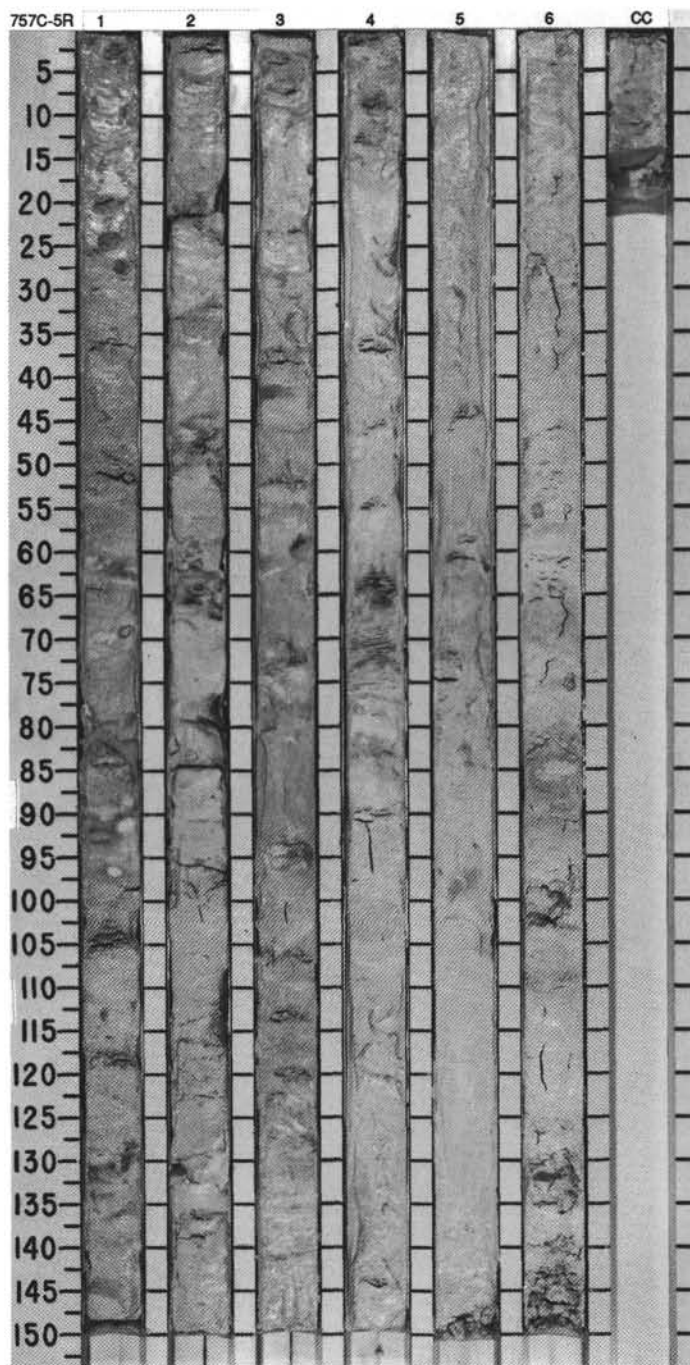


| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|----------------|------------------|-----------|---------|--------|----------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS |                |                  |           |         |        |                      |                   |                 |         |   |
| MIDDLE EOCENE  | P14                                 |              |              |                |                  |           | 1       | 0.5    |                      |                   |                 |         | <p>NANNOFOSSIL OOZE WITH MICRITE</p> <p>The core is moderately disturbed, mostly from the core-splitting process.</p> <p>Major lithology: NANNOFOSSIL OOZE with MICRITE. Very pale brown (10YR 8/3) with some faint white (10YR 8/2) mottles. The core is strongly bioturbated and homogeneous.</p> |
| A/P            | CP14                                |              |              |                |                  |           | 2       | 1.0    |                      |                   |                 |         |   |
| A/P            |                                     |              |              |                |                  |           | 3       |        |                      |                   |                 |         |   |
|                | Barren                              |              |              |                |                  |           | 4       |        |                      |                   |                 |         |   |
|                | not measured                        |              |              |                |                  |           | 5       |        |                      |                   |                 |         |   |
|                |                                     |              |              |                |                  |           | 6       |        |                      |                   |                 |         |   |
|                |                                     |              |              |                |                  |           | 7       |        |                      |                   |                 |         |   |
|                |                                     |              |              |                |                  |           | CC      |        |                      |                   |                 |         |   |



SITE 757 HOLE C CORE 5R CORED INTERVAL 150.5-160.1 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION<br>METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|-------------------|----------------------|-------------------|-----------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |                   |                      |                   |                 |         |   |
| MIDDLE EOCENE  |                                     |              |              |         |                |                  |           |                   |                      |                   |                 |         |   |
| A/P            | P13 - 14                            |              |              |         |                |                  |           | 0.5               |                      |                   |                 |         | <p>NANNOFOSSIL OOZE WITH MICRITE</p> <p>The core is moderately disturbed, mostly from the core-splitting process.</p> <p>Major lithology: NANNOFOSSIL OOZE with MICRITE. Very pale brown (10YR 8/3) with some faint white (10YR 8/2) mottles. The core is strongly bioturbated and homogeneous.</p> |
| A/P            | CP14                                |              |              |         |                |                  | 1         |                   |                      |                   |                 |         |   |
|                | Barren                              |              |              |         |                |                  | 1.0       |                   |                      |                   |                 |         |   |
|                | not measured                        |              |              |         |                |                  | 2         |                   |                      |                   |                 |         |   |
|                |                                     |              |              |         |                |                  | 3         |                   |                      |                   |                 |         |   |
|                |                                     |              |              |         |                |                  | 4         |                   |                      |                   |                 |         |   |
|                |                                     |              |              |         |                |                  | 5         |                   |                      |                   |                 |         |   |
|                |                                     |              |              |         |                |                  | 6         |                   |                      |                   |                 |         |   |
|                |                                     |              |              |         |                |                  | CC        |                   |                      |                   |                 |         |   |

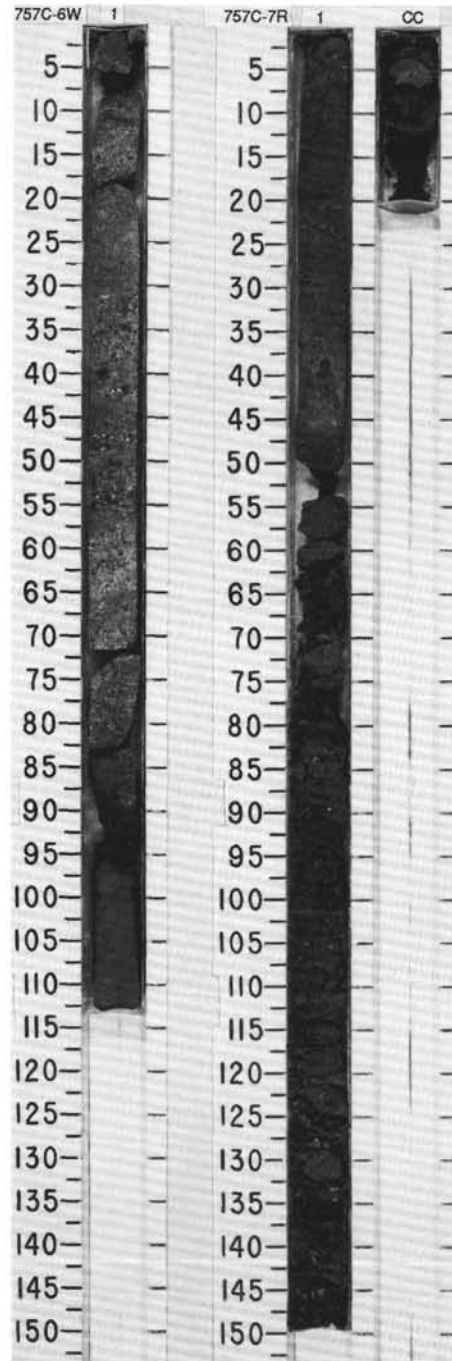


SITE 757 HOLE C CORE 6W CORED INTERVAL 160.1-362.9 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|------------|----------------------|--------------------------------------|---------|---|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |            |                      |                                      |         |   |
|                | Barren                              | Barren       | Barren       | Barren  | not measured   |                  |           | 1       | 0.5<br>1.0 |                      |                                      |         | <p>TUFF</p> <p>The core is slightly fractured.</p> <p>Major lithology: TUFF, dark greenish gray (5BG 4/1) and dark bluish gray (5B 4/1). Basalt fragments are common, of 1 mm to 3 cm size, well rounded, and concentrated in discrete layers. Weak graded bedding was noted at 34 and 66 cm. Reverse grading is seen at 61 cm. At 94 to 112 cm the grain size decreases from that of lapilli to sand size, and weak cross-bedding is present. This is a wash core, so the depth intervals are uncertain.</p> |

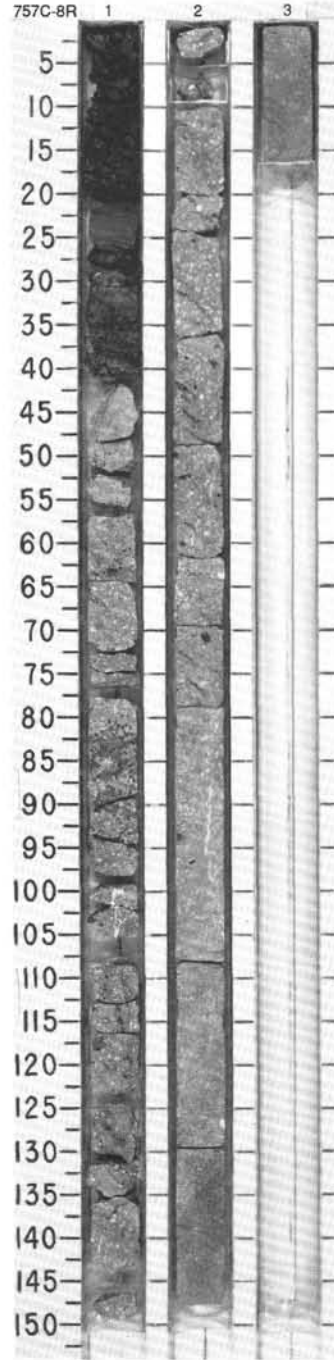
SITE 757 HOLE C CORE 7R CORED INTERVAL 362.9-372.4 mbsf

| TIME-ROCK UNIT     | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | PHYS. PROPERTIES | CHEMISTRY | SECTION | METERS     | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB.<br>SED. STRUCTURES | SAMPLES | LITHOLOGIC DESCRIPTION  |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
|--------------------|-------------------------------------|--------------|--------------|---------|----------------|------------------|-----------|---------|------------|----------------------|--------------------------------------|---------|---|--|-------|-------|---|---|---|------|---|----|------|---|----|------|---|----|--------------------|----|----|------|----|----|----------|----|---|-------|----|----|------------|----|----|---------|---|---|--------------|---|----|----------|---|---|-------------|----|---|----------|---|---|--------|----|---|---------------|----|---|---------|----|---|
|                    | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
|                    | Barren                              | Barren       | Barren       | Barren  | not measured   |                  |           | 1       | 0.5<br>1.0 |                      |                                      | #       | <p>TUFF</p> <p>The core is highly fractured in Section 1, 50 to 70 cm, and has drilling breccia from 70 to 147 cm.</p> <p>Major lithology: TUFF, dark bluish gray (5B 4/1) with angular and rounded basalt fragments 4 cm to 1 mm in size. The pebbles form weak layers in the drilling biscuits. Shell fragments and oyster-like whole shells are common. The entire tuff has a very fine carbonate matrix.</p> <p>SMEAR SLIDE SUMMARY (%):</p> <table border="1"> <tr> <td></td> <td>1, 10</td> <td>1, 93</td> </tr> <tr> <td>D</td> <td>D</td> <td>D</td> </tr> </table> <p>TEXTURE:</p> <table border="1"> <tr> <td>Sand</td> <td>—</td> <td>20</td> </tr> <tr> <td>Silt</td> <td>—</td> <td>60</td> </tr> <tr> <td>Clay</td> <td>—</td> <td>20</td> </tr> </table> <p>COMPOSITION:</p> <table border="1"> <tr> <td>Accessory Minerals</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Clay</td> <td>42</td> <td>15</td> </tr> <tr> <td>Feldspar</td> <td>Tr</td> <td>—</td> </tr> <tr> <td>Glass</td> <td>25</td> <td>72</td> </tr> <tr> <td>Glauconite</td> <td>Tr</td> <td>Tr</td> </tr> <tr> <td>Micrite</td> <td>—</td> <td>7</td> </tr> <tr> <td>Nannofossils</td> <td>—</td> <td>Tr</td> </tr> <tr> <td>Opalines</td> <td>2</td> <td>—</td> </tr> <tr> <td>Plagioclase</td> <td>Tr</td> <td>3</td> </tr> <tr> <td>Pyroxene</td> <td>—</td> <td>1</td> </tr> <tr> <td>Quartz</td> <td>Tr</td> <td>2</td> </tr> <tr> <td>Rock Fragment</td> <td>30</td> <td>—</td> </tr> <tr> <td>Zeolite</td> <td>Tr</td> <td>—</td> </tr> </table> |  | 1, 10 | 1, 93 | D | D | D | Sand | — | 20 | Silt | — | 60 | Clay | — | 20 | Accessory Minerals | Tr | Tr | Clay | 42 | 15 | Feldspar | Tr | — | Glass | 25 | 72 | Glauconite | Tr | Tr | Micrite | — | 7 | Nannofossils | — | Tr | Opalines | 2 | — | Plagioclase | Tr | 3 | Pyroxene | — | 1 | Quartz | Tr | 2 | Rock Fragment | 30 | — | Zeolite | Tr | — |
|                    | 1, 10                               | 1, 93        |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| D                  | D                                   | D            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Sand               | —                                   | 20           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Silt               | —                                   | 60           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Clay               | —                                   | 20           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Accessory Minerals | Tr                                  | Tr           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Clay               | 42                                  | 15           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Feldspar           | Tr                                  | —            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Glass              | 25                                  | 72           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Glauconite         | Tr                                  | Tr           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Micrite            | —                                   | 7            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Nannofossils       | —                                   | Tr           |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Opalines           | 2                                   | —            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Plagioclase        | Tr                                  | 3            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Pyroxene           | —                                   | 1            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Quartz             | Tr                                  | 2            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Rock Fragment      | 30                                  | —            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |
| Zeolite            | Tr                                  | —            |              |         |                |                  |           |         |            |                      |                                      |         |   |  |       |       |   |   |   |      |   |    |      |   |    |      |   |    |                    |    |    |      |    |    |          |    |   |       |    |    |            |    |    |         |   |   |              |   |    |          |   |   |             |    |   |          |   |   |        |    |   |               |    |   |         |    |   |



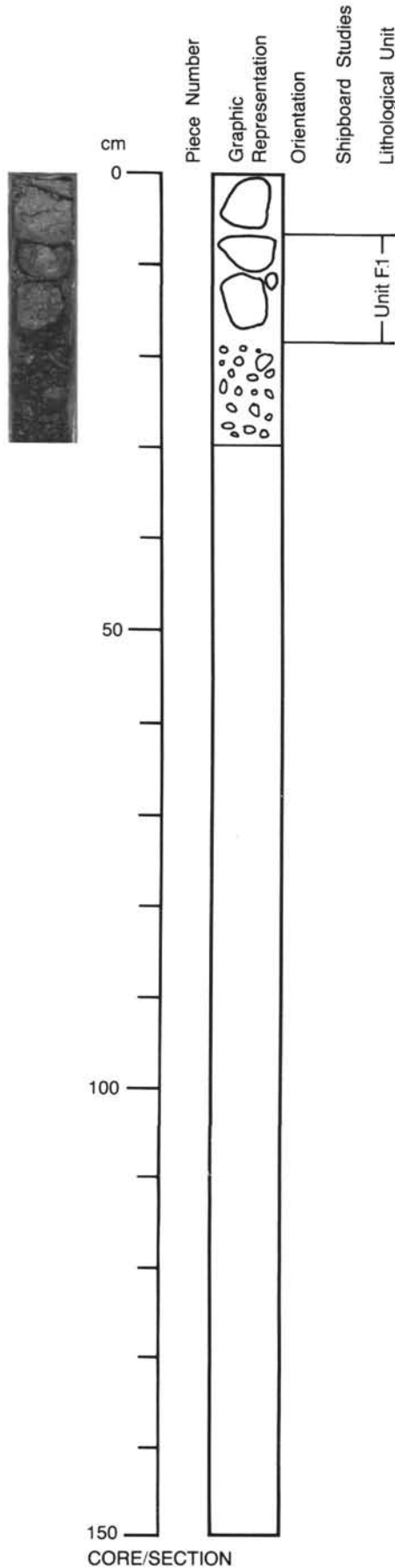
SITE 757 HOLE C CORE 8R CORED INTERVAL 372.4-382.0 mbsf

| TIME-ROCK UNIT | BIOSTRAT. ZONE/<br>FOSSIL CHARACTER |              |              |         | PALEOMAGNETICS | CHEMISTRY               | SECTION    | METERS | GRAPHIC<br>LITHOLOGY | DRILLING DISTURB. | SED. STRUCTURES | SAMPLES   | LITHOLOGIC DESCRIPTION |
|----------------|-------------------------------------|--------------|--------------|---------|----------------|-------------------------|------------|--------|----------------------|-------------------|-----------------|---|------------------------|
|                | FORAMINIFERS                        | NANNOFOSSILS | RADIOLARIANS | DIATOMS |                |                         |            |        |                      |                   |                 |   |                        |
| Barren         |                                     |              |              |         | not measured   | V-4998 ● 0.6.57<br>2.34 | 0.5<br>1.0 |        | X                    | X                 | #               | TUFF<br>The core is mostly drilling breccia with one biscuit from 22 to 27 cm.<br>Major lithology: TUFF, dark bluish gray (5B 4/1) and darker in color. The particles are generally very fine grained until the contact with basalt at 41 cm. At the contact the pebbles reach 2 cm in size, and are dusky red (2.5YR 3/2). Fine-graded and cross-bedded layers are seen in the biscuit.<br>SMEAR SLIDE SUMMARY (%):<br>1, 20<br>D<br>COMPOSITION:<br>Calcite 2<br>Clay 63<br>Glass 30<br>Plagioclase 5 |                        |





**121-757B-40X-CC**



0-6 cm very pale brown, indurated volcanic sediment: Lapilli tuff. The pale color may be due to the thermal effects of the underlying unit (see below).

**UNIT F1: HIGHLY PLAGIOCLASE-PHYRIC BASALT** (Unit extends from 6 cm to 121-757B-42N-1, Piece 4).

**PIECES:** 6 - 17 cm. 2 fragments of basalt.

**CURATED LENGTH:** Unit F1 has a total curated length of 1.91 m.

**CONTACTS:** Upper contact against very pale brown tuff at 6 cm. Lower contact within 121-757B-41X-01, Piece 4, where the basalt is in sharp contact against lapillistone or agglomerate.

**PHENOCRYSTS:** 25% euhedral plagioclase, 1-12 mm, zoned, with a greenish tint.

**GROUNDMASS:** Variable. Fine grained or microcrystalline.

**COLOR:** Dark purple gray (5YR 3/1).

**VESICLES:** Dark green amygdales, 1-4 mm, irregular 4%.

**STRUCTURE:** Thin sill of flow.

**ALTERATION:** Moderate.

**VEINS/FRACTURES:** None.

**COMMENTS:** This small core catcher sample appears to be from the margin of a thicker unit which continues in 121-757B-41X-1. This thicker unit is tentatively identified as a sill because of the thermally bleached(?) sediments adjacent to upper margin.

17-30 cm. Drilling Breccia - mainly fragments of overlying basaltic units(?).

121-757B-41X-01

UNIT F1: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

PIECES: 1A to 1C.

COMMENTS: As for 121-757B-40X-CC except for:

**PHENOCRYSTS:** Plagioclase 35%; 1-20 mm, equant, tabulate subhedral megacrysts. Concentric zonation. Margins of crystals are very pale green from alteration.

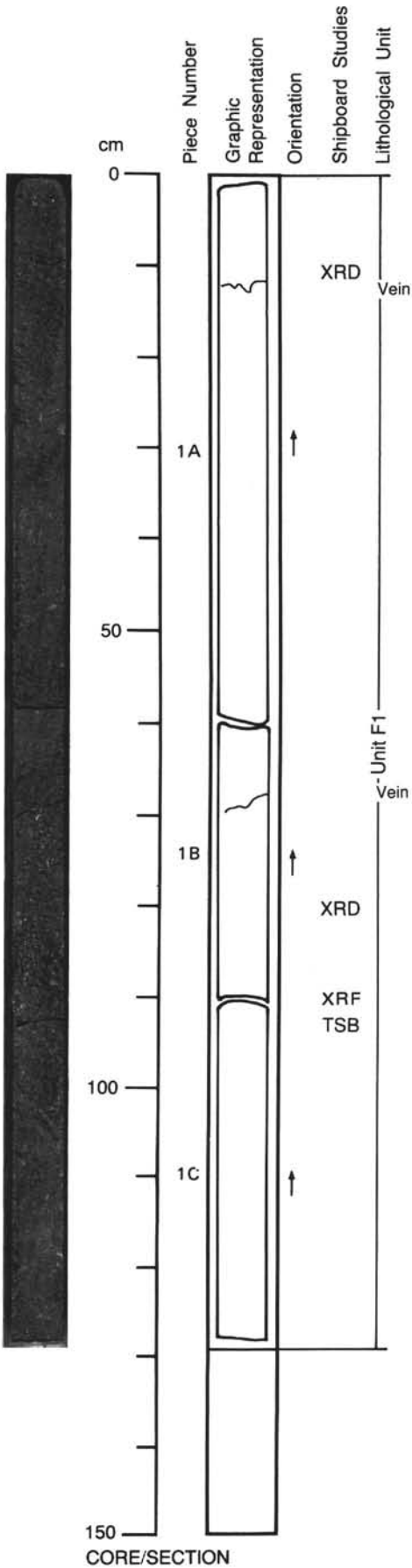
**GROUNDMASS:** Microcrystalline. Fresh pyroxene visible under binocular microscope.

**COLOR:** Dark gray groundmass 2.5YR4/0.

**VESICLES:** Scarce - 3% in irregular patches throughout. Round 1-3 mm. Filled with green smectite. Rare irregular cavity 20 mm filled with calcite(?).

**ALTERATION:** Green clay minerals in vesicles. Green filling to minor fractures. Occasional calcite pockets <20 mm.

**VEINS/FRACTURES:** At 10 cm and 68 cm. Both about 1 mm thick green smectite filling.



CORE/SECTION

121-757B-42N-1

**UNIT F1:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1 - 4 (Part).

**COMMENTS:** For description see 121-757B-41X-01.

**UNIT S1:** VOLCANIC (BASALTIC) AGGLOMERATE.

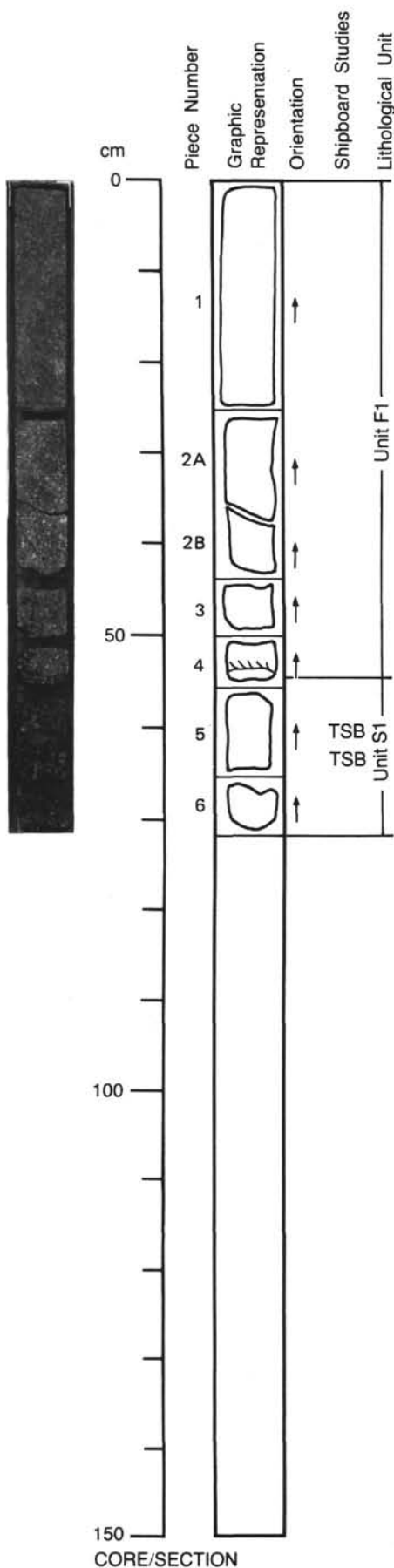
**PIECES:** 4 - 6.

**CURATED LENGTH:** 15 cm.

**COLOR:** Variable, mottled, dark gray green.

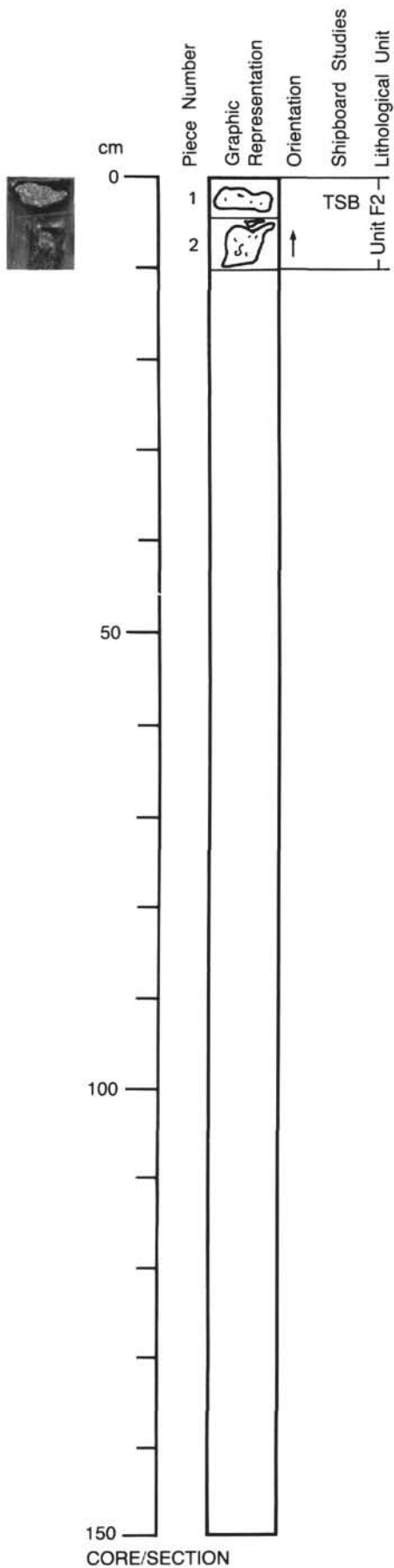
**LITHICS:** Unsorted, 1-15 mm in diameter, sub-spherical, rounded, mainly aphyric, basalt or andesite with plagioclase-rich basalt and about 2% shell fragments. Clear alteration rims on many fragments.

**COMMENTS:** Rounded fragments imply subaqueous transport; deposition may be subaqueous.



CORE/SECTION

**21-757B-43N-CC**



**UNIT F2:** HIGHLY PLAGIOCLASE-PHYRIC BASALT.

**PIECES:** 1 and 2 only.

**CURATED LENGTH:** 10 cm.

**PHENOCRYSTS:** Plagioclase 35-45%, 1-25 mm, subhedral, concentric zoning, some pale green blue alteration. Less than 1% pseudomorphs after olivine.

**GROUNDMASS:** Microcrystalline.

**COLOR:** Dark bluish gray.

**VESICLES:** 1-5 mm in diameter, scarce, smectite and calcite fillings.

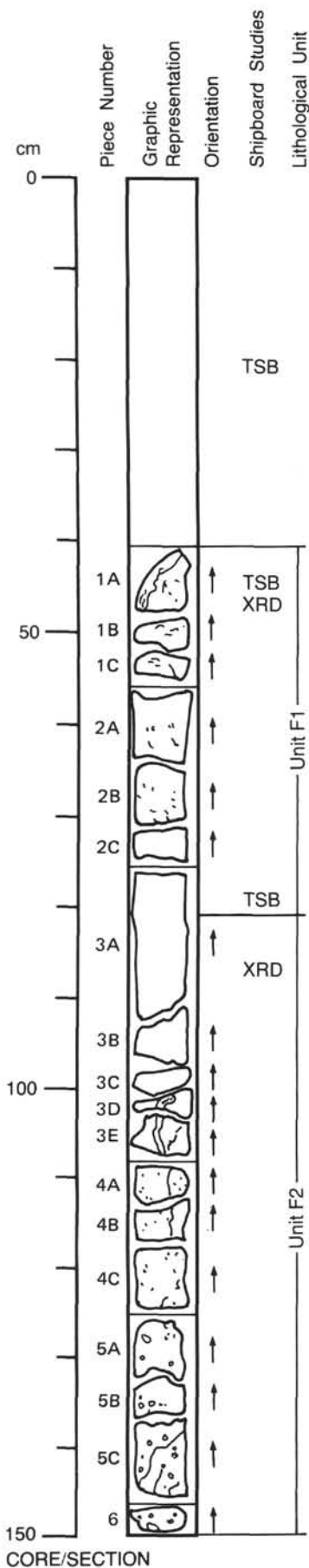
**STRUCTURE:** Uncertain. May be fragments derived from Unit F1 (See 121-757B-42N-1), but more likely to be a separate unit. No contacts exposed

**ALTERATION:** Moderate with calcite and smectite.

**COMMENTS:** End of Hole 757B.

121-757C-8R-1

Drilling breccia and tuff. 0-40 cm. See sedimentary visual core description.



**UNIT F1: HIGHLY PLAGIOCLASE-PHYRIC BASALT.**

**PIECES:** 1A - 3A.

**CURATED LENGTH:** 40 cm.

**CONTACT:** Piece 1a has 10-20 mm of reddish brown clay(?) from the overlying tuff(?) unit with a sharp contact against the underlying basalt. The latter is very vesicular (35% vesicles). The bottom of the unit is marked by an extremely irregular contact with Unit F2.

**PHENOCRYSTS:** Plagioclase about 25%, up to 8 mm, euhedral equant, altered.

**GROUNDMASS:** Fine-grained plagioclase and pyroxene.

**COLOR:** Gray (10YR 6/1) to yellowish brown (10YR 5/6).

**VESICLES:** About 25%, most filled with calcite, zeolites, and smectite. 25% of the vesicles in Piece 2A are partially filled with brown smectite(?).

**STRUCTURE:** Thin flow(?).

**ALTERATION:** Feldspar phenocrysts are highly altered although zoning is still visible. Groundmass alteration variable from high in Piece 1A to moderate in Piece 2B.

**VEINS/FRACTURES:** None.

**UNIT F2: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Piece 3A to 121-757C-9R-3, Piece 1B).**

**PIECES:** 3A - 6 (69 cm).

**CURATED LENGTH:** Unit F2 has a total curated length of 5.51 m.

**UPPER CONTACTS:** Bottom 3/4 of Piece 3A and upper part of Piece 3B are a complex mixed zone consisting of 2 to 30 mm patches of reddish yellow (7.5YR6/8) smectite. These surround 1-3 cm size pieces of plagioclase-phyric basalt with a limonite-stained groundmass and 25% vesicles filled with calcite.

**PHENOCRYSTS:** Plagioclase, up to 10 mm equant, less abundant (2-5%) than in Unit F1 above, but highly altered (as in F1).

**GROUNDMASS:** Fine grained.

**COLOR:** Brownish near contact to reddish gray (5R 5/1) in Pieces 4B through 6A.

**VESICLES:** 25%. Many filled with calcite and smectite. The latter preferentially fills the lower parts of vesicles particularly in pieces 3C to 4C. Others are partially filled with calcite, light blue gray chalcedony and brown smectite.

**STRUCTURE:** Lava flow.

**ALTERATION:** Groundmass is highly altered to smectite.

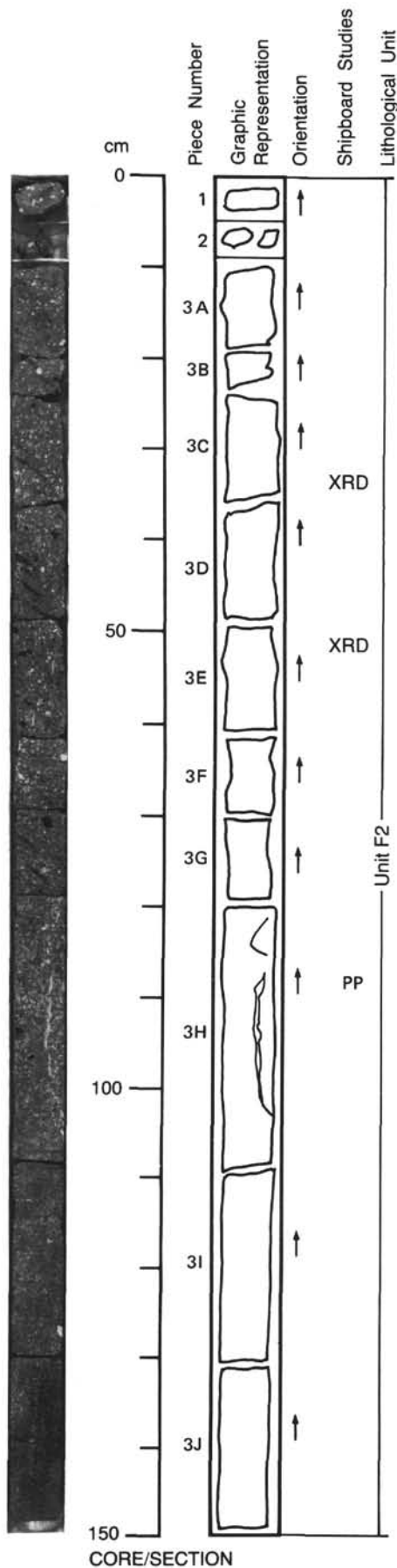
**VEINS/FRACTURES:** 3 mm smectite + calcite vein in Pieces 3D and 3E.

**COMMENTS:** Unit F2 continues in 121-757C-8R-2.

CORE/SECTION



121-757C-8R-2



**UNIT F2:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1 - 3J.

**CURATED LENGTH:** 150 cm.

**COMMENTS:** Unit is as described for 121-757C-8R-1 except as noted below.

**PHENOCRYSTS:** Plagioclase phenocrysts up to 10 mm are more abundant, 5-10%, in general increasing in abundance down the length of the section. Some large grains have altered rims and less altered interiors. Phenocrysts are less altered in Pieces 3H-3J.

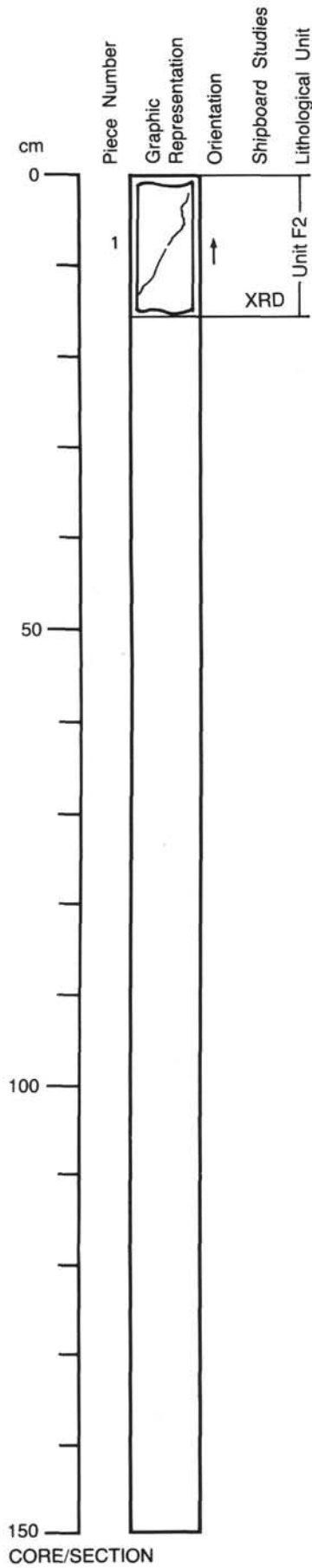
**COLOR:** Gray (10YR 6/1) with groundmass varying to light reddish brown (5YR 6/4).

**VESICLES:** Abundance decreases to 5% in Pieces 3I and 3J.

**VEINS/FRACTURES:** Nearly vertical calcite + smectite vein 1-3 mm extends through much of Piece 3H.

**COMMENTS:** Unit F2 continues in 121-757C-8R-3.

**121-757C-8R-3**



**UNIT F2:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1 only.

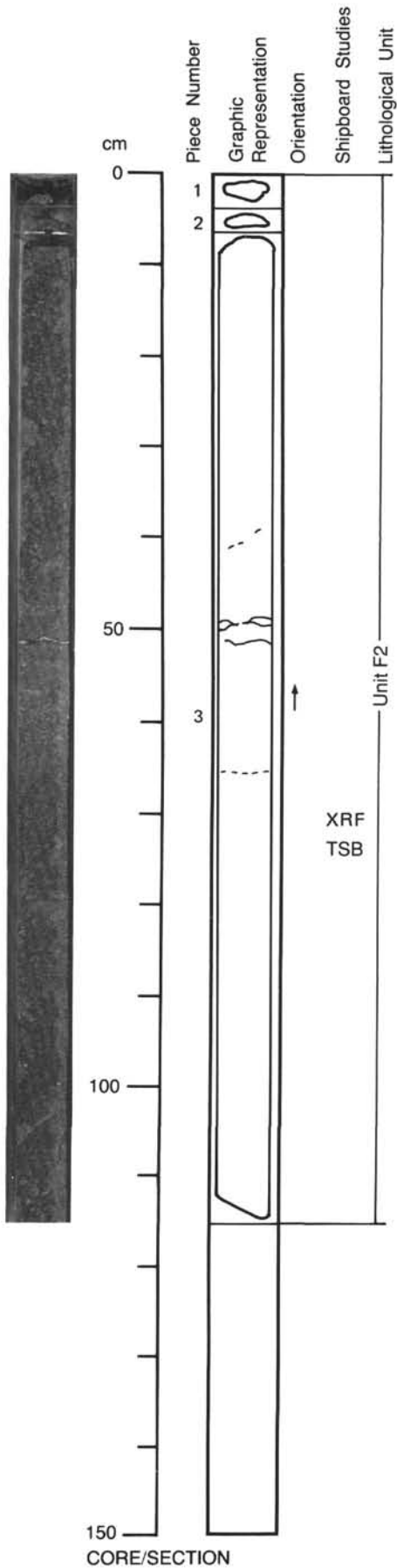
**CURATED LENGTH:** 15 cm.

**COMMENTS:** Unit is as described for 121-757C-8R-1 except as noted below.

**COLOR:** Groundmass changes from light reddish brown to bluish gray (5B 6/1) in Piece 1. Feldspar phenocrysts have a blue green tinge.

**VESICLES:** 5%, mostly filled with very dark gray (7.5YRN3/) smectite.

**COMMENTS:** Unit F2 continues in 121-757C-9R-1.



**121-757C-9R-1**

**UNIT F2:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1 - 3.

**CURATED LENGTH:** 115 cm.

**COMMENTS:** Unit is as described for 121-757C-8R-1 except as noted below. Piece 3 fits with Piece 1A of Section 121-757C-9R-2.

**PHENOCRYSTS:** Rare pseudomorphs after olivine occur along with plagioclase phenocrysts up to 10 mm in diameter.

**COLOR:** 0-43 cm dark gray (10YR 4/1), 43-66 cm grayish brown (10YR 5/2), 66-115 cm dark gray (10YR 4/1).

**VEINS/FRACTURES:** At 50 cm, there is a sub-horizontal 2 mm vein with a calcite core and thin green smectite margins, and small amounts of oxidative alteration, and a larger (10-17 cm wide) halo of less intense alteration.

121-757C-9R-2

UNIT F2: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

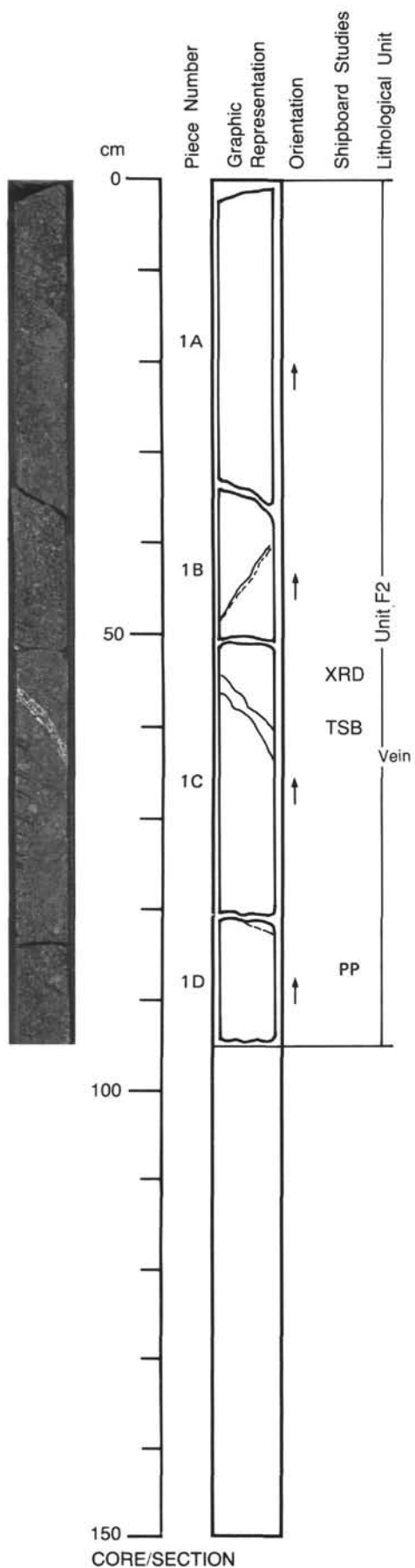
PIECES: 1A - 1D.

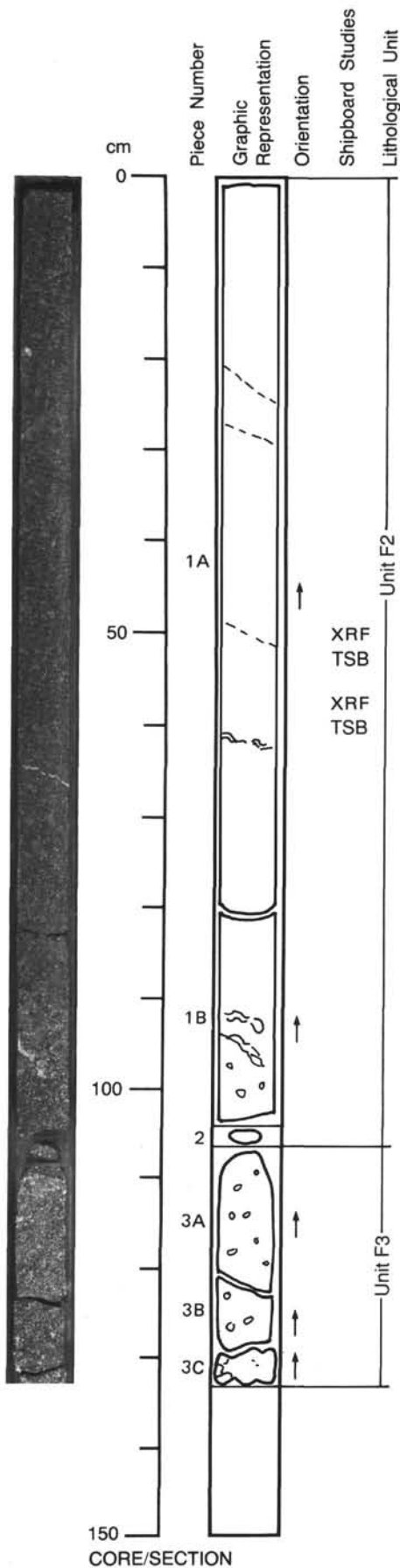
CURATED LENGTH: 95 cm.

COMMENTS: Unit is as described for 121-757C-8R-1 except as noted below. Piece 1D fits with Piece 1A of Section 121-757C-9R-3.

COLOR: 0-45 cm dark gray (10YR 4/1), 45-83 cm grayish brown (10YR 5/2), 83-95 cm dark gray (10YR 4/1).

VEINS/FRACTURES: At 55 cm, there is a dipping (50 degrees) 10-13 mm calcite + green smectite + zeolite vein associated with small amounts of oxidative alteration and a 20-25 cm alteration halo.





**121-757C-9R-3**

**UNIT F2: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).**

**PIECES:** 1A - 2.

**CURATED LENGTH:** 107 cm.

**COMMENTS:** Unit is as described for 121-757C-8R-1 except as noted below.

**PHENOCRYSTS:** Rare pseudomorphs after olivine occur along with plagioclase phenocrysts up to 10 mm in diameter.

**COLOR:** 0-20 cm dark gray (10YR 4/1), 20-29 cm grayish brown (10YR 5/2), 29-55 cm gray, 55-105 cm grayish brown.

**ALTERATION:** Moderate smectite alteration of groundmass.

**VEINS/FRACTURES:** At 63 cm, 0-4 mm calcite vein some oxidative alteration, 10 degree dip.

**VESICLES:** Bottom 20 cm of unit contain up to 25% vesicles filled with chalcedony and zeolites.

**UNIT F3: HIGHLY PLAGIOCLASE-PHYRIC BASALT.**

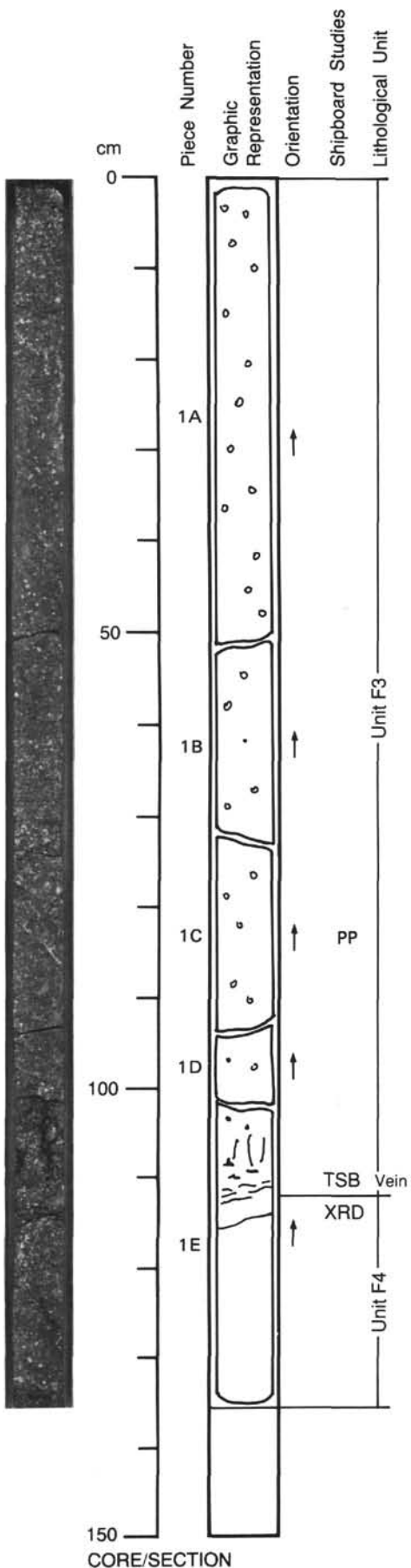
**PIECES:** 3A - 3C.

**CURATED LENGTH:** 26 cm. Total curated length of Unit F3 = 136 cm.

**COMMENTS:** Unit continues in Section 121-757C-9R-4 and is described in that Section.



121-757C-9R-4



**UNIT F3: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).**

**PIECES:** 1A - 1E (part).

**CURATED LENGTH:** 110 cm.

**COMMENTS:** Unit continues from 121-757C-9R-3.

**CONTACTS:** There is a marked color change at the top of the unit in Section 9R-3 (Piece 3A). The base of the unit is marked by a breccia zone in 121-757C-9R-4, Piece 1E.

**PHENOCRYSTS:** Plagioclase 25-35%, 1-15 mm, subhedral to euhedral, no alignment, very pale brown, altered.

**GROUNDMASS:** Fine grained, no obvious grain size variation.

**COLOR:** Oxidized throughout section/unit. Top of unit 9R-3 Piece 3 is brown (10YR 5/3) grading down to reddish brown (5YR 4/3).

**VESICLES:** Probably about 25%, 2-5 mm in diameter. Many filled with white translucent mineral (chalcedony?).

**ALTERATION:** Highly altered.

**STRUCTURE:** Thin flow.

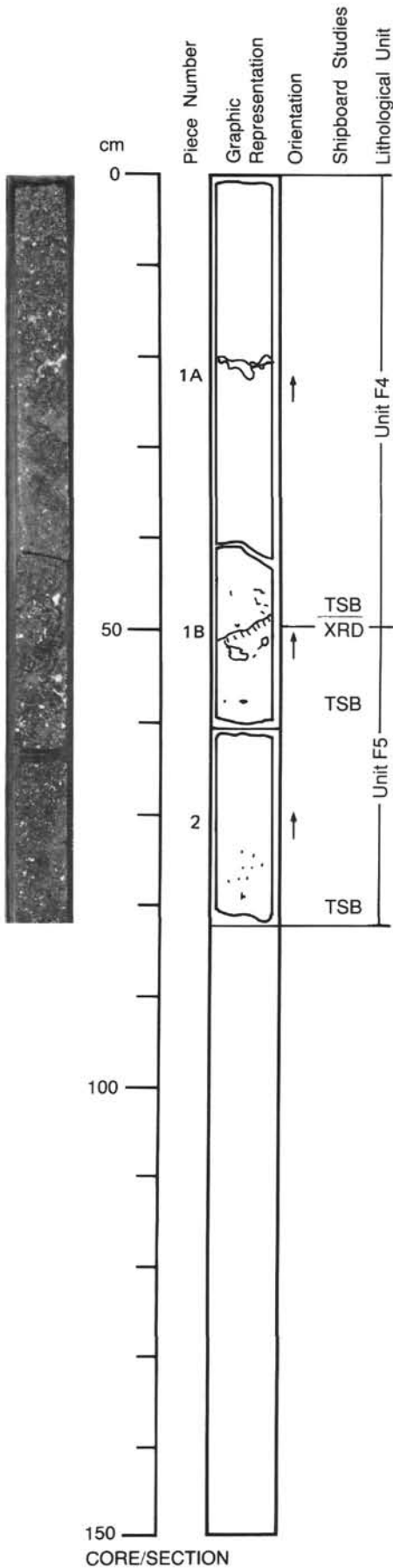
**VEINS/FRACTURES:** Calcite veins in Pieces 1A and 1C, 1-4 mm. Extensive breccia zone 100-115 cm with infilling of pale olive green smectite (5Y 6/3).

**UNIT F4: HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-9R-4, Piece 1E to 121-757C-9R-5, Piece 1B).**

**PIECES:** 1E (part).

**CURATED LENGTH:** 25 cm. Total curated length of unit F4 = 76 cm.

**COMMENTS:** Unit F4 continues in 121-757C-9R-5.



**121-757C-9R-5**

**UNIT F4:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1A - 2.

**CURATED LENGTH:** 82 cm.

**COMMENTS:** Petrographically similar to the overlying unit F3.

**CONTACTS:** Strongly disturbed zone in Section 121-757C-9R-4, Piece 1E, marks the top of the flow; thin breccia horizon in 121-757C-9R-5, Piece 1B marks the base of the unit. Both contacts are sub-horizontal.

**UNIT F5:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-9R-5 Piece 1B through 121-757-9R-8 Piece 5A).

**PIECES:** 1B (part) and 2.

**CURATED LENGTH:** 30 cm. Total curated length of Unit F5 = 3.77 m.

**VESICLES:** Highly vesicular with more than 25% vesicles containing smectite, calcite, chalcedony, and fibrous zeolites.

**COMMENTS:** Unit F5 continues and is described in 121-757C-9R-6.

121-757C-9R-6

**UNIT F5: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).**

**PIECES:** 1A and 1B.

**CURATED LENGTH:** 113 cm.

**CONTACTS:** Upper contact is within 121-757C-9R-5, Piece 5B at 51 cm. Fragments of highly oxidized, medium brown basalt embedded in a green carbonate smectite matrix. The lower contact is within 121-757C-9R-8, Piece 5, where the contact is an irregular, sub-horizontal dark green brown brecciated layer which is about 2 cm wide.

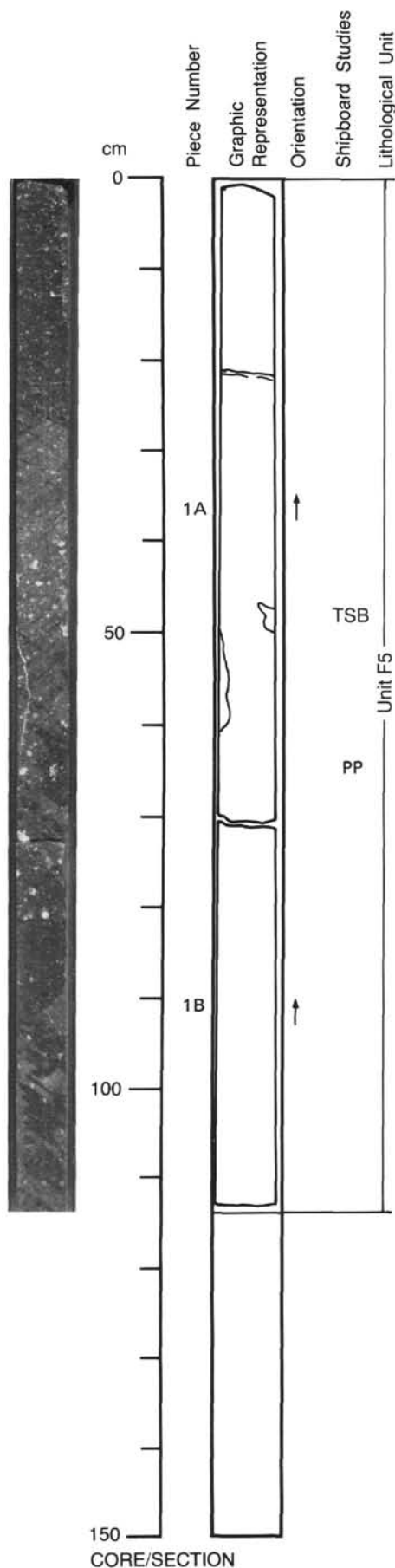
**PHENOCRYSTS:** Plagioclase, subhedral, 1-10 mm. Abundance varies through unit. Towards top (121-757C-9R-5, Piece 2) abundance is about 15% and phenocrysts are generally small (<5 mm). Frequency and size increases down unit until abundance = 25% and crystals >10 mm occur. Rare pseudomorphs after olivine phenocrysts also occur.

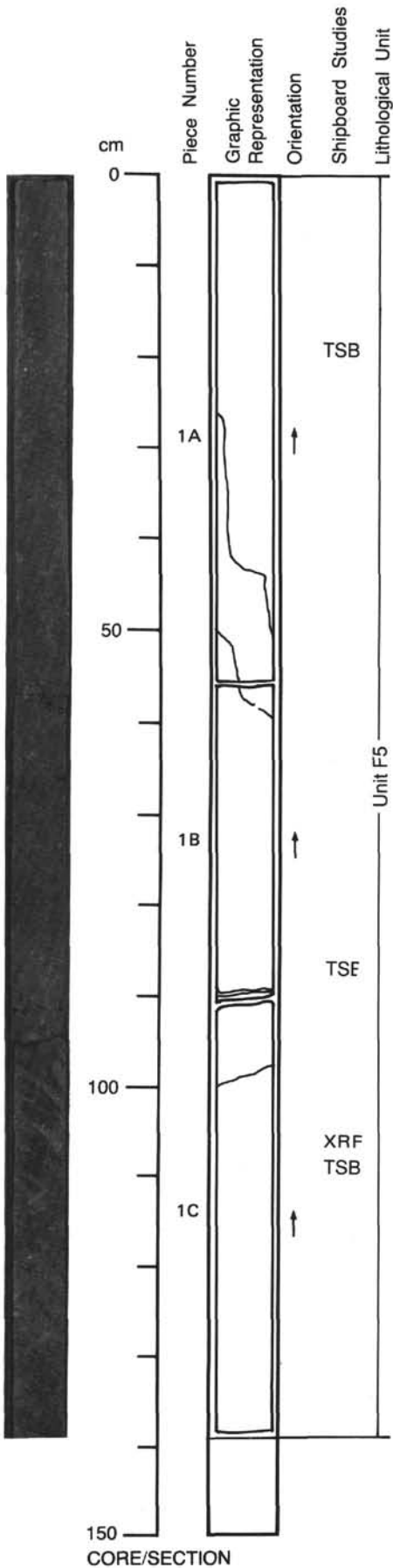
**GROUNDMASS:** Microcrystalline at upper and lower margins, fine grained in center of unit.

**COLOR:** Top of unit dark reddish gray (5YR 4/2) grading down through unit to dark gray (5YR 5/2). Slight brownish tint near flow base.

**VESICLES:** Down to and including 121-757C-9R-6, Piece 1B, the unit is strongly vesicular with about 15% vesicles. The size distribution is bimodal: (i) 8-15 mm rounded, irregular, filled with chalcedony + zeolites + calcite + smectite; (ii) 1-5 mm rounded vesicles, often empty, but also filled as under (i). Below 121-757C-9R-6, Piece 1B, the unit is less vesicular with <5% vesicles. There are some dark 1 cm patches of containing unusually large amounts of smectite alteration.

**COMMENTS:** Detailed description of Unit F5 continues in 121-757C-9R-7.





**21-757C-9R-7**

**UNIT F5:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1A - 1C.

**CURATED LENGTH:** 138 cm.

**COMMENTS:** Detailed description of Unit F5 continues here: Unit F5 continues in Section 121-757C-9R-8.

**STRUCTURE:** Massive flow.

**ALTERATION:** Highly altered in upper part of unit with the development of abundant smectite in the groundmass. Central part of flow is less altered (low).

**VEINS/FRACTURES:** 121-757C-9R-6, Piece 1A 24 cm, 2 mm calcite vein, sub-vertical. 121-757C-9R-6, Piece 1A, 40-65 cm, 1 mm sub-horizontal calcite and green smectite vein. 121-757C-9R-6, Piece 1B, calcite, green smectite, chalcedony, 1-3 mm vein, 45 degree dip. 121-757-9R-7, Pieces 1B and 1C, 2-3 mm veins, sub-horizontal, calcite and dark-green smectite. 121-757C-9R-7, Piece 2. 3-10 mm calcite and olive green smectite vein, vertical.

121-757C-9R-8

UNIT F5: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

PIECES: 1 to 5.

CURATED LENGTH: 90 cm.

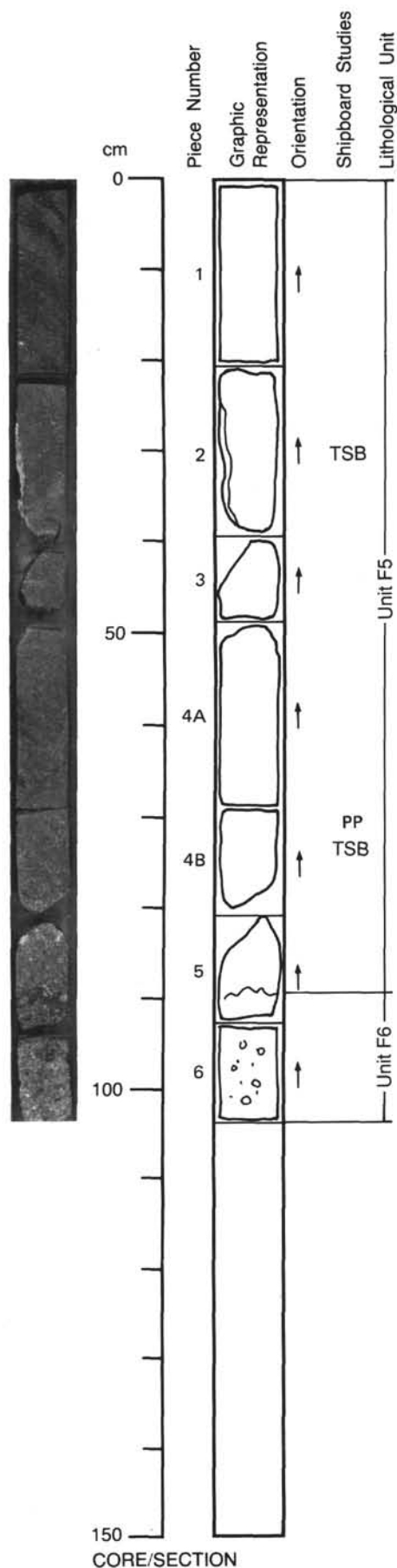
COMMENTS: The lower contact of Unit F5 is considered to be within Piece 5 at about 90 cm.  
This and other features of this flow are described under 121-757C-9R-6 and 121-757C-9R-7.

UNIT F6: HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-9R-8 Piece 5 to 121-757C-10R-2 Piece 4).

PIECES: 5 (part) to 6.

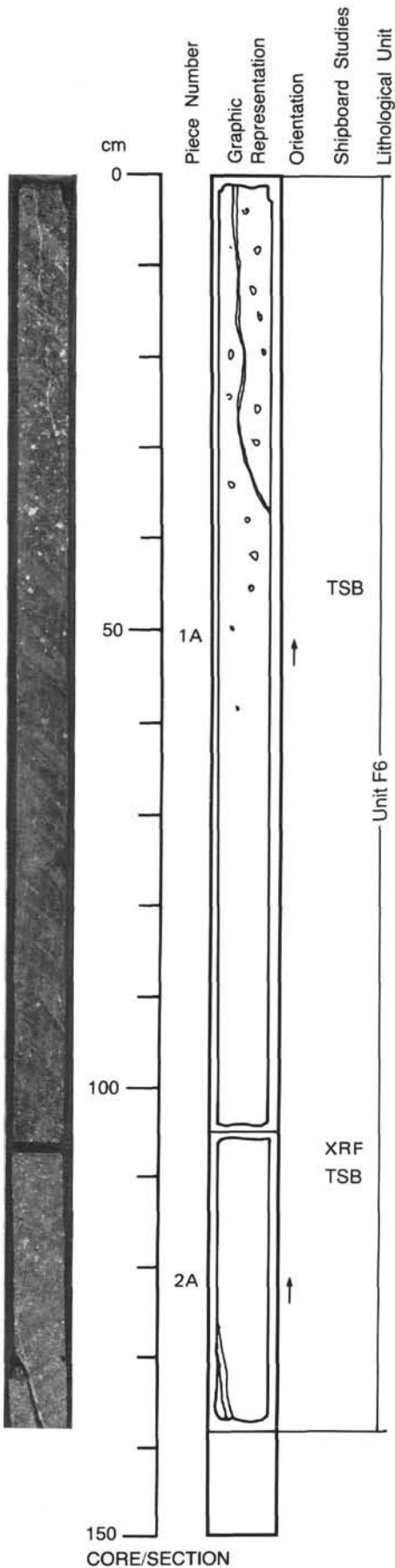
CURATED LENGTH: 14 cm. Total curated length of Unit F6 = 2.10 m.

COMMENTS: The upper contact of Unit F6 is considered to be within Piece 5 at about 90 cm.  
This and other features of this flow are described under 121-757C-10R-1.



150  
CORE/SECTION





**121-757C-10R-1**

**UNIT F6:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1A and 2A.

**CURATED LENGTH:** 136 cm.

**COMMENTS:** Unit and description continues from Section 121-757C-9R-8.

**CONTACTS:** The upper contact is preserved in 121-757C-9R-8 Piece 5. The contact with the overlying unit F5 is sub-horizontal, irregular zone about 10 mm thick. The position of the lower contact is less certain. There is a textural and mineralogical downward gradation through to Section 121-757C-10R-3, Piece 1, where there is sharp contact with an older unit. However a less obvious contact within 12.1-757C-10R-2, Piece 4 is taken as the base of Unit F6.

**PHENOCRYSTS:** Plagioclase 1-10 mm, 15-30%, subhedral, variably altered. At the margins of the unit the feldspars are very pale brown and replaced by smectite. In the center of the unit, the feldspars are much fresher and schiller luster is visible on the cleavage surfaces.

**GROUNDMASS:** Fine grained; microcrystalline adjacent to contact.

**COLOR:** Variable and gradational down unit from reddish gray (5YR 5/2) to gray (5YR 5/1) to grayish brown at base (10YR 6/2).

**VESICLES:** About 25%. Unevenly distributed. Large cavities (5-12 mm) occur towards top of unit (top of Section 121-757C-10R-1) and at base of unit. Larger cavities are irregular in shape. Smaller spherical vesicles scattered throughout. Except for small vesicles in top 10 cm of unit, many are filled with chalcedony, zeolites, and calcite and rimmed with greenish smectite.

**COMMENTS:** Description continues in Section 121-757C-10R-2.

**121-757C-10R-2**

**UNIT F6:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1A to 3.

**CURATED LENGTH:** 59 cm.

**COMMENTS:** Unit and description continues from Section 121-757C-10R-1.

**STRUCTURE:** Lava flow.

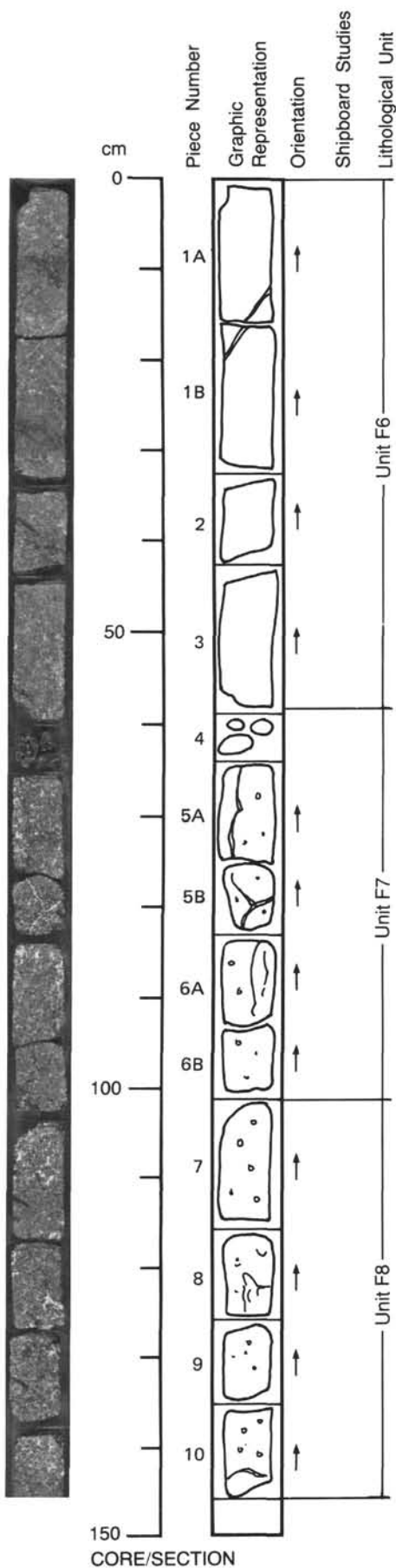
**ALTERATION:** Highly altered.

**VEINS/FRACTURES:** 121-757C-10R-1 Piece 1 and Piece 2 both contain 2-3 mm vertical veins with dominant calcite and small amounts of green smectite.

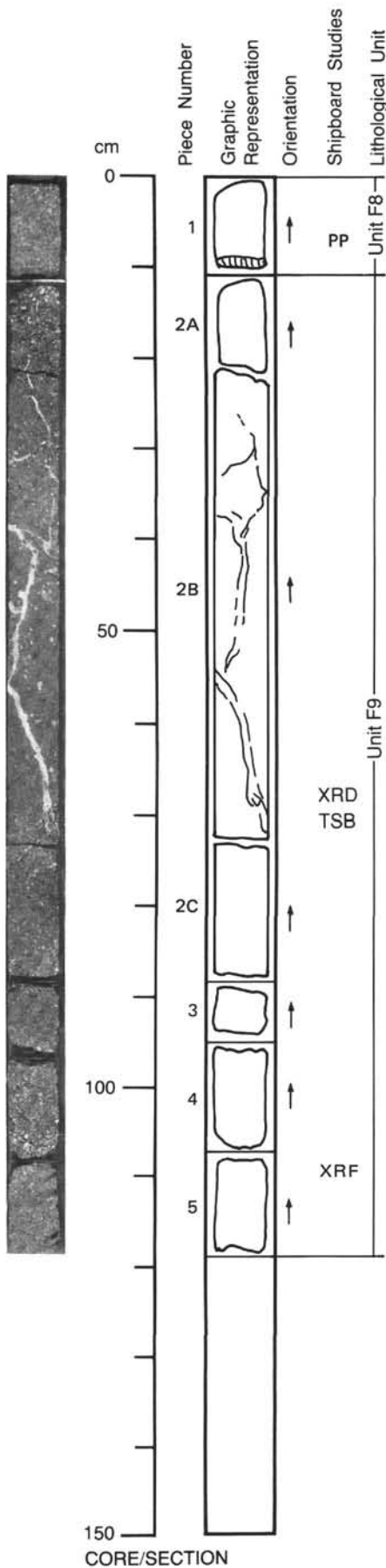
**UNITS F7 and F8:** VESICULAR HIGHLY PLAGIOCLASE-PHYRIC BASALTS (F7: 121-757C-10R-2, Pieces 4-6; F8: 121-757C-10R-2, Pieces 7-10 and 121-757C-10R-3, Piece 1).

**CONTACTS:** F6/F7, Bottom of 121-757C-10R-2, Piece 3. F7/F8 Bottom of 121-757C-10R-2, Piece 6B. F8/F9 Bottom of 121-757C-10R-3, Piece 1. These contacts are all identified by the presence of an oxidized groundmass and green, smectite-rich zones.

**COMMENTS:** These two units may be part of F6, and are considered together because they are so similar. The detailed description of F6 applies.



CORE/SECTION



**121-757C-10R-3**

**UNIT F9:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-10R-3, Pieces 2A-5, and 121-757C-11R-1, Piece 1).

**PIECES:** 2A - 5.

**CURATED LENGTH:** 106 cm. Total curated length of Unit F9 = 115 cm.

**CONTACTS:** Upper contact is marked by a 8 mm undulating sub-horizontal brecciated zone at the base of Piece 1. The lower contact is not exposed.

**PHENOCRYSTS:** Plagioclase 1-15 mm. Slight to moderate alteration. Overall abundance 20-35%. Larger crystals are concentrated in the lower part of unit. Top 15 cm of unit is free of crystals >6 mm and is less porphyritic.

**GROUNDMASS:** Fine grained. Microcrystalline at upper contact.

**COLOR:** Upper 15 cm is reddish gray (5YR 5/2) grading downwards to gray or light gray (5YR 6/1; Reddish gray towards bottom of section 121-757C-10R-3.

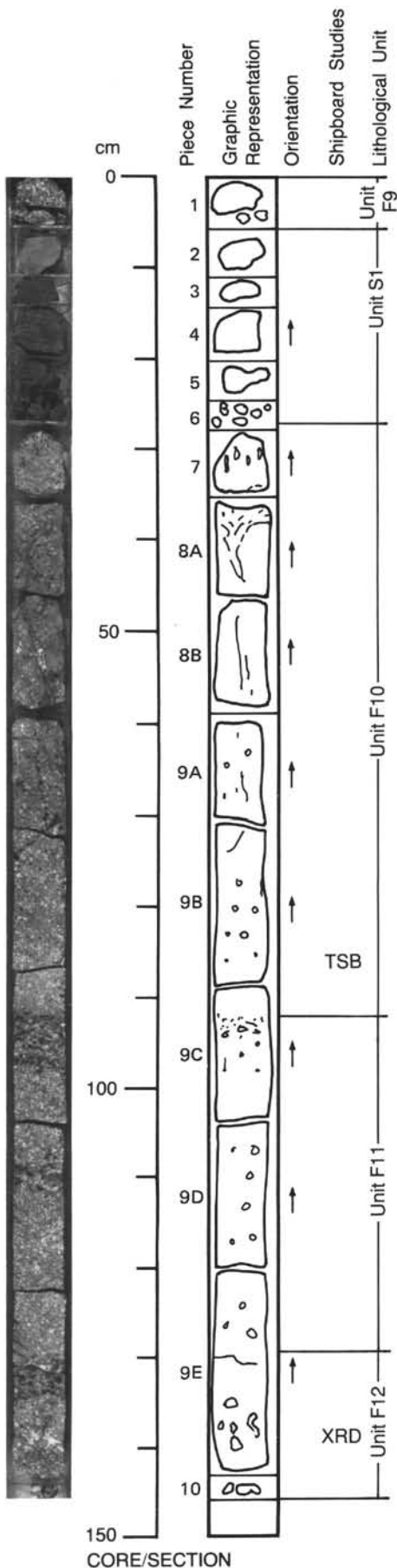
**VESICLES:** Average abundance 25%. Smaller vesicles are abundant (about 30%) in top 10 cm of unit. Larger cavities (about 1 cm) common in 121-757C-10R-3, Piece 2B. Most vesicles are filled with white chalcedony and have a rim of brown green smectite.

**STRUCTURE:** Thin flow.

**ALTERATION:** Moderate to high. Top 20 cm of unit is oxidized.

**VEINS/FRACTURES:** 8 mm thick sub-vertical vein of chalcedony, smectite and calcite in 121-757C-10R-3, Piece 2B.

121-757C-11R-1



**UNIT F9: HIGHLY PLAGIOCLASE-PHYRIC BASALT (Cont.).**

**PIECES:** 1 only (assumed to be part of F9). Unit is described in Section 121-757C-11R-1.

**UNIT S1: VOLCANOGENIC SEDIMENT.**

**PIECES:** 2 - 6. Piece 2 is a light gray (7.5YR5/0) structureless very fine-grained ash. Pieces 3-6 are dark greenish gray (5G4/1) lapilli tuff (?) with angular fragments of highly altered volcanic rock in a green matrix; weakly banded. Clasts <5 mm; matrix supported.

**UNIT F10: HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-11R-1, Pieces 7-9C).**

**CURATED LENGTH:** 58 cm.

**CONTACTS:** Upper contact formed by vertically elongated vesicles and brecciated zone in Pieces 7 and 8A. No obvious chilling. Oxidized basalt fragments form a breccia in a green smectite matrix. Lower contact is within Piece 9C at 92 cm. Upper part of Unit F11 is oxidized and contains dark brown amygdales. Actual F10/F11 contact is obscure and may represent internal heterogeneity.

**PHENOCRYSTS:** Plagioclase <8 mm; subhedral, altered with green colored cores. About 20% abundance.

**GROUNDMASS:** Fine-grained microcrystalline.

**COLOR:** Brown gray 7.5YR 5/2.

**VESICLES:** Generally >15%, less than 10 mm diameter. Vertically elongated vesicles in Piece 7 (?flow top). 50% empty but lined with blue gray smectite. 50% filled with calcite, chalcedony, or zeolite. Rare dark brown smectite fillings.

**STRUCTURE:** Thin flow.

**ALTERATION:** Highly altered, pervasive iron staining of smectite groundmass, vesicles usually filled or lined with smectite and chalcedony.

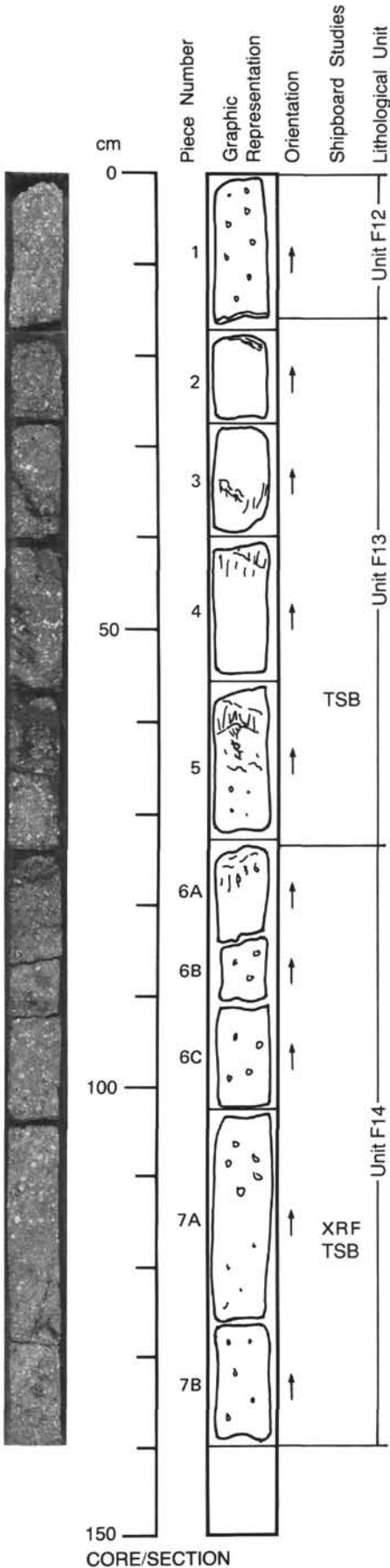
**VEINS/FRACTURES:** Thin sub-vertical fracture in Piece 8B and 9A filled with smectite and calcite.

**UNIT F11: HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-11R-1, Pieces 9C-9E).**

**CURATED LENGTH:** 42 cm.

**CONTACTS:** Upper contact is within Piece 9C and defined by zone of brown, smectite(?) filled flattened amygdales. Lower contact is within Piece 9E and is sharp. Both contacts are sub-horizontal.

**COMMENTS:** Lithologically very similar to Unit F10.



**121-757C-11R-2**

**UNIT F12:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-11R-1, Pieces 9E and 10, and 121-757C-11R-2, Piece 1).

**CURATED LENGTH:** 29 cm.

**CONTACTS:** Upper contact within 121-757C-11R-1, Piece 9E, is defined by a zone of dark brown smectite filled amygdales. Lower contact within 121-757C-11R-2, Piece 1, is marked by a thin oxidized zone. Both contacts are sub-horizontal.

**COMMENTS:** Lithologically very similar to Unit F10.

**UNIT F13:** HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-11R-2, Pieces 2 through 5).

**CURATED LENGTH:** 55 cm.

**CONTACTS:** Upper contact is at the top of 121-757C-11R-2, Piece 2 and is a thin oxidized horizon of flattened dark brown filled amygdales. Lower contact is at the bottom of Piece 121-757C-11R-2, Piece 5. Sharp contact against Unit F14.

**COMMENTS:** Lithologically very similar to Unit F10, but additionally 2 extensive breccia zones, both oxidized, occur within Pieces 4 and 5.

**UNIT F14:** MODERATELY PLAGIOCLASE-PHYRIC BASALT (121-757C-11R-2, Pieces 6A through 7).

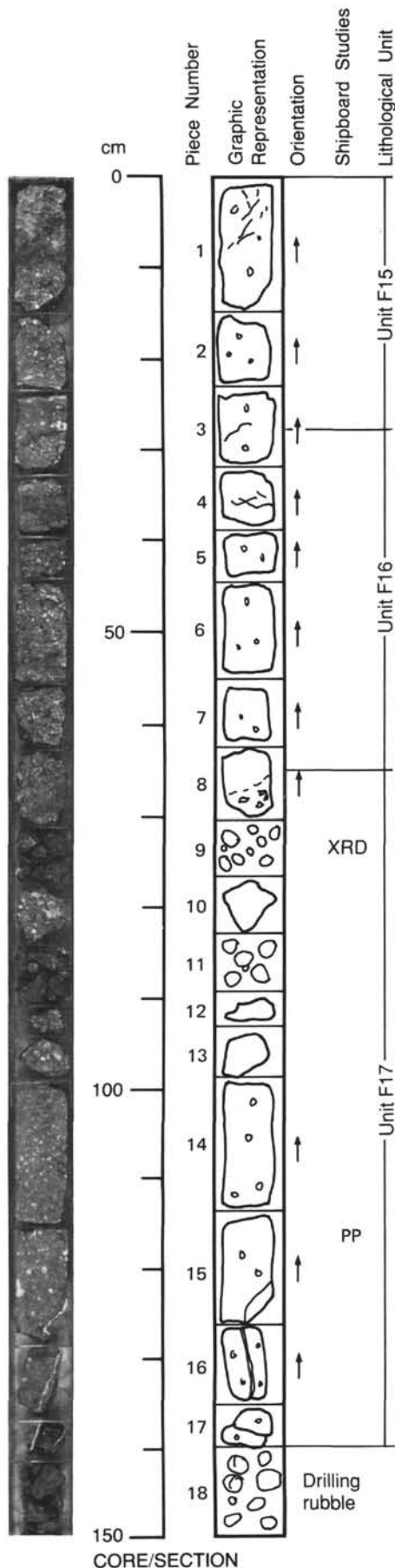
**CURATED LENGTH:** 75 cm.

**CONTACTS:** Upper contact at top of 121-757C-11R-2, Piece 6A, marked by 10 mm breccia zone, below which is a 40 cm zone of calcite zeolite filled vesicles. Lower contact is not seen.

**COMMENTS:** Lithologically very similar to units F10-F13, but less than 10% plagioclase which is generally <5 mm diameter. Units F10 to F14 are distinguished on the basis of (i) oxidized and/or brecciated horizons and (ii) the development of oxidized amygdular zones below the contact. These units are thin and petrographically similar.



121-757C-11R-3



**UNIT F15: MODERATELY PLAGIOCLASE-PHYRIC BASALT** (Section 121-757C-11R-3, Pieces 1, 2, 3).

**CURATED LENGTH:** 27 cm.

**CONTACTS:** Upper contact defined by a strongly brecciated, oxidized zone in Piece 1 containing 1-2 cm fragments. Lower contact is a 5 mm wide breccia horizon above the smooth top of Unit F16 within Piece 3.

**PHENOCRYSTS:** Plagioclase 5-10%, subhedral, variably altered, less than 8 mm long.

**GROUNDMASS:** Microcrystalline.

**COLOR:** Reddish brown 5YR5/3.

**VESICLES:** 20%, 2-10 mm. Larger amygdales are irregular. Most cavities and vesicles are filled. Larger cavities form lined geodes. Fillings: calcite, chalcedony, zeolites and thin smectite rims.

**STRUCTURE:** Thin flow.

**ALTERATION:** Highly altered, oxidized. Pervasive alteration of the groundmass.

**VEINS/FRACTURES:** None.

**UNIT F16: MODERATELY PLAGIOCLASE-PHYRIC BASALT** (Section 121-757C-11R-3, Pieces 3-8).

**CURATED LENGTH:** 38 cm.

**CONTACTS:** Upper contact is within 121-757C-11R-3, Piece 3, and dips at about 10 degrees. Lower contact is within 121-757C-11R-3, Piece 8, and is an oxidized brecciated horizon.

**COMMENTS:** Lithologically similar to Unit F15.

**UNIT F17: MODERATELY PHYRIC BASALT** (Section 121-757C-11R-3, Pieces 8-17).

**CURATED LENGTH:** 70 cm.

**CONTACTS:** Upper contact may be in the brecciated, oxidized zone in Piece 8. Lower contact is not seen.

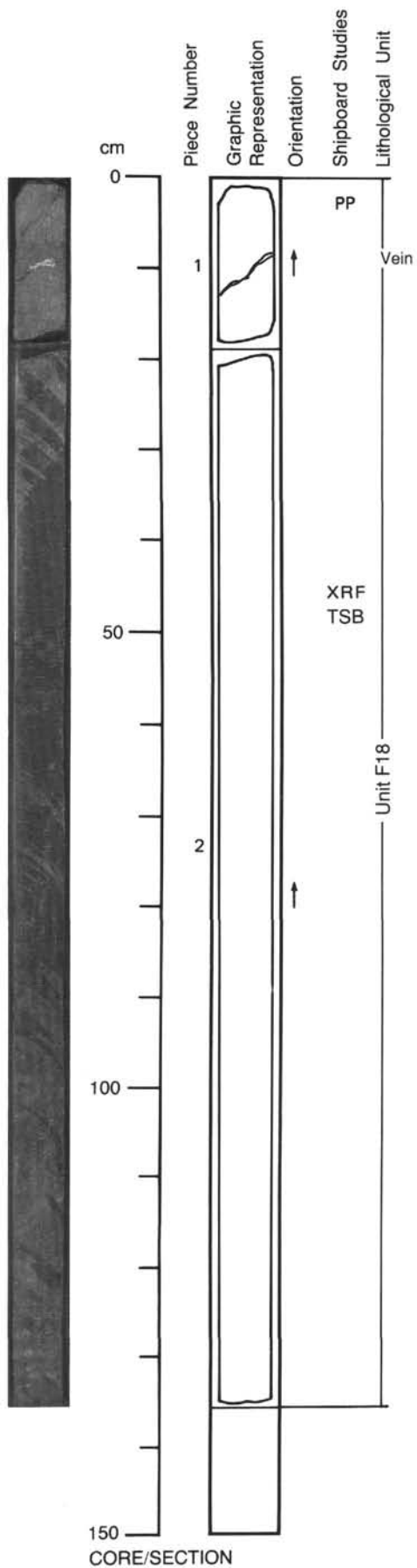
**PHENOCRYSTS:** Plagioclase 5-10%, subhedral, variably altered, less than 8 mm long.

**GROUNDMASS:** Microcrystalline.

**STRUCTURE:** Thin flow.

**COMMENTS:** Lithologically similar to Unit F15 and F16 but alteration moderate and the feldspars are less altered.

**VEINS/FRACTURES:** 3 mm thick sub-vertical calcite(?) vein in Pieces 15, 16, and 17.



**121-757C-12R-1**

**UNIT F18** : MODERATELY PLAGIOCLASE-PHYRIC BASALT (121-757C-12R-1, Pieces 1 and 2 and 121-757C-12R-2, Pieces 1,2,3 and 4).

**CURATED LENGTH**: Total curated length of Unit F18 = 260 cm.

**CONTACTS**: Upper contact not seen. Bottom contact is irregular, steeply dipping (80 degrees), and visible in 121-757C-12R-2, Piece 4.

**PHENOCRYSTS**: About 15% abundance throughout 121-757C-12R-1, Piece 2, perhaps decreasing to 5% in places. Abundance increases at base of unit to about 25% in 121-757C-12R-2, Piece 2. Size also varies: 3-10 mm in upper and central part of unit. 5-12 mm in lower part of flow in 121-757C-12R-2, Piece 2.

**GROUNDMASS**: Fine grained.

**COLOR**: Piece 1 = Pale brown gray (10Y R6/3); Piece 2 = Gray (7.5YR 5/0).

**VESICLES**: There are less than 1% vesicles in Pieces 1 and 2.

**STRUCTURE**: Massive flow.

**ALTERATION**: Slight to moderate smectite alteration of the groundmass.

**VEINS/FRACTURES**: Two thin (1-3 mm) veins of green smectite and calcite are present in Piece 1.

**COMMENTS**: Unit continues in 121-757C-12R-2.

121-757C-12R-2

**UNIT F18:** MODERATELY PLAGIOCLASE-PHYRIC BASALT (Cont.).

**PIECES:** 1 - 10.

**COMMENTS:** Unit continues from 121-757C-12R-1. Description for that section applies but in addition:

**COLOR:** The upper 30 cm of Piece 1 are gray (7.5YR 5.0). The remaining parts of this unit grade downwards to reddish gray (5YR 5/2).

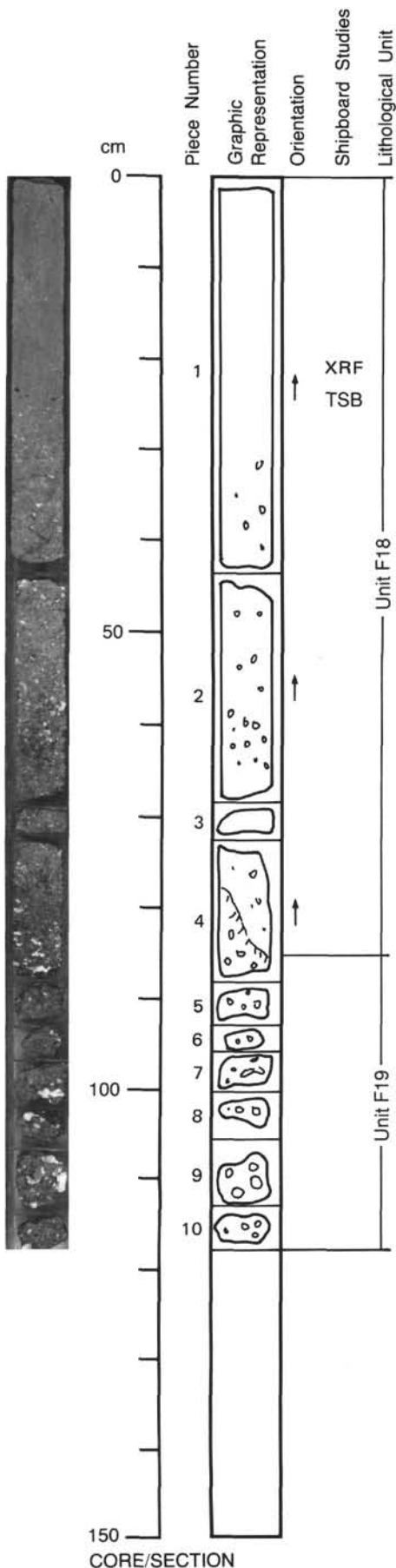
**VESICLES:** There are less than 1% vesicles in the upper part of Pieces 1, but the proportion then increases downwards reaching a maximum of about 20%. Both irregular and spherical in shape up to 10 mm in diameter. Larger cavities are filled with chalcedony and zeolites.

**ALTERATION:** Alteration slight in upper part of Piece 1, but increasing to moderate in lower part of the unit with greater oxidation of the groundmass.

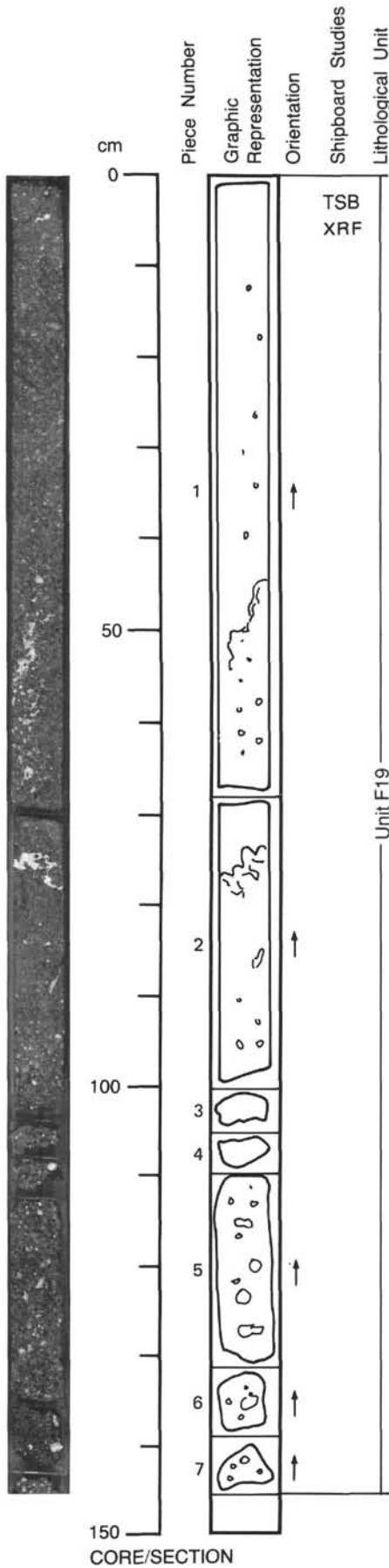
**UNIT F19:** MODERATELY/HIGHLY PLAGIOCLASE-PHYRIC BASALT (121-757C-12R-2, Piece 4 to 121-757C-12R-4, Piece 12 (End of core).

**CURATED LENGTH:** Unit F19 has a total curated length of 3.33 m.

**COMMENTS:** Unit continues in 121-757C-12R-3 and is described under that section.



121-757C-12R-3



**UNIT F19:** MODERATELY/HIGHLY PLAGIOCLASE-PHYRIC BASALT.

**PIECES:** 1 through 7.

**CURATED LENGTH:** 145 cm.

**CONTACTS:** Upper contact with overlying F18 is exposed within 121-757C-12R-2, Piece 4, and has an 80 degree dip and no obvious chill zone. Lower contact not seen.

**PHENOCRYSTS:** Plagioclase 2-12 mm. Subhedral. About 5% in upper part of unit, increasing to about 25% in 121-757C-12R-3.

**GROUNDMASS:** Fine grained.

**COLOR:** Dark reddish gray 5YR 4/2.

**VESICLES:** About 5% large zeolite and/or chalcedony bearing cavities up to 30 mm across. Cavity at 20 cm in Piece 1 is lined with analcite.

**STRUCTURE:** Massive vesiculated flow.

**ALTERATION:** Highly altered pervasive alteration with oxidized smectite.

**VEINS/FRACTURES:** Veins at 121-757C-12R-3, 50-55 cm are 0-15 mm irregular and contain calcite, zeolites, and smectite. At 74-75 cm there are necking veins of calcite.

**COMMENTS:** Unit F19 continues in 121-757C-12R-4.

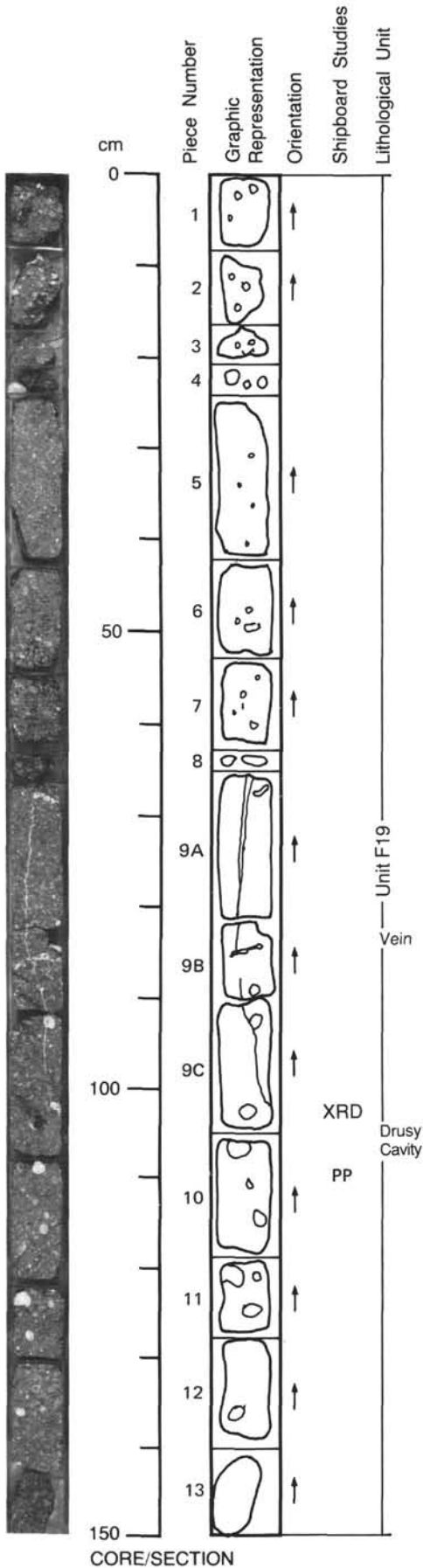
121-757C-12R-4

UNIT F19: MODERATELY/HIGHLY PLAGIOCLASE-PHYRIC BASALT.

PIECES: 1 through 13.

CURATED LENGTH: 150 cm.

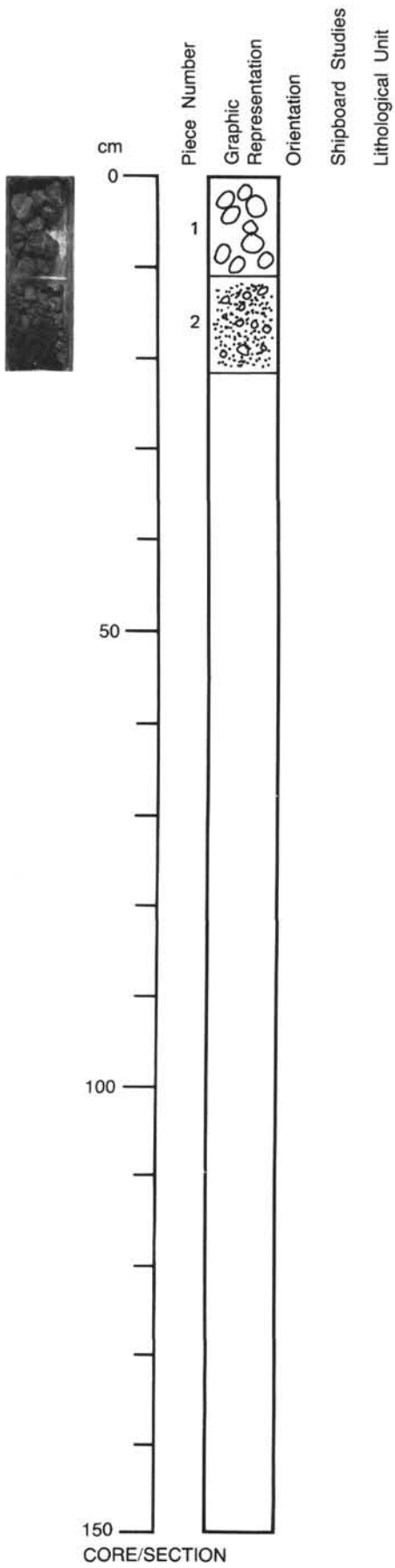
COMMENTS: Unit F19 continues from 121-757C-12R-3. The description under that section applies except that between 67 and 101 cm there is a sub-vertical vein of calcite connected to calcite-zeolite filled cavities. Drusy cavity at 105 cm is lined with analcite.



121-757C-12R-5

VESICLES: Pieces 1 and 2 - Assorted basaltic pebbles - drilling breccia?

COMMENTS: END OF HOLE 121-757C.





## THIN SECTION DESCRIPTION

121-757B-25X-02 (Piece 1 , 127-129 cm)

ROCK NAME: SPARSELY PLAGIOCLASE PHYRIC BASALT FRAGMENT

WHERE SAMPLED: Basalt pebble within tephra, or breccia

TEXTURE: Cryptocrystalline-holocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY            | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|-----------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |                       |  |
| Plagioclase        | 1               | -                | 2               |                     | Euhedral              | Rare.  |
| GROUNDMASS         |                 |                  |                 |                     |                       |  |
| Plagioclase        | 40              | -                | <0.04           |                     | Subhedral             | Typically in between plagioclase microlites.     |
| Clinopyroxene      | 30              | -                | <0.01           |                     | Anhedral              |  |
| Magnetite(?)       | 15              | -                | -               |                     | Anhedral to subhedral | Recrystallized and altered entirely to smectite. |
| Glass              | 0               | 10               | -               |                     | -                     |  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING               | SHAPE | COMMENTS   |
|-------------------|---------|----------|-----------------|-----------------------|-------|--|
| Vesicles          | 7       |          | 1-15            | Smectites and calcite |       | Usually lined with smectites. Large vesicles (filled with smectites and calcite) are present in the middle of the section. |

COMMENTS: The rock is pervasively altered to smectites. Alteration 50%. TSB 83. (NO PIECE OR UNIT NUMBER GIVEN)&gt;

## THIN SECTION DESCRIPTION

121-757B-34X-01 (Piece 1 , 88-90 cm)

ROCK NAME: SPARSELY PLAGIOCLASE PHYRIC BASALT FRAGMENT

WHERE SAMPLED: Basalt fragment within ash

TEXTURE: Cryptocrystalline-holocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY         | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |                    |   |
| Plagioclase        | 2               | -                | 2               |                     | Euhedral           | Rare microphenocrysts.  |
| GROUNDMASS         |                 |                  |                 |                     |                    |   |
| Plagioclase        | 40              | -                | 0.01            |                     | Subhedral          | Typically in between plagioclase microlites.  |
| Clinopyroxene      | 25              | -                | <0.2            |                     | Anhedral           |   |
| Magnetite(?)       | <10             | -                | -               |                     | Cubic or subhedral | Altered to smectites-chlorites. Iddingsite, brown, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Olivine(?)         | -               | <5               | <0.1            |                     | Subhedral          |   |
| Glass              | 0               | 15               | -               |                     | -                  | Recrystallized and altered entirely to smectite.  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE | COMMENTS                      |
|-------------------|---------|----------|-----------------|---------|-------|-------------------------------|
| Vesicles          | ?       |          | 2               |         |       | Usually lined with smectites. |

COMMENTS: Very finely crystallized mesostasis. Alteration 30-40%. TSB 89. (NO UNIT OR PIECE NUMBER GIVEN).

## THIN SECTION DESCRIPTION

121-757B-48X-CC (Piece 2 , 16-18 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F1

TEXTURE: Cryptocrystalline-hypidiomorphic-granular-subophitic

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm)     | APPROX. COMPOSITION | MORPHOLOGY                      | COMMENTS  |
|--------------------|-----------------|------------------|---------------------|---------------------|---------------------------------|---|
| PHENOCRYSTS        |                 |                  |                     |                     |                                 |   |
| Plagioclase        | 15-20           | -                | <8                  |                     | Euhedral                        | Altered from grain centers outward, light brown in PPL, low birefringence.  |
| GROUNDMASS         |                 |                  |                     |                     |                                 |   |
| Plagioclase        | 20-30           | -                | 0.2-0.4             |                     | Subhedral                       | Very little cpx, also very low birefringence.   |
| Clinopyroxene      | <5              | -                | <0.1                |                     | Anhedral                        |   |
| Magnetite(?)       | 1               | -                | -                   |                     | -                               | Very few ferromagnesian minerals in this rock.  |
| Olivine(?)         | -               | <5               | <0.1                |                     | Subhedral                       | Altered to smectites-chlorites, iddingsite, brown, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 30-40            | -                   |                     | -                               | Recrystallized and altered entirely to smectite.  |
| VESICLES/CAVITIES  |                 |                  |                     |                     |                                 |   |
| Vesicles           | PERCENT <20     | LOCATION         | SIZE RANGE (mm) 1-2 |                     | FILLING<br>Smectite and calcite | SHAPE   |

COMMENTS: Veins filled with smectite and calcite also occur. Section appears black and white under crossed polars with very few Fe-Mg minerals and a lot of recrystallized glass. Pervasive replacement of the groundmass by smectites. Alteration 60%. TSB 90.

## THIN SECTION DESCRIPTION

121-757B-41X-01 (Piece 1B, 89-92 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F1

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm)        | APPROX. COMPOSITION | MORPHOLOGY                               | COMMENTS  |
|--------------------|-----------------|------------------|------------------------|---------------------|--|---|
| PHENOCRYSTS        |                 |                  |                        |                     |  |   |
| Plagioclase        | 10-20           | -                | <1-6                   |                     | Euhedral                                 | Altered from grain centers outward, light brown in PPL, low birefringence. Glomerocrysts.   |
| GROUNDMASS         |                 |                  |                        |                     |  |   |
| Plagioclase        | 30-40           | -                | 0.2-0.4                |                     | Subhedral                                | Microlites.   |
| Clinopyroxene      | <5              | -                | <0.1-0.2               |                     | Anhedral                                 | Relatively fresh.   |
| Opakes             | 1               | -                | -                      |                     | -  | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.                               |
| Olivine(?)         | -               | <5               | <0.1                   |                     | Subhedral                                | Altered to smectites-chlorites, iddingsite, brown, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 30               | -                      |                     | -  | Recrystallized and altered entirely to smectite.  |
| VESICLES/CAVITIES  |                 |                  |                        |                     |  |   |
| Vesicles           | <20             |                  | SIZE RANGE (mm)<br>1-2 |                     | FILLING<br>Calcite (10%), smectite (90%) | SHAPE   |

COMMENTS: Much recrystallized glass showing structure with pervasive replacement of the groundmass by smectites. Alteration 40%. TSB 91.

THIN SECTION DESCRIPTION

121-757B-42N-01 (Piece 5 , 61-63 cm)

ROCK NAME: VOLCANIC BRECCIA

WHERE SAMPLED: Unit S1

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|----------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |          |
| Plagioclase        | ?               | ?                | ?               |                     | ?          |          |

| VESICLES/CAVITIES<br>Vesicles | PERCENT Ø | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE |
|-------------------------------|-----------|----------|-----------------|---------|-------|
|                               |           |          |                 |         |       |

COMMENTS: Volcanic breccia with big pieces of basalt, usually round fragments (of different sizes, from 1 to 10 mm), showing various stages of alteration but usually quite high when the mesostasis appears non-crystalline and is dark brown in color (iron oxides and hydroxides). Some plagioclase phenocrysts also are present. The cement is either an amorphous material (or too finely crystallized) or/and smectites and carbonate. TSB 88.

THIN SECTION DESCRIPTION

121-757B-42N-01 (Piece 5 , 63-66 cm)

ROCK NAME: VOLCANIC BRECCIA

WHERE SAMPLED: Unit S1

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|----------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |          |
| -                  | -               | -                | -               |                     | -          |          |

| VESICLES/CAVITIES<br>Vesicles | PERCENT Ø | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE |
|-------------------------------|-----------|----------|-----------------|---------|-------|
|                               |           |          |                 |         |       |

COMMENTS: Volcanic breccia, just 3 cm below the sample 121-757B-42N-1 (Piece 5, 61-63 cm), and much more varied in terms of the types of basalt inclusions which are rounded and cemented by smectites, of distinctly two types (dark green and pale orange-brown), and pervasive calcite. TSB 87.

## THIN SECTION DESCRIPTION

121-757B-43N-CC (Piece 1 , 2-4 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F2

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |            |   |
| Plagioclase        | 20              | -                | <10.0           |                     | Euhedral   | Large. Altered from grain centers outward, light brown in PPL, low birefringence. Glomerocrysts. One large phenocryst in slide.       |
| Olivine            | <1              | -                | 10.0            |                     | -          |   |
| GROUNDMASS         |                 |                  |                 |                     |            |   |
| Plagioclase        | 30              | -                | 0.1-0.2         |                     | Euhedral   | Microlites.   |
| Clinopyroxene      | 15              | -                | 0.2             |                     | Anhedral   | Relatively fresh.   |
| Opakes             | 10              | -                | -               |                     | Euhedral   | Small interstitial, typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.           |
| Olivine(?)         | -               | <5               | <0.1            |                     | Subhedral  | Altered to smectites-chlorites, iddingsite, brown, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 30               | -               |                     | -          | Recrystallized and altered entirely to smectite.  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE |
|-------------------|---------|----------|-----------------|---------|-------|
| Vesicles          | <20     |          | 1-10            | Calcite |       |

COMMENTS: Pervasive replacement of the groundmass by smectites. Alteration 50%. TSB 86.

THIN SECTION DESCRIPTION

121-757C-7R-01 (Piece 1, 56-57 cm)

ROCK NAME: TUFF - VOLCANIC BRECCIA

WHERE SAMPLED:

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|----------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |          |
| ?                  | ?               | ?                | ?               |                     | ?          |          |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING               | SHAPE |
|-------------------|---------|----------|-----------------|-----------------------|-------|
| Vesicles          | ?       |          |                 | Smeclites and calcite |       |

COMMENTS: Volcanic breccia, showing more angular fragments than in 121-757-42N-1 (61-63 and 63-66 cm) also much more vesicles, filled by smectites and much less calcite. There is also a very finely grained crystallized matrix(?). TSB 92. (NO UNIT OR PIECE NUMBER GIVEN).

THIN SECTION DESCRIPTION

121-757C-8R-01 (Piece 1A, 42-46 cm)

ROCK NAME: UPPER CONTACT OF BASALT

WHERE SAMPLED: Unit F1

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|----------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |          |
| ?                  | ?               | ?                | ?               |                     | ?          |          |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE |
|-------------------|---------|----------|-----------------|---------|-------|
| vesicles          | 0       |          |                 |         |       |

COMMENTS: Contact between a very altered basalt (80%) and a volcanic breccia (brown-red orange color). Much non-crystalline material, brownish green, and very oxidized in mesostasis. Some plagioclase phenocrysts replaced by zeolites in patches (especially adjacent to vesicles). Numerous vesicles (25%), from 0.5 to 5 mm and filled by zeolites and lined by a dark red brown material. TSB 105.



## THIN SECTION DESCRIPTION

121-757C-BR-01 (Piece 3A, 78-82 cm)

ROCK NAME: BASALT FLOW CONTACT BETWEEN UNITS F1 AND F2

WHERE SAMPLED: Units F1 and F2

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION                     | MORPHOLOGY | COMMENTS                            |
|--------------------|-----------------|------------------|-----------------|---|------------|-------------------------------------|
| PHENOCRYSTS        |                 |                  |                 |   |            |                                     |
| ?                  | ?               | ?                | ?               |   | ?          |                                     |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                                 | SHAPE      | COMMENTS                            |
| Vesicles           | ?               |                  |                 | Calcite and zeolites, calcite, and opal |            | Lined by smectites and iron oxides. |

COMMENTS: Contact marked by the presence of a waxy material (XRD determination: chlorites/smectites) penetrating everything between two basalt units, showing striking alteration patterns. Almost complete replacement of both the mesostasis and the plagioclase phenocrysts by pervasive smectites. The mesostasis consisted in plagioclase microlites, small clinopyroxene crystals and minor olivine with recrystallized volcanic groundmass but it is not possible to estimate the different mineral proportions. Vesicles lined by smectites and some minor iron oxides and filled by different associations: calcite, calcite and zeolites, zeolites, opal. TSB 106

## THIN SECTION DESCRIPTION

121-757C-9R-03 (Piece 1A, 50-54 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F2

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |            |  |
| Plagioclase        | 30              | -                | 1-12            | An86                | Euhedral   | Large relatively fresh An86 in the cores.  |
| GROUNDMASS         |                 |                  |                 |                     |            |  |
| Plagioclase        | 25              | -                | 0.3-0.4         |                     | Euhedral   | Small crystals. Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine. Some alteration to hematite. |
| Clinopyroxene      | 15-20           | -                | 0.2             |                     | Subhedral  |  |
| Opakes             | 5               | -                | -               |                     | -          |  |
| Olivine(?)         | -               | 10               | <0.1            |                     | Subhedral  | Altered to smectites-chlorites, iddingsite, brown, green color in PPL. Associated with cpx in between the plagioclase microlites.                    |
| Glass              | 0               | >20              | -               |                     | -          | Recrystallized and altered to green smectites.   |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING             | SHAPE      | COMMENTS   |
| Vesicles           | <1              |                  | 0.5             |                     |            | Lined by smectites.  |

COMMENTS: Rock very comparable to 121-756C-9R-3 (Piece 1A, 56-60 cm), but of bluish dark gray color (in PPL, general impression of a green color). Alteration 30-40%. TSB 100.

## THIN SECTION DESCRIPTION

121-757C-9R-01 (Piece 3, 70-74 cm)

ROCK NAME: SPARSELY OLIVINE HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F2

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |            |   |
| Plagioclase        | 30              | -                | 0.5-0.8         |                     | Euhedral   | Large. Relatively fresh.<br>Rare microphenocrysts.  |
| Olivine            | <1              | -                | -               |                     | Subhedral  |   |
| GROUNDMASS         |                 |                  |                 |                     |            |   |
| Plagioclase        | 33              | -                | 0.3-0.4         | Augite(?)           | Euhedral   | Microlites.<br>Small crystals, quite fresh.<br>Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.<br>Altered to smectites-chlorites, iddingsite, brown, green color in PPL.<br>Associated with cpx in between the plagioclase microlites.<br>Recrystallized and altered. |
| Clinopyroxene      | 10              | -                | 0.2-0.4         |                     | Subhedral  |   |
| Opakes             | <5              | -                | -               |                     | -          |   |
| Olivine(?)         | -               | <1               | <0.2-0.4        |                     | Subhedral  |   |
| Glass              | 0               | 15               | -               |                     | -          |   |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE |
|-------------------|---------|----------|-----------------|---------|-------|
| Vesicles          | 0       |          |                 |         |       |

COMMENTS: Pervasive replacement of the groundmass by smectites. This is the only significant alteration feature of the sample. Macroscopically a bluish basalt. Alteration 20%. TSB 97.

## THIN SECTION DESCRIPTION

121-757C-9R-02 (Piece 1C, 59-62 cm)

ROCK NAME: SPARSELY OLIVINE HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F2

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |            |  |
| Plagioclase        | 20              | -                | 0.5-5.0         |                     | Euhedral   | Large.<br>Rare microphenocrysts.   |
| Olivine            | <1              | -                | -               |                     | Subhedral  |  |
| GROUNDMASS         |                 |                  |                 |                     |            |  |
| Plagioclase        | 33              | -                | 0.3-0.4         |                     | Euhedral   | Microlites.<br>Small crystals.<br>Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.<br>Altered to smectites-chlorites, iddingsite, brown, green color in PPL.<br>Associated with the cpx in between the plagioclase microlites.<br>Recrystallized and altered. |
| Clinopyroxene      | 15              | -                | 0.2-0.4         |                     | Subhedral  |  |
| Opakes             | 2               | -                | -               |                     | -          |  |
| Olivine(?)         | -               | 10               | <0.2-0.4        |                     | Subhedral  |  |
| Glass              | 0               | 10               | -               |                     | -          |  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING                     | SHAPE | COMMENTS            |
|-------------------|---------|----------|-----------------|-----------------------------|-------|---------------------|
| Vesicles          |         |          |                 | Zeolites, opal, and calcite |       | Lined by smectites. |

COMMENTS: Vein (10-13 mm) of calcite with smectites and zeolite. Rock is very comparable to 121-756C-9R-1 (Piece 3, 70-74 cm), but much more altered. Pervasive replacement of the groundmass by smectites, zeolites and calcite. Alteration 60%. TSB 104.

## THIN SECTION DESCRIPTION

121-757C-9R-03 (Piece 1A, 56-60 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F2

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY         | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |                    |   |
| Plagioclase        | 30              | -                | 1-12            | An86                | Euhedral           | Large, relatively fresh An86 in the cores.  |
| GROUNDMASS         |                 |                  |                 |                     |                    |   |
| Plagioclase        | 25              | -                | 0.3-0.4         |                     | Euhedral           | Small crystals. Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine. Probably magnetite.   |
| Clinopyroxene      | 15-20           | -                | 0.2             |                     | Subhedral          |   |
| Opakes             | 5               | -                | -               | Magnetite(?)        | -                  |   |
| Olivine(?)         | -               | 10               | <0.1            |                     | Subhedral          | Altered to smectites-chlorites, iddingsite, brown, green color in PPL. Associated with the cpx in between the plagioclase microlites. More altered than the associated clinopyroxene. |
| Glass              | 0               | >20              | -               |                     | -                  | Recrystallized and altered to smectites. Less altered than in the previous basalt. Lower birefringence.   |
| VESICLES/CAVITIES  |                 |                  |                 |                     |                    |   |
| Vesicles           | <1              | 0.5              | -               |                     | FILLING<br>Calcite | SHAPE<br>COMMENTS<br>Small, lined by smectites and iron oxides.   |

COMMENTS: Rock very comparable to 121-756C-9R-3 (Piece 1A, 50-54 cm), but of brownish gray color (in PPL, general impression of a paler green color and smectites less crystallized). Alteration 30-40%. TSB 100.

## THIN SECTION DESCRIPTION

121-757C-9R-04 (Piece 1E, 113-115 cm)

ROCK NAME: BRECCIA CONTACT

WHERE SAMPLED: Between Units F3 and F4

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION     | MORPHOLOGY | COMMENTS            |
|--------------------|-----------------|------------------|-----------------|-------------------------|------------|---------------------|
| PHENOCRYSTS        |                 |                  |                 |                         |            |                     |
| Plagioclase        | ?               | ?                | Big             |                         | ?          |                     |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                 | SHAPE      | COMMENTS            |
| Vesicles           |                 |                  | Big             | Calcite and/or zeolites |            | Lined by smectites. |

COMMENTS: Flow contact, breccia. Brown matrix of iron oxides (dark reddish brown color) including basalt fragments with mesostasis completely altered and recrystallized to iron oxides and smectites and big plagioclase phenocrysts. The dark brown material cementing the breccia is smectites/chlorites (shipboard XRD analysis). TSB 108.

## THIN SECTION DESCRIPTION

121-757C-9R-05 (Piece 1B, 47-50 cm)

ROCK NAME: BRECCIA CONTACT

WHERE SAMPLED: Between Units F4 and F5

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS            |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|---------------------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |                     |
| Plagioclase        | ?               | ?                | ?               |                     | ?          |                     |
| Olivine            | -               | -                | 0.1             |                     | -          | Rare                |
| Clinopyroxene      | -               | -                | 0.1             |                     | -          | Rare                |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING             | SHAPE      | COMMENTS            |
| Vesicles           |                 |                  |                 | Zeolites            |            | Lined by smectites. |

COMMENTS: Very interesting contact between two flow units in terms of the secondary mineral associations and their structures. There are two types of cement for the breccia: a) smectites, showing pervasive alteration and replacement of the mesostasis of the basalt fragments, and (b) iron oxides, in between zeolites fibers. The basalt mesostasis is completely altered in the two types and transformed to an association of non-crystallized iron hydroxides and smectites while the plagioclase phenocrysts, only small minerals still recognizable, are replaced by calcite and are much more altered within the green smectite association than within the iron oxides/hydroxides. There are also rare olivine and clinopyroxene phenocrysts (0.1 mm). Numerous vesicles, lined by smectites and filled with zeolites. The color of the cementing material is light brownish olive green and is smectites/chlorites and zeolites (shipboard XRD analysis). TSB 96.

## THIN SECTION DESCRIPTION

121-757C-9R-05 (Piece 1B, 58-60 cm)

ROCK NAME: ALTERED HIGHLY PHYRIC PLAGIOCLASE BASALT

WHERE SAMPLED: Unit F5

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION  | MORPHOLOGY | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|----------------------|------------|--|
| PHENOCRYSTS        |                 |                  |                 |                      |            |  |
| Plagioclase        | 35              | ~70              | -               |                      | -          |  |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING              | SHAPE      | COMMENTS   |
| Vesicles           | >10             | ?                | ?               | Zeolites and calcite |            | One large vesicle (>1 cm) containing smectite/chlorites and zeolites and thin veinlets of the same material. Other vesicles (>10%) are lined by smectites. |

COMMENTS: The plagioclase phenocrysts (over 35% of the rock) are the only primary mineral phases still recognizable and 50% are replaced by secondary minerals. The alteration exceeds 80% in the groundmass. The mesostasis is dark red, completely transformed into iron oxides/hydroxides and shows pervasive infiltration of green smectites. The minerals which constitute the mesostasis were plagioclase microlites, opaques, clinopyroxene (completely altered) and olivine, mostly replaced by smectites and iddingsite. TSB 94.

THIN SECTION DESCRIPTION

121-757C-9R-05 (Piece 2 , 80-82 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F5

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY       | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION              | MORPHOLOGY | COMMENTS  |
|--------------------------|-----------------|------------------|-----------------|----------------------------------|------------|---|
| <b>PHENOCRYSTS</b>       |                 |                  |                 |                                  |            |   |
| Plagioclase              | 10              | -                | 1-7             |                                  | Euhedral   | Large.  |
| <b>GROUNDMASS</b>        |                 |                  |                 |                                  |            |   |
| Plagioclase              | 28              | -                | 0.1             |                                  | Euhedral   | Small crystals. Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine. Probably magnetite. |
| Clinopyroxene            | 25              | -                | 0.1             |                                  | Subhedral  |   |
| Opaques                  | 7               | -                | -               | Magnetite(?)                     | -          |   |
| Olivine(?)               | -               | 10               | -               |                                  | Subhedral  | Altered to smectites-chlorites, iddingsite, brown, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass                    | 0               | 20               | -               |                                  | -          | Recrystallized and altered to smectites. Pervasive replacement of the mesostasis.   |
| <b>VESICLES/CAVITIES</b> |                 |                  |                 |                                  |            |   |
| VESICLES/CAVITIES        | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                          | SHAPE      | COMMENTS  |
| Vesicles                 | 5               |                  | 0.5-4           | Calcite and zeolites (natrolite) |            | Lined by smectites, with calcite filling the lower part of the vesicle and zeolite the upper part. Vesicles are thus completely filled.     |

COMMENTS: Very clear time sequence of secondary mineralization. Alteration 50%. TSB 110.



## THIN SECTION DESCRIPTION

121-757C-9R-07 (Piece 1B, 89-93 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F5

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular-subophitic

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY               | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |                          |   |
| Plagioclase        | >25             | -                | 2-6             |                     | Euhedral                 | Large, relatively fresh, i.e. no traces of replacement in the core of the crystals or on the borders except near vesicles.    |
| GROUNDMASS         |                 |                  |                 |                     |                          |   |
| Plagioclase        | 30              | -                | 0.2             |                     | Subhedral to euhedral    |   |
| Clinopyroxene      | 20-25           | -                | <0.1            |                     | Small subhedral crystals |   |
| Opaques            | 10-15           | -                | -               |                     | -                        | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.                       |
| Olivine(?)         | -               | 5-10             | 0.2             |                     | Subhedral                | Altered to smectite-chlorites, iddingsite, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 10-15            | -               |                     | -                        | Recrystallized and altered to smectites. Pervasive replacement of the mesostasis with iron oxides/hydroxides.                 |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING  | SHAPE | COMMENTS            |
|-------------------|---------|----------|-----------------|----------|-------|---------------------|
| Vesicles          | 5       |          |                 | Zeolites |       | Lined by smectites. |

COMMENTS: Section is cut by a green veinlet, 5 mm thick, made of green smectites and iron oxides. This is also the center for the pervasive alteration of the mesostasis. Similar to 121-757C-9R-6 (Piece 1A, 41-52 cm), but less altered, especially the mesostasis. Clear example of the initial stages of pervasive replacement of the mesostasis by smectites. Alteration 30%. TSB 101.

THIN SECTION DESCRIPTION

121-757C-9R-07 (Piece 1C, 107-110 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F5

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |                          |  |
| Plagioclase        | 17              | -                | 2-8             |                     | Euhedral                 | Fresh.   |
| GROUNDMASS         |                 |                  |                 |                     |                          |  |
| Plagioclase        | 25              | -                | 0.2-0.3         |                     | Euhedral                 |  |
| Clinopyroxene      | 25              | -                | 0.1-0.2         |                     | Small subhedral crystals |  |
| Opagues            | 8               | -                | -               | Magnetite(?)        | -                        | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine. Probably magnetite.    |
| Olivine(?)         | -               | 10               | 0.2             |                     | Subhedral                | Altered to smectites-chlorites, iddingsite, green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 15-20            | -               |                     | -                        | Recrystallized and altered to smectites. Pervasive replacement of the mesostasis with iron oxides/hydroxides.                  |
| VESICLES/CAVITIES  |                 |                  |                 |                     |                          |  |
| Vesicles           | 0               |                  | SIZE RANGE (mm) |                     | FILLING                  | SHAPE  |

COMMENTS: Rock very comparable to 121-757C-9R-7 (Piece 1A, 18-21 cm) but more altered, i.e. the pervasive replacement of the mesostasis by smectites is more developed. Alteration 30-40%. TSB 98.

## THIN SECTION DESCRIPTION

121-757C-9R-08 (Piece 2 , 30-32 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT (ALTERED)

WHERE SAMPLED: Unit F5

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------------|--|
| <b>PHENOCRYSTS</b> |                 |                  |                 |                     |                          |  |
| Plagioclase        | 15              | -                | 2-8             |                     | Euhedral                 | Alteration starting in the middle of the crystals with replacement by a clay mineral and calcite.  |
| <b>GROUNDMASS</b>  |                 |                  |                 |                     |                          |  |
| Plagioclase        | 30              | -                | 0.2-0.5         |                     | Euhedral                 |  |
| Clinopyroxene      | 20              | -                | 0.1-0.2         |                     | Small subhedral crystals |  |
| Opakes             | 5               | -                | -               |                     | -                        | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.                                  |
| Olivine(?)         | -               | 10               | 0.2             |                     | Subhedral                | Altered to smectites-chlorites, liddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites.    |
| Glass              | 0               | 15(?)            | -               |                     | -                        | Recrystallized and pervasively altered to smectites.   |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING             | SHAPE                    | COMMENTS   |
| Vesicles           | 5               |                  | 0.1-0.2         | Calcite             |                          | All lined by smectite. White veinlet, > 1 cm thick and lined by smectites and iron oxides/hydroxides associated with calcite as filling. |

COMMENTS: Pervasive replacement of the mesostasis by smectites. Alteration 50%. TSB 102.

## THIN SECTION DESCRIPTION

121-757C-9R-08 (Piece 4B, 72-75 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT (ALTERED)

WHERE SAMPLED: Unit F5

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION                      | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|--|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |  |                          |  |
| Plagioclase        | 15-20           | -                | 2-6             |  | Euhedral                 | Some alteration starting in the middle of the crystals with replacement by a clay mineral and calcite.   |
| GROUNDMASS         |                 |                  |                 |  |                          |  |
| Plagioclase        | 25              | -                | 0.2-0.5         |  | Euhedral                 |  |
| Clinopyroxene      | <20             | -                | 0.1             |  | Small subhedral crystals |  |
| Opakes             | 10              | -                | -               |  | -                        | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.  |
| Olivine(?)         | -               | <10              | 0.1             |  | Subhedral                | Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites.           |
| Glass              | 0               | 15-20            | -               |  | -                        | Recrystallized and pervasively altered to smectites.   |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                                  | SHAPE                    | COMMENTS   |
| Vesicles           | 10              |                  | 1-2             | Calcite, smectites/chlorites, & zeolites |                          | All lined with green and filled with calcite (30%), empty (40%), smectites/chlorites (20%), zeolites (10%), with minor iron oxides/hydroxides. |

COMMENTS: Rock very comparable to 121-757C-9R-8 (Piece 2, 30-32 cm) but much more altered with pervasive replacement of the mesostasis by smectites. Alteration 80%. TSB 95.

## THIN SECTION DESCRIPTION

121-757C-10R-01 (Piece 1 , 45-47 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F6

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION     | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|-------------------------|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                         |                          |  |
| Plagioclase        | 35              | -                | 3-8             | An60-70                 | Euhedral                 | Relatively altered, and replaced by zeolites.  |
| GROUNDMASS         |                 |                  |                 |                         |                          |  |
| Plagioclase        | 20              | -                | 0.1             |                         | Euhedral                 |  |
| Clinopyroxene      | 10              | -                | 0.1-0.2         |                         | Small subhedral crystals |  |
| Opakes             | 7               | -                | -               |                         | -                        | Typically in the mesostasis, in between the plagioclase microlites and associated with cpx and olivine.                              |
| Olivine(?)         | -               | 8                | 0.1-0.2         |                         | Subhedral                | Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 15               | -               |                         | -                        | Recrystallized and pervasively altered to smectites.   |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                 | SHAPE                    | COMMENTS   |
| Vesicles           | 12              |                  | 1-8             | Calcite and/or zeolites |                          | All lined by green smectites.  |

COMMENTS: Some small veinlets are filled by green smectites. Complete pervasive replacement of the groundmass by smectites. Alteration 60%.

## THIN SECTION DESCRIPTION

121-757C-10R-01 (Piece 2 , 109-110 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F6

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION     | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|-------------------------|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                         |                          |  |
| Plagioclase        | 30              | -                | 1-6             |                         | Euhedral                 | Crystals show varying degrees of alteration and are also replaced by zeolites, especially along cleavages.   |
| GROUNDMASS         |                 |                  |                 |                         |                          |  |
| Plagioclase        | 25              | -                | 0.2-0.3         |                         | Euhedral                 |  |
| Clinopyroxene      | 10              | -                | 0.1             |                         | Small subhedral crystals |  |
| Opakes             | 10              | -                | -               |                         | -                        | Typically in the mesostasis, in between the plagioclase microlites and the cpx. Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Olivine(?)         | -               | 5                | 0.1             |                         | Subhedral                | Recrystallized and pervasively altered to smectites.   |
| Glass              | 0               | 10               | -               |                         | -                        |  |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                 | SHAPE                    | COMMENTS   |
| Vesicles           | 5               |                  | 1-5             | Calcite and/or zeolites |                          | Lined by green smectites.  |

COMMENTS: Pervasive replacement of the groundmass by smectites. Significant alteration &gt;60%. TSB 111.

## THIN SECTION DESCRIPTION

121-757C-10R-03 (Piece 2 , 68-69 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F9

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION     | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|-------------------------|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                         |                          |  |
| Plagioclase        | 40              | -                | 1-6             |                         | Euhedral                 | Replaced by zeolites.  |
| GROUNDMASS         |                 |                  |                 |                         |                          |  |
| Plagioclase        | 20              | -                | 0.2-0.3         |                         | Euhedral                 |  |
| Clinopyroxene      | 10              | -                | 0.1             |                         | Small subhedral crystals |  |
| Opakes             | 10              | -                | -               |                         | -                        | Typically in the mesostasis, in between the plagioclase microlites and the cpx. Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Olivine(?)         | -               | 5                | 0.1             |                         | Subhedral                | Recrystallized and pervasively altered to smectites.   |
| Glass              | 0               | <10              | -               |                         | -                        |  |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING                 | SHAPE                    | COMMENTS   |
| Vesicles           | 5               |                  | 1-5             | Calcite and/or zeolites |                          | Line by green smectites.   |

COMMENTS: Pervasive calcite vein (1-2 mm), lined by smectite but including iron oxides/hydroxides. Secondary mineral association is comparable to that observed in 121-757C-10R-1 (Piece 1, 45-47 cm) Pervasive replacement of the groundmass by smectites. Alteration 60%. TSB 113.



## THIN SECTION DESCRIPTION

121-757C-11R-01 (Piece 9C, 87-91 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT (VESICULAR)

WHERE SAMPLED: Unit F10

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY               | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|--------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |                          |  |
| Plagioclase        | 10-15           | -                | 1-5             |                     | Euhedral                 | Large, altered, replaced by a light brown clay material and zeolites(?) of low birefringence.<br>A single crystal in the section.  |
| Clinopyroxene      | <1              | -                | 0.7             |                     | -                        |  |
| GROUNDMASS         |                 |                  |                 |                     |                          |  |
| Plagioclase        | 10              | -                | 0.1-0.2         |                     | Euhedral                 |  |
| Clinopyroxene      | 10-15           | -                | 0.1             |                     | Small subhedral crystals |  |
| Opagues            | 5               | -                | -               |                     | -                        | Typically in the mesostasis, in between the plagioclase microlites and the cpx. Altered to smectites-chlorites, dingsite, light green color in PPL. Associated with cpx in between the plagioclase microlites. |
| Olivine(?)         | -               | <5               | <0.1            |                     | Subhedral                | Recrystallized and pervasively altered to smectites.   |
| Glass              | 0               | 25-30            | -               |                     | -                        |  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING               | SHAPE | COMMENTS                 |
|-------------------|---------|----------|-----------------|-----------------------|-------|--------------------------|
| Vesicles          | 10-15   |          | 1-10            | Zeolites (natrolite?) |       | Lined by green smectite. |

COMMENTS: Pervasive replacement of the groundmas by smectites. Significant alteration (&gt;70%). TSB 115.

## THIN SECTION DESCRIPTION

121-757C-11R-02 (Piece 5, 57-61 cm)

ROCK NAME: GREEN AND BROWN ALTERATION VEIN (OR BRECCIA) IN BASALT

WHERE SAMPLED:

TEXTURE:

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS         |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|------------------|
| PHENOCRYSTS        |                 |                  |                 |                     |            |                  |
| Plagioclase        | ?               | ?                | ?               |                     | ?          | Skeletal relics. |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING  | SHAPE | COMMENTS            |
|-------------------|---------|----------|-----------------|----------|-------|---------------------|
| Vesicles          | ?       |          |                 | Zeolites |       | Lined by smectites. |

COMMENTS: Completely altered basalt, with a dark reddish-brown non-crystalline mesostasis and just a few residual plagioclase microlites. Idingsite well developed. Pervasive infiltration of the mesostasis by smectites. Veinlets and vesicles lined by smectites and filled by zeolites. TSB 119.

## THIN SECTION DESCRIPTION

121-757C-11R-02 (Piece 7A, 116-120 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F14

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY                       | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|----------------------------------|--|
| PHENOCRYSTS        |                 |                  |                 |                     |                                  |  |
| Plagioclase        | 20              | -                | 2-8             |                     | Euhedral                         | Large, altered, replaced by zeolites(?) and calcite.   |
| Clinopyroxene      | <5              | -                | 0.1-0.3         |                     | -                                | Rare microphenocrysts.   |
| GROUNDMASS         |                 |                  |                 |                     |                                  |  |
| Plagioclase        | 20              | -                | 0.1-0.2         |                     | Euhedral                         |  |
| Clinopyroxene      | 15              | -                | 0.1-0.5         |                     | Subhedral                        |  |
| Opakes             | 8               | -                | -               |                     | -                                |  |
| Olivine(?)         | -               | 7                | 0.1-1.0         |                     | -                                | Typically in the mesostasis, in between the plagioclase microlites and the cpx. Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | 10               | -               |                     | -                                | Only a small amount originally present but now recrystallized and pervasively altered to smectites.  |
| VESICLES/CAVITIES  |                 |                  |                 |                     |                                  |  |
| Vesicles           | 15              |                  | 1-5             |                     | FILLING<br>Zeolites (natrolite?) | SHAPE<br>COMMENTS<br>Lined by green smectites.   |

COMMENTS: Significant alteration (&gt;70%). TSB 114.

THIN SECTION DESCRIPTION

121-757C-12R-01 (Piece 2 , 45-48 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F18

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS   |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|--|
| <b>PHENOCRYSTS</b> |                 |                  |                 |                     |            |  |
| Plagioclase        | 20              | -                | 1-6             |                     | Euhedral   | Large, well developed zoned crystals.  |
| Olivine            | -               | -                | -               |                     | -          | Rare.  |
| Clinopyroxene      | -               | -                | -               |                     | -          | Rare associated with olivine(?).   |
| <b>GROUNDMASS</b>  |                 |                  |                 |                     |            |  |
| Plagioclase        | 35-40           | -                | 0.1             |                     | Euhedral   | Slightly green pleochroism.  |
| Clinopyroxene      | 15-20           | -                | 0.1             |                     | Subhedral  | Many small crystals typically in the mesostasis.   |
| Opakes             | 15              | -                | -               |                     | -          |  |
| Olivine(?)         | -               | <5               | 0.1             |                     | -          | Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with the cpx in between the plagioclase microlites. |
| Glass              | 0               | <15              | -               |                     | -          | Only a small amount originally present but now recrystallized and pervasively altered to smectites.                                  |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING               | SHAPE | COMMENTS                  |
|-------------------|---------|----------|-----------------|-----------------------|-------|---------------------------|
| Vesicles          | 15      |          | 1-5             | Zeolites (natrolite?) |       | Lined by green smectites. |

COMMENTS: Alteration 50-60%. TSB 117.

## THIN SECTION DESCRIPTION

121-757C-12R-02 (Piece 1 , 22-25 cm)

ROCK NAME: HIGHLY PLAGIOCLASE PHYRIC BASALT

WHERE SAMPLED: Unit F18

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |            |   |
| Plagioclase        | 15              | -                | 1-5             |                     | Euhedral   | Large, well developed zoned crystals. One phenocryst in section. Rare, associated with olivine(?)   |
| Olivine            | -               | -                | -               |                     | -          |   |
| Clinopyroxene      | <5              | -                | -               |                     | -          |   |
| GROUNDMASS         |                 |                  |                 |                     |            |   |
| Plagioclase        | 40              | -                | 0.1-0.2         |                     | Euhedral   | Slightly green pleochroism. Many small crystals typically in the mesostasis. Altered to smectites-chlorites, iddingsite, light green color in PPL. Associated with cpx in between the plagioclase microlites. Only a small amount originally present but now recrystallized and pervasively altered to smectites. |
| Clinopyroxene      | 20              | -                | 0.1             |                     | Subhedral  |   |
| Opakes             | 15              | -                | -               |                     | -          |   |
| Olivine(?)         | -               | <10              | 0.1             |                     | -          |   |
| Glass              | 0               | <15              | -               |                     | -          |   |

| VESICLES/CAVITIES | PERCENT | LOCATION | SIZE RANGE (mm) | FILLING | SHAPE | COMMENTS                  |
|-------------------|---------|----------|-----------------|---------|-------|---------------------------|
| Vesicles          | <5      |          | 1               | Empty   |       | Lined by green smectites. |

COMMENTS: Similar to 121-757C-12R-1 (Piece 2, 45-48 cm) but less red and with a smaller grain size. Alteration >70%. TSB 116.

## THIN SECTION DESCRIPTION

121-757C-12R-03 (Piece 1, 0-4 cm)

ROCK NAME: MODERATELY PLAGIOCLASE PHYRIC BASALT (HIGHLY ALTERED)

WHERE SAMPLED: Unit F19

TEXTURE: Microcrystalline-hypocrystalline-hypidiomorphic-granular

GRAIN SIZE:

| PRIMARY MINERALOGY | PERCENT PRESENT | PERCENT ORIGINAL | SIZE RANGE (mm) | APPROX. COMPOSITION | MORPHOLOGY | COMMENTS  |
|--------------------|-----------------|------------------|-----------------|---------------------|------------|---|
| PHENOCRYSTS        |                 |                  |                 |                     |            |   |
| Plagioclase        | 10              | -                | 5               |                     | Euhedral   | Large, well developed zoned crystals. Rare, associated with olivine(?).   |
| Olivine            | -               | -                | -               |                     | -          |   |
| GROUNDMASS         |                 |                  |                 |                     |            |   |
| Plagioclase        | 30-35           | -                | 0.1-0.2         |                     | Euhedral   | Completely altered.   |
| Clinopyroxene      | -               | <10              | 0.1             |                     | Subhedral  |   |
| Opakes             | 10              | -                | -               |                     | -          | In the mesostasis resulting from the intense alteration.  |
| Olivine(?)         | -               | <5               | 0.1             |                     | -          | Altered to smectites-chlorites, iddingsite.   |
| Glass              | 0               | >15              | -               |                     | -          | Very altered, dark red brown color.   |
| VESICLES/CAVITIES  | PERCENT         | LOCATION         | SIZE RANGE (mm) | FILLING             | SHAPE      | COMMENTS  |
| Vesicles           | <5              |                  | 1-8             | Calcite             |            | Lined by green smectites. Thin veinlets of green smectites also cut the basalt and pass through small vesicles. |

COMMENTS: Very altered mesostasis. Pervasive replacement essentially by iron oxides/hydroxides and minor smectites. Alteration >80%. TSB 118.