

# INDEX TO VOLUME 171A

This index covers both the *Initial Reports* and *Scientific Results* portions of Volume 171A of the *Proceedings of the Ocean Drilling Program*. References to page numbers in the *Initial Reports* are preceded by "A" with a colon (A:) and to those in the *Scientific Results* (this volume) by "B" followed by the chapter number with a colon (B1:).

The index was prepared by Earth Systems, under subcontract to the Ocean Drilling Program. The index contains two hierarchies of entries: (1) a main entry, defined as a keyword or concept followed by a reference to the page on which that word or concept appears, and (2) a subentry, defined as an elaboration on the main entry followed by a page reference.

The index covers volume text, figures, and tables. Also excluded from the index are bibliographic references, names of individuals, and routine front matter.

The Subject Index follows a standard format. Geographical, geologic, and other terms are referenced only if they are subjects of discussion. A site chapter in the *Initial Reports* is considered the principal reference for that site and is indicated on the first line of the site's listing in the index. Such a reference to Site 1044, for example, is given as "Site 1044, A:19-37."

## SUBJECT INDEX

### A

accretionary prisms  
  density, B3:8-10  
  tectonics, A:5-6  
age, vs. depth, B3:21  
Atlantic Ocean, underthrusting, A:5-6

### B

Barbados accretionary prism N  
  porosity, B1:1-19  
  tectonics, A:5-6; B3:3  
  well-logging, B2:1-29; B3:1-25  
Barbados subduction zone N, fluid flow, A:5-10  
bathymetry  
  Caribbean Plate, A:7  
  Site 1046, A:60  
  Site 1047, A:80  
  Site 1048, A:96  
bedding  
  lithologic units, A:100  
  vs. depth, A:78  
  well-logging, A:29-31  
bedding dips, vs. depth, A:88  
bioturbation, lithologic units, A:27, 84  
bulk density correction logs, vs. depth, A:28, 47, 68, 86,  
  102  
bulk density logs  
  factor logs, A:22, 26  
  vs. depth, A:32, 36, 58

### C

calcite, sediments, A:28  
caliper logs. *See* differential caliper logs

carbonate content  
  lithologic units, A:27, 62, 100  
  photoelectric logs, A:28-29  
  vs. depth, A:59, 78  
Caribbean Plate, underthrusting, A:5-6  
cementation, densification, B3:10  
chloride  
  fluid flow, A:67-68  
  vs. depth, A:36, 58, 74, 94  
chlorinity, vs. depth, A:78  
clay  
  imagery, B1:14  
  lithology, A:100  
clay, calcareous, lithologic units, A:27, 60  
clay, nannofossil, lithologic units, A:27, 60, 62  
clay fabric, photomicrograph, B1:3, 9-11  
clay fabric, proto-décollement, imagery, B1:10-11  
clay mineralogy  
  lithologic units, A:45  
  vs. depth, A:59  
clay minerals  
  lithologic units, A:27, 84, 62  
  sediments, A:28  
  vs. depth, B3:22  
clay orientation, scanning electron microscopy, B1:4,  
  13-14  
clays  
  décollement zone, B3:10-11  
  vs. depth, B3:21  
claystone  
  lithologic units, A:27, 84  
  vs. depth, B3:21-22  
  well-logging, A:62  
claystone, calcareous, vs. depth, B3:21-22

claystone, dolomitized calcareous ferruginous, well-logging, A:29  
 claystone, mottled, lithologic units, A:62  
 claystone, radiolarian  
   correlation, B3:24  
   vs. depth, B3:21–22  
 claystone, siliceous, well-logging, A:29  
 claystone, smectitic, vs. depth, B3:21  
 cluster analysis, log quality, B2:6  
 cluster logs  
   comparative overview, B2:18–19  
   statistical methods, B2:8, 13–18  
   vs. depth, B2:13–17  
 compressional wave velocity, vs. depth, A:56, 58  
 consolidation, well-logging, A:46–47  
 correlation, décollement/proto-décollement zone, B3:24

**D**

décollement zone  
   comparison of Sites 1044 and 1045, A:48, 50  
   comparison of Sites 1044 and 1046, A:66  
   comparison of Sites 1044 and 1047, A:87–88  
 densification, B3:10  
 density, A:90; B3:22  
 fluid flow, A:50–52, 67, 89  
 initiation, B3:6–7  
 lithologic units, A:27, 45, 100  
 localization, B3:10–11  
 peak seismic amplitude, B3:18  
 permeability, B3:11  
 porosity, B1:1–19  
 processes, B3:7–11  
 resistivity, A:73  
 sandy underthrust terrigenous sequence, B3:19  
 seismic profiles, B2:12  
 seismic reflection, B3:3–4  
 tectonics, A:5–6  
 well-logging, A:29–31, 45–46, 63  
*See also* proto-décollement zone  
 décollement/proto-décollement zone  
   correlation, B3:24  
   density maps, B3:25  
 deep resistivity logs, vs. depth, A:36  
 deformation  
   heat flow, B3:7  
   proto-décollement zone, B3:6–7  
   well-logging, A:29–31, 85; B2:1–29  
 deformation front, cross section, B3:20  
 delta density logs, vs. depth, A:24, 43, 64, 82, 98  
 densification, décollement zone, B3:10  
 density  
   comparison between Sites 1044 and 1048, A:105  
   comparison of core and log data, A:66  
   comparison of Sites 672 and 1048, A:103  
   cross section, B3:20  
   décollement zone, B3:8  
   profile, A:50  
   proto-décollement zone, B3:8  
   well-logging, A:31–32, 46–47, 63, 66, 86, 100  
 density, bulk

  comparison of Sites 676 and 1046, A:89  
   profile, A:32, 71  
   proto-décollement zone comparison in Sites 1044–1045, A:51  
   vs. depth, A:78–79; B3:21–22  
 density, grain  
   low density, B3:6  
   synthetic porosity profile, A:34  
 density, low, proto-décollement zone, B3:5–6  
 density, wet-bulk  
   comparison between Sites 1044 and 1046, A:73  
   comparison between Sites 1046 and 949, A:72  
   vs. depth, A:50, 72  
 density log editing, caliper logs, A:26  
 density logs  
   comparison between Sites 676 and 1047, A:87  
   proto-décollement and décollement zones in Sites 1044 and 1047, A:90  
   vs. depth, A:24, 43, 46, 49, 56, 59, 64, 67, 70, 74, 82, 85, 88–89, 94, 98, 101, 104; B2:12  
   *See also* bulk density correction logs; bulk density logs; delta density logs; grain density logs  
 density maps, décollement/proto-décollement zone, B3:25  
 diatoms, low density, B3:6  
 differential caliper logs, vs. depth, A:24, 28, 33, 43, 47, 49, 64, 68, 82, 86, 95, 102  
 dilation, density, B3:8–10  
 dissolution, scanning electron microscopy, B1:4, 15

**E**

Eocene  
   lithologic units, A:27  
   well-logging, A:63

**F**

fabric  
   photomicrograph, B1:3, 9–11  
   well-logging, A:63  
 fabric, décollement, imagery, B1:12–13  
 fabric, proto-décollement, imagery, B1:6–8  
 fabric, scaly  
   scanning electron microscopy, B1:4, 13  
   vs. depth, A:78, 88  
   well-logging, A:85  
 fabric matrix, proto-décollement, imagery, B1:9  
 factor analysis, log quality, B2:4–6  
 factor logs  
   statistical methods, B2:7–8  
   vs. depth, B2:13–17  
   well-logging, A:22, 26; B2:20–29  
 fault density, well-logging, A:29–31  
 faulting, logging-while-drilling, A:5–10  
 faults  
   décollement zone, B3:6–11  
   lithologic units, A:45  
   logging-while-drilling, A:49, 70  
   vs. depth, A:78  
   well-logging, A:45–46

faults, discrete, vs. depth, A:88  
 faults, listric normal, seismic section, B3:23  
 faults, normal, well-logging, A:29–31, 63, 85  
 faults, reverse, well-logging, A:85  
 faults, thrust  
   fluid flow, A:51–52, 67, 89  
   seismic section, B3:23  
   well-logging, A:45, 63, 85  
 fluid flow  
   décollement zone, A:50–52  
   heat flow, B3:7  
   logging-while-drilling, A:5–10  
   Site 1044, A:33–35  
   Site 1045, A:50–52  
   Site 1046, A:66–68  
   Site 1047, A:88–90  
   Site 1048, A:101  
   well-logging, A:33–34, 66–67, 88–90, 101; B2:1–29  
 fluid pressure, density, B3:8–10  
 foraminifers, lithologic units, A:60

**G**

gamma rays, spectral, vs. depth, A:79  
 gamma-ray logs  
   comparison between Sites 676 and 1047, A:87  
   comparison of décollement zone in Sites 1044–1046,  
     A:69  
   factor logs, A:22, 26  
   vs. depth, A:25, 44, 46, 49, 56, 59, 65, 67, 70, 74, 83,  
     85, 95, 99, 101; B2:13–17  
 geochemical data, comparison of Site 949 and Site 1046,  
   A:74  
 geothermal gradient, proto-décollement zone, A:35  
 grain density logs, vs. depth, A:34

**H**

heat flow, deformation, B3:7  
 hydrofractures, density, B3:8–10

**I**

image analysis, quantitative, relative porosity, B1:1–19

**L**

Lesser Antilles, underthrusting, A:5–6  
 lithium, vs. depth, A:58  
 lithologic units  
   correlation with log units, A:28–29, 62–63, 84–85,  
     100  
   Site 672, A:26–27  
   Site 676, A:84  
   Site 949, A:60, 62  
   Unit I, A:27, 60, 84  
   Unit II, A:27, 60, 62, 84  
   Unit III, A:27, 62, 84  
   Unit IV, A:27  
   Unit V, A:27  
 lithology  
   Site 1045, A:42–45

Site 1046, A:57–60, 62–63  
 Site 1047, A:84–85  
 Site 1048, A:100  
   well-logging, A:26–29  
 log properties, mean values and standard deviations,  
   A:26, 45, 66, 84, 100  
 log quality, quality control logs, A:26, 57, 80, 84, 100;  
   B2:3–4  
 Log Unit 1  
   bulk density, A:22, 26, 28–29  
   correlation with lithologic units, A:84  
   definition, A:42, 57, 90, 96  
   lithologic units, A:100  
   lithology, A:42, 45  
 Log Unit 2  
   bulk density, A:26, 29  
   correlation with lithologic units, A:84  
   definition, A:42, 57, 90, 96  
   lithologic units, A:100  
   lithology, A:45  
   proto-décollement zone, A:36  
 Log Unit 3  
   bulk density, A:26, 29  
   correlation with lithologic units, A:84  
   definition, A:42, 57, 90, 96  
   lithology, A:45, 100  
 Log Unit 4  
   bulk density, A:26, 29  
   correlation with lithologic units, A:84–85  
   definition, A:42, 57, 90, 96  
   lithology, A:45, 100  
 Log Unit 5  
   bulk density, A:26, 29  
   correlation with lithologic units, A:84–85  
   definition, A:42, 57, 90  
   lithology, A:45  
 Log Unit 6  
   bulk density, A:26, 29  
   correlation with lithologic units, A:85  
   definition, A:42, 57  
   fluid flow, A:51  
   lithology, A:45  
 Log Unit 7  
   definition, A:42, 57  
   fluid flow, A:51  
   lithology, A:45  
 Log Unit 8  
   definition, A:42  
   lithology, A:45  
 log units  
   characterization of logs, A:22, 24–26  
   correlation, A:29; B3:4–5  
   correlation with lithologic units, A:28–29, 62–63, 84–  
     85, 100  
   correlation with seismic reflection, B3:4–5  
   definition, A:27, 46, 67, 85, 101  
   statistical methods, B2:7–8, 13–18  
   summary, A:30, 48, 87  
   vs. depth, A:24–25, 43–44, 64–65, 82–83, 95; B2:13  
 logging-while-drilling  
   data synthesis, B3:1–25

fluid flow, A:5–10  
multivariate analysis, A:5–10; B2:1–29

## M

macropores, preservation, B1:2, 6  
marl, calcareous, lithologic units, A:84  
marl, lithologic units, A:27  
marlstone  
  lithologic units, A:27  
  well-logging, A:62  
marlstone, calcareous, lithologic units, A:84  
methane  
  fluid flow, A:67–68  
  vs. depth, A:36, 58, 74, 78, 94  
mineralogy, bulk  
  lithologic units, A:62  
  sediments, A:28  
Miocene, lithologic units, A:27, 45, 62, 84  
mud, calcareous, lithologic units, A:27, 84  
mudstone  
  décollement zone, B3:10–11  
  lithologic units, A:27  
mudstone, calcareous, lithologic units, A:84  
multivariate analysis, logging-while-drilling, A:5–10;  
  B2:1–29

## N

nannofossils, lithologic units, A:60  
neutron porosity logs  
  factor logs, A:22, 26  
  vs. depth, A:25, 44, 65, 83, 99

## O

opal  
  densification, B3:10  
  low density, B3:6  
opal-CT, densification, B3:10  
overpressure, low density, B3:6  
oxygen isotopes, vs. depth, A:36

## P

penetration logs. *See* rate of penetration logs  
permeability  
  décollement zone, B3:11  
  density, B3:8–10  
  low density, B3:6  
  proto-décollement zone, A:34–35  
photoelectric effect  
  comparison of Sites 672 and 1048, A:103  
  density, A:47, 66, 86, 100  
  vs. depth, A:71, 79, 90  
photoelectric effect logs  
  comparison between Sites 676 and 1047, A:87  
  comparison of décollement zone in Sites 1044–1046,  
    A:69  
  density, A:32  
  factor logs, A:22, 26

vs. depth, A:24, 32, 43, 49, 51, 56, 59, 82, 88, 95, 98,  
  104

### physical properties

  comparison of Sites 1044–1045, A:48, 50  
  Site 1044, A:31–33  
  Site 1045, A:46–50  
  Site 1046, A:63, 66  
  Site 1047, A:85–88  
  Site 1048, A:100–101

### plagioclase

  lithologic units, A:27, 62, 84  
  sediments, A:28

### plate boundaries, décollement zone, B3:7–11

Pleistocene, lithologic units, A:27, 45, 84

### pore pressure

  vs. depth, A:36  
  well-logging, A:33–34

### porosity

  densification, B3:10  
  low density, B3:6  
  proto-décollement zone, B1:1–19  
  well-logging, A:33

### porosity, density, A:47–48

porosity, density, vs. depth, A:52

porosity, radiolarian-related, image analysis, B1:1–3

### porosity, resistivity

  density, A:32, 47–48  
  vs. depth, A:52

### porosity logs

  vs. depth, A:34–35  
  *See also* neutron porosity logs

potassium, gamma-ray logs, A:28

potassium/thorium ratio, décollement zone, A:62

### potassium logs

  factor logs, A:22, 26  
  vs. depth, A:25, 44, 65, 83, 99

preservation, macropores, B1:2, 6

### proto-décollement zone

  bulk density, A:26  
  comparative overview, B2:19  
  comparison at Sites 1044 and 1048, A:101  
  comparison of Sites 1044 and 1046, A:66  
  comparison of Sites 1044–1045, A:48, 50  
  deformation, B3:6–7  
  density, A:90  
  fluid flow, A:101  
  listric normal and thrust faults, B3:23  
  low density, B3:5–6  
  peak seismic amplitude, B3:18  
  porosity, A:34–35; B1:1–19  
  resistivity, A:73  
  sandy underthrust terrigenous sequence, B3:19  
  synthetic seismograms, A:37  
  well-logging, A:33–34  
  *See also* décollement/proto-décollement zone; décolle-  
    ment zone

## Q

### quartz

  densification, B3:10

lithologic units, A:62  
sediments, A:28

## R

radiolarian tests, imagery, B1:14–15  
radiolarian tests, proto-décollement, imagery, B1:6–8  
radiolarians  
  lithologic units, A:27, 84  
  low density, B3:6  
  photomicrograph, B1:2, 6  
  porosity, B1:1–3; B3:10  
rate of penetration logs, vs. depth, A:24, 28, 43, 64, 68, 82, 86, 98, 102  
resistivity  
  comparison between Sites 1044 and 1046, A:73  
  comparison between Sites 1044 and 1048, A:105  
  derivation of velocity, B3:5  
  proto-décollement zone comparison in Sites 1044–1045, A:51  
  vs. depth, A:50, 71  
resistivity, deep, vs. depth, A:79  
resistivity logs  
  comparison between Sites 676 and 1047, A:87  
  density, A:32, 47, 66, 86–87, 100–101  
  vs. depth, A:25, 32, 44, 47, 49, 56, 59, 65, 70, 74, 83, 88–89, 95, 99, 104  
  *See also* deep resistivity logs

## S

sandstone, lithologic units, A:27  
sandy underthrust terrigenous sequence, décollement zone, B3:19  
seafloor, shaded relief image, A:10  
sediments, calcareous, lithologic units, A:45  
sediments, hemipelagic–pelagic, tectonics, A:5–6  
sediments, siliceous, lithologic units, A:45  
sediments, underthrust, fluid flow, A:67–68  
seismic data  
  Site 1044, A:35–36  
  Site 1045, A:52  
  Site 1046, A:68, 71  
  Site 1047, A:90  
  Site 1048, A:101–102  
seismic depth section, décollement zone, B3:19  
seismic images, logging-while-drilling, A:5–10  
seismic profiles  
  Site 1044, A:23  
  Site 1045, A:41  
  Site 1046, A:61  
  Site 1047, A:81  
  Site 1048, A:96  
  vs. depth, B2:12  
seismic reflection  
  correlation with log units, B3:4–5  
  décollement zone, B3:3–4, 8  
seismic section  
  listric normal and thrust faults, B3:23  
  vs. depth, A:56  
seismograms, synthetic

  vs. depth, A:37, 54, 75, 91, 106  
  well-logging, A:35–36, 52, 68, 71, 90, 101–102  
shear wave velocity, vs. depth, A:56  
shearing, scanning electron microscopy, B1:4, 12  
silica, biogenic, well-logging, A:29  
silica, opaline, well-logging, A:29  
silica, vs. depth, A:58, 74  
silt, lithologic units, A:100  
siltstone  
  lithologic units, A:27  
  vs. depth, B3:22  
Site 543, log units, A:29  
Site 671  
  log units, A:48  
  radiolarian-related porosity, B1:18–19  
Site 672  
  core data, A:20–21  
  geochemical data, A:94  
  geochemistry and pore pressure, A:36  
  lithologic units, A:26–27  
  lithology, A:30, 103  
  log units, A:29, 48  
  radiolarian-related porosity, B1:16–17  
  seismic depth section, B3:19  
Site 672A  
  data relationship to A:20–21  
  structure, A:31  
Site 676  
  core data, A:78–79  
  lithologic units, A:84  
  lithology, A:87  
  seismic depth section, B3:19  
  structural synthesis, A:88  
Site 949  
  core data, A:58–59  
  geochemical data, A:74  
  lithologic units, A:60, 62  
  log units, A:48  
  seismic velocity, A:56  
  wet-bulk density, A:72  
Site 1044, A:19–37  
  background and objectives, A:19, 21  
  characterization of logs, A:22, 24–26  
  data relationship to Site 672A, A:20–21  
  fluid flow, A:33–35  
  lithology, A:26–29  
  operations, A:21–22  
  physical properties, A:31–33  
  seismic data, A:35–36  
  seismic depth section, B3:19  
  site description, A:19–37  
  structure, A:29–31  
Site 1045, A:39–54  
  background and objectives, A:39–40  
  fluid flow, A:50–52  
  lithology, A:42–45  
  operations, A:40, 42  
  physical properties, A:46–50  
  seismic data, A:52  
  seismic depth section, B3:19  
  site description, A:39–54

structure, A:45–46  
 well-logging, A:42  
 Site 1046, A:55–75  
 background and objectives, A:55, 57  
 fluid flow, A:66–68  
 lithology, A:57–60, 62–63  
 operations, A:57  
 physical properties, A:63, 66  
 seismic data, A:68, 71  
 site description, A:55–75  
 structure, A:63  
 well-logging, A:57  
 Site 1047, A:77–91  
 background and objectives, A:77  
 fluid flow, A:88–90  
 lithology, A:84–85  
 operations, A:77, 80  
 physical properties, A:85–88  
 seismic data, A:90  
 seismic depth section, B3:19  
 site description, A:77–91  
 structural synthesis, A:88  
 structure, A:85  
 well-logging, A:80, 82–84  
 Site 1048, A:93–106  
 background and objectives, A:93, 96  
 fluid flow, A:101  
 lithology, A:100  
 operations, A:96  
 physical properties, A:100–101  
 seismic data, A:101–102  
 site description, A:93–106  
 structure, A:100  
 well-logging, A:96, 98–100  
 smectite  
 lithologic units, A:45  
 low density, B3:6  
 resistivity logs, A:29  
 sponge spicules, lithologic units, A:27  
 sponge spicules, low density, B3:6  
 structure  
 Site 1044, A:29–31  
 Site 1045, A:45–46  
 Site 1046, A:63  
 Site 1047, A:85  
 Site 1048, A:100  
 synthesis, A:31

**T**

tectonics, Tiburon Rise, A:5–6; B3:3  
 temperature, vs. depth, A:56  
 thickness  
 décollement zone, B3:8  
 proto-décollement zone, B3:8  
 thorium, gamma-ray logs, A:28  
 thorium logs

factor logs, A:22, 26  
 vs. depth, A:25, 44, 65, 83, 99  
 Tiburon Rise, tectonics, A:5–6; B3:3  
 time after bit logs, vs. depth, A:28, 47, 68, 86, 102  
 turbidites, well-logging, A:35

**U**

underconsolidation  
 density, B3:8–10  
 low density, B3:6  
 proto-décollement zone, A:101  
 underthrust section  
 comparison of Sites 1044 and 1046, A:66  
 comparison of Sites 1044 and 1047, A:88  
 fluid flow, A:67–68, 89–90  
 underthrusting, Caribbean Plate, A:5–6  
 uranium logs, vs. depth, A:25, 44, 65, 83, 99

**V**

veins, clay, well-logging, A:29–31  
 veins, mud-filled  
 décollement zone, B3:6–7  
 vs. depth, A:88  
 velocity, derived from resistivity, B3:5  
 volcanic ash  
 lithologic units, A:27, 60, 62, 84, 100  
 low density, B3:6  
 well-logging, A:62

**W**

well-logging  
 Barbados accretionary prism N, B2:1–29; B3:1–25  
 characterization of logs, A:22, 24–26, 42, 57, 80, 82–84, 96, 98–100  
 mean values and standard deviations of log properties, A:26, 45, 66, 84, 100  
 quality control summary, A:28, 47  
 Site 1045, A:42  
 Site 1046, A:57  
 Site 1047, A:80, 82–84  
 Site 1048, A:96, 98–100  
 summary, A:48  
*See also* cluster logs; factor logs; log properties; log quality; log units; logging-while-drilling

**X**

X-ray diffraction mineral data  
 comparison of Sites 672 and 1048, A:103  
 vs. depth, A:59, 78, 94

**Z**

zeolite filling, scanning electron microscopy, B1:4, 15  
 zeolites, densification, B3:10