

# INDEX TO VOLUME 190/196

This index covers the *Initial Reports* portions of Volumes 190 and 196 of the *Proceedings of the Ocean Drilling Program* (published as separate leg-specific books) and the *Scientific Results* portion of those *Proceedings* (published as Volume 190/196). References to page numbers in either *Initial Reports* volume are preceded by the specific leg number and “A” followed by the chapter number with a colon (190A1: or 196A1:) and to those in the *Scientific Results* (this volume) by the combined leg number and “B” followed by the chapter number with a colon (190/196B1:).

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 but not core-description forms (“barrel sheets”), core photographs, smear slide data, or thin section descriptions. 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 1173, for example, is given as “Site 1173, 190A4:1–147; 196A3:4–5.”

The Taxonomic Index is an index relating to significant findings and/or substantive discussions, not of species names *per se*. This index covers three varieties of information: (1) individual genera and species that have been erected or emended formally, (2) biostratigraphic zones, and (3) fossils depicted in illustrations. A taxonomic entry consisting of both genus and species is listed alphabetically by genus and also by species. Biostratigraphic zones are listed alphabetically by genus; zones with letter prefixes are listed under “zones.”

## SUBJECT INDEX

560-mbsf Fractured Interval, structures, 196A4:21

### A

#### Accreted Facies

deformation, 190/196B9:1–15

lithologic units, 190A9:8–9

#### accretion

Izu Collision Zone, 190A1:3

tectonics, 190A2:2

#### accretionary prisms

clay, 190/196B4:1–28

evolution, 190A1:27; 190/196B1:9–10

*See also* prism backthrust

accretionary prisms, frontal, formation, 190A1:3

accretionary prisms, upper, lithostratigraphy, 190/196B4:4

accretionary wedges, décollement zone, 190/196B12:4

#### Advanced CORK

accretionary prisms, 196A1:1–29

installation, 190/196B1:7–8; 196A1:7–8, 11; 196A3:3–4, 28–29, 72–73, 90; 196A4:4

vs. depth, 196A1:23, 25

age, sediment thickness, 190A1:34, 84

#### age vs. depth

magnetostratigraphy, 190A1:78

Site 1173, 190A4:63

Site 1174, 190A5:68

Site 1175, 190A6:43

Site 1176, 190A7:37

Site 1177, 190A8:43

air falls, lithologic units, 190A4:7

#### alkalinity

pore water, 190A4:17, 64; 190A8:17, 44

sediments, 190A5:24, 70; 190A6:17; 190A7:14; 190A9:18–19

vs. depth, 190A4:64, 69; 190A5:70; 190A6:46; 190A7:38; 190A8:44; 190A9:51

#### alkenone

sediments, 190/196B13:1–10

vs. depth, 190/196B13:8

along-strike variation, geology, 190A1:7

#### alteration

basement lithologic units, 196A3:31

illite–smectite reaction, 190/196B6:10–12

lithologic units, 190A4:9

photograph, 190A8:38

sediments, 190A9:18

- volcanic ash, 190/196B2:4–9
- ammonium  
pore water, 190A4:19, 64; 190A8:17, 44  
sediments, 190A5:23–24, 70; 190A6:17; 190A7:14–15;  
190A9:19  
vs. depth, 190A4:69; 190A5:70; 190A6:46; 190A7:38;  
190A8:44; 190A9:51
- amphibole, X-ray diffraction data, 190A6:8
- amygdale, photomicrograph, 196A3:76
- andesite, high-magnesian, igneous activity, 190A1:3
- anisotropy, vs. depth, 196A3:74
- Antarctic Bottom Water, clay, 190/196B4:8
- Antarctic Intermediate Water, clay, 190/196B4:8
- Ashizuri Transect  
clay mineralogy, 190/196B6:3  
sedimentation, 190/196B1:8–9  
transects, 190A1:1–87
- authigenesis  
clay, 190/196B6:11–12  
décollement zone, 190/196B1:6
- axial trench wedge unit, microstructures, 190/196B7:3
- B**
- bacteria  
comparison of near-surface populations, 190A4:139;  
190A5:142; 190A6:87; 190A7:77; 190A9:103  
methane, 190A1:36  
microbiology, 190/196B1:8  
sediments, 190/196B14:3  
sulfate, 190A1:36  
total enumeration, 190A4:23–24, 138–139; 190A5:28,  
141; 190A6:19–20, 86; 190A7:17, 76–77;  
190A8:19–20; 190A9:22–23, 102–103  
vs. depth, 190A1:86; 190A4:68; 190A5:74; 190A6:48;  
190A7:41; 190A9:54  
vs. in situ methane, 190A4:70  
vs. temperature, 190A4:68
- barium, basalt, 196A3:32, 96
- basalt  
geochemistry, 196A3:32, 96  
lithologic units, 190A4:9; 196A3:18  
photograph, 190A1:72; 190A4:46; 190A8:36, 39  
resistivity-at-the-bit images, 196A3:59
- basalt, ocean-floor, composition, 190A1:3
- basalt, plagioclase-phyric  
basement lithologic units, 196A3:30  
lithologic units, 190A8:9
- basement  
lithologic units, 190A8:9; 196A3:30–31  
resistivity-at-the-bit images, 196A3:59
- basement, coring, installation, 196A1:7–8
- bathymetry, maps, 190A2:10; 190/196B4:17
- bathymetry, multibeam, tectonics, 190A2:3
- bedding  
photograph, 190A5:54  
stereographic projections, 190A4:50; 190A6:37;  
190A7:32; 190A9:38  
vs. depth, 190A9:37
- bedding dips  
resistivity-at-the-bit images, 196A4:19–20
- sediments, 190A6:9, 35  
structures, 196A1:6–7  
vs. depth, 190A4:48–49; 190A5:49; 190A6:35;  
190A7:31; 190/196B9:12; 196A3:55; 196A4:48
- bedding dips, steep, lithologic units, 190A9:9
- bedding strike, vs. depth, 196A4:48
- beidellite, Slope–Apron Facies, 190/196B4:5–6
- Bernard ratio  
sediments, 190A1:34–35; 190A5:26; 190A8:18–19  
vs. depth, 190A5:73; 190A9:53
- Big Lost excursion, sediments, 190A7:11
- biogeochemistry  
microbial activity, 190A1:35–36  
vs. depth, 190A1:86
- biostratigraphic events  
interval and depth constraints, 190A4:121;  
190A5:122; 190A6:79; 190A7:69; 190A8:74;  
190A9:89  
nanofossils, 190A4:120–121; 190A5:121; 190A6:78;  
190A7:68; 190A8:73; 190A9:88
- biostratigraphy  
accretionary prisms, 190A1:27  
chronostratigraphy, 190A1:28  
correlation, 190A1:77; 190A4:11–13; 190A5:14–17,  
121–124, 128; 190A6:10–11, 78–80; 190A7:8–  
10, 68–70; 190A8:10–12; 190A9:11–14
- bioturbation, lithologic units, 190A4:6–8; 190A5:9
- Biwa III excursion, sediments, 190A7:11
- black seams  
Brecciated Zone, 190/196B9:3  
photograph, 190A9:39; 190/196B9:13
- Blake excursion, sediments, 190A7:11
- borehole images, structures, 196A1:12
- breakouts  
in situ stress, 196A4:22  
resistivity logs, 196A1:27; 196A4:29  
resistivity-at-the-bit images, 196A4:52–53  
structures, 196A1:12
- breccia  
domains, 190A5:12  
lithologic units, 196A3:18  
photograph, 190A9:43  
structure, 190A4:10
- breccia, chaotic, structure, 190A4:10
- breccia, foliated, photograph, 190A4:52
- breccia, incipient, photograph, 190A9:39
- Brecciated Zone  
deformation, 190/196B9:3  
photograph, 190/196B9:13
- brecciation  
data, 190A4:10, 51  
décollement zone, 190A5:13  
photograph, 190A4:51  
sediments, 190A9:10
- bromine, pore water, 190A1:30
- bromine isotopes, pore water, 190A1:30
- Brunhes Chron, sediments, 190A5:17; 190A6:13;  
190A7:11; 190A9:15
- Brunhes/Matuyama boundary  
comparison of Site 1174 to Site 1173, 190A5:19–20  
sediments, 190A4:15; 190A5:19; 190A6:12; 190A7:11

bulk mineralogy, lithologic units, 196A3:19–20;  
196A4:16  
bulk powders, X-ray diffraction data, 190/196B5:10–12,  
19–25  
burial, sediments, 190/196B7:6–7  
burial, diachronous, sediments, 190A1:26

**C**

## calcite

basement lithologic units, 196A3:31  
lithologic units, 190A4:8–9, 111, 114; 196A3:19–20;  
196A4:16  
vs. depth, 190A4:47; 190A5:46; 190A6:34; 190A7:30;  
190A8:37; 190/196B4:21  
X-ray diffraction data, 190A5:9; 190A6:8; 190A8:9;  
190/196B5:13–14

calcite, biogenic, sediments, 190A6:16

## calcium

pore water, 190A4:18, 64; 190A5:23, 70; 190A6:16–  
17; 190A7:13–15; 190A8:16–17, 44  
sediments, 190A9:18  
vs. depth, 190A4:64; 190A5:70; 190A6:46; 190A7:38;  
190A8:44

calcium/magnesium ratio, sediments, 190A9:18

caliper logs, vs. depth, 190A4:81; 190/196B16:9;  
196A3:52–53, 63; 196A4:42

## Cape Muroto

negative polarity, 190/196B15:1–16  
subduction, 190/196B3:3

carbon, sediments, 190A5:137–140; 190A6:18, 85;  
190A7:75; 190A9:101

## carbon, inorganic

sediments, 190A5:25; 190A7:16; 190A8:17–18;  
190A9:19–22  
vs. depth, 190A5:72; 190A6:47

carbon, organic, sediments, 190/196B13:1–10

## carbon, total organic

sediments, 190A4:23, 135–137; 190A7:15; 190A8:17–  
18, 85; 190A9:19–22  
vs. depth, 190A1:86; 190A4:66, 69; 190A5:72;  
190A7:40; 190A8:17; 190A9:52; 190/196B13:7

## carbon/nitrogen ratio

sediments, 190A4:21; 190A5:25, 27; 190A8:18  
vs. depth, 190A4:19, 66; 190A8:45

## carbon preference index

sediments, 190/196B14:2, 8  
vs. depth, 190/196B14:5

carbonate compensation depth, accretionary prisms,  
190A1:27

## carbonate content

sediments, 190A5:25; 190A7:16  
vs. depth, 190A4:67; 190A5:72; 190A6:47

carbonates, photograph, 190A4:54

## cementation

clay, 190/196B6:13  
lithologic units, 190/196B12:8

chaotic bedding, photograph, 190A1:65; 190A6:32;  
190A7:24

chemical tracers, contamination, 190A4:23–24, 141;  
190A5:28–29; 190A6:20; 190A8:20; 190A9:23

chert, clasts, 190A7:6

## chert, radiolarian

composition, 190A1:3  
photomicrograph, 190/196B3:26, 28

chert fragments, photomicrograph, 190/196B3:28  
chloride

faults, 190A7:15

gas hydrates, 190A9:17

geochemical gradients, 190A1:30–32, 81

pore water, 190A1: 6, 8–9, 81; 190A4:16–17, 64;  
190A5:21–22, 70; 190A6:15; 190A7:12, 15;  
190A8:14–15, 44; 190A9:16–18

subduction, 190/196B1:11

vs. depth, 190A1:79, 81; 190A4:64; 190A5:70;  
190A6:46; 190A7:38; 190A8:44; 190A9:51

chlorine isotopes, pore water, 190A1:30

chlorinity, vs. depth, 196A1:25; 196A4:33

## chlorite

basement lithologic units, 196A3:31

clay, 190/196B4:10–11

clay-sized fraction, 190/196B6:7–8

relative abundance, 190/196B6:5

Site 297, 190/196B5:6

vs. depth, 190/196B4:22, 23; 190/196B5:16, 18; 190/  
196B6:20–22

X-ray diffraction data, 190/196B4:20

chlorite/kaolinite overlap, relative abundance, 190/  
196B6:5–6

*Chondrites*

lithologic units, 190A4:7–8; 190A6:6–7; 190A8:6  
photograph, 190A5:41

Chron C1n-1, sediments, 190A6:13; 190A7:11

Chron C2An.2r, sediments, 190A9:15

Chron C3, sediments, 190A5:19

## Chron C3A

magnetostratigraphy, 190A1:28

sediments, 190A8:13; 190A9:15

Chron C3An, sediments, 190A4:15

## Chron C3B

magnetostratigraphy, 190A1:28

sediments, 190A8:13; 190A9:15

Chron C4, sediments, 190A9:15

Chron C4/C5 boundary, comparison of Site 1174 to Site  
1173, 190A5:19–20

Chron C4A, sediments, 190A5:19

Chron C4An, sediments, 190A4:15

Chron C4r, sediments, 190A4:15

Chron C4r.1n, sediments, 190A9:15

Chron C5, sediments, 190A4:15; 190A8:13

Chron C5ACn, sediments, 190A4:15

Chron C5ADn, sediments, 190A4:15

Chron C5C, sediments, 190A8:14

Chron C5n, sediments, 190A4:15; 190A5:19

chronostratigraphy, synthesis, 190A1:28

clasts, lithologic units, 190A6:7

## clasts, lithic

lithologic units, 190A9:6–9

photograph, 190A1:68; 190A7:29

clasts, mud, photograph, 190A9:33

clasts, quartz, photograph, 190A1:68

clasts, rip-up, photograph, 190A8:32–33

- clay
  - composition and sources, 190/196B4:1–28
  - décollement zone, 190/196B1:6
  - diagenesis, 190/196B6:11–12
  - geotechnical properties, 190/196B6:12–13
  - grain size, 190/196B8:9–11
  - in situ dehydration, 190A1:30
  - porosity, 190/196B11:6
  - vs. depth, 190/196B8:15–17
  - X-ray diffraction data, 190/196B4:26–28
- clay, incipient scaly and foliated, photograph, 190A1:76; 190A9:46
- clay, silty
  - lithologic units, 190A4:6–7; 190A5:7–8; 190A6:4–6; 190A7:5; 190A9:6–9
  - photograph, 190A1:56; 190A4:42–44; 190A7:24
- clay fabric, sediments, 190/196B7:7–11
- clay microfabric, scanning electron microscopy photomicrograph, 190/196B7:23, 27
- clay mineral preferred orientation, inclined, scanning electron microscopy photomicrograph, 190/196B7:21–22
- clay mineral preferred orientation, penetrative, scanning electron microscopy photomicrograph, 190/196B7:20–27
- clay minerals
  - clay-sized fraction, 190/196B4:6–7; 190/196B6:7–8
  - lithologic units, 190A4:6–9, 16; 190A5:7–8; 196A3:19–20
  - lithostratigraphy, 190/196B6:3–4
  - preferred orientation, 190/196B7:6–13
  - relative abundance, 190/196B5:17
  - sedimentation, 190/196B1:9
  - volcanic ash, 190/196B2:4
  - vs. depth, 190A4:47; 190A5:46; 190A6:34; 190A7:30; 190A8:37; 190/196B4:21; 190/196B5:15–16, 18; 196A1:23
  - X-ray diffraction data, 190A5:9; 190A6:8; 190A8:9; 190/196B5:1–28; 190/196B6:5–7
- clay-sized fraction
  - clay mineralogy, 190/196B6:7–8
  - linear regression, 190/196B8:18
- claystone, photograph, 190A8:38
- claystone, bioturbated silty
  - lithologic units, 196A3:18
  - photograph, 190A1:57; 190A4:45–46
- claystone, carbonate-cemented, lithologic units, 190A8:6
- claystone, interbedded siliceous, photograph, 190A1:57; 190A4:45
- claystone, silty
  - lithologic units, 190A4:7; 190A5:8–9; 190A8:5–9; 190A9:6–9; 190/196B12:3–4; 196A3:18; 196A4:15
  - lithology, 196A1:9
  - photograph, 190A1:70; 190A4:45–46; 190A5:41, 43–44; 190A8:29–31, 35
  - volcanic ash, 190/196B2:1–9
- cleavage planes, volcanic ash, 190/196B2:5
- clinoptilolite–heulandite mixture, X-ray diffraction data, 190A5:10
- clinopyroxene, basement lithologic units, 196A3:31
- coercivity, remanent magnetization, 196A3:32–33
- collision zone
  - Izu–Bonin arc, 190A1:37
  - metasedimentary rocks, 190A1:27
  - tectonics, 190A2:2
- common depth point, vs. depth, 196A1: 22, 24; 196A4:32
- common midpoints, seismic reflection, 190/196B12:6–7; 190/196B15:12
- compaction
  - lithologic units, 190A4:7; 190A8:5; 190/196B12:8
  - logs, 196A3:35
- compaction, vertical, structure, 190A4:10
- composite logs, construction, 196A3:16
- compressibility, permeability, 190/196B10:1–16
- compressional wave velocity
  - cores, 196A3:91
  - correction, 190/196B11:4
  - ISONIC, 196A3:26; 196A4:25–26, 62
  - processing, 190/196B16:3
  - sediments, 190/196B7:3–5; 190/196B11:3
  - vs. depth, 190A4:76, 83; 190A5:78; 190A6:53; 190A7:45; 190A8:51; 190A9:25; 190/196B7:16–17; 190/196B11:18; 190/196B15:14; 190/196B16:12, 14; 196A1:25; 196A3:70, 74; 196A4:33
  - vs. porosity, 190A4:84; 190A5:79
  - See also* shear wave velocity; velocity
- compressional wave velocity, vertical, vs. porosity, 190/196B7:18–19
- compressional wave velocity anisotropy, vs. depth, 190A5:79; 190A8:51
- compressional wave velocity logs, vs. depth, 190A4:81
- compressional wave velocity slowness logs
  - vs. depth, 190/196B16:12, 14; 190/196B17:12, 13
  - vs. shear wave velocity slowness logs, 190/196B16:15
- confining pressure
  - evolution, 190/196B10:12
  - permeability, 190/196B10:1–16
- conglomerate, lithologic units, 196A4:15
- conglomerate, mudstone-clast, lithologic units, 190A8:6
- consolidation
  - clay, 190/196B6:13
  - décollement zone, 190/196B12:4
  - lithofacies of lower Shikoku Basin Facies, 190/196B1:22
  - porosity, 190/196B11:6
  - sediments, 190/196B7:5–7; 190/196B12:9
  - Shikoku Basin Facies, 190/196B12:18
- contamination
  - bacteria, 190A4:23–24, 71–72, 140–141; 190A5:28–29, 143–144; 190A6:20, 88–89; 190A8:20–21
  - drilling fluid intrusion, 190A5:143; 190A6:88; 190A8:88; 190A9:23
  - fluorescent microsphere tracers, 190A5:144; 190A6:89; 190A8:89; 190A9:105
  - sediments, 190A9:22–23
- contorted bedding
  - photograph, 190A8:35
  - structure, 190A6:9–10, 35–39, 75

turbidite, 190/196B3:4  
contour plots, hydrosweep data, 190A2:11  
convergent margins  
  fault planes, 190/196B15:5–8  
  subduction, 190/196B1:3  
cores, physical properties, 196A3:29–30  
correlation  
  biostratigraphy, 190A1:77; 190/196B4:19  
  hole-to-hole, 196A3:15–16  
  lithofacies, 190A1:49  
  lithostratigraphy, 190/196B4:19  
  log units with lithologic units, 196A3:19–20;  
    196A4:16–17  
  magnetostratigraphy, 190A1:77  
  resistivity logs, 196A3:45  
Cretaceous, Shimanto Belt, 190A1:2  
cristobalite  
  lithologic units, 190A4:9  
  vs. depth, 190A4:47  
  X-ray diffraction data, 190A5:9; 190A6:8  
cristobalite/quartz transition, décollement zone,  
  196A1:13  
cross laminations  
  lithologic units, 190A6:7  
  photograph, 190A7:28; 190A9:34  
cross sections, geology, 196A1:18

## D

databases, geology and geophysics, 190A1:4  
debris flows, lithologic units, 190A6:7; 190A8:6  
décollement zone  
  comparison, 190A1:79  
  correlation, 190A1:30, 80  
  development, 190A1:28–30  
  diagenesis, 196A1:13  
  fault zones, 196A1:12–13  
  fractures, 190A5:59  
  initiation and evolution, 190/196B1:5–7  
  permeability, 190/196B10:6  
  photograph, 190A1:62–63; 190A5:57  
  physical properties, 190/196B12:1–18  
  resistivity-at-the-bit images, 196A4:21–22, 50–51  
  scanning electron microscopy photomicrograph,  
    190/196B7:23, 27  
  sediments, 190/196B7:8–9; 196A1:10  
  seismic data, 190A1:4–5; 190/196B12:1–18  
  stereographic projections, 190A5:58  
  stratigraphic equivalent, 196A3:35–36  
  structural and hydrologic evolution, 190A1:8  
  structure, 190A5:13, 57–59; 196A1:6–7  
  transects, 190A1:36–37  
  underthrust section, 196A4:30  
  velocity, 190/196B11:7–9  
  *See also* protodécollement horizon  
deepwater circulation, transport, 190/196B4:7  
deformation  
  accretionary prisms, 190A1:27  
  data, 190A4:9–11  
  fluid flow, 190/196B1:1–25; 190/196B11:2–3  
  framework along strike, 190A1:9

geology, 190A1:5  
logs, 190/196B1:4–5; 196A3:22–23  
magnetic fabric, 190/196B9:1–15  
sediments, 190A1:26  
slowness analysis, 190/196B17:5–6  
spatial distribution and temporal progression,  
  190A1:7–8  
structures, 196A1:7  
summary, 196A1:1–29  
timing, 190/196B9:6–7  
deformation, brittle, décollement zone, 190A1:29  
deformation, ductile, geology, 190A1:4  
deformation, penetrative, burial, 190/196B9:7  
deformation bands  
  photograph, 190A1:60; 190A5:50  
  scanning electron microscopy photomicrograph,  
    190/196B7:24  
  stereographic equal-area lower hemisphere projec-  
    tions, 190A1:61  
  stereographic projections with paleomagnetic re-ori-  
    entation, 190A5:51  
  structure, 190A5:10–11  
deformation structures, vs. depth, 190A5:48–49;  
  190A9:37  
deformation zones  
  sediments, 196A1:9–10  
  thrust zones, 190A1:6  
dehydration, smectite, 190A1:8; 190/196B5:6–7  
dehydration, in situ, clay, 190A1:30  
Delta excursion, sediments, 190A7:11  
demagnetization, vector diagrams, 190A4:59  
demagnetization, alternating-field  
  magnetic inclination, 190A6:14–15  
  remanent magnetization, 196A3:32–33  
  sediments, 190A4:15; 190A8:13; 190A9:14  
demagnetization, thermal, magnetic intensity zones,  
  190A5:66  
density  
  comparison with downhole measurements, 190A4:29  
  fault planes, 190/196B15:4–6  
  grain size, 190/196B8:7–10  
  sediments, 190A4:25–26, 73; 190A5:30–31, 33–34, 75;  
    190A6:21–22, 50; 190A7:18, 20, 42; 190A8:21–  
    22; 190A9:24–25; 196A1: 7, 10  
density, bulk  
  vs. clay percent, 190/196B8:19  
  vs. depth, 190A4:73; 190A5:75, 78; 190A6:50;  
    190A7:42; 190A8:49; 190A9:55; 190/196B15:14;  
    196A3:74  
density, grain, vs. depth, 190A4:73; 190A5:75; 190A6:50;  
  190A7:42; 190A8:49; 190A9:55; 196A3:61, 74;  
  196A4:55  
density logs  
  comparison of Sites 808 and 1173, 196A4:24–25, 57  
  porosity, 196A3:23–24, 62–64; 196A4:23–25, 26  
  sediments, 190A4:31–32, 81; 196A3:23, 60–61, 89;  
    196A4:23  
  vs. depth, 190A4:81; 196A1:23, 24; 196A3:47, 50, 52–  
    54, 60, 62–64, 83, 89; 196A4:32, 38–40, 42, 50,  
    54  
  vs. resistivity logs, 196A4:18, 43

deposition, turbidite, 190/196B3:9–12  
detritus, provenance, 190/196B6:10–11  
dewatering structures, photograph, 190A4:53; 190A5:60  
diagenesis  
  clay, 190/196B6:11–14  
  illite–smectite reaction, 190/196B6:10–12  
  lithologic units, 190A4:7; 190A8:5; 196A3:18  
  opal-CT/quartz transition, 190/196B12:4  
  silica, 196A1:13  
  subduction, 190/196B3:3  
  temperature, 196A1:4  
  volcanic ash, 190/196B2:3–9  
diagenesis, progressive in situ, fluid flow, 190A1:9  
diatoms, lithologic units, 190A6:6  
dip, vs. depth, 190A4:48–49; 190A5:49; 190A6:35;  
  190A7:31; 190/196B9:12; 196A1:22; 196A4:48  
diploptene  
  sediments, 190/196B14:3, 10  
  vs. depth, 190/196B14:7  
dipole pole excitation, models, 190/196B16:11  
dispersal system, clay, 190/196B4:8–11  
dissociation, methane, 190A9:17–18  
dissolution  
  sediments, 190A9:18  
  volcanic ash, 190/196B2:5  
dissolution cleavage, photomicrograph, 190/196B3:27  
dolomite, lithologic units, 190A4:8  
dolomitization, sediments, 190A6:17  
domains  
  lithofacies, 190A9:6–9  
  sediments, 190A9:9–11  
downhole measurements, 190A4:30–34, 146  
drilling, troughs, 190A1:47  
drilling fluid, contamination, 190A8:88

## E

earthquakes  
  recurrence of class M8 history, 190A1:46  
  stratigraphy, 196A1:3–4  
effective stress  
  sediments, 190/196B7:5  
  vs. intrinsic permeability, 190/196B19:7  
  vs. permeability, 190/196B10:10; 190/196B18:18–19  
electrical conductivity  
  formation factor, 190A4:144; 190A5:146–148;  
    190A6:91; 190A7:79; 190A8:90–91; 190A9:24,  
    59  
  sediments, 190A4:27–28, 142, 144–145; 190A5:32–33,  
    145–146; 190A6:23, 54, 90; 190A7:19, 46, 78;  
    190A8:23–24; 190A9:25–26  
electrical conductivity anisotropy  
  formation factor, 190A9:25–26  
  sediments, 190A4:28  
  vs. depth, 190A4:77; 190A5:80; 190A8:52  
embayment, tectonics, 190A2:2  
Emperor excursion, sediments, 190A7:11  
epoch boundaries, nannofossils, 190A4:122; 190A5:123;  
  190A8:75; 190A9:90  
ethane  
  sediments, 190A5:25–27, 135–136; 190A9:20

thermogenic vs. biogenic, 190A1:85  
  vs. depth, 190A4:65, 133; 190A5:71; 190A8:45  
Eurasian Plate  
  microstructures, 190/196B7:2  
  tectonics, 190A2:2  
extension, deformation, 190/196B1:4  
extension, lateral, structure, 190A4:10

## F

fabric  
  photograph, 190A9:46  
  *See also* clay fabric; clay microfabric; magnetic fabric;  
    microfabric  
fatty acids  
  sediments, 190/196B14:1–10  
  vs. depth, 190/196B14:6  
fatty acids, terrigenous/aquatic ratio, vs. depth, 190/  
  196B14:6, 9  
fault planes  
  negative polarity, 190/196B15:1–16  
  stereographic projections, 196A3:58  
  *See also* negative polarity  
fault zones, fluid pressure, 196A1:12–13  
faults  
  burial, 190/196B9:7  
  clay, 190/196B6:12–13; 190/196B12:9  
  log response, 196A1:12–13  
  logs, 196A3:22–23  
  photograph, 190A7:33  
  sediments, 190A7:7  
  stereographic projections, 190/196B1:18  
  structure, 190A6:10  
  *See also* microfaults  
faults, antithetic  
  photograph, 190A4:51  
  structure, 190A4:10, 51  
faults, bifurcating healed normal, photograph, 190A5:55  
faults, core-scale healed  
  domains, 190A5:12  
  stereographic projections, 190A5:56  
faults, frontal thrust, negative polarity, 190/196B15:1–16  
faults, healed, photograph, 190A8:38  
faults, high-angle normal, photograph, 190A4:51  
faults, incipient thrust, sediments, 190/196B7:8  
faults, normal  
  sediments, 190/196B7:7  
  stereographic projections, 190A6:38  
faults, prism, stereographic projections, 190A5:53  
faults, thrust  
  deformation, 190/196B1:3  
  geology, 190A1:5–8  
  lithologic units, 190A9:6–9  
  sediments, 190A7:8  
  stratigraphy, 196A1:4  
  three dimensional perspective, 190/196B15:13  
  *See also* Protothrust Zone; underthrust domain  
feldspar  
  lithologic units, 190A4:6–9; 190A5:7–8  
  quartzose sand, 190/196B3:7  
  quartzose and sedimenticlastic sand, 190/196B3:8

sand, 190/196B3:5  
sedimenticlastic sandstone, 190/196B3:8–9  
turbidite, 190/196B3:4  
fissility, lithologic units, 190A9:9  
fluid escape structures. *See* dewatering structures  
fluid flow  
  chemical gradients, 190A1:8–9  
  deformation, 190/196B1:1–25  
  geology, 190A1:5–9  
  indicators, 196A1:4–5  
  microstructures, 190/196B7:2  
  summary, 196A1:1–29  
  vs. hydraulic gradient, 190/196B18:12–17  
fluid pressure  
  fault zones, 196A1:12–13  
  permeability, 190/196B10:6  
  seismic profiles, 190A1:9  
fluorine, pore water, 190A1:30  
folds, stereographic projections, 190A6:37  
foliation  
  deformation, 190/196B9:3–4  
  photograph, 190/196B9:13  
  Trench–Wedge Facies, 190/196B9:5–6  
  vs. depth, 190A9:37  
  *See also* magnetic foliation  
foliation, bedding-oblique, photograph, 190A1:74;  
  190A9:42  
foliation dip, vs. depth, 190/196B9:12  
foraminifers  
  lithologic units, 196A4:15  
  photograph, 190A5:43  
formation factor  
  electrical conductivity, 190A4:144–145; 190A5:146–  
  148; 190A6:91; 190A7:79; 190A8:90–91;  
  190A9:24, 59  
  needle-probe method, 190A4:142–143; 190A5:145;  
  190A6:90; 190A7:78; 190A9:24–25  
  vs. depth, 190A4:77; 190A5:80; 190A6:54; 190A7:46;  
  190A8:52; 190A9:25–26  
Formation Microscanner imaging  
  bioturbated interval, 190A4:86  
  sediments, 190A4:33, 85–87  
  Unit II/III boundary, 190A4:87  
  volcanic ash, 190A4:85  
  vs. resistivity logs, 196A3:82  
fracture dips, vs. depth, 196A1:25; 196A3:56; 196A4:33,  
  44  
fracture planes, photograph, 190/196B10:11  
fracture strike, vs. depth, 196A3:56; 196A4:44  
fracture zones, scanning electron microscopy photomi-  
  crograph, 190/196B7:26–27  
fracture zones, brecciated, photograph, 190A8:38  
fractures  
  Brecciated Zone, 190/196B9:3  
  décollement zone, 190A5:59  
  domains, 190A5:12  
  frequency vs. depth, 196A4:44  
  interpretation, 196A1:26  
  logs, 196A3:22–23  
  photograph, 190A1:63; 190/196B10:13

resistivity-at-the-bit images, 196A3:57; 196A4:18–19,  
  45  
sediments, 190A7:7; 190/196B7:8; 196A1:9–10  
stereographic projections, 190/196B1:18; 196A4:47  
stereographic projections related to prism faults,  
  190A5:53  
  structures, 190A8:10; 196A1:6–7  
  vs. depth, 190A5:59; 190/196B9:12  
  *See also* 560-mbsf Fractured Interval  
fractures, brittle, vs. depth, 190A9:37  
fractures, high-angle  
  photograph, 190A8:39  
  structure, 190A4:10  
fractures, inclined  
  lithologic units, 190A9:6–9  
  photograph, 190A5:52, 54  
fractures, oblique, photograph, 190A9:43  
fractures, spaced, lithologic units, 190A9:9  
fragments, trapezoidal, photograph, 190A9:43  
friction coefficient, permeability, 190/196B10:1–16  
Frontal Out-of-Sequence Thrust Zone  
  geology, 190A1:6  
  structural subdivisions, 190A2:5

## G

gamma rays  
  sediments, 190A4:28–29, 79; 190A6:23–24, 56;  
  190A7:20, 48; 190A8:23–24  
  vs. depth, 190A4:79; 190A6:56; 190A7:48; 190A8:55  
gamma-ray logs  
  sediments, 190A4:31–32, 81  
  vs. depth, 190A4:81–82; 196A1:24; 196A3:47, 50, 52–  
  54, 83; 196A4:32, 38–40, 42  
  vs. photoelectric effect logs, 196A3:20, 49; 196A4:17,  
  43  
gas, free, negative polarity, 190/196B15:1–16  
gas hydrates  
  geology, 190A1:31–32  
  sediments, 190A9:17–18  
Gauss Chron, sediments, 190A4:15; 190A5:19;  
  190A8:13; 190A9:15  
geochemical gradients  
  data, 190A1:30–31  
  fluid flow, 190A1:8–9  
geochemistry, basalt, 196A3:32, 96  
geochemistry, inorganic  
  Site 1173, 190A4:16–19, 64, 131  
  Site 1174, 190A5:20–24, 70, 133  
  Site 1175, 190A6:15–18, 46, 83  
  Site 1176, 190A7:11–15, 38, 73  
  Site 1177, 190A8:14–17  
  Site 1178, 190A9:15–19  
geochemistry, organic  
  sediments, 190A1:34–36, 85  
  Site 1173, 190A4:19–22, 65–67, 133, 135  
  Site 1174, 190A5:24–27, 71–72, 135, 137  
  Site 1175, 190A6:18–19, 47, 84–85  
  Site 1176, 190A7:15–16, 39–40, 74–75  
  Site 1177, 190A8:17–19  
  Site 1178, 190A9:19–22

geodesy, geology, 190A1:3–4  
geomagnetic polarity time scale, sediments, 190A4:14  
geotechnical properties, clay, 190/196B6:12–13  
geothermal gradient  
    microbial activity, 190A1:35–36  
    sediments, 190A8:18–19  
Gilbert Chron, sediments, 190A4:15; 190A5:19;  
    190A8:13; 190A9:15  
glacioeustatic cycles, clay, 190/196B4:10  
glass inclusions, photomicrograph, 190/196B3:25  
grabens, deformation, 190/196B1:19  
graded bedding, photograph, 190A1:59  
grain fabric, sediments, 190A9:11  
grain size  
    density, 190/196B8:8  
    physical properties, 190/196B8:1–25  
    vs. depth, 190/196B8:15–17  
granules, photograph, 190A5:40  
gravel  
    lithologic units, 190A7:6; 190A8:6  
    photograph, 190A1:68; 190A9:33  
    volcanic ash, 190/196B2:4  
gravel, muddy, lithologic units, 190A6:7  
gravel, mud-supported, photograph, 190A9:32  
gravity-flow deposits  
    clay, 190/196B4:10  
    lithologic units, 190A6:8

**H**

heat advection, deformation, 190/196B1:4  
heat flow  
    authigenesis, 190/196B6:12  
    illite–smectite reaction, 190/196B6:9–10  
heave compensator experiment, instruments, 196A3:85–  
    86  
hemipelagic environment, lithologic units, 190A4:6–7  
hemipelagite  
    lithologic units, 190A4:8  
    logging-while-drilling sonic data, 190/196B17:1–15  
    magnetic susceptibility, 190A1:26  
    sonic logs, 190/196B16:1–15  
    stratigraphy, 196A1:4  
    thrust zones, 190A1:6  
    trench, 190A1:4–5  
heulandite. *See* clinoptilolite–heulandite mixture  
hexane, sediments, 190A9:20–21  
hiatuses, sediments, 190A9:15  
Honshu, collision, 190A1:3  
Honshu–Izu collision zone, metasedimentary rocks,  
    190A1:27  
hop-17(21)-ene, vs. depth, 190/196B14:7, 10  
hop-21-ene, vs. depth, 190/196B14:7, 10  
hop-22(29)-ene, vs. depth, 190/196B14:7, 10  
hopanes, vs. depth, 190/196B14:5  
hopanoids  
    sediments, 190/196B14:1–10  
    vs. depth, 190/196B14:6  
hopenes, sediments, 190/196B14:3  
horsts, deformation, 190/196B1:19  
hydraulic gradient, vs. fluid flow, 190/196B18:12–17

hydrocarbons  
    concentration, 190A4:20–21  
    headspace gases, 190A4:65, 133–134; 190A5:25–27,  
        135–136; 190A6:84; 190A7:74; 190A8:18, 84;  
        190A9:19–21, 99–100  
    sediments, 190A1:34–36, 85; 190A4:19, 65, 133;  
        190A6:18–19, 47, 84; 190A7:16  
    thermogenic vs. biogenic, 190A1:85  
    vs. depth, 190A1:85  
hydrogen, sediments, 190A4:21, 135–137; 190A5:137–  
    140; 190A6:18, 85; 190A7:75; 190A8:17–18, 85–  
    86; 190A9:101  
hydrology, décollement zone, 190A1:8  
hydrosweep data, shaded relief maps, 190A2:12  
hyperthermophiles. *See* thermophiles/hyperthermo-  
    philes

**I**

igneous petrology, Nankai Trough, 196A3:30–32  
illite  
    clay-sized fraction, 190/196B4:10; 190/196B6:7–14  
    illite/smectite clays, 190/196B6:5–6, 24  
    relative abundance, 190/196B6:5  
    vs. depth, 190/196B4:22–23; 190/196B5:16, 18; 190/  
        196B6:20–22  
    X-ray diffraction data, 190/196B4:20; 190/196B5:6  
illite/smectite clays, composition, 190/196B6:6  
illite–smectite reaction  
    models, 190/196B6:9–14, 26, 37  
    sedimentation, 190/196B1:9  
illitization, illite–smectite reaction, 190/196B6:10–12  
Imbricate Thrust Zone  
    geology, 190A1:5–6  
    structural subdivisions, 190A2:5  
impedance  
    Trench–Wedge Facies, 190/196B12:9, 14  
    vs. depth, 190A6:53; 190A7:45  
    vs. porosity, 190/196B12:15  
inorganic reactions, geochemistry, 190A4:16–18;  
    190A5:21–23; 190A6:15–17; 190A7:12–14;  
    190A9:16–18  
interbeds, inclined, photograph, 190A7:24  
intergranular texture, basement lithologic units,  
    196A3:31  
iron oxide, basement lithologic units, 196A3:31  
isobutane, sediments, 190A9:20–21  
ISONIC  
    data processing, 196A3:15, 44  
    velocity, 196A1:13–14  
isopentane, sediments, 190A9:20–21  
Izu collision zone  
    accretion, 190A1:3  
    turbidite, 190/196B3:11  
Izu forearc basin, clay, 190/196B4:10  
Izu–Bonin arc  
    clay, 190/196B4:9  
    collision, 190A1:3  
    sedimentation, 190/196B4:11  
    Trench–Wedge Facies, 190/196B6:10–11  
    *See also* proto-Izu–Bonin arc



Izu–Honshu collision zone  
clay, 190/196B4:9  
Trench–Wedge Facies, 190/196B6:10–11

## J

Jamaica excursion, sediments, 190A7:11  
Japan Island arc, sediments, 190A1:26  
Japan Sea, ocean floors, 190A1:3  
Japan SW  
geologic maps, 190/196B3:19  
igneous activity, 190A1:3  
subduction, 190/196B3:3–4  
Japanese forearc region SW, geologic map, 190A1:43  
Japanese Island arc system, sediments, 190A1:1–87  
Jaramillo Subchron, sediments, 190A6:13

## K

kaolinite  
clay-sized fraction, 190/196B6:7–8  
vs. depth, 190/196B4:22–23; 190/196B6:20–22  
X-ray diffraction data, 190/196B4:20  
*See also* chlorite/kaolinite overlap  
Kazusa group, clay, 190/196B4:10  
Kii Peninsula  
geology, 190A1:3–4  
subduction, 190/196B3:3–4  
Kinan Seamounts  
geology and geophysics, 196A1:3–4  
sediments, 190A1:26  
subduction, 190/196B1:3–4, 10  
Kuroshio Current, clay, 190/196B4:9, 11  
Kuroshio–Oyashio convergence, transport, 190/196B4:7  
Kyushu–Palau remnant arc, sediments, 190A1:26

## L

laminations, lithologic units, 190A4:6–8; 190A6:6;  
190A9:6–8  
Landward-Dipping Reflector Zone  
geology, 190A1:7  
structural subdivisions, 190A2:5  
lapilli, lithologic units, 190A4:7  
Large Thrust–Slice Zone  
geology, 190A1:6–7  
structural subdivisions, 190A2:5  
Laschamp excursion, sediments, 190A7:11  
Lavantine excursion, sediments, 190A7:11  
limestone, pelagic, composition, 190A1:3  
lithic fragments, quartzose and sedimenticlastic sand,  
190/196B3:8  
lithification, domains, 190A5:12  
lithofacies  
correlation, 190A1:49–51  
domains, 190A9:6–9  
lithologic units, 190A8:5  
logs, 196A3:33–36  
porosity, 190A1:32–33  
sediments, 190A1:26–27  
velocity, 190A1:32–33

vs. depth, 196A1:24; 196A4:32  
lithologic Unit I, log units, 196A3:18  
lithologic Unit II, log units, 196A3:18; 196A4:15  
lithologic Unit II/III boundary, diagenesis, 196A3:18  
lithologic Unit III, log units, 196A3:18; 196A4:15  
lithologic Unit IV, log units, 196A3:18; 196A4:15–16  
lithologic Unit V, log units, 196A3:18  
lithologic units  
basement, 196A3:30–31  
bulk mineralogy, 196A3:19–20; 196A4:16  
compared with log units, 190A4:106  
log units, 196A3:17–18  
Site 1174, 190A5:7–10, 38, 101  
Site 1175, 190A6:4–8, 27, 69  
Site 1176, 190A7:5–7, 23, 61  
Site 1177, 190A8:5–9, 27  
Site 1178, 190A9:6–9, 29, 75  
Unit I, 190A4:6–7; 190A5:7; 190A6:4–6; 190A7:5;  
190A8:5; 190A9:6–8  
Unit II, 190A4:7; 190A5:7–8; 190A6:6; 190A7:5;  
190A8:5; 190A9:8–9  
Unit III, 190A4:7–8; 190A5:8–9; 190A6:6–8; 190A7:5–  
6; 190A8:5–7  
Unit IV, 190A4:8; 190A5:9; 190A8:7–9  
Unit V, 190A4:9; 190A5:9; 190A8:9  
lithology  
comparison with logs, 196A4:17–18  
resistivity-at-the-bit images, 196A3:20–21, 52–54, 59  
vs. depth, 196A1:22, 24  
lithosphere, oceanic, subduction, 190A1:3  
lithostratigraphy  
clay mineralogy, 190/196B6:3–4  
correlation, 190/196B4:19  
Site 1173, 190A4:6–9, 40; 190/196B6:20  
Site 1174, 190A5:7–10, 38, 101; 190/196B6:21  
Site 1175, 190A6:4–8, 27, 69  
Site 1176, 190A7:4–7, 23, 61  
Site 1177, 190A8:5–9, 27, 64; 190/196B6:22  
Site 1178, 190A9:6–9, 29, 75  
slope basin, 190/196B4:3–4  
Slope–Apron Facies, 190/196B3:5–6  
turbidite, 190/196B3:3–4, 17  
upper accretionary prisms, 190/196B4:4  
log Unit 1  
correlation with lithologic units, 196A4:16  
gamma rays, 196A4:14  
lithology, 196A1:6, 9; 196A3:2  
neutron porosity, 196A3:17  
log Unit 2  
correlation with lithologic units, 196A4:17  
gamma rays, 196A4:14  
lithology, 196A1:6, 9  
resistivity, 196A3:17–18  
structures, 196A1:12  
log Unit 2/3 boundary, seismic reflection, 196A1:7;  
196A3:2  
log Unit 3  
correlation with lithologic units, 196A4:17  
gamma rays, 196A3:17; 196A4:14  
lithology, 196A1:6, 9

log Unit 4  
  density, 196A3:17  
  gamma rays, 196A4:14  
  lithology, 196A1:6, 9  
log Unit 4a, correlation with lithologic units, 196A4:17  
log Unit 4b, correlation with lithologic units, 196A4:17  
log Unit 5, lithology, 196A1:6  
log units  
  definition, 196A3:16–21, 47; 196A4:13–18  
  lithologic units, 196A3:17–18  
  lithology, 196A1:6, 9; 196A3:2, 17–18; 196A4:2, 15–16  
  properties, 196A3:88; 196A4:67  
  statistical definition, 196A3:47–48; 196A4:41  
  visual interpretation, 196A3:46  
logging-while-drilling  
  accretionary prisms, 196A1:1–29  
  numerical modeling, 190/196B17:3–4  
logging-while-drilling sonic data, turbidite and hemipelagite, 190/196B17:1–15  
logs. *See* well-logs  
Lower Shikoku Basin Facies  
  lithologic units, 190A4:7–8; 190A5:9; 190A8:5; 190/196B12:3  
  physical properties, 190A1:33  
  sedimenticlastic sandstone, 190/196B3:9–12  
  *See also* Upper Shikoku Basin Facies/Lower Shikoku Basin Facies boundary  
Lower Shikoku Turbidite Facies, lithologic units, 190A8:5–7

## M

magnesium  
  pore water, 190A4:18, 64; 190A5:23, 70; 190A6:16–17; 190A7:13–15; 190A8:16–17, 44  
  sediments, 190A9:18  
  vs. depth, 190A4:64; 190A5:70; 190A6:46; 190A7:38; 190A8:44  
magnesium oxide, basalt, 196A3:32, 96  
magnetic chrons, depths and ages, 190A4:130; 190A5:132; 190A6:82; 190A7:72; 190A8:82  
magnetic declination  
  magnetic disturbance experiment, 190A6:14, 44  
  sediments, 190A4:14; 190A6:12–15; 190A7:10; 190A9:14  
  vs. depth, 190A4:58; 190A5:63; 190A6:41, 44–45; 190A7:35; 190A8:41; 190A9:47  
magnetic disturbance experiment  
  cores, 190A6:13–14, 44  
  overprint removal experiment, 190A6:45  
magnetic fabric  
  deformation, 190/196B9:1–15  
  summary, 190/196B9:15  
magnetic foliation, deformation, 190/196B9:4–5  
magnetic foliation dip, vs. depth, 190/196B9:14  
magnetic inclination  
  remanent magnetization, 196A3:32–33, 97  
  sediments, 190A4:14; 190A5:17–20; 190A7:10; 190A9:15  
  vs. depth, 190A4:57; 190A5:63; 190A6:41, 44–45; 190A7:35; 190A8:41; 190A9:47  
magnetic intensity  
  sediments, 190A4:14; 190A5:18; 190A6:12–15; 190A7:10; 190A8:13; 190A9:14–15  
  vs. depth, 190A4:60–62; 190A5:63, 65; 190A6:41; 190A7:35; 190A8:41; 190A9:47  
  zones, 190A5:65  
magnetic intensity Zone 1, sediments, 190A5:18  
magnetic intensity Zone 2, sediments, 190A5:18  
magnetic intensity Zone 3, sediments, 190A5:18  
magnetic intensity Zone 4, sediments, 190A5:18  
magnetic polarity  
  ages, 196A3:81  
  basalt, 196A3:33  
  sediments, 190A4:15, 62, 130; 190A5:17–20; 190A8:13  
magnetic polarity reversals  
  correlation of Sites 808, 1173 and 1174, 190A5:69  
  vs. depth, 190A5:69  
magnetic susceptibility  
  correlation, 190A1:49–51  
  deformation, 190/196B9:4–5  
  hemipelagite, 190A1:26  
  sediments, 190A4:15, 28, 78; 190A5:18, 33, 81; 190A6:23, 55; 190A7:20, 47; 190A8:23–24; 190A9:26; 190/196B12:3  
  vs. depth, 190A4:60, 78; 190A5:81; 190A6:55; 190A7:47; 190A8:54; 190A9:60; 190/196B9:14  
magnetostratigraphy  
  chronostratigraphy, 190A1:28  
  comparison of Site 1174 to 1173, 190A5:19–20  
  correlation, 190A1:77  
  sediments, 190A4:15, 62, 130; 190A5:19, 67; 190A6:12–13; 190A7:11, 36; 190A8:13–14; 190A9:14–15, 97  
  vs. depth, 190A4:62; 190A5:67; 190A6:42; 190A7:36; 190A8:42; 190A9:49  
Mariana Trench, clay, 190/196B4:8  
mass accumulation rates  
  sediment thickness, 190A1:34, 84  
  *See also* sedimentation rates  
mass movements, lithologic units, 190A6:5  
maturation, organic matter, 190A1:35; 190A9:21  
Matuyama Chron  
  sediments, 190A4:15; 190A5:19; 190A6:13; 190A7:11; 190A8:13  
  *See also* Brunhes/Matuyama boundary  
Matuyama/Gauss boundary, comparison of Site 1174 to 1173, 190A5:19–20  
mélange, composition, 190A1:3  
mesophiles/thermophiles, temperature boundaries, 190A1:36; 190A5:28  
metamorphic rock fragments  
  photomicrograph, 190/196B3:25–27  
  quartzose sand, 190/196B3:7  
  sand, 190/196B3:6  
  sedimenticlastic sandstone, 190/196B3:9  
metasedimentary rocks  
  clasts, 190A7:6  
  Honshu–Izu collision zone, 190A1:27

- methane  
  bacteria, 190A1:36  
  concentration, 190A4:20–21  
  migration, 190A5:26–27  
  reduction, 190A4:18, 64  
  sediments, 190A1:35; 190A4:21; 190A5:25–27, 135–136; 190A8:18–19; 190A9:20  
  vs. depth, 190A4:65, 69–70, 133; 190A5:71; 190A6:47; 190A7:39–40; 190A8:45
- methane/ethane ratio  
  sediments, 190A6:19  
  vs. depth, 190A1:86
- Methanobacteriales*, microbiology, 190/196B1:8
- Methanosarcinales*, microbiology, 190/196B1:8
- mica, X-ray diffraction data, 190/196B5:7
- microbial activity, biogeochemistry, 190A1:35–36
- microbially mediated reactions, geochemistry, 190A4:18–19; 190A5:23–24; 190A6:17–18; 190A7:14–15; 190A9:18–19
- microbiology  
  Nankai Trough accretionary prism, 190/196B1:8  
  Site 1173, 190A4:23–24  
  Site 1174, 190A5:27–29, 74, 141–142  
  Site 1175, 190A6:19–20, 48–49, 86–87  
  Site 1176, 190A7:16–17, 76–77  
  Site 1177, 190A8:19–21  
  Site 1178, 190A9:22–23, 54, 104–105
- microcline, photomicrograph, 190/196B3:27
- microcrystalline texture, basement lithologic units, 196A3:30
- microfabric  
  décollement zone, 190/196B1:6  
  scanning electron microscopy photomicrograph, 190/196B7:23, 27  
  sediments, 190/196B7:6–7  
  *See also* fabric
- microfaults, high-angle, structure, 190A4:10
- microstructures, scanning electron microscopy, 190/196B7:1–27
- microstructures, open, scanning electron microscopy photomicrograph, 190/196B7:20
- Middle Slope–Basin Facies, lithologic units, 190A6:6
- mineral fragments  
  quartzose sand, 190/196B3:7  
  sand, 190/196B3:5  
  sedimenticlastic sandstone, 190/196B3:8–9
- Miocene  
  lithologic units, 190A5:9; 190A9:7–9; 196A3:18  
  nannofossils, 190A4:13; 190A5:16–17; 190A8:11–12; 190A9:13–14  
  sedimentation, 190/196B1:8–9  
  sediments, 190/196B12:3  
  turbidite, 190A1:27; 190/196B3:10  
  *See also* Pliocene–Miocene Turbidite Unit; Pliocene/Miocene boundary
- Miocene, lower, lithologic units, 190A8:7–9
- Miocene, lower–middle, lithologic units, 190A4:7–8
- Miocene, lower–upper, lithologic units, 190A8:5–7
- Miocene, middle, lithologic units, 196A3:18
- Miocene, upper  
  clay, 190/196B4:10–11  
  lithologic units, 190A8:5  
  siliciclastic turbidite, 190A1:26
- Miocene–Pleistocene interval, sandstone, 190/196B3:1–28
- Miocene–Pliocene interval, magnetostratigraphy, 190A8:13–14
- Miura group, clay, 190/196B4:10
- moisture, grain size, 190/196B8:7–10
- montmorillonite, Slope–Apron Facies, 190/196B4:5–6
- mottling, lithologic units, 190A4:6–8; 190A9:6–8
- mud  
  lithologic units, 196A4:15  
  photograph, 190A9:32
- mud, nannofossil-rich hemipelagic, lithologic units, 190A6:4–6; 190A7:5; 190A9:6–8
- mud, pebbly, lithologic units, 190A6:7
- mud, sandy, lithologic units, 190A9:6–8
- mud chips, photograph, 190A5:39
- mudstone, basal, photograph, 190A1:72; 190A8:36
- mudstone, hemipelagic  
  décollement zone, 190A1:29  
  lithologic units, 190A6:6–8; 190A7:5; 190A9:6–9
- mudstone, indurated hemipelagic, lithologic units, 190A8:5–7
- mudstone, pebbly  
  lithologic units, 190A7:6  
  photograph, 190A1:66; 190A6:33
- mudstone, sandy, lithologic units, 190A6:6; 190A7:5
- mudstone fragments, photomicrograph, 190/196B3:28
- Muroto Peninsula, geology and geophysics, 196A1:3–4
- Muroto Transect  
  clay, 190/196B4:8  
  cross section, 190/196B1:17  
  geology, 196A1:4  
  microstructures, 190/196B7:3  
  stratigraphy and structure of prism toe, 190/196B1:20  
  tectonics, 190A2:1–14  
  transects, 190A1:1–87
- Murotomiskai Canyon, submarine canyons, 190A6:7
- N**
- n*-alkanes  
  sediments, 190/196B14:1–10  
  vs. depth, 190/196B14:5
- n*-alkanes, terrigenous/aquatic ratio, vs. depth, 190/196B14:5, 8
- Nankai subduction zone  
  deformation, 196A1:1–29  
  geology and geophysics, 196A1:3–4  
  sediments, 190A1:26
- Nankai Trough accretionary prism  
  clay, 190/196B4:1–28  
  cross section, 190/196B4:18; 190/196B11:13  
  deformation, 190/196B1:1–25  
  geologic map, 190/196B4:24  
  geology, 190A1:2–7; 190/196B1:2–4; 190/196B11:2–3; 190/196B12:3–4  
  microstructures, 190/196B7:1–27  
  mudstone clay mineralogy, 190/196B6:1–37  
  negative polarity, 190/196B15:1–16

- organic carbon, 190/196B13:1–10  
 permeability, 190/196B10:1–16; 190/196B18:1–22;  
 190/196B19:1–12  
 physical properties, 190/196B12:1–18  
 physical properties and grain size, 190/196B8:1–25  
 porosity, 190/196B11:1–23  
 sediment source maps, 190/196B4:25  
 shaded relief map, 190A2:9  
 site summary, 190A1:87  
 summary, 190A1:1–87  
 tectonics, 190A2:1–14  
 transects, 190A1:1–87  
 turbidite sands and sandstones, 190/196B3:1–28  
 volcanic ash, 190/196B2:1–9  
 Nankai Trough forearc, crustal cross section, 190A1:44  
 Nankai Trough Trench Axial Zone  
 geology, 190A1:4–5  
 structural subdivisions, 190A2:4  
 Nankai–Shikoku Basin system  
 geology, 190A1:36–37  
 operational summary, 190A1:87  
 Nankai–Shikoku subduction zone, sedimentation, 190/  
 196B4:11  
 nannofossils  
 lithologic units, 190A4:8; 190A5:7–9; 190A7:5  
 lithostratigraphy, 190/196B4:3–4  
 range chart, 190A6:80; 190A7:70–71; 190A8:76–81;  
 190A9:91–96  
 range chart (Zones NN9–NN6), 190A4:129  
 range chart (Zones NN18–NN6), 190A5:128–131  
 range chart (Zones NN18–NN9), 190A4:125–128  
 range chart (Zones NN21–NN19), 190A4:123–124;  
 190A5:124–127  
 nannofossils, calcareous, biostratigraphy, 190A4:11–13,  
 120–123, 125, 129; 190A5:14–17, 121–124, 128–  
 131; 190A6:11; 190A7:8–10, 68–70; 190A8:11–12;  
 190A9:12–14  
 negative polarity, frontal thrust, 190/196B15:1–16  
 Neogene  
 geomagnetic polarity time scale, 190A4:14  
 nannofossils, 190A5:15  
 neohop-13(18)-ene, vs. depth, 190/196B14:7, 10  
 neutron porosity logs  
 porosity, 196A3:26, 69  
 vs. depth, 196A3:69  
 nitrogen  
 sediments, 190A4:135–137; 190A5:137–140;  
 190A6:18, 85; 190A7:75; 190A8:17–18, 85–86;  
 190A9:101  
 vs. depth, 190A4:19, 66; 190A5:72  
 nodules, lithologic units, 190A4:8  
 normalization factors, X-ray diffraction data, 190/  
 196B5:1–28  
 North Pacific Deep Water, clay, 190/196B4:8
- O**  
 ocean circulation, clay, 190/196B4:7–8  
 ocean floors, Japan Sea, 190A1:3  
 olivine phenocrysts  
 basement lithologic units, 196A3:30  
 photomicrograph, 196A3:75  
 opal-A  
 clay, 190/196B6:13  
 lithologic units, 190A4:9  
 sediments, 190A6:17  
 opal-CT  
 clay, 190/196B6:13  
 lithologic units, 190A4:9  
 volcanic ash, 190/196B2:4  
 opal-CT/quartz transition  
 décollement zone, 196A1:13  
 lithologic units, 190/196B12:4  
 organic matter, maturation, 190A1:35; 190A5:27;  
 190A9:21  
 organic matter, woody, upper Miocene, 190A1:26  
 outer trench wedge unit, microstructures, 190/196B7:3  
 overburden stress, deformation, 190/196B10:14  
 overpressure, décollement zone, 190/196B1:6
- P**  
 Pacific Plate, subduction boundaries, 190A1:2  
 paleoceanography, clay, 190/196B4:9–10  
 paleogeography, reconstruction, 190A1:45  
 paleomagnetism  
 comparison of Site 1174 to 1173, 190A5:19–20  
 Site 1173, 190A4:14–16, 57–62, 130; 196A3:32–33  
 Site 1174, 190A5:17–20, 63–66, 69  
 Site 1175, 190A6:12–15, 41–42, 44–45, 82  
 Site 1176, 190A7:10–11, 35, 72  
 Site 1177, 190A8:12–14  
 Site 1178, 190A9:14–15  
 particulate tracers, contamination, 190A4:24, 141;  
 190A5:29; 190A6:20; 190A8:21; 190A9:23  
 pebbles  
 lithostratigraphy, 190/196B4:3–4  
 photograph, 190A1:68  
 pebbles, quartz, photograph, 190A7:29  
 penetrative planar fabric, sediments, 190/196B7:6  
 pentane, sediments, 190A9:20–21  
 permeability  
 compressibility, 190/196B10:1–16  
 data, 190/196B10:15  
 sediments, 190/196B18:1–22; 190/196B19:1–12  
 vs. effective stress, 190/196B10:10; 190/196B18:18–19  
 permeability, gas  
 uncalibrated measurements, 190A4:10–11, 55–56;  
 190A5:13–14, 61; 190A6:10, 40; 190A7:8, 34;  
 190A8:10; 190A9:11  
 variations, 190A4:56  
 vs. depth, 190A4:55; 190A5:61; 190A6:40; 190A7:34;  
 190A8:40; 190A9:48; 190/196B18:10–11  
 permeability, intrinsic, vs. effective stress, 190/196B19:7  
 permeability, vertical, testing, 190/196B10:8–9  
 petrography  
 basement lithologic units, 196A3:31  
 volcanic ash, 190/196B2:1–9  
 Philippine Sea plate  
 geology and geophysics, 196A1:3–4  
 microstructures, 190/196B7:2  
 subduction, 190/196B1:3–4, 9–10

- subduction boundaries, 190A1:2
- tectonics, 190A2:2
- phosphate
  - pore water, 190A4:19, 64
  - vs. depth, 190A4:64
- phosphorus oxide, basalt, 196A3:32, 96
- photoelectric effect logs
  - gamma-ray logs, 196A4:17, 43
  - vs. depth, 190A4:81; 196A3:50, 54
  - vs. gamma-ray logs, 196A3:20, 49
- physical properties
  - changes, 190A1:32–34; 190/196B7:3–5
  - comparison with downhole measurements, 190A4:29
  - cores, 196A3:29–30
  - décollement zone, 190/196B12:1–18
  - grain size, 190/196B8:1–25
  - logs, 196A3:23–26; 196A4:23–26
  - Nankai Trough, 196A1:10; 196A4:3
  - Site 1173, 190A4:24–30; 196A1:7; 196A3:3
  - Site 1174, 190A5:29–34, 75, 145–146
  - Site 1175, 190A6:21–24, 50–56, 90–91
  - Site 1176, 190A7:17–20, 42–48, 78–79
  - Site 1177, 190A8:21–24
  - Site 1178, 190A9:23–27
- pillow basalt, composition, 190A1:4–5
- pillow lavas, basement lithologic units, 196A3:31
- plagioclase
  - basement lithologic units, 196A3:30
  - lithologic units, 196A3:19–20; 196A4:16
  - quartzose sand, 190/196B3:7
  - sedimenticlastic sandstone, 190/196B3:8–9
  - vs. depth, 190A4:47; 190A5:46; 190A6:34; 190A7:30; 190A8:37; 190/196B5:15
  - X-ray diffraction data, 190A6:8; 190A7:6; 190A8:9; 190/196B5:13–14
- plagioclase microphenocrysts, photomicrograph, 190/196B3:25
- plagioclase phenocrysts
  - basement lithologic units, 196A3:30–31
  - photomicrograph, 190/196B3:25
- plant material, photograph, 190A8:32
- Pleistocene
  - lithology, 190A1:4–5
  - nannofossils, 190A4:11–12; 190A5:15; 190A6:11; 190A7:9; 190A9:12
  - stratigraphy, 196A1:4
  - turbidite, 190/196B3:11
- Pleistocene, lower, clay, 190/196B4:9–10
- Pleistocene/Pliocene boundary, nannofossils, 190A4:12; 190A5:15; 190A6:11; 190A9:12–13
- Pliocene
  - lithologic units, 190A4:7–8; 190A5:8–9; 190A8:5–9; 190A9:6–8; 190/196B12:3; 196A3:18
  - lithology, 190A1:4–5
  - lithostratigraphy, 190/196B4:3–4
  - nannofossils, 190A4:12–13; 190A5:15–16; 190A6:11; 190A7:9–10; 190A8:11; 190A9:12–13
  - sediments, 190A1:26
  - stratigraphy, 196A1:3–4
  - turbidite, 190/196B3:11
  - See also* Pleistocene/Pliocene boundary
- Pliocene, upper, clay, 190/196B4:9–11
- Pliocene–Miocene Turbidite Unit, sediments, 190A1:6–7
- Pliocene/Miocene boundary, nannofossils, 190A4:13; 190A5:16; 190A8:11
- plutonic rock fragments, quartzose sand, 190/196B3:7
- pore pressure, evolution, 190/196B10:12
- pore water
  - chloride, 190A1:81
  - frontal thrust zone, 196A4:29
  - geochemistry, 190A4:16–17, 64, 131–132; 190A5:20–24, 70, 133–134; 190A6:15–18, 46, 83; 190A7:11–15, 38, 73; 190A8:14–17, 83; 190A9:15–19, 98
  - geology, 190A1:5–9
- porosity
  - accretionary prism facies, 190A7:20
  - chemical gradients, 190A1:8
  - compaction, 190A9:26
  - comparison of Sites 808 and 1173, 196A4:24–25, 58
  - correction, 190/196B11:4
  - décollement zone, 190/196B1:6
  - density logs, 196A3:23–24, 62–64; 196A4:23–25
  - diagenesis, 196A1:13
  - fault planes, 190/196B15:5–8
  - fault zones, 196A1:13
  - grain size, 190/196B8:9–10
  - lithofacies, 190A1:32–33; 190A5:33–34
  - neutron porosity logs, 196A3:26, 69
  - overburden, 190A4:29
  - permeability, 190/196B18:4
  - physical properties, 190A6:24
  - sediments, 190A4:25–26, 28, 73; 190A5:30–31, 33–34, 75; 190A6:21–22, 50; 190A7:18, 20, 42; 190A8:21–22; 190A9:24–25; 190/196B7:3–5, 10; 190/196B12:8–9
  - Slope–Basin Facies, 190A7:20
  - Trench–Wedge Facies, 190A1:32
  - turbidites, 190A8:24
  - vs. clay percent, 190/196B8:19
  - vs. compressional wave velocity, 190A4:84; 190A5:79
  - vs. depth, 190A1:79, 82–83; 190A4:73; 190A5:75; 190A6:50; 190A7:42; 190A8:49; 190A9:55; 190/196B7:16–17; 190/196B11:15–17; 190/196B12:4; 196A3:62, 64, 74; 196A4:56
  - vs. depth below décollement zone, 190A5:76
  - vs. impedance, 190/196B12:15
  - vs. velocity, 190/196B11:1–23
  - vs. vertical compressional wave velocity, 190/196B7:18–19
  - vs. weight percent clay, 190/196B8:20
  - See also* void ratio
- porosity, critical, correction, 190/196B11:5–6
- porosity logs
  - sediments, 190A4:31–32, 81
  - vs. depth, 190A4:81; 196A1:23, 25; 196A3:36; 196A4:33, 50
  - See also* neutron porosity logs
- potassium
  - authigenesis, 190/196B6:12
  - illite–smectite reaction, 190/196B6:9–10

pore water, 190A4:17; 190A5:22, 70; 190A6:16;  
190A7:13, 15; 190A8:16, 44  
vs. depth, 190A4:64; 190A5:70; 190A6:46; 190A7:38;  
190A8:44

potassium feldspar, sedimenticlastic sandstone, 190/  
196B3:8–9

potassium logs, vs. depth, 190A4:82

potassium oxide, basalt, 196A3:32, 96

preferred orientation, clay minerals, 190/196B7:6–13

pressure  
clay, 190/196B6:13  
porosity, 190A9:26–27  
sediments, 190A4:34, 91; 190A5:34–35, 82–84;  
190A9:26–27  
Site 1173, 190A4:34, 91  
Site 1175, 190A6:24, 60  
Site 1176, 190A7:20–21, 49–53, 80  
vs. time, 190A4:91; 190A5:85; 190A6:60; 190A7:53;  
190/196B1:23

prism backthrust, photograph, 190A5:52

propane  
migration, 190A5:26–27  
sediments, 190A4:21; 190A5:25–27, 135–136;  
190A9:20  
thermogenic vs. biogenic, 190A1:85  
vs. depth, 190A4:65; 190A5:71

proto-Izu–Bonin arc, rifting, 190A1:3

proto-turbidite, Nankai Trough, 190/196B3:10

protodécollement horizon, sediments, 190/196B7:11

Protothrust Zone  
deformation, 190/196B1:3  
domains, 190A5:11–12  
geology, 190A1:5  
microstructures, 190/196B7:3  
seismic data, 190A1:4–8  
structural subdivisions, 190A2:4–5

Protothrust Zone, seismically imaged, domains,  
190A5:12

provenance  
clay, 190/196B3:6–7  
detritus, 190/196B6:10–11  
sandstone, 190/196B3:1–28

pumice fragments  
lithologic units, 190A6:6  
photograph, 190A9:33

pyrite  
lithologic units, 190A4:6  
X-ray diffraction data, 190A6:8

pyroclastic materials, lithologic units, 190A4:7

pyroxene, X-ray diffraction data, 190A6:8

**Q**

quartz  
lithologic units, 190A4:6–9; 190A5:7–8; 196A3:19–20;  
196A4:4–6, 16  
quartzose sand, 190/196B3:6  
quartzose and sedimenticlastic sand, 190/196B3:8  
relative abundance, 190/196B6:5  
sand, 190/196B3:5  
sedimenticlastic sandstone, 190/196B3:8–9

Slope–Apron Facies, 190/196B4:5–6

turbidite, 190/196B3:4  
vs. depth, 190A4:47; 190A5:46; 190A6:34; 190A7:30;  
190A8:37; 190/196B4:22–23; 190/196B5:15–16;  
190/196B6:20–22

X-ray diffraction data, 190A5:9; 190A6:8; 190A7:6;  
190A8:9; 190/196B4:20; 190/196B5:13–14  
*See also* cristobalite/quartz transition; opal-CT/quartz  
transition

quartz grains, polygonal, photomicrograph, 190/  
196B3:26

Quaternary  
clay, 190/196B4:8–9  
lithologic units, 190A4:6–7; 190A5:7–9; 190A6:4–6;  
190A7:5–6; 190A9:6–8; 196A3:18  
lithostratigraphy, 190/196B4:3–4  
sediments, 190A1:26  
Trench–Wedge Facies, 190/196B6:10–11  
Quaternary, upper, nannofossils, 190A5:14–15

**R**

radiolarians, lithologic units, 190A6:6

recrystallization, lithologic units, 190A4:8

reduction  
methane, 190A4:18, 64  
*See also* sulfate reduction

reflectors  
diagenesis, 196A1:13  
Inline 215, 190/196B15:16

remanent magnetization, characteristic, principal com-  
ponent analysis, 196A3:32–33

remanent magnetization, depositional, sediments,  
190A8:13

remanent magnetization, isothermal, data, 190A5:18

remanent magnetization, multicomponent isothermal,  
magnetic intensity zones, 190A5:66

remanent magnetization, natural  
magnetic declination, 190A6:12–15  
sediments, 190A4:14; 190A5:17–18; 190A6:12

remanent magnetization, saturation isothermal, data,  
190A5:18

resistivity logs  
breakouts, 196A1:27  
correlation, 196A3:25–26, 45, 68; 196A4:25–26, 61  
correlation of deep vs. medium, 196A3:68  
correlation of deep vs. ring, 196A3:68  
correlation of deep vs. shallow, 196A3:68  
correlation of ring vs. bit, 196A3:68  
density, 196A1:7, 10  
sediments, 190A4:31–32, 81  
vs. density logs, 196A4:18, 43  
vs. depth, 190A4:81; 196A1:23, 25; 196A3:47, 50–54,  
57, 59, 65–67, 83; 196A4:33, 38–40, 42, 50  
vs. Formation Microscanner imaging, 196A3:82

resistivity-at-the-bit images  
accretionary prisms, 196A1:1–29  
basaltic basement, 196A3:59  
bedding dips, 196A4:19–20  
breakouts, 196A4:52–53  
décollement zone, 196A4:21–22, 50–51

fractures, 196A3:57; 196A4:18–19, 45  
 frontal thrust zones, 196A4: 20–21, 46, 49  
 lithology, 196A3:20–21, 52–54, 59  
 rhyolite fragments, banded, photomicrograph, 190/196B3:27  
 rifting, proto-Izu–Bonin arc, 190A1:3  
 rock magnetism, data, 190A5:18  
 rupture planes, photograph, 190/196B10:11

**S**

salinity, sediments, 190/196B7:10  
 sand  
   composition, 190/196B3:5–9, 18  
   lithologic units, 196A4:15; 190A8:5–7  
   modal analysis, 190/196B3:21–24  
   photograph, 190A1:59; 190A6:39; 190A9:40, 45  
   provenance, 190/196B3:1–28  
   volcanic ash, 190/196B2:4  
 sand, clayey, lithologic units, 190A7:5  
 sand, fine, photograph, 190A1:75  
 sand, graded, photograph, 190A5:39  
 sand, quartzose  
   composition, 190/196B3:6–8  
   photomicrograph, 190/196B3:26  
 sand, sedimenticlastic, composition, 190/196B3:8–9  
 sand, silty  
   lithologic units, 190A4:6; 190A7:5; 190A8:5–7  
   photograph, 190A7:27–28; 190A9:35  
 sand, silty–muddy, lithologic units, 190A5:7–8  
 sand, volcaniclastic, 190/196B3:5–6, 12  
 sand beds, sedimentation, 190/196B1:9  
 sandstone  
   composition, 190/196B3:18  
   lithology, 196A1:9  
   provenance, 190/196B3:1–28  
 sandstone, quartzose  
   composition, 190/196B3:8, 12  
   photomicrograph, 190/196B3:27  
 sandstone, sedimenticlastic, composition, 190/196B3:8–9, 12  
 sandstone, vitric, lithologic units, 196A4:15  
 scanning electron microscopy, microstructures, 190/196B7:1–27  
 Schlumberger Dipole Shear Imager, instruments, 190/196B16:8  
 seamounts, tectonics, 190A2:2  
 sediment thickness  
   mass accumulation rates, 190A1:34, 84  
   vs. biostratigraphic and paleomagnetic ages, 190A1:34, 84  
 sedimentary lithic fragments  
   photomicrograph, 190/196B3:25  
   quartzose sand, 190/196B3:7  
   sand, 190/196B3:6  
   sedimenticlastic sandstone, 190/196B3:8–9  
 sedimentation, tectonics, 190/196B1:8–9; 190/196B3:20  
 sedimentation rates  
   Brunhes/Matuyama boundary, 190A6:13, 43; 190A7:11, 36  
   changes, 190A4:15–16, 63

magnetostratigraphy, 190A5:19; 190A8:14  
 tectonics, 190/196B1:9  
*See also* mass accumulation rates  
 sedimentology, volcanic ash, 190/196B2:1–9  
 sediments  
   deformation, 190A1:26  
   permeability, 190/196B18:1–22; 190/196B19:1–12  
   source maps, 190/196B4:25  
   summary, 190A1:26–27  
 seismic Inline 215, reflectors, 190/196B15:16  
 seismic Inline 284, reflectors, 190/196B15:12, 15  
 seismic Line 268, trench, 190/196B12:17  
 seismic lines  
   interpretation, 190A1:48  
   seismic reflection, 190A4:92; 190A5:86; 190/196B12:13; 196A3:41  
 seismic profiles  
   Ashizuri Transect, 190A1:53  
   contrasting stratigraphic and deformational framework along strike, 190A1:9  
   Muroto Transect, 190A1:52, 54  
   Site 808, 196A4:35  
   Site 1173, 190A4:39  
   structural and stratigraphic interpretation, 190A1:80  
 seismic reflection  
   deformation, 190/196B1:4–5  
   logs, 196A1:7, 11; 196A3:3, 27–28; 196A4:3–4  
   negative polarity, 190/196B15:1–16  
   physical properties, 190/196B12:1–18  
   seismic lines, 190A4:92; 190A5:86  
   structural subdivisions, 190A2:3–5, 13  
 seismic reflection, three-dimensional  
   inversion, 190/196B12:5–6  
   stratigraphy, 190A6:61; 190A7:54; 190A8:56; 190A9:27  
   tectonics, 190A2:3, 14; 190/196B12:4–5  
   vs. depth, 190A9:63  
 seismic sections, 196A1:19–21  
 seismic stratigraphy  
   Site 1173, 190A4:34–35, 92  
   Site 1174, 190A5:35, 85–86  
   Site 1175, 190A6:24–25, 61  
   Site 1176, 190A7:21, 54  
   Site 1177, 190A8:25  
   Site 1178, 190A9:27, 63  
 seismic–logging integration, negative polarity, 190/196B15:1–16  
 seismicity, geology, 190A1:3–4  
 seismograms, synthetic  
   logging-while-drilling, 190/196B17:14–15  
   logs, 196A3:27–28, 71; 196A4:26–27, 63  
 serpentinization, geology, 190A1:4  
 Setouchi volcanic belt  
   clay, 190/196B4:7  
   turbidite, 190/196B3:10  
 settling, hemipelagic, lithologic units, 190A8:6  
 shale, hemipelagic, composition, 190A1:3  
 shale, highly sheared scaly, composition, 190A1:3  
 shale fraction  
   porosity, 190/196B11:6–7  
   vs. depth, 190/196B11:20

- shear strength, sediments, 190A4:26, 74; 190A7:18, 43;  
190A9:24–26, 55
- shear strength, undrained, vs. depth, 190A4:74
- shear strength, undrained peak, vs. depth, 190A6:51;  
190A7:43
- shear wave velocity, processing, 190/196B16:4
- shear wave velocity logs, vs. depth, 190A4:81
- shear wave velocity slowness logs  
vs. compressional wave velocity slowness logs, 190/  
196B16:15  
vs. depth, 190/196B16:13–14
- shear zones, domains, 190A5:12
- shell fragments, photograph, 190A9:32
- Shikoku Basin  
geology, 190/196B1:2–4  
geology and geophysics, 196A1:3–4  
sediments, 190A1:1–87  
structural subdivisions, 190A2:4  
velocity–porosity relationship, 190/196B11:7  
X-ray diffraction data, 190/196B5:1–28
- Shikoku Basin Facies  
clay minerals, 190/196B5:6–7  
lithologic units, 196A4:15  
microstructures, 190/196B7:3  
sedimentation, 190/196B1:8–9
- Shimanto Belt, Cretaceous and Tertiary, 190A1:2
- Shionomisaki Canyon  
clay, 190/196B4:8  
submarine canyons, 190A6:7
- silica  
basalt, 196A3:32, 96  
diagenesis, 196A1:13  
lithologic units, 196A3:18  
pore water, 190A4:17–18, 64; 190A5:22, 70;  
190A6:16; 190A7:13; 190A8:17, 44  
sediments, 190A9:18  
vs. depth, 190A4:64; 190A5:70; 190A6:46; 190A7:38;  
190A8:44; 196A1:22
- silica, cryptocrystalline, lithologic units, 190A4:8;  
190A5:9
- siliceous microfossils, lithologic units, 190A5:7–8
- silicoflagellates, lithologic units, 190A6:6
- silt, clayey, lithologic units, 190A4:6–7; 190A5:7–8;  
190A6:4–6; 190A7:5; 190A9:7–9
- siltstone  
lithologic units, 196A4:15  
lithology, 196A1:9
- siltstone, clayey  
lithologic units, 190A4:7; 190A5:8–9; 190A8:5–9;  
190A9:6–9; 196A4:15  
lithology, 196A1:9
- Site 297, X-ray diffraction data, 190/196B5:1–28
- Site 808, 196A4:1–68  
background and objectives, 196A4:4–5  
lithologic units, 190A4:106  
logging-while-drilling sonic data, 190/196B17:1–15  
magnetic intensity, 190A4:61  
operations, 196A1:29; 196A4:5–12, 66  
physical properties, 196A1:10; 196A4:3  
site description, 196A4:1–68  
structural geology, 196A1:9–10; 196A4:2–3  
summary, 196A1:8–11; 196A4:1–4
- Site 1173, 190A4:1–147; 196A3:1–97  
background and objectives, 196A3:4–5  
biostratigraphy, 190A4:11–13  
coring, 190A4:93–105; 196A3:87  
downhole measurements, 190A4:30–34, 146  
geology, 190/196B12:3–4  
grain size, 190/196B8:8  
igneous petrology, 196A3:30–32  
in situ temperature and pressure, 190A4:34, 88–91,  
147  
inorganic geochemistry, 190A4:16–19, 64, 131  
lithostratigraphy, 190A4:6–9; 190/196B11:14  
logging-while-drilling sonic data, 190/196B17:1–15  
microbiology, 190A4:23–24  
microstructures, 190/196B7:6–7  
mudstone clay mineralogy, 190/196B6:1–37  
operations, 190A4:4–6; 196A1:28; 196A3:5–14, 84  
organic geochemistry, 190A4:19–22, 65–67, 133, 135  
paleomagnetism, 190A4:14–16, 57–62, 130;  
196A3:32–33  
permeability, 190/196B18:1–22; 190/196B19:1–12  
physical properties, 190A4:24; 196A1:7; 196A3:3  
sand, 190/196B3:5–6  
seismic stratigraphy, 190A4:34–35, 92  
site description, 190A4:1–147; 196A3:1–97  
structural geology, 190A4:9–11, 115; 196A1:6–7;  
196A3:2–3  
summary, 190A1:9–12, 55; 190A4:1–4; 196A1:5–8;  
196A3:1–4  
volcanic ash, 190/196B2:1–9  
volcanology, 196A3:30–32  
well-logging, 196A3:14–15  
wireline logging, 190/196B16:1–15
- Site 1174, 190A5:1–149  
biostratigraphy, 190A5:14–17, 121–124, 128–131  
coring, 190A5:87–100  
geology, 190/196B12:4  
grain size, 190/196B8:8–9  
in situ temperature and pressure, 190A5:34–35, 82–  
84, 149  
inorganic geochemistry, 190A5:20–24, 70, 133  
lithostratigraphy, 190A5:7–10, 38, 101  
microbiology, 190A5:27–29, 74, 141–142  
microstructures, 190/196B7:7–9  
mudstone clay mineralogy, 190/196B6:1–37  
operations, 190A5:4–7  
organic geochemistry, 190A5:24–27, 71–72, 135, 137  
paleomagnetism, 190A5:17–20, 63–66, 69  
permeability, 190/196B18:1–22; 190/196B19:1–12  
physical properties, 190A5:29–34, 75, 145–146  
sand, 190/196B3:5–6  
seismic stratigraphy, 190A5:35, 85–86  
site description, 190A5:1–149  
structural geology, 190A5:10–14, 48, 112  
summary, 190A1:12–15, 58; 190A5:1–4  
volcanic ash, 190/196B2:1–9
- Site 1175, 190A6:1–92  
biostratigraphy, 190A6:10–11, 78–80  
coring, 190A6:62–68  
grain size, 190/196B8:9



- inorganic geochemistry, 190A6:15–18, 46, 83
- lithostratigraphy, 190A6:4–8, 27, 69
- microbiology, 190A6:19–20, 48–49, 86–87
- operations, 190A6:3–4
- organic geochemistry, 190A6:18–19, 47, 84–85
- paleomagnetism, 190A6:12–15, 41–42, 44–45, 82
- physical properties, 190A6:21–24, 50–56, 90–91
- quartzose sand, 190/196B3:6–7
- seismic stratigraphy, 190A6:24–25, 61
- site description, 190A6:1–92
- structural geology, 190A6:9–10, 35–39, 75
- summary, 190A1:15–17, 64; 190A6:1–3
- Site 1176, 190A7:1–80
  - biostratigraphy, 190A7:8–10, 68–70
  - coring, 190A7:55–56
  - in situ temperature and pressure, 190A7:20–21, 49–53, 80
  - inorganic geochemistry, 190A7:11–15, 38, 73
  - lithostratigraphy, 190A7:4–7, 23, 61
  - microbiology, 190A7:16–17, 76–77
  - operations, 190A7:4
  - organic geochemistry, 190A7:15–16, 39–40, 74–75
  - paleomagnetism, 190A7:10–11, 35, 72
  - physical properties, 190A7:17–20, 42–48, 78–79
  - quartzose sand, 190/196B3:6–7
  - seismic stratigraphy, 190A7:21, 54
  - site description, 190A7:1–80
  - structural geology, 190A7:7–8, 31–33, 66
  - summary, 190A1:17–20, 67; 190A7:1–3
- Site 1177, 190A8:1–91
  - coring, 190A8:57–63
  - grain size, 190/196B8:9
  - inorganic geochemistry, 190A8:14–17
  - lithostratigraphy, 190A8:5–9, 27, 64
  - microbiology, 190A8:19–21
  - mudstone clay mineralogy, 190/196B6:1–37
  - operations, 190A8:4–5
  - organic geochemistry, 190A8:17–19
  - paleomagnetism, 190A8:12–14
  - physical properties, 190A8:21–24
  - quartzose and sedimenticlastic sands and sandstones, 190/196B3:8
  - seismic stratigraphy, 190A8:25
  - site description, 190A8:1–91
  - structural geology, 190A8:9–10
  - summary, 190A1:20–22, 69; 190A8:1–4
  - volcanic ash, 190/196B2:1–9
- Site 1178, 190A9:1–108
  - biostratigraphy, 190A9:11–14
  - coring, 190A9:64–74
  - deformation, 190/196B9:1–15
  - fatty acids, 190/196B14:1–10
  - hopanoids, 190/196B14:1–10
  - in situ temperature and pressure, 190A9:26–27
  - inorganic geochemistry, 190A9:15–19
  - lithostratigraphy, 190A9:6–9, 29, 75
  - microbiology, 190A9:22–23, 54, 102–103
  - n*-alkanes, 190/196B14:1–10
  - operations, 190A9:4–6
  - organic geochemistry, 190A9:19–22
  - paleomagnetism, 190A9:14–15
  - physical properties, 190A9:23–27
  - seismic stratigraphy, 190A9:27, 63
  - site description, 190A9:1–108
  - structural geology, 190A9:9–11, 37–40, 80–87
  - summary, 190A1:23–25, 73; 190A9:1–4
  - slate fragments, photomicrograph, 190/196B3:25
  - slickensides
    - scanning electron microscopy photomicrograph, 190/196B7:21, 27
    - sediments, 190A7:8; 190A9:10; 190/196B7:7
  - sliding, permeability, 190/196B10:6
  - Slope to Prism Transition facies, lithologic units, 190A6:6–8; 190A7:5–6
  - Slope–Apron Facies
    - lithologic units, 190A5:7
    - lithostratigraphy, 190/196B3:5–6
  - Slope–Basin Facies
    - lithologic units, 190A6:8; 190A7:5–6
    - lithostratigraphy, 190/196B4:3–5
    - See also* Middle Slope–Basin Facies; Upper Slope–Basin Facies
  - slowness analysis, logging-while-drilling, 190/196B17:4–5, 10
  - slump folding, structure, 190A6:9–10, 35–39, 75
  - slump folding hinge, photograph, 190A6:36
  - slumped bedding, turbidite, 190/196B3:4
  - smectite
    - clay-sized fraction, 190/196B4:7; 190/196B6:7–14
    - dehydration, 190A1:8; 190/196B5:6–7
    - lithologic units, 190A4:9; 190A5:9
    - mudstone, 190/196B6:8–9, 25
    - relative abundance, 190/196B6:5
    - sediments, 190/196B7:10
    - Slope–Apron Facies, 190/196B4:5–6
    - types, 190/196B6:6–7
    - vs. depth, 190/196B4:22–23; 190/196B5:16, 18; 190/196B6:20–22
    - X-ray diffraction data, 190/196B4:20; 190/196B5:6
    - See also* illite–smectite reaction; illite/smectite clays
  - sodium
    - pore water, 190A4:17; 190A5:22, 70; 190A6:16; 190A7:12–13, 15; 190A8:16, 44
    - vs. depth, 190A4:64; 190A5:70; 190A6:46; 190A7:38; 190A8:44
  - sodium/chloride ratio, vs. depth, 190A7:38
  - sodium oxide, basalt, 196A3:32, 96
  - soft sediment deformation, lithologic units, 190A9:7
  - sonic velocity logs
    - reprocessing, 190/196B16:1–15
    - sediments, 190A4:32–33, 83–84
  - Spectrex laser particle counter, instruments, 190/196B8:3–7, 21–22
  - spreading centers, deformation, 190/196B1:3
  - strain
    - data, 190/196B10:15
    - permeability, 190/196B10:1–16
  - strain discontinuity, décollement zone, 190A1:29
  - stratification, lithologic units, 190A9:6–9
  - stratigraphic units
    - summary, 190A4:106
    - See also* lithologic units; lithostratigraphy

stratigraphy  
    framework along strike, 190A1:9  
    summary, 190A1:26–27  
strength, sediments, 190/196B7:5  
stress  
    data, 190/196B10:15  
    deformation, 190/196B1:4–5  
    *See also* effective stress  
stress, in situ, breakouts, 196A4:22  
stress magnitudes, structures, 196A1:12  
stress orientations, structures, 196A1:12  
strontium, basalt, 196A3:32, 96  
structural features in Domain III, stereographic projections, 190A9:41  
structural features in Domain IV, stereographic projections, 190A9:44  
structural geology  
    Nankai Trough, 196A1:9–10; 196A4:2–3  
    Site 1173, 190A4:9–11, 115; 196A1:6–7; 196A3:2–3  
    Site 1174, 190A5:10–14, 48, 112  
    Site 1175, 190A6:9–10, 35–39, 75  
    Site 1176, 190A7:7–8, 31–33, 66  
    Site 1177, 190A8:9–10  
    Site 1178, 190A9:9–11, 37–40, 80–87  
structural subdivisions, seismic reflection, 190A2:3–5, 13  
structure, incipient weblike, photograph, 190A1:75  
structures  
    data, 190A4:115–119; 190A5:112–120; 190A7:66–67; 190A8:71–72; 190A9:80–87  
    décollement zone, 190A1:8  
    logs, 196A3:22–23; 196A4:18–22  
    stress magnitudes, 196A1:12  
    *See also* microstructures  
structures, core-scale, deformation, 190/196B1:4–5  
subduction zones  
    geology, 190/196B1:2–4  
    geology and geophysics, 196A1:3–4  
    Pacific Plate, 190A1:2  
    sedimentation, 190/196B1:8–9  
sulfate  
    bacteria, 190A1:36  
    pore water, 190A8:15, 44  
    sediments, 190A4:18, 64; 190A5:23–24, 70; 190A6:17; 190A7:14; 190A9:19  
    vs. depth, 190A4:64, 69; 190A5:70; 190A6:46; 190A7:38; 190A8:44  
sulfate reduction zone  
    concentration, 190A4:20–21  
    hydrocarbons, 190A6:18; 190A7:16  
sulfur  
    sediments, 190A1:35; 190A4:135–137; 190A5:137–140; 190A6:18, 85; 190A7:16, 75; 190A8:17–18, 85–86; 190A9:101  
    vs. depth, 190A7:40; 190A9:52  
Suruga Trough, clay, 190/196B4:8  
suspended sediments, transport, 190/196B3:7–8

**T**

Tanzawa massif, accretion, 190A1:3  
tectonic domains, maps, 190A2:13

tectonics  
    geology, 190A2:1–14  
    sedimentation, 190/196B1:8–9, 24–25  
    turbidite, 190/196B3:3–4  
    velocity, 190/196B11:7–9  
temperature  
    diagenesis, 196A1:4  
    sediments, 190A4:26–27, 57, 75, 147; 190A5:31, 77; 190A7:18–19, 44  
    vs. depth, 190A4:57, 75, 90; 190A5:77, 84; 190A6:52, 59; 190A7:44, 52; 190A9:62; 196A1:22  
    vs. time, 190A4:89; 190A5:82–83; 190A6:57; 190A7:49–51; 190A9:61  
    *See also* unblocking temperature  
temperature, in situ  
    porosity, 190A9:26  
    sediments, 190A4:34, 88–90, 147; 190A5:34–35, 82–84, 149; 190A9:26–27  
    Site 1173, 190A4:34, 88–91, 147  
    Site 1175, 190A6:24–25, 57–59, 92  
    Site 1176, 190A7:20–21, 49–53, 80  
temperature, sea-surface  
    alkenone, 190/196B13:1–10  
    vs. depth, 190/196B13:9  
temperature boundaries, thermophiles/hyperthermophiles, 190A1:36  
Tenryu Canyon, clay, 190/196B4:8  
tephra layers, trench, 190A1:4–5  
Tertiary, Shimanto Belt, 190A1:2  
textures, basement lithologic units, 196A3:93–95  
thermal conductivity  
    cores, 196A3:30, 92  
    sediments, 190A4:26–27, 57, 75; 190A5:31, 77; 190A7:18–19, 44; 190A8:22  
    vs. depth, 190A4:57, 75; 190A5:77; 190A6:52; 190A7:44; 190A8:50; 190A9:57; 196A3:74  
thermal structure, geology, 190A1:3–4  
*Thermococcus*, microbiology, 190/196B1:8  
thermophiles. *See* mesophiles/thermophiles  
thermophiles/hyperthermophiles, temperature boundaries, 190A1:36  
thorium logs, vs. depth, 190A4:82  
thrust zones  
    sediments, 196A1:9–10  
    *See also* Large Thrust-Slice Zone  
thrust zones, frontal, resistivity-at-the-bit images, 196A4:20–21, 29–30, 46, 49  
thrust zones, imbricate, stratigraphy, 196A1:4  
time boundaries, correlation, 190A1:49–51  
titanomagnetite, basement lithologic units, 196A3:31  
trench sediments  
    permeability, 190A5:14  
    sedimentation, 190/196B1:9  
Trench–Basin Transition Facies  
    lithologic units, 196A4:15  
    logs, 196A3:21, 53  
    microstructures, 190/196B7:3  
Trench-Fill Facies  
    lithologic units, 196A4:15  
    resistivity, 190/196B1:21  
    turbidite, 190/196B3:4

Trench–Slope Facies  
 clay, 190/196B4:1–28  
 lithologic units, 190A6:5  
 sedimentation, 190/196B1:9

Trench–Wedge Facies  
 lithologic units, 190A4:6–7; 190A5:7–8; 196A3:18  
 logs, 196A3:21, 52  
 magnetic susceptibility, 190/196B9:5–6  
 porosity, 190A1:32; 190/196B12:8–9  
 Quaternary, 190/196B6:10–11

Tsushima Current, sedimentation, 190/196B4:11

tuff, lithologic units, 190A4:7; 196A4:15

tuff, vitric, volcanic ash, 190/196B2:4

tuffaceous fragments, silicic, photomicrograph, 190/196B3:26

turbidite  
 composition, 190A1:3  
 lithologic units, 190A9:6–9; 196A4:15  
 lithostratigraphy, 190/196B4:3–4  
 logging-while-drilling sonic data, 190/196B17:1–15  
 Miocene, 190A1:27  
 permeability, 190A5:14  
 photograph, 190A6:27  
 Pliocene–Miocene Turbidite Unit, 190A1:6–7  
 provenance, 190/196B3:1–28  
 sedimentation, 190/196B1:8–10  
 sonic logs, 190/196B16:1–15  
 stratigraphy, 196A1:4  
 trench, 190A1:4–5  
*See also* proto-turbidite

turbidite, sandy  
 lithologic units, 190A6:6–8; 190A7:5–6  
 photograph, 190A4:42; 190A6:30; 190A9:34

turbidite, sandy–muddy, lithologic units, 196A3:18

turbidite, siliciclastic  
 photograph, 190A8:32–33  
 upper Miocene, 190A1:26

turbidite, trench–wedge, magnetostratigraphy, 190A1:28

turbidite, wood-rich sandy, photograph, 190A1:70; 190A8:31

Turbidite Facies  
 logs, 196A3:21, 52  
 X-ray diffraction data, 190/196B5:7

turbidity currents  
 clay, 190/196B4:9  
 lithologic units, 190A4:6–7; 190A5:7–8; 190A8:6; 196A4:15

**U**

unblocking temperature, remanent magnetization, 190A5:18

underthrust domain  
 décollement zone, 196A4:30  
 porosity, 190/196B11:1–23  
 structure, 190A5:13

unsaturation index, alkenone, 190/196B13:3–4

Upper Shikoku Basin Facies  
 lithologic units, 190A4:7; 190A5:8–9; 190A8:5; 190/196B12:3–4  
 physical properties, 190A1:32–33

volcanic ash, 190/196B2:3

Upper Shikoku Basin Facies/Lower Shikoku Basin Facies boundary  
 lithologic units, 190/196B12:3–4, 6–10, 14  
 logs, 196A3:34–35

Upper Slope–Basin Facies, lithologic units, 190A6:4–6  
 uranium logs, vs. depth, 190A4:82

**V**

variolitic texture, photomicrograph, 196A3:77

veins, structure, 190A4:10, 54; 190A8:10

veins, calcite, lithologic units, 190A8:9

veins, chlorite, lithologic units, 190A8:9

veins, mineralized, photograph, 190A4:54

veins, quartz, photomicrograph, 190/196B3:26, 28

veins, subhorizontal, photograph, 190A8:39

velocity  
 comparison with downhole measurements, 190A4:29  
 ISONIC, 196A1:13–14  
 lithofacies, 190A1:32–33  
 vs. depth, 190A1:82–83  
 vs. porosity, 190/196B11:1–23  
 velocity, acoustic, sediments, 190A4:27, 76; 190A5:31–32, 78; 190A6:22–23, 53; 190A7:19, 45; 190A8:22–23; 190A9:25  
 velocity, seismic, two-way traveltime, 190/196B12:16  
 velocity anisotropy, vs. depth, 190A4:76  
 velocity logs. *See* sonic velocity logs

void ratio  
 grain size, 190/196B8:9–10  
 vs. clay percent, 190/196B8:19  
*See also* porosity

volcanic ash  
 distribution and thickness, 190A5:45; 190A8:28  
 lithologic units, 190A4:6–9, 41; 190A5:7–9; 190A6:4–6; 190A7:5–6; 190A9:6–9; 196A3:18  
 nannofossils, 190A7:9  
 petrography, 190/196B2:1–9  
 photograph, 190A1:56; 190A4:43–44; 190A5:42; 190A6:29; 190A7:24–26  
 vs. depth, 190A4:6–9, 41; 190A5:45, 62; 190A6:28–29, 31; 190A8:28  
 X-ray diffraction data, 190A4:114; 190A5:47, 102; 190A6:74; 190A7:7, 65; 190A8:68

volcanic ash, graded, photograph, 190A9:30

volcanic ash, inclined, photograph, 190A9:31

volcanic ash, laminated bioturbated, photograph, 190A1:71; 190A8:34–35

volcanic ash, overturned bed, photograph, 190A6:31

volcanic debris, clay, 190/196B4:9

volcanic glass  
 lithologic units, 190A4:8; 190A5:8–9; 190A8:5–9  
 volcanic ash, 190/196B2:4

volcanic rock fragments  
 photomicrograph, 190/196B3:25, 27  
 quartzose sand, 190/196B3:7  
 sand, 190/196B3:6  
 sedimenticlastic sandstone, 190/196B3:9

volcanic rock fragments, devitrified silicic, photomicrograph, 190/196B3:27

volcanic rock fragments, silicic, photomicrograph, 190/196B3:25

Volcaniclastic Facies  
 hydrocarbons, 190A8:18  
 lithologic units, 190A4:8; 190A8:7–9; 196A3:18  
 lithology, 196A1:6  
 logs, 196A3:21–22, 54  
 subduction, 190/196B3:3  
 volcanic ash, 190/196B2:3  
 X-ray diffraction data, 190/196B5:7

volcaniclastics  
 lithologic units, 190A6:4–6; 190A8:8–9; 196A3:18  
 sand, 190/196B3:5–6

volcaniclastics, acidic, composition, 190A1:4–5

volcanism, sedimentation, 190/196B6:10–11

volcanology, 196A3:30–32

**W**

water content  
 grain size, 190/196B8:9–10  
 vs. clay percent, 190/196B8:19

water pressure, vs. time, 190/196B10:9

water-escape structures. *See* dewatering structures

waveforms, logging-while-drilling, 190/196B17:2–3, 11

web structure  
 Brecciated Zone, 190/196B9:3  
 photograph, 190A6:39  
 sediments, 190A6:10

web structure, incipient, photograph, 190A9:40, 45

well-logging  
 accretionary prisms, 196A1:1–29  
 log quality, 196A1:5–6, 8–9; 196A3:14–15, 42–43;  
 196A4:1, 12–13, 37  
 summary, 190A4:146

well-logs  
 comparison with lithology, 196A4:17–18  
 décollement zone, 196A3:83  
 deformation, 190/196B1:4–5  
 lithofacies, 196A3:33–36  
 physical properties, 196A3:23–26; 196A4:23–26  
 quality assessment, 196A3:24–25  
 seismic data, 196A3:27–28  
 seismic reflection, 196A1:7, 11; 196A3:3, 27–28;  
 196A4:3–4  
 structures, 196A3:22–23; 196A4:18–22  
 synthetic seismograms, 196A4:26–27, 63

wireline logging  
 sonic logs, 190/196B16:1–15  
 vs. depth, 190/196B16:10

wood fragments, photograph, 190A8:30; 190A9:35

woody material, clasts, 190A7:6

**X**

X-ray diffraction data  
 clay mineralogy, 190/196B4:26–28; 190/196B6:5–7,  
 23, 27–36  
 clay-size fraction, 190/196B5:26–28  
 lithologic units, 190A4:9, 107, 111, 114; 190A5:9–10,  
 102–103, 108; 190A6:8, 34, 70–74; 190A8:9, 68–  
 69; 190A9:9, 36, 76–79  
 mineral abundances and peak area ratios, 190A4:111–  
 113; 190A6:72–73; 190A7:64; 190A8:69–70;  
 190A9:78–79  
 normalization factors, 190/196B5:1–28  
 normalized relative mineral abundances, 190A5:108–  
 111  
 peak intensities and peak areas, 190A4:107–110;  
 190A5:103–107; 190A6:70–71; 190A7:62–63;  
 190A8:65–67; 190A9:76–77  
 sediments, 190A7:6–7, 30, 62, 64  
 volcanic ash, 190A5:47, 102; 190A6:74; 190A8:68

**Y**

Yap Trench, clay, 190/196B4:8

yttrium, basalt, 196A3:32, 96

**Z**

zeolites  
 lithologic units, 190A4:8; 190A5:9  
 volcanic ash, 190/196B2:4

Zijderveld plots  
 remanent magnetization, 196A3:78  
 sediments, 190A5:18, 64

zirconium, basalt, 196A3:32, 96

*Zoophycos*  
 lithologic units, 190A4:7; 190A6:6–7; 190A8:6–7  
 photograph, 190A5:44; 190A8:29

## TAXONOMIC INDEX

## A

*Amaurolithus amplificus*, Site 1178, 190A9:13*Amaurolithus primus*

Site 1173, 190A4:13

Site 1177, 190A8:12

Site 1178, 190A9:13

*Amaurolithus* spp.

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:12

*ampliaperta*, *Helicosphaera*, Site 1173, 190A4:13*amplificus*, *Amaurolithus*, Site 1178, 190A9:13*asanoi*, *Reticulofenestra*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

*asymmetricus*, *Discoaster*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1178, 190A9:12

## B

*belemnos*, *Sphenolithus*, Site 1177, 190A8:12*bergenii*, *Discoaster*, Site 1177, 190A8:12*brouweri*, *Discoaster*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1177, 190A8:11

## C

*Calcidiscus* spp.

Site 1173, 190A4:12–13

Site 1174, 190A5:16

Site 1177, 190A8:11

*Catinaster coalitus*

Site 1173, 190A4:13

Site 1174, 190A5:16

*Ceratolithus cristatus*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:13

*coalitus*, *Catinaster*

Site 1173, 190A4:13

Site 1174, 190A5:16

*Coccolithus miopelagicus*, Site 1177, 190A8:12*Coccolithus* spp.

Site 1173, 190A4:12–13

Site 1174, 190A5:16

Site 1177, 190A8:11

*convallis*, *Minylitha*, Site 1178, 190A9:13*cristatus*, *Ceratolithus*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:13

*Cyclicargolithus floridanus*, Site 1174, 190A5:17

## D

*deflandrei*, *Discoaster*

Site 1174, 190A5:16

Site 1177, 190A8:12

*Discoaster asymmetricus*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1178, 190A9:12

*Discoaster bergenii*, Site 1177, 190A8:12*Discoaster brouweri*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1177, 190A8:11

*Discoaster deflandrei*

Site 1174, 190A5:16

Site 1177, 190A8:12

*Discoaster druggii*, Site 1177, 190A8:12*Discoaster hamatus*

Site 1173, 190A4:13

Site 1174, 190A5:16

*Discoaster kugleri*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:12

*Discoaster musicus*, Site 1173, 190A4:13*Discoaster pentaradiatus*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1176, 190A7:9

Site 1177, 190A8:11

*Discoaster quinqueramus*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:13

*Discoaster surculus*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:12

*druggii*, *Discoaster*, Site 1177, 190A8:12

## E

*Emiliana huxleyi*

Site 1173, 190A4:12

Site 1174, 190A5:14–15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

*Emiliania huxleyi acme*, Site 1174, 190A5:15

**F**

*floridanus*, *Cyclicargolithus*, Site 1174, 190A5:17

**G**

*Gephyrocapsa oceanica*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

*Gephyrocapsa acme* zones, Site 1176, 190A7:9

*Gephyrocapsa* spp.

Site 1173, 190A4:12

Site 1174, 190A5:14–15

Site 1175, 190A6:11

Site 1176, 190A7:9

See also small *Gephyrocapsa* spp.

**H**

*hamatus*, *Discoaster*

Site 1173, 190A4:13

Site 1174, 190A5:16

*Helicosphaera ampliaperta*, Site 1173, 190A4:13

*Helicosphaera inversa*

Site 1175, 190A6:11

Site 1176, 190A7:9

*Helicosphaera sellii*, Site 1173, 190A4:12

*Helicosphaera waltrans*, Site 1173, 190A4:13

*heteromorphus*, *Sphenolithus*

Site 1173, 190A4:13

Site 1177, 190A8:12

*huxleyi*, *Emiliania*

Site 1173, 190A4:12

Site 1174, 190A5:14–15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

**I**

*inversa*, *Helicosphaera*

Site 1175, 190A6:11

Site 1176, 190A7:9

**K**

*kugleri*, *Discoaster*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:12

**L**

*lacunosa*, *Pseudoemiliana*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

**M**

*Minylitha convallis*, Site 1178, 190A9:13

*miopelagicus*, *Coccolithus*, Site 1177, 190A8:12

*musicus*, *Discoaster*, Site 1173, 190A4:13

**O**

*oceanica*, *Gephyrocapsa*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

*Orthorhabdus serratus*

Site 1173, 190A4:13

Site 1174, 190A5:17

**P**

*pentaradiatus*, *Discoaster*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1176, 190A7:9

Site 1177, 190A8:11

*primus*, *Amaurolithus*

Site 1173, 190A4:13

Site 1177, 190A8:12

Site 1178, 190A9:13

*Pseudoemiliana lacunosa*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1178, 190A9:12

*Pseudoemiliana* spp., Site 1176, 190A7:9

*pseudoumbilicus*, *Reticulofenestra*

Site 1173, 190A4:12–13

Site 1174, 190A5:15–16

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1177, 190A8:12

Site 1178, 190A9:12–13

**Q**

*quinqeramus*, *Discoaster*

Site 1173, 190A4:13

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:13

**R**

*Reticulofenestra asanoi*

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

*Reticulofenestra pseudoumbilicus*

Site 1173, 190A4:12–13

Site 1174, 190A5:15–16

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1177, 190A8:12

Site 1178, 190A9:12–13

*Reticulofenestra* spp., Site 1177, 190A8:11–12*rugosus*, *Triquetrorhabdulus*, Site 1178, 190A9:13**S***sellii*, *Helicosphaera*, Site 1173, 190A4:12*serratus*, *Orthorhabdus*

Site 1173, 190A4:13

Site 1174, 190A5:17

small *Gephyrocapsa* spp., Site 1178, 190A9:12*Sphenolithus belemnos*, Site 1177, 190A8:12*Sphenolithus heteromorphus*

Site 1173, 190A4:13

Site 1177, 190A8:12

*Sphenolithus* spp.

Site 1173, 190A4:12

Site 1174, 190A5:15

Site 1175, 190A6:11

Site 1176, 190A7:9

Site 1177, 190A8:12

*surculus*, *Discoaster*

Site 1173, 190A4:12

Site 1174, 190A5:16

Site 1177, 190A8:11

Site 1178, 190A9:12

**T***Triquetrorhabdulus rugosus*, Site 1178, 190A9:13**W***waltrans*, *Helicosphaera*, Site 1173, 190A4:13**Z**

zones (with letter prefixes)

NN2, Site 1177, 190A8:12

NN3, Site 1177, 190A8:12

NN4, Site 1173, 190A4:13

NN4–NN2, Site 1177, 190A8:11–12

NN5, 190A4:11, 13; 190A5:17; 190A8:12

NN6, A4:13; 190A5:15–17; 190A8:12

NN7, A4:13; 190A5:16; 190A8:12

NN8, 190A4:13; 190A5:16

NN9, 190A4:13; 190A5:16; 190A9:13

NN10, Site 1174, 190A5:16

NN10a, 190A5:16; 190A9:13

NN11, 190A5:16; 190A9:13

NN11–NN10 boundary, Site 1173, 190A4:13

NN11a, 190A4:13; 190A8:12; 190A9:13

NN11b, 190A4:13; 190A8:11; 190A9:13

NN11b–NN14, Site 1178, 190A9:13

NN12, 190A4:13; 190A5:16; 190A9:13

NN13, 190A5:16; 190A8:11; 190A9:12

NN14, 190A4:12; 190A5:16; 190A8:11; 190A9:12

NN15, 190A4:12; 190A5:16; 190A9:12

NN16, 190A4:12; 190A5:16; 190A8:11; 190A9:12

NN17, 190A4:12; 190A8:11

NN18, 190A4:12; 190A6:11; 190A7:9; 190A8:11

NN19, 190A5:15; 190A6:11; 190A7:9; 190A9:12

NN20, 190A5:15; 190A6:11

NN21, Site 1174, 190A5:15, 121

NN21a, 190A5:14–15; 190A6:11; 190A7:9; 190A9:12

NN21b, 190A4:11–12; 190A5:14–15