

INDEX TO VOLUME 195

This index covers both the *Initial Reports* and *Scientific Results* portions of Volume 195 of the *Proceedings of the Ocean Drilling Program*. References to page numbers in the *Initial Reports* are preceded by “A” followed by the chapter number with a colon (A1:) 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 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 1200, for example, is given as “Site 1200, A3:1–173.”

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

A

- accessory minerals, lithologic units, A3:13
- acmite, basalt paragenesis, B8:7
- acoustic impedence, vs. depth, A4:145
- acoustic noise, seismic events, B2:3–4
- age vs. depth
 - Site 1201, A4:127–128
 - South Chamorro Seamount, A1:58
- alkalinity
 - pore water, A3:30–40; A4:34–36; B9:3–4
 - seawater-peridotite mud interaction, B4:6
 - vs. depth, A1:45, 55; A3:115; A4:132; B9:8; B10:5
- alteration
 - basalt, A4:20–22
 - halogens, B6:9–10
 - lithologic units, A3:12–14
 - paleoenvironment, A4:19
 - photograph, A3:82, 96; A4:81
 - sediments, A1:22
 - seismic properties, B11:5
- alternating field, vs. magnetic intensity, A4:121
- aluminum
 - basalt paragenesis, B8:7
 - sediments, A4:36
 - vs. depth, A3:117; A4:135
 - See also* iron + aluminum
 - aluminum, in clinopyroxene
 - vs. silicon, B8:17
 - vs. titanium, B8:17
 - aluminum oxide
 - metamorphic clasts, B4:8
 - serpentinite, A3:20
 - serpentinized peridotite compared with serpentine mud, B4:6–7
 - vs. barium/ytterbium ratio, B4:35
 - vs. calcium oxide, A1:44; A3:20, 103
 - vs. rubidium/ytterbium ratio, B4:36
 - vs. silica/magnesium oxide ratio, B4:20, 28
 - vs. titanium oxide, B4:23, 27
 - ammonium, vs. depth, A3:115; A4:132
 - amphibole
 - harzburgite, A3:17
 - lithologic units, A3:13
 - mud, A3:19–20
 - photomicrograph, A3:74
 - vs. depth, A3:76–78
 - amphibole mica schist, photograph, A3:97; B4:15
 - amphibole mica schist, sodium-rich, photograph, A3:97; B4:16
 - amphibole schist, photograph, A3:99
 - amygdules, photomicrograph, A4:105
 - anaerobic conditions, sediments, B3:11

analcime
 lithologic units, A3:14
 X-ray diffraction data, A4:16–17
analcime-wairakite
 photomicrograph, A4:90
 sediments, A1:20
anions, pore water, A4:131
antigorite
 chlorine, B6:7
 lithologic units, A3:12–13
aragonite
 geochemistry, B6:6–7
 lithologic units, A3:13–14
 mud, A3:18–20
 serpentine, A1:13
 vs. depth, A3:76–78
aragonite laths, photomicrograph, A3:74
arc-continent collision, Quaternary paleoceanography,
 B3:2–3
arc volcanism, forearcs, B4:2–3
arenite, lithic
 petrography, A4:14–16
 photomicrograph, A4:85
 tectonic genesis, A4:87
arsenic, serpentine mud, B1:8; B4:8
augite, basalt paragenesis, B8:6
authigenic minerals
 lithologic units, A3:13–14; A4:11–12
 photomicrograph, A4:92, 104–109

B

Bacillus subtilis, sediments, B3:11
backarc basins, geology, A1:23–27
bacteria, pore water, B1:9
banding, photograph, A3:91
barium, vs. depth, B10:6
barium/ytterbium ratio, vs. aluminum oxide, B4:35
basalt
 chemistry, A1:17–18; A4:195–196; B1:11
 clinopyroxene, B8:15
 crust, B2:7–9
 geochemistry, A4:22–23
 mineralogy, B8:1–24
 petrography, A4:20–22; B8:4–5
 photograph, A4:83
 photomicrograph, A4:108
 spinel, B8:16
 tectonic discrimination diagram, A1:59
 vanadium vs. titanium, A1:59
 X-ray diffraction data, A4:194
basalt, aphyric, photograph, A4:96, 102
basement
 age, A1:17
 logging Unit 2, A4:43
basement, basaltic, magnetostratigraphy, A4:32–33
basement contact, photograph, A4:83
bastitic texture
 photograph, A3:81–82
 photomicrograph, A3:84
bathymetry, maps, A1:34; B1:26–28

Bathymodiolus, seamounts, A1:4
beryllium. *See* boron/beryllium ratio
biosphere, subduction zones, A1:7
biostratigraphy
 magnetostratigraphy, A4:31–32
 Site 1200, A3:21–25
 Site 1201, A4:23–28
 Site 1202, A5:8–9
bioturbation
 lithologic units, A4:11–12
 logs, A4:77
 photograph, A4:74
blueschist metamorphism
 lithologic units, A3:13
 mud volcanoes, A1:11
borehole instrumentation
 Site 1200, A3:46–52
 Site 1201, A4:44–61, 158–188, 225–233
borehole seismic observatories, plates, A1:20–22
borehole seismometers
 instruments, A1:49–51
 power spectra, B2:17–18
boron
 fluid-rock interactions, B6:1–23
 geochemical cycles, B1:8; B5:5–8
 pore water, A3:31–37
 seawater-peridotite interaction, B4:6
 serpentine mud, B5:1–18
 vs. depth, A1:45; A3:114; A4:135; B5:14–15; B6:19;
 B9:9; B10:7
 vs. iodine, B5:16
 vs. silica/magnesium oxide ratio, B4:30
 vs. titanium oxide, B4:31
boron/beryllium ratio, serpentine mud, B4:8
boron/chloride ratio
 pore water, B5:4
 vs. depth, B5:14; B6:19
boron/lithium ratio, serpentine mud, B4:8
boron isotopes
 pore water and solid samples, B1:7–8; B6:6–7
 vs. 1/boron ratio, B6:20
 vs. depth, B6:19
breccia
 lithologic units, A4:12–14
 morphology, A3:55–56
breccia, pillow, photograph, A4:100
breccia, polymict, geology, A1:16
breccia, serpentine mud
 photograph, A1:41
 photomicrograph, A1:42–43
brecciation, serpentinite, A3:55
bromide
 fluid-rock interactions, B6:1–23
 vs. depth, B6:17; B10:4
bromide/chloride ratio
 pore water, B6:5–10
 vs. 1/chloride ratio, B6:18
 vs. depth, B6:17; B10:4
brucite
 geochemistry, B6:6–7
 harzburgite, A3:17

lithologic units, A3:12–13
photomicrograph, A3:72, 89
vs. depth, A3:76–78
Brunhes Chron
magnetostratigraphy, A5:10–11; B13:4–5
paleoclimatology, A1:27
bubble vesicles, photomicrograph, A4:84–85
burrows, lithologic units, A5:7–8
bytownite, basalt paragenesis, B8:5–6

C

calcareous sediments, photograph, A5:20–22
calcite
geochemistry, B6:6–7
vs. depth, A3:76–78
calcium
basalt, A4:22–23
basalt paragenesis, B8:7
pore water, A3:33, 35–37; A4:33–36; B9:3–4
seawater-peridotite mud interaction, B4:6
sediments, A1:21
vs. depth, A1:55; A3:116; A4:133; B2:25; B9:7; B10:6
calcium oxide
basalt, A4:22–23
diagenesis, A4:35–36
metamorphic clasts, B4:7–8
serpentinized peridotite compared with serpentine
mud, B4:6–7
vs. aluminum oxide, A1:44; A3:20, 103
vs. depth, A4:110
vs. magnesium/(magnesium + iron) ratio, A1:44;
A3:20, 103
vs. silica, B4:26
vs. silica/magnesium oxide ratio, B4:21, 28
vs. titanium oxide, B4:24
caliper logs, vs. depth, A4:155
carbon, dissolved inorganic, vs. depth, B7:7
carbon, inorganic, pore water, B7:1–12
carbon, organic
sediments, A3:35–37, 162
vs. depth, A3:119
carbon dioxide, pore water, B1:5
carbon isotopes
foraminifers, B3:6, 30
methane, B7:10
pore water, B9:14
vs. depth, B7:8–9; B9:11
carbonate compensation depth
crust, B2:7
paleoclimatology, A1:26–27
sediments, A1:22
carbonate content
sediments, A3:34–37, 162
vs. depth, A3:119
carbonate intervals
lithologic units, A3:11–12
vs. depth, A3:67
carbonates
clasts, A5:8
diagenesis, A4:35–36

lithologic units, A5:7–8
photomicrograph, A4:105
cations, pore water, A4:131
Central Basin Fault, geology, A1:15–16
cesium
geochemistry, B1:11
serpentine mud, B1:8; B4:8
chabazite
photomicrograph, A4:92
sediments, A1:20
X-ray diffraction data, A4:16–17
chert
lithologic units, A4:11–12
photograph, A4:76
chert, diagenetic, lithologic units, A3:14
chilled margins, photograph, A4:97
chloride
bulk solids, B6:7
fluid-rock interactions, B6:1–23
pore water, A3:30–37; B9:3–4
vs. depth, A3:114; B6:17, 21; B9:8
See also boron/chloride ratio; bromide/chloride ratio;
fluoride/chloride ratio; iodide/chloride ratio;
sodium/chloride ratio
chlorinity
pore water, A4:33–36
sediments, A1:21
vs. depth, A4:132; B10:4
chlorite
lithologic units, A3:14
sedimentary regimes, B3:9
vs. depth, A3:76–78
chlorite-amphibole schist, photograph, B4:15
chlorite-tremolite schist, photomicrograph, B4:16
chlorite/kaolinite ratio
sedimentary regimes, B3:9–10, 12
vs. age, B3:27
chlorite schist
photograph, A3:96
photomicrograph, A3:98
chlorite schist, tremolite-rich, photomicrograph, A1:43;
A3:95
chromium
basalt, A4:23
metamorphic clasts, B4:8
serpentinite, A3:20
serpentinized peridotite compared with serpentine
mud, B4:7
vs. nickel, B4:22
vs. yttrium, A1:59; A4:115
chromium spinel
dunite, A3:17–18
harzburgite, A3:16–17
lherzolite, A3:18
photomicrograph, A3:80, 88
Chron C1n
magnetostratigraphy, A5:10–11
paleoclimatology, A1:27
Chron C3n.4n
magnetostratigraphy, A4:31
sediments, A1:21

- Chron C5Bn.1n, magnetostratigraphy, A4:31
 Chron C6Cn.3n, magnetostratigraphy, A4:31
 Chron C7n.2n, magnetostratigraphy, A4:31
 Chron C11n.2n, magnetostratigraphy, A4:31
 Chron C12, biostratigraphy, A4:25
 Chron C12n, magnetostratigraphy, A4:32
 Chron C12n.16n.2n, sediments, A1:21
 Chron C13n, magnetostratigraphy, A4:32
 Chron C13r, biostratigraphy, A4:24
 Chron C15n, magnetostratigraphy, A4:32
 Chron C15r, magnetostratigraphy, A4:32
 Chron C16n, magnetostratigraphy, A4:32
 Chron C21
 basaltic basement, A4:33
 geology, A1:15–16
 chrysotile
 chlorine, B6:7
 photograph, A3:140
 photomicrograph, A3:73
 circulation oblation retrofit kit, configuration, A3:47–51, 133–137
 clasts
 boron and iodine, B5:5–8
 breccia, A3:55–56
 carbonates, A5:8
 halogens, B5:18
 Krumbein sphericity vs. maximum length, A3:143
 lithologic units, A3:11–12; A4:13–14
 mud volcanoes, A1:10–15
 peridotite, A1:3–4
 petrography, A4:14–16
 petrology, A3:16–21; B1:10–11
 photograph, A3:68, 90, 141–142, 144
 seismic properties, B11:1–12
 serpentinite, A3:60–63
 clasts, biogenic, photomicrograph, A4:99
 clasts, serpentinite, photograph, A3:79
 clay, bioturbated silty
 lithologic units, A4:11–12
 photograph, A4:74
 clay, geology, A1:15–16
 clay, silty
 lithologic units, A3:13–14
 photograph, A5:22
 clay minerals
 petrography, A4:14–16
 photomicrograph, A4:88–89, 103
 X-ray diffraction data, A4:94
 clay rims, photomicrograph, A4:90
 claystone
 photograph, A4:82
 sediments, A1:20–22
 claystone, bioturbated silty
 lithologic units, A4:11–14
 logs, A4:77
 photograph, A4:74–76, 78–83
 claystone, silty, photograph, A4:74–76, 78–79
 cleavage, harzburgite, A3:17
 clinoptilolite
 petrography, A4:16
 X-ray diffraction data, A4:16–17
 See also heulandite-clinoptilolite series
 clinopyroxene
 basalt, B8:15
 geochemistry, B6:6–7
 harzburgite, A3:16–17
 lherzolite, A3:18
 microprobe data, B8:22–23
 photomicrograph, A3:80, 87; A4:105–109; B8:12–13
 position in basalt, B8:19
 tectono-magmatic discrimination ternary diagram, B8:20
 clinopyroxene, spherulitic, photomicrograph, B8:13
 clinopyroxene phenocrysts, photomicrograph, A4:86
 coarse fraction, vs. age, B3:27
 color, oxidized calcareous intervals, photograph, A3:71
 color bands, mud volcanoes, A1:10
 composite record, magnetostratigraphy, A4:204
 compressional wave velocity
 anomalies, B2:21
 clasts, A3:41
 crust, B2:6–7
 pelagic muds, A4:38–39
 sediments, A5:13
 serpentinite clasts, B11:1–12
 structure, B2:23
 vs. bulk density, A3:122
 vs. confining pressure, B11:7
 vs. depth, A3:121; A5:35
 vs. depth structure, B2:19
 vs. shear wave velocity, B11:10
 compressional wave velocity, average, vs. confining pressure, B11:8
 concretions, lithologic units, A3:14
 Conical Seamount
 pressure-temperature conditions, A1:6–7
 serpentinite mud, B1:5; B4:1–49
 consolidation tests, sediments, A6:15
 correlation
 lithology, B3:5–6, 29
 magnetic susceptibility, B3:21
 cross laminations, photograph, A4:81
 crossite, lithologic units, A3:13
 crust
 geochemistry, B2:8–9
 structure, B2:6–7, 24
 thickness, A1:17–18
 Curie temperature
 sediments, B13:5
 serpentine mud, A3:27
- D**
- datum levels, Oligocene, A4:24–26
 debris flows, mud volcanoes, A3:15
 décollement, peridotite, A1:3–4, 11–15; B1:4–5
 deep resistivity logs, vs. depth, A4:153
 deformation
 metamorphism, A3:53–54
 mud volcanoes, A3:15
 deformation, penetrative, harzburgite, A3:16–17
 deformation, plastic, photomicrograph, A3:86

deglaciation, upper Quaternary, A1:26–27
dehydration, pore water, B5:5
demagnetization, alternating-field
 serpentinized peridotite, A3:110–111
 vectors, A4:124, 129; A5:28; B13:9
demagnetization, magnetic remanence, A3:28–29
demagnetization, thermal
 basalt, A4:122
 magnetite, A3:107
 pillow basalt, A4:30
 serpentine mud, A3:27
density
 clasts, A3:41, 43
 pelagic muds and basalt, A4:37–38
 seismic properties, B11:5, 12
 vs. depth, A1:53; A4:136–143
 vs. velocity, B1:4–5; B11:9
density, bulk
 vs. compressional wave velocity, A3:122
 vs. depth, A3:120, 124–126; A4:145; A5:31–32
density, grain
 distribution, A3:128
 vs. depth, A4:145
density logs, vs. depth, A1:54; A4:153
deposition
 environment, A4:95; B2:27
 ocean currents, B3:3–5
depth model, sediments, B13:14
deuterium
 pore water, B9:4, 14
 vs. depth, B9:10
 vs. oxygen isotopes, B9:10
diagenesis
 natural gamma ray spectra, B12:6–9
 paleoenvironment, A4:19
 photograph, A4:80
 photomicrograph, A4:88–92
 seamounts, B1:6
 sediments, A1:20
 volcaniclastics, A4:35–36
diamicton
 lithologic units, A3:11–12
 photograph, A3:69–70
discontinuities
 compressional wave velocity, B2:21
 mantle, B2:4–7, 9
dissolution, diagenesis, A4:35–36
downhole measurements, Site 1201, A4:41–44
dunite
 photograph, A3:91
 seismic properties, B11:1–12
 See also harzburgite–dunite transition
dunite, serpentinized and tectonized, petrology, A3:17–18

E

East China Sea, sedimentation, B3:2–5
enstatite, lithologic units, A3:14
environment, sedimentation, A4:95
Eocene
 sediments, A1:20–22

See also Oligocene/Eocene boundary
Eocene, upper
 datum levels, A4:24–26
 lithologic units, A4:12–14
 paleoenvironment, A4:17–18
erionite
 photomicrograph, A4:92
 sediments, A1:20
 X-ray diffraction data, A4:16–17
ethane
 pore water, B7:3
 vs. depth, A3:118
 See also methane/ethane ratio

F

Facies I
 lithologic units, A3:11–12
 photograph, A3:68–69
Facies IA, lithologic units, A4:11–12
Facies IB, lithologic units, A4:12
Facies IC, lithologic units, A4:12
Facies II
 lithologic units, A3:12
 photograph, A3:70
Facies IIA, lithologic units, A4:13
Facies IIB, lithologic units, A4:13–14
faults, geology, A1:3–4; B1:2–4, 29
feldspar
 basalt, B8:14
 lithologic units, A4:14
fluid-mobile elements, serpentine mud, B4:8, 32
fluid-rock interactions, geochemical cycling, B6:1–23
fluid budget, seamounts, A1:5–6
fluid flow
 natural gamma ray spectra, B12:6–9
 sediments, A3:35–37
fluid transport, seamounts, A1:5
fluoride
 fluid-rock interactions, B6:1–23
 pore water, A3:33
 vs. depth, A3:117; A4:134; B6:16, 21; B10:4
fluoride/chloride ratio
 pore water, B6:5–10
 vs. depth, B6:17
foraminifers
 biostratigraphy, A3:23–24; A5:8–9; B3:22
 geochronology, B3:6
 mud volcanoes, A1:10–14
foraminifers, planktonic
 distribution, A3:154
 oxygen isotopes, B3:25
forearcs, serpentine mud, B5:1–18
formation factor
 clasts, A3:43–44
 pelagic muds, A4:39–40
 vs. depth, A3:131; A4:149
Formation MicroScanner imagery, vs. depth, A4:155
forsterite
 basalt paragenesis, B8:7
 lithologic units, A3:14

fractures

- metamorphism, A3:54
- photograph, A4:101
- “Frankenstein veins”
- peridotite, A1:12
- photograph, A3:82, 90

G

- gamma ray logs, vs. depth, A1:54; A4:153–155
- gamma rays
 - clasts, A3:43
 - pelagic muds, A4:38
 - spectra, B12:1–33
 - spectra energy, B12:11–15, 17–18
 - vs. depth, A1:52–53; A3:120, 124–126; A4:73, 136–143; A5:34
- gases, geochemistry, A3:160
- gases, headspace, geochemistry, A3:33–34, 161
- geochemical cycling
 - fluid-rock interactions, B6:1–23
 - halogens, B6:1–23
- geochemical observatories
 - configuration, A1:39–40; A3:171–173
 - seafloor, A1:5, 10–14
- geochemistry
 - along-strike variability, A1:6
 - basalt, A4:22–23
 - crust, B2:8–9
 - serpentinite mud, B4:1–49
 - Site 1200, A3:29–40
 - Site 1201, A4:33–36
 - ultramafics, A3:150–151
- geochronology, foraminifers, B3:6
- geology
 - ion seismic observatory, A1:14–16
 - summary, A1:3–4
 - West Philippine Basin, B2:1–27
- geophysics, West Philippine Basin, B2:1–27
- geothermal gradient
 - clasts, A3:44
 - sediments, A3:170
- Gephyrocapsa caribbeanica*, vs. depth, A3:105
- glaciation, geology, A1:23–27
- glass shards, photomicrograph, A4:84–85, 89–91
- glaucophane, lithologic units, A3:13; B1:10
- glaucophane schist
 - mud, A3:18–20
 - photomicrograph, A1:42; A3:98
- goethite, thermal demagnetization, A4:122
- graded bedding, photograph, A5:21
- grain size
 - mud, A3:18–20
 - sedimentary regimes, B3:9
- granoblastic texture, dunite, A3:18
- greenschist, lithologic units, A3:14
- gypsum
 - photomicrograph, A4:92
 - pore water, A4:34–36

X-ray diffraction data, A4:16–17

H

- halite, vs. depth, A3:76–78
 - halogens
 - geochemical cycling, B6:1–23
 - pore water, B5:17
 - serpentinite, B6:8–10
 - harzburgite
 - photograph, A3:90
 - photomicrograph, A3:80
 - serpentine, A1:13; B1:9–10
 - harzburgite, coarse-grained, photograph, A3:82
 - harzburgite, serpentinized and tectonized, petrology, A3:16–17
 - harzburgite–dunite transition, photograph, A3:81
 - heat flow
 - sediments, A3:170
 - serpentine, A1:13
 - heulandite-clinoptilolite series
 - photomicrograph, A4:90
 - sediments, A1:20
 - hiatuses
 - paleoenvironment, A4:18–19
 - photograph, A4:75
 - Holocene, magnetic intensity, B3:11
 - hourglass texture
 - harzburgite, A3:16–17
 - lherzolite, A3:18
 - photomicrograph, A3:83
 - hyaloclastite
 - photograph, A4:97–98, 100–102
 - sediments, A1:22
 - hyalopilitic texture, photomicrograph, A4:103
 - hydraulic conductivity
 - clasts, A3:44
 - measurement, A6:1–15
 - sediments, A3:169
 - vs. depth, A6:14
 - hydrocarbons
 - geochemistry, A3:160–161
 - sediments, A3:33–34
 - hydrogen sulfide
 - pore water, A3:38–40
 - vs. depth, A3:115
 - hysteresis, sediments, B13:12
- I**
- igneous petrology, A3:16–21; A4:20–23
 - illite, sedimentary regimes, B3:9
 - inclusions, photomicrograph, A3:87
 - index properties
 - clasts, A3:165
 - discrete samples, A3:163, A4:209–214
 - matrix material, A3:166
 - intergranular texture, petrography, A4:16
 - iodide
 - geochemical cycles, B1:7–8; B5:5–8
 - serpentine mud, B5:1–18

- vs. boron, B5:16
- vs. depth, B5:14–15
- iodide/chloride ratio, vs. depth, B5:14
- ion seismic observatory, geology, A1:14–16
- iron
 - basalt, A4:22–23
 - pore water, A3:35–40
 - sediments, A4:36
 - vs. depth, A3:117; B10:7
 - See also* magnesium/(magnesium + iron) ratio
- iron + aluminum, vs. iron + silicon in clinopyroxene, B8:18
- iron + silicon, vs. iron + aluminum in clinopyroxene, B8:18
- iron oxide
 - basalt, A4:22–23
 - serpentinized peridotite compared with serpentine mud, B4:7
 - vs. silica/magnesium oxide ratio, B4:21
- iron oxyhydroxide, photomicrograph, A4:103
- isotopes, pore water, B9:1–14
- Izu-Bonin/Mariana convergent plate margin, serpentinite seamounts, B1:1–30

J

- joints, breccia, A3:55–56

K

- kaolinite
 - sedimentary regimes, B3:9
 - See also* chlorite/kaolinite ratio
- kink banding
 - dunite, A3:17–18
 - harzburgite, A3:16–17
 - photomicrograph, A3:85
- Koenigsberger ratio
 - serpentine mud, A3:27–28
 - vs. depth, A3:106
- Kuroshio Current
 - geology, A1:22–27
 - path, A5:18
 - sedimentation, B3:3–5
- Kyushu-Palau Ridge, geology, A1:15–16

L

- labradorite, basalt paragenesis, B8:5–6
- laminations, “inflated,” photograph, A4:81
- laminations, lithologic units, A4:12–14; A5:7–8
- laminations, planar, lithologic units, A4:13–14
- Lan-Yang River, deposition, B3:4
- lanthanum, geochemistry, B1:11
- lanthanum/samarium ratio, serpentinized peridotite compared with serpentine mud, B4:7
- Laschamp reversal excursion, magnetostratigraphy, A5:11
- lherzolite, serpentinized and tectonized, petrology, A3:18
- limestone, photomicrograph, A4:86

- lithium
 - pore water, A3:33, 35–37; B1:8
 - seawater-peridotite mud interaction, B4:6
 - vs. depth, A3:116; A4:135; B9:9
 - vs. silica/magnesium oxide ratio, B4:30
 - See also* boron/lithium ratio
 - lithoclasts
 - lithic arenite, A4:87
 - photomicrograph, A3:72
 - lithofacies
 - lithologic units, A3:11–12; A4:11–14
 - vs. depth, A4:70–72
 - lithologic units
 - Site 1200, A3:11–12
 - Site 1201, A4:11–14
 - Site 1202, A5:7–8
 - Unit I, A3:11–12; A4:11–12; A5:7–8
 - Unit II, A4:12–14
 - lithology
 - clasts, A3:165
 - correlation, B3:5–6
 - logs, A4:77
 - vs. depth, A3:67; A4:70–73; B2:25
 - lithosphere/asthenosphere boundary, structure, A1:17
 - lithostratigraphy
 - Site 1200, A3:11–15
 - Site 1201, A4:10–19
 - Site 1202, A5:6–8
 - lizardite
 - chlorine, B6:7
 - harzburgite, A3:17
 - lithologic units, A3:12–13
 - peridotite, A1:12
 - loss on ignition
 - basalt, A4:22–23, 195–196
 - metamorphic clasts, B4:8
 - serpentinite, A3:20–21
 - serpentinized peridotite compared with serpentine mud, B4:6–7
 - ultramafics, A3:150–151
 - vs. depth, A4:110
 - vs. magnesium oxide, B4:18
 - vs. silica/magnesium oxide ratio, B4:18
- ## M
- maghemite, thermal demagnetization, A4:122
 - magnesium
 - pore water, A3:33, 35–37; A4:34–36; B9:3–4
 - sediments, A4:36
 - vs. depth, A1:55; A3:116; A4:133; B2:25; B9:7; B10:6
 - See also* silicon/magnesium ratio
 - magnesium/(magnesium + iron) ratio, vs. calcium oxide, A1:44; A3:20, 103
 - magnesium number
 - basalt, A4:195–196
 - serpentinite, A3:20–21
 - ultramafics, A3:150–151
 - magnesium oxide
 - basalt, A4:23
 - diagenesis, A4:35–36

- metamorphic clasts, B4:7–8
- serpentinite, A3:20
- serpentinized peridotite compared with serpentine mud, B4:6–7
- vs. loss on ignition, B4:18
- vs. silica, B4:19, 26
- See also* silica/magnesium oxide ratio
- magnetic declination, vs. depth, A1:57; A3:113; A4:125
- magnetic domains, sediments, B13:12
- magnetic hardness
 - sediments, B13:5
 - vs. depth, B13:10–11
- magnetic inclination
 - sediments, B13:4–5
 - vs. depth, A1:57; A3:113; A4:123, 125–126, 130; A5:24–26; B13:10–11
- magnetic intensity
 - Holocene, B3:11
 - natural remanent magnetization, A3:26–28
 - sediments, B13:5
 - vs. age, B3:28
 - vs. alternating field, A4:121
 - vs. depth, A3:106, 113; A4:119, 123; A5:24–26; B13:10–11
 - vs. temperature, A3:107
 - vs. time, A5:23
- magnetic mineralogy, mud volcanoes, A3:26–28, 155
- magnetic polarity
 - age vs. depth, A4:127–128
 - magnetostratigraphy, A4:30–32
- magnetic properties
 - serpentine, A1:14
 - serpentine mud, A3:27
- magnetic remanence, demagnetization, A3:28–29
- magnetic reversals, magnetostratigraphy, A4:31
- magnetic susceptibility
 - clasts, A3:165
 - correlation, B3:21
 - distribution, A3:127
 - matrix material, A3:166
 - sediments, A5:10
 - vs. depth, A1:53; A3:106, 120, 124–126; A4:119, 123; A5:24–27; B13:10–11
- magnetic susceptibility, volume
 - clasts, A3:40–43
 - pelagic muds, A4:37
 - sediments, A5:11–12
 - serpentine mud, A3:40–41
 - vs. depth, A4:136–144; A5:29–30; B3:21
- magnetite
 - basalt, A4:21–22
 - harzburgite, A3:17
 - photomicrograph, A3:89; B8:12–13
 - thermal demagnetization, A4:122
- magnetostratigraphy
 - basaltic basement, A4:32–33
 - biostratigraphy, A4:31–32
 - composite record, A4:204
 - magnetic polarity, A4:30–32
 - sedimentation rates, A4:32
 - sediments, A5:10–11
 - vs. depth, A1:57; A4:125–128
- major elements
 - metabasite, B4:44–47
 - metamorphic clasts, B4:7–8
 - serpentine mud, B4:17, 37–43
 - serpentinite, A3:20–21
- manganese
 - pore water, A3:33, 35–37
 - seawater-peridotite mud interaction, B4:6
 - sediments, A4:36
 - vs. depth, A3:116; A4:134; B10:7
- manganese oxide, basalt, A1:59; A4:114
- Manheim squeezer, hydraulic conductivity, A6:1–15
- mantle
 - layers, B1:13–14
 - pressure-temperature conditions, B2:19
 - structure, A1:17; B1:16; B2:4–7
- mantle, upper, structure, B2:6–7
- mantle wedges, seismic properties, B11:1–12
- Mariana convergent plate margin system, summary, A1:1–63
- Mariana forearc
 - geology, B1:1–4; B4:2–3
 - summary, A1:1–63
- Marinobacter alkaliphilus*, pore water, B1:9
- median destructive field
 - magnetic domains, A3:28–29
 - vs. depth, A3:106
- melange, serpentine, A1:3–4; B1:17
- mesh texture
 - harzburgite, A3:16–17
 - lherzolite, A3:18
 - photomicrograph, A3:83
- metabasalt, geochemistry, B4:5, 7–10
- metabasite
 - major elements, B4:44
 - mud, A3:19–20
- metamorphic clasts
 - Coryell-Masuda diagram, B4:33
 - major elements, B4:7–8
- metamorphic grains, vs. age, B3:24
- metamorphic petrology, Site 1200, A3:16–21
- metamorphic rocks, geochemistry, B4:1–49
- metamorphism
 - halogens, B6:9–10
 - parageneses, A1:7
 - pore water, B5:5
 - tectonics, A3:53–54
- methane
 - carbon isotopes, B7:10
 - pore water, A3:38–40; B7:1–12
 - sediments, A3:33–34
 - vs. depth, A3:118; B7:8
- methane/ethane ratio
 - sediments, A3:33–34
 - vs. depth, A3:118
- mica, clasts, A5:8
- mica-chlorite schist, photograph, A3:94
- mica schist, photograph, A3:97
- microbiology
 - biosphere, A1:7; B1:14–15

sediments, B3:11
shallow subsurface, A3:37–40
microgranulation, dunite, A3:17–18
microlites
 basalt, A4:21–22
 basalt paragenesis, B8:6
 photomicrograph, B8:12
microphenocrysts, photomicrograph, B8:12
“Mikado-like” aragonite needles, A3:13–14
mineral saturation indices
 pore water, A4:34–36
 vs. depth, A4:208
mineralogy
 basalt, B8:1–24
 vs. depth, A1:52; A4:73; B2:25
minor elements, serpentinite, A3:20–21
Miocene, middle, photograph, A4:75
Miocene, sediments, A1:20–22
Mono Lake Excursion, magnetostratigraphy, A5:11
mottling, lithologic units, A5:7–8
mud, mud volcanoes, A1:10–15; B1:16–17
mud, serpentine
 photograph, A3:79, 96, 100–101
 photomicrograph, A3:95
mud breccia, mud volcanoes, A1:11
mud flows, seamounts, A1:4
mud volcanoes
 convergent plate margins, A1:2–14
 cross section, A1:35
 paleosurface, A3:15
 seismic properties, B11:1–14

N

nannofossils
 age of datum levels, A4:203
 distribution, A3:152–153; A4:197–202; A5:44–45;
 B3:7–8
 mud volcanoes, A1:10–14
 preservation, A4:116
 ranges, A1:56; A4:117–118
 vs. depth, A3:104; A4:116–118
nannofossils, calcareous
 biostratigraphy, A3:21–22, 24; A4:24–28
 vs. age, B3:26
neodymium
 geochemistry, B1:11
 schists, B4:9
 vs. ytterbium, B4:34
 See also thorium/neodymium ratio
Neogene, sedimentary regimes, B3:8–10
nickel
 metamorphic clasts, B4:8
 serpentinite, A3:20
 serpentinized peridotite compared with serpentine
 mud, B4:7
 vs. chromium, B4:22
niobium, geochemistry, B1:11
niobium/thorium ratio, schists, B4:9
nodules, concretionary, photomicrograph, A3:73
nodules, green, lithologic units, A4:11–12

nodules, lithologic units, A3:11–12, 14
nodules, manganese, lithologic units, A4:12
nodules, zeolite, photograph, A4:75

O

ocean circulation, deposition, B3:3–5
ocean currents, deposition, B3:3–5
Okinawa Trough, geology, A1:23–27
Okinawa Trough S
 Quaternary paleoceanography, B3:1–31
 topography, B3:19
Oligocene
 datum levels, A4:24–26
 sediments, A1:21
Oligocene, upper
 lithologic units, A4:11–14
 paleoenvironment, A4:18–19
Oligocene/Eocene boundary, biostratigraphy, A4:24
olivine
 dunite, A3:17–18
 geochemistry, B6:6–7
 harzburgite, A3:16–17; B1:10
 lherzolite, A3:18
 photomicrograph, A3:80, 85, 93; A4:103, 108
opal-A, lithologic units, B1:6
opal-CT, lithologic units, A3:14
organic matter, pore water, A3:38–40
orthopyroxene
 dunite, A3:17–18
 geochemistry, B6:6–7
 harzburgite, A3:16–17
 lherzolite, A3:18
 metamorphism, A3:53–54
 photograph, A3:81
 photomicrograph, A3:80, 84, 87, 93
orthopyroxene, tectonized, photomicrograph, A3:86
oxidized zone, photograph, B7:6
oxygen isotopes
 foraminifers, B3:6, 22
 pore water, B9:4, 14
 vs. age, B3:6, 22, 25
 vs. depth, B7:9; B9:10
 vs. deuterium, B9:10

P

Pacific Ocean W, serpentine, A1:1–63
palagonitization
 basalt, A4:21–22
 photomicrograph, A4:91
 sediments, A1:22
paleoceanography, Quaternary, B3:1–31
paleoclimatology
 Tertiary, A1:18
 upper Quaternary, A1:26–27
paleoenvironment
 sedimentation, A4:17–19
 turbidity currents, A5:8
paleointensity, vs. age, B3:28
paleolatitude, plates, A1:18

- paleomagnetism
 - mud volcanoes, A3:155
 - sediments, B13:1–14
 - Site 1200, A3:26–29
 - Site 1201, A4:28–33
 - Site 1202, A5:9–11; B13:1–14
- paleosurface, mud volcanoes, A3:15
- parageneses
 - metamorphism, A1:7
 - photomicrograph, A3:80
- pelagic sedimentation, paleoenvironment, A4:17–19
- peridotite
 - geochemistry, A3:103
 - geology, A1:3–4; B2:4
 - metamorphism, A3:53–54
 - See also* seawater-peridotite interaction
- peridotite, serpentized
 - comparison with serpentine mud, B4:6–7
 - seismic properties, B11:1–12
- petrography
 - basalt, A4:20–22; B8:4–5
 - lithologic units, A4:14–16
- pH
 - pore water, A3:35–40; A4:33–36; B1:6
 - vs. depth, A1:45; A3:115; A4:132; B10:5
- phenocrysts
 - basalt, A4:21–22
 - photomicrograph, A4:86
- Philippine plate, structure, A1:16–17
- Philippine Sea, geology, A1:15–16
- phillipsite
 - petrography, A4:16
 - photomicrograph, A4:88
 - X-ray diffraction data, A4:16–17
- phosphorus
 - basalt, A4:22
 - sediments, A4:36
- phosphorus oxide, basalt, A1:59; A4:114
- photoelectric effect logs, vs. depth, A4:154
- physical properties
 - sediments, A3:164, 167–168
 - serpentine, A1:13
 - Site 1200, A3:40–45; B1:13–14
 - Site 1201, A4:36–40, 215–222
 - Site 1202, A5:11–14, 46
- pillow basalt
 - lithology, A1:21
 - photograph, A4:97–98, 100–102
- pillow lava, petrography, A4:20–22
- pipe vesicles, photomicrograph, A4:84
- plagioclase
 - basalt paragenesis, B8:5–6
 - lithic arenite, A4:87
 - microprobe data, B8:21
 - photomicrograph, A4:85–86, 88, 104–109; B8:12–13
- plagioclase, skeletal, photomicrograph, A4:104, 108
- plagioclase, swallow-tail, photomicrograph, A4:104
- plagioclase laths, photomicrograph, A4:105–106
- planar laminations, photograph, A4:81
- plate margins, summary, A1:1–63
- plate tectonics, seismic observatories, B2:15
- Pleistocene
 - geology, A1:23–27
 - magnetostratigraphy, A4:31
- pleochroism, lithologic units, A3:13
- Pliocene, lower
 - lithologic units, A4:11–12
 - paleoenvironment, A4:19
- Pliocene, magnetostratigraphy, A4:31
- poikilitic texture, photomicrograph, A3:93
- poikiloptical texture
 - petrography, A4:16
 - photomicrograph, A4:90
- Poisson's ratio, serpentinite clasts, B11:3–4, 12
- porcellanite, lithologic units, A4:14
- pore pressure, clasts, A3:44
- pore water
 - boron and iodine, B5:1–18
 - geochemistry, A3:29–33, 156–158; A4:33–36, 131, 205–206; B1:5–8, 14, 30; B2:8–9, 25; B6:5–23; B9:1–14; B10:1–9
 - geochemistry vs. seawater, A3:159
 - peridotite, A1:11–15
 - sediments, A1:20–22
 - stable isotopes, B7:1–12
 - vs. depth, A1:13
- porosity, vs. depth, A3:131; A4:145; A5:33; A6:14
- porosity logs, vs. depth, A1:54; A4:153
- porphyritic texture, basalt, A4:21–22
- porphyry
 - petrography, A4:14–16
 - photomicrograph, A4:85
- potassium
 - basalt, A4:22–23
 - pore water, A3:35–37; A4:34–36; B9:3–4
 - seawater-peridotite mud interaction, B4:6
 - sediments, A4:36
 - vs. depth, A3:114; A4:133; B9:7; B10:5
- potassium/titanium ratio, vs. age, B3:27
- potassium logs, vs. depth, A4:154–155
- potassium oxide
 - basalt, A4:22–23
 - natural gamma ray spectra, B12:6–9, 33
 - vs. depth, A4:110; B12:19
 - See also* sodium oxide + potassium oxide
- preservation, nannofossils, A4:116
- pressure
 - seismic properties, B11:1–12
 - vs. time, A4:156
- pressure, confining
 - vs. average compressional wave velocity, B11:8
 - vs. compressional wave velocity, B11:7
- pressure-temperature conditions
 - fluids, A1:6–7
 - mantle, B2:19
- provenance
 - paleoenvironment, A4:17–19
 - turbidity currents, A5:8
- Pseudomonas putida*, sediments, B3:11
- pseudomorphism
 - lithologic units, A3:12–13
 - photomicrograph, A4:91, 108

pumice ash layer, photomicrograph, A4:84
 pyroxene, basalt paragenesis, B8:6, 15
 pyroxene phenocrysts, basalt paragenesis, B8:6

Q

quartz

lithic arenite, A4:87
 lithologic units, A4:14
 photograph, A4:82

Quaternary

paleoceanography, B3:1–31
 sedimentation, B3:1–31
 sedimentation rates, B3:12

Quaternary, upper

biostratigraphy, A5:8
 lithologic units, A3:11–14; A5:8–9
 nannofossils, A3:21–22
 paleoclimatology, A1:26–27

R

rare earths

elemental recycling, B4:10
 geochemistry, B1:11
 metamorphic clasts, B4:33
 rock/chondrite ratio, B4:25
 schists, B4:8–9
 serpentinized peridotite compared with serpentine mud, B4:7

reaction zones, pore water, A4:34–36

recrystallization, pore water, A4:34–36

reflectance, vs. depth, A1:52; A3:67; A4:73

relict minerals, metamorphism, A3:53–54

remanent magnetization, anhysteretic sediments, B13:5

vs. depth, A4:119; B13:10–11

remanent magnetization, characteristic

basaltic basement, A4:32–33
 magnetic domains, A3:28–29
 sediments, B13:4–5

remanent magnetization, isothermal

acquisition curves, A3:108; A4:120
 pillow basalt, A4:30
 serpentine mud, A3:27

remanent magnetization, natural

demagnetization curves, A3:109
 magnetic intensity, A3:26–28
 pillow basalt, A4:30
 sediments, A5:10; B13:4–5
 vs. depth, B13:10–11

remanent magnetization, saturation isothermal

alternating-field demagnetization, A3:112
 magnetic domains, A3:28–29
 pillow basalt, A4:30

resistivity logs

vs. depth, A1:54; A4:153

See also deep resistivity logs; shallow resistivity logs

retrograde metamorphism, mud volcanoes, A1:11

rheology, seamounts, A1:8

rock magnetics

mud volcanoes, A3:26–28, 155
 paleomagnetism, A4:29–30
 sediments, B13:5

rosette texture, basalt, A4:21–22

rotation, plates, A1:18

ROV operations, configuration, A4:61

rubidium, geochemistry, B1:11

rubidium/ytterbium ratio, vs. aluminum oxide, B4:36

Ryukyu arc-trench system, geology, A1:23–27

S

salinity, vs. depth, B10:4

samarium. *See* lanthanum/samarium ratio

sand

lithologic units, A5:7–8

See also silt/sand ratio

sandstone

lithologic units, A4:11–14

logs, A4:77

photograph, A4:78

photomicrograph, A4:89–90

tectonic genesis, A4:87

sandstone, volcanoclastic, photograph, A4:78

scandium, vs. ytterbium, B4:35

schists

origin, B4:9–10

rare earths, B:48–9

See also amphibole mica schist; amphibole schist; chlorite schist; chlorite-tremolite schist; glaucophane schist; greenschist; mica-chlorite schist; talc schist

scoria, reddish oxidized, photomicrograph, A4:86

Scotia Trench, geology, B1:3–4

sea level changes

sedimentary regimes, B3:9–12

vs. age, B3:26–27

seafloor instruments, configuration, A4:52–58

seamounts

forearcs, B4:2–3

mud flows, A1:4

seamounts, serpentinite, synthesis, B1:1–30

seawater-peridotite interaction, geochemistry, B4:5–7

sedimentary regimes, Neogene, B3:8–10

sedimentary structures, photograph, A4:81

sedimentation

environment, A4:95; B2:27

geology, A1:60

paleoenvironment, A4:17–19

Quaternary, B3:1–31

turbidity currents, A5:8

vs. depth, A4:70–72

sedimentation rates

geology, A1:23–27

magnetostratigraphy, A4:32

Quaternary, B3:12

vs. age, B3:27

vs. depth, A1:58

sediments

crust, B2:7–9

- geochemistry, A3:34–37; A4:207
- natural gamma ray spectra, B12:1–33
- paleomagnetism, B13:1–14
- petrography, A4:14–16
- recovery, B3:20
- X-ray diffraction data, A4:93, 192–193
- seismic observatories
 - plate tectonics, B2:15
 - plates, A1:20–22
 - See also* borehole seismic observatories
- seismic profiles
 - side-scan imagery, A1:36
 - Site 1200, A1:37, 48, 62
 - Site 1201, A4:68–69, 157
 - Site 1202, A5:19
- seismic properties, serpentinite, B11:1–12
- seismic records, synthesis, A4:146
- seismic reflection, geology, A1:15–16
- seismic refraction, crust and mantle, B2:22
- seismic stations, location, A1:46
- seismic structure, deep, crust and mantle, B2:3
- seismic waves, mantle, B2:4–7
- seismometers. *See* borehole seismometers
- serpentine
 - geology, A1:3–4
 - lithologic units, A3:12–13
 - mud, A3:18–20
 - photomicrograph, A3:72–74, 89
 - vs. depth, A3:76–78
- serpentine, clast-poor, photograph, A3:69
- serpentine, clast-rich, photograph, A3:70
- serpentine, silty clay
 - photograph, A3:68
 - photomicrograph, A3:72–74
- serpentine flakes, photomicrograph, A3:72–74
- serpentine mud
 - comparison with serpentinitized peridotite, B4:6–7
 - Coryell-Masuda diagram, B4:25
 - fluid-mobile elements, B4:8, 32
 - geochemistry, B4:1–49
 - halogens, B5:18
 - iodine and boron, B5:1–18
 - origin, B4:9
 - shearing, A3:55
- serpentine mud volcano, convergent plate margins, A1:2–14
- serpentinite
 - clasts, A3:60–63
 - composition, A3:102; B1:9–13
 - geochemistry, A3:20–21; B1:15–16
 - halogens, B6:8–10
 - photograph, A3:96, 140–142
 - photomicrograph, A3:98
 - seismic properties, B11:1–12
 - X-ray diffraction data, A3:14–15, 75
- serpentinite seamounds, synthesis, B1:1–30
- serpentinitization
 - dunite, A3:18
 - harzburgite, A3:17
 - peridotite, A1:11–15
 - seismic properties, B11:3–5
 - tectonics, A3:53–54
 - veins, A3:138–139
- shallow resistivity logs, vs. depth, A4:153
- shear strength
 - clasts, A3:43
 - pelagic muds, A4:39
 - sediments, A5:13
- shear strength, peak, vs. depth, A3:129; A4:148; A5:36
- shear wave velocity
 - serpentinite clasts, B11:1–12
 - vs. compressional wave velocity, B11:10
- shearing
 - harzburgite, A3:17
 - serpentine mud, A3:55
- Shimajiri Group, sedimentation, B3:2–3
- sideromelane, petrography, A4:16
- signal/noise ratio, mantle, B2:5
- silica
 - basalt, B8:8
 - metamorphic clasts, B4:7–8
 - pore water, A3:33, 35–37
 - vs. calcium oxide, B4:26
 - vs. depth, A3:117; A4:134
 - vs. magnesium oxide, B4:19, 26
 - vs. sodium oxide + potassium oxide, A4:111
- silica/magnesium oxide ratio
 - serpentinized peridotite compared with serpentinite mud, B4:6–7
 - vs. aluminum oxide, B4:20, 28
 - vs. boron, B4:30
 - vs. calcium oxide, B4:21, 28
 - vs. iron oxide, B4:21
 - vs. lithium, B4:30
 - vs. loss on ignition, B4:18
 - vs. titanium oxide, B4:20, 29
- silicon
 - basalt paragenesis, B8:7
 - sediments, A4:36
 - vs. depth, B10:7
 - vs. total aluminum in clinopyroxene, B8:17
 - See also* iron + silicon
- silicon/magnesium ratio
 - metamorphic clasts, B4:8
 - serpentinite, A3:20
- silt, vs. age, B3:26
- silt, clayey, lithologic units, A5:7–8
- silt/sand ratio, vs. age, B3:23
- siltstone, photomicrograph, A4:85
- siltstone, sandy, photomicrograph, A4:91
- Site 778, serpentinite mud, B4:1–49
- Site 779
 - iodine and boron, B5:1–18
 - serpentinite mud, B4:1–49
- Site 1200, A3:1–173
 - background and objectives, A3:3–4
 - biostratigraphy, A3:21–25
 - borehole instrumentation, A3:46–52
 - coring summary, A3:145–147
 - geochemistry, A3:29–40
 - halogens, B6:1–23

- igneous and metamorphic petrology of ultramafics, A3:16–21
- iodine and boron, B5:1–18
- lithostratigraphy, A3:11–15
- microbiology, A3:45–46
- operations, A3:4–10
- paleomagnetism, A3:26–29
- physical properties, A3:40–45
- principal results, A3:1–3
- seismic properties, B11:1–12
- serpentinite mud, B4:1–49
- serpentinite seamounts, B1:1–30
- site description, A3:1–173
- stable isotopes, B7:1–12
- structural geology, A3:52–56
- summary, A1:2–14
- Site 1201, A4:1–233
 - background and objectives, A4:3–6
 - basalt mineralogy, B8:1–24
 - biostratigraphy, A4:23–28
 - borehole instrumentation, A4:44–61
 - coring summary, A4:189–191
 - downhole measurements, A4:41–44
 - geochemistry, A4:33–36
 - igneous petrology, A4:20–23
 - ion seismic observatory, A1:14–22
 - lithostratigraphy, A4:10–19
 - natural gamma ray spectra, B12:1–33
 - operations, A4:6–10
 - paleomagnetism, A4:28–33
 - physical properties, A4:36–40
 - pore water, B9:1–14
 - principal results, A4:1–3
 - site description, A4:1–233
 - summary, A1:14–22
 - synthesis, B2:1–27
- Site 1202, A5:1–46
 - background and objectives, A5:2–4
 - biostratigraphy, A5:8–9
 - coring summary, A5:41–43
 - geology, A1:22–27
 - lithostratigraphy, A5:6–8
 - operations, A5:5–6
 - paleomagnetism, A5:9–11; B13:1–14
 - physical properties, A5:11–14
 - pore water, B10:1–9
 - principal results, A5:1–2
 - site description, A5:1–46
 - summary, A1:22–27
 - synthesis, B3:1–31
- slab/mantle interface, elemental recycling, B4:10
- slate chips, vs. age, B3:24
- smear slides, lithologic units, A4:14; A5:7–8
- smectite
 - seamounts, B1:6
 - sedimentary regimes, B3:9
 - sediments, A1:22
- sodium
 - basalt, A4:22–23
 - pore water, A3:30–33; A4:34–36; B9:3–4
 - sediments, A4:36
- vs. depth, A1:55; A3:114; A4:133; B2:25; B9:7; B10:5
- sodium/chloride ratio
 - pore water, A3:30–33
 - seawater-peridotite interaction, B4:6
 - vs. depth, A1:45; A3:114; B10:5
- sodium oxide
 - basalt, A4:22–23; B8:8
 - vs. depth, A4:110
- sodium oxide + potassium oxide, vs. silica, A4:111
- sodium-rich rims, photomicrograph, A4:106
- soft-sediment deformation, lithologic units, A3:11–12
- solid solution, photomicrograph, A4:90
- South Chamorro Seamount
 - serpentine mud volcano, A1:2–14
 - serpentinite mud, B1:5; B4:1–49
- specific storage, A3:44; A6:1–15
- "*Sphenolithus* problem," biostratigraphy, A4:25
- spherulites, photomicrograph, A4:84, 89, 107
- spherulitic texture, basalt, A4:21–22; B8:4–5
- spinel
 - basalt, B8:16
 - basalt paragenesis, B8:6–7
 - microprobe data, B8:24
 - peridotite, A1:12; B1:10
 - See also chromium spinel
- stable isotopes, pore water, B7:1–12
- strontium
 - basalt, A4:22–23
 - pore water, A3:33, 35–37; B1:8
 - seawater-peridotite mud interaction, B4:6
 - serpentinized peridotite compared with serpentine mud, B4:7
 - vs. depth, A3:116; A4:110, 134; B6:21; B10:6
 - vs. titanium oxide, B4:23
- structural geology, A3:52–56
- subduction
 - forearcs, B1:3–5; B4:2–3
 - serpentine mud, B5:1–18
- subduction zones
 - biosphere, A1:7
 - volatiles, B6:9–10
- subophitic texture
 - basalt, B8:4–5
 - photomicrograph, A4:109; B8:13
- sulfate
 - pore water, A3:30–40; A4:34–36; B7:1–12; B9:3–4
 - sulfur isotopes, B7:12
 - vs. depth, A1:45; A3:115; A4:132; B7:7–8; B9:8; B10:5
- sulfate reduction, pore water, A3:32–40
- sulfide
 - pore water, A3:30–33; B7:1–12
 - vs. depth, B7:7
- sulfur
 - sediments, A3:162
 - vs. depth, A3:119; B7:8
- sulfur isotopes
 - sulfate, B7:12
 - vs. depth, B7:8–9
- suprasubduction, basalt, B1:1–17

T

talc
 lithologic units, A3:14
 vs. depth, A3:76–78
talc schist, photograph, B4:15
tectonic discrimination diagram, basalt, A1:59
tectonic drift, plates, A1:18
tectonics
 Quaternary paleoceanography, B3:2–3
 serpentinization, A3:53–54; B1:2–4
temperature
 clasts, A3:44–45
 logs, A4:44
 pelagic muds, A4:40
 sediments, A5:13–14
 vs. time, A3:132; A4:151, 156; A5:38
temperature, in situ, sediments, A3:170
temperature, sea-surface, vs. age, B3:25–26
tephra, petrography, A4:14–16
Tertiary, paleoclimatology, A1:18
thermal conductivity
 clasts, A3:41
 pelagic muds, A4:40
 sediments, A5:13
 vs. depth, A3:123, 130; A4:150; A5:37
thermal resistivity
 vs. depth, A5:39
 vs. temperature, A5:40
thermomagnetism, sediments, B13:13
thermoremanence, sediments, B13:5
thorium
 natural gamma ray spectra, B12:6–9, 33
 vs. depth, B12:19
 vs. ytterbium, B4:34
 See also niobium/thorium ratio
thorium/neodymium ratio, schists, B4:9
thorium logs, vs. depth, A4:154
Thvera Subchron
 magnetostratigraphy, A4:31
 sediments, A1:21
titanium
 basalt, A4:23, 112
 basalt paragenesis, B8:7
 sediments, A4:36
 total aluminum in clinopyroxene, B8:17
 vs. vanadium, A1:59; A4:113; B2:26
 See also potassium/titanium ratio
titanium oxide
 basalt, A1:59; A4:114; B8:8
 serpentinite, A3:20
 serpentinized peridotite compared with serpentine
 mud, B4:7
 vs. aluminum oxide, B4:23, 27
 vs. boron, B4:31
 vs. calcium oxide, B4:24
 vs. silica/magnesium oxide ratio, B4:20, 29
 vs. strontium, B4:23
 vs. vanadium, B4:24
Tonga Trench, geology, B1:2–4
Torishima Forearc Seamount, geology, B1:5

trace elements
 metabasite, B4:44–47
 serpentine mud, B4:17, 37–43
 serpentinite, A3:20–21; B1:12–13
trench axis, seismic properties, B11:3–4
turbidite
 crust, B2:8–9
 logs, A4:77
 paleoclimatology, A1:27
 sediments, A1:20–22
turbidite, silty claystone, photograph, A4:78
turbidity currents
 mud volcanoes, A3:15
 paleoenvironment, A4:17–19
 sedimentation, A5:8

U

ultramafics
 petrology, B1:12–15
 X-ray diffraction data, A3:148–149
ultramafics, altered, lithologic units, A3:11–12
unconformities, sediments, A1:21
uplifts, geology, A1:23–27
upwelling
 halogens, B6:9–10
 sediments, A3:35–37
uranium
 natural gamma ray spectra, B12:6–9, 33
 vs. depth, B12:19
uranium logs, vs. depth, A4:154

V

vanadium
 basalt, A4:23
 vs. titanium, A1:59; A4:113; B2:26
 vs. titanium oxide, B4:24
veins
 harzburgite, A3:17
 metamorphism, A3:54
 photograph, A3:140–142; A4:101–102
 serpentinization, A3:138–139
veins, chrysotile
 photograph, A3:82, 90–91
 photomicrograph, A3:92
veins, serpentine, photomicrograph, A3:88, 92
velocity
 spectra, B2:20
 vs. density, B1:4–5; B11:9
 vs. depth, A4:145
 See also compressional wave velocity; shear wave velocity
velocity anisotropy, vs. depth, A4:147
velocity anomalies, mantle, B2:5
velocity logs, vs. depth, A1:54; A4:153
vent communities, serpentine, A1:13
vesicles
 petrography, A4:16
 photograph, A4:96, 100–102, 107–109
 photomicrograph, B8:13

vitrophyre, petrography, A4:14–16
vitrophyre fragments, photomicrograph, A4:85–86, 89
void ratio, sediments, A3:169
volatiles, subduction zones, B6:9–10
volcanic ash fall, sediments, A1:18
volcanic glass
 basalt, A4:21–22; B8:4–5
 photograph, A4:97–98, 100–102
volcanic grains, vs. age, B3:24
volcanic rocks, petrography, A4:20–22
volcaniclastics
 crust, B2:8–9
 lithologic units, A4:12–14
 petrography, A4:14–16
 sediments, A1:20–22

W

water content
 sediments, A3:162; B1:5–6
 vs. depth, A3:119
well-logging, operations, A4:152, 223–224
well-logging Unit 1, lithology, A4:43
well-logging Unit 2, lithology, A4:43
well-logging units, A4:42–44
West Philippine Basin
 ion seismic observatory, A1:14–22
 synthesis, B2:1–27

X

X-ray diffraction data
 basalt, A4:194
 clay minerals, A4:94

sediments, A4:16–17, 93, 192–193
serpentinite, A3:14–15, 75
ultramafics, A3:148–149

Y

ytterbium
 vs. neodymium, B4:34
 vs. scandium, B4:35
 vs. thorium, B4:34
 See also barium/ytterbium ratio; rubidium/ytterbium ratio
yttrium
 basalt, A4:23, 112
 vs. chromium, A1:59; A4:115

Z

zeolite cement
 lithologic units, A4:13–14
 photograph, A4:80
zeolites
 basalt, A4:21–22
 lithologic units, A3:14; A4:11–12
 petrography, A4:14–16
 photomicrograph, A4:89–92, 105
 pore water, A4:34–36
 sediments, A1:20
 vs. depth, A3:76–78
 X-ray diffraction data, A4:94
zeolites, reworked, photomicrograph, A4:84
zinc sulfide, pore water, A3:33
zirconium, basalt, A4:23, 112

TAXONOMIC INDEX

A

aequilateralis, *Globigerinella*, Site 1200, A3:23

B

barbadiensis, *Discoaster*, Site 1201, A4:24–25, 32; B2:8
bisectus, *Dictyococcites*, Site 1201, A4:24, 31
Bramletteius serraculoides, Site 1201, A4:26

C

Calcidiscus leptoporus, Site 1200, A3:21
Candeina nitida, Site 1200, A3:23
caribbeanica, *Gephyrocapsa*, Site 1200, A3:21–22, 24, 105
carteri, *Helicosphaera*, Site 1200, A3:21–22
Ceratolithus cristatus, Site 1200, A3:21
Cibicidoides spp., Site 1200, A3:23
ciperoensis, *Sphenolithus*, Site 1201, A4:25–26, 31
clavigera, *Rhabdosphaera*, Site 1200, A3:21–22
coccolithomorpha, *Neosphaera*, Site 1200, A3:21
Coccolithus pelagicus, Site 1200, A3:21
compacta, *Helicosphaera*, Site 1201, A4:26
cristatus, *Ceratolithus*, Site 1200, A3:21

Cyclicargolithus floridanus

Site 1200, A3:21
Site 1201, A4:26

D

deflandrei, *Discoaster*, Site 1201, A4:26
dehiscens, *Sphaeroidinella*, Site 1200, A3:23
Dictyococcites bisectus, Site 1201, A4:24, 31
Discoaster barbadiensis, Site 1201, A4:24–25, 32; B2:8
Discoaster deflandrei, Site 1201, A4:26
Discoaster saipanensis, Site 1201, A4:24–25, 27, 32
Discoaster tani ornatus, Site 1201, A4:26
distentus, *Sphenolithus*, Site 1201, A4:25–26, 31; B2:8
dutertrei, *Neogloboquadrina*
 Site 1200, A3:23
 Site 1202, B3:6, 22

E

Ehrenbergina spp., Site 1200, A3:23
Emiliana huxleyi
 Site 1200, A3:21–22
 Site 1202, A1:27; A5:9; B3:8

Ericsonia formosa, Site 1201, A4:25, 27, 32

F

Fissurina spp., Site 1200, A3:23

floridanus, *Cyclicargolithus*

Site 1200, A3:21

Site 1201, A4:26

Florisphaera profunda, Site 1202, B3:8, 26

formosa, *Ericsonia*, Site 1201, A4:25, 27, 32

fragilis, *Oolithotus*, Site 1200, A3:21–22

G

Gephyrocapsa caribbeanica, Site 1200, A3:21–22, 24, 105

Gephyrocapsa oceanica, Site 1200, A3:21

Gephyrocapsa spp., Site 1202, B3:8

Gephyrocapsa spp. (small), Site 1200, A3:21–22

Globigerinella aequilateralis, Site 1200, A3:23

Globigerinoides immaturus, Site 1200, A3:23

Globigerinoides quadrilobatus, Site 1200, A3:23

Globigerinoides ruber

Site 1200, A3:23

Site 1202, A5:9

Globigerinoides sacculifer

Site 1200, A3:23

Site 1202, B3:7, 25

Globigerinoides spp., Site 1202, B3:6

Globorotalia menardii, Site 1200, A3:23–24

Globorotalia truncatulinoides, Site 1200, A3:23–24

Globorotalia tumida, Site 1200, A3:23

Gyroidina spp., Site 1200, A3:23

H

Helicosphaera carteri, Site 1200, A3:21–22

Helicosphaera compacta, Site 1201, A4:26

huxleyi, *Emiliana*

Site 1200, A3:21–22

Site 1202, A1:27; A5:9; B3:8

I

immaturus, *Globigerinoides*, Site 1200, A3:23

irregularis, *Umbellosphaera*, Site 1200, A3:21

Isthmolithus recurvus, Site 1201, A4:24–25

L

Lagena spp., Site 1200, A3:23

leptoporus, *Calcidiscus*, Site 1200, A3:21

M

Melonis spp., Site 1200, A3:23

menardii, *Globorotalia*, Site 1200, A3:23–24

moriformis, *Sphenolithus*, Site 1201, A4:26

N

Neogloboquadrina dutertrei

Site 1200, A3:23

Site 1202, B3:6, 22

Neosphaera coccolithomorpha, Site 1200, A3:21

nitida, *Candeina*, Site 1200, A3:23

O

obliquiloculata, *Pulleniatina*, Site 1200, A3:23–24

oceanica, *Gephyrocapsa*, Site 1200, A3:21

Oolithotus fragilis, Site 1200, A3:21–22

Orbulina universa

Site 1200, A3:20, 23

Site 1202, B3:6

P

pelagicus, *Coccolithus*, Site 1200, A3:21

Pontosphaera spp., Site 1200, A3:21–22

predistentus, *Sphenolithus*, Site 1201, A4:25–26

profunda, *Florisphaera*, Site 1202, B3:8, 26

pseudoradians, *Sphenolithus*, Site 1201, A4:26

pseudoumbilicus, *Reticulofenestra*, Site 1200, A3:21

Pulleniatina obliquiloculata, Site 1200, A3:23–24

Q

quadrilobatus, *Globigerinoides*, Site 1200, A3:23

R

recurvus, *Isthmolithus*, Site 1201, A4:24–25

Reticulofenestra pseudoumbilicus, Site 1200, A3:21

Reticulofenestra spp. (small), Site 1200, A3:21

Reticulofenestra umbilicus, Site 1201, A4:25, 27, 32

Rhabdosphaera clavigera, Site 1200, A3:21–22

ruber, *Globigerinoides*

Site 1200, A3:23

Site 1202, A5:9

rubescens, *Zeaglobigerina*

Site 1200, A3:23–24

Site 1202, A5:9

S

sacculifer, *Globigerinoides*

Site 1200, A3:23

Site 1202, B3:7, 25

saipanensis, *Discoaster*, Site 1201, A4:24–25, 27, 32

serraculoides, *Bramletteius*, Site 1201, A4:26

sibogae, *Umbilicosphaera*, Site 1200, A3:21–22

Sphaeroidinella dehiscens, Site 1200, A3:23

Sphenolithus ciperoensis, Site 1201, A4:25–26, 31

Sphenolithus distentus, Site 1201, A4:25–26, 31; B2:8

Sphenolithus moriformis, Site 1201, A4:26

Sphenolithus predistentus, Site 1201, A4:25–26

Sphenolithus predistentus–*Sphenolithus ciperoensis* lineage,

Site 1201, A4:25–26

Sphenolithus pseudoradians, Site 1201, A4:26

Syracosphaera spp., Site 1200, A3:21–22

T

tani ornatus, *Discoaster*, Site 1201, A4:26

tenuis, *Umbellosphaera*, Site 1200, A3:21
truncatulinoides, *Globorotalia*, Site 1200, A3:23–24
tumida, *Globorotalia*, Site 1200, A3:23

U

Umbellosphaera irregularis, Site 1200, A3:21
Umbellosphaera spp., Site 1200, A3:21–22
Umbellosphaera tenuis, Site 1200, A3:21
Umbilicosphaera sibogae, Site 1200, A3:21–22
umbilicus, *Reticulofenestra*, Site 1201, A4:25, 27, 32
universa, *Orbulina*
 Site 1200, A3:20, 23
 Site 1202, B3:6
Uvigerina spp., Site 1202, B3:22

Z

Zeaglobigerina rubescens
 Site 1200, A3:23–24
 Site 1202, A5:9
 zones (*with letter prefixes*)
 N22, Site 1200, A3:23
 NN20, Site 1200, A3:22, 24
 NN21, A3:21–22; A5:9
 NP19/NP20, Site 1201, A1:21; A4:27–28
 NP20, Site 1201, A4:24–25
 NP21, Site 1201, A4:24–25, 27–28
 NP21/NP22 boundary, Site 1201, A4:25
 NP22, Site 1201, A4:27–28
 NP23, Site 1201, A4:27–28
 NP24, Site 1201, A4:26, 28, 31
 NP25, Site 1201, A1:21; A4:28