

INDEX TO VOLUME 186

This index covers both the *Initial Reports* and *Scientific Results* portions of Volume 186 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 1150, for example, is given as "Site 1150, A4:1-209."

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

accumulation

carbonate content, B11:34

marine organic matter, B11:4-6

acme events, dinoflagellates, B6:16, 18

acritarchs, paleoclimatology, B6:6-7

advection, alteration, B14:9

age controls, biostratigraphic datums, A4:195; A5:113

age vs. depth

Site 1150, A1:32; A4:124; B5:12

Site 1151, A1:32; A5:69; B5:12

alkali metals, tephra, B9:8-9

alkalinity

fluid flow, B14:9

pore water, A1:10; A5:25-26; B1:4

sediments, A1:13-14; A4:38

vs. depth, A4:128; A5:73; B14:18, 19

alkenones

hemipelagic sediments, B13:1-12

vs. depth, B13:6

alteration

biogenic silica, B14:9

fluids, B14:10

glass shards, B9:5-7

volcanic ash, B14:9

aluminum oxide

standard deviation, B9:20

tephra, B9:8-9, 16-17

vs. depth, B15:16, 17, 18, 19-20

vs. gamma rays, B15:21

vs. silica, B15:21

vs. silica/aluminum oxide ratio, B15:21

See also potassium oxide/aluminum oxide ratio; silica/aluminum oxide ratio; titanium oxide/aluminum oxide ratio

aluminum oxide/silica ratio, glass shards, B9:7

ammonium

pore water, A5:25-27

sediments, A4:38

vs. depth, A4:128; A5:73

anisotropy, compressional wave velocity, vs. depth, A4:135; A5:80

anisotropy, horizontal compressional wave velocity vs. depth, A5:80

vs. magnetic declination, A4:136

anisotropy, magnetic susceptibility, faults and bedding structures, B16:5-6

anisotropy, sediments, A4:200; A5:117

authigenic minerals, carbonates, B12:1-6

B

backarcs, uplifts, B1:5
bedding planes
 anisotropy of magnetic susceptibility, B16:5–6
 dip, A1:14; A5:96
 magnetic foliation, B16:17–18
 orientation, A4:175; A5:40, 96, 125
 sediments, A4:65
biogenic component
 histograms, A4:77
 lithologic units, A4:19–21; A5:13
 vs. depth, A4:78; A5:52; B16:10
biogeography, foraminifers, B7:5–6
biohorizons
 dinoflagellates, B6:4–5, 16, 18
 foraminifers, B7:5–6, 21
biostratigraphic datums
 age control points, A4:195; A5:113
 diatoms, A5:111; B2:12–14
 nannofossils, A5:52; B4:22
 sedimentation rates, B5:4–5
 temperature, B3:7
biostratigraphy
 diatoms, B2:1–38
 foraminifers, B7:1–23
 nannofossils, B4:1–31; B5:1–15
 palynomorphs, B6:1–19
 sedimentation rates, A4:35–37; A5:23–24
 Site 1150, A4:23–26
 Site 1151, A5:17–21
biotite, lithologic units, A5:12–13
bioturbation
 lithologic units, A1:10; A4:17–18, 21–22; A5:14–15
 photograph, A5:88
BOB, downhole links, A3:16, 39, 50, 53
borehole geophysical observatory, boreholes, A1:9–15
borehole instruments
 deployment, A5:121
 jet-in test, A4:11–13
 photograph, A4:159–164
 Site 1150, A4:57–59, 71–74, 205–206
 Site 1151, A5:36–37
borehole offsets, vs. depth, B8:17
boreholes
 drilling, A1:26–28
 geometry, A4:53–54
 installations, A5:45
 instruments, A3:1–53
boron
 alteration, B14:10–13
 pore water, B14:5–6
 vs. depth, B14:18–19
boron isotopes, water flux, B1:8–9
boron-11
 pore water, B14:7, 11
 vs. depth, B14:21
Brunhes/Matuyama boundary
 magnetostratigraphy, A5:23
 sediments, A1:11, 14
bulk density logs, vs. depth, A4:94, 158; A5:35, 84, 87

burrows, tephra, B9:4

C

cables, NEREID, A3:20–21, 47–49
calcareous layers
 lithologic units, A5:15
 photograph, A5:62
 X-ray diffraction data, A5:104
calcite
 authigenic minerals, B12:1–6
 lithologic units, A4:19–22; A5:14
 photograph, A5:62
 vs. depth, A5:54
calcite, X-ray diffraction data, vs. depth, A4:89
calcium
 pore water, A1:10, 14; A5:26; B14:5–6
 sediments, A4:38–39
 vs. depth, A4:128; A5:73; B14:18–19
 vs. magnesium, B14:10, 23
calcium oxide
 tephra, B9:9, 16–17
 See also iron oxide/calcium oxide ratio; silica/calcium oxide ratio
caliper logs, vs. depth, A4:94; A5:84
carbon, organic
 hemipelagic sediments, B13:3–4
 mass accumulation rates, B11:4–6
 sediments, A1:10, 13; A4:38; A5:25, 27
 vs. depth, A4:127; A5:72; B11:12–13; B13:6
carbon, organic/nitrogen ratio
 hemipelagic sediments, B13:3–4
 mass accumulation rates, B11:5–7
 vs. depth, A4:127; A5:72; B11:12–13; B13:6
carbon, total organic
 sediments, B15:37–38
 vs. silica/aluminum oxide ratio, B15:21
carbon dioxide, organic matter, B11:4–6
carbon isotopes
 carbonates, B12:3, 5
 organic matter, B11:5–6
 vs. depth, B11:12
carbon/nitrogen ratio, sediments, A1:13
carbonaceous component, histograms, A4:77
carbonate compensation depth, accumulation, B11:3–4
carbonate content
 accumulation, B11:3–4
 sediments, A1:13; A4:37; A5:25
 vs. depth, A4:127; A5:72; B11:12–13
 vs. porosity, A4:144
carbonates
 authigenic minerals, B12:1–6
 mass accumulation rates, B11:3–4
casing strings, jet-in test, A4:6–9, 73
cell pressure, vs. time, B17:12
chlorine-37
 pore water, B14:6–7
 vs. depth, B14:20
chlorinity
 fluid flow, B14:9
 pore water, A1:10; A5:25; B1:4, 10; B14:4–6

- sediments, A1:13,15; A4:38
 - vs. depth, A1:31; A4:128; A5:73; B1:20; B14:18–19
 - chlorite, X-ray diffraction data, vs. depth, A4:90
 - Chondrites*
 - lithologic units, A1:10; A4:18–19
 - photograph, A4:80
 - Chron C2An/C2Ar boundary, sedimentation rates, A4:36; A5:24
 - Chron C2Ar. *See* Chron C2An/C2Ar boundary
 - clay
 - lithologic units, A4:16–17
 - vs. depth, A4:83
 - clay, diatom-bearing silty, lithologic units, A1:12–13; A5:9–10
 - clay, diatom-bearing sponge spicule-bearing silty, lithologic units, A5:8–11
 - clay, diatomaceous
 - correlation, B8:12
 - lithologic units, A4:15–17
 - photograph, B8:12
 - clay, diatomaceous silty, lithologic units, A1:9–10, 12; A5:5–10
 - clay, diatomaceous spicule-bearing silty, lithologic units, A1:12–13
 - clay, glass-bearing diatom-bearing silty, lithologic units, A5:8–9
 - clay, glass-bearing silty, lithologic units, A1:12–13
 - clay, hemipelagic diatom-bearing silty, lithologic units, A5:8–11
 - clay, hemipelagic diatom-bearing sponge spicule-bearing silty, lithologic units, A5:10–11
 - clay, hemipelagic diatomaceous, lithologic units, A4:15–16
 - clay, hemipelagic diatomaceous silty, lithologic units, A4:16–17
 - clay, hemipelagic sponge spicule-bearing diatomaceous silty, lithologic units, A5:9–10
 - clay, silty, lithologic units, A4:15–17
- clay minerals
 - dehydration, B14:9
 - lithologic units, A4:19–22, 49–50; A5:12–13
 - vs. depth, A4:91; A5:54–55
- clay minerals, X-ray diffraction data, vs. depth, A4:89–90
- claystone, isotopes, B14:6–7
- claystone, diatom-bearing, lithologic units, A1:13
- claystone, diatomaceous silty, lithologic units, A1:9–10; A4:18–19
- claystone, hemipelagic diatom-bearing sponge spicule-bearing silty, lithologic units, A:11–12
- claystone, hemipelagic diatomaceous silty, lithologic units, A4:17–18
- claystone, hemipelagic glassy silty, lithologic units, A5:12
- claystone, spicule-bearing, lithologic units, A1:13
- climate cycles
 - core–log integration, B15:9–10
 - volcanic ash, B9:7–8
- clinopyroxene, vs. depth, A5:53
- Coccolithus pelagicus*, abundance, B4:1–31
- coercivity
 - rock magnetics, A4:32–35
 - sediments, A5:22
- color
 - lithologic units, A5:16
 - vs. depth, A4:91–92
- combiner/repeater modules, seafloor instruments, A3:13–14
- composite depth, scales, B8:1–23
- compression
 - backarcs, B1:5–6
 - deformation, B1:8
 - tectonics, A1:15–16
- compressional wave velocity
 - lithologic units, A1:14
 - Mohorovicic discontinuity, B1:3
 - sediments, A1:11; A4:42–44, 200; A5:29–30, 117
 - vs. depth, A4:94, 131, 141–142; A5:79
- compressional wave velocity, horizontal, vs. depth, A4:134; A5:76
- compressional wave velocity, vertical, vs. depth, A4:134
- concretions, calcareous, photograph, A5:63
- consolidation
 - logs, A4:55
 - shear strength, B17:13
- continental slope, tectonic erosion, A1:9
- convection, thermal structure, B1:7
- convergent margin, underthrusting, A1:4–5
- core–in situ correlation, physical properties, A4:46–49
- core–log correlation, seismic integration, A4:153–154
- core–log integration, gamma rays, B15:1–42
- cores, remanent magnetization, A4:28–30
- coring biscuits, photograph, A4:79
- correlation
 - biohorizons, B6:5–6
 - composite depth scales, B8:4–7
 - tephra, B9:8–9
 - upper Quaternary tephrostratigraphy, B10:3–4
 - volcanic ash, B8:12, 22
- coupling, geometry and length, B1:8–9
- Cretaceous, unconformities, A1:4; B1:3
- Cretaceous, Lower, convergent margin, A1:4–5
- crust, forearc basins, B1:3
- currents
 - diatoms, B3:1–21
 - paleoceanography, B4:7–9, 15
- cyclic processes
 - core–log integration, B15:9–10
 - lithologic units, A4:20
- D**
- deformation
 - magnetic fabric, B16:5–6
 - rock magnetics, B16:1–21
 - stratigraphy, B1:5
 - structure number, A4:207; A5:122
 - subduction, A1:15–16
 - deformation, brittle, lithologic units, A1:13
 - degradation, organic matter, B11:4–6
 - dehydration
 - clay minerals, B14:9
 - sediments, A1:15

demagnetization
 discrete samples, A5:23
 remanent magnetization, A4:27–35
 sediments, A5:22–23
 vectors, A4:108–114
demagnetization, thermal, vectors, A4:115
density
 lithologic units, A1:14
 vs. depth, A4:153–154
density, bulk
 sediments, A1:11, 14; A4:45–46, 50–51
 vs. depth, A4:92, 130, 138–139, 141–142; A5:75, 81–82
 See also bulk density logs
density, dry, vs. depth, A4:138–139; A5:81–82
density, grain
 sediments, A1:14
 vs. depth, A4:138, 140; A5:81–82
 vs. gamma rays, B15:22
density, pore water, vs. depth, A4:138
density logs. *See* bulk density logs
deposition, tephra, B9:4–5
depth offsets, sediments, B15:39
dewatering, logs, A4:55
diagenesis
 lithologic units, A4:20–21
 silica, B9:7; B14:11
diatom datums
 magnetostratigraphy, A4:35
 Neogene, A1:13; B2:1–38
 stratigraphic occurrence and chronology, A5:111
diatom valves
 sediments, B15:37–38
 vs. silica/aluminum oxide ratio, B15:21
diatoms
 age diagnostic forms, B2:25–30
 age and stratigraphic position, B2:31
 alteration, B14:10
 biostratigraphic datums, A5:111
 biostratigraphy, A4:24–26; A5:19–21; B2:1–38
 distribution and abundances of species, A4:186–189; A5:106–110; B3:15–16
 lithologic units, A1:9–10; A5:13
 paleoceanography, B3:1–21
 principal component analysis, B3:5–6, 12, 14, 17–21
 stratigraphic occurrences and chronology, A4:190
 stratigraphic ranges, B2:23
 vs. depth, A4:82; A5:52; B3:11–14; B15:16–18, 20
 zonation, A1:10; B2:1–38
diatoms, cold-water, paleoceanography, B3:4, 6
diatoms, extinct
 paleoceanography, B3:5–6
 vs. depth, B3:11, 13
diatoms, freshwater
 paleoceanography, B3:5–6
 vs. depth, B3:11, 13
diatoms, sublittoral
 paleoceanography, B3:5–6
 vs. depth, B3:11, 13
diatoms, warm-water, paleoceanography, B3:4, 6
dilatometers, strainmeters, A3:5–7, 27

dinoflagellates
 biostratigraphy, B6:1–19
 occurrence, B6:15, 17
 photomicrograph, B6:19
dip
 bedding planes, A1:14; B16:17
 structures, A4:63
 thermal structure, B1:7–8
 triaxial shear strength, B17:6
dip azimuth
 fracture planes, A4:172; A5:93
 healed fractures, A5:92
discrete samples
 demagnetization, A5:23
 remanent magnetization, A4:30–35
dolomite
 authigenic minerals, B12:1–6
 layers, A4:184
 lithologic units, A1:14; A4:16–17, 22; A5:14
 photograph, A4:100
 vs. depth, A4:91; A5:54
 X-ray diffractograms, A4:87
 dolomite, X-ray diffraction data, vs. depth, A4:89
dolomite layers, lithologic units, A5:15
downhole links, seafloor instruments, A3:15–16
downhole measurements
 Site 1150, A4:49–57
 Site 1151, A5:33–35

E

Early Pliocene problem subzone, diatom biostratigraphy, B2:12–14
earthquakes
 epicenters, A1:24
 sources, A1:7–8, 24
 subduction zones, A1:5–6; B1:5–6
eccentricity
 core-log integration, B15:9–10
 gamma-ray time shift variation, B15:24–25
elastic deformation, triaxial shear strength, B17:6
enrichment, elements, B14:12–13
epicenters, earthquakes, A1:24
erosion rates, deformation, B1:7–9
ethane
 sediments, A1:10, 13; A4:37; A5:25; B14:7–8
 vs. depth, A4:126; A5:71
 See also methane/ethane ratio

F

failure, triaxial shear strength, B17:5
fault dip angle, vs. depth, B16:19
fault dip azimuth, vs. depth, B16:19
fault planes, magnetic foliation, B16:16
faults
 anisotropy of magnetic susceptibility, B16:5–6
 frequency (number vs. depth), A1:36
 lithologic units, A4:18–19, 60–61
 number, A5:122
 number vs. depth, A5:91

orientation, A1:35
photograph, A5:90
vs. depth, A4:168; B16:15, 19
faults, normal
 deformation, A1:15–16
 frequency, A5:38–39
 photograph, A4:165–166; A5:88
faults, strike-slip, frequency, A5:38–39
feldspar
 lithologic units, A4:19–22; A5:12–13
 vs. depth, A4:83; A5:53
feldspar, X-ray diffraction data, vs. depth, A4:88
ferrimagnetic minerals, magnetic susceptibility, B16:4
fluid flow, geochemistry, B14:8–13
fluids, alteration, B14:10
foraminifers
 biostratigraphy, B7:1–23
 vs. depth, A4:82; A5:52
foraminifers, planktonic, distribution, B7:15–20
forearc basins
 cross section, B1:14
 paleoclimatology, B6:6–7
 subduction plate coupling, B1:1–27
forearcs, map, B1:17
Formation Microscanner imagery
 carbonate zone, A4:146
 fractures, A4:148
 silts, A4:147
 vs. depth, A4:94; A5:84
fracture planes
 dip vs. depth, A4:172
 sediments, A1:14
fractures
 Formation Microscanner imagery, A4:148
 frequency, A5:39
 number, A5:122
 photograph, A4:80; B17:10
 physical properties, A4:48
 sediments, A4:61
 stereoplots, A4:170
 triaxial shear strength, B17:5
 vs. depth, A4:168
fractures, healed
 contour diagrams, A4:173; A5:94
 frequency, A5:92
 histograms, A4:171
 orientation, A4:208; A5:39–40, 123
 sediments, A4:63–65
fractures, open
 contour diagrams, A4:174; A5:95
 number vs. depth, A5:91
 orientation, A4:209; A5:40, 124
 sediments, A4:65
freshwater, sediments, A1:15
Fukushima, volcanic front, B1:6

G

gamma rays
 core-log integration, B15:1–42
 depth shift and depth adjustment, B15:23

grain density, B15:22
lithologic units, A1:14; A5:34
sediments, A4:42, 52–53
time shift variation, B15:24–25
vs. aluminum oxide, B15:21
vs. depth, A4:91–92, 132, 141–142; A5:77; B15:16–20
vs. porosity, B15:22
vs. potassium oxide, B15:21
vs. silica/aluminum oxide ratio, B15:22
wireline logs vs. natural, B15:15
gamma rays, spectral, vs. shallow resistivity, A4:152
gamma-ray logs, spectral, vs. depth, B15:14
gas hydrates, sediments, A4:40
gases, headspace, sediments, A4:37
gases, sediments, B14:8
Gauss Chron, sedimentation rates, A4:36; A5:24
geochemistry
 fluid flow, B14:8–13
 forearcs, B1:4
 glass shards, B9:5–7
 Site 1150, A4:37–41
 Site 1151, A5:25–27
 tephra correlation, B9:8–9
geochemistry, organic
 alkenones, B13:1–12
 sediments, B11:16, 17
geothermal gradient, alteration, B9:7
glass shards
 lithologic units, A5:13–14; B10:19
 major elements, B10:19–20
 tephra, B9:5–7, 11
glauconite
 lithologic units, A4:16–17; A5:14
 vs. depth, A4:84
glauconite, detrital, lithologic units, A1:10
glauconite, X-ray diffraction data, vs. depth, A4:90
grabens, geometry, B1:8
granules
 lithologic units, A4:15–16, 22
 number, A4:182–183
 vs. depth, A4:78
gravity residual anomalies, deformation, B1:8
greigite, rock magnetics, A4:32–35

H

H stages, core-log integration, B15:9–10
H1 Stage, core-log integration, B15:9–10
H2 Stage, core-log integration, B15:9–10
H3 Stage, core-log integration, B15:9–10
H4 Stage, core-log integration, B15:9–10
halite, vs. depth, A4:93
heat flow
 deformation, B1:8
 sediments, A1:11
heat flux, alteration, B9:7
hematite
 lithologic units, A5:14
 rock magnetics, A4:32–35
 vs. depth, A4:84

hiatuses
 diatom biostratigraphy, B2:7
 sedimentation rates, A5:24
 See also unconformities
histograms, sediments, A4:77
Hokkaido, upper Quaternary tephrostratigraphy, B10:4
Holocene
 calcareous nannofossils, B4:4–7
 lithologic units, A4:15–16; A5:8–9
hornblende
 lithologic units, A4:19–22; A5:12–13
 upper Quaternary tephrostratigraphy, B10:3–4
 vs. depth, A4:83; A5:53
hornblende, X-ray diffraction data, vs. depth, A4:88
hydration
 glass shards, B9:5–7, 11
 major oxides, B9:21
hydrocarbons
 sediments, B14:8
 See also alkenones; ethane; methane; methane/ethane ratio
hydrocarbons, light, gas pocket analyses, A4:197
hydrocarbons, volatile, sediments, A5:25, 114
headspace concentration, A4:196; A5:114

I

ichnofossils, photograph, A4:80–81
ignimbrite, upper Quaternary tephrostratigraphy, B10:4
illite, X-ray diffraction data, vs. depth, A4:90
index properties, sediments, A1:11; A4:44–46, 202;
 A5:30–31, 118
induration, lithologic units, A4:21
instruments, boreholes, A3:1–53
interplate events, unconformities, A1:5–6
iron oxide
 tephra, B9:9, 16–17
 vs. magnesium oxide, B9:25
iron oxide/calcium oxide ratio, tephra, B9:9
iron oxide/magnesium oxide ratio, tephra, B9:10
iron oxide/titanium oxide ratio, tephra, B9:9
Ishikari–Hidaka Basin, biostratigraphy, A4:26
isotope excursions, alteration, B14:10–11
isotopes, pore water, B14:6–7
Isthmus of Panama, paleoceanography, B4:7–9, 19–20

J

Japan, extensional tectonics, B1:5
Japan Forearc
 fluid geochemistry, B14:1–23
 tephrochronology, B9:1–29
Japan N
 alkenones, B13:1–12
 biostratigraphy, B6:1–19
Japan NE, paleoceanography, B3:1–21
Japan Trench
 alkenones, B13:1–12
 deep oceans, A1:1–37
 foraminiferal biostratigraphy, B7:1–23
 maps, A4:69

Neogene calcareous nannofossil biostratigraphy,
 B4:1–31
organic matter, B11:1–17
Quaternary nannofossils, B5:1–15
rock magnetism, B16:1–21
tephrostratigraphy, B10:1–22
jet-in test, A4:3–14
joints
 frequency, A5:38–39
 number, A5:122
 number vs. depth, A5:91
 photograph, A4:167; A5:90
 sediments, A4:61
 vs. depth, A4:168; B16:15, 19

K

kaolinite, X-ray diffraction data, vs. depth, A4:90
Kitakami, volcanic front, B1:6
Kitakami Basin, biostratigraphy, A4:26
Kitakami Range, deformation, B1:8
Kuroshio Front, paleoceanography, B3:1–21
Kyushu, upper Quaternary tephrostratigraphy, B10:4

L

layers, tephra, B9:4–5, 11
lithification
 lithologic units, A4:20–21; A5:16–17
 logs, A4:55
lithium
 alteration, B14:10–11
 pore water, A1:14; A5:26; B14:5–6
 sediments, A4:39
 vs. depth, A4:129; A5:74; B14:18–19
lithologic units
 Site 1150, A4:14–22
 Site 1151, A1:12–13; A5:7–17, 46–47
 Unit I, A1:12; A4:15–16; A5:8–9
 Unit II, A1:12–13; A4:16–17; A5:9–10
 Unit III, A1:13; A4:17–18; A5:10–11
 Unit IV, A1:13; A4:18–19; A5:11–12
 Unit V, A5:12
 vs. depth, A4:75–76
lithostratigraphy
 Site 1150, A4:14–22
 Site 1151, A5:7–17
 summary, A1:29; A1:30
log–seismic correlation, synthetic seismograms,
 A4:55–57

M

maghemite, rock magnetism, A4:32–35
magnesium
 alteration, B14:9
 pore water, A1:10; A5:26; B1:4; B14:6
 sediments, A1:13; A4:38–39
 vs. calcium, B14:10, 23
 vs. depth, A4:129; A5:74; B14:18–19
magnesium oxide
 tephra, B9:9, 16–17

- vs. iron oxide, B9:25
- See also* iron oxide/magnesium oxide ratio; titanium oxide/magnesium oxide ratio
- magnesium oxide vs. iron oxide, Japan Trench vs. Japan tephra, B9:25
- magnetic declination
 - histograms, A4:105
 - magnetic foliation, B16:5–6
 - vs. anisotropy of horizontal compressional wave velocity, A4:136
 - vs. depth, A4:101, 104, 106, 169; B16:17, 19
- magnetic fabric, deformation, B16:5–6
- magnetic foliation
 - anisotropy of magnetic susceptibility, B16:5–6
 - bedding planes, B16:17–18
 - fault planes, B16:16
 - Flinn-type diagrams, B16:20
 - vs. depth, B16:14–15, 17
- magnetic inclination
 - histograms, A4:107
 - magnetic foliation, B16:5–6
 - remanent magnetization, A4:29–30
 - sediments, A1:14
 - vs. depth, A4:101, 104, 106, 123, 169; A5:64–65; B16:14–15, 17
- magnetic intensity
 - changes with chemical treatment, A4:122, 194
 - isothermal remanent magnetization, A4:120
 - remanent magnetization, A4:30–35
 - vs. depth, A4:101, 104, 106; A5:64, 66
- magnetic intensity, normalized change
 - thermal demagnetization, A4:118–119
 - vs. temperature, A4:118–119
- magnetic intensity logs, correlation, B8:14, 18
- magnetic intensity ratio, vs. depth, A4:116–117
- magnetic lineation, vs. depth, B16:14–15
- magnetic polarity, sediments, A1:11, 14
- magnetic properties, changes with chemical treatment, A4:122
- magnetic reversals, sediments, A1:14
- magnetic reversals, primary, depths, A4:191
- magnetic susceptibility
 - sources, B16:4
 - vectors, B16:13
 - vs. depth, A4:78, 91–92, 101, 116–117; A5:51, 64, 67–68; B16:10–11
- magnetic susceptibility logs, vs. depth, B8:11–13, 16, 19
- magnetite, rock magnetics, A4:32–35
- magnetization, vs. depth, A4:103
- magnetization ratio, vs. depth, A4:102
- magnetostratigraphy
 - Brunhes/Matuyama boundary, A5:23
 - diatom datums, A4:35
 - models, A4:123
- major elements
 - glass shards, B10:19–20
 - hemipelagic sediments, B13:1–12
 - sediments, B15:26–30
 - tephra, B9:5
- major oxides
 - glass shards, B9:5–7
 - hydration, B9:21
 - vs. depth, B9:21
- manganese oxide, tephra, B9:16–17
- mantle, water flux, B1:8–10
- mantle wedges, stiffening, B1:24
- maps
 - Japan Trench, A4:69
 - seismicity, A1:25; A4:157
- marine isotope stages, tephra geochemistry, B9:9–11
- mass accumulation rates
 - carbonates, B11:3–4
 - marine organic matter, B11:4–6
- mass accumulation rates, carbonates, vs. age, B11:14–15
- mass accumulation rates, organic carbon, vs. age, B11:14–15
- Matuyama Chron. *See* Brunhes/Matuyama boundary
- mechanical coupling, deformation, B1:7–8
- median destructive field
 - remanent magnetization, A4:31–35
 - vs. depth, A4:116–117; A5:68
- methane
 - sediments, A1:10, 13; A4:37; A5:25, 27; B14:7–8, 12
 - vs. depth, A4:126; A5:71; B14:22
- methane/ethane ratio
 - sediments, A1:10, 13; A4:37; A5:25; B14:7–8, 12
 - vs. depth, A4:126; A5:71; B14:22
- mica
 - lithologic units, A5:12–13
 - vs. depth, A4:83
- mica, X-ray diffraction data, vs. depth, A4:90
- microearthquakes
 - forearc basins, B1:2–3
 - plate motions, A1:6
- Miocene
 - biostratigraphy, A5:17–21
 - diatom biostratigraphy, B2:6–10
 - volcanic ash, A1:8–9
- Miocene, middle
 - dinoflagellate biostratigraphy, B6:1–19
 - lithologic units, A5:11–12
- Miocene, middle–upper, calcareous nannofossils, B4:4–7
- Miocene, upper
 - biostratigraphy, A4:23–26
 - diatom biostratigraphy, B2:6–8
 - dinoflagellate biostratigraphy, B6:1–19
 - foraminiferal biostratigraphy, B7:4
 - lithologic units, A4:16–19; A5:9–12
- Miocene/Pliocene boundary
 - biostratigraphy, A1:10
 - diatom biostratigraphy, B2:7, 12
- Miocene–Pliocene interval, paleoclimatology, B6:6–7
- mobilization, mineral water, B14:12–13
- modular intelligent digitizers, seafloor instruments, A3:11–13
- Mohorovicic discontinuity, forearc basins, B1:3
- Mohr–Coulomb envelope, triaxial shear strength, B17:6
- multiple-access expandable gateways, seafloor instruments, A3:11, 35–37

N

- nannofossils
 - abundance, B5:11
 - biostratigraphic datums, A5:105; B4:22
 - distribution, B5:13–15
 - lithologic units, A5:9–10
 - Quaternary, B5:1–15
 - range chart, B4:23–31
 - relative abundance, B4:18; B5:10
 - vs. depth, A4:82; A5:52
 - nannofossils, calcareous
 - biostratigraphy, A4:23–24; A5:17–18
 - datum levels, A4:185
 - Neogene, B4:1–31
 - paleoceanography, B4:7–9
 - Narugo Caldera, upper Quaternary tephrostratigraphy, B10:4
 - Narugo Yanagisawa, upper Quaternary tephrostratigraphy, B10:4
 - Neogene
 - calcareous nannofossil biostratigraphy, B4:1–31
 - convergent margin, A1:4–5
 - diatom age and stratigraphic position, B2:31
 - diatom datums, A1:13
 - foraminiferal biostratigraphy, B7:1–23
 - plate tectonics, B1:1–27
 - Neogene, upper, diatom biostratigraphy, B2:1–38
 - NEREID System
 - boreholes, A3:2–3, 23–25
 - operation, A3:19–20
 - NEREID-1, borehole geophysical observatory, A1:9–15
 - NEREID-2, borehole geophysical observatory, A1:12–15
 - nitrogen
 - sediments, A1:10; A4:38; A5:25, 27
 - See also* carbon/nitrogen ratio
 - nodules, lithologic units, A4:18–19
- O**
- obliquity
 - core-log integration, B15:9–10
 - gamma-ray time shift variation, B15:24–25
 - ocean-borehole seismometers. *See* seismometers, ocean-borehole
 - ocean-bottom installation, strainmeters, A3:7–8
 - Olduvai Subchron, foraminiferal biostratigraphy, B7:4
 - ooze, diatomaceous
 - correlation, B8:12
 - photograph, B8:12
 - ooze, hemipelagic diatomaceous, lithologic units, A4:15–16
 - ooze, interbedded diatomaceous, lithologic units, A1:9
 - opal-A
 - lithologic units, A4:15–22; A5:9–10, 13
 - vs. depth, A4:91, 93; A5:53
 - vs. porosity, A4:144
 - See also* opal-CT/opal-A ratio
 - opal-A, X-ray diffraction data, vs. depth, A4:88

- opal-CT
 - diatoms, A4:24
 - vs. depth, A4:92
 - opal-CT/opal-A ratio, vs. depth, A4:93
 - organic matter
 - degradation, B11:4–6
 - sediments, A1:13; A5:27
 - organic matter, marine, accumulation, B11:1–17
 - overlying plate, coupling with subducting slabs, B1:5–6
 - overprinting, remanent magnetization, A4:27–32
 - oxygen isotope stratigraphy, upper Quaternary tephrostratigraphy, B10:4, 7
 - oxygen isotopes, carbonates, B12:3, 5
 - Oyashio Current
 - organic matter, B11:6–7
 - sediments, A5:27
 - Oyashio Front, paleoceanography, B3:1–21
- P**
- Pacific Ocean NW
 - biostratigraphy, B6:1–19
 - Quaternary nannofossils, B5:1–15
 - Pacific Ocean W, deep oceans, A1:1–37
 - paleoceanography
 - calcareous nannofossils, B4:7–9, 19–20; B5:1–15
 - diatoms, B3:1–21
 - Miocene–Pliocene, B6:6–7
 - organic matter, B11:6–7
 - paleoclimatology
 - core-log integration, B15:9–10
 - Miocene–Pliocene, B6:6–7
 - paleoenvironment, Miocene–Pliocene, B6:6–7
 - paleointensity, vs. depth, A4:121
 - paleomagnetism
 - Site 1150, A4:27–35
 - Site 1151, A5:22–23
 - paleotemperature
 - alkenones, B13:3
 - paleoceanography, B3:1–21
 - vs. depth, B13:6
 - palynomorphs, biostratigraphy, B6:1–19
 - Panama. *See* Isthmus of Panama
 - paramagnetic minerals, magnetic susceptibility, B16:4
 - pebbles
 - lithologic units, A4:15–16, 22
 - number, A4:182–183
 - vs. depth, A4:78
 - Peedee formation belemnite, carbon isotopes, B12:3
 - peridiniacean cysts. *See* protoperidiniacean cysts
 - petrography, tephra, B10:22
 - pH, pore water, B14:5
 - physical properties
 - bulk samples, B15:31–36
 - sediments, A1:10–11
 - Site 1150, A4:41–49
 - Site 1151, A5:27–33
 - vs. depth, A4:47–49; A5:32–33
 - plane-strain analysis, deformation, B1:7–8

Planolites

lithologic units, A1:10; A4:18–19
 photograph, A4:80
 tephra, B9:4
 plastic broadening, triaxial shear strength, B17:5
 plate boundary
 forearc basins, B1:2–3
 high-resolution geometry, A1:8
 plate coupling
 length, B1:25
 subduction, B1:1–27
 plate geometry, changes with time, B1:23
 plate motions, subduction zones, A1:5–6
 Pleistocene
 calcareous nannofossils, B4:4–7
 diatom biostratigraphy, B2:6–10
 lithologic units, A4:15–16; A5:8–9
 tephrochronology, B9:1–29
 See also Pliocene/Pleistocene boundary
 Pliocene
 biostratigraphy, A4:23–26; A5:17–21
 calcareous nannofossils, B4:4–7
 diatom biostratigraphy, B2:6–10
 foraminiferal biostratigraphy, B7:4
 tephrochronology, B9:1–29
 Thalassiosira stratigraphic occurrence, B2:32–33
 See also Early Pliocene Problem Subzone; Miocene–Pliocene interval; Miocene/Pliocene boundary
 Pliocene, lower
 dinoflagellate biostratigraphy, B6:1–19
 lithologic units, A4:16–17; A5:9–10
 Pliocene, upper, lithologic units, A4:15–16; A5:8–9
 Pliocene/Pleistocene boundary
 biostratigraphy, A1:10
 foraminiferal biostratigraphy, B7:4–6
 pods, tephra, B9:4–5, 11
 pore pressure
 vs. time, B17:12
 water flux, B1:9
 pore water
 forearcs, B1:4
 geochemistry, A1:10; A4:38–41, 198; A5:115;
 B14:1–23
 sediments, A1:15
 porosity
 lithologic units, A1:14
 sediments, A1:11; A4:45–46, 62–63
 vs. carbonate content, A4:144
 vs. depth, A4:138, 140–142; A5:81–82; B15:16–20
 vs. gamma rays, B15:22
 vs. opal-A, A4:144
 potassium
 alteration, B14:9
 pore water, A1:10; A5:26; B1:4; B14:6
 sediments, A1:13; A4:39
 vs. depth, A4:129; A5:74; B14:18–19
 potassium logs, vs. depth, A4:94; A5:84
 potassium oxide
 glass shards, B9:6
 standard deviation, B9:20
 tephra, B9:10, 16–17

vs. gamma rays, B15:21
 vs. titanium oxide, B9:23–24
See also titanium oxide/potassium oxide ratio
 potassium oxide vs. titanium oxide, Japan Trench vs. Japan tephra, B9:25
 potassium oxide/aluminum oxide ratio
 hemipelagic sediments, B13:4
 vs. depth, B13:6
 power consumption, systems, A3:17, 40
 power distribution modules, seafloor instruments, A3:14
 power supply, systems, A3:17–18
 precession index
 core-log integration, B15:9–10
 gamma-ray time shift variation, B15:24–25
 precipitation rims, faults, A5:39
 principal component analysis, diatoms, B3:5–6, 12, 14, 17–21
 productivity, organic matter, B11:6–7
 protoperidiniacean cysts, Miocene–Pliocene, B6:6–7
 pumice
 lithologic units, A5:8–9
 photograph, A4:95
 tephra, B9:4–5
 pumice grains
 lithologic units, A4:17, 21–22; A5:14–15
 photograph, A5:61
 vs. depth, A5:49–50
 pumice layers, number, A5:102–103
 pyrite
 lithologic units, A4:18–19; A5:14
 vs. depth, A4:84
 pyroxene, lithologic units, A5:12–13
 pyrrhotite, rock magnetism, A4:32–35

Q

quartz
 lithologic units, A4:19–22; A5:12–13
 vs. depth, A4:83, 91; A5:53
 quartz, X-ray diffraction data, vs. depth, A4:88
 Quaternary
 biostratigraphy, A4:23–26; A5:17–21
 diatom age and stratigraphic position, B2:31
 diatom biostratigraphy, B2:1–38
 Quaternary, upper
 alkenones, B13:1–12
 nannofossils, B5:1–15
 tephrostratigraphy, B10:1–22

R

radiolarians
 lithologic units, A1:9; A5:13
 vs. depth, A4:82; A5:52
 re-entry cones, jet-in test, A4:5–9
 reflectance
 lithologic units, A5:16
 vs. depth, A4:76, 91; A5:48; B8:15
 reflection coefficient, correlation, A4:56–57
 refractive index, tephra, B9:8–9
 relaxation, photograph, B17:11

- remagnetization, remanent magnetization, A4:29–30
- remanent magnetization
- chemical treatment, A4:34–35
 - sediments, A1:14
- remanent magnetization, anhysteretic
- demagnetization data, A4:192
 - magnetic susceptibility, B16:4
 - paleointensity vs. depth, A4:121
 - sediments, A4:31–35; A5:112
 - vs. depth, A4:116–117; A5:68; B16:10–13
- remanent magnetization, characteristic, sediments, A4:31–35; A5:22
- remanent magnetization, depositional, sediments, A4:31–32
- remanent magnetization, isothermal
- magnetic intensity vs. acquisition, A4:120
 - paleointensity vs. depth, A4:121
 - sediments, A4:33–35
 - thermal demagnetization, A4:119
- remanent magnetization, natural
- demagnetization data, A4:192–193
 - paleointensity vs. depth, A4:121
 - sediments, A4:27–32; A5:112
 - vs. depth, A4:116–117; A5:68
- remanent magnetization, natural/anhysteretic intensity ratio
- sediments, A4:33–35
 - vs. depth, A5:68
- remanent magnetization, natural/isothermal intensity ratio, sediments, A4:33–35
- remanent magnetization, postdeposition, sediments, A4:31–32
- remanent magnetization, viscous, sediments, A4:33–35
- resistivity
- sediments, A4:52
 - structures, B1:16
 - vs. depth, A4:91, 93
- resistivity logs, vs. depth, A4:94; A5:34, 84
- resistivity, shallow, vs. spectral gamma rays, A4:152
- rheology, deformation, B1:7–8
- rifting, stratigraphy, B1:5
- rock magnetics, sediments, A4:32–35; B16:1–21
- S**
- salinity
- fluid flow, B14:9
 - pore water, A4:38; A5:25; B14:4, 6
 - sediments, A1:13, 15
 - vs. depth, A4:93, 128; A5:73; B14:18–19
- salinity, in situ, vs. depth, A4:138
- SAM, downhole links, A3:15–16, 35, 38, 45, 51
- sand
- lithologic units, A4:17–18, 22; A5:8–9
 - vs. depth, A4:78
- sand, authigenic glauconitic, lithologic units, A1:10
- sand, glauconitic, photograph, A5:57–58
- sand layers
- lithologic units, A5:15
 - number, A5:101
 - vs. depth, A5:51
- sand patches, vs. depth, A5:51
- sand/silt grains, number, A4:182–183
- Sanriku
- alkenones, B13:1–12
 - biostratigraphy, B6:1–19
 - core–log integration, B15:1–42
 - paleoceanography, B3:1–21
- seafloor instruments, gateways, A3:11–17
- seawater battery, power supply, A3:17–19, 41–43
- sediment flux, tectonics, A1:15–16
- sedimentary record, core–log integration, B15:1–42
- sedimentary rocks, triaxial shear strength, B17:1–19
- sedimentation, core–log integration, B15:9–10
- sedimentation rates
- biostratigraphy, A4:35–37; A5:23–24
 - diatom biostratigraphy, B2:7–10
 - forearcs, B1:4
 - gamma-ray time series, B15:41
 - gamma-ray time shift variation, B15:24–25
 - nannofossil datums, B5:4–5
 - Neogene, A1:10, 13
 - sediments, A1:15
 - Site 1150, A4:35–37
 - Site 1151, A5:23–24, 27
 - vs. age, A1:33; A4:125; A5:70; B1:19, 26
- sediments
- histograms, A4:77
 - organic geochemistry, B11:16, 17
 - rock magnetics, B16:1–21
 - triaxial shear strength, B17:1–19
 - X-ray diffractograms, A4:85–87
- sediments, hemipelagic, alkenones, B13:1–12
- seismic profiles
- Japan Trench, A1:22
 - Site 1150, A4:70
 - Site 1151, A5:43–44
- seismic sections, synthetic seismograms, A4:155–156
- seismicity
- forearc basins, B1:2–3
 - maps, A1:25; A4:157
 - subduction zones, A1:5–6
 - thrust zones, B1:15
- seismograms, synthetic, vs. depth, A4:153–154
- seismometers, ocean-borehole, boreholes, A3:8–9, 30–32
- seismometers, PMD, boreholes, A3:9–10
- seismometers, sediments, A1:15–16
- seismotectonics, forearc basins, B1:2–3
- sensors, tiltmeters, A3:11, 33, 50
- Shatsky Rise, volcanic ash, A1:8–9
- shear planes, triaxial shear strength, B17:5
- shear strength, triaxial
- sedimentary rocks, B17:1–19
 - sediments, B17:1–19
- shear strength, undrained
- sediments, A4:44, 201
 - vs. depth, A4:137
- shearing, dextral, photograph, A5:89
- Shikotsu Daiichi tephra, upper Quaternary tephrostratigraphy, B10:4
- signal conditioning, strainmeters, A3:8

- silica
 diagenesis, B9:7
 standard deviation, B9:20
 tephra, B9:8–9, 16–17
 vs. aluminum oxide, B15:21
 vs. sodium oxide, B9:26
See also aluminum oxide/silica ratio
- silica, biogenic, alteration, B14:9
- silica/aluminum oxide ratio
 vs. aluminum oxide, B15:21
 vs. depth, B9:22; B15:16–20
 vs. diatom valves, B15:21
 vs. gamma rays, B15:22
 vs. total organic carbon, B15:21
- silica/calcium oxide ratio, tephra, B9:10
- siliciclastics
 histograms, A4:77
 lithologic units, A1:9, 13; A4:19–21; A5:12–13
 vs. depth, A4:78; A5:52; B16:10
- silicoflagellates
 lithologic units, A5:13
 vs. depth, A4:82
- silt
 lithologic units, A1:9; A4:22; A5:8–9
 vs. depth, A4:78
 X-ray diffractograms, A4:86
See also sand/silt grains
- silt, clayey, lithologic units, A5:8–9
- silt, sandy, lithologic units, A4:15–16
- silt layers
 lithologic units, A5:15
 number, A5:101
 vs. depth, A5:51
- silt patches, vs. depth, A5:51
- siltstone, clayey, lithologic units, A4:17–19
- siltstone, lithologic units, A4:17–18
- Site 438
 age vs. depth, A1:32
 chlorinity vs. depth, A1:31
 correlation with B7:13–14
 sedimentation rates vs. age, A1:33
 volcanic ash layers vs. age, A1:34
- Site 439, Cretaceous unconformities, A1:4
- Site 440, volcanic ash layers vs. age, A1:34
- Site 584
 age vs. depth, A1:32
 Cretaceous unconformities, A1:4
 sedimentation rates vs. age, A1:33
- Site 799, chlorinity vs. depth, A1:31
- Site 1150, A4:1–209
 authigenic carbonates, B12:1–6
 background and objectives, A4:1–2
 biostratigraphy, A4:23–26
 borehole instruments, A4:57–59
 composite depth scales, B8:1–23
 core-log integration, B15:1–42
 coring summary, A4:176–178
 correlation with Site 438, B7:13–14
 deep-sea terraces, A1:9–12
 diatom biostratigraphy, B2:6–8
 diatoms, B3:4–5
 downhole measurements, A4:49–57
 fluid geochemistry, B14:1–23
 foraminiferal biostratigraphy, B7:3, 11, 15–17
 geochemistry, A4:37–41
 jet-in test, A4:3–14
 lithostratigraphy, A4:14–22; B14:17
 marine organic matter, B11:1–17
 Neogene calcareous nannofossil biostratigraphy, B4:1–31
 operational summary, A1:37
 operations, A4:2–3
 paleoceanography, B3:1–21
 paleomagnetism, A4:27–35
 physical properties, A4:41–49
 Quaternary nannofossils, B5:1–15
 rock magnetism, B16:1–21
 sedimentation rates, A4:35–37
 site description, A4:1–209
 structural geology, A4:60–65
 summary, A1:9–12
 tephra geochemistry, B9:10–11
 triaxial shear strength, B17:1–19
 upper Quaternary tephrostratigraphy, B10:1–22
- Site 1151, A5:1–125
 alkenones, B13:1–12
 authigenic carbonates, B12:1–6
 background and objectives, A5:1–2
 biostratigraphy, A5:17–21; B2:8–10; B3:5–7; B4:1–31; B6:1–19
 borehole instruments, A5:36–37
 composite depth scales, B8:1–23
 core-log integration, B15:1–42
 coring summary, A5:97–99
 correlation with Site 438, B7:13–14
 deep-sea terraces, A1:12–15
 diatom biostratigraphy, B2:8–10
 diatoms, B3:5–7
 downhole measurements, A5:33–35
 fluid geochemistry, B14:1–23
 foraminiferal biostratigraphy, B7:3–4, 12, 18–20
 geochemistry, A5:25–27
 lithostratigraphy, A5:7–17; B14:17
 marine organic matter, B11:1–17
 Neogene calcareous nannofossil biostratigraphy, B4:1–31
 operational summary, A1:37
 operations, A5:2–7
 paleoceanography, B3:1–21
 paleomagnetism, A5:22–23
 physical properties, A5:27–33
 Quaternary nannofossils, B5:1–15
 rock magnetism, B16:1–21
 sedimentation rates, A5:23–24
 site description, A5:1–125
 structural geology, A5:37–40
 summary, A1:12–15
 tephra geochemistry, B9:9
 triaxial shear strength, B17:1–19
 upper Quaternary tephrostratigraphy, B10:1–22
 smectite, X-ray diffraction data, vs. depth, A4:88

- sodium
 alteration, B14:9
 pore water, A5:26; B14:5–6
 sediments, A1:13; A4:39
 vs. depth, A4:129; A5:74; B14:18, 19
- sodium oxide
 glass shards, B9:6
 standard deviation, B9:20
 tephra, B9:16–17
 vs. silica, B9:26
- Spfa-1 tephra, upper Quaternary tephrostratigraphy, B10:4
- splice tie points, correlation, B8:23
- sponge spicules
 lithologic units, A1:9; A4:18–19; A5:13
 photograph, A5:56
 vs. depth, A4:82; A5:52
- stiffness modulus
 triaxial shear strength, B17:6
 vs. depth, B17:14
- strain, vs. stress, B17:16–19
- strainmeter interface, seafloor instruments, A3:14–15
- strainmeters
 boreholes, A3:5–8, 26–29
 sediments, A1:15–16
- stratigraphy, gamma-ray time series, B15:40
- stress
 sediments, A4:61–63
 vs. strain, B17:16–19
- stress, differential, photograph, B17:16–19
- stress, total effective vertical, vs. depth, A4:143; A5:83
- stress, vertical, sediments, A4:47; A5:31–32
- stress fields
 arcs, B1:21
 deformation, A1:15–16
- stress transfer zone, backarcs, B1:6
- striations
 faults, A5:40
 triaxial shear strength, B17:6
- strontium
 alteration, B14:10–11
 pore water, A1:14; A5:26; B14:5
 sediments, A4:38–39
 vs. depth, A4:129; A5:74; B14:18, 19
- structural geology
 Site 1150, A4:60–65
 Site 1151, A5:37–40
- structures
 deformation, A5:122
 orientation, A4:63
- subducting slabs
 coupling with overlying plate, B1:5–6, 8–10
 thermal structure, B1:7
- subduction
 deformation, A1:15–16
 plate coupling, B1:1–27
- subduction angle, volcanic front, B1:6, 10
- subduction zones
 coupling with overlying plate, B1:5–6
 geometry, B1:8
 trenches, A1:1–37
- subsidence
 history, A1:9, 23
 trenches, A1:1–37
- sulfate
 pore water, A1:14; A5:25–27
 sediments, A4:38
 vs. depth, A4:128; A5:73
- sulfate reduction, sediments, A4:39–40
- sulfur
 hemipelagic sediments, B13:3–4
 sediments, A1:10; A4:38; A5:25
 vs. depth, A4:127; A5:72
- T**
- tectonic erosion, history, A1:9
- tectonics, extensional
 convergence, A1:4–5
 stratigraphy, B1:5
- temperature
 vs. depth, A4:150–151; A5:35, 86; B3:11, 13
 vs. time, A4:149; A5:85
- temperature, in-situ, sediments, A4:204; A5:120
- tension gashes, photograph, A5:89
- tephra
 correlation, B9:8–9
 deposition, B9:4–5
 lithologic units, A4:15–17; A5:14–15; B10:8–14
 petrography, B10:22
 Pliocene–Pleistocene distribution, B9:27–28
 vs. depth, A4:78
- tephra, bioturbated, photograph, A5:60
- tephra, primary
 lithologic units, A5:8–9
 photograph, A5:59
- tephra, reworked, lithologic units, A4:15–16
- tephrochronology, Pliocene–Pleistocene, B9:1–29
- tephrostratigraphy
 Pliocene–Pleistocene, B9:1–29
 upper Quaternary, B10:1–22
- Thalassiosira trifulta* group, diatom biostratigraphy, B2:11
- thermal conductivity
 sediments, A4:43, 199; A5:29, 116
 vs. depth, A4:133; A5:78
- thermal structure, subducting slab, B1:7
- thermal subsidence, stratigraphy, B1:5
- thorium logs, vs. depth, A4:94; A5:84
- three-component instrument, strainmeters, A3:7, 29
- tie points, sediments, B15:39
- tiltmeters, boreholes, A3:10–11, 33–34
- titanium oxide
 tephra, B9:16–17
 vs. potassium oxide, B9:23–24
See also iron oxide/titanium oxide ratio
- titanium oxide/aluminum oxide ratio
 hemipelagic sediments, B13:4
 vs. depth, B13:6
- titanium oxide/magnesium oxide ratio, tephra, B9:10
- titanium oxide/potassium oxide ratio, tephra, B9:9–10

To-H tephra, upper Quaternary tephrostratigraphy,
B10:3–4

Tohoku, upper Quaternary tephrostratigraphy, B10:3–4
Towada Caldera, upper Quaternary tephrostratigraphy,
B10:3–4

trench axis, forearc basins, B1:3

trenches, drilling, A1:1–37

Tsugaru Strait, paleoceanography, B3:1–21

Tsugaru Warm Current, paleoceanography, B3:1–21

U

unconformities

Cretaceous, A1:4; B1:3

See also hiatuses

underthrusting, convergent margin, A1:4–5

uplifts, backarcs, B1:5

uranium logs, vs. depth, A4:94; A5:84

V

velocity

lithologic units, A1:14

plate motions, A1:6

structures, B1:16

unconformities, A1:5

vs. depth, A4:153–154

velocity, sonic, lithologic units, A4:51–52

velocity logs, vs. depth, A4:94, 158; A5:34–35, 84, 87

viscosity, thermal structure, B1:7

void ratio, vs. depth, A4:138, 140; A5:81–82

volcanic ash

alteration, B14:9

backarcs, B1:5

correlation, B8:12, 22

lithologic units, A1:9; A4:18–19, 21–22; A5:8–9,
14–15

number of layers, A4:180–181

patch frequency, B1:18

photograph, A4:96–99; B8:12

temporal distribution, B9:7–8

vs. depth, A5:49–50

volcanic ash, bioturbated

photograph, A4:98

vs. depth, A5:49–50

volcanic ash, reworked

photograph, A4:97, 99

vs. depth, A5:49–50

volcanic ash, rhyolitic–dacitic, derivation, A1:8–9

volcanic ash layers

number, A5:102–103

vs. age, A1:34

volcanic ash patches, photograph, A5:60

volcanic front

migration, B1:22

subduction angle, B1:6

volcanic glass

lithologic units, A1:9; A4:17–18; A5:9–11

vs. depth, A4:84

volcaniclastics

frequency in tephra pods and layers, B9:19, 29

histograms, A4:77

lithologic units, A4:21–22; A5:13–14; B10:15–18

tephrochronology, B9:1–29

vs. depth, A4:78

volcanogenic component, vs. depth, A5:52

volcanism

eruptions, A1:4

forearcs, B1:4, 10

tectonics, A1:15–16

upper Quaternary tephrostratigraphy, B10:3–4

vs. age, B1:26

volume change, vs. time, B17:13

W

water content, vs. depth, A5:81–82

water content, solid mass, vs. depth, A4:138–139;
A5:81–82

water content, total mass, vs. depth, A4:138–139;
A5:81–82

water flux, coupling, B1:8–9

well-logging

sediments, A1:12, 14–15

summary, A4:145, 203; A5:119

X

X-ray diffraction data

sediments, A4:85–87, 179; A5:100

vs. depth, A5:53–55

Z

zonation

calcareous nannofossils, B4:4–7, 21

diatoms, A1:10; B2:3–5, 22, 24

Zoophycos

lithologic units, A1:10; A4:18–19

photograph, A4:81

tephra, B9:4

TAXONOMIC INDEX

A

- Achomosphaera callosa* Zone, Site 1151, B6:5
Achomosphaera spongiosa, Site 1151, B6:5–6
Achomosphaera spongiosa Zone, Site 1151, B6:5
acostaensis, *Neogloboquadrina*, Site 1151, B7:4, 23
actinocoronata, *Reticulosphaera*, Site 1151, B6:19
Actinocyclus ingens
 Site 1150, A4:25
 Site 1151, A5:20
Actinocyclus oculatus
 Site 1150, A4:24; B2:7
 Site 1151, A5:19, 21, 24; B2:9
 Sites 1150–1151, B2:4, 14
Actinocyclus oculatus Zone
 Site 1150, A4:24–25; B2:7
 Site 1151, A5:19, 21; B2:9
Actinoptychus senarius
 Site 1150, A4:26
 Site 1151, A5:21
acutus, *Ceratolithus*, Site 1150, A4:24
albicans, *Melosira*
 Site 1150, B3:5
 Site 1151, B3:5
Alveus marinus, Site 1151, B3:6
Amaurolithus amplificus, Site 1150, A4:24; B4:5
Amaurolithus spp.
 Site 1150, A4:24
 Site 1151, A5:17
amplificus, *Amaurolithus*, Site 1150, A4:24; B4:5
antiqua, *Thalassiosira*
 Site 1150, A4:25
 Site 1151, A5:19, 21
asanoi, *Neogloboquadrina*
 Site 1150, B7:3–6, 13–14
 Site 1151, B7:4–6, 13–14, 23
asanoi, *Reticulofenestra*, Site 1150, B4:5
Aulacoseira granulata, Site 1150, B3:5
Aulacoseira spp.
 Site 1150, A4:26
 Site 1151, A5:21
aurita, *Odontella*
 Site 1150, B3:4
 Site 1151, B3:5

B

- Bacteriosira fragilis*
 Site 1150, B3:4
 Site 1151, B3:5
berggrenii, *Discoaster*
 Site 1150, A4:24; B4:6
 Site 1151, A5:18; B4:6
bipora, *Thalassiosira*
 Site 1150, B2:12–14
 Site 1151, B2:12–14, 34
bipora f. *minima*, *Thalassiosira*, Site 1151, B2:11
bipora f. *prima*, *Thalassiosira*
 Site 1150, B2:12–14

- Site 1151, B2:11–14, 35
bipora s.a., *Thalassiosira*, Site 1151, B2:14
Brigantedinium irregulare, Site 1151, B6:19
Brigantedinium simplex, Site 1151, B6:5, 19
Brigantedinium spp., Site 1151, B6:4–6
brouweri, *Discoaster*
 Site 1150, A4:23
 Site 1151, A5:15; B4:6
bulloides, *Globigerina*, Site 1151, B7:4

C

- Calcidiscus leptoporus*
 Site 1150, A4:23; B4:5
 Site 1151, A5:18; B4:6–7; B5:4
Calcidiscus macintyreii, Site 1150, A4:23; B4:5
californica, *Rouxia*
 Site 1150, A4:25; B2:8, 14
 Site 1151, A5:19–20; B2:9, 14
campanula, *Heteraulacacysta*, Site 1151, B6:6
Capillicysta fusca Zone, Site 1151, B6:5
Capillicysta spp., Site 1151, B6:4
caribbeanica, *Gephyrocapsa*
 Site 1150, A4:23; B4:5; B5:3, 12
 Site 1151, A5:17–18; B4:6–7; B5:3–5, 12
Catinaster coalitus
 Site 1150, A4:24; B4:6
 Site 1151, A5:18; B4:7
Cavitatus jouseanus, Site 1151, A5:19
centrocarpum, *Operculodinium*, Site 1151, B6:5–6
Ceratolithus acutus, Site 1150, A4:24
Ceratolithus rugosus
 Site 1150, A4:24; B4:5
 Site 1151, A5:17
Chaetoceros spp., Site 1150, A4:26
choanophorum, *Melitasphaeridium*, Site 1151, B6:6
Cleistosphaeridium placacanthum, Site 1151, B6:6, 19
Cleistosphaeridium spp., Site 1151, B6:4
coalitus, *Catinaster*
 Site 1150, A4:24; B4:6
 Site 1151, A5:18; B4:7
Coccolithus pelagicus
 Site 1150, A4:23; B4:1–31
 Site 1151, A5:17–18; B4:1–31; B5:4
Cocconeis spp.
 Site 1150, A4:26
 Site 1151, A5:21
Crucidentricula nicobarica, Site 1151, A5:20
Crucidentricula nicobarica group, Sites 1150–1151, B2:5
Crucidentricula nicobarica Zone, Site 1151, A5:20
cuneiformis, *Hemidiscus*
 Site 1150, A4:26; B2:7
 Site 1151, A5:21; B2:8
curvirostris, *Proboscia*
 Site 1150, A4:24–25, 36; B2:7, 14; B3:7
 Site 1151, A5:19, 21; B2:8, 14; B3:7
Cyclicargolithus floridanus, Site 1151, A5:18
Cyclotella spp., Site 1151, B3:6
cylindrus, *Fragilariopsis*, Site 1150, B3:4

D

- deflandrei*, *Discoaster*, Site 1151, A5:18
dehiscens, *Globoquadrina*
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22
Delphineis surirella, Site 1150, B3:5
Denticulopsis dimorpha
 Site 1150, A1:10; A4:26, 36; B2:8, 14
 Site 1151, A5:20; B2:9–10, 14
Denticulopsis dimorpha group, Sites 1150–1151, B2:5
Denticulopsis dimorpha Zone
 Site 1150, B2:8; B7:5
 Site 1151, A5:20; B2:10; B7:5
Denticulopsis hustedtii Zone, Site 1151, A5:20
Denticulopsis hyalina, Site 1151, A5:20–21; B2:10, 14
Denticulopsis hyalina group, Sites 1150–1151, B2:5
Denticulopsis hyalina Zone, Site 1151, A5:21; B2:10
Denticulopsis katayamae
 Site 1150, A4:26; B2:8
 Site 1151, A5:20, 24; B2:9
Denticulopsis katayamae group, Sites 1150–1151, B2:5
Denticulopsis katayamae Zone
 Site 1150, A4:25
 Site 1151, A5:20; B2:9
 Sites 1150–1151, B2:4
Denticulopsis lauta
 Site 1151, A5:20–21
 Sites 1150–1151, B2:14
Denticulopsis lauta group, Sites 1150–1151, B2:5
Denticulopsis lauta Zone, Site 1151, A5:21, 24; B2:10
Denticulopsis praedimorpha
 Site 1150, B2:8, 14
 Site 1151, A5:20; B2:10, 14
Denticulopsis praedimorpha group, Sites 1150–1151, B2:5
Denticulopsis praedimorpha Zone, Site 1151, A5:20
Denticulopsis praelauta, Site 1151, A5:21
Denticulopsis praelauta Zone, Site 1151, A5:21; B2:10
Denticulopsis simonsenii
 Site 1150, A4:25–26; B2:8
 Site 1151, A5:20, 24; B2:10
 Sites 1150–1151, B2:4, 14
Denticulopsis simonsenii group, Sites 1150–1151, B2:5
dimorpha, *Denticulopsis*
 Site 1150, A1:10; A4:26, 36; B2:8, 14
 Site 1151, A5:20; B2:9–10, 14
Diphyes latiusculum, Site 1151, B6:5–6, 19
Diphyes latiusculum Zone, Site 1151, B6:5
Diphyes spp., Site 1151, B6:4
Discoaster berggrenii
 Site 1150, A4:24; B4:6
 Site 1151, A5:18; B4:6
Discoaster brouweri
 Site 1150, A4:23
 Site 1151, A5:15; B4:6
Discoaster deflandrei, Site 1151, A5:18
Discoaster loeblichii, Site 1150, A4:24; B4:6
Discoaster pentaradiatus
 Site 1150, A4:24; B4:5
 Site 1151, A5:17; B4:6

- Discoaster quinqueramus*
 Site 1150, A4:24; B4:5
 Site 1151, A5:18; B4:6
Discoaster surculus
 Site 1150, A4:24; B4:5–6
 Site 1151, B4:6
Discoaster tamalis
 Site 1150, A4:24; B4:5
 Site 1151, B4:6
doliolus, *Fragilariopsis*
 Site 1150, A4:25–26; B2:7; B3:4
 Site 1151, B3:5

E

- elegans*, *Pseudopodosira*
 Site 1150, B3:5
 Site 1151, B3:5
ellipsoideus, *Spiniferites*, Site 1151, B6:5
Emiliana huxleyi
 Site 1150, A4:23; B4:5; B5:3, 12
 Site 1151, A5:18; B4:7; B5:4–5, 12
Emiliana huxleyi acme Zone
 Site 1150, B4:5; B5:3
 Site 1151, B5:4–5
Eunotia sp., Site 1150, B3:5
Evittosphaerula paratabulata, Site 1151, B6:6
Evittosphaerula sp., Site 1151, B6:5–6, 19
exceptiuncula, *Thalassiosira*, Site 1151, B2:37–38

F

- filifera*, *Filisphaera*, Site 1151, B6:19
Filisphaera filifera, Site 1151, B6:19
Filisphaera spp., Site 1151, B6:4
firmus, *Spiniferites*, Site 1151, B6:6
floridanus, *Cyclicargolithus*, Site 1151, A5:18
Florisphaera profunda
 Site 1150, B5:10
 Site 1151, B5:4, 11
fossilis, *Nitzschia*, Site 1151, A5:19; B2:8
Fragilariopsis cylindrus, Site 1150, B3:4
Fragilariopsis doliolus
 Site 1150, A4:25–26; B2:7; B3:4
 Site 1151, B3:5
fragilis, *Bacteriosira*
 Site 1150, B3:4
 Site 1151, B3:5
frenguelliopsis, *Thalassiosira*
 Site 1150, B2:12–13, 37–38
 Site 1151, B2:11–13, 37–38

G

- gelida*, *Reticulofenestra*, Site 1150, B4:5
Gephyrocapsa caribbeanica
 Site 1150, A4:23; B4:5; B5:3, 12
 Site 1151, A5:17–18; B4:6–7; B5:3–5, 12
Gephyrocapsa muelleriae, Site 1150, B5:3
Gephyrocapsa oceanica
 Site 1150, A4:23; B4:5
 Site 1151, B4:6

Gephyrocapsa parallela
 Site 1150, A4:23; B4:5
 Site 1151, A5:17–18; B4:6–7

Gephyrocapsa spp.
 Site 1150, A4:23; B4:5
 Site 1151, A5:18; B5:4

giganteum, *Operculodinium*, Site 1151, B6:5–6

Globigerina bulloides, Site 1151, B7:4

Globigerina nepenthes
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:5–6, 13–14, 22

Globigerinita glutinata, Site 1151, B7:4

Globoquadrina dehiscens
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22

Globorotalia ikebei
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22

Globorotalia inflata
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22

Globorotalia linguaensis, Site 1151, B7:4, 22

Globorotalia plesiotumida, Site 1151, B7:4, 23

Globorotalia punctulata
 Site 1150, B7:3–6, 13–14
 Site 1151, B7:4–6, 13–14, 23

glutinata, *Globigerinita*, Site 1151, B7:4

granulata, *Aulacoseira*, Site 1150, B3:5

gravida, *Thalassiosira*
 Site 1150, A4:25
 Site 1151, B3:5

H

Helicosphaera inversa, Site 1150, B4:5

Helicosphaera selli, Site 1150, B4:5

Helicosphaera spp., Site 1150, A4:23; B4:5

Hemidiscus cuneiformis
 Site 1150, A4:26; B2:7
 Site 1151, A5:21; B2:8

Heteraulacacysta campanula, Site 1151, B6:6

heteromorphus, *Sphenolithus*, Site 1151, A5:18

hexatypicus, *Spiniferites*, Site 1151, B6:5–6

huxleyi, *Emiliana*
 Site 1150, A4:23; B4:5; B5:3, 12
 Site 1151, A5:18; B4:7; B5:4–5, 12

hyalina, *Denticulopsis*, Site 1151, A5:20–21; B2:10, 14

hyalina, *Thalassiosira*
 Site 1150, B3:4
 Site 1151, B3:5

Hystrichokolpoma spp., Site 1151, B6:4

I

ikebei, *Globorotalia*
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22

Impagidinium patulum, Site 1151, B6:6

Impagidinium spp., Site 1151, B6:4

inflata, *Globorotalia*
 Site 1150, B7:3, 5–6, 13–14
 Site 1151, B7:4–6, 13–14, 22

ingens, *Actinocyclus*
 Site 1150, A4:25
 Site 1151, A5:20

inversa, *Helicosphaera*, Site 1150, B4:5

irregulare, *Brigantedinium*, Site 1151, B6:19

J

jouseae, *Thalassiosira*
 Site 1150, A4:24
 Site 1151, A5:19, 21

jouseanus, *Cavitatus*, Site 1151, A5:19

K

kamtschatica, *Neodenticula*
 Site 1150, A4:25; B2:7–8
 Site 1151, A5:19–20; B2:9
 Sites 1150–1151, B2:4, 14

katayamae, *Denticulopsis*
 Site 1150, A4:26; B2:8
 Site 1151, A5:20, 24; B2:9

koizumii, *Neodenticula*
 Site 1150, A4:25, 36; B2:7, 12, 14
 Site 1151, A5:19, 21, 24; B2:9, 12, 14
 Sites 1150–1151, B2:4, 12

L

lacunosa, *Pseudoemiliana*
 Site 1150, A4:23; B4:5; B5:12
 Site 1151, A5:18; B4:7; B5:3–5, 12

latimarginata, *Thalassiosira*
 Site 1150, A4:25
 Site 1151, A5:19

latiusculum, *Diphyes*, Site 1151, B6:5–6, 19

lauta, *Denticulopsis*
 Site 1151, A5:20–21
 Sites 1150–1151, B2:14

Lejeunecysta spp., Site 1151, B6:4, 6, 19

lemmiscata, *Nematosphaeropsis*, Site 1151, B6:19

linguaensis, *Globorotalia*, Site 1151, B7:4, 22

leptoporus, *Calcidiscus*
 Site 1150, A4:23; B4:5
 Site 1151, A5:18; B4:6–7; B5:4

leptopus, *Thalassiosira*
 Site 1150, B3:4
 Site 1151, B3:5

Lingulodinium machaerophorum, Site 1151, B6:19

loeblichii, *Discoaster*, Site 1150, A4:24; B4:6

M

machaerophorum, *Lingulodinium*, Site 1151, B6:19

macintyreii, *Calcidiscus*, Site 1150, A4:23; B4:5

marina, *Nitzschia*, Site 1150, B2:7

marinus, *Alveus*, Site 1151, B3:6

Melitasphaeridium choanophorum, Site 1151, B6:6

Melosira albicans
 Site 1150, B3:5
 Site 1151, B3:5

muelleriae, *Gephyrocapsa*, Site 1150, B5:3

N

Nematosphaeropsis lemniscata, Site 1151, B6:19

Nematosphaeropsis spp., Site 1151, B6:4

Neodenticula kamtschatica

Site 1150, A4:25; B2:7–8

Site 1151, A5:19–20; B2:9

Sites 1150–1151, B2:4, 14

Neodenticula kamtschatica Zone

Site 1150, A4:25; B2:7

Site 1151, A5:19; B2:9, 12

Sites 1150–1151, B2:4, 14

Neodenticula koizumii

Site 1150, A4:25, 36; B2:7, 12, 14

Site 1151, A5:19, 21, 24; B2:9, 12, 14

Sites 1150–1151, B2:4, 12

Neodenticula koizumii Zone

Site 1150, A4:25; B2:7

Site 1151, A5:19, 21; B2:9

Sites 1150–1151, B2:4

Neodenticula koizumii–*Neodenticula kamtschatica* Zone

Site 1150, A4:25; B2:7

Site 1151, A5:19; B2:9

Neodenticula seminae

Site 1150, A4:25; B3:4

Site 1151, A5:19, 21; B3:5

Neodenticula seminae Zone

Site 1150, A4:24; B2:7

Site 1151, A5:21

Neogloboquadrina acostaensis, Site 1151, B7:4, 23

Neogloboquadrina asanoi

Site 1150, B7:3–6, 13–14

Site 1151, B7:4–6, 13–14, 23

Neogloboquadrina pachyderma s.l., Site 1151, B7:4, 23

Neogloboquadrina praeumerosa, Site 1151, B7:4, 23

Neogloboquadrina spp., Site 1150, B7:3

nepenthes, *Globigerina*

Site 1150, B7:3, 5–6, 13–14

Site 1151, B7:5–6, 13–14, 22

nephroides, *Selenopemphix*, Site 1151, B6:19

nicobarica, *Crucidenticula*, Site 1151, A5:20

nidulus, *Thalassiosira*, Site 1151, B3:5, 7

Nitzschia fossilis, Site 1151, A5:19; B2:8

Nitzschia marina, Site 1150, B2:7

Nitzschia reinholdii

Site 1150, A4:24, 26; B2:7

Site 1151, A5:21; B2:8

Nitzschia rolandii, Site 1151, A5:20; B2:9

nordenskiöldii, *Thalassiosira*

Site 1150, B3:4

Site 1151, B3:5

O

oceanica, *Gephyrocapsa*

Site 1150, A4:23; B4:5

Site 1151, B4:6

oculatus, *Actinocyclus*

Site 1150, A4:24; B2:7

Site 1151, A5:19, 21, 24; B2:9

Sites 1150–1151, B2:4, 14

Odontella aurita

Site 1150, B3:4

Site 1151, B3:5

oestrupii, *Thalassiosira*, Sites 1150–1151, B2:14

oestrupii f. *vetus*, *Thalassiosira*, Sites 1150–1151, B2:13

oestrupii s.l., *Thalassiosira*

Site 1150, A4:25

Site 1151, A5:19

"*oestrupii*" s.a., *Thalassiosira*

Site 1150, B2:7, 12–13

Site 1151, B2:9, 11–13

Operculodinium centrocarpum, Site 1151, B6:5–6

Operculodinium giganteum, Site 1151, B6:5–6

Operculodinium spp., Site 1151, B6:4

P

pachyderma s.l., *Neogloboquadrina*, Site 1151, B7:4, 23

Paralia sulcata

Site 1150, A4:26; B3:5

Site 1151, A5:21

parallela, *Gephyrocapsa*

Site 1150, A4:23; B4:5

Site 1151, A5:17–18; B4:6–7

paratabulata, *Evittosphaerula*, Site 1151, B6:6

patulum, *Impagidinium*, Site 1151, B6:6

pelagicus, *Coccolithus*

Site 1150, A4:23; B4:1–31

Site 1151, A5:17–18; B4:1–31; B5:4

pentaradiatus, *Discoaster*

Site 1150, A4:24; B4:5

Site 1151, A5:17; B4:6

Pinnularia spp., Site 1150, B3:5

placacanthum, *Cleistosphaeridium*, Site 1151, B6:6, 19

plesiotumida, *Globorotalia*, Site 1151, B7:4, 23

praedimorpha, *Denticulopsis*

Site 1150, B2:8, 14

Site 1151, A5:20; B2:10, 14

praeumerosa, *Neogloboquadrina*, Site 1151, B7:4, 23

praelauta, *Denticulopsis*, Site 1151, A5:21

praeoestrupii, *Thalassiosira*

Site 1150, B2:12–13, 36

Site 1151, B2:11–13

praeoestrupii, *Thalassiosira* cf., Site 1150, B2:37–38

praeoestrupii f. *juvenis*, *Thalassiosira*, Site 1151, B2:11

Proboscia curvirostris

Site 1150, A4:24–25, 36; B2:7, 14; B3:7

Site 1151, A5:19, 21; B2:8, 14; B3:7

Proboscia curvirostris Zone

Site 1150, A4:24; B2:7

Site 1151, A5:19, 21; B2:8–9

profunda, *Florisphaera*

Site 1150, B5:10

Site 1151, B5:4, 11

Pseudoemiliana lacunosa

Site 1150, A4:23; B4:5; B5:12

Site 1151, A5:18; B4:7; B5:3–5, 12

Pseudopodosira elegans

Site 1150, B3:5

Site 1151, B3:5

pseudoumbilicus, *Reticulofenestra*

Site 1150, A4:24; B4:5

Site 1151, A5:17; B4:6

punctulata, *Globorotalia*

Site 1150, B7:3–6, 13–14

Site 1151, B7:4–6, 13–14, 23

Pyxidicula zabelinae

Site 1150, A4:25

Site 1151, A5:19

Pyxidinospis cf. *tuberculata*, Site 1151, B6:6*Pyxidinospis* spp., Site 1151, B6:4–6

Q

quanta, *Selenopemphix*, Site 1151, B6:19*quinqueramus*, *Discoaster*

Site 1150, A4:24; B4:5

Site 1151, A5:18; B4:6

R

reinholdii, *Nitzschia*

Site 1150, A4:24, 26; B2:7

Site 1151, A5:21; B2:8

Reticulatosphaera actinocoronata, Site 1151, B6:19*Reticulofenestra asanoi*, Site 1150, B4:5*Reticulofenestra gelida*, Site 1150, B4:5*Reticulofenestra pseudoumbilicus*

Site 1150, A4:24; B4:5

Site 1151, A5:17; B4:6

Reticulofenestra spp., Site 1150, A4:23; B4:5*rolandii*, *Nitzschia*, Site 1151, A5:20; B2:9*Roperia tessellata*, Site 1151, B3:6*Rouxia californica*

Site 1150, A4:25; B2:8, 14

Site 1151, A5:19–20; B2:9, 14

Rouxia californica Zone

Site 1150, A4:25

Site 1151, A5:19; B2:9

rugosus, *Ceratolithus*

Site 1150, A4:24; B4:5

Site 1151, A5:17

rugosus, *Triquetrorhabdulus*

Site 1150, A4:24

Site 1151, A5:17–18

S

schraderi, *Thalassionema*

Site 1150, A4:25–26; B2:8, 14

Site 1151, A5:20; B2:9, 14

Selenopemphix nephroides, Site 1151, B6:19*Selenopemphix quanta*, Site 1151, B6:19*Selenopemphix* spp., Site 1151, B6:6*selli*, *Helicosphaera*, Site 1150, B4:5*seminae*, *Neodenticula*

Site 1150, A4:25; B3:4

Site 1151, A5:19, 21; B3:5

senarius, *Actinoptychus*

Site 1150, A4:26

Site 1151, A5:21

senticosa, *Uvigerina*, Japan Trench, B10:4*simonsenii*, *Denticulopsis*

Site 1150, A4:25–26; B2:8

Site 1151, A5:20, 24; B2:10

Sites 1150–1151, B2:4, 14

simplex, *Brigantedinium*, Site 1151, B6:5, 19*Sphaeroidinellopsis* spp., Site 1151, B7:4*Sphenolithus heteromorphus*, Site 1151, A5:18*Spiniferites ellipsoideus*, Site 1151, B6:5*Spiniferites firmus*, Site 1151, B6:6*Spiniferites hexatypicus*, Site 1151, B6:5–6*Spiniferites* spp., Site 1151, B6:4*spongiosa*, *Achomospaera*, Site 1151, B6:5–6*Stephanodiscus* spp., Site 1151, B3:6*Stephanopyxis turris*

Site 1150, B3:5

Site 1151, B3:5

sulcata, *Paralia*

Site 1150, A4:26; B3:5

Site 1151, A5:21

surculus, *Discoaster*

Site 1150, A4:24; B4:5–6

Site 1151, B4:6

surirella, *Delphineis*, Site 1150, B3:5

T

tamalis, *Discoaster*

Site 1150, A4:24; B4:5

Site 1151, B4:6

tesselata, *Roperia*, Site 1151, B3:6*tetraoestrupii*, *Thalassiosira*

Site 1150, B2:12–13, 37–38

Site 1151, B2:11–13, 37–38

Thalassionema schraderi

Site 1150, A4:25–26; B2:8, 14

Site 1151, A5:20; B2:9, 14

Thalassionema schraderi Zone

Site 1150, A4:25; B2:8

Site 1151, A5:20; B2:9

Thalassiosira antiqua

Site 1150, A4:25

Site 1151, A5:19, 21

Thalassiosira bipora

Site 1150, B2:12–14

Site 1151, B2:12–14, 34

Thalassiosira bipora f. *minima*, Site 1151, B2:11*Thalassiosira bipora* f. *prima*

Site 1150, B2:12–14

Site 1151, B2:11–14, 35

Thalassiosira bipora s.a., Site 1151, B2:14*Thalassiosira bipora* subgroup, Site 1151, B2:11*Thalassiosira bipora* subzone, Site 1151, B2:14*Thalassiosira* cf. *praeoestrupii*, Site 1150, B2:37–38*Thalassiosira exceptiuncula*, Site 1151, B2:37–38*Thalassiosira frenguelliopsis*

Site 1150, B2:12–13, 37–38

Site 1151, B2:11–13, 37–38

Thalassiosira frenguelliopsis subgroup, Site 1151, B2:11*Thalassiosira gravida*

Site 1150, A4:25

Site 1151, B3:5

Thalassiosira hyalina
 Site 1150, B3:4
 Site 1151, B3:5

Thalassiosira jouseae
 Site 1150, A4:24
 Site 1151, A5:19, 21

Thalassiosira latimarginata
 Site 1150, A4:25
 Site 1151, A5:19

Thalassiosira leptopus
 Site 1150, B3:4
 Site 1151, B3:5

Thalassiosira nidulus, Site 1151, B3:5, 7

Thalassiosira nordenskiöldii
 Site 1150, B3:4
 Site 1151, B3:5

Thalassiosira oestrupii, Sites 1150–1151, B2:14

Thalassiosira oestrupii f. *vetus*, Sites 1150–1151, B2:13

Thalassiosira oestrupii s.l.
 Site 1150, A4:25
 Site 1151, A5:19

Thalassiosira oestrupii subgroup, Site 1151, B2:11

Thalassiosira oestrupii Subzone, Site 1151, A5:19; B2:11, 13–14

Thalassiosira "oestrupii" s.a.
 Site 1150, B2:7, 12–13
 Site 1151, B2:9, 11–13

Thalassiosira praeoestrupii
 Site 1150, B2:12–13, 36
 Site 1151, B2:11–13

Thalassiosira praeoestrupii f. *juvenis*, Site 1151, B2:11

Thalassiosira spp.
 Site 1150, B2:32
 Site 1151, B2:33

Thalassiosira tetraoestrupii
 Site 1150, B2:12–13, 37–38
 Site 1151, B2:11–13, 37–38

Thalassiosira trifulta
 Site 1150, B3:4
 Site 1151, B2:11; B3:5

Thalassiosira trifulta group, Site 1151, B2:11, 14, 23, 37–38

Thalassiosira yabei, Site 1151, A5:20

Thalassiosira yabei Zone, Site 1151, A5:20; B2:10

trifulta, *Thalassiosira*
 Site 1150, B3:4
 Site 1151, B2:11; B3:5

Triquetrorhabdulus rugosus
 Site 1150, A4:24
 Site 1151, A5:17–18

tuberculata, *Pyxidnopsis* cf., Site 1151, B6:6

Tuberculodinium vancampoae, Site 1151, B6:6, 19

turris, *Stephanopyxis*
 Site 1150, B3:5
 Site 1151, B3:5

U

Uvigerina senticosa, Japan Trench, B10:4

V

vancampoae, *Tuberculodinium*, Site 1151, B6:6, 19

X

Xandarodinium sp. A, Site 1151, B6:4–5, 19
Xandarodinium spp., Site 1151, B6:4, 6

Y

yabei, *Thalassiosira*, Site 1151, A5:20

Z

zabelinae, *Pyxidicula*

Site 1150, A4:25

Site 1151, A5:19

zones (with letter prefixes)

CN3, Site 1151, A5:18; B4:7

CN5, Site 1151, A5:18

CN5a, Site 1151, A5:18

CN6, A5:18; B4:6, 7

CN6–CN8, Site 1151, A5:18

CN7, Site 1151, A5:18

CN7/CN6 boundary, Site 1151, B4:7

CN8, Site 1150, A4:24

CN8/CN7 boundary, Site 1151, B4:7

CN9, A4:24; B4:6–7

CN10, Site 1151, A5:18; B4:6

CN10/CN9 boundary, Site 1150, A4:24; B4:5

CN10a, Site 1151, A5:18

CN10b/CN10a boundary, Site 1151, A5:18; B4:6

CN10c, Site 1150, A4:24; B4:5

CN10c/CN10b boundary, Site 1151, A5:18; B4:6

CN11, Site 1151, A5:18; B4:6

CN11/CN10c boundary, Site 1151, A5:18; B4:6

CN12, Site 1150, B4:7

CN12a, A4:24; A5:17; B4:5–6

CN12b, A4:24; B4:5–6

CN12b/CN12a boundary, Site 1151, A5:17

CN12c, A4:24; B4:6

CN12c/CN12b boundary, Site 1151, A5:17

CN12c/CN12d, Site 1150, B4:5

CN12d, A4:24; A5:17; B4:6

CN13a, A4:23; A5:17; B4:5–6

CN13b, A4:23; A5:17–18; B4:5, 7

CN14, Site 1151, B4:6–8

CN14/CN13 boundary, Site 1151, A5:18; B4:7

CN14a, A4:23; A5:17; B4:5

CN14b, A4:23; A5:18; B4:5, 7

CN15, A4:23; B4:5, 7–8

CN15/CN14b boundary, Site 1151, A5:18; B4:7

NPD3B, Site 1151, A5:21; B2:10

NPD4A, Site 1151, A5:21; B2:10

NPD4Ba, Site 1151, A5:21

NPD4Bb, Site 1151, A5:20

NPD5A, Site 1151, A5:20; B2:10

NPD5B, Site 1151, A5:20; B2:10

NPD5C, A5:20; B2:8, 10

NPD5D, A4:26; A5:20; B2:8, 10; B7:5
NPD6A, A4:25–26; A5:20; B2:9
NPD6B, A4:25–26; A5:20; B2:8–9
NPD7A, A4:25–26; A5:19–20; B2:8–9
NPD7B, A4:25; B2:7–8, 12–14; B7:5
NPD7Ba, Site 1150, A4:25
NPD7Ba/NPD7A boundary, Site 1151, A5:19
NPD7Bb, Sites 1150–1151, B2:12–14
NPD7Bb/NPD7Ba boundary, Site 1151, B2:9

NPD8, A4:25; A5:19; B2:9
NPD8/NPD7B boundary, A4:25; A5:19; B2:7, 9
NPD9, A4:25; A5:19, 21; B7:4–5
NPD10, A4:25; A5:19, 21; B2:9
NPD10/NPD9 boundary, Site 1150, B2:7
NPD11, Site 1151, A5:19; B2:8
NPD11/NPD10 boundary, A4:24–25; A5:21; B2:7, 9
NPD12, Sites 1150–1151, B2:13
NPD12/NPD11 boundary, Site 1150, B2:7