

INDEX TO VOLUME 204

This index covers both the *Initial Reports* and *Scientific Results* portions of Volume 204 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 1244, for example, is given as "Site 1244, A3:1-132."

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

abyssal plains, age constraints, B3:4-5
accretionary complexes
 deposition, A11:7-9
 gas transport in shallow sediments, B15:1-52
 geology, B1:4-5
 lithologic units, A3:9-10
 Seismic Profile OR89-Line 2, B1:28
accretionary prisms
 clay mineralogy, B7:5
 gas hydrates, B15:19-20
accretionary ridges
 age constraints, B3:4-5
 dewatering, B3:7
accretionary wedges
 age constraints, B3:4-5
 dewatering, B3:7
acetate
 pore water, B17:1-20
 vs. depth, B17:10-16
 vs. temperature, B17:17
acetogenesis, sediments, B17:5
acoustic logs
 gas hydrates, B24:3
 vs. depth, A3:94; A4:93; A6:65; A9:71; A10:86;
 A11:50; B24:8-13, 23-36

See also dipole sonic waveforms; monopole sonic waveforms; waveforms
acoustic properties, repressurized sediments, B26:6
advanced piston corer
 porosity, vs. depth, A4:86
 temperature, vs. time, A5:49
 tools, B23:16-18
advection
 calcium-depleted fluids, A8:13; A9:11-12
 compaction, B15:10-11
age, vs. iodine-129/iodine ratio, B14:22
age constraints, structural zones, B3:4-5
age vs. depth
 Site 1244, A3:58; B15:32
 Site 1245, A4:60
 Site 1246, A5:27
 Site 1247, A6:38
 Site 1248, A7:35
 Site 1249, A8:47
 Site 1250, A9:45
 Site 1251, A10:51
 Site 1252, A11:34
alkalinity
 carbon cycling, A7:11; A9:11
 microbial methanogenesis, B15:14-16
 organic matter decomposition, A3:17; A10:14-15
 pore water, A4:14

- vs. depth, A3:59; A4:61, 66; A5:28; A6:39; A7:36; A8:48; A9:46; A10:52; A11:35; B15:36; B16:14–18; B19:9–10
- vs. sulfate, B15:35
- Alvin Canyon fault, sediments, B4:13
- ammonium
- organic matter decomposition, A3:17; A10:14–15
 - vs. depth, A3:59; A4:61; A5:28; A6:39; A7:36; A8:48; A9:46; A10:52; A11:35
- anaerobic methane oxidation
- carbon cycling, A7:10–11; A8:13; A9:11
 - gas hydrates, A1:6; A3:16
 - pore water, A6:10
 - redox, B15:9–10
 - sulfate/methane interface, A6:10–11
 - sulfate reduction, B15:11–14
- Anticline A, seismic units, B2:7–8
- Anticline B
- seismic units, B2:6–7
 - tectonics, B2:9
 - Archaea. *See* bacteria-Archaea
- Archie parameters, physical properties, B8:4–5
- Astoria Fan
- abyssal plain sediment seismic units, B2:6
 - clay mineralogy, B7:4
- Atterberg limits, sediments, B12:6, 71
- authigenesis, carbonates, A4:66
- B**
- bacteria, fluorescence micrograph, A10:64
- bacteria-Archaea, bacterial mats, A8:13
- bacterial mats
- bacteria-Archaea, A8:13
 - gas hydrates, A1:6
 - photograph, A1:54
- barite, sediments, A3:18
- barium
- pore water, A6:11; A7:11; A8:13; A9:12; A10:15
 - pore water comparison of Sites 1244 and 1248, A7:39
 - remobilization, A3:67
 - sediments, A3:18–19
 - vs. depth, A3:60, 67; A4:62; A5:29; A6:40; A7:37, 39; A8:49; A9:47; A10:53, 57
- bathymetry
- Cascadia continental margin, B3:12
 - Hydrate Ridge, A1:51; B3:13; B10:9
 - Hydrate Ridge S, B1:26
 - Site 1244, A3:44
 - Site 1245, A4:35
 - Site 1246, A5:21
 - Site 1247, A6:27
 - Site 1248, A7:25
 - Site 1249, A8:36
 - Site 1250, A9:31
 - Site 1251, A10:39
 - Site 1252, A11:22
- Beggiatoa*, bacterial mats, A8:13
- bioevents
- age, A3:107; A4:105; A5:55; A6:71; A7:65; A8:82; A9:80; A10:96; A11:54; B8:28
- See also* diatom bioevents; nannofossil bioevents
- biogenic component
- lithologic units, A6:3–8
 - vs. depth, A3:4–8; A4:36–40, 42; A5:22; A6:29–30; A7:26; A8:37; A9:32–33, 38; A10:40–43; A11:23–24, 26
- biogeochemistry, summary, A1:4–6
- biological communities, gas hydrates, A1:10–11
- biosphere, shallow marine, “peachy orange slime,” A10:19, 64
- biostratigraphy
- diatoms, Sites 1251–1252, B6:1–10
 - Site 1244, A3:10–13
 - Site 1245, A4:11–13
 - Site 1246, A5:5–7
 - Site 1247, A6:8–9
 - Site 1248, A7:7–9
 - Site 1249, A8:9–11
 - Site 1250, A9:9–10
 - Site 1251, A10:11–13
 - Site 1252, A11:9–11
 - summary, A1:60
- Biot-Gassman theory, velocity logs, B22:11–12
- biotite, lithologic units, A3:6–8
- bioturbation
- lithologic units, A4:4; A6:3–8; A7:3–4; A8:7–8; A9:5–7; A10:5–9; A11:4–7
 - photograph, A3:50; A4:54–55
- Blake Ridge, sulfate, methane, alkalinity, magnesium, and calcium, B16:13
- borehole breakouts
- azimuth, B4:14
 - azimuth histograms, B4:12
 - lithologic units, A10:7–8
 - plan view, B4:10
 - resistivity-at-the-bit, A3:98
 - stress orientation, B4:1–14
- boron
- pore water, A7:11; A10:15–16
 - pore water comparison of Sites 1244 and 1248, A7:40
 - vs. depth, A3:59; A4:61; A5:28; A6:39; A7:36; A8:48; A9:46; A10:52
- bottom-simulating reflector
- accretionary complex, A1:56–57; A3:10
 - acetate and hydrogen, B17:5
 - chloride vs. depth, A10:55
 - gas transport, B15:8–9
 - Hydrate Ridge S, B2:11–12
 - infrared scanning, A7:16
 - iron sulfides, B18:6–7
 - map, B2:29
 - rock magnetism, B18:13
 - sediments, B11:8
 - seismic data, A8:60
 - seismic profiles, A6:28, 31; A7:27
 - temperature and depths, B15:50
 - thermal anomalies, A10:67
 - vs. chloride, A3:61
 - vs. depth, A5:23
- breccia, silty clay, lithologic units, A3:8
- bromide, vs. depth, B14:18

bromine
pore water, B14:1–25
See also iodine/bromine ratio
burial velocity, compaction, B15:10–11
burrow infills, lithologic units, A10:6
butane
gas hydrates, A7:13–14
See also iso-butane; *n*-butane

C

calcareous component, vs. depth, A3:45–47; A4:36–40;
A5:22; A6:29–30; A7:26; A8:37; A9:32–33, 38;
A10:40–43; A11:23–24, 26

calcite
lithologic units, A10:9
oxygen isotopes, B13:6–8
sediments, B11:17–19
X-ray diffraction data, A6:34; A7:31; A9:37; A10:50;
B12:71
calcite, high-magnesium, authigenic carbonates, B5:1–8
calcite crystals, photomicrograph, A5:24
calcite needles, authigenic, photomicrograph, A3:55
calcium
bacterial mats, A8:13
pore water, A9:12
vs. depth, A3:60; A4:62, 66; A5:29; A6:40; A7:37;
A8:49; A9:47; A10:53
See also magnesium/calcium ratio
caliper logs
logging-while-drilling, A3:90–93
vs. depth, A4:88, 90–91; A5:50; A6:60, 62–63; A7:57;
A8:71; A9:67–69; A10:81, 83–84; A11:48–49, 51
carbon, dissolved inorganic, carbon isotopes, B15:5–6;
B20:1–16
carbon, dissolved organic, vs. depth, A4:61; A5:28;
A6:39; A7:36; A8:48; A9:46; A10:52; A11:35
carbon, inorganic
sediments, A3:21, 119; A4:17, 116; A5:10, 60; A6:14,
77; A7:14, 70; A9:14, 88; A10:17, 106
vs. depth, A3:72; A4:73; A5:37; A6:49; A7:46; A9:53;
A10:63
carbon, organic
authigenic carbonates, B5:7–8
sediments, A3:21, 119; A4:17, 116; A5:10, 60; A6:14,
77; A7:14, 70; A9:14, 88; A10:17–18, 106
vs. depth, A3:72; A4:73; A5:37; A6:49; A7:46; A9:53;
A10:63
carbon, total
authigenic carbonates, B5:7–8
sediments, A3:21, 119; A4:17, 116; A5:10, 60; A6:77;
A7:70; A9:88; A10:106
carbon/nitrogen ratio
sediments, A3:21, 119; A4:17, 116; A5:10, 60; A6:14,
77; A7:70; A9:14, 88; A10:17–18, 106
vs. depth, A3:72; A4:73; A5:37; A6:49; A7:46; A9:53;
A10:63
carbon cycling, sediments, A7:10–11; A8:13; A9:11
carbon dioxide
carbon isotopes, B15:5
core void gas, A4:112–113; A5:58; A6:74; A7:68;
A8:86; A9:84–85; A11:57

decomposed gas hydrates, A4:114; A5:59; A6:75;
A7:69; A8:97; A9:86
organic matter decomposition, A10:15
pressure cores, A4:115; A6:76; A8:88–89; A9:87;
A10:104–105
vs. depth, B19:9–10
carbon isotopes
anaerobic methane oxidation, B15:11–14
carbon dioxide, B19:6
dissolved inorganic carbon, B15:5–6, 30, 49; B20:1–16
ethane generation mechanism, B15:16–17
ethane-pentane hydrocarbons in void gas, B15:45
methane and carbon dioxide, B15:5, 29, 42–44
methane and carbon dioxide in hydrate-bound gas,
B15:48
methane and carbon dioxide in pressure core gas,
B15:47
vs. 1/carbon number ratio, B15:31
vs. depth, B15:27; B20:7
vs. methane/ethane ratio, B15:28
carbon number reciprocal, vs. carbon isotopes, B15:31
carbonate apron, seafloor observations, A1:4–6
carbonate cementation, apparent overconsolidation,
B8:9
carbonate content
authigenic carbonates, B5:2–3
calcite, B5:6
dolomite, B5:6
lithologic units, A6:3–8; A10:8–9
sediments, A3:119; A4:116; A5:60; A6:77; A7:70;
A9:88
vs. depth, A3:72; A4:45, 73; A5:37; A6:33, 49; A7:46;
A9:53; A10:47, 63; B5:6; B11:13–15
X-ray diffraction data, A6:34; B12:71
carbonate pavement, seafloor observations, A1:4–6
carbonate precipitates, lithologic units, A11:6–7
carbonate spire, seafloor observations, A1:4–6
carbonates
authigenesis, A4:66
concretions, A7:64
dissolution, A11:10
fluoride, B16:8–9
mineral composition, A10:95
oxygen isotopes, B13:6–8
photograph, A1:54; A3:54
redox, B15:9–10
X-ray diffraction data, A9:37
carbonates, authigenic
accretionary complexes, A11:7–9
carbon cycling, A9:11
fluoride, B16:8–9
lithologic units, A3:4–8; A4:4; A6:3–4; A7:3–8; A9:4–5;
A10:7–8; A11:6–7
photograph, A5:24; A6:32; A11:32
photomicrograph, A5:24
sediments, B5:1–8
carbonates, magnesium-rich, fluoride, B16:8–9
Cascadia accretionary complex
gas hydrates, B1:1–40
geology, A1:4–6

- Cascadia accretionary prism, authigenic carbonates, B5:1–8
- Cascadia Basin, clay mineralogy, B7:4
- Cascadia continental margin
bathymetry, B3:12
consolidation and sediment strength, B12:1–148
fluid evolution in accretionary prism, B13:1–20
summary, A1:1–75
- Cascadia margin, north-south variability of deformation and fluid venting, B3:1–15
- Cascadia subduction zone
clay mineralogy, B7:1–15
geology, B1:3–5
tectonics, A1:51
- check shot surveys, near-offset vertical seismic profiles, B25:7, 23
- chemohierms, environment, A7:7
- chemosynthetic communities, gas transport in shallow sediments, B15:1–52
- chloride
discrete excursions within gas hydrate stability zone, B13:16
dissolved in pore fluids, A3:111; A4:109; A5:7
fluid provenance, B13:5–6
gas hydrate proxies, B1:11–12
gas hydrates, A1:43; A3:13–16; A4:13–14; A5:7; A6:10; A7:10; A8:11–12; A9:10–11; A10:13–14; A11:11–12
glaciation signals in shallow interstitial waters, B13:4–5
moisture and density bulk density, A8:84
pore water, A4:15; B13:13, 17
profile comparison of Sites 1245 and 1249, A8:50
profile comparison of Sites 1245 and 1250, A9:48
profile vs. reflectors, A11:36
sediments, A3:17–18
seismic Horizon A, B1:32
vs. bottom-simulating reflector, A3:61
vs. depth, A1:65; A3:59, 70; A4:61, 63–64; A5:28, 30; A6:39, 41; A7:36, 38; A8:48, 50; A9:46, 48; A10:52, 54–55, 69; A11:35–36; B1:32, 34; B14:18
vs. reflector AC, A3:61
See also lithium/chloride ratio
- chlorite
sediments, B7:5
vs. depth, B11:13–16
- chlorite (+ kaolinite), vs. depth, B7:12–14
- clams, gas hydrates, A1:6
- clasts
lithologic units, A9:6–7; A10:5
photograph, A11:28
- clasts, carbonate, lithologic units, A7:4
- clasts, clay
lithologic units, A7:5; A11:4–7
photograph, A9:40; A11:28
- clasts, mud
lithologic units, A4:9–10; A10:4–5
photograph, A4:57
- clay
clay mineralogy, B7:1–15; B11:1–19
gas hydrates, B10:4–6
lithologic units, A3:4–8; A4:5–10; A5:3–5; A8:6–8
photograph, A11:27
vs. depth, A3:45–47; A4:36–40, 42; A5:22; A6:29–30; A7:26; A8:37; A9:32–33, 35; A10:40–43; A11:23–24, 26; B10:11–18; B11:13–15
- clay, authigenic carbonate-rich, lithologic units, Site 1249, A8:7–8
- clay, biogenic opal-rich, photomicrograph, A3:49
- clay, diatom-bearing, lithologic units, A4:5; A7:3–6
- clay, diatom-bearing silty, lithologic units, A5:3; A10:4–5
- clay, diatom-rich
lithologic units, A4:5–7; A7:3–4; A8:6–8
photomicrograph, A4:49; A10:49
- clay, diatom-rich silty, lithologic units, A5:3; A6:4–5; A9:4–5; A11:2–6
- clay, foraminifer-rich, photograph, A10:48
- clay, foraminifer-rich silty, lithologic units, A11:5–7
- clay, glauconite-rich, photograph, A10:49
- clay, hemipelagic
environment, A9:8; A10:10–11
lithologic units, A6:3–4; A7:5–6
- clay, indurated, lithologic units, A10:7–8
- clay, nannofossil-bearing, lithologic units, A4:4; A6:6–7; A7:4–6
- clay, nannofossil-bearing silty, lithologic units, A5:3
- clay, nannofossil-rich, lithologic units, A4:5–7; A8:6–8; A9:7; A11:3–5
- clay, nannofossil-rich foraminifer-bearing, photomicrograph, A10:48
- clay, nannofossil-rich silty, lithologic units, A11:3–5
- clay, silty
clay mineralogy, B11:1–19
lithologic units, A3:4–8; A4:4–11; A5:3–5; A6:3–8; A7:3–6; A8:6–8; A9:4–7; A10:4–9; A11:2–7
photograph, A3:50; A11:29
- clay, volcanic glass-rich silty, lithologic units, A9:4
- clay mineralogy, sediments, B7:1–15; B11:1–19
- clay minerals, lithologic units, A3:4–8; A6:3–8; A11:5–7
- clay volume content, velocity logs, B22:6–7
- claystone
clay mineralogy, B7:1–15
lithologic units, A3:7–10; A4:7–9; A10:8–9
photograph, A4:55
- claystone, nannofossil-rich
photograph, A4:54
photomicrograph, A4:56
- claystone, silty, lithologic units, A4:9–10; A10:8–9
- cleavage planes, photograph, A8:45
- Cline, vs. time, B23:21–28
- coccolid cells, “peachy orange slime,” A10:19, 64
- coefficient of consolidation, vs. vertical consolidation stress, B12:31–47
- color change
lithologic units, A3:4–8; A5:3–4
photograph, A3:54
- Columbia River, clay mineralogy, B7:4
- compaction
burial velocity, B15:10–11
fluid venting, B3:6

- compression index, sediments, B12:7–8
 compressional wave velocity
 correlation, B8:7
 repressurized sediments, B26:6
 sediments, A3:27, 126; A4:21–22, 124; A5:13, 64;
 A10:24, 113; A11:16
 seismic Horizon A, B1:32
 vs. consolidation stress, B26:15
 vs. depth, A3:80–81; A5:46
 compressional wave velocity logs, vs. depth, A3:94;
 A6:65; A9:71; A11:48
 computed tomographic analysis, gas hydrate shape and
 structure, B21:1–11
 concretions, carbonate, location, A7:64
 conductivity. *See* temperature-pressure-conductivity tool
 conglomerate
 environment, A8:9
 photograph, A4:57
 consolidation, sediments, B12:1–148
 contamination
 bacteria, A3:23; A4:19
 See also fluorescent microspheres; perfluorocarbon
 tracers
 convoluted bedding, lithologic units, A7:5; A9:6–7;
 A10:5; A11:4–7
 core logging, tools, A8:26–28
 core quality, microbiology, A3:122
 cores
 drilling data, B23:33–41
 recovery, A9:98
 correlation
 logging-while-drilling, A1:61
 physical properties, B8:7
 physical properties and seismic data, A4:78
 cracks
 lithologic units, A3:4–8; A4:6
 photograph, B8:15
 X-ray line scanner images, A10:72
 cross bedding, photograph, A4:57
 cross sections, reconstruction, B2:28
 crust. *See* top of oceanic crust
 cycling, carbon, A7:10–11; A8:13; A9:11
- D**
- Daisy Bank fault, sediments, B4:13
 DBF1 debris flow deposit, Seismic Profile OR89-Line 2,
 B1:28
 DBF2 debris flow deposit, Seismic Profile OR89-Line 2,
 B1:28
 debris flows
 accretionary complexes, A11:7–9
 clay mineralogy, B11:8
 deposition, A6:7
 diatom biostratigraphy, B6:2–3
 environment, A10:10–11
 lithologic units, A7:5–7; A8:7–8; A9:5–7; A10:4–9;
 A11:2–7
 photograph, A1:59; A6:36; A7:32; A9:40; A10:46;
 A11:28
 seismic data, A3:58
 decay constants, surface porosity, B8:29
 decomposition, organic matter, A10:14–15
 deep resistivity logs, vs. depth, A4:89–90; A5:51, 53;
 A6:61–62, 68; A7:58, 60; A8:72, 74; A9:72, 75;
 A10:82–83, 89; A11:48, 51
 deformation
 fluid venting, B3:6
 gas hydrate stability zone, B2:12–13
 geology, B1:4–5
 north-south variability, B3:1–15
 deformation front
 accretionary prisms, B14:5
 vs. heat flow, B9:24
 deformation, syn- and post-tectonic, seismic units, B2:8
 degassing
 core pullout, B23:9–10
 sediments, A3:130; A4:129; A6:83; A8:96; A9:97;
 A10:117
 volume-time plots, A3:85–86
 dehydration, clay minerals, B13:8
 demagnetization, magnetite, B18:5–6
 demagnetization, thermal, iron sulfides, B18:5–7
 density
 correlation, B8:7
 correlation with seismic data, A4:78; A5:42
 logging-while-drilling, A3:61; A4:41, 77, 92
 nuclear magnetic resonance logs, B27:8–9
 repressurized sediments, B26:5–6, 18
 sediments, A3:26–27, 123–125; A4:20–21, 122–123;
 A5:63; A6:80; A7:73; A8:18, 93; A9:17–18, 94;
 A10:22, 111–112; A11:15, 59
 vs. depth, A3:68; A4:51; A7:27; A9:34; B8:17–21
 vs. shear strength, B8:22
 vs. velocity, B8:22
 density, bulk
 correlation with seismic data, A4:78
 seismic Horizon B, B25:17
 sulfide structure photograph, A6:54–55
 density, gamma ray attenuation
 across seismic Horizon A, A4:79; A7:51
 degassing, A8:68
 Fugro pressure corer, A8:70
 HYACE rotary corer, A8:69
 HYACINTH pressure core, B1:35–36
 logging-while-drilling, A1:61
 vs. depth, A3:77–79, 81, 88; A4:77; A5:41, 43–44;
 A6:52–53; A7:51–52; A8:59, 68–70; A9:56–57;
 A10:44, 70; A11:44–45
 density, grain
 across seismic Horizon A, A4:79; A7:51
 vs. depth, A3:77; A4:77; A5:41; A6:52; A7:51–52;
 A8:59; A9:56; A10:70; A11:44
 density, in situ bulk, seismic Horizon A, B1:31
 density, logging-while-drilling
 across seismic Horizon A, A4:79; A7:51
 vs. depth, A3:77–78; A5:23, 41, 43–44; A6:31, 52, 64;
 A7:51–52; A8:59–60; A9:56–58; A10:70–71
 density, moisture and density bulk
 across seismic Horizon A, A4:79; A7:51
 chloride, A8:84

- vs. depth, A3:77–79; A4:77; A6:52; A7:51–52; A8:59–60; A9:56, 58; A10:70; A11:44–45
- density, normalized bulk, vs. depth, A10:74
- density, sediment, vs. depth, A4:81; A5:12, 46; A6:15–16; A7:16–17
- density, time-after-bit, vs. depth, A4:88; A5:50; A6:60; A7:57; A8:71; A9:67; A10:81
- density correction logs, vs. depth, A4:88; A6:60; A7:57; A8:71; A9:67; A10:81
- density from core logs, vs. depth, A4:89, 92; A5:51, 53; A6:61–62, 64, 68; A7:58, 60; A8:72, 74; A9:70, 72, 75; A10:82, 85, 89; A11:48, 51
- density logs
logging-while-drilling, A3:90–93, 100; A10:85
vs. depth, A4:89; A6:61–62, 68; A7:58, 60; A8:72, 74; A9:72, 75; A10:82–83, 89; A11:48, 51
- density porosity logs
gas hydrate saturation, B27:17–22
logging-while-drilling, A3:99
vs. depth, A4:90; A5:52; A6:62, 67; A8:73; A9:74; A10:83; A11:48, 51
vs. resistivity, B22:20
vs. velocity, B22:19
vs. velocity ratio, B22:18
- density wireline logs, vs. depth, A3:93; A4:92; A6:64; A9:70; A10:85
- deoxyribonucleic acid, enrichment, A3:23
- deposition, environment, A3:9–10; A4:10–11; A5:5; A6:7–8; A7:7; A8:9; A9:8; A10:9–11; A11:7–9
- deuterium
fluid provenance, B13:5–6
methane, B15:46
vs. depth, B13:14, 17
- dewatering
accretionary wedges, B3:7
fluid venting, B3:6
gas hydrates, A1:45–46
porosity, B8:9–10
- diagenesis
organic matter, A3:17
pore water, A6:11
- diagenesis, early
acetogenesis, B17:5
gas hydrates, B15:19–20
organic matter, A10:14–15
- diatom bioevents, chart, A4:59; A7:34
- diatoms
biostratigraphy, A3:10–11; A4:11–12; A5:6; A6:8; A7:8; A8:10; A9:9; A10:11; A11:9; B6:1–10
lithologic units, A3:4–8; A4:5–11; A5:3–4; A6:3–8; A8:6–8; A10:6–7; A11:3–5
- dipole sonic waveforms, vs. depth, A4:93; A6:65; A9:71; A10:86; A11:50; B24:23–37
- disconformities
lithologic units, A4:5
seismic Horizon Y, A6:7
- discontinuities, environment, A10:10–11
- dissolution, carbonates, A11:10
- dolomite
authigenic carbonates, B5:2–3
lithologic units, A10:9
- oxygen isotopes, B13:6–8
- X-ray diffraction data, A6:34; A10:50
- domes
seismic units, B2:7–8
tectonics, B2:10
- downhole logging
gas hydrate proxies, B1:12–13; B22:1–25
Site 1244, A3:34–40
Site 1245, A4:26–33
Site 1246, A5:15–19
Site 1247, A6:19–25
Site 1248, A7:19–23
Site 1249, A8:29–33
Site 1250, A9:22–29
Site 1251, A10:30–37
Site 1252, A11:17–20
- downhole measurements
Site 1244, A3:29–33
Site 1245, A4:22–26
Site 1246, A5:14–15
Site 1247, A6:17–19
Site 1248, A7:18–19
Site 1249, A8:20–28
Site 1250, A9:19–22
Site 1251, A10:25–30
Site 1252, A11:16–17
- dynamics, gas hydrates, B1:5–10
- ## E
- echo sounder data, A1:53
- Eel River Basin, methane/ethane ratio in void gas samples, B15:40
- elastic constants, velocity logs, B22:24
- elastic models, parameters, B24:38
- elastic properties, gas hydrates, B24:4
- electrical conductivity, uncalibrated, gas hydrate dissociation, A8:61
- erosional surfaces, lithologic units, A10:6
- Escanaba Trough, methane/ethane ratio, B15:38
- ethane
concentration in headspace gases, A3:112
core void gas, A4:112–113; A5:58; A6:74; A7:68; A8:53, 86; A9:51, 84–85; A10:61, 102–103; A11:40, 57
core void gas vs. depth, A3:113–114; A5:35; A6:46
decomposed gas hydrates, A4:114; A5:59; A6:75; A7:69; A8:97; A9:86
fractionation by gas hydrate formation, B15:17–19
gas hydrates, A1:45
generation mechanism, B15:16–17
geothermal gradient, B15:38
pressure cores, A4:115; A6:76; A8:88–89; A9:87; A10:104–105
sediments, A3:19–20; A4:16–17, 110–111; A5:8–9, 57; A6:12–13, 73; A7:12, 67; A8:14–15, 85; A9:12–13, 83; A10:16–17, 100–101; A11:13, 56
vs. depth, A3:68; A4:68, 70; A5:33; A6:44, 46–48; A7:41–45; A8:52; A9:50–53; A10:59, 61–62; A11:38, 40–41
See also methane/ethane ratio

ethylene
sediments, A3:19; A4:16–17, 110–111; A5:8–9, 57;
A6:12, 73; A7:67; A8:14, 85; A9:12, 83; A10:16,
100–101; A11:56
vs. depth, A6:44; A7:41; A8:52; A9:50; A10:59; A11:38

F

fabric, gas hydrates, B1:14–15
fabric, scaly, lithologic units, A10:7–8
Fault F1, seismic units, B2:7
Fault F2
map, B2:24
seismic units, B2:7
Fault System E
seismic units, B2:8
tectonics, B2:9–111
faults, gas hydrate stability zone, B3:6–8
faults, normal
deposition, A5:5
seismic Horizon B, B2:27
faults, strike-slip, deformation age constraints, B3:4–5
faults, thrust
fluid venting distribution, B3:5–6
gas hydrate stability zone, B2:12–13
seismic Horizon Y, A6:7
feldspar
lithologic units, A3:4–8; A4:5–11; A6:3–8; A7:5–6;
A10:8–9; A11:5–7
sediments, B11:8, 17–19
fluid evolution, isotopes, B13:3–4
fluid flow, gas hydrates, A1:43–44
fluid provenance, chloride and deuterium, B13:5–6
fluid transport, iodine and bromine, B14:1–25
fluid venting
distribution, B3:5–6
history, B3:6
fluorescent microspheres, bacteria, A3:23; A4:19; A8:17;
A9:15–16; A10:19
fluoride
pore water, B16:1–22
vs. depth, B16:14–20
fluoride, dissolved, methane-charged sediments, B16:1–
22
flux, distributed low, gas hydrates, B1:6–7
flux, focused high, transport-dominated regime, B1:7–8
Fold F
map, B2:24
seismic units, B2:6–7
tectonics, B2:9–10
folding, thrust, growth strata, B2:19
folds, drag, tectonics, B2:9
foraminifers
lithologic units, A3:5–8; A4:4–11; A6:3–8; A10:6–7;
A11:4–7
photograph, A4:57; A6:37; A10:48
photomicrograph, A4:58; A7:30
formation factor, vs. porosity, B8:16
Formation MicroScanner imagery
correlation, A11:19–20
logging-while-drilling, A3:37–38, 91–93, 96–97

resistivity-at-the-bit images, A6:23; A9:27; A10:35
seismic Horizon A, A4:95
turbidite, A4:96
vs. depth, A4:91; A6:63, 66; A9:69, 73; A10:84;
A11:49, 51
well-logging units, A4:30–31
fractures
gas hydrate stability zone, B3:6–8
lithologic units, A3:4–8
“peachy orange slime,” A10:19, 64
free gas saturation, cementation model, B24:14–15
free gas saturation vs. depth, velocity, B22:22–23
free gas zone
gas hydrates, A1:10–11, 45
velocity logs, B22:1–25
friction angle, internal, vs. axial strain, B12:49, 51, 53,
55, 57, 59, 61, 63, 65, 67
Fugro pressure corer, tools, A3:32–33; A4:26; A8:25–26;
A9:22; A10:29–30
Fulmar fault, accretionary prisms, B14:5

G

gamma ray logs
logging-while-drilling, A3:90–93, 100; A4:92; A6:64;
A9:70
vs. depth, A4:89–92; A5:51, 53; A6:61–64, 68; A7:58,
60; A8:72, 74; A9:68–70, 72, 75; A10:82–85, 89;
A11:48–49, 51
See also uranium-free gamma ray logs
gamma ray wireline logs, vs. depth, A4:92; A6:64; A9:70;
A10:85
gas expansion
lithologic units, A3:4–8; A4:6
photograph, A8:41–42; B8:15
gas expansion cracks, photograph, B8:15
gas hydrate anomalies, thermal anomalies, A5:40;
A10:65
gas hydrate dissociation
boron, A7:11
photograph, A3:57; A7:28; A8:41–42, 46, 51
physical properties, A7:17–18; A8:19–20
resistivity, A7:54
uncalibrated electrical conductivity, A8:61
gas hydrate occurrence zone
correlation with grain size, B10:19–20
isothermal remanent magnetization, B18:13
sediment grain size, B10:4
gas hydrate proxies
intercalibration, B1:10–13
occurrence, A1:42–43
gas hydrate saturation
cementation model, B24:14–15
density porosity logs, B27:17–22
nuclear magnetic resonance logs, B27:8–9
gas hydrate saturation vs. depth, shear wave velocity,
B22:21
gas hydrate stability zone
acetate and hydrogen, B17:4–6
chloride concentration, A3:13–16
discrete chloride excursions, B13:16

- fractures, B3:6–8
- gas transport, B15:7–8
- Hydrate Ridge S, B1:18–19
- infrared scanning, A7:16
- lateral heterogeneity, B1:9–10
- seafloor observations, A1:5–6
- seismic profiles, A11:25; B4:11
- tectonic controls, B2:11–12
- transport-dominated regime, B1:7–8
- velocity logs, B22:12–13
- See also* methane/seawater/hydrate stability zone
- gas hydrates
 - acetate and hydrogen, B17:1–20
 - amount, B22:11
 - average content in sediments, B1:38
 - chloride, A3:13–16; A4:13–14; A5:7; A6:10; A7:10; A8:11–12; A9:10–11; A10:13–14; A11:11–12
 - degassing, B23:10
 - distribution and dynamics, B1:1–40
 - dynamics, B1:5–10; B15:6
 - elastic properties, B24:4
 - estimates using chloride concentration profile, A3:63–64
 - ethane fractionation, B15:17–19
 - gases from decomposition, A3:117
 - geochemistry, A3:118
 - hydrocarbons, A5:10; A7:13–14
 - infrared imagery, A4:120–121; A5:62; A6:79; A7:61, 72; A8:92; A9:92–93; A10:20–22, 110; A11:58
 - iodine and bromine, B14:1–25
 - iron sulfide rock magnetism, B18:1–33
 - isotope anomalies, B13:4
 - lithologic effects, B1:8–9
 - lithologic units, A10:7
 - microbiology, B1:16–18
 - near-offset vertical seismic profiles, B25:7
 - nuclear magnetic resonance logs, B27:1–22
 - Oregon continental margin, A1:1–75
 - past presence, B1:16
 - pressure cores, A3:20; A4:17; A6:13–14; A8:15; A9:13–14, 19–21; A10:17
 - resistivity-at-the-bit, A3:95; A8:75
 - sediment granulometry, B10:1–30
 - sedimentary evidence, A3:8–9; A4:10; A5:4–5; A7:6–7; A8:8–9; A9:7–8; A10:9; A11:7
 - seismic Horizon A, B1:32
 - seismic profiles, B1:27–28; B9:15
 - shape and structure, B21:1–11
 - slope stability, A1:10
 - sonic velocity, B24:1–38
 - stratigraphic and structural controls, B2:11–12
 - structure and fabric, B1:14–15
 - sulfate/methane interface, A3:16–17
 - sulfur isotopes, B19:4–6
 - velocity logs, B22:1–25
 - vs. depth, A4:104; B1:32, 34
 - well-logging, A3:39–40; A4:32; A5:18–19; A6:24–25; A7:22–23; A8:32–33; A9:28–29; A10:36; A11:20
- gas hydrates, disseminated, computed tomographic analysis, B21:2–3
- gas hydrates, in pore space, vs. depth, A4:63; A5:30; A6:41; A7:38; A9:48
- gas hydrates, layer, computed tomographic analysis, B21:3, 8
- gas hydrates, massive, computed tomographic analysis, B21:3, 10
- gas hydrates, nodule, computed tomographic analysis, B21:3, 9
- gas hydrates, reaction-dominated
 - microbial metabolites, B15:9–19
 - systems, B1:6–7
- gas hydrates, transport-dominated, systems, B1:7–8
- gas hydrates, veinlets, computed tomographic analysis, B21:3, 6
- gas hydrates, veins
 - computed tomographic analysis, B21:3, 7
 - photograph, A1:54
- gas transport
 - bottom-simulating reflector, B15:8–9
 - gas hydrate stability zone, B15:7–8
 - shallow sediments, B15:1–52
- gases, gas hydrates, A1:44–46
- geochemical anomalies, gas hydrate proxies, B1:11–12
- geochemistry
 - gas hydrates, A1:10
 - pore water, A3:13–19; A4:13–15, 106–108; A5:7–8, 56; A6:9–12, 72; A7:9–12, 66; A8:11–13, 83; A9:10–12, 81–82; A10:13–16, 97–99; A11:11–12, 55
- geochemistry, organic
 - Site 1244, A3:19–21
 - Site 1245, A4:15–18
 - Site 1246, A5:8–10
 - Site 1247, A6:12–14
 - Site 1248, A7:12–14
 - Site 1249, A8:14–15
 - Site 1250, A9:12–14
 - Site 1251, A10:16–18
 - Site 1252, A11:12–14
- geology
 - Cascadia subduction zone, B1:3–5
 - summary, A1:4–6
- geophysical surveys, calibration, A1:10
- geothermal gradient
 - ethane, B15:38
 - summary, B1:39; B9:7–10, 26
- glaciation, signals in shallow interstitial waters, B13:4–5
- glass shards
 - lithologic units, A3:7–8
 - photomicrograph, A1:59; A3:52
- glaucinite
 - lithologic units, A3:6–8; A4:5–11; A6:4–5; A7:5–6; A9:6–7; A10:8–9
 - photograph, A11:31
 - photomicrograph, A3:56; A4:46, 58; A7:30
 - vs. depth, A4:45; A10:47; A11:30
- glaucinite, authigenic, environment, A10:9–11
- graded bedding, lithologic units, A5:3–4; A10:4–5
- grain size
 - apparent overconsolidation, B8:9
 - correlation with gas hydrate occurrence, B10:20
 - gas hydrates, B10:4–7

sediments, B11:1–19
soils, B12:20
statistical correlation with gas hydrate occurrence, B10:19, 30
granules, clay-rich, lithologic units, A10:5
greigite, demagnetization, B18:5–7
growth strata, thrust folding, B2:19
gypsum, lithologic units, A4:9

H

halogens, pore water, B14:1–25
heat flow
 based on age of subducting oceanic crust and thickness of overlying sediments, B9:24
 Hydrate Ridge S, B1:15–16
 summary, B1:39; B9:7–10, 26
 vs. deformation front, B9:24
heat transfer, radial, models, B23:15
helium, pore water, B17:20
heterogeneity, lateral, gas hydrate stability zone, B1:9–10
hexane
 core void gas, A9:51
 decomposed gas hydrates, A4:114
 See also iso-hexane; n-hexane
Holocene
 lithologic units, A4:4; A5:3; A6:3–4; A7:3–4; A8:6–7; A9:4; A10:4–5; A11:2–5
 See also Pleistocene/Holocene boundary
HYACE rotary corer operations, tools, A4:25–26; A8:24–25; A9:21–22; A10:28–29
HYACINTH
 gamma ray attenuation density, B1:35–36
 pressure coring, A3:33, 131; A4:24–25, 130; A8:23, 97; A9:21–22, 99; A10:27–30, 118
Hydrate Ridge
 authigenic carbonates, B5:1–8
 biogeochemistry, A1:4–6
 clay mineralogy, B7:1–15
 consolidation and sediment strength, B12:1–148
 deep-towed sidescan sonar imagery, B3:16
 dissolved fluoride, B16:1–22
 dissolved hydrogen sulfide and sulfur isotopes in pore water, B19:1–13
 fluid evolution in accretionary prism, B13:1–20
 gas hydrates estimated from velocity logs, B22:1–25
 halogen concentration in interstitial waters, B14:1–25
 interstitial water isotopes, B13:1–20
 isotopic characterization of dissolved inorganic carbon, B20:1–16
 near-offset vertical seismic experiments, B25:1–23
 north-south variability of deformation and fluid venting, B3:1–15
 nuclear magnetic resonance logging, B27:1–22
 physical properties of near-surface sediments, B8:1–29
 physical properties of repressurized sediments, B26:1–19
 rock magnetism of iron sulfides, B18:1–33
 sediment granulometry and gas hydrates, B10:1–30
 shape and structure of gas hydrates, B21:1–11
 sonic velocity, B24:1–38

stress orientation, B4:1–14
structure map, B3:14
tectonics, A1:51
temperature-pressure-conductivity tool, B23:1–41
Hydrate Ridge N, seaward vergent structural style, B3:1–8
Hydrate Ridge S
 acetate and hydrogen in pore fluids, B17:1–20
 geologic history, B1:3–5
 grain-size and sediment bulk and clay mineralogy of summit and flanks, B11:1–19
 landward vergent structural style, B3:1–8
 location, B2:17
 microbial methane generation and gas transport, B15:1–52
 seismic sequence stratigraphy and tectonic evolution, B2:1–29
 subsurface temperature, B9:1–25
 thermal regime, B1:15–16
 water temperature, A1:53
hydraulic conductivity, vs. void ratio, B12:31–47
hydrocarbons
 core void gas, A4:112–113; A5:58
 gas hydrates, A5:10; A7:13–14
 sediments, A3:19–20; A4:16–17; A5:8–9; A6:12–13; A7:12–13; A8:14–15; A9:12–13; A10:16–17; A11:13
hydrogen
 pore water, B17:1–20
 vs. depth, B17:10–16
hydrogen index, sediments, A3:120
hydrogen isotopes
 methane and carbon dioxide, B15:5
 pore water, B13:3–4
hydrogen sulfide
 bacterial mats, A8:13
 core void gas, A4:112–113; A7:68; A10:102–103
 decomposed gas hydrates, A5:59; A7:69; A9:86
 sulfur isotopes, B19:1–13
 vs. depth, B19:9–10
hydrogen sulfide, dissolved, pore water, B19:1–13
hydrologic properties, sediment cores, B1:13–14

I

I layers, grain size and gas hydrates, B10:4
ice sheets, gas hydrates, B13:8
illite
 lithologic units, A4:9; A10:8
 sediments, B7:5
 vs. depth, B7:12–14
impedance, downcore seismic, reflection coefficients, B8:8
impedance, seismic, vs. depth, B8:24
induration, lithologic units, A4:7
infrared anomalies
 correlation with sediment grain size, B10:4–5, 23–24
 vs. depth, B11:13–16
infrared imagery
 cores, A1:62; A3:73

gas hydrates, A6:79; A7:72; A8:92; A9:92–93; A10:20–22, 110; A11:58
nodular texture, A8:56
veins, A8:56
infrared scanning
gas hydrate proxies, B1:11
thermal anomalies, A3:25–26; A4:20; A5:11, 39;
A6:14–15, 51; A7:15–16, 47–48; A8:17–18, 58;
A9:16–17, 55; A10:65–69; A11:14–15, 43;
B10:11–18
intercalibration, gas hydrate proxies, B1:10–13
iodide, vs. depth, B14:18
iodine, pore water, B14:1–25
iodine-127, pore water, B14:3–4, 8
iodine-129/iodine ratio
vs. age, B14:22
vs. depth, B14:20–21
iodine/bromine ratio, vs. depth, B14:19
iodine isotopes, pore water, B14:1–25
iron
comparison between Sites 1244 and 1246, A5:32
microorganisms, A3:22
pore water, A5:8; A6:11; A10:15
sediments, A3:18
vs. depth, A3:59; A4:61; A5:28, 32; A6:39; A7:36;
A8:48; A9:46; A10:52, 58
iron sulfides
lithologic units, A7:3–6; A9:5; A11:3–5
pore water, A5:8
rock magnetism, B18:1–33
iso-butane
core void gas, A4:112–113; A5:58; A6:74; A7:68;
A8:53, 86; A9:51, 84–85; A10:61, 102–103;
A11:57
core void gas vs. depth, A6:46
decomposed gas hydrates, A4:114; A5:59; A6:75;
A7:69; A8:97; A9:86
pressure cores, A4:115; A6:76; A8:88–89; A9:87;
A10:104–105
vs. depth, A4:70; A7:42–43; A10:61
iso-hexane
core void gas, A6:74; A7:68; A9:84–85
core void gas vs. depth, A6:46
decomposed gas hydrates, A9:86
pressure cores, A9:87; A10:104–105
iso-pentane
core void gas, A5:58; A6:74; A7:68; A8:53, 86; A9:51,
84–85
decomposed gas hydrates, A8:97
pressure cores, A6:76; A8:88–89; A9:87
isopach maps, seismic units, B2:26
isotopes
anomalies with gas hydrates, B13:3–4
gas hydrates, A1:10
geological and geochemical constraints, B13:1–20
pore water, B13:1–20; B15:6
isotopic fractionation factor
deuterium, B13:6
oxygen isotopes, B13:7

J

Juan de Fuca plate, geology, A1:4; B1:3–5

K

kaolinite
sediments, B7:5
vs. depth, B11:13–16

L

laminations, lithologic units, A3:7–8; A6:6–7
laminations, planar, photograph, A4:55, 57
landslides, accretionary complexes, A11:7–9
Leg 204
coring summary, A1:73–74
operational summary, A1:11–14, 75
site summary, A1:72; B1:37
liquid limit, vs. plasticity index, B12:19
lithium
comparison between Sites 1244 and 1246, A5:31
comparison of Sites 1245 and 1250, A9:49
pore water, A4:15; A5:8; A6:11–12; A9:12; A10:15
sediments, A3:17–18
seismic Horizon A, A6:12, 43; A9:12
vs. depth, A3:59; A4:61, 67; A5:28, 31; A6:39, 43;
A7:36; A8:48; A9:46, 49; A10:52, 54
lithium/chloride ratio, vs. depth, A3:62
lithofacies, hemipelagic clay, B11:8
lithologic units
clay mineralogy, B11:1–19
correlation, B2:18; B7:9
Site 1244, A3:4–8
Site 1245, A4:4–10
Site 1246, A5:3–4
Site 1247, A6:3–7
Site 1248, A7:3–6
Site 1249, A8:6–8
Site 1250, A9:4–7
Site 1251, A10:4–9
Site 1252, A11:2–7
stress orientation, B4:1–14
Unit I, A3:4–5; A4:4; A5:3; A6:3–4; A9:4; A10:4–5;
A11:2–5
Unit I–II, A7:3–4; A8:6–7
Unit II, A3:5–7; A4:4–5; A5:3–4; A6:4–5; A9:5; A10:5–
7; A11:5
Unit III, A3:7–8; A4:5–7; A6:5–7; A7:4–6; A8:7–8;
A9:5–7; A10:7–9; A11:5–7
Unit IV, A4:7–8
Unit V, A4:9–10
lithology
gas hydrates, A1:45; B1:8–9
lithologic Unit V, A4:103
summary, A1:60; A3:45–47; A4:36–40; A5:22; A6:29–
30; A7:26; A8:37; A9:32–33; A10:40–43; A11:23–
24
vs. depth, A4:36–40; A5:22; A6:29–30; A7:26; A8:37;
A9:32–33; A10:40–43; A11:23–24
lithostratigraphy
Site 1244, A3:4–10

- Site 1245, A4:3–11
 Site 1246, A5:2–5
 Site 1247, A6:2–8
 Site 1248, A7:2–7
 Site 1249, A8:5–9
 Site 1250, A9:3–8
 Site 1251, A10:3–11
 Site 1252, A11:2–9
 summary, A3:45–47
 load structures, environment, A7:7
 logging-while-drilling
 comparison with wireline logging, A3:36; A4:29;
 A6:21–22; A9:25–26; A10:33–34
 density, A1:61
 gamma density, A1:61
 log interpretation, A7:19–20
 magnetic susceptibility, A1:61
 porosity logs, A3:99
 quality control, A8:29–30; A9:23–24; A10:30–31
 quality control logs, A3:89
 resistivity, A1:61
 seismic data, A1:61
 stress orientation, B4:1–14
 summary, A3:90; A5:16; B27:2–3
 tools, B4:9; B27:12–13
 loss on ignition, sediments, B12:6
- M**
- magnesium
 pore water, A6:11; A8:13
 vs. depth, A3:60; A4:62, 66; A5:29; A6:40; A7:37;
 A8:49; A9:47; A10:53
 magnesium/calcium ratio, vs. depth, B16:14–18
 magnesium carbonate
 authigenic carbonates, B5:2–3
 vs. depth, B5:5
 magnetic intensity, vs. temperature, B18:12
 magnetic susceptibility
 across seismic Horizon A, A4:79
 anomaly photograph, A9:60
 comparison of loop sensor and point sensor, A10:72
 correlation with seismic data, A4:78; A5:42
 logging-while-drilling, A1:61
 sediments, A3:27; A4:21; A5:12; A6:16; A7:17; A8:18;
 A9:18; A10:22–23; A11:15
 seismic Horizon B, B1:33
 seismic Horizon Y, A9:61
 turbidite, A9:61
 vs. depth, A3:77; A4:51, 77; A5:41, 43–44; A6:35, 52–
 53; A7:51–52; A8:59–60; A9:43, 57–58; A10:44,
 58, 71; A11:44–45; B8:17–19, 21; B11:13–15
 magnetic susceptibility Event 1, sedimentology and
 physical properties, A5:43
 magnetic susceptibility Event 2, sedimentology and
 physical properties, A5:44
 magnetite, demagnetization, B18:5–6
 major elements, pore water, A3:17–19; A4:14–15; A5:8;
 A6:11–12; A7:11–12; A8:13; A9:11–12; A10:15–16
 manganese
 pore water, A6:11
 sediments, A3:18
 vs. depth, A3:60; A4:62; A5:29; A6:40; A7:37; A8:49;
 A9:47; A10:53
 mean stress, vs. shear stress, B12:50, 52, 54, 56, 58, 60,
 62, 64, 66
 mean stress, normalized, vs. normalized shear stress,
 B12:49, 51, 53, 55, 57, 59, 61, 63, 65, 67
 mechanical properties, sediment cores, B1:13–14
 medium resistivity logs, vs. depth, A4:90; A6:62; A10:83;
 A11:48, 51
 metal reducers, enrichment, A3:23
 methane
 acetogenesis, B17:6
 advection, A7:11
 alkalinity, B15:14–16
 carbon cycling, A7:10–11
 carbon isotopes, B15:5; B20:3
 concentration in headspace gases, A3:112; A6:59
 concentration in sediments, A3:87
 converted to microliters per liter, A3:115–116
 core void gas, A4:112–113; A5:58; A6:74; A7:68;
 A8:53, 86; A9:51, 84–85; A10:61, 102–103;
 A11:40, 57
 core void gas vs. depth, A3:113–114; A5:35; A6:46
 decomposed gas hydrates, A4:114; A5:59; A6:75;
 A7:69; A8:97; A9:86
 deuterium in void gas, B15:46
 dissolved in pore fluids, A4:14; A10:60; A11:39
 distributed low flux, B1:6–7
 fluoride, B16:1–22
 gas composition and carbon isotopes, B1:29
 gas hydrates, A3:16–17; A5:8
 hydrogen isotopes, B15:5
 microbial generation, B15:1–52
 modeled concentration vs. depth, B1:29
 pore water, A6:10–11; A10:14; A11:12; B17:20
 pressure cores, A1:67; A4:115; A6:76; A8:88–89;
 A9:87; A10:104–105
 sediments, A3:19–20; A4:16–17, 110–111; A5:8–9, 57;
 A6:12–13, 73; A7:12–13, 67; A8:14–15, 67, 85;
 A9:12–13, 83; A10:16–17, 100–101; A11:13, 56
 sources, A1:9–10
 subduction zones, B1:4–5
 transport-dominated regime, B1:7–8
 velocity logs, B22:10–11
 vs. depth, A1:69; A3:66, 68, 71; A4:65, 68–70, 87;
 A5:33–34; A6:42, 44–48; A7:41–45; A8:52;
 A9:50–53, 66; A10:56, 59–62, 80; A11:37–41;
 B1:35–36; B15:36
 See also anaerobic methane oxidation; sulfate/methane
 interface
 methane, dissolved residual, vs. depth, A6:45
 methane/ethane ratio
 core void gas, A4:112–113; A5:58; A8:86; A9:84–85;
 A10:102–103; A11:13, 57
 decomposed gas hydrates, A4:114; A5:59; A8:97;
 A9:86
 ethane fractionation, B15:17–19
 ethane generation mechanism, B15:16–17
 gas hydrate proxies, B1:12
 gas hydrates, A1:42–43; A5:10; A7:14; A9:13–14

- gas transport, B15:4–5
geothermal gradient, B15:38
pressure cores, A4:115; A6:76; A8:88–89; A9:87;
A10:104–105
sediments, A3:19–20; A4:16–17, 110–111; A5:8–9, 57;
A6:12–13, 73; A7:12; A8:14–15, 85; A9:13, 83;
A10:17, 100–101; A11:56
seismic Horizon A, B1:31
void gas samples, B15:39–40
vs. carbon isotopes, B15:28
vs. depth, A1:66; A3:69; A4:71; A5:36; A6:47; A7:44–
45; A8:54; A9:52; A10:62; A11:41; B15:26
vs. temperature, A3:70; A4:72; A6:48; A8:55
methane/seawater/hydrate stability zone, thermal
anomalies, A7:16
methane bubbles, seafloor observations, A1:5
methane production rate
assumptions, B1:29
parameters, B15:52
vs. depth, B15:37
methanogenesis, anaerobic environment, A3:22; A4:18
methanogenesis, microbial, alkalinity, B15:14–16
mica. *See also* muscovite
mica, detrital
sediments, B11:17–19
vs. depth, B11:13–16
micrite, lithologic units, A10:8–9
microbial generation, methane, B15:1–52
microbial metabolites, reaction-dominated gas hydrates,
B15:9–19
microbial processes, organic matter decomposition,
A3:17
microbiology
core quality of intervals sampled, A3:122; A8:91;
A9:91; A10:19, 109
Hydrate Ridge S, B1:16–18
intervals sampled, A3:121; A4:118; A8:90; A9:90;
A10:108
sampling, A9:15
Site 1244, A3:21–24
Site 1245, A4:18–19
Site 1249, A8:15–17
Site 1250, A9:14–16
Site 1251, A10:18–19
microorganisms
gas hydrates, A1:10–11
iron, A3:22
mineral composition, authigenic carbonates, B5:7–8
mineralogy, bulk, sediments, B11:1–19
minor elements, pore water, A3:17–19; A4:14–15; A5:8;
A6:11–12; A7:11–12; A8:13; A9:11–12; A10:15–16
monopole sonic waveforms, vs. depth, A4:93; A6:65;
A9:71; A10:86; A11:50; B24:23–32, 35–37
mottling
lithologic units, A7:3–6; A8:7–8; A9:4; A10:5
photograph, A8:38
mousseliike texture
lithologic units, A4:6; A5:4; A7:3–6; A8:6–8
photograph, A3:57; A4:48; A7:28–29; A8:41–42, 46,
62; A9:44; A11:33
sedimentary evidence of gas hydrates, A3:8–9
thermal anomalies, A7:48
vs. depth, A8:40
mud, clay mineralogy, B7:1–15
mudstone, clay mineralogy, B7:1–15
muscovite, lithologic units, A3:6–8; A4:9; A10:8
- N**
- n*-butane
core void gas, A6:74; A7:68; A8:53, 86; A9:51, 84–85;
A11:57
core void gas vs. depth, A6:46
decomposed gas hydrates, A5:59; A6:75; A7:69; A8:97;
A9:86
pressure cores, A6:76; A8:88–89; A9:87
vs. depth, A7:42–43
n-hexane
core void gas, A6:74; A7:68
core void gas vs. depth, A6:46
pressure cores, A9:87; A10:104–105
n-pentane
core void gas, A5:58; A6:74; A7:68; A8:51; A9:84–85
core void gas vs. depth, A6:46
decomposed gas hydrates, A9:86
pressure cores, A6:76; A9:87; A10:104–105
nanofossil bioevents, chart, A4:59; A7:34
nanofossils
environment, A10:10–11
lithologic units, A3:5–8; A4:5–11; A5:3–4; A6:3–8;
A8:6–8; A9:6–7; A10:6–7; A11:3–5
nanofossils, calcareous, biostratigraphy, A3:11–13;
A4:12; A5:6; A6:8–9; A7:8; A8:10; A9:9–10;
A10:11–12; A11:10
neutron porosity from core logs, vs. depth, A4:90
neutron porosity logs
logging-while-drilling, A3:38–39, 90–93, 99; A6:64;
A9:70, 74; A10:85
vs. depth, A4:90; A5:52; A6:62, 67; A7:59; A8:73;
A9:68, 70, 74; A10:83, 88; A11:48, 51
neutron porosity wireline logs, vs. depth, A4:92; A6:64;
A9:70; A10:85
New Jersey Slope, methane/ethane ratio, B15:38
nitrogen
core void gas, A4:112–113; A5:58; A6:74; A7:14, 68;
A8:86; A9:84–85; A10:102–103; A11:57
decomposed gas hydrates, A4:114; A5:59; A6:75;
A7:69; A8:97; A9:86
pressure cores, A4:115; A6:76; A8:88–89; A9:87;
A10:104–105
See also carbon/nitrogen ratio
nitrogen, total
sediments, A3:21, 119; A4:17, 116; A5:10, 60; A6:14,
77; A7:70; A9:14, 88; A10:18, 106
vs. depth, A3:72; A4:73; A5:37; A6:49; A7:46; A9:53;
A10:63
nodular texture, infrared imagery, A8:56
nodules, thermal anomalies, A7:47
nodules, carbonate
lithologic units, A4:5; A7:3–8; A10:8–9
photograph, A3:48; A4:43; A7:29; A10:49
photomicrograph, A7:30
thermal anomalies, A7:15

nodules, gas hydrates, computed tomographic analysis, B21:3, 9
 nodules, gypsum, lithologic units, A3:8
 nodules, pyrrhotite, lithologic units, A3:6; A10:7
 nuclear magnetic resonance logs, gas hydrates, B27:1–22
 nuclear magnetic resonance porosity
 Hydrate Ridge, B27:7
 vs. depth, A4:97; A5:52; A6:67; A7:59; A8:73; A9:74; A10:88
 nuclear magnetic resonance tool, logging-while-drilling, A3:99

O

O layers, grain size and gas hydrates, B10:4
 obliquity, sediments, B12:9
 offlap, thrust folding, B2:19
 offset planes, photograph, A8:45
 onlap
 tectonics, B2:9–10
 thrust folding, B2:19
 opal, biogenic
 apparent overconsolidation, B8:9
 lithologic units, A4:7; A7:5–6; A9:4–7
 vs. depth, A3:45–47; A4:36–40, 42; A5:22; A6:29–30; A7:26; A8:37; A9:32–33, 38; A10:40–43; A11:23–24, 26
 Oregon continental margin, summary, A1:1–75
 organic debris, lithologic units, A3:4–8
 organic matter
 data, B12:71
 decomposition, A3:17; A10:14–15
 oxidation, B19:6
 overburden, repressurized sediments, B26:6
 overconsolidation, apparent, overburden pressure, B8:8–9
 oxidation
 organic matter, B19:6
 See also anaerobic methane oxidation
 oxygen
 core void gas, A4:112–113; A5:58; A6:74; A7:68; A8:86; A9:84–85; A10:102–103; A11:57
 decomposed gas hydrates, A4:114; A5:59; A6:75; A7:69; A8:97; A9:86
 pressure cores, A4:115; A6:76; A8:88–89; A9:87; A10:104–105
 oxygen isotopes
 depletion, B13:6–8
 pore water, B13:3–4
 vs. depth, B13:15, 17

P

“peachy orange slime,” fluorescence micrograph, A10:19, 64
 Pearson correlation, gas hydrate correlation with sediment grain size, B10:4–6, 25–29
 pebbles, lithologic units, A10:5
 pentane
 core void gas, A4:112–113
 decomposed gas hydrates, A4:114

pressure cores, A4:115
 vs. depth, A4:70
See also iso-pentane; *n*-pentane
 perfluorocarbon tracers
 bacteria, A3:23; A4:19; A8:16–17; A10:19
 microbiology, A4:119
 permeability, gas hydrates, A1:45–46
 Peru Trench, fluoride, B16:5–6
 phosphate
 organic matter decomposition, A3:17; A10:14–15
 vs. depth, A3:59; A4:61; A5:28; A6:39; A7:36; A8:48; A9:46; A10:52; A11:35; B16:20
 photoelectric effect factor, logging-while-drilling, A1:90–93; A4:92; A6:64; A9:70; A10:85
 photoelectric effect factor logs, vs. depth, A4:89; A5:51, 53; A6:61–62; A7:58; A8:72; A9:72; A10:82–83; A11:48, 51
 photoelectric effect factor wireline logs, vs. depth, A3:93; A4:92; A6:64; A9:70; A10:85
 physical properties
 correlation, B8:7
 correlation with seismic data, A4:78; A5:42
 gas hydrate dissociation, A7:17–18; A8:19–20
 near-surface sediments, B8:1–29
 repressurized sediments, B26:1–19
 seismic data, A8:60; A9:34, 58; A10:71; A11:45
 seismic Horizon A, A9:18–19
 seismic Horizon B, B1:33
 seismic profiles, A10:44
 Site 1244, A3:24–28
 Site 1245, A4:19–22
 Site 1246, A5:10–14
 Site 1247, A6:14–17
 Site 1248, A7:14–18
 Site 1249, A8:17–20
 Site 1250, A9:16–19
 Site 1251, A10:19–25
 Site 1252, A11:14–16
 thermal anomalies, A6:53
 tools, B26:12–14
 plasticity index
 sediments, B12:7–8
 vs. liquid limit, B12:19
 Pleistocene
 biostratigraphy, A4:12; A6:8–9
 lithologic units, A5:3–5
 tectonics, B2:9–11
 See also Pliocene/Pleistocene boundary
 Pleistocene, lower
 biostratigraphy, A8:10; A9:9–10
 clay mineralogy, B7:1–15
 deformation age constraints, B3:4–5
 lithologic units, A3:7–8; A4:7–10; A8:6–7; A10:7–9; A11:6–7
 Pleistocene, lower–middle, lithologic units, A3:5–7; A4:5–7; A6:5–7; A7:4–6; A9:5–7; A10:5–7; A11:5
 Pleistocene, middle
 diatom biostratigraphy, B6:2–3
 lithologic units, A4:5; A6:4–5; A7:3–4; A8:7–8; A9:4; A10:4–5; A11:2–5

- Pleistocene, middle–upper, lithologic units, A3:4–5;
A6:3–4; A9:5
- Pleistocene, upper, lithologic units, A4:4
- Pleistocene/Holocene boundary, photograph, A11:27
- Pliocene, biostratigraphy, A3:10–13
- Pliocene, lower, nannofossils, A3:13
- Pliocene, upper
- biostratigraphy, A10:11
 - clay mineralogy, B7:1–15
 - deformation age constraints, B3:4–5
 - lithologic units, A3:7–8; A10:7–9; A11:6–7
 - tectonics, B2:9–11
- Pliocene/Pleistocene boundary
- biostratigraphy, A10:12; A11:11
 - nannofossils, A3:12–13
- Poisson's ratio, velocity logs, B22:7
- pore pressure, excess, vs. vertical consolidation stress, B12:31–47
- pore pressure, normalized, vs. axial strain, B12:49, 51, 53, 55, 57, 59, 61, 63, 65, 67
- pore pressure change, vs. axial strain, B26:17
- pore water
- acetate and hydrogen, B17:1–20
 - carbon isotopes, B20:1–16
 - compaction, B15:10–11
 - fluoride, B16:1–22
 - geochemistry, A3:13–19, 108–110; A4:13–15, 106–108; A5:7–8, 56; A6:9–12, 72; A7:9–12, 66; A8:11–13, 83; A9:10–12, 81–82; A10:13–16, 97–99; A11:11–12, 55
 - halogens, B14:1–25
 - hydrogen sulfide, B19:1–13
 - isotopes, B13:1–20; B15:7
- pore water saturation, vs. depth, A4:76; A5:39; A6:51, 53; A7:49, 60; A9:75; A10:89
- porosity
- across seismic Horizon A, A4:79
 - advanced piston corer, A4:86
 - comparison of logging-while-drilling density and NMR-MRP, A4:97
 - correlation, B8:7
 - correlation with seismic data, A5:42
 - sediments, A3:26–27
 - vs. depth, A3:77; A4:77; A5:41; A6:52; A7:52; A8:59–60; A9:56; A10:70–71; A11:44–45; B8:17–21; B10:11–18; B15:32; B22:17; B27:15–16
 - vs. formation factor, B8:16
 - vs. shear strength, B8:22
 - vs. velocity, B8:22
 - well-logging, A4:31; A5:17–18; A6:23–24; A7:21–22; A8:31–32; A9:27–28; A10:35–36; A11:20
- porosity, abnormally high, near-surface sediments, B8:9–10
- porosity, downcore, vs. depth, B8:26
- porosity, surface, decay constants, B8:29
- porosity from core logs, vs. depth, A5:52; A6:62, 64, 67; A7:59; A8:73; A9:70, 74; A10:83, 85, 88; A11:48, 51
- porosity logs
- logging-while-drilling, A4:92; B22:6–7
 - See also* neutron porosity from core logs; neutron porosity logs; neutron porosity wireline logs; nuclear magnetic resonance porosity
- potassium
- pore water, A8:13
 - vs. depth, A3:60; A4:62; A5:29; A6:40; A7:37; A8:49; A9:47; A10:53
- potassium logs
- logging-while-drilling, A3:92
 - vs. depth, A4:91; A6:63; A9:69; A10:84; A11:40
- preconsolidation pressure, sediments, B12:8
- pressure
- core pullout, B23:9
 - vs. temperature, B26:11
 - vs. time, B23:29–30
 - See also* temperature-pressure-conductivity tool; volume-pressure-time plots
- pressure, in situ
- estimation, A10:26
 - sediments, A3:30; A8:21
 - vs. time, A9:19, 63
- pressure, overburden
- apparent overconsolidation, B8:8–9
 - vs. depth, B8:25
 - See also* shear strength/overburden pressure ratio
- pressure, seafloor, MATLAB m-file, B23:14
- pressure-temperature conditions, identification, A3:83
- pressure cores
- gas hydrate proxies, B1:10–11
 - gas hydrates, A3:20, 30–32; A4:17, 23–24; A6:13–14, 18–19; A8:15, 21–23; A9:13–14, 19–21; A10:17
 - HYACINTH, A3:32–33, 131; A4:24–25, 130; A8:23, 97; A9:21–22, 99; A10:27–30, 118
 - Site 1245, A4:22–26
 - Site 1246, A5:14–15
 - Site 1249, A8:20–28
 - Site 1250, A9:19–22
 - Site 1251, A10:25–30
 - Site 1252, A11:16–17
- pressurization, physical property tools, B26:12–14
- propane
- core void gas, A4:112–113; A5:58; A6:74; A7:68; A8:53, 86; A9:12–13, 51, 84–85; A10:61, 102–103; A11:40, 57
 - core void gas vs. depth, A3:113–114; A5:35; A6:46
 - decomposed gas hydrates, A4:114; A5:59; A6:75; A7:69; A8:14, 97; A9:86
 - gas hydrates, A7:14
 - pore fluids, A3:112
 - pressure cores, A4:115; A6:76; A8:88–89; A9:87; A10:104–105
 - sediments, A3:19–20; A4:16–17, 110–111; A5:8–9, 57; A6:12, 73; A7:13, 67; A8:85; A9:83; A10:16, 100–101; A11:56
 - vs. depth, A3:68; A4:68, 70; A5:33; A6:44, 46; A7:41–43; A8:52; A9:50–51; A10:61; A11:38, 40
- propylene, sediments, A11:56
- proxies. *See* gas hydrate proxies
- pyrrhotite
- demagnetization, B18:5–6
 - environment, A10:10–11
 - lithologic units, A4:9

Q

quartz

lithologic units, A3:4–8; A4:5–11; A6:3–8; A7:5–6;
A10:8–9; A11:5–7

photomicrograph, A7:30

sediments, B11:8, 17–19

X-ray diffraction data, A6:34; A9:37; A10:50

Quaternary, biostratigraphy, A3:10–13; A4:11–13; A5:6–
7; A7:8–9; A10:11–12; A11:10

R

radiography logs, sediment consolidation, B12:18, 141–
148

radiolarians, lithologic units, A3:4–8; A4:5–11; A11:4–7

rate of penetration, vs. depth, A4:88; A5:50; A6:60;
A10:81

recompression index, sediments, B12:7–8

reconstruction, cross sections, B2:28

Red Sea, methane/ethane ratio, B15:38

redox, microbial metabolites, B15:9–10

reflectance

lithologic units, A4:7; A9:7

vs. depth, A4:51; A9:43

reflection coefficients, downcore impedance, B8:8, 27

reflector AC, vs. chloride, A3:61

remanent magnetization, anhysteretic, vs. isothermal re-
manent magnetization, B18:12

remanent magnetization, isothermal

iron sulfides, B18:5–7

vs. anhysteretic remanent magnetization, B18:12

resistance, conversion of temperature data, B23:32

resistivity

gas hydrate dissociation, A7:54

gas hydrates, A1:64

logging-while-drilling, A3:61, 63, 90–93; A4:41, 92;
A6:64; A9:70; A10:85

repressurized sediments, B26:6–7

volcanic ash, A3:96

vs. consolidation stress, B26:16

vs. density porosity logs, B22:20

vs. depth, A3:68; A4:81; A9:34; A10:44; B8:17–19, 21

See also deep resistivity logs; medium resistivity logs;
shallow resistivity logs; spherically focused re-
sistivity logs

resistivity, logging-while-drilling

thermal anomalies, A7:50

vs. depth, A6:31

resistivity, noncontact

sediments, A4:21; A5:12–13; A10:23

tool calibration, B8:14

vs. depth, A3:81; A4:80; A5:45–46; A7:53; A10:73

resistivity, time-after-bit ring, vs. depth, A4:88; A5:50;
A6:60; A7:57; A8:71; A9:67; A10:81

resistivity-at-the-bit

borehole breakouts, A3:37–38, 98; A10:87

coring test summary, A8:98

gas hydrates, A8:75

imaging and gas hydrates, A4:94; A7:21, 61

photograph, A3:95–97

seismic Horizon A, A3:68; A4:95

seismic profiles, A6:31

turbidite, A4:96

vs. depth, A5:51–53; A7:27

well-logging units, A4:30–31

resistivity-at-the-bit images

Formation MicroScanner imagery, A6:23; A9:27;
A10:35

stress orientation, B4:1–14

vs. depth, A4:89; A6:61, 66–68; A7:59–61; A8:31, 72–
75; A9:72–75; A10:82–89; B1:34–36

resistivity wireline logs, vs. depth, A3:93; A4:92; A6:64;
A9:70; A10:85

ring resistivity logs, vs. depth, A4:89; A5:23, 53; A6:61,
68; A7:58, 60; A8:72, 74; A9:72, 75; A10:82–83,
89

Rock-Eval pyrolysis data, sediments, A3:21, 120; A4:18,
117; A5:10, 61; A6:78; A7:14, 71; A9:14, 89;
A10:18, 107

rock magnetism

iron sulfides, B18:1–33

vs. depth, B18:13

S

sand

grain size and gas hydrates, B10:4

lithologic units, A3:6–8; A4:5–11; A5:3–4; A6:4–8;
A7:4–6; A9:5–7; A10:4–9; A11:3–7

photograph, A3:50; A9:59

vs. depth, A3:45–47; A4:36–40, 42, 51; A5:22; A6:29–
30; A7:26; A8:37; A9:32–33, 35; A10:40–43;
A11:23–24, 26; B10:10–18; B11:13–15

sand, glauconite, photograph, A3:59; A11:31

sand, glauconite-rich, lithologic units, A11:6–7

sand, silty, lithologic units, A8:7–8

sand, volcanic glass-rich, photograph, A4:50

seafloor observations, carbonate pavement, A1:4–6

seamounts, gas hydrate stability zone, B2:12–13

seawater. *See* methane/seawater/hydrate stability zone

sediment/water interface, compaction, B15:10–11

sediment cores

hydrologic properties, B1:13–14

mechanical properties, B1:13–14

sediment disruption, photograph, A3:57; A8:41, 51

sedimentary structures, lithologic units, A4:5–10

sedimentation rates

biostratigraphy, A4:13

deposition, A5:5

environment, A9:8

hemipelagic clay, A8:9

sedimentation rates, linear, biostratigraphy, A3:13; A5:7;
A6:9; A7:9; A8:10–11; A9:10; A10:12–13; A11:11

sediments

average gas hydrate content, B1:38

clay mineralogy, B7:1–15

consolidation, B12:1–148

fluoride, B16:1–22

granulometry and gas hydrates, B10:1–30

stress orientation, B4:1–14

sediments, abyssal plain, seismic units, B2:6

- sediments, high-density, photograph, A9:59
- sediments, near-surface, physical properties, B8:1–29
- sediments, repressurized, physical properties, B26:1–19
- sediments, slope basin, seismic units, B2:6–7
- sediments, volcanic glass-rich, photograph, A4:50;
A5:25; A7:33; A9:41
- seismic data
- chloride, A11:36
 - correlation with physical properties, A4:78; A5:42
 - debris flows, A3:58
 - gas hydrate proxies, B1:13
 - logging-while-drilling, A3:61
 - physical properties, A8:60; A9:34, 58; A10:71; A11:45
 - reflectivity, A3:57
 - seismic Horizon A, A3:56–57
 - thermal anomalies, A6:53
- seismic data, three-dimensional
- accretionary complex, A1:55; B11:12
 - stratigraphy, B2:2–3
- seismic data, two-dimensional, stratigraphy, B2:4, 21–23
- seismic experiments, near-offset vertical, seismic profiles, B25:1–23
- seismic Horizon A
- amplitude, B1:30
 - clay mineralogy, B11:7
 - deposition, A4:10–11
 - environment, A6:7–8
 - Formation MicroScanner imagery, A4:95
 - Hydrate Ridge, B1:32
 - in situ bulk density, B1:31
 - lithium, A4:67; A6:12, 43; A9:12
 - lithologic units, A9:5–7
 - map, B2:24
 - photograph, A7:33; A9:41
 - physical properties, A4:79; A9:18–19
 - resistivity-at-the-bit, A1:68; A4:95
 - seismic data, A1:56–57
 - seismic profiles, A6:28
 - seismic reflection, A4:41
 - seismic surveys, A1:7–8
 - tectonics, B2:9–11
 - transport-dominated regime, B1:7–8
 - volcanic glass-rich sediments and ash sequences, A4:51
- seismic Horizon A'
- map, B2:24
 - tectonics, B2:9–11
- seismic Horizon B
- deposition, A5:5
 - gas hydrates, B1:9
 - Hydrate Ridge, B1:33
 - lithium, A5:31
 - lithologic units, A5:4
 - physical properties, B1:33
 - seismic surveys, A1:8
 - seismic units, B2:6
 - time map, B2:27
- seismic Horizon B'
- bulk density, B25:17
 - deposition, A5:5
 - photograph, A3:51
 - seismic surveys, A1:8
- seismic units, B2:6
- X-ray diffraction data, A3:53
- seismic Horizon Y
- angular unconformity, A6:7–8
 - lithologic units, A4:5; A7:4–6; A8:7–8; A9:5–7
 - magnetic susceptibility, A9:61
 - photograph, A9:39
 - seismic data, A3:10
 - seismic reflection, A4:41
- seismic horizons, depth, A1:71
- Seismic Profile OR89-Line 2, B1:28
- seismic profiles
- Hydrate Ridge S, B1:27–28; B7:10; B9:15; B10:10
 - physical properties, A10:44
 - Site 1244, B4:11
 - Site 1245, A4:41; B4:11
 - Site 1246, A5:23
 - Site 1247, A6:28, 31
 - Site 1248, A7:27
 - Site 1250, A9:34
 - Site 1251, A10:44–45
 - Site 1252, A11:25
 - tectonics, A1:52
- seismic profiles, vertical
- reflection vs. depth, B25:14, 18, 20
 - spectra, B25:13
 - surveys, B24:4
 - two-way travelttime vs. depth, B25:15, 19, 21
 - velocity functions, B25:16
- seismic sequence stratigraphy, tectonic evolution, B2:1–29
- seismic surveys, gas hydrates, A1:4–6
- seismic surveys, high-resolution three-dimensional, gas hydrates, A1:7–9
- seismic Unit S.II, seismic units, B2:8
- seismic Unit S.IV, seismic units, B2:6
- seismic Unit S.V, seismic units, B2:6
- seismic Unit S.VII, seismic units, B2:6
- seismic units
- isopach maps, B2:26
 - stratigraphy, B2:4–7, 20
- seismograms, synthetic
- gas hydrates, B24:24, 26–27, 29, 31–32, 34, 36–37
 - reflection coefficients, B24:4
- shallow resistivity logs, vs. depth, A4:90; A6:62; A10:83;
A11:48, 51
- shape, gas hydrates, B21:1–11
- shear strength
- correlation, B8:7
 - repressurized sediments, B26:7
 - sediments, A3:28, 128; A4:22, 126–127; A5:66;
A10:24, 115; B12:1–148
 - vs. density, B8:22
 - vs. depth, A3:77, 81; A4:77, 81; A5:14, 41; A10:70;
B8:17–19
 - vs. porosity, B8:22
 - vs. velocity, B8:23
 - See also* undrained modulus, normalized
- shear strength, triaxial
- data, B26:19
 - sediments, B12:8–10

- shear strength, undrained, sediments, B12:104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124
- shear strength/overburden pressure ratio, vs. depth, B8:25
- shear stress, vs. mean stress, B12:50, 52, 54, 56, 58, 60, 62, 64, 66
- shear stress, effective, vs. axial strain, B26:17
- shear stress, normalized
- vs. axial strain, B12:49, 51, 53, 55, 57, 59, 61, 63, 65, 67
 - vs. normalized mean stress, B12:6, 49, 51, 53, 55, 57, 59, 61, 63, 65
- shear wave velocity
- seismic Horizon A, B1:32
 - velocity logs, B22:12–13
- shear wave velocity logs, vs. depth, A11:48
- shelf environment, deposition, A4:10–11
- siderite, X-ray diffraction data, A10:50
- sidescan sonar imagery, deep-towed, Hydrate Ridge, B3:16
- Siletz terrain, accretionary prisms, B14:5
- siliceous microfossils, lithologic units, A7:3–4
- silicoflagellates, lithologic units, A3:4–8
- silt
- clay mineralogy, B11:1–19
 - gas hydrates, B10:4–6
 - lithologic units, A3:4–8; A4:4–11; A5:3–4; A6:4–8; A7:4–6; A9:5–7
 - vs. depth, A3:45–47; A4:36–40, 42, 51; A5:22; A6:29–30; A7:26; A8:37; A9:32–33, 35; A10:40–43; A11:23–24, 26; B10:11–18; B11:13–15
- silt, clayey, lithologic units, A3:7–8
- silt, sandy, lithologic units, A7:5–6
- silt, volcanic glass-rich, X-ray diffraction data, A3:53
- silt layers, inclined, photograph, A8:39
- Site 229, methane/ethane ratio, B15:38
- Site 860, fluoride, B16:7
- Site 861, fluoride, B16:7
- Site 888
- chloride vs. depth, A10:55
 - lithium/chloride ratio, A3:62
- Site 889, chloride vs. depth, A10:55
- Site 890, chloride vs. depth, A10:55
- Site 994, sulfate, methane, alkalinity, magnesium, and calcium, B16:13
- Site 1019, methane/ethane ratio in void gas samples, B15:40
- Site 1038, methane/ethane ratio, B15:38
- Site 1073, methane/ethane ratio, B15:38
- Site 1244, A3:1–132
- acetate and hydrogen, B17:10
 - acoustic logs, B24:11–12, 30–32
 - bioevents, A3:107
 - biostratigraphy, A3:10–13
 - carbon isotopes in dissolved inorganic carbon, B20:8
 - consolidation and sediment strength, B12:1–148
 - coring summary, A3:102–104
 - downhole logging, A3:34–40
 - downhole measurements, A3:29–33
 - gas hydrate presence, A3:105–106
 - interstitial water geochemistry, A3:13–19
 - lithostratigraphy, A3:4–10
 - microbiology, A3:21–24
 - near-offset vertical seismic profiles, B25:4–5
 - operations, A3:2–4
 - operations summary, A1:15
 - organic geochemistry, A3:19–21
 - physical properties, A3:24–28; B8:5–6
 - principal scientific results, A1:15–18
 - rock magnetism, B18:13, 22
 - site description, A3:1–132
 - site summary, A1:14–18
- Site 1245, A4:1–131
- acetate and hydrogen, B17:11
 - acoustic logs, B24:8–9, 23–24
 - age vs. iodine-129/iodine ratio, B14:22
 - biostratigraphy, A4:11–13
 - carbon isotopes in dissolved inorganic carbon, B20:9
 - coring summary, A4:100–102
 - downhole logging, A4:26–33
 - downhole measurements, A4:22–26
 - interstitial water geochemistry, A4:13–15
 - lithostratigraphy, A4:3–11
 - microbiology, A4:18–19
 - operations, A4:2–3
 - operations summary, A1:19
 - organic geochemistry, A4:15–18
 - physical properties, A4:19–22; B8:6
 - pressure cores, A4:22–26
 - principal scientific results, A1:19–21
 - rock magnetism, B18:14, 23–24
 - site description, A4:1–131
 - site summary, A1:18–21
- Site 1246, A5:1–67
- acetate and hydrogen, B17:12
 - biostratigraphy, A5:5–7
 - carbon isotopes in dissolved inorganic carbon, B20:10
 - coring summary, A5:54
 - downhole logging, A5:15–19
 - downhole measurements, A5:14–15
 - interstitial water geochemistry, A5:7–8
 - lithostratigraphy, A5:2–5
 - operations, A5:2
 - operations summary, A1:22
 - organic geochemistry, A5:8–10
 - physical properties, A5:10–14; B8:6
 - pressure cores, A5:14–15
 - principal scientific results, A1:22–24
 - rock magnetism, B18:15, 25
 - seismic Horizon B, B1:33
 - site description, A5:1–67
 - site summary, A1:21–24
- Site 1247, A6:1–84
- acoustic logs, B24:9–10, 25–27
 - biostratigraphy, A6:8–9
 - carbon isotopes in dissolved inorganic carbon, B20:11
 - coring summary, A6:70
 - downhole logging, A6:19–25
 - downhole measurements, A6:17–19
 - interstitial water geochemistry, A6:9–12
 - lithostratigraphy, A6:2–8
 - near-offset vertical seismic profiles, B25:5–6

- operations, A6:2
- operations summary, A1:25
- organic geochemistry, A6:12–14
- physical properties, A6:14–17; B8:6–7
- principal scientific results, A1:25–27
- rock magnetism, B18:16, 26
- site description, A6:1–84
- site summary, A1:25–27
- Site 1248, A7:1–75
 - biostratigraphy, A7:7–9
 - carbon isotopes in dissolved inorganic carbon, B20:12
 - coring summary, A7:62–63
 - downhole logging, A7:19–23
 - downhole measurements, A7:18–19
 - interstitial water geochemistry, A7:9–12
 - lithostratigraphy, A7:2–7
 - operations, A7:2
 - operations summary, A1:28
 - organic geochemistry, A7:12–14
 - physical properties, A7:14–18; B8:6–7
 - principal scientific results, A1:28–30
 - rock magnetism, B18:17, 27
 - site description, A7:1–75
 - site summary, A1:27–30
- Site 1249, A8:1–98
 - acetate and hydrogen, B17:13
 - biostratigraphy, A8:9–11
 - carbon isotopes in dissolved inorganic carbon, B20:13
 - coring summary, A8:76–80
 - depth of penetration, A8:81
 - downhole logging, A8:29–33
 - downhole measurements and pressure coring, A8:20–28
 - interstitial water geochemistry, A8:11–13
 - lithostratigraphy, A8:5–9
 - microbiology, A8:15–17
 - operations, A8:2–5
 - operations summary, A1:30–31
 - organic geochemistry, A8:14–15
 - physical properties, A8:17–20
 - principal scientific results, A1:31–33
 - rock magnetism, B18:18, 28
 - site description, A8:1–98
 - site summary, A1:30–33
- Site 1250, A9:1–100
 - acetate and hydrogen, B17:14
 - acoustic logs, B24:10–11, 28–29
 - biostratigraphy, A9:9–10
 - carbon isotopes in dissolved inorganic carbon, B20:14
 - coring summary, A9:77–79
 - downhole logging, A9:22–29
 - downhole measurements and pressure coring, A9:19–22
 - interstitial water geochemistry, A9:10–12
 - lithostratigraphy, A9:3–8
 - microbiology, A9:14–16
 - near-offset vertical seismic profiles, B25:6–7
 - operations, A9:2–3
 - operations summary, A1:33–34
 - organic geochemistry, A9:12–14
 - physical properties, A9:16–19
 - principal scientific results, A1:34–36
 - rock magnetism, B18:19, 29
 - seismic Horizon A, B1:32
 - site description, A9:1–100
 - site summary, A1:33–36
- Site 1251, A10:1–119
 - acetate and hydrogen, B17:15
 - acoustic logs, B24:13–14, 35–36
 - biostratigraphy, A10:11–13
 - carbon isotopes in dissolved inorganic carbon, B20:15
 - coring summary, A10:91–94
 - diatom biostratigraphy, B6:2–3, 6–7
 - downhole logging, A10:30–37
 - downhole measurements and pressure coring, A10:25–30
 - gas hydrate lateral variability, B1:34
 - interstitial water geochemistry, A10:13–16
 - lithostratigraphy, A10:3–11
 - microbiology, A10:18–19
 - operations, A10:2–3
 - operations summary, A1:36–37
 - organic geochemistry, A10:16–18
 - physical properties, A10:19–25
 - principal scientific results, A1:37–40
 - rock magnetism, B18:20, 30–31
 - site description, A10:1–119
 - site summary, A1:36–40
- Site 1252, A11:1–62
 - acetate and hydrogen, B17:16
 - acoustic logs, B24:12–13, 33–34
 - biostratigraphy, A11:9–11
 - carbon isotopes in dissolved inorganic carbon, B20:16
 - coring summary, A11:53
 - diatom biostratigraphy, B6:3, 8–10
 - downhole logging, A11:17–20
 - downhole measurements and pressure coring, A11:16–17
 - interstitial water geochemistry, A11:11–12
 - lithostratigraphy, A11:2–9
 - operations, A11:2
 - operations summary, A1:40
 - organic geochemistry, A11:12–14
 - physical properties, A11:14–16; B8:7
 - principal scientific results, A1:40–42
 - rock magnetism, B18:21, 32–33
 - site description, A11:1–62
 - site summary, A1:40–42
- skewness, vs. depth, B11:13–15
- slope basin deposits, clay mineralogy, B7:5
- slope stability, gas hydrates, A1:10
- slumping, lithologic units, A3:9–10
- smectite
 - dehydration, B13:7–8
 - sediments, B7:4–5; B11:4–8
 - vs. depth, B7:12–14; B11:13–16
- sodium
 - pore water, A8:13
 - vs. depth, A3:60; A4:62; A5:29; A6:40; A7:37; A8:49; A9:47; A10:53
- soft sediment deformation
 - environment, A7:7
 - lithologic units, A4:6; A9:6–7; A11:4–7
- sonic logs. *See* acoustic logs

- soupy texture
 lithologic units, A7:3–6; A8:6–8
 photograph, A7:28
 vs. depth, A8:40
- spherically focused resistivity logs, vs. depth, A3:94;
 A4:93; A9:71; A10:86; A11:50
- sponge spicules, lithologic units, A3:4–8; A4:5–11; A11:4
- strain, vs. vertical consolidation stress, B12:48, 50, 52,
 54, 56, 58, 60, 62, 64, 66
- strain, axial
 vs. effective shear stress, B26:17
 vs. internal friction angle, B12:49, 51, 53, 55, 57, 59,
 61, 63, 65, 67
 vs. normalized pore pressure, B12:49, 51, 53, 55, 57,
 59, 61, 63, 65, 67
 vs. normalized shear stress, B12:49, 51, 53, 55, 57, 59,
 61, 63, 65, 67
 vs. normalized undrained modulus, B12:49, 51, 53,
 55, 57, 59, 61, 63, 65, 67
 vs. pore pressure change, B26:17
- strain, vertical, vs. vertical consolidation stress, B12:31–
 48
- stratigraphic controls, gas hydrates, A1:9
- stress
 orientation, B4:1–14
 seismic Horizon A, B1:32
- stress, consolidation
 vs. compressional wave velocity, B26:15
 vs. resistivity, B26:16
- stress, effective, vs. depth, B1:32
- stress, maximum horizontal, sediments, B4:13
- stress, vertical consolidation
 vs. coefficient of consolidation, B12:31–47
 vs. excess pore pressure, B12:31–47
 vs. lateral stress ratio, B12:48, 50, 52, 54, 56, 58, 60,
 62, 64, 66
 vs. strain, B12:48, 50, 52, 54, 56, 58, 60, 62, 64, 66
 vs. total work, B12:31–48, 50, 52, 54, 56, 58, 60, 62,
 64, 66
 vs. vertical strain, B12:31–48
 vs. void ratio, B12:31–48, 50, 52, 54, 56, 58, 60, 62,
 64, 66
- stress ratio, lateral, vs. vertical consolidation stress,
 B12:48, 50, 52, 54, 56, 58, 60, 62, 64, 66
- strontium
 pore water, A4:15; A6:11; A7:11; A8:13; A10:15
 pore water comparison of Sites 1244 and 1248, A7:40
 sediments, A3:18
 vs. depth, A3:60; A4:62, 66; A5:29; A6:40; A7:37, 40;
 A8:49; A9:47; A10:53
- structural controls, gas hydrates, A1:9
- structural style, landward vergent, dewatering, B3:1–8
- structural style, seaward vergent, dewatering, B3:1–8
- structural vergence, variation summary, B3:15
- structural Zone I, age constraints, B3:4–5
- structural Zone II, age constraints, B3:4–5
- structural Zone III, age constraints, B3:4–5
- structure
 gas hydrates, B1:14–15; B21:1–11
 seismic units, B2:7–8
- Structure I hydrate, gas hydrates, B1:14–15; B15:8–9
- Structure II hydrate, gas hydrates, B15:9
- structure map, Hydrate Ridge, B3:14
- subduction zone décollement, Seismic Profile OR89-Line
 2, B1:28
- subduction zones, Cascadia subduction zone, B1:3–5
- submarine slides, accretionary complexes, A11:7–9
- sulfate
 carbon cycling, A9:11
 depletion, A7:11; A8:13
 dissolved in pore fluids, A3:111; A4:14; A11:39
 gas hydrates, A3:16–17; A5:8
 microbiology, A9:15
 pore water, A6:10–11; A10:14; A11:12
 pore water comparison of Sites 1244 and 1248, A7:39
 redox, B15:9–10
 sulfur isotopes, B19:1–13
 vs. alkalinity, B15:35
 vs. depth, A3:59, 66–67, 71; A4:61, 65, 69; A5:28, 34;
 A6:39, 42, 45; A7:36, 38–39; A8:48; A9:46;
 A10:52, 56–57, 60; A11:35, 37; B15:33; B16:14–
 18; B19:9–10
- sulfate, dissolved residual, vs. depth, A6:45
- sulfate/methane interface
 anaerobic methane oxidation, A6:10–11
 dissolved in pore fluids, A4:14
 gas hydrates, A1:6; A3:16–17; A5:8
 pore water, A6:10–11; A10:14; A11:12
 sulfur isotopes, B19:4
 vs. depth, A3:66, 69; A4:65; A6:42, 45; A10:56
- sulfate depletion zone
 barium, A3:67
 pore water, A11:12
 sulfur isotopes, B19:6
- sulfate reduction
 anaerobic methane oxidation, B15:11–14
 carbon isotopes, B20:3
 rate parameters, B15:51
 vs. depth, B15:34
- sulfate reduction zone, gas hydrates, A3:16–17
- sulfide mineralization, lithologic units, A4:4
- sulfide precipitates
 lithologic units, A11:5–7
 photograph, A11:29
- sulfides
 anomaly photograph, A9:60
 lithologic units, A3:6–8; A5:3–4; A6:3–8; A8:6–8;
 A10:5–9
 photograph, A6:54–55; A8:38, 43
 vs. depth, A10:58
 X-ray line scanner images, A10:72
- sulfur, total
 sediments, A3:119; A4:17, 116; A5:10, 60; A6:14, 77;
 A7:14, 70; A9:14, 88; A10:18, 106
 vs. depth, A3:72; A4:73; A5:37; A6:49; A7:46; A9:53;
 A10:63
- sulfur isotopes
 hydrogen sulfide and sulfate, B19:1–13
 vs. depth, B19:9–10
- summit vents, seismic reflection, A1:8

T

tectonic evolution, seismic sequence stratigraphy, B2:1–29

tectonics, A3:51

temperature

- anomalies, A3:63
- conversion of raw data to resistance, B23:31
- core pullout, B23:9
- sediments, A3:29–30, 40, 129; A4:128; A5:67; A6:82; A7:75; A8:95; A9:96; A10:116; A11:16–17, 61
- seismic Horizon B, B1:33
- tool calibration, B9:25
- vs. acetate, B17:17
- vs. depth, A3:74–76; A4:22–23, 64, 74, 99; A5:14, 38, 43–44; A6:17–18, 50, 53, 69; A7:18, 49, 56; A8:20–21, 57; A9:19, 54, 64, 76; A10:65–66, 68–69, 90; A11:42, 47, 52; B1:34; B9:17, 19–23; B23:7
- vs. magnetic intensity, B18:12
- vs. methane/ethane ratio, A4:72; A6:48; A8:55
- vs. pressure, B26:11
- vs. time, A4:82–83; A5:47, 49; A7:55; A11:46; B9:16–18; B23:6–7, 20–28, 30
- well-logging, A4:32–33; A6:25; A9:28–29; A10:37; A11:20

See also pressure-temperature conditions

temperature, borehole, tools, A3:101

temperature, catwalk core, tools, B23:2–3

temperature, in situ

- estimation, A3:82–83; A6:56; A10:25–26; B9:4–6
- vs. time, A6:56; A8:63–64; A9:62–63; A10:75–76

temperature, subsurface

- sediments, B9:1–25
- vs. depth, A3:84; A4:84; A5:48; A6:57; A8:65; A10:77

temperature, water, vs. depth, A1:53

temperature-pressure-conductivity tool, B23:1–41

thermal anomalies

- gas hydrate anomalies, A5:40; A7:15–16; A10:65
- gas hydrate stability zone, B13:16
- infrared scanning, A3:25–26; A4:20; A5:11, 39; A6:14–15, 51; A7:15–16, 47–48; A8:58; A9:16–17, 55; A11:14–15, 43
- methane/seawater/hydrate stability zone, A7:16
- microbiology, A9:15
- mousselike texture, A7:48
- nodules, A7:47
- physical properties, A6:53
- sedimentary evidence of gas hydrates, A3:8–9
- seismic data, A6:53
- veins, A7:47
- voids, A7:48
- vs. depth, A1:70; A7:49; A10:67
- vs. logging-while-drilling resistivity, A7:49

thermal conductivity

- sediments, A3:27–28, 127; A4:22, 125; A5:13, 65; A6:17, 81; A7:17, 74; A8:19, 94; A9:18, 95; A10:24, 114; A11:16, 60; B9:21–23
- stability boundaries, B9:18
- uncertainty, B9:6

- vs. depth, A3:77; A4:77; A5:41; A6:52; A7:52; A8:59, 65; A9:56; A10:70; A11:44; B9:19–20

thermal conductivity, normalized, vs. depth, A10:74

thermal regime, Hydrate Ridge, B1:15–16

thorium logs

- logging-while-drilling, A3:92
- vs. depth, A4:91; A6:63; A9:69; A10:84; A11:40

time map, seismic Horizon B, B2:27

top of oceanic crust, Seismic Profile OR89-Line 2, B1:28

tortuosity, physical properties, B8:4–5

traveltime, vertical seismic profiles, B25:23

trench slope deposits, clay mineralogy, B7:5

tube radiographs, sediment consolidation, B12:16–17, 125–140

tube worms, gas hydrates, A1:6

turbidite

- clay mineralogy, B11:1–19
- Formation MicroScanner imagery, A3:97; A4:96
- lithologic units, A3:7–10; A4:4–11; A5:3–4; A6:4–8; A7:4–6; A8:7–8; A9:5–7; A10:4–9; A11:2–7
- magnetic susceptibility, A9:61
- photograph, A3:50, 59; A4:44, 47, 55, 57; A9:39; A10:46; A11:29
- photomicrograph, A4:58
- resistivity-at-the-bit, A4:96

turbidite, sandy, photograph, A6:37

turbidite, sandy silt, lithologic units, A11:6–7

turbidity currents

- deposition, A6:7
- environment, A9:8; A10:10–11
- lithologic units, A4:8–11

U

unconformities

- diatom biostratigraphy, B6:2–3
- lithologic units, A7:4
- seismic data, A3:58
- seismic units, B2:6
- See also* disconformities; erosional surfaces

unconformities, angular

- lithologic units, A10:5–6
- seismic Horizon Y, A6:7–8

unconformities, regional

- accretionary complexes, A11:7–9
- lithologic units, A11:5–7

unconformities, seismic, lithologic units, A11:3

unconformity DF2, seismic profiles, A11:25

unconformity K, map, B2:25

underplating

- seismic units, B2:8
- subduction zones, B1:3–5

underthrusting, geology, B1:4–5

undrained modulus, normalized, vs. axial strain, B12:49, 51, 53, 55, 57, 59, 61, 63, 65, 67

uplifts

- age constraints, B3:4–5
- deposition, A5:5
- gas hydrate stability zone, B2:12–13
- tectonics, B2:10

uranium-free gamma ray logs, vs. depth, A4:91; A6:63;
A9:69; A10:84; A11:49

uranium logs

logging-while-drilling, A3:92
vs. depth, A4:91; A6:63; A9:69; A10:84; A11:40

V

veins

infrared imagery, A8:56
thermal anomalies, A7:47

veins, gas hydrates

computed tomographic analysis, B21:3, 7
photograph, A8:43–46, 62

veins, pyrrhotite, photograph, A6:35

veins, sulfide, photograph, A6:55

velocity

vs. density, B8:22
vs. density porosity logs, B22:19
vs. depth, B8:17–19
vs. porosity, B8:22
vs. shear strength, B8:23

velocity, sonic, gas hydrates, B24:1–38

velocity logs

free gas, B22:1–25
gas hydrates, B22:1–25
vs. depth, A4:93; A6:65; A9:71; A11:48, 50
See also acoustic logs; compressional wave velocity logs; shear wave velocity logs

velocity ratio

velocity logs, B22:6–7
vs. density porosity logs, B22:18

vents

north-south variability, B3:1–15
subduction zones, B1:4–5
See also summit vents

void ratio

vs. hydraulic conductivity, B12:31–47
vs. vertical consolidation stress, B12:31–48, 50, 52,
54, 56, 58, 60, 62, 64, 66

voids

lithologic units, A3:4–8
thermal anomalies, A7:48
X-ray line scanner images, A10:72

volcanic ash

Formation MicroScanner imagery, A3:96
lithologic units, A3:9–10; A4:6–8; A7:4; A9:6–7
photograph, A3:51, 59; A4:50; A9:59
photomicrograph, A7:33

volcanic glass

lithologic units, A3:9–10; A4:6–8; A6:6–7; A7:4; A9:4–
7
photograph, A3:59; A4:50; A9:36
photomicrograph, A4:52; A5:26
vs. depth, A4:51; A9:42
X-ray diffraction data, A4:53

volume-pressure-time plots, vs. run time, A4:85; A6:58;
A8:66; A9:65; A10:78–79

W

water content

compaction, B15:10–11
core void gas, A4:112–113
repressurized sediments, B26:5–6, 18
sediments, A3:123–125; A4:20–21, 122–123; A5:63;
A6:80; A7:73; A8:93; A9:94; A10:111–112;
A11:59; B12:7–8

water saturation

comparison of logging-while-drilling, density, and res-
istivity, A4:98

logging-while-drilling, A3:100

water saturation logs, vs. depth, A5:53; A6:68; A8:74
waveforms, stacked, vertical sonic profiles, vs. depth,
B24:19–22

well-logging

gas hydrates, A4:32; A5:18–19; A6:24–25; A7:22–23;
A8:32–33; A9:28–29; A10:36; A11:20
porosity, A4:31; A5:17–18; A6:23–24; A7:21–22;
A8:31–32; A9:27–28; A10:35–36; A11:20
temperature, A4:32–33; A6:25; A9:28–29; A10:37;
A11:20

well-logging Unit 1, physical properties, A3:37; A4:29;
A5:16; A6:22; A7:20; A8:31; A9:26; A10:34;
A11:19

well-logging Unit 2, physical properties, A3:37; A4:29–
30; A5:16–17; A6:22; A7:20–21; A9:26; A10:34;
A11:19

well-logging Unit 3, physical properties, A3:37; A4:30;
A5:17; A6:22; A7:21; A9:26–27; A10:34

well-logging Unit 4, physical properties, A3:37; A6:23;
A7:21; A10:34

well-logging units

Formation MicroScanner imagery, A4:30–31
physical properties, A3:37; A4:29–30; A5:16–17;
A6:22–23; A7:20–22; A8:31; A9:26–27; A10:34;
A11:19

resistivity-at-the-bit, A4:30–31

wireline logging

comparison with logging-while-drilling, A3:36;
A4:29; A6:21–22; A9:25–26; A10:33–34
summary, A3:35–36, 132; A4:27–28, 131; A6:20–21,
84; A9:24–25, 100; A10:31–33, 119; A11:17–19,
62

wood fragments, lithologic units, A4:9

X

X-ray diffraction data

authigenic carbonates, B5:1–8
calcite, A7:31; A9:37
calcite-treated random powder sample, B12:24–26,
75–80
carbonate content, A6:34
carbonates, A10:50
clay-fraction random powder sample, B12:27–29, 81–
83
clay mineralogy, B7:1–15
random powder sample, B12:21–23, 72–74
seismic Horizon B', A3:53

volcanic glass, A4:53
 X-ray line scanner images
 cracks, A10:72
 sulfides, A10:72

voids, A10:72

Y

yellowness, vs. depth, A3:59

TAXONOMIC INDEX

A

Actinocyclus oculatus

Site 1244, A3:10–11

Site 1247, A6:8

Site 1248, A7:8–9

Site 1251, A10:11

Site 1252, A11:9

Actinocyclus oculatus Zone

Site 1244, A3:11

Site 1247, A6:8

Site 1251, A10:11

Site 1252, A11:9

Actinoptychus senarius

Site 1248, A7:8

Site 1251, A10:11

Aulacoseira spp., Site 1251, A10:11

C

Calcidiscus macintyreii

Site 1244, A3:12

Site 1245, A4:12

Site 1247, A6:9

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:10

Site 1251, A10:12

carribeana, *Gephyrocapsa*, Site 1244, A3:11

Chaetoceros spp., Sites 1251–1252, B6:1–3

Coccolithus pelagicus, Site 1244, A3:11–12

Cocconeis spp.

Site 1248, A7:8

Site 1251, A10:11

cuneiformis, *Hemidiscus*

Site 1244, A3:10

Site 1248, A7:8

Site 1251, A10:11

Site 1252, A11:9

curvirostris, *Proboscia*

Site 1244, A3:10–11

Site 1245, A4:12

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8–9

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:11

Site 1252, B6:3

D

dimorpha, *Stephanopyxis*

Site 1245, A4:11

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Discoaster variabilis, Site 1244, A3:12

doliolus, *Fragilariopsis*

Site 1244, A3:10

Site 1245, A4:12

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:11; B6:2–3

Site 1252, A11:9; B6:3

E

Emiliania huxleyi

Site 1244, A3:11

Site 1245, A4:12

Site 1246, A5:6

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:12

Site 1252, A11:10

Emiliania huxleyi Acme Zone

Site 1251, A10:12

Site 1252, A11:10

F

Fragilariopsis doliolus

Site 1244, A3:10

Site 1245, A4:12

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:11; B6:2–3

Site 1252, A11:9; B6:3

G

Gephyrocapsa carribeana, Site 1244, A3:11

Gephyrocapsa lumina

Site 1244, A3:12

Site 1245, A4:12

Site 1247, A6:9

Site 1248, A7:8–9

Site 1249, A8:10

Site 1250, A9:10

Site 1251, A10:12

Site 1252, A11:10

Gephyrocapsa spp. (small)

Site 1244, A3:11

Site 1246, A5:6

Site 1247, A6:9

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:12

Site 1252, A11:10

Gephyrocapsa spp. (small) Acme Zone

Site 1244, A3:12

Site 1245, A4:12

Site 1247, A6:9

Site 1248, A7:8–9

Site 1249, A8:10

Site 1251, A10:12

Site 1252, A11:10

H

Hemidiscus cuneiformis

Site 1244, A3:10

Site 1248, A7:8

Site 1251, A10:11

Site 1252, A11:9

huxleyi, *Emiliana*

Site 1244, A3:11

Site 1245, A4:12

Site 1246, A5:6

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:12

Site 1252, A11:10

K

kamtschatica, *Neodenticula*, Site 1244, A3:11

koizumii, *Neodenticula*

Site 1244, A3:11

Site 1251, A10:11

Site 1252, A11:9

L

lacunosa, *Pseudoemiliana*

Site 1244, A3:11–12

Site 1245, A4:12

Site 1246, A5:6

Site 1247, A6:9

Site 1248, A7:8

Site 1250, A9:9

Site 1251, A10:12

Site 1252, A11:10

lumina, *Gephyrocapsa*

Site 1244, A3:12

Site 1245, A4:12

Site 1247, A6:9

Site 1248, A7:8–9

Site 1249, A8:10

Site 1250, A9:10

Site 1251, A10:12

Site 1252, A11:10

M

macintyreii, *Calcidiscus*

Site 1244, A3:12

Site 1245, A4:12

Site 1247, A6:9

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:10

Site 1251, A10:12

minuta, *Reticulofenestra*, Site 1244, A3:12

minutula, *Reticulofenestra*, Site 1244, A3:12

N

Neodenticula kamtschatica, Site 1244, A3:11

Neodenticula koizumii

Site 1244, A3:11

Site 1251, A10:11

Site 1252, A11:9

Neodenticula koizumii Zone

Site 1251, A10:11

Site 1252, A11:9

Neodenticula seminae

Site 1244, A3:10–11

Site 1245, A4:11–12

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, A10:11; B6:2

Site 1252, A11:9

Neodenticula seminae Zone

Site 1244, A3:10

Site 1245, A4:12

Site 1246, A5:6

Site 1247, A6:8

Site 1250, A9:9

Site 1251, A10:11; B6:2

Site 1252, A11:9

Neodenticula spp., Site 1252, A11:9

nitzschioides, *Thalassionema*

Site 1244, A3:10

Site 1245, A4:12

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, B6:2

O

oculatus, *Actinocyclus*

Site 1244, A3:10–11

Site 1247, A6:8

Site 1248, A7:8–9

Site 1251, A10:11
 Site 1252, A11:9
oestrupii, *Thalassiosira*
 Site 1244, A3:10
 Site 1247, A6:8
 Site 1249, A8:10
 Site 1250, A9:9
 Site 1252, A11:9

P

pelagicus, *Coccolithus*, Site 1244, A3:11–12

Proboscia curvirostris

Site 1244, A3:10–11
 Site 1245, A4:12
 Site 1246, A5:6
 Site 1247, A6:8
 Site 1248, A7:8–9
 Site 1249, A8:10
 Site 1250, A9:9
 Site 1251, A10:11
 Site 1252, B6:3

Proboscia curvirostris Zone

Site 1244, A3:10–11
 Site 1248, A7:8
 Site 1251, A10:11
 Site 1252, A11:9

productus, *Reticulofenestra*

Site 1244, A3:12
 Site 1251, A10:12

Pseudoemiliana lacunosa

Site 1244, A3:11–12
 Site 1245, A4:12
 Site 1246, A5:6
 Site 1247, A6:9
 Site 1248, A7:8
 Site 1250, A9:9
 Site 1251, A10:12
 Site 1252, A11:10

pseudoumbilicus, *Reticulofenestra*, Site 1244, A3:12

R

Reticulofenestra minuta, Site 1244, A3:12

Reticulofenestra minutula, Site 1244, A3:12

Reticulofenestra productus

Site 1244, A3:12
 Site 1251, A10:12

Reticulofenestra pseudoumbilicus, Site 1244, A3:12

S

seminae, *Neodenticula*

Site 1244, A3:10–11
 Site 1245, A4:11–12
 Site 1246, A5:6
 Site 1247, A6:8
 Site 1248, A7:8
 Site 1249, A8:10
 Site 1250, A9:9
 Site 1251, A10:11; B6:2

Site 1252, A11:9
senarius, *Actinocyclus*

Site 1248, A7:8

Site 1251, A10:11

Stephanopyxis dimorpha

Site 1245, A4:11

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Stephanopyxis spp.

Site 1244, A3:10

Site 1245, A4:11

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1252, A11:9; B6:3

T

Thalassionema nitzschioides

Site 1244, A3:10

Site 1245, A4:12

Site 1246, A5:6

Site 1247, A6:8

Site 1248, A7:8

Site 1249, A8:10

Site 1250, A9:9

Site 1251, B6:2

Thalassiosira oestrupii

Site 1244, A3:10

Site 1247, A6:8

Site 1249, A8:10

Site 1250, A9:9

Site 1252, A11:9

V

variabilis, *Discoaster*, Site 1244, A3:12

Z

zones (with letter prefixes)

NN15, Site 1244, A3:12–13

NN16, Site 1244, A3:12–13

NN19, A3:12; A6:9; A7:8; A8:10; A9:10; A10:12;
 A11:10

NN19b/NN20 boundary, A4:12; A7:8; A8:10; A11:10

NN20, A3:11; A4:12; A5:6; A6:9; A8:10; A10:12;
 A11:10

NN21, A3:11; A4:12; A5:6; A6:9; A9:9; A10:12; A11:10

NPD9, A10:11; A11:9

NPD10, A3:11; A6:8; A11:9

NPD11, A3:11; A7:8; A10:11; A11:9

NPD12, A3:10; A4:12; A5:6; A6:8; A7:8; A9:9; A10:11;
 A11:9; B6:2

NPD12/NPD11, Site 1244, A3:10